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WATAUGA COUNTY LANDFILL

NC DEHNR PERMIT NO. 95-02

THIRD ASSESSMENT MONITORING EVENT

Volume II of II Book 2 of 2

Prepared for:

Watauga County, North Carolina

DAA JN: 6520-20
May 26, 1995

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SECTION II

CLP VOLATILES

SECTION 2.1

CLP VOLATILES REPORTING QUALIFIERS

CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, flag each result with the specific data reporting qualifiers listed below. Up to five qualifiers may be reported on Form I for each compound. The qualifiers to be used are:

U – This flag indicates the compound was analyzed for but not detected. The CRQL shall be adjusted to reflect any dilution and/or percent moisture.

J – This flag indicates an estimated value. This flag is used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J.

N – This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N flag is not used.

P – This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a P.

C – This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; use a laboratory-defined flag instead (see the X qualifier).

B – This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag shall be used for a tentatively identified compound as well as for a positively identified target compound.

The combination of flags BU or UB is expressly prohibited. Blank contaminants are flagged B only when they are detected in the sample.

E – This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract shall be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range shall have the

concentration flagged with an E on Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the DL suffix appended to the sample number.

D – This flag is used for all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is reanalyzed at a higher dilution factor, as in the E flag, the DL suffix is appended to the sample number on Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

A – This flag indicates that a tentatively identified compound is a suspected aldol–condensation product.

X – Other specific flags may be required to properly define the results. If used, the flags shall be fully described, with the description attached to the sample data summary package and the SDG Narrative. Begin by using X. If more than one flag is required, use Y and Z as needed. If more than five qualifiers are required for a sample result, use the X flag to represent a combination of several flags. For instance, the X flag might combine the A, B, and D flags for some samples. The laboratory–defined flags are limited to X, Y, and Z.

SECTION 2.2

DAA CLP VOLATILES DATA VALIDATION FORMS

See later sections for data from remain mw's

CLP VOLATILE ORGANIC ANALYSIS (VOA) DATA VALIDATION SUMMARY

Samples were collected during the February 6-10, 1995 sampling event from monitoring wells MW-1, MW-6, MW-3, MW-11, MW-10, MW-8, MW-17, MW-4 and MW-2 at Watauga County Landfill.

Samples were analyzed by CompuChem Environmental Corporation according to 3/90 Statement of Work (SOW) (document 0LM01.9) protocol on February 15, 1995 for volatile contaminants. Dilutions were required for samples MW-2 (1/15), MW-6 (1/2.5 dil) and MW-10 (1/5 dil) in order to quantitate target parameters within the linear range of the calibration curve. Samples which were diluted have elevated levels of quantitation correlating with the required dilution factor.

Draper Aden Associates data validation included the following items: technical holding times, sample preservation, instrument tuning and calibration requirements, blank analyses, surrogate spike recoveries, matrix spike/matrix spike duplicate recoveries and relative percent difference, and confirmation that all necessary parameters were monitoring by the analyzing laboratory.

The overall degree of adherence to technical and reporting protocol was excellent. Analytical data prepared by CompuChem for these samples displayed a few minor concerns and required minimal qualification. The %Deviation of Acetone, 2-Butanone and 2-Hexanone exceeded CLP performance criteria in continuing calibrations CS-A56 and CS B56. Results for these compounds in MW-2, MW-6, MW-7 and MW-10 are validated as estimated and flagged (J). Neither, Acetone, 2-Butanone, or 2-Hexanone were detected in any of the analyses associated with this Sample Delivery Group, therefore sample results were not negatively affected.

There was minimal Methylene chloride contamination in Trip Blank 1, at 2 ug/L, and also in the Method Blank (VBLKVN), at 2 ug/L, analyzed on February 15, 1995. CompuChem reported Methylene chloride at low levels in several samples which is considered laboratory contamination and was validated accordingly.

All holding times, sample preservation, instrument tuning, surrogate spike recoveries, matrix spike/matrix spike duplicate, and calibration requirements were met.

CLP VOA Volatile Data Review (Water)

Wells: Case #30073, SDG #00001, MW-1, MW-6, MW-3, MW-11, MW-10, MW-8, MW-17, MW-4, MW-2

QC Samples: MW-1 MS/MSD, Trip Blank 1

Laboratory: CompuChem Environmental Corporation, Research Triangle Park, NC

Does Laboratory analyte list correspond to analyte list requested by DAA? X Yes __No

All samples analyzed under CLP SOW for organic analysis (3/90); and included the addition of Dichlorodifluoromethane?

"X" denotes items reviewed. A detailed evaluation follows each item reviewed.

x **A. CLP Technical Holding Times and Preservation Requirements:**

- X 14 day holding time
- X Cool 4° C (± 2°C)
- X Adjust pH <2 w/ HCL
- X If samples were not preserved, were they analyzed within 7 days?

Comments: All technical holding times and preservation requirements met.

X **B. GC/MS Instrument Performance Check Requirements:**

- X 50 ng BFB
- X 12 hr. frequency
- X Ion abundance criteria (CLP Form V VOA)

Comments: 2 ul BFB (25ng BFB stock) injected @ 12 hour frequency. All ion abundance criteria passed. Retention times checked between RICs and MS/relative abundance table 1.

X **C. Initial Calibration Requirements:**

1. CLP Performance Criteria:

- All target analytes and system monitoring compounds (surrogates) must have RRF's $\geq$ 0.05 and %RSD's $\leq$ 30.0%
* Does ICAL meet this Criteria? Yes X No __
- If "No", list compounds which exceed criteria acetone 38.6 %RSD.
- See page 12 (VOA) of CLP for validation procedures
- Recalculate 10% of analytes

2. CLP Contractual Requirements:

- All target analytes and system monitoring compounds (surrogates) SMC (SURR) must have %RSD ±20.5%
- 2 compounds may fail to meet minimum RRF's or maximum %RSD as long as they have RRF's $\geq$0.010 and %RSD $\leq$ 40.0%
* Does ICAL meet this criteria? Yes X No__
- If "No", explain

Comments: Acetone failed %RSD criteria (≤30%) at 38.6% RSD. CLP guidance recommends that all low level positive results be qualified as "J" - estimated. Therefore, positive results in the linear portion of the curve will not be qualified. Positive results near the LOQ will be estimated, and due to Acetone's status as a common lab contaminant, non-detected results will not be estimated.

X **D. Continuing Calibration Requirements:**

1. CLP Performance Criteria:

- All target analytes and system monitoring CMPDS (surrogates) must have RRF's $\geq$0.05 and %D $\pm$ 25.0%.
* Does CCAL meet this criteria? Yes __ No X
- If "No", list compounds which exceed criteria.

CS-A56	CS-56B
Acetone - 62.0%D	Acetone - 40.7%D
2-Butanone - 60.9%D	2-Butanone - 39.9%D
2-Hexanone - 38.3%D	2-Hexanone - 29.9%D

- See pg. 16 (VOA) of CLP for Validation Procedures.

- Recalculate 10% of analytes.

2. CLP Contractual Requirements:

- All target analytes and SMC (SURR) must have %D $\pm$ 25.0%.
- 2 CMPDS may fail to meet minimum RRF's or maximum %D as long as they have RRF's $\geq$ 0.010 and %D $\pm$40.0%.
  See list in C(2.) of compounds that are not required to meet %D criteria.
- * Does CCAL meet this criteria? Yes X No __

Comments: Three CCALs run:

CCAL CZ	CCAL CS-B56	CCAL CS-A56
VBLKJC	VBLKJD	VBLKMH
VBLKVN	MW-6	MW-10
TRIPBLK 1	MW-2	MW-17
MW-1		
MW-1MS		
MW-1MSD		
MW-3		
MW-8		
MW-11		

CCAL CZ contained no problems. Acetone, 2-Butanone and 2-Hexanone all failed %D guideline of 25% for both CCAL CS-A56 and CCAL C5-B56. Actual percent differences are listed above. Sample results for these parameteres, related to these two calibrations, will be validated as estimated.

X **E. Blanks Criteria:**

- A Method blank must be performed after the calibration standards, at 12 hr. intervals during analysis, on every GCMS system, and after a highly contaminated sample.
- All blanks should be interference free
- Trip Blank, Equipment Blank, Method Blank

Comments: All blanks met 12 Hr frequency. 3 method blanks analyzed; VBLKVN, which applied to Trip Blank 1, MW-1, MW-1MS, MS-1MSD, MW-3, MW-8, MW-11, and MW-4, contained methylene chloride at 2 ug/L. All associated samples will be validated accordingly.

X **F. System Monitoring Compounds Criteria:**

CLP Performance Criteria: The following three system monitoring compounds are added to all samples and blanks to measure their recovery in samples and matrices. The recoveries for these parameters must be within the specified limits.

- 1,2-Dichlorethane-d4 (76-114)
- 4-Bromofluorobenzene (86-115)
- Toluene-d8 (88-110)

Comments: All surrogate recoveries within CLP specified limits representative calculations made.

X **G. Matrix Spike, Matrix Spike Duplicates Criteria:**

- The MS/MSD must be analyzed at a frequency of one MS and MSD per 20 samples of similar matrix.
- Spike recoveries should be within limits provided below, and as shown on Form III VOA 1-2.
- Relative percent difference (RPD) between MS and MSD recoveries must be within the advisory limits provided below, and as shown on Form III VOA 1 and 2.

Compound	%R-Water	RPD-Water	%R-Soil	RPD-Soil
1,1-Dichloroethene	61-145	≤14	59-172	22
Trichloroethene	71-120	≤14	62-137	24
Benzene	76-127	≤11	66-142	21
Toluene	76-125	≤13	59-139	21
Chlorobenzene	75-130	≤13	60-133	21

Comments: All MS/MSD requirements met. Representative calculations made.

X **H. Internal Standards Criteria:**

- Bromochloromethane
- 1,4-Difluorobenzene
- Chlorobenzene-d5

Comments: All internal standards criteria met.

X **I. Tentatively Identified Compounds** (TICs) (Library Searches)

Comments: TICs identified as laboratory artifact.

Draper Aden Associates conducted a data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data evaluation was conducted using *USEPA Contract Laboratory Program Nation Functional Guidelines for Organic Data Review* (2/94). Random representative data points were selected for calculation verification. Validation of this data set is not considered to be a comprehensive evaluation.

Validated by: Jeanie Flint

Date: May 17, 1995

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Methylene Chloride	MW-1	1JB	10U	Methylene Chloride results less than 10 X VBLKN concentration therefore validated as U.
CLP VOA 3/90	1,1-Dichloroethene	MW-10	100	100	No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW-10	37J	37J	Sample analyzed at a 1/5 dilution. Result is less than sample level of quantitation. No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-10	650	650	No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-10	6J	6J	Sample analyzed at a 1/5 dilution. Result is less than sample level of quantitation. No action taken.
CLP VOA 3/90	Methylene Chloride	MW-11	2JB	10U	Methylene Chloride results less than 10 X VBLKN concentration therefore validated as U.
CLP VOA 3/90	1,1-Dichloroethane	MW-11	28	28	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (Total)	MW-11	8J	8J	Result is less than CRQL. No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-11	5J	5J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Trichloroethene	MW-11	3J	3J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-11	8J	8J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Dichlorodifluoromethane	MW-11	2J	2J	Result is less than CRQL. No action taken.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Chloroethane	MW-17	5J	5J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Methylene Chloride	MW-17	2J	10U	Less than 10 X Trip Blank concentration therefore validated as U.
CLP VOA 3/90	1,1-Dichloroethene	MW-17	3J	3J	Result is less than CRQL. No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW-17	170	170	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (Total)	MW-17	80	80	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-17	14	14	No action taken.
CLP VOA 3/90	1,2-Dichloropropane	MW-17	1J	1J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Trichloroethene	MW-17	24	24	No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-17	48	48	No action taken.
CLP VOA 3/90	Dichlorodifluoromethane	MW-17	12	12	No action taken.
CLP VOA 3/90	1,1-Dichloroethene	MW-2	360	360	No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW-2	160	160	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-2	2700	2700	No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-2	18J	18J	Sample analyzed at a 1/15 dilution. Result is less than sample level of quantitation. No action taken.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Vinyl Chloride	MW-3	2J	2J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Chloroethenae	MW-3	7J	7J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Methylene Chloride	MW-3	4JB	10U	Methylene Chloride result less than 10 X VBLKVN concentration therefore validated as U.
CLP VOA 3/90	1,1-Dichloroethene	MW-3	6J	6J	Result is less than CRQL. No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW-3	180	180	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (Total)	MW-3	54	54	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-3	31	31	No action taken.
CLP VOA 3/90	1,2-Dichloropropane	MW-3	1J	1J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Trichloroethene	MW-3	19	19	No action taken.
CLP VOA 3/90	Benzene	MW-3	2J	2J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-3	46	46	No action taken.
CLP VOA 3/90	Methylene Chloride	MW-4	1JB	10U	Methhylene Chloride result less than 10 X VBLKVN concentration therefore validated as U.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Vinyl Chloride	MW-6	20J	20J	Sample analyzed at a 1/2.5 dilution. Result is less than sample level of quantitation. No action taken.
CLP VOA 3/90	Chloroethane	MW-6	11J	11J	Sample analyzed at a 1/2.5 dilution. Result is less than sample level of quantitation. No action taken.
CLP VOA 3/90	Methylene Chloride	MW-6	5J	25U	Less than 10 X Trip Blank concentration therefore validated as U.
CLP VOA 3/90	1,1-Dichloroethane	MW-6	140	140	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (Total)	MW-6	370	370	No action taken.
CLP VOA 3/90	Trichloroethene	MW-6	88	88	No action taken.
CLP VOA 3/90	Benzene	MW-6	12J	12J	Sample analyzed at a 1/2.5 dilution. Result is less than sample level of quantitation. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-6	33	33	No action taken.
CLP VOA 3/90	Vinyl Chloride	MW-8	6J	6J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Chloroethane	MW-8	7J	7J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Methylene Chloride	MW-8	3JB	10U	Methylene Chloride result less than 10 X VBLKVN concentration therefore validated as U.
CLP VOA 3/90	1,1-Dichloroethene	MW-8	6J	6J	Result is less than CRQL. No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW-8	74	74	No action taken.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	1,2-Dichloroethene (Total)	MW-8	91	91	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-8	6J	6J	Result is less than CRQL. No action taken.
CLP VOA 3/90	1,2-Dichloropropane	MW-8	2J	2J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Trichloroethene	MW-8	14	14	No action taken.
CLP VOA 3/90	Benzene	MW-8	5J	5J	Result is less than CRQL. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-8	31	31	No action taken.
CLP VOA 3/90	Dichlorodifluoromethane	MW-8	14	14	No action taken.
CLP VOA 3/90	Acetone	MW-10 and MW-17	U	UJ	%D exceeded CLP performance criteria in CCAL (CS-A56) therefore validated as estimated and flagged J.
CLP VOA 3/90	2-Butanone	MW-10 and MW-17	U	UJ	%D exceeded CLP performance criteria in CCAL (CS-A56) therefore validated as estimated and flagged J.
CLP VOA 3/90	2-Hexanone	MW-10 and MW-17	U	UJ	%D exceeded CLP performance criteria in CCAL (CS-A56) therefore validated as estimated and flagged J.
CLP VOA 3/90	Acetone	MW-6 and MW-2	U	UJ	%D exceeded CLP performance criteria in CCAL (CS-B56) therefore validated as estimated and flagged J.
CLP VOA 3/90	2-Butanone	MW-6 and MW-2	U	UJ	%D exceeded CLP performance criteria in CCAL (CS-B56) therefore validated as estimated and flagged J.
CLP VOA 3/90	2-Hexanone	MW-6 and MW-2	U	UJ	%D exceeded CLP performance criteria in CCAL (CS-B56) therefore validated as estimated and flagged J.

CLP VOLATILE ORGANIC ANALYSIS (VOA) DATA VALIDATION SUMMARY

Samples were collected during the February 6-10, 1995 sampling event from monitoring wells MW-9 and MW-12 at Watauga County Landfill.

Samples were analyzed by CompuChem Environmental Corporation according to 3/90 Statement of Work (SOW) (document 0LM01.9) protocol on February 16, 1995 for volatile contaminants.

Draper Aden Associates data validation included the following items: technical holding times, sample preservation, instrument tuning and calibration requirements, blank analyses, surrogate spike recoveries, matrix spike/matrix spike duplicate recoveries and relative percent difference, and confirmation that all necessary parameters were monitoring by the analyzing laboratory.

The overall degree of adherence to technical and reporting protocol was excellent. Analytical data prepared by CompuChem for these samples displayed a few minor concerns and required minimal qualification. The %Relative Standard Deviation (%RSD) for Acetone in the initial calibration was 38.6%. When the low point (10 ug/L) in the calibration curve is eliminated the %RSD drops to 12.6%. The percent deviation for 2-Butanone in the continuing calibration was 36.6%. Neither Acetone or 2-Butanone were detected in any of the analyses associated with this Sample Delivery Group, therefore sample results were not negatively affected. If Acetone or 2-Butanone had been detected in these samples, those values may have required qualification as estimated depending on the concentration detected.

There was minimal Methylene chloride contamination in Trip Blank 2, at 2 ug/L, and also in the Method Blank (VBLKML), at 1 ug/L, analyzed on February 16, 1995. CompuChem reported Methylene chloride at 3 ug/L in MW-12 which is probably laboratory contamination. Methylene chloride was also reported in MW-9 at 93 ug/L, and although this value is flagged with B (also detected in the method blank) on the Form 1, it is highly unlikely that this value is a result of laboratory contamination, since it is substantially greater than five times the level detected in the blank.

File Name: C:\STOLTE\LANDFILL\NC\WATAUGA\VALID\3RDASS.VAL

CLP VOA Volatile Data Review

Wells: MW-9 and MW-12

QC Samples: Trip Blank 2, MW-9MS, and MW-9MSD

Laboratory: CompuChem Environmental Corporation Research Triangle, NC

Does Laboratory analyte list correspond to analyte list requested by DAA? X Yes __No

All samples analyzed under CLP SOW for organic analysis (3/90); and included the addition of Dichlorodifluoromethane? X Yes __No

"X" denotes items reviewed. A detailed evaluation follows each item reviewed.

X **A. CLP Technical Holding Times and Preservation Requirements:**

- 14 day holding time
- Cool 4° C (± 2°C)
- Adjust pH <2 w/ HCL
- If samples were not preserved, were they analyzed within 7 days?

Comments: All holding times and preservation requirements met.

X **B. GC/MS Instrument Performance Check Requirements:**

- 50 ng BFB
- 12 hr. frequency
- Ion abundance criteria (CLP Form V VOA)

Comments: All standards and samples analyzed within 12 hours of successful tuning of instrument with BFB.

X **C. Initial Calibration Requirements:**

1. CLP Performance Criteria:

- All target analytes and system monitoring compounds (surrogates) must have RRF's $\geq$ 0.05 and %RSD's $\leq$ 30.0%
- * Does ICAL meet this Criteria? __Yes X No
- If "No" list compounds which exceed criteria
  Acetone 38.6%
- See page 12 (VOA) of CLP for validation procedures
- Recalculate 10% of analytes

2. CLP Contractual Requirements:

- All target analytes and system monitoring compounds (surrogates) SMC (SURR) must have %RSD ±20.5%
- 2 compounds may fail to meet minimum RRF's or maximum %RSD as long as they have RRF's $\geq$0.010 and %RSD $\leq$ 40.0%
  The following compounds do not have to meet %RSD criteria:

Acetone	1,2-Dichloropropane
2-Butanone	2-Hexanone
Carbon disulfide	Methylene chloride
Chloroethane	4-Methyl-2-Pentanone
Chloromethane	Toluene-d8
1,2-Dichloroethene (total)	1,2-Dichloroethane-d4

- * Does ICAL meet this criteria? X Yes __No
- If "No", explain

Comments: All CLP data validation initial calibration RRF and %RSD criteria was met for all parameters except Acetone. The % RSD for Acetone was 38.6%. If the RRF from the 10 ug/L standard is eliminated the %RSD drops to 12.6%. Any positive Acetone results less than 20 ug/L will be estimated and flagged (J).

All CLP contractual initial calibration requirements were met. Representative calculations performed. No abnormalities detected.

X **D. Continuing Calibration Requirements:**

1. CLP Performance Criteria:

- All target analytes and system monitoring CMPDS (surrogates) must have RRF's ≥0.05 and %D ± 25.0%.
* Does CCAL meet this criteria? Yes __ No X
- If "No", list compounds which exceed criteria.
  2-Butanone %D 36.6
- See pg. 16 (VOA) of CLP for Validation Procedures.
- Recalculate 10% of analytes.

2. CLP Contractual Requirements:

- All target analytes and SMC (SURR) must have %D ± 25.0%.
- 2 CMPDS may fail to meet minimum RRF's or maximum %D as long as they have RRF's ≥ 0.010 and %D ±40.0%. See list in C(2.) of compounds that are not required to meet %D criteria.
* Does CCAL meet this criteria? Yes X No __

Comments: All samples were analyzed on February 16, 1995 against continuing calibration CS950216A56.D.

All CLP data validation continuing calibration RRF and %D criteria was met for all parameters except 2-Butanone. The %D for 2-Butanone was 36.6%. Any positive 2-Butanone results will be estimated and flagged with a (J).

All CLP contractual continuing calibration requirements were met. Representative calculations performed. No abnormalities detected.

X **E. Blanks Criteria:**

- A Method blank must be performed after the calibration standards, at 12 hr. intervals during analysis, on every GCMS system, and after a highly contaminated sample.
- All blanks should be interference free
- Trip Blank, Equipment Blank, Method Blank

Comments: One Trip Blank (Trip Blank 2) and one Method Blank (VBLKML) are associated with this batch of sample analyses. Methylene chloride was detected in VBLKML at 1 ug/L and in Trip Blank 2 at 2 ug/L.

X **F. System Monitoring Compounds Criteria:**

CLP Performance Criteria: The following three system monitoring compounds are added to all samples and blanks to measure their recovery in samples and matrices. The recoveries for these parameters must be within the specified limits.

- 1,2-Dichlorethane-d4 (76-114)
- 4-Bromofluorobenzene (86-115)
- Toluene-d8 (88-110)

Comments: All surrogate recovery requirements were met for all analyses.

X **G. Matrix Spike, Matrix Spike Duplicates Criteria:**

- The MS/MSD must be analyzed at a frequency of one MS and MSD per 20 samples of similar matrix.
- Spike recoveries should be within limits provided below, and as shown on Form III VOA 1-2.
- Relative percent difference (RPD) between MS and MSD recoveries must be within the advisory limits provided below, and as shown on Form III VOA 1 and 2.

Compound	%R-Water
1,1-Dichloroethene	61-145
Trichloroethene	71-120
Benzene	76-127
Toluene	76-125
Chlorobenzene	75-130

Comments: All matrix spike/matrix spike duplicate RPD values and recoveries met CLP criteria with one exception. The %recovery of Toluene is slightly low in the matrix spike. Data quality is not judged to be compromised and no validation is deemed necessary based solely on this.

X **H. Internal Standards Criteria:**

- Bromochloromethane
- 1,4-Difluorobenzene
- Chlorobenzene-d5

Comments: All internal standard criteria was met.

X **I. Tentatively Identified Compounds** (TICs) (Library Searches)

Comments: One TIC was detected in each (MW-9 and MW-12) sample but since this TIC was also detected in the VBLKLM it is probably not a sample constituent.

Draper Aden Associates conducted a data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data evaluation was conducted using *USEPA Contract Laboratory Program Nation Functional Guidelines for Organic Data Review* (2/94). Random representative data points were selected for calculation verification. Validation of this data set is not considered to be a comprehensive evaluation.

Validated by: Jeanie Flint

Date: 4/11/95

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Chloroethane	MW-9	17	17	No action taken.
CLP VOA 3/90	Methylene Chloride	MW-9	93B	93B	Sample result > CRQL and > 10 X blank concentrations, no action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW-9	30	30	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	MW-9	2J	2J	Result < CRQL, no action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-9	14	14	No action taken.
CLP VOA 3/90	Trichloroethene	MW-9	6J	6J	Result < CRQL, no action taken.
CLP VOA 3/90	Benzene	MW-9	2J	2J	Result < CRQL, no action taken.
CLP VOA 3/90	Tetrachloroethene	MW-9	4J	4J	Result < CRQL, no action taken.
CLP VOA 3/90	Xylene (total)	MW-9	3J	3J	Result < CRQL, no action taken.
CLP VOA 3/90	Dichlorodifluoromethane	MW-9	27	27	No action taken.

See Definition Section (Section 1.1) for additional information on Data Validation Qualifiers.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Chloroethane	MW-12	4J	4J	Result < CRQL, No action taken.
CLP VOA 3/90	Methylene Chloride	MW-12	3JB	UB	Common lab contaminant. Result < CRQL and < 10 x blank concentration. Validated as U.
CLP VOA 3/90	1,1-Dichloroethene	MW-12	4J	4J	Result < CRQL, no action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW-12	120	120	No action taken.
CLP VOA 3/90	1,2-Dichloroethene	MW-12	37	37	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW-12	18	18	No action taken.
CLP VOA 3/90	Trichloroethene	MW-12	13	13	No action taken.
CLP VOA 3/90	Tetrachloroethene	MW-12	32	32	No action taken.

CLP VOA Volatile Data Review

Wells: L1, S1, S2, S3, S4, S5, SFW1, SFW2, SFW3

QC Samples: TRIPBLK3, VBLKJD, SFW1 MS, SFW1 MSD, VBLKML

Laboratory: CompuChem Environmental Corporation

Does Laboratory analyte list correspond to analyte list requested by DAA? X Yes __No

All samples analyzed under CLP SOW for organic analysis (3/90); and included the addition of Dichlorodifluoromethane? X Yes __No

"X" denotes items reviewed. A detailed evaluation follows each item reviewed.

X **A. CLP Technical Holding Times and Preservation Requirements:**

- 14 day holding time
- Cool 4° C (± 2°C)
- Adjust pH <2 w/ HCL
- If samples were not preserved, were they analyzed within 7 days?

Comments:

All samples were properly preserved and analyzed within holding time.

X **B. GC/MS Instrument Performance Check Requirements:**

- 50 ng BFB
- 12 hr. frequency
- Ion abundance criteria (CLP Form V VOA)

Comments:

All samples were analyzed within 12 hours of successfully tuning the instrument with 50 ng of BFB.

2/15/95 CCAL CS950215B56.D		2/16/95 CCAL CS950216A56.D
Acetone	%D 40.7	2-Butanone %D 36.6
2-Butanone	%D 39.9	
2-Hexanone	%D 29.9	

- See pg. 16 (VOA) of CLP for Validation Procedures.
- Recalculate 10% of analytes.

2. CLP Contractual Requirements:

- All target analytes and SMC (SURR) must have %D $\pm$ 25.0%.
- 2 CMPDS may fail to meet minimum RRF's or maximum %D as long as they have RRF's $\geq$ 0.010 and %D $\pm$40.0%. See list in C(2.) of compounds that are not required to meet %D criteria.
- * Does CCAL meet this criteria? Yes X No __

Comments:

Samples were analyzed under two separate continuing calibrations (CCAL) on 2/15/95 and on 2/16/95. Please refer to the list below as to which analyses were performed on each day. The CCAL analyzed on 2/15/95 (file ID CS950215B56.D) met CLP contractual requirements but exceeded validation performance %D criteria for Acetone (%D = 40.7), 2-Hexanone (%D = 29.9) and 2-Butanone (%D = 39.3). Any positive results of these compounds in samples analyzed on 2/15/95 will be qualified as estimated and flagged with "J".

The CCAL analyzed on 2/16/95 (file ID CS950216A56.D) met CLP contractual requirements but exceeded validation performance %D criteria for 2-Butanone (%D = 36.6). Any positive result for 2-Butanone in samples analyzed on 2/16/95 will be qualified as estimated and flagged with "J".

X **G. Matrix Spike, Matrix Spike Duplicates Criteria:**

- The MS/MSD must be analyzed at a frequency of one MS and MSD per 20 samples of similar matrix.
- Spike recoveries should be within limits provided below, and as shown on Form III VOA 1-2.
- Relative percent difference (RPD) between MS and MSD recoveries must be within the advisory limits provided below, and as shown on Form III VOA 1 and 2.

Compound	%R-Water	RPD-Water
1,1-Dichloroethane	61-145	≤14
Trichloroethene	71-120	≤14
Benzene	76-127	≤11
Toluene	76-125	≤13
Chlorobenzene	75-130	≤13

Comments:

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on sample SFW1. All relative percent difference values and all spike recoveries were compliant with the exception of 1,1 Dichloroethene recoveries in both the MS and MSD (156% and 157%). The analysis of SFW1 does not show 1,1-Dichloroethene on the quantitation report and an examination of the chromatogram does not reveal any peaks at the expected retention time. 1,1 Dichloroethene was not detected in any other sample therefore the possibility of the QC being accidently performed on the wrong sample is eliminated. CompuChem was contacted and they noted that although these recoveries are high, the recovery windows are only guidelines. During the conversation with Compuchem it was determined that there was another analysis of SFW1 performed (high surrogate recovery) which confirmed the absence of 1,1-Dichloroethene. No validation is necessary based solely on MS/MSD %Recovery results.

X **H. Internal Standards Criteria:**

- Bromochloromethane
- 1,4-Difluorobenzene
- Chlorobenzene-d5

Comments:

All internal standard area and retention time criteria met.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Chloroethane	L1	6J	6J	Result <CRQL, no action taken.
CLP VOA 3/90	Methylene Chloride	L1	1JB	UB	Result <CRQL, and <10X VBLKML concentration, validated as U.
CLP VOA 3/90	None	S1	--	--	No analytes detected.
CLP VOA 3/90	Chloroethane	S2	26	26	No action taken.
CLP VOA 3/90	Methylene Chloride	S2	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Xylene (total)	S2	7J	7J	Result <CRQL, no action taken.
CLP VOA 3/90	Methylene Chloride	S3	3J	3J	Result <CRQL, no action taken.
CLP VOA 3/90	Vinyl Chloride	S4	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Chloroethane	S4	2J	2J	Result <CRQL, no action taken.

See Definition Section (Section 1.1) for additional information on Data Validation Qualifiers.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	1,2-Dichloroethene (total)	SFW2	6J	6J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	SFW2	6J	6J	Result <CRQL, no action taken.
CLP VOA 3/90	Trichloroethene	SFW2	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Tetrachloroethene	SFW2	8J	8J	Result <CRQL, no action taken.
CLP VOA 3/90	Methylene Chloride	SFW3	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1-Dichloroethane	SFW3	11	11	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	SFW3	3J	3J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1,1,-Trichloroethane	SFW3	3J	3J	Result <CRQL, no action taken.
CLP VOA 3/90	Trichloroethene	SFW3	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Tetrachloroethane	SFW3	7J	7J	Result <CRQL, no action taken.

See Definition Section (Section 1.1) for additional information on Data Validation Qualifiers.

CLP VOA Volatile Data Review

Wells: L1, S1, S2, S3, S4, S5, SFW1, SFW2, SFW3

QC Samples: TRIPBLK3, VBLKJD, SFW1 MS, SFW1 MSD, VBLKML

Laboratory: CompuChem Environmental Corporation

Does Laboratory analyte list correspond to analyte list requested by DAA? X Yes __No

All samples analyzed under CLP SOW for organic analysis (3/90); and included the addition of Dichlorodifluoromethane? X Yes __No

"X" denotes items reviewed. A detailed evaluation follows each item reviewed.

X **A. CLP Technical Holding Times and Preservation Requirements:**

- 14 day holding time
- Cool 4° C (± 2°C)
- Adjust pH <2 w/ HCL
- If samples were not preserved, were they analyzed within 7 days?

Comments:

All samples were properly preserved and analyzed within holding time.

X **B. GC/MS Instrument Performance Check Requirements:**

- 50 ng BFB
- 12 hr. frequency
- Ion abundance criteria (CLP Form V VOA)

Comments:

All samples were analyzed within 12 hours of successfully tuning the instrument with 50 ng of BFB.

X **C. Initial Calibration Requirements:**

1. CLP Performance Criteria:

- All target analytes and system monitoring compounds (surrogates) must have RRF's $\geq$ 0.05 and %RSD's $\leq$ 30.0%
* Does ICAL meet this Criteria? Yes __ No X
- If "No" list compounds which exceed criteria

  Acetone %RSD = 38.6%

- See page 12 (VOA) of CLP for validation procedures
- Recalculate 10% of analytes

2. CLP Contractual Requirements:

- All target analytes and system monitoring compounds (surrogates) SMC (SURR) must have %RSD ±20.5%
- 2 compounds may fail to meet minimum RRF's or maximum %RSD as long as they have RRF's $\geq$0.010 and %RSD $\leq$ 40.0%

* Does ICAL meet this criteria? Yes X No__
- If "No", explain

Comments:

All CLP data validation initial calibration RRF and %RSD criteria was met for all parameters except Acetone. The %RSD from Acetone was 38.6%. If the RRF from the 10 ug/L standard is eliminated the %RSD drops to 12.6%. Any positive Acetone results less than 20 ug/L will be estimated and flagged (J).

All CLP contractual initial calibration requirements were met. Representative calculations were performed. No abnormalities detected.

X **D. Continuing Calibration Requirements:**

1. CLP Performance Criteria:

- All target analytes and system monitoring CMPDS (surrogates) must have RRF's $\geq$0.05 and %D $\pm$ 25.0%.
* Does CCAL meet this criteria? Yes __ No X
- If "No", list compounds which exceed criteria.

2/15/95 CCAL CS950215B56.D		2/16/95 CCAL CS950216A56.D
Acetone	%D 40.7	2-Butanone %D 36.6
2-Butanone	%D 39.9	
2-Hexanone	%D 29.9	

- See pg. 16 (VOA) of CLP for Validation Procedures.
- Recalculate 10% of analytes.

2. CLP Contractual Requirements:

- All target analytes and SMC (SURR) must have %D $\pm$ 25.0%.
- 2 CMPDS may fail to meet minimum RRF's or maximum %D as long as they have RRF's $\geq$ 0.010 and %D $\pm$40.0%. See list in C(2.) of compounds that are not required to meet %D criteria.
- * Does CCAL meet this criteria? Yes X No __

Comments:

Samples were analyzed under two separate continuing calibrations (CCAL) on 2/15/95 and on 2/16/95. Please refer to the list below as to which analyses were performed on each day. The CCAL analyzed on 2/15/95 (file ID CS950215B56.D) met CLP contractual requirements but exceeded validation performance %D criteria for Acetone (%D = 40.7), 2-Hexanone (%D = 29.9) and 2-Butanone (%D = 39.3). Any positive results of these compounds in samples analyzed on 2/15/95 will be qualified as estimated and flagged with "J".

The CCAL analyzed on 2/16/95 (file ID CS950216A56.D) met CLP contractual requirements but exceeded validation performance %D criteria for 2-Butanone (%D = 36.6). Any positive result for 2-Butanone in samples analyzed on 2/16/95 will be qualified as estimated and flagged with "J".

2/15/95 CCAL file ID CS950215B56.D	2/16/95 CCAL file ID CS950216A56.D
VBLKJD	VBLKML
TRIPBLK3	L1
S1	
S2	
S3	
S4	
S5	
SFW1	
SFW2	
SFW3	
SFW1MS	
SFW1MSD	

X **E. Blanks Criteria:**

- A Method blank must be performed after the calibration standards, at 12 hr. intervals during analysis, on every GCMS system, and after a highly contaminated sample.
- All blanks should be interference free
- Trip Blank, Equipment Blank, Method Blank

Comments:

Two Method Blanks (2/15/95-VBLKJD and 2/16/95 VBLKML) and one Trip blank (TRIPBLK3) were analyzed with this sample delivery group. All blank analyses were free from contamination except VBLKML, associated with L1, contained Methylene Chloride at 1 ug/L.

X **F. System Monitoring Compounds Criteria:**

CLP Performance Criteria: The following three system monitoring compounds are added to all samples and blanks to measure their recovery in samples and matrices. The recoveries for these parameters must be within the specified limits.

- 1,2-Dichloroethane-d4 (76-114)
- 4-Bromofluorobenzene (86-115)
- Toluene-d8 (88-110)

Comments:

All surrogate recoveries were compliant.

X **G. Matrix Spike, Matrix Spike Duplicates Criteria:**

- The MS/MSD must be analyzed at a frequency of one MS and MSD per 20 samples of similar matrix.
- Spike recoveries should be within limits provided below, and as shown on Form III VOA 1-2.
- Relative percent difference (RPD) between MS and MSD recoveries must be within the advisory limits provided below, and as shown on Form III VOA 1 and 2.

Compound	%R-Water	RPD-Water
1,1-Dichloroethane	61-145	≤14
Trichloroethene	71-120	≤14
Benzene	76-127	≤11
Toluene	76-125	≤13
Chlorobenzene	75-130	≤13

Comments:

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on sample SFW1. All relative percent difference values and all spike recoveries were compliant with the exception of 1,1 Dichloroethene recoveries in both the MS and MSD (156% and 157%). The analysis of SFW1 does not show 1,1-Dichloroethene on the quantitation report and an examination of the chromatogram does not reveal any peaks at the expected retention time. 1,1 Dichloroethene was not detected in any other sample therefore the possibility of the QC being accidently performed on the wrong sample is eliminated. CompuChem was contacted and they noted that although these recoveries are high, the recovery windows are only guidelines. During the conversation with Compuchem it was determined that there was another analysis of SFW1 performed (high surrogate recovery) which confirmed the absence of 1,1-Dichloroethene. No validation is necessary based solely on MS/MSD %Recovery results.

X **H. Internal Standards Criteria:**

- Bromochloromethane
- 1,4-Difluorobenzene
- Chlorobenzene-d5

Comments:

All internal standard area and retention time criteria met.

X **I. Tentatively Identified Compounds** (TICs) (Library Searches)

Comments:

There was one real library search detected in S2 at 6 ug/L which was identified as an unknown hydrocarbon. All other library searches are laboratory artifacts.

Draper Aden Associates conducted a data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data evaluation was conducted using *USEPA Contract Laboratory Program Nation Functional Guidelines for Organic Data Review* (2/94). Random representative data points were selected for calculation verification. Validation of this data set is not considered to be a comprehensive evaluation.

Validated by: Jamie Flint Date: 4-19-95

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Chloroethane	L1	6J	6J	Result <CRQL, no action taken.
CLP VOA 3/90	Methylene Chloride	L1	1JB	UB	Result <CRQL, and <10X VBLKML concentration, validated as U.
CLP VOA 3/90	None	S1	--	--	No analytes detected.
CLP VOA 3/90	Chloroethane	S2	26	26	No action taken.
CLP VOA 3/90	Methylene Chloride	S2	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Xylene (total)	S2	7J	7J	Result <CRQL, no action taken.
CLP VOA 3/90	Methylene Chloride	S3	3J	3J	Result <CRQL, no action taken.
CLP VOA 3/90	Vinyl Chloride	S4	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Chloroethane	S4	2J	2J	Result <CRQL, no action taken.

See Definition Section (Section 1.1) for additional information on Data Validation Qualifiers.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Methylene Chloride	S4	1J	1J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1-Dichloroethane	S4	45	45	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	S4	42	42	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	S4	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Trichloroethene	S4	8J	8J	Result <CRQL, no action taken.
CLP VOA 3/90	Tetrachloroethene	S4	12	12	No action taken.
CLP VOA 3/90	Chloroethane	S5	7J	7J	Result <CRQL, no action taken.
CLP VOA 3/90	Methylene Chloride	SFW1	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1-Dichloroethane	SFW2	18	18	No action taken.

See Definition Section (Section 1.1) for additional information on Data Validation Qualifiers.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	1,2-Dichloroethene (total)	SFW2	6J	6J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	SFW2	6J	6J	Result <CRQL, no action taken.
CLP VOA 3/90	Trichloroethene	SFW2	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Tetrachloroethene	SFW2	8J	8J	Result <CRQL, no action taken.
CLP VOA 3/90	Methylene Chloride	SFW3	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1-Dichloroethane	SFW3	11	11	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	SFW3	3J	3J	Result <CRQL, no action taken.
CLP VOA 3/90	1,1,1,-Trichloroethane	SFW3	3J	3J	Result <CRQL, no action taken.
CLP VOA 3/90	Trichloroethene	SFW3	2J	2J	Result <CRQL, no action taken.
CLP VOA 3/90	Tetrachloroethane	SFW3	7J	7J	Result <CRQL, no action taken.

See Definition Section (Section 1.1) for additional information on Data Validation Qualifiers.

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Unknown Hydrocarbon (Library Search)	S2	6J	6NJ	Validated as tentatively identified.

See Definition Section (Section 1.1) for additional information on Data Validation Qualifiers.

SECTION 2.3

REVISIONS TO ORIGINAL DATA SET

NO REVISIONS TO DATA

SECTION 2.4

CLP VOLATILES ANALYTICAL DATA

SDG1

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

28/FEB/95

Draper Aden Associates
Attn: Ms. Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

Subject: Report of Data - Account Number 500672

Report Style Number 9

Attn: Ms. Janet Cleary

Enclosed are the results of analytical work performed in accordance with the referenced account number.

This report covers 10 sample(s) appearing on the attached listing and their associated Quality Control Data. In an effort to produce your data more effectively and present it more uniformly, CompuChem has applied the USEPA Contract Laboratory Program (CLP) reporting conventions and associated forms.

Thank you for selecting CompuChem Environmental for your sample analysis. If you should have questions or require additional analytical services please contact your representative at 1-919-406-1600.

Sincerely,

Report Preparation

Attachment

COMPUCHEM
ENVIRONMENTAL
CORPORATION

28/FEB/95

Draper Aden Associates
Attn: Ms. Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

ACCOUNT #: 500672

Analysis: RELEASED

CC#	SAMPLE-ID	RECEIPT DATE
683841	MW3	2/10/95
683857	MW8	2/10/95
683859	MW11	2/10/95
683861	TRIPBLK1	2/10/95
683863	MW6	2/10/95
683865	MW1	2/10/95
683867	MW10	2/10/95
683869	MW2	2/10/95
683873	MW17	2/10/95
683875	MW4	2/10/95

TOTAL NUMBER OF SAMPLES = 10

CompuChem Environmental Corporation

I. SAMPLE DATA SUMMARY PACKAGE

3/90 STATEMENT OF WORK

The Sample Data Summary Package shall contain data for samples in one Sample Delivery Group (SDG) of the Case, as follows :

A. SDG Narrative

B. Form I and Form I – TIC
Organic Analysis Data Sheet (OADS) and Tentatively Identified Compounds (TICs)

C. Form II
System Monitoring Compound Summary (VOA) and Surrogate Spike Analysis Results (SV & PEST)

D. Form III
Matrix Spike / Matrix Spike Duplicate Results

E. Form IV, Form I, and Form I – TIC
Method Blank Summary, OADS, and TICs

F. Form VIII
Internal Standard Area Data

NOTE: All forms are arranged in order by fraction (VOA, SV, PEST) unless otherwise specified.

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS SAS# (if applicable) : _____

CASE # : 30073 SDG # : 00001

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SDG NARRATIVE

Case # 30073
SDG # 00001
Contract # (3-90)-REVS

Sample Identifications: MW3, MW8, MW11, TRIPBLK1, MW6, MW1, MW10, MW2, MW17, MW4

The ten (10) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on February 10, 1995. The samples were scheduled for the requested analyses of the volatile fraction. These samples were analyzed following 3/90 Statement of Work (SOW) (document OLM01.9) protocol, with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30073, SDG 00001 are included in the sample data sections.

VOLATILES:
Analysis holding time requirements were met for all of these samples. There were a number of halogenated alkane and halogenated alkene Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) at varyingconcentrations in these samples. Tentatively Identified Compounds (TIC's) found in all of these samples could be characterized as laboratory artifacts which may not be a sample constituent.

Due to the results of a screen of MW10, the sample was initially analyzed using 1 mL of raw sample.

The pH values of these samples are tabulated on the attached batch sheet(s).

All of the system monitoring compounds met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blanks met all quality control criteria. One method blank contained a levels of the common laboratory solvent methylene chloride within allowable limits. A laboratory artifact was present as a TIC in three of the method blanks.

The associated duplicate matrix spikes met all advisory accuracy and precision criteria.

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

2/27/95

Daniel E. Boone Jr.
Technical Reviewer
February 27, 1995

Note: This report is paginated for reference and accountability in decreasing numerical sequence.

CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, flag each result with the specific data reporting qualifiers listed below. Up to five qualifiers may be reported on Form I for each compound. The qualifiers to be used are:

U – This flag indicates the compound was analyzed for but not detected. The CRQL shall be adjusted to reflect any dilution and/or percent moisture.

J – This flag indicates an estimated value. This flag is used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J.

N – This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N flag is not used.

P – This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a P.

C – This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; use a laboratory-defined flag instead (see the X qualifier).

B – This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag shall be used for a tentatively identified compound as well as for a positively identified target compound.

The combination of flags BU or UB is expressly prohibited. Blank contaminants are flagged B only when they are detected in the sample.

E – This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract shall be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range shall have the

DATA REPORTING QUALIFIERS

concentration flagged with an E on Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the DL suffix appended to the sample number.

D – This flag is used for all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is reanalyzed at a higher dilution factor, as in the E flag, the DL suffix is appended to the sample number on Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

A – This flag indicates that a tentatively identified compound is a suspected aldol–condensation product.

X – Other specific flags may be required to properly define the results. If used, the flags shall be fully described, with the description attached to the sample data summary package and the SDG Narrative. Begin by using X. If more than one flag is required, use Y and Z as needed. If more than five qualifiers are required for a sample result, use the X flag to represent a combination of several flags. For instance, the X flag might combine the A, B, and D flags for some samples. The laboratory–defined flags are limited to X, Y, and Z.

QUALITY ASSURANCE NOTICE

Specific guidelines are presented in the EPA Contract Laboratory Program Statement of Work for the positive qualitative identification of target compounds through mass spectral interpretation. Applying these guidelines absolutely may not be possible when the nature of the sample is less than pure reference material. The mass spectral interpretation specialist exercises technical judgement in performing a qualitative analysis when interferences are present. In instances when the mass spectral pattern of a positively identified compound demonstrates interferences or coelution from one or more additional compounds, either extraneous unknowns, internal standards, or surrogate standards, a "+" sign is added to the top of the dual spectra page.

CompuChem's Quality Assurance Department

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Notification To Clients Regarding Deliverables Generated By New Gas Chromatograph/Mass Spectrometer (GC/MS) Data System

CompuChem Environmental Corporation has upgraded their GC/MS data systems in order to provide state-of-the-art data review and forms/hardcopy generation capabilities. While our GC/MS instruments are products of Finnigan, they now will be networked to systems consisting of the Hewlett-Packard (H-P) ChemServer utilizing ThruPut's Envision product. Clients familiar with the hardcopy output from H-P GC/MS instruments will notice similarities to our new deliverables. These new hardware/software systems, however, provide dramatic speed and performance enhancements.

As a service to our clients, the following is a listing of the major differences that will be observed when comparing our new deliverables packages against the old ones:

1. The new GC/MS Reconstructed Ion Chromatogram (RIC) presentation has the following features:

   - the retention time, along the x-axis is labeled at exact minute intervals,
   - separate line items in the RIC header are included for instrument ID, sample ID, and volume injected,
   - header information includes the GC column phase and diameter,
   - all internal standard and surrogate peaks are labeled with the compound name and the exact retention time rather than "IS#," "SS#," and associated scan number,
   - on the two page RIC for semivolatile injections, there is a display overlap between the two pages.
   - some peaks may be flagged with a "+." This indicates that more than one compound is eluting at that retention time.

2. The new quantitation report presentation has the following features:

   - the number of quantitation report pages is reduced for CLP analyses,
   - the internal standards are presented first, followed by the surrogate compounds, all in increasing retention time order,
   - the retention time is presented as minutes and decimal minutes,
   - the compound name appears on the same line as the data/results for that compound (rather than on a separate page) and the displays include both on-column and final concentrations,
   - for assistance in data review/validation a number of flags are utilized - on the left hand side of the quantitation report page on the right side.

   Left Side Flags

*	denotes internal standard compound,
$	denotes surrogate compound,
M	denotes summary compounds; e.g. - total xylenes.

   Right Side Flags

(a)	denotes those compounds whose results will be flagged with a "J" (estimate) on the Form I,
(A)	denotes those compounds whose results will be flagged with an "E" (concentration greater than highest calibration standard) on the Form I,
(H)	denotes that the data reviewer selected a peak other than the one selected by the software routine,
(M)	denotes that the data reviewer has manually integrated a compound,
(R)	denotes that a recovery for a surrogate or spike compound has failed acceptance criteria,
(T)	denotes that the retention time for an internal standard has shifted outside of acceptance criteria.,
(Q)	denotes that unexpected ion ratios obtained.

3. The mass spectra of target analytes will be presented on one page rather than the two from the Finnigan data system. The printing of the spectra will be portrait (tall) instead of landscape (wide).

4. The mass spectra for tentatively identified compounds (TICs) will also be presented as a portrait view. The compound matching information summary is contained below the header information and includes a "quality" ranking, similar to the Finnigan "PUR" (purity) ranking.

We hope this information is beneficial to you. If, however, there are any questions or, if you need any more information please feel free to contact a member of your project management team at 1-800-833-5097.

Robert E. Meierer

Robert E. Meierer
Vice President & General Manager

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Quality Assurance Notice

In some instances, manual adjustments of the software are necessary to provide an accurate quantitation of a compound. These adjustments are performed by the data reviewer, GC/MS operator or GC chemist. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for each compound to demonstrate the accuracy of the adjustment whenever the adjustment involves a manual integration. Adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration as follows:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed by the data reviewer, GC/MS operator or GC chemist in order to provide the most accurate area count as possible for the peak.

For GC analyses, an "M" flag may also indicate instances in which a peak is "unassigned" to a particular compound and "reassigned" to another compound. This situation would occur when two compounds co-elute on only one column.

H - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound, and that the data reviewer or GC/MS operator also performed a manual integration of the chosen peak. The manual integration was performed by the data reviewer or GC/MS operator in order to provide the most accurate area count as possible for the peak.

L - Denotes that the data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternative peak. The software still performs the integration.

ML - Denotes that the data reviewer or GC/MS operator has selected an alternate library search and a manual integration was also performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

With the introduction of the current EPA CLP SOW (Document Number OLM03.0, plus revisions) additional explanations for manual editing/integration are required. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in GC/MS and GC data packages.

Robert E. Meierer
Vice President & General Manager

Revision 1 (2/20/95)

B. Form I and Form I – TIC

Organic Analysis Data Sheet (OADS) and Tentatively Identified Compounds (TICs)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683865

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083865C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683865

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083865C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683865

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083865C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	1900	JB
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683867

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083867A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	50	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	100	
75-34-3	1,1-Dichloroethane	37	J
540-59-0	1,2-Dichloroethene (total)	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	650	
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	50	U
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	6	J
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (Total)	50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683867

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083867A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	50	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW10

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683867

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083867A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2600	JB
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683859

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083859C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	28	
540-59-0	1,2-Dichloroethene (total)	8	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	8	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683859

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083859C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	2	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW11

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683859

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083859C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	1200	JB
2.		LABORATORY ARTIFACT	1.51	1100	J
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW17

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683873

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083873A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	5	J
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	3	J
75-34-3	1,1-Dichloroethane	170	
540-59-0	1,2-Dichloroethene (total)	80	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	1	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	24	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	48	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW17

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683873

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083873A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	12	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW17

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683873

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083873A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2200	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683869

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83869B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 15.4

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	150	U
74-83-9	Bromomethane	150	U
75-01-4	Vinyl Chloride	150	U
75-00-3	Chloroethane	150	U
75-09-2	Methylene Chloride	150	U
67-64-1	Acetone	150	U
75-15-0	Carbon Disulfide	150	U
75-35-4	1,1-Dichloroethene	360	
75-34-3	1,1-Dichloroethane	160	
540-59-0	1,2-Dichloroethene (total)	150	U
67-66-3	Chloroform	150	U
107-06-2	1,2-Dichloroethane	150	U
78-93-3	2-Butanone	150	U
71-55-6	1,1,1-Trichloroethane	2700	
56-23-5	Carbon Tetrachloride	150	U
75-27-4	Bromodichloromethane	150	U
78-87-5	1,2-Dichloropropane	150	U
10061-01-5	cis-1,3-Dichloropropene	150	U
79-01-6	Trichloroethene	150	U
124-48-1	Dibromochloromethane	150	U
79-00-5	1,1,2-Trichloroethane	150	U
71-43-2	Benzene	150	U
10061-02-6	trans-1,3-Dichloropropene	150	U
75-25-2	Bromoform	150	U
108-10-1	4-Methyl-2-Pentanone	150	U
591-78-6	2-Hexanone	150	U
127-18-4	Tetrachloroethene	18	J
79-34-5	1,1,2,2-Tetrachloroethane	150	U
108-88-3	Toluene	150	U
108-90-7	Chlorobenzene	150	U
100-41-4	Ethylbenzene	150	U
100-42-5	Styrene	150	U
1330-20-7	Xylene (Total)	150	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683869

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83869B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 15.4

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	150	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683869

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83869B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 15.4

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	10000	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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10.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683841

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083841C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	4	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	6	J
75-34-3	1,1-Dichloroethane	180	
540-59-0	1,2-Dichloroethene (total)	54	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	31	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	1	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	19	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	46	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683841

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083841C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683841

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083841C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2000	JB
2.					
3.					
4.					
5.					
6.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683875

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083875C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683875

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083875C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683875

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083875C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2000	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683863

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83863B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	25	U
74-83-9	Bromomethane	25	U
75-01-4	Vinyl Chloride	20	J
75-00-3	Chloroethane	11	J
75-09-2	Methylene Chloride	5	J
67-64-1	Acetone	25	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	140	
540-59-0	1,2-Dichloroethene (total)	370	
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	88	
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	12	J
10061-02-6	trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	25	U
591-78-6	2-Hexanone	25	U
127-18-4	Tetrachloroethene	33	
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Xylene (Total)	25	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683863

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83863B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	25	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW6

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683863

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83863B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.78	4400	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683857

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083857C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	6	J
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	3	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	6	J
75-34-3	1,1-Dichloroethane	74	
540-59-0	1,2-Dichloroethene (total)	91	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	6	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	2	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	14	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	5	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	31	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683857

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083857C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	14	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW8

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683857

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083857C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.77	2300	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683861

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083861C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683861

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083861C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLK1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683861

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083861C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.82	190	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683842

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083842C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	70	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	49	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	50	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	39	
108-90-7	Chlorobenzene	46	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683842

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083842C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683843

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083843C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	71	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	49	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	51	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	42	
108-90-7	Chlorobenzene	46	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683843

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083843C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

C. Form II

System Monitoring Compound Summary (VOA) and Surrogate Spike Analysis Results (SV & PEST)

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKVN	96	94	102		0
02	TRIPBLK1	98	90	101		0
03	MW1	94	92	105		0
04	MW1MS	94	98	100		0
05	MW1MSD	96	97	100		0
06	MW3	97	94	110		0
07	MW8	93	92	113		0
08	MW11	90	91	107		0
09	MW4	102	91	112		0
10	VBLKMH	92	93	100		0
11	MW10	96	93	100		0
12	MW17	91	91	106		0
13	VBLKJD	102	91	98		0
14	MW6	98	93	107		0
15	MW2	96	91	98		0
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

D. Form III

Matrix Spike / Matrix Spike Duplicate Results

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix Spike - EPA Sample No.: MW1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	70.45	141	61-145
Trichloroethene	50.00	0.000	48.79	98	71-120
Benzene	50.00	0.000	50.31	101	76-127
Toluene	50.00	0.000	39.02	78	76-125
Chlorobenzene	50.00	0.000	45.96	92	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	71.33	143	1	14	61-145
Trichloroethene	50.00	49.20	98	0	14	71-120
Benzene	50.00	50.73	101	0	11	76-127
Toluene	50.00	42.34	85	8	13	76-125
Chlorobenzene	50.00	46.31	93	1	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

E. **Form IV, Form I, and Form I – TIC**

Method Blank Summary, OADS, and TICs

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: CB950215B56.D Lab Sample ID: VBLKJD

Date Analyzed: 02/15/95 Time Analyzed: 1918

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW6	683863	C3R83863B56.D	2017
02	MW2	683869	C3R83869B56.D	2047
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
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29				
30				

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.73	16	J
2.					
3.					
4.					
5.					
6.					
7.					
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4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: CC950215A56.D Lab Sample ID: VBLKMH

Date Analyzed: 02/15/95 Time Analyzed: 1350

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW10	683867	CR083867A56.D	1445
02	MW17	683873	CR083873A56.D	1549
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
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COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKMH

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CC950215A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKMH

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CC950215A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKMH

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CC950215A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.72	14	J
2.					
3.					
4.					
5.					
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7.					
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30.					

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: CB950215C56.D Lab Sample ID: VBLKVN

Date Analyzed: 02/15/95 Time Analyzed: 0045

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIPBLK1	683861	CN083861C56.D	0210
02	MW1	683865	CN083865C56.D	0235
03	MW1MS	683842	CN083842C56.D	0309
04	MW1MSD	683843	CN083843C56.D	0335
05	MW3	683841	CN083841C56.D	0440
06	MW8	683857	CN083857C56.D	0515
07	MW11	683859	CN083859C56.D	0550
08	MW4	683875	CN083875C56.D	1027
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30				

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKVN

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215C56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKVN

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215C56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKVN

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215C56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	100	J
2.					
3.					
4.					
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F. Form VIII

Internal Standard Area Data

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID (Standard): CZ950214B56.D Date Analyzed: 02/14/95

Instrument ID: F50056 Time Analyzed: 2312

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	93327	5.88	391908	7.54	382873	12.04
	UPPER LIMIT	186654	6.38	783816	8.04	765746	12.54
	LOWER LIMIT	46664	5.38	195954	7.04	191436	11.54
	EPA SAMPLE No.						
01	VBLKVN	95043	5.79	367208	7.43	381478	11.94
02	TRIPBLK1	83776	5.87	348355	7.51	354104	12.03
03	MW1	77286	5.82	338930	7.46	351351	11.97
04	MW1MS	84199	5.79	338231	7.45	347634	11.95
05	MW1MSD	87004	5.81	345311	7.45	355538	11.95
06	MW3	68861	5.77	310902	7.40	318466	11.90
07	MW8	66972	5.74	301721	7.38	315492	11.89
08	MW11	71822	5.77	312941	7.41	325980	11.89
09	MW4	66353	5.78	298674	7.42	310753	11.93
10							
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21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID (Standard): CS950215B56.D Date Analyzed: 02/15/95

Instrument ID: F50056 Time Analyzed: 1837

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE No.	IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	81762	5.84	329717	7.50	340942	12.02
	UPPER LIMIT	163524	6.34	659434	8.00	681884	12.52
	LOWER LIMIT	40881	5.34	164858	7.00	170471	11.52
01	VBLKJD	92571	5.86	337927	7.51	354446	12.03
02	MW6	74605	5.78	321575	7.41	347652	11.92
03	MW2	84372	5.79	330015	7.43	360607	11.93
04							
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22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID (Standard): CS950215A56.D Date Analyzed: 02/15/95

Instrument ID: F50056 Time Analyzed: 1230

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	77400	5.87	322823	7.52	327066	12.03
	UPPER LIMIT	154800	6.37	645646	8.02	654132	12.53
	LOWER LIMIT	38700	5.37	161412	7.02	163533	11.53
	EPA SAMPLE No.						
01	VBLKMH	85629	5.83	321148	7.47	337671	11.99
02	MW10	79476	5.84	317293	7.50	335941	12.02
03	MW17	68866	5.81	309034	7.45	321245	11.95
04							
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22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

CompuChem Environmental Corporation

II. SAMPLE DATA PACKAGE

3/90 STATEMENT OF WORK

The Sample Data Package shall include data for analyses of all samples in one Sample Delivery Group (SDG), including field samples, reanalyses, blanks, matrix spikes, and matrix spike duplicates. The Sample Data Package consists of the following :

A. SDG Narrative

B. Traffic Reports

C. Volatile Data

D. Semivolatile Data

E. Pesticide / PCB Data

THIS PACKAGE CONTAINS :

___ R A S data only
___ S A S data only
___ R A S + S A S data

___ Regional request / additional data
___ Other (see explanation below):

_____

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30073

SDG # : 00001

A. SDG NARRATIVE

This document shall be clearly labeled "SDG Narrative" and shall contain : laboratory name; sample numbers in the Sample Delivery Group (SDG), differentiating between initial analyses and reanalyses; SDG number; Contract number; and detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples reported in the data package.

Whenever data from sample reanalyses are submitted, the Contractor shall state in the SDG Narrative, for each analysis, whether it considers the reanalysis to be billable.

The Contractor must also include documentation of any internal quality control processes used, a summary of corrective actions taken, and the resolution.

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SDG NARRATIVE

Case # 30073
SDG # 00001
Contract # (3-90)-REVS

Sample Identifications: MW3, MW8, MW11, TRIPBLK1, MW6, MW1, MW10, MW2, MW17, MW4

The ten (10) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on February 10, 1995. The samples were scheduled for the requested analyses of the volatile fraction. These samples were analyzed following 3/90 Statement of Work (SOW) (document OLM01.9) protocol, with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30073, SDG 00001 are included in the sample data sections.

VOLATILES:
Analysis holding time requirements were met for all of these samples. There were a number of halogenated alkane and halogenated alkene Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) at varyingconcentrations in these samples. Tentatively Identified Compounds (TIC's) found in all of these samples could be characterized as laboratory artifacts which may not be a sample constituent.

Due to the results of a screen of MW10, the sample was initially analyzed using 1 mL of raw sample.

The pH values of these samples are tabulated on the attached batch sheet(s).

All of the system monitoring compounds met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blanks met all quality control criteria. One method blank contained a levels of the common laboratory solvent methylene chloride within allowable limits. A laboratory artifact was present as a TIC in three of the method blanks.

The associated duplicate matrix spikes met all advisory accuracy and precision criteria.

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

2/27/95

Daniel E. Boone Jr.
Technical Reviewer
February 27, 1995

Note: This report is paginated for reference and accountability in decreasing numerical sequence.

CompuChem Environmental Corporation

WATER BATCH SHEET

Date Batched 2/13/95
Case 30073.000001
Instrument Code 428

LINKER NWSW TAT 28 SOW 3/90(42)

	CCN	CLIENT ID	QC SAMPLE TYPE	QC SAMPLE ORIGINAL	pH	TIME	DATE RUN	INST. #	OPERATOR	H/T	VOLUME/ INSTRUCTIONS	SCREEN BOTTLE #	ANAL BOT
1)	683842	MW1MS	SS	683865		3:09	2/15/95	56	1948	3/20	989	of	
2)	683843	MW1MSD	SS	683865		3:35		56	1948		1624	of	
3)	683844		BS			4:06		56	1948			of	
4)	683841	MW3			1	4:40		56	1948		2V	1 of 2	2
5)	683857	MW8			1	5:15		56	1948		2V	1 of 2	2
6)	683859	MW11			1	5:50		56	1948		2V	1 of 2	2
7)	683861	(2/13/95) ATRIPBLK1			1	2:10	2/15/95	56	1948		2V TB	of	1
8)	683863	MW6			1	6:25		56	1948		2V	1 of 2	2
9)	683865	MW1			1	2:35		56	1948		4V QC	1 of 4	2
10)	683867	MW10			1	6:59		56	1948		2V	1 of 2	2
11)	683869	MW2			1	7:39		56	1948		2V	1 of 2	2
12)	683873	MW17			1	9:38			2141		2V 25mL	1 of 2	2
13)	683875	MW4			1	10:27					2V RN	1 of 2	2
14)	683877	VHBLK43			1	9:59	2.16.95	56	2141		B1	of	1
15)	683878	44									B2	of	
16)	683863R1				—	11:00	2.15.95	56	2141		2mL	of	1
17)	683867R1				—	14:45					1mL	of	
18)	683869R1				—	15:15					700µl RN	of	
19)	683873R1				—	15:49						of	
20)	683863R2					16:22			2011		2mL	of	1
21)	683869R2					17:35					325µl	of	1
22)	683863R3					20:17					2mL	of	2
23)	683867R3					20:47						of	

Relinquished By M. Murchison Date 2-13-95 Received By Temporary Storage Date 2-13-95
Relinquished By T. Storage Date 2/15/95 Received By V.A. Smith Date 2/15/95
Relinquished By V.A. Smith Date 2/15/95 Received By MB Date 2.15.95

Log Page Updated

PP# 115 + DICHLORODIFLUOROMETHANE

#6931

30073 00001 SAMPLE DATA PACKAGE

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CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, flag each result with the specific data reporting qualifiers listed below. Up to five qualifiers may be reported on Form I for each compound. The qualifiers to be used are:

U - This flag indicates the compound was analyzed for but not detected. The CRQL shall be adjusted to reflect any dilution and/or percent moisture.

J - This flag indicates an estimated value. This flag is used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J.

N - This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N flag is not used.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a P.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; use a laboratory-defined flag instead (see the X qualifier).

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag shall be used for a tentatively identified compound as well as for a positively identified target compound.

The combination of flags BU or UB is expressly prohibited. Blank contaminants are flagged B only when they are detected in the sample.

E - This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract shall be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range shall have the

concentration flagged with an E on Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the DL suffix appended to the sample number.

D – This flag is used for all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is reanalyzed at a higher dilution factor, as in the E flag, the DL suffix is appended to the sample number on Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

A – This flag indicates that a tentatively identified compound is a suspected aldol–condensation product.

X – Other specific flags may be required to properly define the results. If used, the flags shall be fully described, with the description attached to the sample data summary package and the SDG Narrative. Begin by using X. If more than one flag is required, use Y and Z as needed. If more than five qualifiers are required for a sample result, use the X flag to represent a combination of several flags. For instance, the X flag might combine the A, B, and D flags for some samples. The laboratory–defined flags are limited to X, Y, and Z.

QUALITY ASSURANCE NOTICE

Specific guidelines are presented in the EPA Contract Laboratory Program Statement of Work for the positive qualitative identification of target compounds through mass spectral interpretation. Applying these guidelines absolutely may not be possible when the nature of the sample is less than pure reference material. The mass spectral interpretation specialist exercises technical judgement in performing a qualitative analysis when interferences are present. In instances when the mass spectral pattern of a positively identified compound demonstrates interferences or coelution from one or more additional compounds, either extraneous unknowns, internal standards, or surrogate standards, a "+" sign is added to the top of the dual spectra page.

CompuChem's Quality Assurance Department

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Notification To Clients Regarding Deliverables Generated By New Gas Chromatograph/Mass Spectrometer (GC/MS) Data System

CompuChem Environmental Corporation has upgraded their GC/MS data systems in order to provide state-of-the-art data review and forms/hardcopy generation capabilities. While our GC/MS instruments are products of Finnigan, they now will be networked to systems consisting of the Hewlett-Packard (H-P) ChemServer utilizing ThruPut's Envision product. Clients familiar with the hardcopy output from H-P GC/MS instruments will notice similarities to our new deliverables. These new hardware/software systems, however, provide dramatic speed and performance enhancements.

As a service to our clients, the following is a listing of the major differences that will be observed when comparing our new deliverables packages against the old ones:

1. The new GC/MS Reconstructed Ion Chromatogram (RIC) presentation has the following features:

   - the retention time, along the x-axis is labeled at exact minute intervals,
   - separate line items in the RIC header are included for instrument ID, sample ID, and volume injected,
   - header information includes the GC column phase and diameter,
   - all internal standard and surrogate peaks are labeled with the compound name and the exact retention time rather than "IS#," "SS#," and associated scan number,
   - on the two page RIC for semivolatile injections, there is a display overlap between the two pages.
   - some peaks may be flagged with a "+." This indicates that more than one compound is eluting at that retention time.

2. The new quantitation report presentation has the following features:

   - the number of quantitation report pages is reduced for CLP analyses,
   - the internal standards are presented first, followed by the surrogate compounds, all in increasing retention time order,
   - the retention time is presented as minutes and decimal minutes,
   - the compound name appears on the same line as the data/results for that compound (rather than on a separate page) and the displays include both on-column and final concentrations,
   - for assistance in data review/validation a number of flags are utilized - on the left hand side of the quantitation report page a[illegible] on the right side.

   Left Side Flags

*	denotes internal standard compound,
$	denotes surrogate compound,
M	denotes summary compounds; e.g. - total xylenes.

   Right Side Flags

(a)	denotes those compounds whose results will be flagged with a "J" (estimate) on the Form I,
(A)	denotes those compounds whose results will be flagged with an "E" (concentration greater than highest calibration standard) on the Form I,
(H)	denotes that the data reviewer selected a peak other than the one selected by the software routine,
(M)	denotes that the data reviewer has manually integrated a compound,
(R)	denotes that a recovery for a surrogate or spike compound has failed acceptance criteria,
(T)	denotes that the retention time for an internal standard has shifted outside of acceptance criteria.,
(Q)	denotes that unexpected ion ratios obtained.

3. The mass spectra of target analytes will be presented on one page rather than the two from the Finnigan data system. The printing of the spectra will be portrait (tall) instead of landscape (wide).

4. The mass spectra for tentatively identified compounds (TICs) will also be presented as a portrait view. The compound matching information summary is contained below the header information and includes a "quality" ranking, similar to the Finnigan "PUR" (purity) ranking.

We hope this information is beneficial to you. If, however, there are any questions or, if you need any more information please feel free to contact a member of your project management team at 1-800-833-5097.

Robert E. Meierer

Robert E. Meierer
Vice President & General Manager

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Quality Assurance Notice

In some instances, manual adjustments of the software are necessary to provide an accurate quantitation of a compound. These adjustments are performed by the data reviewer, GC/MS operator or GC chemist. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for each compound to demonstrate the accuracy of the adjustment whenever the adjustment involves a manual integration. Adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration as follows:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed by the data reviewer, GC/MS operator or GC chemist in order to provide the most accurate area count as possible for the peak.

For GC analyses, an "M" flag may also indicate instances in which a peak is "unassigned" to a particular compound and "reassigned" to another compound. This situation would occur when two compounds co-elute on only one column.

H - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound, and that the data reviewer or GC/MS operator also performed a manual integration of the chosen peak. The manual integration was performed by the data reviewer or GC/MS operator in order to provide the most accurate area count as possible for the peak.

L - Denotes that the data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternative peak. The software still performs the integration.

ML - Denotes that the data reviewer or GC/MS operator has selected an alternate library search and a manual integration was also performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

With the introduction of the current EPA CLP SOW (Document Number OLM03.0, plus revisions) additional explanations for manual editing/integration are required. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in GC/MS and GC data packages.

Robert E. Meierer
Vice President & General Manager

Revision 1 (2/20/95)

B. TRAFFIC REPORTS

A copy of the Traffic Report for all of the samples in the SDG. The Traffic Reports shall be arranged in increasing EPA number order, considering both letters and numbers in ordering samples.

CHAIN OF CUSTODY RECORD

30073

SDG1

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 544-5491

Client: Watauga County, NC
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC 28607
Phone: (704) 265-8003 Fax:(704) 265-8003

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 3rd Assessment Monitoring
JN: 6520-20 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note
Carrier: FEDERAL EXPRESS
Tracking No.: HKYA 9900

Box 1: Matrix
SW. Surface Water
GW. Groundwater
L. Leachate
S. Soil
T. Trip Blank
E. Equipment Blank
P. Product
O. Other

Box 2: Preservative
A. HCl
B. HNO_3
C. H_2SO_4
D. $Na_2S_2O_3$
E. NaOH
F. ZnAc
G. Other (specify)
H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
MW1	2/6	1500	GW	..	U	G	<2		3	2	1	SEE ATTACHED PARAMETER LISTS
MW1 MS	2/6	1500	GW	..	U	G	<2	X	1	1		** TOTAL METALS - PRESERVATIVE: NITRIC ACID
MW1 MSD	2/6	1500	GW	..	U	G	<2	X	1	1		VOLATILES - PRESERVATIVE: HCl
MW1 MS/SD	2/6	1500	GW	..	U	G	<2	X	1		1	Attn: Kathy Dever — Hold 51,52,53,54,55, and for processing with SDG3 which will arrive Saturday 2-11-95.
MW6	2/6	1630	GW	..	U	G	<2		3	2	1	
MW 3	2/6	1745	GW	..	U	G	<2		3	2	1	
MW 11	2/7	0925	GW	..	U	G	<2		3	2	1	
MW 10	2/7	1005	GW	..	U	G	<2		3	2	1	
MW 8	2/7	1055	GW	..	U	G	<2		3	2	1	

Client's Special Instructions: TOTAL CLP VOA LIST + DICHLORODIFLUOROMETHANE + TIC ANALYSIS; CLP TOTAL METALS; Ba, Cd, Fe, Hg (TOTALS ONLY)

Lab: Received in Good Condition? ✓ Yes ___ No Custody Seal Intact? ✓ Yes ___ No Temp. on arrival 4 Received on Ice ✓ Describe problems, if any:

Sampler Name (print): JEFF PACK	Date: 2-8-95	#1 Relinquished By (Sig.): Jeff Pack	Date: 2-8-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: Jeff Pack	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:	
Sampler Name (print): ERIK RUDIN	Date: 2-8-95	#1 Received By (Sig.): B Payne	Date: 2-8-95	#2 Received By (Sig.): J. Purdie	Date: 2-10-95	60 (No.
Sampler Signature: Erik Rudin	Time: 1300	Company Name: Watauga Co. Lf.	Time: 1300	Company Name: CompuChem	Time: 0830	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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30073 00001 SAMPLE DATA PACKAGE

CHAIN OF CUSTODY RECORD

30073 SDG 1

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 544-5491

Client: Watauga County, NC Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC 28607 Phone: (704) 265-8003 Fax:(704) 265-8003	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 3rd Assessment Monitoring JN: 6520-20 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? _X_ Yes ___ No (See Note 1) Carrier: FEDERAL EXPRESS Tracking No.: HKYA9900

Box 1: Matrix SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	Box 2: Preservative A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	Box 3: Filtered/Unfiltered F. Filtered U. Unfiltered	Box 4: Sample Type C. Composite G. Grab	Copy to Consultant: _X_ Yes ___ No Bill: _X_ Client ___ Consultant Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 1995	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment) CLP VOLATILES	CLP TOTAL METALS									Special Instructions/Comments
MW 17	2/7	1710	GW	..	U	G	<2		3	2	1									
MW 4	2/7	1805	GW	..	U	G	<2		3	2	1									
S3	2/7	1415	SW	..	U	G	<2		3	2	1									
S1	2/7	1425	SW	..	U	G	<2		3	2	1									
S2	2/7	1440	SW	..	U	G	<2		3	2	1									
S5	2/7	1455	SW	..	U	G	<2		3	2	1									
L1	2/7	1505	L	..	U	G	<2		3	2	1									
S4	2/7	1620	SW	..	U	G	<2		3	2	1									
MW 2	2/8	0945	GW	..	U	G	<2		3	2	1									

SEE ATTACHED PARAMETER LISTS

** TOTAL METALS - PRESERVATIVE: NITRIC ACID
VOLATILES - PRESERVATIVE: HCl

Attn: Kathy Dever - hold S1, S2, S3, S4, S5, and L1 for processing with SDG 3 which will arrive Saturday 2-11-95

Client's Special Instructions: TOTAL CLP VOA LIST + DICHLORODIFLUOROMETHANE + TIC ANALYSIS; CLP TOTAL METALS; Ba, Cd, Fe, Hg (TOTALS ONLY)

Lab: Received in Good Condition? ✓Yes ___No Custody Seal Intact? ✓Yes ___No Temp. on arrival 4 Received on Ice ✓ Describe problems, if any:

Sampler Name (print): JEFF PACK	Date: 2-8-95	#1 Relinquished By (Sig.): Jeff Pack	Date: 2-8-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: Jeff Pack	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:	
Sampler Name (print): ERIK RUDIN	Date: 2-8-95	#1 Received By (Sig.): B J Payne	Date: 2-8-95	#2 Received By (Sig.): J. Purdie	Date: 2-10-95	60 (No. Da
Sampler Signature: Erik Rudin	Time: 1300	Company Name: Watauga Co. Tx.	Time: 1900	Company Name: CompuChem	Time: 0930	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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30073 00001 SAMPLE DATA PACKAGE

CHAIN OF CUSTODY RECORD

30073 (SDG 1)

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 544-5491

Client: Watauga County, NC
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC 28607
Phone: (704) 265-8003 Fax:(704) 265-8003

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 3rd Assessment Monitoring
JN: 6520-20 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note 1)
Carrier: FEDERAL EXPRESS
Tracking No.: HKYA9900

Box 1: Matrix
SW. Surface Water
GW. Groundwater
L. Leachate
S. Soil
T. Trip Blank
E. Equipment Blank
P. Product
O. Other

Box 2: Preservative
A. HCl
B. HNO_3
C. H_2SO_4
D. $Na_2S_2O_3$
E. NaOH
F. ZnAc
G. Other (specify)
H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
TRIP BLANK 1	2/6	1200	T	..	U	G	<2		3	2	1	SEE ATTACHED PARAMETER LISTS
				..	U	G	<2					** TOTAL METALS - PRESERVATIVE: NITRIC ACID
				..	U	G	<2					VOLATILES - PRESERVATIVE: HCl
				..	U	G	<2					Attn: Kathy Dover: Hold S1, S2, S3, S4, S5, and L for processing with SDG3 which will arrive Saturday 2-11-95.
				..	U	G	<2					
				..	U	G	<2					
				..	U	G	<2					
				..	U	G	<2					
				..	U	G	<2					

Client's Special Instructions: TOTAL CLP VOA LIST + DICHLORODIFLUOROMETHANE + TIC ANALYSIS; CLP TOTAL METALS; Ba, Cd, Fe, Hg (TOTALS ONLY)

Lab: Received in Good Condition? ✓ Yes ___ No Custody Seal Intact? ✓ Yes ___ No Temp. on arrival 4 Received on Ice ✓ Describe problems, if any:

Sampler Name (print): JEFF PACK	Date: 2-8-95	#1 Relinquished By (Sig.): J. Pack	Date: 2-8-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: J. Pack	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:	
Sampler Name (print): ERIK RYDIN	Date: 2.8.95	#1 Received By (Sig.): B. Payne	Date: 2-8-95	#2 Received By (Sig.): J. Purdie	Date: 2-10-95	60 (No. Days)
Sampler Signature: E. Rydin	Time: 1300	Company Name: Watauga Co. Lf.	Time: 1300	Company Name: CompuChem	Time: 0830	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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30073 00001 SAMPLE DATA PACKAGE

CompuChem Environmental Corporation

C. VOLATILE DATA

1. Q C Summary

2. Sample Data

3. Standards. Data

4. Raw Q C Data

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30073

SDG # : 00001

1. Q C Summary

a. Form II VOA
System Monitoring Compound Summary

b. Form III VOA
Matrix Spike / Matrix Spike Duplicate Summary

c. Form IV VOA
Method Blank Summary

d. Form V VOA
GC/MS Instrument Performance Check

e. Form VIII VOA
Internal Standard Area and Retention Time Summary

a. Form II VOA

System Monitoring Compound Summary

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKVN	96	94	102		0
02	TRIPBLK1	98	90	101		0
03	MW1	94	92	105		0
04	MW1MS	94	98	100		0
05	MW1MSD	96	97	100		0
06	MW3	97	94	110		0
07	MW8	93	92	113		0
08	MW11	90	91	107		0
09	MW4	102	91	112		0
10	VBLKMH	92	93	100		0
11	MW10	96	93	100		0
12	MW17	91	91	106		0
13	VBLKJD	102	91	98		0
14	MW6	98	93	107		0
15	MW2	96	91	98		0
16						
17						
18						
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28						
29						
30						

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

b. Form III VOA

Matrix Spike / Matrix Spike Duplicate Summary

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix Spike - EPA Sample No.: MW1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	70.45	141	61-145
Trichloroethene	50.00	0.000	48.79	98	71-120
Benzene	50.00	0.000	50.31	101	76-127
Toluene	50.00	0.000	39.02	78	76-125
Chlorobenzene	50.00	0.000	45.96	92	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	71.33	143	1	14	61-145
Trichloroethene	50.00	49.20	98	0	14	71-120
Benzene	50.00	50.73	101	0	11	76-127
Toluene	50.00	42.34	85	8	13	76-125
Chlorobenzene	50.00	46.31	93	1	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

c. Form IV VOA

Method Blank Summary

If more than a single form is necessary, forms must be arranged in chronological order by date of analysis of the blank.

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: CB950215B56.D Lab Sample ID: VBLKJD

Date Analyzed: 02/15/95 Time Analyzed: 1918

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW6	683863	C3R83863B56.D	2017
02	MW2	683869	C3R83869B56.D	2047
03				
04				
05				
06				
07				
08				
09				
10				
11				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: CC950215A56.D Lab Sample ID: VBLKMH

Date Analyzed: 02/15/95 Time Analyzed: 1350

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW10	683867	CR083867A56.D	1445
02	MW17	683873	CR083873A56.D	1549
03				
04				
05				
06				
07				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: CB950215C56.D Lab Sample ID: VBLKVN

Date Analyzed: 02/15/95 Time Analyzed: 0045

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIPBLK1	683861	CN083861C56.D	0210
02	MW1	683865	CN083865C56.D	0235
03	MW1MS	683842	CN083842C56.D	0309
04	MW1MSD	683843	CN083843C56.D	0335
05	MW3	683841	CN083841C56.D	0440
06	MW8	683857	CN083857C56.D	0515
07	MW11	683859	CN083859C56.D	0550
08	MW4	683875	CN083875C56.D	1027
09				
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COMMENTS:

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: BH950214B56.D BFB Injection Date: 02/14/95

Instrument ID: F50056 BFB Injection Time: 2300

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.2
75	30.0 - 66.0% of mass 95	46.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.3 (0.3)1
174	50.0 - 120.0% of mass 95	88.8
175	4.0 - 9.0% of mass 174	6.2 (7.0)1
176	93.0 - 101.0% of mass 174	87.1 (98.1)1
177	5.0 - 9.0% of mass 176	5.5 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	CZ950214B56.D	02/14/95	2312
02	VBLKVN	VBLKVN	CB950215C56.D	02/15/95	0045
03	TRIPBLK1	683861	CN083861C56.D	02/15/95	0210
04	MW1	683865	CN083865C56.D	02/15/95	0235
05	MW1MS	683842	CN083842C56.D	02/15/95	0309
06	MW1MSD	683843	CN083843C56.D	02/15/95	0335
07	MW3	683841	CN083841C56.D	02/15/95	0440
08	MW8	683857	CN083857C56.D	02/15/95	0515
09	MW11	683859	CN083859C56.D	02/15/95	0550
10	MW4	683875	CN083875C56.D	02/15/95	1027
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: BF950215B56.D BFB Injection Date: 02/15/95

Instrument ID: F50056 BFB Injection Time: 1825

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	21.3
75	30.0 - 66.0% of mass 95	49.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	50.0 - 120.0% of mass 95	86.0
175	4.0 - 9.0% of mass 174	5.9 (6.9)1
176	93.0 - 101.0% of mass 174	83.3 (96.9)1
177	5.0 - 9.0% of mass 176	5.4 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	CS950215B56.D	02/15/95	1837
02	VBLKJD	VBLKJD	CB950215B56.D	02/15/95	1918
03	MW6	683863	C3R83863B56.D	02/15/95	2017
04	MW2	683869	C3R83869B56.D	02/15/95	2047
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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d. Form V VOA

GC/MS Instrument Performance Check

BFB in chronological order by instrument.

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: BG950214B56.D BFB Injection Date: 02/14/95

Instrument ID: F50056 BFB Injection Time: 1725

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.1
75	30.0 - 66.0% of mass 95	47.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.2 (0.3)1
174	50.0 - 120.0% of mass 95	84.4
175	4.0 - 9.0% of mass 174	6.0 (7.1)1
176	93.0 - 101.0% of mass 174	82.5 (97.8)1
177	5.0 - 9.0% of mass 176	5.2 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	CT950214B56.D	02/14/95	1755
02	VSTD020	VSTD020	CU950214B56.D	02/14/95	1835
03	VSTD050	VSTD050	CV950214B56.D	02/14/95	1912
04	VSTD100	VSTD100	CW950214B56.D	02/14/95	1950
05	VSTD200	VSTD200	CY950214B56.D	02/14/95	2135
06					
07					
08					
09					
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID: BF950215A56.D BFB Injection Date: 02/15/95

Instrument ID: F50056 BFB Injection Time: 1217

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.8
75	30.0 - 66.0% of mass 95	48.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	91.3
175	4.0 - 9.0% of mass 174	6.3 (7.0)1
176	93.0 - 101.0% of mass 174	90.3 (99.0)1
177	5.0 - 9.0% of mass 176	5.7 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	CS950215A56.D	02/15/95	1230
02	VBLKMH	VBLKMH	CC950215A56.D	02/15/95	1350
03	MW10	683867	CR083867A56.D	02/15/95	1445
04	MW17	683873	CR083873A56.D	02/15/95	1549
05					
06					
07					
08					
09					
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e. Form VIII VOA

Internal Standard Area and Retention Time Summary

In chronological order by instrument.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID (Standard): CZ950214B56.D Date Analyzed: 02/14/95

Instrument ID: F50056 Time Analyzed: 2312

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	93327	5.88	391908	7.54	382873	12.04
	UPPER LIMIT	186654	6.38	783816	8.04	765746	12.54
	LOWER LIMIT	46664	5.38	195954	7.04	191436	11.54
	EPA SAMPLE No.						
01	VBLKVN	95043	5.79	367208	7.43	381478	11.94
02	TRIPBLK1	83776	5.87	348355	7.51	354104	12.03
03	MW1	77286	5.82	338930	7.46	351351	11.97
04	MW1MS	84199	5.79	338231	7.45	347634	11.95
05	MW1MSD	87004	5.81	345311	7.45	355538	11.95
06	MW3	68861	5.77	310902	7.40	318466	11.90
07	MW8	66972	5.74	301721	7.38	315492	11.89
08	MW11	71822	5.77	312941	7.41	325980	11.89
09	MW4	66353	5.78	298674	7.42	310753	11.93
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22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID (Standard): CS950215B56.D Date Analyzed: 02/15/95

Instrument ID: F50056 Time Analyzed: 1837

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	81762	5.84	329717	7.50	340942	12.02
	UPPER LIMIT	163524	6.34	659434	8.00	681884	12.52
	LOWER LIMIT	40881	5.34	164858	7.00	170471	11.52
	EPA SAMPLE No.						
01	VBLKJD	92571	5.86	337927	7.51	354446	12.03
02	MW6	74605	5.78	321575	7.41	347652	11.92
03	MW2	84372	5.79	330015	7.43	360607	11.93
04							
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18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Lab File ID (Standard): CS950215A56.D Date Analyzed: 02/15/95

Instrument ID: F50056 Time Analyzed: 1230

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	.77400	5.87	322823	7.52	327066	12.03
	UPPER LIMIT	154800	6.37	645646	8.02	654132	12.53
	LOWER LIMIT	38700	5.37	161412	7.02	163533	11.53
	EPA SAMPLE No.						
01	VBLKMH	85629	5.83	321148	7.47	337671	11.99
02	MW10	79476	5.84	317293	7.50	335941	12.02
03	MW17	68866	5.81	309034	7.45	321245	11.95
04							
05							
06							
07							
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15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

2. Sample Data

Sample data shall be arranged in packets with the Organic Analysis Data Sheet (Form I VOA, including Form I VOA-TIC), followed by the raw data for volatile samples. These sample packets should then be placed in increasing EPA number order, considering both letters and numbers in ordering samples.

. TCL Results - Organic Analysis Data Sheet (Form I VOA).
Tabulated results (identification and quantitation) of the specified target compounds.

. Tentatively Identified Compounds (Form I VOA-TIC).
This form must be included even if no compounds are found.

. Reconstructed total ion chromatogram (RIC) for each sample, sample extract, standard, blank and spike sample.

. For each sample, by each compound identified :

Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (TCL) that are identified in the sample and corresponding background-subtracted TCL standard mass spectra. Compound names must be clearly marked on all spectra.

Copies of mass spectra of nonsurrogate organic compounds (tentatively identified compounds) with associated best-match spectra (three best matches).

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683865

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083865C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683865

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083865C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683865

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083865C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	1900	JB
2.					
3.					
4.					
5.					
6.					
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23.					
24.					
25.					
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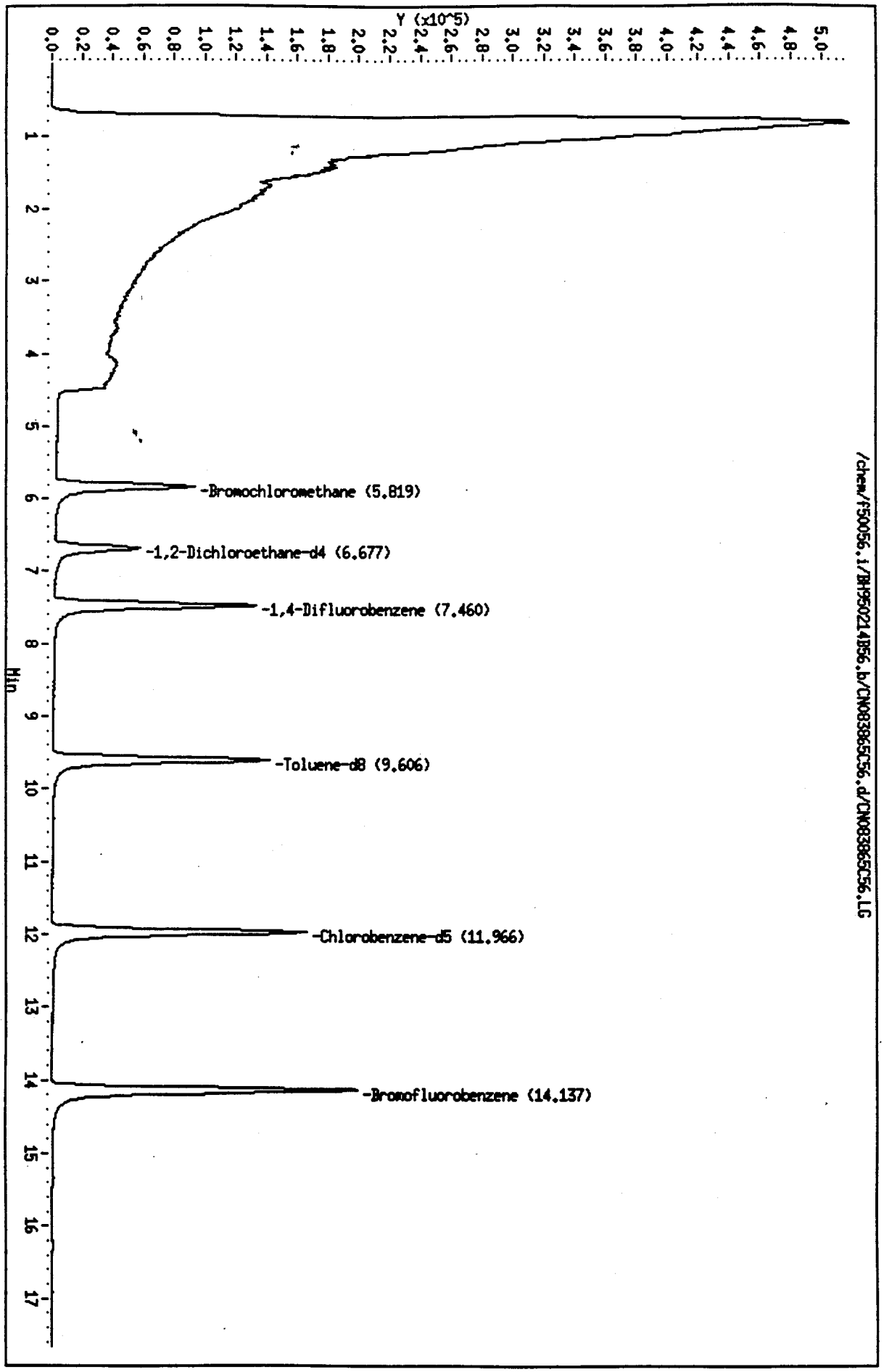
29.					
30.					


Data File: /chem/f50056.i/BH950214B56.b/CN083865C56.d
Date : 15-FEB-1995 02:35
Client ID: MW1
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^5)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Min
-Bromochloromethane (5.819)
-1,2-Dichloroethane-d4 (6.677)
-1,4-Difluorobenzene (7.460)
-Toluene-d8 (9.606)
-Chlorobenzene-d5 (11.966)
-Bromofluorobenzene (14.137)
/chem/f50056.i/BH950214B56.b/CN083865C56.d/CN083865C56.LG

Data File: /chem/f50056.i/BH950214B56.b/CN083865C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083865C56.d
Lab Smp Id: 683865 Client Smp ID: MW1
Inj Date : 15-FEB-1995 02:35
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.819	5.882	(1.000)	77286	250.0	
* 2 1,4-Difluorobenzene	114.00	7.460	7.536	(1.000)	338930	250.0	
* 3 Chlorobenzene-d5	117.00	11.966	12.042	(1.000)	351351	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.677	6.740	(1.147)	140756	263.2	52.65
$ 5 Toluene-d8	98.00	9.593	9.669	(0.802)	305426	234.8	46.96
$ 6 Bromofluorobenzene	95.00	14.137	14.213	(1.181)	269766	228.8	45.77
7 Dichlorodiflouromethane	85.00		0.947		Compound Not Detected.		
8 Chloromethane	50.00		1.111		Compound Not Detected.		
9 Vinyl Chloride	62.00		1.237		Compound Not Detected.		
10 Bromomethane	94.00		1.590		Compound Not Detected.		
11 Chloroethane	64.00		1.729		Compound Not Detected.		
12 1,1-Dichloroethene	96.00		2.853		Compound Not Detected.		
13 Acetone	43.00		3.193		Compound Not Detected.		
14 Carbon Disulfide	76.00		2.954		Compound Not Detected.		
15 Methylene Chloride	84.00	3.661	3.698	(0.629)	3240	7.28	1.46(a)
16 trans-1,2-Dichloroethene	96.00		4.090		Compound Not Detected.		
17 1,1-Dichloroethane	63.00		4.683		Compound Not Detected.		
18 cis-1,2-Dichloroethene	96.00		5.567		Compound Not Detected.		
19 2-Butanone	43.00		5.781		Compound Not Detected.		
20 Chloroform	83.00		6.135		Compound Not Detected.		
21 1,1,1-Trichloroethane	97.00		6.210		Compound Not Detected.		
22 Carbon Tetrachloride	117.00		6.437		Compound Not Detected.		
23 Benzene	78.00		6.753		Compound Not Detected.		

Data File: /chem/f50056.i/BH950214B56.b/CN083865C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.854		Compound Not Detected.		
25	Trichloroethene	130.00		7.801		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.104		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.341		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.745		Compound Not Detected.		
30	Toluene	91.00		9.782		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.313		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.552		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.616		Compound Not Detected.		
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.693		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BH950214B56.b/CN083865C56.d

Date : 15-FEB-1995 02:35

Client ID: MW1

Instrument: f50056.i

Sample Info:

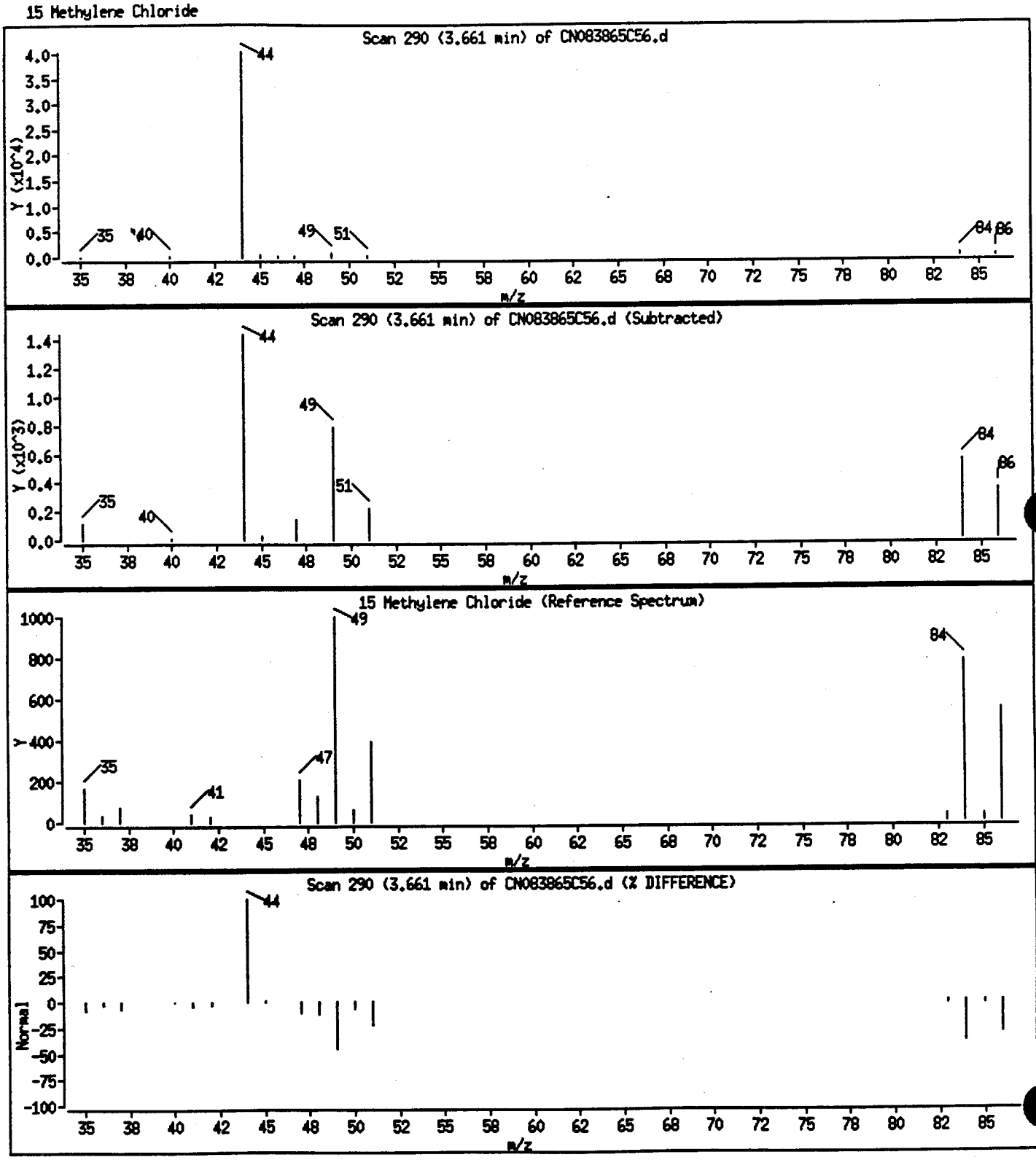
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BH950214B56.b/CN083865C56.d

Date : 15-FEB-1995 02:35

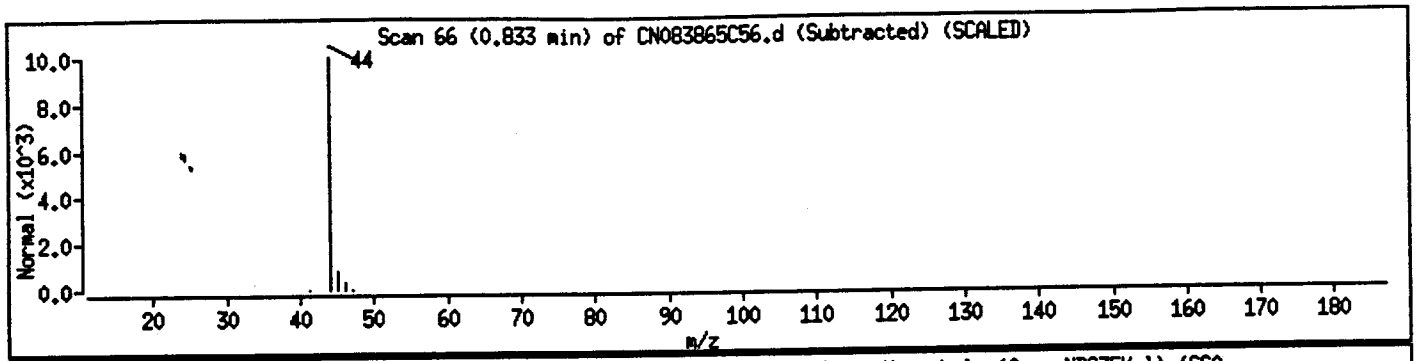
Client ID: MW1 Instrument: f50056.i

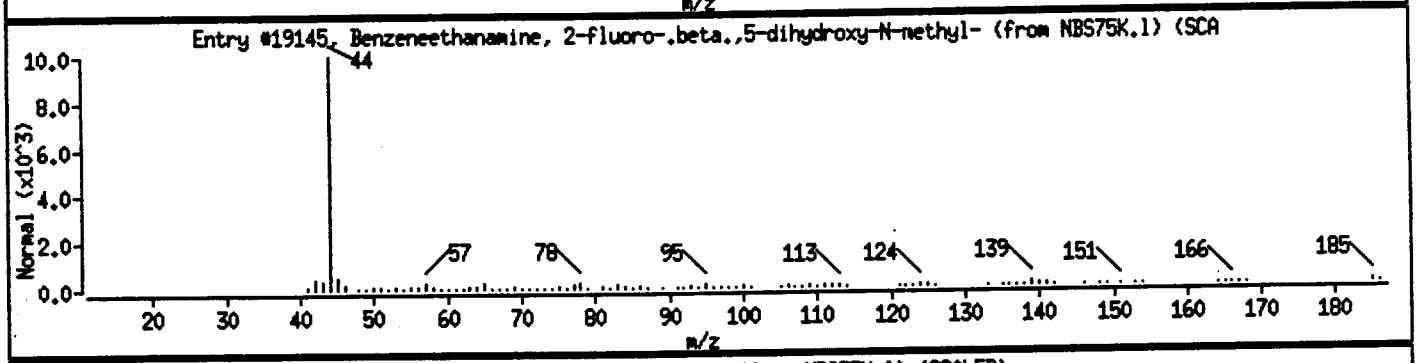
Sample Info:

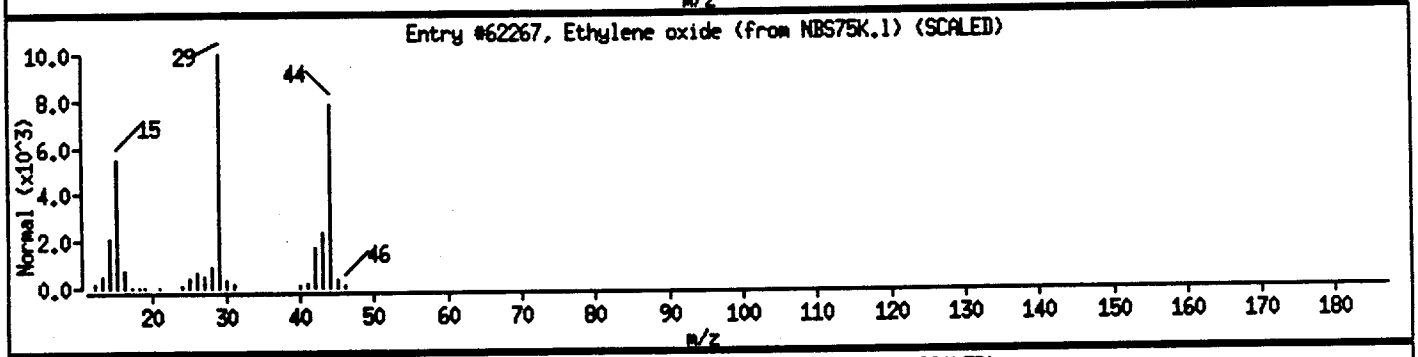
Purge Volume: 5.0 Operator: 1948

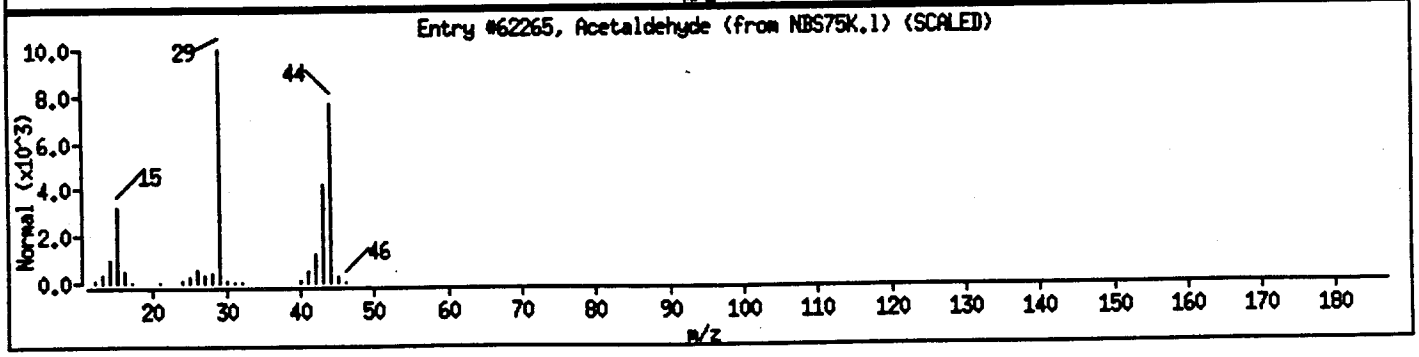
Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Ethylene oxide	75-21-8	NBS75K.l	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44









LAB INSTRUCTIONS: PPS#: _____
PPS#115 USE FOR QC* + DICHLORODIFLUOROMETHANE

RECEIPT DATE: 02/10/95 CASE#: 30073 00001 DUE DATE: 03/10/9

VOA J[ ] J3[ ] D[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683865
ORIGINAL J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020695 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: MW1

GC/MS ANALYSIS
Amount Purged: [✓] 5 mls or [ ] VS 2/15/95 Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BH950214B56 Disk ( )
Blank Filename CB950215C56 Disk ( )
Standard Filename CZ950214B56 Disk ( )
Sample Filename CN083865C56 Disk ( )

ANALYST(S): Injection 1945 V.A. Smith Work-up 1948 V.A. Smith

GC/MS REVIEW

CONDITION CODE OK

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 01

COMMENTS:

#GC/MS Review [signature] Date 2/20/95 Auditor_____ Date___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s):_____/_____

QA COMMENTS:

Initials_____ Date___/___/___

FINAL REVIEW: Initials_____ Date___/___/___

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683865
Client ID# MW1
Instrument Blank ID# CB9502154S6
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 66 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / FF

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683867

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083867A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	50	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	100	
75-34-3	1,1-Dichloroethane	37	J
540-59-0	1,2-Dichloroethene (total)	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	650	
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	50	U
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	6	J
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (Total)	50	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683867

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083867A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	50	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW10

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683867

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083867A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2600	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
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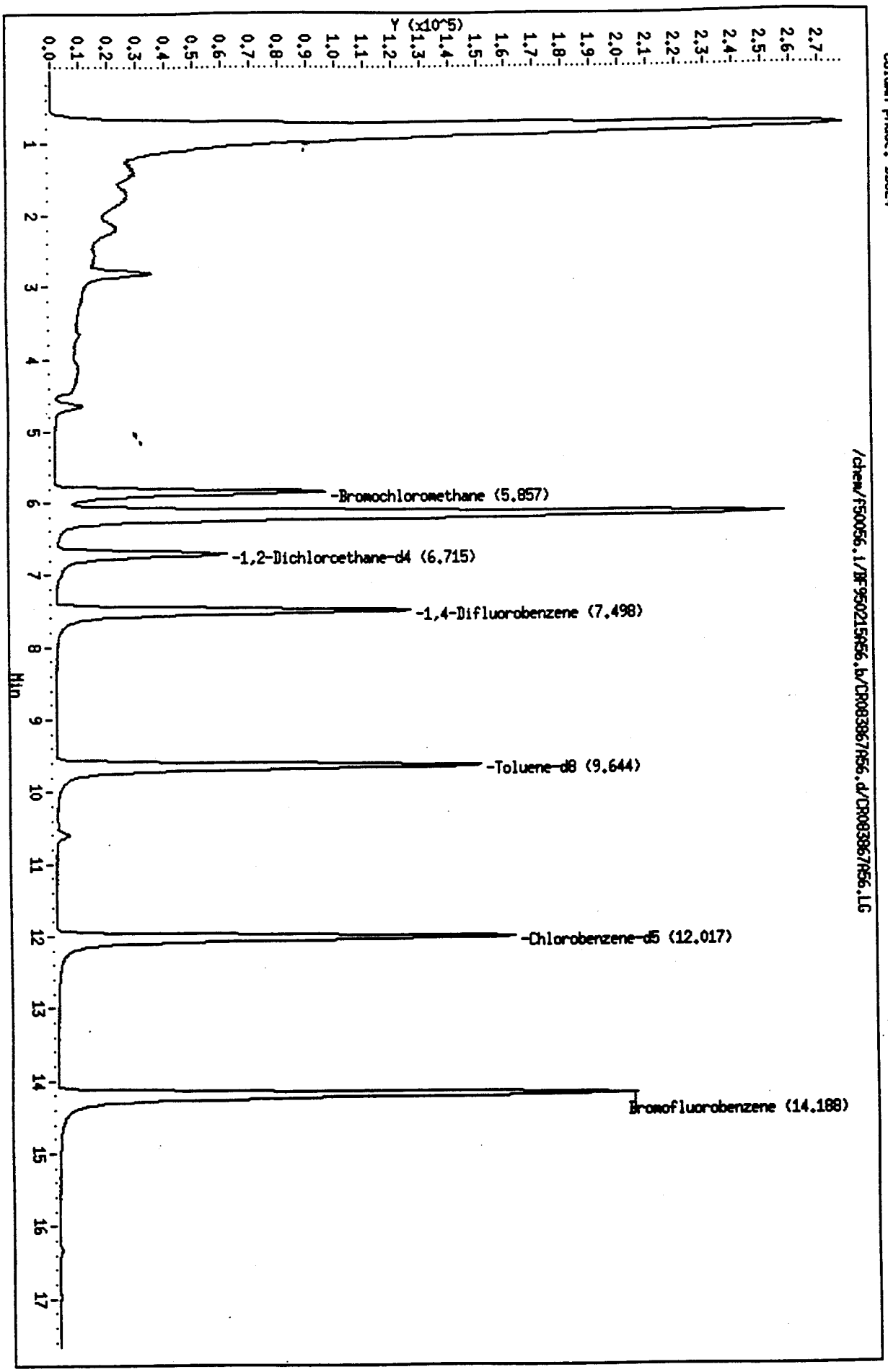
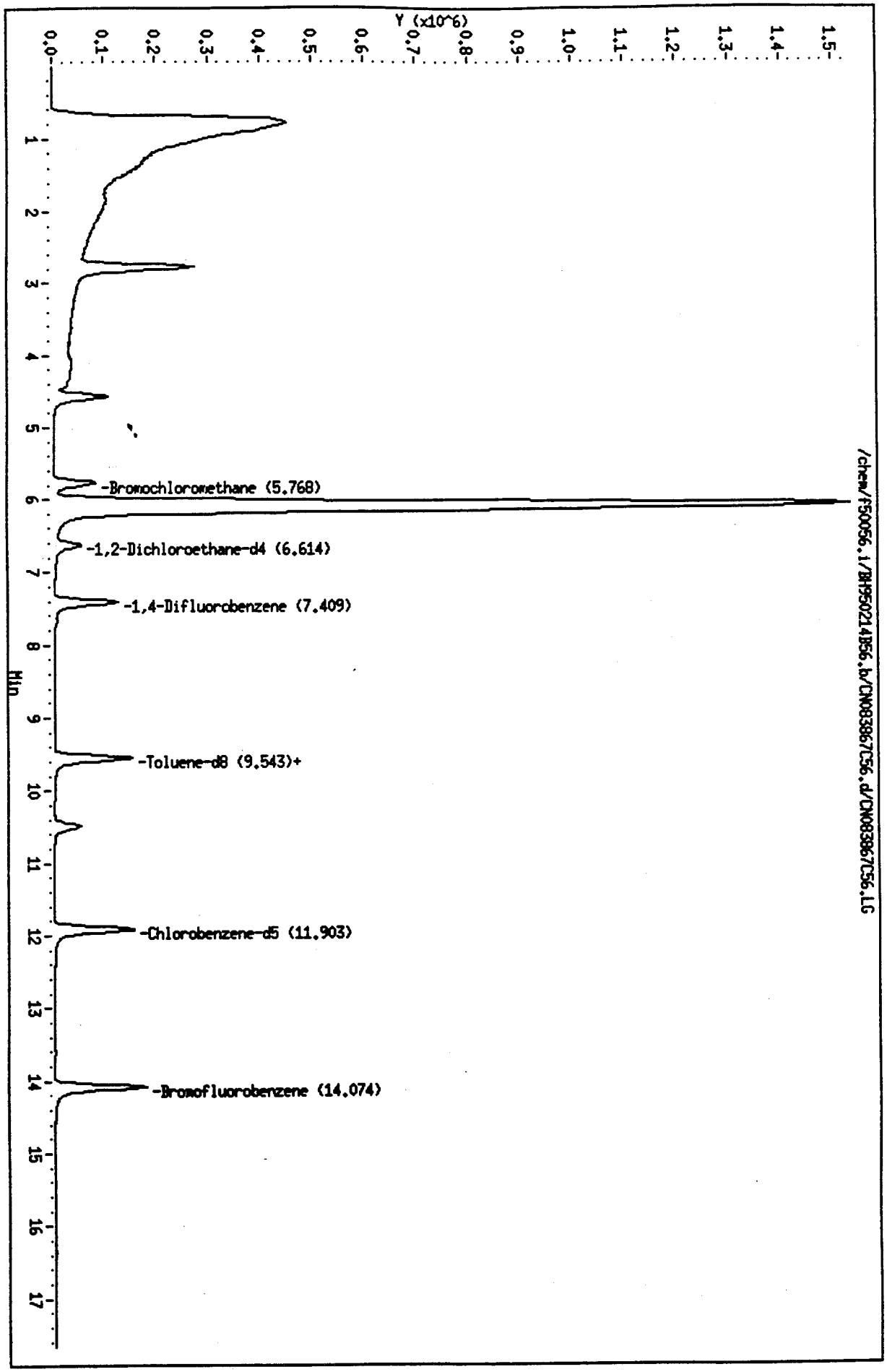
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.1/BF950215A56.b/CR083867A56.d
Date : 15-FEB-1995 14:45
Client ID: MW10
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.1
Operator: 2141
Column diameter: 0.53
Y (X10^5)
Min
/chem/f50056.1/BF950215A56.b/CR083867A56.d/CR083867A56.LG
-Bromochloromethane (5.857)
-1,2-Dichloroethane-d4 (6.715)
-1,4-Difluorobenzene (7.498)
-Toluene-d8 (9.644)
-Chlorobenzene-d5 (12.017)
Bromofluorobenzene (14.188)


Data File: /chem/f50056.i/BH950214B56.b/CN083867C56.d
Date : 15-FEB-1995 06:59
Client ID: MW10
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^6)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Min
-Bromochloromethane (5.768)
-1,2-Dichloroethane-d4 (6.614)
-1,4-Difluorobenzene (7.409)
-Toluene-d8 (9.543)+
-Chlorobenzene-d5 (11.903)
-Bromofluorobenzene (14.074)
/chem/f50056.i/BH950214B56.b/CN083867C56.d/CN083867C56.LG

Screen

Data File: /chem/f50056.i/BF950215A56.b/CR083867A56.d
Report Date: 20-Feb-1995 11:29

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215A56.b/CR083867A56.d
Lab Smp Id: 683867 Client Smp ID: MW10
Inj Date : 15-FEB-1995 14:45
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 10:24 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 12:30 Cal File: CS950215A56.d
Als bottle: 1
Dil Factor: 5.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.844	5.869	(1.000)	79476	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.523	(1.000)	317293	250.0	
*	3 Chlorobenzene-d5	117.00	12.017	12.029	(1.000)	335941	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.728	(1.149)	148846	251.1	251.1
$	5 Toluene-d8	98.00	9.644	9.669	(0.803)	335001	240.8	240.8
$	6 Bromofluorobenzene	95.00	14.200	14.200	(1.182)	267919	232.3	232.3
	7 Dichlorodiflouromethane	85.00		0.959	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
	10 Bromomethane	94.00		1.590	Compound Not Detected.			
	11 Chloroethane	64.00		1.729	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00	2.827	2.840	(0.484)	29752	102.4	102.4
	13 Acetone	43.00		3.181	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
	15 Methylene Chloride	84.00		3.686	Compound Not Detected.			
	16 trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00	4.645	4.670	(0.795)	32940	36.81	36.81(a)
	18 cis-1,2-Dichloroethene	96.00		5.554	Compound Not Detected.			
	19 2-Butanone	43.00		5.768	Compound Not Detected.			
	20 Chloroform	83.00		6.122	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00	6.172	6.198	(0.823)	588943	646.1	646.1
	22 Carbon Tetrachloride	117.00		6.412	Compound Not Detected.			
	23 Benzene	78.00		6.740	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215A56.b/CR083867A56.d
Report Date: 20-Feb-1995 11:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.841		Compound Not Detected.		
25	Trichloroethene	130.00		7.788		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.091		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.621		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.328		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.732		Compound Not Detected.		
30	Toluene	91.00		9.770		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.300		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.540		Compound Not Detected.		
33	Tetrachloroethene	164.00	10.603	10.603	(0.882)	3999	5.63	5.63(a)
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.108		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.370		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.266		Compound Not Detected.		
40	Styrene	104.00		13.329		Compound Not Detected.		
41	Bromoform	173.00		13.544		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.680		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.266		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215A56.b/CR083867A56.d

Date : 15-FEB-1995 14:45

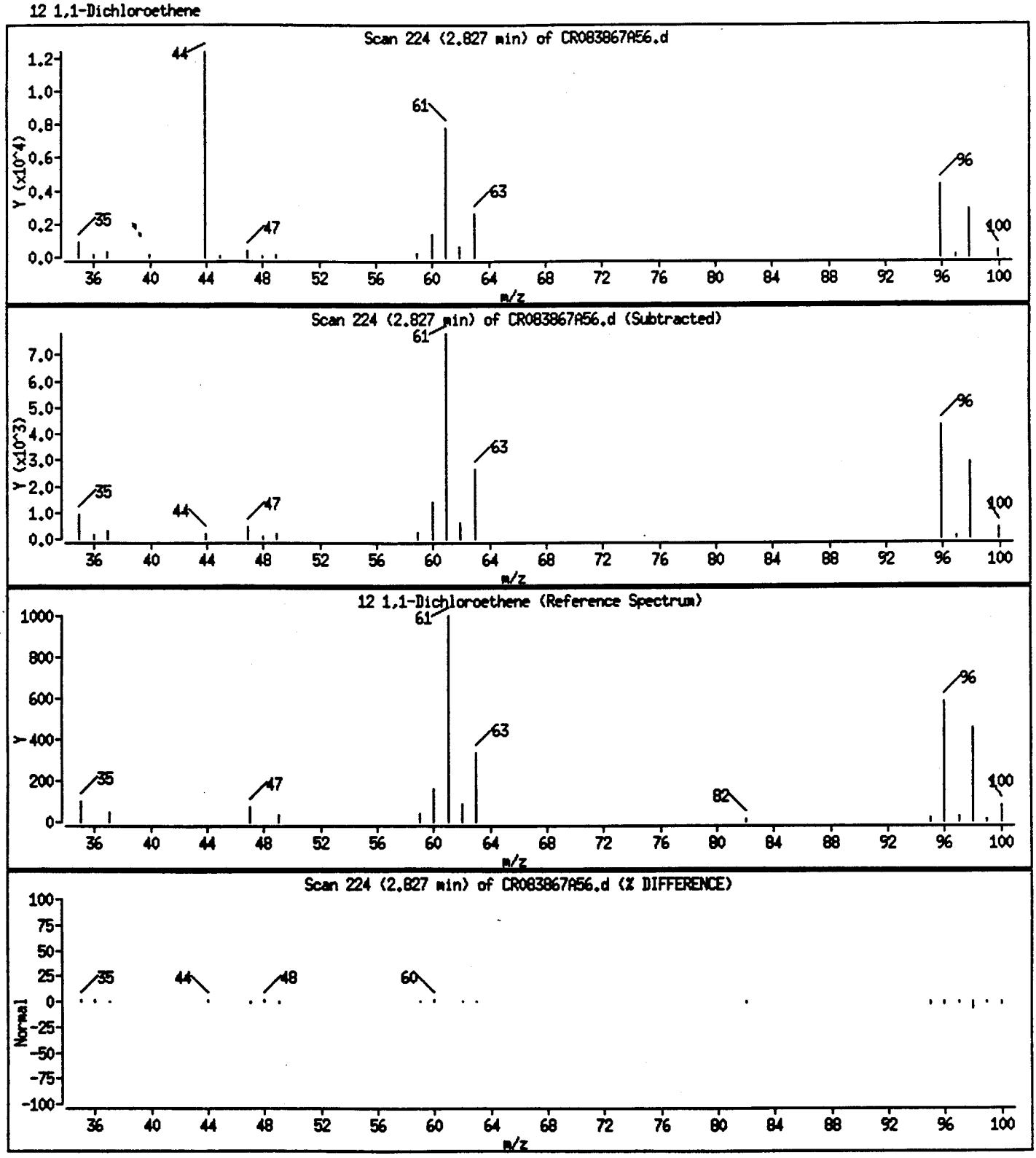
Client ID: MW10 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column dianeter: 0.53

12 1,1-Dichloroethene



Data File: /chem/f50056.i/BF950215A56.b/CR083867A56.d

Date : 15-FEB-1995 14:45

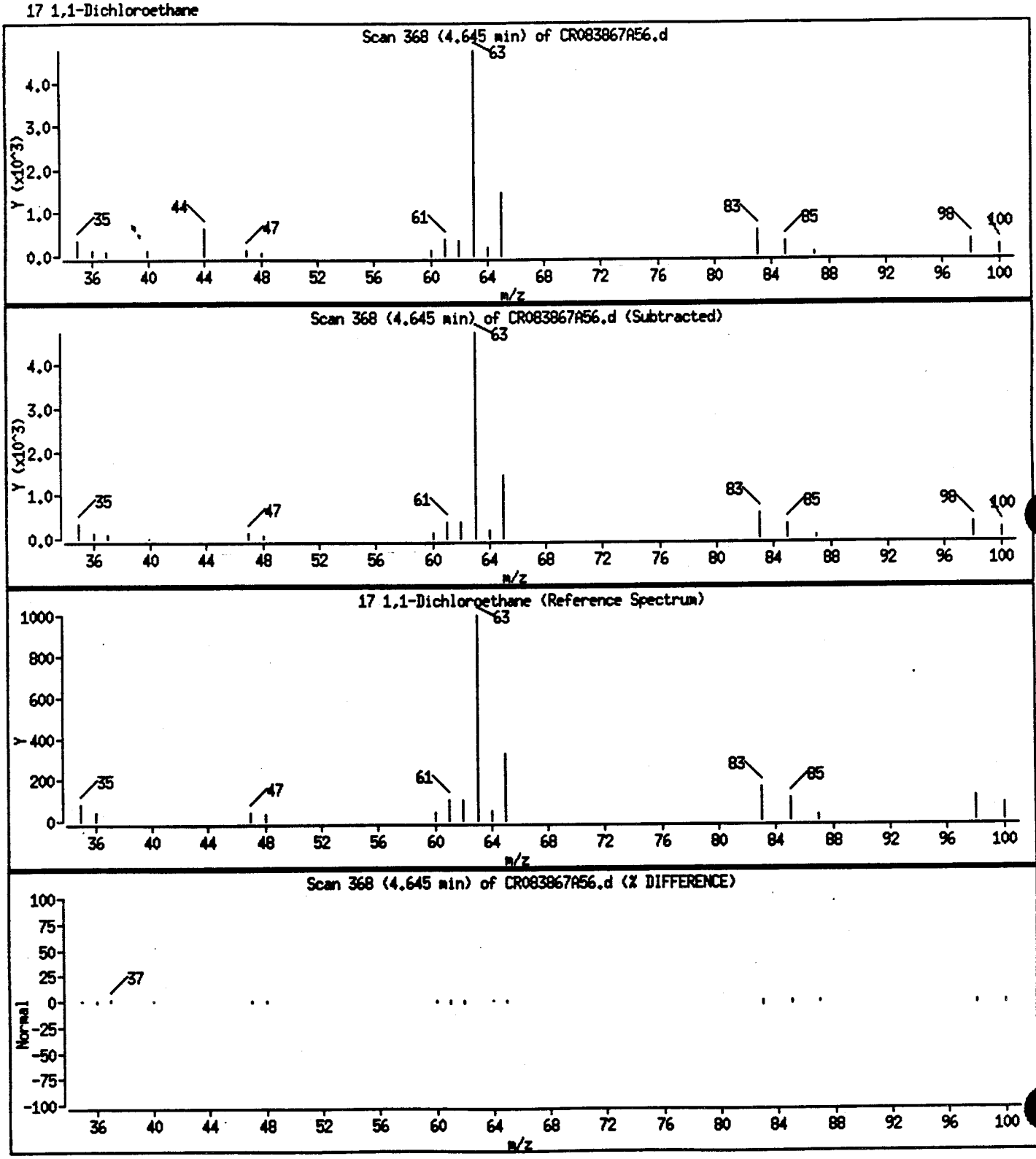
Client ID: MW10 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50056.i/BF950215A56.b/CR083867A56.d

Date : 15-FEB-1995 14:45

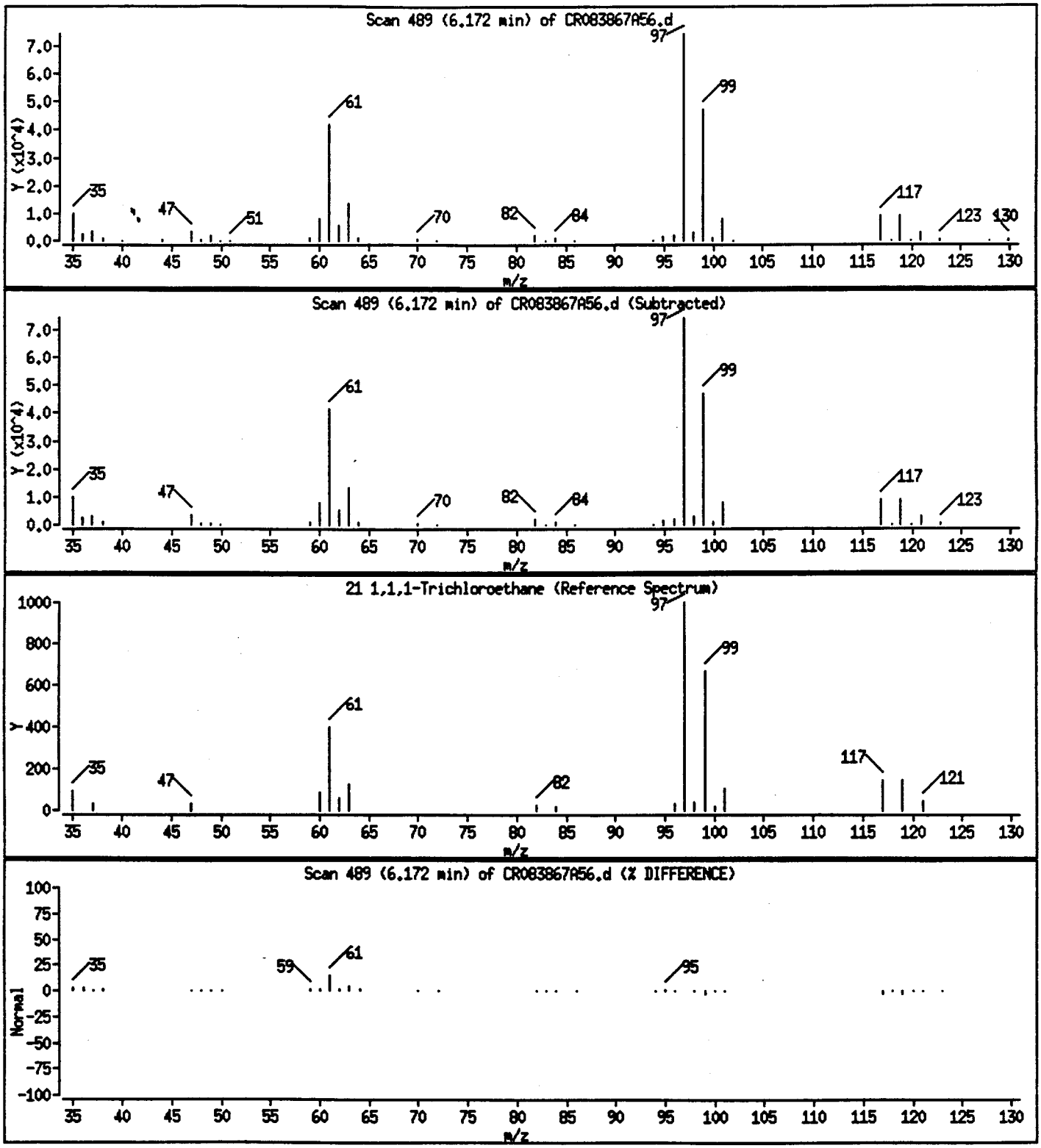
Client ID: MW10 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane



Data File: /chem/f50056.i/BF950215A56.b/CR083867A56.d

Date : 15-FEB-1995 14:45

Client ID: MW10

Instrument: f50056.i

Sample Info:

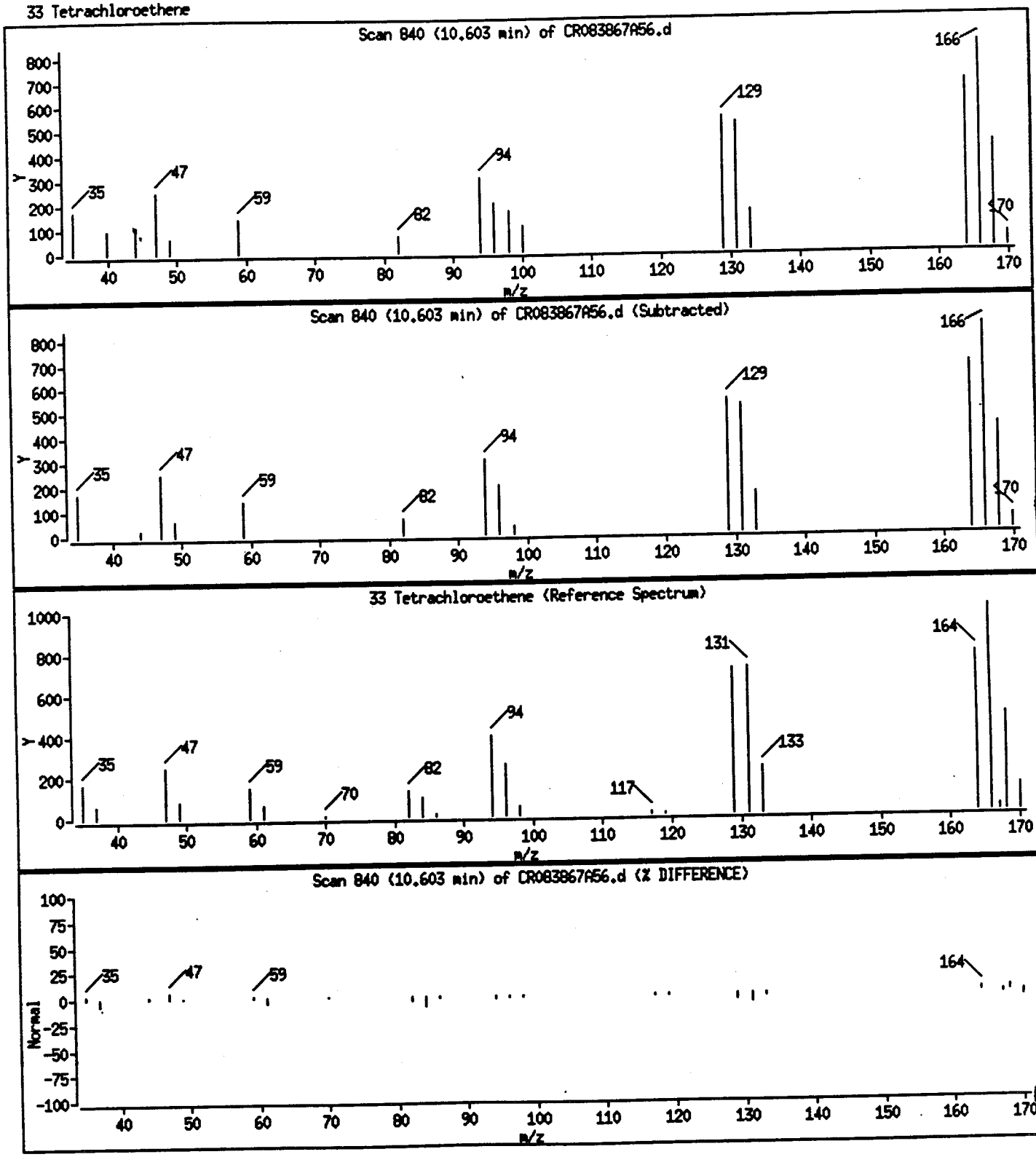
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BF950215A56.b/CR083867A56.d

Date : 15-FEB-1995 14:45

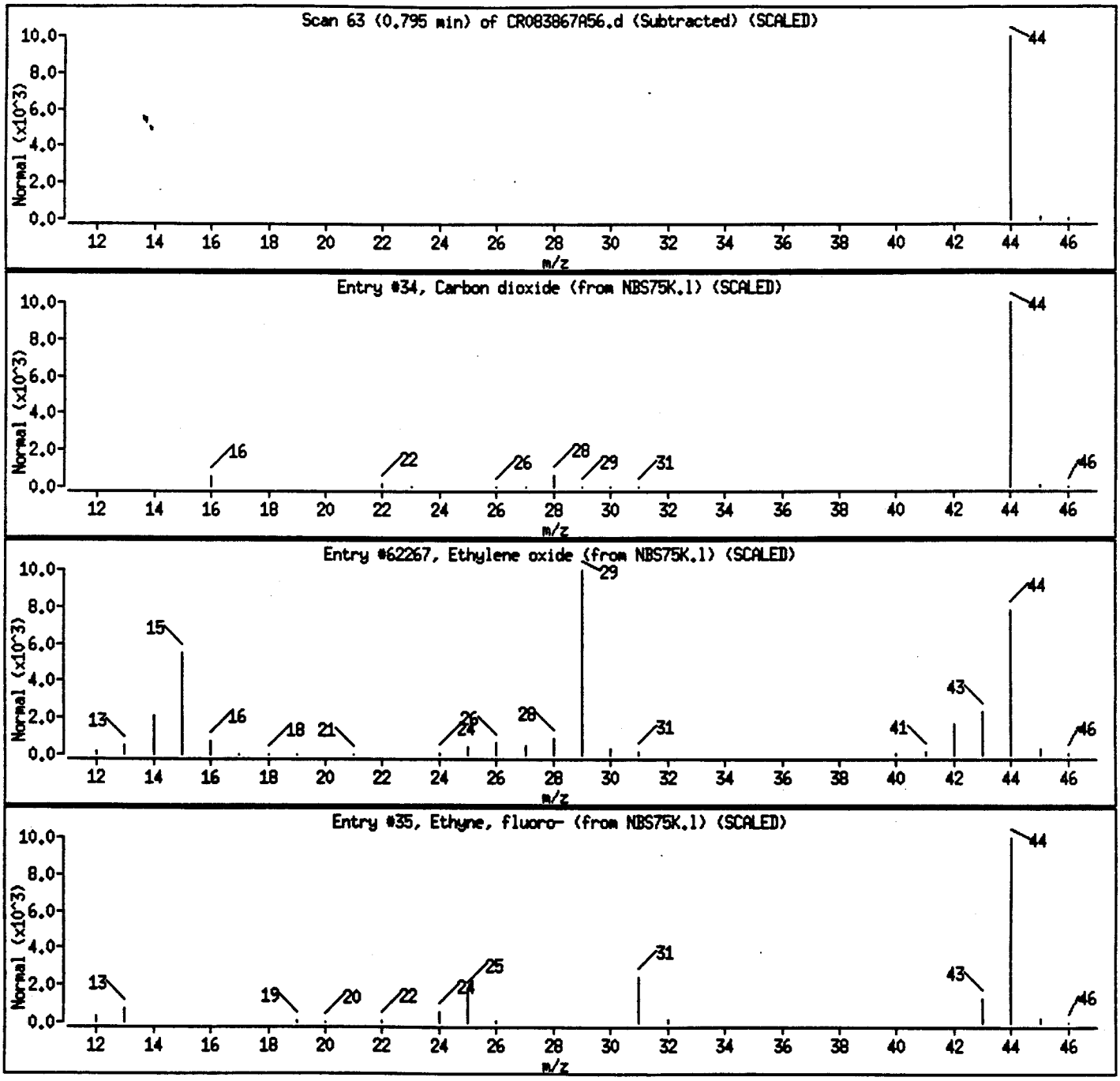
Client ID: MW10 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.1	34	5	CO2	44
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Ethyne, fluoro-	2713-09-9	NBS75K.1	35	3	C2HF	44



LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

==========

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GC/MS ANALYSIS MB 2.15.95
AMOUNT PURGED: 100 0. UL
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950215A56
BLANK FILENAME: CC950215A56
STANDARD FILENAME: CS950215A56
SAMPLE FILENAME: CR083867A56

ANALYST(S): INJECTION: 2141 WORKUP: 2141MB

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE DA

DISPOSITION: [✓] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 1 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW [signature] DATE 2/20/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

FINAL REVIEW: INITIALS _____ DATE ___/___/___

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
MW11

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683859

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083859C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	28	
540-59-0	1,2-Dichloroethene (total)	8	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	8	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683859

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083859C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	2	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW11

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683859

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083859C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	1200	JB
2.		LABORATORY ARTIFACT	1.51	1100	J
3.					
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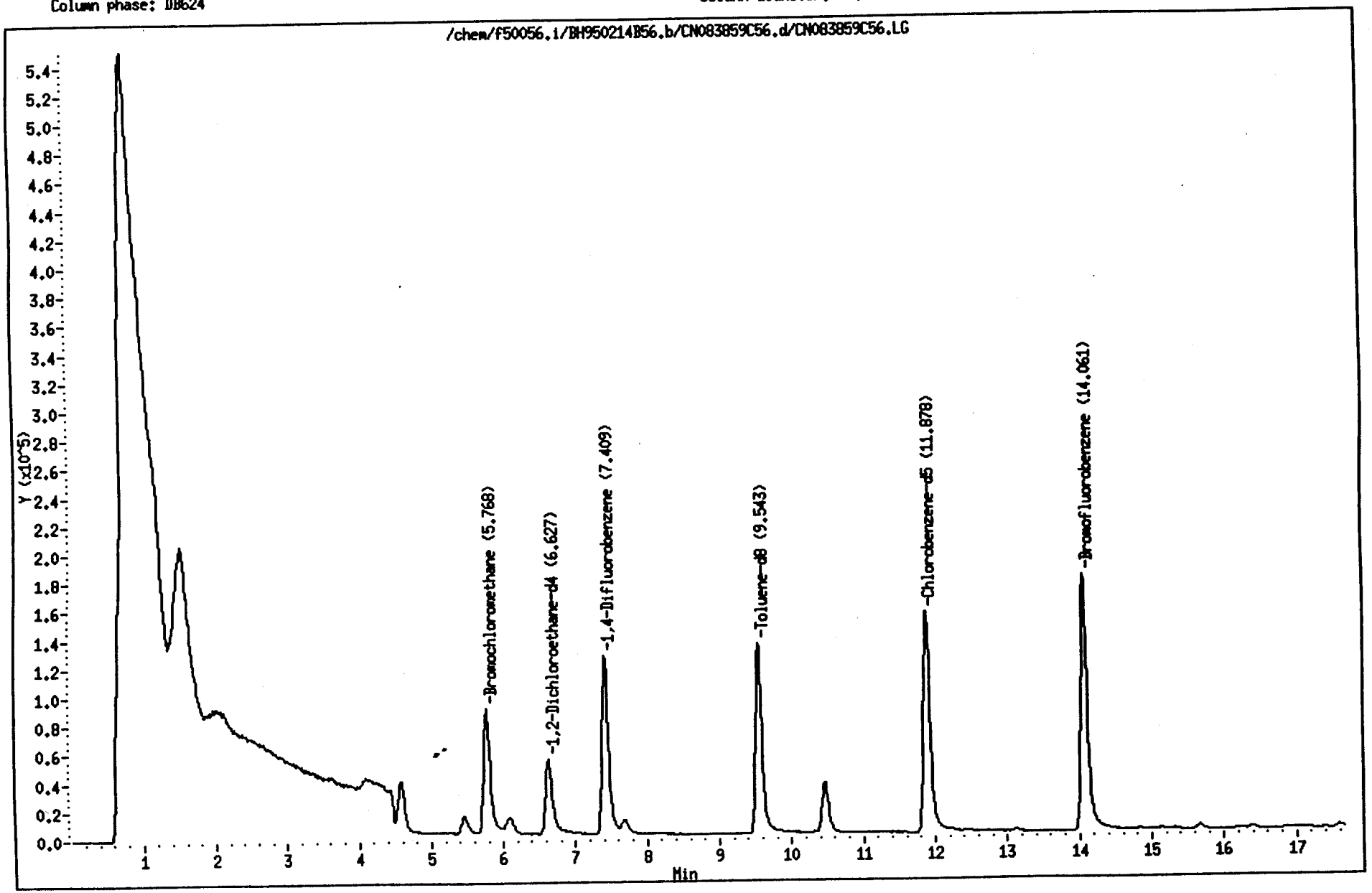
Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d
Date : 15-FEB-1995 05:50
Client ID: MW11
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 1948
Column diameter: 0.53



Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083859C56.d
Lab Smp Id: 683859 Client Smp ID: MW11
Inj Date : 15-FEB-1995 05:50
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.768	5.882	(1.000)	71822	250.0	
*	2 1,4-Difluorobenzene	114.00	7.409	7.536	(1.000)	312941	250.0	
*	3 Chlorobenzene-d5	117.00	11.890	12.042	(1.000)	325980	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.627	6.740	(1.149)	132805	267.3	53.46
$	5 Toluene-d8	98.00	9.543	9.669	(0.803)	270011	223.8	44.75
$	6 Bromofluorobenzene	95.00	14.074	14.213	(1.184)	248276	227.0	45.40
	7 Dichlorodiflouromethane	85.00	0.934	0.947	(0.162)	1761	12.44	2.49(a)
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
	10 Bromomethane	94.00		1.590	Compound Not Detected.			
	11 Chloroethane	64.00		1.729	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		2.853	Compound Not Detected.			
	13 Acetone	43.00		3.193	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.610	3.698	(0.626)	3285	7.94	1.59(a)
	16 trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00	4.582	4.683	(0.794)	117991	140.8	28.16
	18 cis-1,2-Dichloroethene	96.00	5.466	5.567	(0.947)	18187	36.95	7.39(a)
	19 2-Butanone	43.00		5.781	Compound Not Detected.			
	20 Chloroform	83.00		6.135	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00	6.097	6.210	(0.823)	22718	26.28	5.26(a)
	22 Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
	23 Benzene	78.00		6.753	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.854		Compound Not Detected.		
25	Trichloroethene	130.00	7.687	7.801	(1.037)	8987	16.57	3.31(a)
26	1,2-Dichloropropane	63.00		8.104		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.341		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.745		Compound Not Detected.		
30	Toluene	91.00		9.782		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.313		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.552		Compound Not Detected.		
33	Tetrachloroethene	164.00	10.464	10.616	(0.880)	28832	41.96	8.39(a)
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.693		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00				18187	37.97	7.59(a)
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d

Date : 15-FEB-1995 05:50

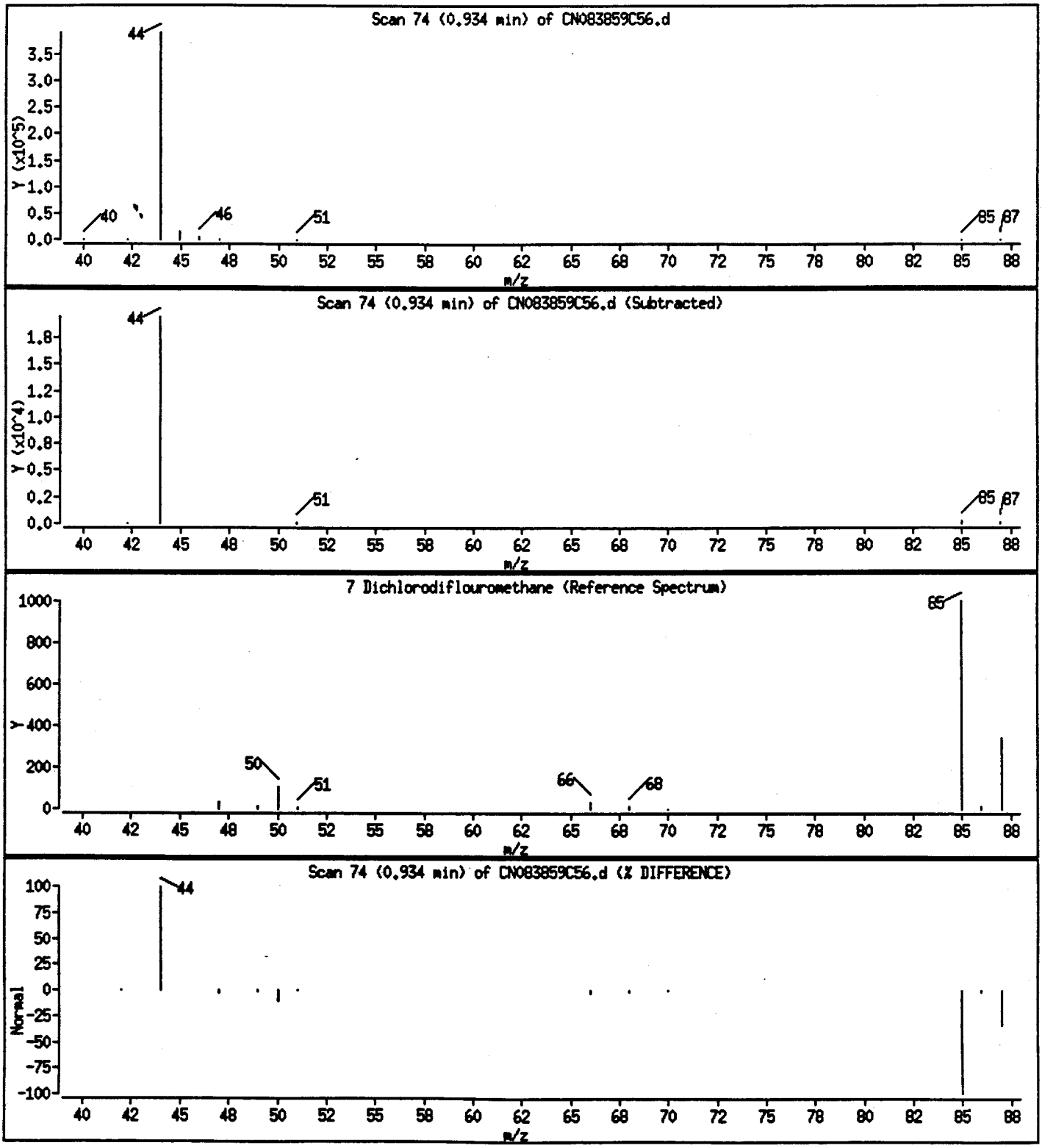
Client ID: MW11 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column dianeter: 0.53

7 Dichlorodiflourcmethane



Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d

Date : 15-FEB-1995 05:50

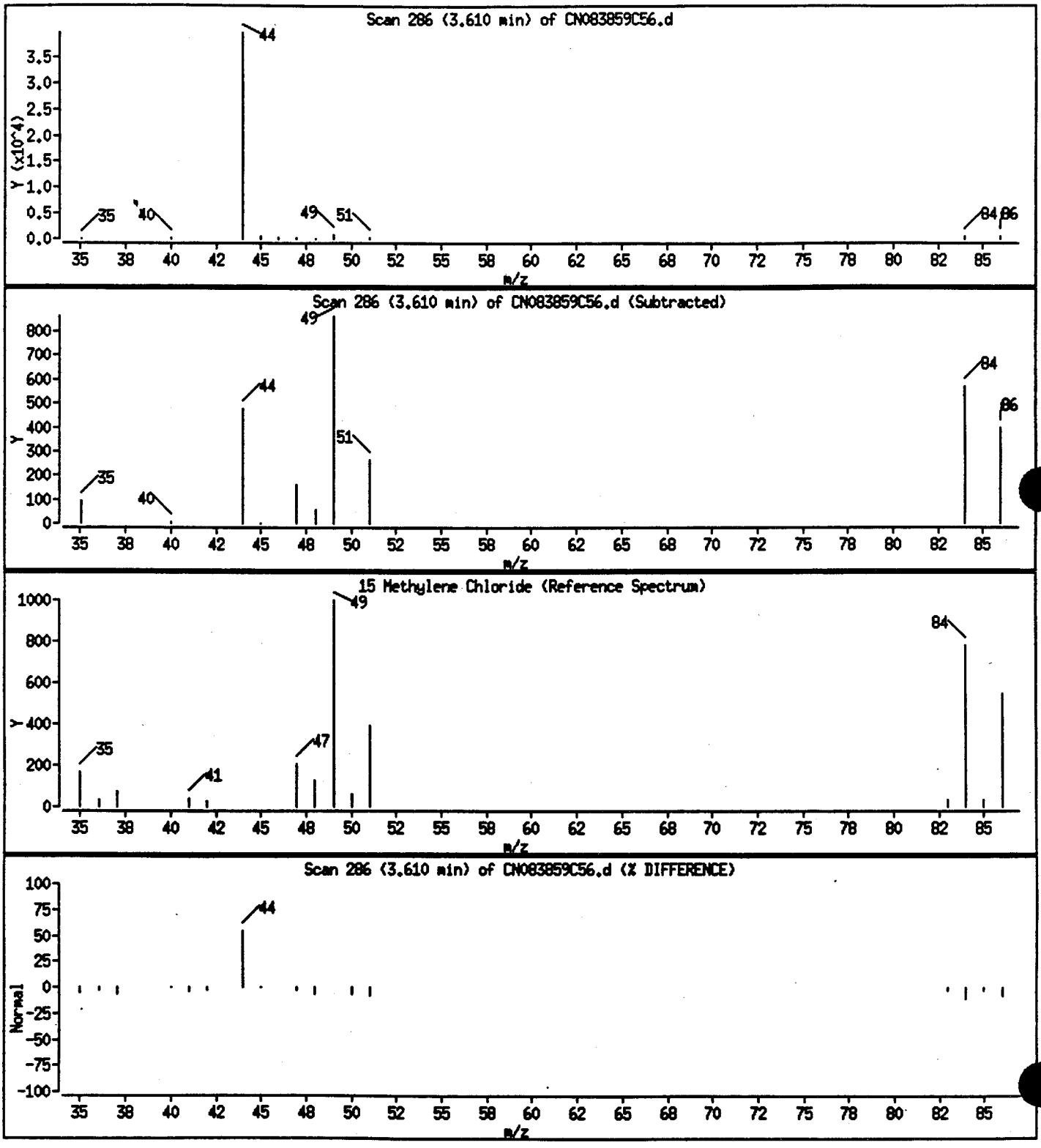
Client ID: MW11 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



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Date : 15-FEB-1995 05:50

Client ID: MW11

Instrument: f50056.i

Sample Info:

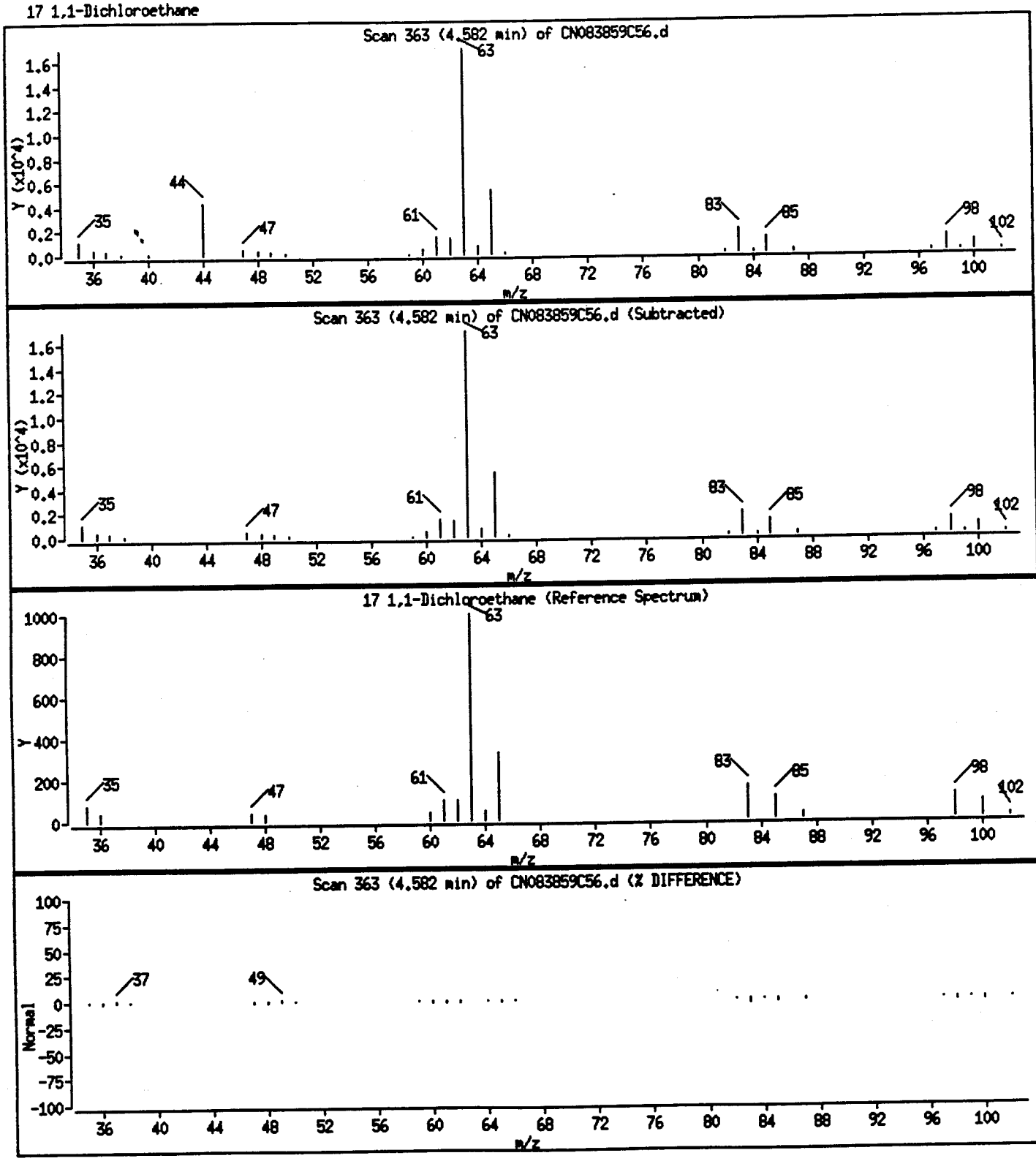
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



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Date : 15-FEB-1995 05:50

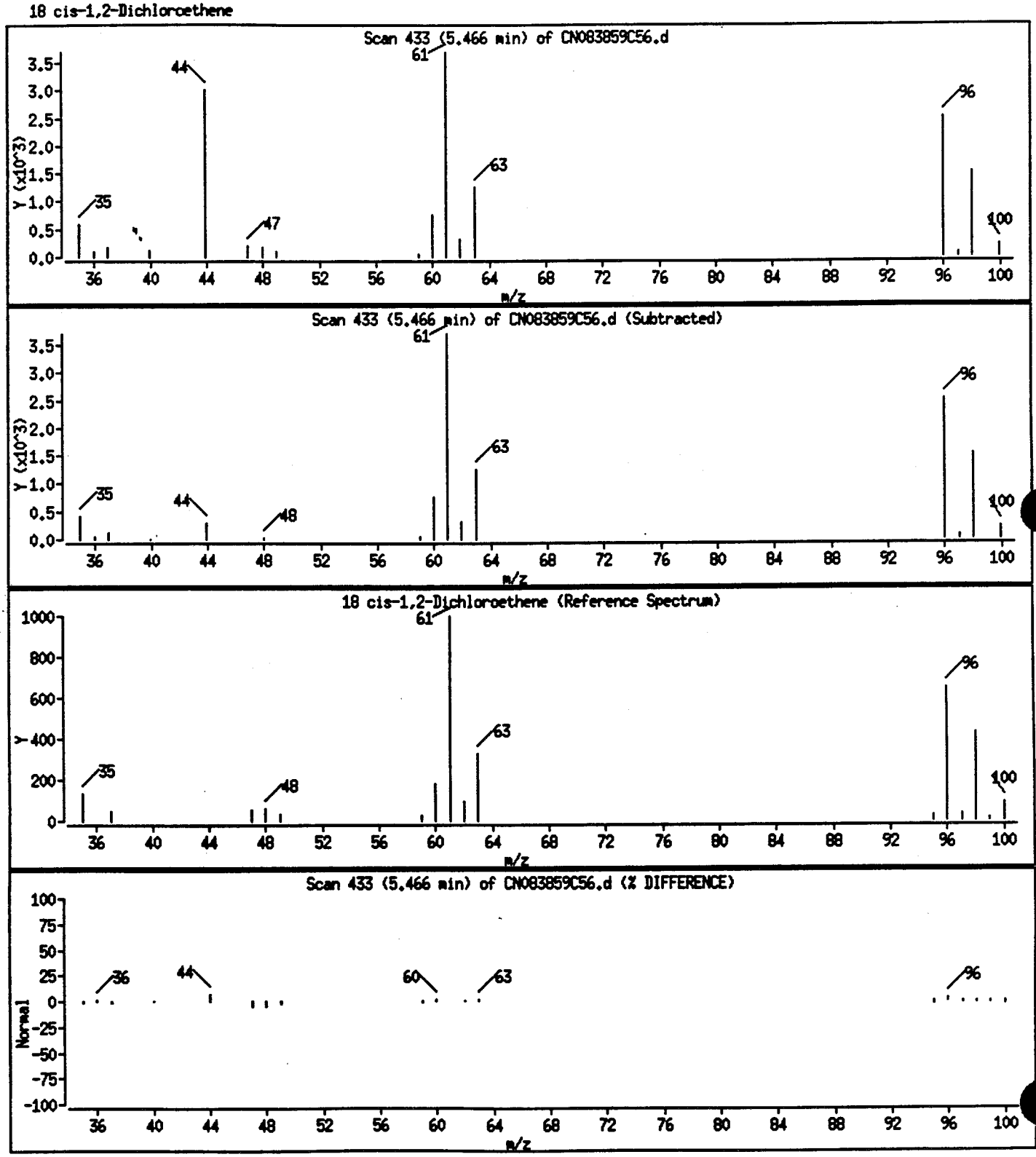
Client ID: MW11 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

18 cis-1,2-Dichloroethene



Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d

Date : 15-FEB-1995 05:50

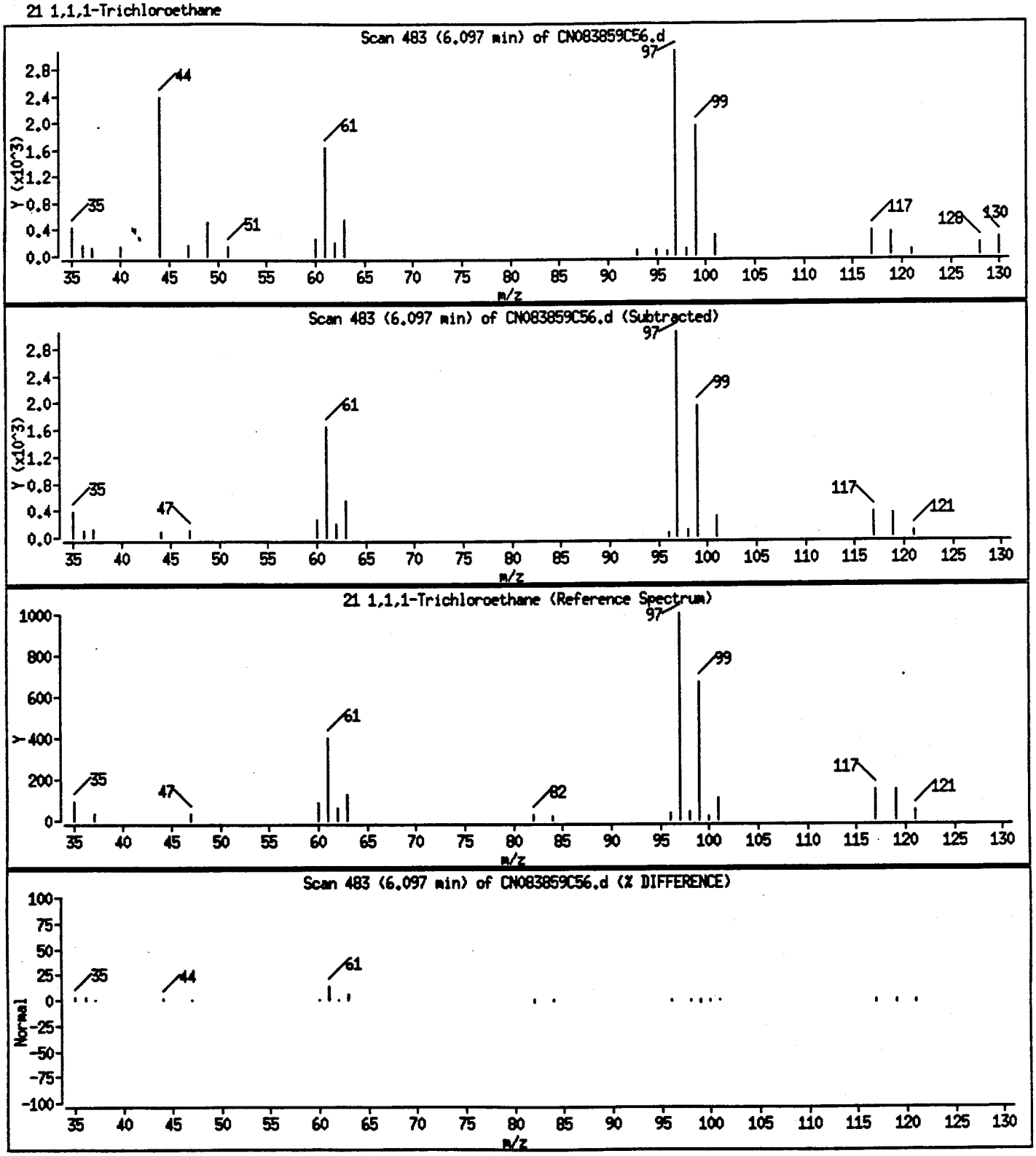
Client ID: MW11 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane



Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d

Date : 15-FEB-1995 05:50

Client ID: MW11

Instrument: f50056.i

Sample Info:

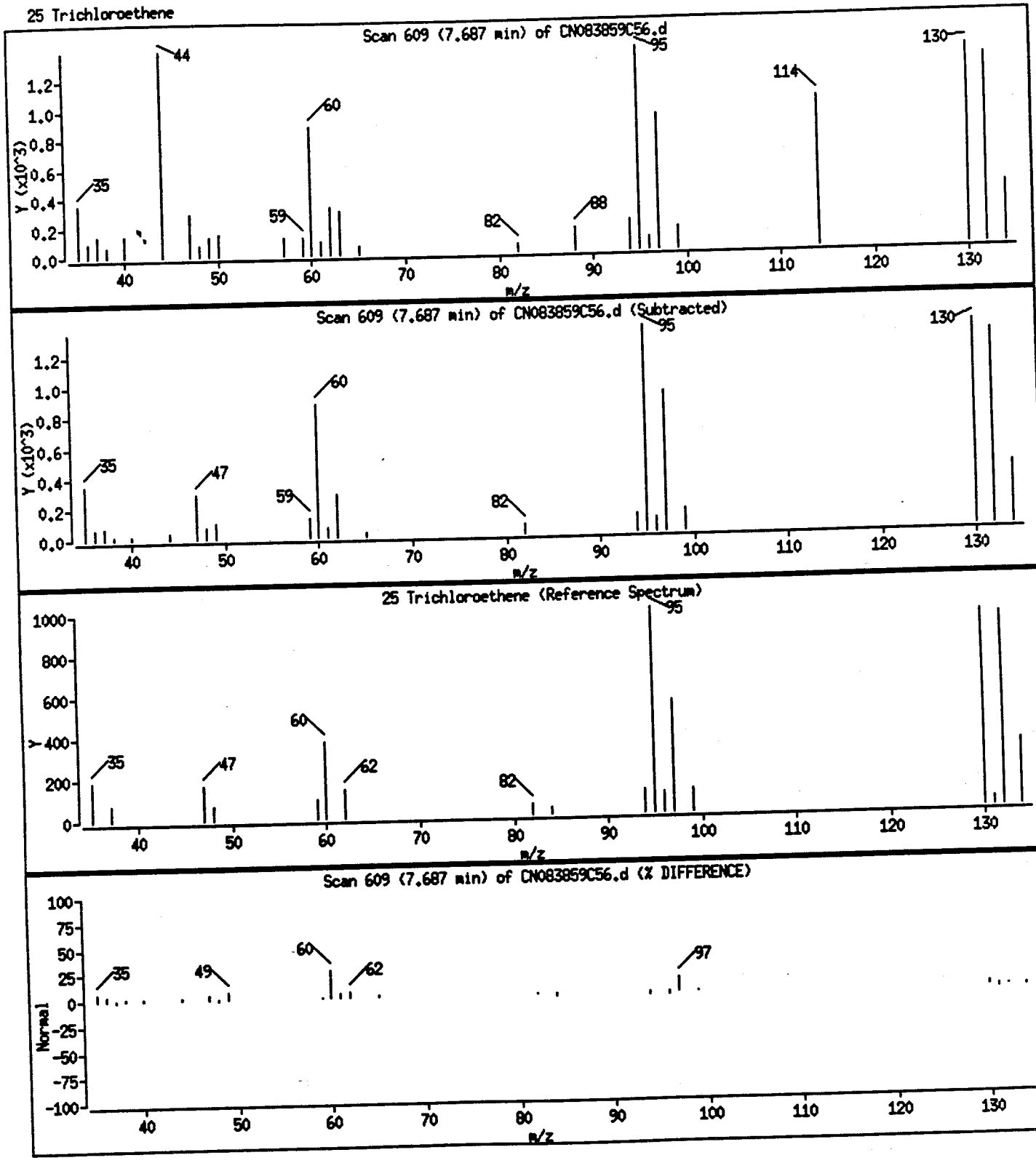
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



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Date : 15-FEB-1995 05:50

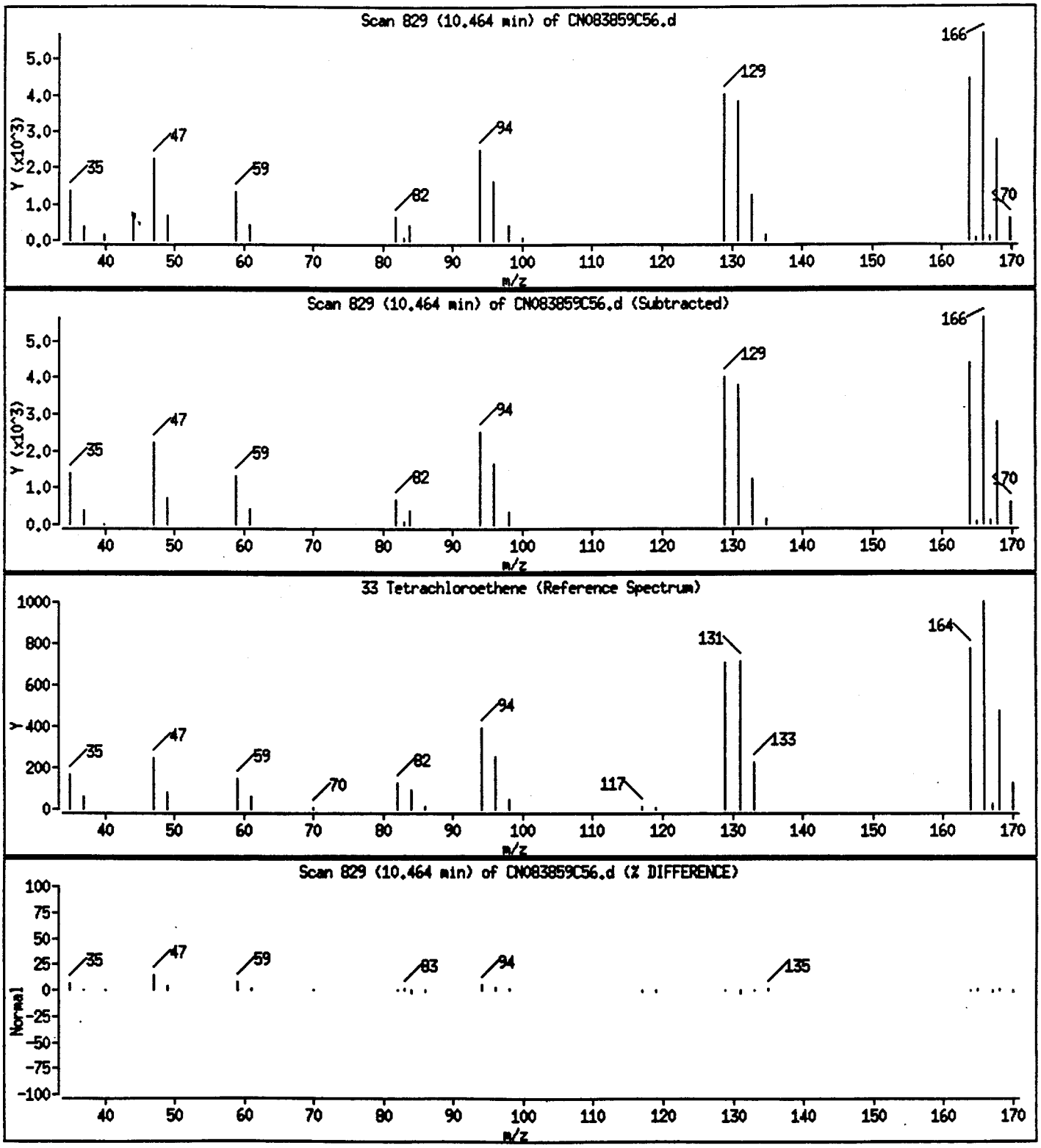
Client ID: MW11 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d

Date : 15-FEB-1995 05:50

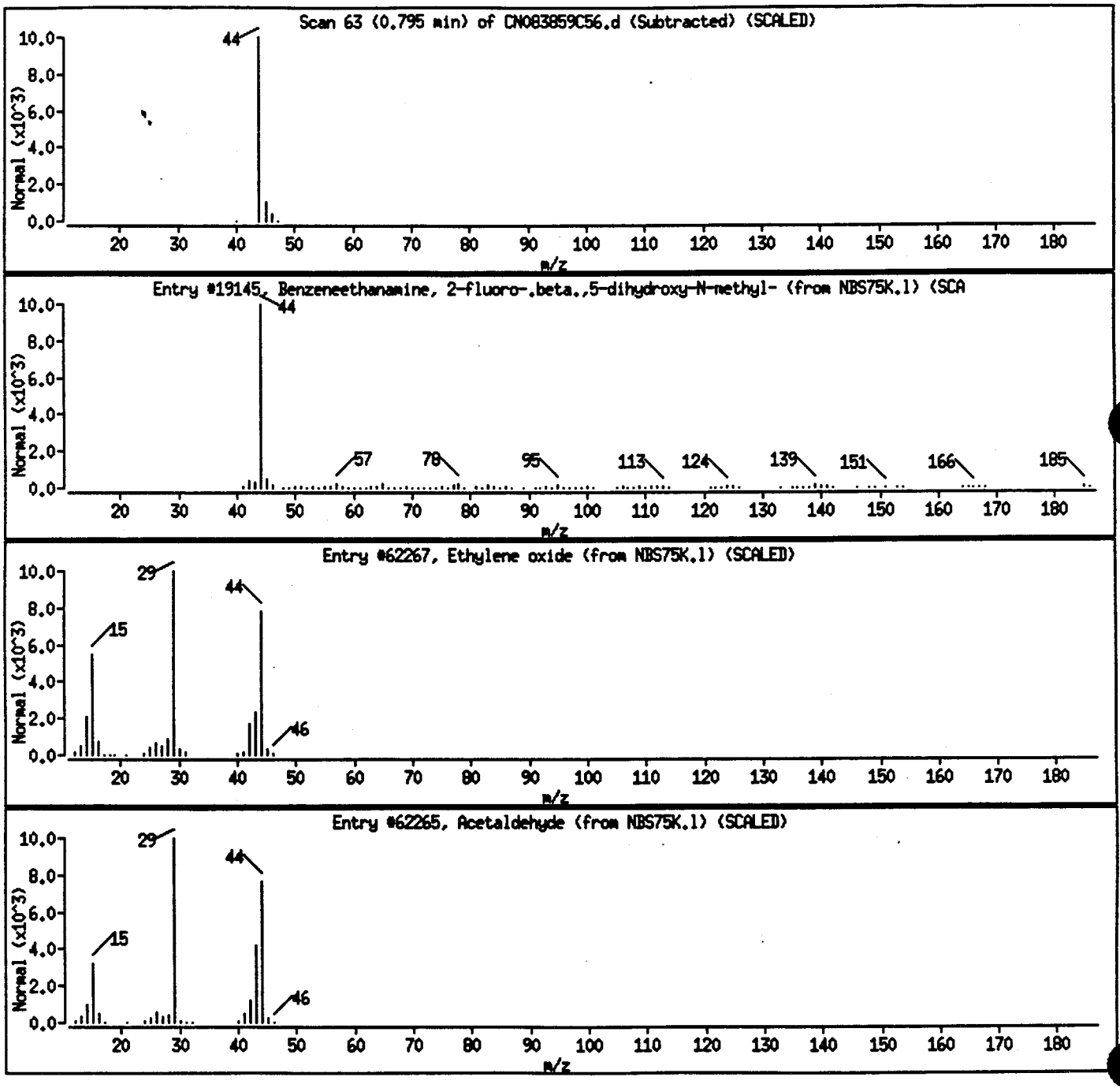
Client ID: MW11 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Ethylene oxide	75-21-8	NBS75K.l	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44



Data File: /chem/f50056.i/BH950214B56.b/CN083859C56.d

Date : 15-FEB-1995 05:50

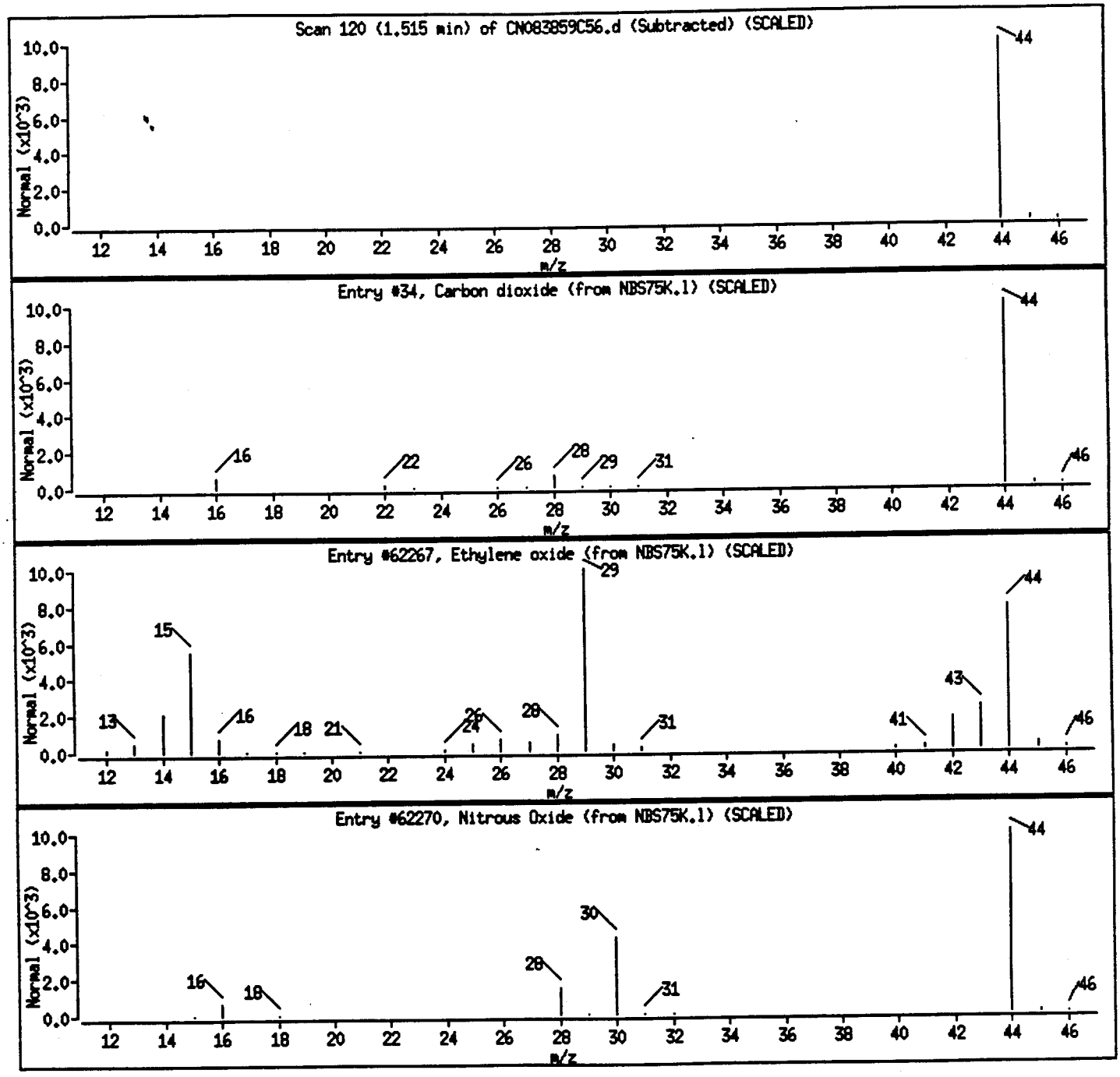
Client ID: MW11 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	34	5	CO2	44
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Nitrous Oxide	10024-97-2	NBS75K.l	62270	3	N2O	44



LAB INSTRUCTIONS:
PPS#115 + DICHLORODIFLUOROMETHANE

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00001

DUE DATE: 03/10/9

VOA
GC/MS WORKSHEET

COMPUCHEM#: 683859

J[ ] J3[ ] D[ ] (:1)
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020795 Report type: 0

Sample Prep Code---	0
Instrument Code----	428
Compound List------	643
Surrogate Std------	424
Internal Std-------	36

SAMPLE ID#: MW11

GC/MS ANALYSIS VS2/15/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BH950214BS6 Disk ( )
Blank Filename CB950215CS6 Disk ( )
Standard Filename CZ950214BS6 Disk ( )
Sample Filename CN083859CS6 Disk ( )

ANALYST(S): Injection 1948V.A Smith Work-up 1948V.A Smith

GC/MS REVIEW

CONDITION CODE: ox

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 02

[ ] Reinject Neat

[ ] Dilute (:1)

Quality Assurance Notice(s):
Notices Required 01

COMMENTS:

#GC/MS Review [illegible] Date 2/20/95 Auditor _____ Date ____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ____/____/____

FINAL REVIEW: Initials _____ Date ____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683859
Client ID# MW11
Instrument Blank ID# CB950215C56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 63,120 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / FF

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW17

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683873

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083873A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	5	J
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	3	J
75-34-3	1,1-Dichloroethane	170	
540-59-0	1,2-Dichloroethene (total)	80	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	1	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	24	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	48	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW17

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683873

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083873A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	12	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW17

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683873

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083873A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2200	JB
2.					
3.					
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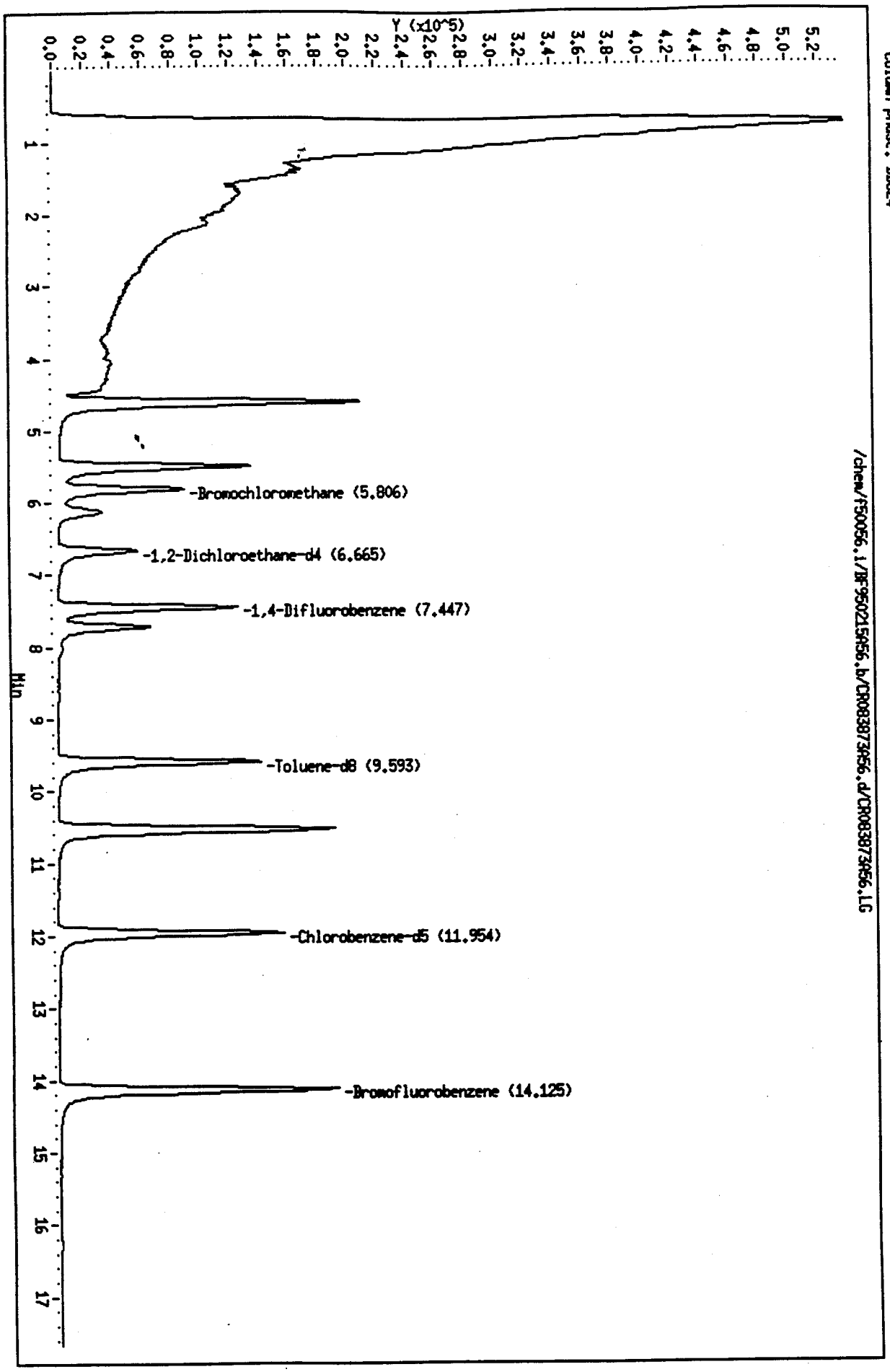

Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d
Date : 15-FEB-1995 15:49
Client ID: MW17
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2141
Column diameter: 0.53
/chem/f50056.i/BF950215A56.b/CR083873A56.d/CR083873A56.LG
(x10^5)
Min
-Bromochloromethane (5.806)
-1,2-Dichloroethane-d4 (6.665)
-1,4-Difluorobenzene (7.447)
-Toluene-d8 (9.593)
-Chlorobenzene-d5 (11.954)
-Bromofluorobenzene (14.125)

Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d
Report Date: 20-Feb-1995 11:29

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215A56.b/CR083873A56.d
Lab Smp Id: 683873 Client Smp ID: MW17
Inj Date : 15-FEB-1995 15:49
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 10:24 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 12:30 Cal File: CS950215A56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.806	5.869	(1.000)	68866	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.523	(1.000)	309034	250.0	
*	3 Chlorobenzene-d5	117.00	11.954	12.029	(1.000)	321245	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.728	(1.146)	136132	265.1	53.01
$	5 Toluene-d8	98.00	9.593	9.669	(0.803)	302913	227.6	45.53
$	6 Bromofluorobenzene	95.00	14.125	14.200	(1.182)	251928	228.4	45.68
	7 Dichlorodiflouromethane	85.00	0.934	0.959	(0.161)	6714	58.56	11.71
	8 Chloromethane	50.00		1.111		Compound Not Detected.		
	9 Vinyl Chloride	62.00		1.237		Compound Not Detected.		
	10 Bromomethane	94.00		1.590		Compound Not Detected.		
	11 Chloroethane	64.00	1.704	1.729	(0.293)	4663	23.65	4.73(a)
	12 1,1-Dichloroethene	96.00	2.790	2.840	(0.480)	3769	14.98	3.00(a)
	13 Acetone	43.00		3.181		Compound Not Detected.		
	14 Carbon Disulfide	76.00		2.954		Compound Not Detected.		
	15 Methylene Chloride	84.00	3.635	3.686	(0.626)	3881	11.29	2.26(a)
	16 trans-1,2-Dichloroethene	96.00		4.090		Compound Not Detected.		
	17 1,1-Dichloroethane	63.00	4.607	4.670	(0.793)	654646	844.2	168.8
	18 cis-1,2-Dichloroethene	96.00	5.491	5.554	(0.946)	178649	380.5	76.10
	19 2-Butanone	43.00		5.768		Compound Not Detected.		
	20 Chloroform	83.00		6.122		Compound Not Detected.		
	21 1,1,1-Trichloroethane	97.00	6.122	6.198	(0.822)	62898	70.84	14.17
	22 Carbon Tetrachloride	117.00		6.412		Compound Not Detected.		
	23 Benzene	78.00		6.740		Compound Not Detected.		

Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d
Report Date: 20-Feb-1995 11:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.841	Compound Not Detected.			
25	Trichloroethene	130.00	7.712	7.788	(1.036)	65205	122.4	24.49
26	1,2-Dichloropropane	63.00	8.015	8.091	(1.076)	3438	7.09	1.42(a)
27	Bromodichloromethane	83.00		8.621	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		9.328	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		9.732	Compound Not Detected.			
30	Toluene	91.00		9.770	Compound Not Detected.			
31	trans-1,3-Dichloropropene	75.00		10.300	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		10.540	Compound Not Detected.			
33	Tetrachloroethene	164.00	10.527	10.603	(0.881)	163700	241.1	48.23
34	2-Hexanone	43.00		11.171	Compound Not Detected.			
35	Dibromochloromethane	129.00		11.108	Compound Not Detected.			
36	Chlorobenzene	112.00		12.080	Compound Not Detected.			
37	Ethylbenzene	106.00		12.370	Compound Not Detected.			
38	m,p-Xylene	106.00		12.610	Compound Not Detected.			
39	o-Xylene	106.00		13.266	Compound Not Detected.			
40	Styrene	104.00		13.329	Compound Not Detected.			
41	Bromoform	173.00		13.544	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		14.680	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00				178649	401.5	80.31
M 44	Xylene (Total)	106.00		13.266	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

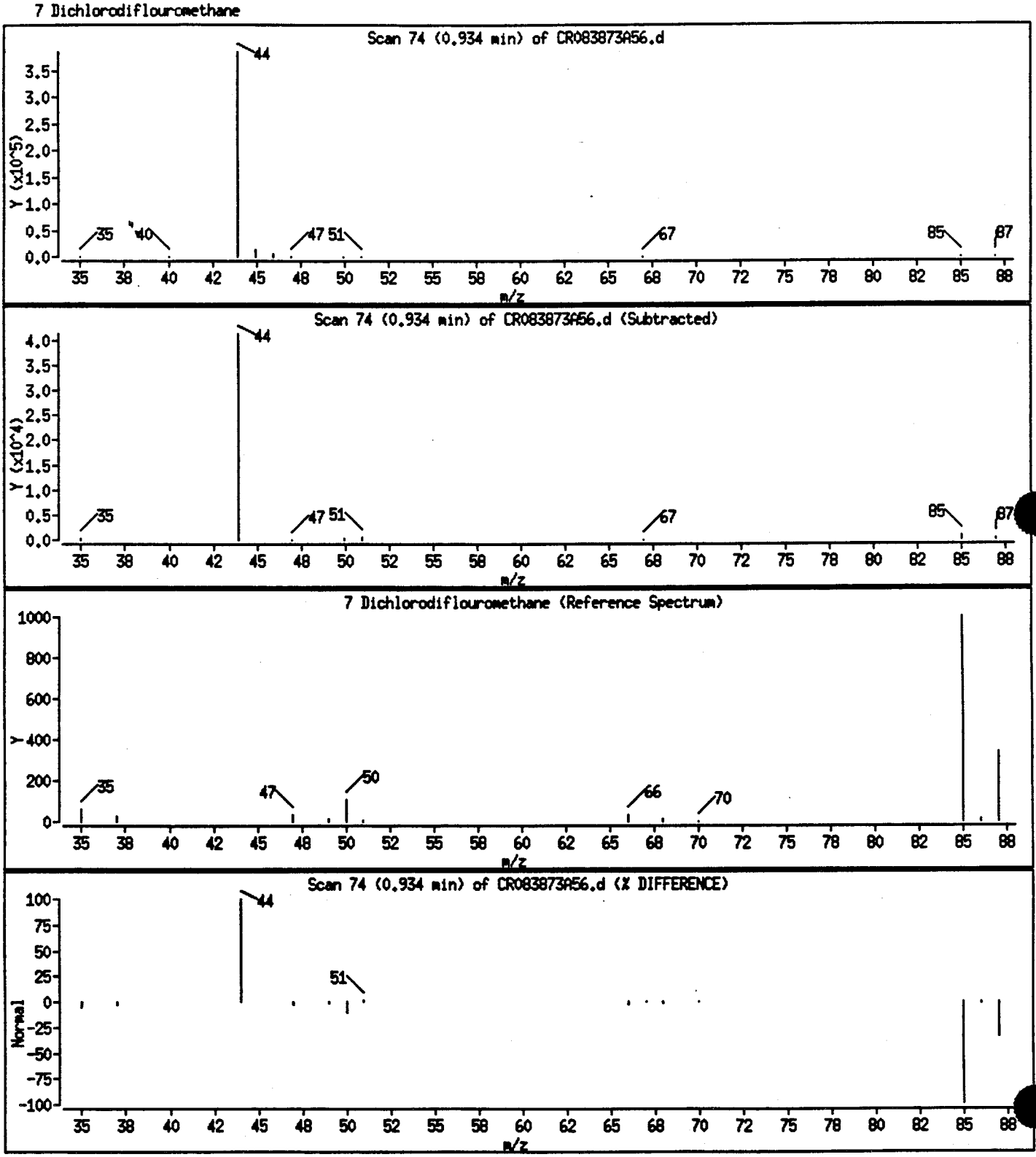
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

7 Dichlorodiflouromethane



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

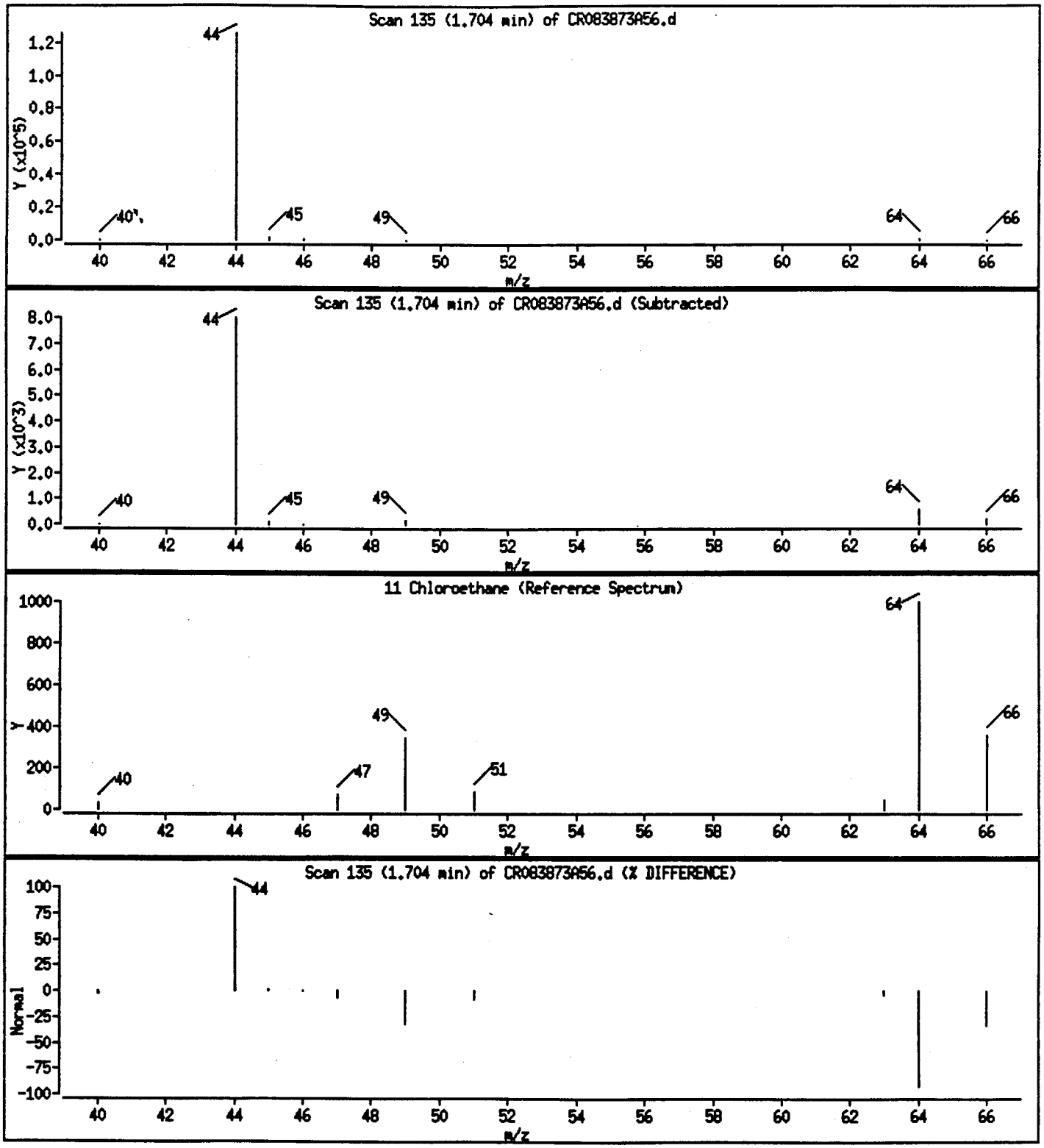
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

11 Chloroethane



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

Client ID: MW17

Instrument: f50056.i

Sample Info:

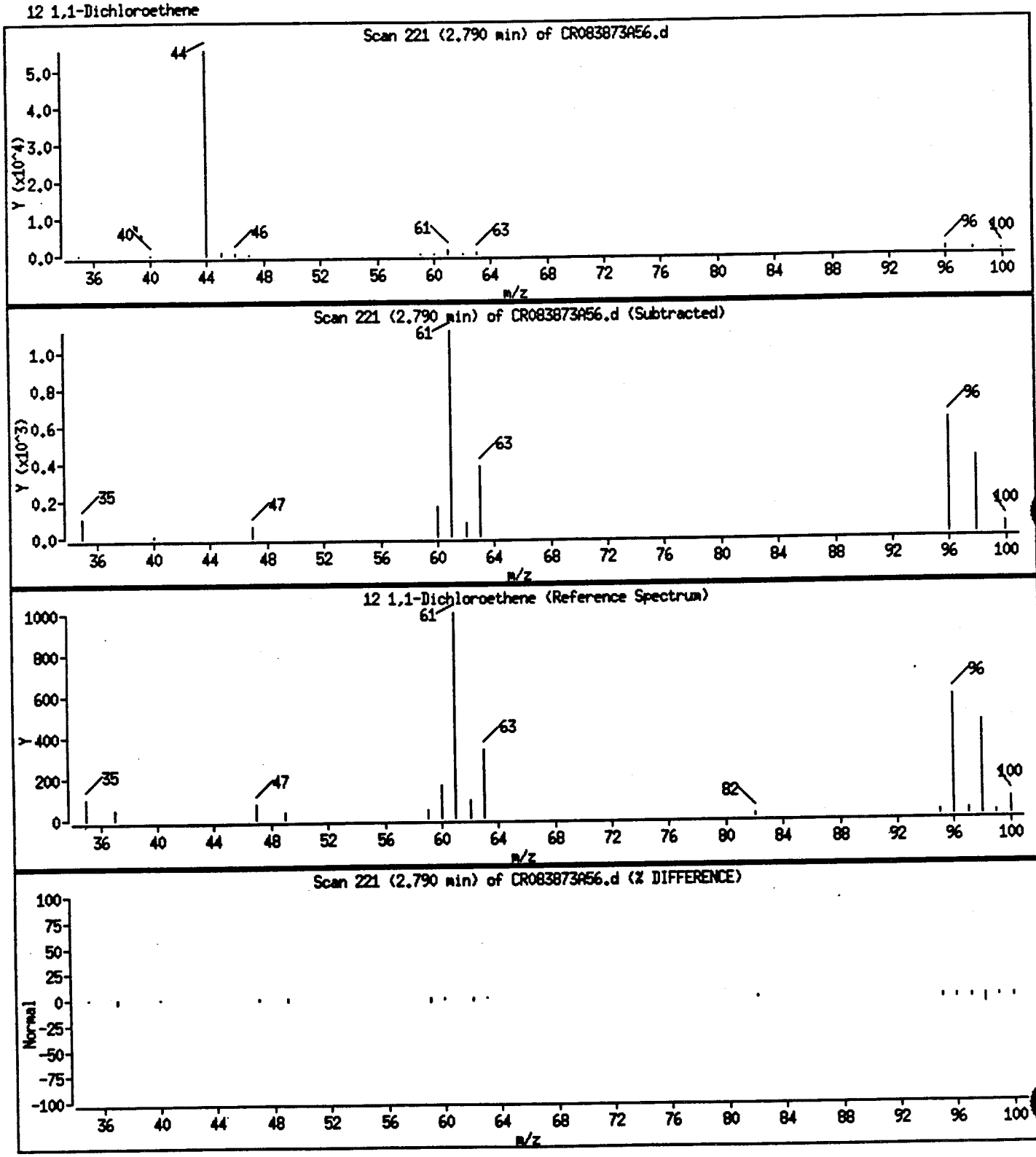
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

12 1,1-Dichloroethene



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

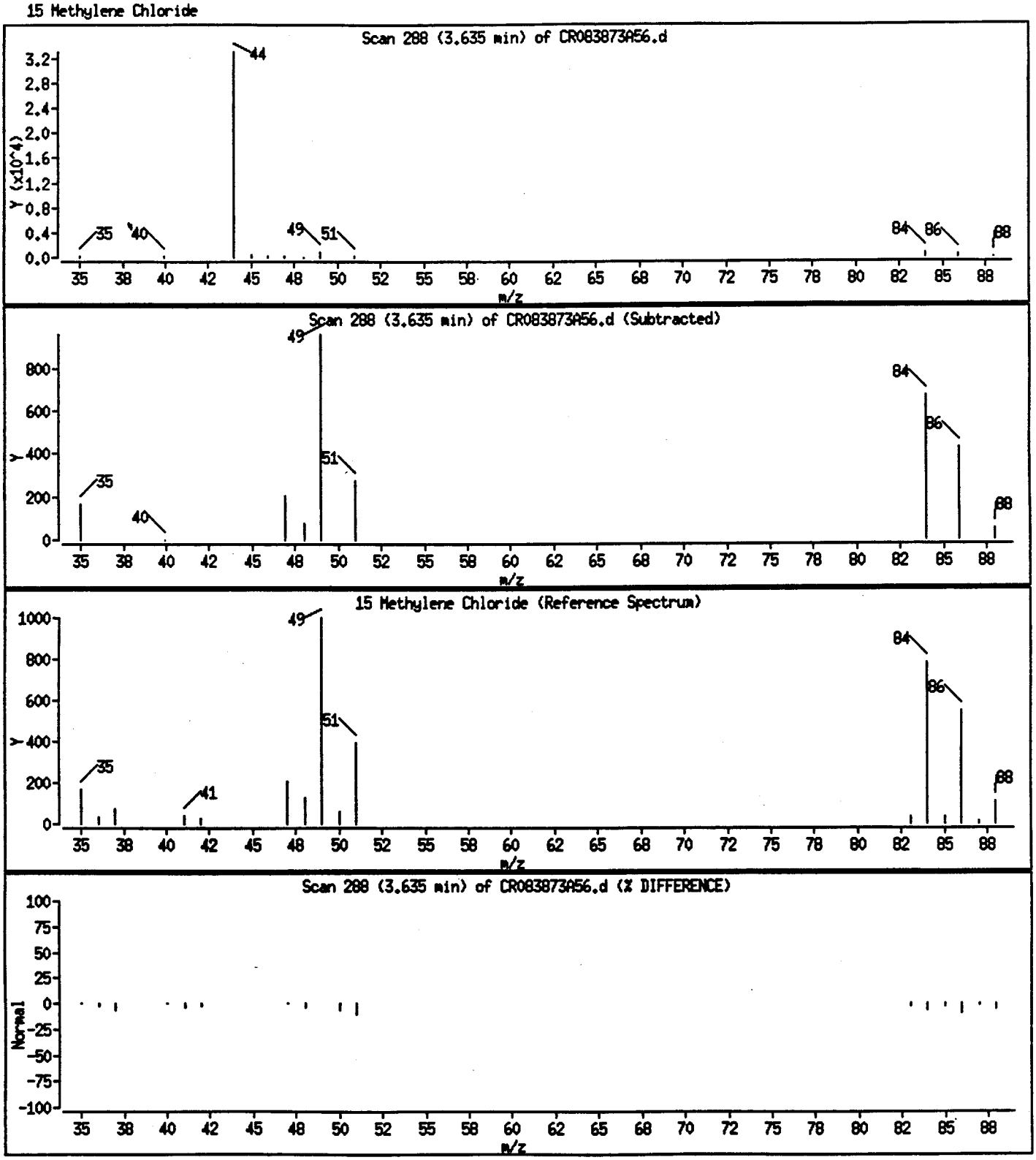
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

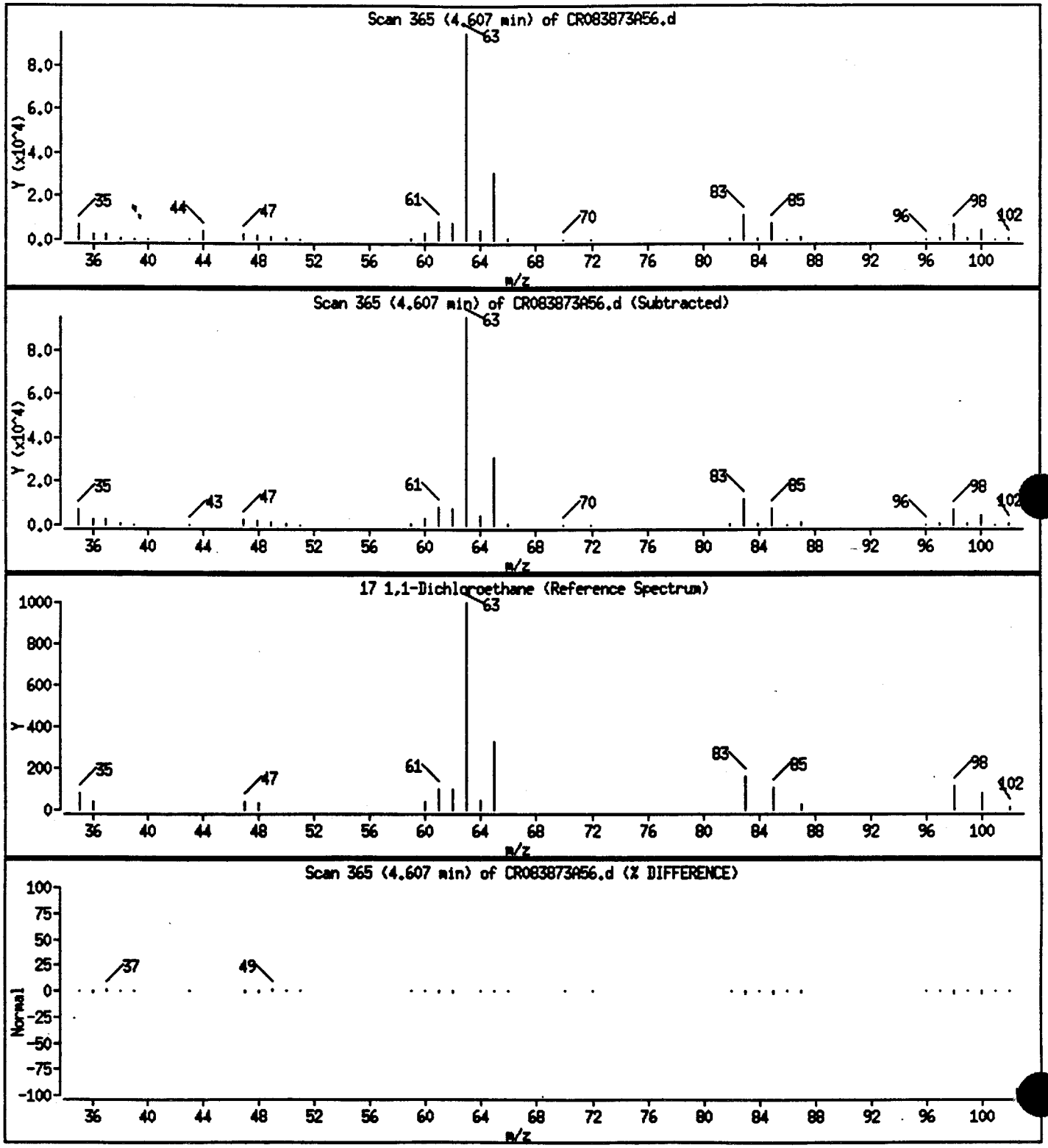
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

Client ID: MW17

Instrument: f50056.i

Sample Info:

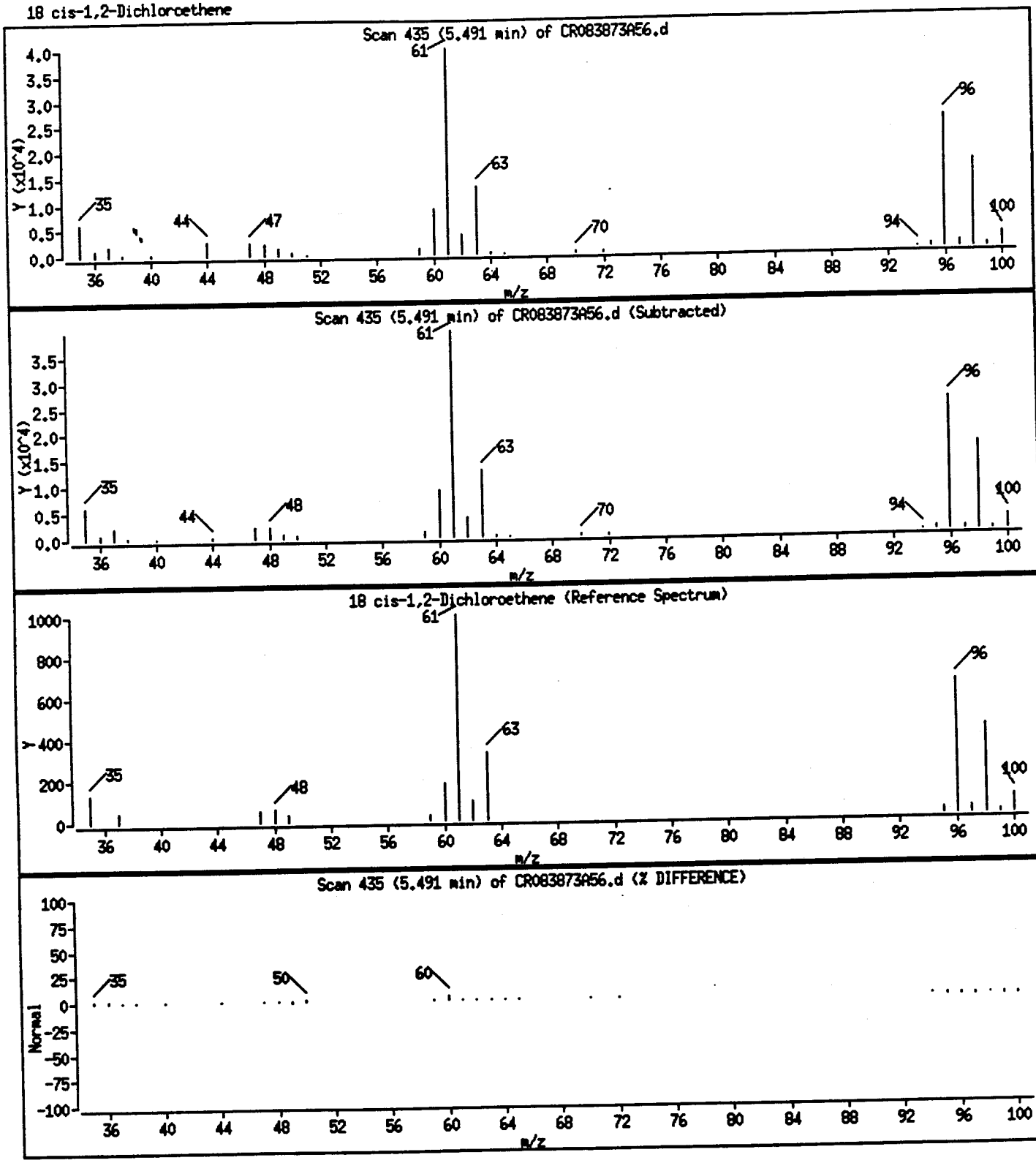
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

18 cis-1,2-Dichloroethene



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

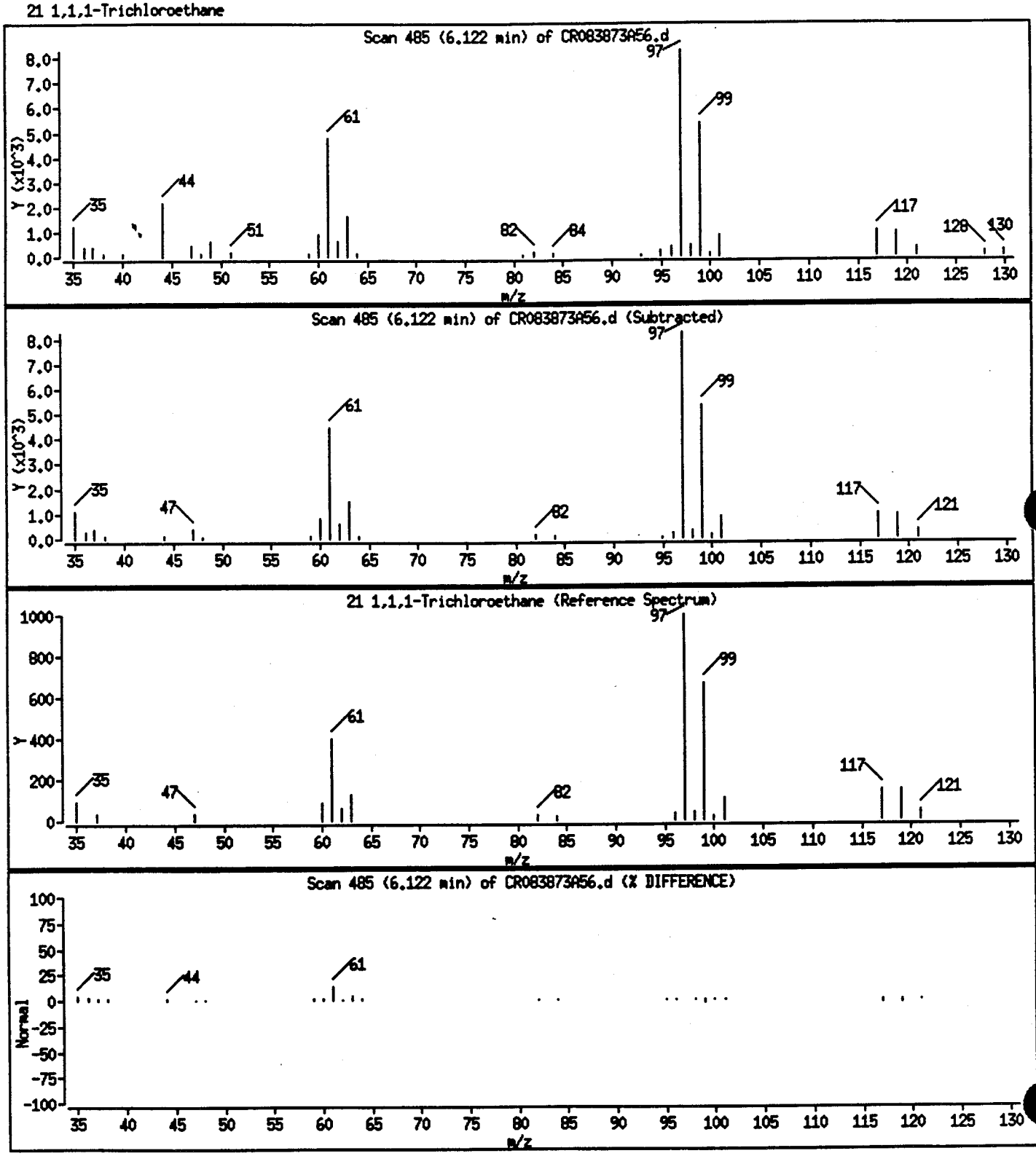
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

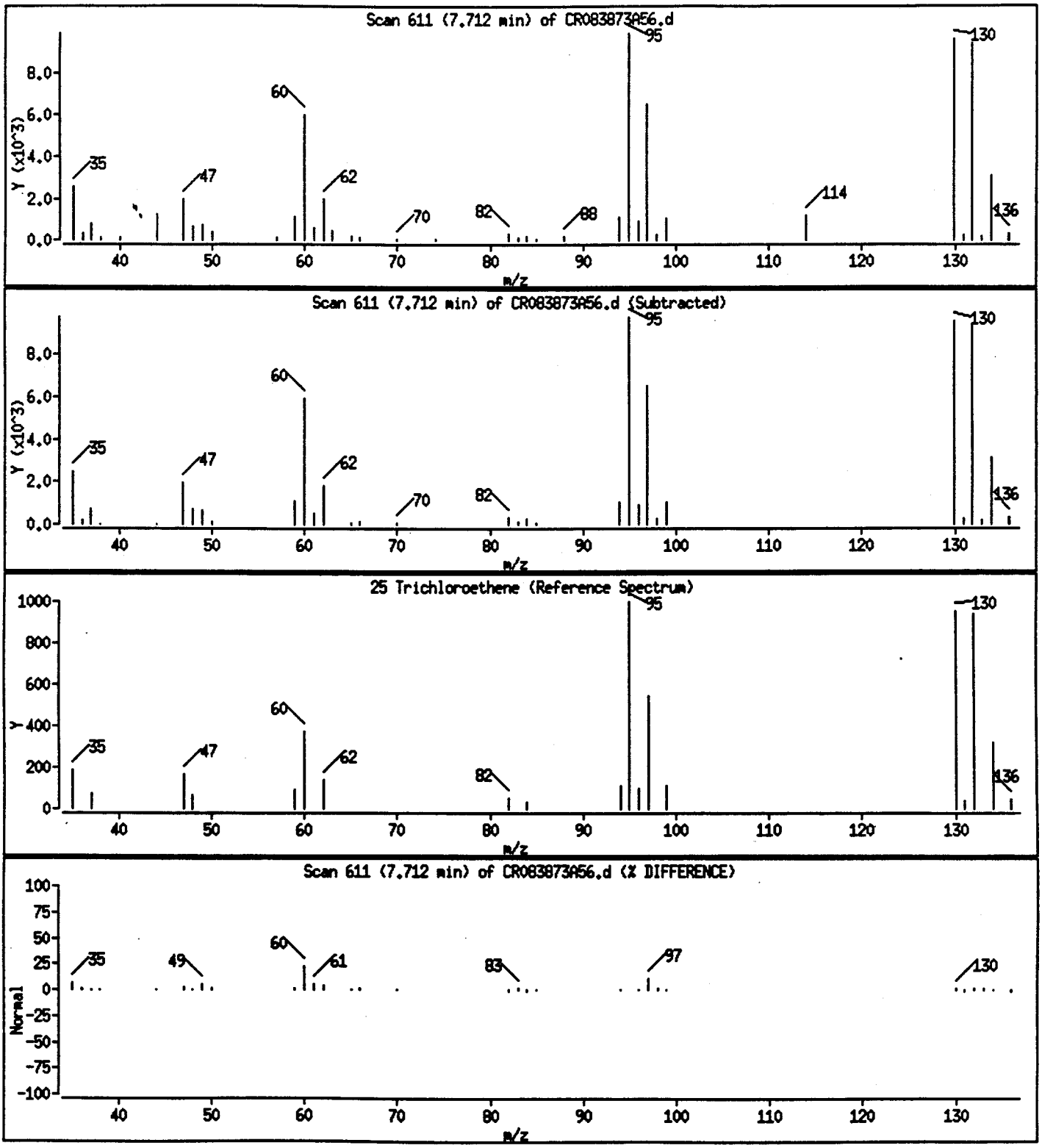
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

25 Trichloroethene



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

Client ID: MW17

Instrument: f50056.i

Sample Info:

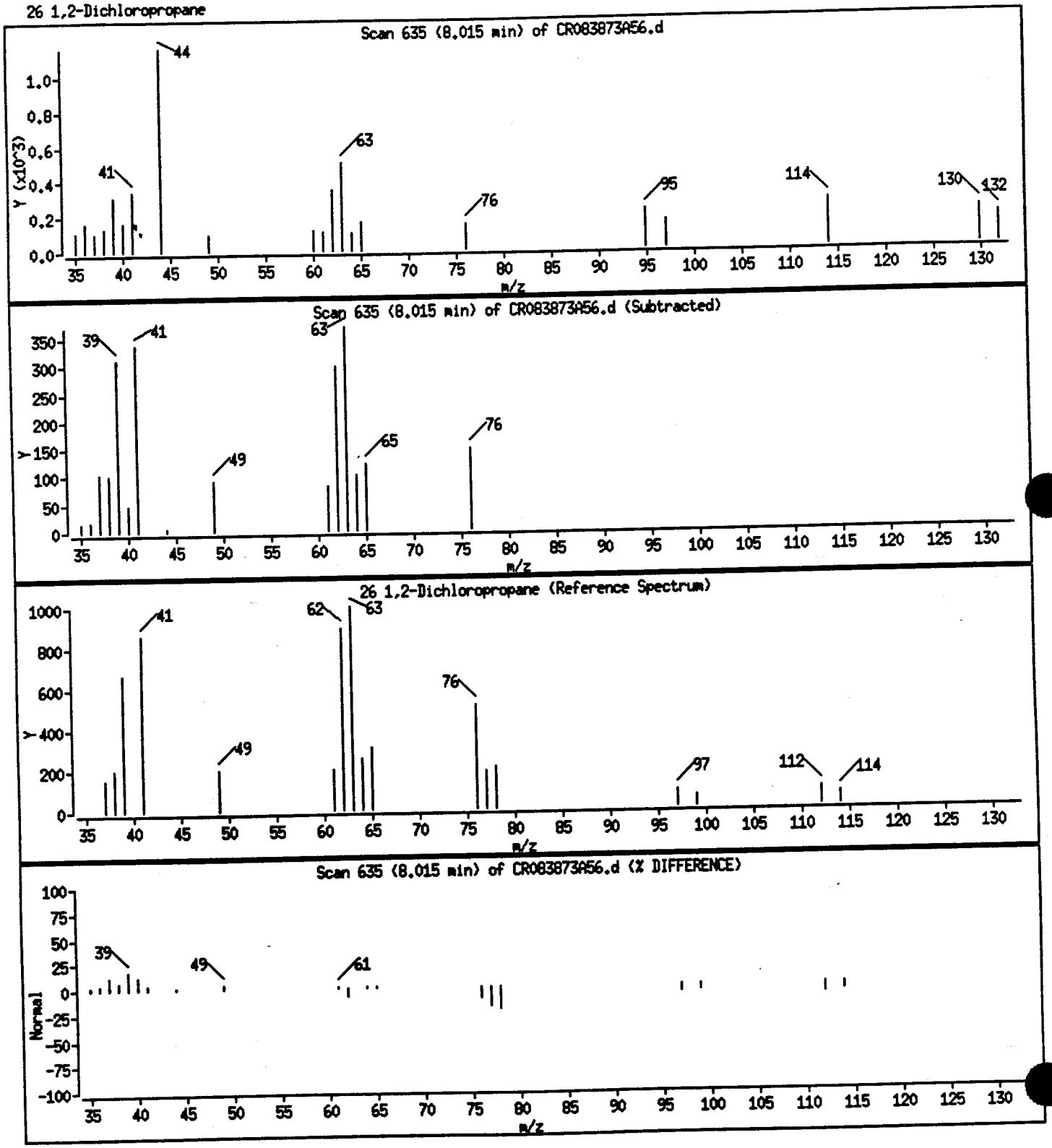
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

26 1,2-Dichloropropane



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

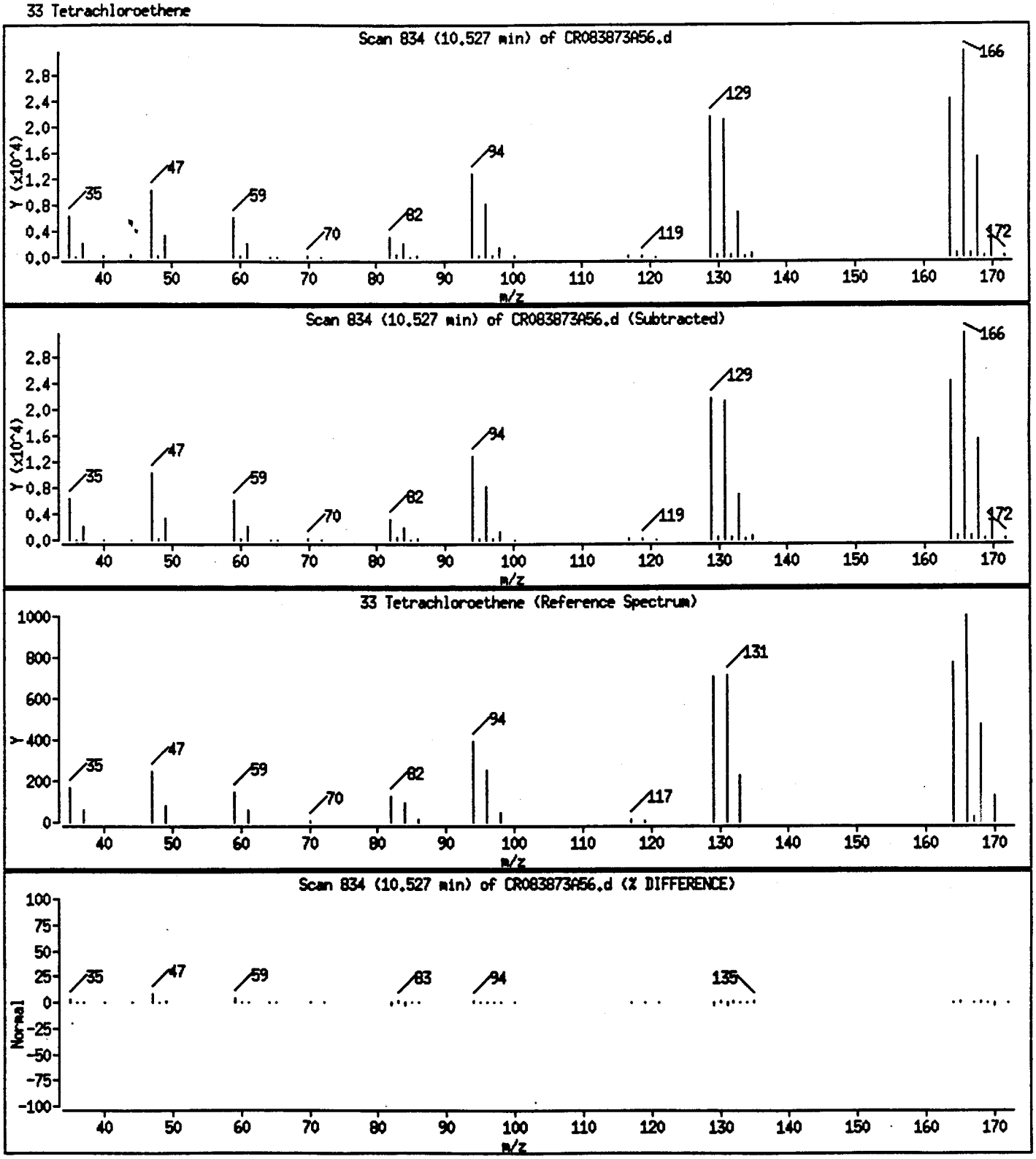
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BF950215A56.b/CR083873A56.d

Date : 15-FEB-1995 15:49

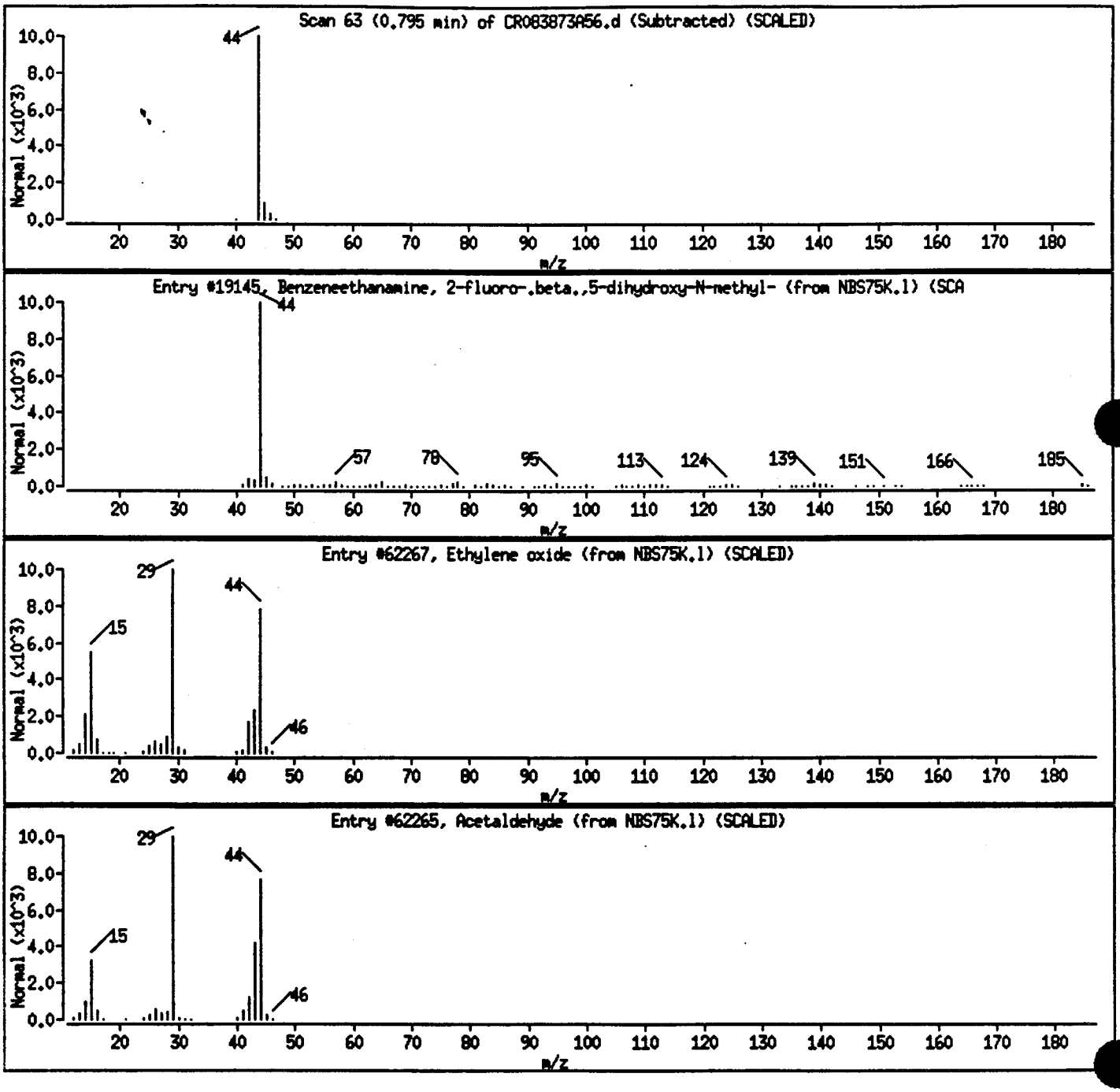
Client ID: MW17 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Ethylene oxide	75-21-8	NBS75K.l	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44



AB INSTRUCTIONS PPS#_____

VOA
MS WORKSHEET

J( ) J3( ) D( ) (:1)

J2( ) J4( ) D2( ) (:1)

683873: 2141: 1:

GC/MS ANALYSIS JR 2/15/95
AMOUNT PURGED: 5000. UL
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950215A56
BLANK FILENAME: CC950215A56
STANDARD FILENAME: CS950215A56
SAMPLE FILENAME: CR083873A56

ANALYST(S): INJECTION: ~~2044~~ JR 2/15/95 2141 WORKUP: JKedi

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE JA ~~OK~~

DISPOSITION: [/] COMPLETE

2/20/95

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 1 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW [signature] DATE 2/20/95 AUDITOR _____ DATE ____/____/____

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

QA COMMENTS:

INITIALS _____ DATE ____/____/____

FINAL REVIEW: INITIALS _____ DATE ____/____/____

QUALITY ASSURANCE NOTICE

CompuChem ID# 683873
Client ID# mw17
Instrument Blank ID# CC950215A56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 63 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DS / 983

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683869

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83869B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 15.4

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	150	U
74-83-9	Bromomethane	150	U
75-01-4	Vinyl Chloride	150	U
75-00-3	Chloroethane	150	U
75-09-2	Methylene Chloride	150	U
67-64-1	Acetone	150	U
75-15-0	Carbon Disulfide	150	U
75-35-4	1,1-Dichloroethene	360	
75-34-3	1,1-Dichloroethane	160	
540-59-0	1,2-Dichloroethene (total)	150	U
67-66-3	Chloroform	150	U
107-06-2	1,2-Dichloroethane	150	U
78-93-3	2-Butanone	150	U
71-55-6	1,1,1-Trichloroethane	2700	
56-23-5	Carbon Tetrachloride	150	U
75-27-4	Bromodichloromethane	150	U
78-87-5	1,2-Dichloropropane	150	U
10061-01-5	cis-1,3-Dichloropropene	150	U
79-01-6	Trichloroethene	150	U
124-48-1	Dibromochloromethane	150	U
79-00-5	1,1,2-Trichloroethane	150	U
71-43-2	Benzene	150	U
10061-02-6	trans-1,3-Dichloropropene	150	U
75-25-2	Bromoform	150	U
108-10-1	4-Methyl-2-Pentanone	150	U
591-78-6	2-Hexanone	150	U
127-18-4	Tetrachloroethene	18	J
79-34-5	1,1,2,2-Tetrachloroethane	150	U
108-88-3	Toluene	150	U
108-90-7	Chlorobenzene	150	U
100-41-4	Ethylbenzene	150	U
100-42-5	Styrene	150	U
1330-20-7	Xylene (Total)	150	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683869

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83869B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 15.4

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	150	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683869

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83869B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 15.4

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	10000	JB
2.					
3.					
4.					
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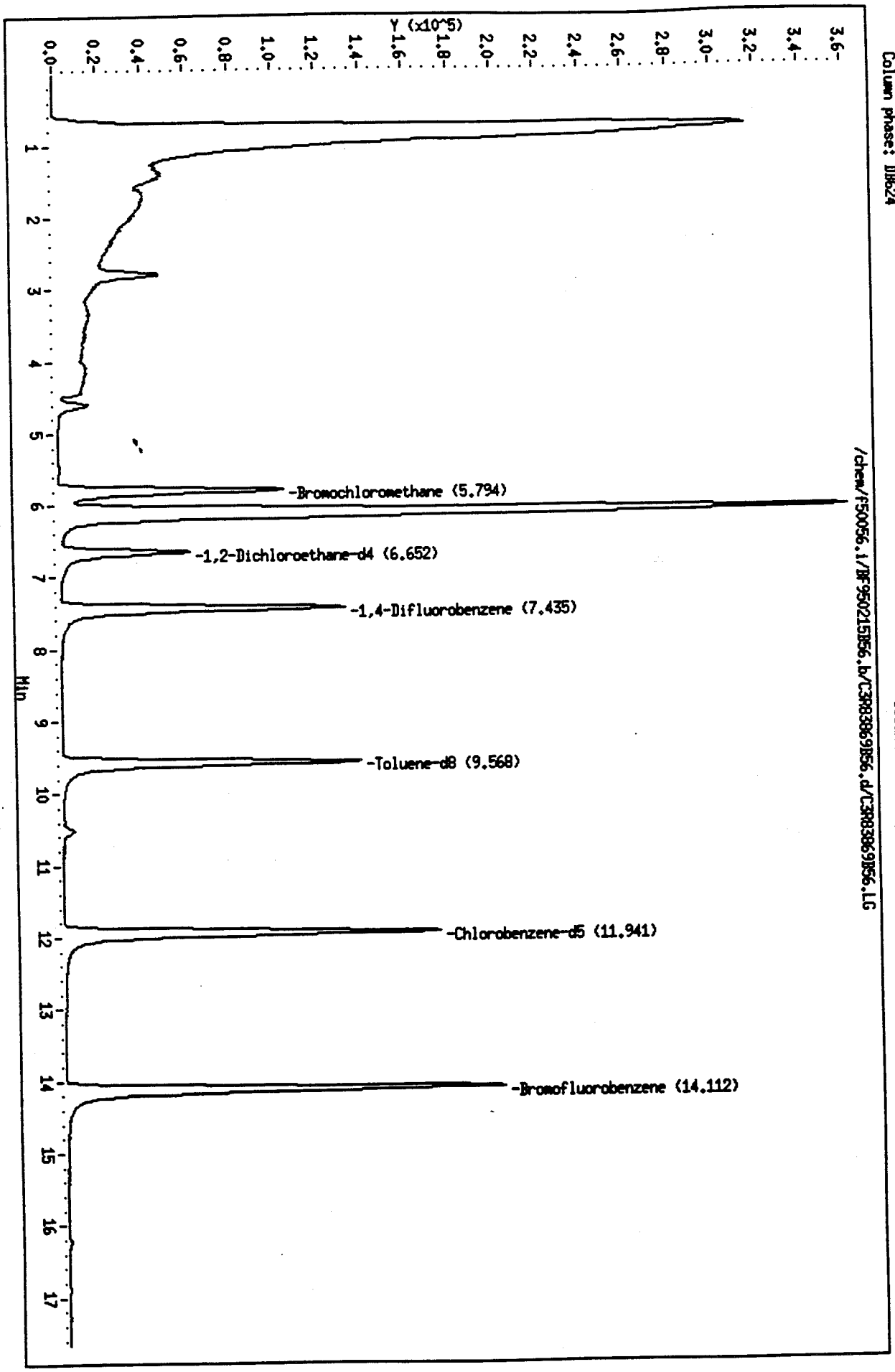

Data File: /chem/f50056.i/BF950215B56.b/C3R838691B56.d
Date : 15-FEB-1995 20:47
Client ID: MW2
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BF950215B56.b/C3R838691B56.d/C3R838691B56.LG
-Bromochloromethane (5.794)
-1,2-Dichloroethane-d4 (6.652)
-1,4-Difluorobenzene (7.435)
-Toluene-d8 (9.568)
-Chlorobenzene-d5 (11.941)
-Bromofluorobenzene (14.112)

Data File: /chem/f50056.i/BF950215B56.b/C3R83869B56.d
Report Date: 20-Feb-1995 12:26

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/C3R83869B56.d
Lab Smp Id: 683869 Client Smp ID: MW2
Inj Date : 15-FEB-1995 20:47
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 15.380
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.794	5.844	(1.000)	84372	250.0	
* 2	1,4-Difluorobenzene	114.00	7.435	7.498	(1.000)	330015	250.0	
* 3	Chlorobenzene-d5	117.00	11.928	12.017	(1.000)	360607	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.652	6.703	(1.148)	146758	245.6	755.3
$ 5	Toluene-d8	98.00	9.568	9.644	(0.802)	291086	240.7	740.3
$ 6	Bromofluorobenzene	95.00	14.112	14.188	(1.183)	268319	227.0	698.2.
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10	Bromomethane	94.00		1.565	Compound Not Detected.			
11	Chloroethane	64.00		1.704	Compound Not Detected.			
12	1,1-Dichloroethene	96.00	2.790	2.815	(0.481)	37026	117.3	360.7
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15	Methylene Chloride	84.00		3.661	Compound Not Detected.			
16	trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17	1,1-Dichloroethane	63.00	4.607	4.645	(0.795)	46583	50.39	155.0
18	cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
19	2-Butanone	43.00		5.731	Compound Not Detected.			
20	Chloroform	83.00		6.097	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00	6.109	6.172	(0.822)	829367	883.2	2717
22	Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23	Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/C3R83869B56.d
Report Date: 20-Feb-1995 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816	Compound Not Detected.			
25	Trichloroethene	130.00		7.763	Compound Not Detected.			
26	1,2-Dichloropropane	63.00		8.066	Compound Not Detected.			
27	Bromodichloromethane	83.00		8.609	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		9.303	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		9.707	Compound Not Detected.			
30	Toluene	91.00		9.745	Compound Not Detected.			
31	trans-1,3-Dichloropropene	75.00		10.275	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		10.515	Compound Not Detected.			
33	Tetrachloroethene	164.00	10.515	10.590	(0.881)	4434	5.94	18.28(a)
34	2-Hexanone	43.00		11.146	Compound Not Detected.			
35	Dibromochloromethane	129.00		11.083	Compound Not Detected.			
36	Chlorobenzene	112.00		12.054	Compound Not Detected.			
37	Ethylbenzene	106.00		12.357	Compound Not Detected.			
38	m,p-Xylene	106.00		12.585	Compound Not Detected.			
39	o-Xylene	106.00		13.254	Compound Not Detected.			
40	Styrene	104.00		13.304	Compound Not Detected.			
41	Bromoform	173.00		13.531	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		14.667	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00		1.000	Compound Not Detected.			
M 44	Xylene (Total)	106.00		13.254	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/C3R83869B56.d

Date : 15-FEB-1995 20:47

Client ID: MW2

Sample Info:

Purge Volume: 5.0

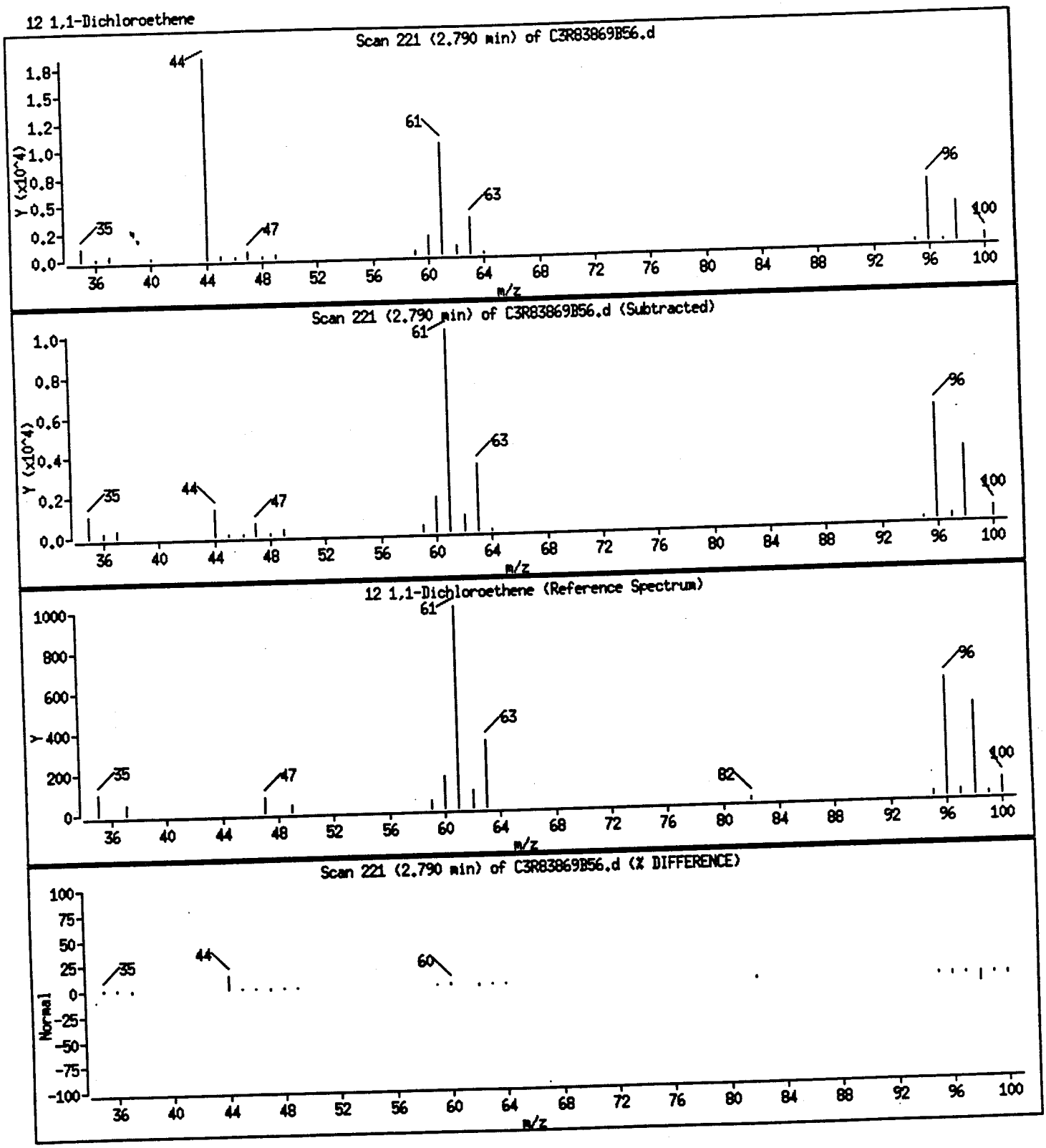
Column phase: DB624

Instrument: f50056.i

Operator: 2011

Column diameter: 0.53

12 1,1-Dichloroethene



Data File: /chem/f50056.i/BF950215B56.b/C3R83869B56.d

Date : 15-FEB-1995 20:47

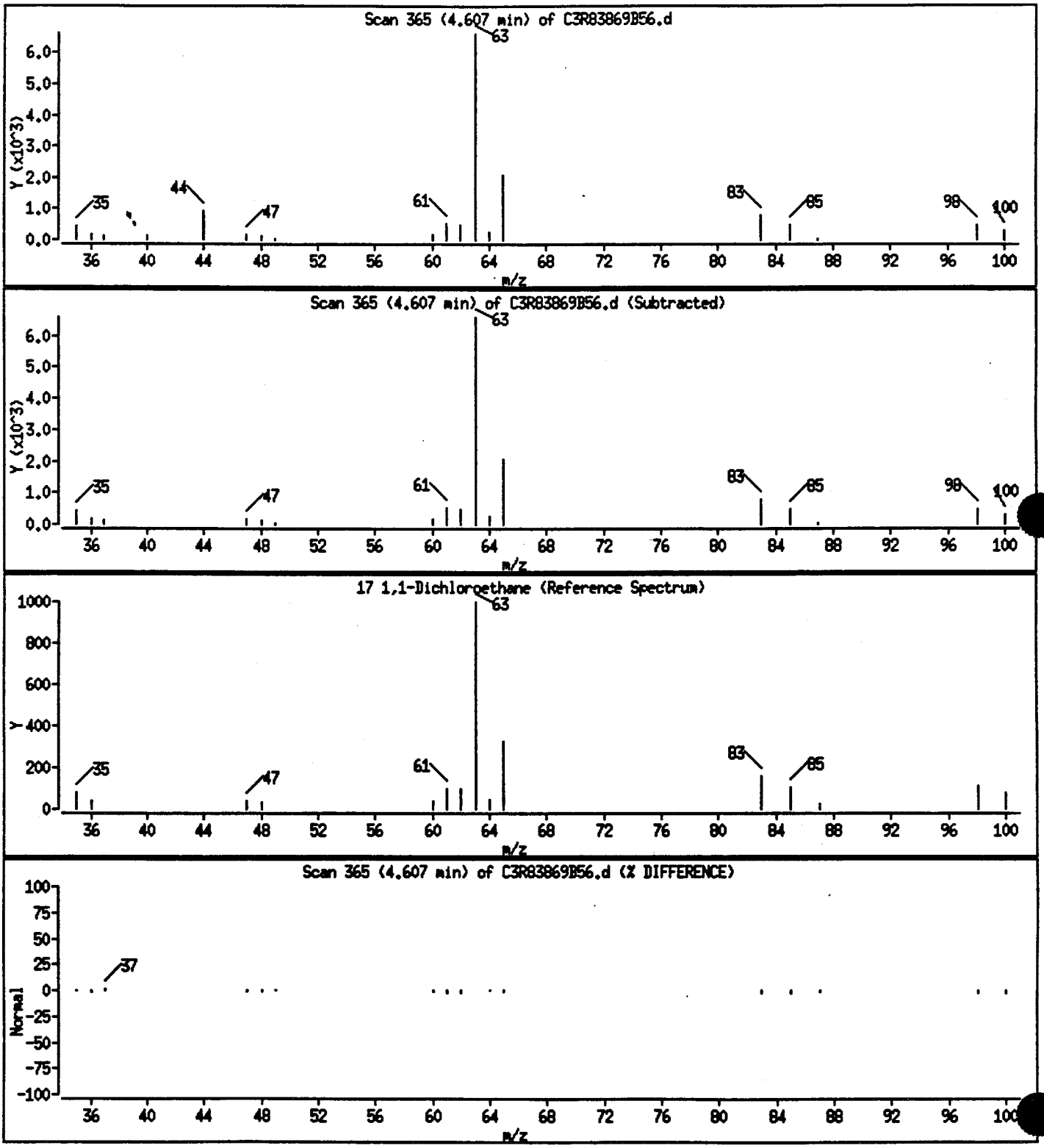
Client ID: MW2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50056.i/BF950215B56.b/C3R83869B56.d

Date : 15-FEB-1995 20:47

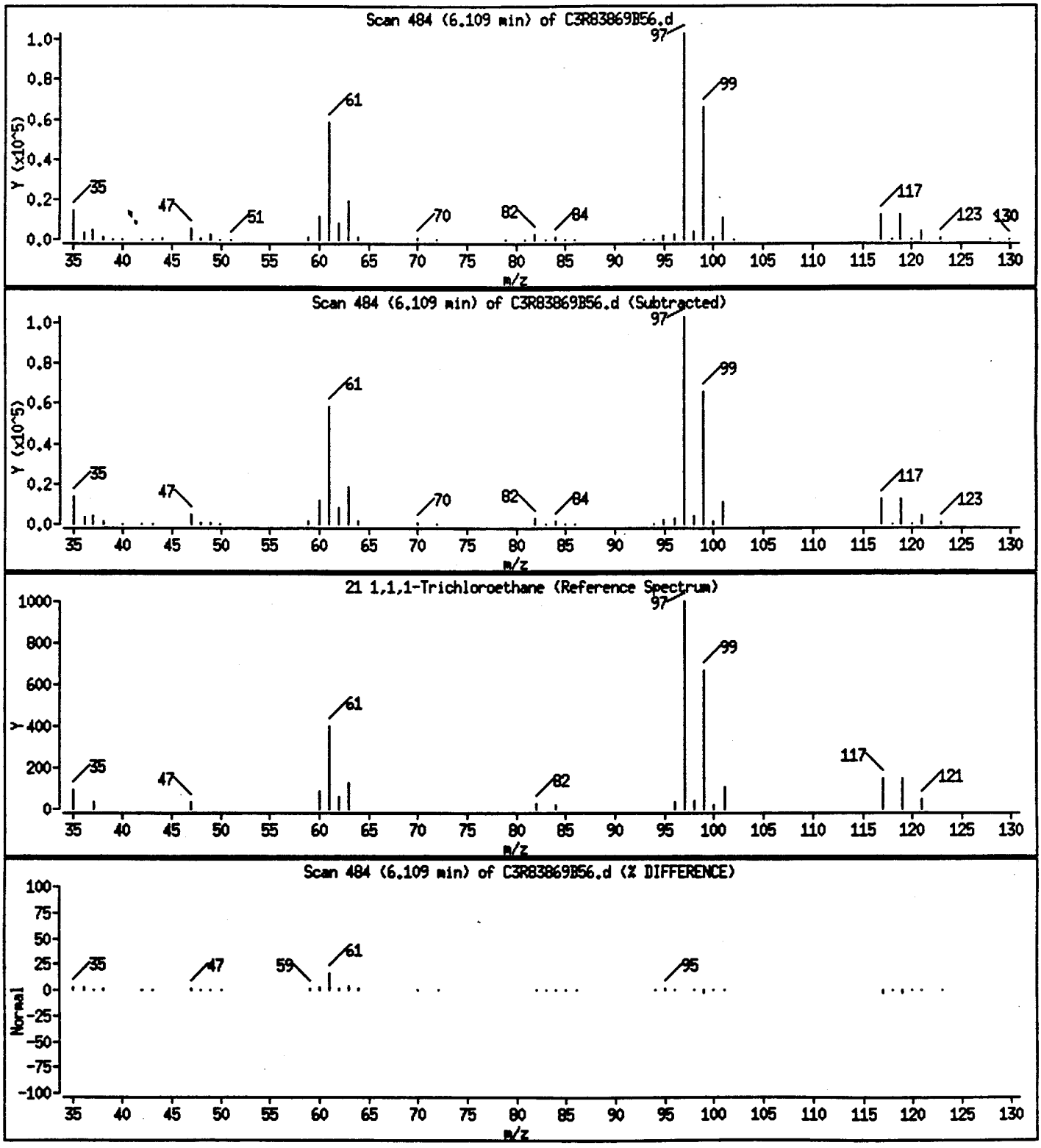
Client ID: MW2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane



Data File: /chem/f50056.i/BF950215B56.b/C3R83869B56.d

Date : 15-FEB-1995 20:47

Client ID: MW2

Instrument: f50056.i

Sample Info:

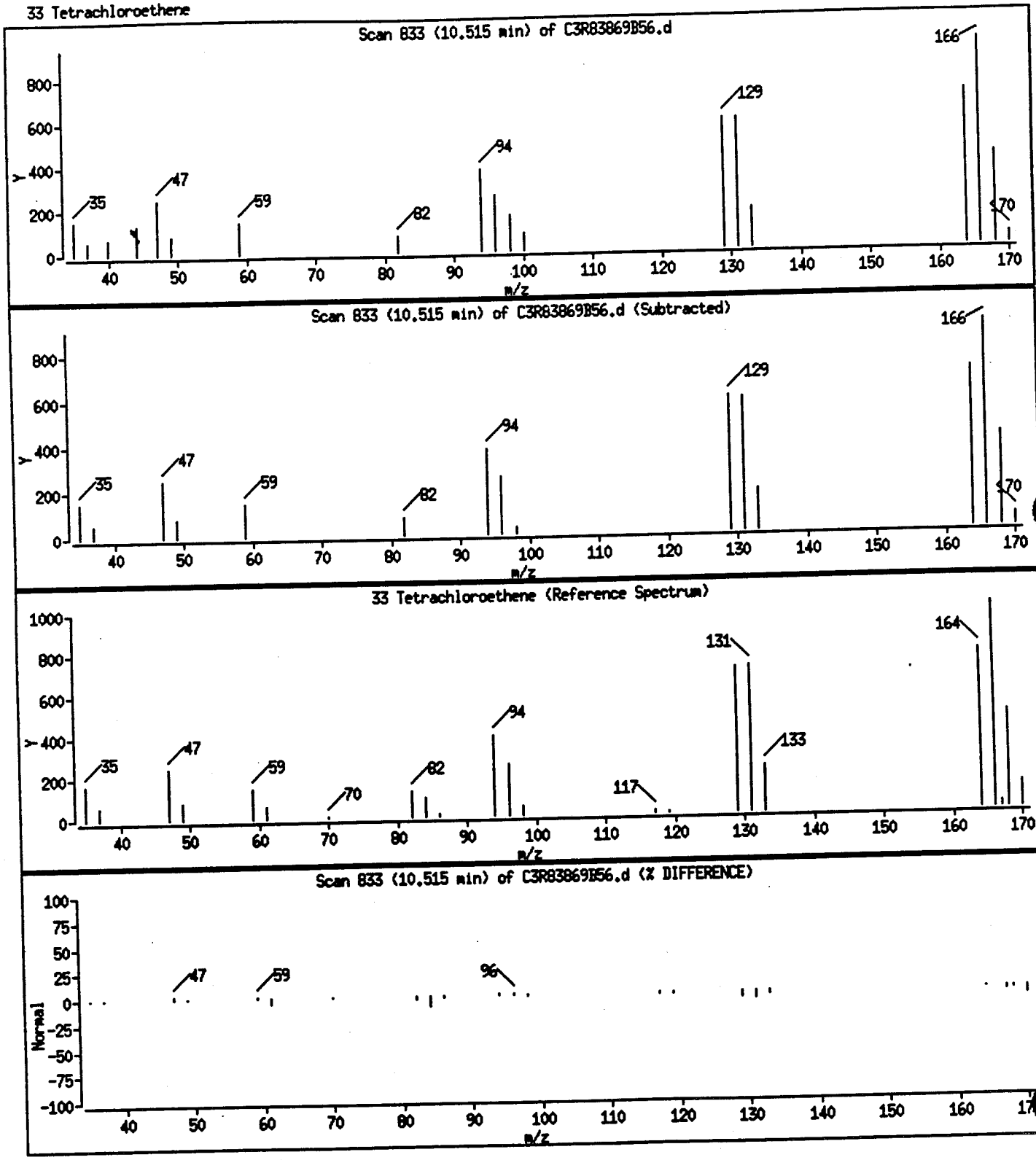
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BF950215B56.b/C3R83869B56.d

Date : 15-FEB-1995 20:47

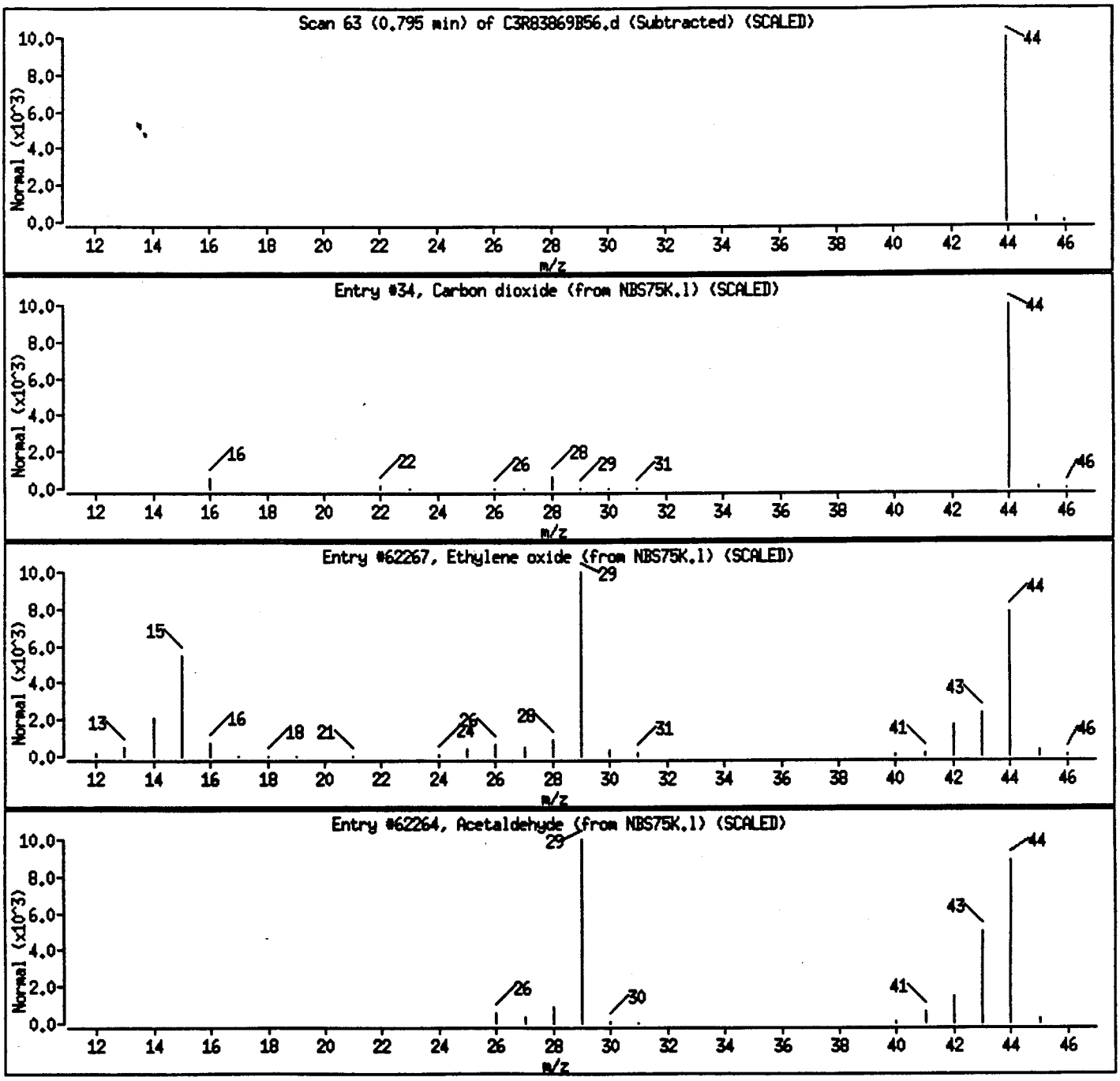
Client ID: MW2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	34	5	CO2	44
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62264	3	C2H4O	44



PPS#: _____

B INSTRUCTIONS:

CEIPT DATE: CASE#: 30073 00001 SAS#: DUE DATE:

VOA
/MS WORKSHEET COMPUCHEM#: 68386R3 J1[ ] J3[ ] D[ ] (:1)
2J[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

Sample date: Report type: A

SAMPLE ID#: MW2

GC/MS ANALYSIS: ~~Date~~ 9/12/15/95 325uL
Amount Purged: [ ] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added _____ ul
Surrogate Standard Volume Added _____ ul
BFB Filename BFS5D215B56 Disk ( )
Blank Filename CBS5D215B56 Disk ( )
Standard Filename CS5D215B56 Disk ( )
Sample Filename CB8386R3B6 Disk ( )

ANALYST(S): Injection 2011 Work-up JKuch

GC/MS REVIEW

CONDITION CODE DA

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 25

[ ] Reinject Neat

[ ] Dilute (:1)

Quality Assurance Notice(s):
Notices Required 01

COMMENTS:

#GC/MS Review default Date 2/20/95 Auditor_____ Date___/___/___

Total # of Injections: _____

REPORT INTEGRATION
Final Reportable Package(s):_____/_____

QA COMMENTS:

Initials_____ Date___/___/___

FINAL REVIEW: Initials_____ Date___/___/___

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683869
Client ID# mw2
Instrument Blank ID# CB950215B56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 63 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / RF
Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
MW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683841

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083841C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	4	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	6	J
75-34-3	1,1-Dichloroethane	180	
540-59-0	1,2-Dichloroethene (total)	54	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	31	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	1	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	19	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	46	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683841

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083841C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683841

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083841C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2000	JB
2.					
3.					
4.					
5.					
6.					
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14.					
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21.					
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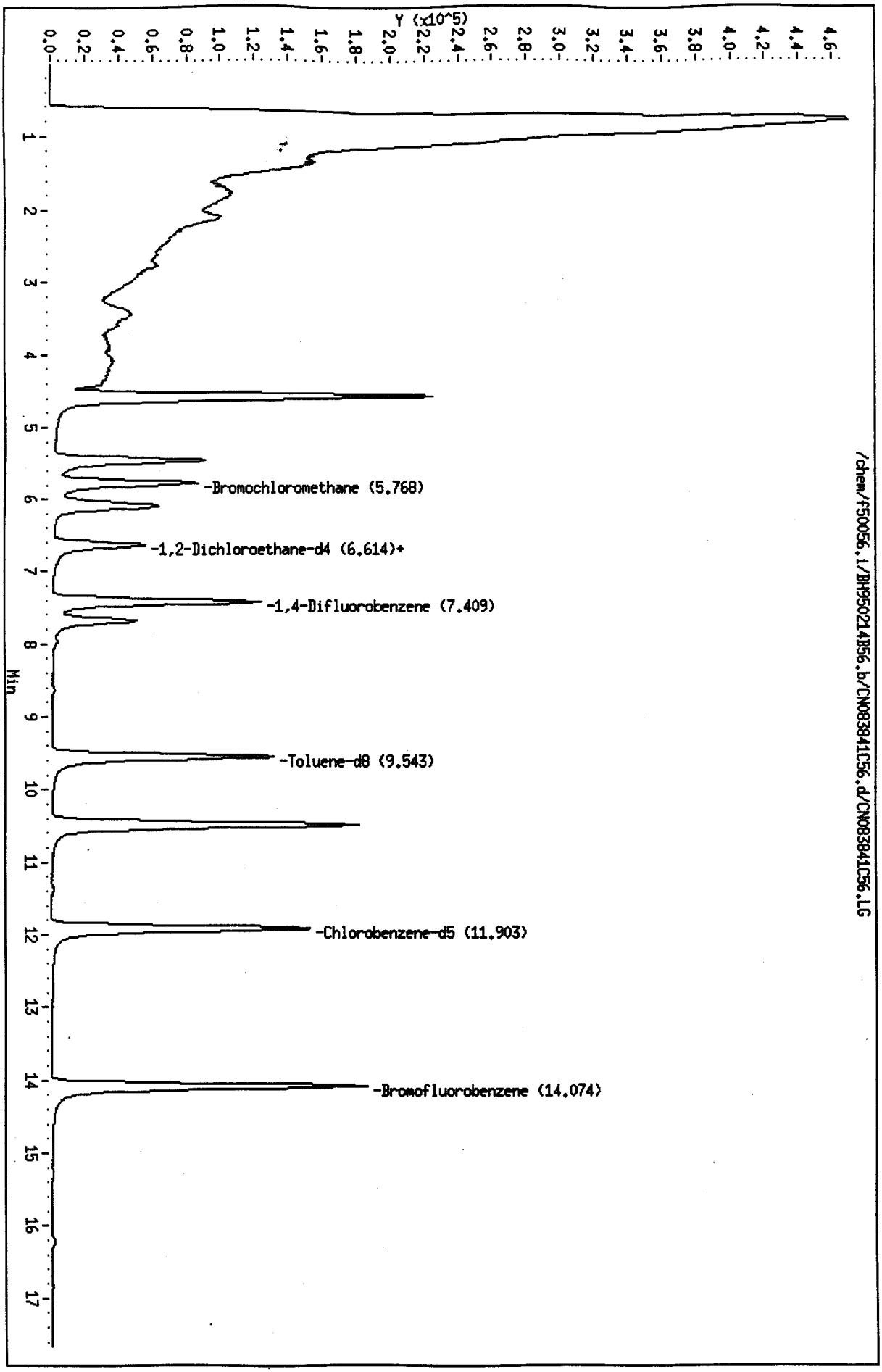
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d
Date : 15-FEB-1995 04:40
Client ID: MW3
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BH950214B56.b/CN083841C56.d/CN083841C56.LG
-Bromochloromethane (5.768)
-1,2-Dichloroethane-d4 (6.614)+
-1,4-Difluorobenzene (7.409)
-Toluene-d8 (9.543)
-Chlorobenzene-d5 (11.903)
-Bromofluorobenzene (14.074)

Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083841C56.d
Lab Smp Id: 683841 Client Smp ID: MW3
Inj Date : 15-FEB-1995 04:40
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.768	5.882	(1.000)	68861	250.0	
* 2	1,4-Difluorobenzene	114.00	7.397	7.536	(1.000)	310902	250.0	
* 3	Chlorobenzene-d5	117.00	11.903	12.042	(1.000)	318466	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.614	6.740	(1.147)	130478	273.9	54.78
$ 5	Toluene-d8	98.00	9.543	9.669	(0.802)	285525	242.2	48.44
$ 6	Bromofluorobenzene	95.00	14.074	14.213	(1.182)	250033	234.0	46.80
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00	1.199	1.237	(0.208)	3140	11.77	2.35(a)
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00	1.691	1.729	(0.293)	7800	35.12	7.02(a)
12	1,1-Dichloroethene	96.00	2.777	2.853	(0.481)	8021	30.12	6.02(a)
13	Acetone	43.00		3.193	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00	3.610	3.698	(0.626)	7061	17.80	3.56(a)
16	trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
17	1,1-Dichloroethane	63.00	4.569	4.683	(0.792)	714219	889.1	177.8
18	cis-1,2-Dichloroethene	96.00	5.453	5.567	(0.945)	122918	260.5	52.10
19	2-Butanone	43.00		5.781	Compound Not Detected.			
20	Chloroform	83.00		6.135	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00	6.084	6.210	(0.823)	133713	155.7	31.14
22	Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
23	Benzene	78.00	6.627	6.753	(0.896)	10133	8.81	1.76(a)
24	1,2-Dichloroethane	62.00		6.854	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	25 Trichloroethene	130.00	7.674	7.801	(1.038)	51530	95.64	19.13
	26 1,2-Dichloropropane	63.00	7.977	8.104	(1.078)	2659	5.51	1.10(a)
	27 Bromodichloromethane	83.00		8.634		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		9.341		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		9.745		Compound Not Detected.		
	30 Toluene	91.00		9.782		Compound Not Detected.		
	31 trans-1,3-Dichloropropene	75.00		10.313		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		10.552		Compound Not Detected.		
	33 Tetrachloroethene	164.00	10.477	10.616	(0.880)	155149	231.1	46.23
	34 2-Hexanone	43.00		11.171		Compound Not Detected.		
	35 Dibromochloromethane	129.00		11.120		Compound Not Detected.		
	36 Chlorobenzene	112.00		12.080		Compound Not Detected.		
	37 Ethylbenzene	106.00		12.383		Compound Not Detected.		
	38 m,p-Xylene	106.00		12.610		Compound Not Detected.		
	39 o-Xylene	106.00		13.279		Compound Not Detected.		
	40 Styrene	104.00		13.342		Compound Not Detected.		
	41 Bromoform	173.00		13.557		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		14.693		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00				122918	267.6	53.53
M	44 Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

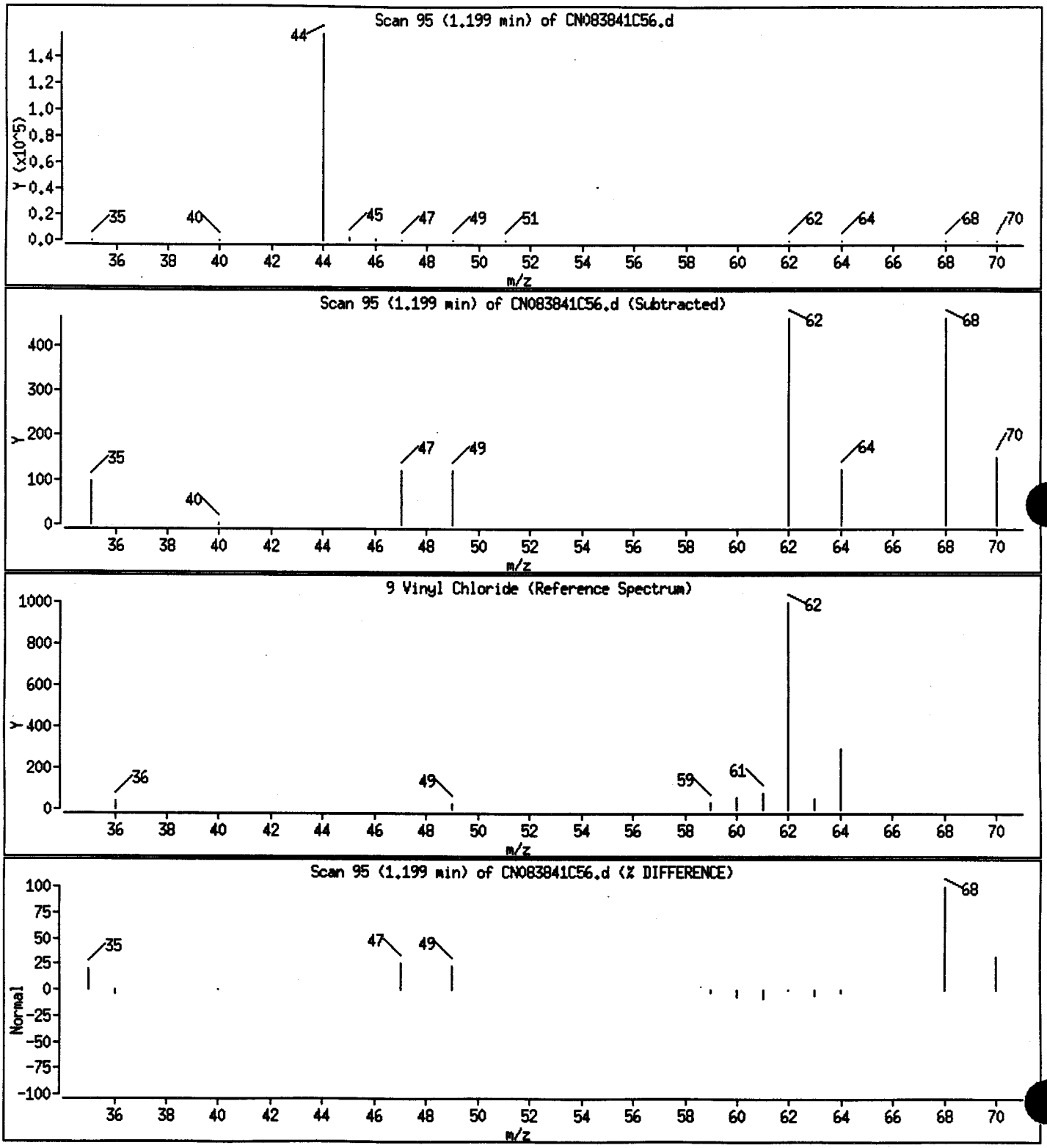
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

9 Vinyl Chloride



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

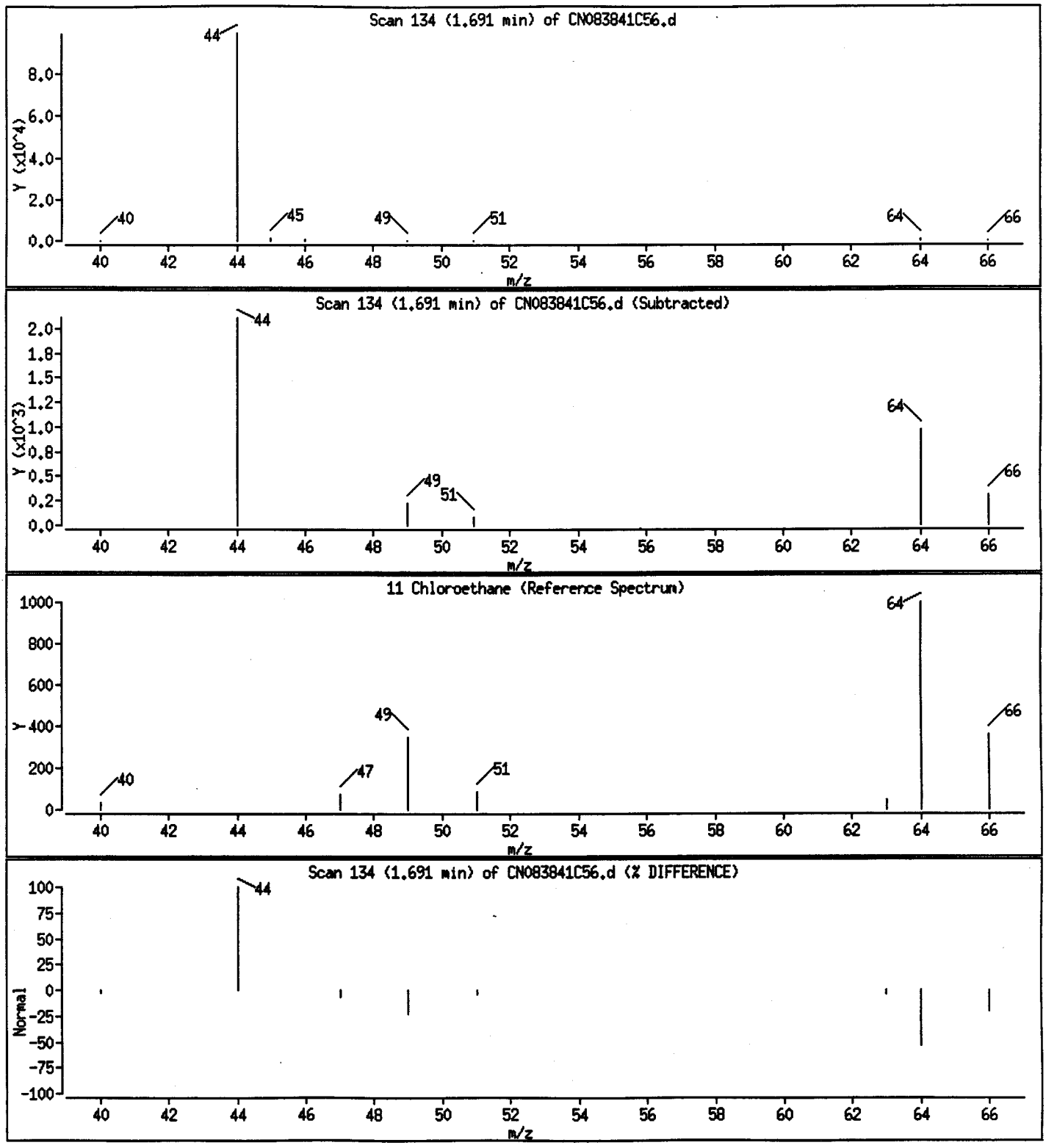
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

11 Chloroethane



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

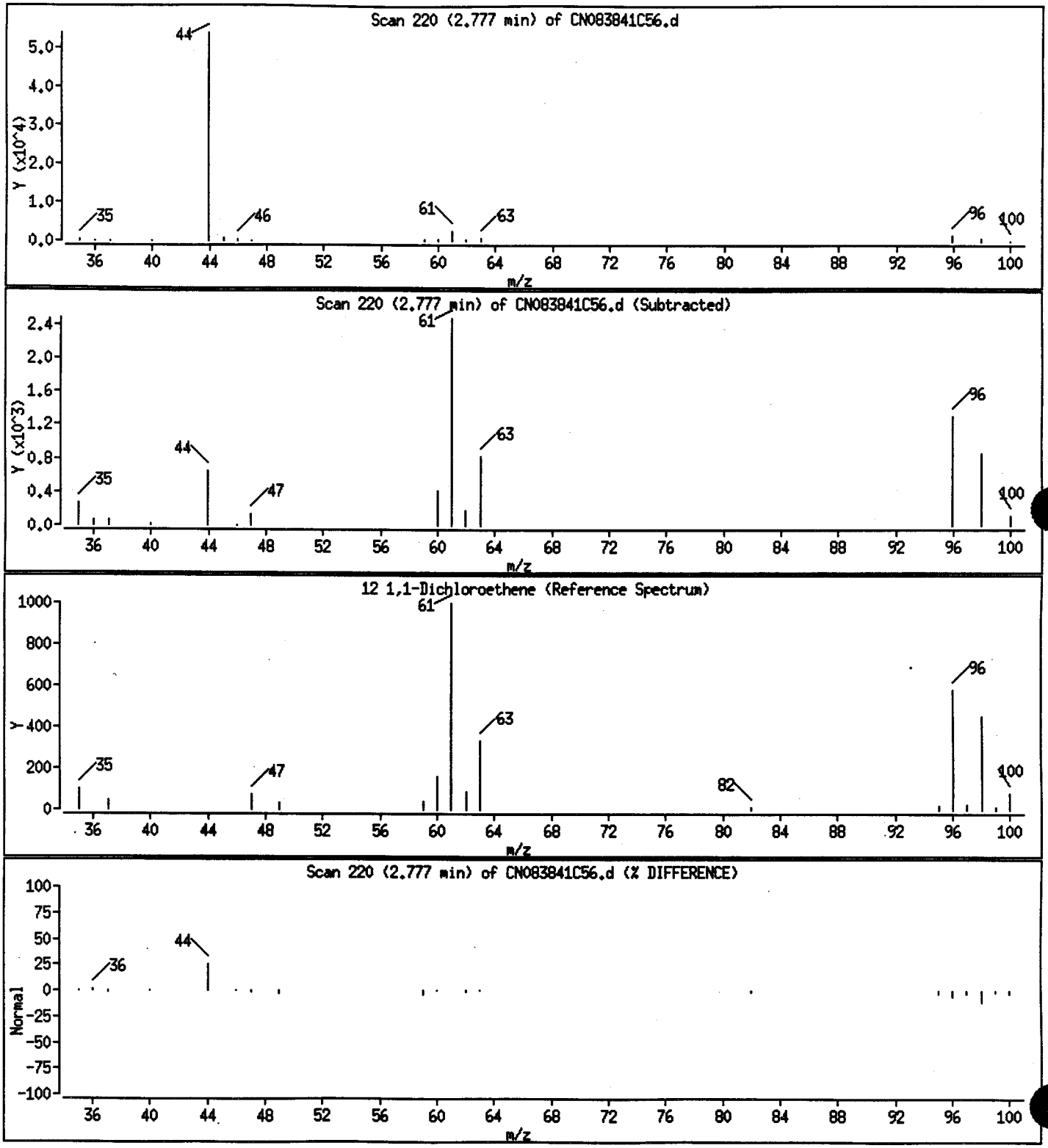
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

12 1,1-Dichloroethene



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

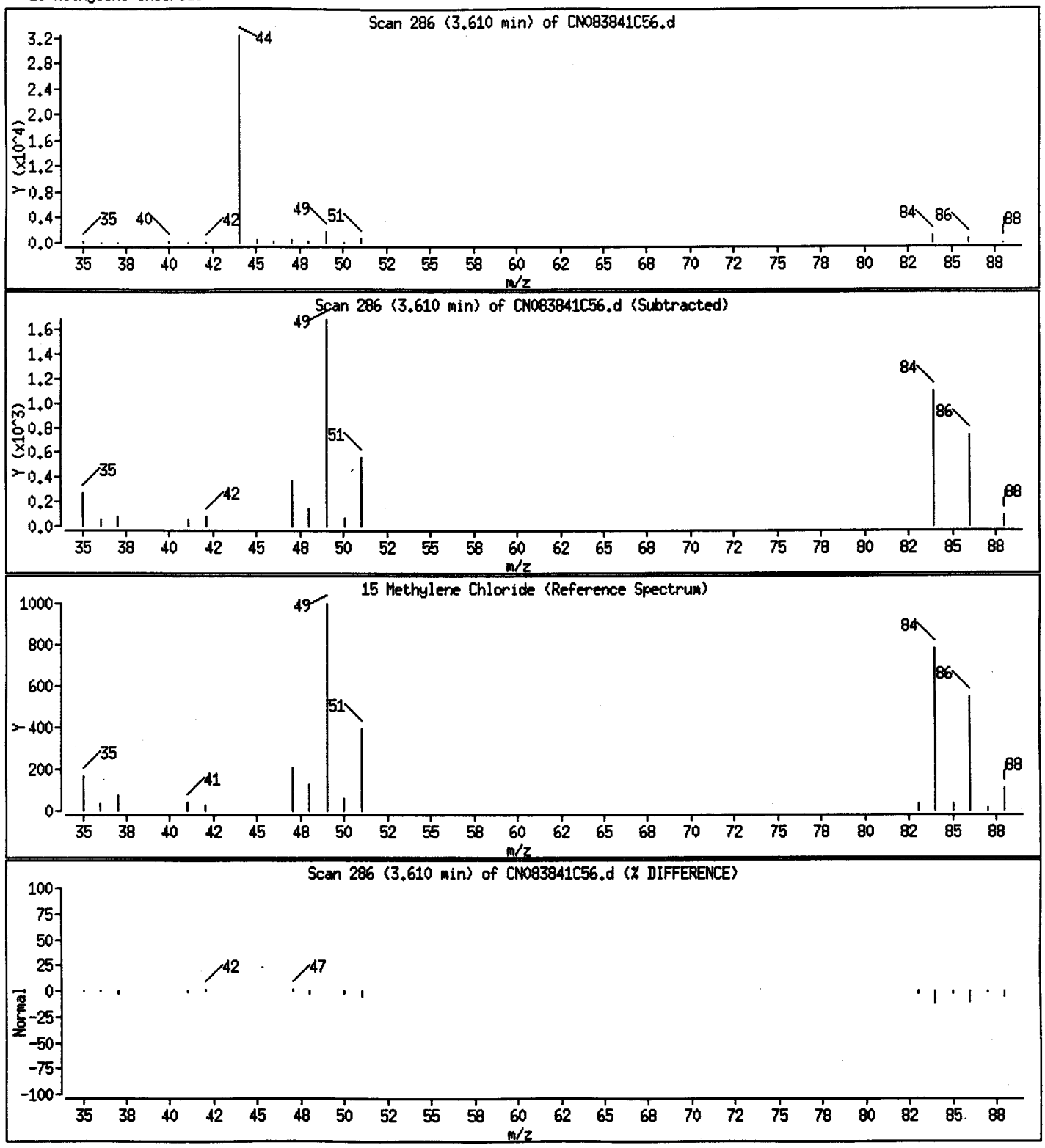
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

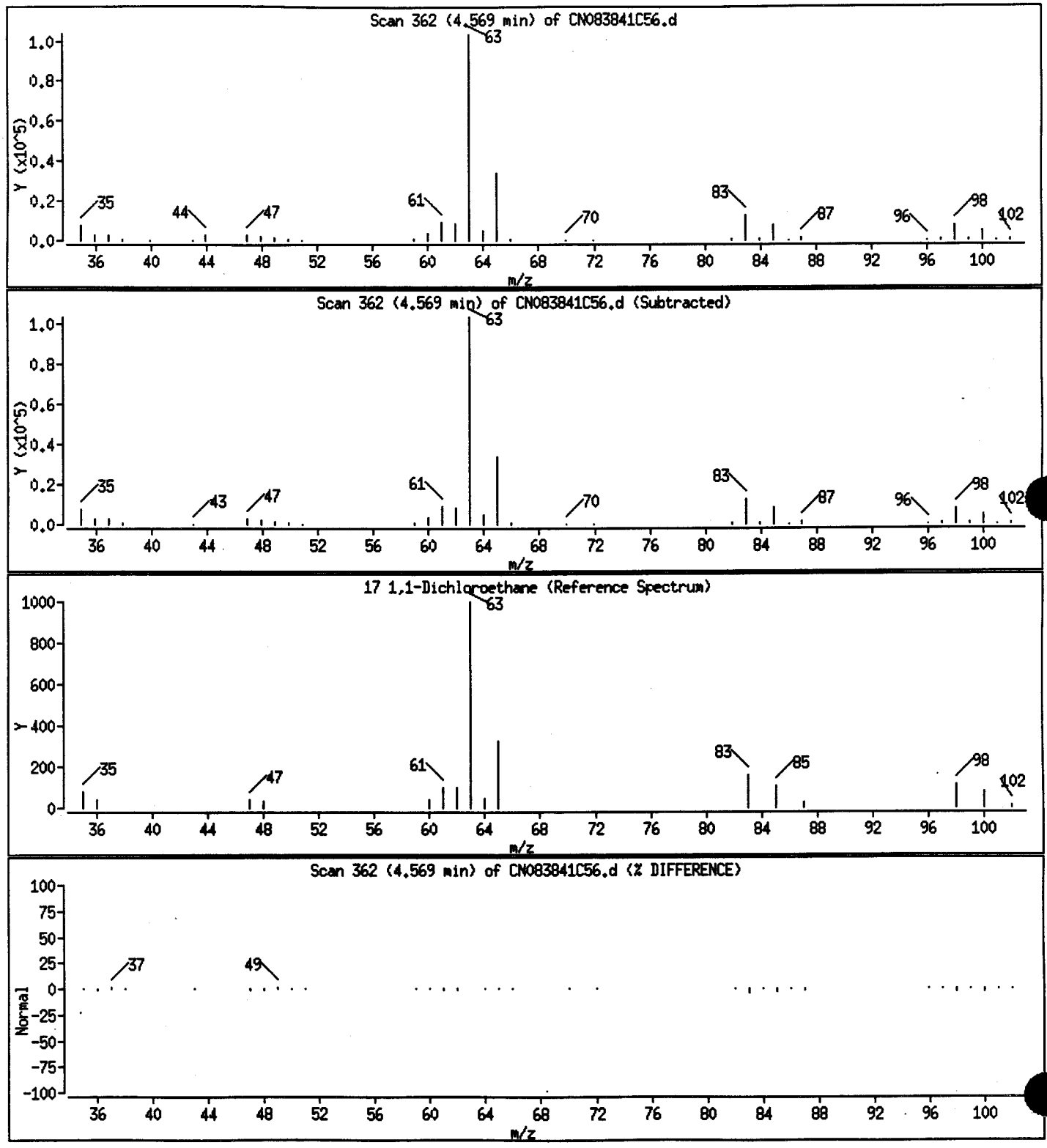
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

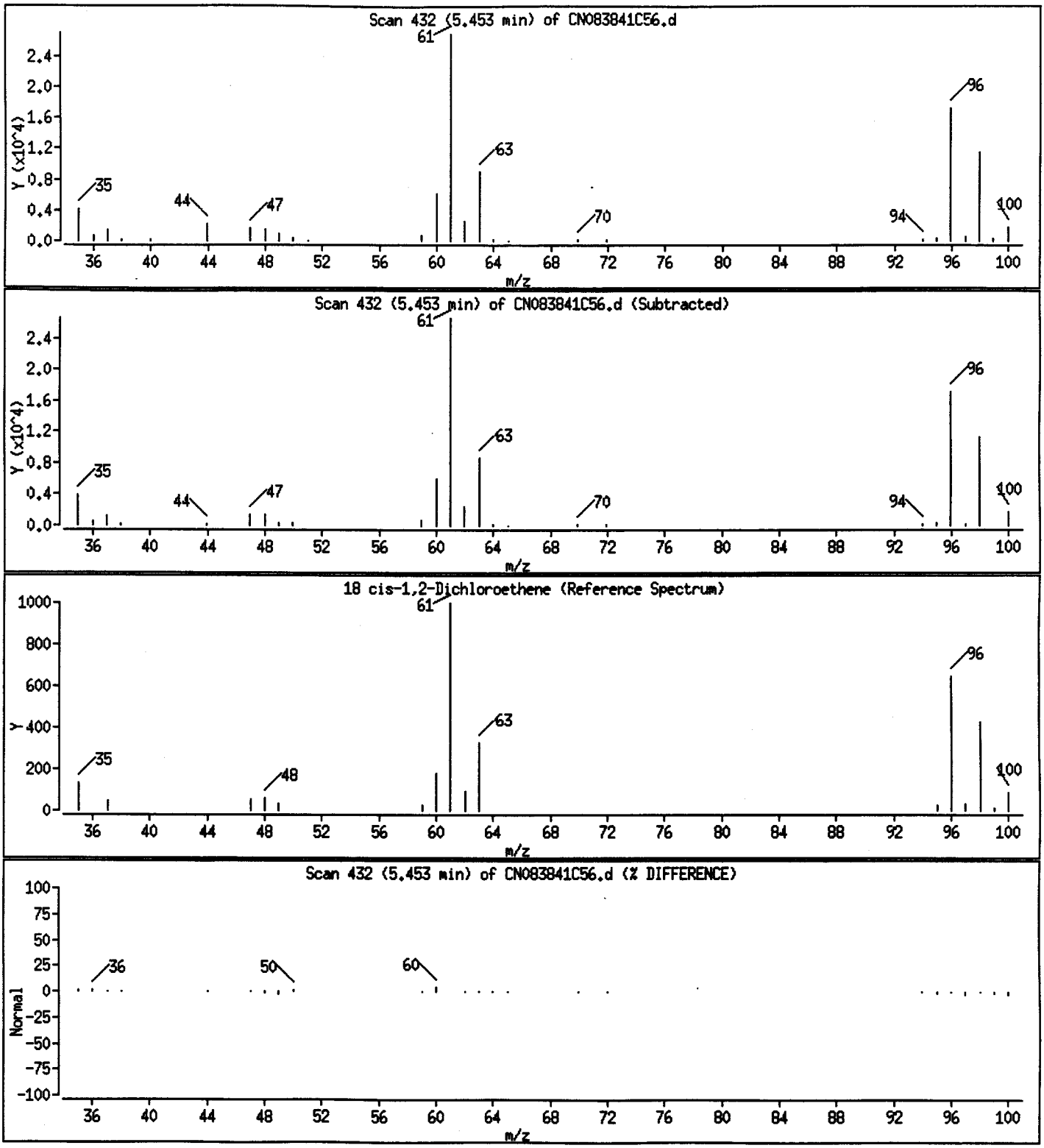
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

18 cis-1,2-Dichlorcethene



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

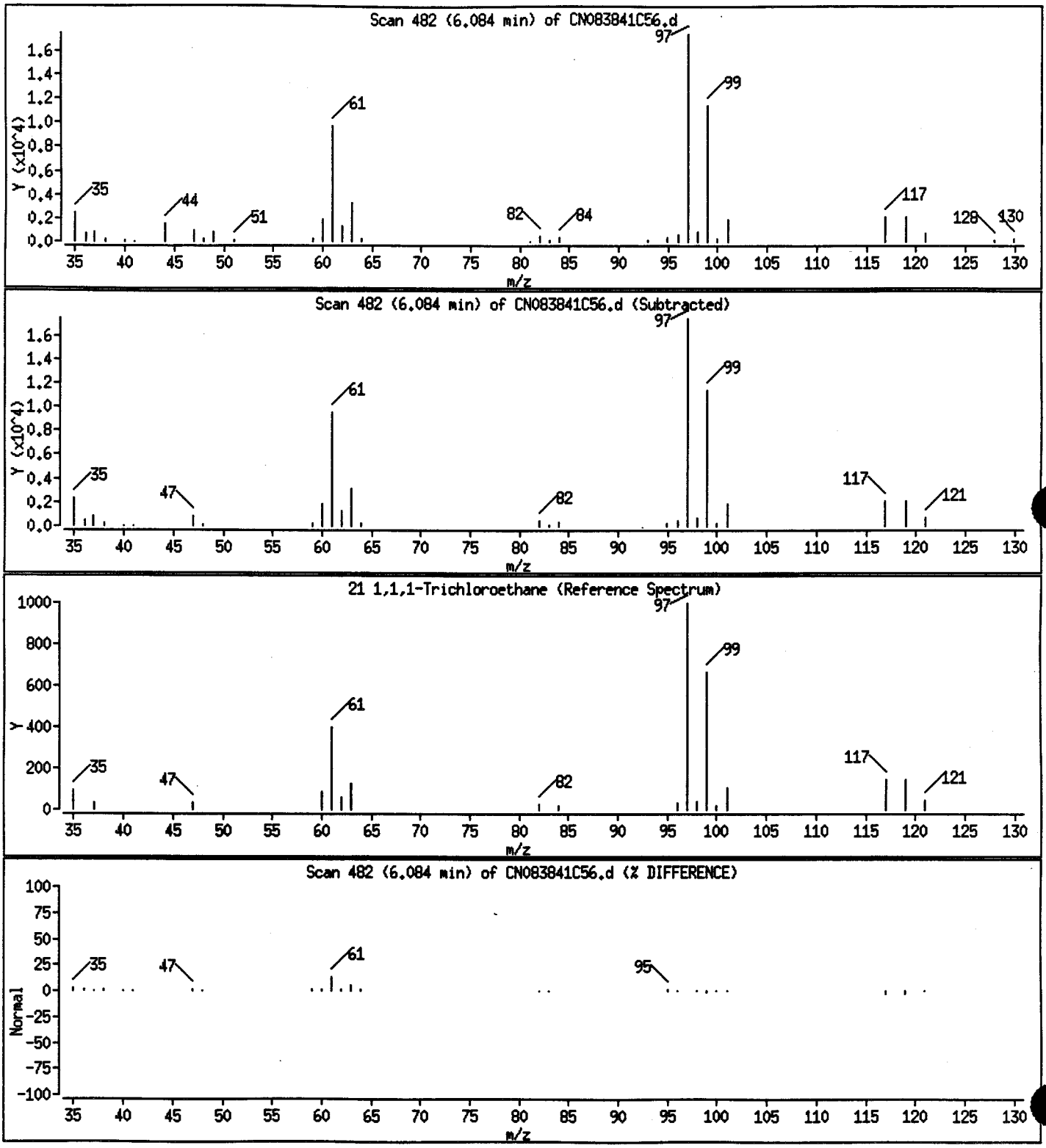
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

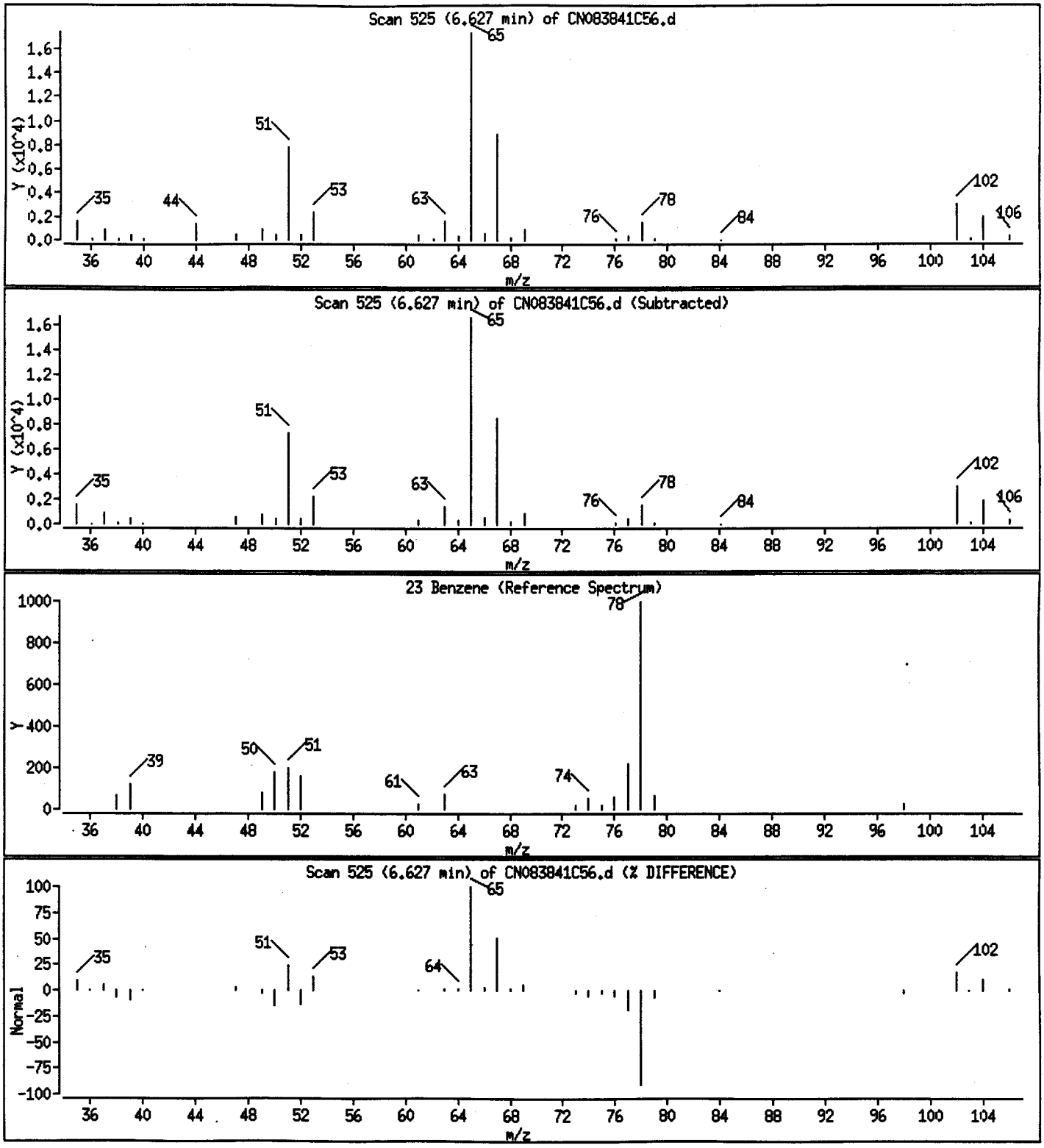
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

23 Benzene



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

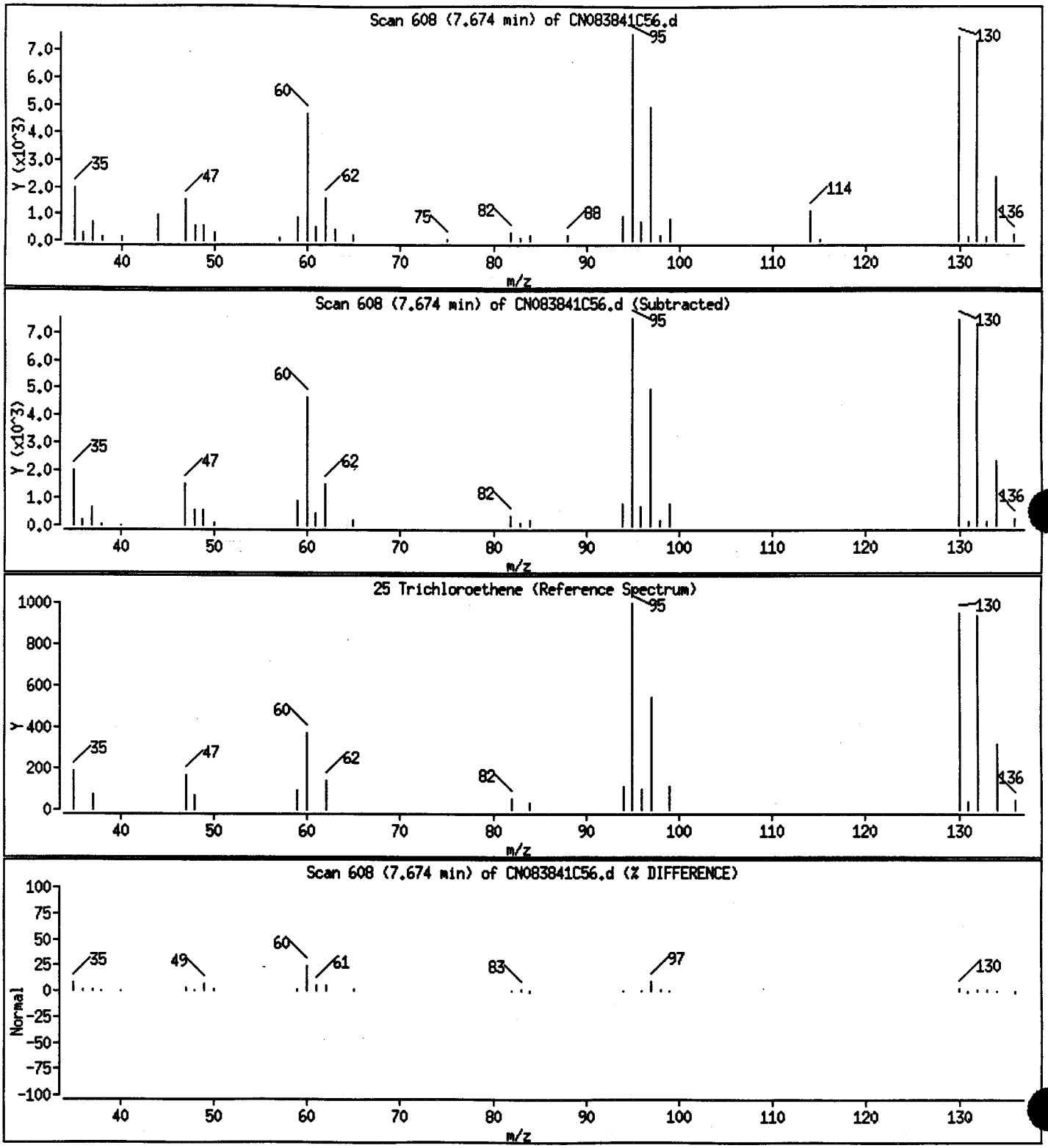
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

25 Trichloroethene



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

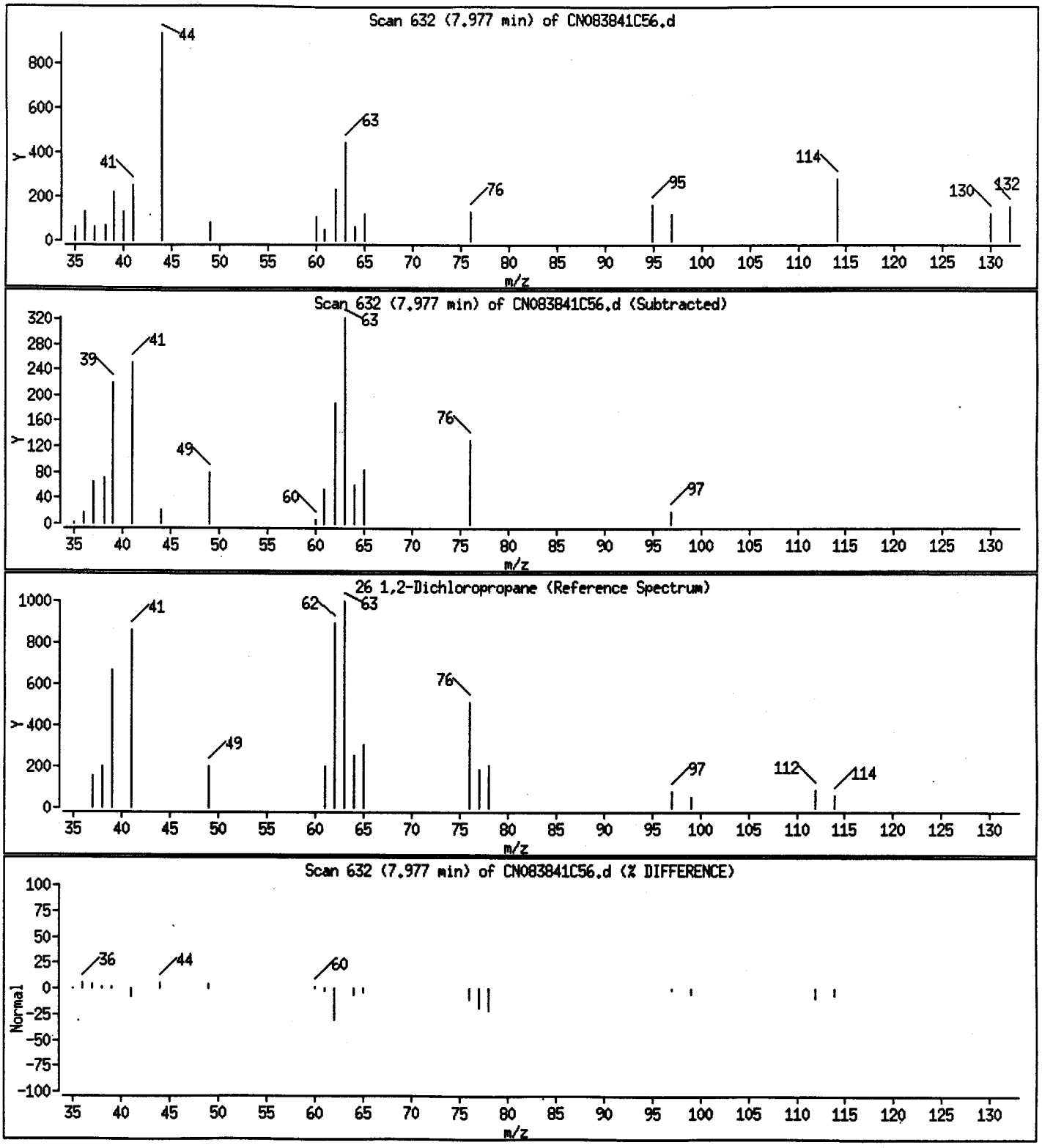
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

26 1,2-Dichloropropane



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

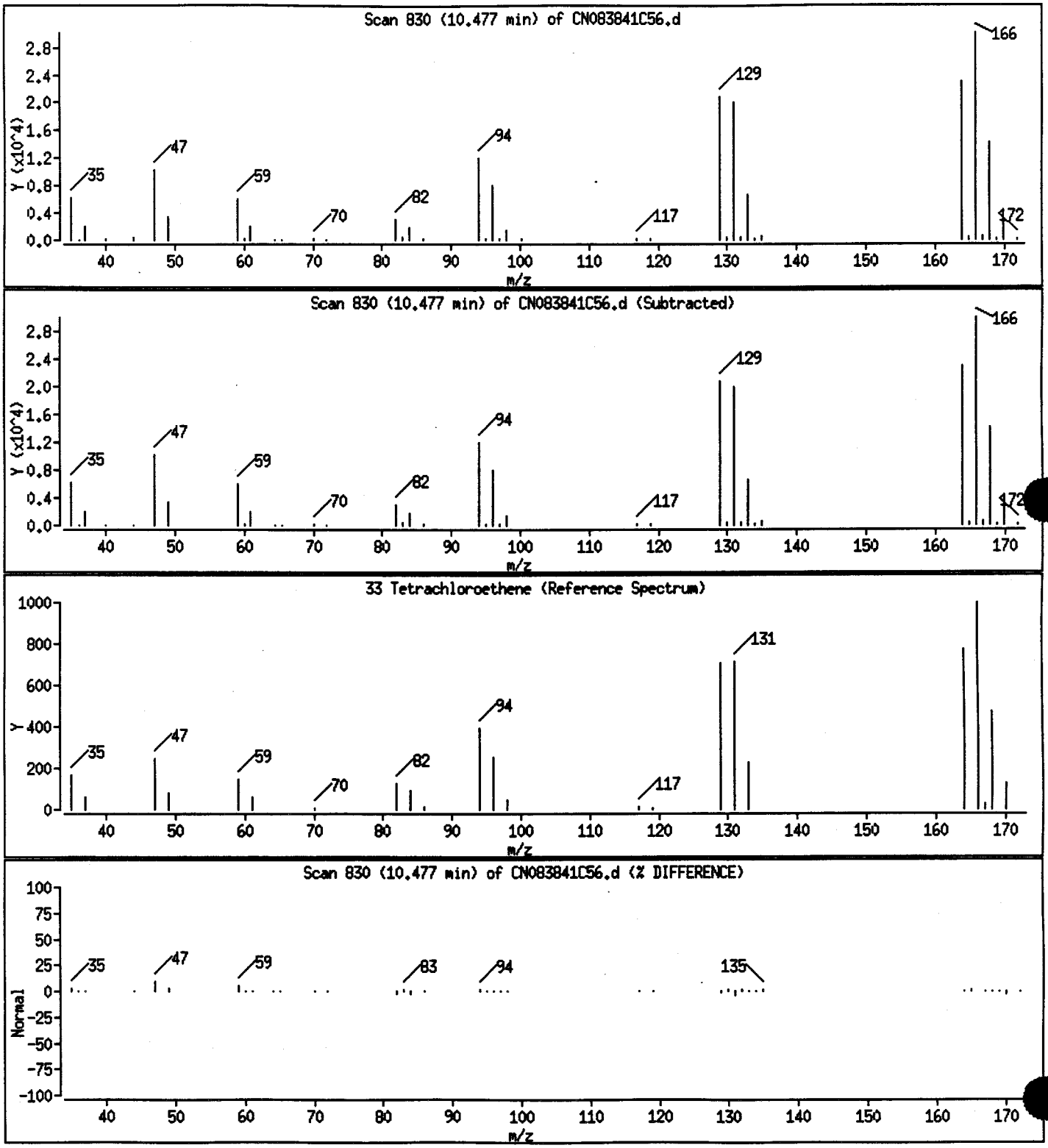
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BH950214B56.b/CN083841C56.d

Date : 15-FEB-1995 04:40

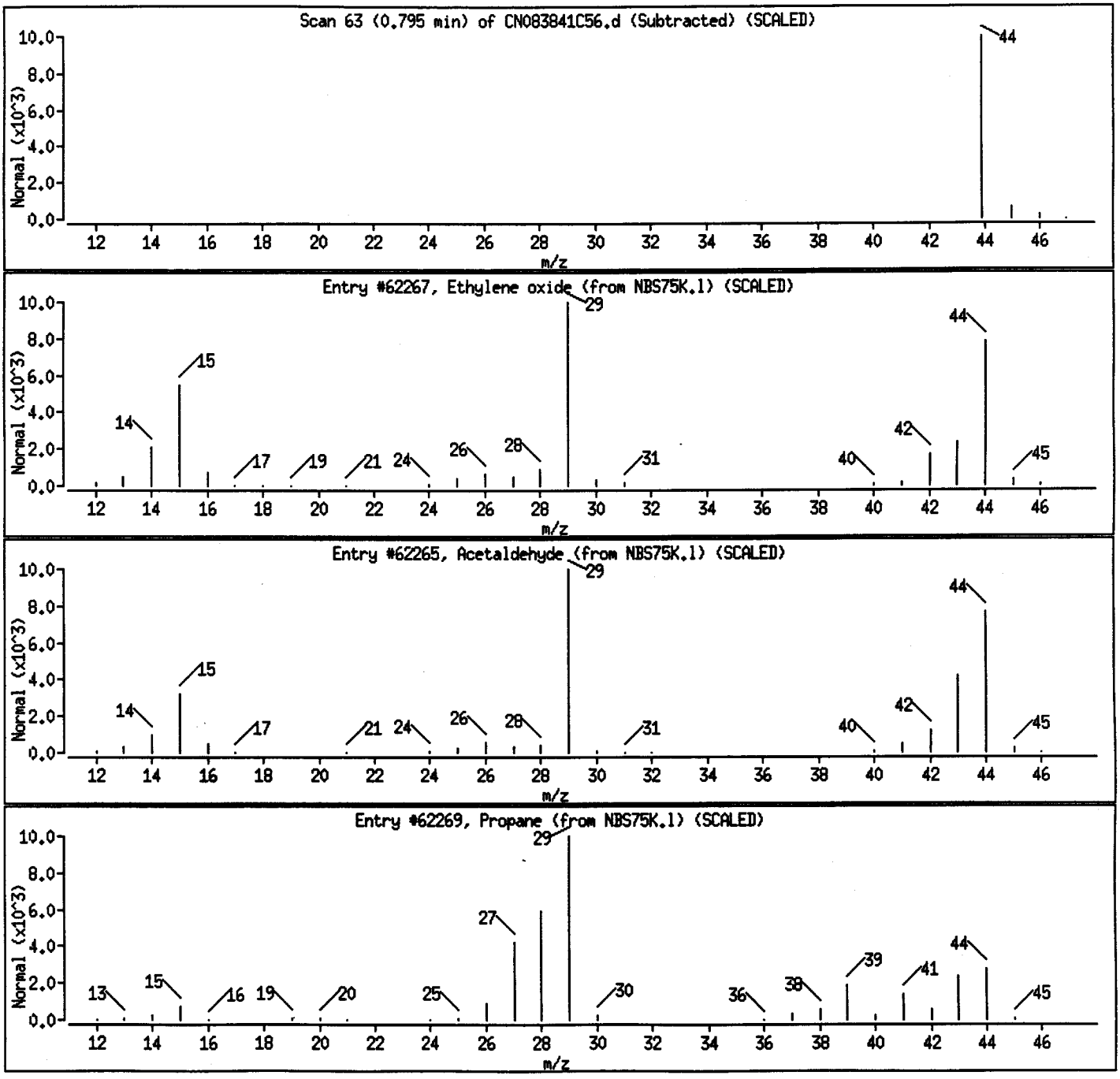
Client ID: MW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.1	62265	3	C2H4O	44
Propane	74-98-6	NBS75K.1	62269	2	C3H8	44



LAB INSTRUCTIONS:
PPS#115 + DICHLORODIFLUOROMETHANE

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00001 DUE DATE: 03/10/9

VOA
GC/MS WORKSHEET COMPUCHEM#: 683841

J[ ] J3[ ] D[ ] (:1)
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020695 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: MW3

GC/MS ANALYSIS 2/15/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename B1495021 4B56 Disk ( )
Blank Filename CB95021 5C56 Disk ( )
Standard Filename CZ95021 4B56 Disk ( )
Sample Filename CNC83841C56 Disk ( )

ANALYST(S): Injection 1948 V.A. Smith Work-up 1948 V.A. Smith

GC/MS REVIEW

CONDITION CODE: 01c

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 21

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 21

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review [signature] Date 2/20/95 Auditor _____ Date ____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ____/____/____

FINAL REVIEW: Initials _____ Date ____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683541
Client ID# MW3
Instrument Blank ID# CB950215C56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 63 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / 8F3

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683875

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083875C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683875

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083875C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683875

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083875C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2000	JB
2.					
3.					
4.					
5.					
6.					
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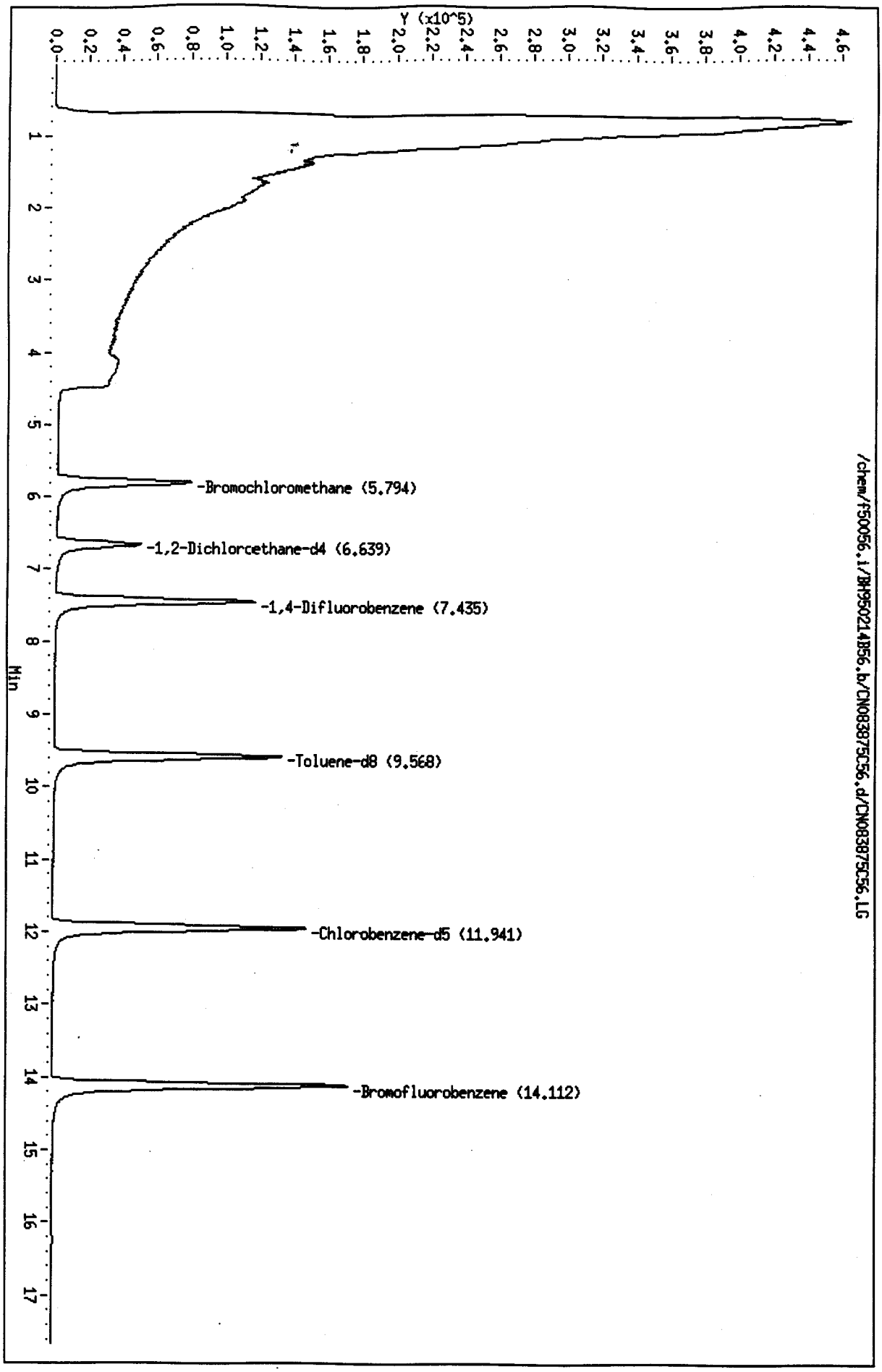
25.					
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BH950214B56.b/CN0838756.d
Date : 15-FEB-1995 10:27
Client ID: MW4
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
/chem/f50056.i/BH950214B56.b/CN0838756.d/CN0838756.LG
Y (x10^5)
Min
-Bromochloromethane (5.794)
-1,2-Dichlorcethane-d4 (6.639)
-1,4-Difluorobenzene (7.435)
-Toluene-d8 (9.568)
-Chlorobenzene-d5 (11.941)
-Bromofluorobenzene (14.112)

Data File: /chem/f50056.i/BH950214B56.b/CN083875C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083875C56.d
Lab Smp Id: 683875 Client Smp ID: MW4
Inj Date : 15-FEB-1995 10:27
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.781	5.882	(1.000)	66353	250.0	
* 2	1,4-Difluorobenzene	114.00	7.422	7.536	(1.000)	298674	250.0	
* 3	Chlorobenzene-d5	117.00	11.928	12.042	(1.000)	310753	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.639	6.740	(1.148)	128260	279.4	55.88
$ 5	Toluene-d8	98.00	9.568	9.669	(0.802)	292720	254.5	50.89
$ 6	Bromofluorobenzene	95.00	14.112	14.213	(1.183)	236711	227.0	45.41
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00		1.729	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		2.853	Compound Not Detected.			
13	Acetone	43.00		3.193	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00	3.635	3.698	(0.629)	2319	6.07	1.21(a)
16	trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.683	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.567	Compound Not Detected.			
19	2-Butanone	43.00		5.781	Compound Not Detected.			
20	Chloroform	83.00		6.135	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.210	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
23	Benzene	78.00		6.753	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CN083875C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.854		Compound Not Detected.		
25	Trichloroethene	130.00		7.801		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.104		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.341		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.745		Compound Not Detected.		
30	Toluene	91.00		9.782		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.313		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.552		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.616		Compound Not Detected.		
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.693		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BH950214B56.b/CN083875C56.d

Date : 15-FEB-1995 10:27

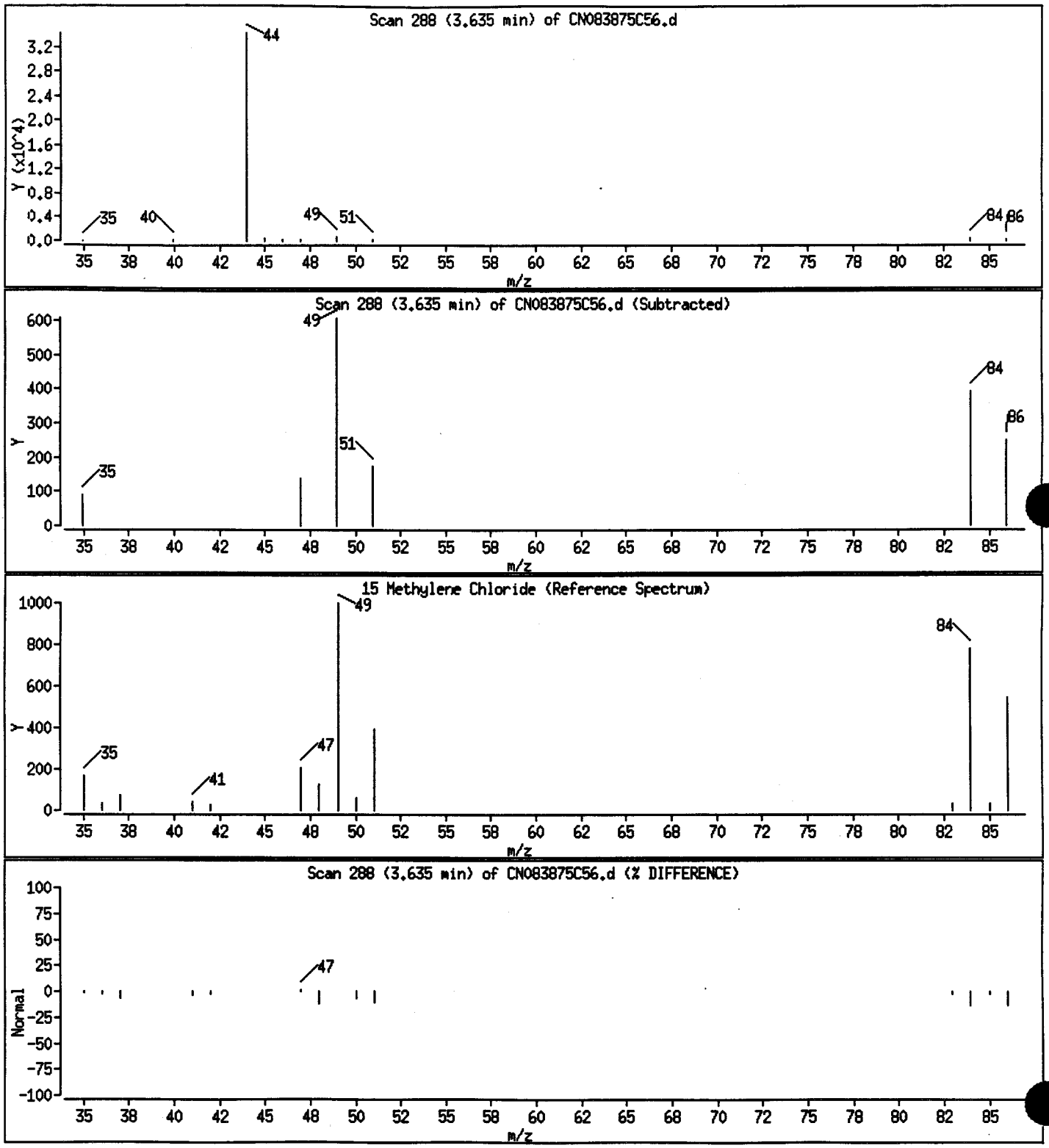
Client ID: MW4 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BH950214B56.b/CN083875C56.d

Date : 15-FEB-1995 10:27

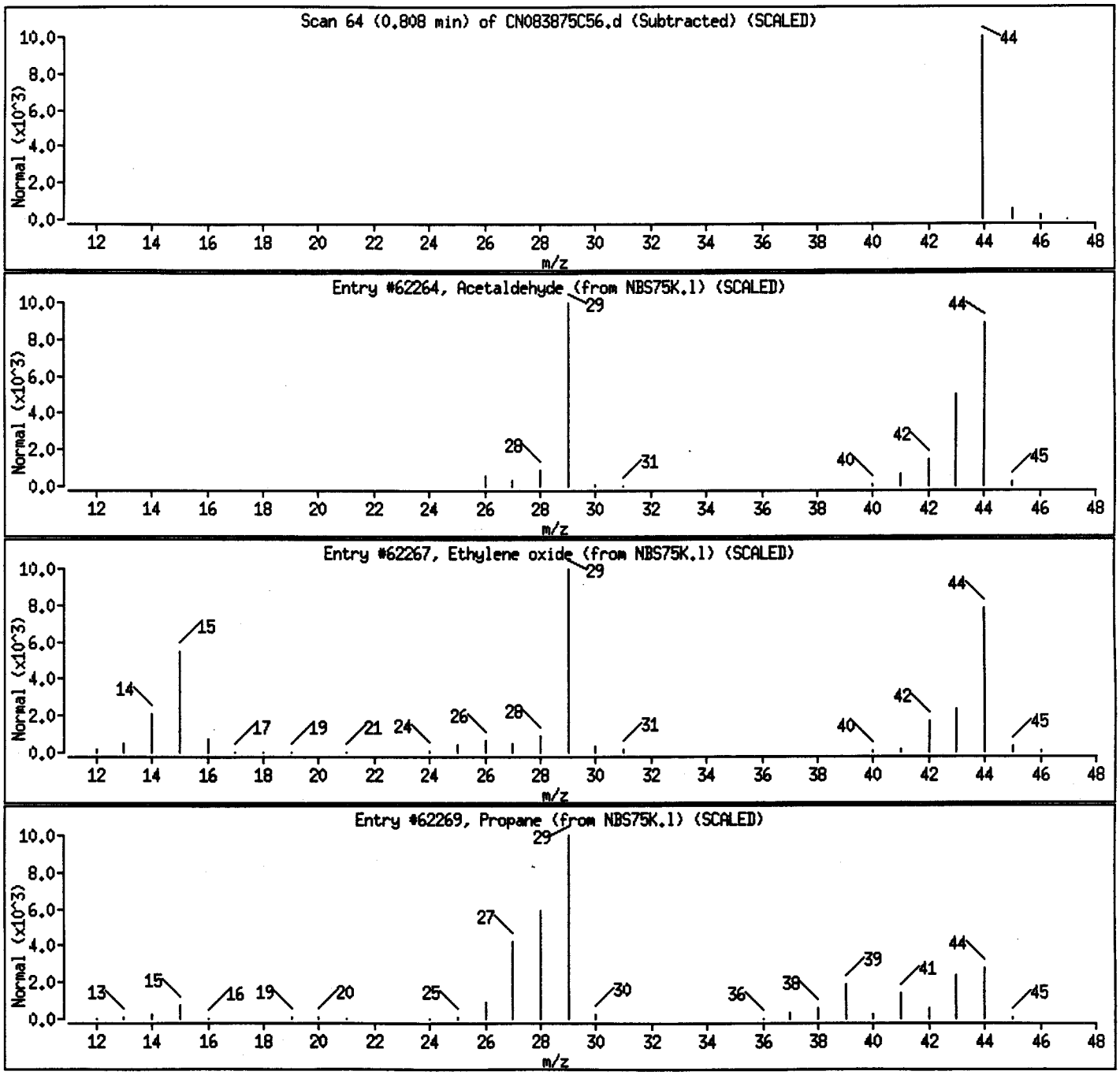
Client ID: MW4 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Acetaldehyde	75-07-0	NBS75K.1	62264	3	C2H4O	44
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Propane	74-98-6	NBS75K.1	62269	2	C3H8	44



LAB INSTRUCTIONS PPS#_____

VOA J( ) J3( ) D( ) (:1)
GC/MS WORKSHEET J2( ) J4( ) D2( ) (:1)

==========

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GC/MS ANALYSIS MB2.15.95
AMOUNT PURGED: 500. UL
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BH950214B56
BLANK FILENAME: CB950215C56
STANDARD FILENAME: CZ950214B56
SAMPLE FILENAME: CN083875C56

ANALYST(S): INJECTION: 2141 WORKUP: 2141 MR2

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE --OK--

DISPOSITION: [/] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 01

[ ] REINJECT NEAT
[ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 01

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW [signature] DATE 2/26/95 AUDITOR _____ DATE ____/____/____

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ____/____/____

==========

FINAL REVIEW: INITIALS _____ DATE ____/____/____

QUALITY ASSURANCE NOTICE

CompuChem ID# 653875
Client ID# MW4
Instrument Blank ID# CB9502154
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 64 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / 883

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
MW6

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683863

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83863B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	25	U
74-83-9	Bromomethane	25	U
75-01-4	Vinyl Chloride	20	J
75-00-3	Chloroethane	11	J
75-09-2	Methylene Chloride	5	J
67-64-1	Acetone	25	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	140	
540-59-0	1,2-Dichloroethene (total)	370	
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	88	
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	12	J
10061-02-6	trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	25	U
591-78-6	2-Hexanone	25	U
127-18-4	Tetrachloroethene	33	
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Xylene (Total)	25	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683863

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83863B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	25	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW6

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683863

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C3R83863B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.78	4400	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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27.					
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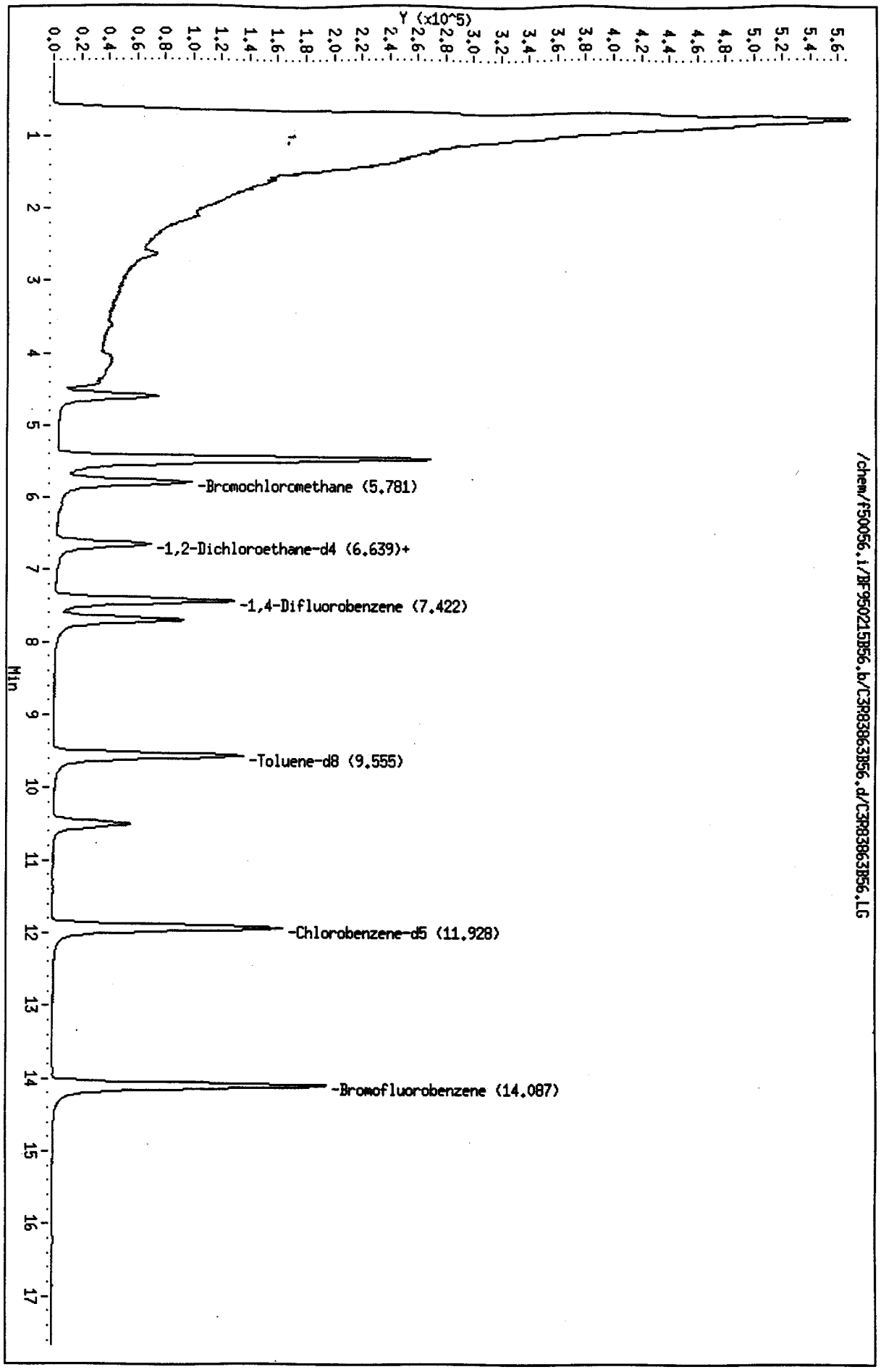
29.					
30.					


Data File: /chem/f50056.i/BF9502151856.b/C3R83863B56.d
Date : 15-FEB-1995 20:17
Client ID: MW6
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
/chem/f50056.i/BF9502151856.b/C3R83863B56.d/C3R83863B56.LG
Y (x10^5)
Min
-Bromochloromethane (5.781)
-1,2-Dichloroethane-d4 (6.639)+
-1,4-Difluorobenzene (7.422)
-Toluene-d8 (9.555)
-Chlorobenzene-d5 (11.928)
-Bromofluorobenzene (14.087)

Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d
Report Date: 20-Feb-1995 12:26

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/C3R83863B56.d
Lab Smp Id: 683863 Client Smp ID: MW6
Inj Date : 15-FEB-1995 20:17
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 2.500
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.781	5.844	(1.000)	74605	250.0	
* 2	1,4-Difluorobenzene	114.00	7.409	7.498	(1.000)	321575	250.0	
* 3	Chlorobenzene-d5	117.00	11.916	12.017	(1.000)	347652	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.627	6.703	(1.146)	141711	268.2	134.1
$ 5	Toluene-d8	98.00	9.555	9.644	(0.802)	285445	244.8	122.4
$ 6	Bromofluorobenzene	95.00	14.087	14.188	(1.182)	264696	232.3	116.1
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00	1.212	1.224	(0.210)	9123	39.76	19.88(a)
10	Bromomethane	94.00		1.565	Compound Not Detected.			
11	Chloroethane	64.00	1.679	1.704	(0.290)	4860	21.75	10.87(a)
12	1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15	Methylene Chloride	84.00	3.623	3.661	(0.627)	3633	9.52	4.76(a)
16	trans-1,2-Dichloroethene	96.00	4.014	4.064	(0.694)	3403	7.50	3.75(a)
17	1,1-Dichloroethane	63.00	4.582	4.645	(0.793)	225208	275.5	137.7
18	cis-1,2-Dichloroethene	96.00	5.453	5.529	(0.943)	348515	709.0	354.5
19	2-Butanone	43.00		5.731	Compound Not Detected.			
20	Chloroform	83.00		6.097	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23	Benzene	78.00	6.639	6.715	(0.896)	28363	23.78	11.89(a)
24	1,2-Dichloroethane	62.00		6.816	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d
Report Date: 20-Feb-1995 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	25 Trichloroethene	130.00	7.687	7.763	(1.037)	95933	175.2	87.62
	26 1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
	27 Bromodichloromethane	83.00		8.609		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
	30 Toluene	91.00		9.745		Compound Not Detected.		
	31 trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
	33 Tetrachloroethene	164.00	10.489	10.590	(0.880)	48113	66.88	33.44
	34 2-Hexanone	43.00		11.146		Compound Not Detected.		
	35 Dibromochloromethane	129.00		11.083		Compound Not Detected.		
	36 Chlorobenzene	112.00		12.054		Compound Not Detected.		
	37 Ethylbenzene	106.00		12.357		Compound Not Detected.		
	38 m,p-Xylene	106.00		12.585		Compound Not Detected.		
	39 o-Xylene	106.00		13.254		Compound Not Detected.		
	40 Styrene	104.00		13.304		Compound Not Detected.		
	41 Bromoform	173.00		13.531		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00				351918	744.8	372.4
M	44 Xylene (Total)	106.00		13.254		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

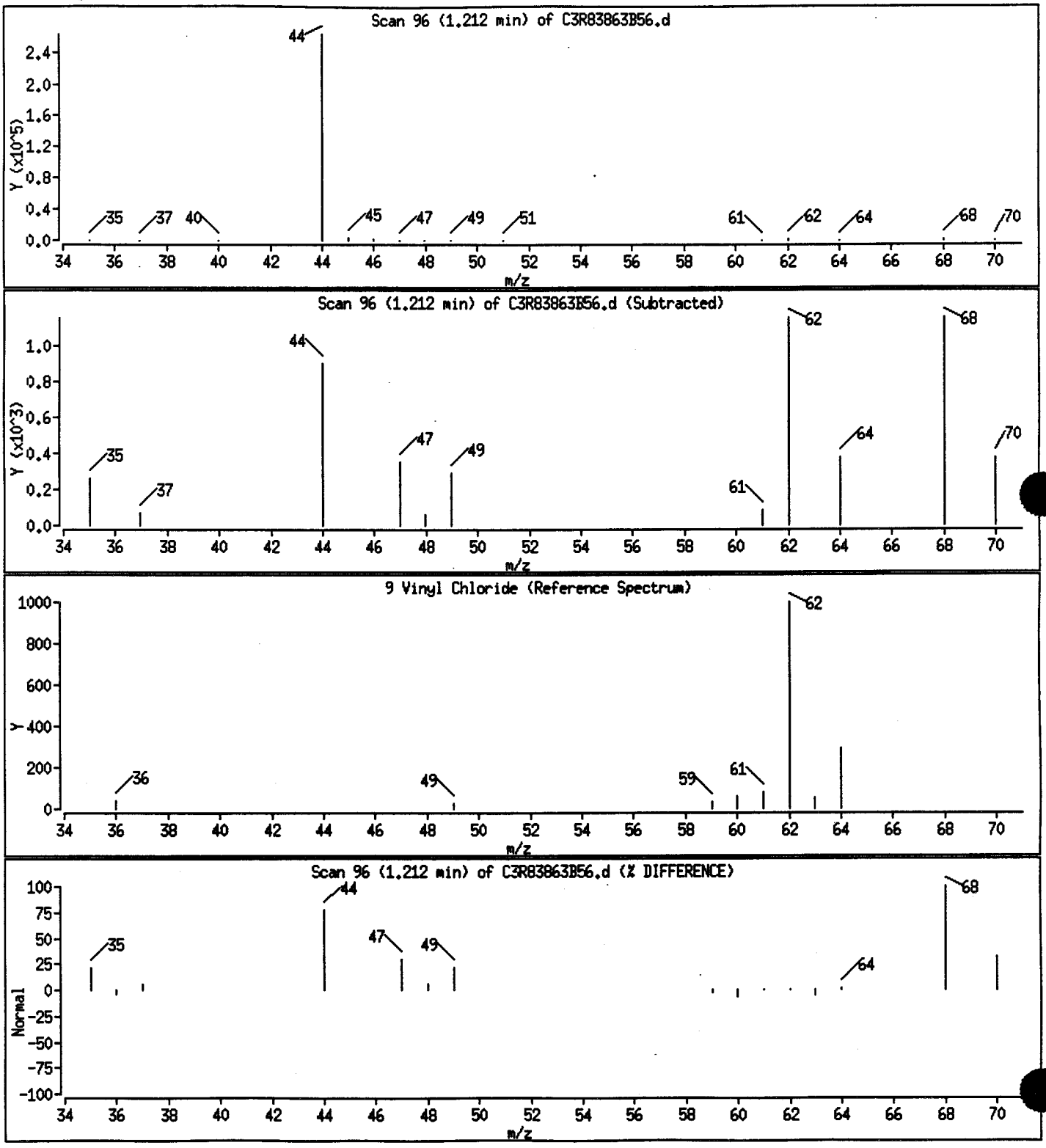
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

9 Vinyl Chloride



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

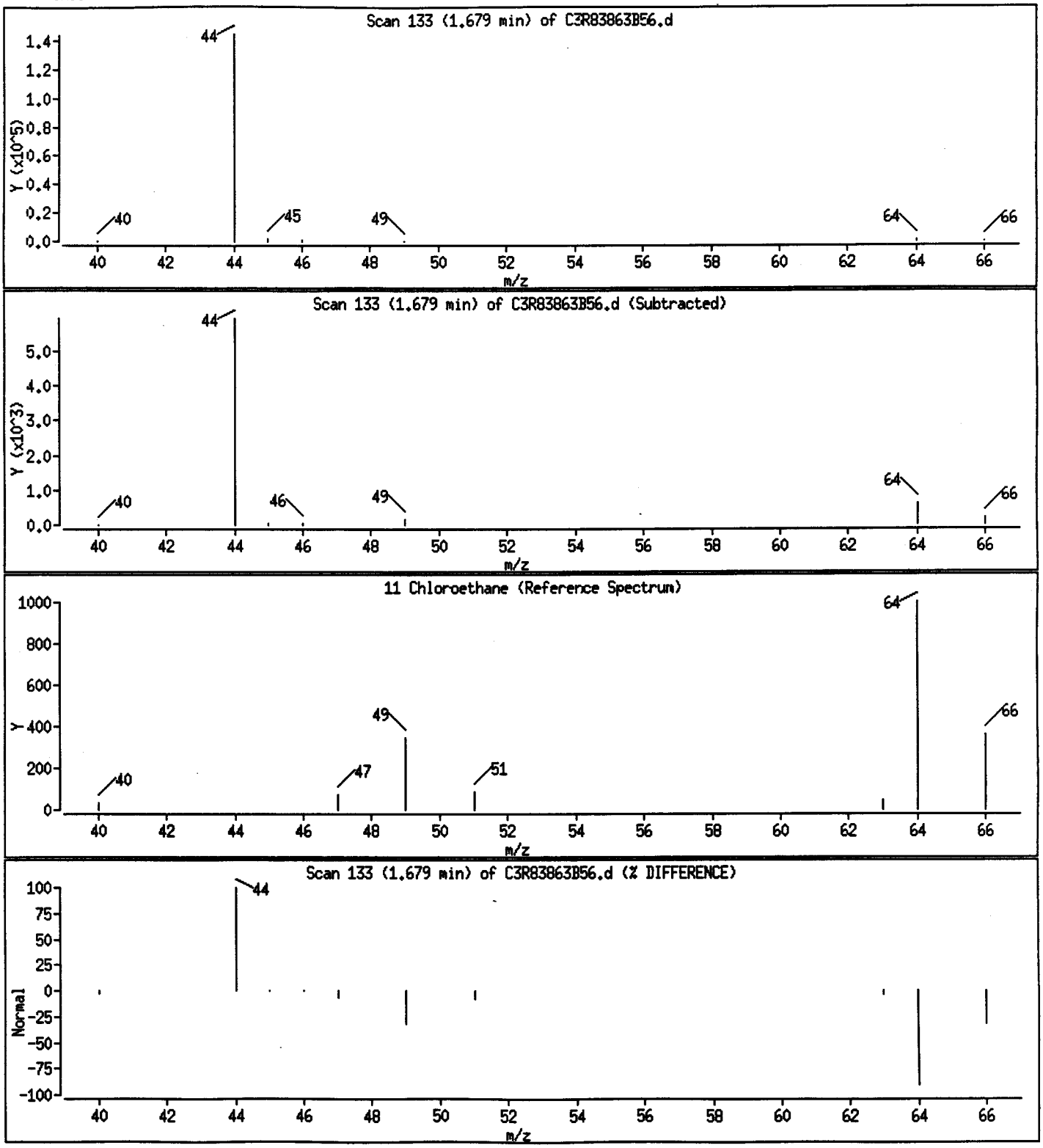
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

11 Chloroethane



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

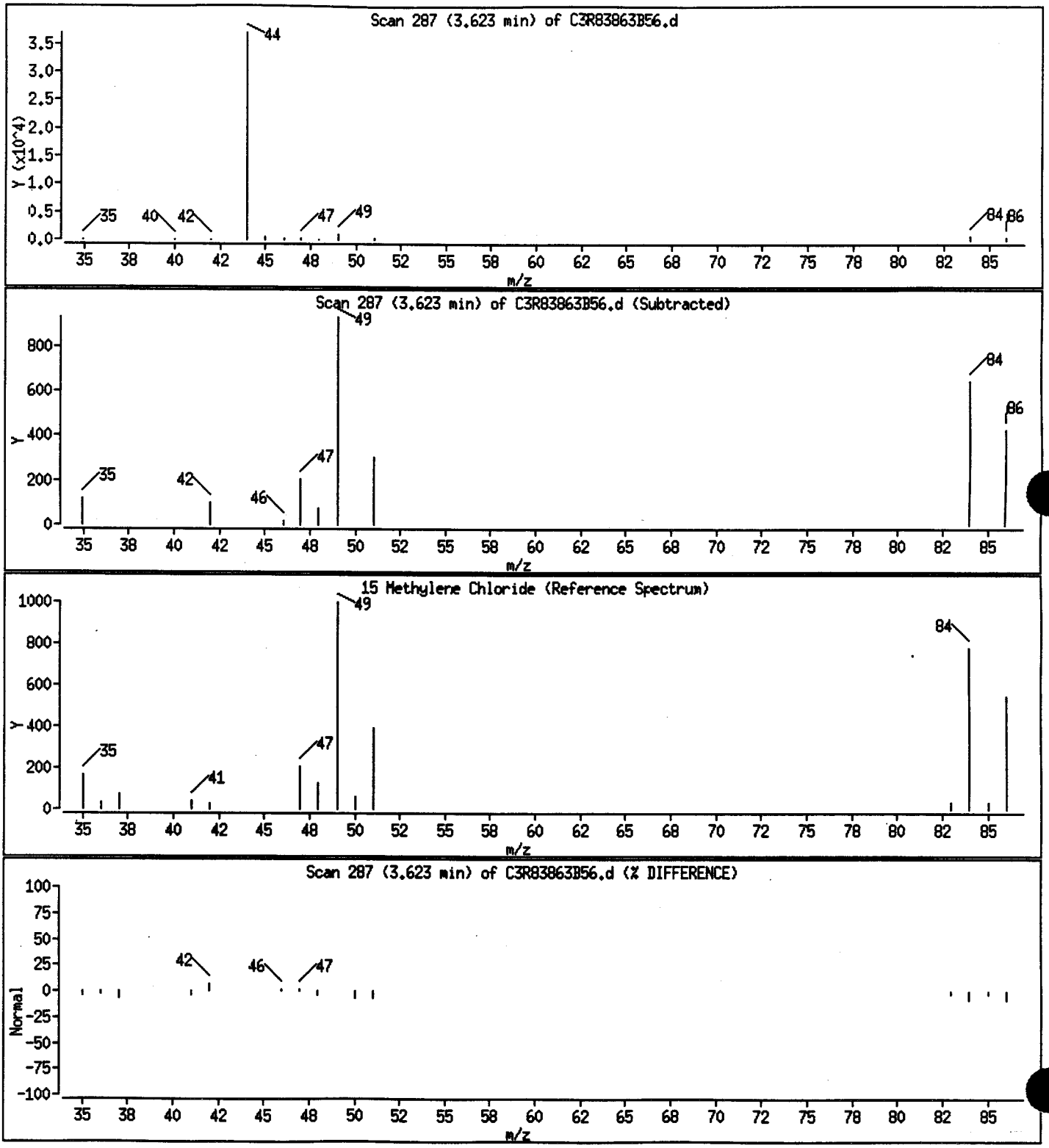
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

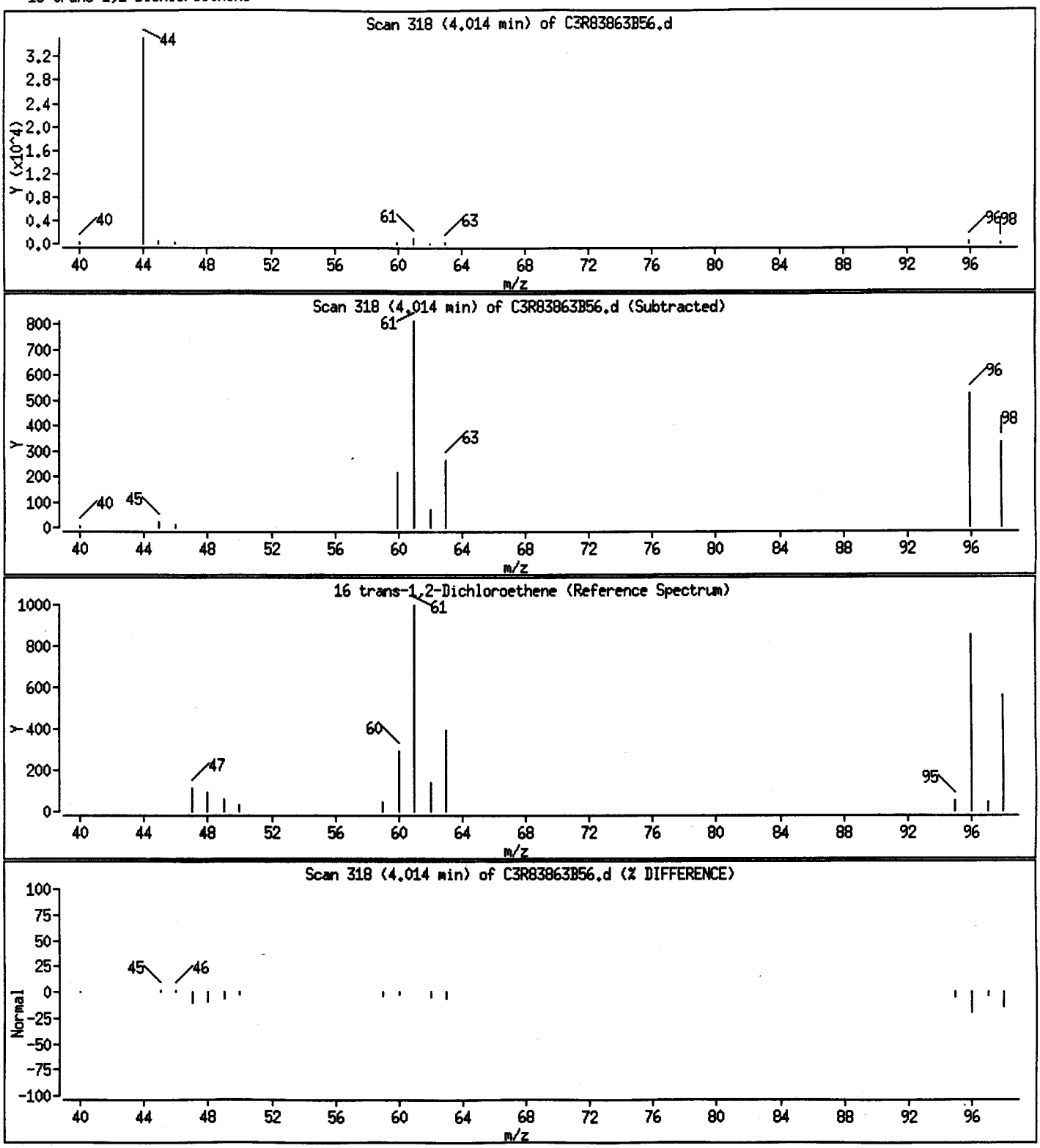
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

16 trans-1,2-Dichloroethene



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

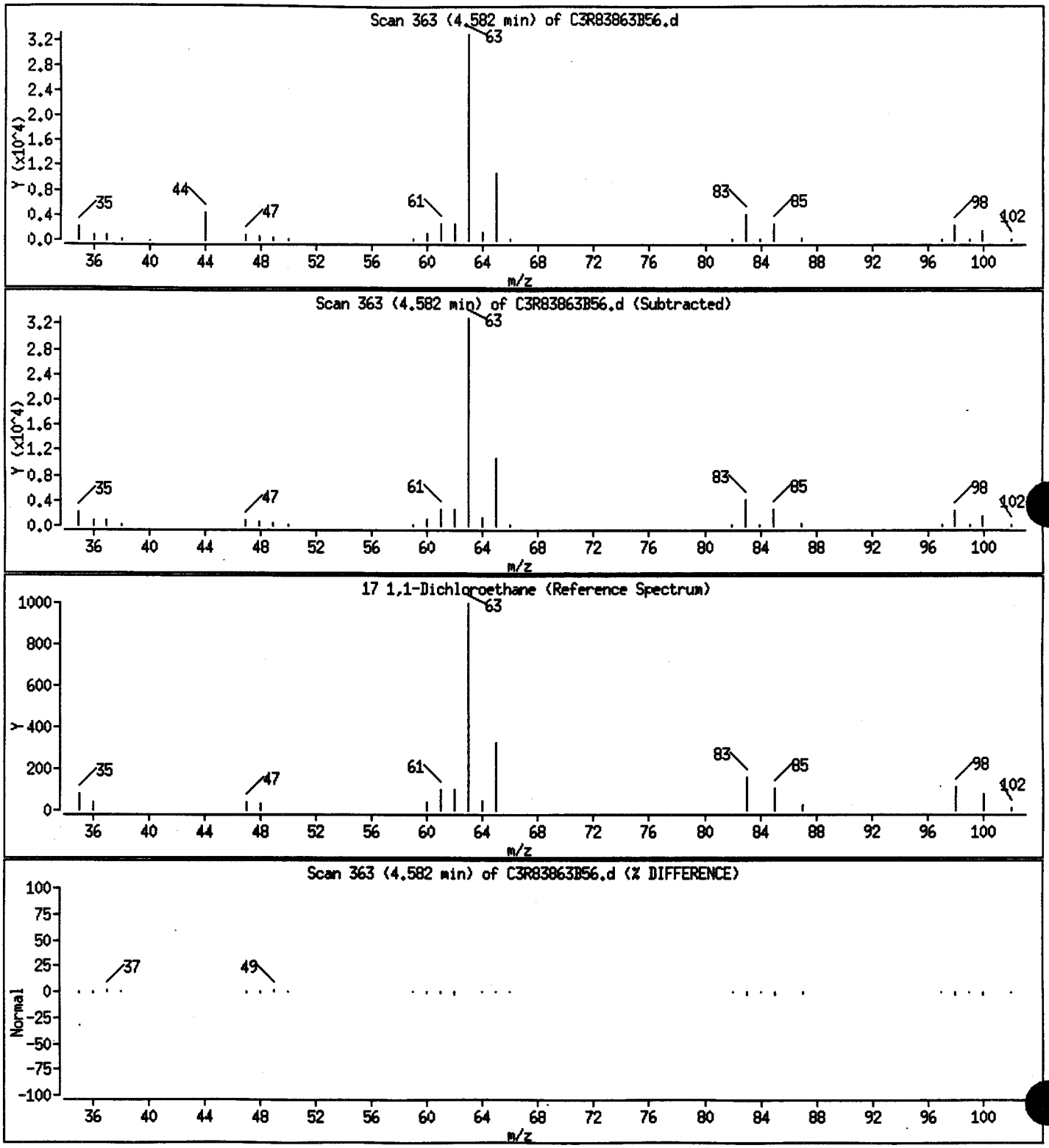
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

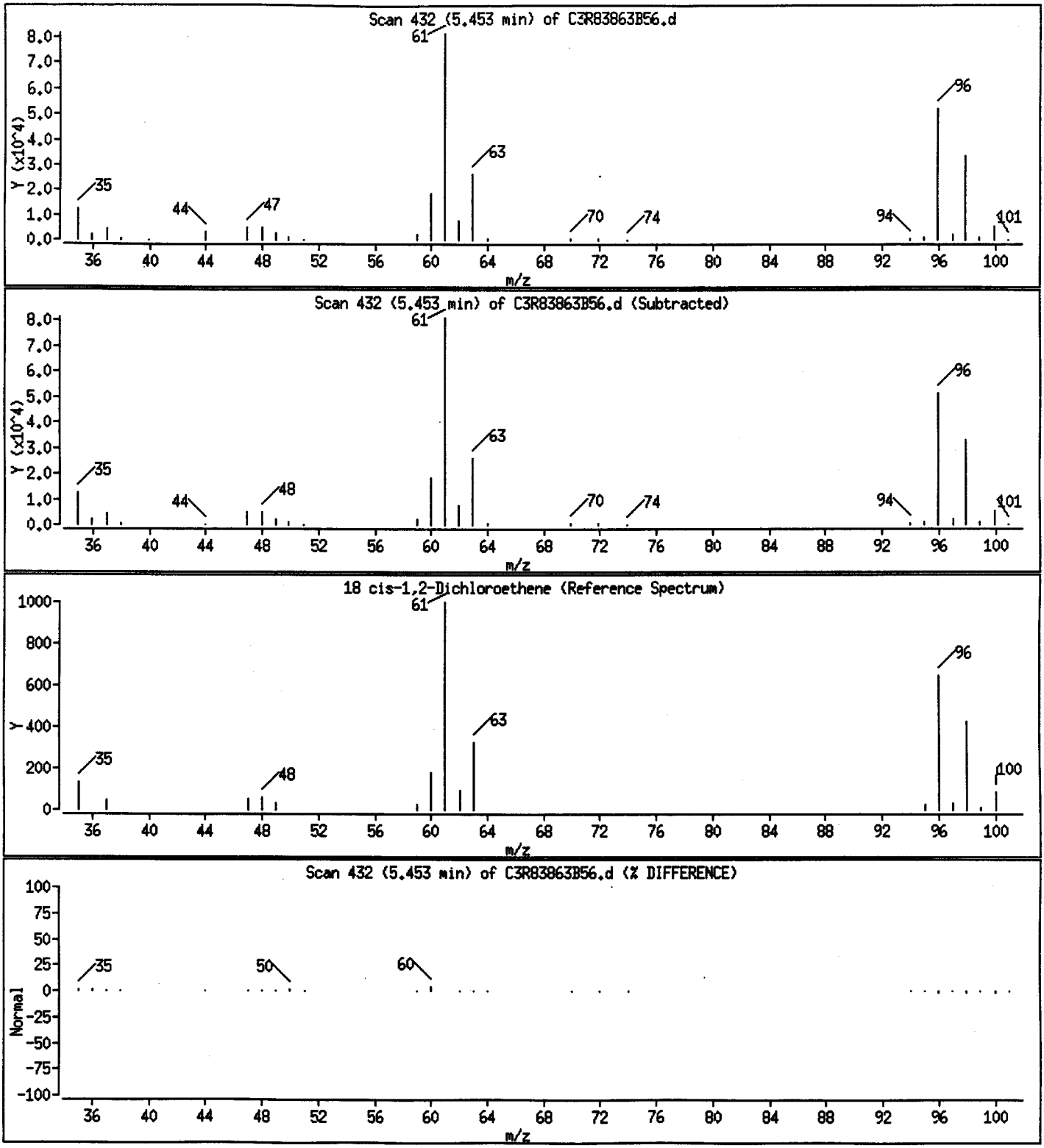
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

18 cis-1,2-Dichlorcethene



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

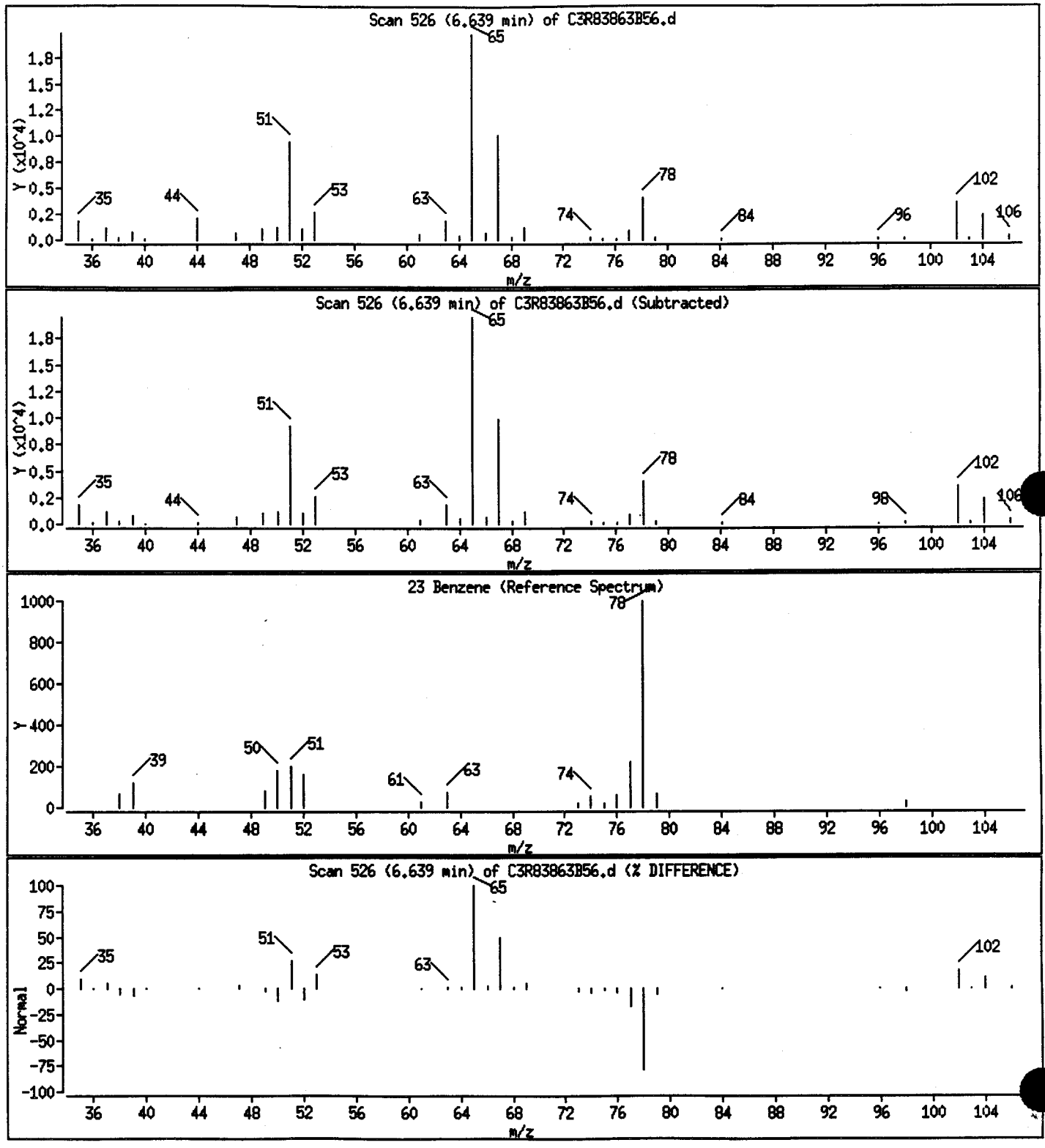
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

23 Benzene



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

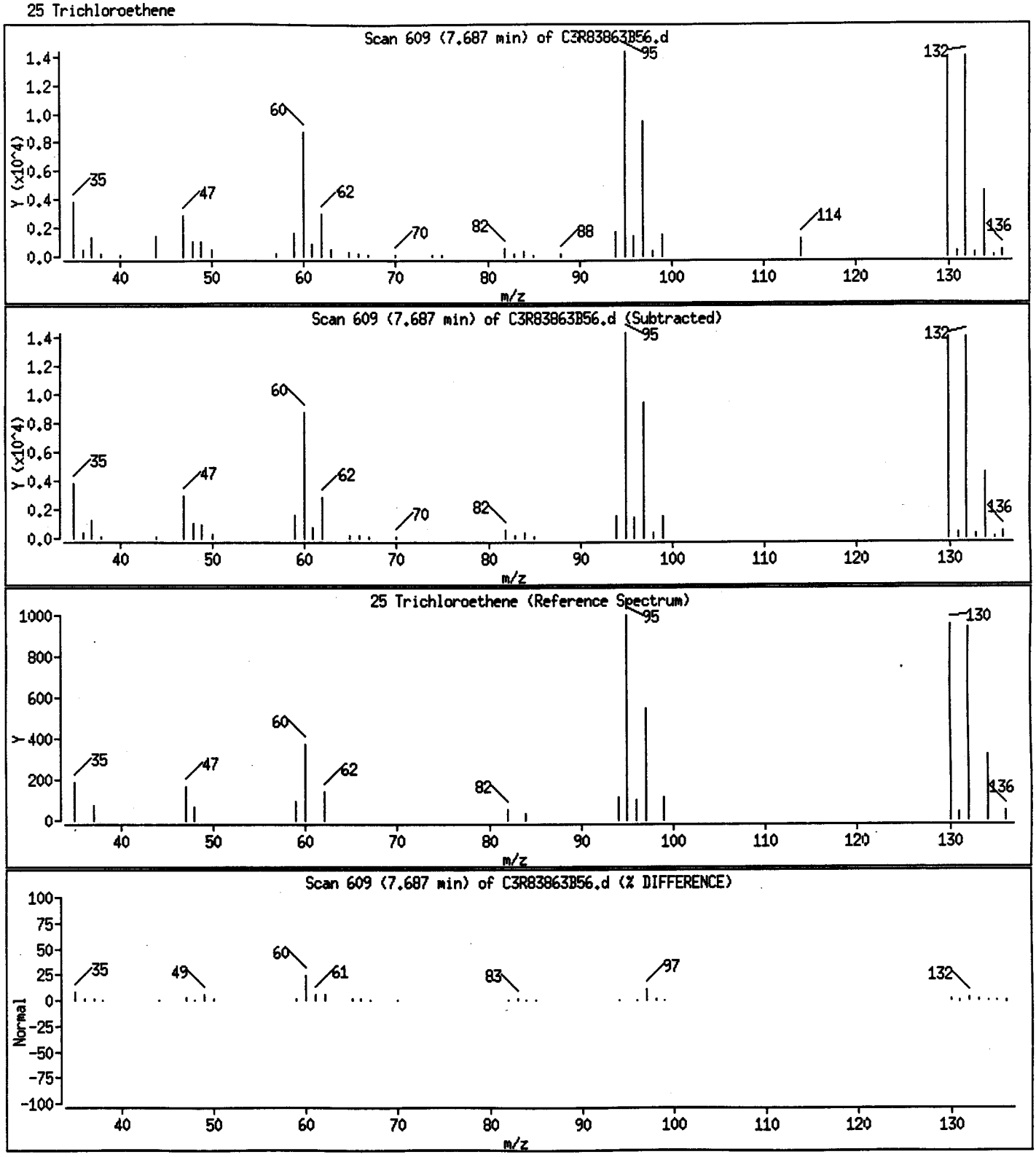
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

25 Trichloroethene



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Date : 15-FEB-1995 20:17

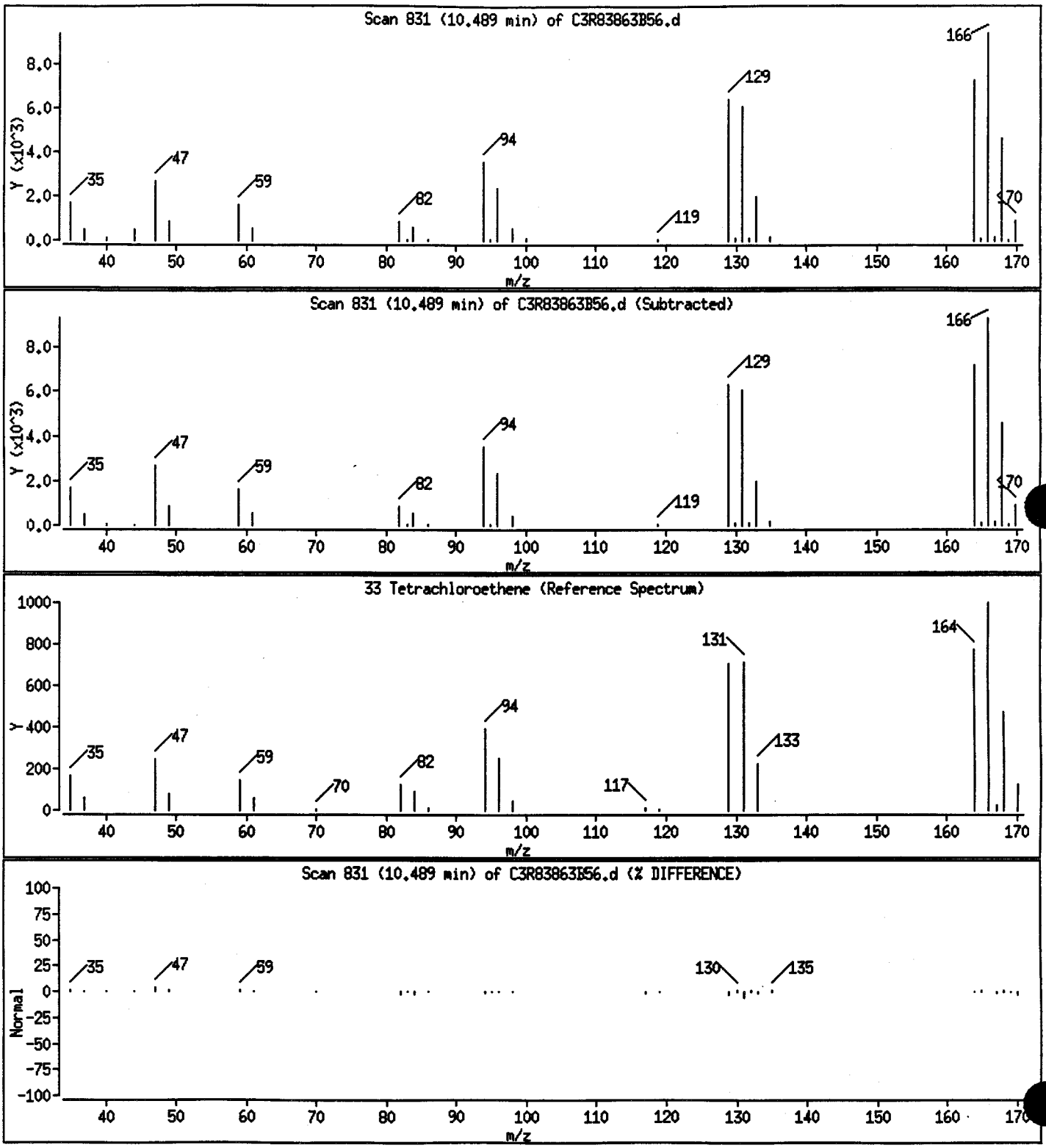
Client ID: MW6 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BF950215B56.b/C3R83863B56.d

Date : 15-FEB-1995 20:17

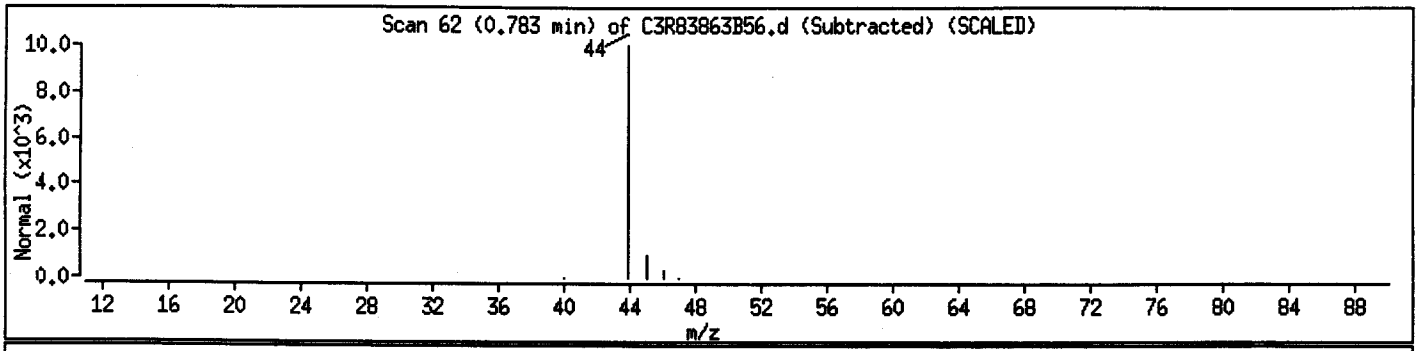
Client ID: MW6 Instrument: f50056.i

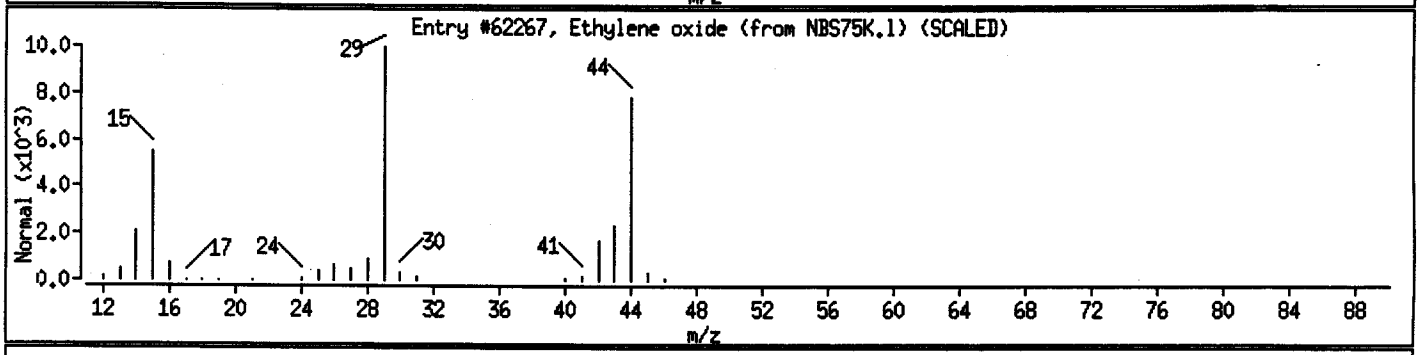
Sample Info:

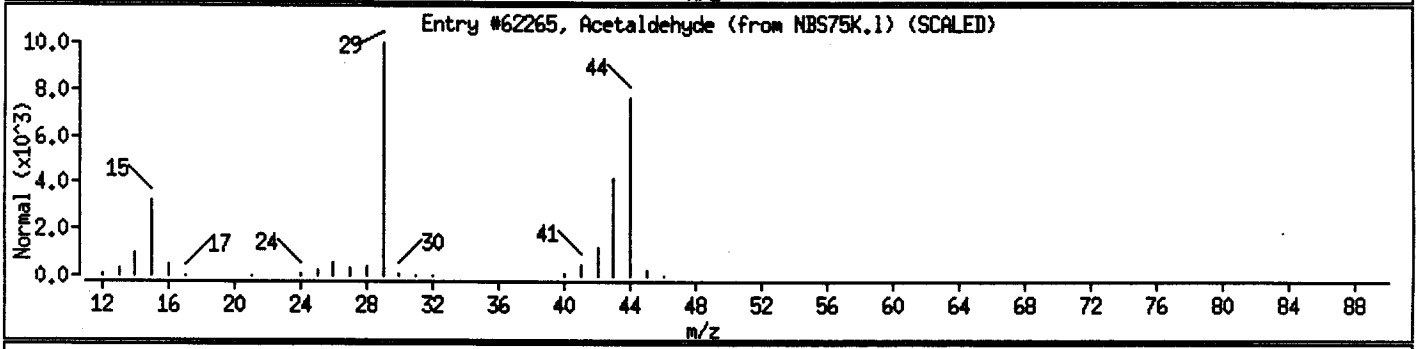
Purge Volume: 5.0 Operator: 2011

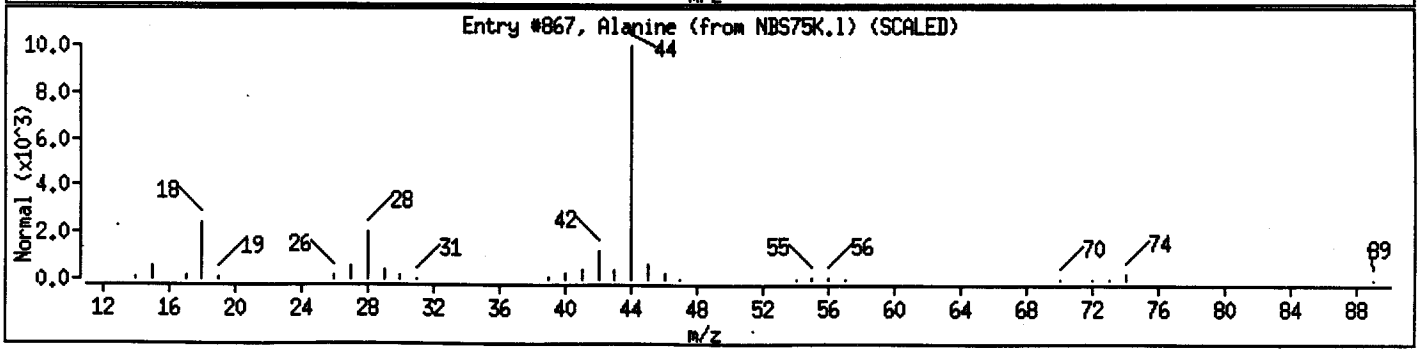
Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44
Alanine	56-41-7	NBS75K.l	867	2	C3H7NO2	89









AB INSTRUCTIONS:

PPS#: _____

ECEIPT DATE: CASE#: 30073 00001 SAS#: DUE DATE:

VOA
C/MS WORKSHEET COMPUCHEM#: 68286323

J[ ] J3[ ] D[ ] (:1)
2J[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: Report type: A

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: MW6

GC/MS ANALYSIS: JnL 2/21/95
Amount Purged: [ ] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added _____ ul
Surrogate Standard Volume Added _____ ul
BFB Filename BFB50215B56 Disk ( )
Blank Filename CB450215B56 Disk ( )
Standard Filename ISA50215B56 Disk ( )
Sample Filename [illegible] Disk ( )

ANALYST(S): Injection JNL Work-up Skid

GC/MS REVIEW

CONDITION CODE: DA

Disposition: [ ] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01

[ ] Reinject Neat

[ ] Dilute (:1)

Quality Assurance Notice(s):
Notices Required 0

COMMENTS:

#GC/MS Review [illegible] Date 2/20/95 Auditor _____ Date ___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ___/___/___

FINAL REVIEW: Initials _____ Date ___/___/___

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683863
Client ID# mw6
Instrument Blank ID# CB9502158S6
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 62 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / 88

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683857

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083857C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	6	J
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	3	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	6	J
75-34-3	1,1-Dichloroethane	74	
540-59-0	1,2-Dichloroethene (total)	91	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	6	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	2	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	14	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	5	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	31	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683857

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083857C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	14	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW8

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683857

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083857C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.77	2300	JB
2.					
3.					
4.					
5.					
6.					
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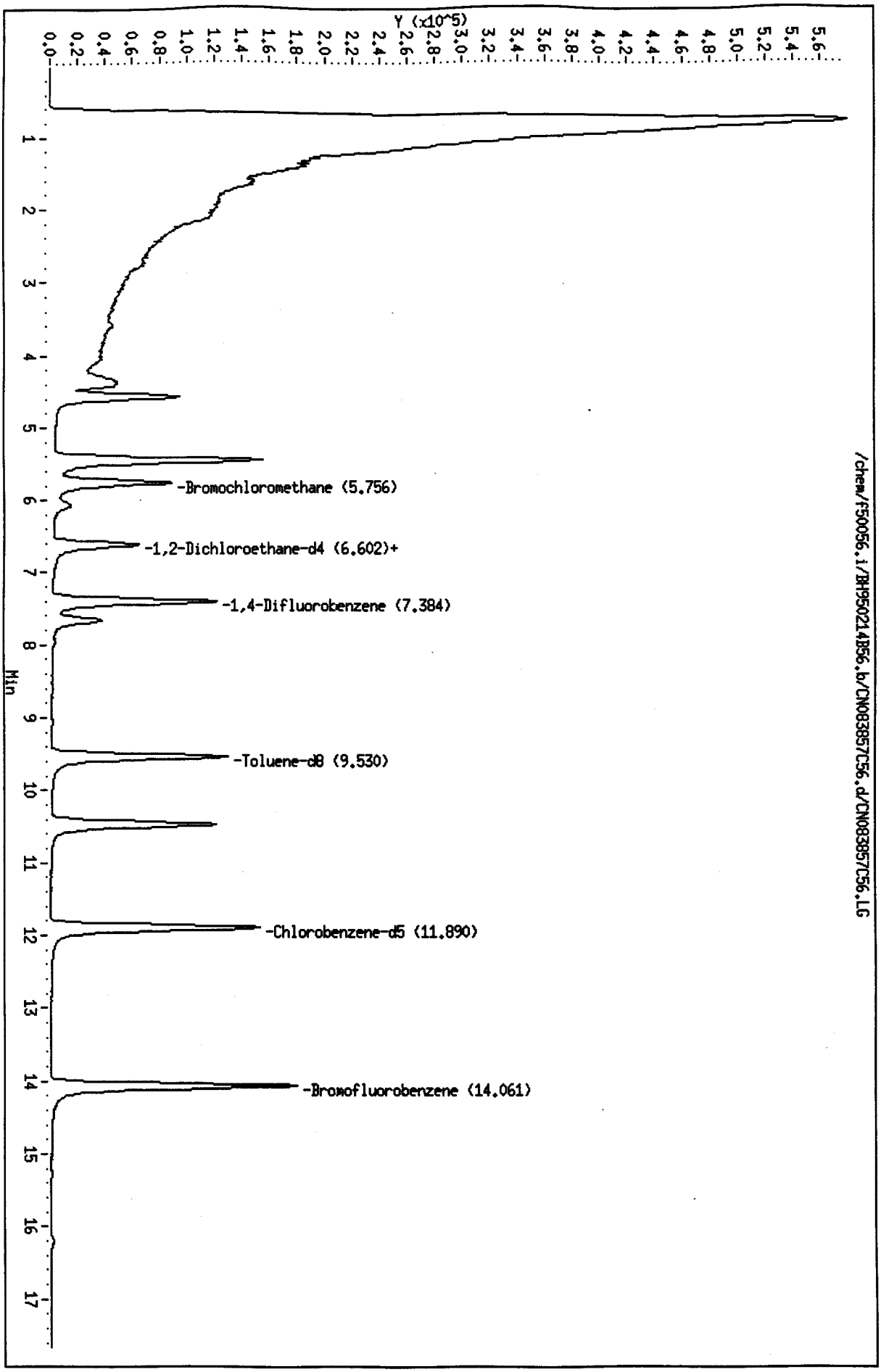
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BH950214B56.b/CN083857C56.d
Date : 15-FEB-1995 05:15
Client ID: MW8
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
/chem/f50056.i/BH950214B56.b/CN083857C56.d/CN083857C56.LG
Y (X10^5)
Min
-Bromochloromethane (5.756)
-1,2-Dichloroethane-d4 (6.602)+
-1,4-Difluorobenzene (7.384)
-Toluene-d8 (9.530)
-Chlorobenzene-d5 (11.890)
-Bromofluorobenzene (14.061)

Data File: /chem/f50056.i/BH950214B56.b/CN083857C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083857C56.d
Lab Smp Id: 683857 Client Smp ID: MW8
Inj Date : 15-FEB-1995 05:15
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.743	5.882	(1.000)	66972	250.0	
*	2 1,4-Difluorobenzene	114.00	7.384	7.536	(1.000)	301721	250.0	
*	3 Chlorobenzene-d5	117.00	11.890	12.042	(1.000)	315492	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.602	6.740	(1.149)	130890	282.5	56.50
$	5 Toluene-d8	98.00	9.530	9.669	(0.801)	272307	233.2	46.63
$	6 Bromofluorobenzene	95.00	14.061	14.213	(1.183)	242147	228.8	45.75
	7 Dichlorodiflouromethane	85.00	0.921	0.947	(0.160)	9525	72.15	14.43
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00	1.187	1.237	(0.207)	8302	32.00	6.40(a)
	10 Bromomethane	94.00		1.590	Compound Not Detected.			
	11 Chloroethane	64.00	1.666	1.729	(0.290)	7559	35.00	7.00(a)
	12 1,1-Dichloroethene	96.00	2.764	2.853	(0.481)	7337	28.33	5.67(a)
	13 Acetone	43.00		3.193	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.597	3.698	(0.626)	5439	14.10	2.82(a)
	16 trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00	4.557	4.683	(0.793)	290107	371.3	74.26
	18 cis-1,2-Dichloroethene	96.00	5.428	5.567	(0.945)	203928	444.3	88.87
	19 2-Butanone	43.00		5.781	Compound Not Detected.			
	20 Chloroform	83.00		6.135	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00	6.071	6.210	(0.822)	23164	27.79	5.56(a)
	22 Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
	23 Benzene	78.00	6.614	6.753	(0.896)	28086	25.16	5.03(a)
	24 1,2-Dichloroethane	62.00		6.854	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CN083857C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	7.662	7.801	(1.038)	37206	71.16	14.23
26	1,2-Dichloropropane	63.00	7.977	8.104	(1.080)	3838	8.20	1.64(a)
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.341		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.745		Compound Not Detected.		
30	Toluene	91.00		9.782		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.313		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.552		Compound Not Detected.		
33	Tetrachloroethene	164.00	10.464	10.616	(0.880)	101776	153.0	30.61
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.693		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00				203928	456.6	91.32
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BH950214B56.b/CN083857C56.d

Date : 15-FEB-1995 05:15

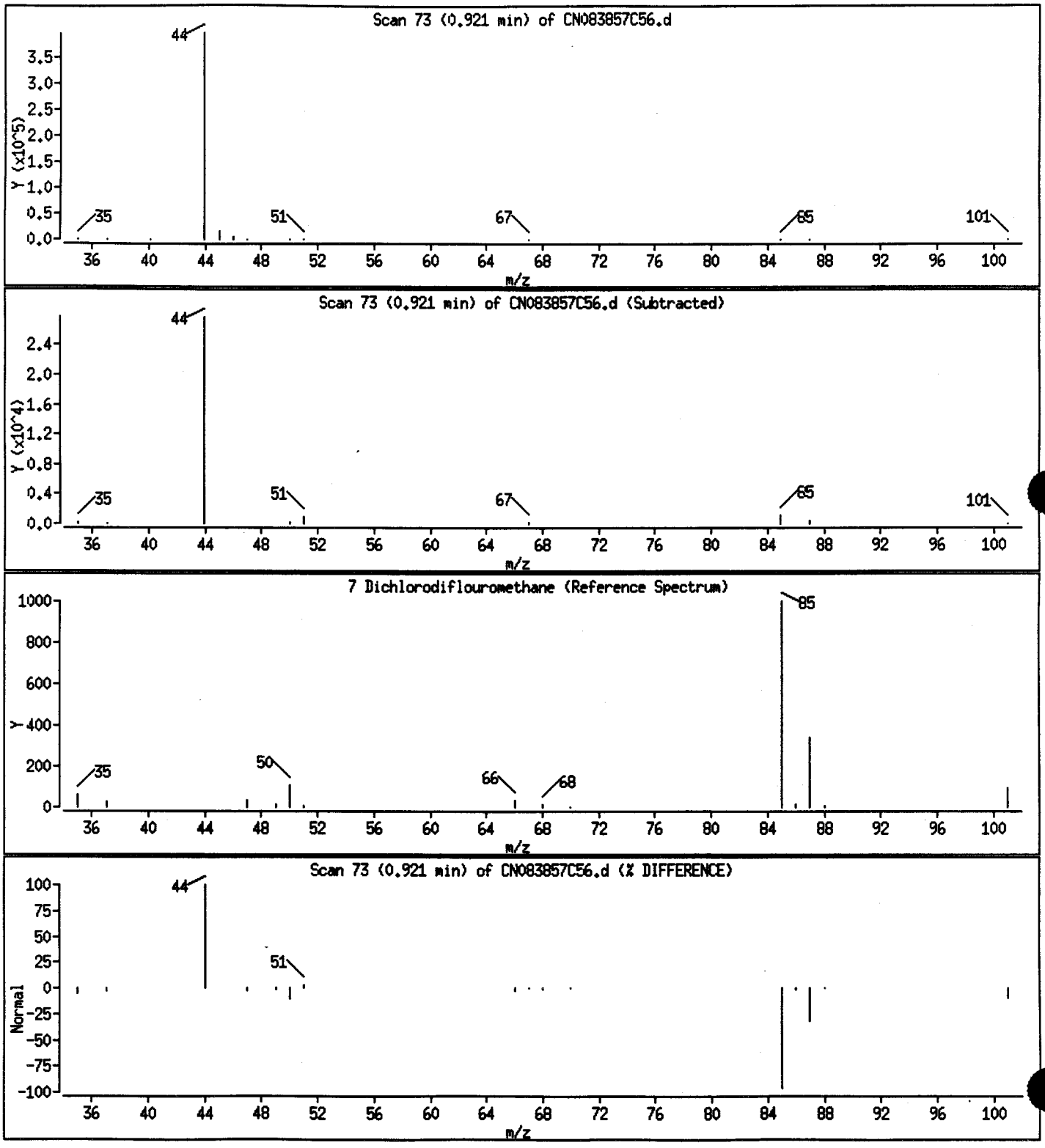
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

7 Dichlorodiflourcmethane



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Date : 15-FEB-1995 05:15

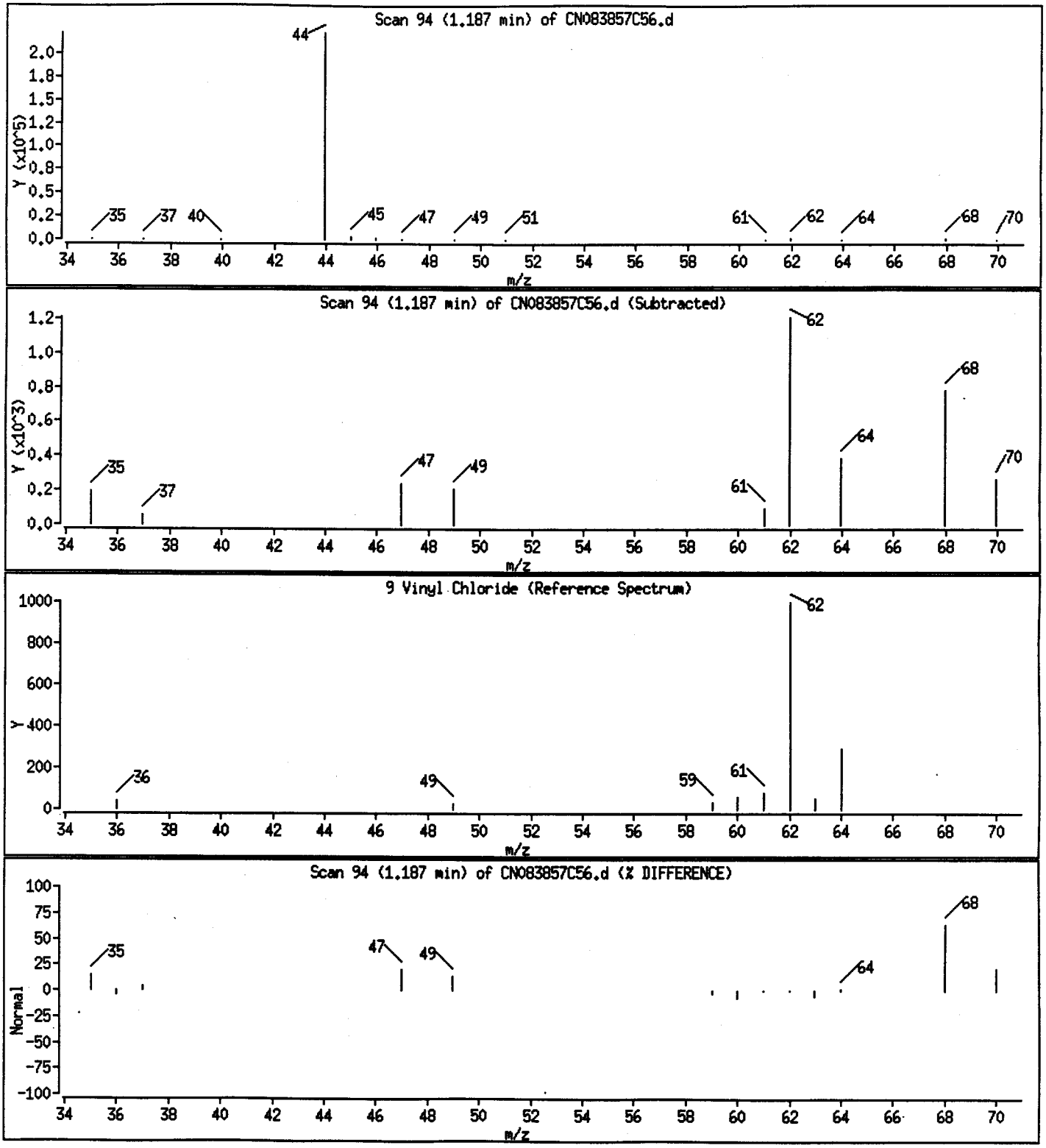
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

9 Vinyl Chloride



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Date : 15-FEB-1995 05:15

Client ID: MW8

Instrument: f50056.i

Sample Info:

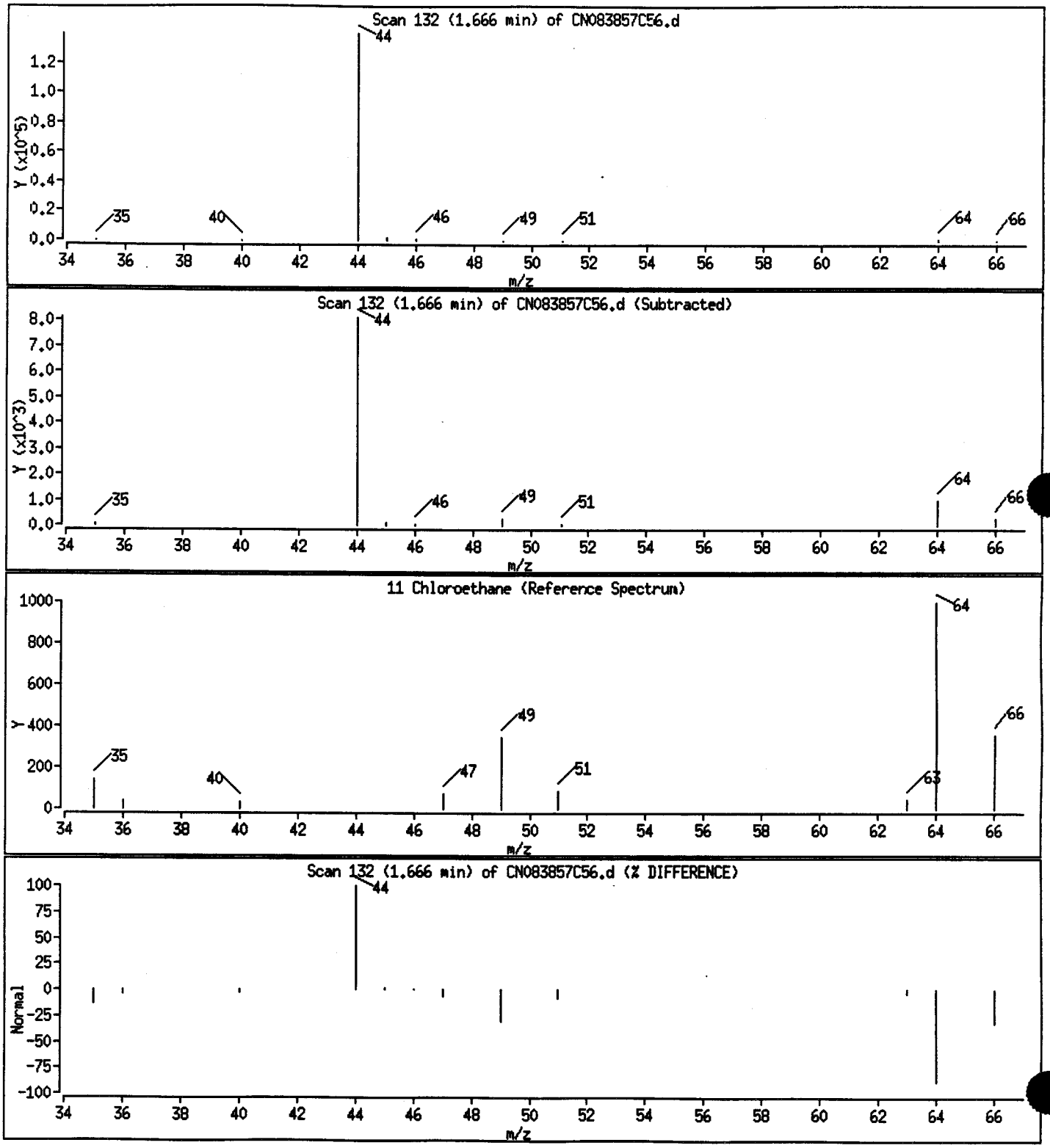
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

11 Chloroethane



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Date : 15-FEB-1995 05:15

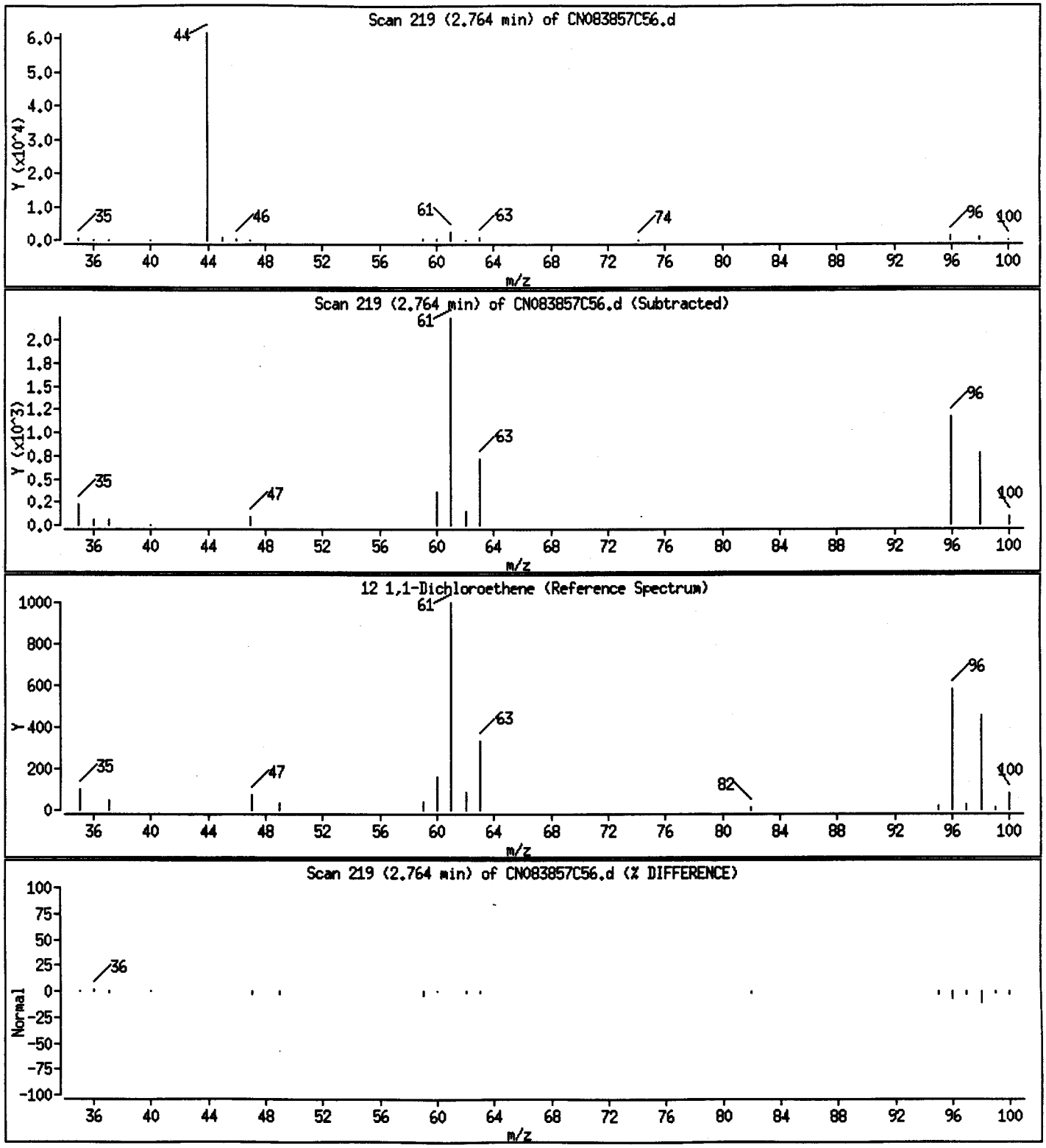
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

12 1,1-Dichloroethene



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Date : 15-FEB-1995 05:15

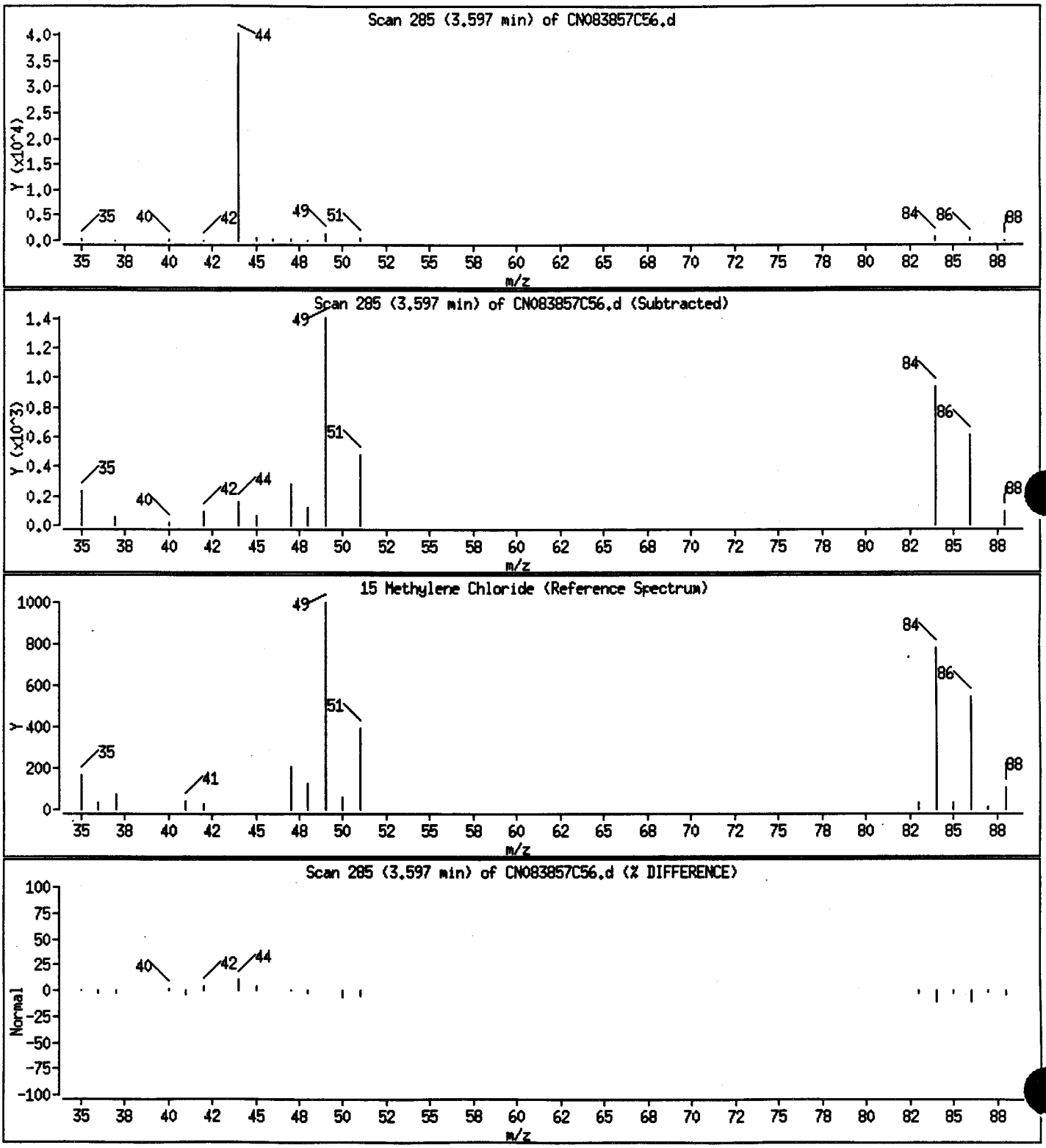
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



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Date : 15-FEB-1995 05:15

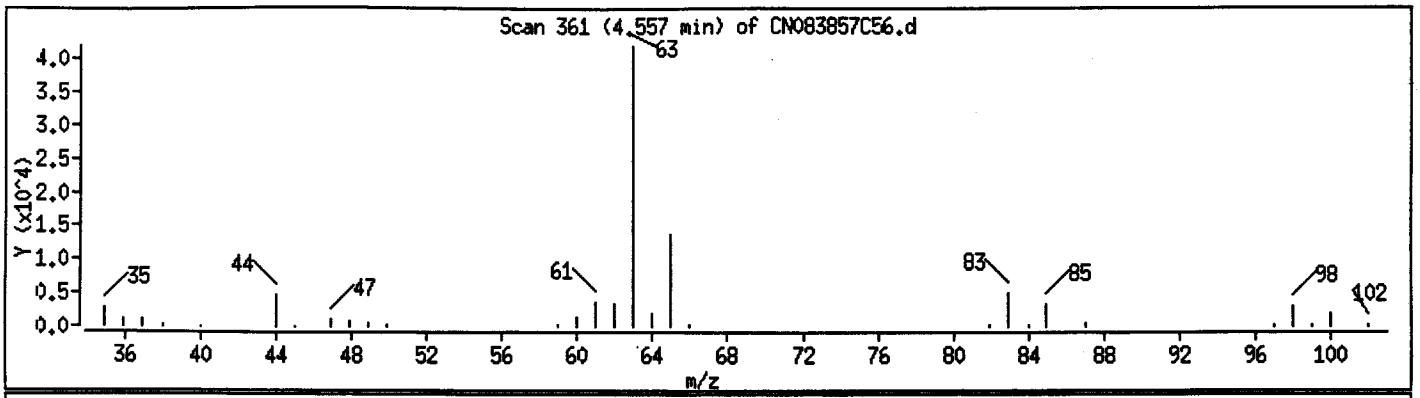
Client ID: MW8 Instrument: f50056.i

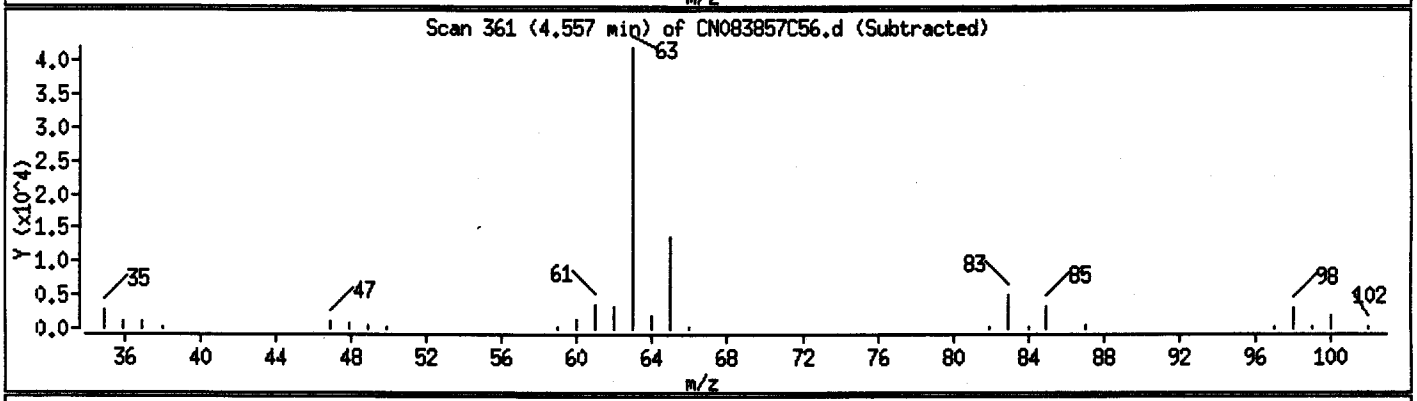
Sample Info:

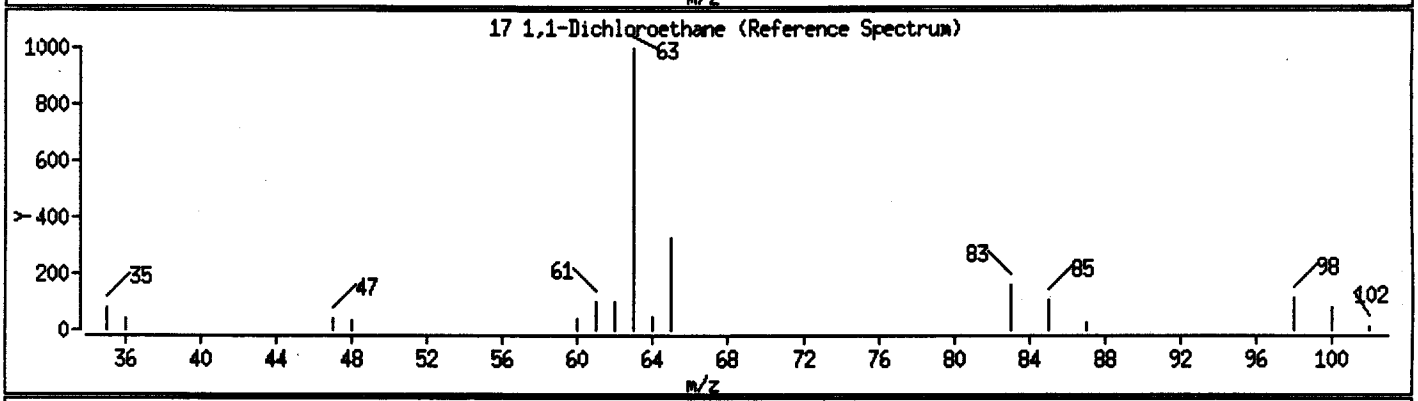
Purge Volume: 5.0 Operator: 1948

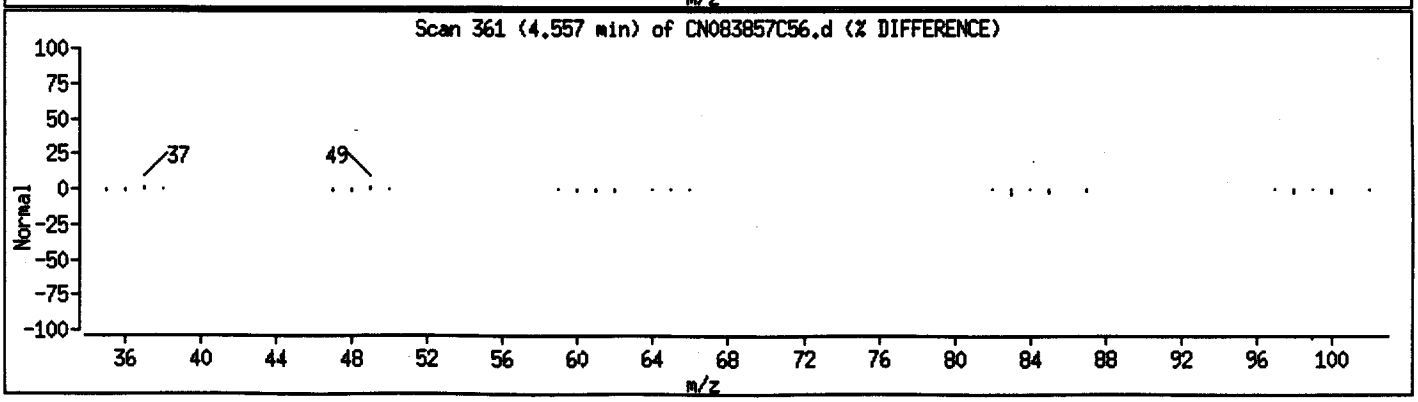
Column phase: DB624 Column diameter: 0.53

17 1,1-Dichloroethane









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Date : 15-FEB-1995 05:15

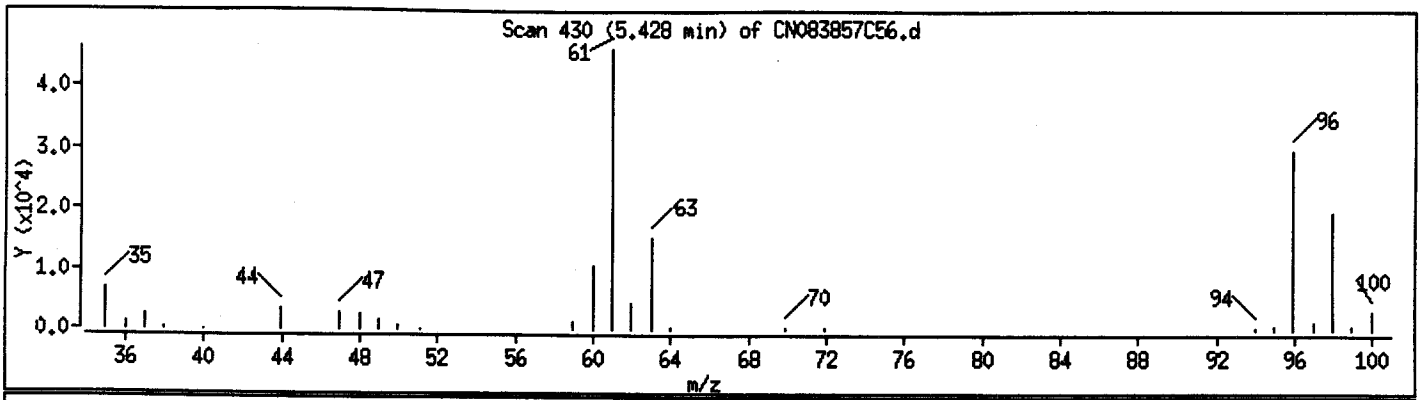
Client ID: MW8 Instrument: f50056.i

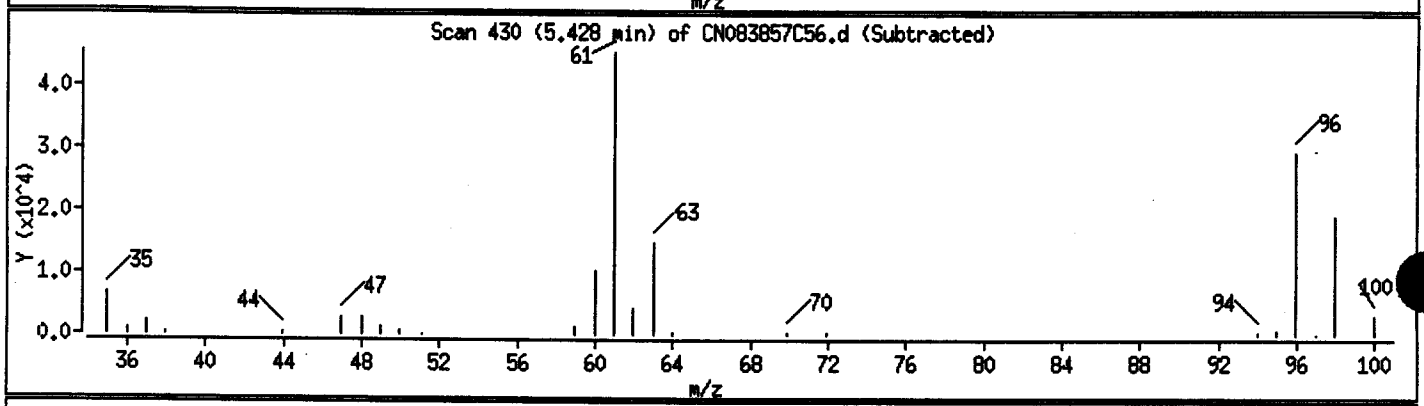
Sample Info:

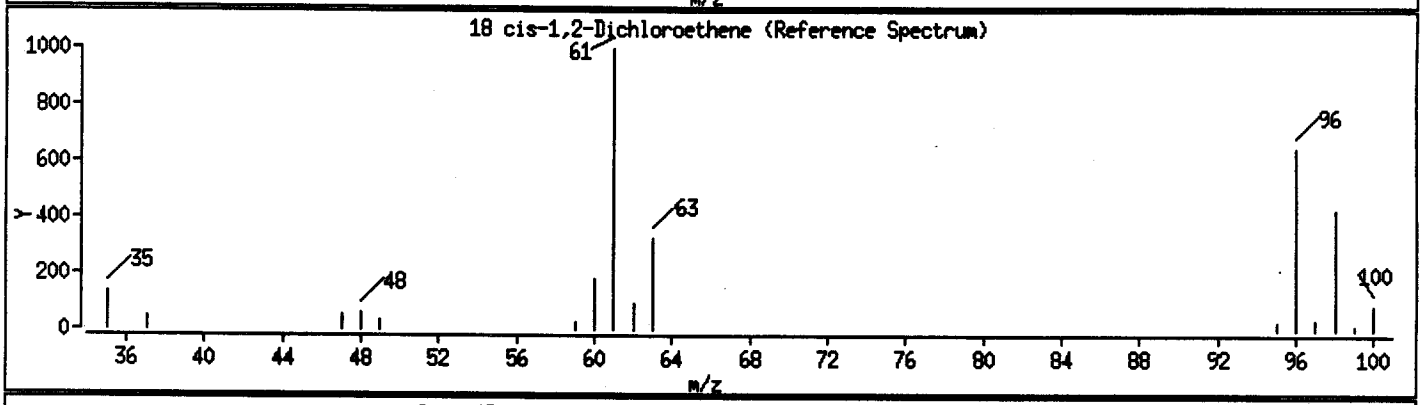
Purge Volume: 5.0 Operator: 1948

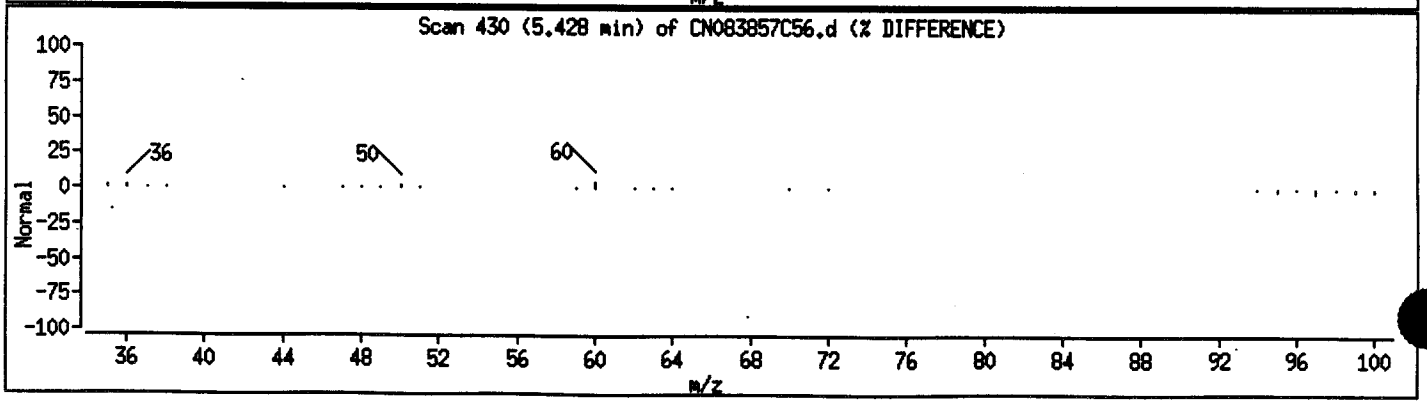
Column phase: DB624 Column diameter: 0.53

18 cis-1,2-Dichlorcethene









Data File: /chem/f50056.i/BH950214B56.b/CN083857C56.d

Date : 15-FEB-1995 05:15

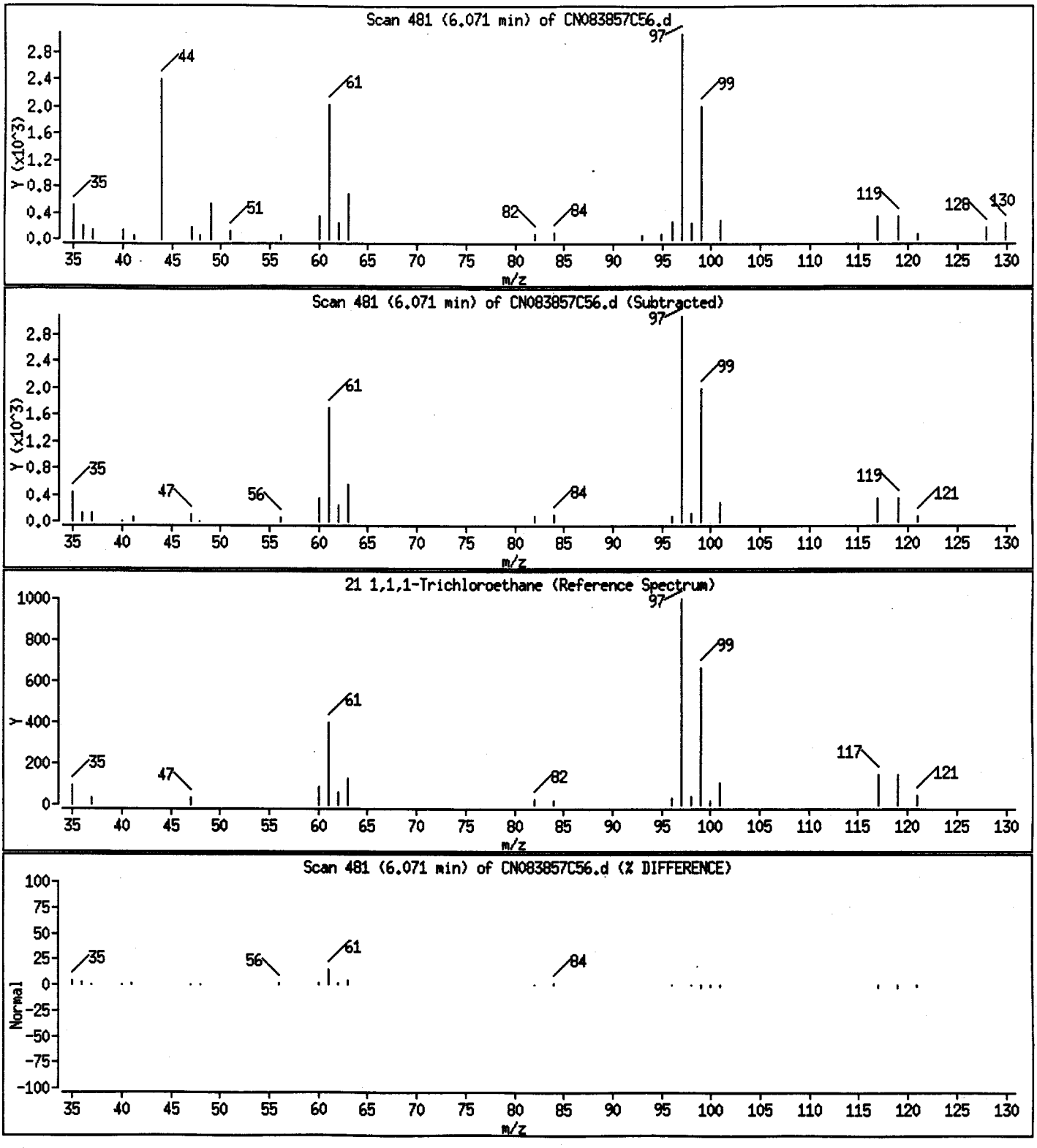
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane



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Date : 15-FEB-1995 05:15

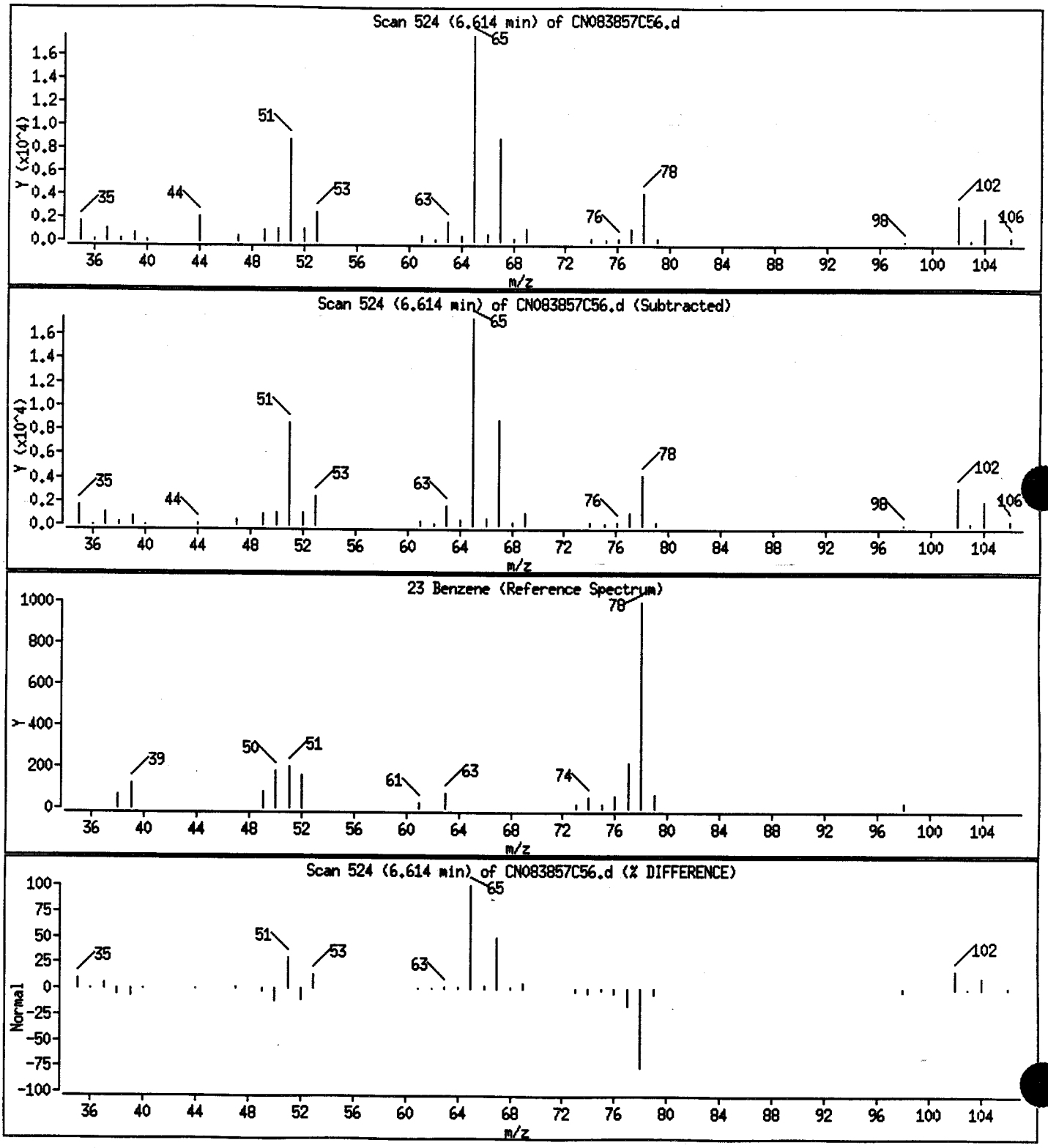
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

23 Benzene



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Date : 15-FEB-1995 05:15

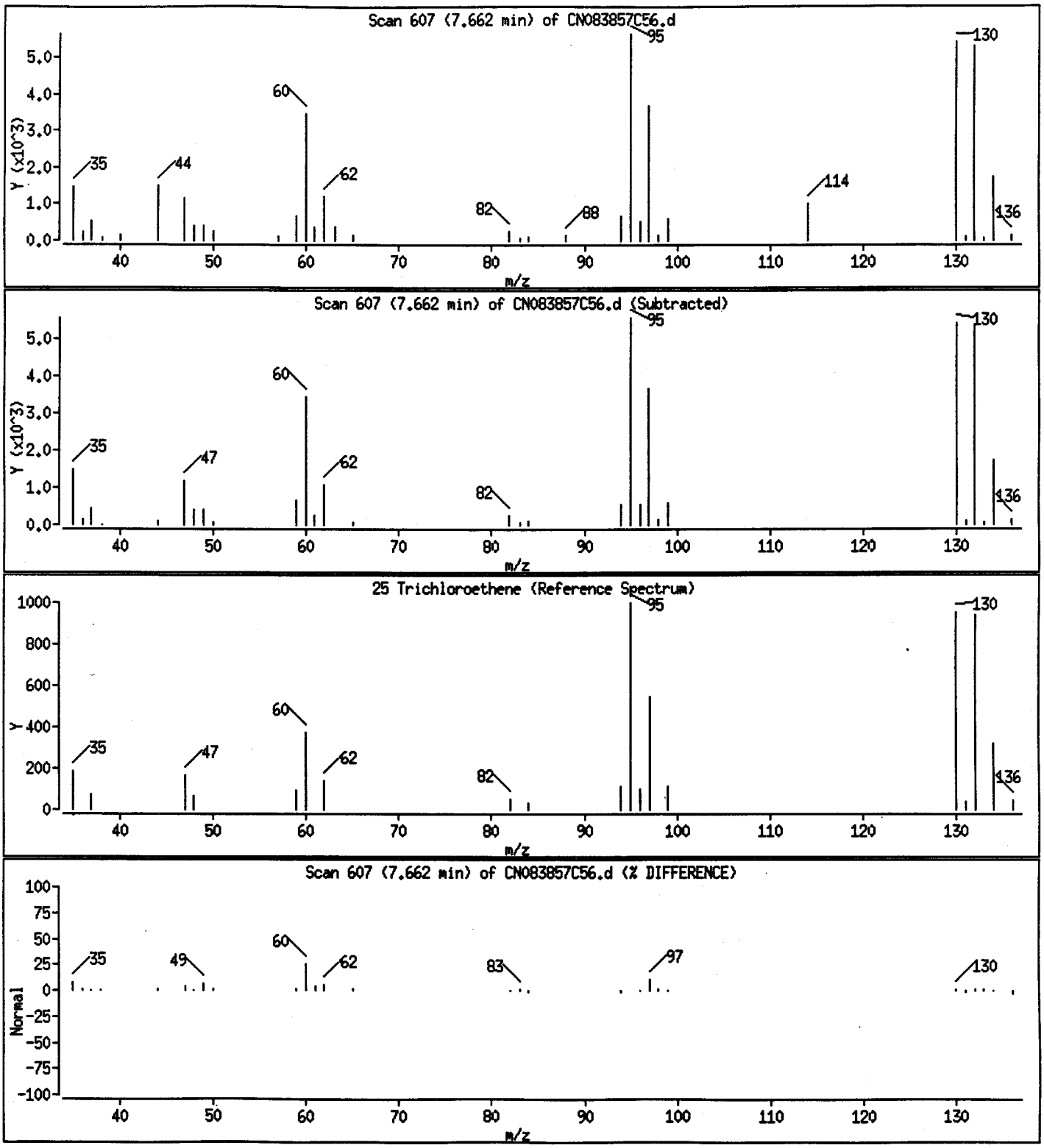
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

25 Trichloroethene



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Date : 15-FEB-1995 05:15

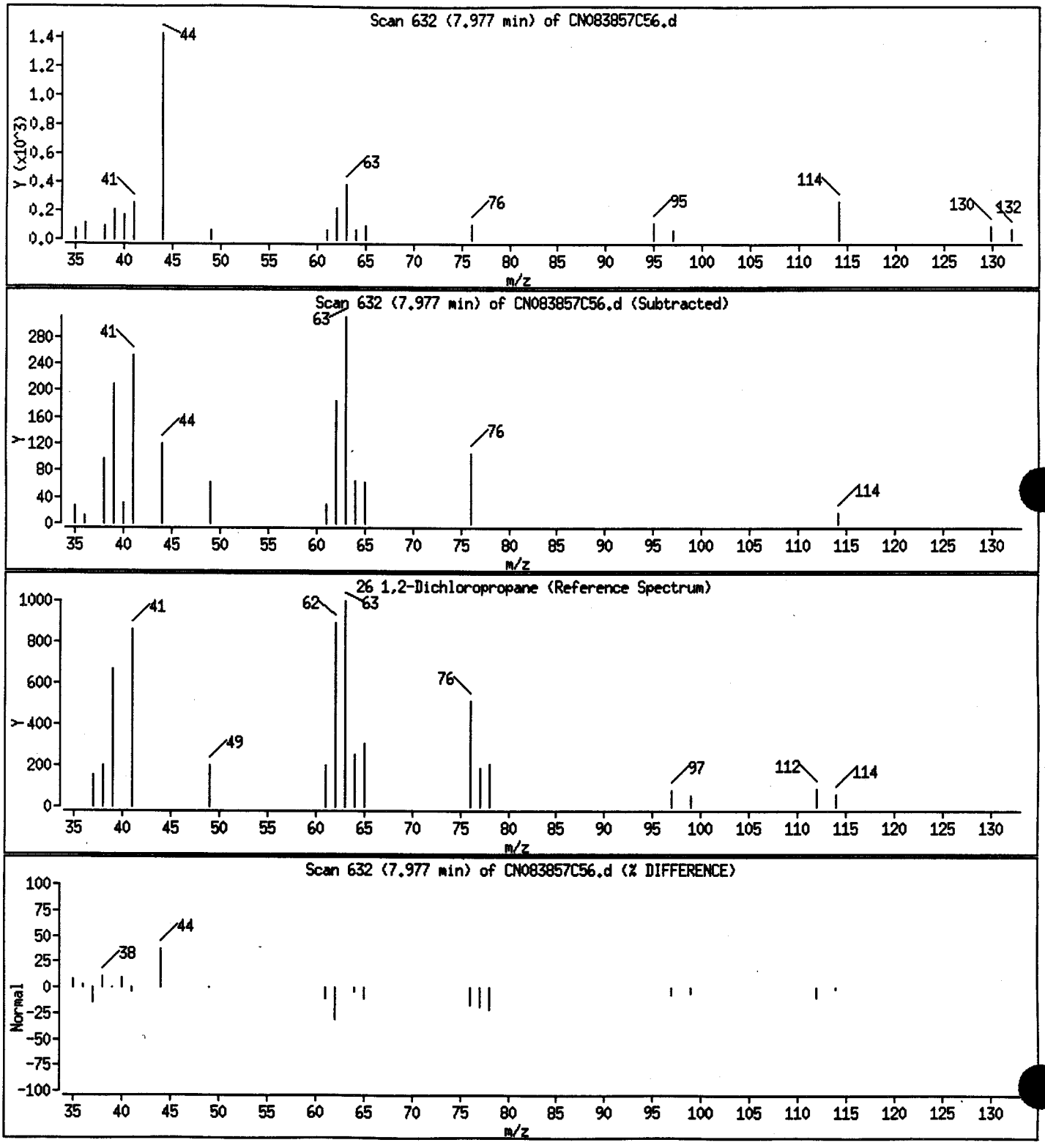
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

26 1,2-Dichloropropane



Data File: /chem/f50056.i/BH950214B56.b/CN083857C56.d

Date : 15-FEB-1995 05:15

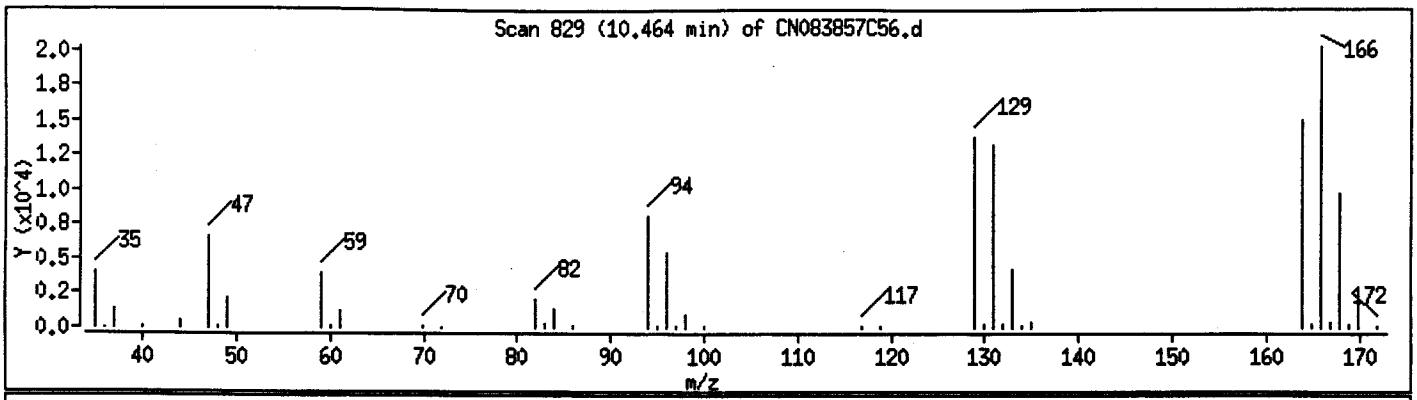
Client ID: MW8 Instrument: f50056.i

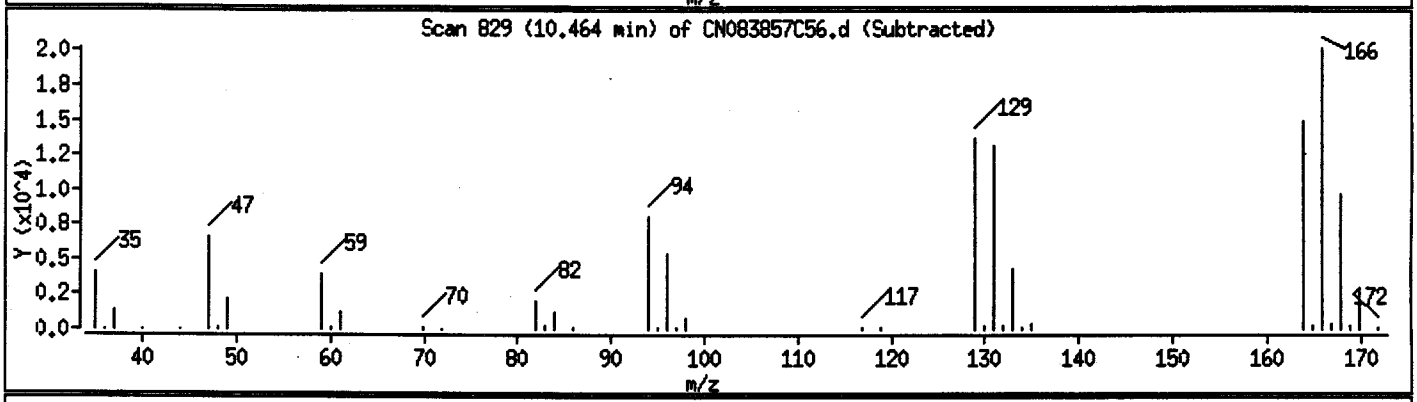
Sample Info:

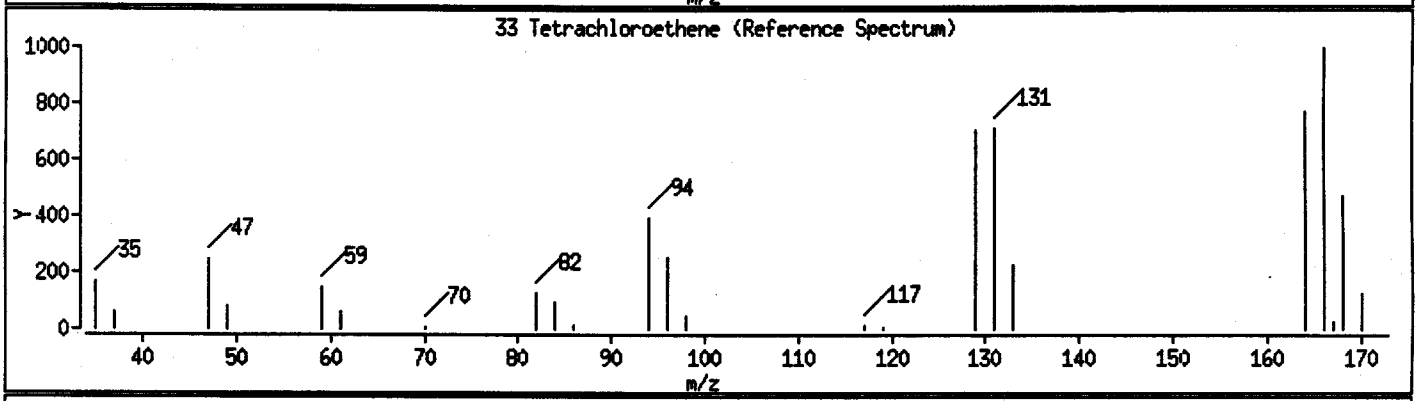
Purge Volume: 5.0 Operator: 1948

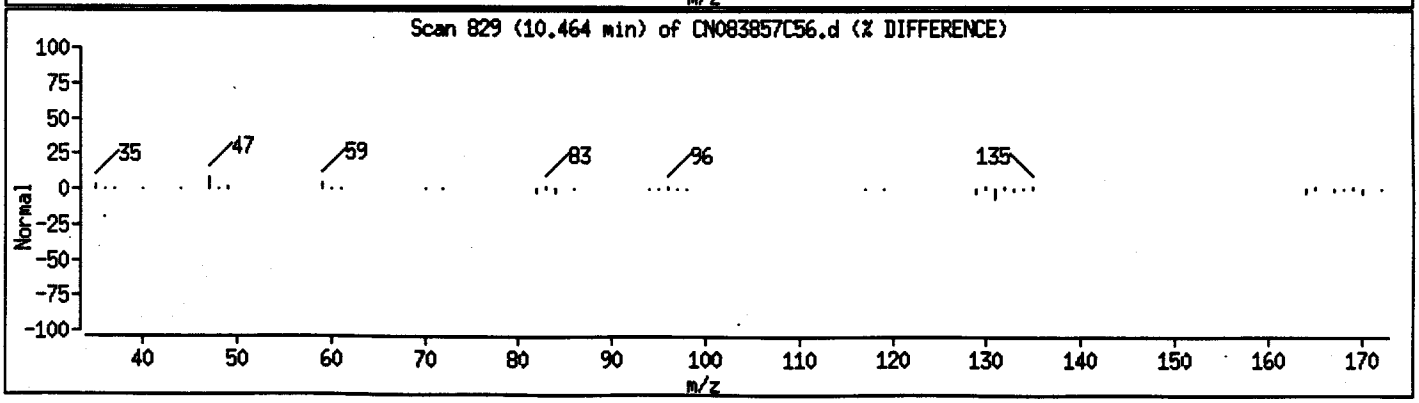
Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene









Data File: /chem/f50056.i/BH950214B56.b/CN083857C56.d

Date : 15-FEB-1995 05:15

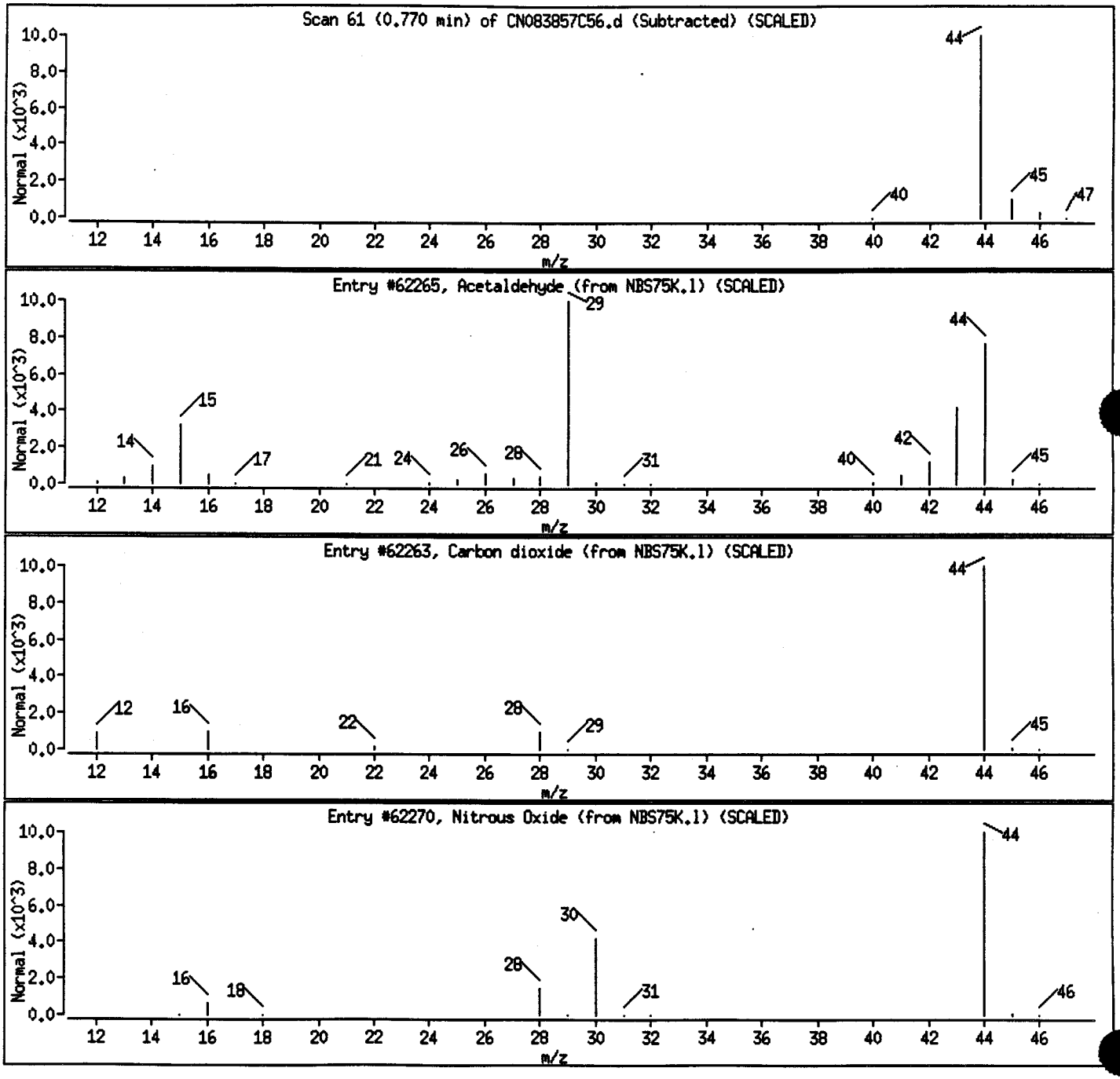
Client ID: MW8 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Acetaldehyde	75-07-0	NBS75K.1	62265	2	C2H4O	44
Carbon dioxide	124-38-9	NBS75K.1	62263	2	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.1	62270	2	N2O	44



LAB INSTRUCTIONS: PPS#: _____
PPS#115 + DICHLORODIFLUOROMETHANE

RECEIPT DATE: 02/10/95 CASE#: 30073 00001 RE 2/13/95 DUE DATE: 03/10/9

VOA J[ ] J3[ ] D[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683857
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020795 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: MW8

GC/MS ANALYSIS VS 2/15/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename VS 2/15/95 BFH950214B56 Disk ( )
Blank Filename CB950215C56 Disk ( )
Standard Filename CZ950214B56 Disk ( )
Sample Filename CN083857C56 Disk ( )

ANALYST(S): Injection 1948 V.A. Smith Work-up 1948 V.A. Smith

GC/MS REVIEW

CONDITION CODE | OK |

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 01

COMMENTS:

#GC/MS Review [signature] Date 2/20/95 Auditor_____ Date___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s):_____/_____

QA COMMENTS:

Initials_____ Date___/___/___

FINAL REVIEW: Initials_____ Date___/___/___

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683857
Client ID# MW5
Instrument Blank ID# CB9502150S6
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 61 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / EF

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683861

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083861C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683861

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083861C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLK1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683861

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083861C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

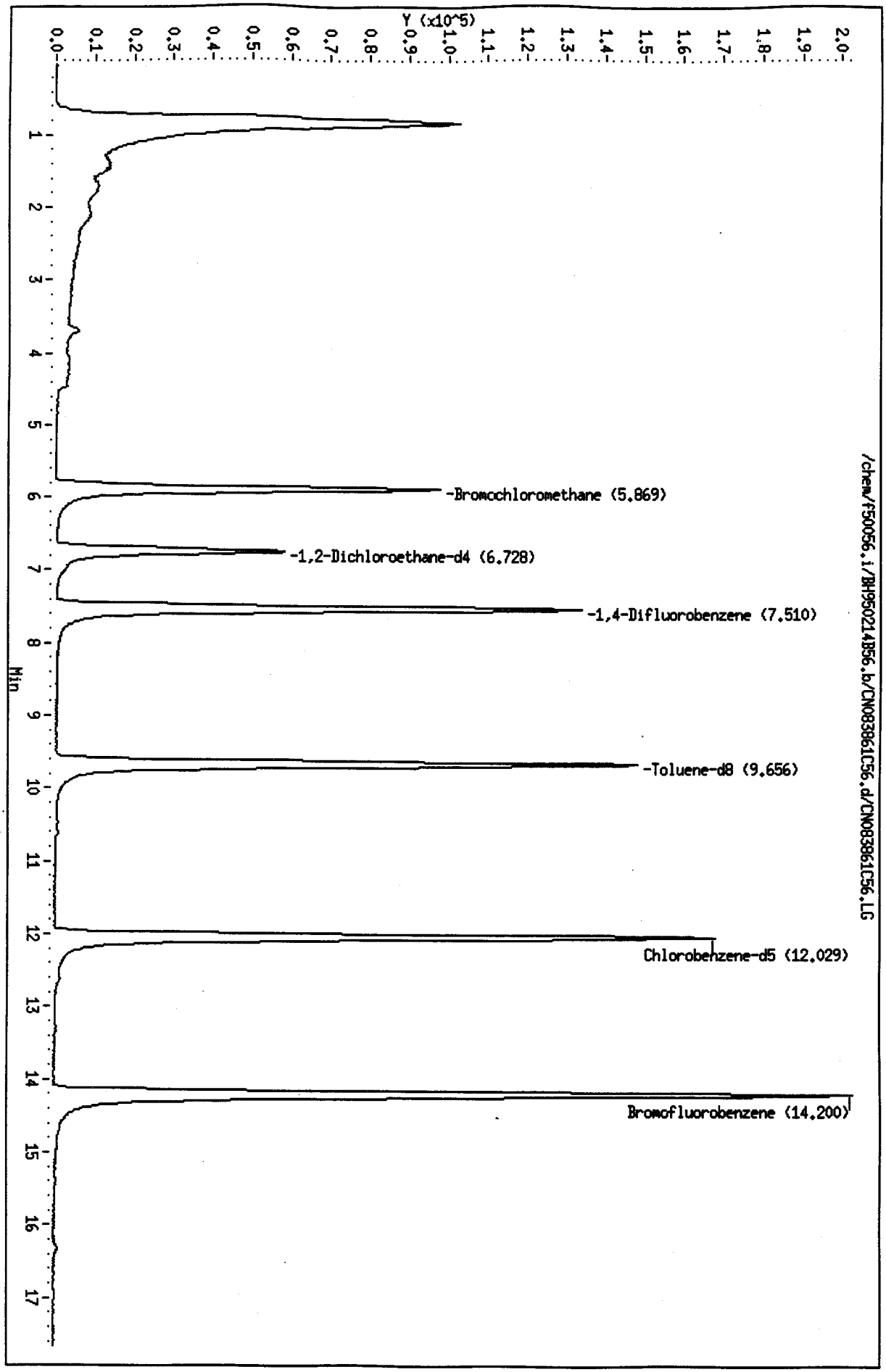
GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.82	190	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BH950214B56.b/CN083861C56.d
Date : 15-FEB-1995 02:10
Client ID: TRIPBLK1
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BH950214B56.b/CN083861C56.d/CN083861C56.LG
-Bromochloromethane (5.869)
-1,2-Dichloroethane-d4 (6.728)
-1,4-Difluorobenzene (7.510)
-Toluene-d8 (9.656)
Chlorobenzene-d5 (12.029)
Bromofluorobenzene (14.200)

Data File: /chem/f50056.i/BH950214B56.b/CN083861C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083861C56.d
Lab Smp Id: 683861 Client Smp ID: TRIPBLK1
Inj Date : 15-FEB-1995 02:10
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.869	5.882	(1.000)	83776	250.0	
*	2 1,4-Difluorobenzene	114.00	7.510	7.536	(1.000)	348355	250.0	
*	3 Chlorobenzene-d5	117.00	12.029	12.042	(1.000)	354104	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.728	6.740	(1.146)	146705	253.1	50.62
$	5 Toluene-d8	98.00	9.656	9.669	(0.803)	320199	244.3	48.85
$	6 Bromofluorobenzene	95.00	14.200	14.213	(1.180)	269042	226.4	45.29
	7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
	10 Bromomethane	94.00		1.590	Compound Not Detected.			
	11 Chloroethane	64.00		1.729	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		2.853	Compound Not Detected.			
	13 Acetone	43.00		3.193	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.698	3.698	(0.630)	4103	8.50	1.70(a)
	16 trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		4.683	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		5.567	Compound Not Detected.			
	19 2-Butanone	43.00		5.781	Compound Not Detected.			
	20 Chloroform	83.00		6.135	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		6.210	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
	23 Benzene	78.00		6.753	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CN083861C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.854		Compound Not Detected.		
25	Trichloroethene	130.00		7.801		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.104		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.341		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.745		Compound Not Detected.		
30	Toluene	91.00		9.782		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.313		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.552		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.616		Compound Not Detected.		
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.693		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BH950214B56.b/CN083861C56.d

Date : 15-FEB-1995 02:10

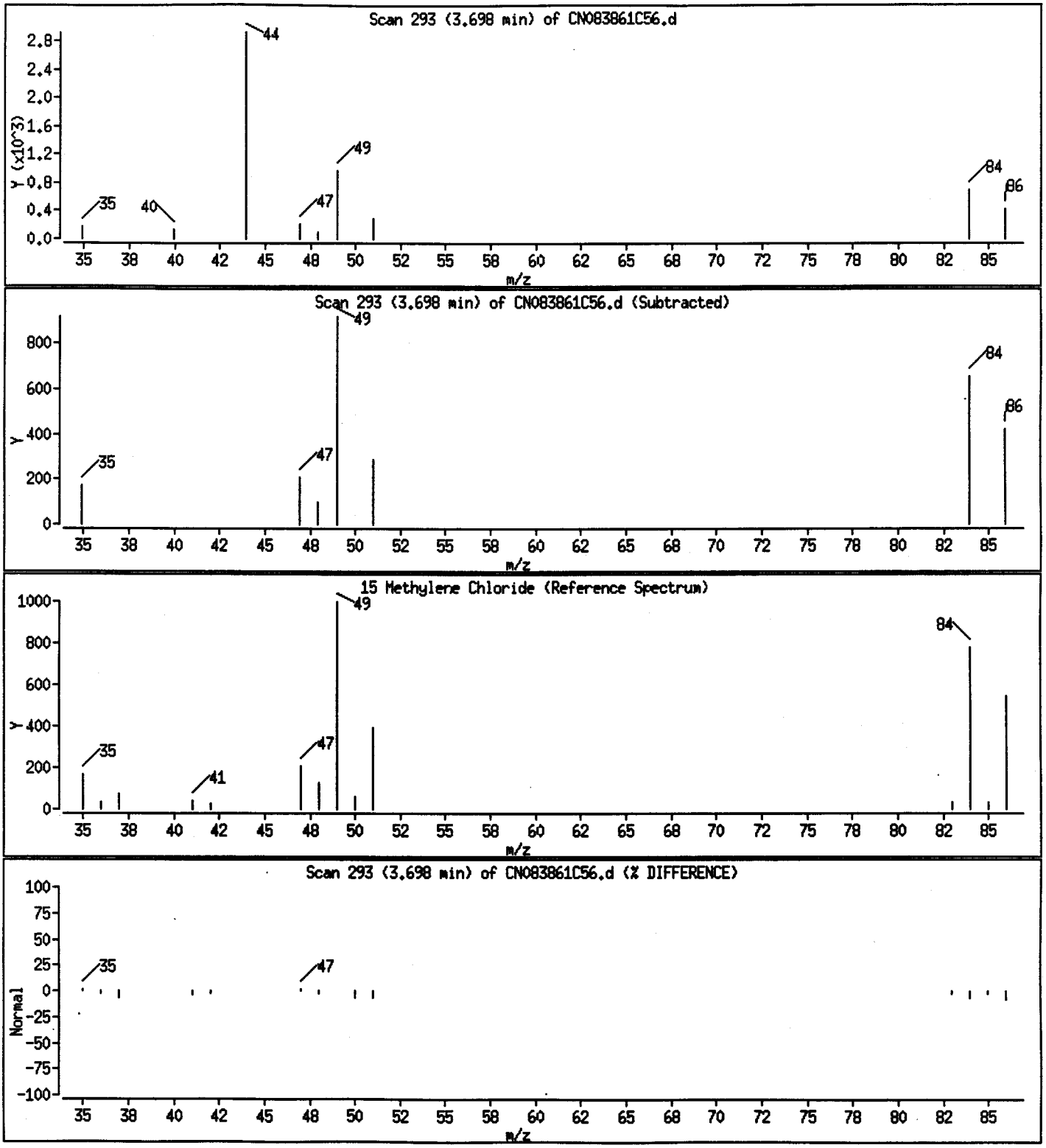
Client ID: TRIPBLK1 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BH950214B56.b/CN083861C56.d

Date : 15-FEB-1995 02:10

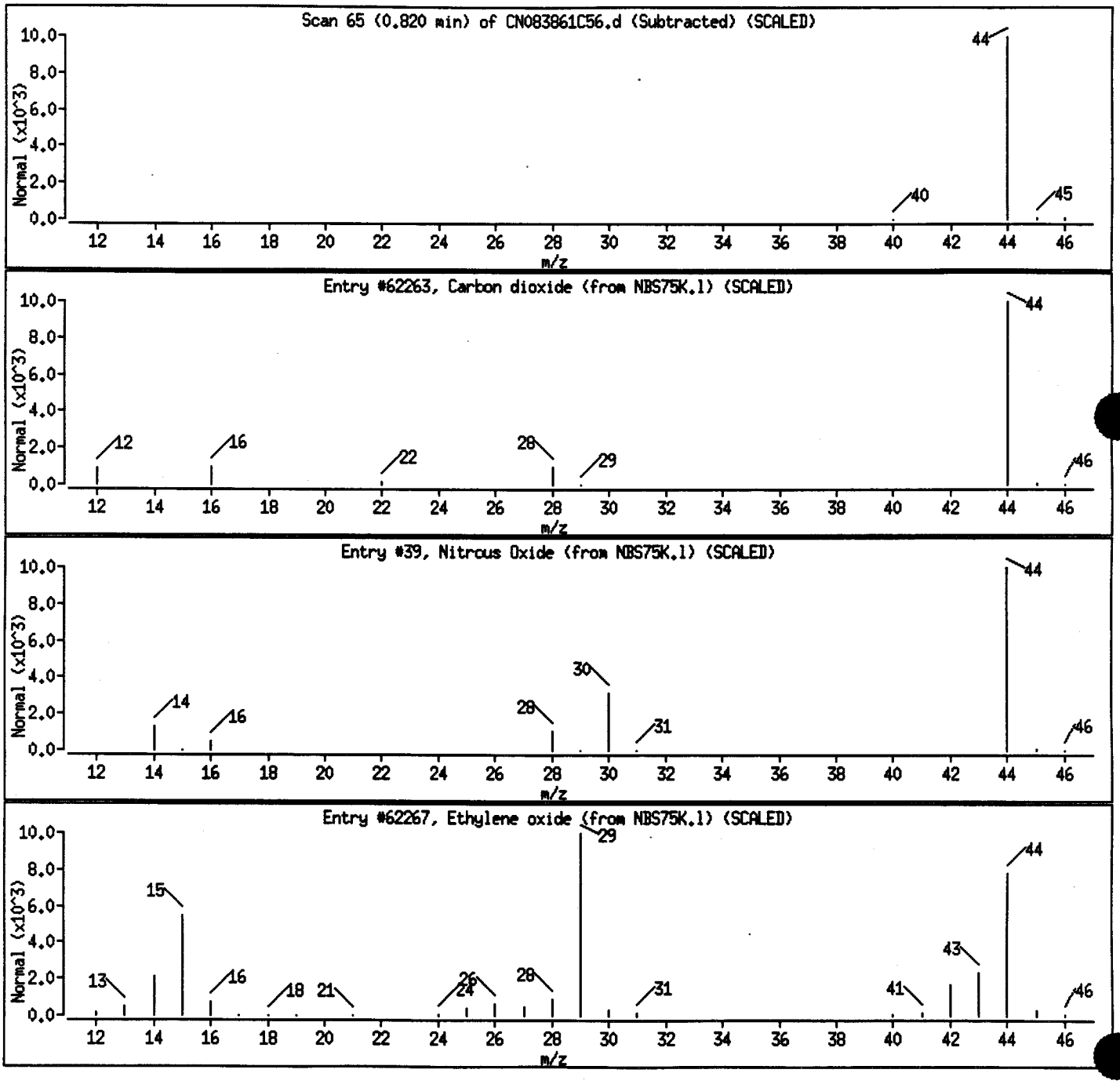
Client ID: TRIPBLK1 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	62263	5	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.l	39	3	N2O	44
Ethylene oxide	75-21-8	NBS75K.l	62267	2	C2H4O	44



LAB INSTRUCTIONS: PPS#: _____
PPS#115 TRIP BLANK* + DICHLORODIFLUOROMETHANE

RECEIPT DATE: 02/10/95 CASE#: 30073 00001 DUE DATE: 03/10/9

VOA J[ ] J3[ ] D[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683861
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020695 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: TRIPBLK1

GC/MS ANALYSIS
Amount Purged: [✓] 5 mls or [ ] VS 2/15/95 Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BH950214B56 Disk ( )
Blank Filename CB950215C56 Disk ( )
Standard Filename CZ950214B56 Disk ( )
Sample Filename CN683861C56 Disk ( )

ANALYST(S): Injection 1948 VA Smith Work-up 1948 VA Smith

GC/MS REVIEW

CONDITION CODE | OK |

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 01

COMMENTS:

#GC/MS Review OSTab Date 2/20/95 Auditor_____ Date____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____ _____/_____

QA COMMENTS:

Initials_____ Date____/____/____

FINAL REVIEW: Initials_____ Date____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 68386
Client ID# TRIP BLK
Instrument Blank ID# CB9502150
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 65 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / FF

Date 2-20-95

QAN-V-14
901001

3. Standards Data

a. Form VI VOA

Initial Calibration Data

b. Form VII VOA

Continuing Calibration Data

a. Form VI VOA

Initial Calibration Data

In order by instrument.

(1) VOA standards reconstructed ion chromatograms and quantitation reports for the initial (five point) calibration. Spectra not required.

(2) All initial calibration data must be included, regardless of when it was performed and for which case. When more than one initial calibration is performed, the data must be put in chronological order, by instrument.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Instrument ID: F50056 Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =CT950214B56.D RRF20 =CU950214B56.D
RRF50 =CV950214B56.D RRF100=CW950214B56.D RRF200=CY950214B56.D

COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Chloromethane		0.541	0.599	0.581	0.641	0.672	0.607	8.4
Bromomethane	*	1.185	1.255	1.156	1.161	1.056	1.163	6.1*
Vinyl Chloride	*	0.800	0.888	0.841	0.897	0.900	0.865	5.0*
Chloroethane		0.768	0.857	0.775	0.775	0.690	0.773	7.6
Methylene Chloride		1.755	1.383	1.366	1.303	1.152	1.392	16.0
Acetone		0.418	0.180	0.200	0.210	0.243	0.250	38.6
Carbon Disulfide		4.859	4.176	4.195	4.118	3.528	4.175	11.3
1,1-Dichloroethene	*	1.095	0.951	0.985	0.960	0.809	0.960	10.6*
1,1-Dichloroethane	*	3.404	2.832	2.886	2.825	2.505	2.891	11.2*
1,2-Dichloroethene (total)		1.942	1.656	1.662	1.598	1.384	1.648	12.1
Chloroform	*	4.067	3.454	3.457	3.256	2.689	3.384	14.6*
1,2-Dichloroethane	*	2.442	2.041	2.116	2.010	1.722	2.066	12.5*
2-Butanone		0.491	0.315	0.380	0.362	0.374	0.385	16.9
1,1,1-Trichloroethane	*	0.919	0.760	0.737	0.673	0.549	0.727	18.5*
Carbon Tetrachloride	*	0.820	0.687	0.691	0.654	0.549	0.680	14.3*
Bromodichloromethane	*	0.833	0.695	0.739	0.698	0.595	0.712	12.1*
1,2-Dichloropropane		0.511	0.412	0.408	0.385	0.328	0.409	16.2
cis-1,3-Dichloropropene	*	0.588	0.493	0.539	0.521	0.457	0.520	9.4*
Trichloroethene	*	0.567	0.450	0.452	0.420	0.353	0.449	17.3*
Dibromochloromethane	*	0.836	0.652	0.721	0.664	0.532	0.681	16.2*
1,1,2-Trichloroethane	*	0.463	0.356	0.376	0.338	0.271	0.361	19.3*
Benzene	*	1.218	1.002	0.972	0.869	0.697	0.952	20.0*
trans-1,3-Dichloropropene	*	0.510	0.419	0.485	0.482	0.423	0.464	8.7*
Bromoform	*	0.595	0.435	0.522	0.498	0.418	0.494	14.4*
4-Methyl-2-Pentanone		0.353	0.228	0.275	0.264	0.265	0.277	16.6
2-Hexanone		0.182	0.097	0.145	0.149	0.175	0.150	22.5
Tetrachloroethene	*	0.694	0.561	0.544	0.506	0.432	0.547	17.5*
1,1,2,2-Tetrachloroethane	*	0.724	0.445	0.520	0.512	0.491	0.538	20.0*
Toluene	*	1.274	0.968	0.940	0.888	0.838	0.982	17.4*
Chlorobenzene	*	1.209	0.999	1.030	0.990	0.873	1.020	11.9*
Ethylbenzene	*	0.548	0.455	0.473	0.458	0.404	0.468	11.1*
Styrene	*	1.150	0.920	0.936	0.880	0.758	0.929	15.3*
Xylene (Total)	*	0.770	0.622	0.620	0.569	0.477	0.612	17.4*
Dichlorodiflouromethane		0.449	0.523	0.491	0.535	0.518	0.503	6.9
Toluene-d8		0.962	0.880	0.822	0.814	0.798	0.855	7.9
Bromofluorobenzene	*	0.938	0.838	0.817	0.816	0.766	0.835	7.6*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Instrument ID: F50056 Calibration Date(s): 02/14/95 02/14/95

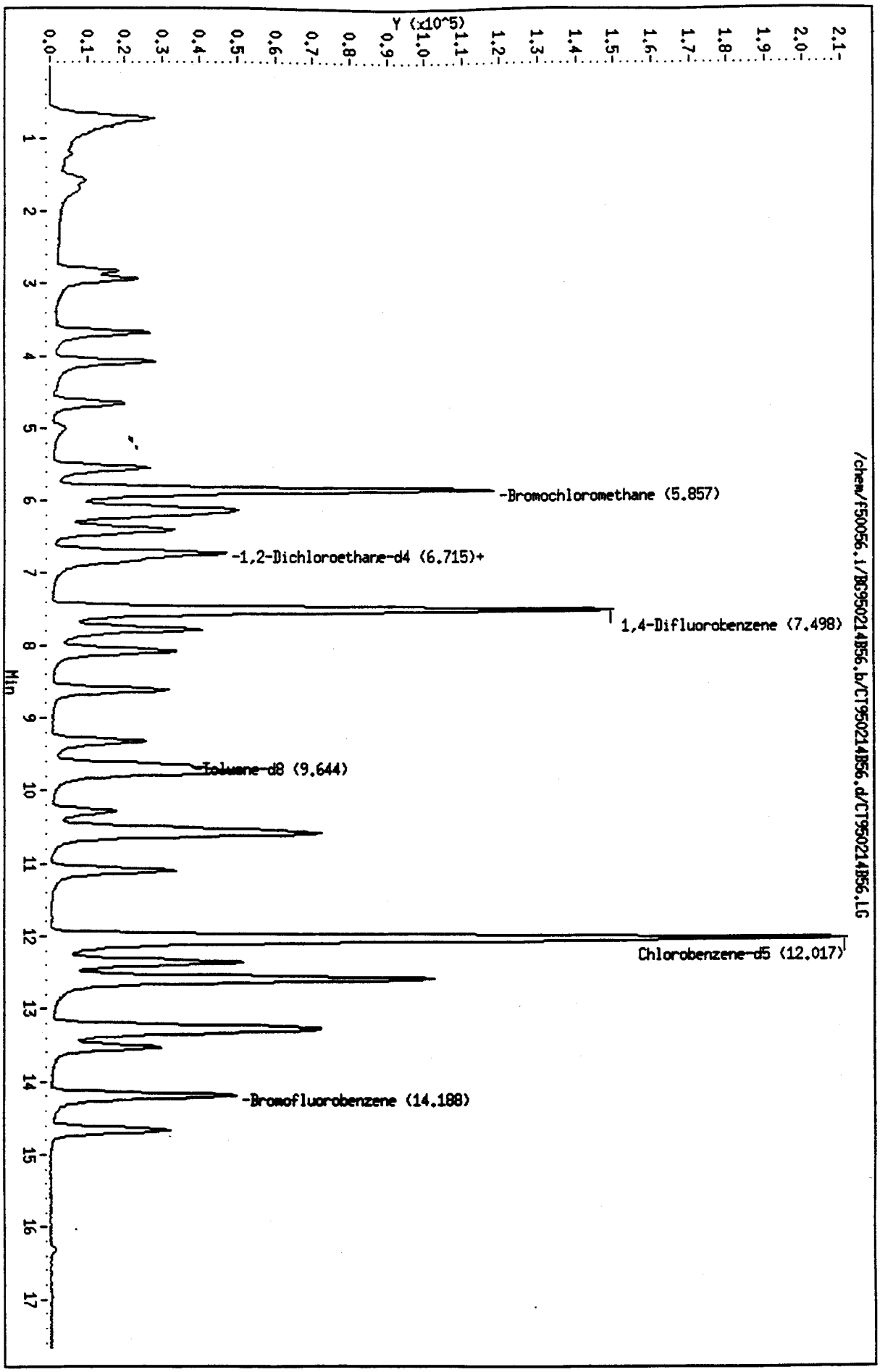
Heated Purge: (Y/N) N Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =CT950214B56.D RRF20 =CU950214B56.D
RRF50 =CV950214B56.D RRF100=CW950214B56.D RRF200=CY950214B56.D

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
1,2-Dichloroethane-d4	1.896	1.790	1.761	1.705	1.503	1.731	8.4

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.


Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Date : 14-FEB-1995 17:55
Client ID: VSTD010
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^5)
/chem/f50056.i/BG950214B56.b/CT950214B56.d/CT950214B56.LG
-Bromochloromethane (5.857)
-1,2-Dichloroethane-d4 (6.715)+
1,4-Difluorobenzene (7.498)
Toluene-d8 (9.644)
Chlorobenzene-d5 (12.017)
-Bromofluorobenzene (14.188)
Min

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CT950214B56.d
Lab Smp Id: VSTD010 Client Smp ID: VSTD010
Inj Date : 14-FEB-1995 17:55
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.857	5.857	(1.000)	98183	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	380576	250.0	
*	3 Chlorobenzene-d5	117.00	12.004	12.004	(1.000)	384769	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.715	(1.147)	37230	50.00	54.77
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	74051	50.00	56.26
$	6 Bromofluorobenzene	95.00	14.188	14.188	(1.182)	72167	50.00	56.16
	7 Dichlorodiflouromethane	85.00	0.959	0.959	(0.164)	8809	50.00	44.57(aM)
	8 Chloromethane	50.00	1.098	1.098	(0.187)	10622	50.00	44.56(aM)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	15701	50.00	46.20(a)
	10 Bromomethane	94.00	1.578	1.578	(0.269)	23269	50.00	50.96
	11 Chloroethane	64.00	1.717	1.717	(0.293)	15077	50.00	49.67(a)
	12 1,1-Dichloroethene	96.00	2.827	2.827	(0.483)	21499	50.00	57.01
	13 Acetone	43.00	3.156	3.156	(0.539)	8201	50.00	83.50
	14 Carbon Disulfide	76.00	2.941	2.941	(0.502)	95407	50.00	58.18
	15 Methylene Chloride	84.00	3.686	3.686	(0.629)	34471	50.00	63.06
	16 trans-1,2-Dichloroethene	96.00	4.077	4.077	(0.696)	36695	50.00	58.53
	17 1,1-Dichloroethane	63.00	4.658	4.658	(0.795)	66835	50.00	58.87
	18 cis-1,2-Dichloroethene	96.00	5.541	5.541	(0.946)	39576	50.00	59.26
	19 2-Butanone	43.00	5.768	5.768	(0.985)	9649	50.00	63.89(M)
	20 Chloroform	83.00	6.109	6.109	(1.043)	79853	50.00	60.08
	21 1,1,1-Trichloroethane	97.00	6.185	6.185	(0.825)	69955	50.00	63.17
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	62437	50.00	60.29
	23 Benzene	78.00	6.715	6.715	(0.896)	92714	50.00	64.00

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Report Date: 16-Feb-1995 17:58

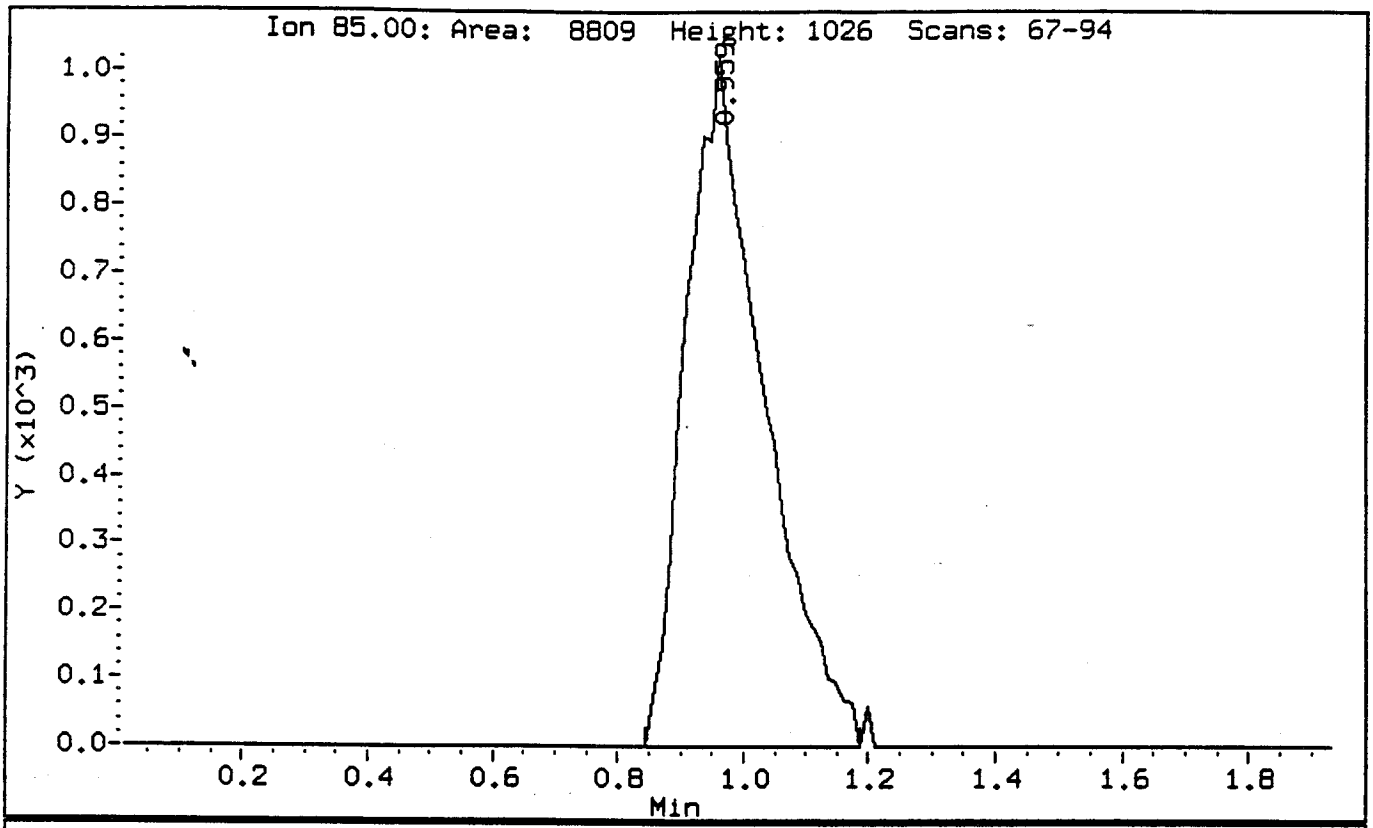
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.829	6.829	(1.166)	47953	50.00	59.09
25	Trichloroethene	130.00	7.775	7.775	(1.037)	43190	50.00	63.25
26	1,2-Dichloropropane	63.00	8.066	8.066	(1.076)	38900	50.00	62.49
27	Bromodichloromethane	83.00	8.609	8.609	(1.148)	63439	50.00	58.54
28	cis-1,3-Dichloropropene	75.00	9.315	9.315	(1.242)	44737	50.00	56.54
29	4-Methyl-2-Pentanone	43.00	9.719	9.719	(0.810)	27146	50.00	63.66
30	Toluene	91.00	9.745	9.745	(0.812)	98052	50.00	64.89
31	trans-1,3-Dichloropropene	75.00	10.275	10.275	(1.370)	38821	50.00	54.97
32	1,1,2-Trichloroethane	97.00	10.515	10.515	(1.402)	35243	50.00	64.16
33	Tetrachloroethene	164.00	10.590	10.590	(0.882)	53400	50.00	63.39
34	2-Hexanone	43.00	11.171	11.171	(0.931)	14035	50.00	60.90
35	Dibromochloromethane	129.00	11.095	11.095	(1.480)	63604	50.00	61.36
36	Chlorobenzene	112.00	12.054	12.054	(1.004)	93005	50.00	59.25
37	Ethylbenzene	106.00	12.345	12.345	(1.028)	42159	50.00	58.58
38	m,p-Xylene	106.00	12.585	12.585	(1.048)	117003	100.0	131.1
39	o-Xylene	106.00	13.254	13.254	(1.104)	59264	50.00	62.95
40	Styrene	104.00	13.304	13.304	(1.108)	88465	50.00	61.89
41	Bromoform	173.00	13.531	13.531	(1.805)	45259	50.00	60.23
42	1,1,2,2-Tetrachloroethane	83.00	14.655	14.655	(1.221)	55705	50.00	67.22
M 43	1,2-Dichloroethene (total)	96.00				76271	100.0	117.8
M 44	Xylene (Total)	106.00				176267	50.00	187.2

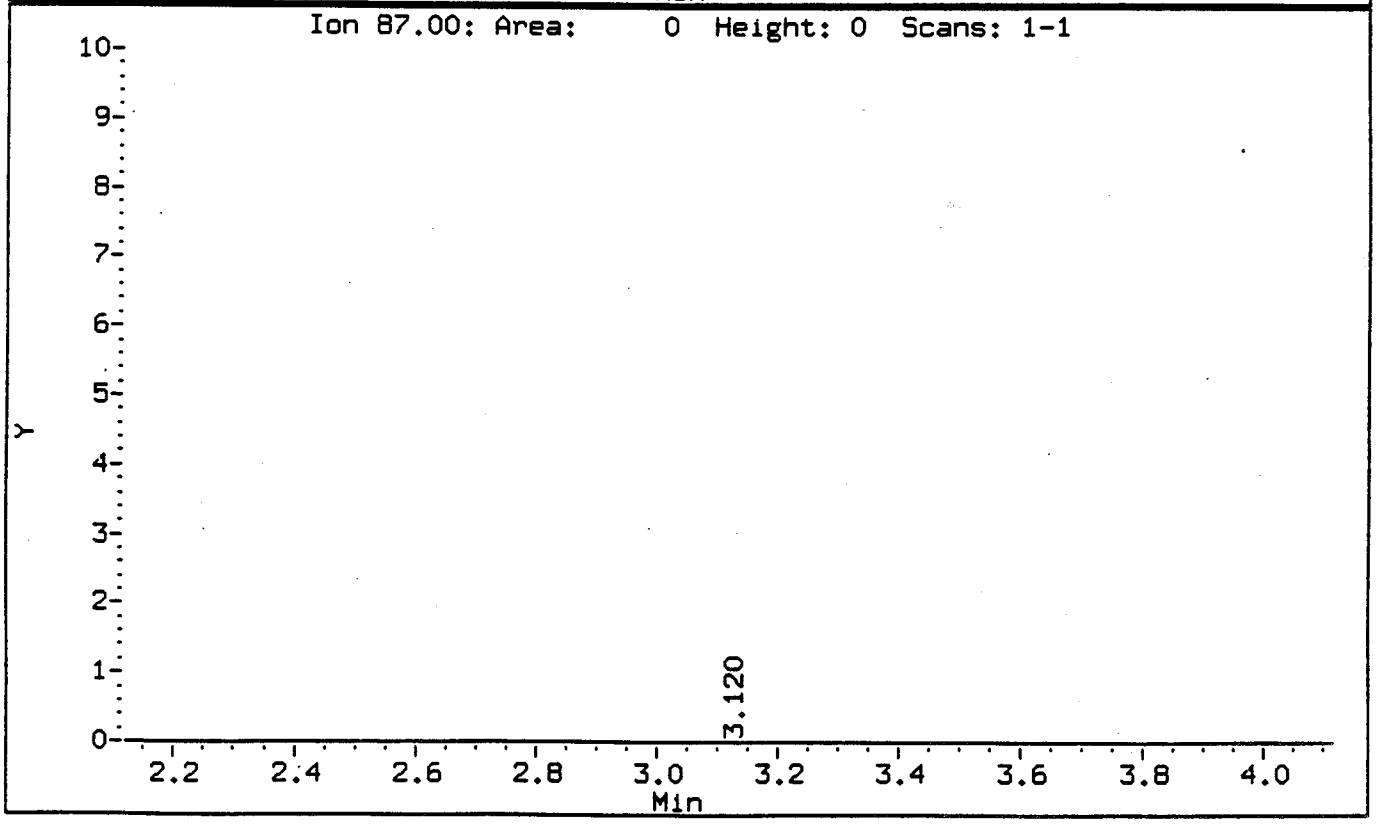
QC Flag Legend

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

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d/CT950214B56.LG
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





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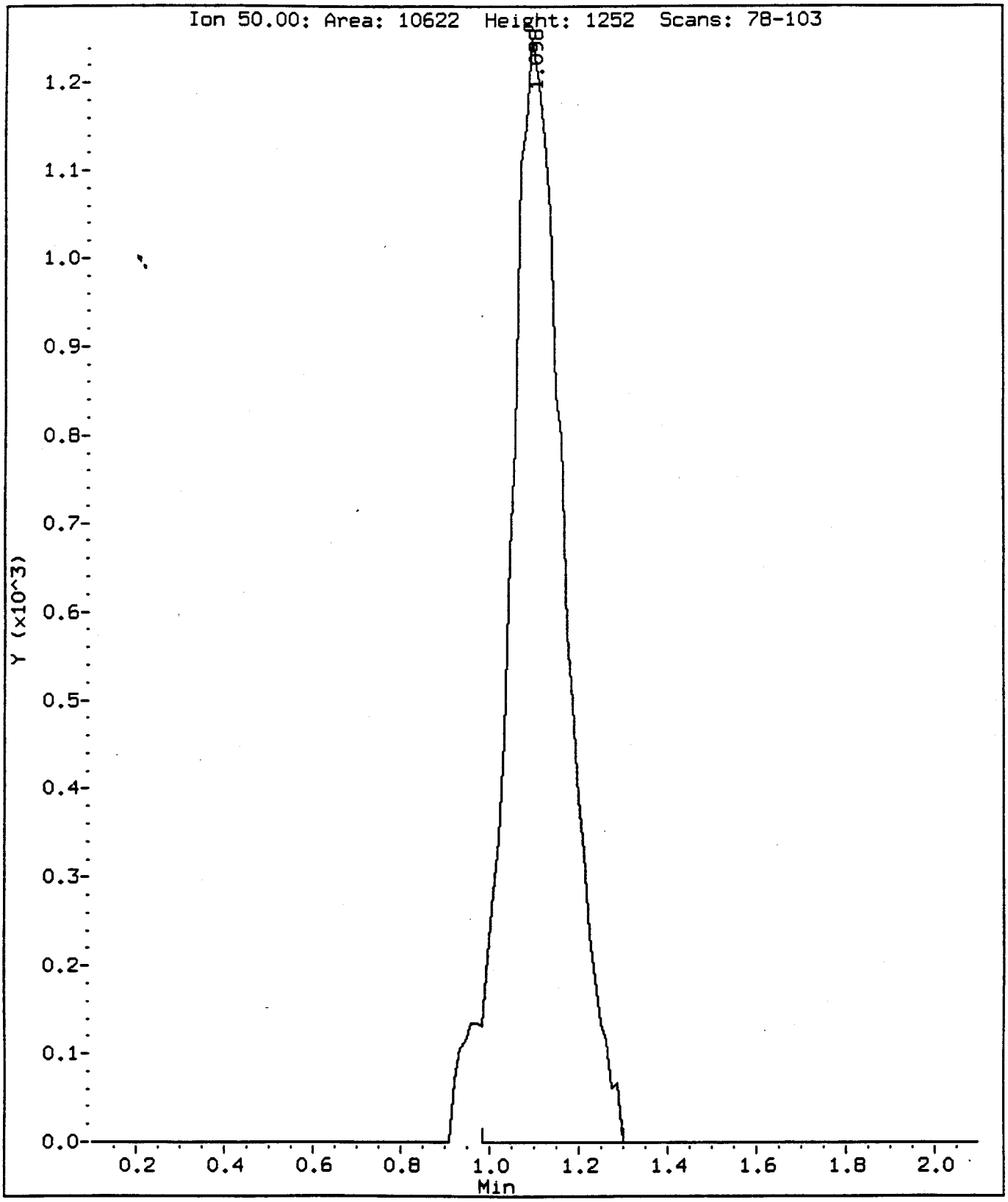
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

Compound: Chloromethane
CAS Number: 74-87-3



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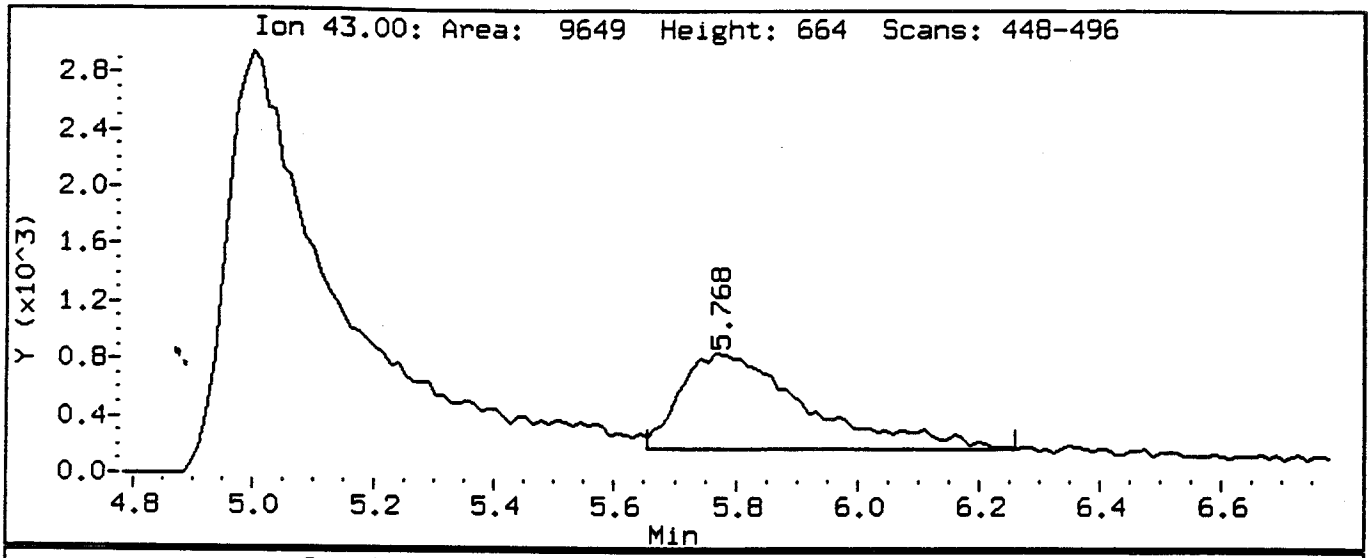
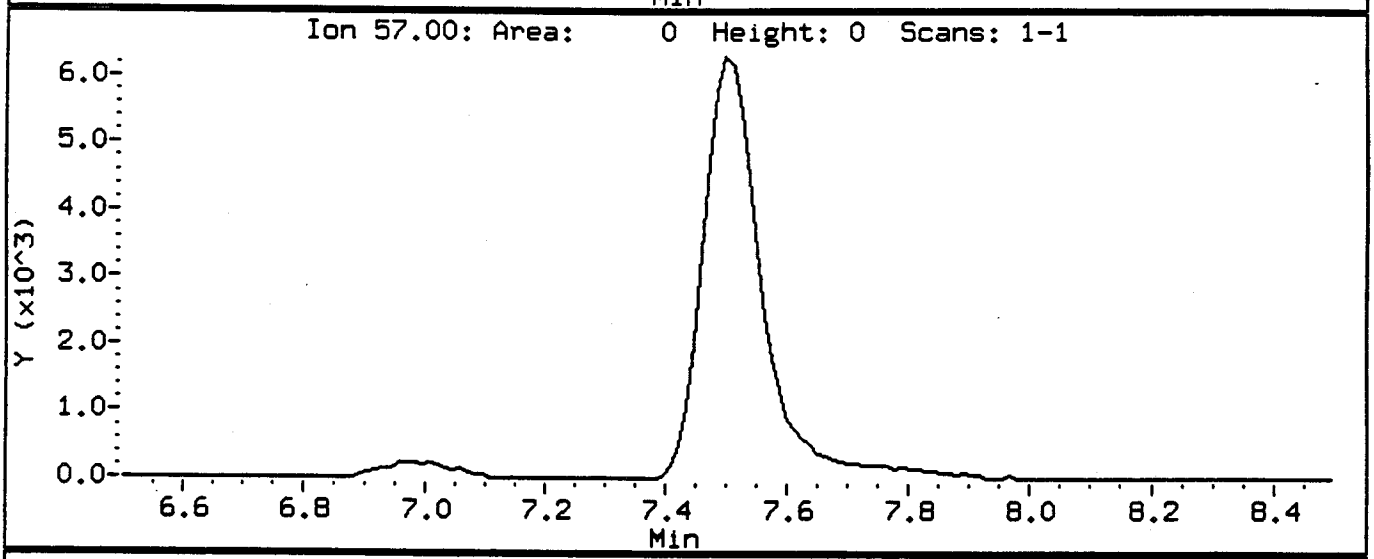
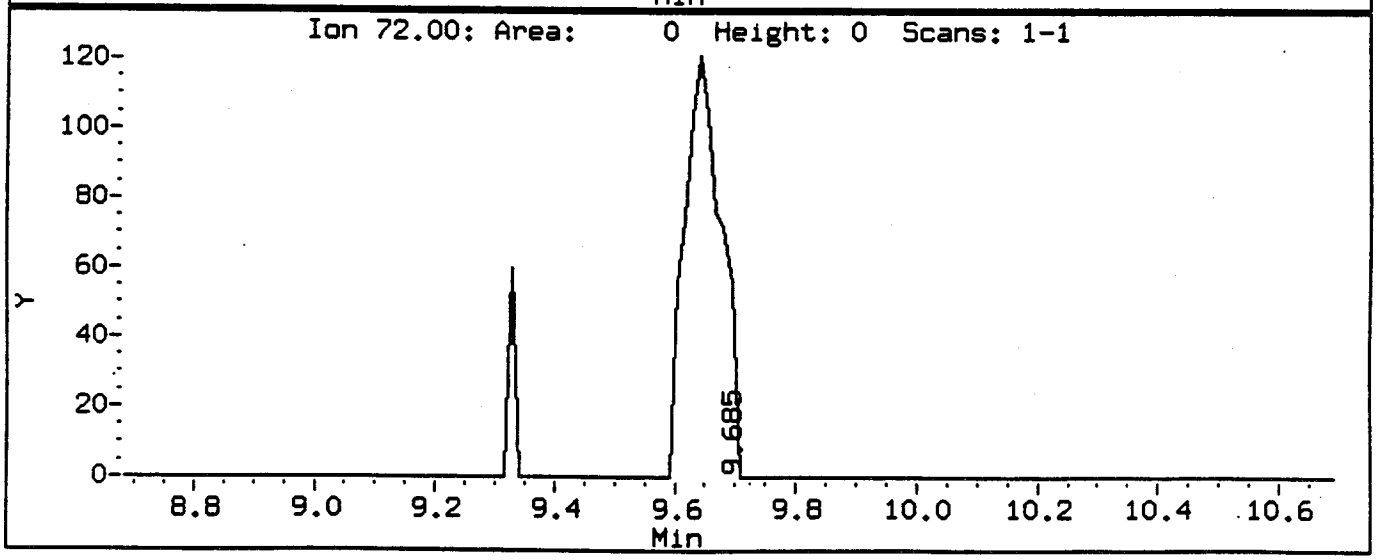
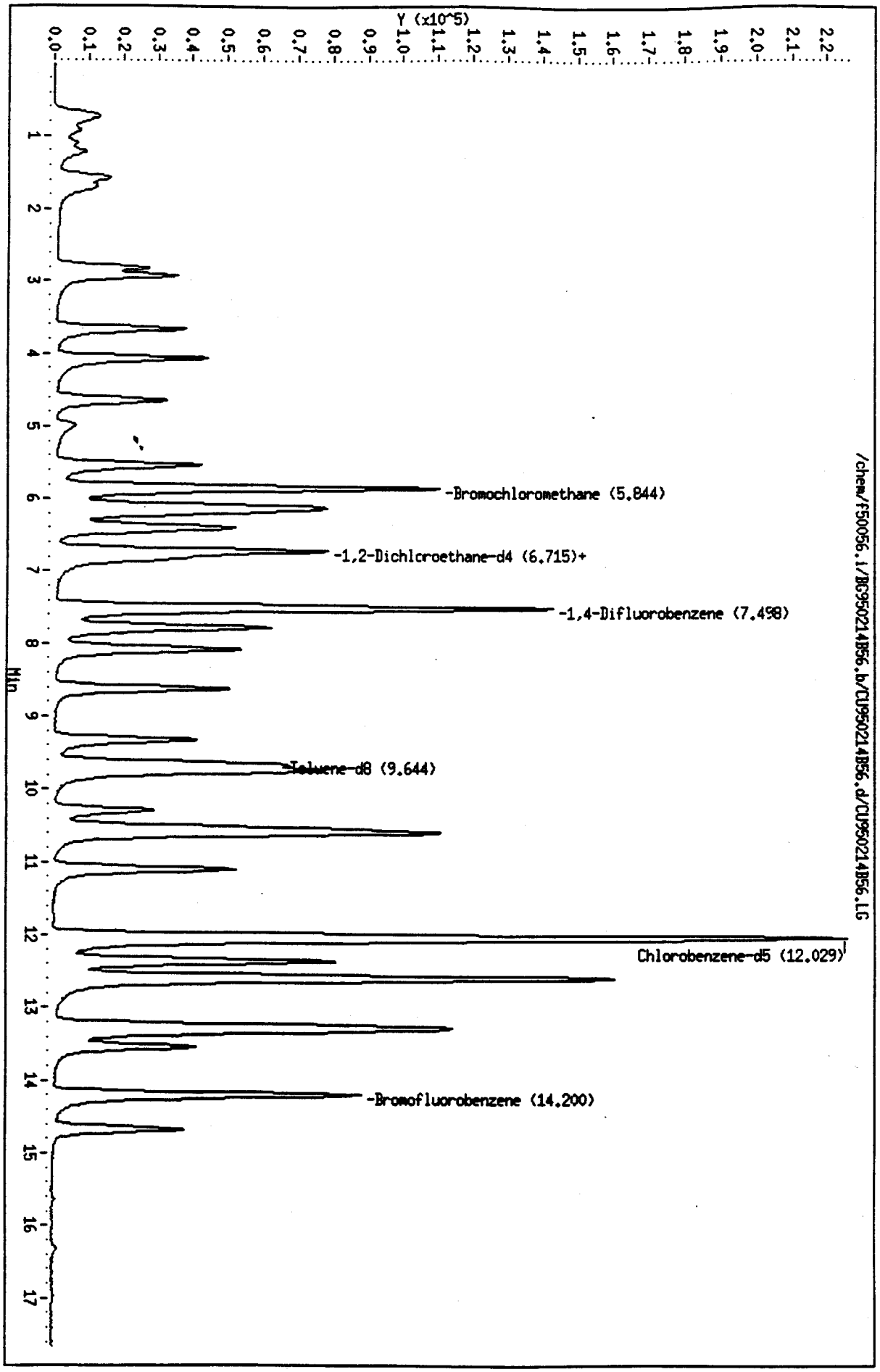
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

Compound: 2-Butanone
CAS Number: 78-93-3








Data File: /chem/f50056.i/BG9502148B6.b/CU9502148B6.d
Date : 14-FEB-1995 18:35
Client ID: VSTD020
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^5)
Min
-Bromochloromethane (5.844)
-1,2-Dichloroethane-d4 (6.715)+
-1,4-Difluorobenzene (7.498)
-Toluene-d8 (9.644)
Chlorobenzene-d5 (12.029)
-Bromofluorobenzene (14.200)
/chem/f50056.i/BG9502148B6.b/CU9502148B6.d/CU9502148B6.LG

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CU950214B56.d
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 14-FEB-1995 18:35
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.844	5.844	(1.000)	92122	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	366169	250.0	
*	3 Chlorobenzene-d5	117.00	12.017	12.017	(1.000)	372017	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.715	(1.149)	65975	100.0	103.4
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	130876	100.0	102.8
$	6 Bromofluorobenzene	95.00	14.200	14.200	(1.182)	124769	100.0	100.4
	7 Dichlorodiflouromethane	85.00	0.934	0.934	(0.160)	19288	100.0	104.0 (M)
	8 Chloromethane	50.00	1.098	1.098	(0.188)	22083	100.0	98.74 (M)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	32729	100.0	102.6
	10 Bromomethane	94.00	1.578	1.578	(0.270)	46260	100.0	108.0
	11 Chloroethane	64.00	1.704	1.704	(0.292)	31580	100.0	110.9
	12 1,1-Dichloroethene	96.00	2.815	2.815	(0.482)	35055	100.0	99.07
	13 Acetone	43.00	3.156	3.156	(0.540)	6627	100.0	71.91
	14 Carbon Disulfide	76.00	2.928	2.928	(0.501)	153899	100.0	100.0
	15 Methylene Chloride	84.00	3.661	3.661	(0.626)	50948	100.0	99.33
	16 trans-1,2-Dichloroethene	96.00	4.064	4.064	(0.695)	59060	100.0	100.4
	17 1,1-Dichloroethane	63.00	4.632	4.632	(0.793)	104356	100.0	97.97
	18 cis-1,2-Dichloroethene	96.00	5.529	5.529	(0.946)	62962	100.0	100.5
	19 2-Butanone	43.00	5.781	5.781	(0.989)	11603	100.0	81.88 (M)
	20 Chloroform	83.00	6.109	6.109	(1.045)	127279	100.0	102.0
	21 1,1,1-Trichloroethane	97.00	6.172	6.172	(0.823)	111246	100.0	104.4
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	100650	100.0	101.0
	23 Benzene	78.00	6.715	6.715	(0.896)	146746	100.0	105.3

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Report Date: 16-Feb-1995 17:58

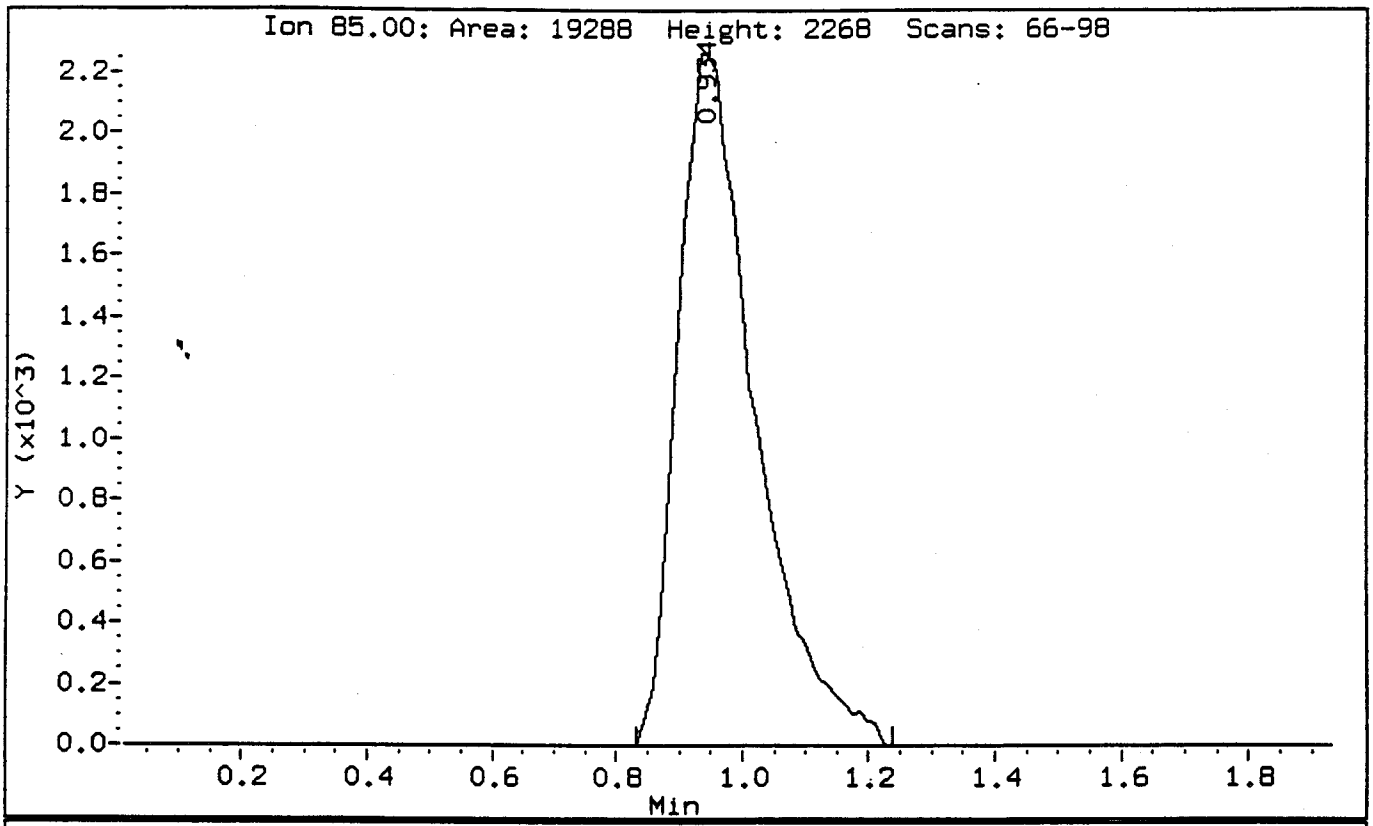
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.829	6.829	(1.168)	75191	100.0	98.75
25	Trichloroethene	130.00	7.775	7.775	(1.037)	65934	100.0	100.4
26	1,2-Dichloropropane	63.00	8.078	8.078	(1.077)	60319	100.0	100.7
27	Bromodichloromethane	83.00	8.609	8.609	(1.148)	101787	100.0	97.61
28	cis-1,3-Dichloropropene	75.00	9.315	9.315	(1.242)	72274	100.0	94.93
29	4-Methyl-2-Pentanone	43.00	9.719	9.719	(0.809)	33925	100.0	82.28
30	Toluene	91.00	9.745	9.745	(0.811)	144015	100.0	98.58
31	trans-1,3-Dichloropropene	75.00	10.287	10.287	(1.372)	61438	100.0	90.41
32	1,1,2-Trichloroethane	97.00	10.527	10.527	(1.404)	52143	100.0	98.66
33	Tetrachloroethene	164.00	10.590	10.590	(0.881)	83496	100.0	102.5
34	2-Hexanone	43.00	11.171	11.171	(0.930)	14433	100.0	64.77
35	Dibromochloromethane	129.00	11.095	11.095	(1.480)	95478	100.0	95.74
36	Chlorobenzene	112.00	12.067	12.067	(1.004)	148613	100.0	97.92
37	Ethylbenzene	106.00	12.370	12.370	(1.029)	67725	100.0	97.34
38	m,p-Xylene	106.00	12.597	12.597	(1.048)	179254	200.0	207.7
39	o-Xylene	106.00	13.254	13.254	(1.103)	92578	100.0	101.7
40	Styrene	104.00	13.317	13.317	(1.108)	136851	100.0	99.03
41	Bromoform	173.00	13.531	13.531	(1.805)	63716	100.0	88.13
42	1,1,2,2-Tetrachloroethane	83.00	14.680	14.680	(1.222)	66171	100.0	82.58
M 43	1,2-Dichloroethene (total)	96.00				122022	200.0	200.9
M 44	Xylene (Total)	106.00				271832	100.0	298.6

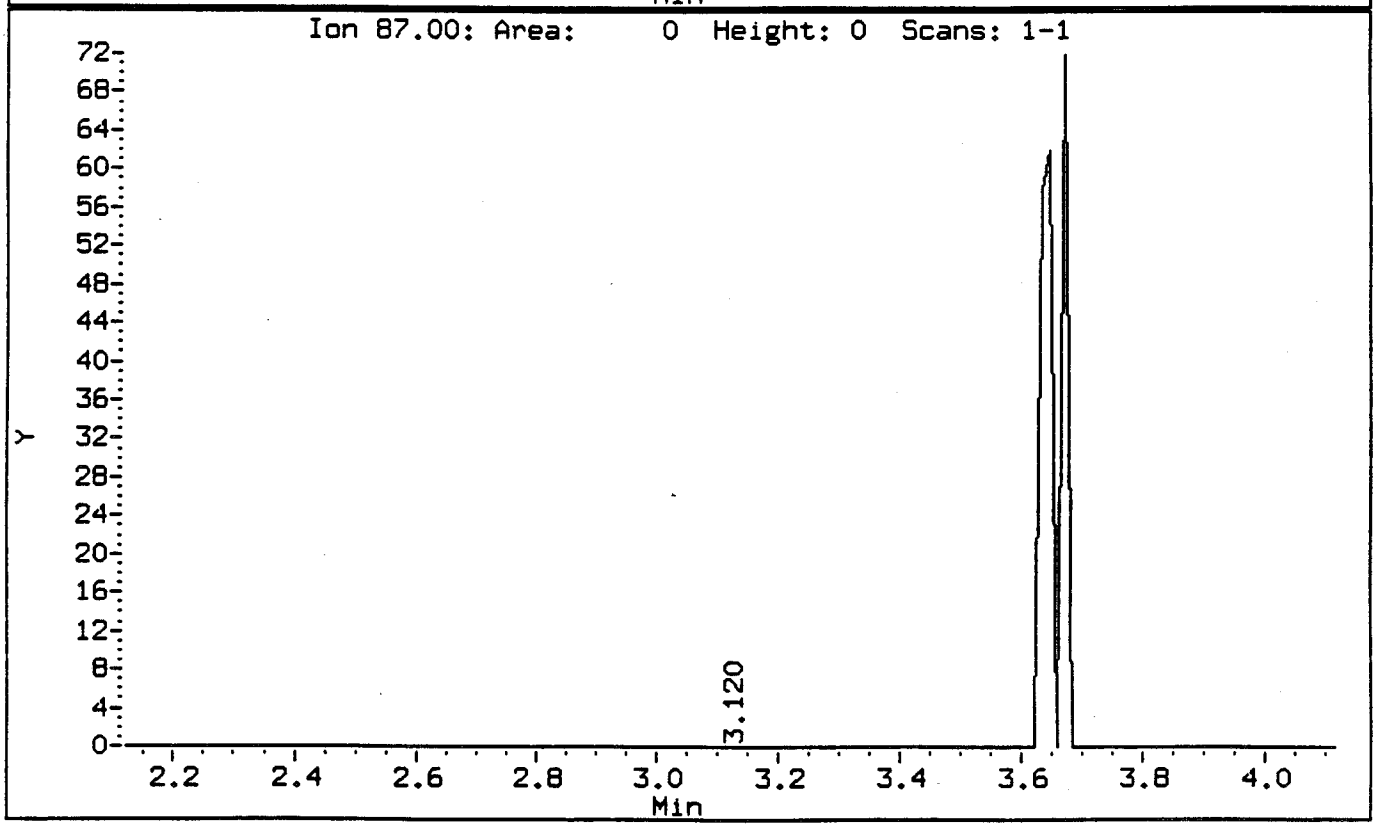
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d/CU950214B56.LG
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

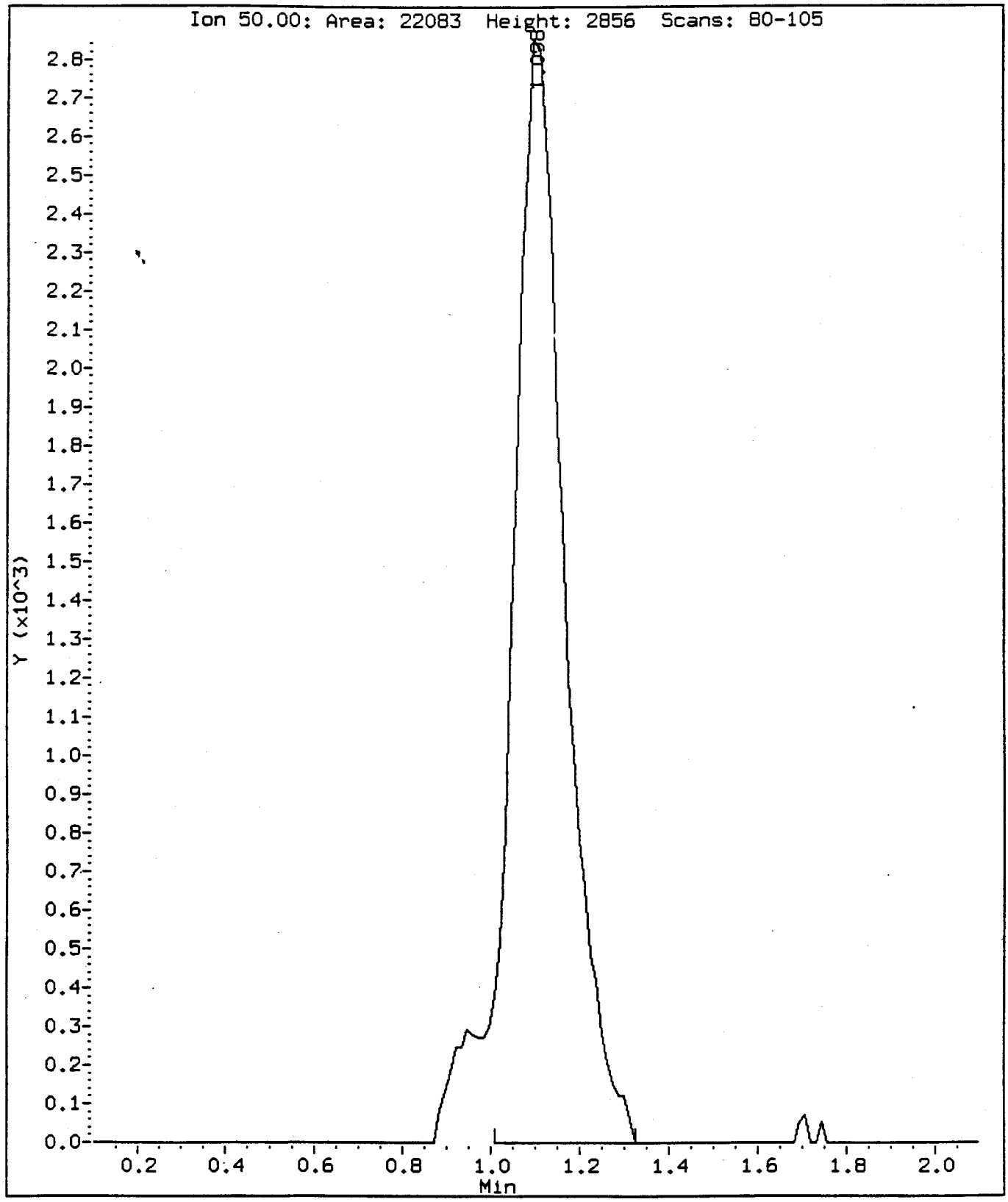
Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





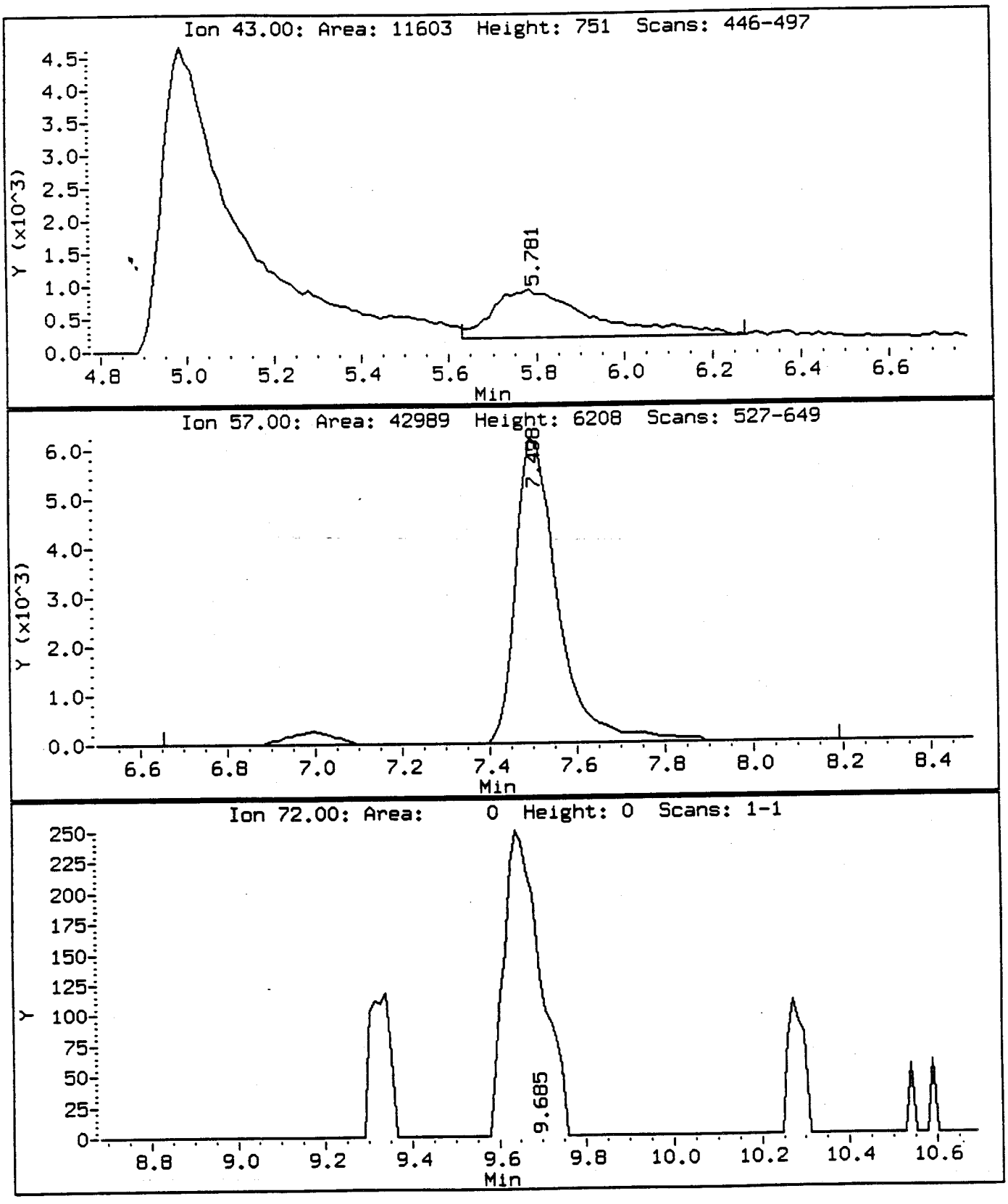
Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d/CU950214B56.LG
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

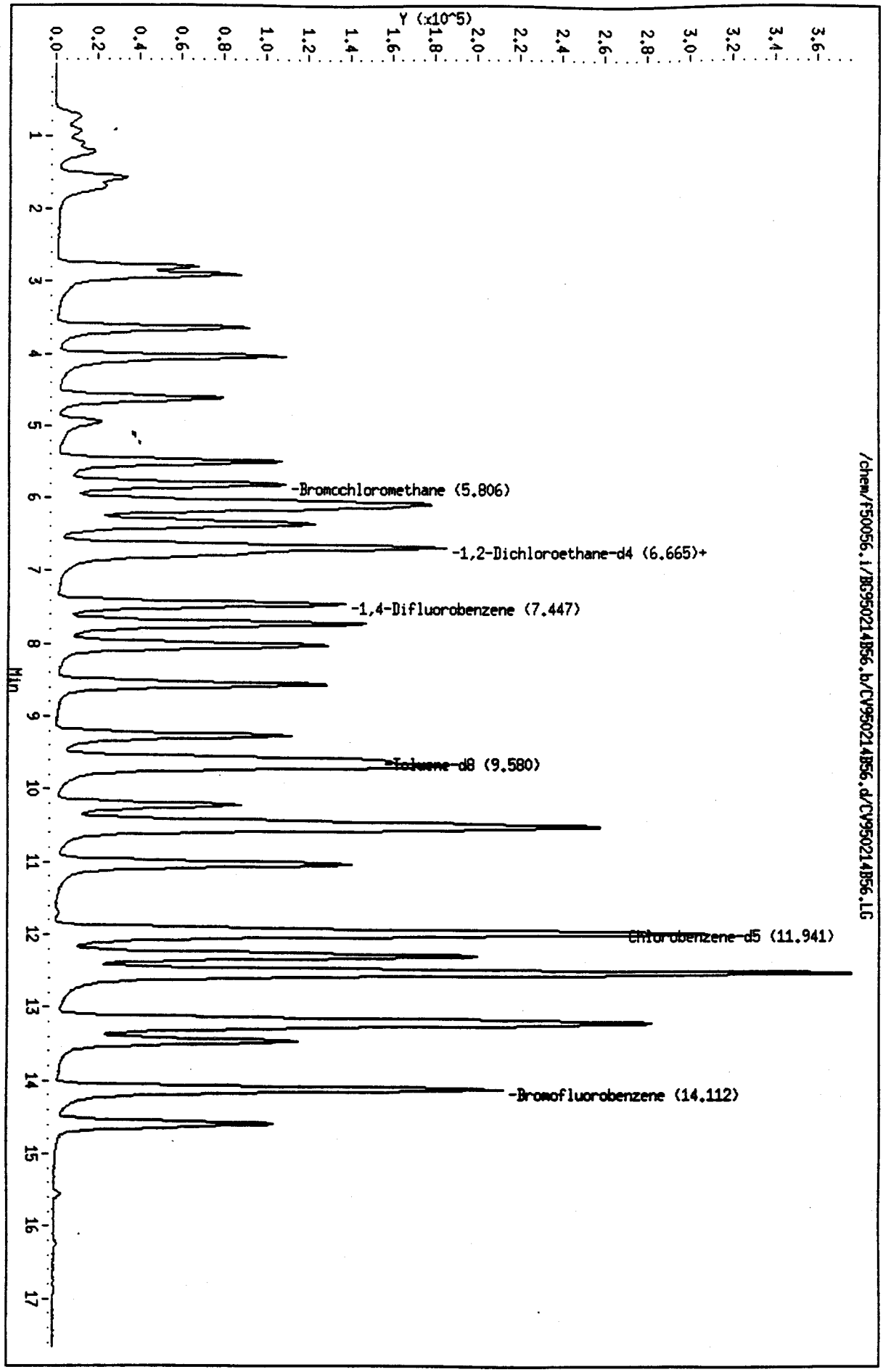
Compound: Chloromethane
CAS Number: 74-87-3



Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d/CU950214B56.LG
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

Compound: 2-Butanone
CAS Number: 78-93-3




Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Date : 14-FEB-1995 19:12
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^5)
Min
-Bromcchloromethane (5.806)
-1,2-Dichloroethane-d4 (6.665)+
-1,4-Difluorobenzene (7.447)
-Toluene-d8 (9.580)
Chlorobenzene-d5 (11.941)
-Bromofluorobenzene (14.112)
/chem/f50056.i/BG950214B56.b/CV950214B56.d/CV950214B56.LG

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CV950214B56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 14-FEB-1995 19:12
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.806	5.806	(1.000)	85449	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.447	(1.000)	342995	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	11.941	(1.000)	347565	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.665	6.665	(1.148)	150459	250.0	254.3
$	5 Toluene-d8	98.00	9.580	9.580	(0.802)	285693	250.0	240.3
$	6 Bromofluorobenzene	95.00	14.112	14.112	(1.182)	283841	250.0	244.5
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.163)	41973	250.0	244.0
	8 Chloromethane	50.00	1.123	1.123	(0.193)	49665	250.0	239.4
	9 Vinyl Chloride	62.00	1.237	1.237	(0.213)	71900	250.0	243.1
	10 Bromomethane	94.00	1.578	1.578	(0.272)	98792	250.0	248.6(M)
	11 Chloroethane	64.00	1.717	1.717	(0.296)	66198	250.0	250.6(M)
	12 1,1-Dichloroethene	96.00	2.802	2.802	(0.483)	84204	250.0	256.5
	13 Acetone	43.00	3.130	3.130	(0.539)	17072	250.0	199.7
	14 Carbon Disulfide	76.00	2.916	2.916	(0.502)	358436	250.0	251.2
	15 Methylene Chloride	84.00	3.648	3.648	(0.628)	116734	250.0	245.4
	16 trans-1,2-Dichloroethene	96.00	4.039	4.039	(0.696)	136423	250.0	250.0
	17 1,1-Dichloroethane	63.00	4.607	4.607	(0.793)	246630	250.0	249.6
	18 cis-1,2-Dichloroethene	96.00	5.491	5.491	(0.946)	147672	250.0	254.1
	19 2-Butanone	43.00	5.693	5.693	(0.980)	32472	250.0	247.0
	20 Chloroform	83.00	6.059	6.059	(1.043)	295395	250.0	255.4
	21 1,1,1-Trichloroethane	97.00	6.135	6.135	(0.824)	252798	250.0	253.3
	22 Carbon Tetrachloride	117.00	6.349	6.349	(0.853)	236955	250.0	253.9
	23 Benzene	78.00	6.665	6.665	(0.895)	333376	250.0	255.3

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Report Date: 16-Feb-1995 17:58

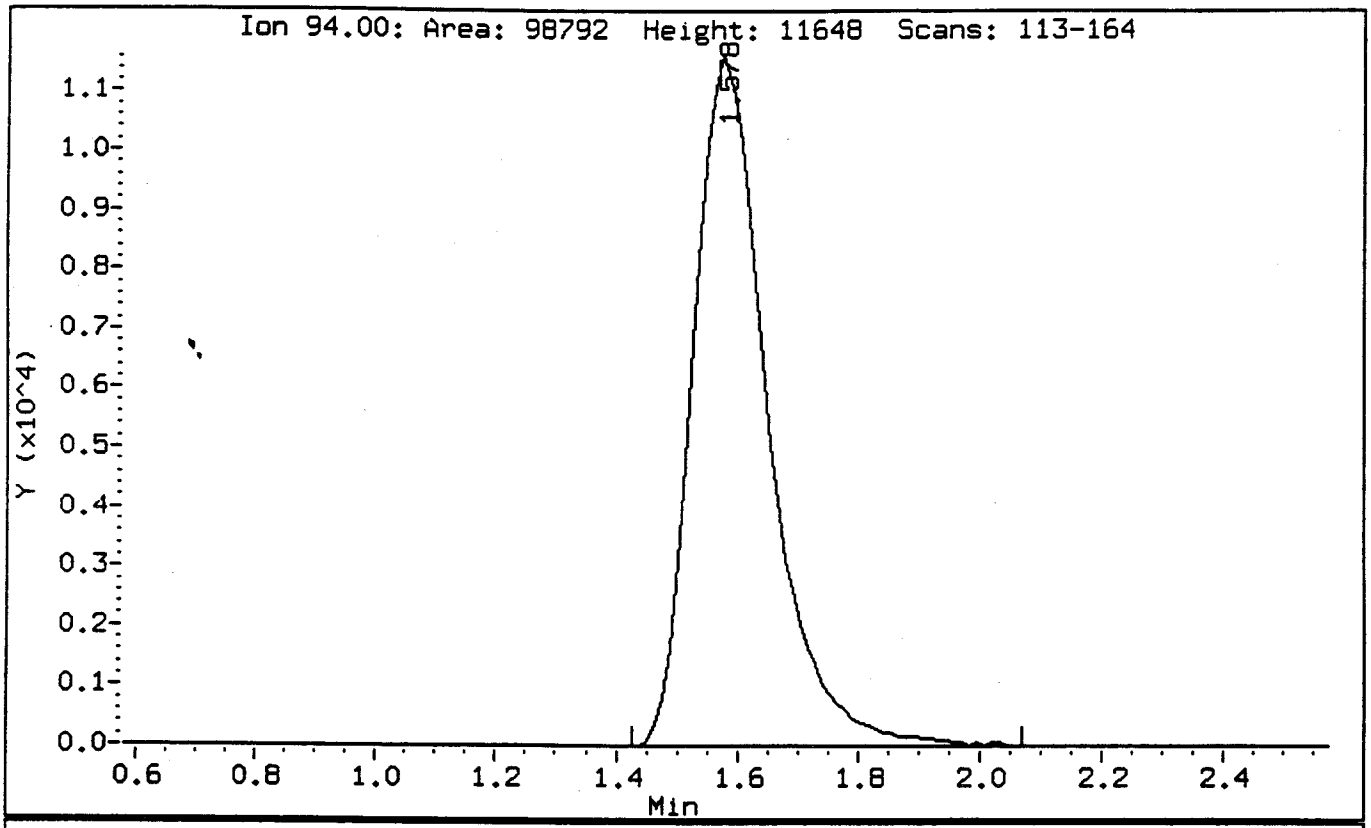
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.778	6.778	(1.167)	180839	250.0	256.0
	25 Trichloroethene	130.00	7.712	7.712	(1.036)	155014	250.0	251.9
	26 1,2-Dichloropropane	63.00	8.015	8.015	(1.076)	140104	250.0	249.7
	27 Bromodichloromethane	83.00	8.558	8.558	(1.149)	253324	250.0	259.4
	28 cis-1,3-Dichloropropene	75.00	9.252	9.252	(1.242)	184881	250.0	259.2
	29 4-Methyl-2-Pentanone	43.00	9.644	9.644	(0.808)	95676	250.0	248.4
	30 Toluene	91.00	9.681	9.681	(0.811)	326841	250.0	239.5
	31 trans-1,3-Dichloropropene	75.00	10.212	10.212	(1.371)	166491	250.0	261.6
	32 1,1,2-Trichloroethane	97.00	10.451	10.451	(1.403)	129109	250.0	260.8
	33 Tetrachloroethene	164.00	10.515	10.515	(0.881)	189081	250.0	248.5
	34 2-Hexanone	43.00	11.070	11.070	(0.927)	50465	250.0	242.4
	35 Dibromochloromethane	129.00	11.019	11.019	(1.480)	247328	250.0	264.8
	36 Chlorobenzene	112.00	11.991	11.991	(1.004)	357905	250.0	252.4
	37 Ethylbenzene	106.00	12.282	12.282	(1.029)	164343	250.0	252.8
	38 m,p-Xylene	106.00	12.522	12.522	(1.049)	404739	500.0	502.0
	39 o-Xylene	106.00	13.178	13.178	(1.104)	215569	250.0	253.5
	40 Styrene	104.00	13.241	13.241	(1.109)	325270	250.0	251.9
	41 Bromoform	173.00	13.456	13.456	(1.807)	179007	250.0	264.3
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.222)	180825	250.0	241.6
M	43 1,2-Dichloroethene (total)	96.00				284095	500.0	504.2
M	44 Xylene (Total)	106.00				620308	250.0	729.4

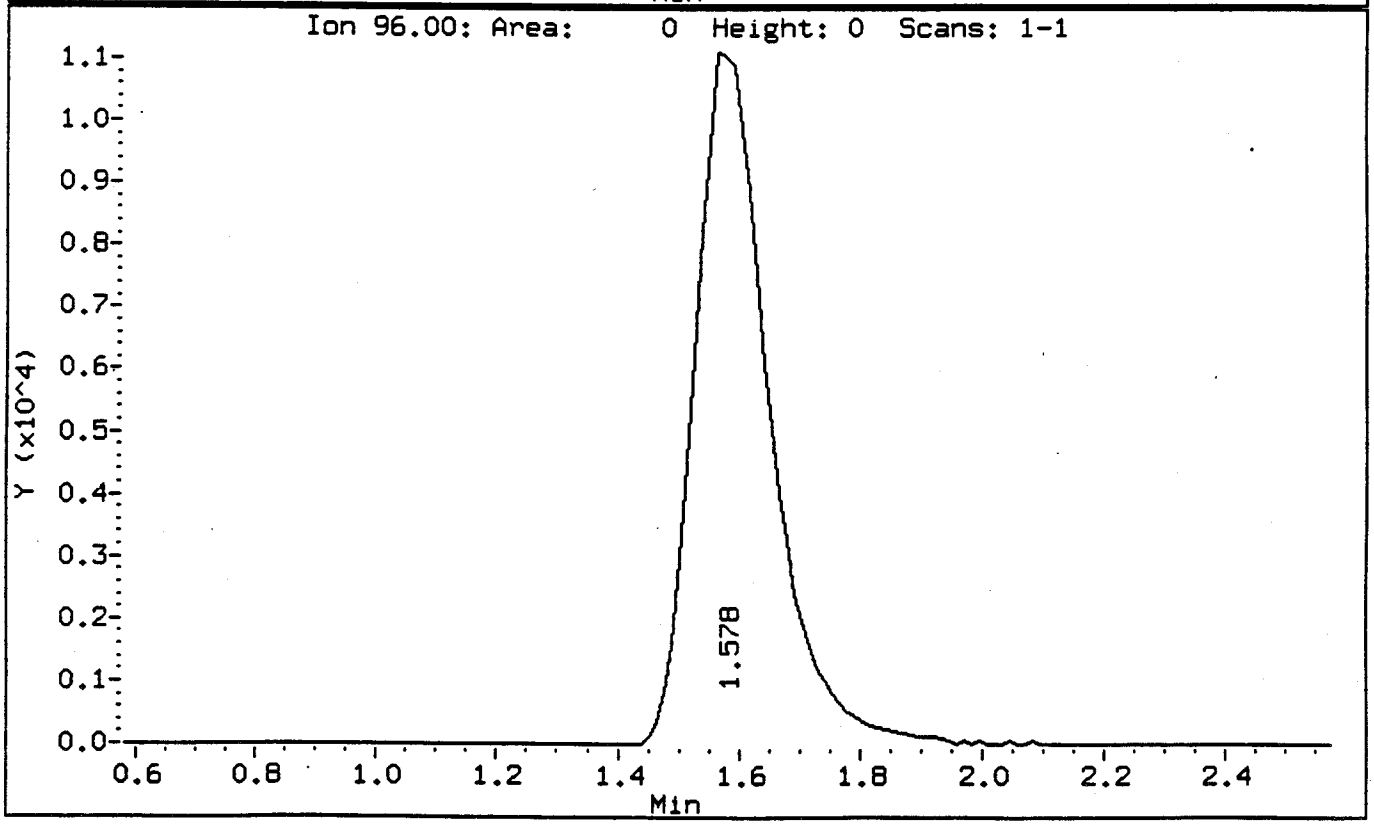
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d/CV950214B56.LG
Injection Date: 14-FEB-95 19:12
Instrument: f50056.i
Client Sample ID: VSTD050

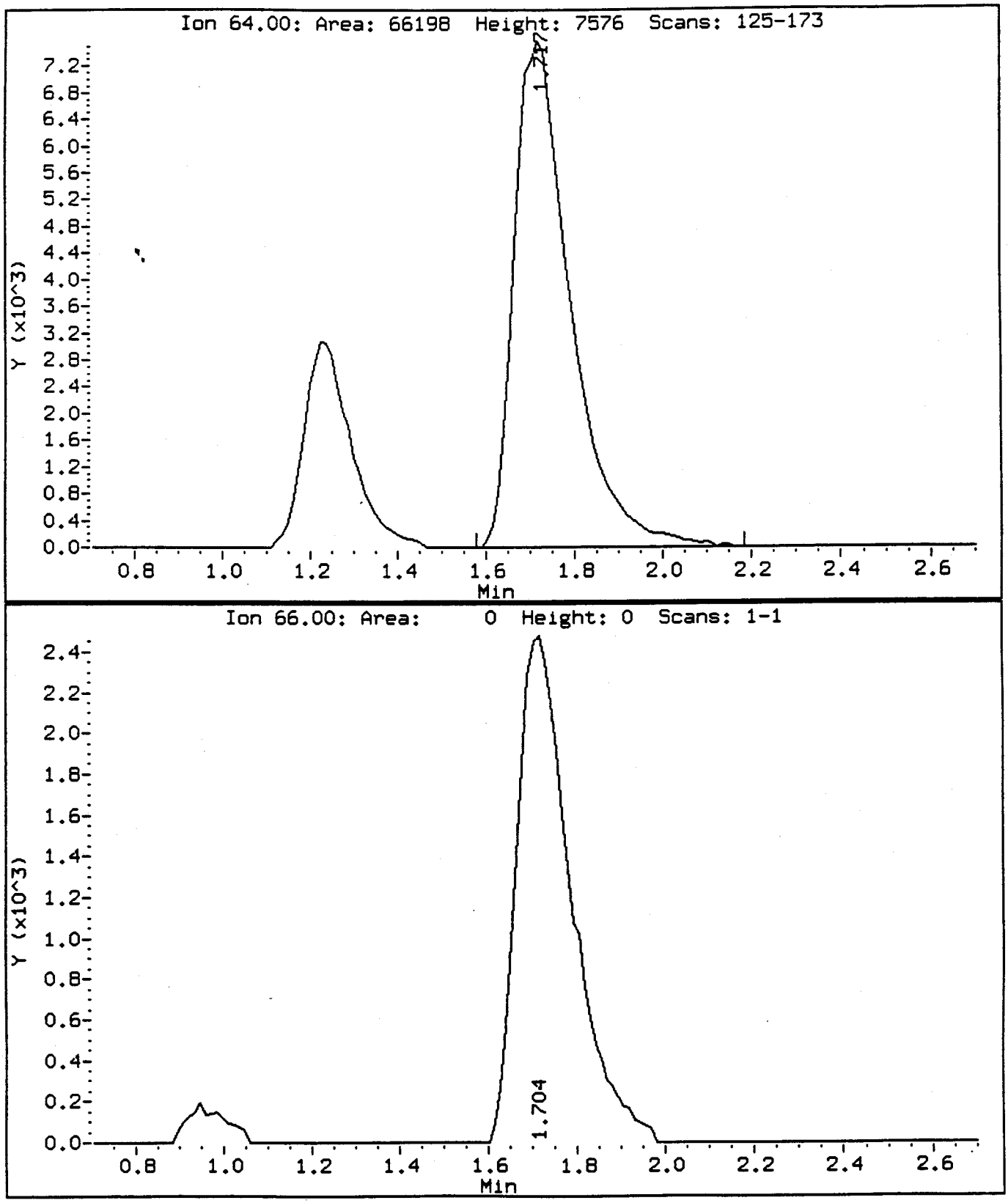
Compound: Bromomethane
CAS Number: 74-83-9

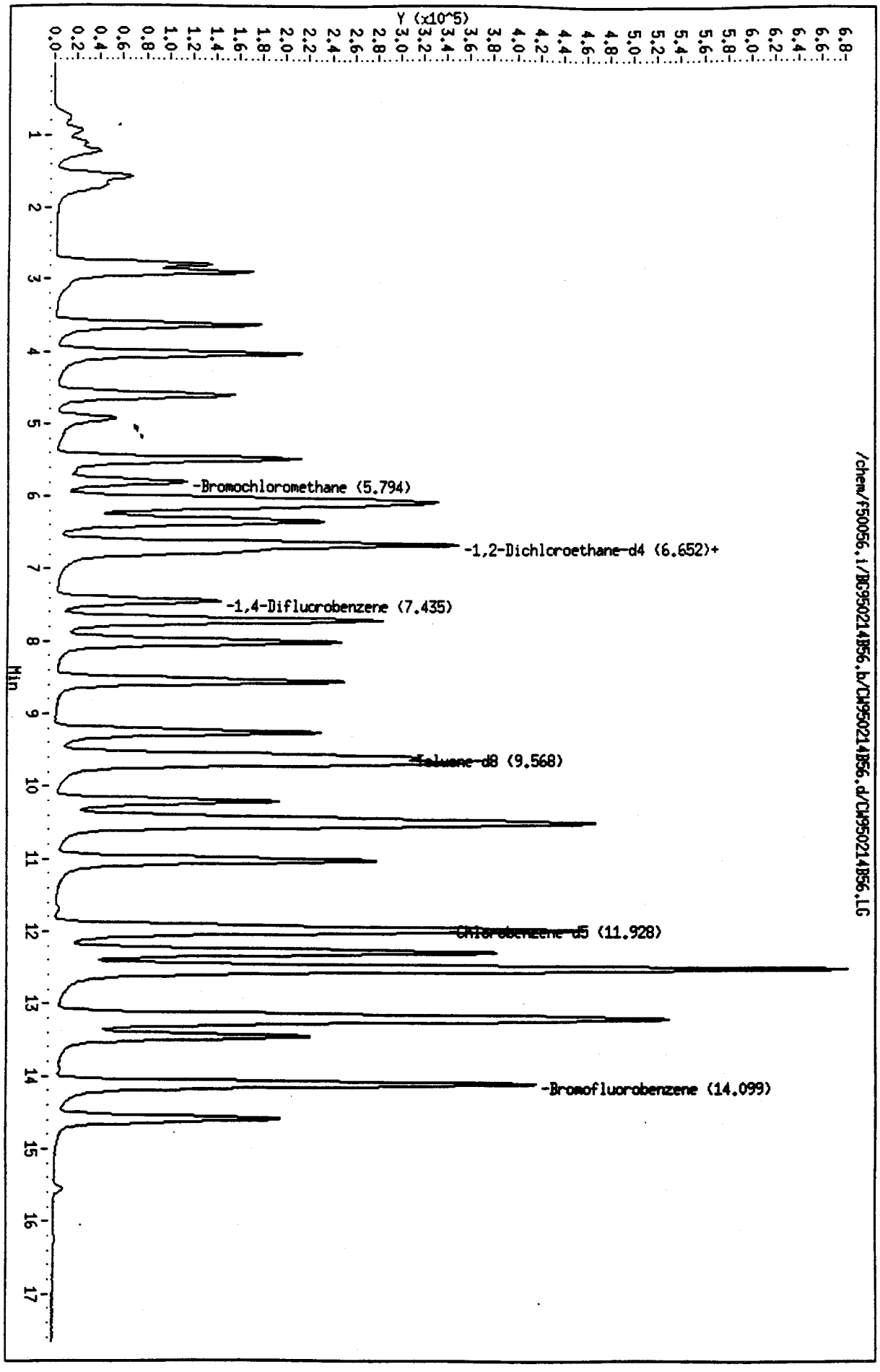




Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d/CV950214B56.LG
Injection Date: 14-FEB-95 19:12
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3




Data File: /chem/f50056.i/BC950214B56.b/CW950214B56.d
Date : 14-FEB-1995 19:50
Client ID: VSTD100
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^5)
Min
-Bromochloromethane (5.794)
-1,2-Dichloroethane-d4 (6.652)+
-1,4-Diflurobenzene (7.435)
-Toluene-d8 (9.568)
-Chlorobenzene-d5 (11.928)
-Bromofluorobenzene (14.099)
/chem/f50056.i/BC950214B56.b/CW950214B56.d/CW950214B56.LG

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CW950214B56.d
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 14-FEB-1995 19:50
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1	Bromochloromethane	128.00	5.794	5.794	(1.000)	84710	250.0	
* 2	1,4-Difluorobenzene	114.00	7.435	7.435	(1.000)	350426	250.0	
* 3	Chlorobenzene-d5	117.00	11.928	11.928	(1.000)	338836	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.639	6.639	(1.146)	288835	500.0	492.5
$ 5	Toluene-d8	98.00	9.568	9.568	(0.802)	551810	500.0	476.0
$ 6	Bromofluorobenzene	95.00	14.099	14.099	(1.182)	552753	500.0	488.5
7	Dichlorodiflouromethane	85.00	0.947	0.947	(0.163)	90624	500.0	531.4
8	Chloromethane	50.00	1.111	1.111	(0.192)	108630	500.0	528.2
9	Vinyl Chloride	62.00	1.224	1.224	(0.211)	151987	500.0	518.4
10	Bromomethane	94.00	1.565	1.565	(0.270)	196646	500.0	499.1(M)
11	Chloroethane	64.00	1.704	1.704	(0.294)	131347	500.0	501.5(M)
12	1,1-Dichloroethene	96.00	2.790	2.790	(0.481)	162700	500.0	500.0
13	Acetone	43.00	3.118	3.118	(0.538)	35538	500.0	419.4
14	Carbon Disulfide	76.00	2.891	2.891	(0.499)	697755	500.0	493.2
15	Methylene Chloride	84.00	3.623	3.623	(0.625)	220810	500.0	468.2
16	trans-1,2-Dichloroethene	96.00	4.014	4.014	(0.693)	262911	500.0	486.1
17	1,1-Dichloroethane	63.00	4.595	4.595	(0.793)	478687	500.0	488.7
18	cis-1,2-Dichloroethene	96.00	5.478	5.478	(0.946)	278538	500.0	483.4
19	2-Butanone	43.00	5.680	5.680	(0.980)	61397	500.0	471.2
20	Chloroform	83.00	6.034	6.034	(1.041)	551600	500.0	481.0
21	1,1,1-Trichloroethane	97.00	6.109	6.109	(0.822)	471872	500.0	462.7
22	Carbon Tetrachloride	117.00	6.336	6.336	(0.852)	458507	500.0	480.8
23	Benzene	78.00	6.652	6.652	(0.895)	609001	500.0	456.6

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

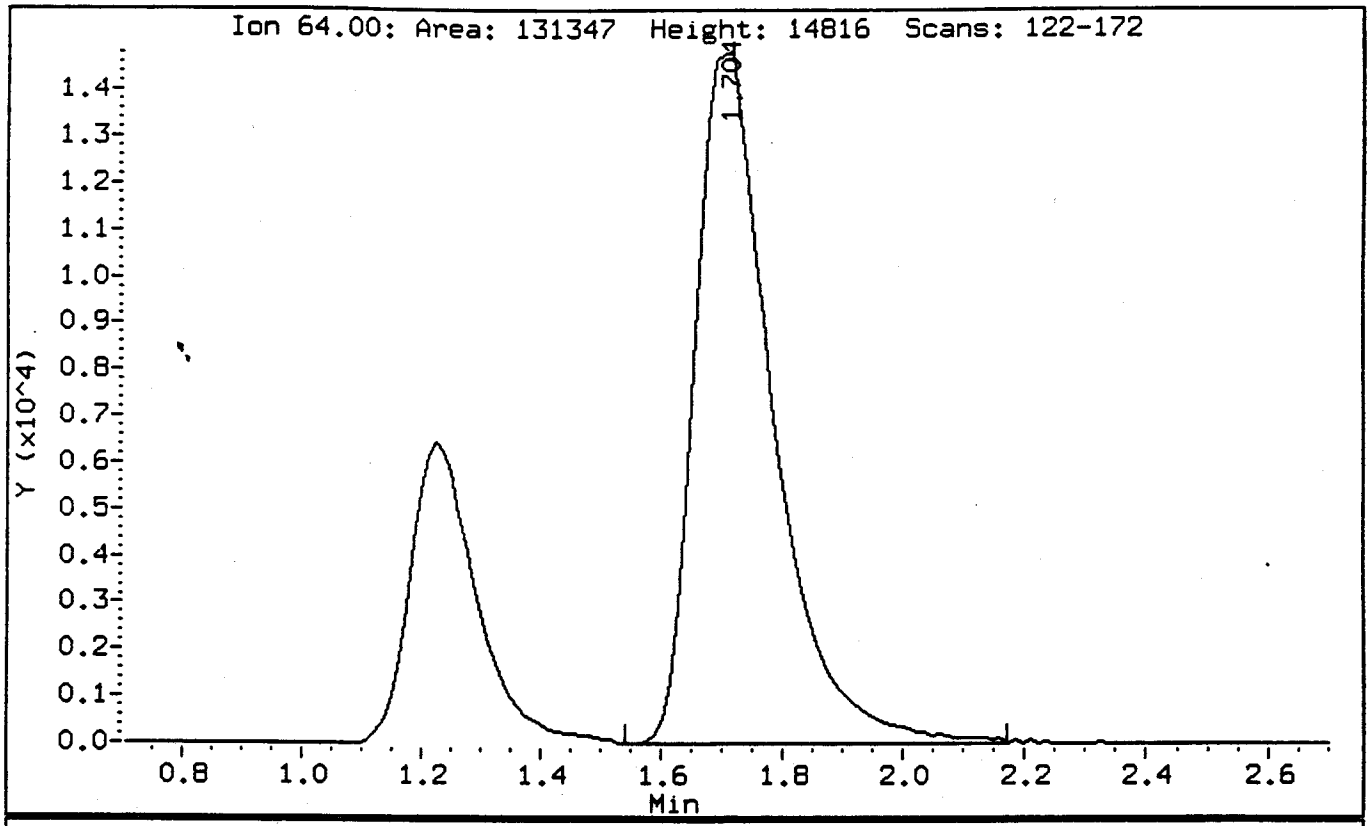
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.753	6.753	(1.166)	340603	500.0	486.5
	25 Trichloroethene	130.00	7.700	7.700	(1.036)	294617	500.0	468.6
	26 1,2-Dichloropropane	63.00	8.003	8.003	(1.076)	269648	500.0	470.4
	27 Bromodichloromethane	83.00	8.545	8.545	(1.149)	488996	500.0	490.0
	28 cis-1,3-Dichloropropene	75.00	9.240	9.240	(1.243)	365475	500.0	501.6
	29 4-Methyl-2-Pentanone	43.00	9.644	9.644	(0.808)	179092	500.0	476.9
	30 Toluene	91.00	9.669	9.669	(0.811)	601843	500.0	452.3
	31 trans-1,3-Dichloropropene	75.00	10.199	10.199	(1.372)	337472	500.0	518.9
	32 1,1,2-Trichloroethane	97.00	10.439	10.439	(1.404)	236998	500.0	468.6
	33 Tetrachloroethene	164.00	10.502	10.502	(0.880)	342820	500.0	462.2
	34 2-Hexanone	43.00	11.057	11.057	(0.927)	100796	500.0	496.6
	35 Dibromochloromethane	129.00	11.007	11.007	(1.480)	465191	500.0	487.4
	36 Chlorobenzene	112.00	11.979	11.979	(1.004)	670872	500.0	485.3
	37 Ethylbenzene	106.00	12.269	12.269	(1.029)	310231	500.0	489.5
	38 m,p-Xylene	106.00	12.509	12.509	(1.049)	709723	1000	902.9
	39 o-Xylene	106.00	13.165	13.165	(1.104)	385519	500.0	465.0
	40 Styrene	104.00	13.228	13.228	(1.109)	596614	500.0	474.0
	41 Bromoform	173.00	13.456	13.456	(1.810)	349167	500.0	504.7
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.223)	347195	500.0	475.7
M	43 1,2-Dichloroethene (total)	96.00				541449	1000	969.4
M	44 Xylene (Total)	106.00				1095242	500.0	1321

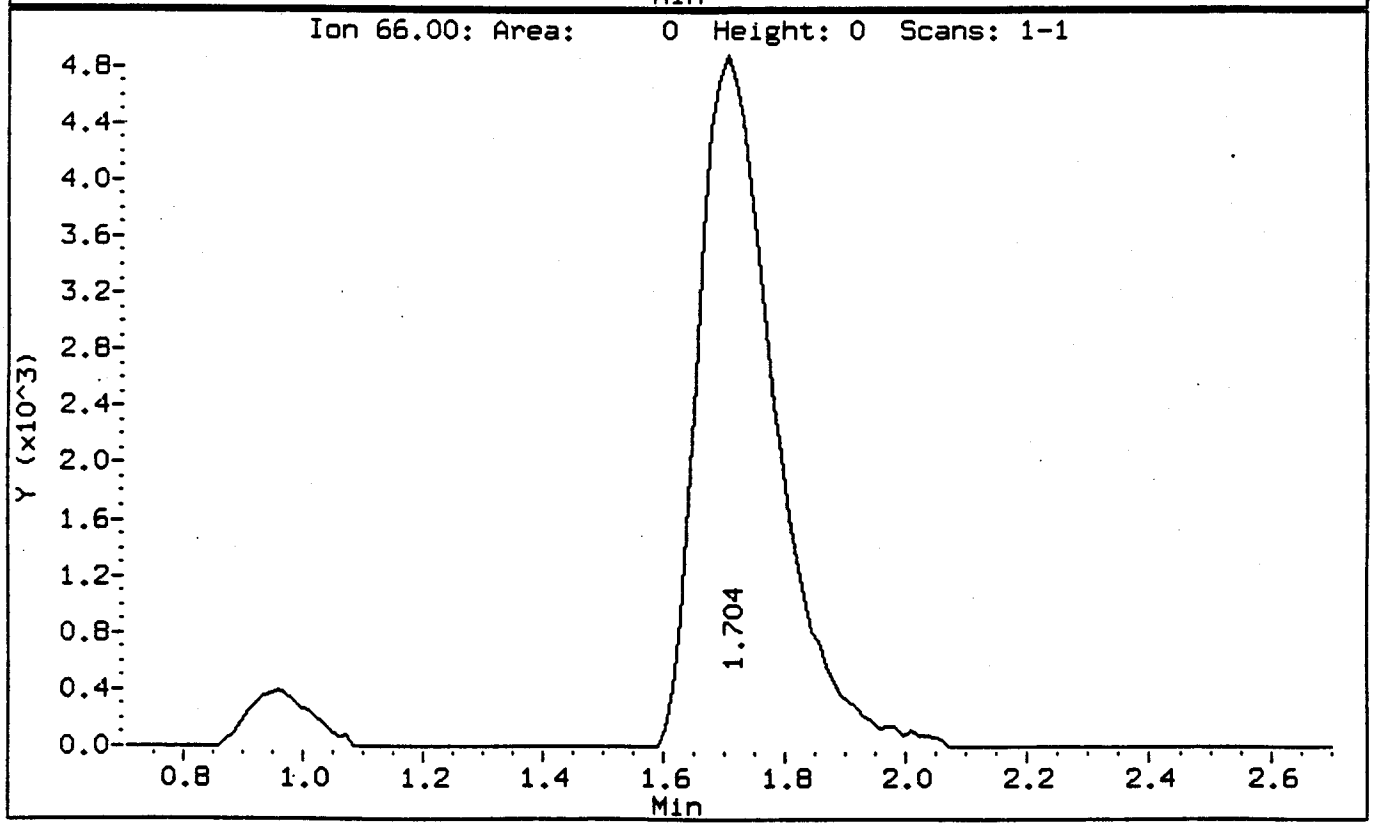
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d/CW950214B56.LG
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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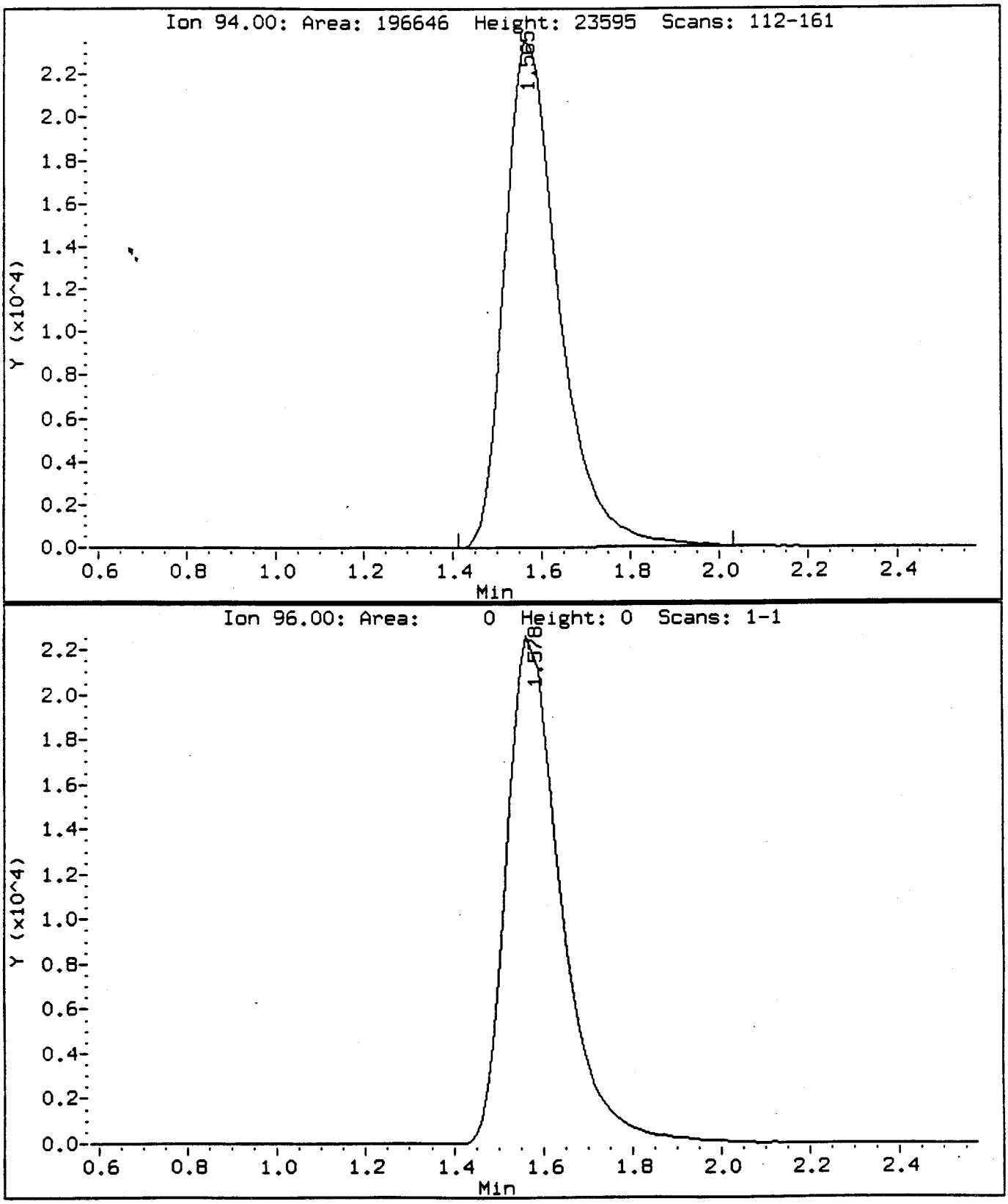
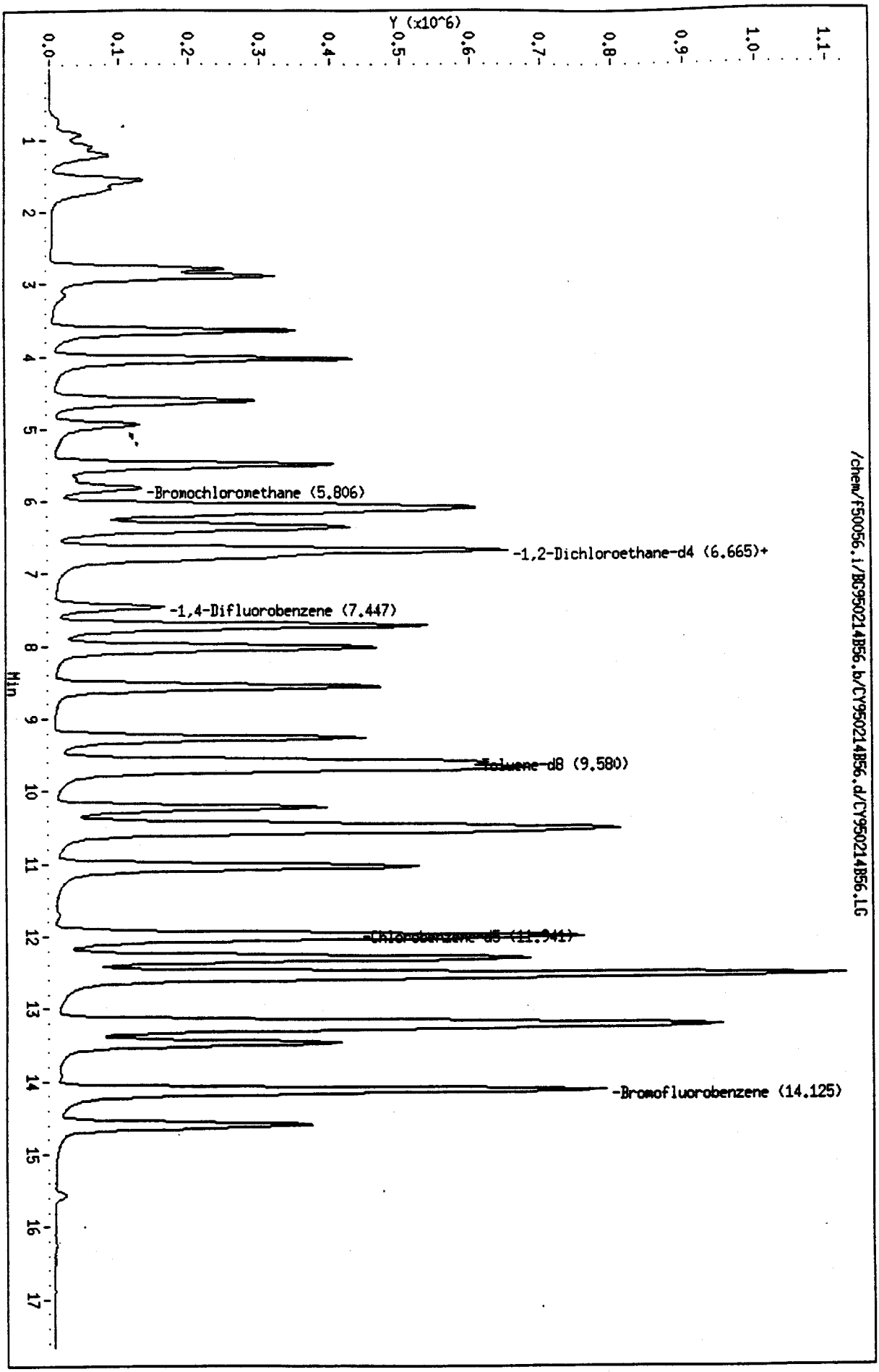
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

Compound: Bromomethane
CAS Number: 74-83-9

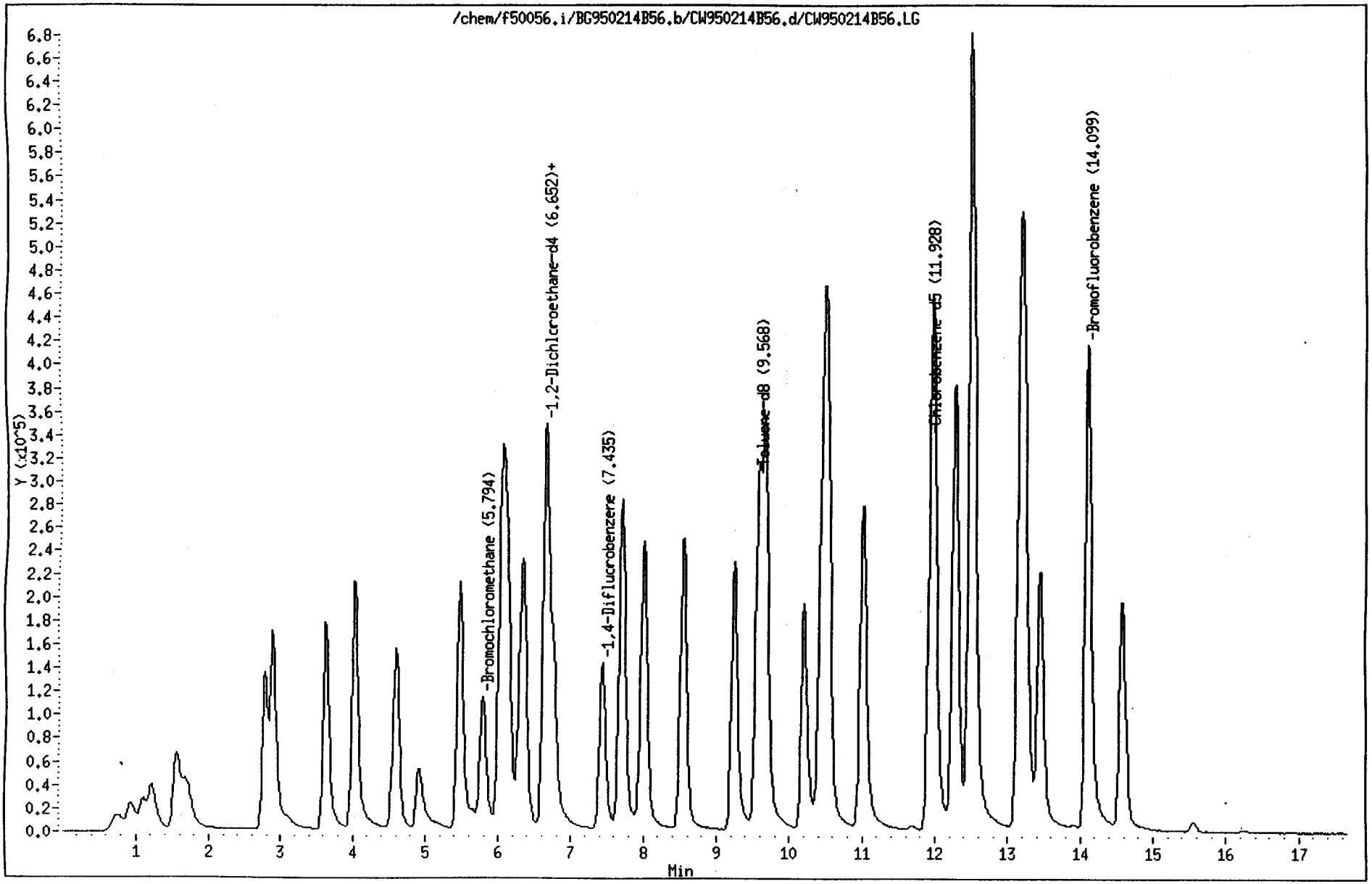



Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Date : 14-FEB-1995 21:35
Client ID: VSTD200
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^6)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Min
-Bromochloromethane (5.806)
-1,2-Dichloroethane-d4 (6.665)+
-1,4-Difluorobenzene (7.447)
-Toluene-d8 (9.580)
-Chlorobenzene-d5 (11.941)
-Bromofluorobenzene (14.125)
/chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Date : 14-FEB-1995 19:50
Client ID: VSTD100
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



85

30073 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CW950214B56.d
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 14-FEB-1995 19:50
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.794	5.794	(1.000)	84710	250.0	
*	2 1,4-Difluorobenzene	114.00	7.435	7.435	(1.000)	350426	250.0	
*	3 Chlorobenzene-d5	117.00	11.928	11.928	(1.000)	338836	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.639	6.639	(1.146)	288835	500.0	492.5
$	5 Toluene-d8	98.00	9.568	9.568	(0.802)	551810	500.0	476.0
$	6 Bromofluorobenzene	95.00	14.099	14.099	(1.182)	552753	500.0	488.5
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.163)	90624	500.0	531.4
	8 Chloromethane	50.00	1.111	1.111	(0.192)	108630	500.0	528.2
	9 Vinyl Chloride	62.00	1.224	1.224	(0.211)	151987	500.0	518.4
	10 Bromomethane	94.00	1.565	1.565	(0.270)	196646	500.0	499.1(M)
	11 Chloroethane	64.00	1.704	1.704	(0.294)	131347	500.0	501.5(M)
	12 1,1-Dichloroethene	96.00	2.790	2.790	(0.481)	162700	500.0	500.0
	13 Acetone	43.00	3.118	3.118	(0.538)	35538	500.0	419.4
	14 Carbon Disulfide	76.00	2.891	2.891	(0.499)	697755	500.0	493.2
	15 Methylene Chloride	84.00	3.623	3.623	(0.625)	220810	500.0	468.2
	16 trans-1,2-Dichloroethene	96.00	4.014	4.014	(0.693)	262911	500.0	486.1
	17 1,1-Dichloroethane	63.00	4.595	4.595	(0.793)	478687	500.0	488.7
	18 cis-1,2-Dichloroethene	96.00	5.478	5.478	(0.946)	278538	500.0	483.4
	19 2-Butanone	43.00	5.680	5.680	(0.980)	61397	500.0	471.2
	20 Chloroform	83.00	6.034	6.034	(1.041)	551600	500.0	481.0
	21 1,1,1-Trichloroethane	97.00	6.109	6.109	(0.822)	471872	500.0	462.7
	22 Carbon Tetrachloride	117.00	6.336	6.336	(0.852)	458507	500.0	480.8
	23 Benzene	78.00	6.652	6.652	(0.895)	609001	500.0	456.6

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

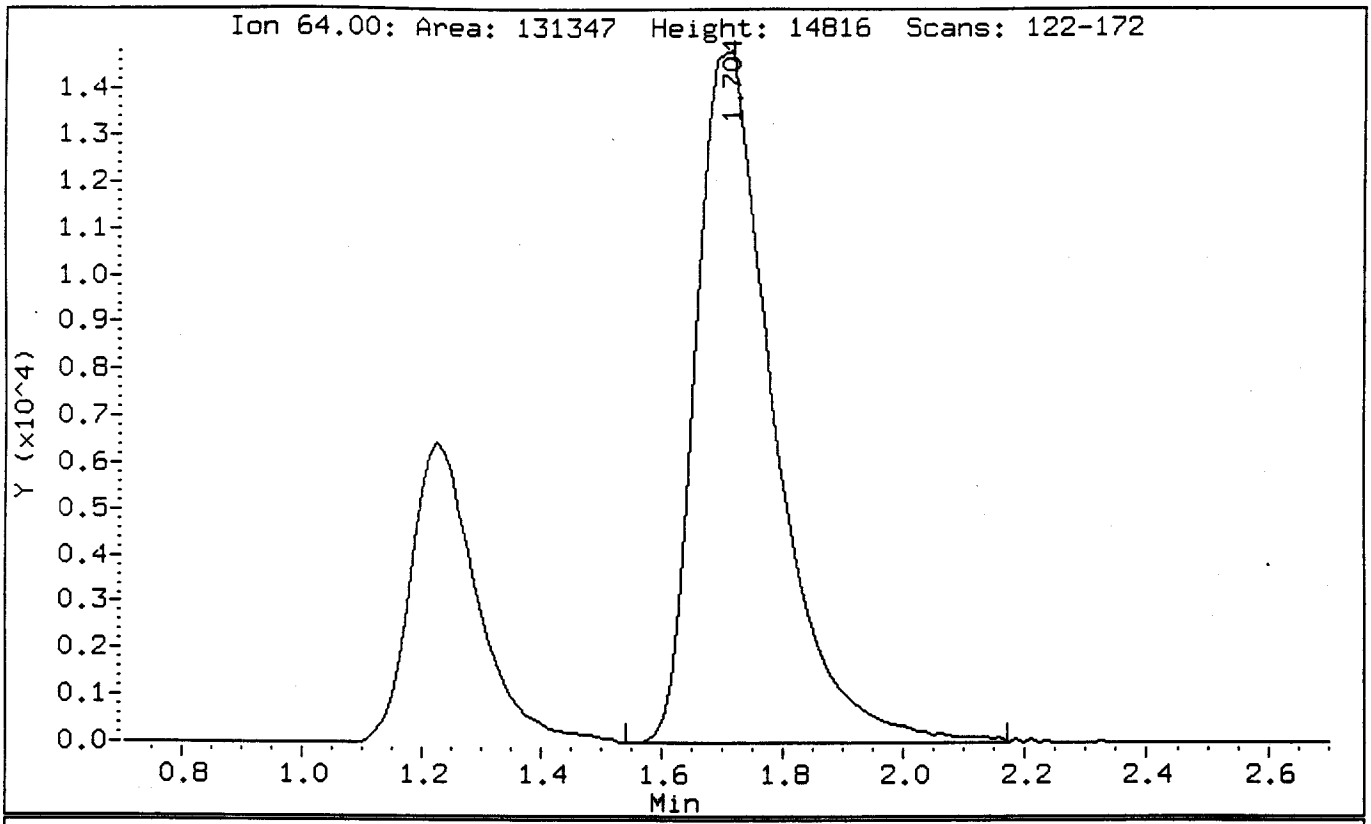
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.753	6.753	(1.166)	340603	500.0	486.5
	25 Trichloroethene	130.00	7.700	7.700	(1.036)	294617	500.0	468.6
	26 1,2-Dichloropropane	63.00	8.003	8.003	(1.076)	269648	500.0	470.4
	27 Bromodichloromethane	83.00	8.545	8.545	(1.149)	488996	500.0	490.0
	28 cis-1,3-Dichloropropene	75.00	9.240	9.240	(1.243)	365475	500.0	501.6
	29 4-Methyl-2-Pentanone	43.00	9.644	9.644	(0.808)	179092	500.0	476.9
	30 Toluene	91.00	9.669	9.669	(0.811)	601843	500.0	452.3
	31 trans-1,3-Dichloropropene	75.00	10.199	10.199	(1.372)	337472	500.0	518.9
	32 1,1,2-Trichloroethane	97.00	10.439	10.439	(1.404)	236998	500.0	468.6
	33 Tetrachloroethene	164.00	10.502	10.502	(0.880)	342820	500.0	462.2
	34 2-Hexanone	43.00	11.057	11.057	(0.927)	100796	500.0	496.6
	35 Dibromochloromethane	129.00	11.007	11.007	(1.480)	465191	500.0	487.4
	36 Chlorobenzene	112.00	11.979	11.979	(1.004)	670872	500.0	485.3
	37 Ethylbenzene	106.00	12.269	12.269	(1.029)	310231	500.0	489.5
	38 m,p-Xylene	106.00	12.509	12.509	(1.049)	709723	1000	902.9
	39 o-Xylene	106.00	13.165	13.165	(1.104)	385519	500.0	465.0
	40 Styrene	104.00	13.228	13.228	(1.109)	596614	500.0	474.0
	41 Bromoform	173.00	13.456	13.456	(1.810)	349167	500.0	504.7
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.223)	347195	500.0	475.7
M	43 1,2-Dichloroethene (total)	96.00				541449	1000	969.4
M	44 Xylene (Total)	106.00				1095242	500.0	1321

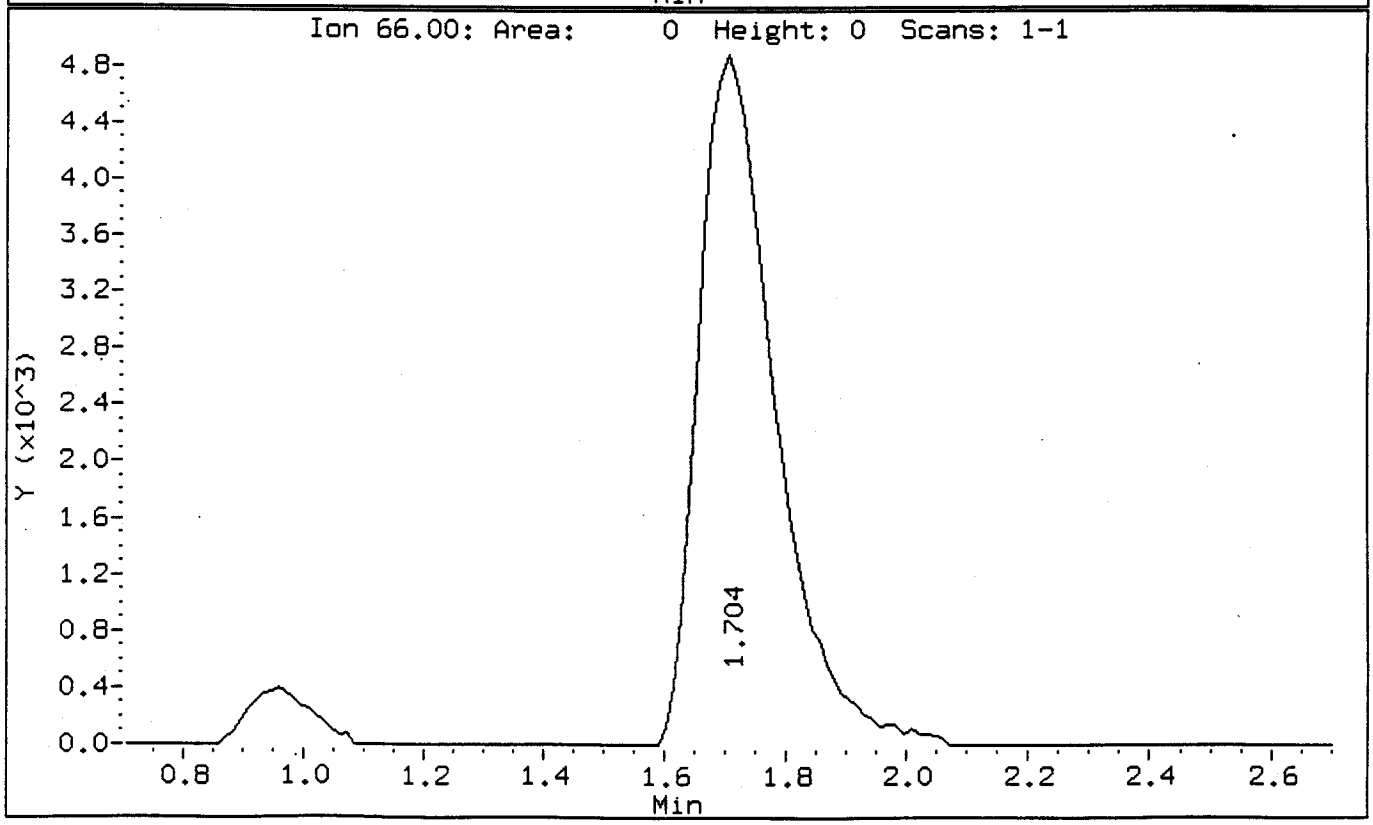
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d/CW950214B56.LG
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

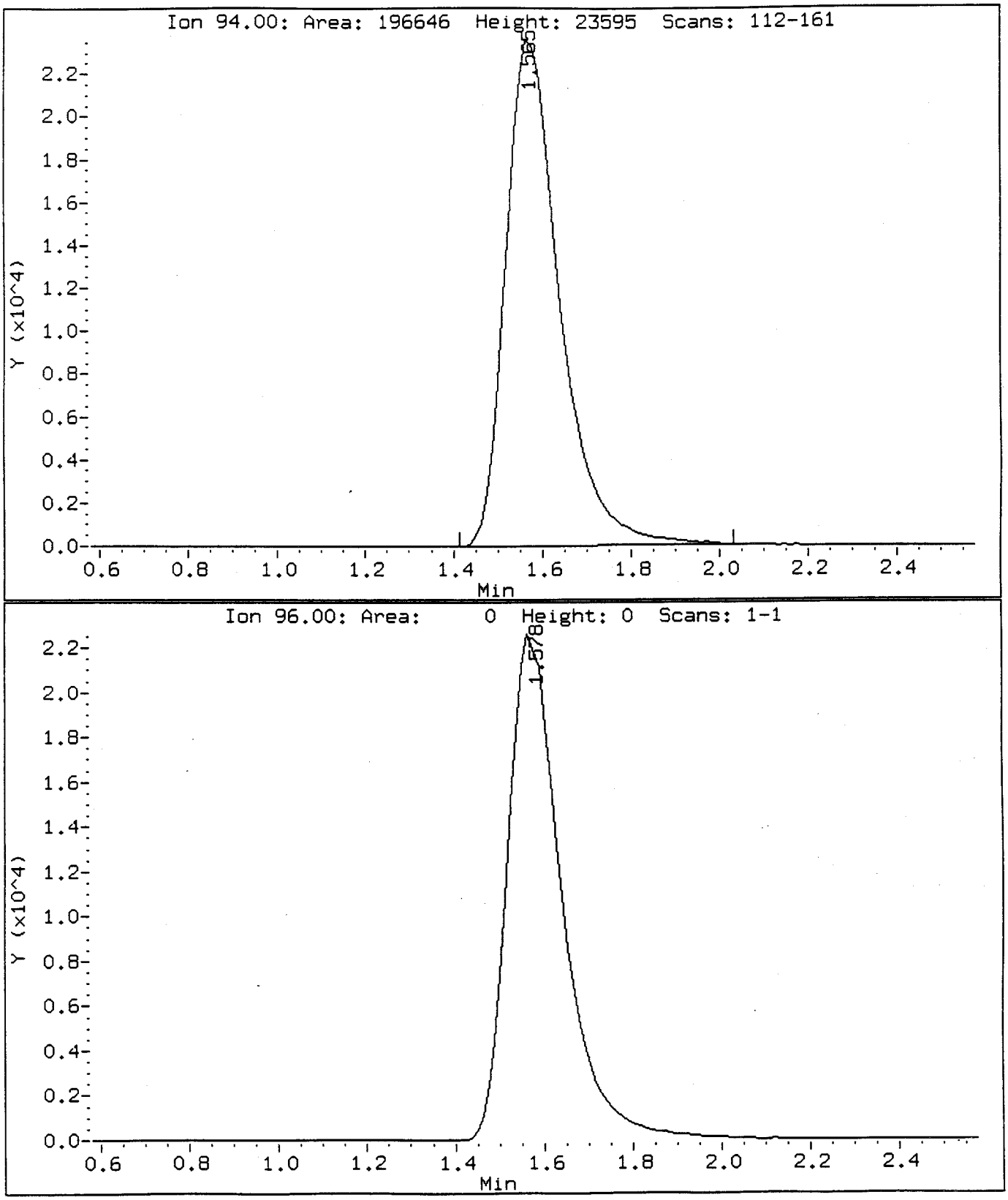
Compound: Chloroethane
CAS Number: 75-00-3





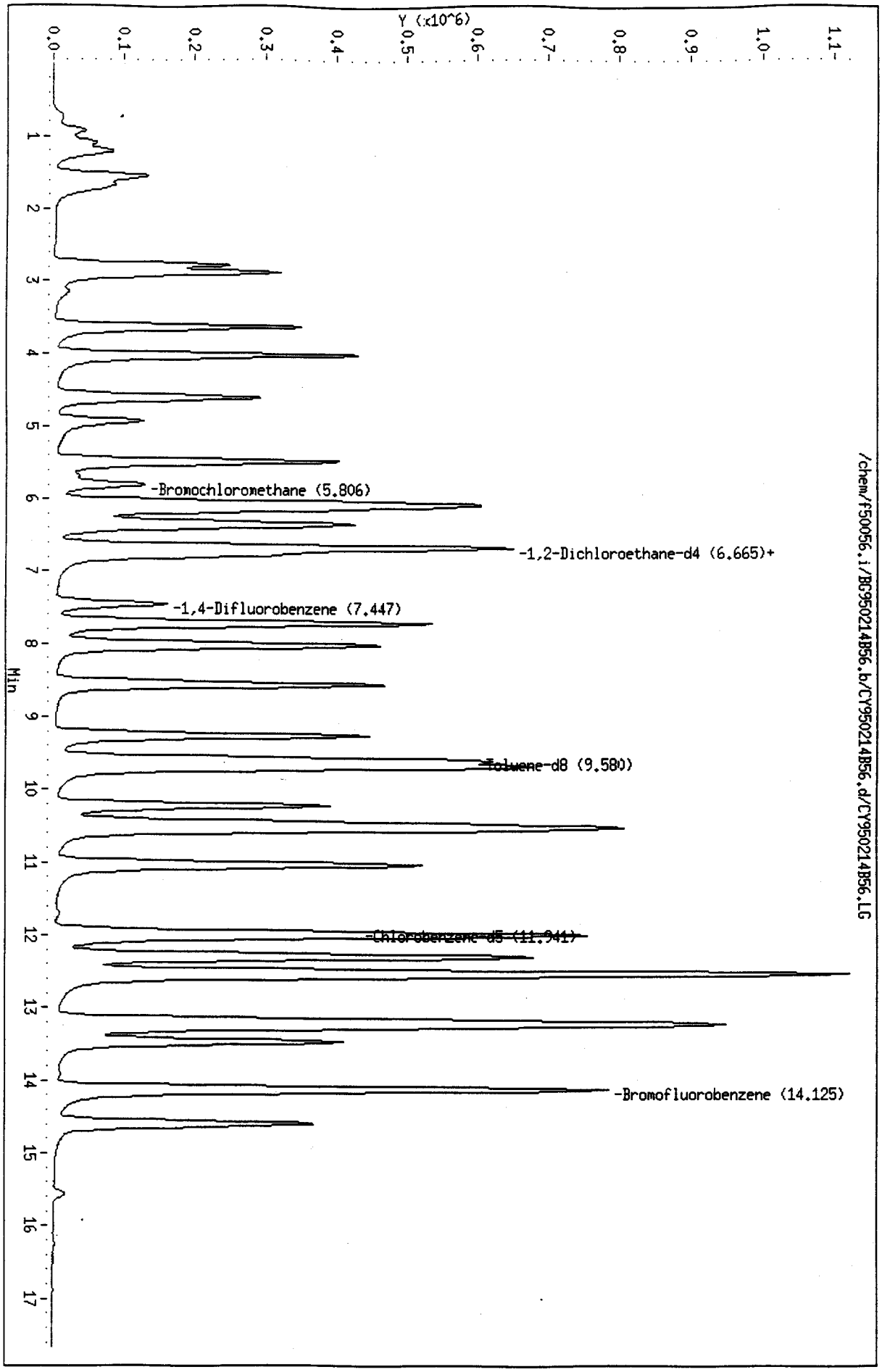
Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d/CW950214B56.LG
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BG9502148B56.b/CY9502148B56.d
Date : 14-FEB-1995 21:35
Client ID: VSTD200
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i
Operator: 2011
Column diameter: 0.53



Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CY950214B56.d
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 14-FEB-1995 21:35
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.806	5.806	(1.000)	92411	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.447	(1.000)	386888	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	11.941	(1.000)	342184	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.652	(1.146)	555433	1000	868.1
$	5 Toluene-d8	98.00	9.580	9.580	(0.802)	1092604	1000	933.4
$	6 Bromofluorobenzene	95.00	14.125	14.125	(1.183)	1048142	1000	917.2
	7 Dichlorodiflouromethane	85.00	0.934	0.934	(0.161)	191592	1000	1030(A)
	8 Chloromethane	50.00	1.086	1.086	(0.187)	248464	1000	1107(AM)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.211)	332827	1000	1040(A)
	10 Bromomethane	94.00	1.553	1.553	(0.267)	390511	1000	908.6(M)
	11 Chloroethane	64.00	1.691	1.691	(0.291)	255019	1000	892.6(M)
	12 1,1-Dichloroethene	96.00	2.790	2.790	(0.480)	299226	1000	843.0
	13 Acetone	43.00	3.156	3.156	(0.543)	89957	1000	973.1
	14 Carbon Disulfide	76.00	2.891	2.891	(0.498)	1303954	1000	844.9
	15 Methylene Chloride	84.00	3.635	3.635	(0.626)	425815	1000	827.6
	16 trans-1,2-Dichloroethene	96.00	4.014	4.014	(0.691)	503351	1000	853.0
	17 1,1-Dichloroethane	63.00	4.607	4.607	(0.793)	926128	1000	866.8
	18 cis-1,2-Dichloroethene	96.00	5.478	5.478	(0.943)	519539	1000	826.6
	19 2-Butanone	43.00	5.693	5.693	(0.980)	138320	1000	973.0
	20 Chloroform	83.00	6.059	6.059	(1.043)	993890	1000	794.4
	21 1,1,1-Trichloroethane	97.00	6.135	6.135	(0.824)	848855	1000	754.0
	22 Carbon Tetrachloride	117.00	6.349	6.349	(0.853)	849344	1000	806.8
	23 Benzene	78.00	6.665	6.665	(0.895)	1079157	1000	732.8

Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Report Date: 16-Feb-1995 17:58

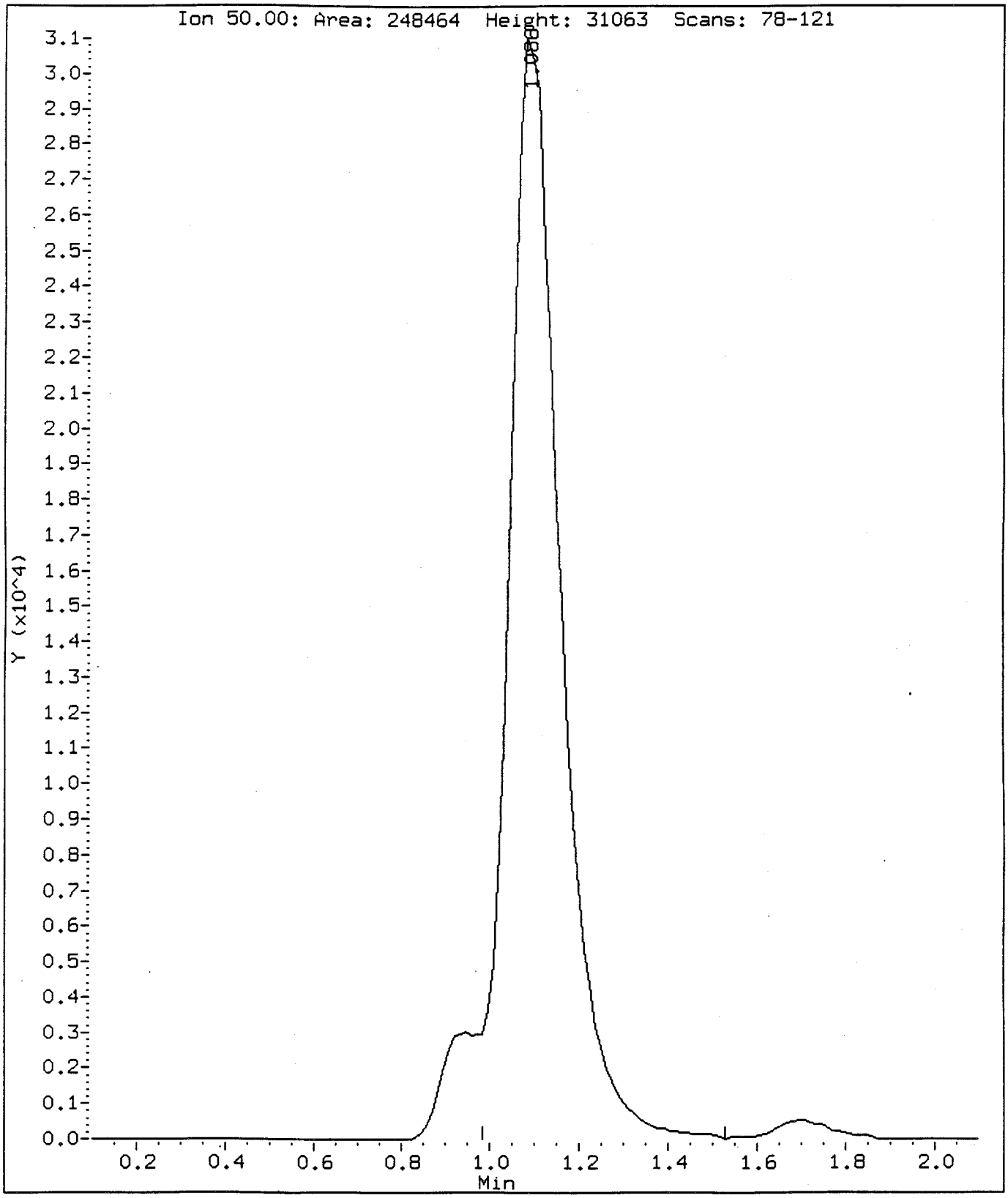
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.766	6.766	(1.165)	636594	1000	833.5
	25 Trichloroethene	130.00	7.712	7.712	(1.036)	545926	1000	786.5
	26 1,2-Dichloropropane	63.00	8.015	8.015	(1.076)	508295	1000	803.2
	27 Bromodichloromethane	83.00	8.558	8.558	(1.149)	920714	1000	835.7
	28 cis-1,3-Dichloropropene	75.00	9.252	9.252	(1.242)	707548	1000	879.6
	29 4-Methyl-2-Pentanone	43.00	9.656	9.656	(0.809)	362895	1000	956.9
	30 Toluene	91.00	9.681	9.681	(0.811)	1147234	1000	853.8
	31 trans-1,3-Dichloropropene	75.00	10.212	10.212	(1.371)	655057	1000	912.4
	32 1,1,2-Trichloroethane	97.00	10.451	10.451	(1.403)	418766	1000	749.9
	33 Tetrachloroethene	164.00	10.527	10.527	(0.882)	590731	1000	788.6
	34 2-Hexanone	43.00	11.070	11.070	(0.927)	240132	1000	1172(A)
	35 Dibromochloromethane	129.00	11.019	11.019	(1.480)	823471	1000	781.5
	36 Chlorobenzene	112.00	11.991	11.991	(1.004)	1194358	1000	855.6
	37 Ethylbenzene	106.00	12.294	12.294	(1.030)	553369	1000	864.6
	38 m,p-Xylene	106.00	12.534	12.534	(1.050)	1180996	2000	1488
	39 o-Xylene	106.00	13.178	13.178	(1.104)	653110	1000	780.0
	40 Styrene	104.00	13.254	13.254	(1.110)	1037454	1000	816.2
	41 Bromoform	173.00	13.468	13.468	(1.808)	647303	1000	847.4
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.222)	672262	1000	912.1
M	43 1,2-Dichloroethene (total)	96.00				1022890	2000	1679
M	44 Xylene (Total)	106.00				1834106	1000	2190

QC Flag Legend

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

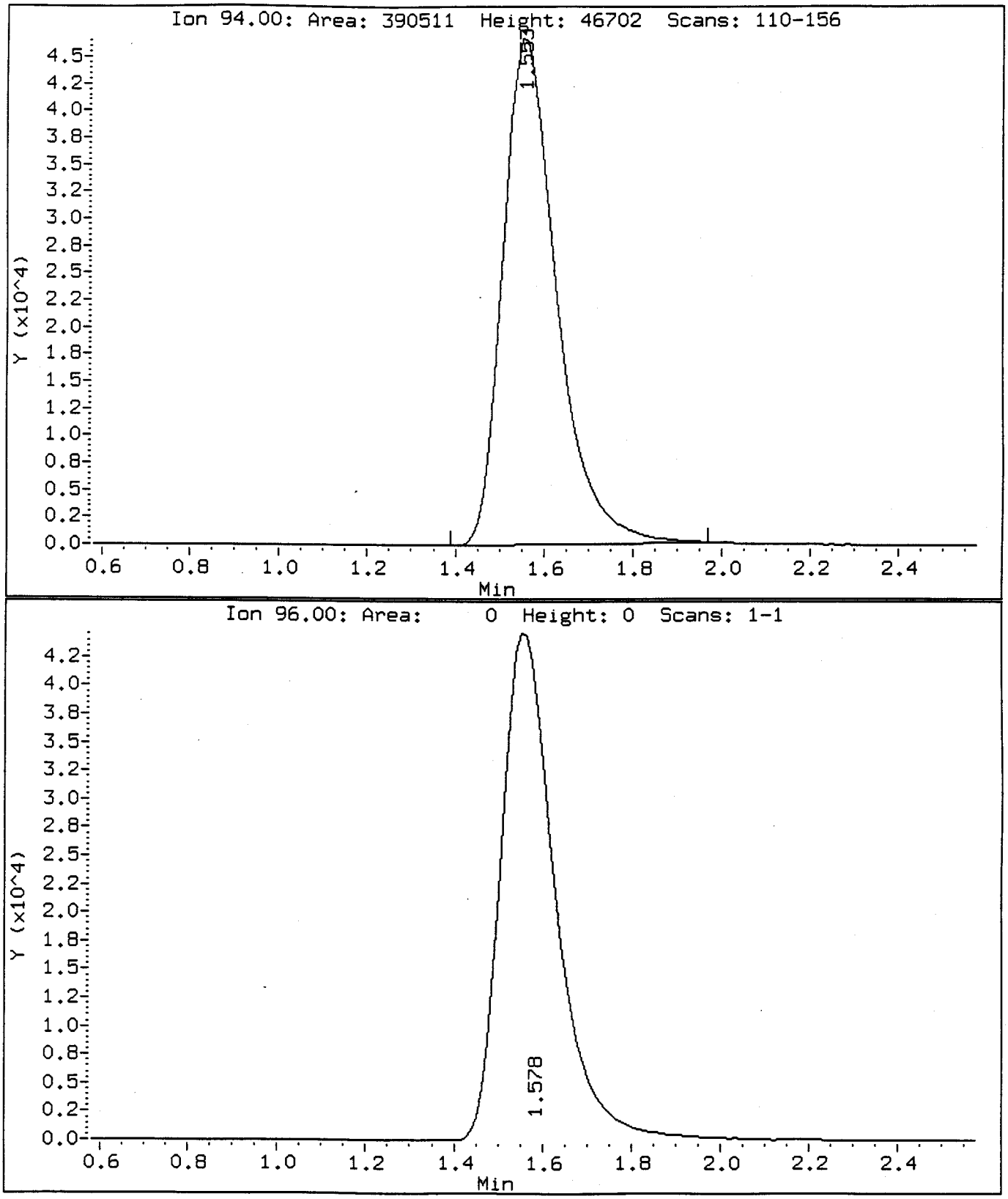
Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

Compound: Chloromethane
CAS Number: 74-87-3



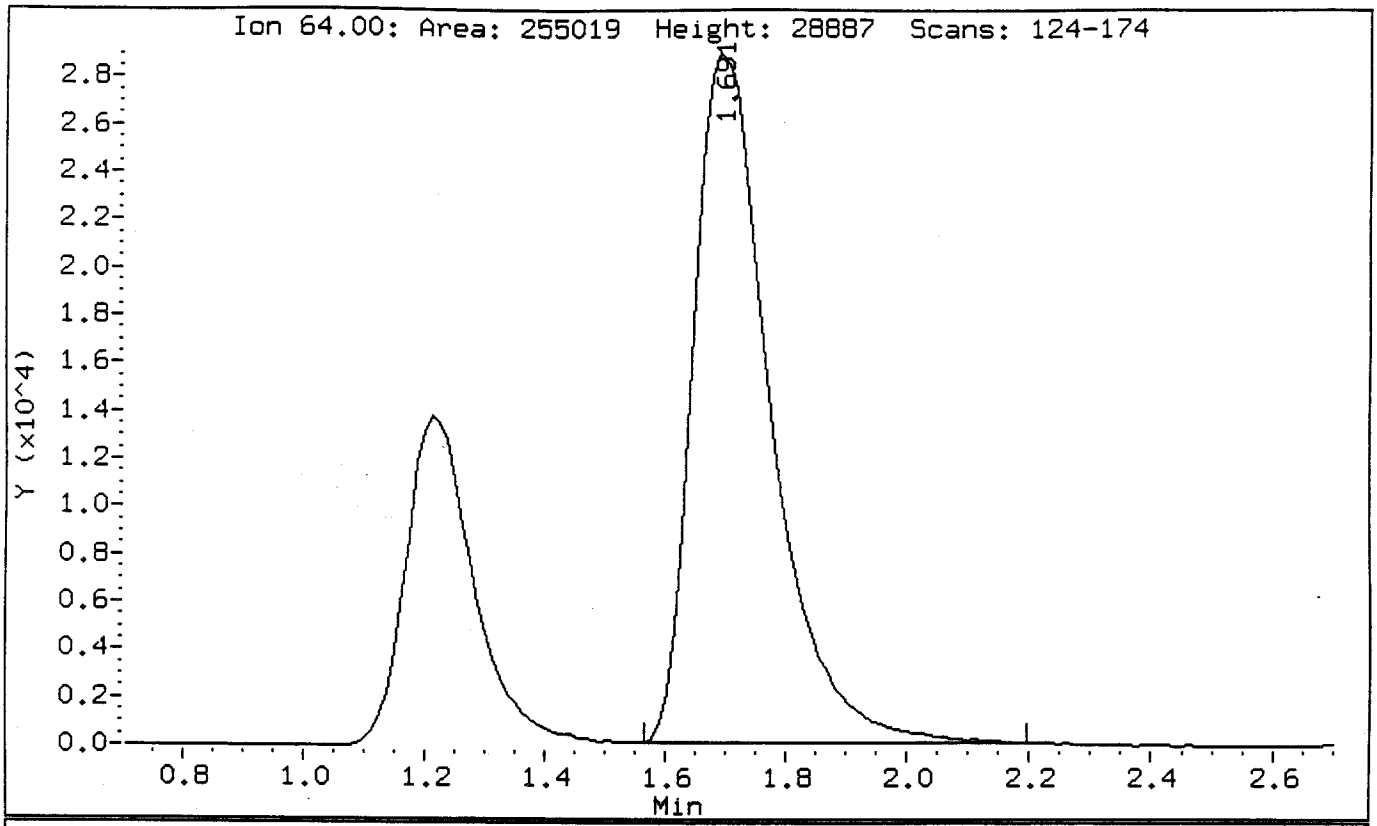
Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

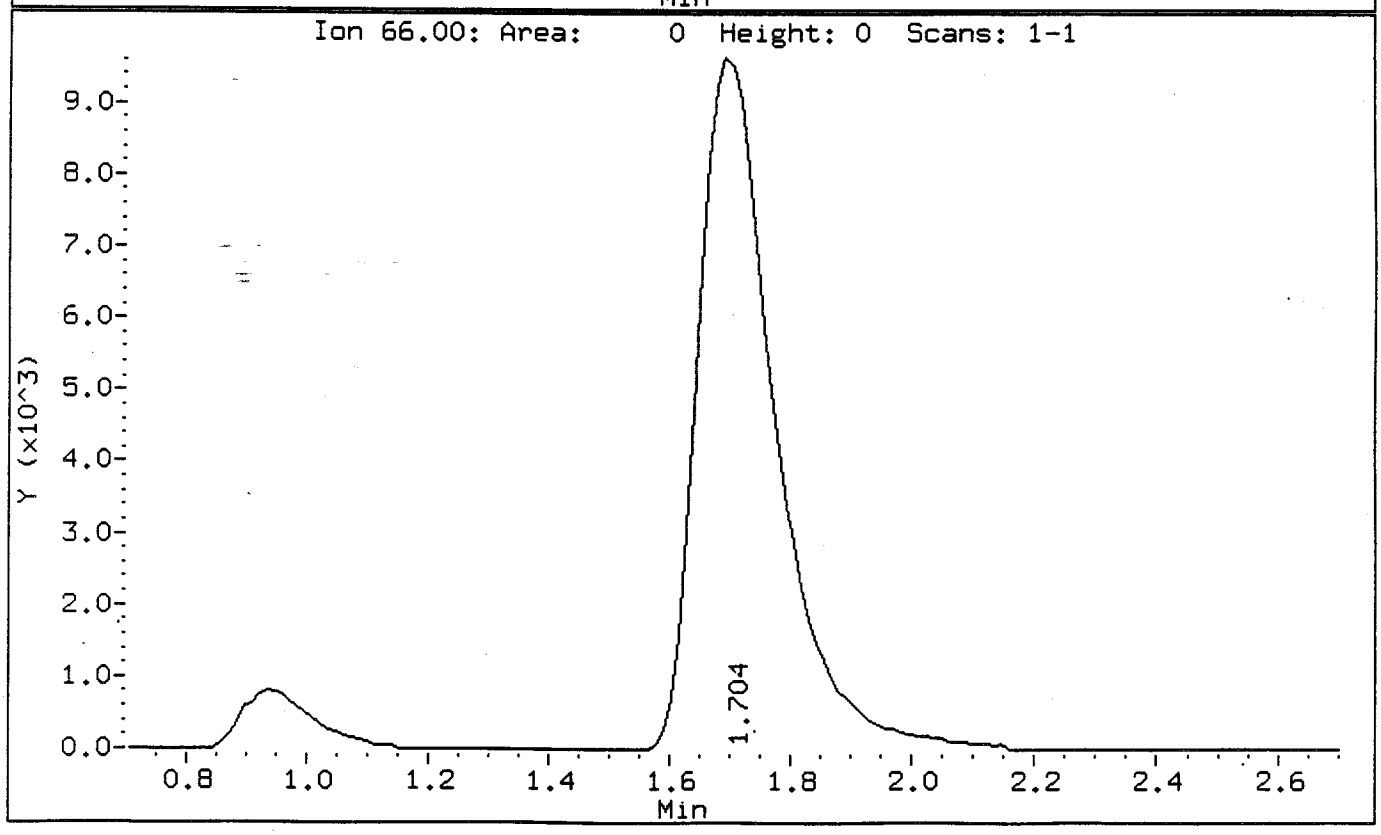
Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





COMPUCHEM LABORATORIES, INC.
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 4:53
TIME TUNE EXPIRES 16:53

SHIFT(S) (A) ✓ (B) ✓ (C) ✓
DATE 2.14.95
LINKER/METHOD NW swt Dichlorfluromethane

PREVENTIVE MAINTENANCE Dtrap from #6 to #3 VS 2/14/95

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, Etc.)
1		BG950214C56	✓	2/14/95	4:53	BFB	—	7008	2ul	1948	Lot#42750 LC=SC
2		CT950214C56		2/14/95	5:15	VSTD010	—	—	5ml	1948	Lot#TN7
3		CU950214C56		2/14/95	5:57	VSTD020	—	—	5ml	1948	
4		CV950214C56		2/14/95	6:51	VSTD050	—	—	5ml	1948	
5		CW950214C56		2/14/95	8:18	VSTD100	—	—	5ml	1948	
6		CX950214C56		2/14/95	8:53	VSTD200	—	—	5ml	1948	
7	✓	CY950214AC56 MB 7.14.95		/ /	10:21	VSTD010				2141	
8	✓	CZ950214C56		/ /	11:57						
9		CA950214C56		/ /	13:14						1st inte
10		CS950214A56		/ /	14:02	VSTD200				2011	42750 LC=SC
11		BF950214B56	✓	2/14/95	16:18	BFB	—	7008	2uL		TN7 (42755, 42756
12	✓	CS950214B56		/ /	16:31	Vstd050		—	5mL		42750 LEM 300
13		BG950214B56	✓	/ /	17:25	BFB		7008	2uL		(42755, 42756
14		CT950214B56	✓	/ /	17:55	Vstd010		—	5mL		
15		CU950214B56	✓	/ /	18:35	Vstd020					Good
16		CV950214B56	✓	/ /	19:12	Vstd050					ICAL
17		CW950214B56	✓	/ /	19:50	Vstd100					
18	✓	CX950214B56		/ /	20:27	Vstd200					
19		CY950214B56	✓	/ /	21:35	Vstd200					
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						

JR 2/14/95

VERIFIED
SUPERVISOR APPROVAL M. S. Kanai
ENVELOPE NAME

JR

30073 00001 SAMPLE DATA PACKAGE

74

7A

VOLATILE CONTINUING CALIBRATION CHECK

COPY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Instrument ID: F50056 Calibration Date: 02/14/95 Time: 2312

Lab File ID: CZ950214B56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.607	0.725		-19.5	
Bromomethane	1.163	1.228	0.100	-5.6	25.0
Vinyl Chloride	0.865	0.969	0.100	-11.9	25.0
Chloroethane	0.773	0.806		-4.3	
Methylene Chloride	1.392	1.440		-3.5	
Acetone	0.250	0.306		-22.5	
Carbon Disulfide	4.175	4.258		-2.0	
1,1-Dichloroethene	0.960	0.967	0.100	-0.7	25.0
1,1-Dichloroethane	2.891	2.916	0.200	-0.9	25.0
1,2-Dichloroethene (total)	1.648	1.667		-1.1	
Chloroform	3.384	3.359	0.200	0.8	25.0
1,2-Dichloroethane	2.066	1.962	0.100	5.0	25.0
2-Butanone	0.385	0.348		9.6	
1,1,1-Trichloroethane	0.727	0.691	0.100	5.1	25.0
Carbon Tetrachloride	0.680	0.644	0.100	5.4	25.0
Bromodichloromethane	0.712	0.672	0.200	5.7	25.0
1,2-Dichloropropane	0.409	0.388		5.1	
cis-1,3-Dichloropropene	0.520	0.499	0.200	4.0	25.0
Trichloroethene	0.449	0.433	0.300	3.4	25.0
Dibromochloromethane	0.681	0.635	0.100	6.7	25.0
1,1,2-Trichloroethane	0.361	0.339	0.100	6.0	25.0
Benzene	0.952	0.925	0.500	2.8	25.0
trans-1,3-Dichloropropene	0.464	0.434	0.100	6.5	25.0
Bromoform	0.494	0.488	0.100	1.2	25.0
4-Methyl-2-Pentanone	0.277	0.300		-8.3	
2-Hexanone	0.150	0.175		-17.1	
Tetrachloroethene	0.547	0.527	0.200	3.7	25.0
1,1,2,2-Tetrachloroethane	0.538	0.572	0.500	-6.2	25.0
Toluene	0.982	1.072	0.400	-9.2	25.0
Chlorobenzene	1.020	0.982	0.500	3.7	25.0
Ethylbenzene	0.468	0.465	0.100	0.6	25.0
Styrene	0.929	0.894	0.300	3.7	25.0
Xylene (Total)	0.612	0.588	0.300	3.8	25.0
Dichlorodiflouromethane	0.503	0.493		2.1	
Toluene-d8	0.855	0.925		-8.2	
Bromofluorobenzene	0.835	0.839	0.200	-0.5	25.0

All other compounds must meet a minimum RRF of 0.010.

7A

VOLATILE CONTINUING CALIBRATION CHECK

COPY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Instrument ID: F50056 Calibration Date: 02/14/95 Time: 2312

Lab File ID: CZ950214B56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

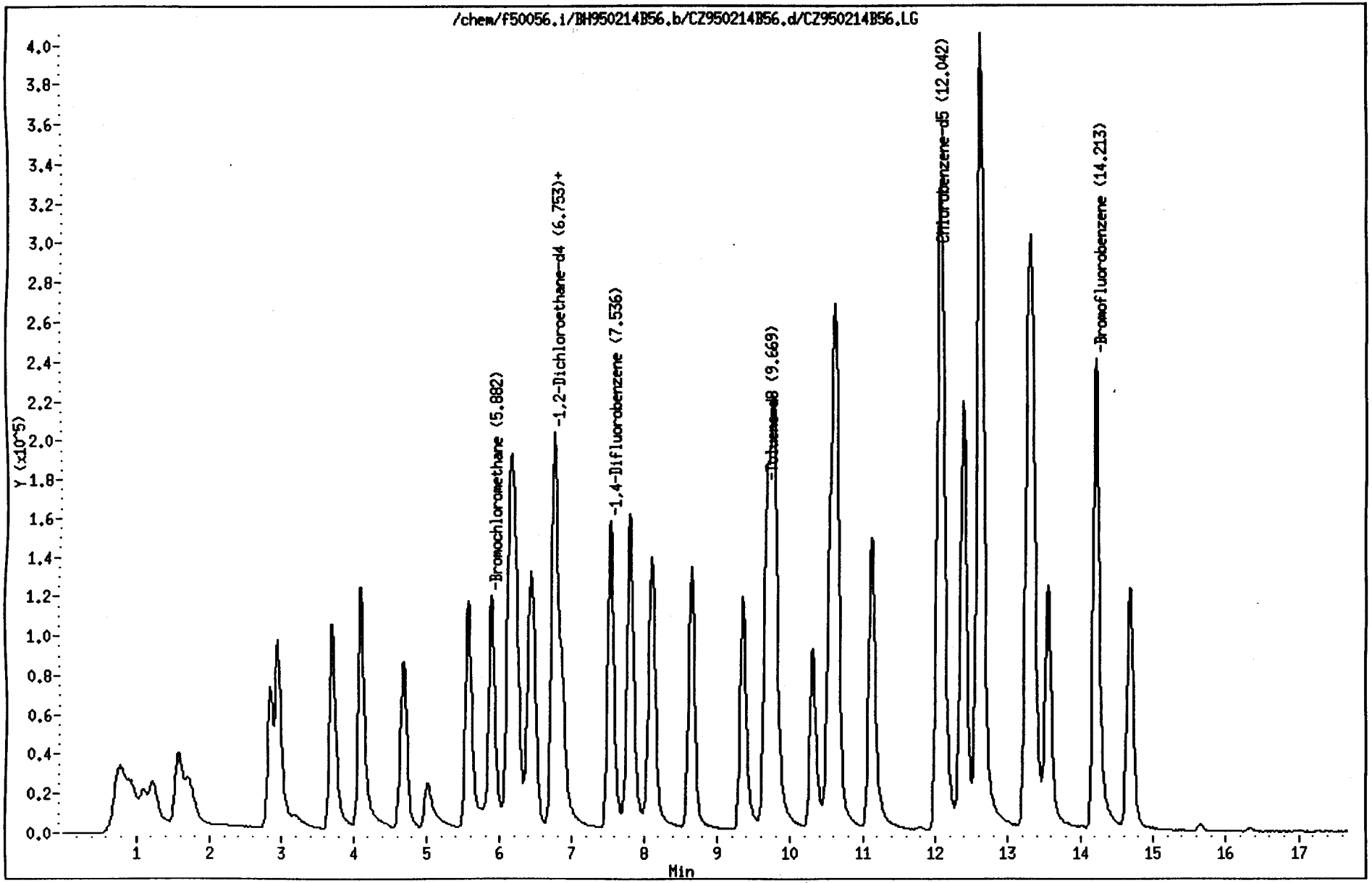
COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
1,2-Dichloroethane-d4	1.731	1.730		0.1	

All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50056.i/BH950214B56.b/CZ950214B56.d
Date : 14-FEB-1995 23:12
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 1948
Column diameter: 0.53



30073 00001 SAMPLE DATA PACKAGE

7A

VOLATILE CONTINUING CALIBRATION CHECK

COPY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Instrument ID: F50056 Calibration Date: 02/15/95 Time: 1837

Lab File ID: CS950215B56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.607	0.532		12.3	
Bromomethane	1.163	1.082	0.100	7.0	25.0
Vinyl Chloride	0.865	0.769	0.100	11.2	25.0
Chloroethane	0.773	0.749		3.1	
Methylene Chloride	1.392	1.279		8.1	
Acetone	0.250	0.148		40.7	
Carbon Disulfide	4.175	3.841		8.0	
1,1-Dichloroethene	0.960	0.936	0.100	2.6	25.0
1,1-Dichloroethane	2.891	2.739	0.200	5.2	25.0
1,2-Dichloroethene (total)	1.648	1.583		3.9	
Chloroform	3.384	3.354	0.200	0.9	25.0
1,2-Dichloroethane	2.066	2.029	0.100	1.8	25.0
2-Butanone	0.385	0.231		39.9	
1,1,1-Trichloroethane	0.727	0.711	0.100	2.2	25.0
Carbon Tetrachloride	0.680	0.664	0.100	2.4	25.0
Bromodichloromethane	0.712	0.689	0.200	3.2	25.0
1,2-Dichloropropane	0.409	0.386		5.6	
cis-1,3-Dichloropropene	0.520	0.498	0.200	4.1	25.0
Trichloroethene	0.449	0.426	0.300	5.1	25.0
Dibromochloromethane	0.681	0.666	0.100	2.2	25.0
1,1,2-Trichloroethane	0.361	0.349	0.100	3.4	25.0
Benzene	0.952	0.927	0.500	2.6	25.0
trans-1,3-Dichloropropene	0.464	0.436	0.100	6.1	25.0
Bromoform	0.494	0.467	0.100	5.4	25.0
4-Methyl-2-Pentanone	0.277	0.223		19.4	
2-Hexanone	0.150	0.105		29.9	
Tetrachloroethene	0.547	0.517	0.200	5.5	25.0
1,1,2,2-Tetrachloroethane	0.538	0.449	0.500	16.7	25.0
Toluene	0.982	0.960	0.400	2.2	25.0
Chlorobenzene	1.020	0.972	0.500	4.7	25.0
Ethylbenzene	0.468	0.453	0.100	3.2	25.0
Styrene	0.929	0.890	0.300	4.2	25.0
Xylene (Total)	0.612	0.588	0.300	3.8	25.0
Dichlorodiflouromethane	0.503	0.465		7.7	
Toluene-d8	0.855	0.839		2.0	
Bromofluorobenzene	0.835	0.819	0.200	1.8	25.0

All other compounds must meet a minimum RRF of 0.010.

7A

VOLATILE CONTINUING CALIBRATION CHECK

COPY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Instrument ID: F50056 Calibration Date: 02/15/95 Time: 1837

Lab File ID: CS950215B56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
1,2-Dichloroethane-d4	1.731	1.771		-2.3	

All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50056.i/BH950214B56.b/CZ950214B56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CZ950214B56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 14-FEB-1995 23:12
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.882	5.882	(1.000)	93327	250.0	
*	2 1,4-Difluorobenzene	114.00	7.536	7.536	(1.000)	391908	250.0	
*	3 Chlorobenzene-d5	117.00	12.042	12.042	(1.000)	382873	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.740	6.740	(1.146)	161414	250.0	249.8
$	5 Toluene-d8	98.00	9.669	9.669	(0.803)	354331	250.0	270.5
$	6 Bromofluorobenzene	95.00	14.213	14.213	(1.180)	321152	250.0	251.2
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.161)	45993	250.0	244.8
	8 Chloromethane	50.00	1.111	1.111	(0.189)	67670	250.0	298.6
	9 Vinyl Chloride	62.00	1.237	1.237	(0.210)	90388	250.0	279.8
	10 Bromomethane	94.00	1.590	1.590	(0.270)	114586	250.0	264.0 (M)
	11 Chloroethane	64.00	1.729	1.729	(0.294)	75244	250.0	260.8 (M)
	12 1,1-Dichloroethene	96.00	2.853	2.853	(0.485)	90218	250.0	251.7
	13 Acetone	43.00	3.193	3.193	(0.543)	28602	250.0	306.4
	14 Carbon Disulfide	76.00	2.954	2.954	(0.502)	397418	250.0	255.0
	15 Methylene Chloride	84.00	3.698	3.698	(0.629)	134415	250.0	258.7
	16 trans-1,2-Dichloroethene	96.00	4.090	4.090	(0.695)	151316	250.0	253.9
	17 1,1-Dichloroethane	63.00	4.683	4.683	(0.796)	272184	250.0	252.2
	18 cis-1,2-Dichloroethene	96.00	5.567	5.567	(0.946)	159890	250.0	251.9
	19 2-Butanone	43.00	5.781	5.781	(0.983)	32445	250.0	226.0
	20 Chloroform	83.00	6.135	6.135	(1.043)	313475	250.0	248.1
	21 1,1,1-Trichloroethane	97.00	6.210	6.210	(0.824)	270635	250.0	237.3
	22 Carbon Tetrachloride	117.00	6.437	6.437	(0.854)	252284	250.0	236.6
	23 Benzene	78.00	6.753	6.753	(0.896)	362534	250.0	243.0

Data File: /chem/f50056.i/BH950214B56.b/CZ950214B56.d
Report Date: 20-Feb-1995 10:13

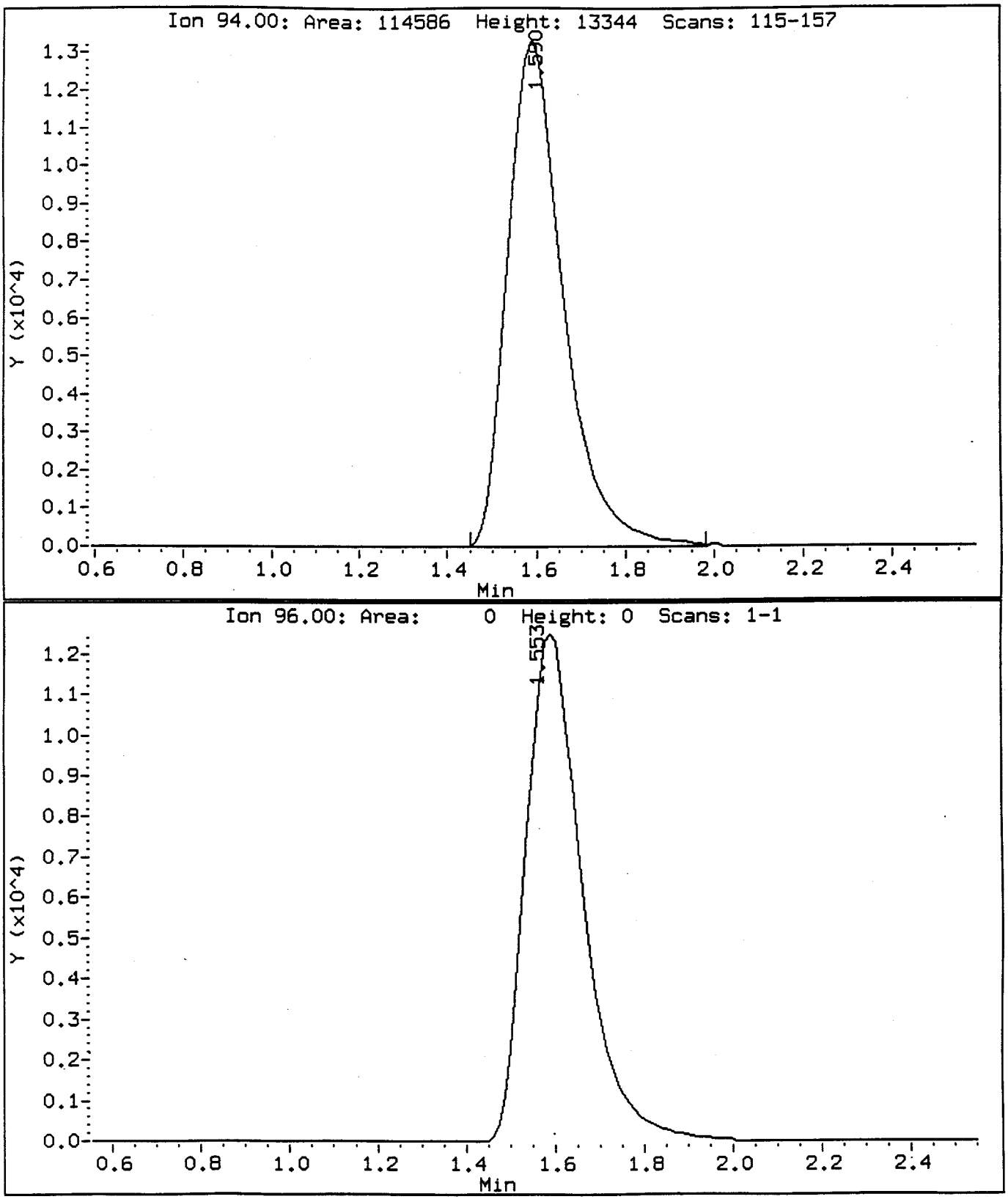
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.854	6.854	(1.165)	183136	250.0	237.4
	25 Trichloroethene	130.00	7.801	7.801	(1.035)	169786	250.0	241.5
	26 1,2-Dichloropropane	63.00	8.104	8.104	(1.075)	152076	250.0	237.2
	27 Bromodichloromethane	83.00	8.634	8.634	(1.146)	263197	250.0	235.8
	28 cis-1,3-Dichloropropene	75.00	9.341	9.341	(1.240)	195485	250.0	239.9
	29 4-Methyl-2-Pentanone	43.00	9.745	9.745	(0.809)	114856	250.0	270.7
	30 Toluene	91.00	9.782	9.782	(0.812)	410563	250.0	273.1
	31 trans-1,3-Dichloropropene	75.00	10.313	10.313	(1.369)	169944	250.0	233.7
	32 1,1,2-Trichloroethane	97.00	10.552	10.552	(1.400)	132981	250.0	235.1
	33 Tetrachloroethene	164.00	10.616	10.616	(0.882)	201749	250.0	240.7
	34 2-Hexanone	43.00	11.171	11.171	(0.928)	67164	250.0	292.8
	35 Dibromochloromethane	129.00	11.120	11.120	(1.476)	248971	250.0	233.2
	36 Chlorobenzene	112.00	12.080	12.080	(1.003)	376049	250.0	240.7
	37 Ethylbenzene	106.00	12.383	12.383	(1.028)	177996	250.0	248.6
	38 m,p-Xylene	106.00	12.610	12.610	(1.047)	424846	500.0	478.3
	39 o-Xylene	106.00	13.279	13.279	(1.103)	225197	250.0	240.4
	40 Styrene	104.00	13.342	13.342	(1.108)	342323	250.0	240.7
	41 Bromoform	173.00	13.557	13.557	(1.799)	191178	250.0	247.1
	42 1,1,2,2-Tetrachloroethane	83.00	14.693	14.693	(1.220)	218997	250.0	265.6
M	43 1,2-Dichloroethene (total)	96.00				311206	500.0	505.7
M	44 Xylene (Total)	106.00				650043	250.0	693.9

QC Flag Legend

M - Compound response manually integrated.

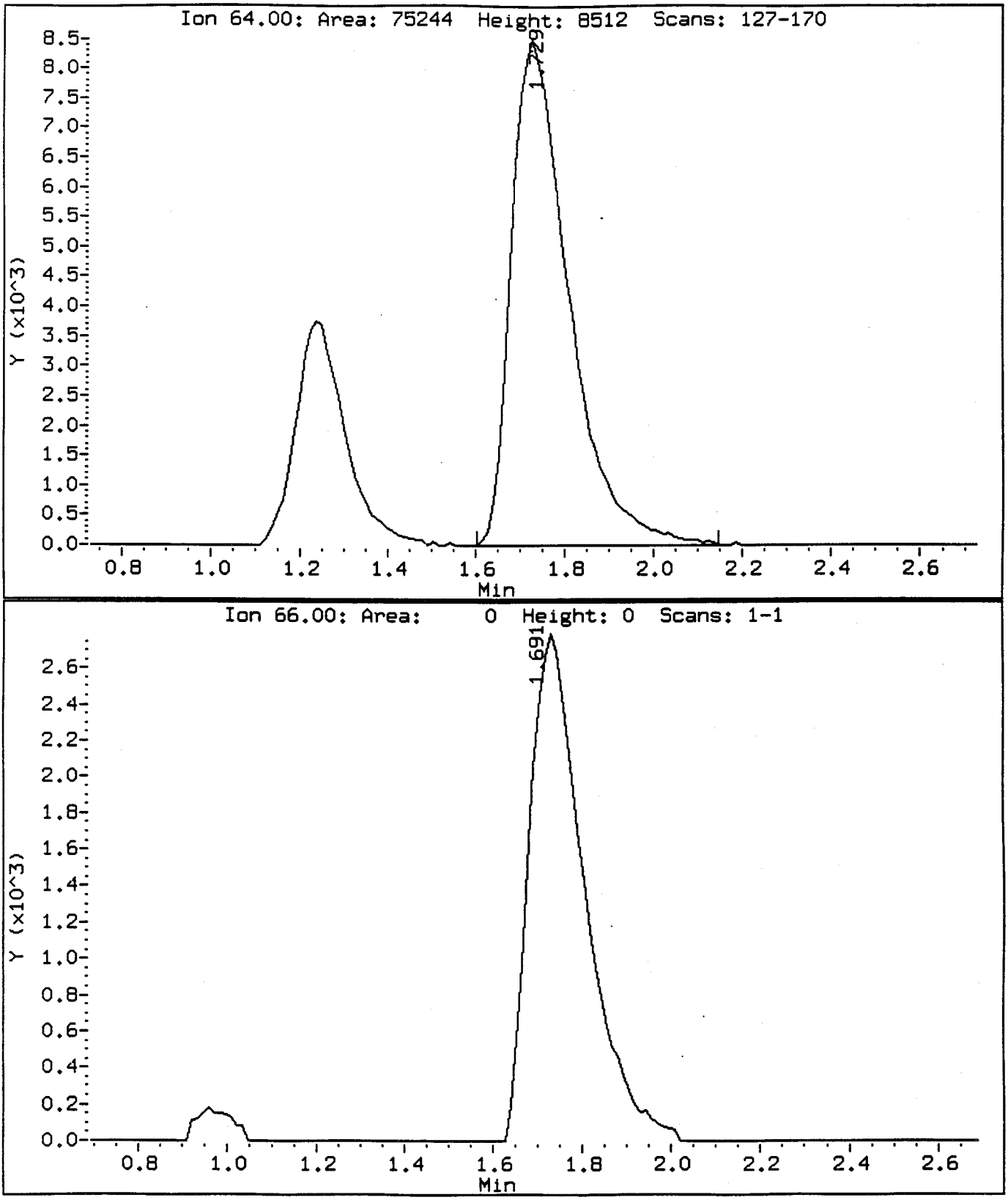
Data File: /chem/f50056.i/BH950214B56.b/CZ950214B56.d/CZ950214B56.LG
Injection Date: 14-FEB-95 23:12
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BH950214B56.b/CZ950214B56.d/CZ950214B56.LG
Injection Date: 14-FEB-95 23:12
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



INITIAL TIME OF TUNE 23:00 SHIFT(S) (A) ✓ (B) — (C) —

TIME TUNE EXPIRES 11:00 DATE 2/14/95

LINKER/METHOD NWSW + DI CI F

PREVENTIVE MAINTENANCE None JK 2/14/95

...ON LOG

	D	FILE NAME	EPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, Et
1		BH950214B56	/	2/14/95	23:00	BFB	—	7008	2uL	2011	LC=SC 42750
2		C7950214B56 JK 2/14/95	/	/ /	23:12	Vstd050	—	—	5mL	↓	TN7 (42493,42492)
3		CB950214B56	CS	/ /	23:52	VblkJC	—	—	↓	↓	
4		CB950215C56	/	2/15/95	0:45	VBLKVN	Various	—	5mL	1948	
5		CN083861C56	/	2/15/95	2:10	TRIPBLK1	30073	—	5mL	1948	
6		CN083865C56	/	2/15/95	2:35	MW1	30073	—	5mL	1948	
7		CN083842C56	/	2/15/95	3:09	MW1MS	30073	—	5mL	1948	Lot #42781
8		CN083843C56	/	2/15/95	3:35	MW1MSD	30073	—	5mL	1948	↓
9		CN083844C56	/	2/15/95	4:06	BS	30073	—	5mL	1948	
10		CN083841C56	/	2/15/95	4:40	MW~~1~~3 VS 2/15/95	30073	—	5mL	1948	
11		CN083857C56	/	2/15/95	5:15	MW8	30073	—	5mL	1948	
12		CN083859C56	/	2/15/95	5:50	MW11	30073	—	5mL	1948	
13	/	CN083863C56	DT/SH	2/15/95	6:23	MW6	30073	—	5mL	1948	
14	/	CN083867C56	DT/SH	2/15/95	6:59	MW10	30073	—	5mL	1948	
15	/	CN083869C56	DI	2/15/95	7:39	MW2	30073	—	5mL	1948	
16		CC950215C56	OK	/ /	9:03	CUB	—	↓	↓	2141	
17	/	CN083873C56	DW	/ /	9:38	MW17	30073	↓	2.5mL	↓	
18		CN083875C56	/	/ /	10:27	MW4	↓	↓	5mL	↓	
19	/	CR083863B56	SH	/ ↓	11:00	MW6	↓	↓	~~3~~2mL MB 2/15/95	↓	↓
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						
				/ /	:						

MB.

VERIFIED

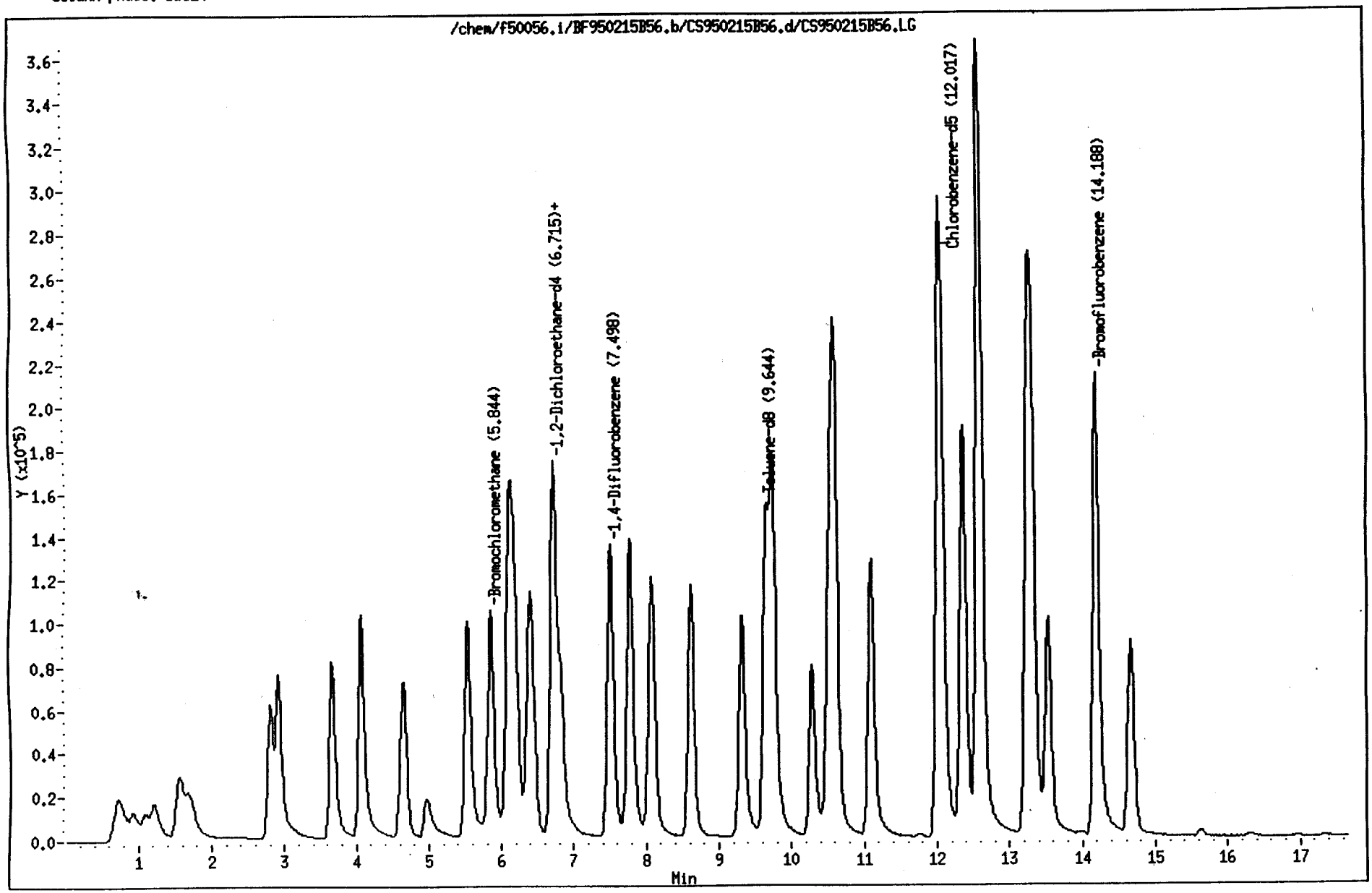
SUPERVISOR APPROVAL [signature] 2/15/95

ENVELOPE NAME

Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d
Date : 15-FEB-1995 18:37
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 0211
Column diameter: 0.53



30073 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CS950215B56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 15-FEB-1995 18:37
Operator : 0211 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
*	1 Bromochloromethane	128.00	5.844	5.844	(1.000)	81762	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	329717	250.0	
*	3 Chlorobenzene-d5	117.00	12.017	12.017	(1.000)	340942	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.703	6.703	(1.147)	144791	250.0	255.8
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	285884	250.0	245.1
$	6 Bromofluorobenzene	95.00	14.188	14.188	(1.181)	279395	250.0	245.4
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.162)	37998	250.0	230.8
	8 Chloromethane	50.00	1.111	1.111	(0.190)	43520	250.0	219.2
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	62860	250.0	222.1
	10 Bromomethane	94.00	1.565	1.565	(0.268)	88441	250.0	232.6(M)
	11 Chloroethane	64.00	1.704	1.704	(0.292)	61225	250.0	242.2(M)
	12 1,1-Dichloroethene	96.00	2.815	2.815	(0.482)	76492	250.0	243.6
	13 Acetone	43.00	3.156	3.156	(0.540)	12129	250.0	148.3
	14 Carbon Disulfide	76.00	2.928	2.928	(0.501)	314024	250.0	230.0
	15 Methylene Chloride	84.00	3.661	3.661	(0.626)	104549	250.0	229.7
	16 trans-1,2-Dichloroethene	96.00	4.064	4.064	(0.695)	124232	250.0	238.0
	17 1,1-Dichloroethane	63.00	4.645	4.645	(0.795)	223973	250.0	236.9
	18 cis-1,2-Dichloroethene	96.00	5.529	5.529	(0.946)	134679	250.0	242.2
	19 2-Butanone	43.00	5.731	5.731	(0.981)	18901	250.0	150.3
	20 Chloroform	83.00	6.097	6.097	(1.043)	274247	250.0	247.8
	21 1,1,1-Trichloroethane	97.00	6.172	6.172	(0.823)	234560	250.0	244.5
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	218807	250.0	243.9
	23 Benzene	78.00	6.715	6.715	(0.896)	305704	250.0	243.6

Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d
Report Date: 20-Feb-1995 12:27

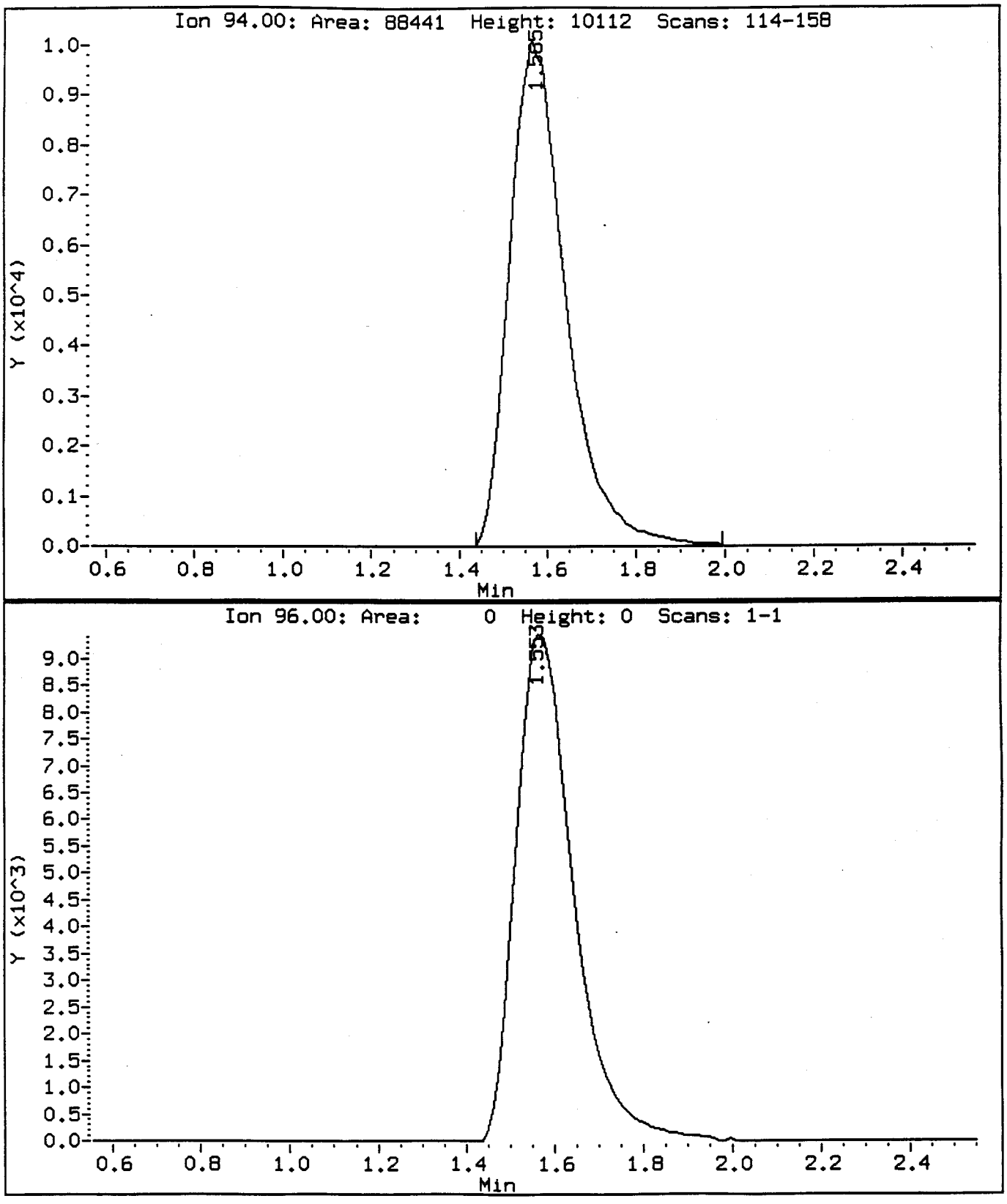
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.816	6.816	(1.166)	165878	250.0	245.5
25	Trichloroethene	130.00	7.763	7.763	(1.035)	140329	250.0	237.2
26	1,2-Dichloropropane	63.00	8.066	8.066	(1.076)	127217	250.0	235.9
27	Bromodichloromethane	83.00	8.609	8.609	(1.148)	227218	250.0	242.0
28	cis-1,3-Dichloropropene	75.00	9.303	9.303	(1.241)	164335	250.0	239.7
29	4-Methyl-2-Pentanone	43.00	9.707	9.707	(0.808)	76121	250.0	201.4
30	Toluene	91.00	9.745	9.745	(0.811)	327280	250.0	244.4
31	trans-1,3-Dichloropropene	75.00	10.275	10.275	(1.370)	143641	250.0	234.8
32	1,1,2-Trichloroethane	97.00	10.515	10.515	(1.402)	114965	250.0	241.6
33	Tetrachloroethene	164.00	10.590	10.590	(0.881)	176389	250.0	236.3
34	2-Hexanone	43.00	11.146	11.146	(0.928)	35779	250.0	175.2
35	Dibromochloromethane	129.00	11.083	11.083	(1.478)	219668	250.0	244.6
36	Chlorobenzene	112.00	12.054	12.054	(1.003)	331230	250.0	238.1
37	Ethylbenzene	106.00	12.357	12.357	(1.028)	154379	250.0	242.1
38	m,p-Xylene	106.00	12.585	12.585	(1.047)	381430	500.0	482.2
39	o-Xylene	106.00	13.254	13.254	(1.103)	200640	250.0	240.5
40	Styrene	104.00	13.304	13.304	(1.107)	303482	250.0	239.6
41	Bromoform	173.00	13.531	13.531	(1.805)	153990	250.0	236.5
42	1,1,2,2-Tetrachloroethane	83.00	14.667	14.667	(1.221)	152994	250.0	208.3
M 43	1,2-Dichloroethene (total)	96.00				258911	500.0	480.3
M 44	Xylene (Total)	106.00				582070	250.0	697.7

QC Flag Legend

M - Compound response manually integrated.

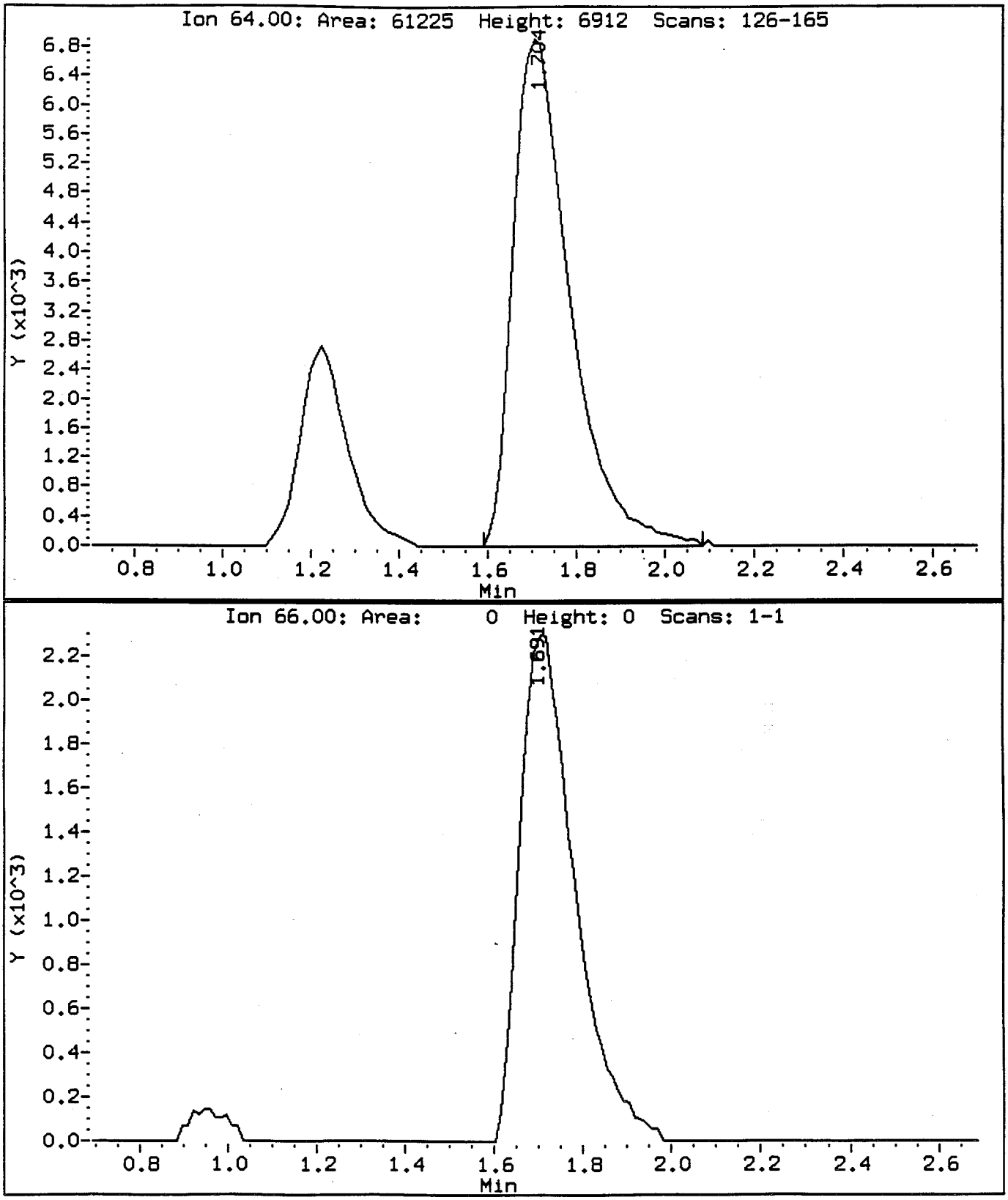
Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d/CS950215B56.LG
Injection Date: 15-FEB-95 18:37
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d/CS950215B56.LG
Injection Date: 15-FEB-95 18:37
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



COMPUCHEM LABORATORIES, INC.
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 18:25 SHIFT(S) (A) ____ (B) ✓ (C) ✓
TIME TUNE EXPIRES 6:25 DATE 2/15/95
LINKER/METHOD DWSW + DiCIF
PREVENTIVE MAINTENANCE None 2/15/95

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, Etc
1		BFQ50215B56	✓	2/15/95	18:25	BFB	—	7008	2uL	2011	42750 LC=SC
2		CS950215B56	✓	"	18:37	VSTD050	↓	—	5mL	↓	TN7 (42493, 42492)
3		CB950215B56	✓	"	19:18	VBLKJD		↓	↓		
4		C3R83863B56	✓	"	20:17	MW6	30073		2mL		
5		C3R83869B56	✓	"	20:47	MW2			325uL		
6		CR083922B56	✓	"	21:25	Trblk3			5mL		
7	✓	CN083833A56 V3 2/16/95	SH	"	21:56	L1					
8		CN083849A56 V3 2/16/95	✓	"	22:59	S3					
9		CN083851A56 V3 2/16/95		"	23:28	S1	↓	↓	↓	↓	
10	✓	CN083853A56	SL	2/16/95	0:09	S2	30073	—	5mL	1948	
11	✓	CN083855H56	SL	2/16/95	0:44	S5	30073		5mL	1948	
12		CN083871H56		2/16/95	1:22	S4	30073	—	5mL	1948	
13		CN083983A56		2/16/95	2:00	SFW1	30073	—	5mL	1948	
14		CN083984H56		2/16/95	2:54	SFW2	30073	—	5mL	1948	
15		CN083985H56		2/16/95	3:33	SFW3	30073	—	5mL	1948	
16	✓	CN083834B56	SM	2/16/95	4:15	SFWMS	30073	—	5mL	1948	Lot#42781
17		CN083835B56		2/16/95	4:46	SFWMSD	30073	—	5mL	1948	
18		CR083834C56		2/16/95	5:16	SFWMS	30073	—	5mL	1948	
19		CR083853C56		2/16/95	5:43	S2	30073	—	5mL	1948	
20		CR083855C56		2/16/95	6:16	S5	30073	—	5mL	1948	
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						
				/ /	:						V3 2/16/95

VERIFIED ____
SUPERVISOR APPROVAL Mark D. B 2/1
ENVELOPE NAME ____

30073 00001 SAMPLE DATA PACKAGE

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Instrument ID: F50056 Calibration Date: 02/15/95 Time: 1230

Lab File ID: CS950215A56.D Init. Calibration Date(s): 02/14/95 02/14/95

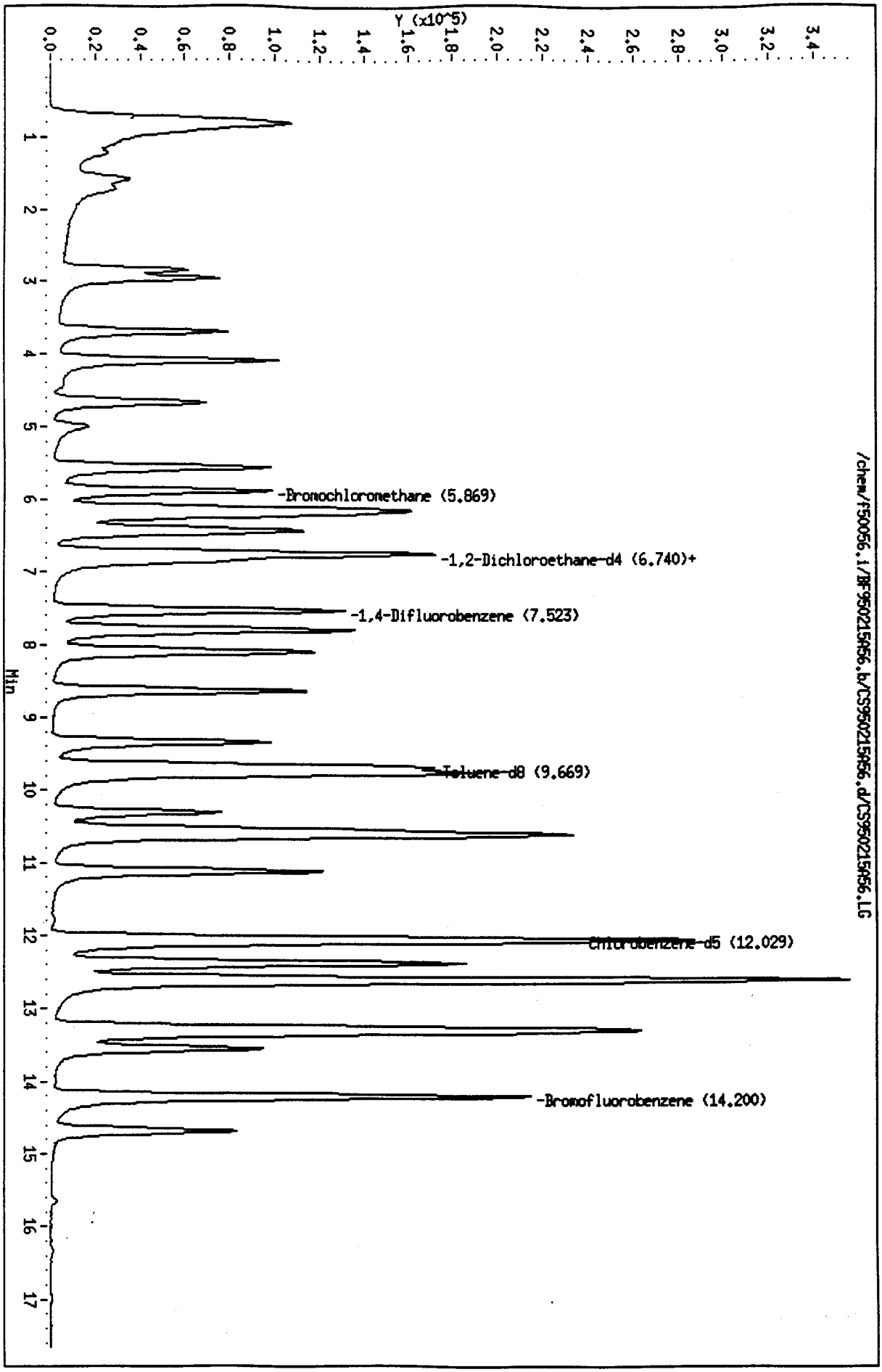
Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.607	0.482		20.6	
Bromomethane	1.163	1.004	0.100	13.6	25.0
Vinyl Chloride	0.865	0.698	0.100	19.4	25.0
Chloroethane	0.773	0.716		7.4	
Methylene Chloride	1.392	1.248		10.3	
Acetone	0.250	0.095		62.0	
Carbon Disulfide	4.175	3.797		9.1	
1,1-Dichloroethene	0.960	0.914	0.100	4.9	25.0
1,1-Dichloroethane	2.891	2.815	0.200	2.6	25.0
1,2-Dichloroethene (total)	1.648	1.615		2.0	
Chloroform	3.384	3.472	0.200	-2.6	25.0
1,2-Dichloroethane	2.066	2.055	0.100	0.6	25.0
2-Butanone	0.385	0.151		60.9	
1,1,1-Trichloroethane	0.727	0.718	0.100	1.3	25.0
Carbon Tetrachloride	0.680	0.667	0.100	2.0	25.0
Bromodichloromethane	0.712	0.687	0.200	3.5	25.0
1,2-Dichloropropane	0.409	0.392		4.1	
cis-1,3-Dichloropropene	0.520	0.490	0.200	5.8	25.0
Trichloroethene	0.449	0.431	0.300	4.0	25.0
Dibromochloromethane	0.681	0.648	0.100	4.8	25.0
1,1,2-Trichloroethane	0.361	0.340	0.100	5.8	25.0
Benzene	0.952	0.934	0.500	1.8	25.0
trans-1,3-Dichloropropene	0.464	0.426	0.100	8.1	25.0
Bromoform	0.494	0.448	0.100	9.3	25.0
4-Methyl-2-Pentanone	0.277	0.209		24.7	
2-Hexanone	0.150	0.092		38.3	
Tetrachloroethene	0.547	0.528	0.200	3.5	25.0
1,1,2,2-Tetrachloroethane	0.538	0.427	0.500	20.6	25.0
Toluene	0.982	1.111	0.400	-13.2	25.0
Chlorobenzene	1.020	0.986	0.500	3.3	25.0
Ethylbenzene	0.468	0.459	0.100	1.8	25.0
Styrene	0.929	0.895	0.300	3.6	25.0
Xylene (Total)	0.612	0.594	0.300	2.9	25.0
Dichlorodiflouromethane	0.503	0.416		17.3	
Toluene-d8	0.855	1.035		-21.1	
Bromofluorobenzene	0.835	0.858	0.200	-2.8	25.0

All other compounds must meet a minimum RRF of 0.010.

FORM VII VOA 3/90


Data File: /chem/f50056.i/BF9502156A56.b/CS9502156A56.d
Date : 15-FEB-1995 12:30
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2141
Column diameter: 0.53
Abundance (x10^5)
Min
-Bromochloromethane (5.869)
-1,2-Dichloroethane-d4 (6.740)+
-1,4-Difluorobenzene (7.523)
Toluene-d8 (9.669)
Chlorobenzene-d5 (12.029)
-Bromofluorobenzene (14.200)
/chem/f50056.i/BF9502156A56.b/CS9502156A56.d/CS9502156A56.LG

Data File: /chem/f50056.i/BF950215A56.b/CS950215A56.d
Report Date: 20-Feb-1995 11:29

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215A56.b/CS950215A56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 15-FEB-1995 12:30
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 10:24 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 12:30 Cal File: CS950215A56.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
*	1 Bromochloromethane	128.00	5.869	5.869	(1.000)	77400	250.0	
*	2 1,4-Difluorobenzene	114.00	7.523	7.523	(1.000)	322823	250.0	
*	3 Chlorobenzene-d5	117.00	12.029	12.029	(1.000)	327066	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.728	6.728	(1.146)	144303	250.0	269.3
$	5 Toluene-d8	98.00	9.669	9.669	(0.804)	338672	250.0	302.7
$	6 Bromofluorobenzene	95.00	14.200	14.200	(1.180)	280729	250.0	257.0
	7 Dichlorodiflouromethane	85.00	0.959	0.959	(0.163)	32216	250.0	206.8
	8 Chloromethane	50.00	1.111	1.111	(0.189)	37296	250.0	198.5
	9 Vinyl Chloride	62.00	1.237	1.237	(0.211)	54001	250.0	201.6
	10 Bromomethane	94.00	1.590	1.590	(0.271)	77723	250.0	215.9(M)
	11 Chloroethane	64.00	1.729	1.729	(0.295)	55397	250.0	231.5(M)
	12 1,1-Dichloroethene	96.00	2.840	2.840	(0.484)	70716	250.0	237.8
	13 Acetone	43.00	3.181	3.181	(0.542)	7353	250.0	94.97
	14 Carbon Disulfide	76.00	2.954	2.954	(0.503)	293873	250.0	227.3
	15 Methylene Chloride	84.00	3.686	3.686	(0.628)	96620	250.0	224.2
	16 trans-1,2-Dichloroethene	96.00	4.090	4.090	(0.697)	118106	250.0	239.0
	17 1,1-Dichloroethane	63.00	4.670	4.670	(0.796)	217889	250.0	243.5
	18 cis-1,2-Dichloroethene	96.00	5.554	5.554	(0.946)	131922	250.0	250.6
	19 2-Butanone	43.00	5.768	5.768	(0.983)	11653	250.0	97.88(M)
	20 Chloroform	83.00	6.122	6.122	(1.043)	268748	250.0	256.5
	21 1,1,1-Trichloroethane	97.00	6.198	6.198	(0.824)	231865	250.0	246.8
	22 Carbon Tetrachloride	117.00	6.412	6.412	(0.852)	215218	250.0	245.0
	23 Benzene	78.00	6.740	6.740	(0.896)	301558	250.0	245.4

2-21-95

Data File: /chem/f50056.i/BF950215A56.b/CS950215A56.d
Report Date: 20-Feb-1995 11:29

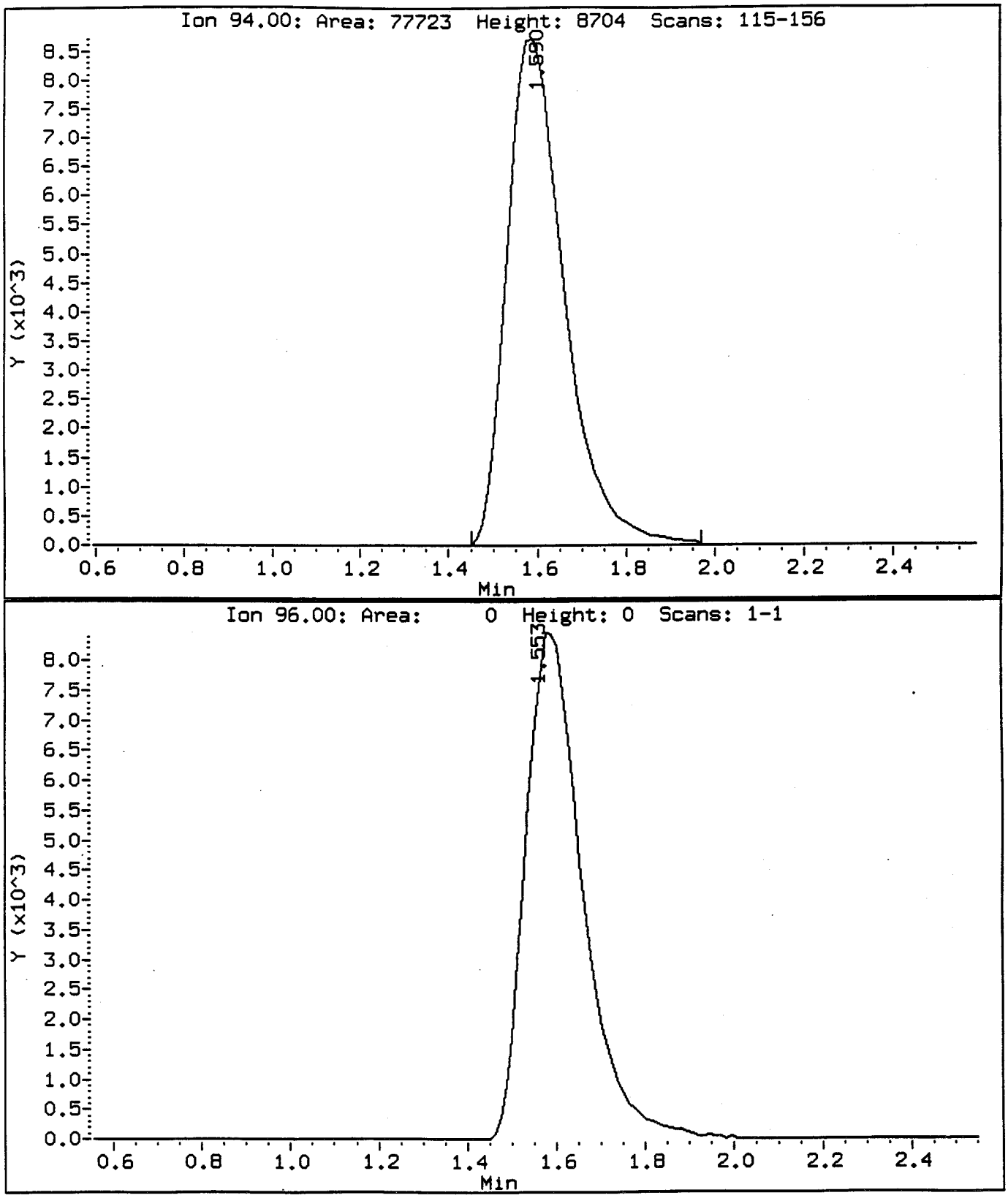
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.841	6.841	(1.166)	159031	250.0	248.6
25	Trichloroethene	130.00	7.788	7.788	(1.035)	139055	250.0	240.1
26	1,2-Dichloropropane	63.00	8.091	8.091	(1.075)	126552	250.0	239.7
27	Bromodichloromethane	83.00	8.621	8.621	(1.146)	221865	250.0	241.3
28	cis-1,3-Dichloropropene	75.00	9.328	9.328	(1.240)	158063	250.0	235.5
29	4-Methyl-2-Pentanone	43.00	9.732	9.732	(0.809)	68227	250.0	188.2
30	Toluene	91.00	9.770	9.770	(0.812)	363453	250.0	283.0
31	trans-1,3-Dichloropropene	75.00	10.300	10.300	(1.369)	137622	250.0	229.7
32	1,1,2-Trichloroethane	97.00	10.540	10.540	(1.401)	109704	250.0	235.4
33	Tetrachloroethene	164.00	10.603	10.603	(0.881)	172796	250.0	241.3
34	2-Hexanone	43.00	11.171	11.171	(0.929)	30213	250.0	154.2
35	Dibromochloromethane	129.00	11.108	11.108	(1.476)	209274	250.0	238.0
36	Chlorobenzene	112.00	12.080	12.080	(1.004)	322432	250.0	241.6
37	Ethylbenzene	106.00	12.370	12.370	(1.028)	150105	250.0	245.4
38	m,p-Xylene	106.00	12.610	12.610	(1.048)	369582	500.0	487.1
39	o-Xylene	106.00	13.266	13.266	(1.103)	194222	250.0	242.7
40	Styrene	104.00	13.329	13.329	(1.108)	292771	250.0	241.0
41	Bromoform	173.00	13.544	13.544	(1.800)	144560	250.0	226.8
42	1,1,2,2-Tetrachloroethane	83.00	14.680	14.680	(1.220)	139791	250.0	198.4
M 43	1,2-Dichloroethene (total)	96.00				250028	500.0	489.9
M 44	Xylene (Total)	106.00				563804	250.0	704.5

QC Flag Legend

M - Compound response manually integrated.

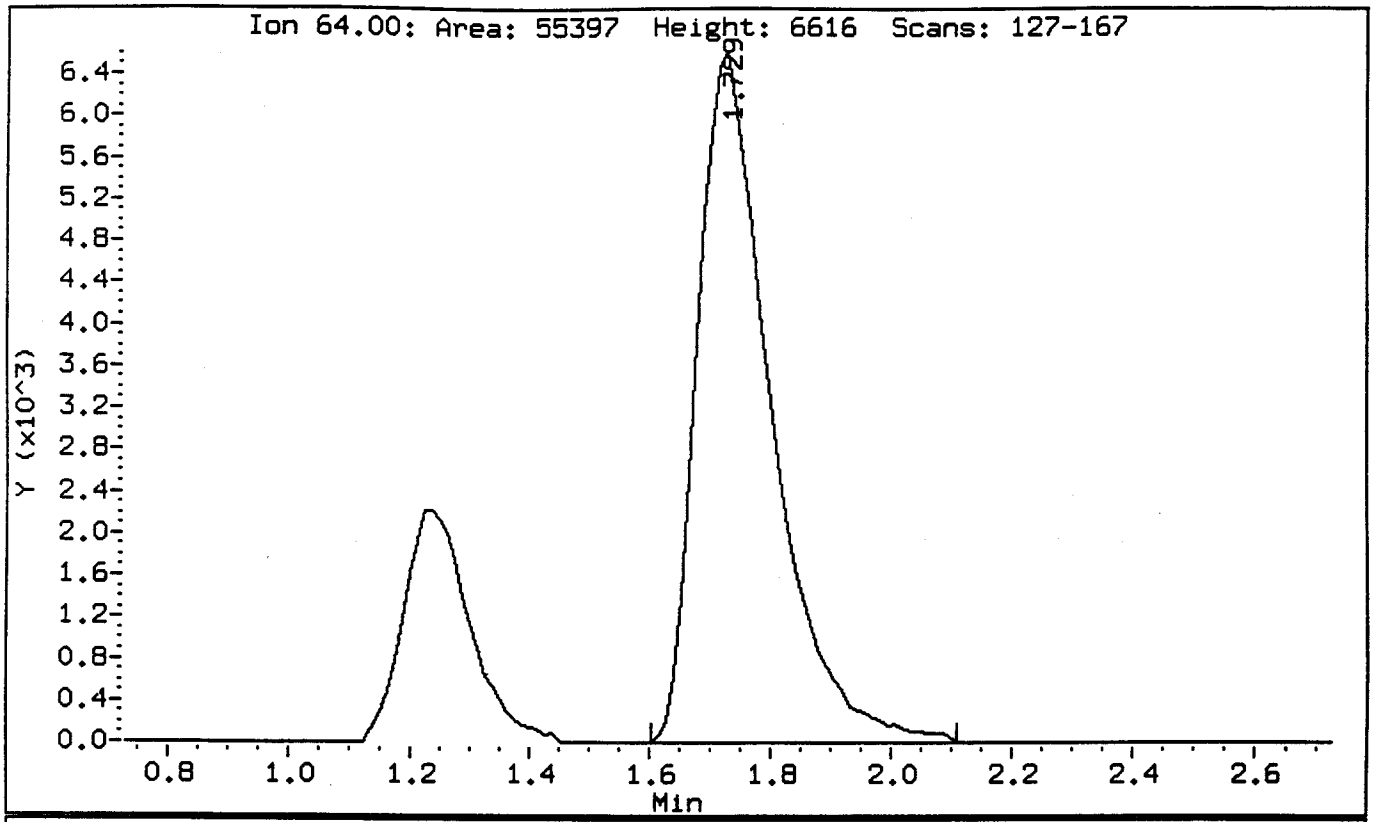
Data File: /chem/f50056.i/BF950215A56.b/CS950215A56.d/CS950215A56.LG
Injection Date: 15-FEB-95 12:30
Instrument: f50056.i
Client Sample ID: VSTD050

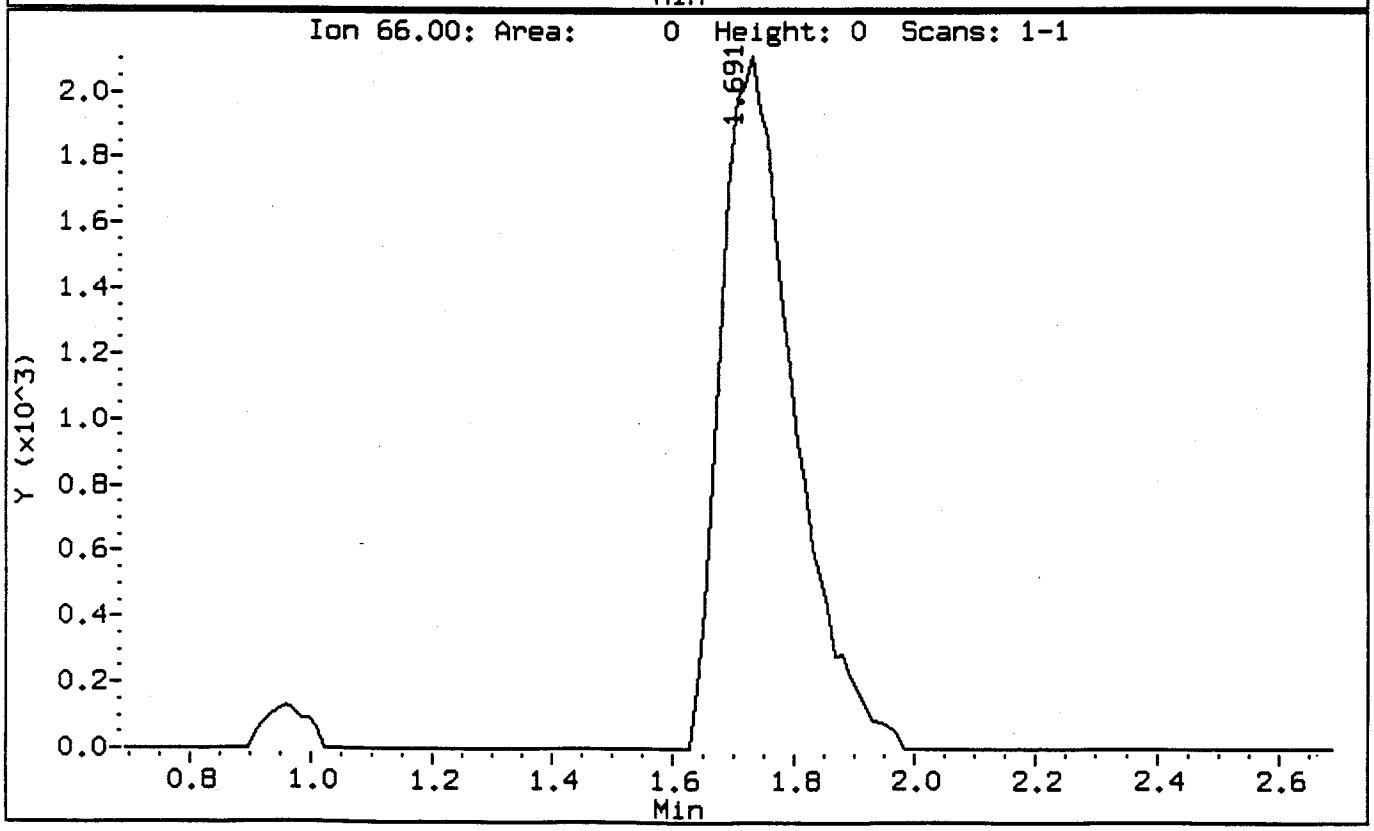
Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BF950215A56.b/CS950215A56.d/CS950215A56.LG
Injection Date: 15-FEB-95 12:30
Instrument: f50056.i
Client Sample ID: VSTD050

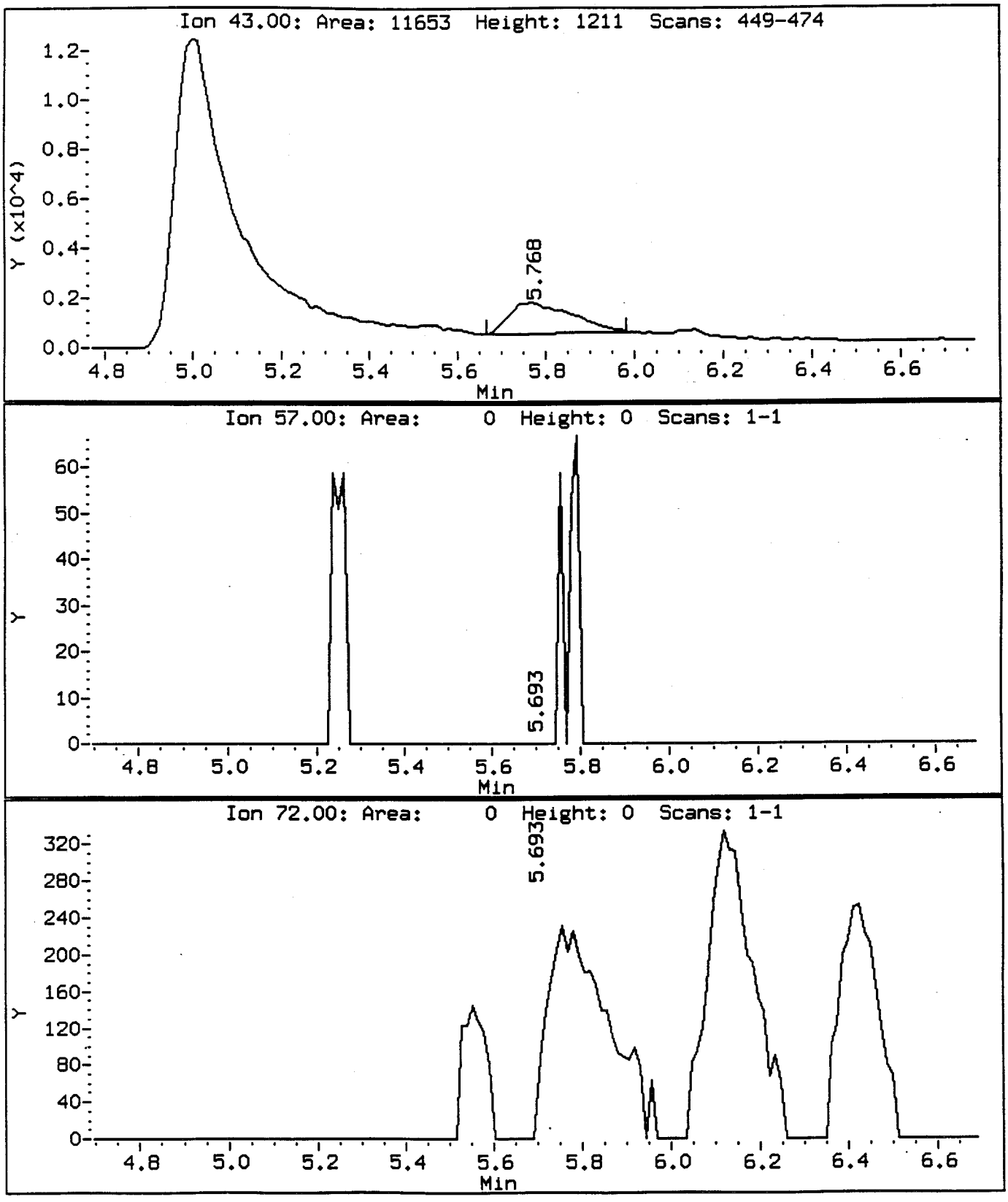
Compound: Chloroethane
CAS Number: 75-00-3





Data File: /chem/f50056.i/BF950215A56.b/CS950215A56.d/CS950215A56.LG
Injection Date: 15-FEB-95 12:30
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: 2-Butanone
CAS Number: 78-93-3



COMPUCHEM LABORATORIES, INC.
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 12:17
TIME TUNE EXPIRES 0:17

SHIFT(S) (A) / (B) — (C)
DATE 2.15.95
LINKER/METHOD NWSW + DiCLF

PREVENTIVE MAINTENANCE None

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, Etc
1		BF950215A56	/	2/15/95	12:17	BFB	—	7008	2ul	2141	LC5SC 42750
2		CS950215A56	/	/ /	12:30	VSTD050	—	—	5mL		TN7 (42493 42492)
3	/	CB950215A56	SL	/ /	13:17	VBLKMH	—	—			
4		CC950215A56	/	/ /	13:50	↓	—	—	↓		
5		CN083867A56	/	/ /	14:45	MW6	30073		1mL		
6	/	CR083869A56	DW/SL	/ /	15:15	MW2			700ul		
7		CR083873A56	/	/ /	15:49	MW17			5mL	↓	
8	/	CR83863BA56	SL	/ /	16:22	MW6			2mL	2011	
9	/	CN083992A56	SL	/ /	16:59	TroBlks			5mL		
10	/	CR83869B56	SL	/ /	17:35	MW2			325mL		
11		~~CR83863B56~~		/ /	:	~~MW6~~			2mL		JR 2/15/95
12				/ /	:						
13				/ /	:						
14				/ /	:						
15				/ /	:						
16				/ /	:						
17				/ /	:						
18				/ /	:						
19				/ /	:						
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						
				/ /	:						JR 2/15/95

VERIFIED
SUPERVISOR APPROVAL [signature] 2/15/95
ENVELOPE NAME

54

30073 00001 SAMPLE DATA PACKAGE

a. B F B Data

For each 12 hour period, for each GC/MS system utilized.

(1) Bar graph spectrum

(2) Mass listing

(3) Reconstructed total ion chromatogram (RIC)

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d

Date : 14-FEB-1995 17:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

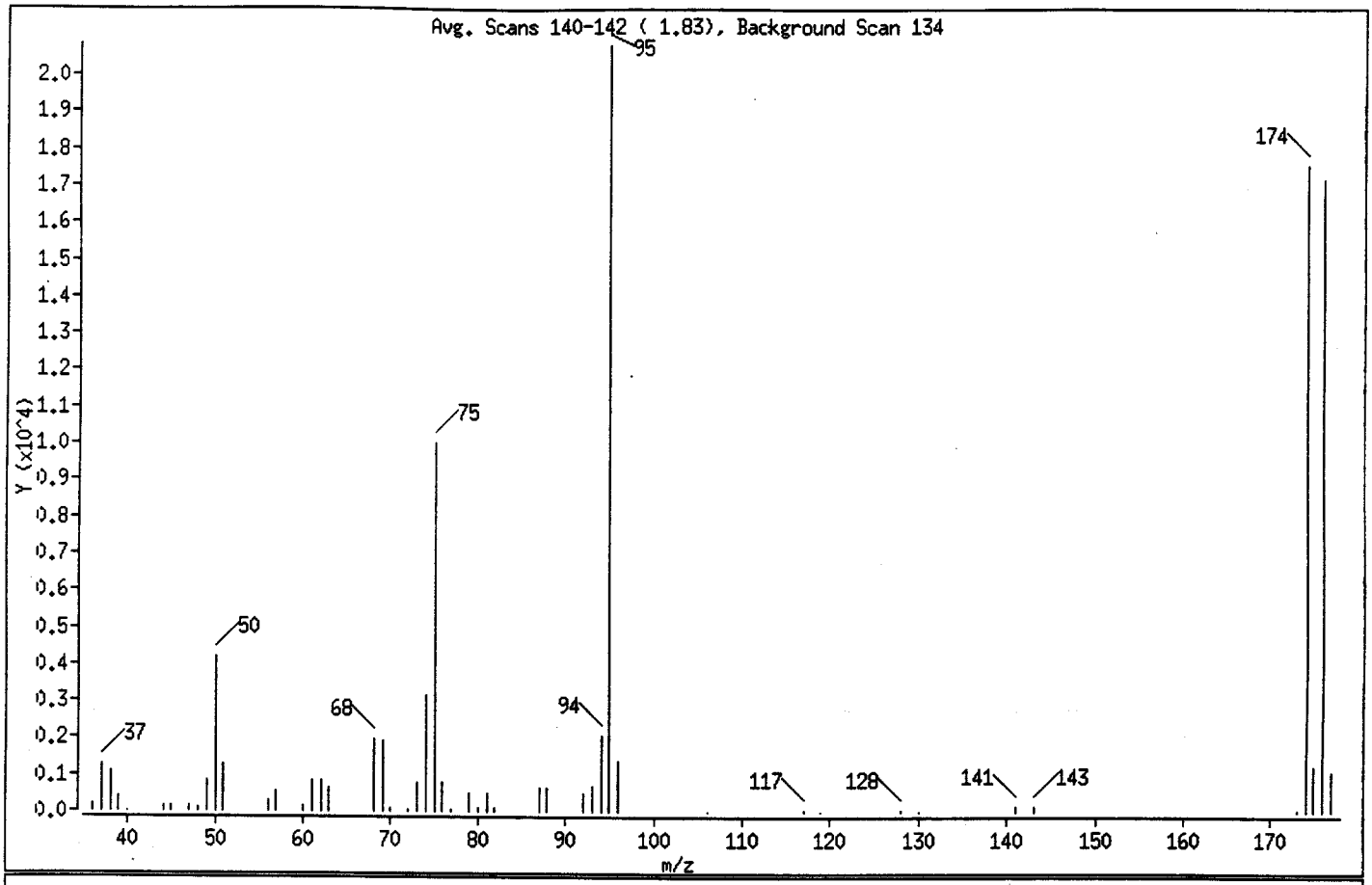
Volume Injected (uL): 2.0

Operator: 2011

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	8.00 - 40.00% of mass 95	20.12
75	30.00 - 66.00% of mass 95	47.87
96	5.00 - 9.00% of mass 95	6.54
173	Less than 2.00% of mass 174	0.22 (0.26)
174	50.00 - 120.00% of mass 95	84.42
175	4.00 - 9.00% of mass 174	5.98 (7.08)
176	93.00 - 101.00% of mass 174	82.53 (97.76)
177	5.00 - 9.00% of mass 176	5.18 (6.27)

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d

Date : 14-FEB-1995 17:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

Data File: BG950214B56.d

Spectrum : Avg. Scans 140-142 (1.83), Background Scan 134

Largest m/z: 95.00

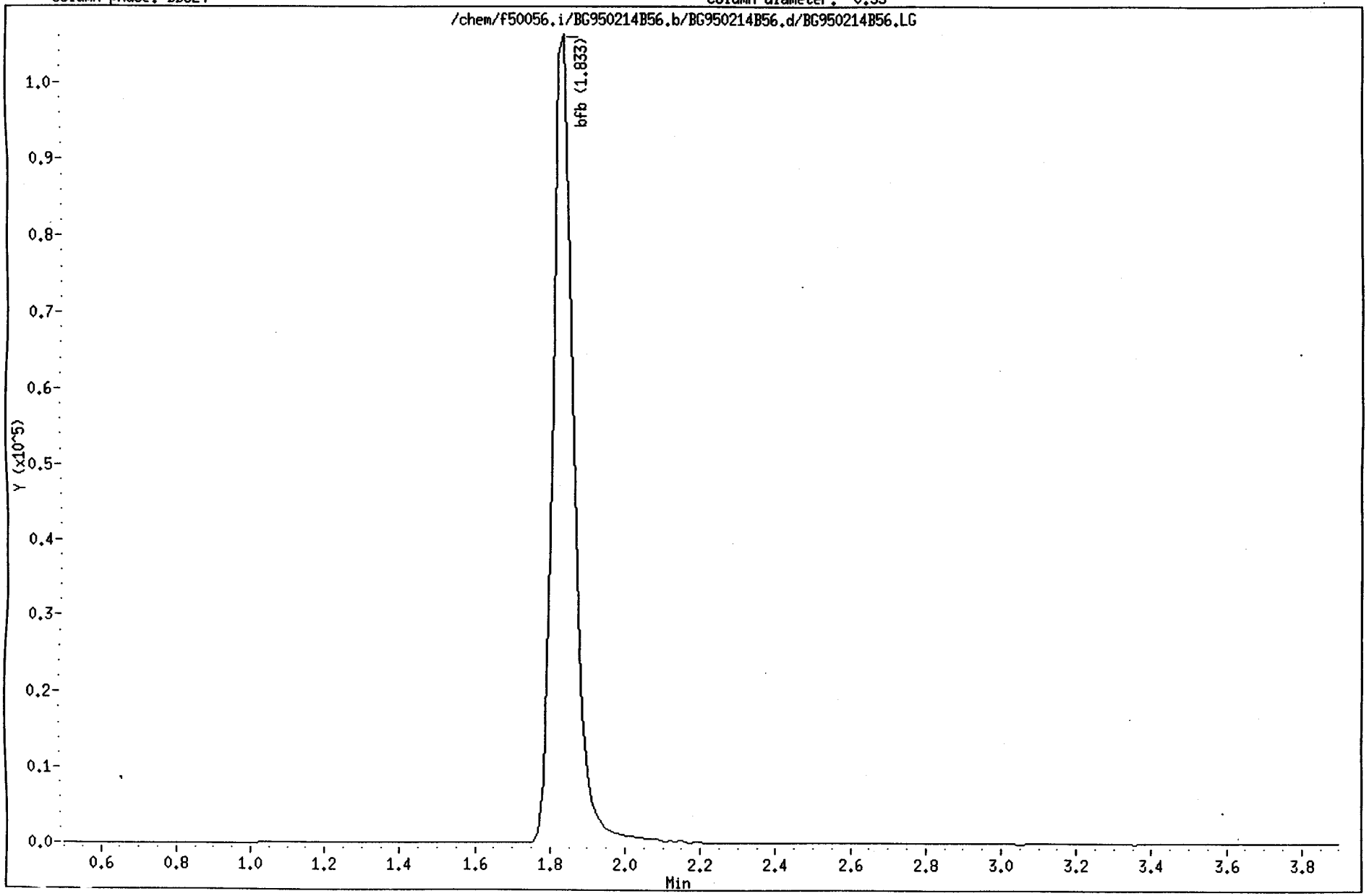
Number of peaks: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	197	57.00	540	77.00	55	117.00	70
37.00	1258	60.00	152	79.00	478	119.00	21
38.00	1077	61.00	861	80.00	108	128.00	36
39.00	387	62.00	856	81.00	478	130.00	17
40.00	18	63.00	631	82.00	77	141.00	144
44.00	124	68.00	1988	87.00	624	143.00	142
45.00	158	69.00	1944	88.00	641	173.00	46
47.00	171	70.00	110	92.00	480	174.00	17592
48.00	98	72.00	49	93.00	713	175.00	1246
49.00	850	73.00	788	94.00	2093	176.00	17200
50.00	4193	74.00	3146	95.00	20840	177.00	1079
51.00	1266	75.00	9978	96.00	1363		
56.00	277	76.00	807	106.00	19		

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d
Date : 14-FEB-1995 17:25
Client ID: BFB
Sample Info:
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



Data File: /chem/f50056.i/BH950214B56.b/BH950214B56.d

Date : 14-FEB-1995 23:00

Client ID: BFB

Instrument: f50056.i

Sample Info:

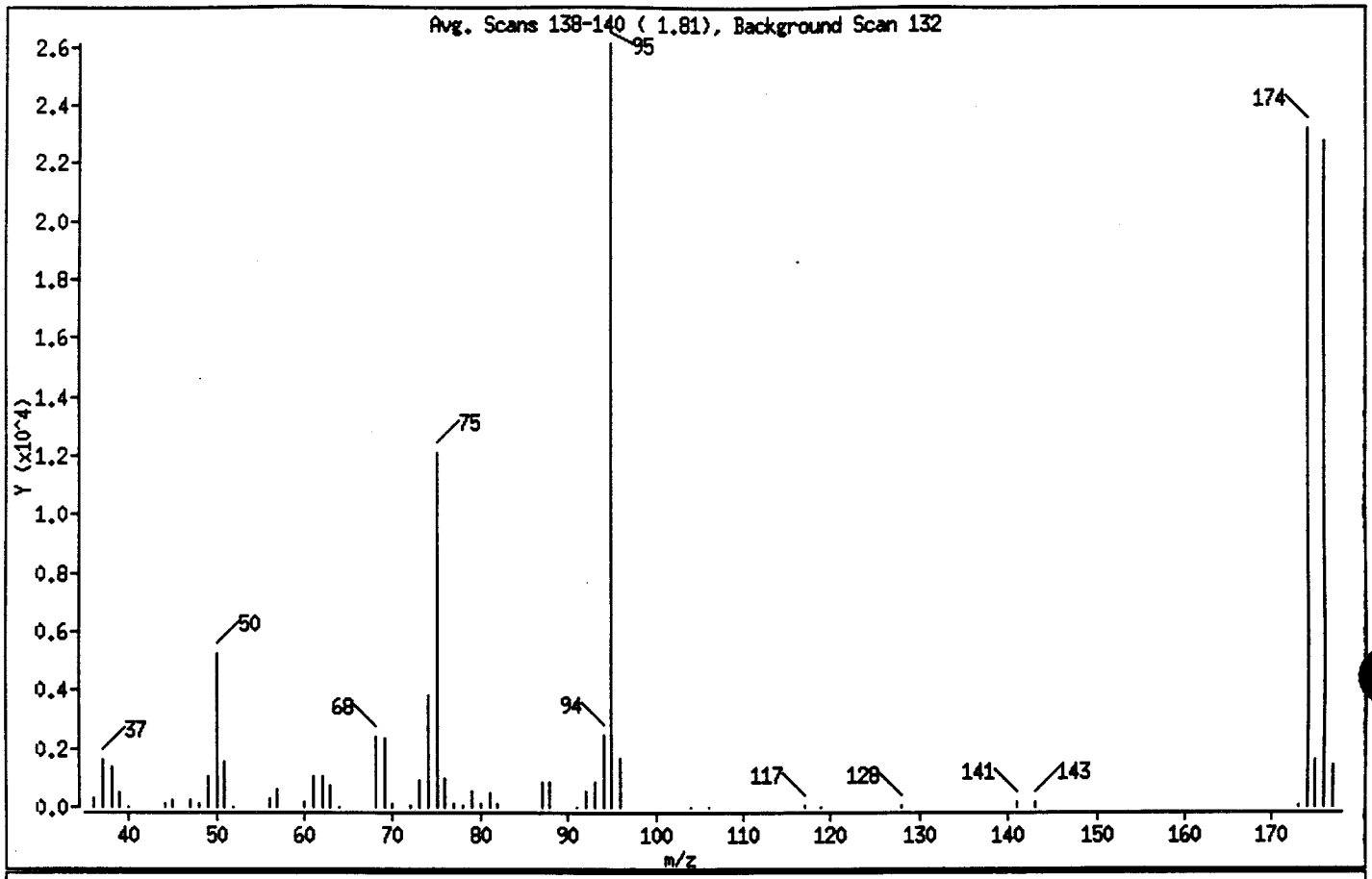
Volume Injected (uL): 2.0

Operator: 1948

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	8.00 - 40.00% of mass 95	20.17
75	30.00 - 66.00% of mass 95	46.40
96	5.00 - 9.00% of mass 95	6.49
173	Less than 2.00% of mass 174	0.31 (0.35)
174	50.00 - 120.00% of mass 95	88.81
175	4.00 - 9.00% of mass 174	6.19 (6.97)
176	93.00 - 101.00% of mass 174	87.13 (98.12)
177	5.00 - 9.00% of mass 176	5.49 (6.30)

Data File: /chem/f50056.i/BH950214B56.b/BH950214B56.d

Date : 14-FEB-1995 23:00

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

Data File: BH950214B56.d

Spectrum : Avg. Scans 138-140 (1.81), Background Scan 132

Largest m/z: 95.00

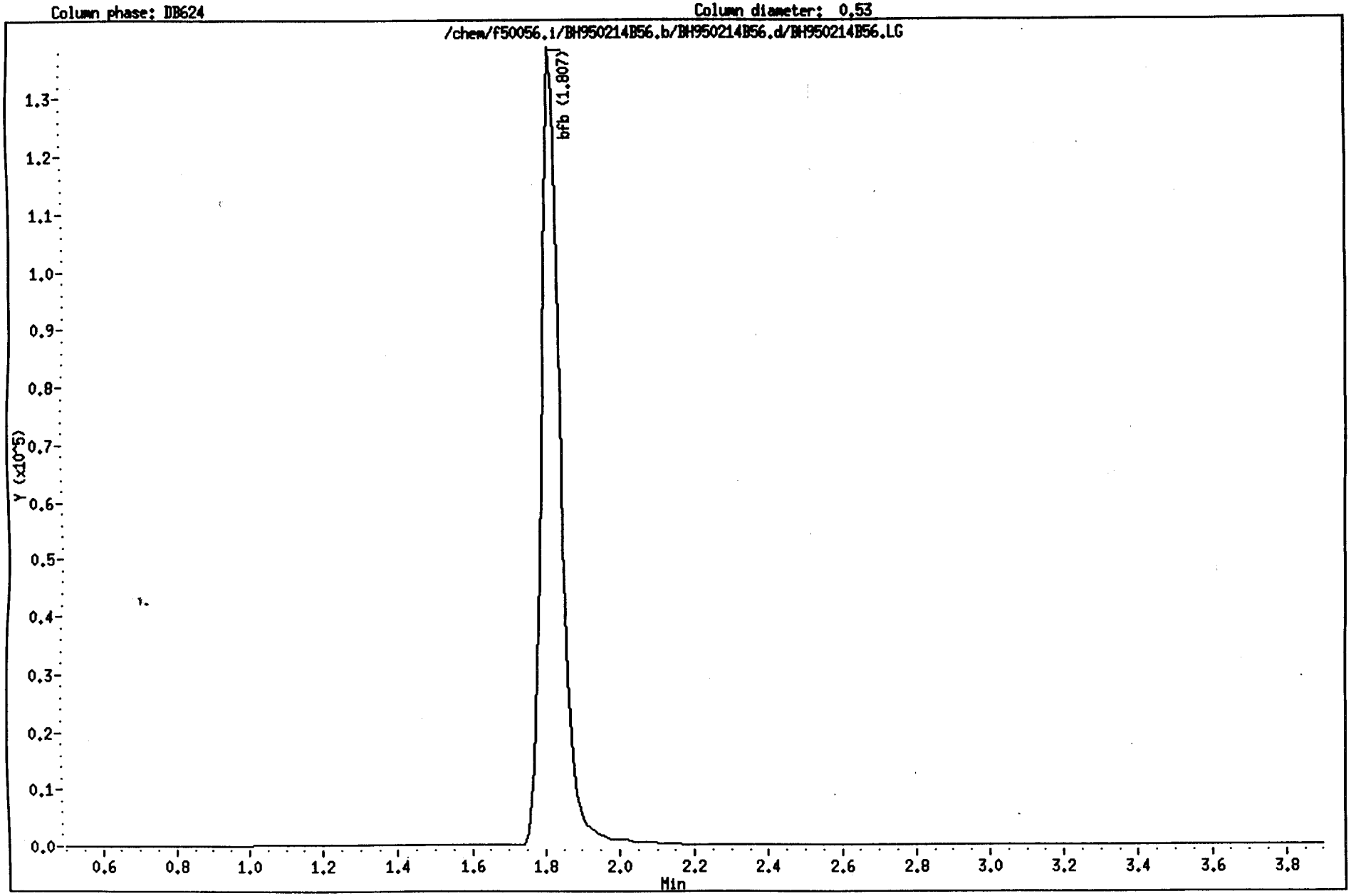
Number of peaks: 54

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	287	57.00	627	77.00	109	104.00	17
37.00	1588	60.00	167	78.00	45	106.00	18
38.00	1360	61.00	1036	79.00	536	117.00	46
39.00	509	62.00	1031	80.00	137	119.00	30
40.00	11	63.00	736	81.00	514	128.00	40
44.00	149	64.00	20	82.00	100	141.00	160
45.00	228	68.00	2424	87.00	852	143.00	155
47.00	241	69.00	2360	88.00	879	173.00	81
48.00	105	70.00	144	91.00	20	174.00	23184
49.00	1062	72.00	77	92.00	557	175.00	1617
50.00	5268	73.00	942	93.00	859	176.00	22752
51.00	1520	74.00	3854	94.00	2502	177.00	1434
52.00	19	75.00	12117	95.00	26112		
56.00	321	76.00	969	96.00	1695		

Data File: /chem/f50056.i/BH950214B56.b/BH950214B56.d
Date : 14-FEB-1995 23:00
Client ID: BFB
Sample Info:
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50056.i

Operator: 1948
Column diameter: 0.53



30073 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950215A56.b/BF950215A56.d

Date : 15-FEB-1995 12:17

Client ID: BFB

Instrument: f50056.i

Sample Info:

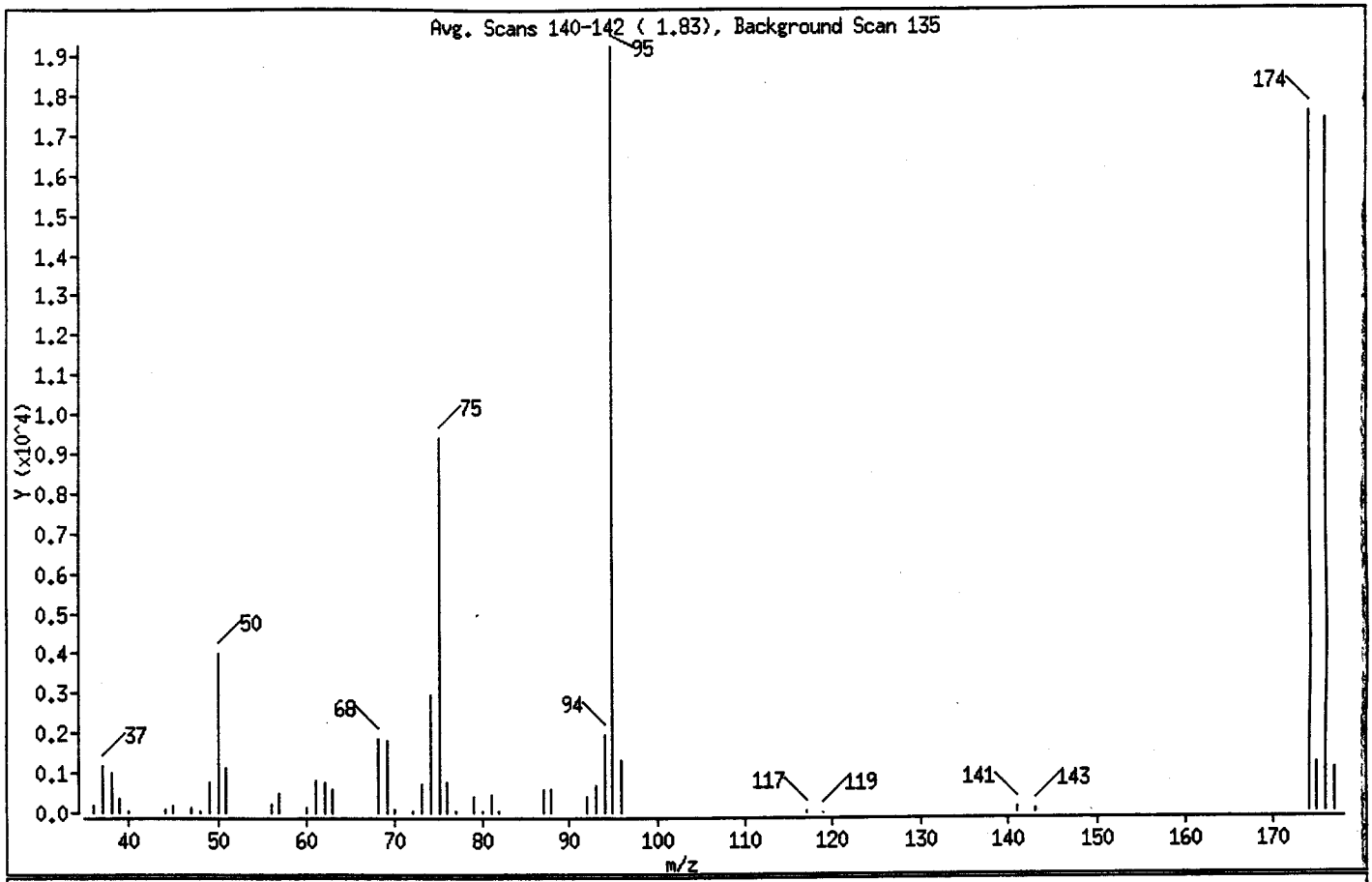
Volume Injected (uL): 2.0

Operator: 2141

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	8.00 - 40.00% of mass 95	20.82
75	30.00 - 66.00% of mass 95	48.93
96	5.00 - 9.00% of mass 95	6.95
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	91.29
175	4.00 - 9.00% of mass 174	6.35 (6.95)
176	93.00 - 101.00% of mass 174	90.34 (98.97)
177	5.00 - 9.00% of mass 176	5.71 (6.32)

Data File: /chem/f50056.i/BF950215A56.b/BF950215A56.d

Date : 15-FEB-1995 12:17

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

Data File: BF950215A56.d

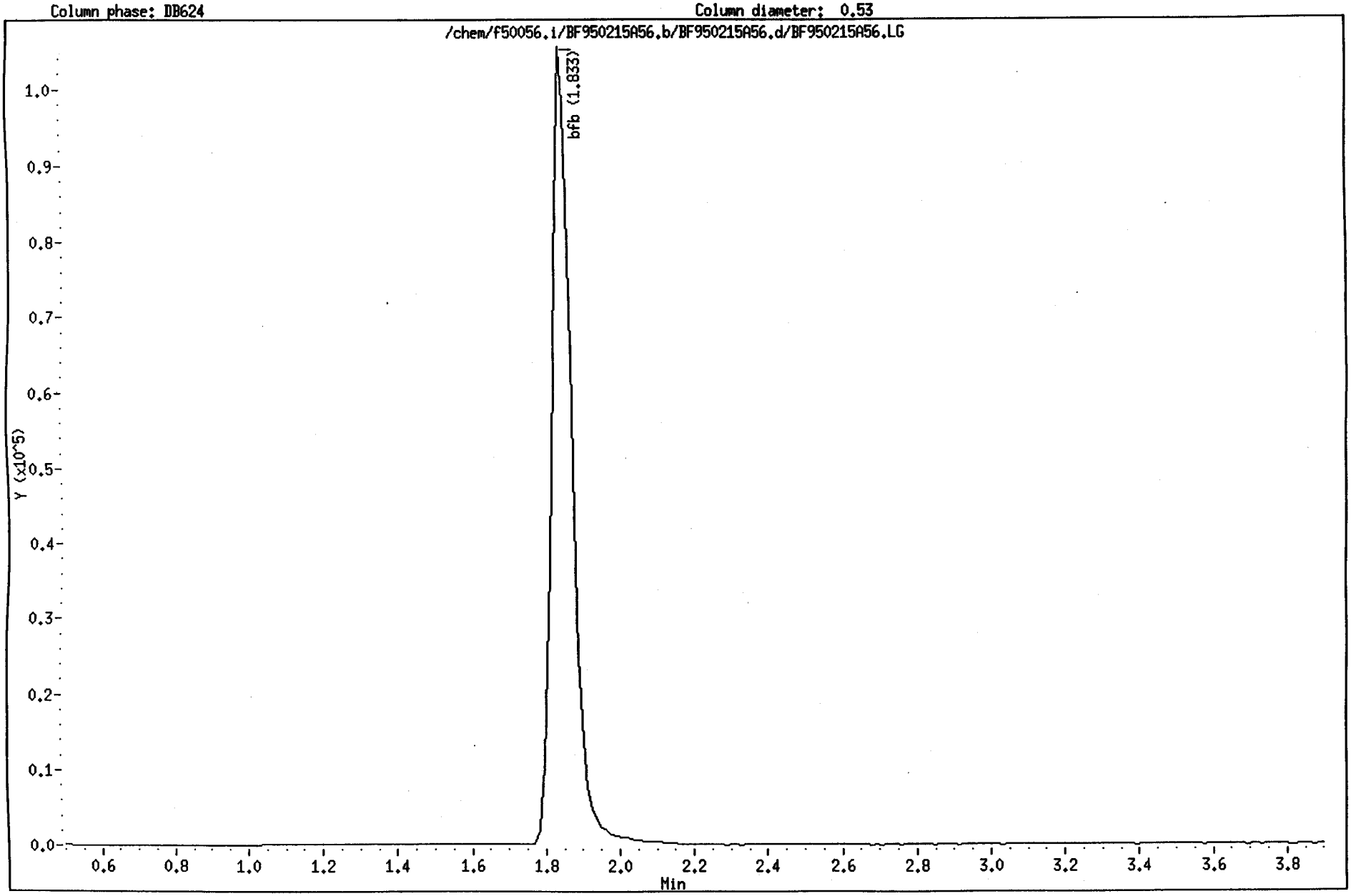
Spectrum : Avg. Scans 140-142 (1.83), Background Scan 135

Largest m/z: 95.00

Number of peaks: 46

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	171	56.00	248	75.00	9434	95.00	19280
37.00	1180	57.00	496	76.00	779	96.00	1340
38.00	1027	60.00	127	77.00	68	117.00	40
39.00	385	61.00	807	79.00	427	119.00	22
40.00	23	62.00	785	80.00	58	141.00	120
44.00	97	63.00	596	81.00	457	143.00	110
45.00	160	68.00	1854	82.00	37	174.00	17600
47.00	140	69.00	1845	87.00	584	175.00	1224
48.00	49	70.00	101	88.00	583	176.00	17416
49.00	794	72.00	40	92.00	427	177.00	1101
50.00	4014	73.00	725	93.00	691		
51.00	1164	74.00	2964	94.00	1966		

Data File: /chem/f50056.i/BF950215A56.b/BF950215A56.d
Date : 15-FEB-1995 12:17
Client ID: BFB
Instrument: f50056.i
Sample Info:
Volume Injected (uL): 2.0
Operator: 2141
Column phase: DB624
Column diameter: 0.53



Data File: /chem/f50056.i/BF950215B56.b/BF950215B56.d

Date : 15-FEB-1995 18:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

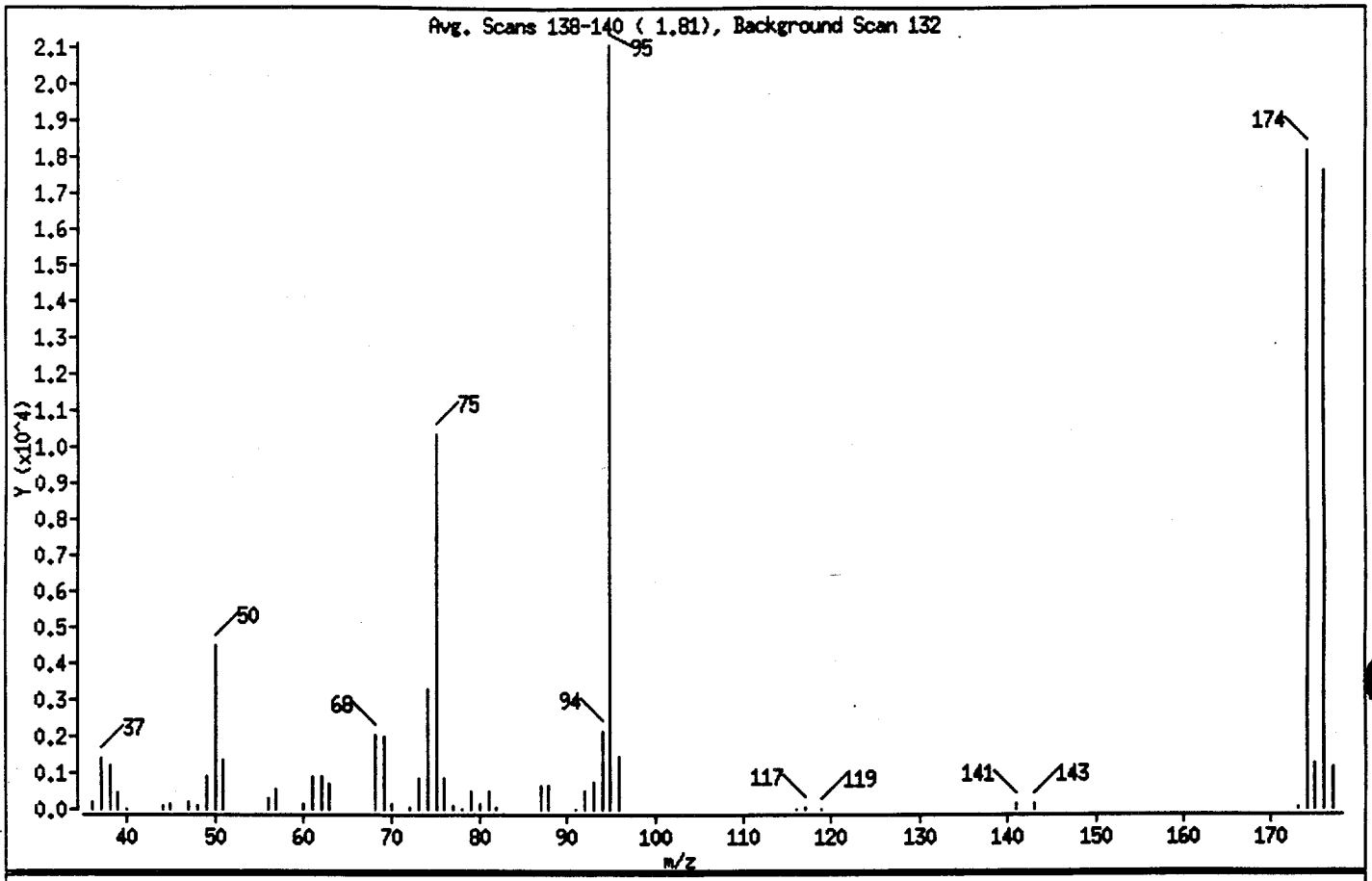
Volume Injected (uL): 2.0

Operator: 2141

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	8.00 - 40.00% of mass 95	21.28
75	30.00 - 66.00% of mass 95	49.04
96	5.00 - 9.00% of mass 95	6.76
173	Less than 2.00% of mass 174	0.30 (0.35)
174	50.00 - 120.00% of mass 95	85.98
175	4.00 - 9.00% of mass 174	5.95 (6.91)
176	93.00 - 101.00% of mass 174	83.32 (96.91)
177	5.00 - 9.00% of mass 176	5.43 (6.52)

Data File: /chem/f50056.i/BF950215B56.b/BF950215B56.d

Date : 15-FEB-1995 18:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

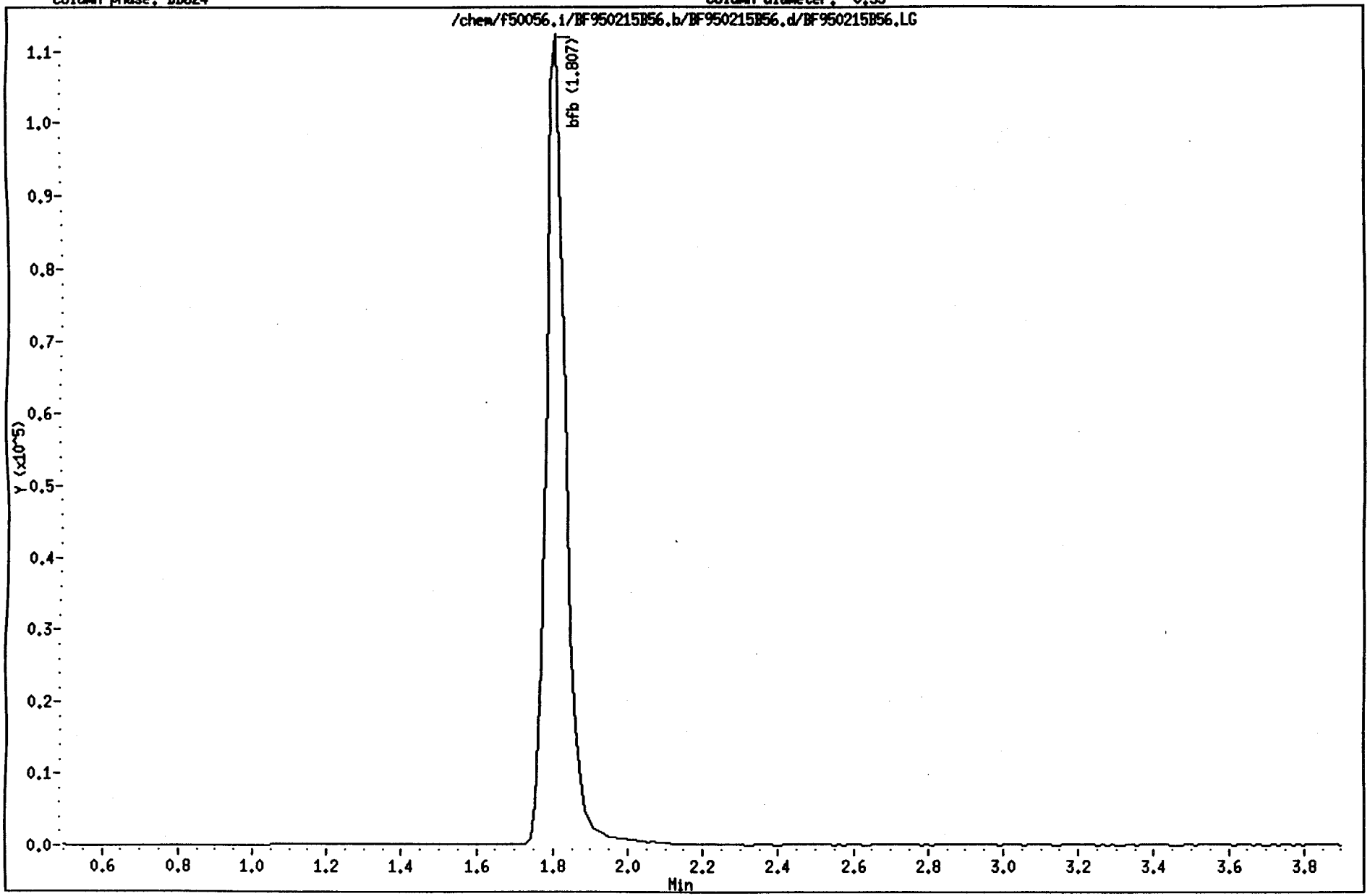
Data File: BF950215B56.d
Spectrum : Avg. Scans 138-140 (1.81), Background Scan 132
Largest m/z: 95.00
Number of peaks: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	220	57.00	575	77.00	97	96.00	1428
37.00	1376	60.00	153	78.00	18	116.00	16
38.00	1210	61.00	907	79.00	497	117.00	68
39.00	431	62.00	920	80.00	132	119.00	20
40.00	14	63.00	683	81.00	512	141.00	130
44.00	116	68.00	2069	82.00	55	143.00	152
45.00	166	69.00	1998	87.00	643	173.00	64
47.00	195	70.00	134	88.00	669	174.00	18144
48.00	110	72.00	52	91.00	22	175.00	1255
49.00	893	73.00	852	92.00	496	176.00	17584
50.00	4492	74.00	3317	93.00	733	177.00	1146
51.00	1354	75.00	10352	94.00	2152		
56.00	293	76.00	867	95.00	21104		

Data File: /chem/f50056.i/BF950215B56.b/BF950215B56.d
Date : 15-FEB-1995 18:25
Client ID: BFB
Sample Info:
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50056.i

Operator: 2141
Column diameter: 0.53



30073 00001 SAMPLE DATA PACKAGE

b. Blank Data

In chronological order.

(1) Form I VOA
Blank's Organic Analysis Data Sheet (OADS)

(2) Form I VOA-TIC
Blank's Tentatively Identified Compounds; even if none found.

(3) RIC and quantitation report

(4) TCL spectra with lab generated standard.

(5) GC/MS library search spectra for TICs

(6) Quantitation / calculation of TICs

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.73	16	J
2.					
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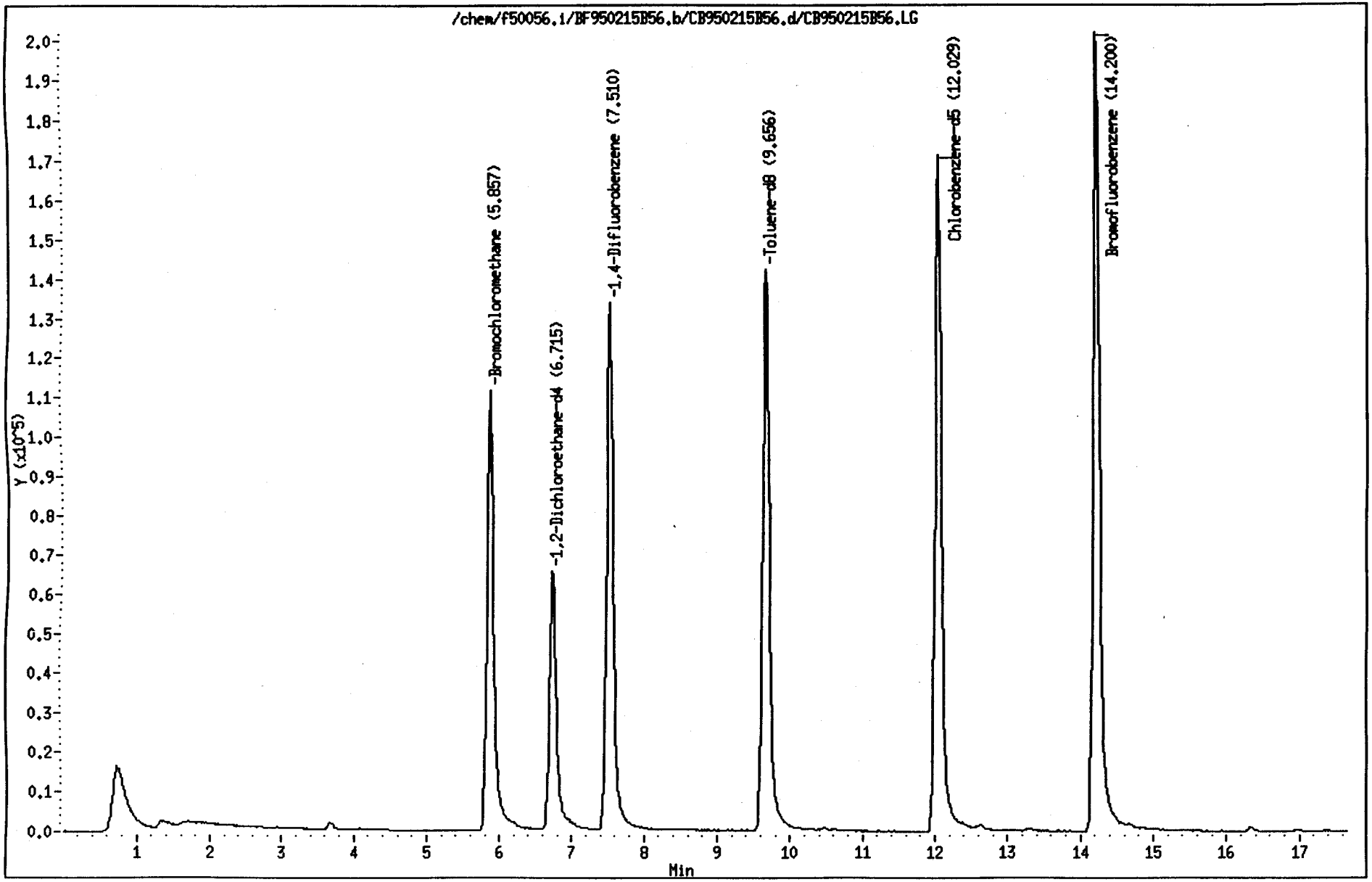
27.					
28.					
29.					
30.					

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d
Date : 15-FEB-1995 19:18
Client ID: VBLKJD
Instrument: f50056.i
Sample Info:
Purge Volume: 5.0
Operator: 2011
Column phase: DB624
Column diameter: 0.53



30073 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d
Report Date: 20-Feb-1995 12:26

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CB950215B56.d
Lab Smp Id: VBLKJD Client Smp ID: VBLKJD
Inj Date : 15-FEB-1995 19:18
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.857	5.844	(1.000)	92571	250.0	
*	2 1,4-Difluorobenzene	114.00	7.510	7.498	(1.000)	337927	250.0	
*	3 Chlorobenzene-d5	117.00	12.029	12.017	(1.000)	354446	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.703	(1.147)	161268	245.9	49.19
$	5 Toluene-d8	98.00	9.656	9.644	(0.803)	303236	255.1	51.01
$	6 Bromofluorobenzene	95.00	14.200	14.188	(1.180)	265594	228.6	45.72
	7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
	10 Bromomethane	94.00		1.565	Compound Not Detected.			
	11 Chloroethane	64.00		1.704	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
	13 Acetone	43.00		3.156	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
	15 Methylene Chloride	84.00		3.661	Compound Not Detected.			
	16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
	19 2-Butanone	43.00		5.731	Compound Not Detected.			
	20 Chloroform	83.00		6.097	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
	23 Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d
Report Date: 20-Feb-1995 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
25	Trichloroethene	130.00		7.763		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.609		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
30	Toluene	91.00		9.745		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.590		Compound Not Detected.		
34	2-Hexanone	43.00		11.146		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.083		Compound Not Detected.		
36	Chlorobenzene	112.00		12.054		Compound Not Detected.		
37	Ethylbenzene	106.00		12.357		Compound Not Detected.		
38	m,p-Xylene	106.00		12.585		Compound Not Detected.		
39	o-Xylene	106.00		13.254		Compound Not Detected.		
40	Styrene	104.00		13.304		Compound Not Detected.		
41	Bromoform	173.00		13.531		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.254		Compound Not Detected.		

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d

Date : 15-FEB-1995 19:18

Client ID: VBLKJD

Instrument: f50056.i

Sample Info:

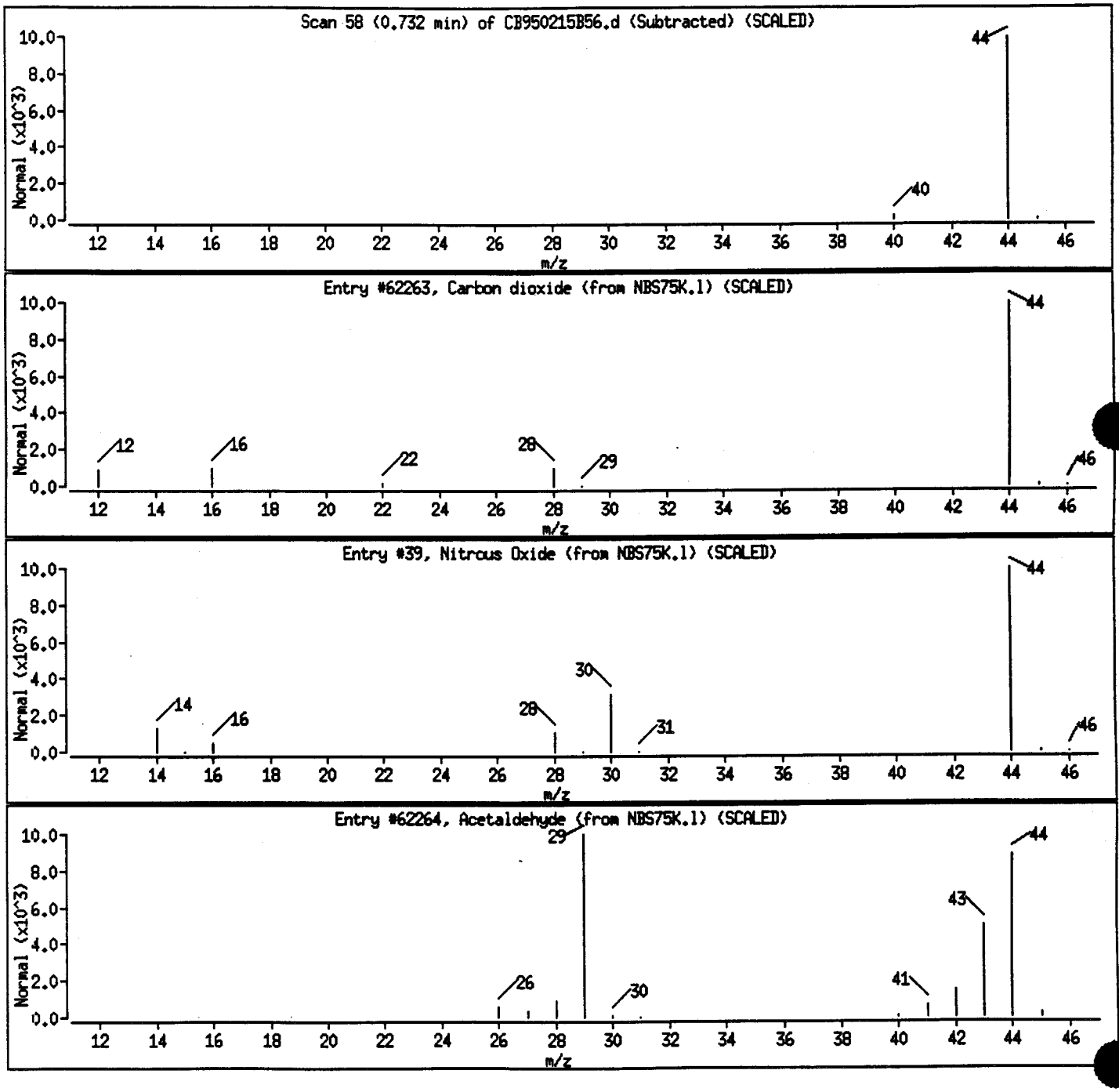
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.1	62263	3	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.1	39	3	N2O	44
Acetaldehyde	75-07-0	NBS75K.1	62264	2	C2H4O	44



QUALITY ASSURANCE NOTICE

CompuChem ID# CB9502150S6
Client ID# VBLKJD
Instrument Blank ID# CB9502150S6
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 58 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / FF2

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKMH

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CC950215A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKMH

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CC950215A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKMH

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKMH

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CC950215A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.72	14	J
2.					
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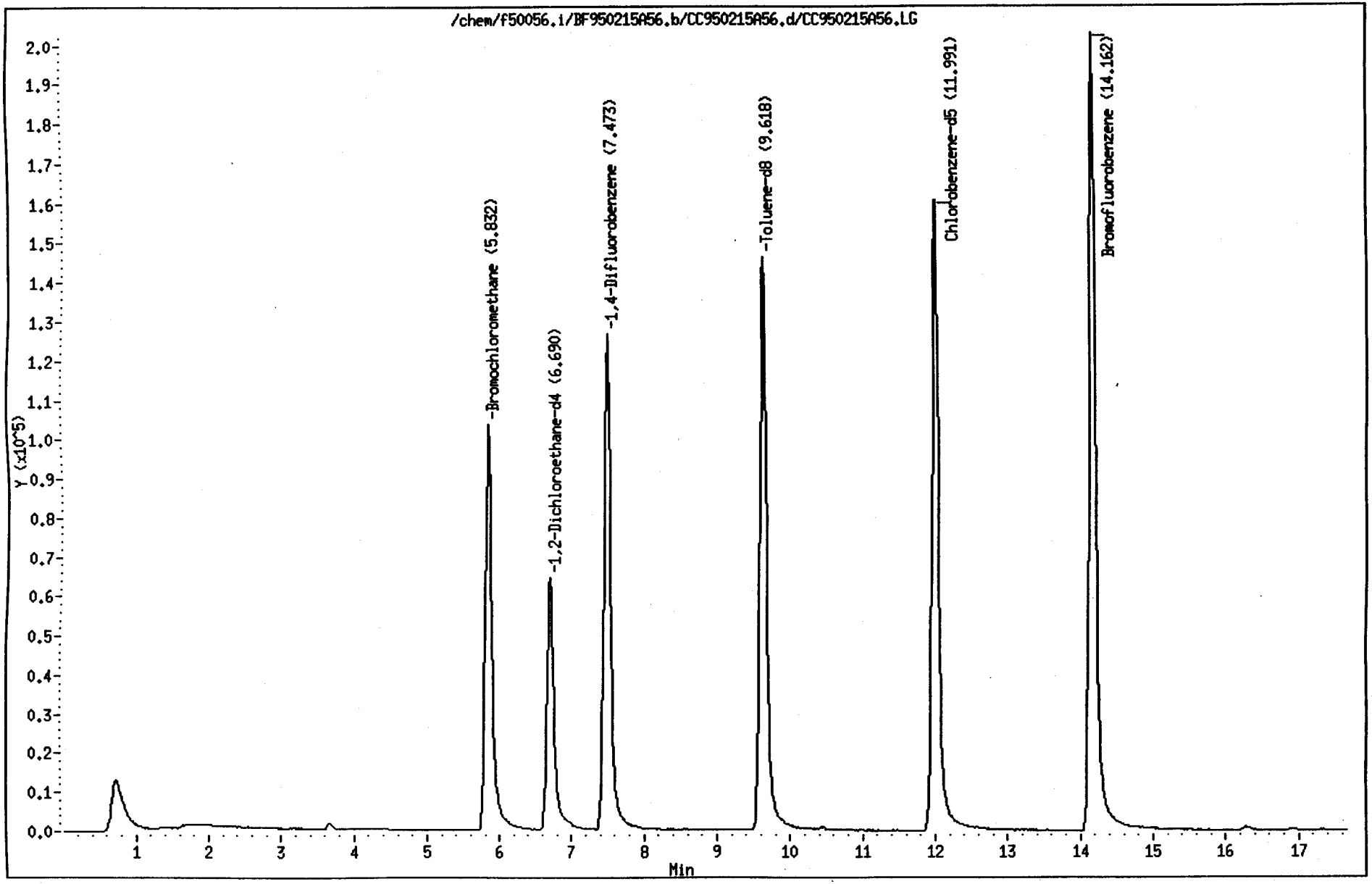
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50056.i/BF950215A56.b/CC950215A56.d
Date : 15-FEB-1995 13:50
Client ID: VBLKMH
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2141
Column diameter: 0.53



30073 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950215A56.b/CC950215A56.d
Report Date: 20-Feb-1995 11:29

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215A56.b/CC950215A56.d
Lab Smp Id: VBLKMH Client Smp ID: VBLKMH
Inj Date : 15-FEB-1995 13:50
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 10:24 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 12:30 Cal File: CS950215A56.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.832	5.869	(1.000)	85629	250.0	
* 2	1,4-Difluorobenzene	114.00	7.473	7.523	(1.000)	321148	250.0	
* 3	Chlorobenzene-d5	117.00	11.991	12.029	(1.000)	337671	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.690	6.728	(1.147)	160499	251.3	50.27
$ 5	Toluene-d8	98.00	9.618	9.669	(0.802)	320604	229.2	45.84
$ 6	Bromofluorobenzene	95.00	14.162	14.200	(1.181)	270899	233.7	46.73
7	Dichlorodiflouromethane	85.00		0.959	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00		1.729	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		2.840	Compound Not Detected.			
13	Acetone	43.00		3.181	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00		3.686	Compound Not Detected.			
16	trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.670	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.554	Compound Not Detected.			
19	2-Butanone	43.00		5.768	Compound Not Detected.			
20	Chloroform	83.00		6.122	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.198	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.412	Compound Not Detected.			
23	Benzene	78.00		6.740	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215A56.b/CC950215A56.d
Report Date: 20-Feb-1995 11:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.841		Compound Not Detected.		
25	Trichloroethene	130.00		7.788		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.091		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.621		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.328		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.732		Compound Not Detected.		
30	Toluene	91.00		9.770		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.300		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.540		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.603		Compound Not Detected.		
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.108		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.370		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.266		Compound Not Detected.		
40	Styrene	104.00		13.329		Compound Not Detected.		
41	Bromoform	173.00		13.544		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.680		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.266		Compound Not Detected.		

Data File: /chem/f50056.i/BF950215A56.b/CC950215A56.d

Date : 15-FEB-1995 13:50

Client ID: VBLKMH

Instrument: f50056.i

Sample Info:

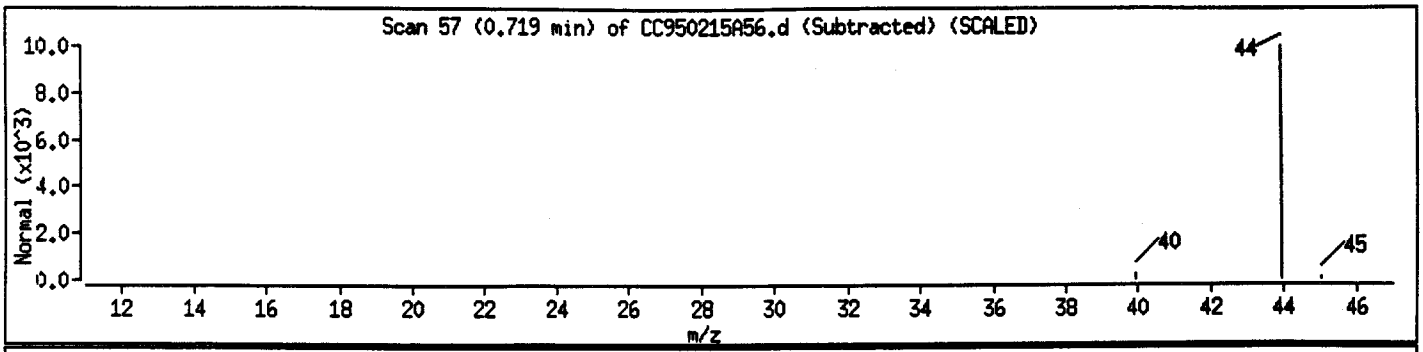
Purge Volume: 5.0

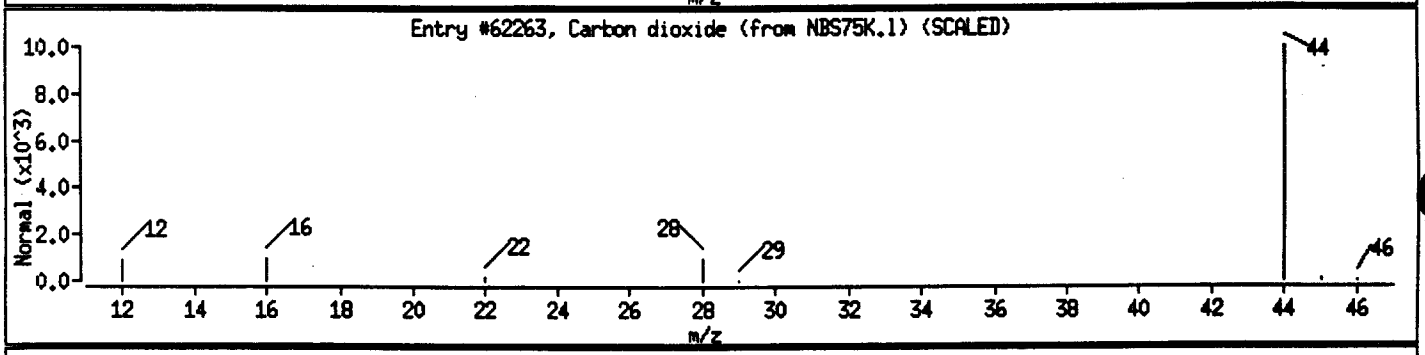
Operator: 2141

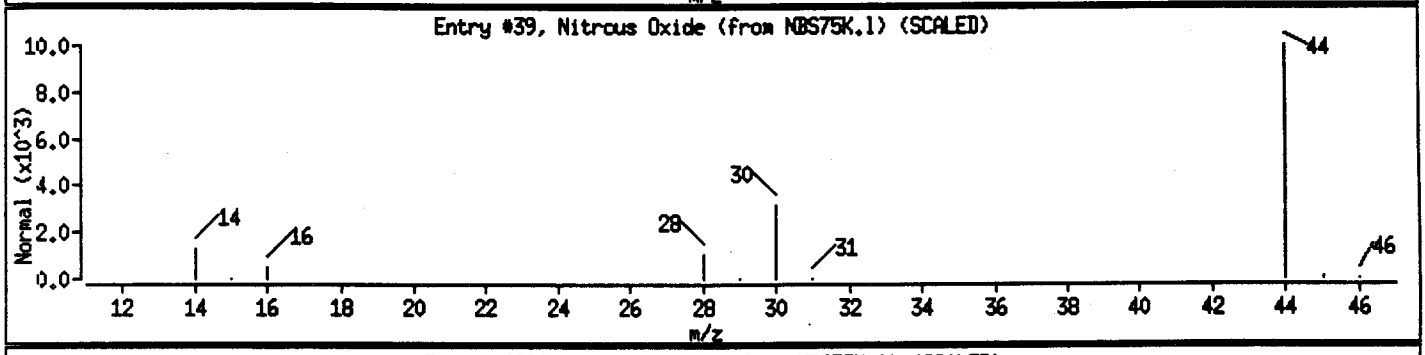
Column phase: DB624

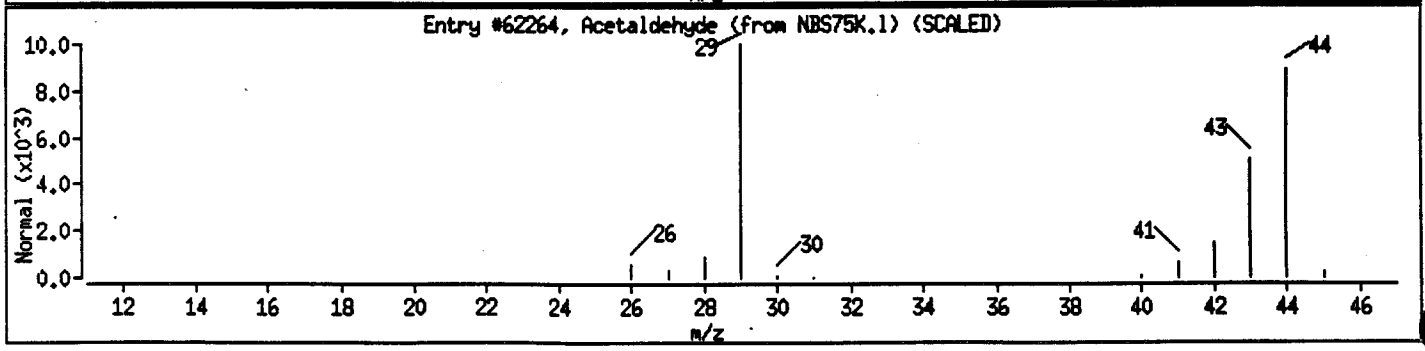
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.1	62263	3	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.1	39	3	N2O	44
Acetaldehyde	75-07-0	NBS75K.1	62264	2	C2H4O	44









QUALITY ASSURANCE NOTICE

CompuChem ID# CC950215A56
Client ID# VBLKMH
Instrument Blank ID# CB950215A56
Case# _____

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 57 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / 983

Date 2.20 95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKVN

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215C56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKVN

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215C56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKVN

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: VBLKVN

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215C56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	100	J
2.					
3.					
4.					
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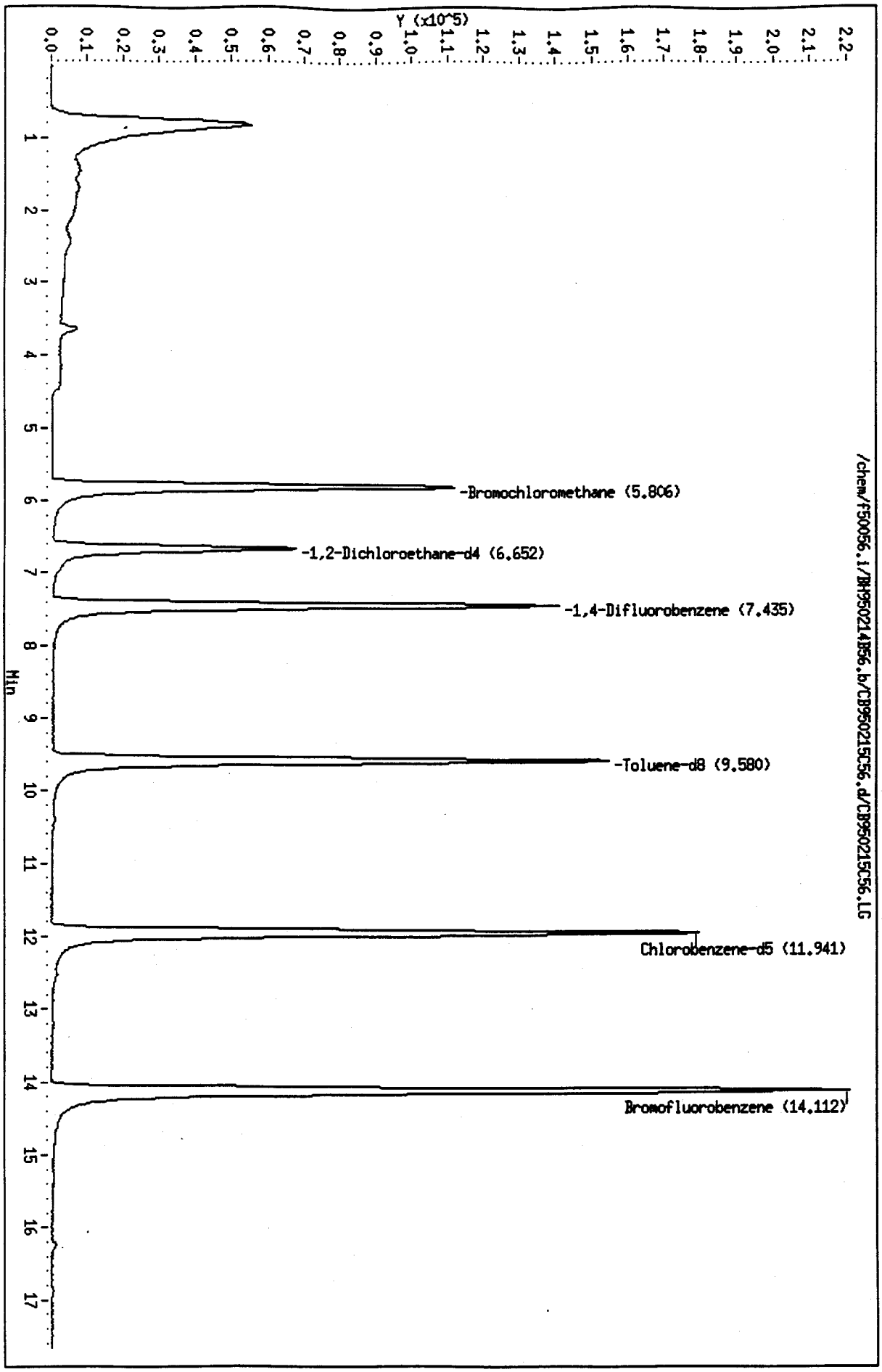
25.					
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BH950214B56.b/CB950215C56.d
Date : 15-FEB-1995 00:45
Client ID: VBLKVN
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BH950214B56.b/CB950215C56.d/CB950215C56.LG
-Bromochloromethane (5.806)
-1,2-Dichloroethane-d4 (6.652)
-1,4-Difluorobenzene (7.435)
-Toluene-d8 (9.580)
Chlorobenzene-d5 (11.941)
Bromofluorobenzene (14.112)

Data File: /chem/f50056.i/BH950214B56.b/CB950215C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CB950215C56.d
Lab Smp Id: VBLKVN Client Smp ID: VBLKVN
Inj Date : 15-FEB-1995 00:45
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.794	5.882	(1.000)	95043	250.0	
* 2	1,4-Difluorobenzene	114.00	7.435	7.536	(1.000)	367208	250.0	
* 3	Chlorobenzene-d5	117.00	11.941	12.042	(1.000)	381478	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.652	6.740	(1.148)	168578	256.4	51.28
$ 5	Toluene-d8	98.00	9.580	9.669	(0.802)	340320	241.0	48.20
$ 6	Bromofluorobenzene	95.00	14.112	14.213	(1.182)	302028	236.0	47.19
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00		1.729	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		2.853	Compound Not Detected.			
13	Acetone	43.00		3.193	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00	3.648	3.698	(0.630)	6485	11.84	2.37(a)
16	trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.683	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.567	Compound Not Detected.			
19	2-Butanone	43.00		5.781	Compound Not Detected.			
20	Chloroform	83.00		6.135	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.210	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
23	Benzene	78.00		6.753	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CB950215C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.854		Compound Not Detected.		
25	Trichloroethene	130.00		7.801		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.104		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.341		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.745		Compound Not Detected.		
30	Toluene	91.00		9.782		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.313		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.552		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.616		Compound Not Detected.		
34	2-Hexanone	43.00		11.171		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.693		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BH950214B56.b/CB950215C56.d

Date : 15-FEB-1995 00:45

Client ID: VBLKVN

Instrument: f50056.i

Sample Info:

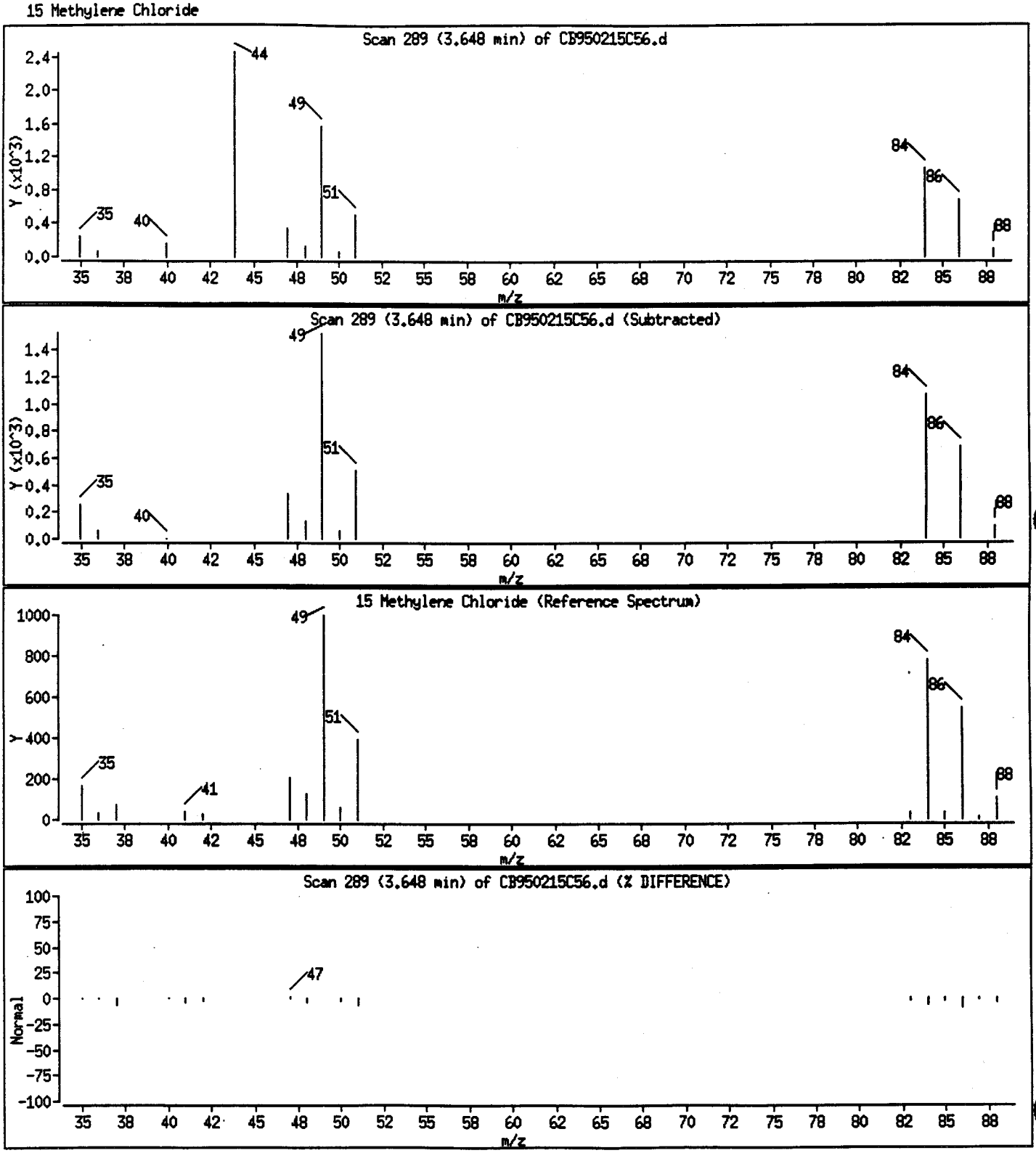
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BH950214B56.b/CB950215C56.d

Date : 15-FEB-1995 00:45

Client ID: VBLKVN

Instrument: f50056.i

Sample Info:

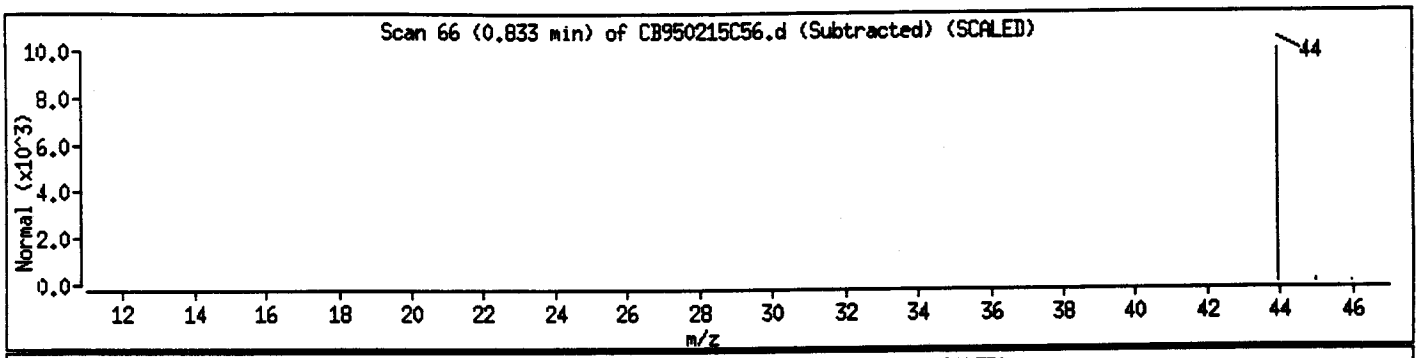
Purge Volume: 5.0

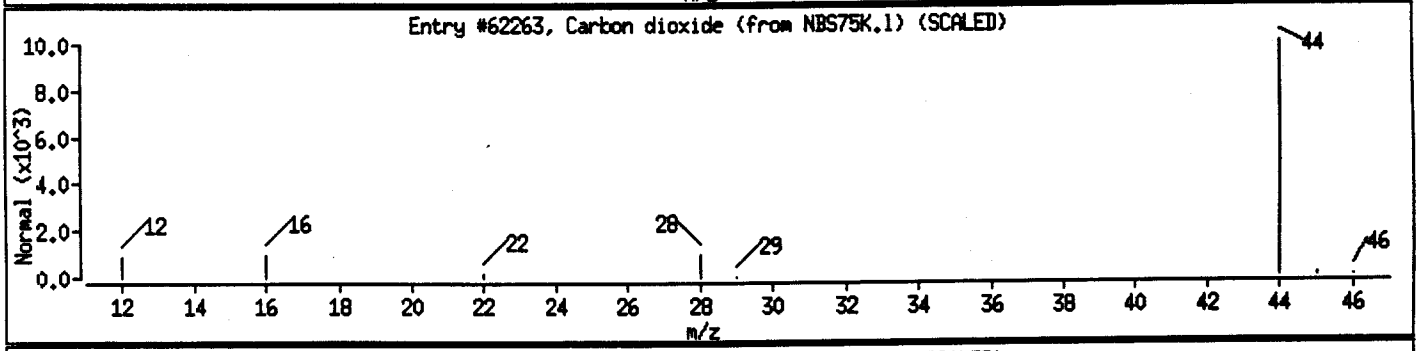
Operator: 1948

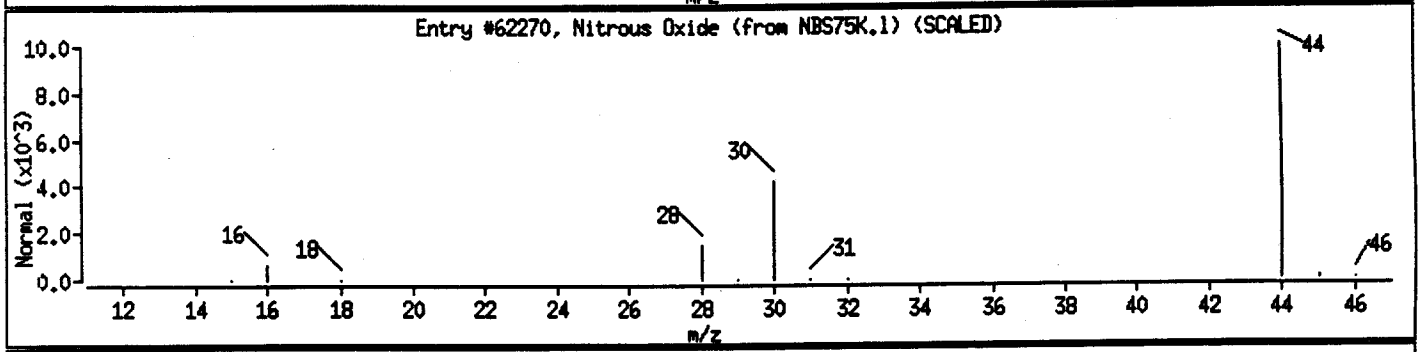
Column phase: DB624

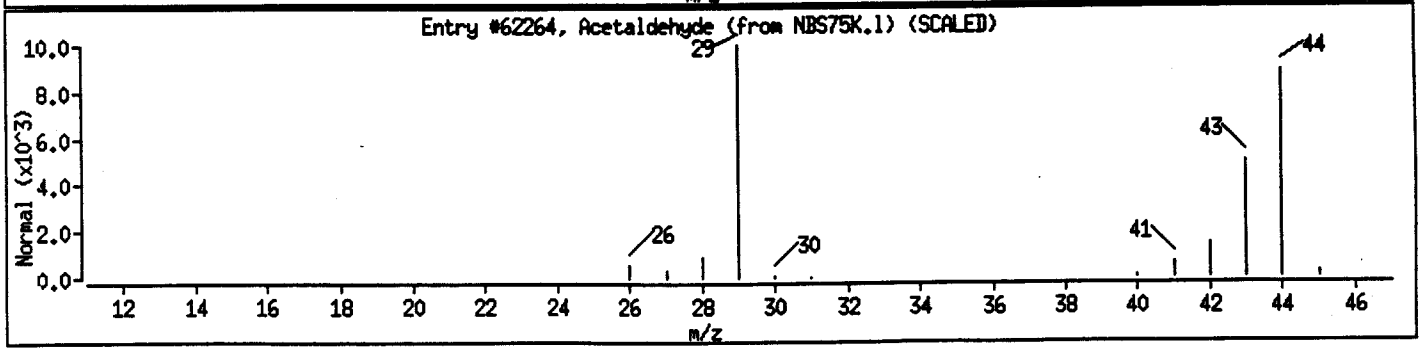
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	62263	5	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.l	62270	3	N2O	44
Acetaldehyde	75-07-0	NBS75K.l	62264	2	C2H4O	44









c. Matrix Spike Data

(1) Form I VOA

Matrix Spike's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683842

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083842C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	70	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	49	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	50	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	39	
108-90-7	Chlorobenzene	46	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683842

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083842C56.D

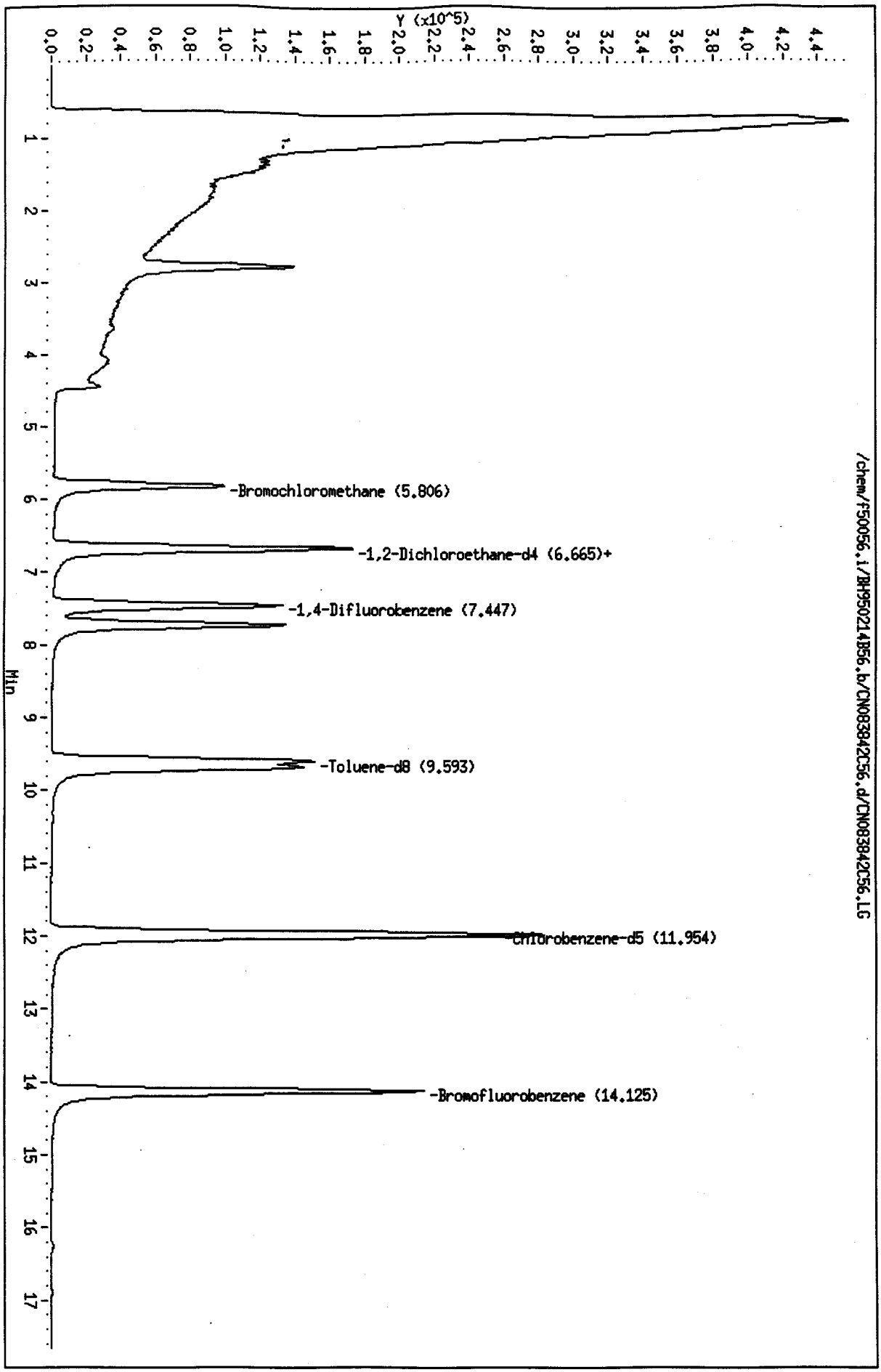
Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U


Data File: /chem/f50056.i/BH950214B56.b/CN083842C56.d
Date : 15-FEB-1995 03:09
Client ID: MW1MS
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
/chem/f50056.i/BH950214B56.b/CN083842C56.d/CN083842C56.LG
Y (x10^5)
Min
-Bromochloromethane (5.806)
-1,2-Dichloroethane-d4 (6.665)+
-1,4-Difluorobenzene (7.447)
-Toluene-d8 (9.593)
Chlorobenzene-d5 (11.954)
-Bromofluorobenzene (14.125)

Data File: /chem/f50056.i/BH950214B56.b/CN083842C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083842C56.d
Lab Smp Id: 683842 Client Smp ID: MW1MS
Inj Date : 15-FEB-1995 03:09
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.794	5.882	(1.000)	84199	250.0	
* 2	1,4-Difluorobenzene	114.00	7.447	7.536	(1.000)	338231	250.0	
* 3	Chlorobenzene-d5	117.00	11.954	12.042	(1.000)	347634	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.652	6.740	(1.148)	145970	250.6	50.12
$ 5	Toluene-d8	98.00	9.580	9.669	(0.801)	301409	234.2	46.84
$ 6	Bromofluorobenzene	95.00	14.125	14.213	(1.182)	286851	245.9	49.19
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00		1.729	Compound Not Detected.			
12	1,1-Dichloroethene	96.00	2.777	2.853	(0.479)	114685	352.2	70.45
13	Acetone	43.00		3.193	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00	3.635	3.698	(0.627)	4426	9.12	1.82(a)
16	trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.683	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.567	Compound Not Detected.			
19	2-Butanone	43.00		5.781	Compound Not Detected.			
20	Chloroform	83.00		6.135	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.210	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
23	Benzene	78.00	6.665	6.753	(0.895)	314821	251.6	50.31
24	1,2-Dichloroethane	62.00		6.854	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CN083842C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	25 Trichloroethene	130.00	7.712	7.801	(1.036)	142989	244.0	48.79
	26 1,2-Dichloropropane	63.00		8.104	Compound Not Detected.			
	27 Bromodichloromethane	83.00		8.634	Compound Not Detected.			
	28 cis-1,3-Dichloropropene	75.00		9.341	Compound Not Detected.			
	29 4-Methyl-2-Pentanone	43.00		9.745	Compound Not Detected.			
	30 Toluene	91.00	9.681	9.782	(0.810)	290903	195.1	39.02
	31 trans-1,3-Dichloropropene	75.00		10.313	Compound Not Detected.			
	32 1,1,2-Trichloroethane	97.00		10.552	Compound Not Detected.			
	33 Tetrachloroethene	164.00		10.616	Compound Not Detected.			
	34 2-Hexanone	43.00		11.171	Compound Not Detected.			
	35 Dibromochloromethane	129.00		11.120	Compound Not Detected.			
	36 Chlorobenzene	112.00	11.991	12.080	(1.003)	313837	229.8	45.96
	37 Ethylbenzene	106.00		12.383	Compound Not Detected.			
	38 m,p-Xylene	106.00		12.610	Compound Not Detected.			
	39 o-Xylene	106.00		13.279	Compound Not Detected.			
	40 Styrene	104.00		13.342	Compound Not Detected.			
	41 Bromoform	173.00		13.557	Compound Not Detected.			
	42 1,1,2,2-Tetrachloroethane	83.00		14.693	Compound Not Detected.			
M	43 1,2-Dichloroethene (total)	96.00		1.000	Compound Not Detected.			
M	44 Xylene (Total)	106.00		13.279	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

LAB INSTRUCTIONS:
PPS#11S + DICHLORODIFLUOROMETHANE

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00001 DUE DATE: 02/24/9

VOA J[ ] J3[ ] D[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683842
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

Sample date: Report type: 0

SAMPLE ID#: MW1MS 989/1624

GC/MS ANALYSIS
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename B1950214BSe Disk ( )
Blank Filename [illegible] Disk ( )
Standard Filename B1950214BSe Disk ( )
Sample Filename [illegible] Disk ( )

QC

ANALYST(S): Injection [illegible] Work-up [illegible]

GC/MS REVIEW

CONDITION CODE | Qc |

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 0 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 0

COMMENTS:

#GC/MS Review [illegible] Date 2/20/95 Auditor _____ Date ____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ____/____/____

FINAL REVIEW: Initials _____ Date ____/____/____

AC1169

d. Matrix Spike Duplicate Data

(1) Form I VOA

Matrix Spike Duplicate's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683843

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083843C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	71	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	49	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	51	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	42	
108-90-7	Chlorobenzene	46	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 683843

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083843C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

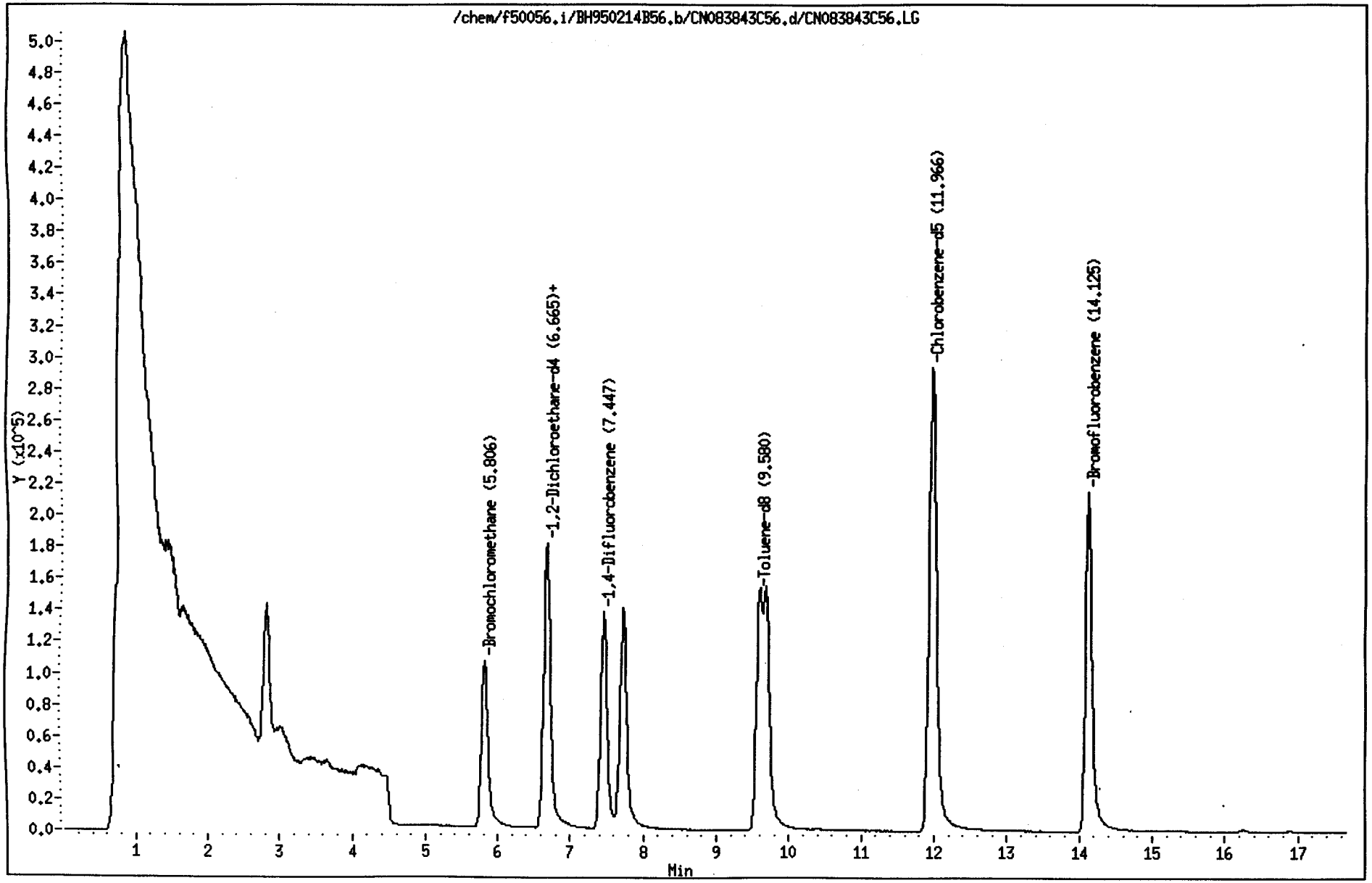
GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

Data File: /chem/f50056.i/BH950214B56.b/CN083843C56.d
Date : 15-FEB-1995 03:35
Client ID: MW1MSD
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i
Operator: 1948
Column diameter: 0.53



30073 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BH950214B56.b/CN083843C56.d
Report Date: 20-Feb-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BH950214B56.b/CN083843C56.d
Lab Smp Id: 683843 Client Smp ID: MW1MSD
Inj Date : 15-FEB-1995 03:35
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BH950214B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 08:57 studt Quant Type: ISTD
Cal Date : 14-FEB-1995 23:12 Cal File: CZ950214B56.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.806	5.882	(1.000)	87004	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.536	(1.000)	345311	250.0	
*	3 Chlorobenzene-d5	117.00	11.954	12.042	(1.000)	355538	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.740	(1.146)	150276	249.7	49.93
$	5 Toluene-d8	98.00	9.580	9.669	(0.801)	314712	239.1	47.82
$	6 Bromofluorobenzene	95.00	14.112	14.213	(1.181)	289569	242.7	48.55
	7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
	10 Bromomethane	94.00		1.590	Compound Not Detected.			
	11 Chloroethane	64.00		1.729	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00	2.802	2.853	(0.483)	119982	356.6	71.33
	13 Acetone	43.00		3.193	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.648	3.698	(0.628)	5273	10.52	2.10(a)
	16 trans-1,2-Dichloroethene	96.00		4.090	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		4.683	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		5.567	Compound Not Detected.			
	19 2-Butanone	43.00		5.781	Compound Not Detected.			
	20 Chloroform	83.00		6.135	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		6.210	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		6.437	Compound Not Detected.			
	23 Benzene	78.00	6.665	6.753	(0.895)	324077	253.6	50.73
	24 1,2-Dichloroethane	62.00		6.854	Compound Not Detected.			

Data File: /chem/f50056.i/BH950214B56.b/CN083843C56.d
Report Date: 20-Feb-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	25 Trichloroethene	130.00	7.712	7.801	(1.036)	147214	246.0	49.20
	26 1,2-Dichloropropane	63.00		8.104	Compound Not Detected.			
	27 Bromodichloromethane	83.00		8.634	Compound Not Detected.			
	28 cis-1,3-Dichloropropene	75.00		9.341	Compound Not Detected.			
	29 4-Methyl-2-Pentanone	43.00		9.745	Compound Not Detected.			
	30 Toluene	91.00	9.681	9.782	(0.810)	322848	211.7	42.34
	31 trans-1,3-Dichloropropene	75.00		10.313	Compound Not Detected.			
	32 1,1,2-Trichloroethane	97.00		10.552	Compound Not Detected.			
	33 Tetrachloroethene	164.00		10.616	Compound Not Detected.			
	34 2-Hexanone	43.00		11.171	Compound Not Detected.			
	35 Dibromochloromethane	129.00		11.120	Compound Not Detected.			
	36 Chlorobenzene	112.00	11.991	12.080	(1.003)	323461	231.6	46.31
	37 Ethylbenzene	106.00		12.383	Compound Not Detected.			
	38 m,p-Xylene	106.00		12.610	Compound Not Detected.			
	39 o-Xylene	106.00		13.279	Compound Not Detected.			
	40 Styrene	104.00		13.342	Compound Not Detected.			
	41 Bromoform	173.00		13.557	Compound Not Detected.			
	42 1,1,2,2-Tetrachloroethane	83.00		14.693	Compound Not Detected.			
M	43 1,2-Dichloroethene (total)	96.00		1.000	Compound Not Detected.			
M	44 Xylene (Total)	106.00		13.279	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

LAB INSTRUCTIONS:
PPS#115 + DICHLORODIFLUOROMETHANE

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00001 DUE DATE: 02/24/9

VOA J[ ] J3[ ] D[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683843
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

Sample date: Report type: 0

SAMPLE ID#: MW1MSD 989/1624

GC/MS ANALYSIS VS 2/15/95

Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename MB95021456 Disk ( )
Blank Filename CB95021556 Disk ( )
Standard Filename CZ95021456 Disk ( )
Sample Filename CN083843C56 Disk ( )

QC

ANALYST(S): Injection 1948 V.A. Smith Work-up 1948 V.A. Smith

GC/MS REVIEW

CONDITION CODE | OK |

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 0 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 0

COMMENTS:

#GC/MS Review Okrafka Date 2/20/95 Auditor _____ Date ____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ____/____/____

FINAL REVIEW: Initials _____ Date ____/____/____

AC1169

END OF REPORT

SDG 2

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

28/FEB/95

Draper Aden Associates
Attn: Ms. Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

Subject: Report of Data - Account Number 500672

Attn: Ms. Janet Cleary

Enclosed are the results of analytical work and associated Quality Control data for the samples received by CompuChem under the referenced account number.

As you know, CLP service is performed in accordance with EPA methodologies as defined for the National Contract Laboratory Program; 'SOW For Organic Analysis; Multi-Media, Multi-Concentration'. Your original data has been stored and is available for future reference.

Thank you for selecting CompuChem Environmental for your sample analysis. We would like to continue providing you analytical support and services in the future. If you should have questions or require additional analytical services, please contact your representative at 1-919-406-1600.

Sincerely,

Report Preparation

Attachment

COMPUCHEM
ENVIRONMENTAL
CORPORATION

28/FEB/95

Draper Aden Associates
Attn: Ms. Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

ACCOUNT #: 500672

CC#	SAMPLE-ID	RECEIPT DATE
683990	MW12	2/11/95
683986	MW9	2/11/95
683991	TRIPBLK2	2/11/95

TOTAL NUMBER OF SAMPLES = 3

COMPUCHEM
ENVIRONMENTAL
CORPORATION

SDG NARRATIVE

Case # 30073
SDG # 00002
Contract # (3-90)-REV8

Sample Identifications: MW12, MW9, TRIPBLK2

The three (3) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on February 11, 1995. The samples were scheduled for the requested analyses of the volatile fraction. These samples were analyzed following 3/90 Statement of Work (SOW) (document OLM01.9) protocol, with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30073, SDG 00002 are included in the sample data sections.

VOLATILES

Analysis holding time requirements were met for all of these samples. The pH values for these samples are tabulated on the attached batch sheet.

There were several halogenated Target Compound List (TCL) analytes, including dichlorodifluoromethane, identified above the Contract Required Quantitation Limit (CRQL) at varying concentrations in these samples. One Tentatively Identified Compounds (TICs) was found in each of these samples. All of the TICs found in these samples were assessed as laboratory artifacts, and therefore may not be sample constituents.

The trip blank TRIPBLK2 contained no TCL analytes other than the common laboratory solvent methylene chloride.

All of the system monitoring compounds met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blank met all quality control criteria. The method blank contained a level of the common laboratory solvent methylene chloride, which was within allowable limits. A laboratory artifact was also present as a TIC in this method blank.

MW9 was used as the original to prepare the duplicate matrix spikes as requested. With one exception, the associated duplicate matrix spikes met all accuracy and precision criteria. The recovery of the spike compound toluene was flagged as an outlier in the matrix spike.

COMPUCHEM
ENVIRONMENTAL
CORPORATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data contained in the hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael Steven Schapira 2/27/95

Michael Steven Schapira
Technical Reviewer
February 27, 1995

Note: This report is paginated for reference and accountability.

CompuChem Environmental Corporation

I. SAMPLE DATA SUMMARY PACKAGE

3/90 STATEMENT OF WORK

The Sample Data Summary Package shall contain data for samples in one Sample Delivery Group (SDG) of the Case, as follows :

A. SDG Narrative

B. Form I and Form I – TIC
Organic Analysis Data Sheet (OADS) and Tentatively Identified Compounds (TICs)

C. Form II
System Monitoring Compound Summary (VOA) and Surrogate Spike Analysis Results (SV & PEST)

D. Form III
Matrix Spike / Matrix Spike Duplicate Results

E. Form IV, Form I, and Form I – TIC
Method Blank Summary, OADS, and TICs

F. Form VIII
Internal Standard Area Data

NOTE: All forms are arranged in order by fraction (VOA, SV, PEST) unless otherwise specified.

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS SAS# (if applicable) : _____

CASE # : 30073 SDG # : 00002

CompuChem Environmental Corporation

WATER BATCH SHEET

Date Batched 2/13/95

Case 30073.00002

Instrument Code 428

LINKER NAVWSW

TAT 28 SOW 3/90(12)

	CCN	CLIENT ID	QC SAMPLE TYPE	QC SAMPLE ORIGINAL	pH	TIME	DATE RUN	INST. #	OPERATOR	H/T	VOLUME/ INSTRUCTIONS	SCREEN BOTTLE #	ANALYSIS BOTTLE #
1)	683987	MW9MS	SS	683986	/	14:49	2/16/95	56	2011	2/21	989/1625	of	of
2)	683988	MW9MSD	SS	683986	/	15:28	↓	↓				of	of
3)	683989	~~RESET MW9~~	BS									of	of
4)	683990	MW12			1	~~11:03~~ 11:03	2.16.95	56	~~2011~~ 2141	2/14/95	2V	1 of 2	2 of 2
5)	683991	TRIPBLK2			1	11:03	↓	↓	2141	↓	2V TB	of	1 of 2
6)	683986	MW9			1	14:01	↓	↓	2011	↓	4V	1 of 4	2 of 4
7)	683998R1	MB 2/16/95			—	12:21	2.16.95	56	2141			of	of
8)												of	of
9)												of	of
10)												of	of
11)												of	of
12)												of	of
13)												of	of
14)												of	of
15)												of	of
16)												of	of
17)												of	of
18)												of	of
19)												of	of
20)												of	of
21)												of	of
22)												of	of
23)											7K2/16/95	of	of

Relinquished By [signature] Date 2/14/95 Received By [signature] Date 2/14/95

Relinquished By T.S. Date 2.16.95 Received By MB Date 2.16.95

Relinquished By MB Date 2.16.95 Received By [signature] Date 2/16/95

Log Page Updated

Screened 2-21

PUT 113 VOA + LC UPM

#1950

183

30073 SAMPLE DATA SUMMARY

NO. 0115

CompuChem Laboratories, Inc.

Fill out COMPLETELY

PROJECT PROFILE SHEET

REVISION# : ____

DATE : 6-22-94

Revision Date : ____

ACCOUNT NUMBER : 500672

ORDER NUMBER : 28899

PROJECT NAME : WATAGA County

Project Start Date : 6-22-94

Project End Date : 7-22-94

QUOTE # : 94-5500

PO # : 6520-14

COMPANY NAME : Draper Aden Associates

Mailing ADDRESS #1 : 2206 S. Main St.

COPIES : 1

Attn: Janet Cleary

Blacksburg, VA 24060

Mailing ADDRESS #2 :

COPIES : ____

Address for INVOICES #1 : Same As Above

COPIES : 1

Address for INVOICES #2 :

COPIES : ____

Address for SAMPLESAVERS : Same As Above

PROJECT TEAM

SALES : D. Tomec Ext. 162

CUST. SERV. : C. Dover Ext. 627

PROJ MGR : Ext.

CLIENT CONTACTS

PROJ MGR : Janet Cleary

PHONE# : (703) 552-0444

FIELD/OTHER : Same

PHONE# : ( )

BILLING : Same

PHONE# : ( )

****

VERBAL TAT : N/A

HARDCOPY TAT : 28

****

SUBCONTRACT WORK TO : None

SAMPLE DISPOSITION : Normal

EXTRACT DISPOSITION : Normal

DATA RETENTION (If other than 5 yrs.): ____

ANALYZE TRIP BLANK : (YES) NO

BILL FOR SAMPLESAVERS : YES (NO) $____

BILLABLE QC : (YES) NO

BILLABLE REPEATS : (YES) NO

ADDITIONAL COMMENTS : ____

DISKETTE REQUIRED : YES (NO)

STYLE : ____ FORMAT A (CLP-like disk) # COPIES : ____

____ CONVERTED disk (Note conversion program name on line below) # COPIES : ____

** **

SPECIAL INST.: ____

MONTHLY PROGRESS REPORT

REQUIRED : ___Yes X No Level : ____

____ HAZWRAP ____ OTHER : ____

____ NEESA

HAZWRAP GENERAL ORDER #: ____

SPEC. INST. : ____

CompuChem Laboratories, Inc.
PROJECT PROFILE SHEET

NO. 0115

DATE: 6-22-94
CLIENT: DAA
PROJECT: WATAGA County

REVISION#: ____
Revision Date: ____

ALL:

___ PENALTIES if late: ___% @ ___ days; ___% @ ___ days; ___% @ ___ days	Other:
___ PREMIUMS if early! ___% @ ___days; ___% @ ___ days; ___% @ ___ days	
___ Internal Chain-of-Custody procedures required: ___NJDEP ___Other( )	Holding Times from: X VTSR (for: All Par.)
	from: ___ VTOS (for:)

CUSTOMER SERVICE:

Enter in lab instructions (Max. 25 spaces):	Other: VOA = TCL + DichloroDifluoromethane
✓ See PPS# 115 ___ Diskettes Required	METALS = Report only Cd, Fe, Hg, Ba
✓ Use for QC( ) ___ F Blank/T Blank	Client will Designate QC at a
Other:	Frequency of 1 in 10 NOT 1 in 20
___ Weekly QUIZ report required	___ Holding Time priority

RECEIVING: Other:

___ Screen VOA / RAD / ___ samples	
___ Return client cooler(s) to this address:	
	___ Truncate IDs as follows: ___
	Create SDGs: ___Weekly ___Bi-Weekly ___Other:
___ Potentially radioactive samples	___ Schedule unique SDG for Trip/Field/etc. Blanks

PP&C: Other:

___ Blank Spikes Required	Batch size is 1 in 10
___ Possible high / low concentration samples	Client will Designate QC
___ Total/Dissolved Metals	CIP VOAs include DichloroDifluoromethane

LABORATORY: Other:

___ Possible high / low concentration samples	
___ Analyze/Report blank spike	
___ All notices require the following in header:	
___ Analyze/Report special analytes (see attached)	
X Metals: Report/Run ONLY Cd, Fe, Hg, Ba	

REPORT PREPARATION: Other:

___ Must mail via ___	
___ Special compound list required (see attached)	
___ Do NOT report TICs	

TECHNICAL REVIEW: Other:

___ Submit ALL Narratives and Notices to the Report Preparation Manager	
___ All Notices require the following header:	

ACCOUNTING: Other:

Invoice: X Weekly ___ Monthly	
___ Other: ___ Duplicate required	

DATA REPORTING QUALIFIERS

VALUE – If the result is a value greater than or equal to the Contract Required Quantitation Limit (CRQL), report the value.

U – Indicates compound was analyzed for but not detected. The sample Quantitation Limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U) \times df}{D} \qquad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

$$\text{At 24\% moisture, } D = \frac{100 - 24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil samples subjected to GPC clean-up procedures, the extract must be concentrated to 0.5 ml, and the sensitivity of the analysis is not compromised by the cleanup procedures. Therefore, the CRQL values will apply to all samples, regardless of cleanup. However if a sample extract cannot be concentratred to the protocol-specifed volume, this fact must be accounted for in reporting the sample quantitation limit.

J – Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/l, but a concentration of 3 ug/l is calculated, report it as 3J. The sample quantitation limit must be adjusted for dilution as dicussed for the U flag. The J flag is also applied to pesticide/Aroclor results where the pesticide/Aroclor is confirmed to be present but the concentration is less than the CRQL.

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

DATA REPORTING QUALIFIERS - PAGE 2

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but unsuccessful, do not apply this flag, instead use a laboratory-defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG Narrative. If more than one flag is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample. The laboratory-defined flags are limited to the letters "X", "Y", and "Z".

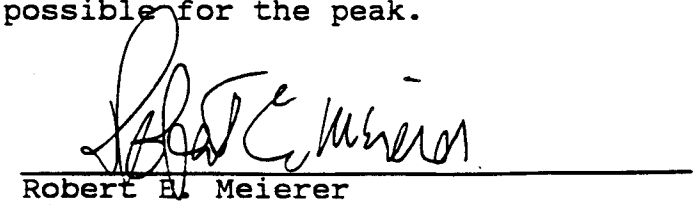
Quality Assurance Notice

In some instances, manual adjustments of the software are necessary to provide an accurate quantitation of a compound. These adjustments are performed by the data reviewer. An Extracted Ion Current Profile (EICP) has been provided for each compound to demonstrate the accuracy of the adjustment. The adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration as follows:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed by the data reviewer in order to provide the most accurate area count as possible for the peak.

H - Denotes that the data reviewer has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denote that the data reviewer has chosen an alternate peak within the retention time window from that chosen by the software for that compound, and that the data reviewer performed a manual integration of the chosen peak. The manual integration was performed by the data reviewer in order to provide the most accurate area count as possible for the peak.



Robert E. Meierer
Vice President & General Manager

COMPUCHEM
ENVIRONMENTAL
CORPORATION

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Research Triangle Park, NC 27709-4998
(919) 406-1600

Notification To Clients Regarding Deliverables Generated By New Gas Chromatograph/Mass Spectrometer (GC/MS) Data System

CompuChem Environmental Corporation has upgraded their GC/MS data systems in order to provide state-of-the-art data review and forms/hardcopy generation capabilities. While our GC/MS instruments are products of Finnigan, they now will be networked to systems consisting of the Hewlett-Packard (H-P) ChemServer utilizing ThruPut's Envision product. Clients familiar with the hardcopy output from H-P GC/MS instruments will nouce similarities to our new deliverables. These new hardware/software systems, however, provide dramatic speed and performance enhancements.

As a service to our clients, the following is a listing of the major differences that will be observed when comparing our new deliverables packages against the old ones:

1. The new GC/MS Reconstructed Ion Chromatogram (RIC) presentation has the following features:

   - the retention time, along the x-axis is labeled at exact minute intervals,
   - separate line items in the RIC header are included for instrument ID, sample ID, and volume injected,
   - header information includes the GC column phase and diameter,
   - all internal standard and surrogate peaks are labeled with the compound name and the exact retention time rather than "IS#," "SS#," and associated scan number,
   - on the two page RIC for semivolatile injections, there is a display overlap between the two pages.
   - some peaks may be flagged with a "+." This indicates that more than one compound is eluting at that retention time.

2. The new quantitation report presentation has the following features:

   - the number of quantitation report pages is reduced for CLP analyses,
   - the internal standards are presented first, followed by the surrogate compounds, all in increasing retention time order,
   - the retention time is presented as minutes and decimal minutes,
   - the compound name appears on the same line as the data/results for that compound (rather than on a separate page), and the displays include both on-column and final concentrations,
   - for assistance in data review/validation a number of flags are utilized - on the left hand side of the quantitation report page and on the right side.

   Left Side Flags

*	denotes internal standard compound,
$	denotes surrogate compound,
M	denotes summary compounds; e.g. - total xylenes.

   Right Side Flags

(a)	denotes those compounds whose results will be flagged with a "J" (estimate) on the Form I,
(A)	denotes those compounds whose results will be flagged with an "E" (concentration greater than highest calibration standard) on the Form I,
(H)	denotes that the data reviewer selected a peak other than the one selected by the software routine,
(M)	denotes that the data reviewer has manually integrated a compound,
(R)	denotes that a recovery for a surrogate or spike compound has failed acceptance criteria,
(T)	denotes that the retention time for an internal standard has shifted outside of acceptance criteria.,
(Q)	denotes that unexpected ion ratios obtained.

3. The mass spectra of target analytes will be presented on one page rather than the two from the Finnigan data system. The printing of the spectra will be portrait (tall) instead of landscape (wide).

4. The mass spectra for tentatively identified compounds (TICs) will also be presented as a portrait view. The compound matching information summary is contained below the header information and includes a "quality" ranking, similar to the Finnigan "PUR" (purity) ranking.

We hope this information is beneficial to you. If, however, there are any questions or, if you need any more information please feel free to contact a member of your project management team at 1-800-833-5097.

Robert E. Meierer

Robert E. Meierer

B. **Form I and Form I – TIC**

Organic Analysis Data Sheet (OADS) and Tentatively Identified Compounds (TICs)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW12

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083990A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	4	J
75-09-2	Methylene Chloride	3	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	4	J
75-34-3	1,1-Dichloroethane	120	
540-59-0	1,2-Dichloroethene (total)	37	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	18	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	13	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	32	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW12

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083990A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	14	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW12

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083990A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	2300	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683986

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083986A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	17	
75-09-2	Methylene Chloride	93	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	30	
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	6	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	4	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683986

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083986A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	27	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW9

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683986

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083986A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2300	JB
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083991A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083991A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLK2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083991A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	640	JB
2.					
3.					
4.					
5.					
6.					
7.					
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12.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683987

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083987A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	17	
75-09-2	Methylene Chloride	95	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	63	
75-34-3	1,1-Dichloroethane	30	
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	48	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	37	
108-90-7	Chlorobenzene	42	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683987

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083987A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	26	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083988A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	18	
75-09-2	Methylene Chloride	110	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	66	
75-34-3	1,1-Dichloroethane	32	
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	15	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	55	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	54	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	41	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083988A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	25	

C. Form II

System Monitoring Compound Summary (VOA) and Surrogate Spike Analysis Results (SV & PEST)

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKML	97	93	98		0
02	TRIPBLK2	100	94	105		0
03	MW9	93	90	101		0
04	MW9MS	97	96	98		0
05	MW9MSD	107	109	111		0
06	MW12	99	94	106		0
07						
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	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

D. Form III

Matrix Spike / Matrix Spike Duplicate Results

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix Spike - EPA Sample No.: MW9

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	62.90	126	61-145
Trichloroethene	50.00	5.80	49.92	88	71-120
Benzene	50.00	2.00	48.47	93	76-127
Toluene	50.00	0.000	37.26	74*	76-125
Chlorobenzene	50.00	0.000	42.44	85	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	66.50	133	5	14	61-145
Trichloroethene	50.00	55.49	99	12	14	71-120
Benzene	50.00	54.16	104	11	11	76-127
Toluene	50.00	40.96	82	10	13	76-125
Chlorobenzene	50.00	48.02	96	12	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 1 out of 10 outside limits

COMMENTS: _____

E. **Form IV, Form I, and Form I – TIC**

Method Blank Summary, OADS, and TICs

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Lab File ID: CB950216A56.D Lab Sample ID: VBLKML

Date Analyzed: 02/16/95 Time Analyzed: 0904

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIPBLK2	683991	CR083991A56.D	1221
02	MW9	683986	CN083986A56.D	1401
03	MW9MS	683987	CN083987A56.D	1449
04	MW9MSD	683988	CN083988A56.D	1528
05	MW12	683990	CN083990A56.D	1602
06				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.72	19	J
2.					
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F. Form VIII

Internal Standard Area Data

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Lab File ID (Standard): CS950216A56.D Date Analyzed: 02/16/95

Instrument ID: F50056 Time Analyzed: 0818

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	72863	5.87	295065	7.52	308913	12.03
	UPPER LIMIT	145726	6.37	590130	8.02	617826	12.53
	LOWER LIMIT	36432	5.37	147532	7.02	154456	11.53
	EPA SAMPLE No.						
01	VBLKML	80470	5.87	299990	7.51	316422	12.03
02	TRIPBLK2	69668	5.81	293882	7.45	311056	11.95
03	MW9	67304	5.82	292884	7.46	310362	11.95
04	MW9MS	65792	5.82	285915	7.46	296178	11.95
05	MW9MSD	62191	5.83	255318	7.47	267057	11.98
06	MW12	62913	5.87	280613	7.51	296499	12.02
07							
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21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

CompuChem Environmental Corporation

II. SAMPLE DATA PACKAGE

3/90 STATEMENT OF WORK

The Sample Data Package shall include data for analyses of all samples in one Sample Delivery Group (SDG), including field samples, reanalyses, blanks, matrix spikes, and matrix spike duplicates. The Sample Data Package consists of the following :

A. SDG Narrative

B. Traffic Reports

C. Volatile Data

D. Semivolatile Data

E. Pesticide / PCB Data

THIS PACKAGE CONTAINS :

___ R A S data only
___ S A S data only
___ R A S + S A S data

___ Regional request / additional data
___ Other (see explanation below):

_____

_____

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30073

SDG # : 00002

A. SDG NARRATIVE

This document shall be clearly labeled "SDG Narrative" and shall contain : laboratory name; sample numbers in the Sample Delivery Group (SDG), differentiating between initial analyses and reanalyses; SDG number; Contract number; and detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples reported in the data package.

Whenever data from sample reanalyses are submitted, the Contractor shall state in the SDG Narrative, for each analysis, whether it considers the reanalysis to be billable.

The Contractor must also include documentation of any internal quality control processes used, a summary of corrective actions taken, and the resolution.

CompuChem Environmental Corporation

WATER BATCH SHEET

Date Batched 2/13/95

Case 30073.00000

Instrument Code 458

LINKER [redacted]

TAT 28 SOW 3/90(+2)

	CCN	CLIENT ID	QC SAMPLE TYPE	QC SAMPLE ORIGINAL	pH	TIME	DATE RUN	INST. #	OPERATOR	H/T	VOLUME/ INSTRUCTIONS	SCREEN BOTTLE #	ANALYSIS BOTTLE #
1)	683987	MW9MS	SS	683986	/	14:49	2/16/95	56	2011	2/21	989/1625	of	of
2)	683988	MW9MSD	SS	683986	/	15:28	↓	↓				of	of
3)	683989	~~BLANK~~	BS									of	of
4)	683990	MW12			1	~~11:03~~ 11:03	2.16.95	56	2011	2/14/95	2V	1 of 2	2 of 2
5)	683991	TRIPBLK2			1	11:03	↓	↓	2141	↓	2V TB	of	1 of 2
6)	683986	MW9			1	14:01	↓	↓	2011	↓	4V	1 of 4	2 of 4
7)	683992				—	12:21	2.16.95	56	2141			of	of
8)												of	of
9)												of	of
10)												of	of
11)												of	of
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23)											7K 2/16/95	of	of

Relinquished By [signature] Date 2/14/95 Received By [signature] Date 2/14/95

Relinquished By T.S. Date 2.16.95 Received By MB Date 2.16.95

Relinquished By MB Date 2.16.95 Received By [signature] Date 2/16/95

Log Page Updated _____

screened 2-11

PUT 113 VOA + LVCUM

#6950

149

30073 SAMPLE DATA PACKAGE

NO. 0115

CompuChem Laboratories, Inc.

Fill out COMPLETELY

PROJECT PROFILE SHEET

REVISION# : ____

DATE : 6-22-94

Revision Date : ____

ACCOUNT NUMBER : 500672

ORDER NUMBER : 28899

PROJECT NAME : WATAGA County

Project Start Date : 6-22-94

Project End Date : 7-22-94

QUOTE # : 94-5500

PO # : 6520-14

COMPANY NAME : Draper Aden Associates

Mailing ADDRESS #1 : 2206 S. Main St.

COPIES : 1

Attn: Janet Cleary

Blacksburg, VA 24060

Mailing ADDRESS #2 :

COPIES : ____

Address for INVOICES #1 : Same As Above

COPIES : 1

Address for INVOICES #2 :

COPIES : ____

Address for SAMPLESAVERS : Same As Above

PROJECT TEAM

SALES : D. Tomec Ext. 1662

CUST. SERV. : C. Dover Ext. 1627

PROJ MGR : ____ Ext.

CLIENT CONTACTS

PROJ MGR : Janet Cleary

PHONE# : (703) 552-0444

FIELD/OTHER : Same

PHONE# : ( )

BILLING : Same

PHONE# : ( )

****

VERBAL TAT : N/A

HARDCOPY TAT : 28

****

SUBCONTRACT WORK TO : None

SAMPLE DISPOSITION : Normal

EXTRACT DISPOSITION : Normal

DATA RETENTION (If other than 5 yrs.): ____

ANALYZE TRIP BLANK : (YES) NO

BILL FOR SAMPLESAVERS : YES (NO) $____

BILLABLE QC : (YES) NO

BILLABLE REPEATS : (YES) NO

ADDITIONAL COMMENTS : ____

DISKETTE REQUIRED : YES (NO)

STYLE : ____ FORMAT A (CLP-like disk) # COPIES : ____

____ CONVERTED disk (Note conversion program name on line below) # COPIES : ____

** **

SPECIAL INST.: ____

MONTHLY PROGRESS REPORT

REQUIRED : ___ Yes X No Level : ____

____ HAZWRAP ____ OTHER :

____ NEESA ____

HAZWRAP GENERAL ORDER #: ____

SPEC. INST. : ____

CompuChem Laboratories, Inc.
PROJECT PROFILE SHEET

NO. 0115

DATE: 6-22-94
CLIENT: DAA
PROJECT: Wayne County

REVISION# : ____
Revision Date : ____

ALL:

___ PENALTIES if late: ___% @ ___ days; ___% @ ___ days; ___% @ ___ days | Other :

___ PREMIUMS if early! ___% @ ___days; ___% @ ___ days; ___% @ ___ days

___ Internal Chain-of-Custody procedures required: ___NJDEP ___Other( ) | Holding Times from : X VTSR (for: All Par.)
from: ___ VTOS (for:)

CUSTOMER SERVICE : | Other : VOA = TCL + DichloroDifluoromethane
METALS = Report only Cd, Fe, Hg, Ba
Client will Designate QC at a Frequency of 1in 10 NOT 1in 20

Enter in lab instructions (Max. 25 spaces):
✓ See PPS# 115 ___ Diskettes Required
✓ Use for QC( ) ___ F Blank/T Blank
Other:

___ Weekly QUIZ report required | ___ Holding Time priority

RECEIVING : | Other :

___ Screen VOA / RAD /_____ samples

___ Return client cooler(s) to this address:

___ Truncate IDs as follows: _____

Create SDGs: ___Weekly ___Bi-Weekly ___Other:

___ Potentially radioactive samples | ___ Schedule unique SDG for Trip/Field/etc. Blanks

PP&C : | Other :

___ Blank Spikes Required | Batch size is 1in 10
___ Possible high / low concentration samples | Client will Designate QC
___ Total/Dissolved Metals | CLP VOAs include DichloroDifluoromethane

LABORATORY : | Other:

___ Possible high / low concentration samples

___ Analyze/Report blank spike

___ All notices require the following in header:

___ Analyze/Report special analytes (see attached)

X Metals: Report/Run ONLY Cd, Fe, Hg, Ba

REPORT PREPARATION : | Other :

___ Must mail via _____

___ Special compound list required (see attached) -

___ Do NOT report TICs

TECHNICAL REVIEW : | Other :

___ Submit ALL Narratives and Notices to the Report Preparation Manager

___ All Notices require the following header :

ACCOUNTING : | Other :

Invoice : X Weekly ___ Monthly

___ Other:

___ Duplicate required

DATA REPORTING QUALIFIERS

VALUE – If the result is a value greater than or equal to the Contract Required Quantitation Limit (CRQL), report the value.

U – Indicates compound was analyzed for but not detected. The sample Quantitation Limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U) \times df}{D} \qquad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

$$\text{At 24\% moisture, } D = \frac{100 - 24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil samples subjected to GPC clean-up procedures, the extract must be concentrated to 0.5 ml, and the sensitivity of the analysis is not compromised by the cleanup procedures. Therefore, the CRQL values will apply to all samples, regardless of cleanup. However if a sample extract cannot be concentratred to the protocol-specifed volume, this fact must be accounted for in reporting the sample quantitation limit.

J – Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/l, but a concentration of 3 ug/l is calculated, report it as 3J. The sample quantitation limit must be adjusted for dilution as dicussed for the U flag. The J flag is also applied to pesticide/Aroclor results where the pesticide/Aroclor is confirmed to be present but the concentration is less than the CRQL.

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

DATA REPORTING QUALIFIERS - PAGE 2

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but unsuccessful, do not apply this flag, instead use a laboratory-defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG Narrative. If more than one flag is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample. The laboratory-defined flags are limited to the letters "X", "Y", and "Z".

Quality Assurance Notice

In some instances, manual adjustments of the software are necessary to provide an accurate quantitation of a compound. These adjustments are performed by the data reviewer. An Extracted Ion Current Profile (EICP) has been provided for each compound to demonstrate the accuracy of the adjustment. The adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration as follows:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed by the data reviewer in order to provide the most accurate area count as possible for the peak.

H - Denotes that the data reviewer has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denote that the data reviewer has chosen an alternate peak within the retention time window from that chosen by the software for that compound, and that the data reviewer performed a manual integration of the chosen peak. The manual integration was performed by the data reviewer in order to provide the most accurate area count as possible for the peak.

Robert E. Meierer
Vice President & General Manager

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Notification To Clients Regarding Deliverables Generated By New Gas Chromatograph/Mass Spectrometer (GC/MS) Data System

CompuChem Environmental Corporation has upgraded their GC/MS data systems in order to provide state-of-the-art data review and forms/hardcopy generation capabilities. While our GC/MS instruments are products of Finnigan, they now will be networked to systems consisting of the Hewlett-Packard (H-P) ChemServer utilizing ThruPut's Envision product. Clients familiar with the hardcopy output from H-P GC/MS instruments will notice similarities to our new deliverables. These new hardware/software systems, however, provide dramatic speed and performance enhancements.

As a service to our clients, the following is a listing of the major differences that will be observed when comparing our new deliverables packages against the old ones:

1. The new GC/MS Reconstructed Ion Chromatogram (RIC) presentation has the following features:

   - the retention time, along the x-axis is labeled at exact minute intervals,
   - separate line items in the RIC header are included for instrument ID, sample ID, and volume injected,
   - header information includes the GC column phase and diameter,
   - all internal standard and surrogate peaks are labeled with the compound name and the exact retention time rather than "IS#," "SS#," and associated scan number,
   - on the two page RIC for semivolatile injections, there is a display overlap between the two pages.
   - some peaks may be flagged with a "+." This indicates that more than one compound is eluting at that retention time.

2. The new quantitation report presentation has the following features:

   - the number of quantitation report pages is reduced for CLP analyses,
   - the internal standards are presented first, followed by the surrogate compounds, all in increasing retention time order,
   - the retention time is presented as minutes and decimal minutes,
   - the compound name appears on the same line as the data/results for that compound (rather than on a separate page) and the displays include both on-column and final concentrations,
   - for assistance in data review/validation a number of flags are utilized - on the left hand side of the quantitation report page and on the right side.

   Left Side Flags

*	denotes internal standard compound,
$	denotes surrogate compound,
M	denotes summary compounds; e.g. - total xylenes.

   Right Side Flags

(a)	denotes those compounds whose results will be flagged with a "J" (estimate) on the Form I,
(A)	denotes those compounds whose results will be flagged with an "E" (concentration greater than highest calibration standard) on the Form I,
(H)	denotes that the data reviewer selected a peak other than the one selected by the software routine,
(M)	denotes that the data reviewer has manually integrated a compound,
(R)	denotes that a recovery for a surrogate or spike compound has failed acceptance criteria,
(T)	denotes that the retention time for an internal standard has shifted outside of acceptance criteria.,
(Q)	denotes that unexpected ion ratios obtained.

3. The mass spectra of target analytes will be presented on one page rather than the two from the Finnigan data system. The printing of the spectra will be portrait (tall) instead of landscape (wide).

4. The mass spectra for tentatively identified compounds (TICs) will also be presented as a portrait view. The compound matching information summary is contained below the header information and includes a "quality" ranking, similar to the Finnigan "PUR" (purity) ranking.

We hope this information is beneficial to you. If, however, there are any questions or, if you need any more information please feel free to contact a member of your project management team at 1-800-833-5097.

Robert E. Meierer

Robert E. Meierer
Vice President & General Manager

B. TRAFFIC REPORTS

A copy of the Traffic Report for all of the samples in the SDG. The Traffic Reports shall be arranged in increasing EPA number order, considering both letters and numbers in ordering samples.

COMPUCHEM
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CORPORATION

SDG NARRATIVE

Case # 30073
SDG # 00002
Contract # (3-90)-REV8

Sample Identifications: MW12, MW9, TRIPBLK2

The three (3) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on February 11, 1995. The samples were scheduled for the requested analyses of the volatile fraction. These samples were analyzed following 3/90 Statement of Work (SOW) (document OLM01.9) protocol, with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30073, SDG 00002 are included in the sample data sections.

VOLATILES

Analysis holding time requirements were met for all of these samples. The pH values for these samples are tabulated on the attached batch sheet.

There were several halogenated Target Compound List (TCL) analytes, including dichlorodifluoromethane, identified above the Contract Required Quantitation Limit (CRQL) at varying concentrations in these samples. One Tentatively Identified Compounds (TICs) was found in each of these samples. All of the TICs found in these samples were assessed as laboratory artifacts, and therefore may not be sample constituents.

The trip blank TRIPBLK2 contained no TCL analytes other than the common laboratory solvent methylene chloride.

All of the system monitoring compounds met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blank met all quality control criteria. The method blank contained a level of the common laboratory solvent methylene chloride, which was within allowable limits. A laboratory artifact was also present as a TIC in this method blank.

MW9 was used as the original to prepare the duplicate matrix spikes as requested. With one exception, the associated duplicate matrix spikes met all accuracy and precision criteria. The recovery of the spike compound toluene was flagged as an outlier in the matrix spike.

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data contained in the hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael Steven Schapira 2/27/95

Michael Steven Schapira
Technical Reviewer
February 27, 1995

Note: This report is paginated for reference and accountability.

CHAIN OF CUSTODY RECORD 30073

SDG 2

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 544-5491

Client: Watauga County, NC
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC 28607
Phone: (704) 265-8003 Fax:(704) 265-8003

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 3rd Assessment Monitoring
JN: 6520-20 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note 1)
Carrier: Federal Express
Tracking No.: HKTA9
Saturday Delivery

Box 1: Matrix
SW. Surface Water — T. Trip Blank
GW. Groundwater — E. Equipment Blank
L. Leachate — P. Product
S. Soil — O. Other

Box 2: Preservative
A. HCl — E. NaOH
B. HNO_3 — F. ZnAc
C. H_2SO_4 — G. Other (specify)
D. $Na_2S_2O_3$ — H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
MW7	2/8	1010	GW	--	U	G	<2		1		1	SEE ATTACHED PARAMETER LISTS ** TOTAL METALS - PRESERVATIVE: NITRIC ACID VOLATILES - PRESERVATIVE: HCl Attn: Kathy Dover — This completes SDG 2 4°C
MW5	2/8	1045	GW	--	U	G	<2		1		1	
MW5 MS/SD	2/8	1045	GW	--	U	G	<2	X	1		1	
MW9	2/8	1515	GW	--	U	G	<2		3	2	1	
MW9 MS	2/8	1515	GW	--	U	G	<2	X	1	1		
MW9 MSD	2/8	1515	GW	--	U	G	<2	X	1	1		
MW9 MS/SD	2/8	1515	GW	--	U	G	<2	X	1		1	
MW 13	2/8	1720	GW	--	U	G	<2		1		1	
MW12	2/8	1820	GW	--	U	G	<2		3	2	1	

Client's Special Instructions: TOTAL CLP VOA LIST + DICHLORODIFLUOROMETHANE + TIC ANALYSIS; CLP TOTAL METALS; Ba, Cd, Fe, Hg (TOTALS ONLY)

RECEIVED IN m·s 2/11/95.

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival _____ Received on Ice _____ Describe problems, if any: GOOD CONDITION

Sampler Name (print): Jeff Pack	Date: 2-10-95	#1 Relinquished By (Sig.):	Date: 2-10-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:	
Sampler Signature:	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:		
Sampler Name (print): Raymond	Date: 2-10-95	#1 Received By (Sig.):	Date: 2/10/95	#2 Received By (Sig.):	Date: 2/11/95	60 (No. Days)	
Sampler Signature:	Time: 1300	Company Name: Watauga Co. Lf.	Time: 1300	Company Name: CompuChem ENV	Time: 0930		

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

30073 SAMPLE DATA PACKAGE 139

CHAIN OF CUSTODY RECORD 30073 SDG 2

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 544-5491

Client: Watauga County, NC Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC 28607 Phone: (704) 265-8003 Fax:(704) 265-8003	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 3rd Assessment Monitoring JN: 6520-20 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? _X_ Yes ___ No (See Note 1) Carrier: Federal Express Tracking No.: HKYA9 Saturday Delivery

Box 1: Matrix SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	Box 2: Preservative A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	Box 3: Filtered/Unfiltered F. Filtered U. Unfiltered	Box 4: Sample Type C. Composite G. Grab	Copy to Consultant: _X_ Yes ___ No Bill: _X_ Client ___ Consultant Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment) CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
MW 14	2/9	0945	GW	**	U	G	<2		1		1	SEE ATTACHED PARAMETER LISTS ** TOTAL METALS - PRESERVATIVE: NITRIC ACID VOLATILES - PRESERVATIVE: HCl Attn: Kathy Dover - This completes SDG# 4°C
MW 16	2/9	1050	GW	**	U	G	<2		1		1	
MW 18	2/9	1215	GW	**	U	G	<2		1		1	
MW 15	2/10	1150	GW	**	U	G	<2		1		1	
TRIP BLANK 2	2/6	0800	T	**	U	G	<2		3	2	1	
				**	U	G	<2					
				**	U	G	<2					
				**	U	G	<2					
				**	U	G	<2					

RECEIVED IN GOOD CONDITION MS 2/11/95.

Client's Special Instructions: TOTAL CLP VOA LIST + DICHLORODIFLUOROMETHANE + TIC ANALYSIS; CLP TOTAL METALS: Ba, Cd, Fe, Hg (TOTALS ONLY)

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival_____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): JEFF PACK	Date: 2-10-95	#1 Relinquished By (Sig.): J Black	Date: 2-10-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:	
Sampler Signature: J Black	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:		
Sampler Name (print): ERIK RUDIN	Date: 2-10-95	#1 Received By (Sig.): B Payne	Date: 2/10/95	#2 Received By (Sig.): M Stew	Date: 2/11/95	60 (No. Days)	
Sampler Signature: E Rudin	Time: 1300	Company Name: Watauga Co Tf.	Time: 1300	Company Name: CompuChem ENV.	Time: 0930		

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes" lab to begin processing.
Note: Always mail invoice and results to consultant.

30073 SAMPLE DATA PACKAGE 138

CompuChem Environmental Corporation

C. VOLATILE DATA

1. Q C Summary

2. Sample Data

3. Standards. Data

4. Raw Q C Data

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30073

SDG # : 00002

1. Q C Summary

a. Form II VOA

System Monitoring Compound Summary

b. Form III VOA

Matrix Spike / Matrix Spike Duplicate Summary

c. Form IV VOA

Method Blank Summary

d. Form V VOA

GC/MS Instrument Performance Check

e. Form VIII VOA

Internal Standard Area and Retention Time Summary

a. Form II VOA

System Monitoring Compound Summary

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKML	97	93	98		0
02	TRIPBLK2	100	94	105		0
03	MW9	93	90	101		0
04	MW9MS	97	96	98		0
05	MW9MSD	107	109	111		0
06	MW12	99	94	106		0
07						
08						
09						
10						
11						
12						
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26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

b. Form III VOA

Matrix Spike / Matrix Spike Duplicate Summary

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix Spike - EPA Sample No.: MW9

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	62.90	126	61-145
Trichloroethene	50.00	5.80	49.92	88	71-120
Benzene	50.00	2.00	48.47	93	76-127
Toluene	50.00	0.000	37.26	74*	76-125
Chlorobenzene	50.00	0.000	42.44	85	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	66.50	133	5	14	61-145
Trichloroethene	50.00	55.49	99	12	14	71-120
Benzene	50.00	54.16	104	11	11	76-127
Toluene	50.00	40.96	82	10	13	76-125
Chlorobenzene	50.00	48.02	96	12	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 1 out of 10 outside limits

COMMENTS: _____

c. Form IV VOA

Method Blank Summary

If more than a single form is necessary, forms must be arranged in chronological order by date of analysis of the blank.

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Lab File ID: CB950216A56.D Lab Sample ID: VBLKML

Date Analyzed: 02/16/95 Time Analyzed: 0904

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIPBLK2	683991	CR083991A56.D	1221
02	MW9	683986	CN083986A56.D	1401
03	MW9MS	683987	CN083987A56.D	1449
04	MW9MSD	683988	CN083988A56.D	1528
05	MW12	683990	CN083990A56.D	1602
06				
07				
08				
09				
10				
11				
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30				

COMMENTS:

d. Form V VOA

GC/MS Instrument Performance Check

BFB in chronological order by instrument.

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Lab File ID: BG950214B56.D BFB Injection Date: 02/14/95

Instrument ID: F50056 BFB Injection Time: 1725

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.1
75	30.0 - 66.0% of mass 95	47.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.2 (0.3)1
174	50.0 - 120.0% of mass 95	84.4
175	4.0 - 9.0% of mass 174	6.0 (7.1)1
176	93.0 - 101.0% of mass 174	82.5 (97.8)1
177	5.0 - 9.0% of mass 176	5.2 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	CT950214B56.D	02/14/95	1755
02	VSTD020	VSTD020	CU950214B56.D	02/14/95	1835
03	VSTD050	VSTD050	CV950214B56.D	02/14/95	1912
04	VSTD100	VSTD100	CW950214B56.D	02/14/95	1950
05	VSTD200	VSTD200	CY950214B56.D	02/14/95	2135
06					
07					
08					
09					
10					
11					
12					
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17					
18					
19					
20					
21					
22					

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Lab File ID: BF950216A56.D BFB Injection Date: 02/16/95

Instrument ID: F50056 BFB Injection Time: 0809

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	21.3
75	30.0 - 66.0% of mass 95	48.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.1 (0.1)1
174	50.0 - 120.0% of mass 95	83.8
175	4.0 - 9.0% of mass 174	5.7 (6.8)1
176	93.0 - 101.0% of mass 174	81.3 (96.9)1
177	5.0 - 9.0% of mass 176	5.1 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	CS950216A56.D	02/16/95	0818
02	VBLKML	VBLKML	CB950216A56.D	02/16/95	0904
03	TRIPBLK2	683991	CR083991A56.D	02/16/95	1221
04	MW9	683986	CN083986A56.D	02/16/95	1401
05	MW9MS	683987	CN083987A56.D	02/16/95	1449
06	MW9MSD	683988	CN083988A56.D	02/16/95	1528
07	MW12	683990	CN083990A56.D	02/16/95	1602
08					
09					
10					
11					
12					
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22					

e. Form VIII VOA

Internal Standard Area and Retention Time Summary

In chronological order by instrument.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Lab File ID (Standard): CS950216A56.D Date Analyzed: 02/16/95

Instrument ID: F50056 Time Analyzed: 0818

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	72863	5.87	295065	7.52	308913	12.03
	UPPER LIMIT	145726	6.37	590130	8.02	617826	12.53
	LOWER LIMIT	36432	5.37	147532	7.02	154456	11.53
	EPA SAMPLE No.						
01	VBLKML	80470	5.87	299990	7.51	316422	12.03
02	TRIPBLK2	69668	5.81	293882	7.45	311056	11.95
03	MW9	67304	5.82	292884	7.46	310362	11.95
04	MW9MS	65792	5.82	285915	7.46	296178	11.95
05	MW9MSD	62191	5.83	255318	7.47	267057	11.98
06	MW12	62913	5.87	280613	7.51	296499	12.02
07							
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09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

2. Sample Data

Sample data shall be arranged in packets with the Organic Analysis Data Sheet (Form I VOA, including Form I VOA-TIC), followed by the raw data for volatile samples. These sample packets should then be placed in increasing EPA number order, considering both letters and numbers in ordering samples.

. TCL Results - Organic Analysis Data Sheet (Form I VOA).
Tabulated results (identification and quantitation) of the specified target compounds.

. Tentatively Identified Compounds (Form I VOA-TIC).
This form must be included even if no compounds are found.

. Reconstructed total ion chromatogram (RIC) for each sample, sample extract, standard, blank and spike sample.

. For each sample, by each compound identified :

Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (TCL) that are identified in the sample and corresponding background-subtracted TCL standard mass spectra. Compound names must be clearly marked on all spectra.

Copies of mass spectra of nonsurrogate organic compounds (tentatively identified compounds) with associated best-match spectra (three best matches).

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW12

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083990A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	4	J
75-09-2	Methylene Chloride	3	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	4	J
75-34-3	1,1-Dichloroethane	120	
540-59-0	1,2-Dichloroethene (total)	37	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	18	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	13	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	32	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW12

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083990A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	14	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: MW12

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083990A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	2300	JB
2.					
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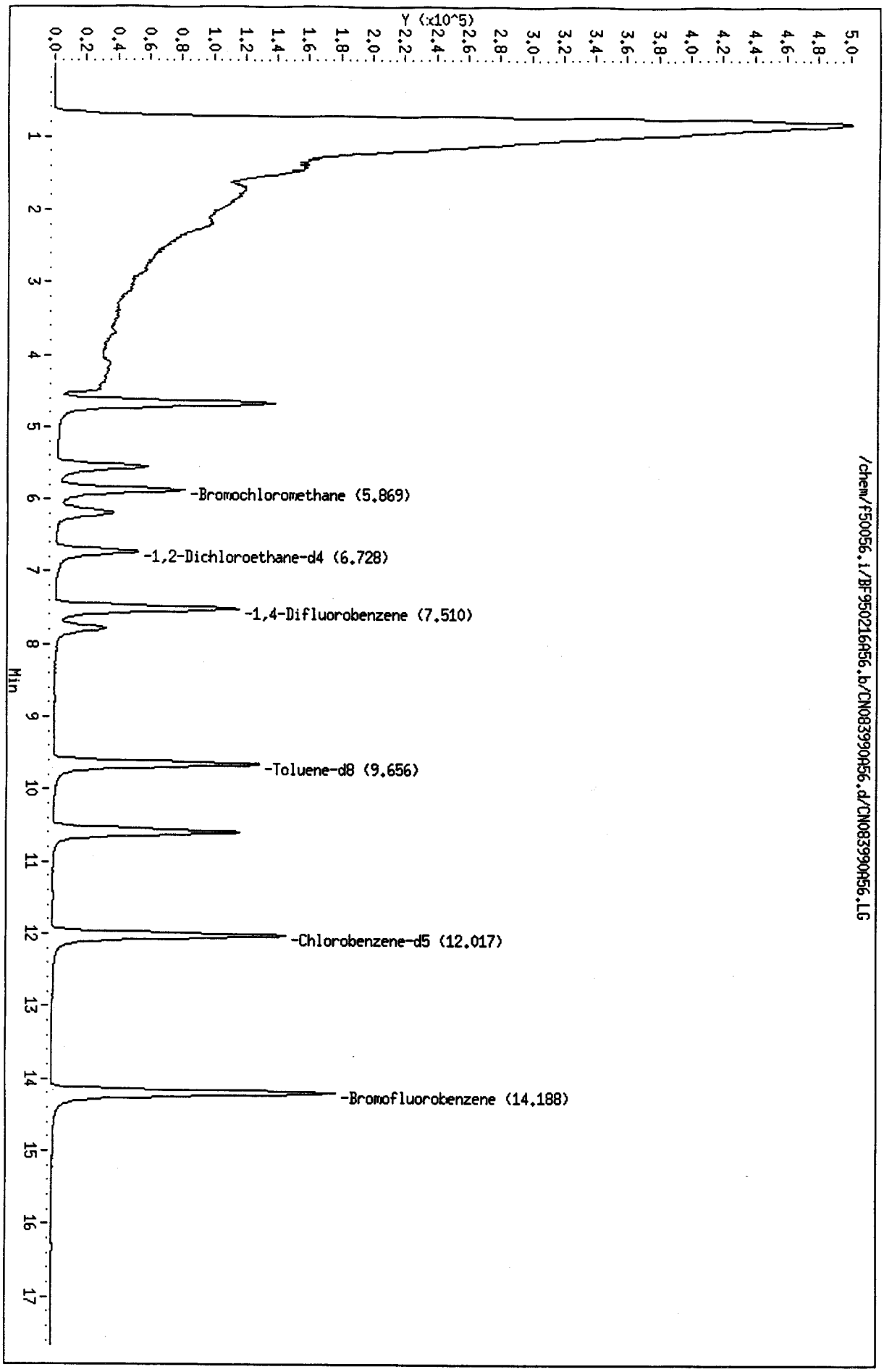

Data File: /chem/f50056.i/BF950216A56.b/CN083990A56.d
Date : 16-FEB-1995 16:02
Client ID: MW12
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2141
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BF950216A56.b/CN083990A56.d/CN083990A56.LG
-Bromochloromethane (5.869)
-1,2-Dichloroethane-d4 (6.728)
-1,4-Difluorobenzene (7.510)
-Toluene-d8 (9.656)
-Chlorobenzene-d5 (12.017)
-Bromofluorobenzene (14.188)

Data File: /chem/f50056.i/BF950216A56.b/CN083990A56.d
Report Date: 20-Feb-1995 15:12

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CN083990A56.d
Lab Smp Id: 683990 Client Smp ID: MW12
Inj Date : 16-FEB-1995 16:02
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.869	5.869	(1.000)	62913	250.0	
*	2 1,4-Difluorobenzene	114.00	7.510	7.523	(1.000)	280613	250.0	
*	3 Chlorobenzene-d5	117.00	12.017	12.029	(1.000)	296499	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.728	6.728	(1.146)	125434	265.6	53.13
$	5 Toluene-d8	98.00	9.656	9.669	(0.804)	263754	246.6	49.33
$	6 Bromofluorobenzene	95.00	14.200	14.213	(1.182)	236993	236.2	47.23
	7 Dichlorodiflouromethane	85.00	0.985	0.972	(0.168)	8394	69.27	13.85
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
	10 Bromomethane	94.00		1.590	Compound Not Detected.			
	11 Chloroethane	64.00	1.755	1.729	(0.299)	4061	19.67	3.93(a)
	12 1,1-Dichloroethene	96.00	2.853	2.840	(0.486)	5901	20.75	4.15(a)
	13 Acetone	43.00		3.156	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.698	3.686	(0.630)	4912	13.82	2.76(a)
	16 trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00	4.670	4.670	(0.796)	436185	580.5	116.1
	18 cis-1,2-Dichloroethene	96.00	5.541	5.554	(0.944)	77583	177.0	35.40
	19 2-Butanone	43.00		5.768	Compound Not Detected.			
	20 Chloroform	83.00		6.122	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00	6.185	6.198	(0.824)	75396	91.01	18.20
	22 Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
	23 Benzene	78.00		6.740	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/CN083990A56.d
Report Date: 20-Feb-1995 15:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.841	Compound Not Detected.			
25	Trichloroethene	130.00	7.775	7.788	(1.035)	32086	65.50	13.10
26	1,2-Dichloropropane	63.00		8.091	Compound Not Detected.			
27	Bromodichloromethane	83.00		8.634	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		9.328	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		9.732	Compound Not Detected.			
30	Toluene	91.00		9.770	Compound Not Detected.			
31	trans-1,3-Dichloropropene	75.00		10.300	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		10.540	Compound Not Detected.			
33	Tetrachloroethene	164.00	10.590	10.603	(0.881)	99103	161.5	32.30
34	2-Hexanone	43.00		11.158	Compound Not Detected.			
35	Dibromochloromethane	129.00		11.120	Compound Not Detected.			
36	Chlorobenzene	112.00		12.080	Compound Not Detected.			
37	Ethylbenzene	106.00		12.383	Compound Not Detected.			
38	m,p-Xylene	106.00		12.610	Compound Not Detected.			
39	o-Xylene	106.00		13.279	Compound Not Detected.			
40	Styrene	104.00		13.342	Compound Not Detected.			
41	Bromoform	173.00		13.557	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		14.680	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00				77583	184.5	36.90
M 44	Xylene (Total)	106.00		13.279	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950216A56.b/CN083990A56.d

Date : 16-FEB-1995 16:02

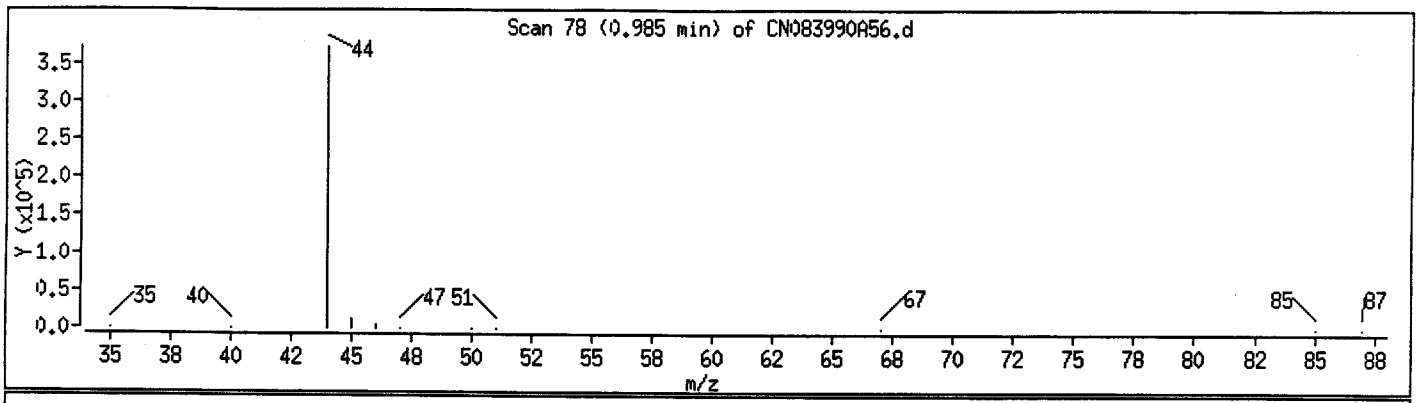
Client ID: MW12 Instrument: f50056.i

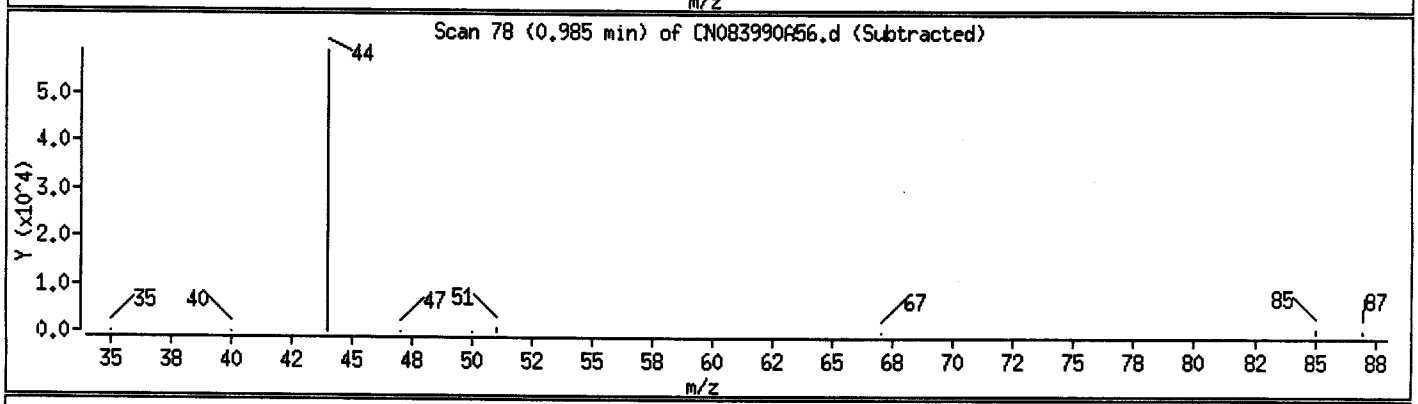
Sample Info:

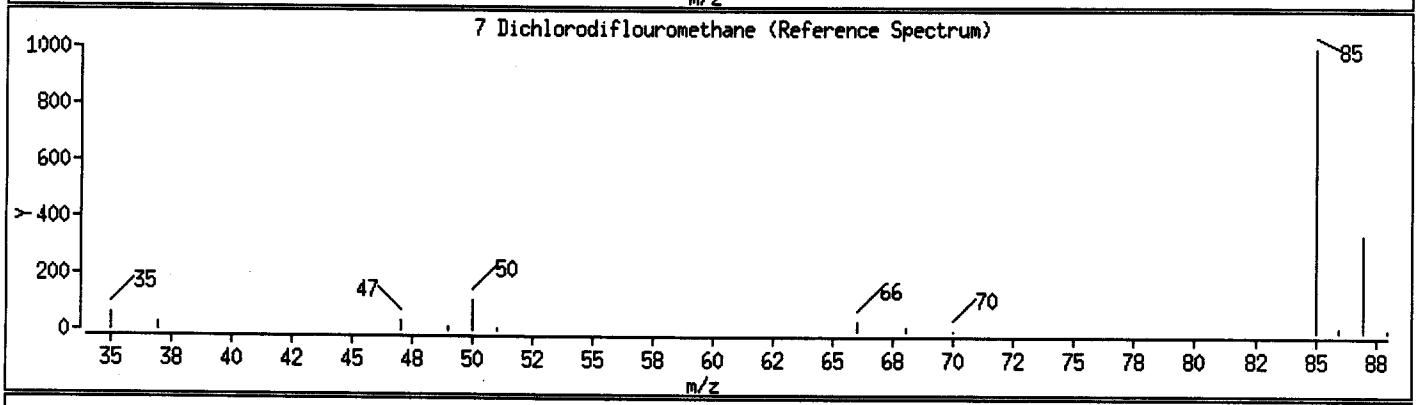
Purge Volume: 5.0 Operator: 2141

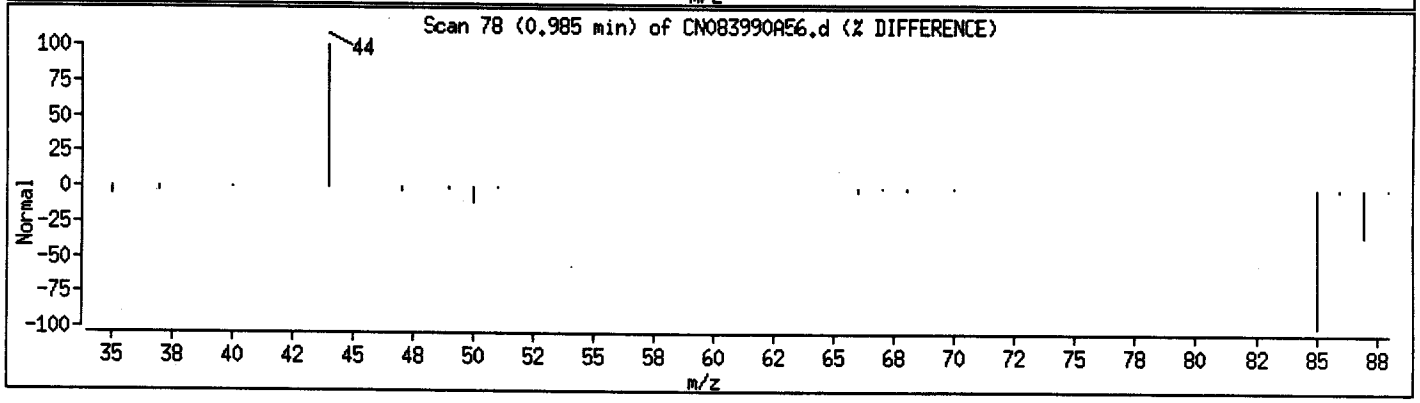
Column phase: DB624 Column diameter: 0.53

7 Dichlorodiflourcmethane









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Date : 16-FEB-1995 16:02

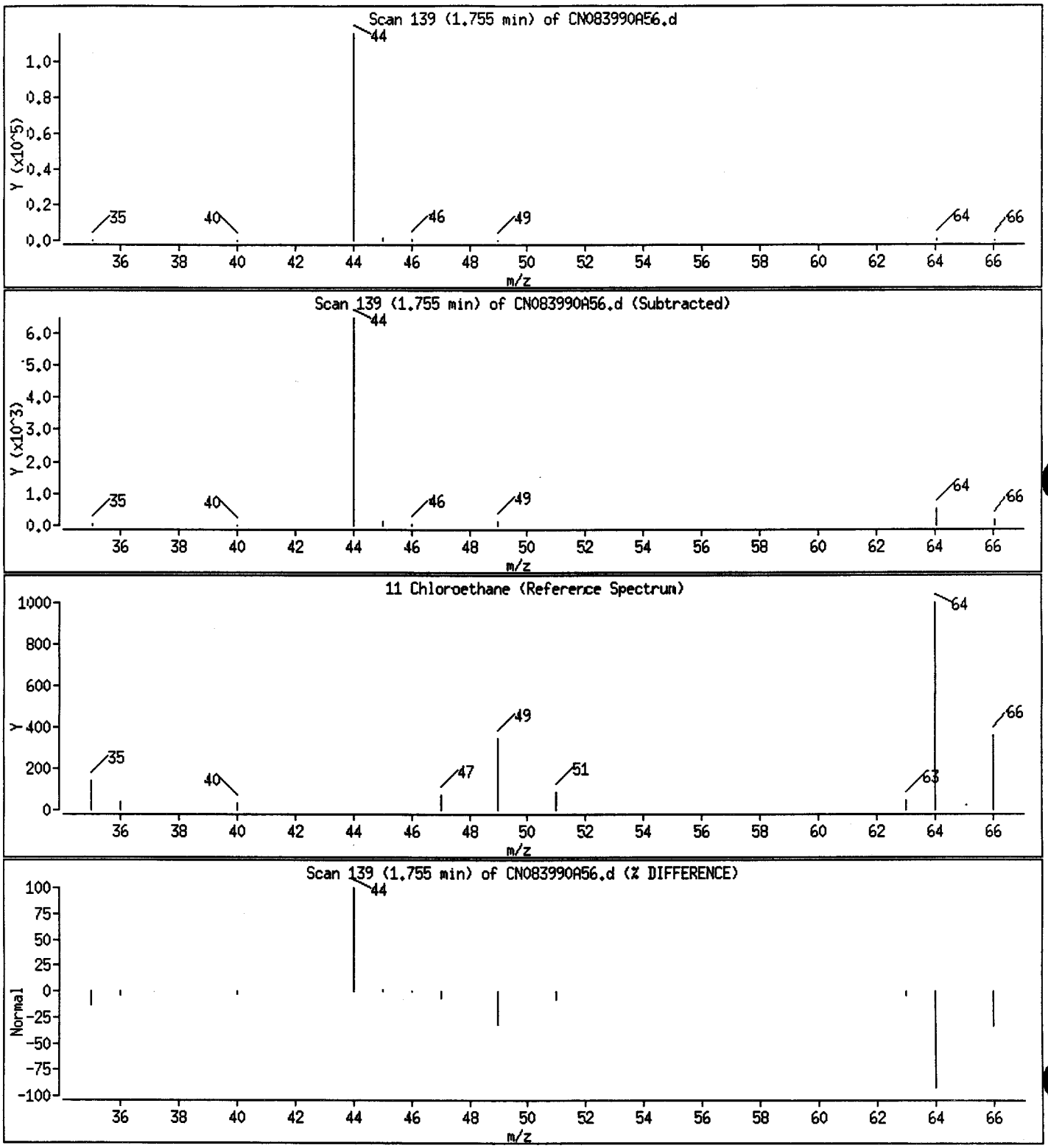
Client ID: MW12 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

11 Chloroethane



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Date : 16-FEB-1995 16:02

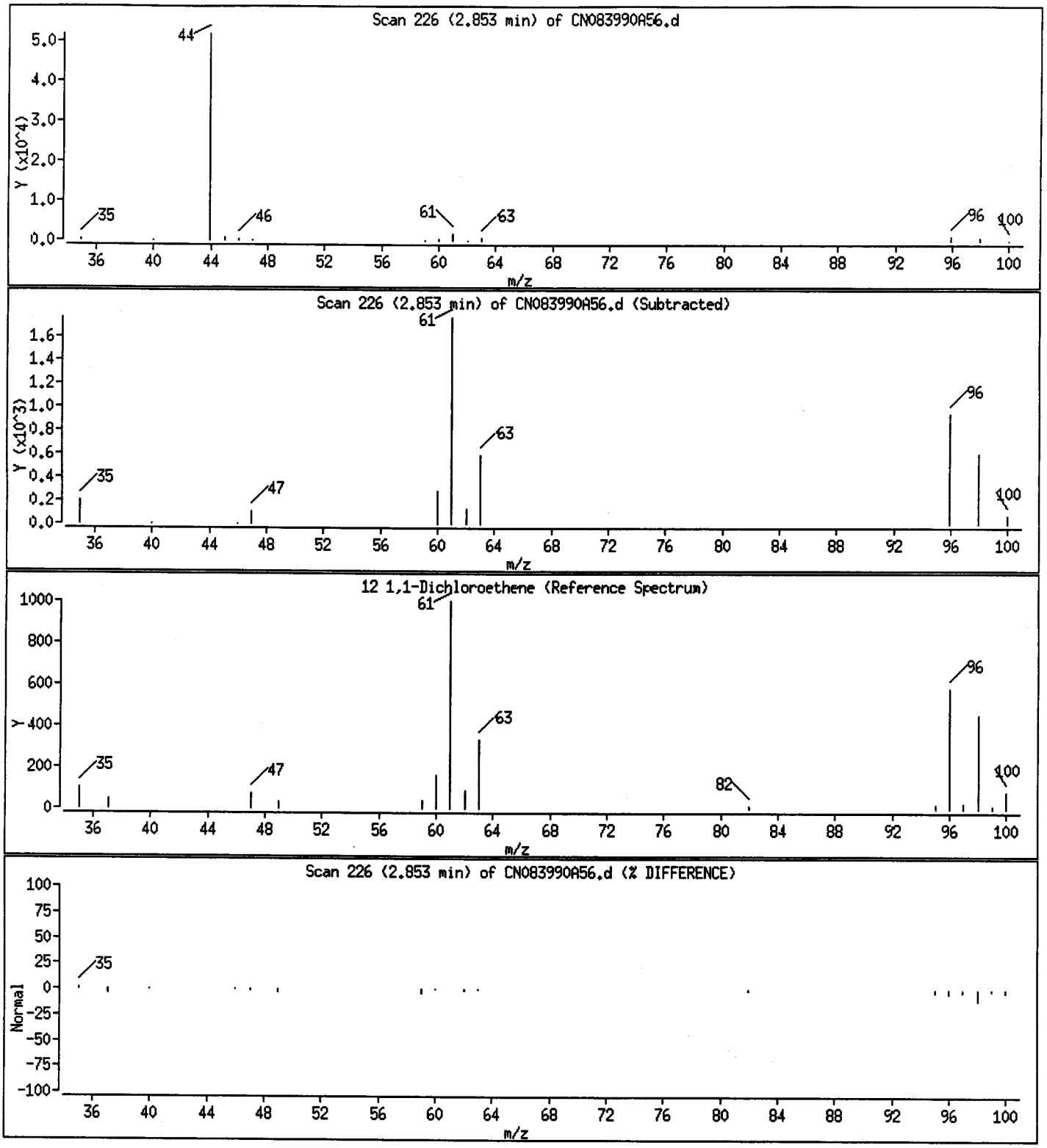
Client ID: MW12 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

12 1,1-Dichloroethene



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Date : 16-FEB-1995 16:02

Client ID: MW12

Instrument: f50056.i

Sample Info:

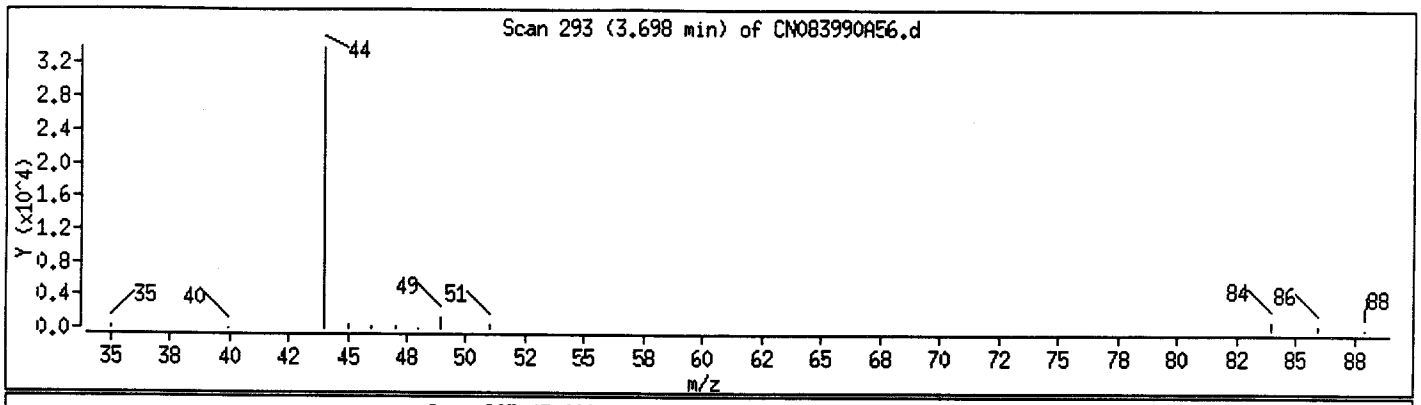
Purge Volume: 5.0

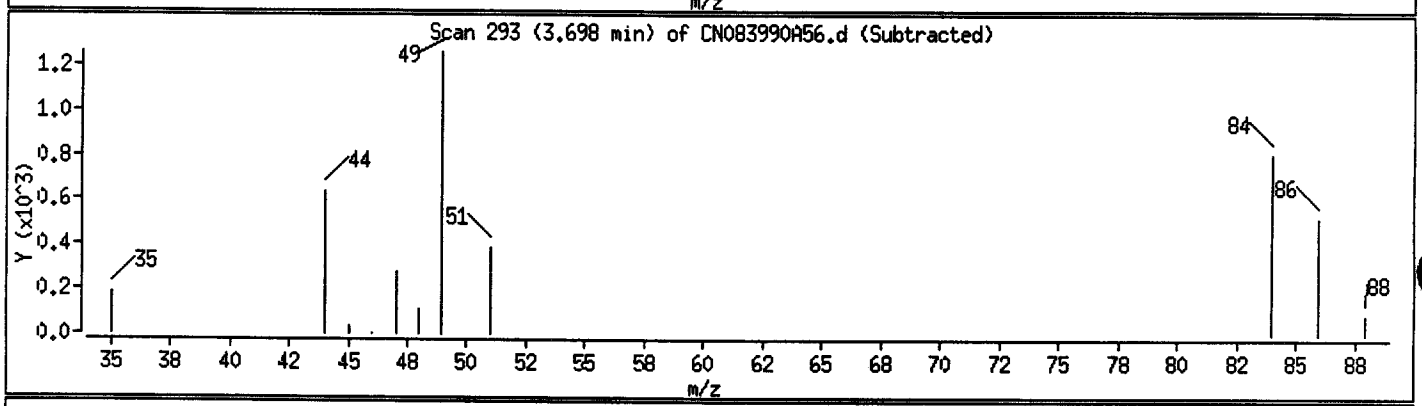
Operator: 2141

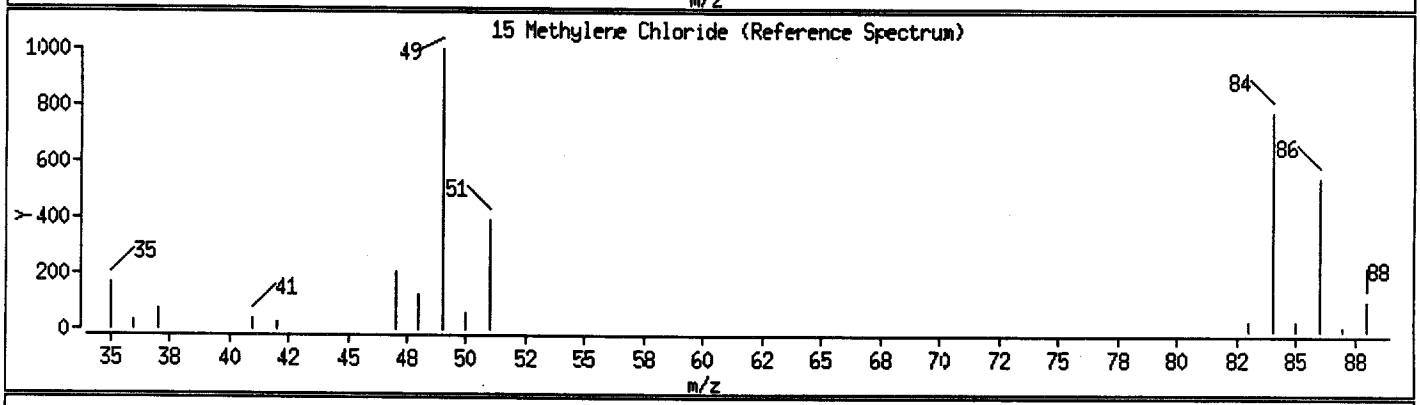
Column phase: DB624

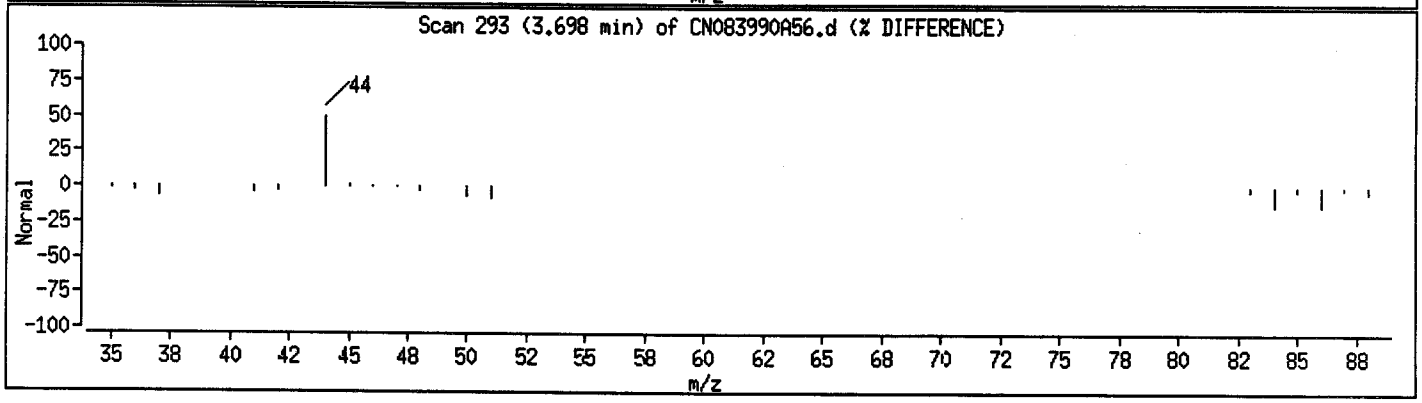
Column diameter: 0.53

15 Methylene Chloride









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Date : 16-FEB-1995 16:02

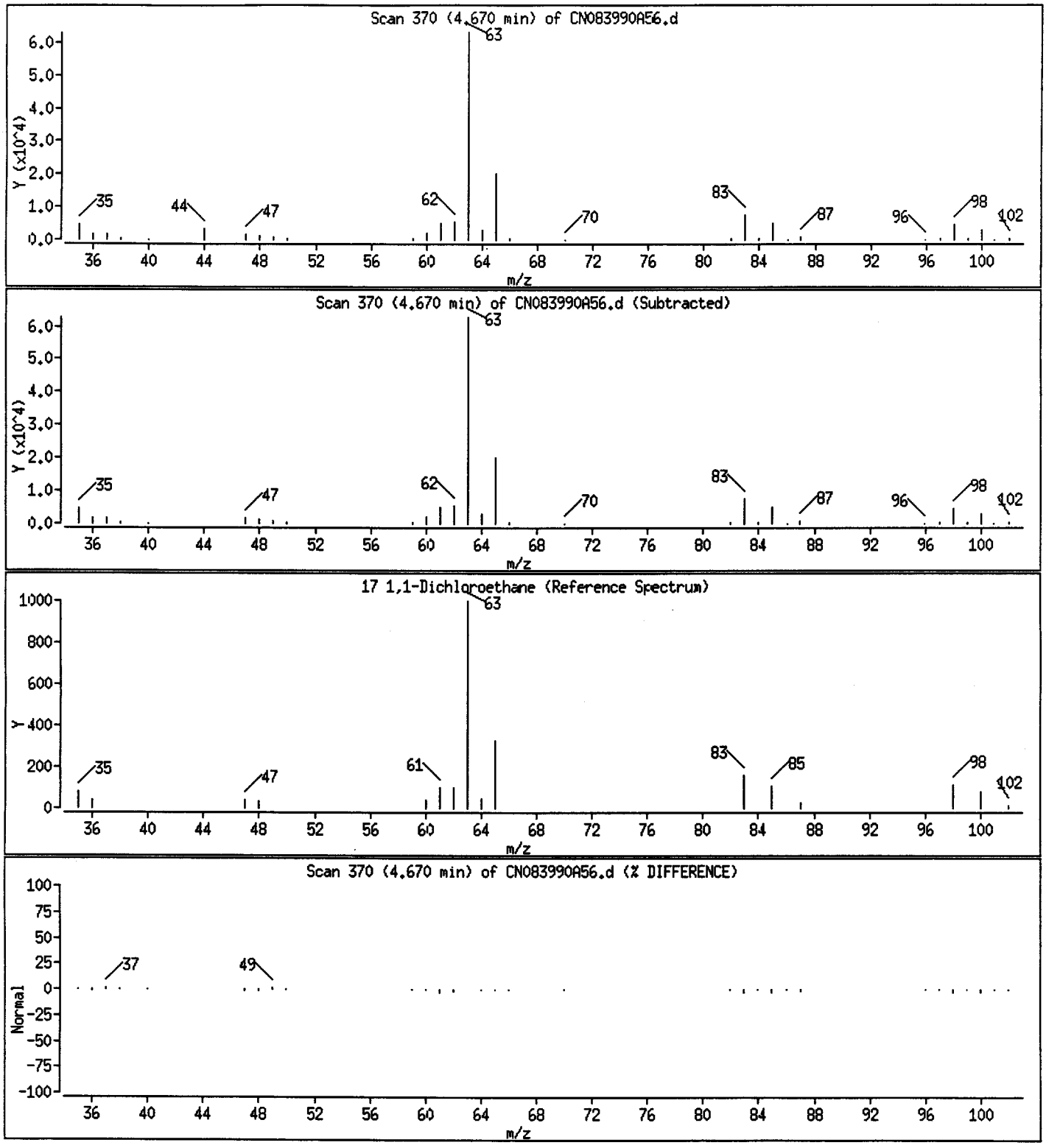
Client ID: MW12 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

17 1,1-Dichloroethane



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Date : 16-FEB-1995 16:02

Client ID: MW12

Instrument: f50056.i

Sample Info:

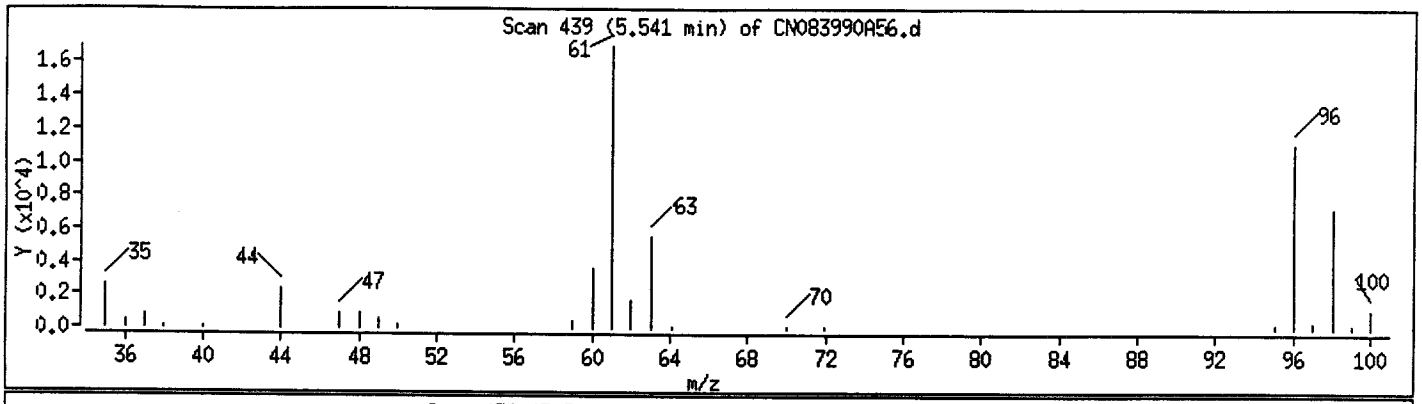
Purge Volume: 5.0

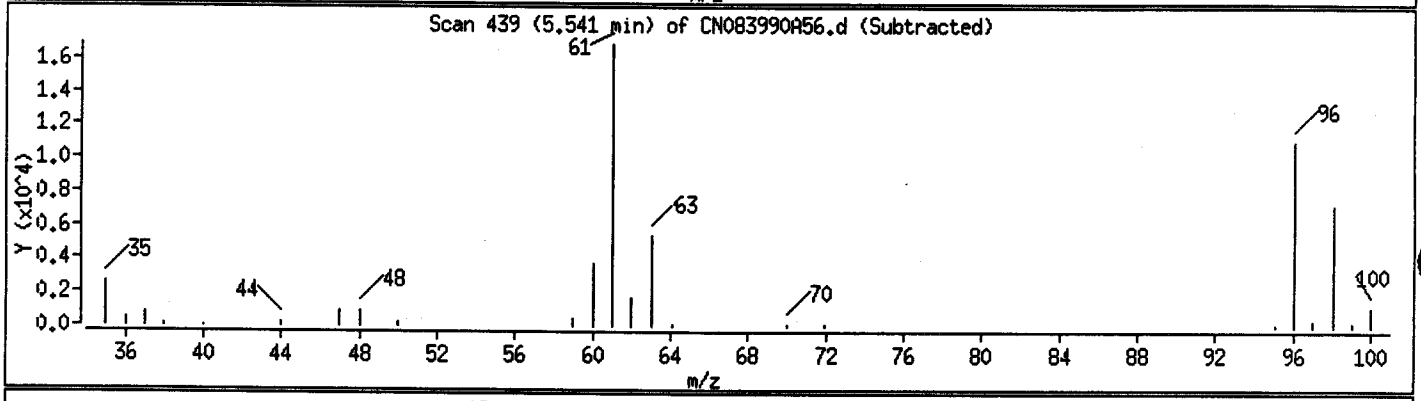
Operator: 2141

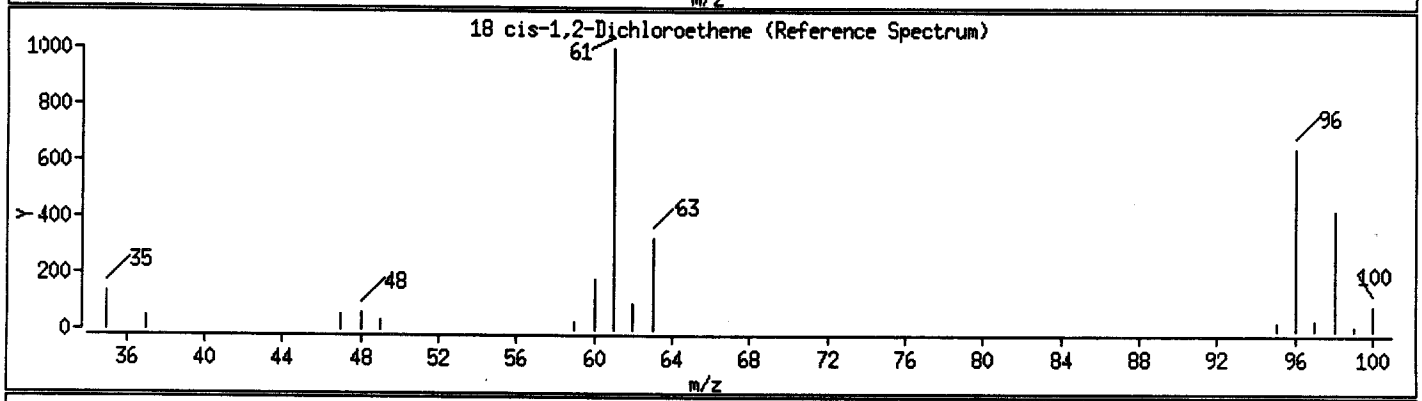
Column phase: DB624

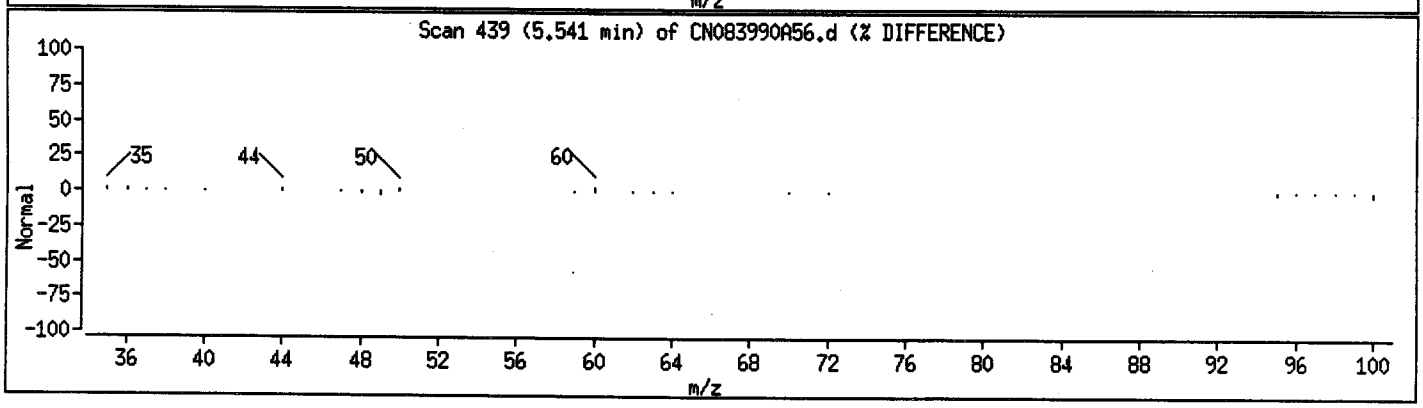
Column diameter: 0.53

18 cis-1,2-Dichlorcethene









Data File: /chem/f50056.i/BF950216A56.b/CN083990A56.d

Date : 16-FEB-1995 16:02

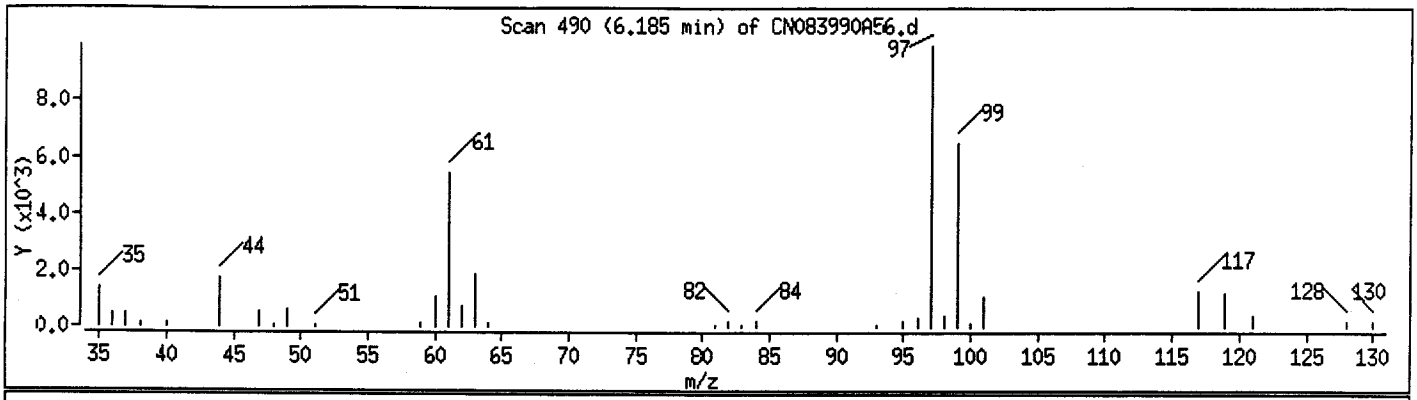
Client ID: MW12 Instrument: f50056.i

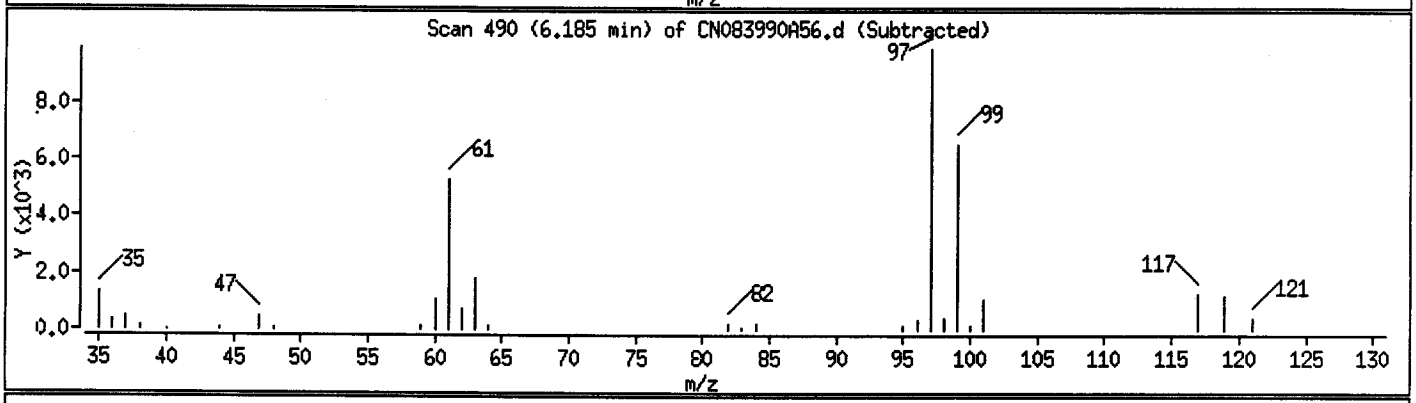
Sample Info:

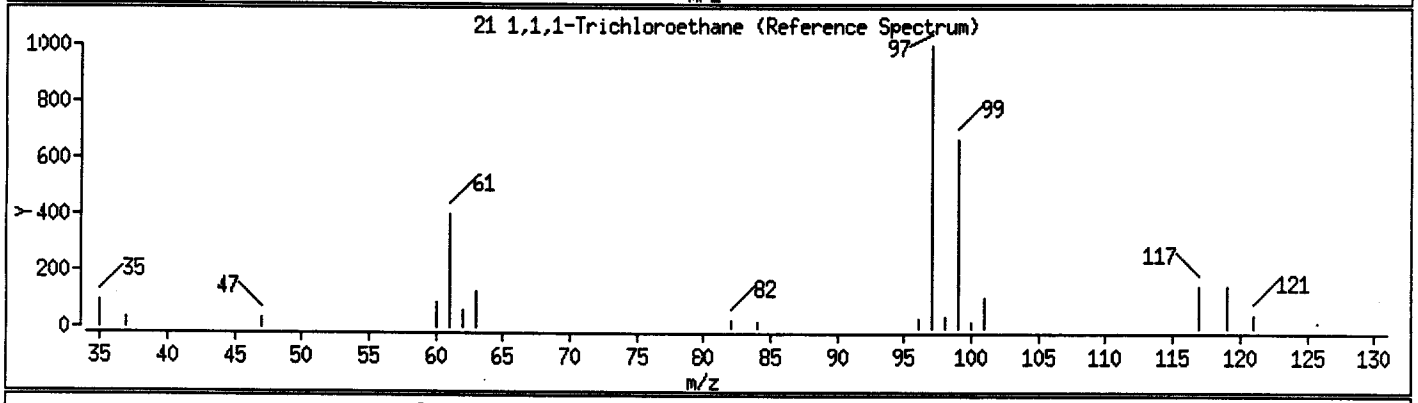
Purge Volume: 5.0 Operator: 2141

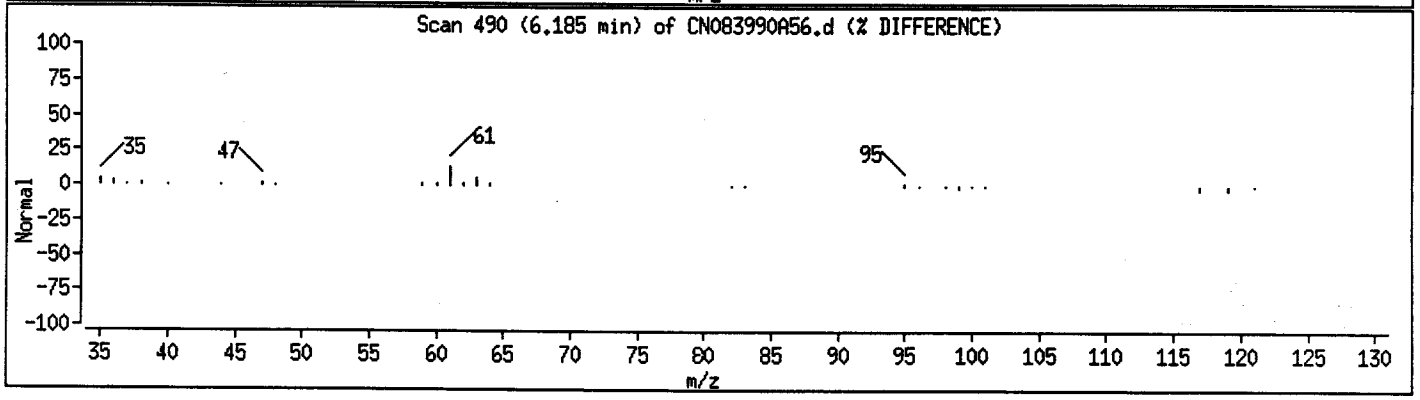
Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane









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Date : 16-FEB-1995 16:02

Client ID: MW12

Instrument: f50056.i

Sample Info:

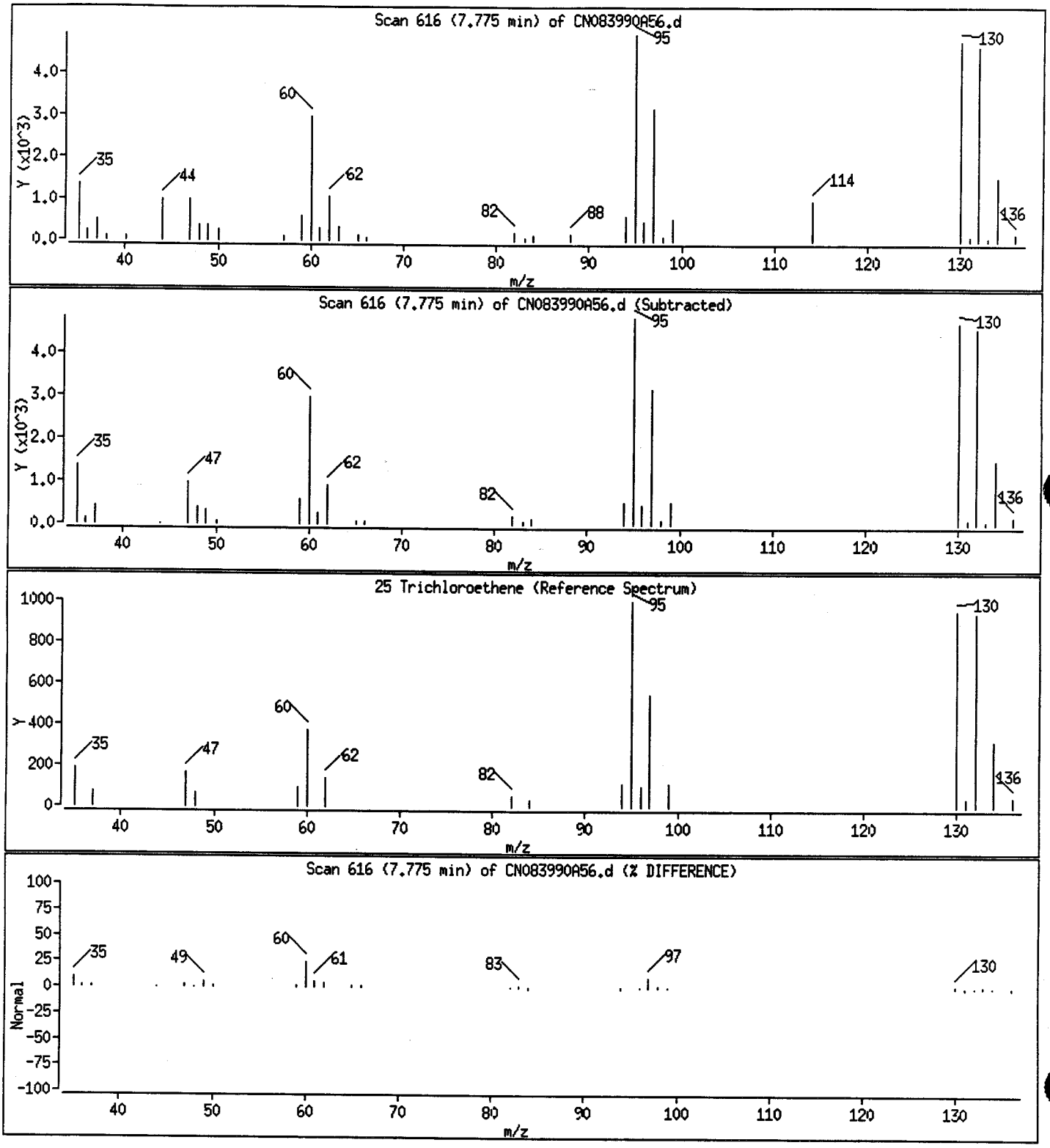
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



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Date : 16-FEB-1995 16:02

Client ID: MW12

Instrument: f50056.i

Sample Info:

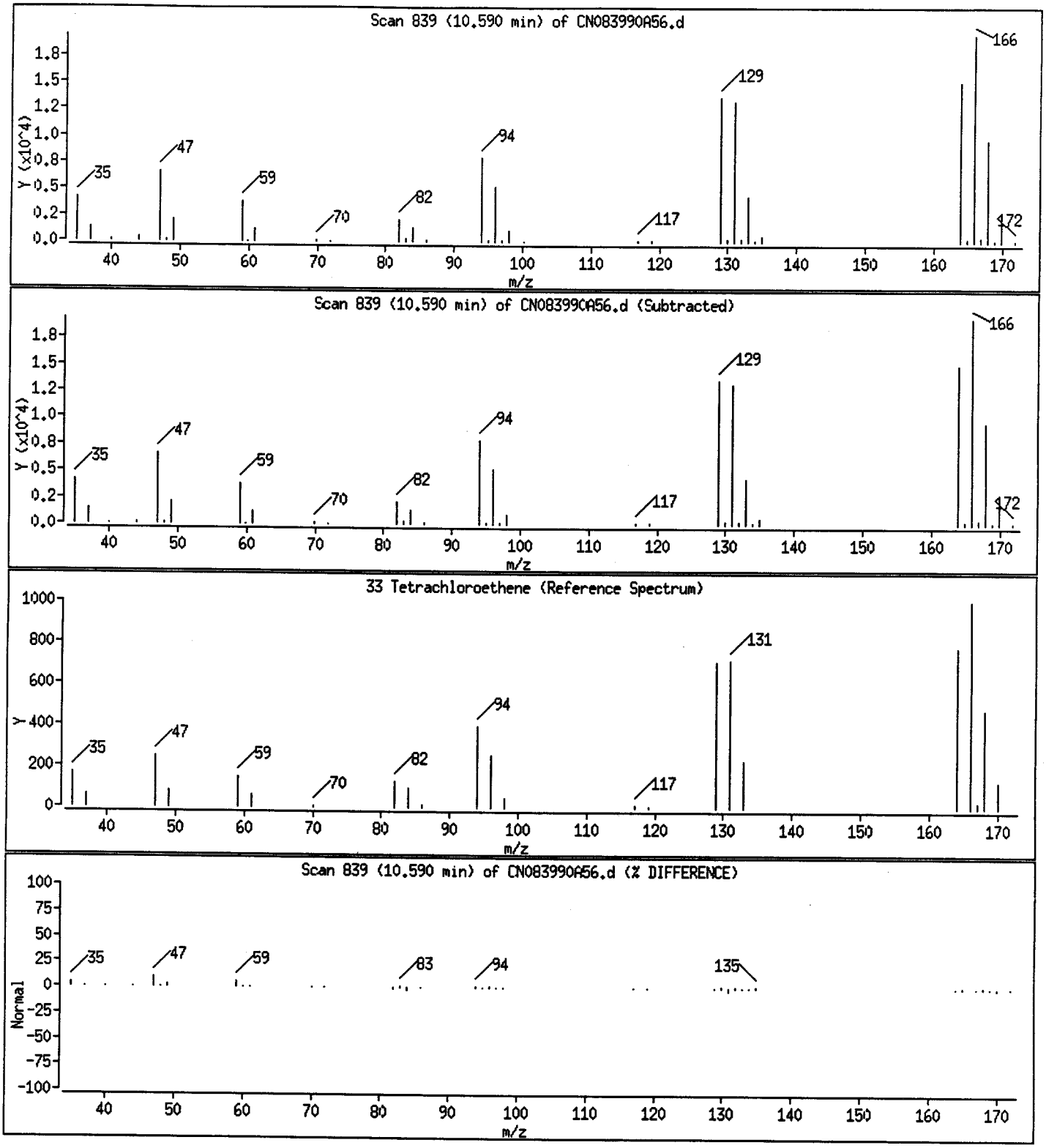
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BF950216A56.b/CN083990A56.d

Date : 16-FEB-1995 16:02

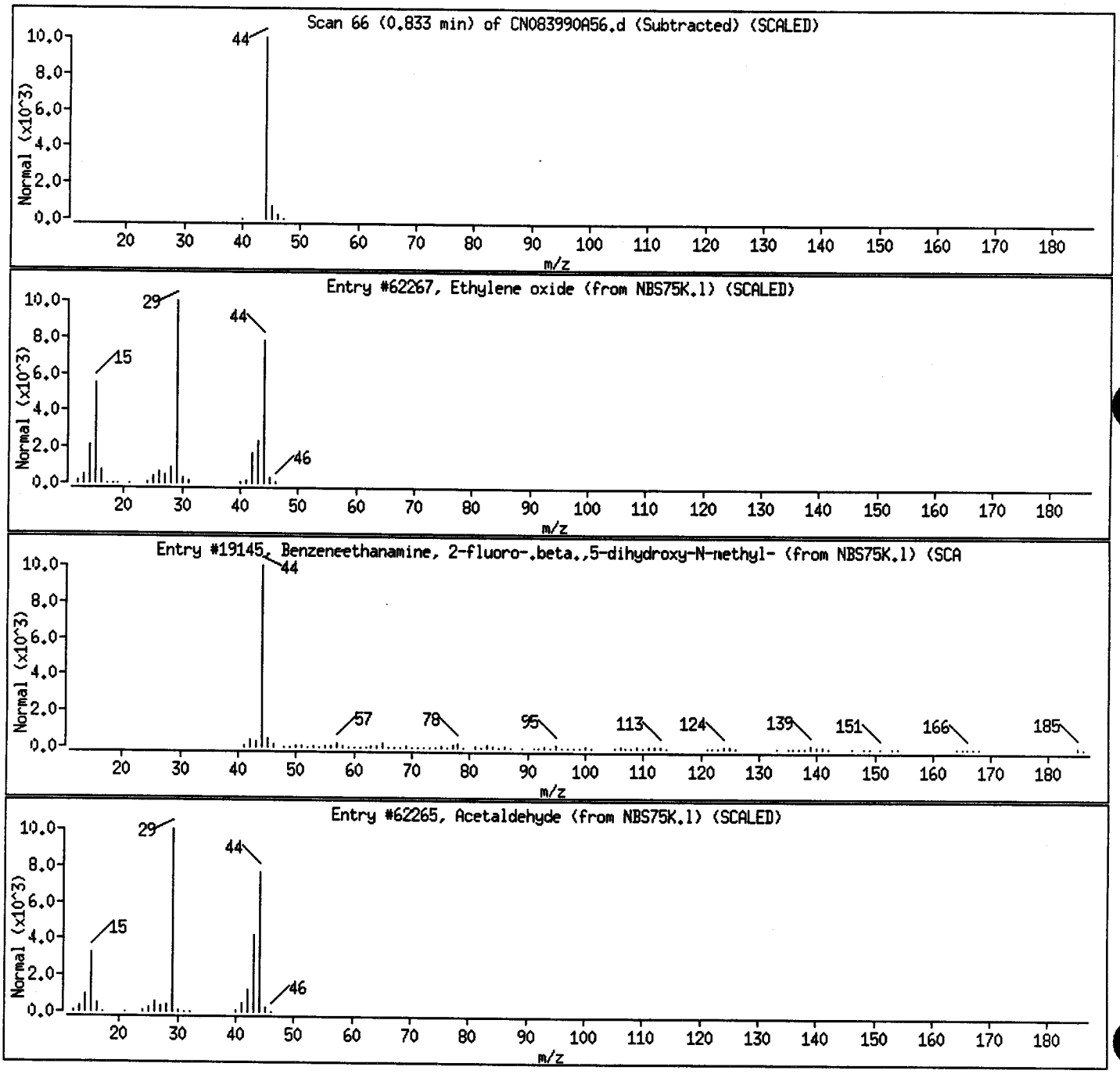
Client ID: MW12 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44



LAB INSTRUCTIONS PPS#_____

VOA
/MS WORKSHEET J( ) J3( ) D( ) (:1)

J2( ) J4( ) D2( ) (:1)

==========

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GC/MS ANALYSIS 5mL 9412/16/95
AMOUNT PURGED: ~~0. UL~~
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950216A56
BLANK FILENAME: CB950216A56
STANDARD FILENAME: CS950216A56
SAMPLE FILENAME: CN083990A56

ANALYST(S): INJECTION: 2011 WORKUP: JKidd

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE --OK---

DISPOSITION: [/] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 01 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 01

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW DCStuDT DATE 2/20/95 AUDITOR _____ DATE ____/____/____

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ____/____/____

==========

FINAL REVIEW: INITIALS _____ DATE ____/____/____

QUALITY ASSURANCE NOTICE

CompuChem ID# 683990
Client ID# MW12
Instrument Blank ID# CB950216A56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 66 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DC/983

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683986

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083986A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	17	
75-09-2	Methylene Chloride	93	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	30	
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	6	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	4	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683986

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083986A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	27	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW9

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683986

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083986A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2300	JB
2.					
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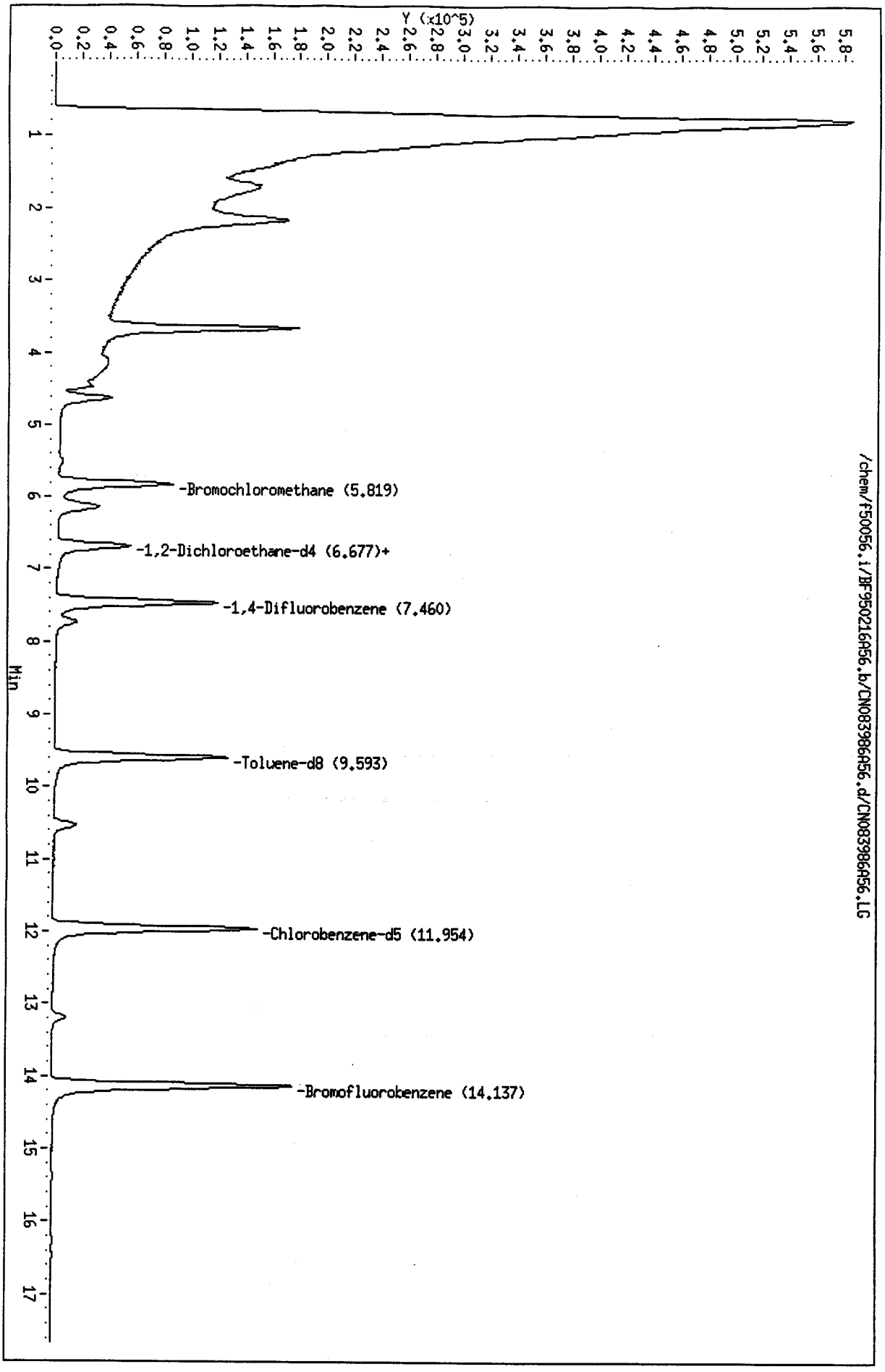

Data File: /chem/f50056.i/BF950216A56.b/CN083986A56.d
Date : 16-FEB-1995 14:01
Client ID: MW9
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2141
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BF950216A56.b/CN083986A56.d/CN083986A56.LG
-Bromochloromethane (5.819)
-1,2-Dichloroethane-d4 (6.677)+
-1,4-Difluorobenzene (7.460)
-Toluene-d8 (9.593)
-Chlorobenzene-d5 (11.954)
-Bromofluorobenzene (14.137)

Data File: /chem/f50056.i/BF950216A56.b/CN083986A56.d
Report Date: 20-Feb-1995 15:12

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CN083986A56.d
Lab Smp Id: 683986 Client Smp ID: MW9
Inj Date : 16-FEB-1995 14:01
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.819	5.869	(1.000)	67304	250.0	
* 2 1,4-Difluorobenzene	114.00	7.460	7.523	(1.000)	292884	250.0	
* 3 Chlorobenzene-d5	117.00	11.954	12.029	(1.000)	310362	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.665	6.728	(1.145)	127596	252.6	50.52
$ 5 Toluene-d8	98.00	9.593	9.669	(0.803)	259488	231.8	46.36
$ 6 Bromofluorobenzene	95.00	14.137	14.213	(1.183)	235804	224.5	44.90
7 Dichlorodiflouromethane	85.00	0.972	0.972	(0.167)	17804	137.3	27.47
8 Chloromethane	50.00		1.111	Compound Not Detected.			
9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10 Bromomethane	94.00		1.590	Compound Not Detected.			
11 Chloroethane	64.00	1.729	1.729	(0.297)	19107	86.49	17.30
12 1,1-Dichloroethene	96.00		2.840	Compound Not Detected.			
13 Acetone	43.00		3.156	Compound Not Detected.			
14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15 Methylene Chloride	84.00	3.661	3.686	(0.629)	177712	467.4	93.47
16 trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
17 1,1-Dichloroethane	63.00	4.632	4.670	(0.796)	121697	151.4	30.28
18 cis-1,2-Dichloroethene	96.00	5.503	5.554	(0.946)	4290	9.15	1.83(a)
19 2-Butanone	43.00		5.768	Compound Not Detected.			
20 Chloroform	83.00		6.122	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00	6.135	6.198	(0.822)	60928	70.46	14.09
22 Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
23 Benzene	78.00	6.690	6.740	(0.897)	11184	9.99	2.00(a)
24 1,2-Dichloroethane	62.00		6.841	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/CN083986A56.d
Report Date: 20-Feb-1995 15:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	7.738	7.788	(1.037)	14832	29.01	5.80(a)
26	1,2-Dichloropropane	63.00		8.091	Compound Not Detected.			
27	Bromodichloromethane	83.00		8.634	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		9.328	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		9.732	Compound Not Detected.			
30	Toluene	91.00		9.770	Compound Not Detected.			
31	trans-1,3-Dichloropropene	75.00		10.300	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		10.540	Compound Not Detected.			
33	Tetrachloroethene	164.00	10.527	10.603	(0.881)	14313	22.28	4.46(a)
34	2-Hexanone	43.00		11.158	Compound Not Detected.			
35	Dibromochloromethane	129.00		11.120	Compound Not Detected.			
36	Chlorobenzene	112.00		12.080	Compound Not Detected.			
37	Ethylbenzene	106.00		12.383	Compound Not Detected.			
38	m,p-Xylene	106.00		12.610	Compound Not Detected.			
39	o-Xylene	106.00	13.191	13.279	(1.103)	11258	15.24	3.05(a)
40	Styrene	104.00		13.342	Compound Not Detected.			
41	Bromoform	173.00		13.557	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		14.680	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00				4290	9.54	1.91(a)
M 44	Xylene (Total)	106.00				11258	15.24	3.05(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950216A56.b/CN083986A56.d

Date : 16-FEB-1995 14:01

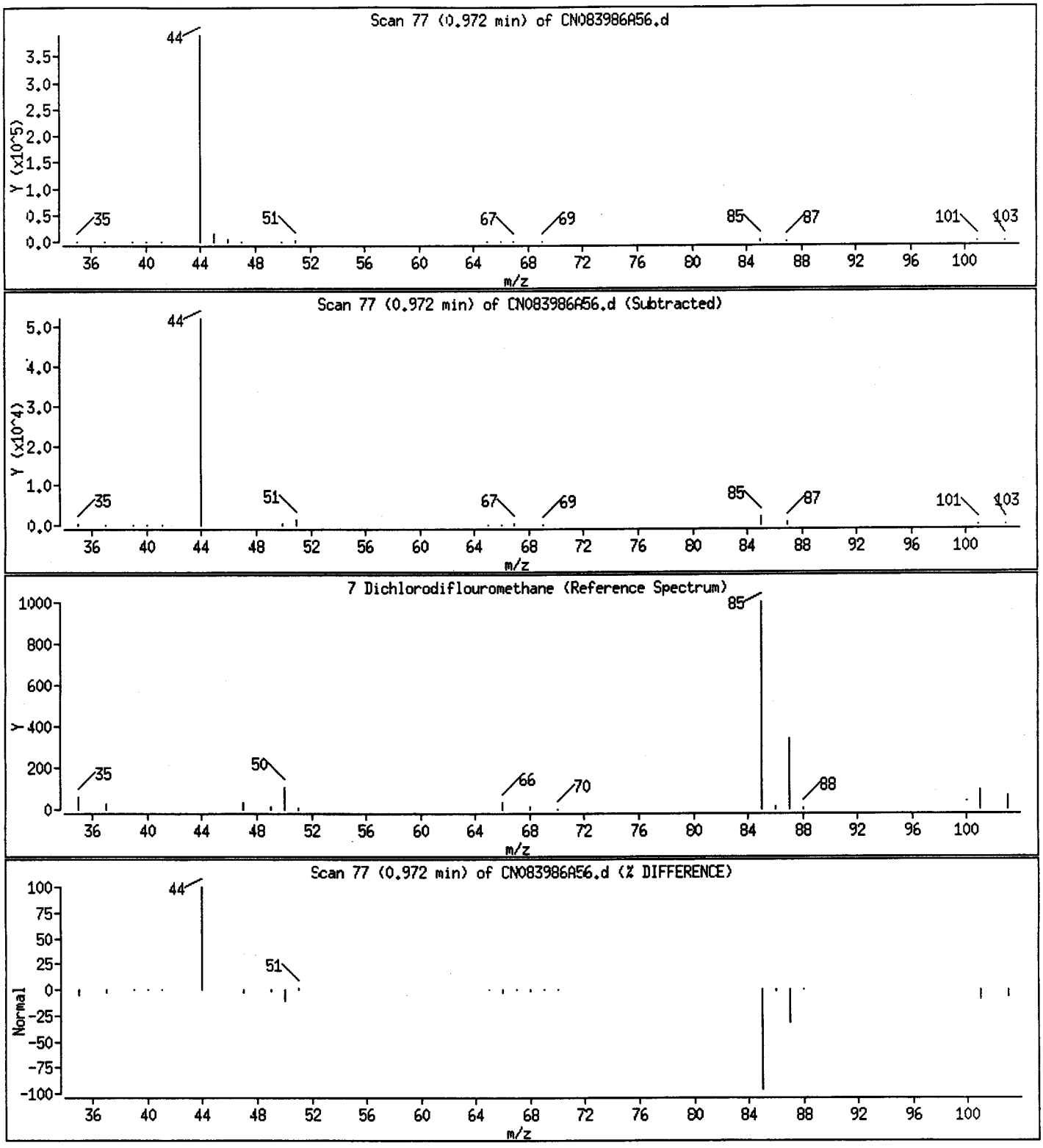
Client ID: MW9 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

7 Dichlorcdiflourcmethane



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Date : 16-FEB-1995 14:01

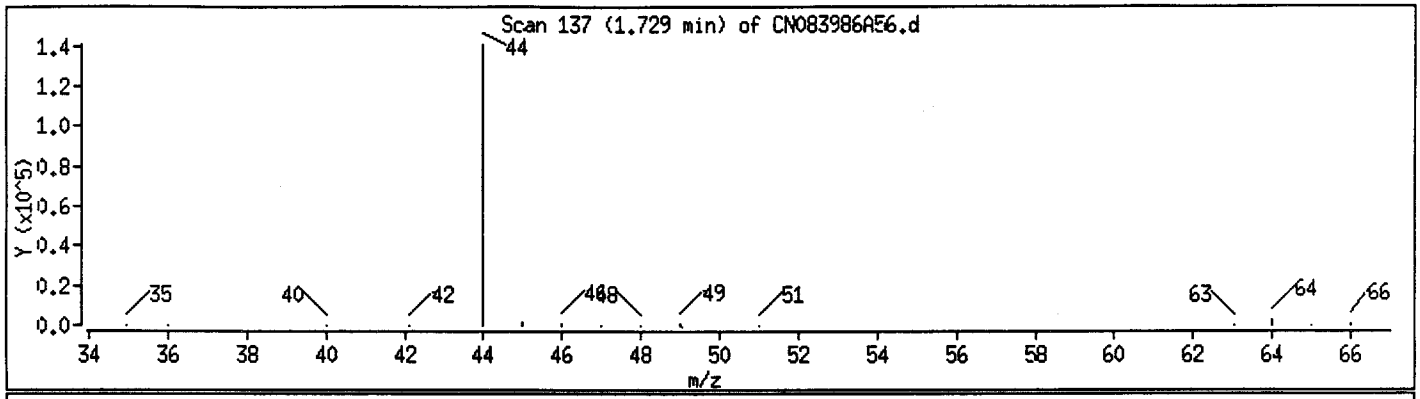
Client ID: MW9 Instrument: f50056.i

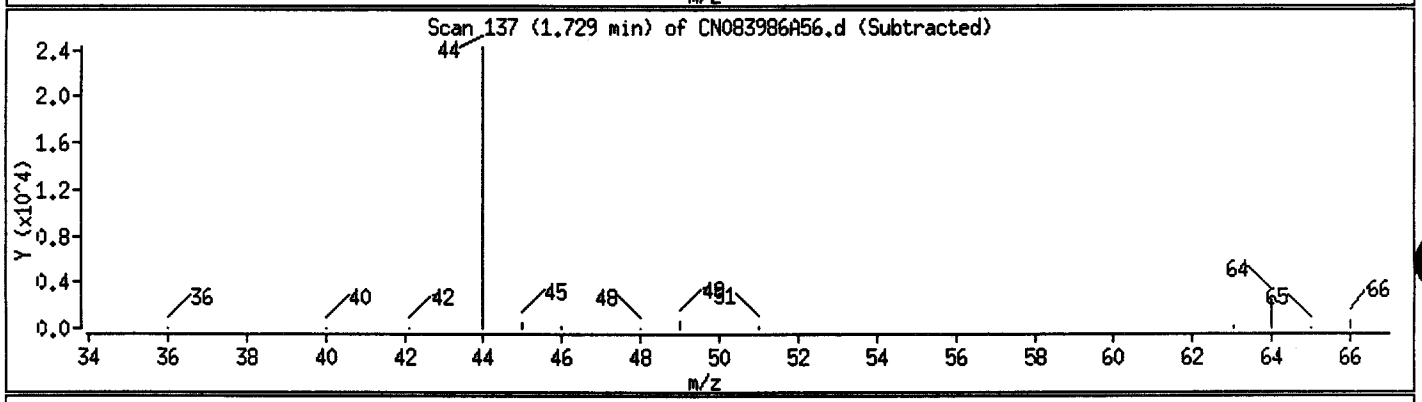
Sample Info:

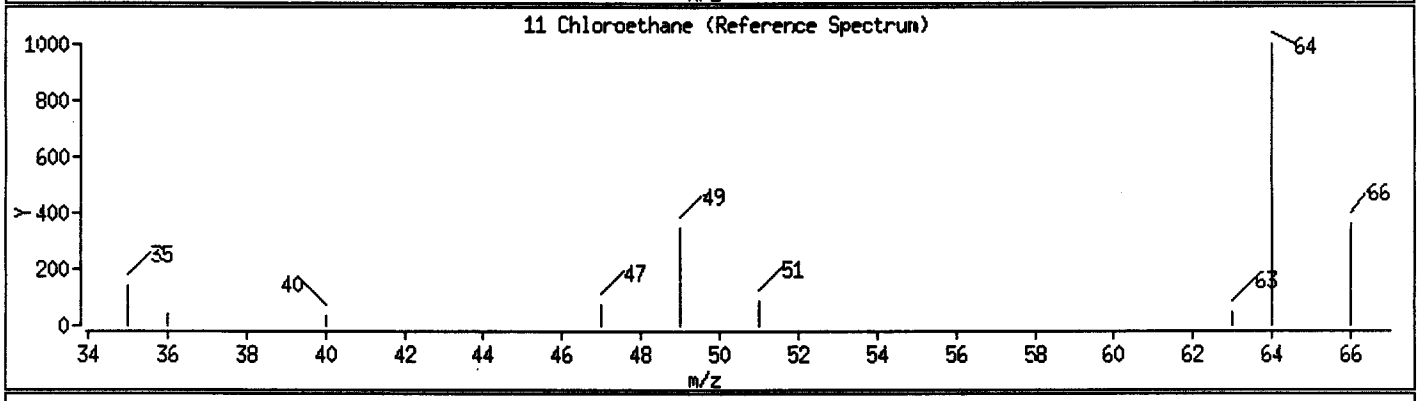
Purge Volume: 5.0 Operator: 2141

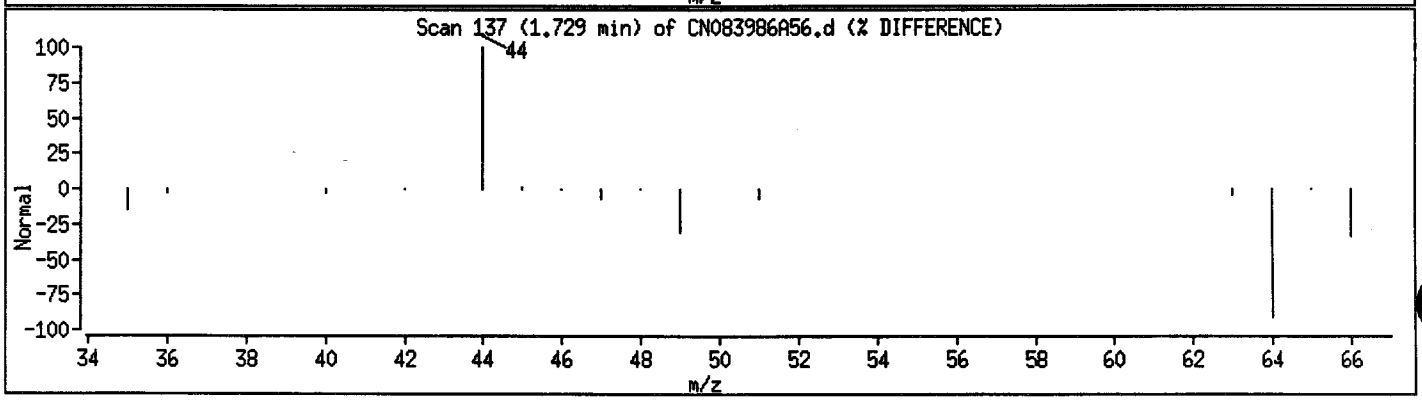
Column phase: DB624 Column diameter: 0.53

11 Chloroethane









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Date : 16-FEB-1995 14:01

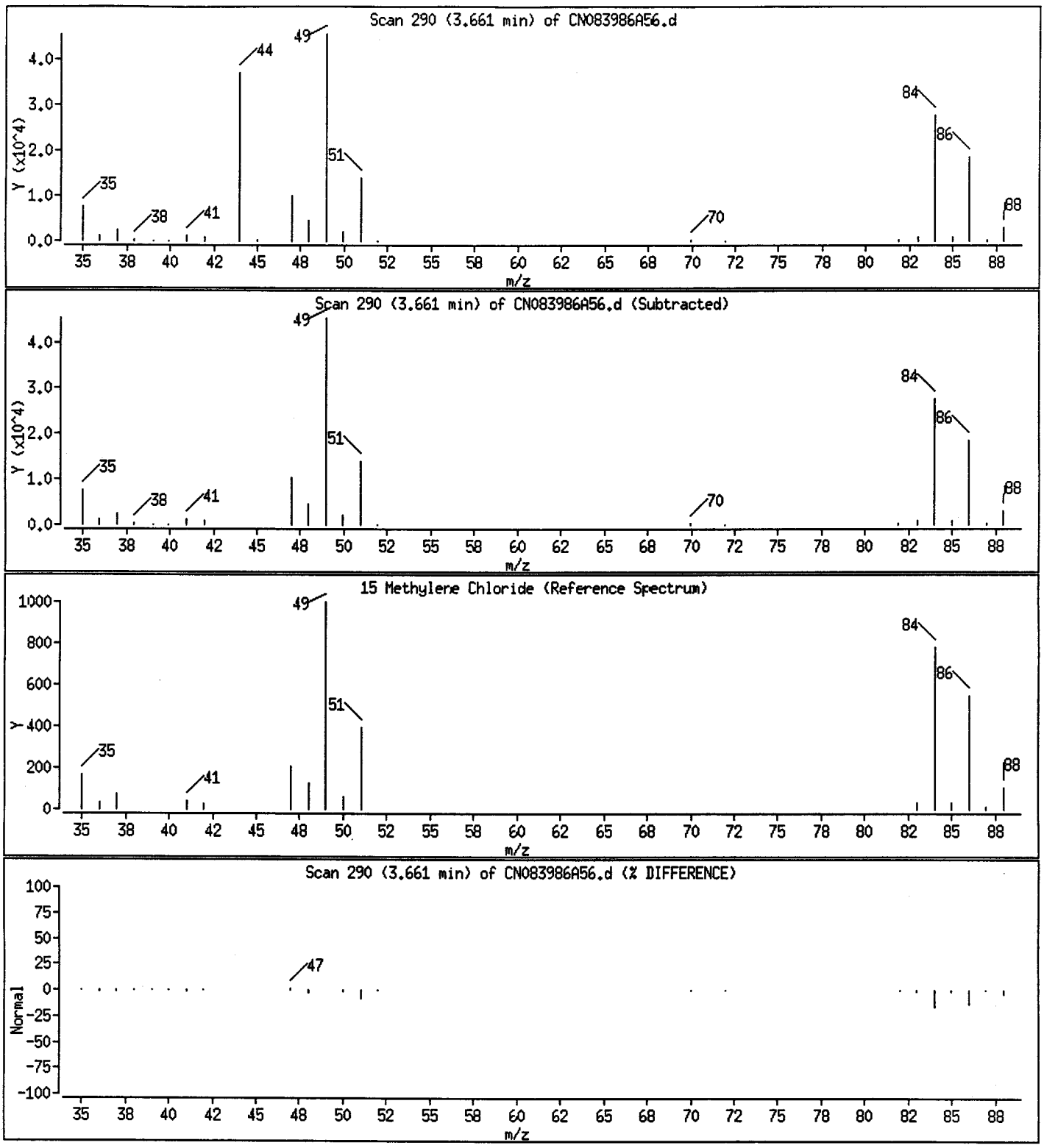
Client ID: MW9 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



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Date : 16-FEB-1995 14:01

Client ID: MW9

Instrument: f50056.i

Sample Info:

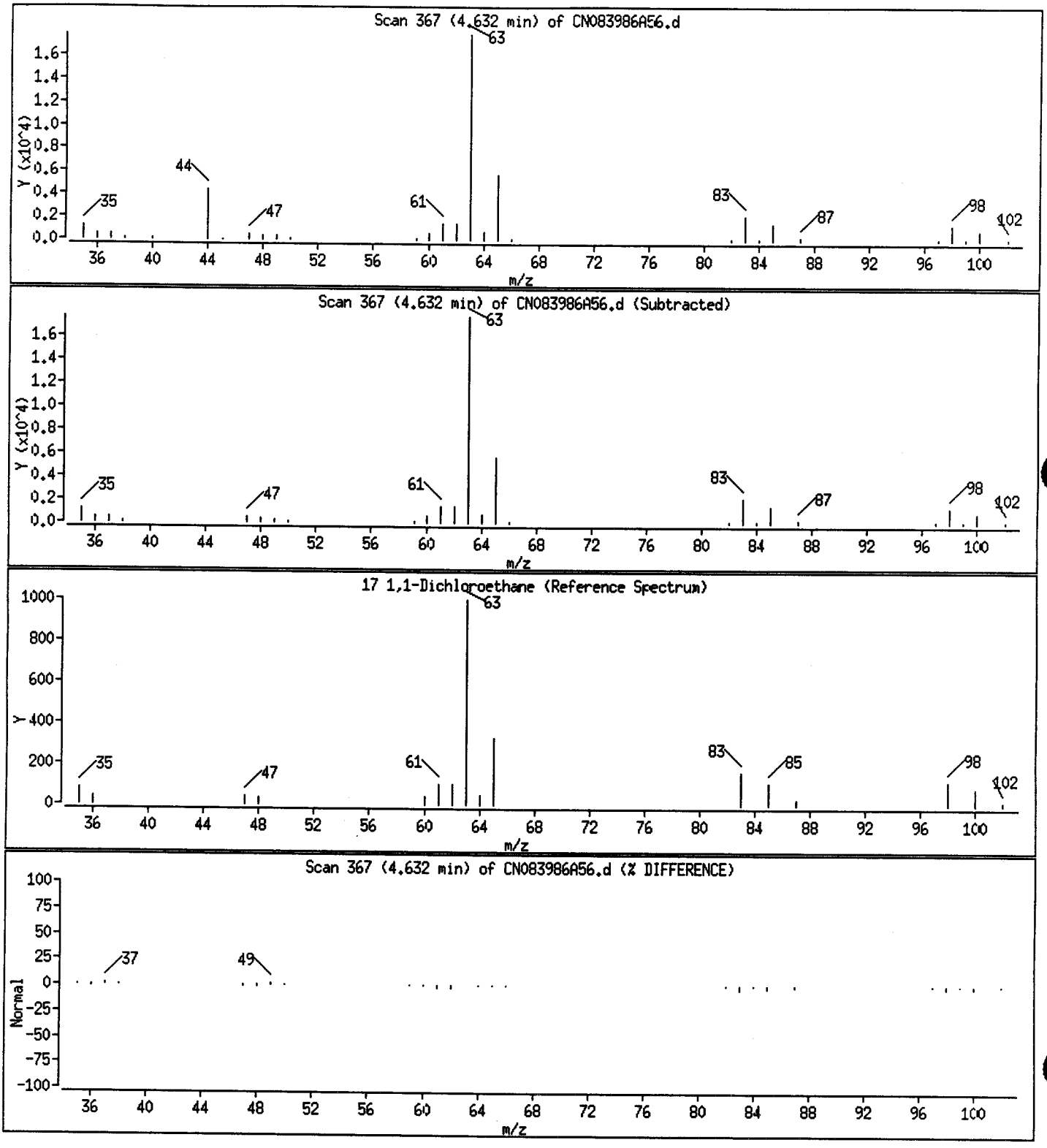
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



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Date : 16-FEB-1995 14:01

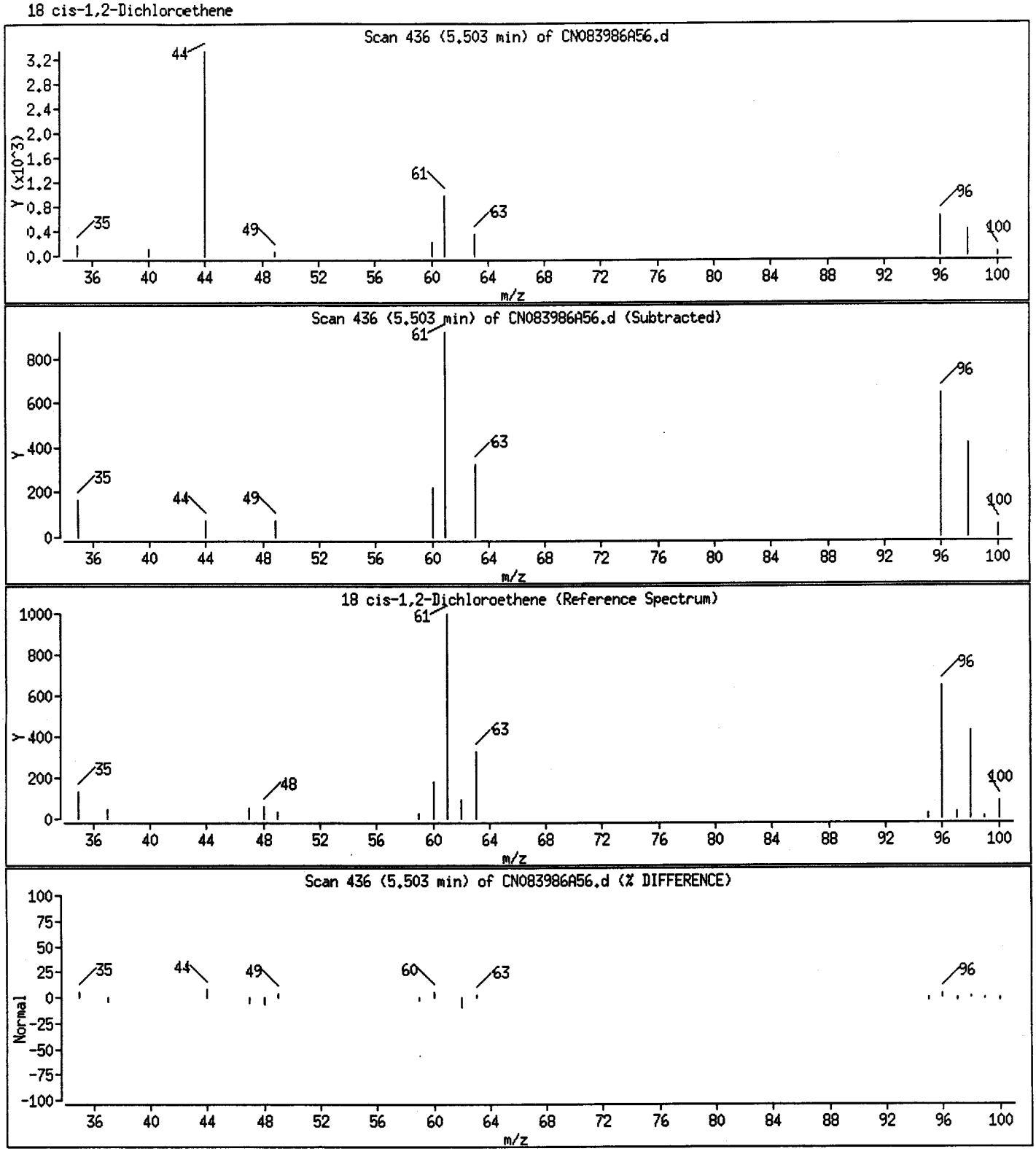
Client ID: MW9 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

18 cis-1,2-Dichlorcethene



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Date : 16-FEB-1995 14:01

Client ID: MW9

Instrument: f50056.i

Sample Info:

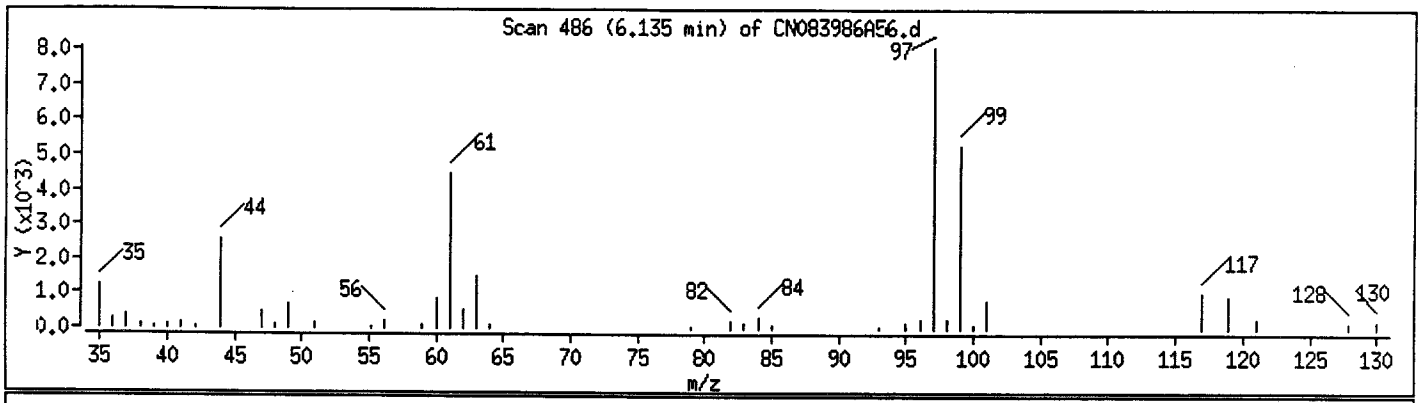
Purge Volume: 5.0

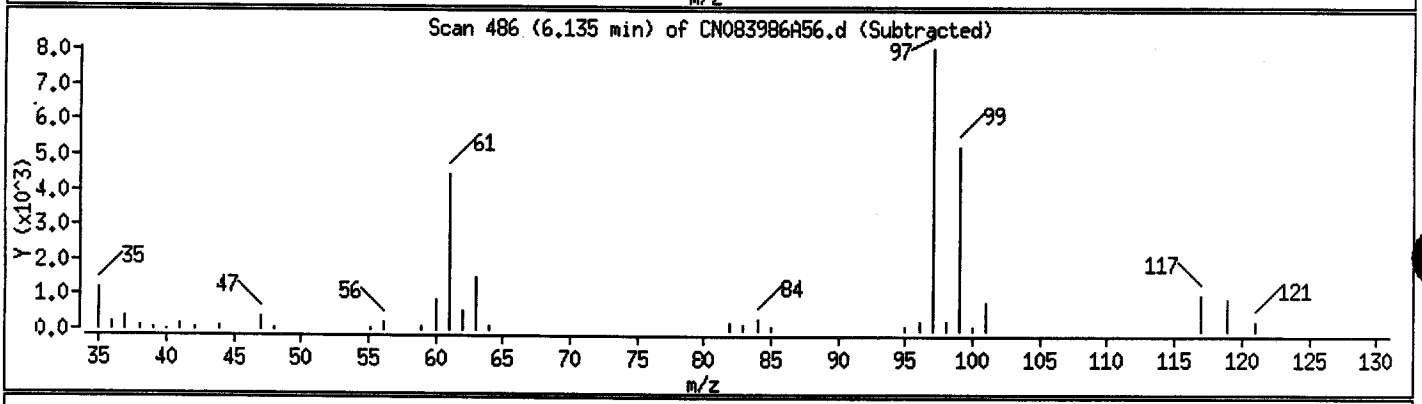
Operator: 2141

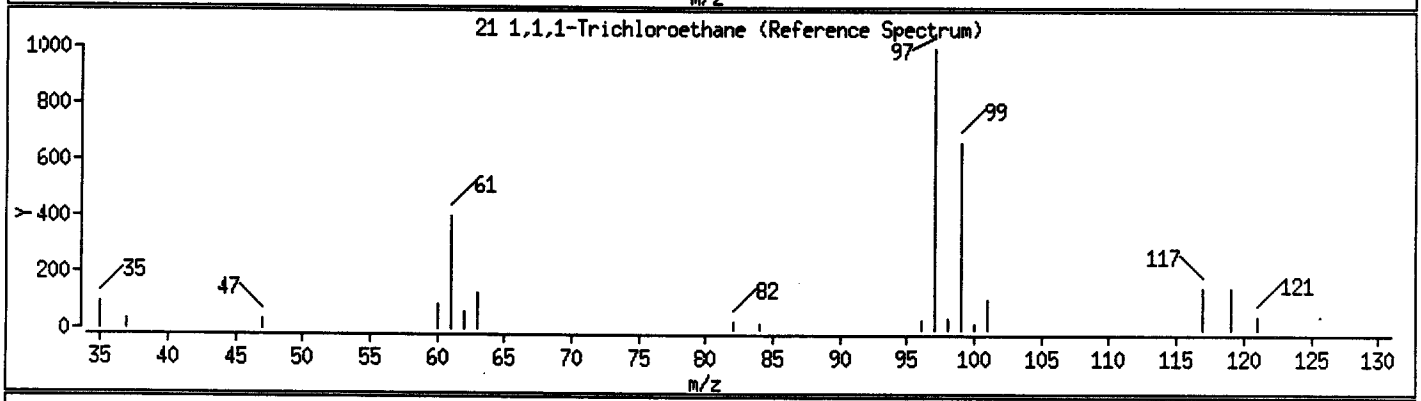
Column phase: DB624

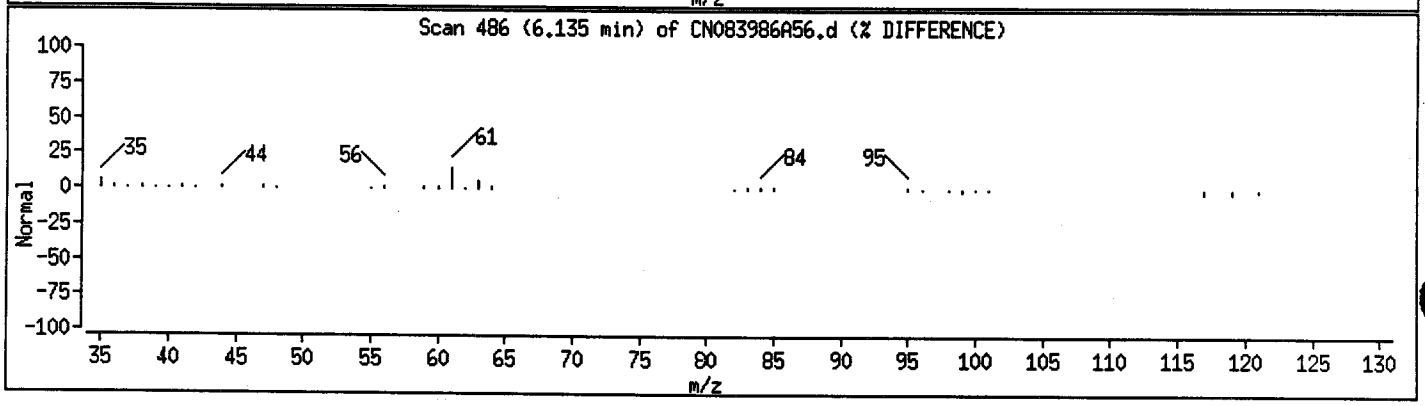
Column diameter: 0.53

21 1,1,1-Trichloroethane









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Date : 16-FEB-1995 14:01

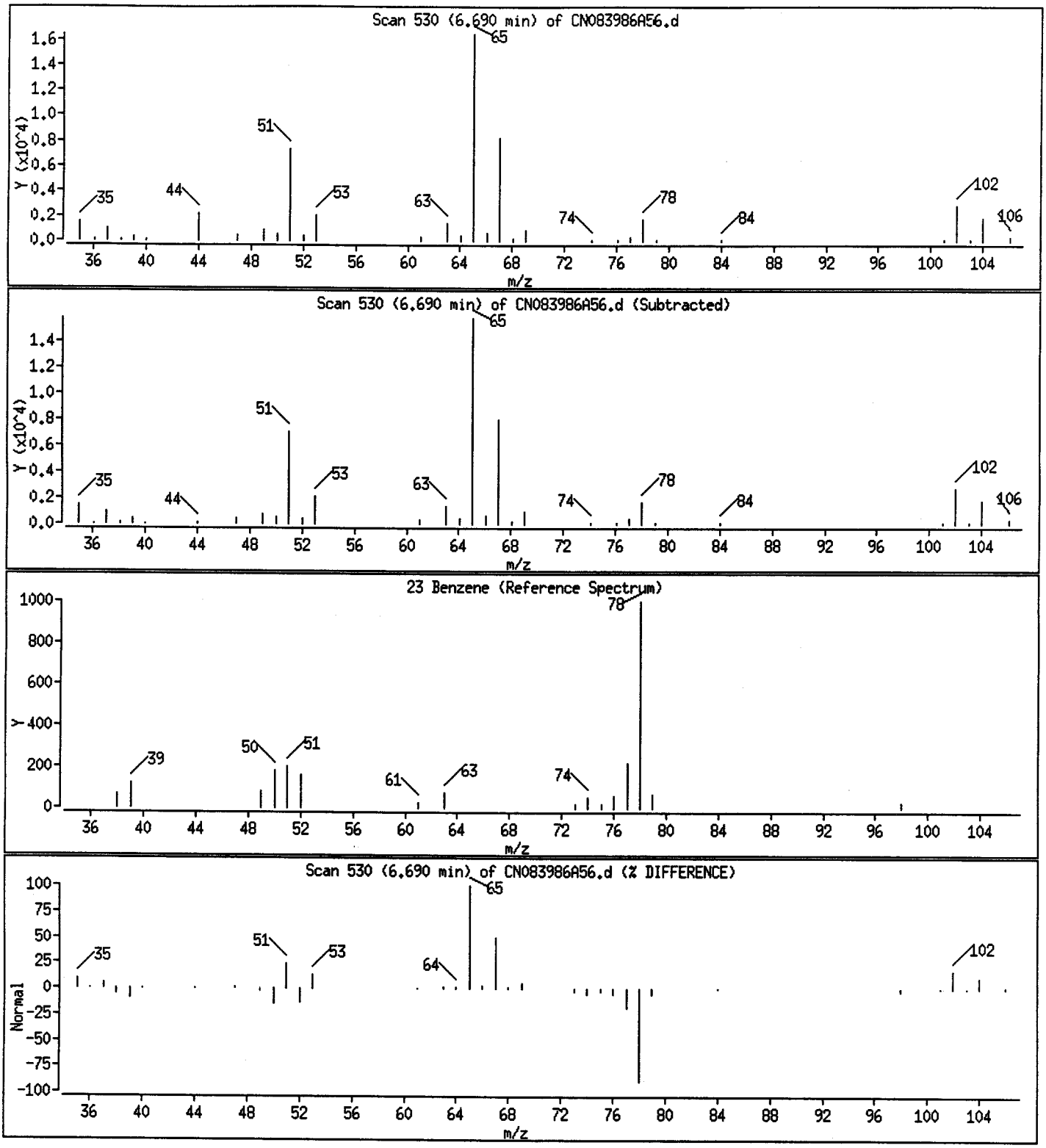
Client ID: MW9 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

23 Benzene



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Date : 16-FEB-1995 14:01

Client ID: MW9

Instrument: f50056.i

Sample Info:

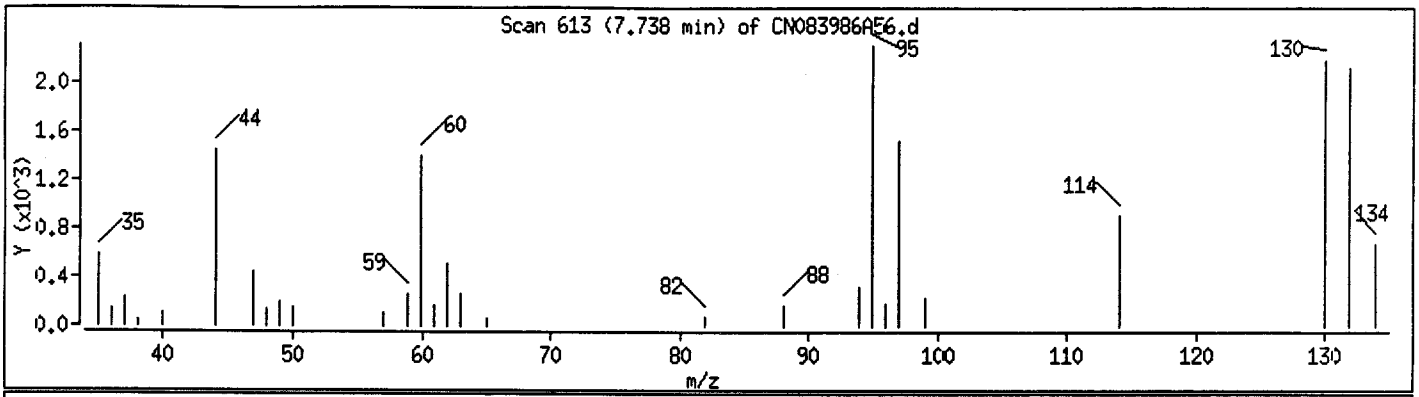
Purge Volume: 5.0

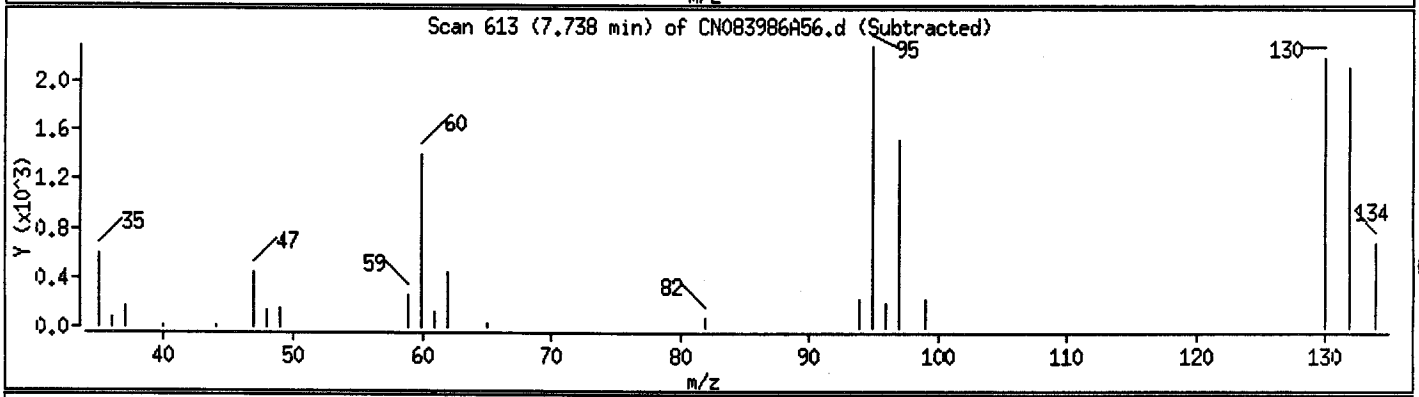
Operator: 2141

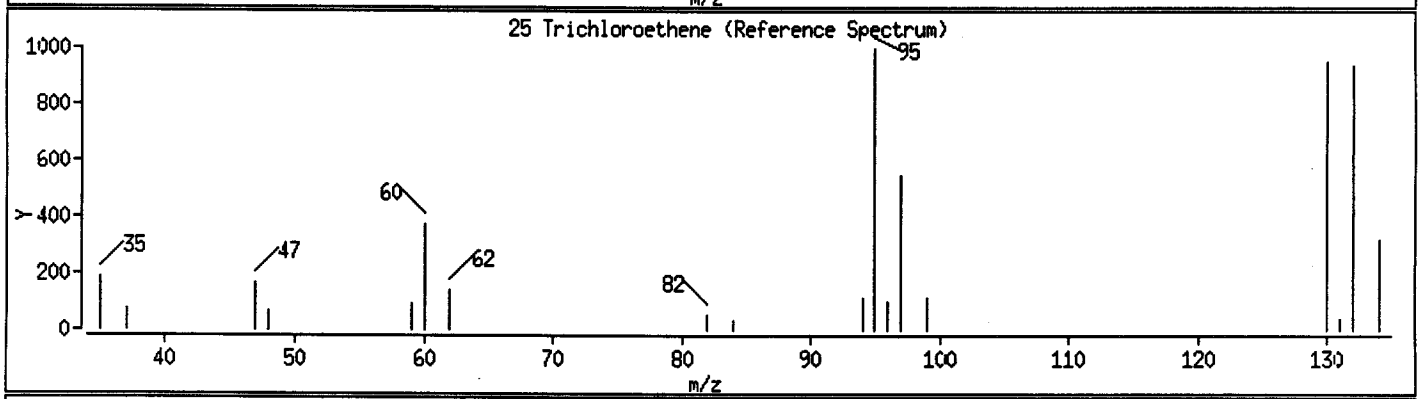
Column phase: DB624

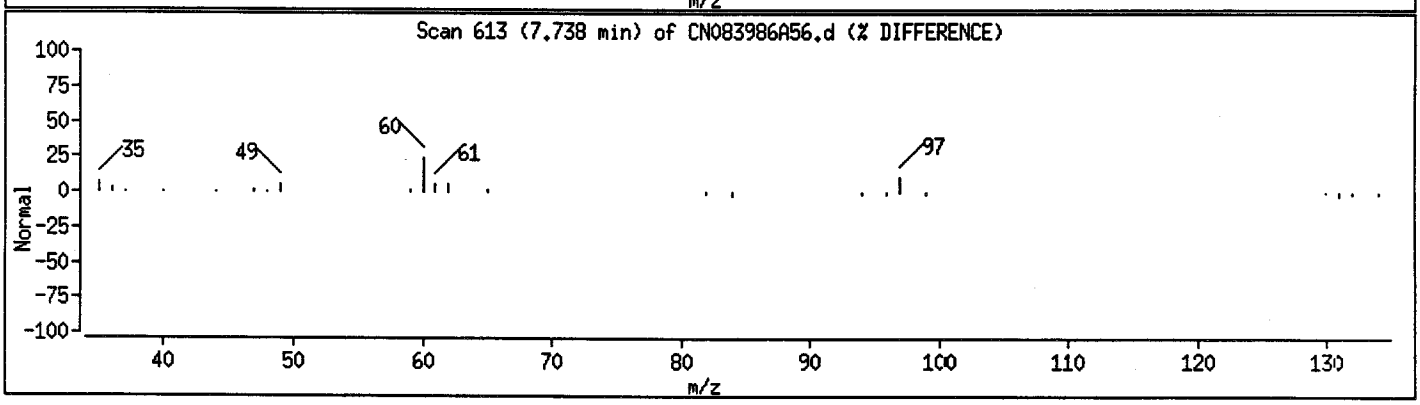
Column diameter: 0.53

25 Trichloroethene









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Date : 16-FEB-1995 14:01

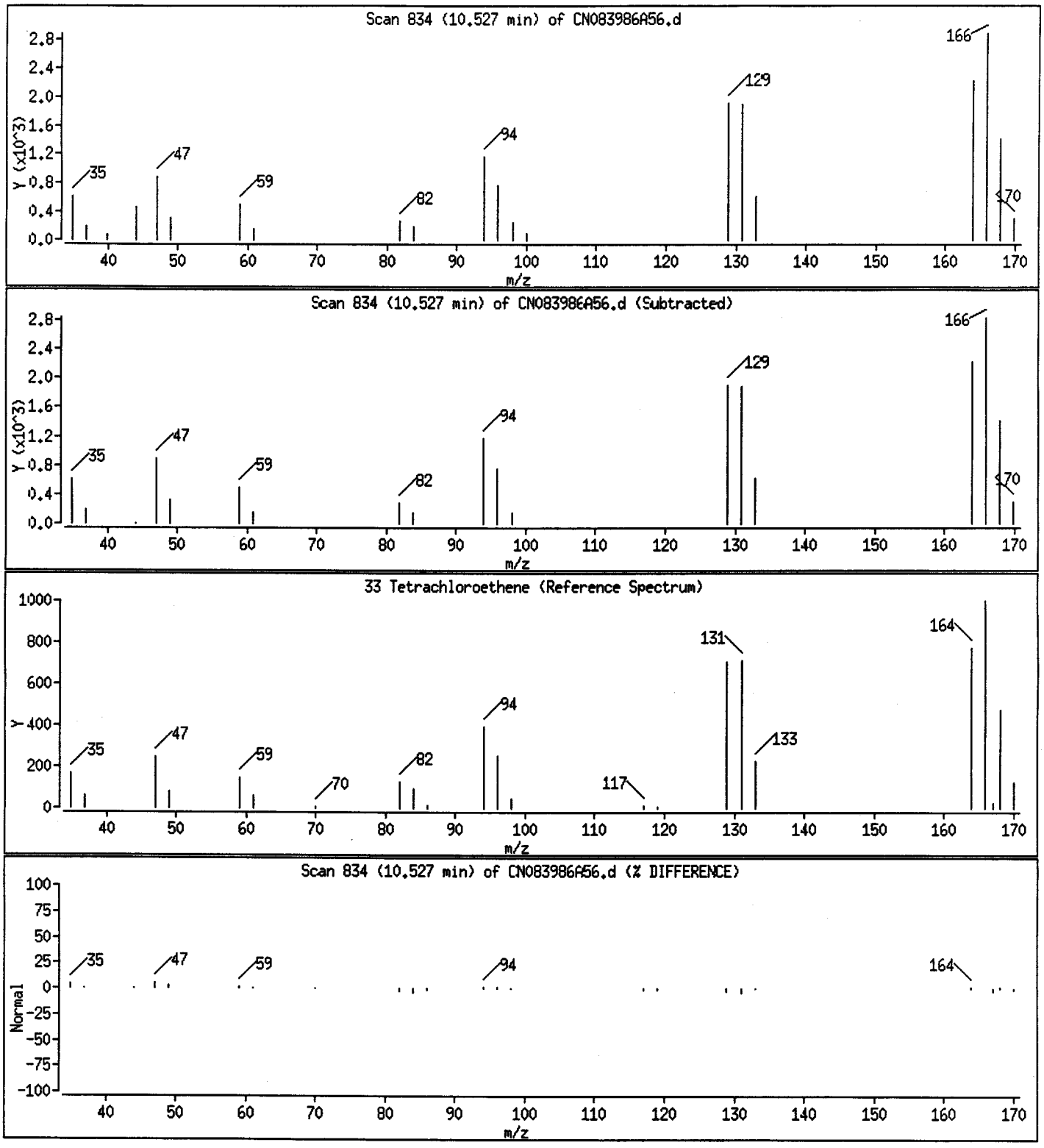
Client ID: MW9 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene



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Date : 16-FEB-1995 14:01

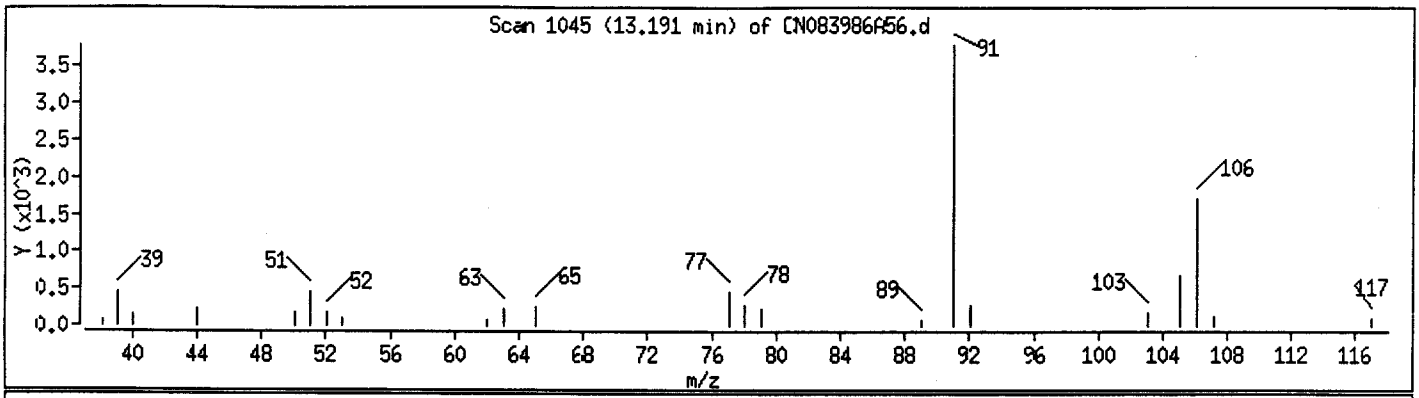
Client ID: MW9 Instrument: f50056.i

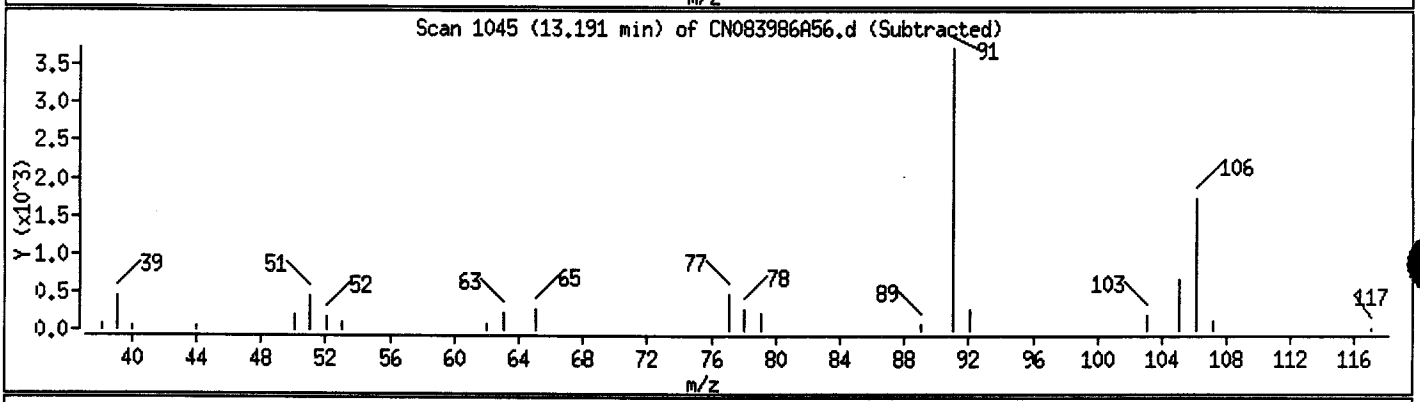
Sample Info:

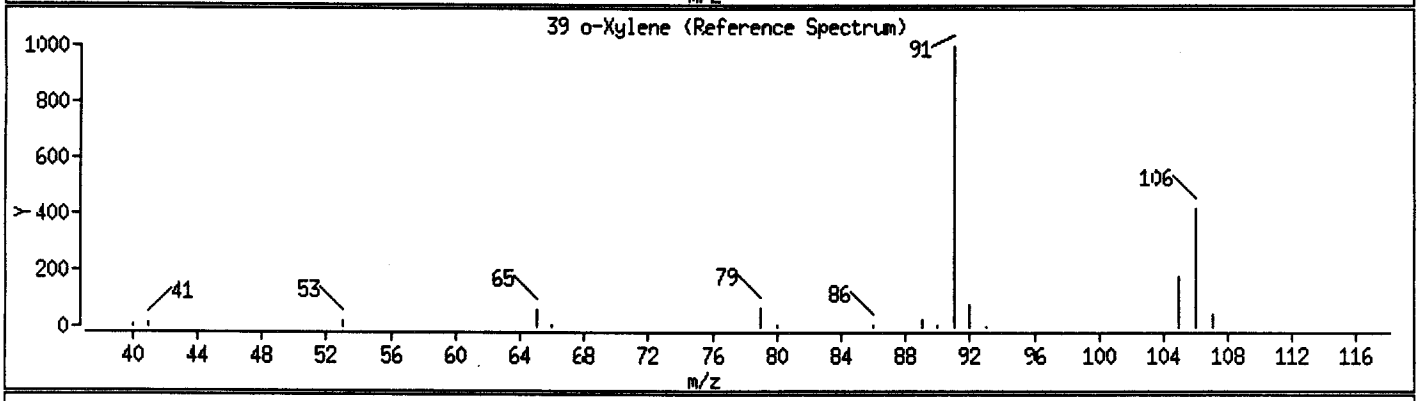
Purge Volume: 5.0 Operator: 2141

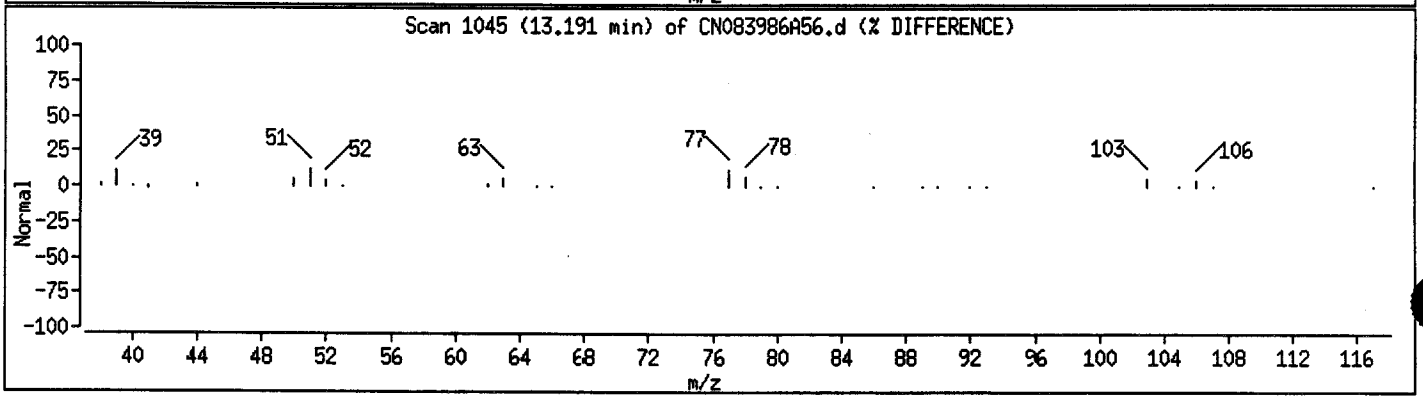
Column phase: DB624 Column diameter: 0.53

39 o-Xylene









Data File: /chem/f50056.i/BF950216A56.b/CN083986A56.d

Date : 16-FEB-1995 14:01

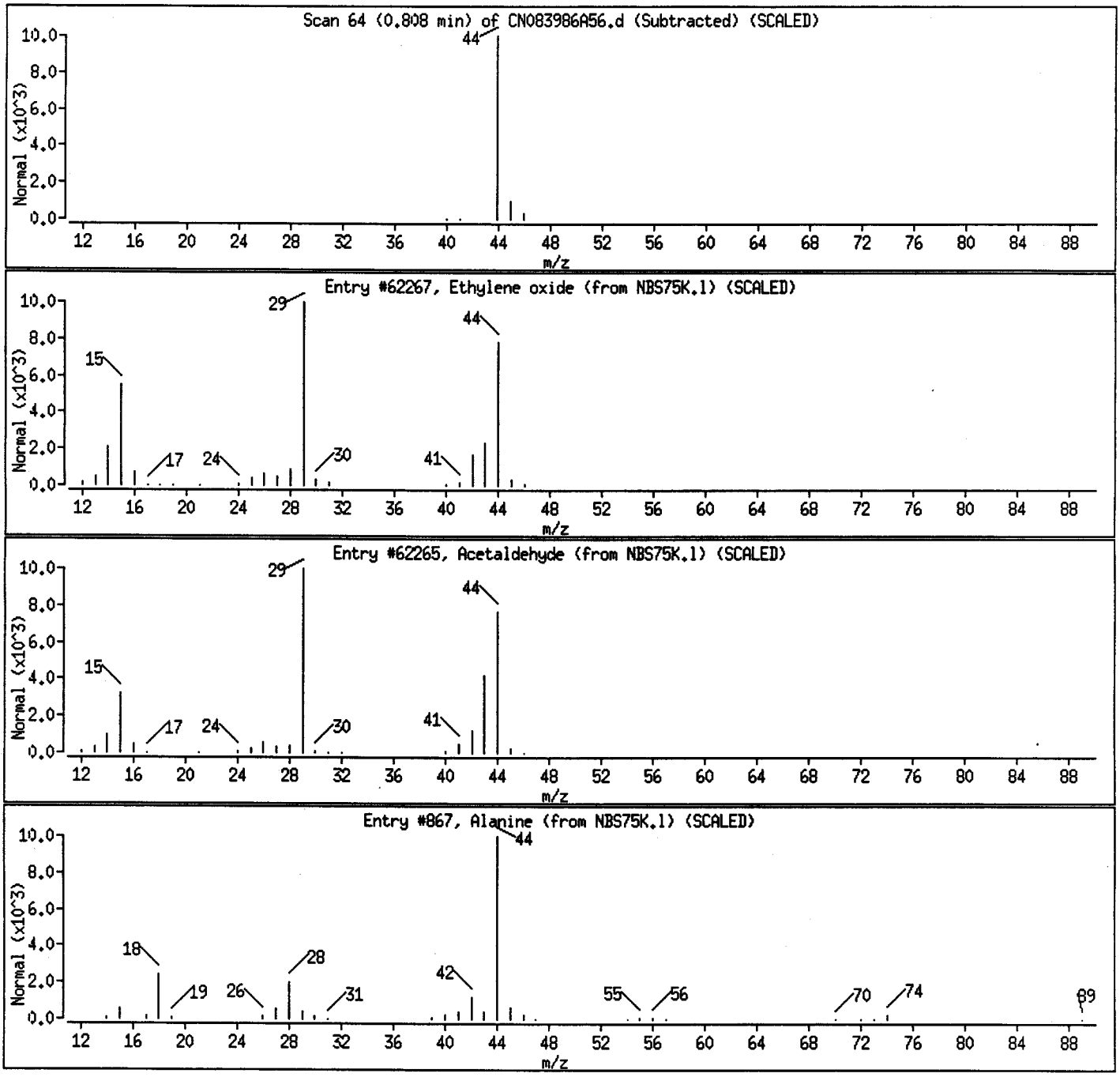
Client ID: MW9 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.1	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.1	62265	2	C2H4O	44
Alanine	56-41-7	NBS75K.1	867	2	C3H7NO2	89



LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

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GC/MS ANALYSIS
AMOUNT PURGED: ~~0. UL~~ Sam Sml 9/2/10/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950216A56
BLANK FILENAME: CB950216A56
STANDARD FILENAME: CS950216A56
SAMPLE FILENAME: CN083986A56

ANALYST(S): INJECTION: 2011 WORKUP: [signature]

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE ___OK___

DISPOSITION: [✓] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 01 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 01

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW [signature] DATE 2/20/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

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QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

FINAL REVIEW: INITIALS _____ DATE ___/___/___

QUALITY ASSURANCE NOTICE

CompuChem ID# 683986
Client ID# mw9
Instrument Blank ID# CB95021A56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 64 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DKS / 983

Date 2·20·95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083991A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083991A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLK2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083991A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

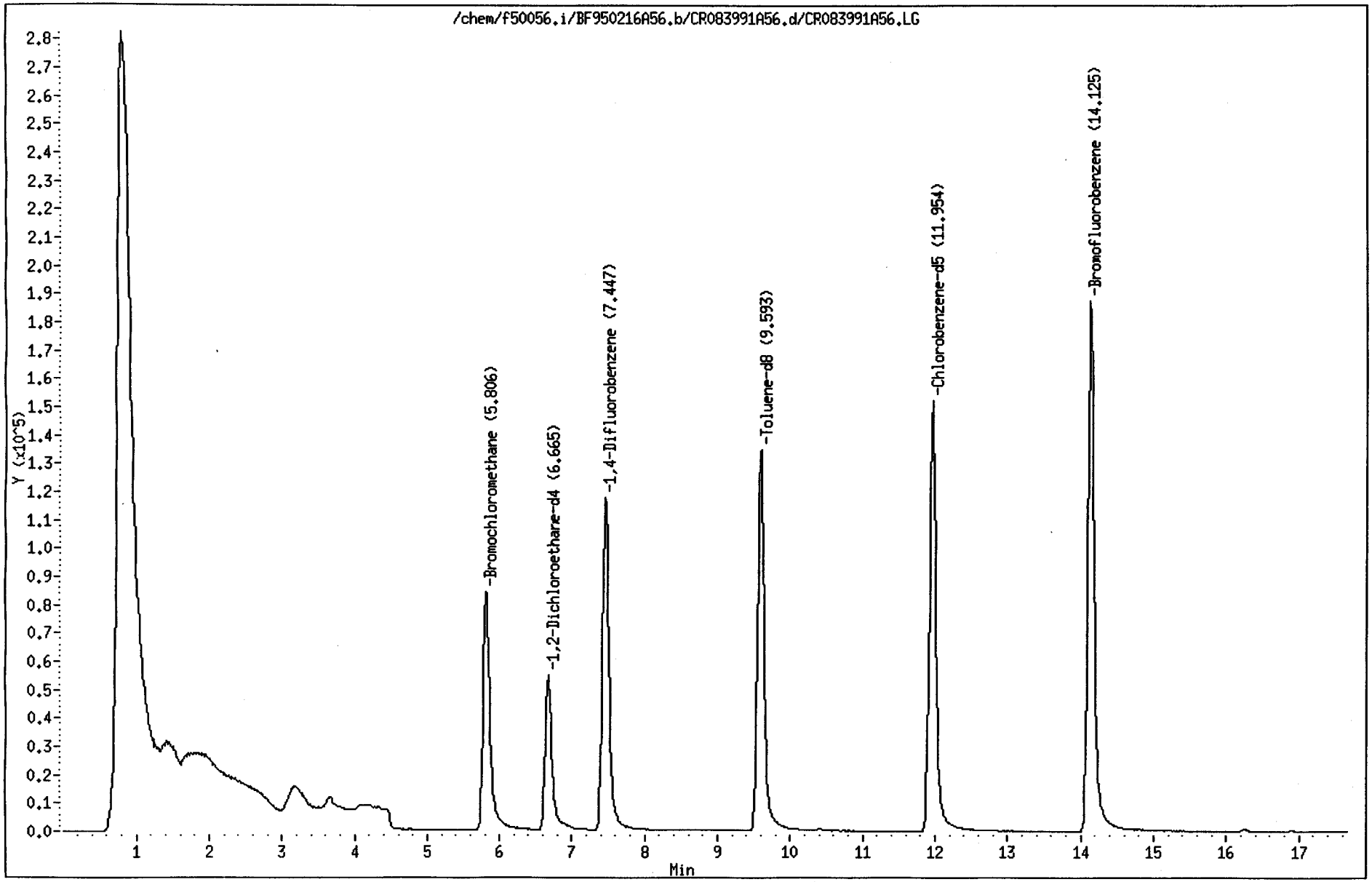
Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	640	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50056.i/BF950216A56.b/CR083991A56.d
Date : 16-FEB-1995 12:21
Client ID: TRIPBLK2
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i
Operator: 2141
Column diameter: 0.53



Data File: /chem/f50056.i/BF950216A56.b/CR083991A56.d
Report Date: 20-Feb-1995 15:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CR083991A56.d
Lab Smp Id: 683991 Client Smp ID: TRIPBLK2
Inj Date : 16-FEB-1995 12:21
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.806	5.869	(1.000)	69668	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.523	(1.000)	293882	250.0	
*	3 Chlorobenzene-d5	117.00	11.954	12.029	(1.000)	311056	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.665	6.728	(1.148)	137674	263.3	52.66
$	5 Toluene-d8	98.00	9.580	9.669	(0.801)	280088	249.7	49.93
$	6 Bromofluorobenzene	95.00	14.125	14.213	(1.182)	248507	236.0	47.21
	7 Dichlorodiflouromethane	85.00		0.972	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
	10 Bromomethane	94.00		1.590	Compound Not Detected.			
	11 Chloroethane	64.00		1.729	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		2.840	Compound Not Detected.			
	13 Acetone	43.00		3.156	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.673	3.686	(0.633)	3721	9.45	1.89(a)
	16 trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		4.670	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		5.554	Compound Not Detected.			
	19 2-Butanone	43.00		5.768	Compound Not Detected.			
	20 Chloroform	83.00		6.122	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		6.198	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
	23 Benzene	78.00		6.740	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/CR083991A56.d
Report Date: 20-Feb-1995 15:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.841		Compound Not Detected.		
25	Trichloroethene	130.00		7.788		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.091		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.328		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.732		Compound Not Detected.		
30	Toluene	91.00		9.770		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.300		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.540		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.603		Compound Not Detected.		
34	2-Hexanone	43.00		11.158		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.680		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950216A56.b/CR083991A56.d

Date : 16-FEB-1995 12:21

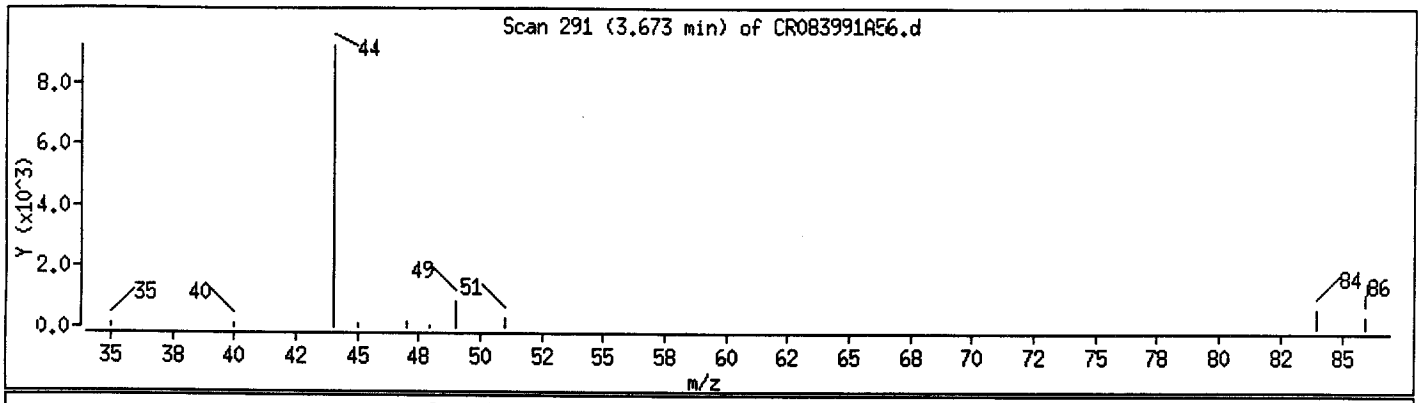
Client ID: TRIPBLK2 Instrument: f50056.i

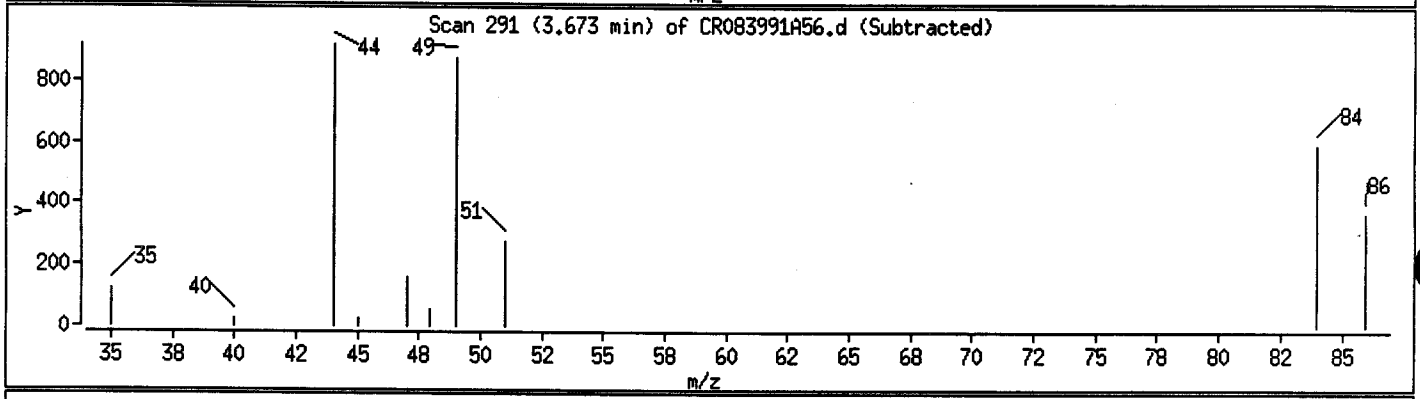
Sample Info:

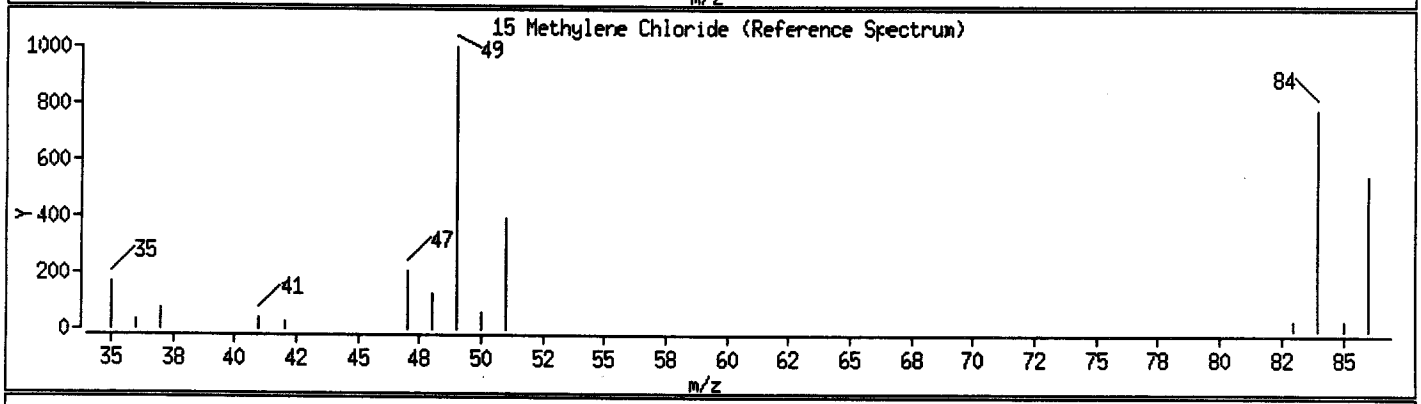
Purge Volume: 5.0 Operator: 2141

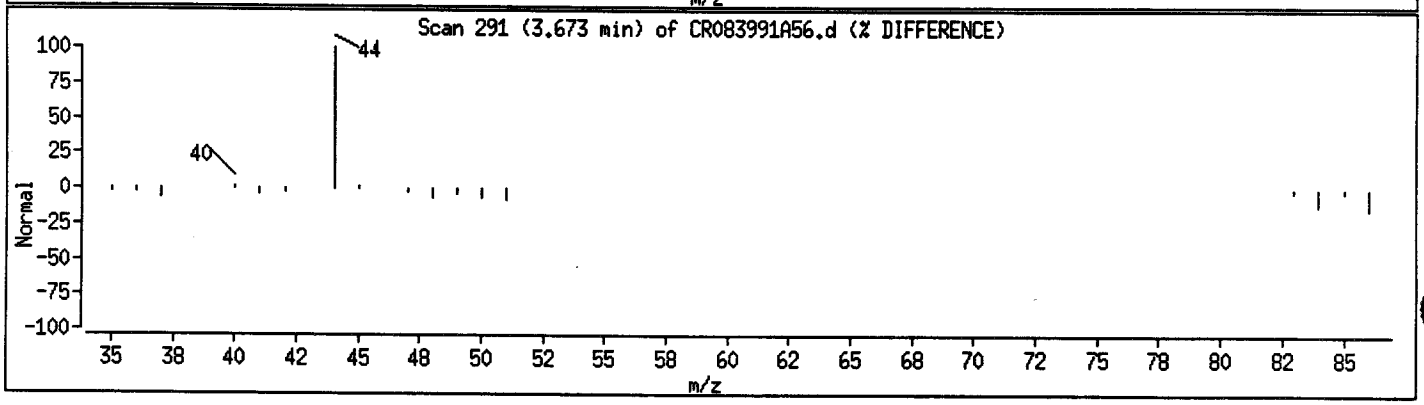
Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride









Data File: /chem/f50056.i/BF950216A56.b/CR083991A56.d

Date : 16-FEB-1995 12:21

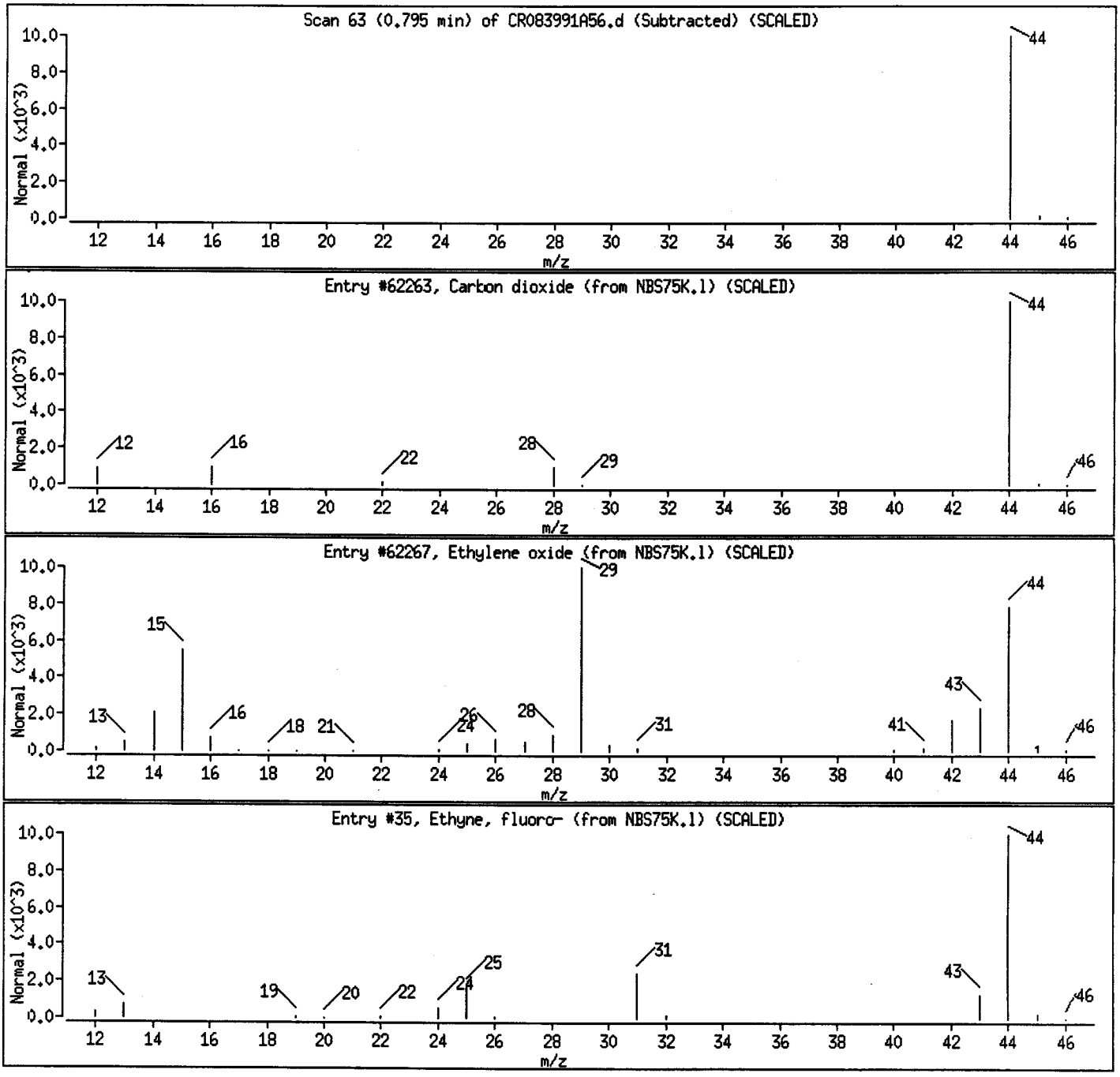
Client ID: TRIPBLK2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.1	62263	5	CO2	44
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Ethyne, fluoro-	2713-09-9	NBS75K.1	35	3	C2HF	44



LAB INSTRUCTIONS PPS#_____

VOA J( ) J3( ) D( ) (:1)
GC/MS WORKSHEET J2( ) J4( ) D2( ) (:1)

==========

GC/MS ANALYSIS
AMOUNT PURGED: ~~0. UL~~ 5 mL JK 2/16/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950216A56
BLANK FILENAME: CB950216A56
STANDARD FILENAME: CS950216A56
SAMPLE FILENAME: CR083991A56

ANALYST(S): INJECTION: 2141 WORKUP: [signature]

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [/] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 01 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 01

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW [signature] DATE 2/20/95 AUDITOR _____ DATE ____/____/____

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

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QA COMMENTS:

INITIALS _____ DATE ____/____/____

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FINAL REVIEW: INITIALS DATE / /

QUALITY ASSURANCE NOTICE

CompuChem ID# 643991
Client ID# TRIP BLK 2
Instrument Blank ID# CB950216.SC
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 63 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID OKS /983

Date 2-26-95

QAN-V-14
901001

3. Standards Data

a. Form VI VOA
Initial Calibration Data

b. Form VII VOA
Continuing Calibration Data

a. Form VI VOA

Initial Calibration Data

In order by instrument.

(1) VOA standards reconstructed ion chromatograms and quantitation reports for the initial (five point) calibration. Spectra not required.

(2) All initial calibration data must be included, regardless of when it was performed and for which case. When more than one initial calibration is performed, the data must be put in chronological order, by instrument.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Instrument ID: F50056 Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =CT950214B56.D RRF20 =CU950214B56.D
RRF50 =CV950214B56.D RRF100=CW950214B56.D RRF200=CY950214B56.D

COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Chloromethane		0.541	0.599	0.581	0.641	0.672	0.607	8.4
Bromomethane	*	1.185	1.255	1.156	1.161	1.056	1.163	6.1*
Vinyl_Chloride	*	0.800	0.888	0.841	0.897	0.900	0.865	5.0*
Chloroethane		0.768	0.857	0.775	0.775	0.690	0.773	7.6
Methylene_Chloride		1.755	1.383	1.366	1.303	1.152	1.392	16.0
Acetone		0.418	0.180	0.200	0.210	0.243	0.250	38.6
Carbon_Disulfide		4.859	4.176	4.195	4.118	3.528	4.175	11.3
1,1-Dichloroethene	*	1.095	0.951	0.985	0.960	0.809	0.960	10.6*
1,1-Dichloroethane	*	3.404	2.832	2.886	2.825	2.505	2.891	11.2*
1,2-Dichloroethene_(total)		1.942	1.656	1.662	1.598	1.384	1.648	12.1
Chloroform	*	4.067	3.454	3.457	3.256	2.689	3.384	14.6*
1,2-Dichloroethane	*	2.442	2.041	2.116	2.010	1.722	2.066	12.5*
2-Butanone		0.491	0.315	0.380	0.362	0.374	0.385	16.9
1,1,1-Trichloroethane	*	0.919	0.760	0.737	0.673	0.549	0.727	18.5*
Carbon_Tetrachloride	*	0.820	0.687	0.691	0.654	0.549	0.680	14.3*
Bromodichloromethane	*	0.833	0.695	0.739	0.698	0.595	0.712	12.1*
1,2-Dichloropropane		0.511	0.412	0.408	0.385	0.328	0.409	16.2
cis-1,3-Dichloropropene	*	0.588	0.493	0.539	0.521	0.457	0.520	9.4*
Trichloroethene	*	0.567	0.450	0.452	0.420	0.353	0.449	17.3*
Dibromochloromethane	*	0.836	0.652	0.721	0.664	0.532	0.681	16.2*
1,1,2-Trichloroethane	*	0.463	0.356	0.376	0.338	0.271	0.361	19.3*
Benzene	*	1.218	1.002	0.972	0.869	0.697	0.952	20.0*
trans-1,3-Dichloropropene	*	0.510	0.419	0.485	0.482	0.423	0.464	8.7*
Bromoform	*	0.595	0.435	0.522	0.498	0.418	0.494	14.4*
4-Methyl-2-Pentanone		0.353	0.228	0.275	0.264	0.265	0.277	16.6
2-Hexanone		0.182	0.097	0.145	0.149	0.175	0.150	22.5
Tetrachloroethene	*	0.694	0.561	0.544	0.506	0.432	0.547	17.5*
1,1,2,2-Tetrachloroethane	*	0.724	0.445	0.520	0.512	0.491	0.538	20.0*
Toluene	*	1.274	0.968	0.940	0.888	0.838	0.982	17.4*
Chlorobenzene	*	1.209	0.999	1.030	0.990	0.873	1.020	11.9*
Ethylbenzene	*	0.548	0.455	0.473	0.458	0.404	0.468	11.1*
Styrene	*	1.150	0.920	0.936	0.880	0.758	0.929	15.3*
Xylene_(Total)	*	0.770	0.622	0.620	0.569	0.477	0.612	17.4*
Dichlorodiflouromethane		0.449	0.523	0.491	0.535	0.518	0.503	6.9
Toluene-d8		0.962	0.880	0.822	0.814	0.798	0.855	7.9
Bromofluorobenzene	*	0.938	0.838	0.817	0.816	0.766	0.835	7.6*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Instrument ID: F50056 Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

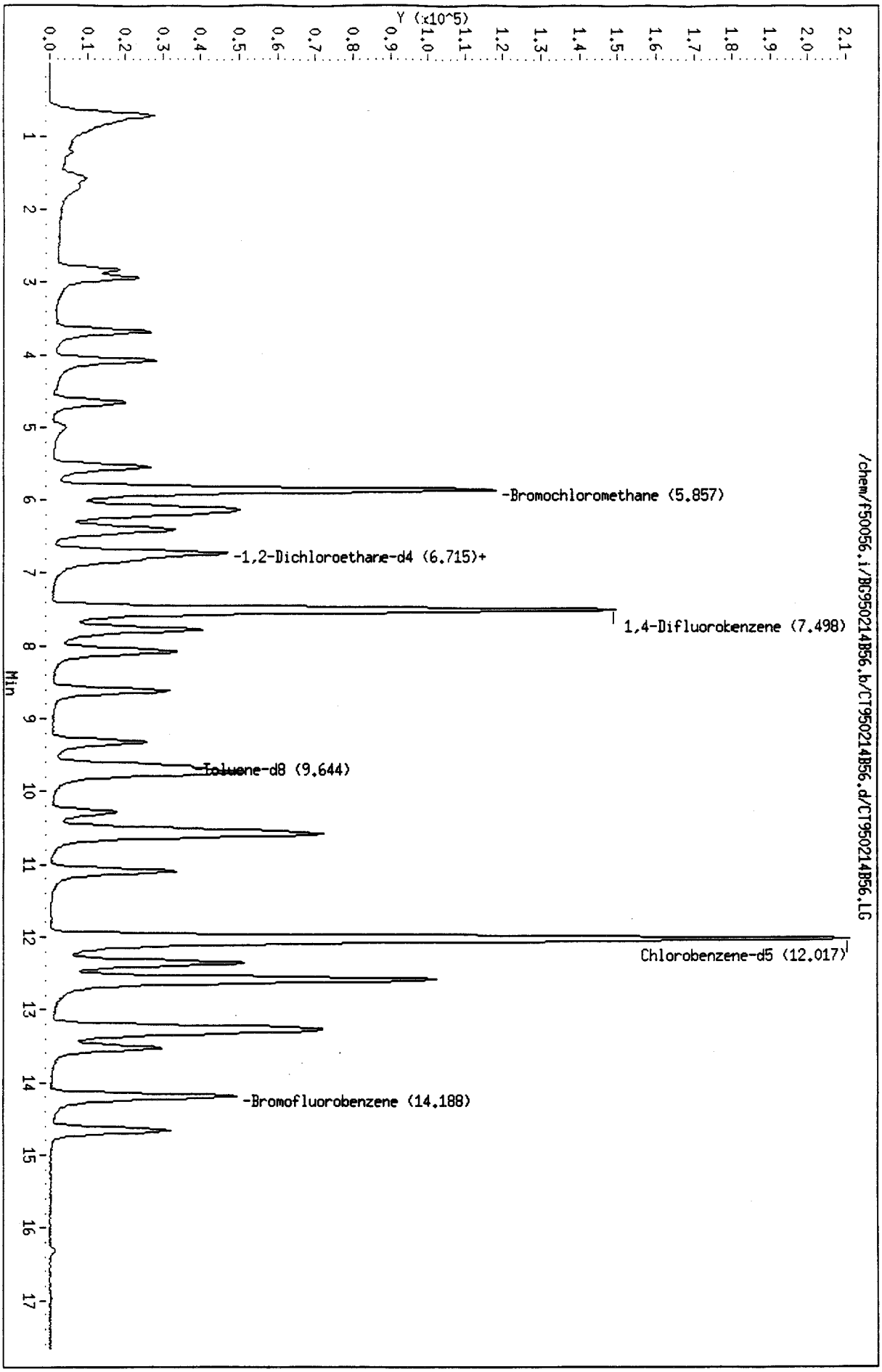
LAB FILE ID: RRF10 =CT950214B56.D RRF20 =CU950214B56.D
RRF50 =CV950214B56.D RRF100=CW950214B56.D RRF200=CY950214B56.D

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
1,2-Dichloroethane-d4	1.896	1.790	1.761	1.705	1.503	1.731	8.4

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Date : 14-FEB-1995 17:55
Client ID: VSTD010
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i
Operator: 2011
Column diameter: 0.53



Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CT950214B56.d
Lab Smp Id: VSTD010 Client Smp ID: VSTD010
Inj Date : 14-FEB-1995 17:55
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.857	5.857	(1.000)	98183	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	380576	250.0	
*	3 Chlorobenzene-d5	117.00	12.004	12.004	(1.000)	384769	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.715	(1.147)	37230	50.00	54.77
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	74051	50.00	56.26
$	6 Bromofluorobenzene	95.00	14.188	14.188	(1.182)	72167	50.00	56.16
	7 Dichlorodiflouromethane	85.00	0.959	0.959	(0.164)	8809	50.00	44.57(aM)
	8 Chloromethane	50.00	1.098	1.098	(0.187)	10622	50.00	44.56(aM)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	15701	50.00	46.20(a)
	10 Bromomethane	94.00	1.578	1.578	(0.269)	23269	50.00	50.96
	11 Chloroethane	64.00	1.717	1.717	(0.293)	15077	50.00	49.67(a)
	12 1,1-Dichloroethene	96.00	2.827	2.827	(0.483)	21499	50.00	57.01
	13 Acetone	43.00	3.156	3.156	(0.539)	8201	50.00	83.50
	14 Carbon Disulfide	76.00	2.941	2.941	(0.502)	95407	50.00	58.18
	15 Methylene Chloride	84.00	3.686	3.686	(0.629)	34471	50.00	63.06
	16 trans-1,2-Dichloroethene	96.00	4.077	4.077	(0.696)	36695	50.00	58.53
	17 1,1-Dichloroethane	63.00	4.658	4.658	(0.795)	66835	50.00	58.87
	18 cis-1,2-Dichloroethene	96.00	5.541	5.541	(0.946)	39576	50.00	59.26
	19 2-Butanone	43.00	5.768	5.768	(0.985)	9649	50.00	63.89(M)
	20 Chloroform	83.00	6.109	6.109	(1.043)	79853	50.00	60.08
	21 1,1,1-Trichloroethane	97.00	6.185	6.185	(0.825)	69955	50.00	63.17
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	62437	50.00	60.29
	23 Benzene	78.00	6.715	6.715	(0.896)	92714	50.00	64.00

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Report Date: 16-Feb-1995 17:58

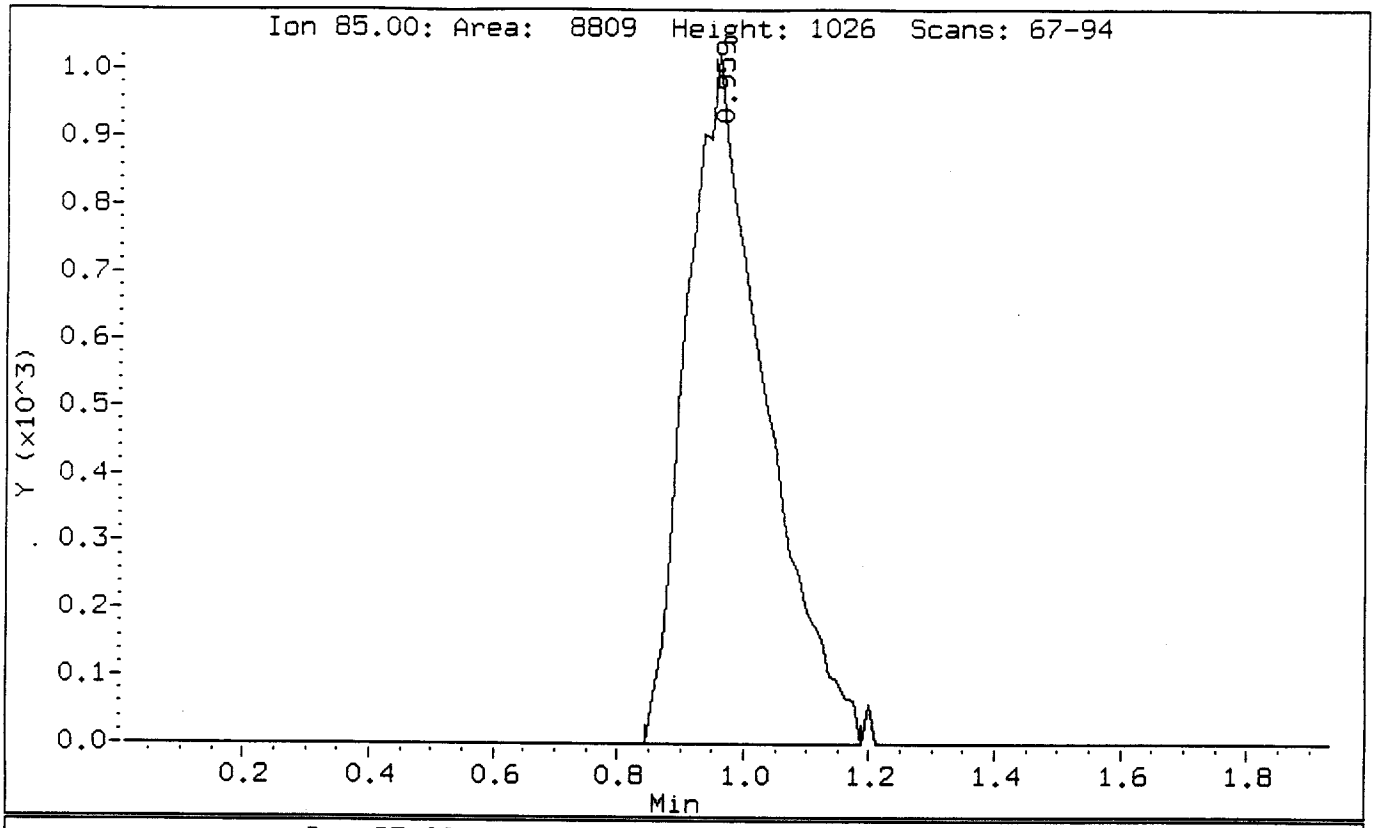
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.829	6.829	(1.166)	47953	50.00	59.09
25	Trichloroethene	130.00	7.775	7.775	(1.037)	43190	50.00	63.25
26	1,2-Dichloropropane	63.00	8.066	8.066	(1.076)	38900	50.00	62.49
27	Bromodichloromethane	83.00	8.609	8.609	(1.148)	63439	50.00	58.54
28	cis-1,3-Dichloropropene	75.00	9.315	9.315	(1.242)	44737	50.00	56.54
29	4-Methyl-2-Pentanone	43.00	9.719	9.719	(0.810)	27146	50.00	63.66
30	Toluene	91.00	9.745	9.745	(0.812)	98052	50.00	64.89
31	trans-1,3-Dichloropropene	75.00	10.275	10.275	(1.370)	38821	50.00	54.97
32	1,1,2-Trichloroethane	97.00	10.515	10.515	(1.402)	35243	50.00	64.16
33	Tetrachloroethene	164.00	10.590	10.590	(0.882)	53400	50.00	63.39
34	2-Hexanone	43.00	11.171	11.171	(0.931)	14035	50.00	60.90
35	Dibromochloromethane	129.00	11.095	11.095	(1.480)	63604	50.00	61.36
36	Chlorobenzene	112.00	12.054	12.054	(1.004)	93005	50.00	59.25
37	Ethylbenzene	106.00	12.345	12.345	(1.028)	42159	50.00	58.58
38	m,p-Xylene	106.00	12.585	12.585	(1.048)	117003	100.0	131.1
39	o-Xylene	106.00	13.254	13.254	(1.104)	59264	50.00	62.95
40	Styrene	104.00	13.304	13.304	(1.108)	88465	50.00	61.89
41	Bromoform	173.00	13.531	13.531	(1.805)	45259	50.00	60.23
42	1,1,2,2-Tetrachloroethane	83.00	14.655	14.655	(1.221)	55705	50.00	67.22
M 43	1,2-Dichloroethene (total)	96.00				76271	100.0	117.8
M 44	Xylene (Total)	106.00				176267	50.00	187.2

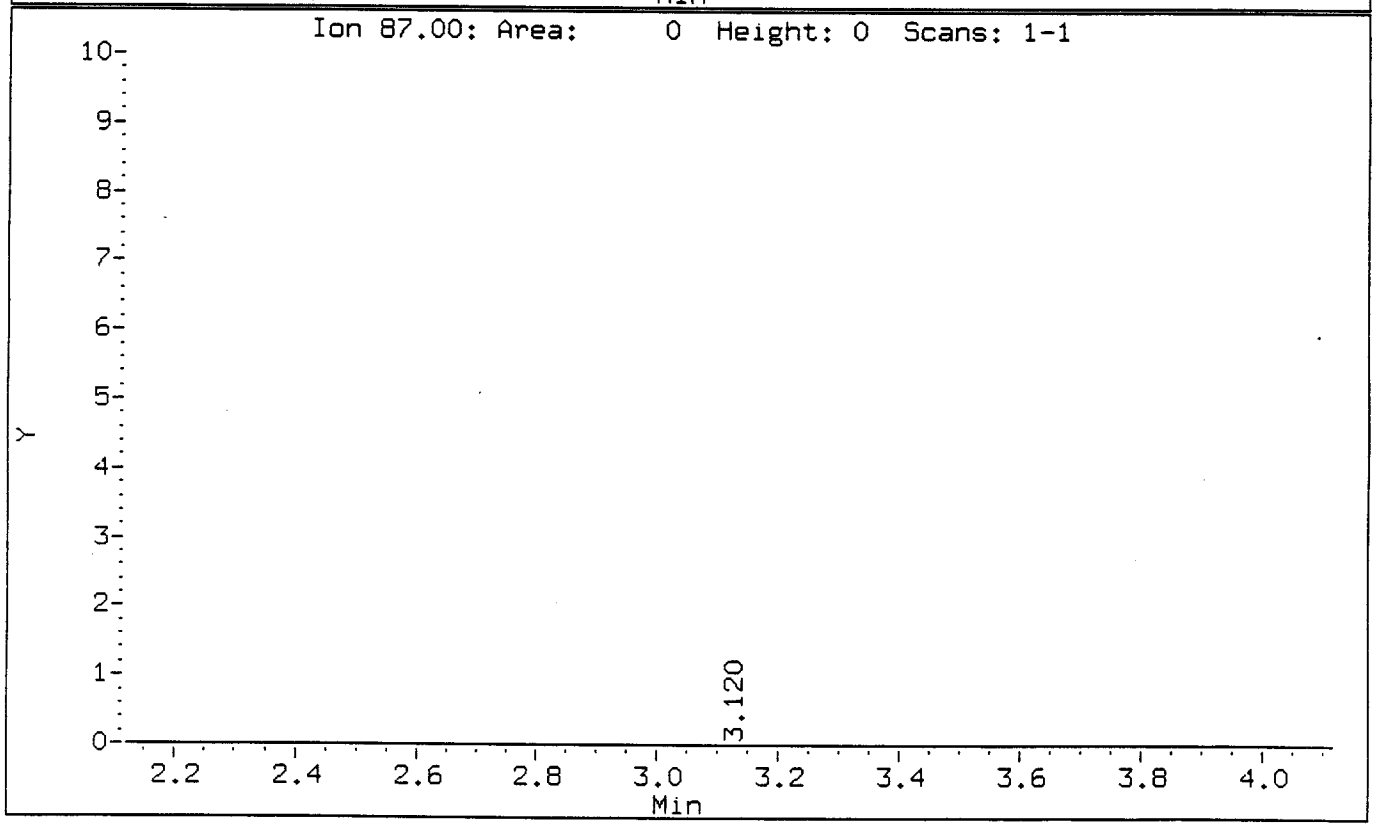
QC Flag Legend

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

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d/CT950214B56.LG
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





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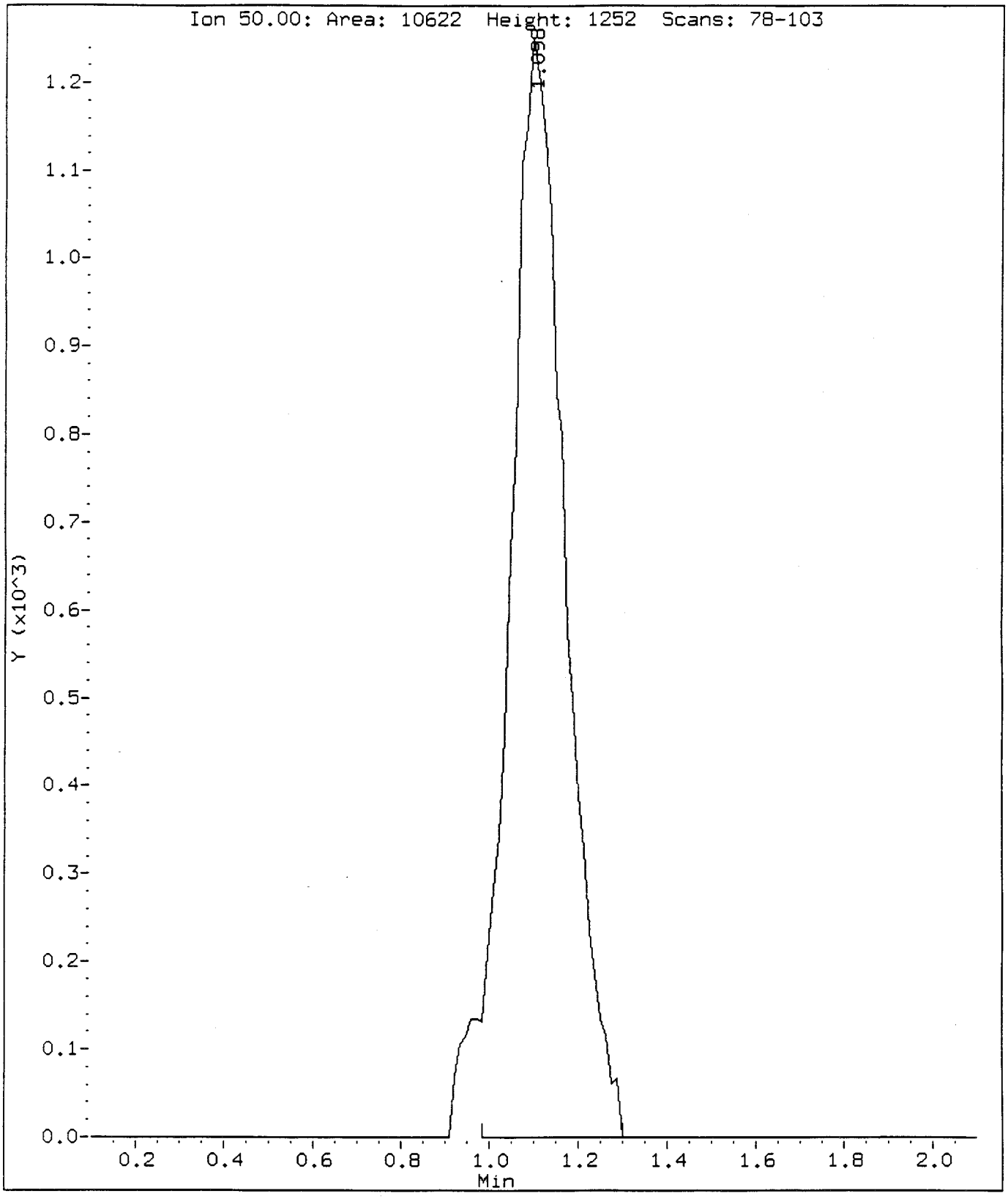
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

Compound: Chloromethane
CAS Number: 74-87-3



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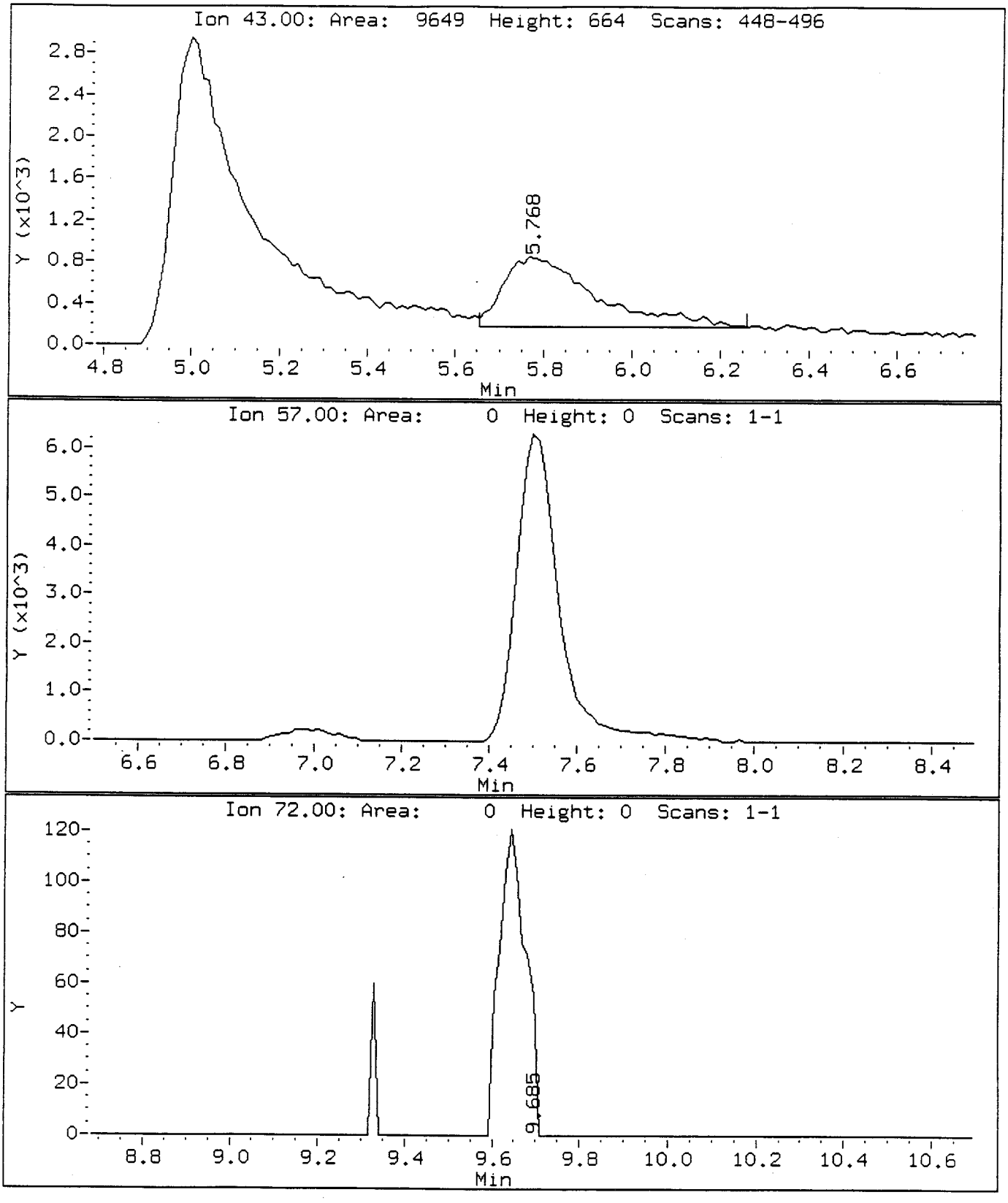
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

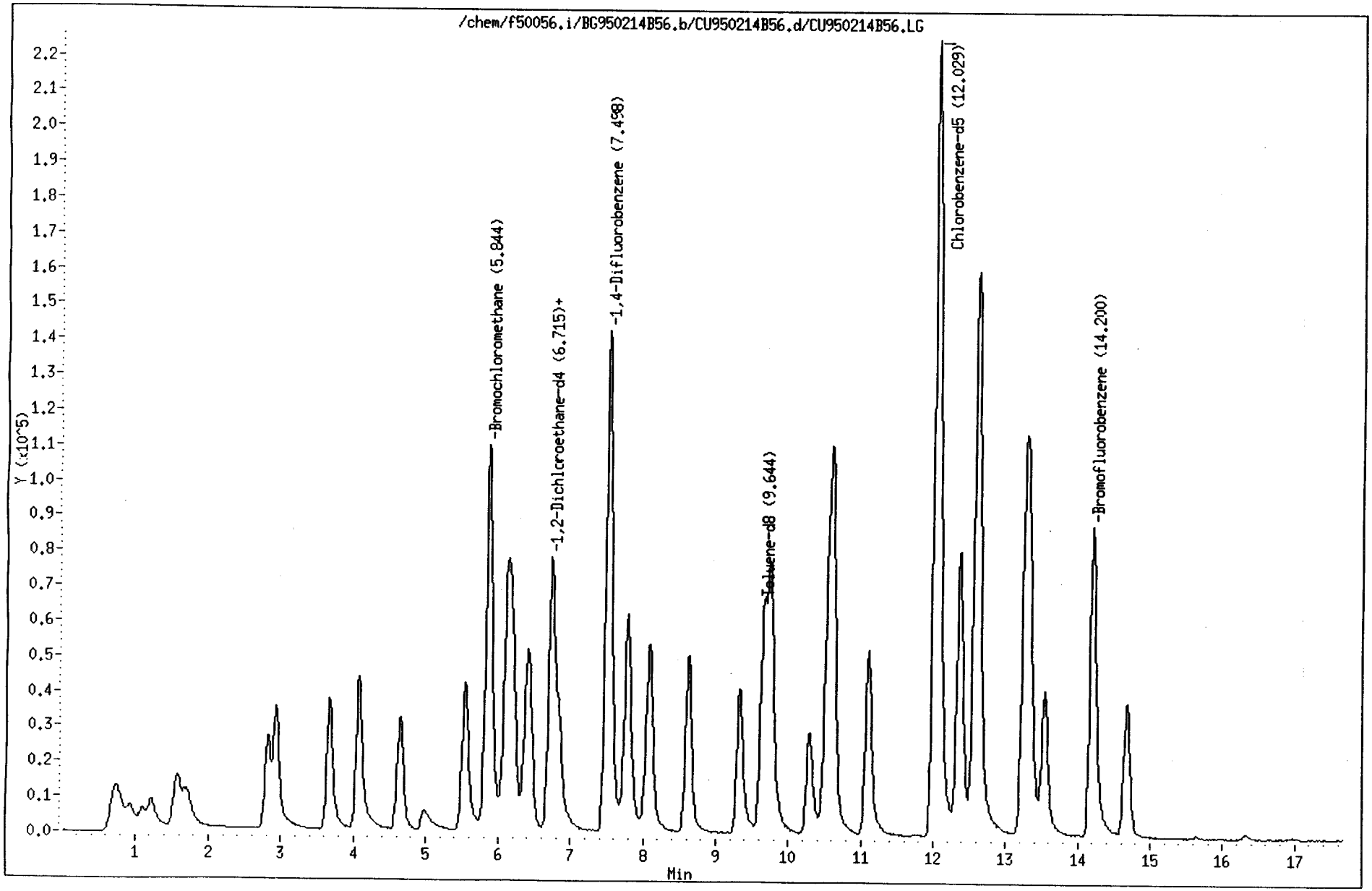
Compound: 2-Butanone
CAS Number: 78-93-3



Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Date : 14-FEB-1995 18:35
Client ID: VSTD020
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



30073 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CU950214B56.d
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 14-FEB-1995 18:35
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.844	5.844	(1.000)	92122	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	366169	250.0	
*	3 Chlorobenzene-d5	117.00	12.017	12.017	(1.000)	372017	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.715	(1.149)	65975	100.0	103.4
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	130876	100.0	102.8
$	6 Bromofluorobenzene	95.00	14.200	14.200	(1.182)	124769	100.0	100.4
	7 Dichlorodiflouromethane	85.00	0.934	0.934	(0.160)	19288	100.0	104.0(M)
	8 Chloromethane	50.00	1.098	1.098	(0.188)	22083	100.0	98.74(M)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	32729	100.0	102.6
	10 Bromomethane	94.00	1.578	1.578	(0.270)	46260	100.0	108.0
	11 Chloroethane	64.00	1.704	1.704	(0.292)	31580	100.0	110.9
	12 1,1-Dichloroethene	96.00	2.815	2.815	(0.482)	35055	100.0	99.07
	13 Acetone	43.00	3.156	3.156	(0.540)	6627	100.0	71.91
	14 Carbon Disulfide	76.00	2.928	2.928	(0.501)	153899	100.0	100.0
	15 Methylene Chloride	84.00	3.661	3.661	(0.626)	50948	100.0	99.33
	16 trans-1,2-Dichloroethene	96.00	4.064	4.064	(0.695)	59060	100.0	100.4
	17 1,1-Dichloroethane	63.00	4.632	4.632	(0.793)	104356	100.0	97.97
	18 cis-1,2-Dichloroethene	96.00	5.529	5.529	(0.946)	62962	100.0	100.5
	19 2-Butanone	43.00	5.781	5.781	(0.989)	11603	100.0	81.88(M)
	20 Chloroform	83.00	6.109	6.109	(1.045)	127279	100.0	102.0
	21 1,1,1-Trichloroethane	97.00	6.172	6.172	(0.823)	111246	100.0	104.4
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	100650	100.0	101.0
	23 Benzene	78.00	6.715	6.715	(0.896)	146746	100.0	105.3

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Report Date: 16-Feb-1995 17:58

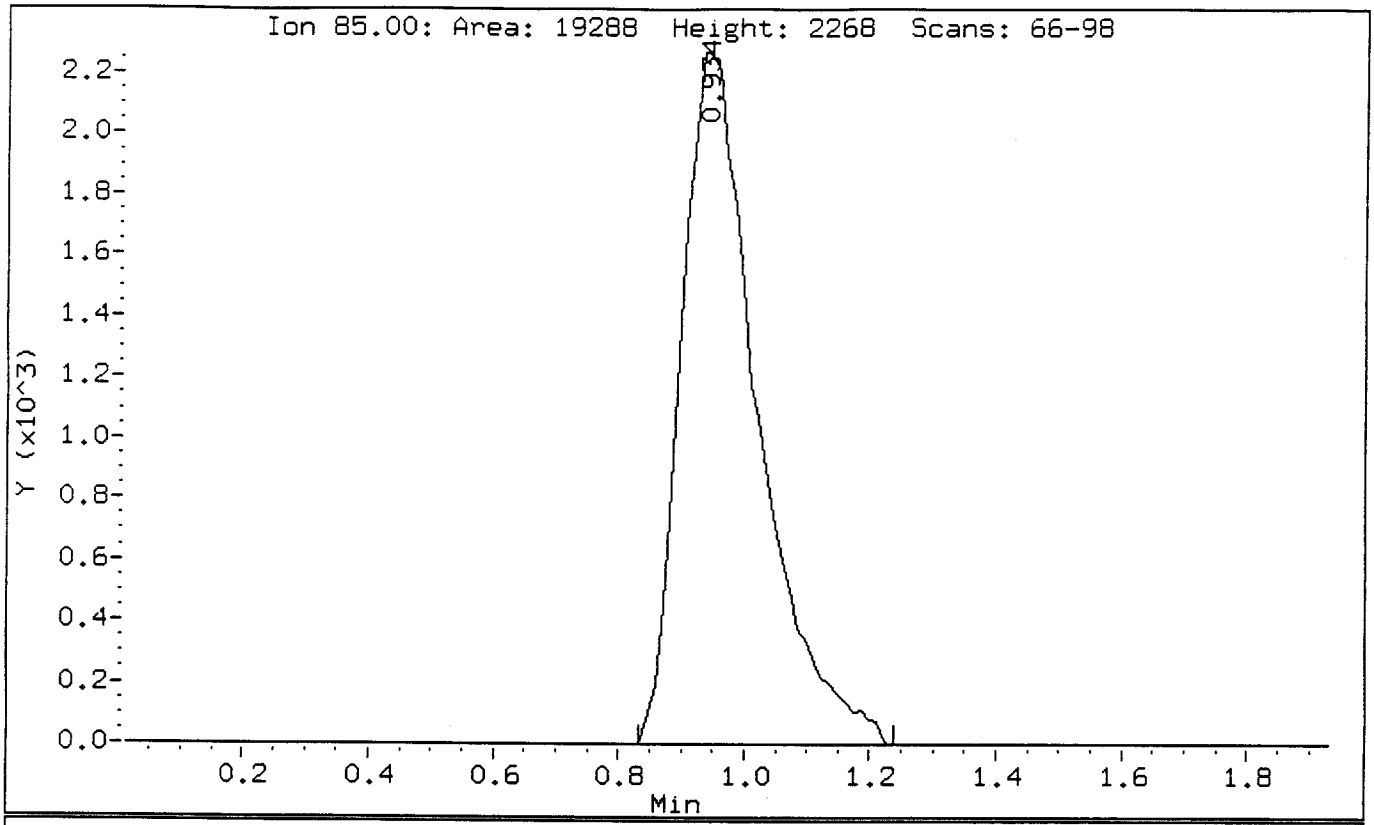
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.829	6.829	(1.168)	75191	100.0	98.75
25	Trichloroethene	130.00	7.775	7.775	(1.037)	65934	100.0	100.4
26	1,2-Dichloropropane	63.00	8.078	8.078	(1.077)	60319	100.0	100.7
27	Bromodichloromethane	83.00	8.609	8.609	(1.148)	101787	100.0	97.61
28	cis-1,3-Dichloropropene	75.00	9.315	9.315	(1.242)	72274	100.0	94.93
29	4-Methyl-2-Pentanone	43.00	9.719	9.719	(0.809)	33925	100.0	82.28
30	Toluene	91.00	9.745	9.745	(0.811)	144015	100.0	98.58
31	trans-1,3-Dichloropropene	75.00	10.287	10.287	(1.372)	61438	100.0	90.41
32	1,1,2-Trichloroethane	97.00	10.527	10.527	(1.404)	52143	100.0	98.66
33	Tetrachloroethene	164.00	10.590	10.590	(0.881)	83496	100.0	102.5
34	2-Hexanone	43.00	11.171	11.171	(0.930)	14433	100.0	64.77
35	Dibromochloromethane	129.00	11.095	11.095	(1.480)	95478	100.0	95.74
36	Chlorobenzene	112.00	12.067	12.067	(1.004)	148613	100.0	97.92
37	Ethylbenzene	106.00	12.370	12.370	(1.029)	67725	100.0	97.34
38	m,p-Xylene	106.00	12.597	12.597	(1.048)	179254	200.0	207.7
39	o-Xylene	106.00	13.254	13.254	(1.103)	92578	100.0	101.7
40	Styrene	104.00	13.317	13.317	(1.108)	136851	100.0	99.03
41	Bromoform	173.00	13.531	13.531	(1.805)	63716	100.0	88.13
42	1,1,2,2-Tetrachloroethane	83.00	14.680	14.680	(1.222)	66171	100.0	82.58
M 43	1,2-Dichloroethene (total)	96.00				122022	200.0	200.9
M 44	Xylene (Total)	106.00				271832	100.0	298.6

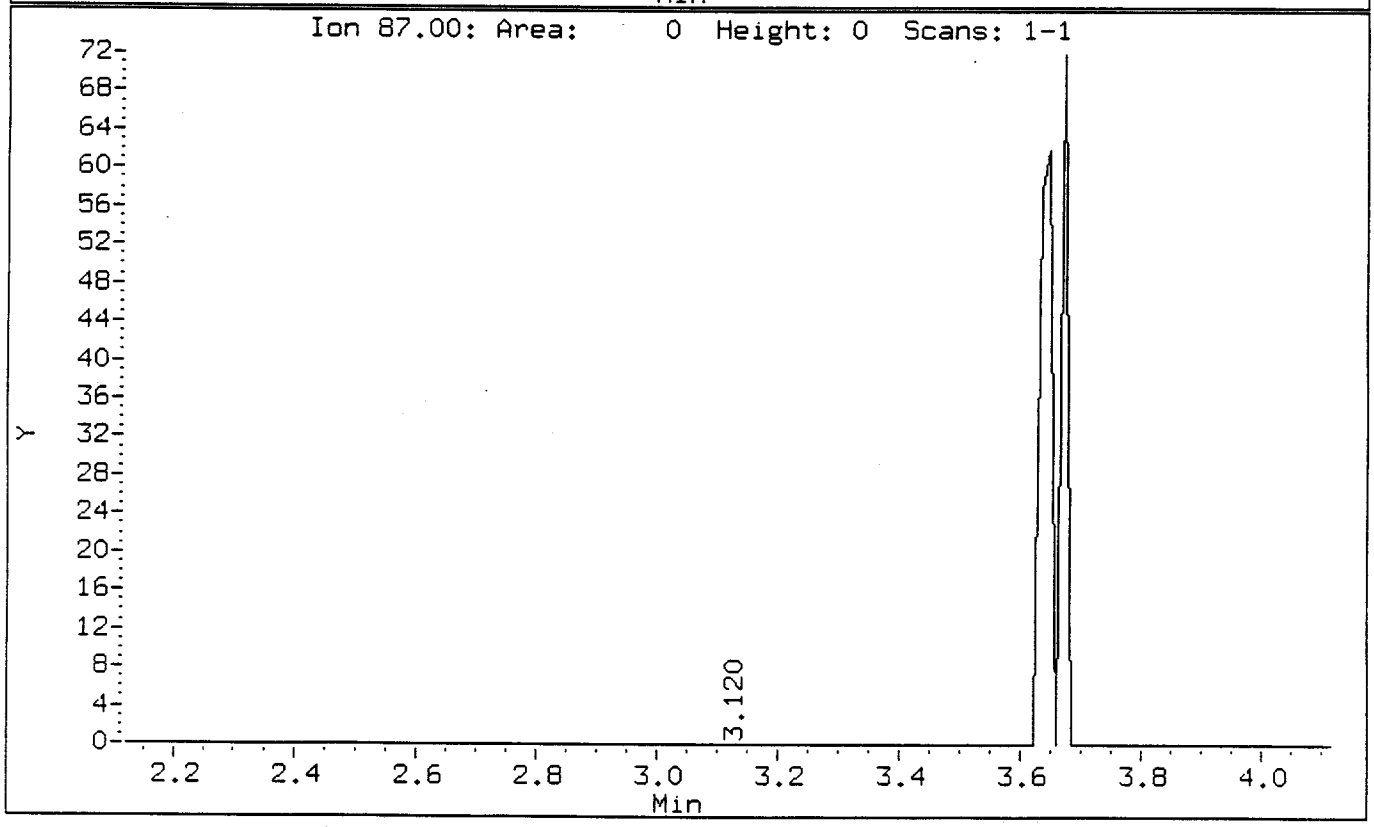
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d/CU950214B56.LG
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





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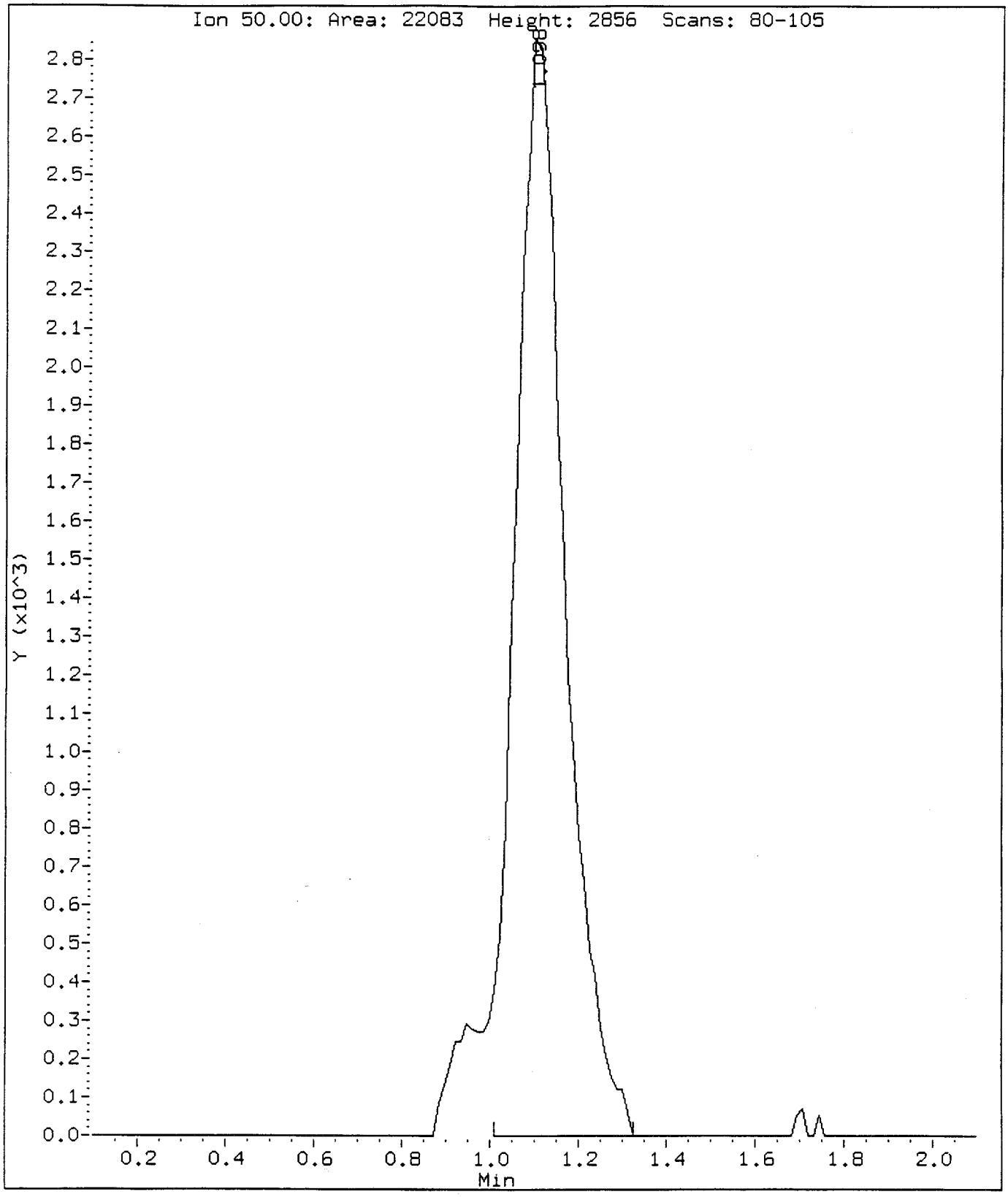
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

Compound: Chloromethane
CAS Number: 74-87-3



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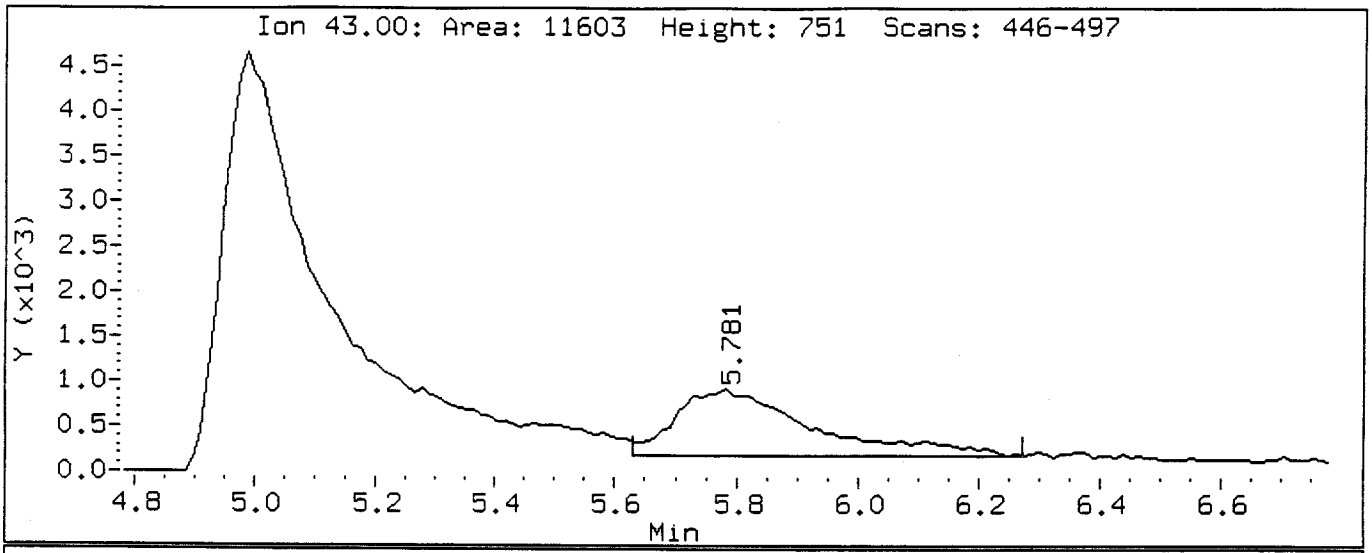
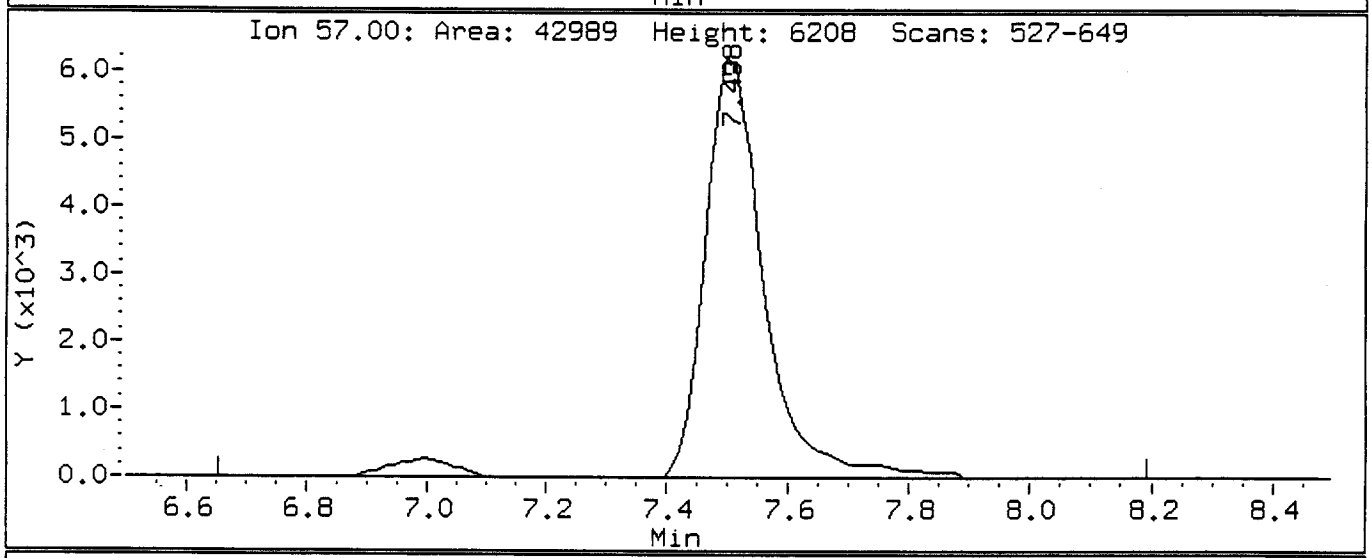
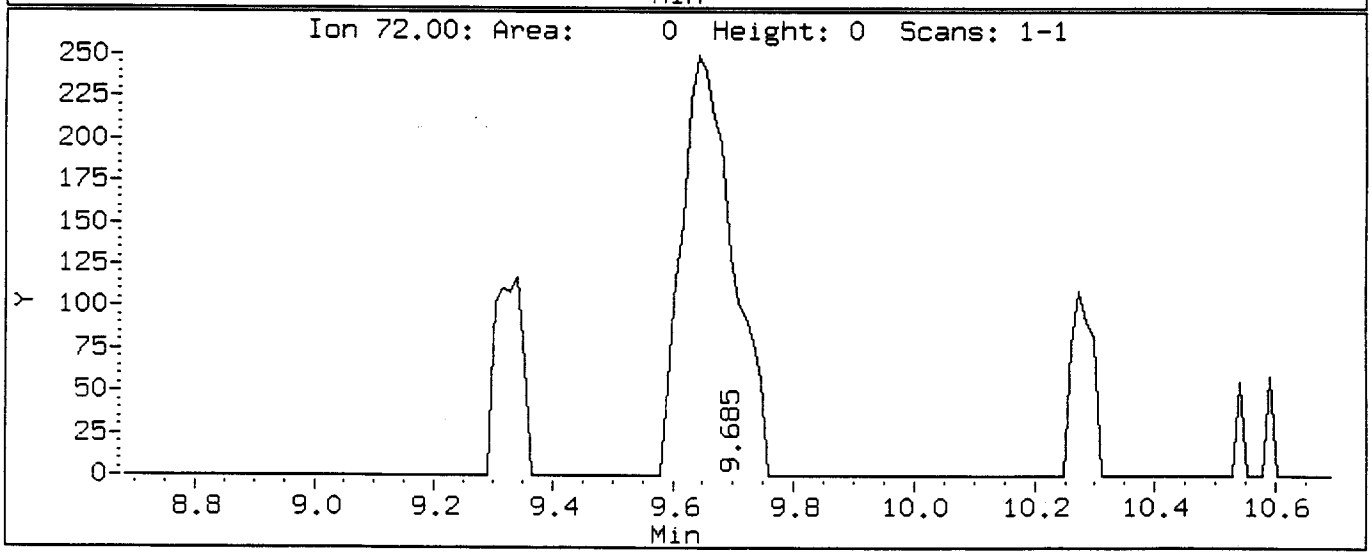
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

Compound: 2-Butanone
CAS Number: 78-93-3



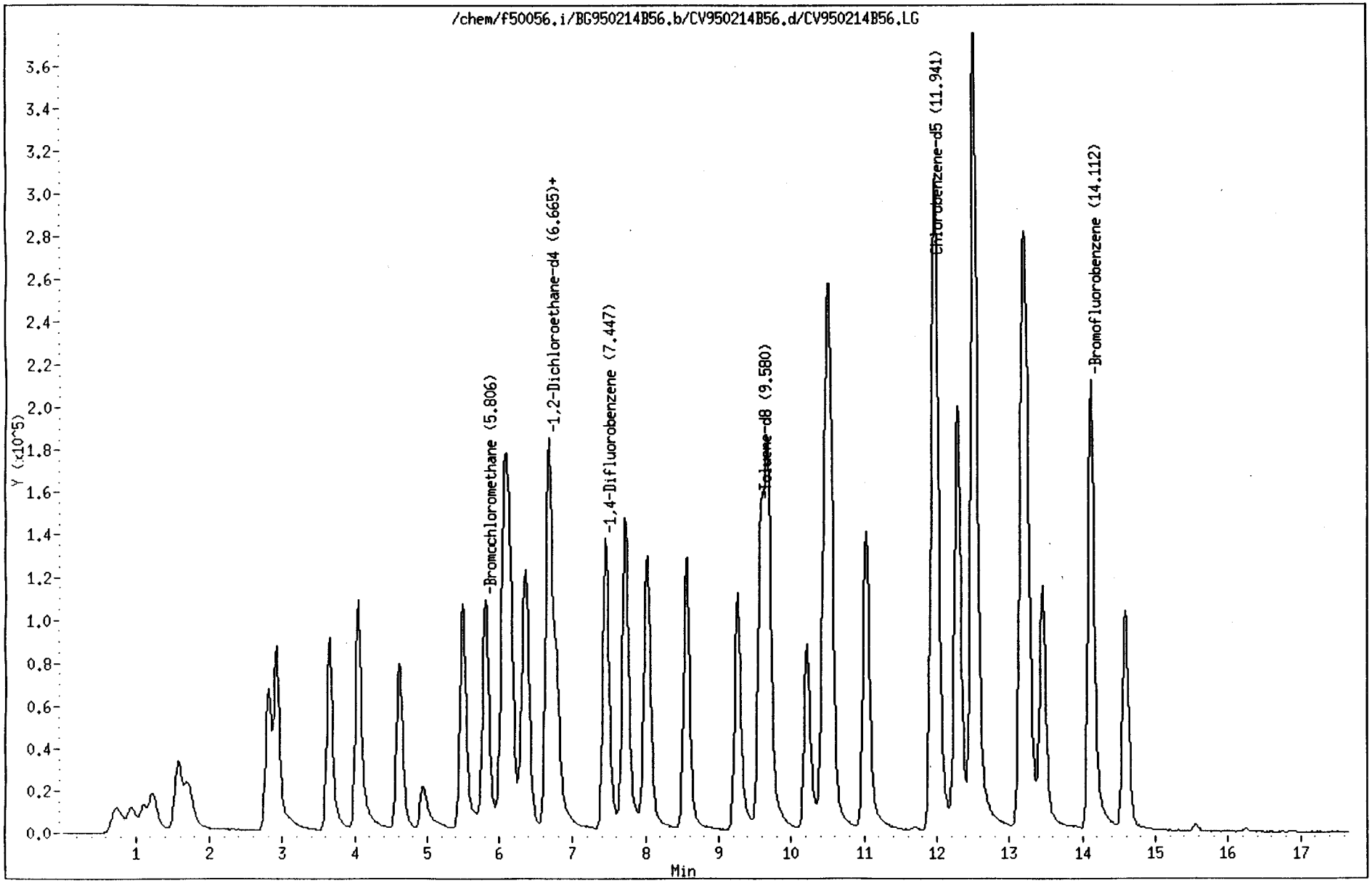




Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Date : 14-FEB-1995 19:12
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



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30073 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CV950214B56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 14-FEB-1995 19:12
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.806	5.806	(1.000)	85449	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.447	(1.000)	342995	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	11.941	(1.000)	347565	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.665	6.665	(1.148)	150459	250.0	254.3
$	5 Toluene-d8	98.00	9.580	9.580	(0.802)	285693	250.0	240.3
$	6 Bromofluorobenzene	95.00	14.112	14.112	(1.182)	283841	250.0	244.5
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.163)	41973	250.0	244.0
	8 Chloromethane	50.00	1.123	1.123	(0.193)	49665	250.0	239.4
	9 Vinyl Chloride	62.00	1.237	1.237	(0.213)	71900	250.0	243.1
	10 Bromomethane	94.00	1.578	1.578	(0.272)	98792	250.0	248.6(M)
	11 Chloroethane	64.00	1.717	1.717	(0.296)	66198	250.0	250.6(M)
	12 1,1-Dichloroethene	96.00	2.802	2.802	(0.483)	84204	250.0	256.5
	13 Acetone	43.00	3.130	3.130	(0.539)	17072	250.0	199.7
	14 Carbon Disulfide	76.00	2.916	2.916	(0.502)	358436	250.0	251.2
	15 Methylene Chloride	84.00	3.648	3.648	(0.628)	116734	250.0	245.4
	16 trans-1,2-Dichloroethene	96.00	4.039	4.039	(0.696)	136423	250.0	250.0
	17 1,1-Dichloroethane	63.00	4.607	4.607	(0.793)	246630	250.0	249.6
	18 cis-1,2-Dichloroethene	96.00	5.491	5.491	(0.946)	147672	250.0	254.1
	19 2-Butanone	43.00	5.693	5.693	(0.980)	32472	250.0	247.0
	20 Chloroform	83.00	6.059	6.059	(1.043)	295395	250.0	255.4
	21 1,1,1-Trichloroethane	97.00	6.135	6.135	(0.824)	252798	250.0	253.3
	22 Carbon Tetrachloride	117.00	6.349	6.349	(0.853)	236955	250.0	253.9
	23 Benzene	78.00	6.665	6.665	(0.895)	333376	250.0	255.3

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Report Date: 16-Feb-1995 17:58

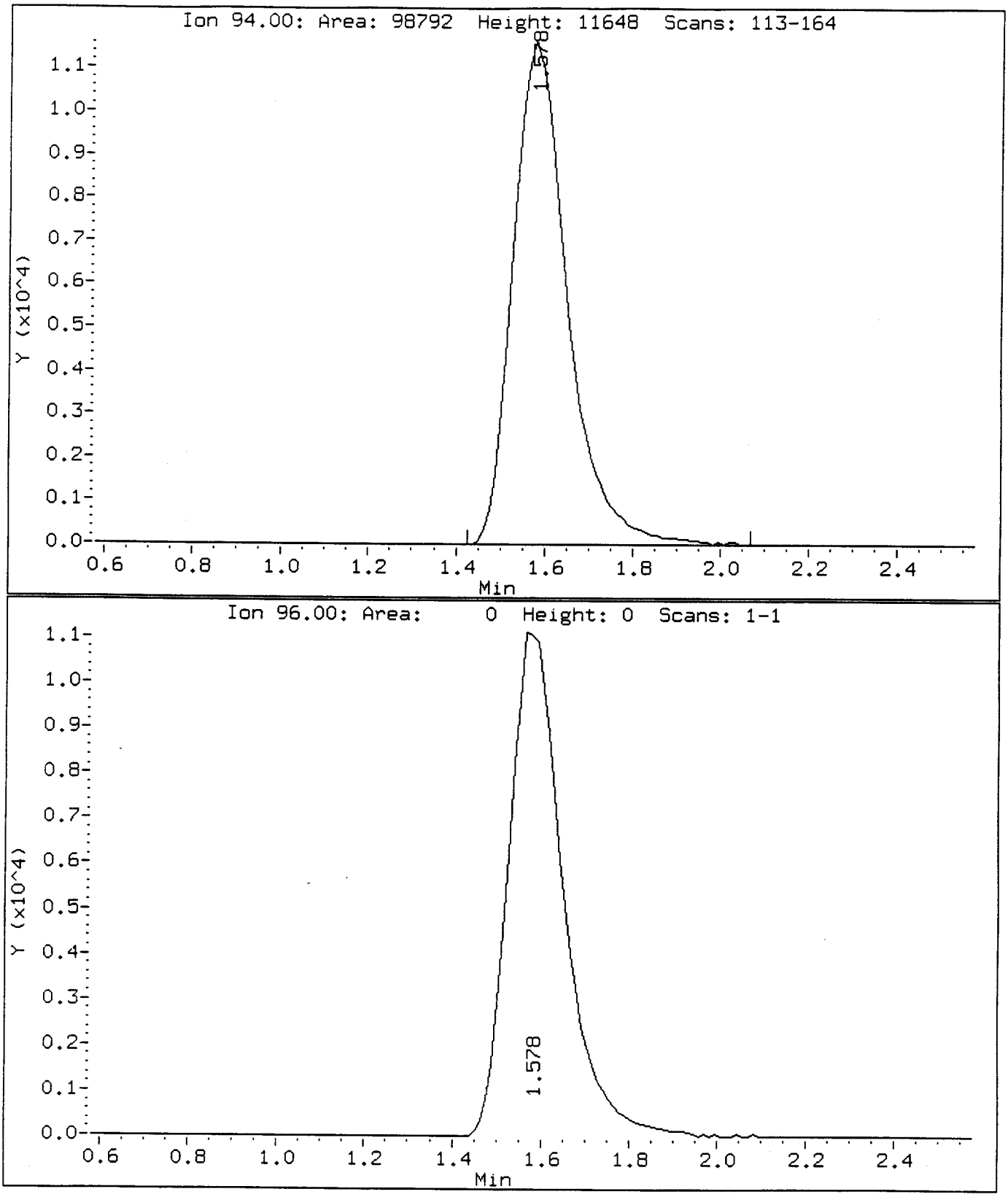
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.778	6.778	(1.167)	180839	250.0	256.0
	25 Trichloroethene	130.00	7.712	7.712	(1.036)	155014	250.0	251.9
	26 1,2-Dichloropropane	63.00	8.015	8.015	(1.076)	140104	250.0	249.7
	27 Bromodichloromethane	83.00	8.558	8.558	(1.149)	253324	250.0	259.4
	28 cis-1,3-Dichloropropene	75.00	9.252	9.252	(1.242)	184881	250.0	259.2
	29 4-Methyl-2-Pentanone	43.00	9.644	9.644	(0.808)	95676	250.0	248.4
	30 Toluene	91.00	9.681	9.681	(0.811)	326841	250.0	239.5
	31 trans-1,3-Dichloropropene	75.00	10.212	10.212	(1.371)	166491	250.0	261.6
	32 1,1,2-Trichloroethane	97.00	10.451	10.451	(1.403)	129109	250.0	260.8
	33 Tetrachloroethene	164.00	10.515	10.515	(0.881)	189081	250.0	248.5
	34 2-Hexanone	43.00	11.070	11.070	(0.927)	50465	250.0	242.4
	35 Dibromochloromethane	129.00	11.019	11.019	(1.480)	247328	250.0	264.8
	36 Chlorobenzene	112.00	11.991	11.991	(1.004)	357905	250.0	252.4
	37 Ethylbenzene	106.00	12.282	12.282	(1.029)	164343	250.0	252.8
	38 m,p-Xylene	106.00	12.522	12.522	(1.049)	404739	500.0	502.0
	39 o-Xylene	106.00	13.178	13.178	(1.104)	215569	250.0	253.5
	40 Styrene	104.00	13.241	13.241	(1.109)	325270	250.0	251.9
	41 Bromoform	173.00	13.456	13.456	(1.807)	179007	250.0	264.3
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.222)	180825	250.0	241.6
M	43 1,2-Dichloroethene (total)	96.00				284095	500.0	504.2
M	44 Xylene (Total)	106.00				620308	250.0	729.4

QC Flag Legend

M - Compound response manually integrated.

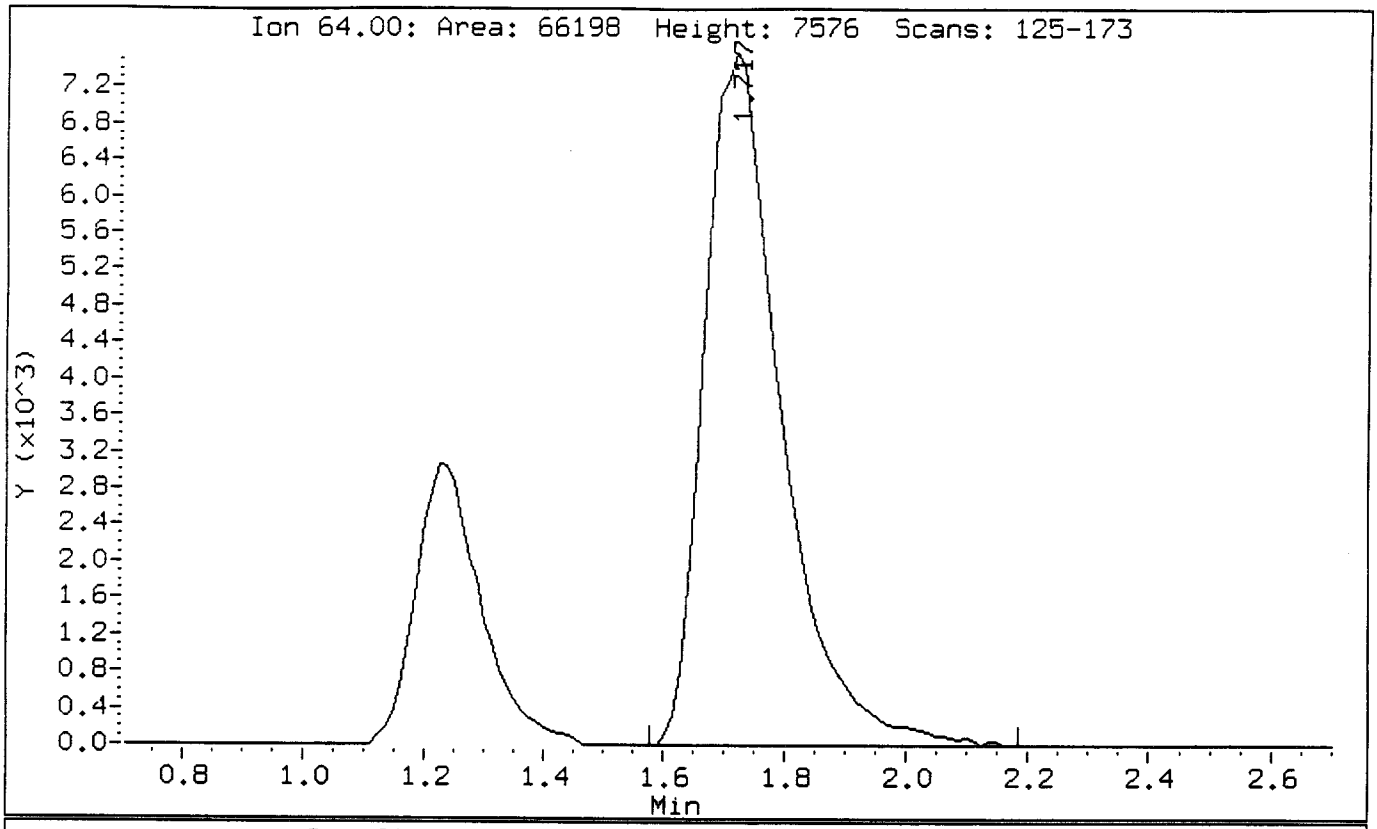
Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d/CV950214B56.LG
Injection Date: 14-FEB-95 19:12
Instrument: f50056.i
Client Sample ID: VSTD050

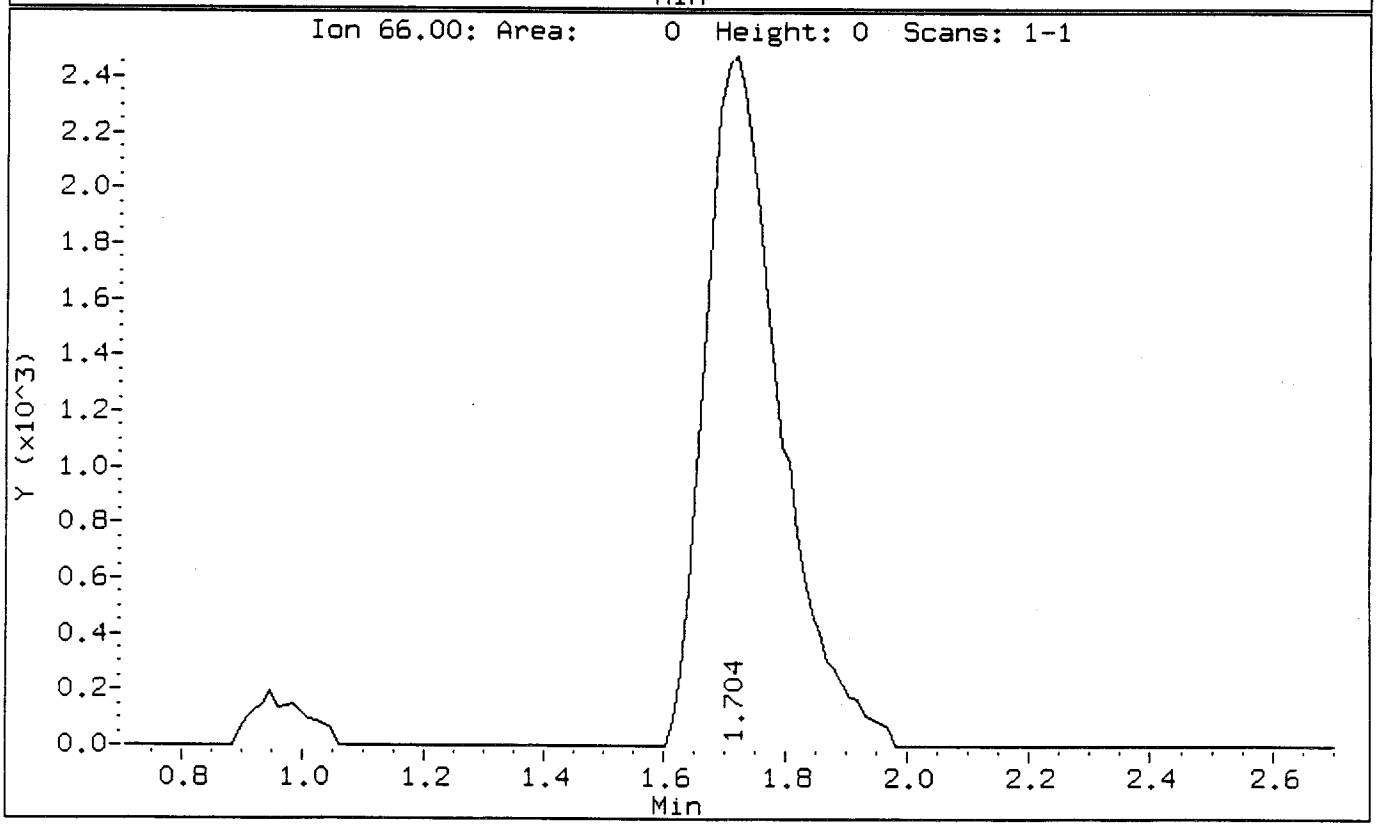
Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d/CV950214B56.LG
Injection Date: 14-FEB-95 19:12
Instrument: f50056.i
Client Sample ID: VSTD050

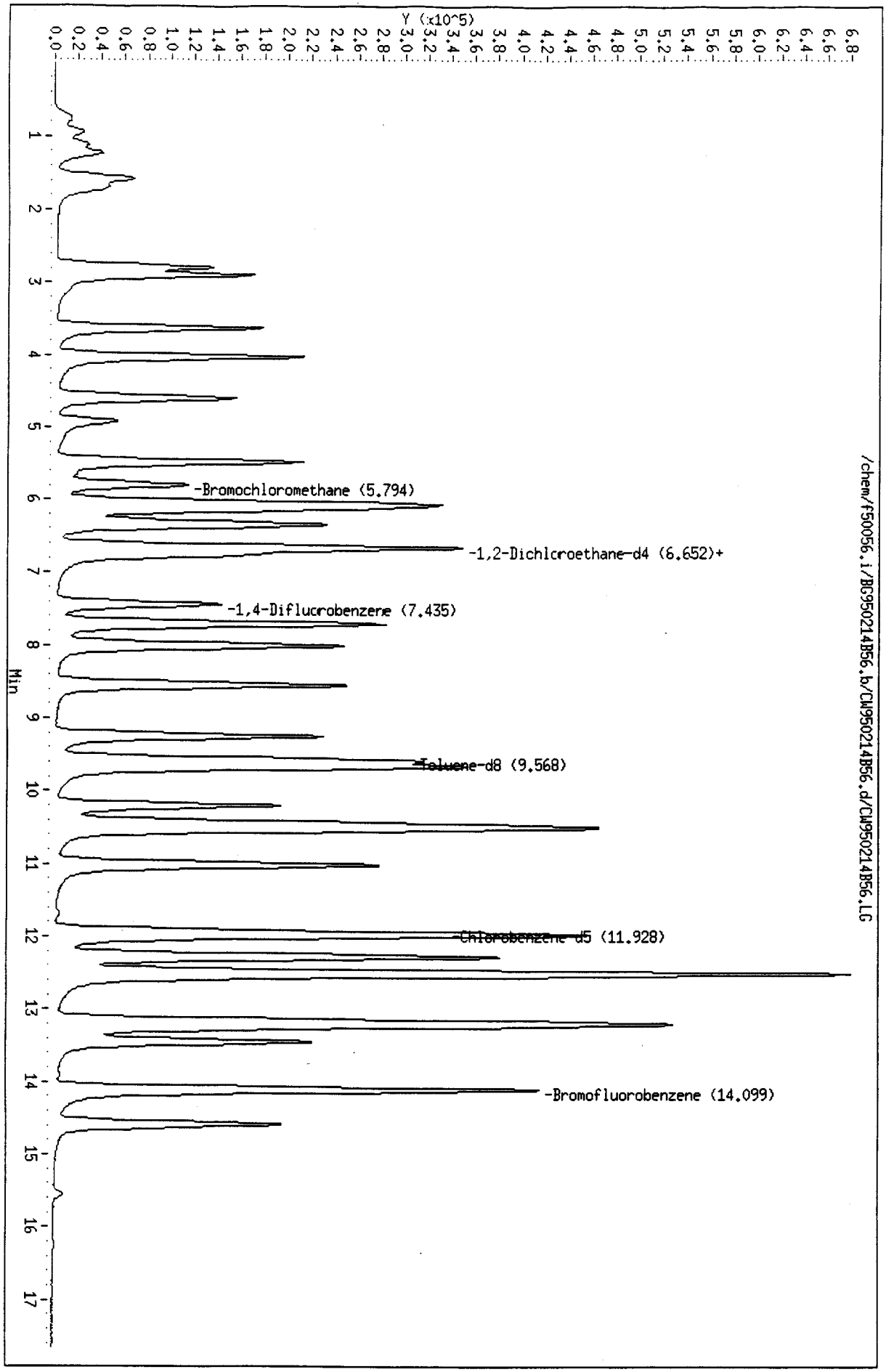
Compound: Chloroethane
CAS Number: 75-00-3





Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Date : 14-FEB-1995 19:50
Client ID: VSTD100
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i
Operator: 2011
Column diameter: 0.53



Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CW950214B56.d
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 14-FEB-1995 19:50
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1	Bromochloromethane	128.00	5.794	5.794	(1.000)	84710	250.0	
* 2	1,4-Difluorobenzene	114.00	7.435	7.435	(1.000)	350426	250.0	
* 3	Chlorobenzene-d5	117.00	11.928	11.928	(1.000)	338836	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.639	6.639	(1.146)	288835	500.0	492.5
$ 5	Toluene-d8	98.00	9.568	9.568	(0.802)	551810	500.0	476.0
$ 6	Bromofluorobenzene	95.00	14.099	14.099	(1.182)	552753	500.0	488.5
7	Dichlorodiflouromethane	85.00	0.947	0.947	(0.163)	90624	500.0	531.4
8	Chloromethane	50.00	1.111	1.111	(0.192)	108630	500.0	528.2
9	Vinyl Chloride	62.00	1.224	1.224	(0.211)	151987	500.0	518.4
10	Bromomethane	94.00	1.565	1.565	(0.270)	196646	500.0	499.1(M)
11	Chloroethane	64.00	1.704	1.704	(0.294)	131347	500.0	501.5(M)
12	1,1-Dichloroethene	96.00	2.790	2.790	(0.481)	162700	500.0	500.0
13	Acetone	43.00	3.118	3.118	(0.538)	35538	500.0	419.4
14	Carbon Disulfide	76.00	2.891	2.891	(0.499)	697755	500.0	493.2
15	Methylene Chloride	84.00	3.623	3.623	(0.625)	220810	500.0	468.2
16	trans-1,2-Dichloroethene	96.00	4.014	4.014	(0.693)	262911	500.0	486.1
17	1,1-Dichloroethane	63.00	4.595	4.595	(0.793)	478687	500.0	488.7
18	cis-1,2-Dichloroethene	96.00	5.478	5.478	(0.946)	278538	500.0	483.4
19	2-Butanone	43.00	5.680	5.680	(0.980)	61397	500.0	471.2
20	Chloroform	83.00	6.034	6.034	(1.041)	551600	500.0	481.0
21	1,1,1-Trichloroethane	97.00	6.109	6.109	(0.822)	471872	500.0	462.7
22	Carbon Tetrachloride	117.00	6.336	6.336	(0.852)	458507	500.0	480.8
23	Benzene	78.00	6.652	6.652	(0.895)	609001	500.0	456.6

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

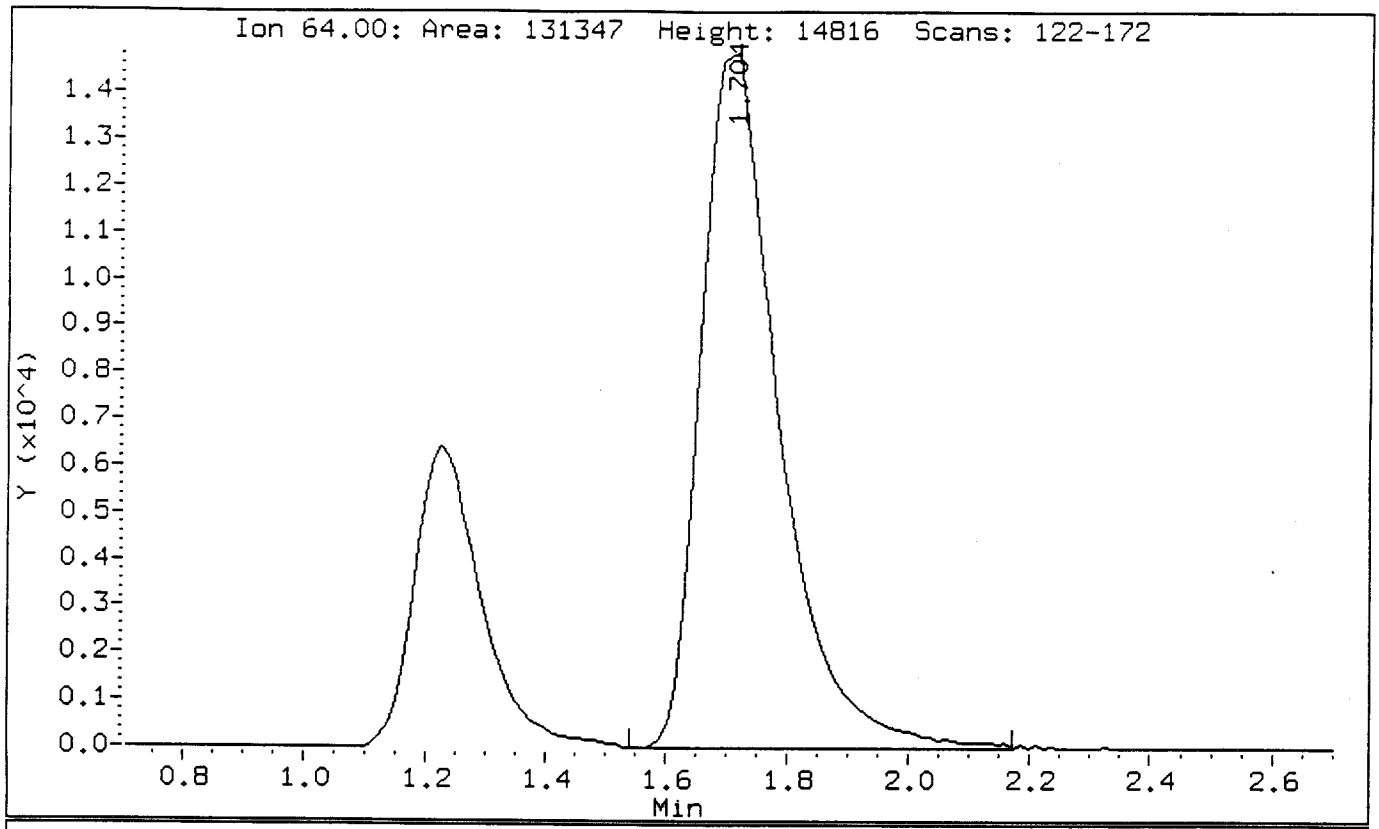
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.753	6.753	(1.166)	340603	500.0	486.5
	25 Trichloroethene	130.00	7.700	7.700	(1.036)	294617	500.0	468.6
	26 1,2-Dichloropropane	63.00	8.003	8.003	(1.076)	269648	500.0	470.4
	27 Bromodichloromethane	83.00	8.545	8.545	(1.149)	488996	500.0	490.0
	28 cis-1,3-Dichloropropene	75.00	9.240	9.240	(1.243)	365475	500.0	501.6
	29 4-Methyl-2-Pentanone	43.00	9.644	9.644	(0.808)	179092	500.0	476.9
	30 Toluene	91.00	9.669	9.669	(0.811)	601843	500.0	452.3
	31 trans-1,3-Dichloropropene	75.00	10.199	10.199	(1.372)	337472	500.0	518.9
	32 1,1,2-Trichloroethane	97.00	10.439	10.439	(1.404)	236998	500.0	468.6
	33 Tetrachloroethene	164.00	10.502	10.502	(0.880)	342820	500.0	462.2
	34 2-Hexanone	43.00	11.057	11.057	(0.927)	100796	500.0	496.6
	35 Dibromochloromethane	129.00	11.007	11.007	(1.480)	465191	500.0	487.4
	36 Chlorobenzene	112.00	11.979	11.979	(1.004)	670872	500.0	485.3
	37 Ethylbenzene	106.00	12.269	12.269	(1.029)	310231	500.0	489.5
	38 m,p-Xylene	106.00	12.509	12.509	(1.049)	709723	1000	902.9
	39 o-Xylene	106.00	13.165	13.165	(1.104)	385519	500.0	465.0
	40 Styrene	104.00	13.228	13.228	(1.109)	596614	500.0	474.0
	41 Bromoform	173.00	13.456	13.456	(1.810)	349167	500.0	504.7
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.223)	347195	500.0	475.7
M	43 1,2-Dichloroethene (total)	96.00				541449	1000	969.4
M	44 Xylene (Total)	106.00				1095242	500.0	1321

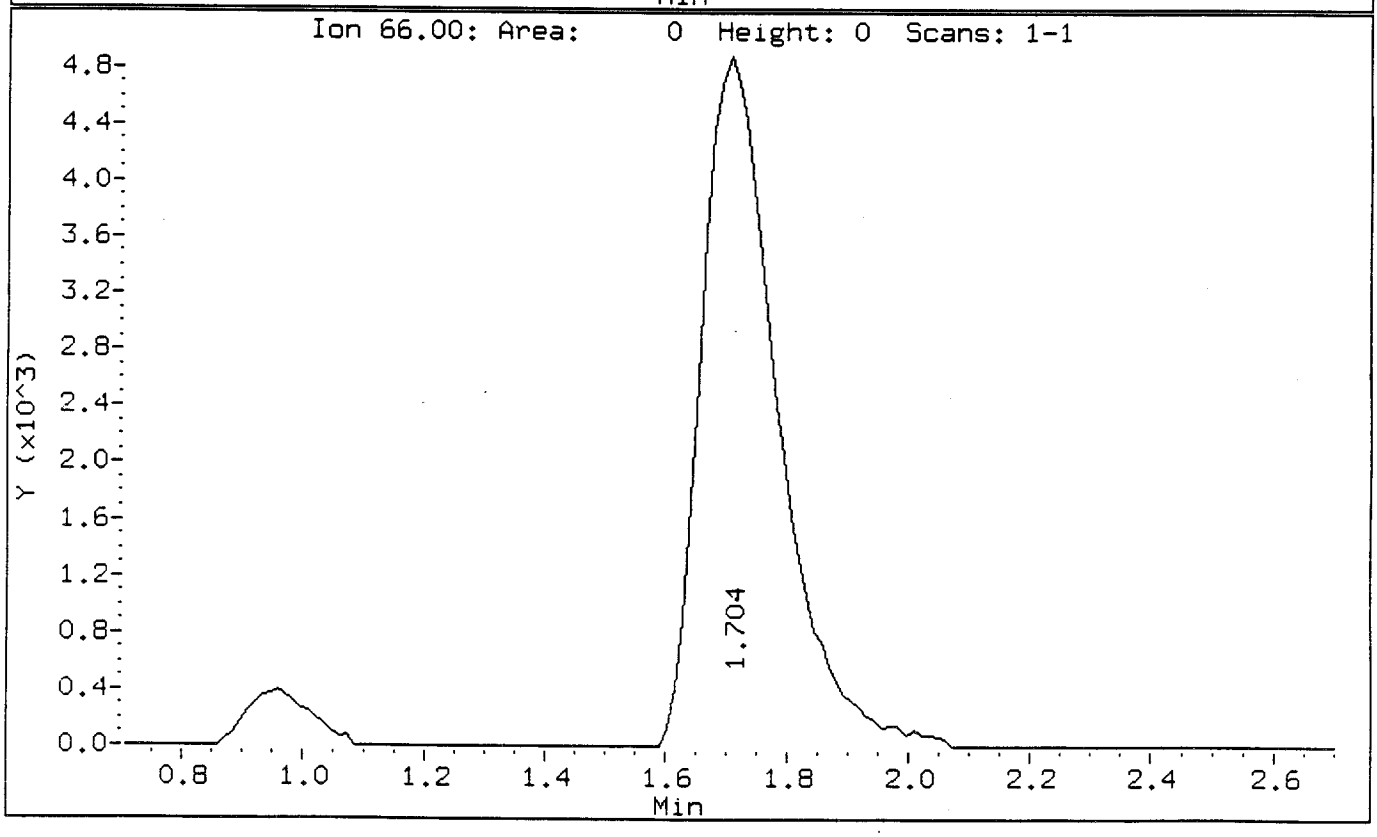
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d/CW950214B56.LG
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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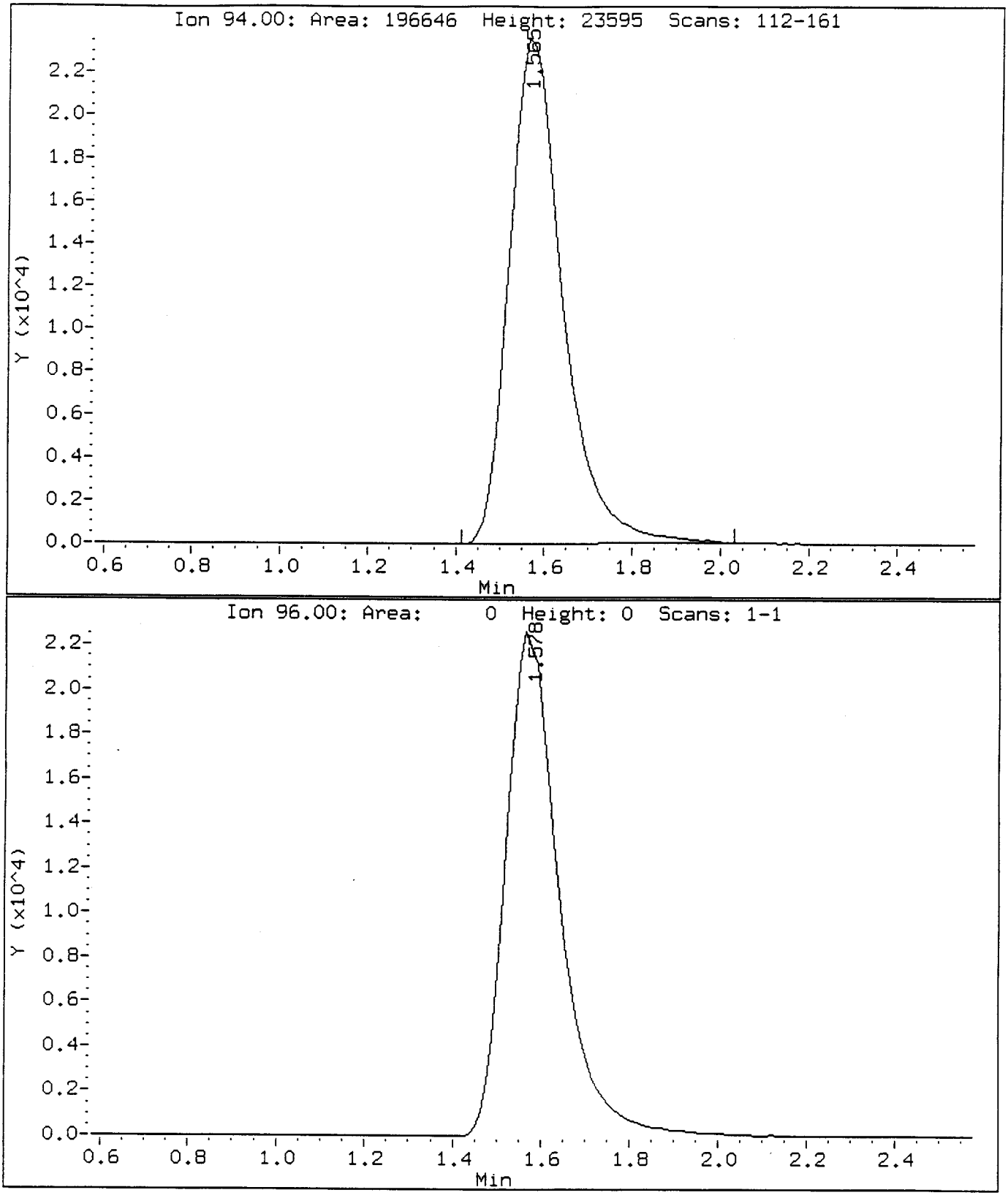
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

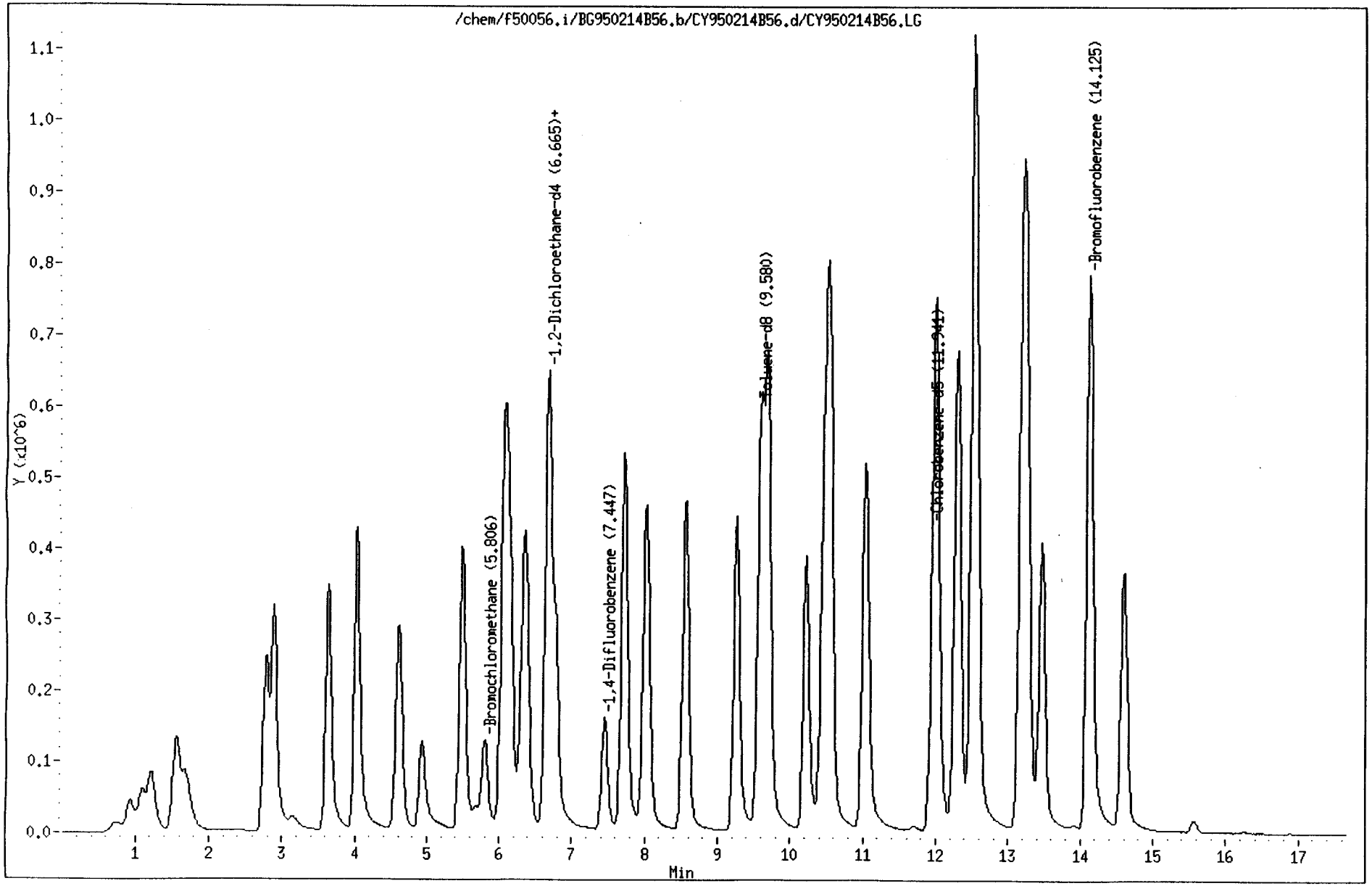
Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Date : 14-FEB-1995 21:35
Client ID: VSTD200
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CY950214B56.d
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 14-FEB-1995 21:35
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
*	1 Bromochloromethane	128.00	5.806	5.806	(1.000)	92411	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.447	(1.000)	386888	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	11.941	(1.000)	342184	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.652	(1.146)	555433	1000	868.1
$	5 Toluene-d8	98.00	9.580	9.580	(0.802)	1092604	1000	933.4
$	6 Bromofluorobenzene	95.00	14.125	14.125	(1.183)	1048142	1000	917.2
	7 Dichlorodiflouromethane	85.00	0.934	0.934	(0.161)	191592	1000	1030(A)
	8 Chloromethane	50.00	1.086	1.086	(0.187)	248464	1000	1107(AM)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.211)	332827	1000	1040(A)
	10 Bromomethane	94.00	1.553	1.553	(0.267)	390511	1000	908.6(M)
	11 Chloroethane	64.00	1.691	1.691	(0.291)	255019	1000	892.6(M)
	12 1,1-Dichloroethene	96.00	2.790	2.790	(0.480)	299226	1000	843.0
	13 Acetone	43.00	3.156	3.156	(0.543)	89957	1000	973.1
	14 Carbon Disulfide	76.00	2.891	2.891	(0.498)	1303954	1000	844.9
	15 Methylene Chloride	84.00	3.635	3.635	(0.626)	425815	1000	827.6
	16 trans-1,2-Dichloroethene	96.00	4.014	4.014	(0.691)	503351	1000	853.0
	17 1,1-Dichloroethane	63.00	4.607	4.607	(0.793)	926128	1000	866.8
	18 cis-1,2-Dichloroethene	96.00	5.478	5.478	(0.943)	519539	1000	826.6
	19 2-Butanone	43.00	5.693	5.693	(0.980)	138320	1000	973.0
	20 Chloroform	83.00	6.059	6.059	(1.043)	993890	1000	794.4
	21 1,1,1-Trichloroethane	97.00	6.135	6.135	(0.824)	848855	1000	754.0
	22 Carbon Tetrachloride	117.00	6.349	6.349	(0.853)	849344	1000	806.8
	23 Benzene	78.00	6.665	6.665	(0.895)	1079157	1000	732.8

Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Report Date: 16-Feb-1995 17:58

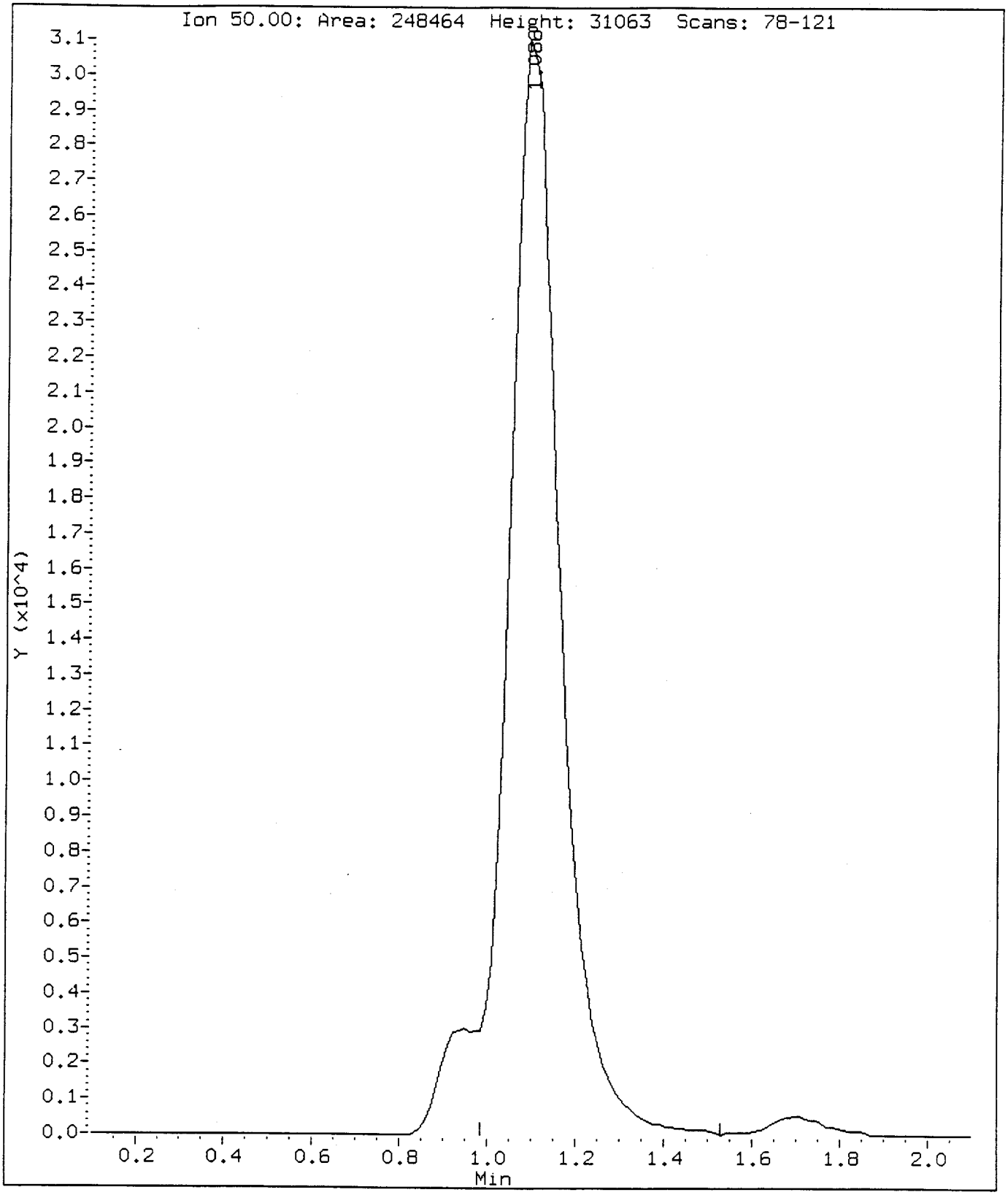
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.766	6.766	(1.165)	636594	1000	833.5
25	Trichloroethene	130.00	7.712	7.712	(1.036)	545926	1000	786.5
26	1,2-Dichloropropane	63.00	8.015	8.015	(1.076)	508295	1000	803.2
27	Bromodichloromethane	83.00	8.558	8.558	(1.149)	920714	1000	835.7
28	cis-1,3-Dichloropropene	75.00	9.252	9.252	(1.242)	707548	1000	879.6
29	4-Methyl-2-Pentanone	43.00	9.656	9.656	(0.809)	362895	1000	956.9
30	Toluene	91.00	9.681	9.681	(0.811)	1147234	1000	853.8
31	trans-1,3-Dichloropropene	75.00	10.212	10.212	(1.371)	655057	1000	912.4
32	1,1,2-Trichloroethane	97.00	10.451	10.451	(1.403)	418766	1000	749.9
33	Tetrachloroethene	164.00	10.527	10.527	(0.882)	590731	1000	788.6
34	2-Hexanone	43.00	11.070	11.070	(0.927)	240132	1000	1172(A)
35	Dibromochloromethane	129.00	11.019	11.019	(1.480)	823471	1000	781.5
36	Chlorobenzene	112.00	11.991	11.991	(1.004)	1194358	1000	855.6
37	Ethylbenzene	106.00	12.294	12.294	(1.030)	553369	1000	864.6
38	m,p-Xylene	106.00	12.534	12.534	(1.050)	1180996	2000	1488
39	o-Xylene	106.00	13.178	13.178	(1.104)	653110	1000	780.0
40	Styrene	104.00	13.254	13.254	(1.110)	1037454	1000	816.2
41	Bromoform	173.00	13.468	13.468	(1.808)	647303	1000	847.4
42	1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.222)	672262	1000	912.1
M 43	1,2-Dichloroethene (total)	96.00				1022890	2000	1679
M 44	Xylene (Total)	106.00				1834106	1000	2190

QC Flag Legend

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

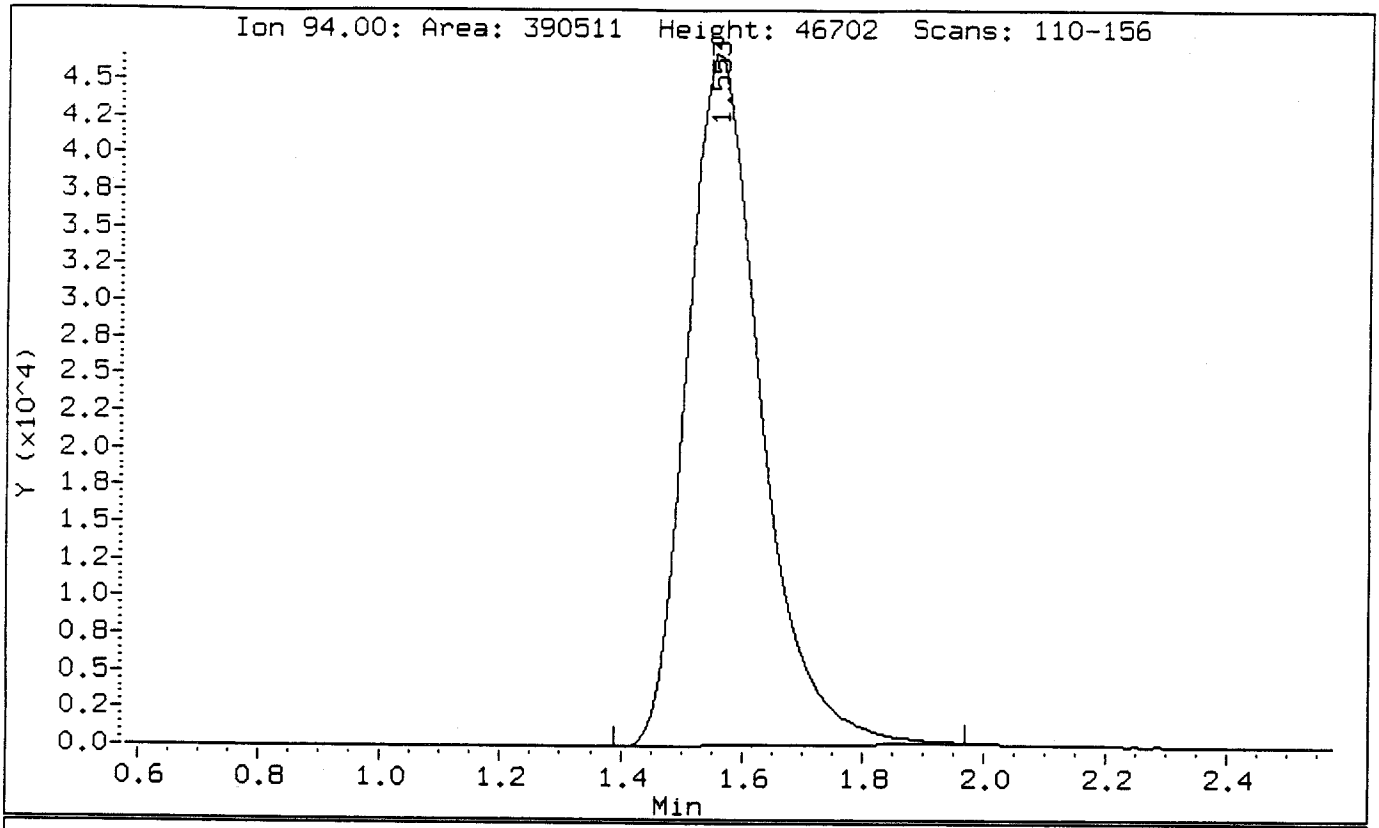
Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

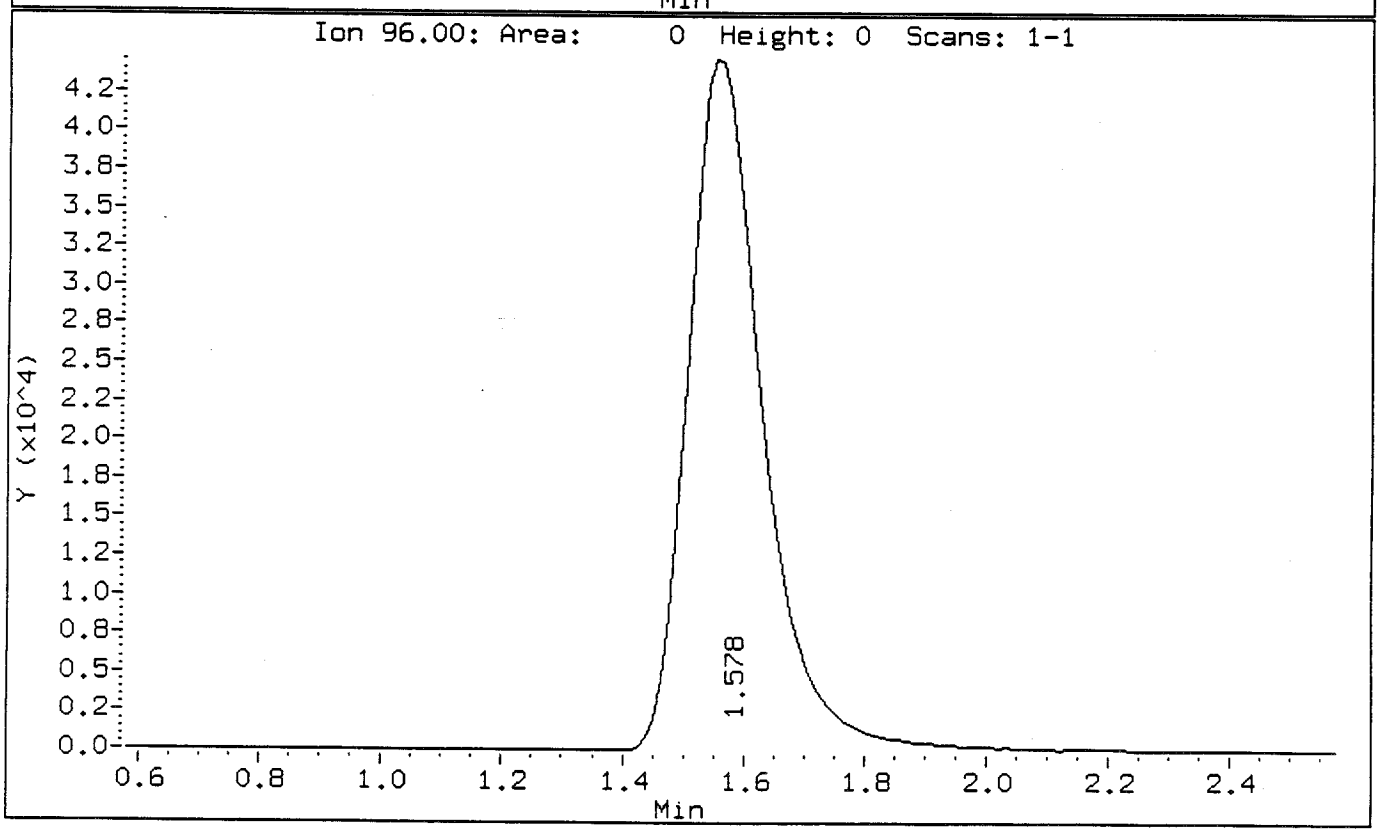
Compound: Chloromethane
CAS Number: 74-87-3



Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

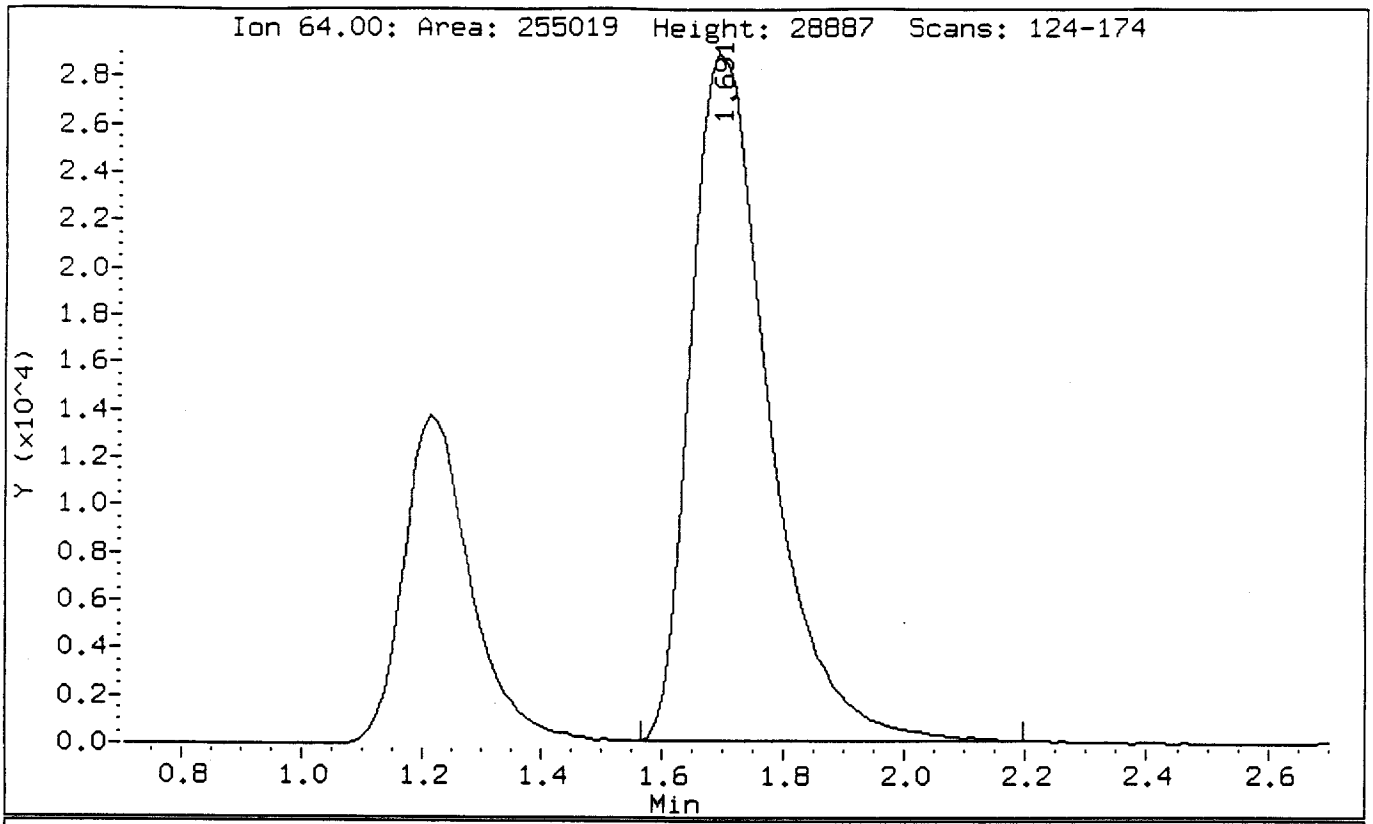
Compound: Bromomethane
CAS Number: 74-83-9

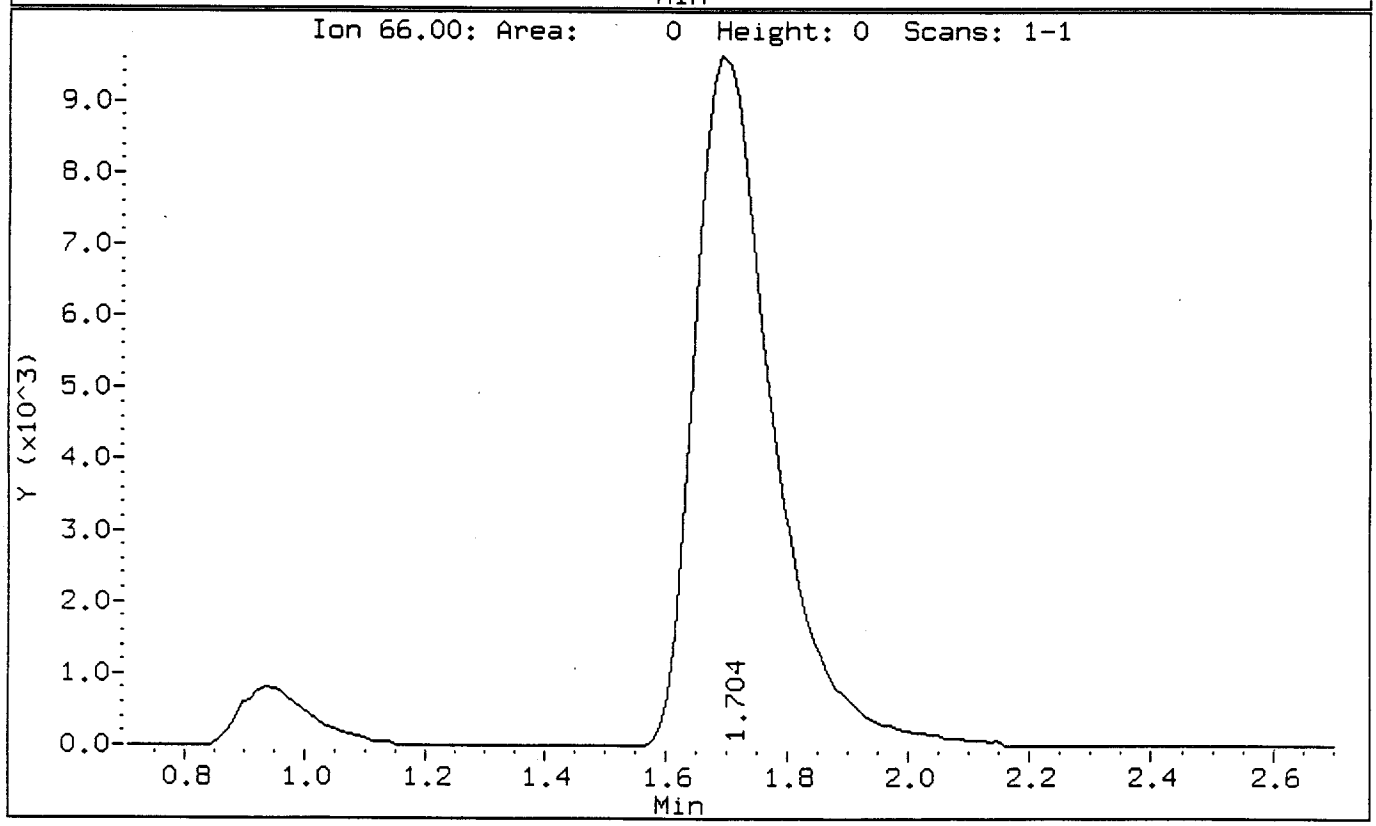




Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3





COMPU[redacted]M LABORATORIES, INC.
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 4:53 SHIFT(S) (A) / (B) ✓ (C) /
TIME TUNE EXPIRES 16:53 DATE 2-14-95
LINKER/METHOD NewSoil Dichlorflurom
PREVENTIVE MAINTENANCE D-trap from #6 to #3 VS 2/14/95

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, E
1		BG9502141C56	/	2/14/95	4:53	BFB	—	7008	2ul	1948	Lot#42750 LC=SC
2		CT9502141C56		2/14/95	5:15	VSTD010	—	-	5ml	1948	Lot#TN7
3		CU9502141C56		2/14/95	5:57	VSTD020	—	-	5ml	1948	
4		CV9502141C56		2/14/95	6:51	VSTD050		-	5ml	1948	
5		CW9502141C56		2/14/95	8:18	VSTD100	—	—	5ml	1948	
6		CX9502141C56		2/14/95	9:15	VSTD200	—	—	5ml	1948	
7	/	CY9502141C56 MB 2/14/95		/ /	10:21	VSTD010				2141	
8	/	CZ9502141C56		/ /	11:51						
9		CA9502141C56		/ /	13:14						
10		CS9502141A56		/ /	14:02	VSTD200					
11		BF9502141B56	/	2/14/95	16:18	BFB	—	700x	2uL	2011	42750 LC=SC
12	/	CS9502141B56		/ /	16:31	VSTD050		—	5mL		TN7 (4275, 4275
13		BB9502141B56	/	/ /	17:25	BFB		700's	2uL		42750 LEM 3(
14		CT9502141B56	/	/ /	17:55	VSTD010		—	5mL		4275 4275
15		CU9502141B56	/	/ /	18:35	VSTD020					
16		CV9502141B56	/	/ /	19:12	VSTD050					Good
17		CW9502141B56	/	/ /	19:50	VSTD100					ICAL
18	/	CX9502141B56		/ /	20:27	VSTD200					
19		CY9502141C56	/	/ /	21:35	VSTD200	✓	✓	✓	✓	✓
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						
				/ /	:						2/14/95

VERIFIED
SUPERVISOR APPROVAL M. S. Kamm
ENVELOPE NAME

30073 SAMPLE DATA PACKAGE

b. Form VII VOA

Continuing Calibration Data

In order by instrument.

(1) VOA standard reconstructed ion chromatograms and quantitation reports for the continuing calibration. Spectra not required.

(2) When more than one continuing calibration is performed. forms must be in chronological order. within fraction and instrument.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Instrument ID: F50056 Calibration Date: 02/16/95 Time: 0818

Lab File ID: CS950216A56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.607	0.618		-1.9	
Bromomethane	1.163	1.169	0.100	-0.6	25.0
Vinyl Chloride	0.865	0.837	0.100	3.3	25.0
Chloroethane	0.773	0.821		-6.2	
Methylene Chloride	1.392	1.412		-1.5	
Acetone	0.250	0.191		23.7	
Carbon Disulfide	4.175	3.749		10.2	
1,1-Dichloroethene	0.960	1.130	0.100	-17.7	25.0
1,1-Dichloroethane	2.891	2.986	0.200	-3.3	25.0
1,2-Dichloroethene (total)	1.648	1.671		-1.4	
Chloroform	3.384	3.518	0.200	-3.9	25.0
1,2-Dichloroethane	2.066	2.174	0.100	-5.2	25.0
2-Butanone	0.385	0.244		36.6	
1,1,1-Trichloroethane	0.727	0.738	0.100	-1.5	25.0
Carbon Tetrachloride	0.680	0.686	0.100	-0.8	25.0
Bromodichloromethane	0.712	0.706	0.200	0.9	25.0
1,2-Dichloropropane	0.409	0.402		1.6	
cis-1,3-Dichloropropene	0.520	0.509	0.200	2.1	25.0
Trichloroethene	0.449	0.436	0.300	2.7	25.0
Dibromochloromethane	0.681	0.686	0.100	-0.8	25.0
1,1,2-Trichloroethane	0.361	0.366	0.100	-1.5	25.0
Benzene	0.952	0.956	0.500	-0.4	25.0
trans-1,3-Dichloropropene	0.464	0.459	0.100	1.0	25.0
Bromoform	0.494	0.480	0.100	2.8	25.0
4-Methyl-2-Pentanone	0.277	0.250		9.7	
2-Hexanone	0.150	0.122		18.3	
Tetrachloroethene	0.547	0.517	0.200	5.4	25.0
1,1,2,2-Tetrachloroethane	0.538	0.478	0.500	11.3	25.0
Toluene	0.982	1.061	0.400	-8.1	25.0
Chlorobenzene	1.020	0.997	0.500	2.3	25.0
Ethylbenzene	0.468	0.458	0.100	2.0	25.0
Styrene	0.929	0.925	0.300	0.4	25.0
Xylene (Total)	0.612	0.595	0.300	2.8	25.0
Dichlorodiflouromethane	0.503	0.482		4.3	
Toluene-d8	0.855	0.902		-5.4	
Bromofluorobenzene	0.835	0.846	0.200	-1.4	25.0

All other compounds must meet a minimum RRF of 0.010.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Instrument ID: F50056 Calibration Date: 02/16/95 Time: 0818

Lab File ID: CS950216A56.D Init. Calibration Date(s): 02/14/95 02/14/95

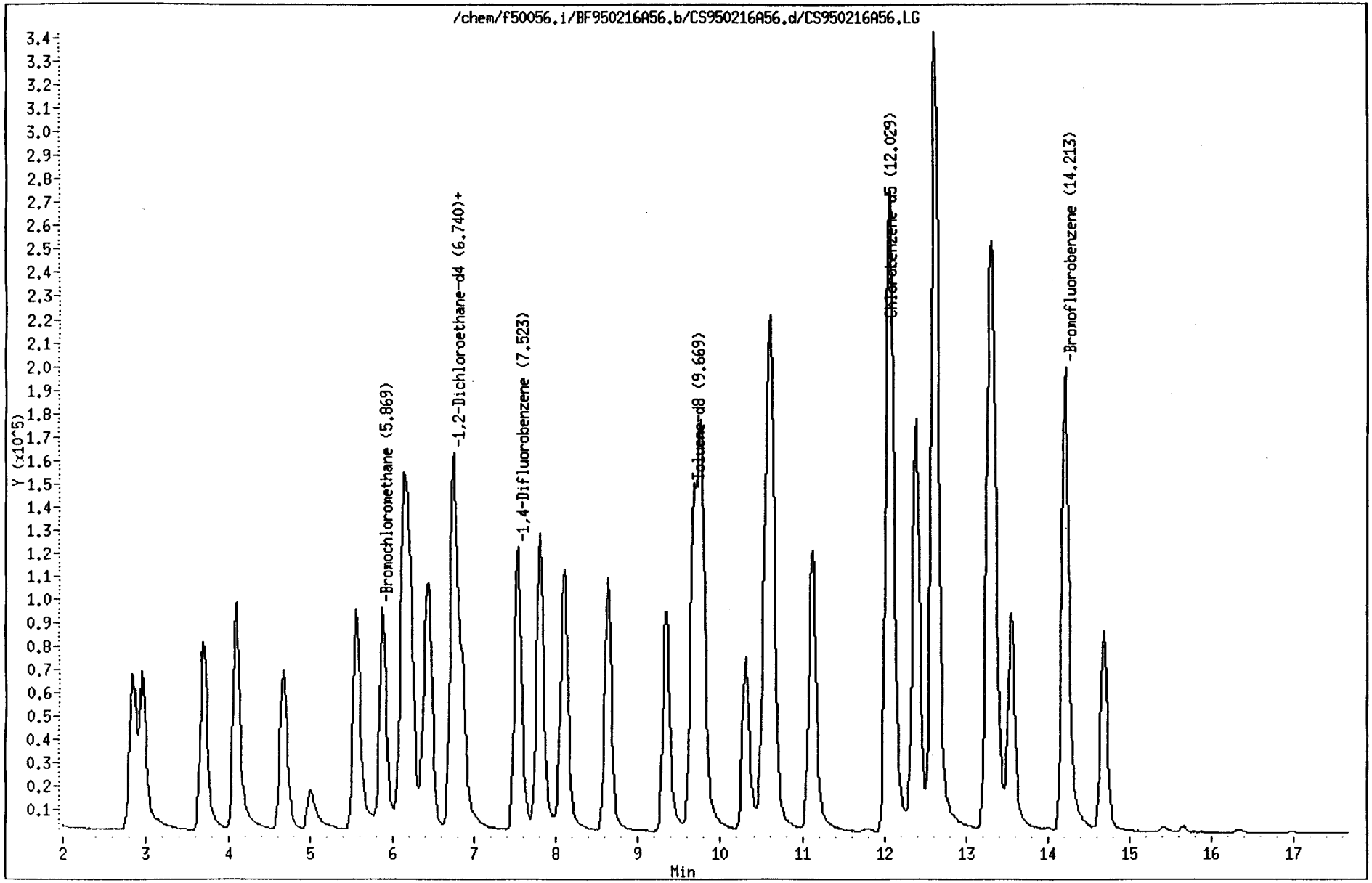
Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
1,2-Dichloroethane-d4	1.731	1.876		-8.4	

All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d
Date : 16-FEB-95 08:18
Client ID: VSTD050
Instrument: f50056.i
Sample Info: VSTD050: 2141: 1:
Purge Volume: 5.0
Operator: 2141
Column phase: DB624
Column diameter: 0.53



30073 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d
Report Date: 20-Feb-1995 15:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CS950216A56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 16-FEB-95 08:18
Operator : 2141 Inst ID: f50056.i
Smp Info : VSTD050: 2141: 1:
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	
*	1 Bromochloromethane	128.00	5.869	5.869	(1.000)	72863	250.0		
*	2 1,4-Difluorobenzene	114.00	7.523	7.523	(1.000)	295065	250.0		
*	3 Chlorobenzene-d5	117.00	12.029	12.029	(1.000)	308913	250.0		
$	4 1,2-Dichloroethane-d4	65.00	6.728	6.728	(1.146)	136722	250.0	271.0	
$	5 Toluene-d8	98.00	9.669	9.669	(0.804)	278529	250.0	263.6	
$	6 Bromofluorobenzene	95.00	14.213	14.213	(1.182)	261391	250.0	253.4	
	7 Dichlorodiflouromethane	85.00	0.972	0.972	(0.166)	35084	250.0	239.2	
	8 Chloromethane	50.00	1.111	1.111	(0.189)	45053	250.0	254.7	
	9 Vinyl Chloride	62.00	1.237	1.237	(0.211)	60953	250.0	241.7	(M) M1
	10 Bromomethane	94.00	1.590	1.590	(0.271)	85207	250.0	251.4	(M) M1
	11 Chloroethane	64.00	1.729	1.729	(0.295)	59787	250.0	265.4	(M) M1
	12 1,1-Dichloroethene	96.00	2.840	2.840	(0.484)	82347	250.0	294.2	
	13 Acetone	43.00	3.156	3.156	(0.538)	13905	250.0	190.8	
	14 Carbon Disulfide	76.00	2.954	2.954	(0.503)	273198	250.0	224.5	
	15 Methylene Chloride	84.00	3.686	3.686	(0.628)	102912	250.0	253.7	
	16 trans-1,2-Dichloroethene	96.00	4.077	4.077	(0.695)	116581	250.0	250.6	
	17 1,1-Dichloroethane	63.00	4.670	4.670	(0.796)	217563	250.0	258.2	
	18 cis-1,2-Dichloroethene	96.00	5.554	5.554	(0.946)	126907	250.0	256.1	
	19 2-Butanone	43.00	5.768	5.768	(0.983)	17761	250.0	158.5	
	20 Chloroform	83.00	6.122	6.122	(1.043)	256333	250.0	259.9	
	21 1,1,1-Trichloroethane	97.00	6.198	6.198	(0.824)	217777	250.0	253.6	
	22 Carbon Tetrachloride	117.00	6.425	6.425	(0.854)	202285	250.0	251.9	
	23 Benzene	78.00	6.740	6.740	(0.896)	281974	250.0	251.0	

AMS 2.20.95

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d
Report Date: 20-Feb-1995 15:13

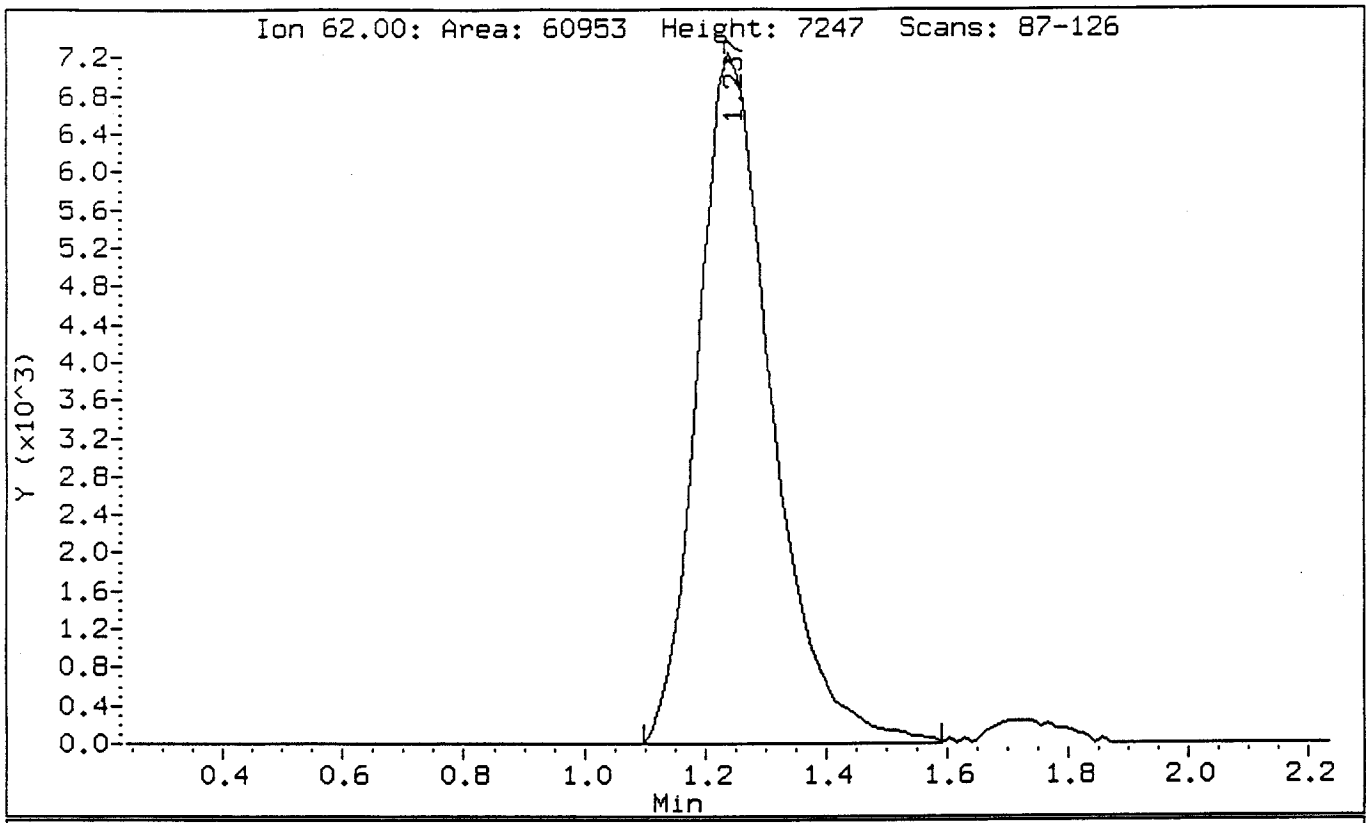
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.841	6.841	(1.166)	158397	250.0	263.0
	25 Trichloroethene	130.00	7.788	7.788	(1.035)	128773	250.0	243.2
	26 1,2-Dichloropropane	63.00	8.091	8.091	(1.075)	118742	250.0	246.0
	27 Bromodichloromethane	83.00	8.634	8.634	(1.148)	208242	250.0	247.8
	28 cis-1,3-Dichloropropene	75.00	9.328	9.328	(1.240)	150224	250.0	244.9
	29 4-Methyl-2-Pentanone	43.00	9.732	9.732	(0.809)	77332	250.0	225.9
	30 Toluene	91.00	9.770	9.770	(0.812)	327757	250.0	270.2
	31 trans-1,3-Dichloropropene	75.00	10.300	10.300	(1.369)	135496	250.0	247.4
	32 1,1,2-Trichloroethane	97.00	10.540	10.540	(1.401)	108121	250.0	253.9
	33 Tetrachloroethene	164.00	10.603	10.603	(0.881)	159858	250.0	236.4
	34 2-Hexanone	43.00	11.158	11.158	(0.928)	37776	250.0	204.2
	35 Dibromochloromethane	129.00	11.120	11.120	(1.478)	202492	250.0	252.0
	36 Chlorobenzene	112.00	12.080	12.080	(1.004)	307938	250.0	244.3
	37 Ethylbenzene	106.00	12.383	12.383	(1.029)	141533	250.0	245.0
	38 m,p-Xylene	106.00	12.610	12.610	(1.048)	349898	500.0	488.2
	39 o-Xylene	106.00	13.279	13.279	(1.104)	183758	250.0	243.1
	40 Styrene	104.00	13.342	13.342	(1.109)	285751	250.0	249.0
	41 Bromoform	173.00	13.557	13.557	(1.802)	141506	250.0	242.9
	42 1,1,2,2-Tetrachloroethane	83.00	14.680	14.680	(1.220)	147564	250.0	221.8
M	43 1,2-Dichloroethene (total)	96.00				243488	500.0	506.8
M	44 Xylene (Total)	106.00				533656	250.0	706.0

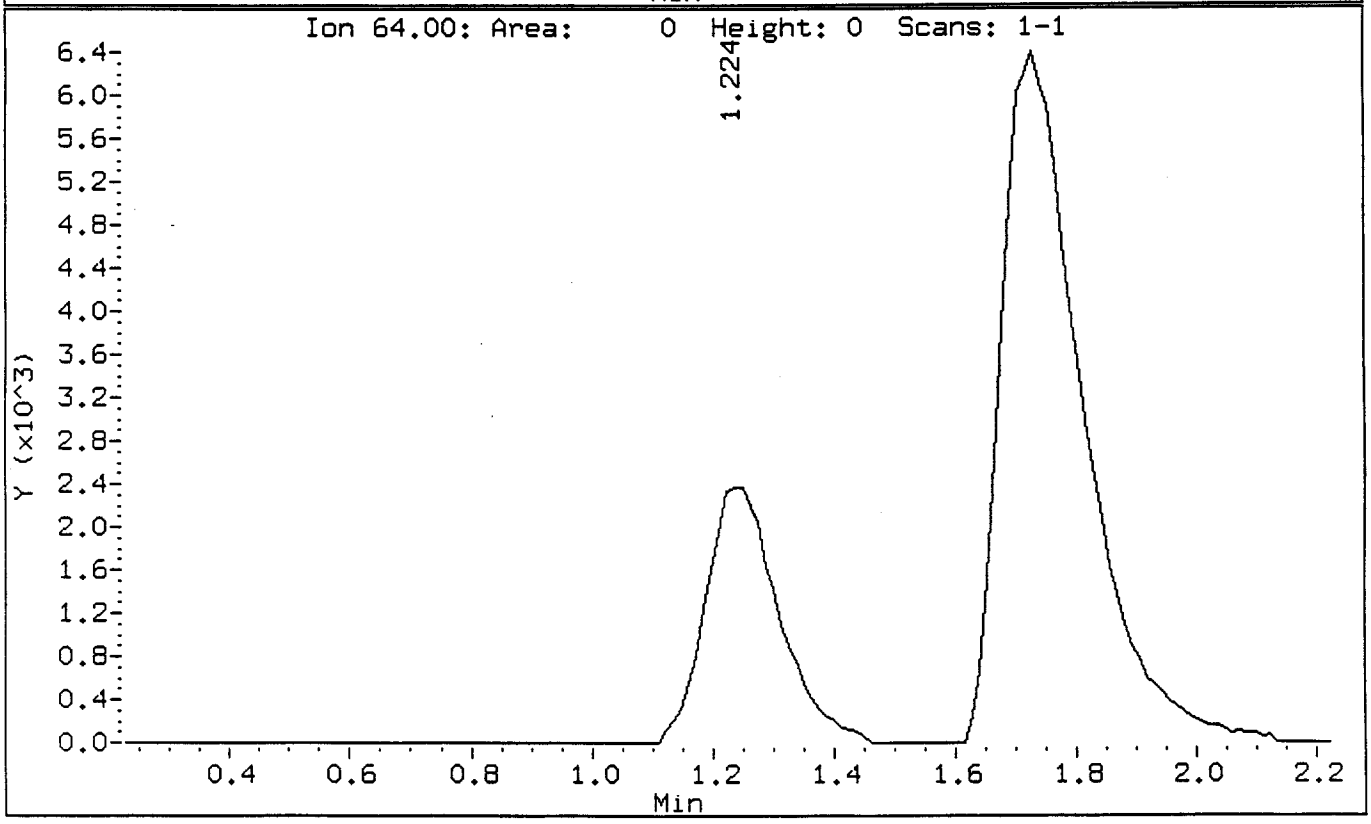
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d/CS950216A56.LG
Injection Date: 16-FEB-95 08:18
Instrument: f50056.i
Client Sample ID: VSTD050

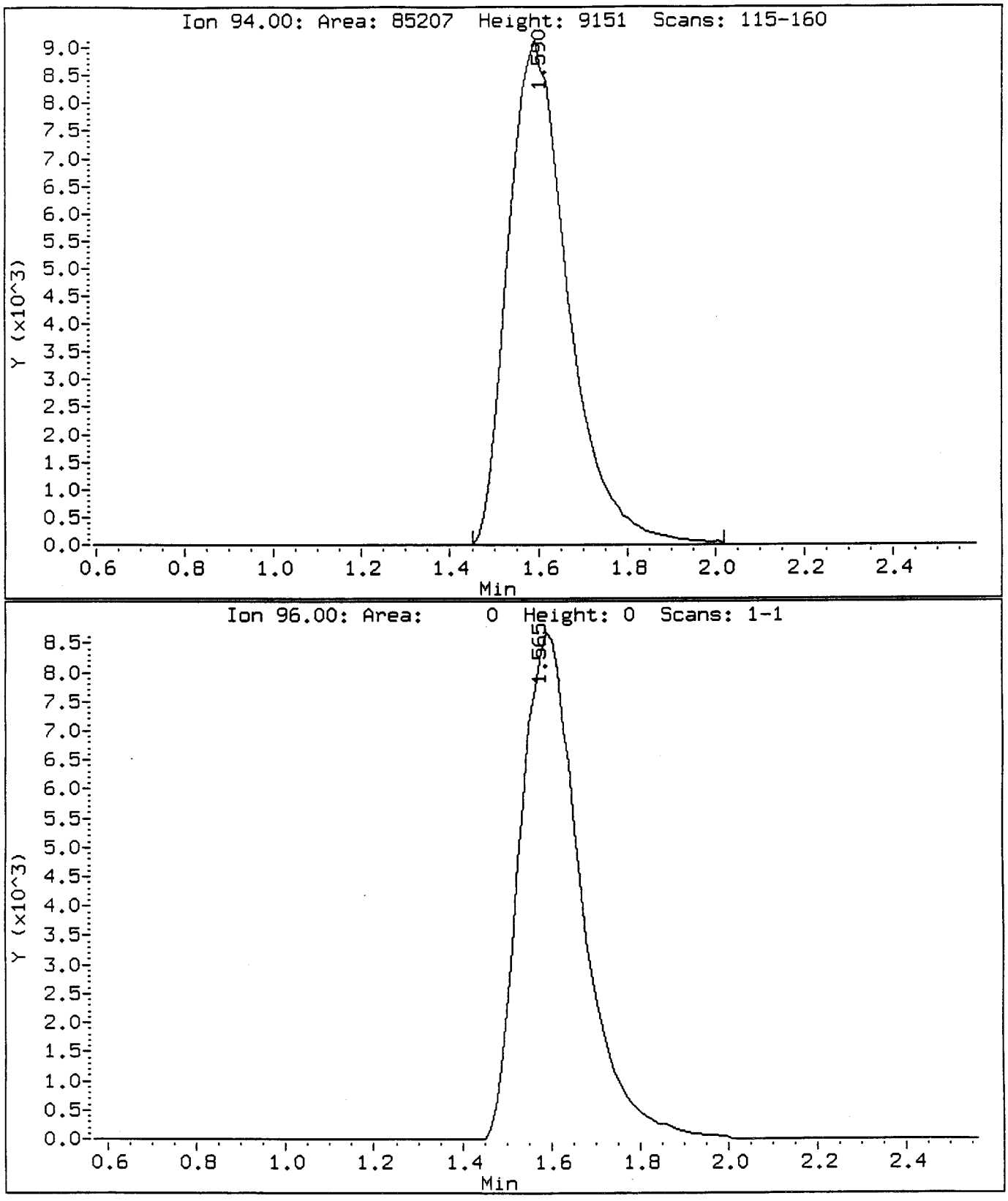
Compound: Vinyl Chloride
CAS Number: 75-01-4





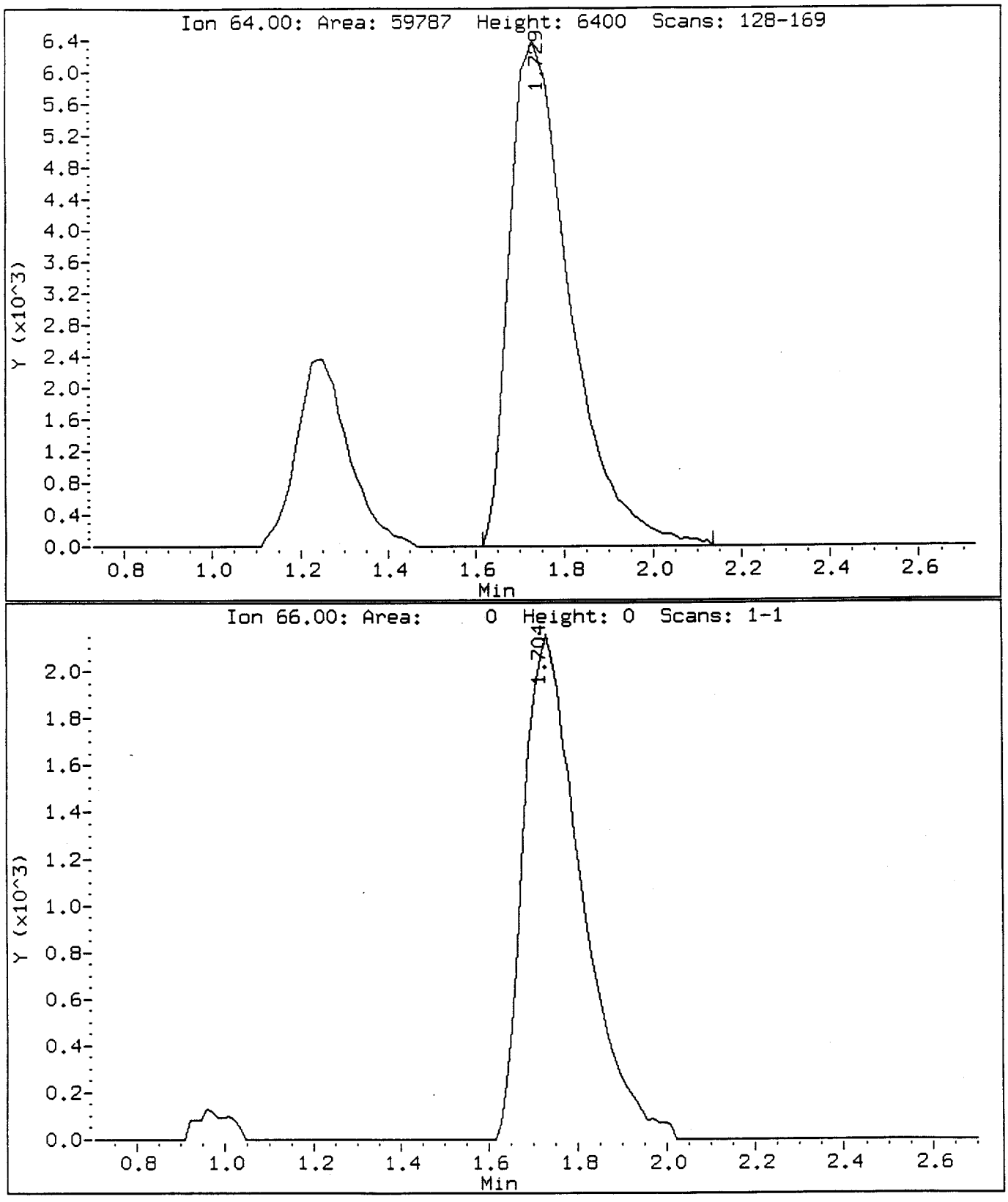
Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d/CS950216A56.LG
Injection Date: 16-FEB-95 08:18
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Bromomethane
CAS Number: 74-83-9



Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d/CS950216A56.LG
Injection Date: 16-FEB-95 08:18
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



COMPU[illegible]M LABORATORIES, INC.
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 8:09
TIME TUNE EXPIRES 20:09

SHIFT(S) (A) 1 (B) —
DATE 2.16.95
LINKER/METHOD NWSW + DCFM

PREVENTIVE MAINTENANCE None

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, E
1		BF950216A56	/	2/16/95	8:09	BFB	—	7008	2ul	2141	LC-SC 42750
2		CS950216A56	/	/ /	8:18	VSTD050	—	—	5mL		TN7 (42493 42492)
3		CB950216D56	/	/ /	9:04	VBLKML	—	—			
4		CN083877A56	/	/ /	9:59	VHBLK43	30073				
5	/	CR083833A56	SL	/ /	10:31	L1					
6	/	CN083991A56	SL	/ /	11:03	TRIPBLK2					
7		C2R83833A56	/	/ /	11:38	L1					
8		CR083991A56	✓	/ /	12:21	TRIPBLK2					
9	/	CN083879A56	PT	/ /	12:54	VBblk51				2011	
10		CN083986A56	/	/ /	14:01	MW9					
11		CN083987A56	/	/ /	14:49	MW9MS					42781
12		CN083988A56	/	/ /	15:28	MW9MSD					↓
13		CN083990A56	/	/ /	16:02	MW12					
14		CR083879A56	/	/ /	16:41	VBblk51 TripBLK2					
15				/ /	:						
16				/ /	:						
17				/ /	:						
18				/ /	:						
19				/ /	:						
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						
				/ /	:						

JK 2/16/95

JK

VERIFIED
SUPERVISOR APPROVAL SWBuo 2/16/95
ENVELOPE NAME

30073 SAMPLE DATA PACKAGE

34

4. Raw Q C Data

a. B F B Data

b. Blank Data

c. Matrix Spike Data

d. Matrix Spike Duplicate Data

a. B F B Data

For each 12 hour period, for each GC/MS system utilized.

(1) Bar graph spectrum

(2) Mass listing

(3) Reconstructed total ion chromatogram (RIC)

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d

Date : 14-FEB-1995 17:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

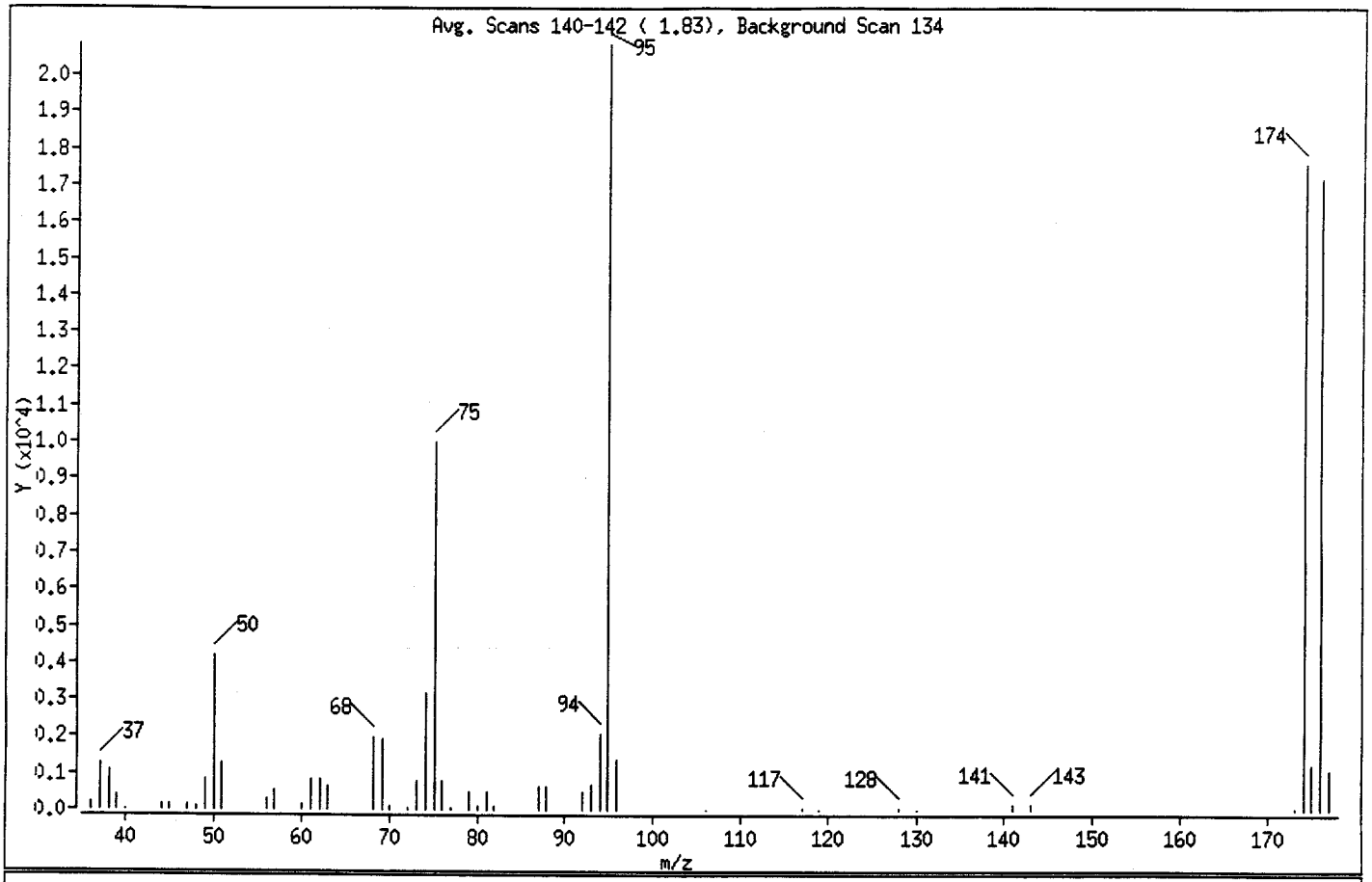
Volume Injected (uL): 2.0

Operator: 2011

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	8.00 - 40.00% of mass 95	20.12
75	30.00 - 66.00% of mass 95	47.87
96	5.00 - 9.00% of mass 95	6.54
173	Less than 2.00% of mass 174	0.22 (0.26)
174	50.00 - 120.00% of mass 95	84.42
175	4.00 - 9.00% of mass 174	5.98 (7.08)
176	93.00 - 101.00% of mass 174	82.53 (97.76)
177	5.00 - 9.00% of mass 176	5.18 (6.27)

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d

Date : 14-FEB-1995 17:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

Data File: BG950214B56.d

Spectrum : Avg. Scans 140-142 (1.83), Background Scan 134

Largest m/z: 95.00

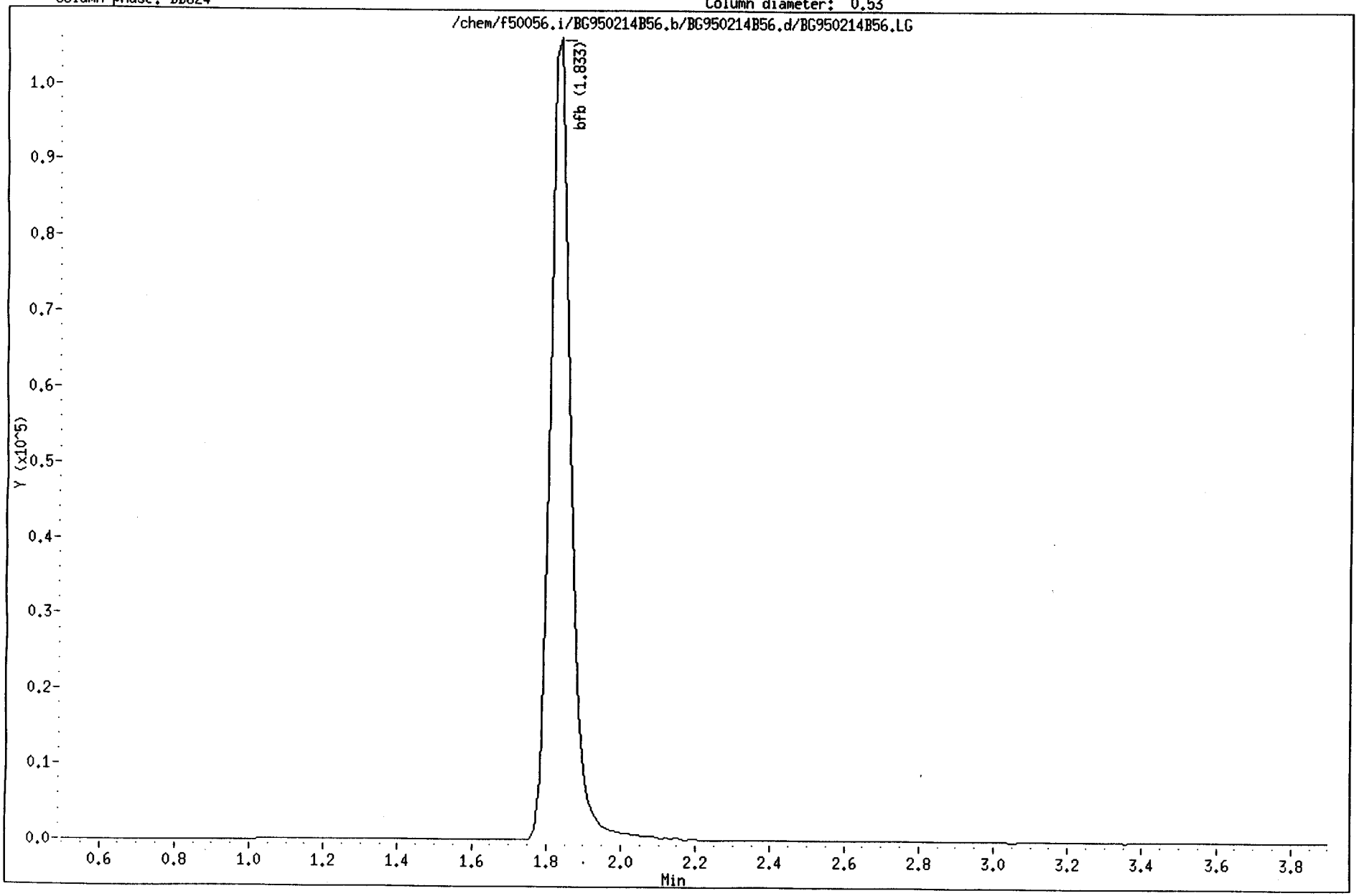
Number of peaks: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	197	57.00	540	77.00	55	117.00	70
37.00	1258	60.00	152	79.00	478	119.00	21
38.00	1077	61.00	861	80.00	108	128.00	36
39.00	387	62.00	856	81.00	478	130.00	17
40.00	18	63.00	631	82.00	77	141.00	144
44.00	124	68.00	1988	87.00	624	143.00	142
45.00	158	69.00	1944	88.00	641	173.00	46
47.00	171	70.00	110	92.00	480	174.00	17592
48.00	98	72.00	49	93.00	713	175.00	1246
49.00	850	73.00	788	94.00	2093	176.00	17200
50.00	4193	74.00	3146	95.00	20840	177.00	1079
51.00	1266	75.00	9978	96.00	1363		
56.00	277	76.00	807	106.00	19		

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d
Date : 14-FEB-1995 17:25
Client ID: BFB
Sample Info:
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



Data File: /chem/f50056.i/BF950216A56.b/BF950216A56.d

Date : 16-FEB-1995 08:09

Client ID: BFB

Instrument: f50056.i

Sample Info:

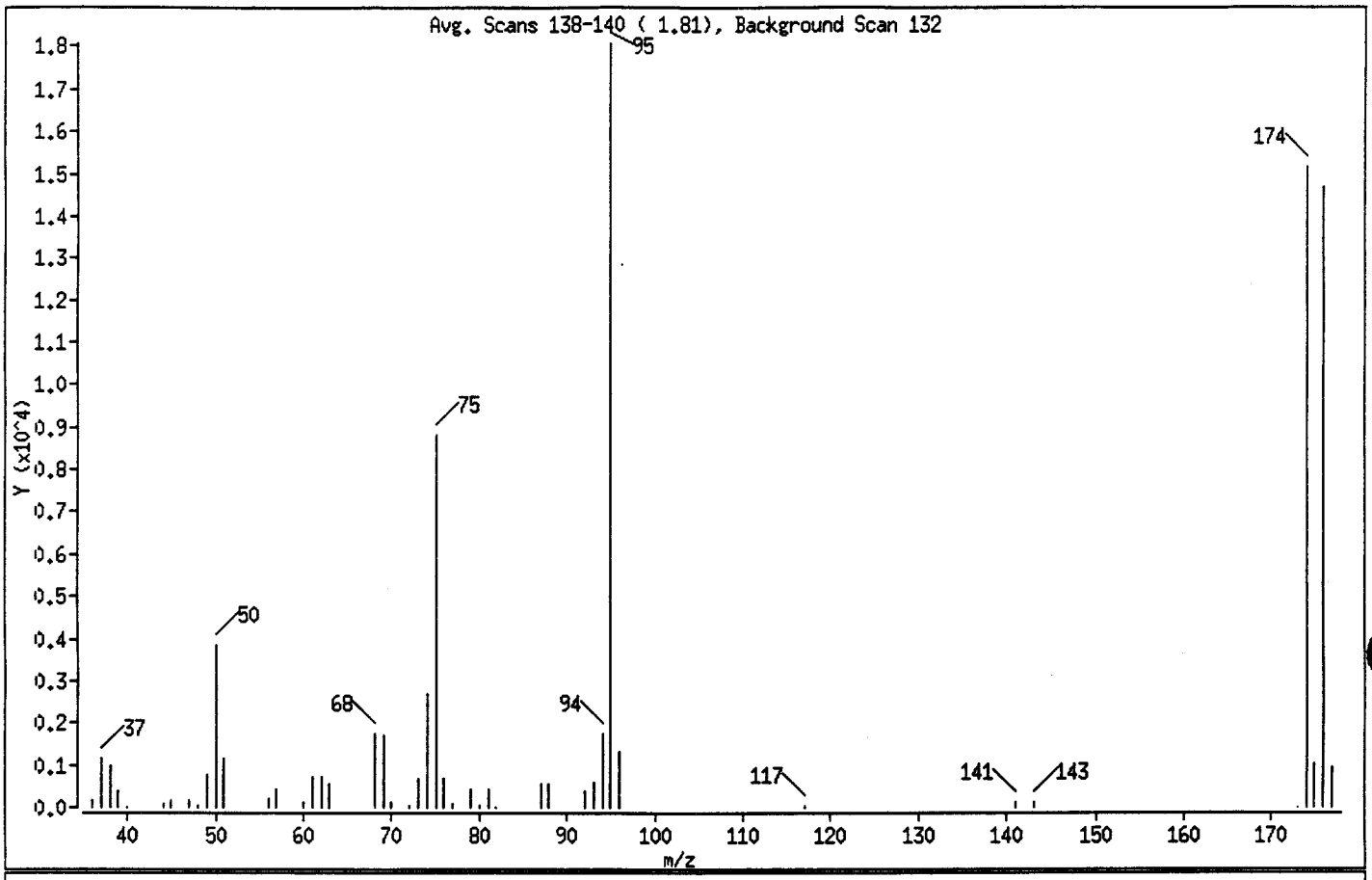
Volume Injected (uL): 2.0

Operator: 2141

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	8.00 - 40.00% of mass 95	21.26
75	30.00 - 66.00% of mass 95	48.86
96	5.00 - 9.00% of mass 95	7.23
173	Less than 2.00% of mass 174	0.09 (0.11)
174	50.00 - 120.00% of mass 95	83.82
175	4.00 - 9.00% of mass 174	5.71 (6.81)
176	93.00 - 101.00% of mass 174	81.26 (96.94)
177	5.00 - 9.00% of mass 176	5.15 (6.33)

Data File: /chem/f50056.i/BF950216A56.b/BF950216A56.d

Date : 16-FEB-1995 08:09

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

Data File: BF950216A56.d

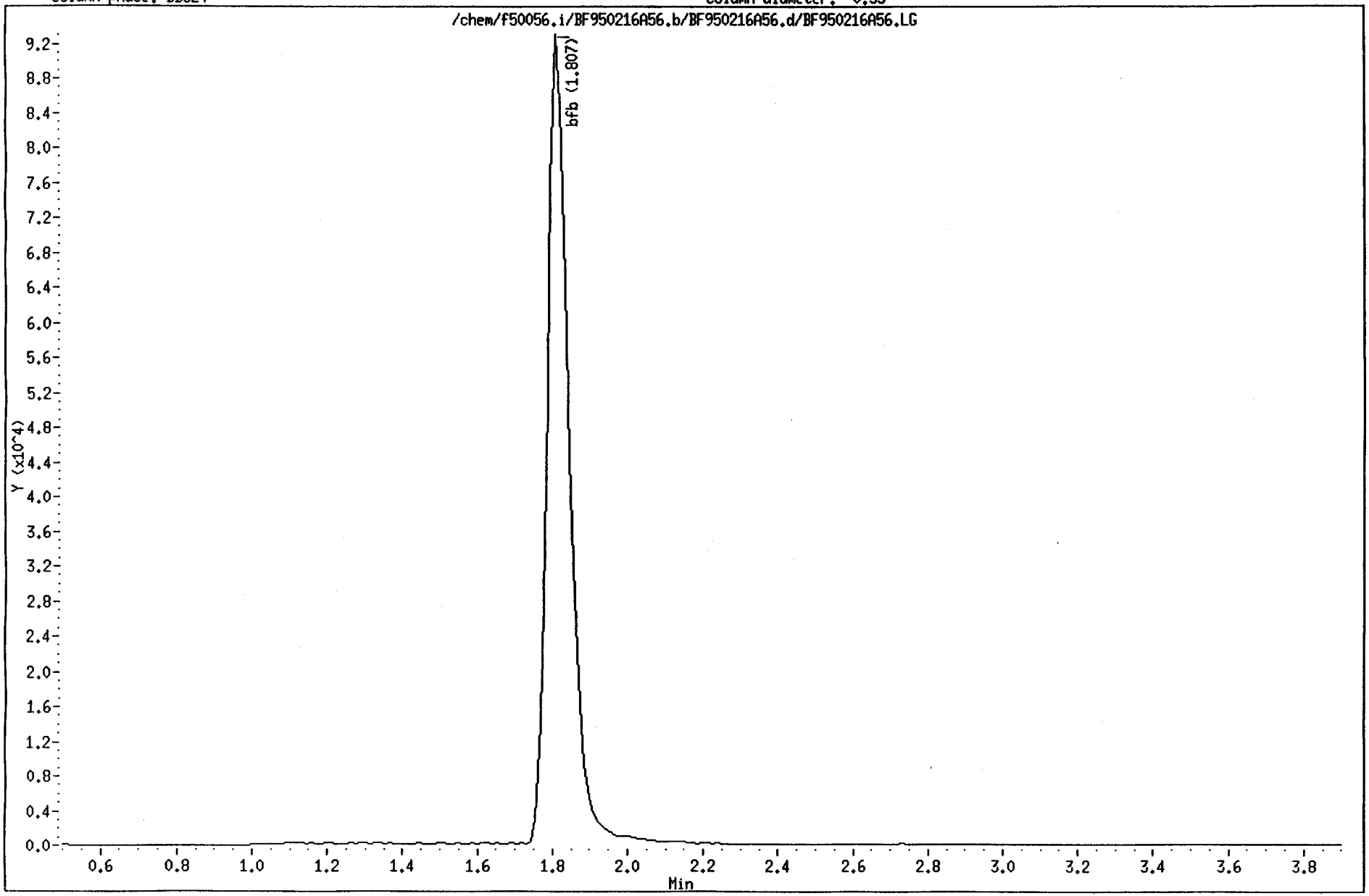
Spectrum : Avg. Scans 138-140 (1.81), Background Scan 132

Largest m/z: 95.00

Number of peaks: 46

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	172	56.00	228	75.00	8829	95.00	18064
37.00	1143	57.00	439	76.00	698	96.00	1306
38.00	993	60.00	133	77.00	66	117.00	47
39.00	383	61.00	731	79.00	410	141.00	114
40.00	8	62.00	726	80.00	60	143.00	122
44.00	86	63.00	559	81.00	424	173.00	17
45.00	160	68.00	1736	82.00	18	174.00	15146
47.00	161	69.00	1710	87.00	542	175.00	1032
48.00	62	70.00	141	88.00	539	176.00	14682
49.00	790	72.00	23	92.00	393	177.00	930
50.00	3841	73.00	684	93.00	617		
51.00	1136	74.00	2694	94.00	1766		

Data File: /chem/f50056.i/BF950216A56.b/BF950216A56.d
Date : 16-FEB-1995 08:09
Client ID: BFB
Instrument: f50056.i
Sample Info:
Volume Injected (uL): 2.0
Operator: 2141
Column phase: DB624
Column diameter: 0.53



30073 SAMPLE DATA PACKAGE

b. Blank Data

In chronological order.

(1) Form I VOA
Blank's Organic Analysis Data Sheet (OADS)

(2) Form I VOA-TIC
Blank's Tentatively Identified Compounds; even if none found.

(3) RIC and quantitation report

(4) TCL spectra with lab generated standard.

(5) GC/MS library search spectra for TICs

(6) Quantitation / calculation of TICs

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.72	19	J
2.					
3.					
4.					
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27.					
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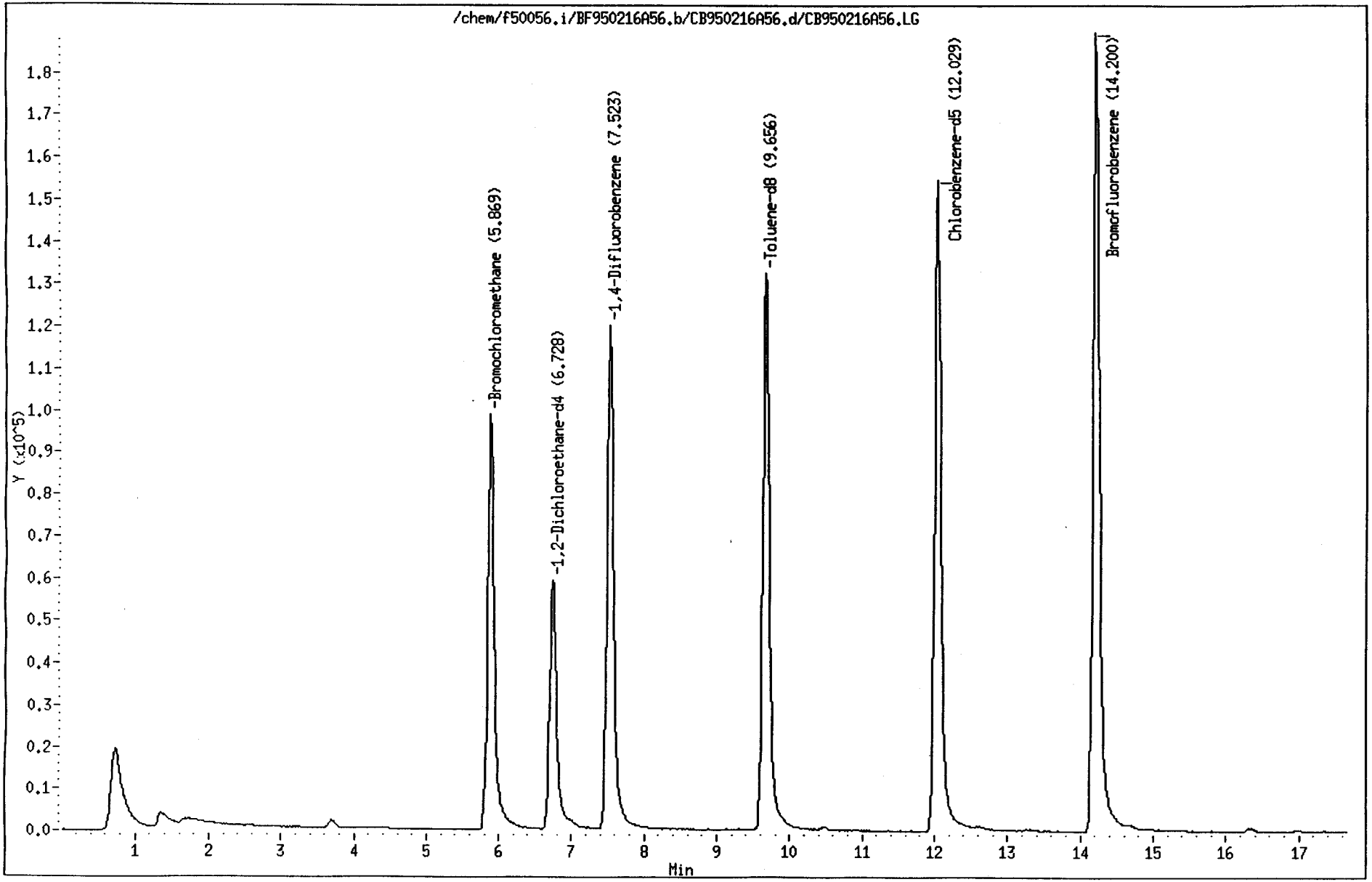
29.					
30.					

Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d
Date : 16-FEB-1995 09:04
Client ID: VBLKML
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2141
Column diameter: 0.53



Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d
Report Date: 20-Feb-1995 15:12

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CB950216A56.d
Lab Smp Id: VBLKML Client Smp ID: VBLKML
Inj Date : 16-FEB-1995 09:04
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.869	5.869	(1.000)	80470	250.0	
* 2	1,4-Difluorobenzene	114.00	7.510	7.523	(1.000)	299990	250.0	
* 3	Chlorobenzene-d5	117.00	12.029	12.029	(1.000)	316422	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.728	6.728	(1.146)	148771	246.3	49.26
$ 5	Toluene-d8	98.00	9.656	9.669	(0.803)	276024	241.9	48.37
$ 6	Bromofluorobenzene	95.00	14.200	14.213	(1.180)	249720	233.2	46.63
7	Dichlorodiflouromethane	85.00		0.972	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00		1.729	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		2.840	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00	3.698	3.686	(0.630)	2723	5.99	1.20(a)
16	trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.670	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.554	Compound Not Detected.			
19	2-Butanone	43.00		5.768	Compound Not Detected.			
20	Chloroform	83.00		6.122	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.198	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
23	Benzene	78.00		6.740	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d
Report Date: 20-Feb-1995 15:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 1,2-Dichloroethane	62.00		6.841		Compound Not Detected.		
	25 Trichloroethene	130.00		7.788		Compound Not Detected.		
	26 1,2-Dichloropropane	63.00		8.091		Compound Not Detected.		
	27 Bromodichloromethane	83.00		8.634		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		9.328		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		9.732		Compound Not Detected.		
	30 Toluene	91.00		9.770		Compound Not Detected.		
	31 trans-1,3-Dichloropropene	75.00		10.300		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		10.540		Compound Not Detected.		
	33 Tetrachloroethene	164.00		10.603		Compound Not Detected.		
	34 2-Hexanone	43.00		11.158		Compound Not Detected.		
	35 Dibromochloromethane	129.00		11.120		Compound Not Detected.		
	36 Chlorobenzene	112.00		12.080		Compound Not Detected.		
	37 Ethylbenzene	106.00		12.383		Compound Not Detected.		
	38 m,p-Xylene	106.00		12.610		Compound Not Detected.		
	39 o-Xylene	106.00		13.279		Compound Not Detected.		
	40 Styrene	104.00		13.342		Compound Not Detected.		
	41 Bromoform	173.00		13.557		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		14.680		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M	44 Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d

Date : 16-FEB-1995 09:04

Client ID: VBLKML

Instrument: f50056.i

Sample Info:

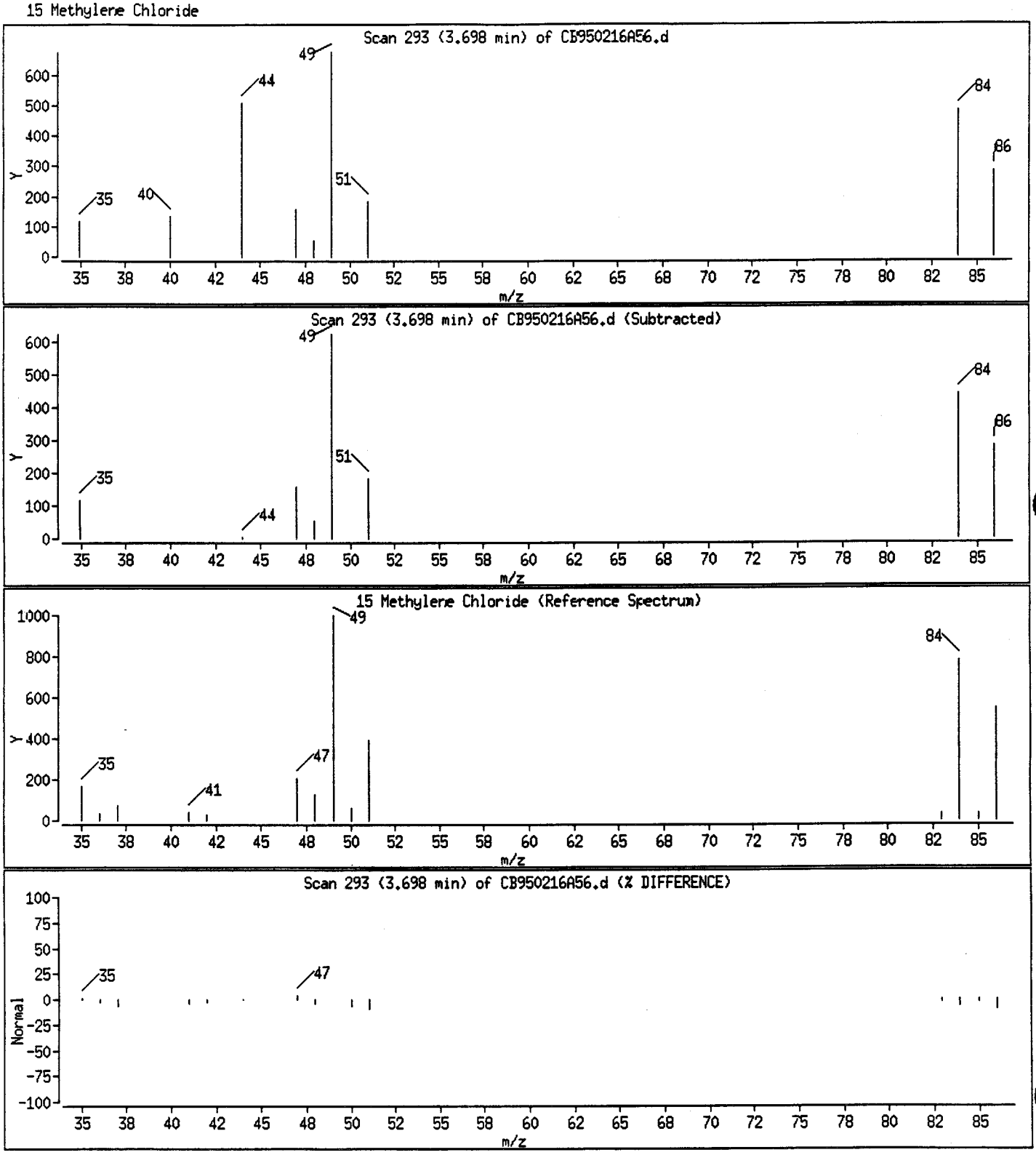
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d

Date : 16-FEB-1995 09:04

Client ID: VBLKML

Instrument: f50056.i

Sample Info:

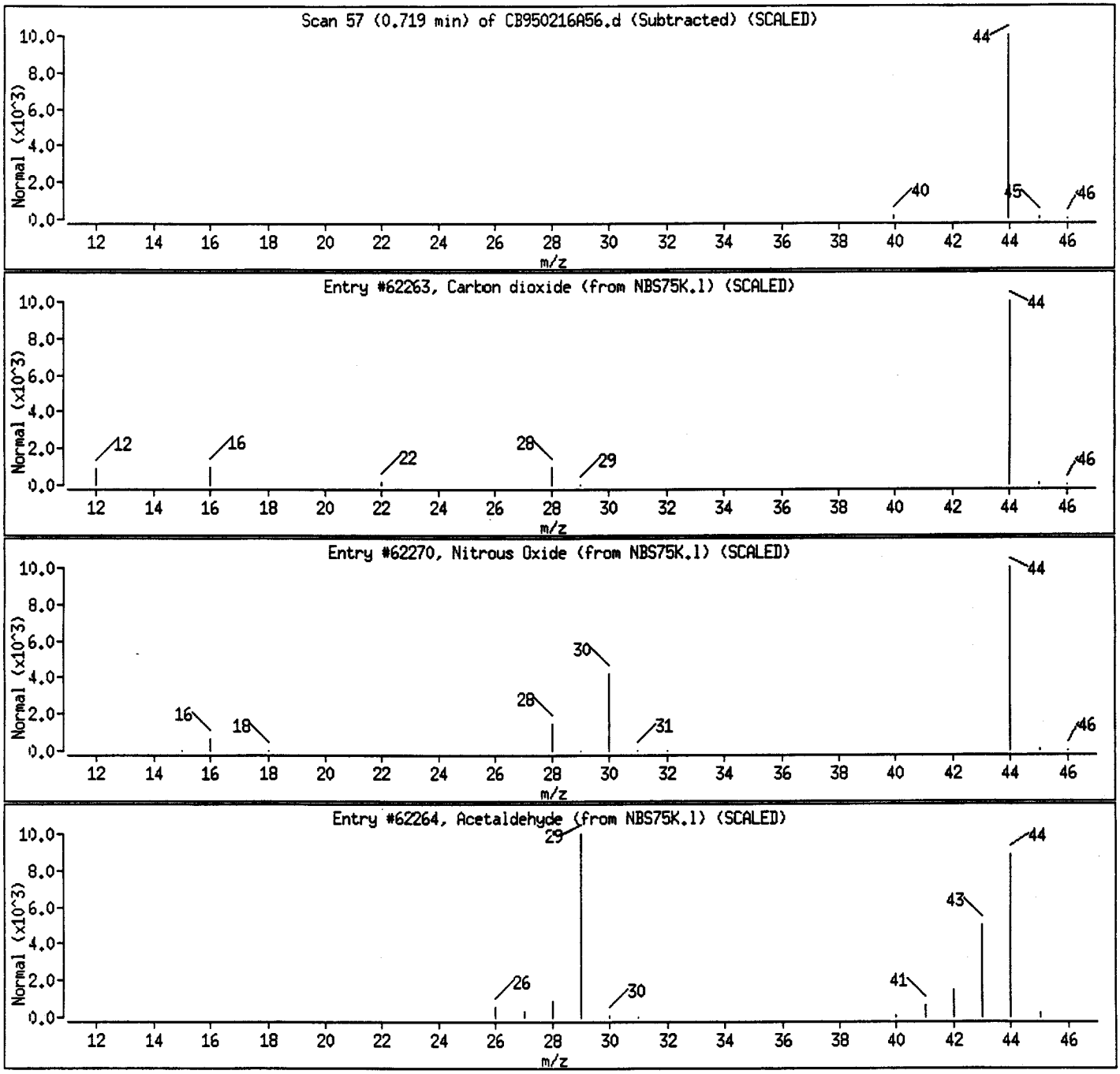
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	62263	5	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.l	62270	3	N2O	44
Acetaldehyde	75-07-0	NBS75K.l	62264	3	C2H4O	44



QUALITY ASSURANCE NOTICE

CompuChem ID# CB95c216456
Client ID# VBLK MC
Instrument Blank ID# CB95c216A56
Case# _____

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 57 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID CK / 983

Date 2·20·95

QAN-V-14
901001

c. Matrix Spike Data

(1) Form I VOA

Matrix Spike's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683987

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083987A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	17	
75-09-2	Methylene Chloride	95	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	63	
75-34-3	1,1-Dichloroethane	30	
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	48	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	37	
108-90-7	Chlorobenzene	42	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683987

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083987A56.D

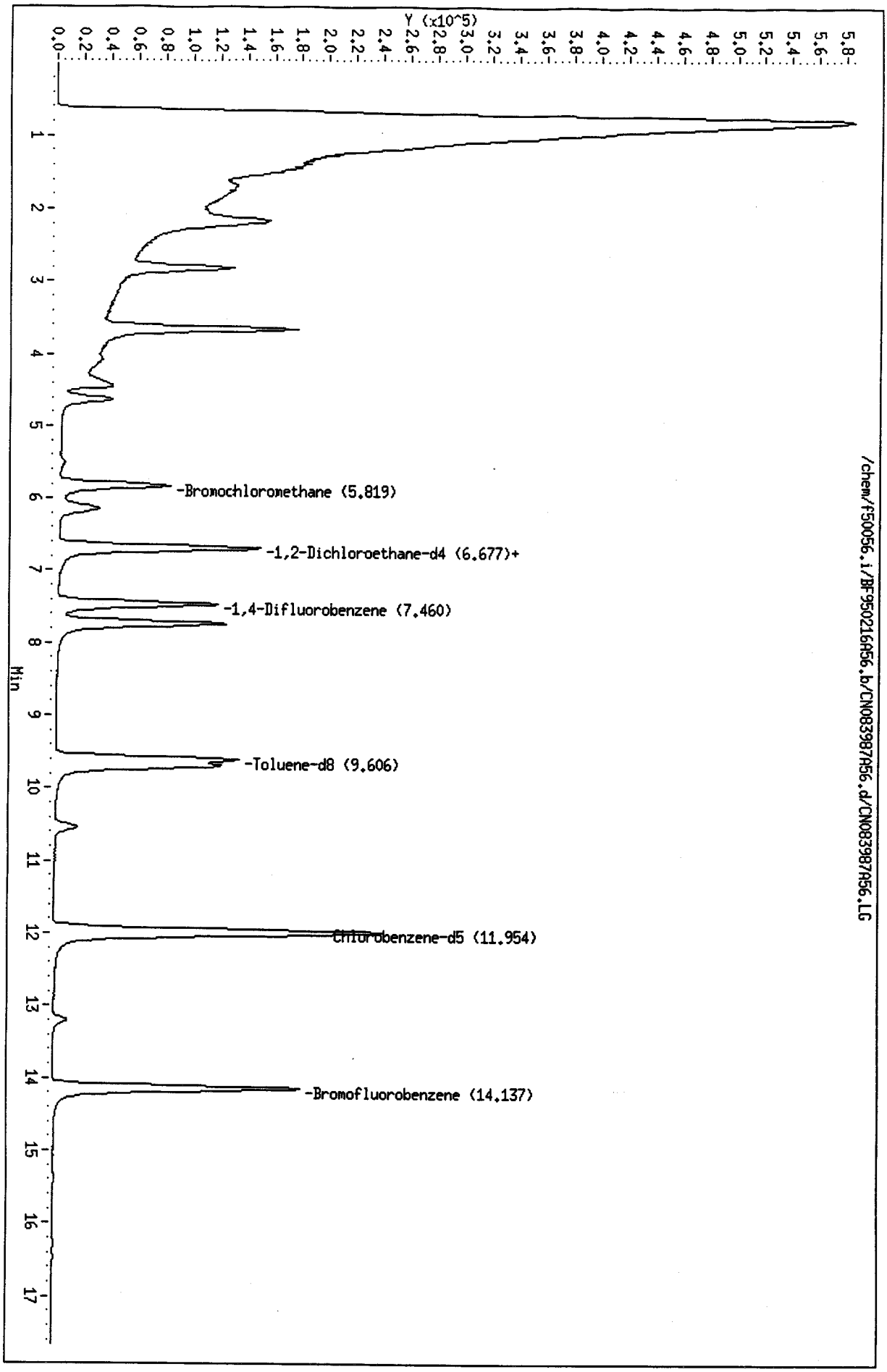
Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	26	


Data File: /chem/f50056.i/BF9502216A56.b/CN083987A56.d
Date : 16-FEB-1995 14:49
Client ID: MW9MS
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2141
Column diameter: 0.53
/chem/f50056.i/BF9502216A56.b/CN083987A56.d/CN083987A56.LG
Y (x10^5)
Min
-Bromochloromethane (5.819)
-1,2-Dichloroethane-d4 (6.677)+
-1,4-Difluorobenzene (7.460)
-Toluene-d8 (9.606)
Chlorobenzene-d5 (11.954)
-Bromofluorobenzene (14.137)

Data File: /chem/f50056.i/BF950216A56.b/CN083987A56.d
Report Date: 20-Feb-1995 15:12

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CN083987A56.d
Lab Smp Id: 683987 Client Smp ID: MW9MS
Inj Date : 16-FEB-1995 14:49
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.819	5.869	(1.000)	65792	250.0	
* 2 1,4-Difluorobenzene	114.00	7.460	7.523	(1.000)	285915	250.0	
* 3 Chlorobenzene-d5	117.00	11.954	12.029	(1.000)	296178	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.677	6.728	(1.147)	121545	246.1	49.23
$ 5 Toluene-d8	98.00	9.593	9.669	(0.803)	259457	242.9	48.58
$ 6 Bromofluorobenzene	95.00	14.137	14.213	(1.183)	241143	240.6	48.11
7 Dichlorodiflouromethane	85.00	0.959	0.972	(0.165)	16594	131.0	26.19
8 Chloromethane	50.00		1.111	Compound Not Detected.			
9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10 Bromomethane	94.00		1.590	Compound Not Detected.			
11 Chloroethane	64.00	1.717	1.729	(0.295)	18566	85.98	17.20
12 1,1-Dichloroethene	96.00	2.815	2.840	(0.484)	93536	314.5	62.90
13 Acetone	43.00		3.156	Compound Not Detected.			
14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15 Methylene Chloride	84.00	3.648	3.686	(0.627)	176781	475.6	95.12
16 trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
17 1,1-Dichloroethane	63.00	4.620	4.670	(0.794)	119159	151.6	30.33
18 cis-1,2-Dichloroethene	96.00	5.516	5.554	(0.948)	4366	9.52	1.90(a)
19 2-Butanone	43.00		5.768	Compound Not Detected.			
20 Chloroform	83.00		6.122	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00	6.135	6.198	(0.822)	58505	69.31	13.86
22 Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
23 Benzene	78.00	6.690	6.740	(0.897)	264896	242.4	48.47
24 1,2-Dichloroethane	62.00		6.841	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/CN083987A56.d
Report Date: 20-Feb-1995 15:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	25 Trichloroethene	130.00	7.725	7.788	(1.036)	124569	249.6	49.92
	26 1,2-Dichloropropane	63.00		8.091	Compound Not Detected.			
	27 Bromodichloromethane	83.00		8.634	Compound Not Detected.			
	28 cis-1,3-Dichloropropene	75.00		9.328	Compound Not Detected.			
	29 4-Methyl-2-Pentanone	43.00		9.732	Compound Not Detected.			
	30 Toluene	91.00	9.694	9.770	(0.811)	234181	186.3	37.26(R)
	31 trans-1,3-Dichloropropene	75.00		10.300	Compound Not Detected.			
	32 1,1,2-Trichloroethane	97.00		10.540	Compound Not Detected.			
	33 Tetrachloroethene	164.00	10.540	10.603	(0.882)	14185	23.14	4.63(a)
	34 2-Hexanone	43.00		11.158	Compound Not Detected.			
	35 Dibromochloromethane	129.00		11.120	Compound Not Detected.			
	36 Chlorobenzene	112.00	12.004	12.080	(1.004)	250620	212.2	42.44
	37 Ethylbenzene	106.00		12.383	Compound Not Detected.			
	38 m,p-Xylene	106.00		12.610	Compound Not Detected.			
	39 o-Xylene	106.00	13.203	13.279	(1.105)	11007	15.62	3.12(a)
	40 Styrene	104.00		13.342	Compound Not Detected.			
	41 Bromoform	173.00		13.557	Compound Not Detected.			
	42 1,1,2,2-Tetrachloroethane	83.00		14.680	Compound Not Detected.			
M	43 1,2-Dichloroethene (total)	96.00				4366	9.93	1.98(a)
M	44 Xylene (Total)	106.00				11007	15.62	3.12(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

LAB INSTRUCTIONS PPS#_____

VOA
/MS WORKSHEET

J( ) J3( ) D( ) (:1)

J2( ) J4( ) D2( ) (:1)

==========

==========

GC/MS ANALYSIS
AMOUNT PURGED: ~~0. UL~~ 5ml 9R 2/16/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950216A56
BLANK FILENAME: CB950216A56
STANDARD FILENAME: CS950216A56
SAMPLE FILENAME: CN083987A56

ANALYST(S): INJECTION: 2011 WORKUP: JKiell

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [✓] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 0 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 0

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW [signature] DATE 2/20/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

FINAL REVIEW: INITIALS _____ DATE ___/___/___

d. Matrix Spike Duplicate Data

(1) Form I VOA

Matrix Spike Duplicate's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083988A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	18	
75-09-2	Methylene Chloride	110	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	66	
75-34-3	1,1-Dichloroethane	32	
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	15	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	55	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	54	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	41	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	3	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00002

Matrix: (soil/water) WATER Lab Sample ID: 683988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083988A56.D

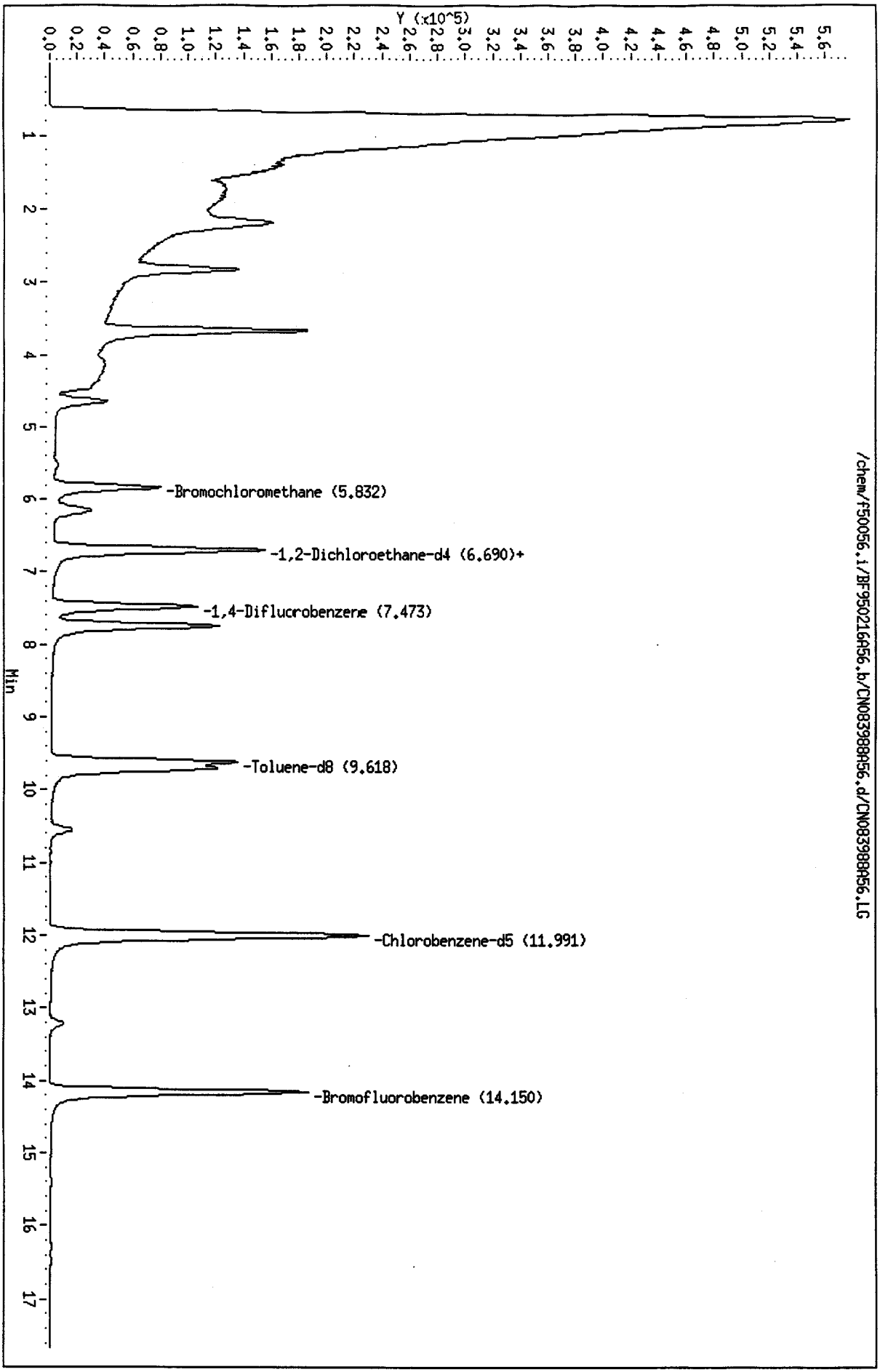
Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	25	


Data File: /chem/f50056.i/BF950216A56.b/CN0839BBA56.d
Date : 16-FEB-1995 15:28
Client ID: MW9MSD
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2141
Column diameter: 0.53
/chem/f50056.i/BF950216A56.b/CN0839BBA56.d/CN0839BBA56.LG
Y (x10^5)
Min
-Bromochloromethane (5.832)
-1,2-Dichloroethane-d4 (6.690)+
-1,4-Diflucrobenzene (7.473)
-Toluene-d8 (9.618)
-Chlorobenzene-d5 (11.991)
-Bromofluorobenzene (14.150)

Data File: /chem/f50056.i/BF950216A56.b/CN083988A56.d
Report Date: 20-Feb-1995 15:12

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CN083988A56.d
Lab Smp Id: 683988 Client Smp ID: MW9MSD
Inj Date : 16-FEB-1995 15:28
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.832	5.869	(1.000)	62191	250.0	
* 2 1,4-Difluorobenzene	114.00	7.473	7.523	(1.000)	255318	250.0	
* 3 Chlorobenzene-d5	117.00	11.979	12.029	(1.000)	267057	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.690	6.728	(1.147)	129222	276.8	55.37
$ 5 Toluene-d8	98.00	9.606	9.669	(0.802)	257355	267.2	53.44
$ 6 Bromofluorobenzene	95.00	14.150	14.213	(1.181)	246053	272.2	54.44
7 Dichlorodiflouromethane	85.00	0.959	0.972	(0.165)	14777	123.4	24.67
8 Chloromethane	50.00		1.111	Compound Not Detected.			
9 Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10 Bromomethane	94.00		1.590	Compound Not Detected.			
11 Chloroethane	64.00	1.742	1.729	(0.299)	17883	87.61	17.52
12 1,1-Dichloroethene	96.00	2.827	2.840	(0.485)	93482	332.5	66.50
13 Acetone	43.00		3.156	Compound Not Detected.			
14 Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15 Methylene Chloride	84.00	3.673	3.686	(0.630)	185393	527.6	105.5
16 trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
17 1,1-Dichloroethane	63.00	4.645	4.670	(0.797)	119445	160.8	32.16
18 cis-1,2-Dichloroethene	96.00	5.516	5.554	(0.946)	4375	10.10	2.02(a)
19 2-Butanone	43.00		5.768	Compound Not Detected.			
20 Chloroform	83.00		6.122	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00	6.147	6.198	(0.823)	55957	74.24	14.85
22 Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
23 Benzene	78.00	6.690	6.740	(0.895)	264305	270.8	54.16
24 1,2-Dichloroethane	62.00		6.841	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/CN083988A56.d
Report Date: 20-Feb-1995 15:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	25 Trichloroethene	130.00	7.738	7.788	(1.035)	123669	277.5	55.49
	26 1,2-Dichloropropane	63.00		8.091		Compound Not Detected.		
	27 Bromodichloromethane	83.00		8.634		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		9.328		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		9.732		Compound Not Detected.		
	30 Toluene	91.00	9.707	9.770	(0.810)	232134	204.8	40.96
	31 trans-1,3-Dichloropropene	75.00		10.300		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		10.540		Compound Not Detected.		
	33 Tetrachloroethene	164.00	10.552	10.603	(0.881)	13256	23.98	4.80(a)
	34 2-Hexanone	43.00		11.158		Compound Not Detected.		
	35 Dibromochloromethane	129.00		11.120		Compound Not Detected.		
	36 Chlorobenzene	112.00	12.017	12.080	(1.003)	255671	240.1	48.02
	37 Ethylbenzene	106.00		12.383		Compound Not Detected.		
	38 m,p-Xylene	106.00		12.610		Compound Not Detected.		
	39 o-Xylene	106.00	13.216	13.279	(1.103)	11032	17.36	3.47(a)
	40 Styrene	104.00		13.342		Compound Not Detected.		
	41 Bromoform	173.00		13.557		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		14.680		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00				4375	10.52	2.10(a)
M	44 Xylene (Total)	106.00				11032	17.36	3.47(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

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683988: 2141: 1:

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GC/MS ANALYSIS 2/16/95
AMOUNT PURGED: 5000. UL
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950216A56
BLANK FILENAME: CB950216A56
STANDARD FILENAME: CS950216A56
SAMPLE FILENAME: CN083988A56

ANALYST(S): INJECTION: 2011 WORKUP: JKirill

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GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE --OK---

DISPOSITION: [/] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 0

[ ] REINJECT NEAT
[ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 0

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW OSTeDK DATE 2/20/95 AUDITOR _____ DATE ____/____/____

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REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ____/____/____

==========

FINAL REVIEW: INITIALS _____ DATE ____/____/____

END OF REPORT

SDG 3

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

28/FEB/95

Draper Aden Associates
Attn: Ms. Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

Subject: Report of Data - Account Number 500672

Attn: Ms. Janet Cleary

Enclosed are the results of analytical work and associated Quality Control data for the samples received by CompuChem under the referenced account number.

As you know, CLP service is performed in accordance with EPA methodologies as defined for the National Contract Laboratory Program; 'SOW For Organic Analysis; Multi-Media, Multi-Concentration'. Your original data has been stored and is available for future reference.

Thank you for selecting CompuChem Environmental for your sample analysis. We would like to continue providing you analytical support and services in the future. If you should have questions or require additional analytical services, please contact your representative at 1-919-406-1600.

Sincerely,

Report Preparation

Attachment

COMPUCHEM
ENVIRONMENTAL
CORPORATION

28/FEB/95

Draper Aden Associates
Attn: Ms. Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

ACCOUNT #: 500672

CC#	SAMPLE-ID	RECEIPT DATE
683833	L1	2/10/95
683851	S1	2/10/95
683853	S2	2/10/95
683849	S3	2/10/95
683871	S4	2/10/95
683855	S5	2/10/95
683983	SFW1	2/11/95
683984	SFW2	2/11/95
683985	SFW3	2/11/95
683992	TRIPBLK3	2/11/95

TOTAL NUMBER OF SAMPLES = 10

CompuChem Environmental Corporation

I. SAMPLE DATA SUMMARY PACKAGE

3/90 STATEMENT OF WORK

The Sample Data Summary Package shall contain data for samples in one Sample Delivery Group (SDG) of the Case, as follows :

A. SDG Narrative

B. Form I and Form I – TIC
Organic Analysis Data Sheet (OADS) and Tentatively Identified Compounds (TICs)

C. Form II
System Monitoring Compound Summary (VOA) and Surrogate Spike Analysis Results (SV & PEST)

D. Form III
Matrix Spike / Matrix Spike Duplicate Results

E. Form IV, Form I, and Form I – TIC
Method Blank Summary, OADS, and TICs

F. Form VIII
Internal Standard Area Data

NOTE: All forms are arranged in order by fraction (VOA, SV, PEST) unless otherwise specified.

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS SAS# (if applicable) : _____

CASE # : 30073 SDG # : 00003

COMPUCHEM
ENVIRONMENTAL
CORPORATION

SDG NARRATIVE
CASE # 30073
SDG # 00003
CONTRACT # (3-90)-REVS

Sample Identifications: L1, S1, S2, S3, S4, S5, SFW1, SFW2, SFW3, TRIPBLK3

The ten (10) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on February 10 and 11, 1995. The samples were scheduled for the requested analysis of the volatile fraction only. These samples were analyzed following the 3/90 Statement of Work (SOW) (document OLM01.9) protocol with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30073, SDG 00003 are included in the sample data sections.

Volatiles

All samples were analyzed within holding time requirements. There were some chlorinated alkane and chlorinated alkene Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in these samples. Tentatively Identified Compounds (TICs) were found in some of these samples. These TICs could be characterized as laboratory artifacts and a hydrocarbon. The pH values of these samples are tabulated on the attached batch sheets.

The system monitoring compounds met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blanks met all quality control criteria. The TCL analyte methylene chloride was found in one of the method blanks at a concentration within acceptance criteria. TICs were found in the method blanks.

SFW1 was used as the original to prepare the duplicate matrix spikes. With two exceptions, the associated duplicate matrix spikes met all advisory accuracy and precision criteria. The recovery of spike compound 1,1-dichloroethene was flagged as an outlier in the matrix spike and the matrix duplicate.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data

contained in the hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jean M. Zimmerman
Final Technical Reviewer
February 27, 1995

CompuChem Environmental Corporation

WATER BATCH SHEET

PPS # 115 + DICHLORODIFLUOROMETHANE

Date Batched 2/13/95

Case 30073.00003

Instrument Code 428

LINKER [redacted]

TAT 28 SOW 3/90

	CCN	CLIENT ID	QC SAMPLE TYPE	QC SAMPLE ORIGINAL	pH	TIME	DATE RUN	INST. #	OPERATOR	H/T	VOLUME/ INSTRUCTIONS	SCREEN BOTTLE #	ANAL BOTT
1)	683834	SFW1 ms	SS	683183		1:15	2/16/95	56	1948		989/1623	of	of
2)	683835	SFW1 msd	SS	683983		1:46	"	56	1948		~~2V~~ 2/13/95	of	of
3)	683836		BS								~~2V~~ 2/14/95	of	of
4)	683833	L1			1	21:56	2/15/95	56	2011	2/20	2V RN	1 of 2	2 of
5)	683849	S3			1	22:59					2V RN	1 of 2	2 of
6)	683851	S1			1	23:28					2V	1 of 2	2 of
7)	683853	S2			1	0:09	2/16/95	56	1948		2V	1 of 2	2 of
8)	683855	S5			1	0:44		56	1948		2V	1 of 2	2 of
9)	683871	S4			1	1:22		56	1948		2V	1 of 2	2 of
10)	683983	SFW1			1	2:00		56	1948	2/21	2V	1 of 2	2 of
11)	683984	SFW2			1	2:54		56	1948		2V	1 of 2	2 of
12)	683985	SFW3			1	3:33					2V	1 of 2	2 of
13)	683992	TRIPBLK3			1	16:39	2/15/95	56	2011		2V TB	of	2 of
14)	683879	VHBLK51			1	12:54	2/15/95	56	2011			of	of
15)	683880	VHBLK52										of	of
16)	683912				1	21:25	2/15/95	56	2011			of	of
17)	683849R1					22:59						of	of
18)	683853R1				1	5:43	2/16/95	56	1948			of	1 of
19)	683855R1				1	6:16	2/16/95	56	1948			of	of
20)	683833R1					10:31	2/16/95	56	~~1948~~ 2141	US 2/14/95		of	of
21)	683834R1					5:16	2/16/95	56	1948			of	of
22)	683833R2					11:38			2141		RN	of	of
23)	683879R1					16:41	2/16/95	56	2011			of	of

Relinquished By Neale Date 2/14/95 Received By TS Date 2/14/95

Relinquished By T.S. Date 2/15/95 Received By [redacted] Date 2/15/95

Relinquished By [redacted] Date 2/15/95 Received By V.A. Smith Date 2/16/95

Log Page Updated _____

6932

30073 00003 SAMPLE DATA SUMMARY

CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, flag each result with the specific data reporting qualifiers listed below. Up to five qualifiers may be reported on Form I for each compound. The qualifiers to be used are:

U – This flag indicates the compound was analyzed for but not detected. The CRQL shall be adjusted to reflect any dilution and/or percent moisture.

J – This flag indicates an estimated value. This flag is used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J.

N – This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N flag is not used.

P – This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a P.

C – This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; use a laboratory-defined flag instead (see the X qualifier).

B – This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag shall be used for a tentatively identified compound as well as for a positively identified target compound.

The combination of flags BU or UB is expressly prohibited. Blank contaminants are flagged B only when they are detected in the sample.

E – This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract shall be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range shall have the

(con't.)

DATA REPORTING QUALIFIERS

concentration flagged with an E on Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the DL suffix appended to the sample number.

D – This flag is used for all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is reanalyzed at a higher dilution factor, as in the E flag, the DL suffix is appended to the sample number on Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

A – This flag indicates that a tentatively identified compound is a suspected aldol–condensation product.

X – Other specific flags may be required to properly define the results. If used, the flags shall be fully described, with the description attached to the sample data summary package and the SDG Narrative. Begin by using X. If more than one flag is required, use Y and Z as needed. If more than five qualifiers are required for a sample result, use the X flag to represent a combination of several flags. For instance, the X flag might combine the A, B, and D flags for some samples. The laboratory–defined flags are limited to X, Y, and Z.

QUALITY ASSURANCE NOTICE

Specific guidelines are presented in the EPA Contract Laboratory Program Statement of Work for the positive qualitative identification of target compounds through mass spectral interpretation. Applying these guidelines absolutely may not be possible when the nature of the sample is less than pure reference material. The mass spectral interpretation specialist exercises technical judgement in performing a qualitative analysis when interferences are present. In instances when the mass spectral pattern of a positively identified compound demonstrates interferences or coelution from one or more additional compounds, either extraneous unknowns, internal standards, or surrogate standards, a "+" sign is added to the top of the dual spectra page.

CompuChem's Quality Assurance Department

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Notification To Clients Regarding Deliverables Generated By New Gas Chromatograph/Mass Spectrometer (GC/MS) Data System

CompuChem Environmental Corporation has upgraded their GC/MS data systems in order to provide state-of-the-art data review and forms/hardcopy generation capabilities. While our GC/MS instruments are products of Finnigan, they now will be networked to systems consisting of the Hewlett-Packard (H-P) ChemServer utilizing ThruPut's Envision product. Clients familiar with the hardcopy output from H-P GC/MS instruments will notice similarities to our new deliverables. These new hardware/software systems, however, provide dramatic speed and performance enhancements.

As a service to our clients, the following is a listing of the major differences that will be observed when comparing our new deliverables packages against the old ones:

1. The new GC/MS Reconstructed Ion Chromatogram (RIC) presentation has the following features:

   - the retention time, along the x-axis is labeled at exact minute intervals,
   - separate line items in the RIC header are included for instrument ID, sample ID, and volume injected,
   - header information includes the GC column phase and diameter,
   - all internal standard and surrogate peaks are labeled with the compound name and the exact retention time rather than "IS#," "SS#," and associated scan number,
   - on the two page RIC for semivolatile injections, there is a display overlap between the two pages.
   - some peaks may be flagged with a "+." This indicates that more than one compound is eluting at that retention time.

2. The new quantitation report presentation has the following features:

   - the number of quantitation report pages is reduced for CLP analyses,
   - the internal standards are presented first, followed by the surrogate compounds, all in increasing retention time order,
   - the retention time is presented as minutes and decimal minutes,
   - the compound name appears on the same line as the data/results for that compound (rather than on a separate page) and the displays include both on-column and final concentrations,
   - for assurance in data review/validation a number of flags are utilized - on the left hand side of the quantitation report page and on the right side.

   Left Side Flags

*	denotes internal standard compound.
$	denotes surrogate compound.
M	denotes summary compounds: e.g. - total xylenes.

   Right Side Flags

(a)	denotes those compounds whose results will be flagged with a "J" (estimate) on the Form I.
(A)	denotes those compounds whose results will be flagged with an "E" (concentration greater than highest calibration standard) on the Form I.
(H)	denotes that the data reviewer selected a peak other than the one selected by the software routine.
(M)	denotes that the data reviewer has manually integrated a compound.
(R)	denotes that a recovery for a surrogate or spike compound has failed acceptance criteria.
(T)	denotes that the retention time for an internal standard has shifted outside of acceptance criteria.,
(Q)	denotes that unexpected ion ratios obtained.

3. The mass spectra of target analytes will be presented on one page rather than the two from the Finnigan data system. The printing of the spectra will be portrait (tall) instead of landscape (wide).

4. The mass spectra for tentatively identified compounds (TICs) will also be presented as a portrait view. The compound matching information summary is contained below the header information and includes a "quality" ranking, similar to the Finnigan "PUR" (purity) ranking.

We hope this information is beneficial to you. If, however, there are any questions or, if you need any more information please feel free to contact a member of your project management team at 1-800-833-5097.

Robert E. Meserer

Robert E. Meserer

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Quality Assurance Notice

In some instances, manual adjustments of the software are necessary to provide an accurate quantitation of a compound. These adjustments are performed by the data reviewer, GC/MS operator or GC chemist. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for each compound to demonstrate the accuracy of the adjustment whenever the adjustment involves a manual integration. Adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration as follows:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed by the data reviewer, GC/MS operator or GC chemist in order to provide the most accurate area count as possible for the peak.

For GC analyses, an "M" flag may also indicate instances in which a peak is "unassigned" to a particular compound and "reassigned" to another compound. This situation would occur when two compounds co-elute on only one column.

H - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound, and that the data reviewer or GC/MS operator also performed a manual integration of the chosen peak. The manual integration was performed by the data reviewer or GC/MS operator in order to provide the most accurate area count as possible for the peak.

L - Denotes that the data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternative peak. The software still performs the integration.

ML - Denotes that the data reviewer or GC/MS operator has selected an alternate library search and a manual integration was also performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

With the introduction of the current EPA CLP SOW (Document Number OLM03.0, plus revisions) additional explanations for manual editing/integration are required. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in GC/MS and GC data packages.

Robert E. Meierer
Vice President & General Manager

Revision 1 (2/20/95)

B. **Form I and Form I – TIC**

Organic Analysis Data Sheet (OADS) and Tentatively Identified Compounds (TICs)

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683833

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R83833A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	6	J
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683833

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R83833A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

L1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683833

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R83833A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2000	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083851A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083851A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083851A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	1900	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083853C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	26	
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	7	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083853C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083853C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.77	2200	JB
2.		UNKNOWN HYDROCARBON	8.65	6	J
3.					
4.					
5.					
6.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083849A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083849A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083849A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2000	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683871

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083871A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	2	J
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	45	
540-59-0	1,2-Dichloroethene (total)	42	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	8	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	12	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683871

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083871A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683871

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083871A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	1600	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S5

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083855C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S5

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083855C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S5

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083855C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.78	2100	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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10.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683983

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083983A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683983

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083983A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SFW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683983

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083983A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	1500	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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10.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683984

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083984A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	18	
540-59-0	1,2-Dichloroethene (total)	6	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	6	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	8	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683984

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083984A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SFW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683984

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083984A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2400	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683985

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083985A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	11	
540-59-0	1,2-Dichloroethene (total)	3	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	7	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683985

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083985A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SFW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683985

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083985A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2200	JB
2.					
3.					
4.					
5.					
6.					
7.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683992

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083992B56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683992

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083992B56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLK3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683992

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083992B56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.82	170	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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13.					
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30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683834

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083834C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	78	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	51	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	53	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	44	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683834

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083834C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683835

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083835B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	78	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	52	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	44	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683835

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083835B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

C. Form II

System Monitoring Compound Summary (VOA) and Surrogate Spike Analysis Results (SV & PEST)

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKJD	102	91	98		0
02	TRIPBLK3	102	91	102		0
03	S3	105	94	108		0
04	S1	104	93	106		0
05	S4	100	96	108		0
06	SFW1	101	90	104		0
07	SFW2	107	93	106		0
08	SFW3	96	92	100		0
09	SFW1MSD	100	98	102		0
10	SFW1MS	101	100	102		0
11	S2	105	99	113		0
12	S5	98	92	106		0
13	VBLKML	97	93	98		0
14	L1	89	86	98		0
15						
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	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

D. Form III

Matrix Spike / Matrix Spike Duplicate Results

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix Spike - EPA Sample No.: SFW1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	78.46	157*	61-145
Trichloroethene	50.00	0.000	50.54	101	71-120
Benzene	50.00	0.000	53.00	106	76-127
Toluene	50.00	0.000	44.21	88	76-125
Chlorobenzene	50.00	0.000	48.02	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	77.85	156*	1	14	61-145
Trichloroethene	50.00	50.29	100	1	14	71-120
Benzene	50.00	52.37	105	1	11	76-127
Toluene	50.00	43.83	88	0	13	76-125
Chlorobenzene	50.00	47.77	96	0	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 2 out of 10 outside limits

COMMENTS: _____

E. Form IV, Form I, and Form I – TIC

Method Blank Summary, OADS, and TICs

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID: CB950215B56.D Lab Sample ID: VBLKJD

Date Analyzed: 02/15/95 Time Analyzed: 1918

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIPBLK3	683992	CR083992B56.D	2125
02	S3	683849	CN083849A56.D	2259
03	S1	683851	CN083851A56.D	2328
04	S4	683871	CN083871A56.D	0122
05	SFW1	683983	CN083983A56.D	0200
06	SFW2	683984	CN083984A56.D	0254
07	SFW3	683985	CN083985A56.D	0333
08	SFW1MSD	683835	CN083835B56.D	0446
09	SFW1MS	683834	CR083834C56.D	0516
10	S2	683853	CR083853C56.D	0543
11	S5	683855	CR083855C56.D	0616
12				
13				
14				
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16				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.73	16	J
2.					
3.					
4.					
5.					
6.					
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4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID: CB950216A56.D Lab Sample ID: VBLKML

Date Analyzed: 02/16/95 Time Analyzed: 0904

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	L1	683833	C2R83833A56.D	1138
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
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30				

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.72	19	J
2.					
3.					
4.					
5.					
6.					
7.					
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F. Form VIII

Internal Standard Area Data

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID (Standard): CS950215B56.D Date Analyzed: 02/15/95

Instrument ID: F50056 Time Analyzed: 1837

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	81762	5.84	329717	7.50	340942	12.02
	UPPER LIMIT	163524	6.34	659434	8.00	681884	12.52
	LOWER LIMIT	40881	5.34	164858	7.00	170471	11.52
	EPA SAMPLE No.						
01	VBLKJD	92571	5.86	337927	7.51	354446	12.03
02	TRIPBLK3	78468	5.81	318268	7.46	338960	11.97
03	S3	70963	5.79	305425	7.45	327736	11.95
04	S1	71390	5.79	309479	7.43	329452	11.94
05	S4	67216	5.83	292190	7.47	310596	11.98
06	SFW1	67524	5.79	297945	7.42	314833	11.94
07	SFW2	62283	5.81	273178	7.43	289117	11.95
08	SFW3	67481	5.82	290401	7.46	301748	11.95
09	SWF1MSD	75006	5.77	300804	7.41	316702	11.90
10	SWF1MS	76204	5.79	299945	7.43	315993	11.94
11	S2	66363	5.77	287250	7.41	309241	11.92
12	S5	67901	5.79	289410	7.43	314572	11.90
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID (Standard): CS950216A56.D Date Analyzed: 02/16/95

Instrument ID: F50056 Time Analyzed: 0818

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	72863	5.87	295065	7.52	308913	12.03
	UPPER LIMIT	145726	6.37	590130	8.02	617826	12.53
	LOWER LIMIT	36432	5.37	147532	7.02	154456	11.53
	EPA SAMPLE No.						
01	VBLKML	80470	5.87	299990	7.51	316422	12.03
02	L1	68734	5.82	298164	7.46	321275	11.97
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

CompuChem Environmental Corporation

II. SAMPLE DATA PACKAGE

3/90 STATEMENT OF WORK

The Sample Data Package shall include data for analyses of all samples in one Sample Delivery Group (SDG), including field samples, reanalyses, blanks, matrix spikes, and matrix spike duplicates. The Sample Data Package consists of the following :

A. SDG Narrative

B. Traffic Reports

C. Volatile Data

D. Semivolatile Data

E. Pesticide / PCB Data

THIS PACKAGE CONTAINS :

___ R A S data only
___ S A S data only
___ R A S + S A S data

___ Regional request / additional data
___ Other (see explanation below):

_____

_____

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30073

SDG # : 00003

A. SDG NARRATIVE

This document shall be clearly labeled "SDG Narrative" and shall contain : laboratory name; sample numbers in the Sample Delivery Group (SDG), differentiating between initial analyses and reanalyses; SDG number; Contract number; and detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples reported in the data package.

Whenever data from sample reanalyses are submitted, the Contractor shall state in the SDG Narrative, for each analysis, whether it considers the reanalysis to be billable.

The Contractor must also include documentation of any internal quality control processes used, a summary of corrective actions taken, and the resolution.

COMPUCHEM
ENVIRONMENTAL
CORPORATION

SDG NARRATIVE
CASE # 30073
SDG # 00003
CONTRACT # (3-90)-REVS

Sample Identifications: L1, S1, S2, S3, S4, S5, SFW1, SFW2, SFW3, TRIPBLK3

The ten (10) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on February 10 and 11, 1995. The samples were scheduled for the requested analysis of the volatile fraction only. These samples were analyzed following the 3/90 Statement of Work (SOW) (document OLM01.9) protocol with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30073, SDG 00003 are included in the sample data sections.

Volatiles
All samples were analyzed within holding time requirements. There were some chlorinated alkane and chlorinated alkene Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in these samples. Tentatively Identified Compounds (TICs) were found in some of these samples. These TICs could be characterized as laboratory artifacts and a hydrocarbon. The pH values of these samples are tabulated on the attached batch sheets.

The system monitoring compounds met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blanks met all quality control criteria. The TCL analyte methylene chloride was found in one of the method blanks at a concentration within acceptance criteria. TICs were found in the method blanks.

SFW1 was used as the original to prepare the duplicate matrix spikes. With two exceptions, the associated duplicate matrix spikes met all advisory accuracy and precision criteria. The recovery of spike compound 1,1-dichloroethene was flagged as an outlier in the matrix spike and the matrix duplicate.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data

contained in the hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jean M. Zimmerman
Final Technical Reviewer
February 27, 1995

CompuChem Environmental Corporation

WATER BATCH SHEET

PPS # 115 + DICHLORODIFLUOROMETHANE

Date Batched 2/13/95
Case 30073.00003
Instrument Code 428

LINKER NWSW TAT 28 SOW 3/90

	CCN	CLIENT ID	QC SAMPLE TYPE	QC SAMPLE ORIGINAL	pH	TIME	DATE RUN	INST. #	OPERATOR	H/T	VOLUME/ INSTRUCTIONS	SCREEN BOTTLE #	ANAL BOTT
1)	683834	SFW1 MS	SS	683483		4:15	2/16/95	56	1948		989/1023	of	of
2)	683835	SFW1 MSD	SS	683483		4:46	↓	56	1948		~~2V~~ 2/13/95	of	of
3)	683836		BS								~~2V~~ 2/14/95	of	of
4)	683833	L1			1	21:56	2/15/95	56	2011	2/20	2V RN	1 of 2	2 of
5)	683849	S3			1	22:59	↓	↓	↓	↓	2V RN	1 of 2	2 of
6)	683851	S1			1	23:28	↓	↓	↓	↓	2V ↓	1 of 2	2 of
7)	683853	S2			1	0:09	2/16/95	56	1948	↓	2V	1 of 2	2 of
8)	683855	S5			1	0:44	↓	56	1948	↓	2V	1 of 2	2 of
9)	683871	S4			1	1:27	↓	56	1948	↓	2V	1 of 2	2 of
10)	683983	SFW1			1	2:00	↓	56	1948	2/21	2V	1 of 2	2 of
11)	683984	SFW2			1	2:54	↓	56	1948	↓	2V	1 of 2	2 of
12)	683985	SFW3			1	3:33	↓	↓	↓	↓	2V ↓	1 of 2	2 of
13)	683992	TRIPBLK3			1	16:39	2/15/95	56	2011	↓	2V TB	~~of~~	2 of
14)	683879	VHBLK51			1	12:54	2/15/95	56	2011			~~of~~	of
15)	683880	VHBLK52										~~of~~	of
16)	683912C				1	21:25	2/15/95	56	2011			of	of
17)	683849C1					22:59	↓	↓	↓			of	of
18)	683853C1				1	5:43	2/16/95	56	1948			of	of
19)	683855C1				1	6:16	2/16/95	56	1948			of	1 of
20)	683833C1					10:31	2/16/95	56	~~1948~~ 2141	VS 2/14/95		of	of
21)	683834C1					5:16	2/16/95	56	1948			of	of
22)	683833C2					11:38	↓	↓	2141		RN	of	of
23)	683879C1					16:41	2/16/95	56	2011			of	of

Relinquished By Nzale Date 2/14/95 Received By TS Date 2/14/95
Relinquished By T.S. Date 2/15/95 Received By [illegible] Date 2/15/95
Relinquished By [illegible] Date 2/15/95 Received By V.A. Smith Date 2/16/95

Log Page Updated

6932

242

30073 00003 SAMPLE DATA PACKAGE

NO. 0115

CompuChem Laboratories, Inc.

Fill out COMPLETELY

PROJECT PROFILE SHEET

REVISION# : ____

DATE : 6-22-94

Revision Date : ____

ACCOUNT NUMBER : 500672

ORDER NUMBER : 28899

PROJECT NAME : WATAGA County

Project Start Date : 6-22-94

Project End Date : 7-22-94

QUOTE # : 94-5500

PO # : 6520-14

COMPANY NAME : Draper ADEN Associates

Mailing ADDRESS #1 : 2206 S. Main St.

COPIES : 1

Attn: Janet Cleary

Blacksburg, VA 24060

Mailing ADDRESS #2 : ____

COPIES : ____

Address for INVOICES #1 : Same As Above

COPIES : 1

Address for INVOICES #2 : ____

COPIES : ____

Address for SAMPLESAVERS : Same As Above

PROJECT TEAM

SALES : D. Tomec Ext. 162

CUST. SERV. : C. Dover Ext. 1627

PROJ MGR : ____ Ext. ____

CLIENT CONTACTS

PROJ MGR : Janet Cleary

PHONE# : (703) 552-0444

FIELD/OTHER : Same

PHONE# : ( )

BILLING : Same

PHONE# : ( )

****

VERBAL TAT : N/A

HARDCOPY TAT : 28

****

SUBCONTRACT WORK TO : None

SAMPLE DISPOSITION : Normal

EXTRACT DISPOSITION : Normal

DATA RETENTION (If other than 5 yrs.): ____

ANALYZE TRIP BLANK : (YES) NO

BILL FOR SAMPLESAVERS : YES (NO) $____

BILLABLE QC : (YES) NO

BILLABLE REPEATS : (YES) NO

ADDITIONAL COMMENTS : ____

DISKETTE REQUIRED : YES (NO)

STYLE : ____ FORMAT A (CLP-like disk) # COPIES : ____

____ CONVERTED disk (Note conversion program name on line below) # COPIES : ____

**

**

SPECIAL INST.: ____

MONTHLY PROGRESS REPORT

REQUIRED : ___Yes X No Level : ____

____ HAZWRAP ____ OTHER : ____

____ NEESA

HAZWRAP GENERAL ORDER #: ____

SPEC. INST. : ____

CompuChem Laboratories, Inc.
PROJECT PROFILE SHEET

NO. 0115

DATE: 6-22-94
CLIENT: DAA
PROJECT: WATAGA County

REVISION#: ____
Revision Date: ____

ALL:

___ PENALTIES if late: ___% @ ___ days; ___% @ ___ days; ___% @ ___ days	Other:
___ PREMIUMS if early! ___% @ ___days; ___% @ ___ days; ___% @ ___ days	
___ Internal Chain-of-Custody procedures required: ___NJDEP ___Other( )	Holding Times from: X VTSR (for: All Par.)
	from: ___ VTOS (for:)

CUSTOMER SERVICE:

Enter in lab instructions (Max. 25 spaces):	Other: VOA = TCL + DichloroDifluoromethane
✓ See PPS# 115 ___ Diskettes Required	METALS = Report only Cd, Fe, Hg, Ba
✓ Use for QC( ) ___ F Blank/T Blank	Client will Designate QC at a
Other:	Frequency of 1 in 10 NOT 1 in 20
___ Weekly QUIZ report required	___ Holding Time priority

RECEIVING: Other:

___ Screen VOA / RAD / ___ samples	
___ Return client cooler(s) to this address:	
	___ Truncate IDs as follows: ___
	Create SDGs: ___Weekly ___Bi-Weekly ___Other:
___ Potentially radioactive samples	___ Schedule unique SDG for Trip/Field/etc. Blanks

PP&C: Other:

___ Blank Spikes Required	Batch size is 1 in 10
___ Possible high / low concentration samples	Client will Designate QC
___ Total/Dissolved Metals	CIP VOAs include DichloroDifluoromethane

LABORATORY: Other:

___ Possible high / low concentration samples	
___ Analyze/Report blank spike	
___ All notices require the following in header:	
___ Analyze/Report special analytes (see attached)	
X Metals: Report/Run ONLY Cd, Fe, Hg, Ba	

REPORT PREPARATION: Other:

___ Must mail via ___	
___ Special compound list required (see attached)	
___ Do NOT report TICs	

TECHNICAL REVIEW: Other:

___ Submit ALL Narratives and Notices to the Report Preparation Manager	
___ All Notices require the following header:	

ACCOUNTING: Other:

Invoice: X Weekly ___ Monthly	
___ Other: ___ Duplicate required	

CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, flag each result with the specific data reporting qualifiers listed below. Up to five qualifiers may be reported on Form I for each compound. The qualifiers to be used are:

U – This flag indicates the compound was analyzed for but not detected. The CRQL shall be adjusted to reflect any dilution and/or percent moisture.

J – This flag indicates an estimated value. This flag is used (1) when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the CRQL but greater than zero, and (3) when the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J.

N – This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N flag is not used.

P – This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a P.

C – This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; use a laboratory-defined flag instead (see the X qualifier).

B – This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag shall be used for a tentatively identified compound as well as for a positively identified target compound.

The combination of flags BU or UB is expressly prohibited. Blank contaminants are flagged B only when they are detected in the sample.

E – This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract shall be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range shall have the

concentration flagged with an E on Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the DL suffix appended to the sample number.

D – This flag is used for all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is reanalyzed at a higher dilution factor, as in the E flag, the DL suffix is appended to the sample number on Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

A – This flag indicates that a tentatively identified compound is a suspected aldol–condensation product.

X – Other specific flags may be required to properly define the results. If used, the flags shall be fully described, with the description attached to the sample data summary package and the SDG Narrative. Begin by using X. If more than one flag is required, use Y and Z as needed. If more than five qualifiers are required for a sample result, use the X flag to represent a combination of several flags. For instance, the X flag might combine the A, B, and D flags for some samples. The laboratory–defined flags are limited to X, Y, and Z.

QUALITY ASSURANCE NOTICE

Specific guidelines are presented in the EPA Contract Laboratory Program Statement of Work for the positive qualitative identification of target compounds through mass spectral interpretation. Applying these guidelines absolutely may not be possible when the nature of the sample is less than pure reference material. The mass spectral interpretation specialist exercises technical judgement in performing a qualitative analysis when interferences are present. In instances when the mass spectral pattern of a positively identified compound demonstrates interferences or coelution from one or more additional compounds, either extraneous unknowns, internal standards, or surrogate standards, a "+" sign is added to the top of the dual spectra page.

CompuChem's Quality Assurance Department

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Notification To Clients Regarding Deliverables Generated By New Gas Chromatograph/Mass Spectrometer (GC/MS) Data System

CompuChem Environmental Corporation has upgraded their GC/MS data systems in order to provide state-of-the-art data review and forms/hardcopy generation capabilities. While our GC/MS instruments are products of Finnigan, they now will be networked to systems consisting of the Hewlett-Packard (H-P) ChemServer utilizing ThruPut's Envision product. Clients familiar with the hardcopy output from H-P GC/MS instruments will notice similarities to our new deliverables. These new hardware/software systems, however, provide dramatic speed and performance enhancements.

As a service to our clients, the following is a listing of the major differences that will be observed when comparing our new deliverables packages against the old ones:

1. The new GC/MS Reconstructed Ion Chromatogram (RIC) presentation has the following features:

   - the retention time, along the x-axis is labeled at exact minute intervals,
   - separate line items in the RIC header are included for instrument ID, sample ID, and volume injected,
   - header information includes the GC column phase and diameter,
   - all internal standard and surrogate peaks are labeled with the compound name and the exact retention time rather than "IS#," "SS#," and associated scan number,
   - on the two page RIC for semivolatile injections, there is a display overlap between the two pages.
   - some peaks may be flagged with a "+." This indicates that more than one compound is eluting at that retention time.

2. The new quantitation report presentation has the following features:

   - the number of quantitation report pages is reduced for CLP analyses,
   - the internal standards are presented first, followed by the surrogate compounds, all in increasing retention time order,
   - the retention time is presented as minutes and decimal minutes,
   - the compound name appears on the same line as the data/results for that compound (rather than on a separate page) and the displays include both on-column and final concentrations,
   - for assistance in data review/validation a number of flags are utilized - on the left hand side of the quantitation report page and on the right side.

   Left Side Flags

*	denotes internal standard compound.
$	denotes surrogate compound.
M	denotes summary compounds: e.g. - total xylenes.

   Right Side Flags

(a)	denotes those compounds whose results will be flagged with a "J" (estimate) on the Form I.
(A)	denotes those compounds whose results will be flagged with an "E" (concentration greater than highest calibration standard) on the Form I.
(H)	denotes that the data reviewer selected a peak other than the one selected by the software routine.
(M)	denotes that the data reviewer has manually integrated a compound.
(R)	denotes that a recovery for a surrogate or spike compound has failed acceptance criteria.
(T)	denotes that the retention time for an internal standard has shifted outside of acceptance criteria.,
(Q)	denotes that unexpected ion ratios obtained.

3. The mass spectra of target analytes will be presented on one page rather than the two from the Finnigan data system. The printing of the spectra will be portrait (tall) instead of landscape (wide).

4. The mass spectra for tentatively identified compounds (TICs) will also be presented as a portrait view. The compound matching information summary is contained below the header information and includes a "quality" ranking, similar to the Finnigan "PUR" (purity) ranking.

We hope this information is beneficial to you. If, however, there are any questions or, if you need any more information please feel free to contact a member of your project management team at 1-800-833-5097.

Robert E. Meierer

Robert E. Meierer

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P.O. Box 14998
Research Triangle Park, NC 27709-4998
(919) 406-1600

Quality Assurance Notice

In some instances, manual adjustments of the software are necessary to provide an accurate quantitation of a compound. These adjustments are performed by the data reviewer, GC/MS operator or GC chemist. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for each compound to demonstrate the accuracy of the adjustment whenever the adjustment involves a manual integration. Adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration as follows:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed by the data reviewer, GC/MS operator or GC chemist in order to provide the most accurate area count as possible for the peak.

For GC analyses, an "M" flag may also indicate instances in which a peak is "unassigned" to a particular compound and "reassigned" to another compound. This situation would occur when two compounds co-elute on only one column.

H - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that the data reviewer or GC/MS operator has chosen an alternate peak within the retention time window from that chosen by the software for that compound, and that the data reviewer or GC/MS operator also performed a manual integration of the chosen peak. The manual integration was performed by the data reviewer or GC/MS operator in order to provide the most accurate area count as possible for the peak.

L - Denotes that the data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternative peak. The software still performs the integration.

ML - Denotes that the data reviewer or GC/MS operator has selected an alternate library search and a manual integration was also performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

With the introduction of the current EPA CLP SOW (Document Number OLM03.0, plus revisions) additional explanations for manual editing/integration are required. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in GC/MS and GC data packages.

Robert E. Meierer
Vice President & General Manager

Revision 1 (2/20/95)

B. TRAFFIC REPORTS

A copy of the Traffic Report for all of the samples in the SDG. The Traffic Reports shall be arranged in increasing EPA number order, considering both letters and numbers in ordering samples.

CHAIN OF CUSTODY RECORD

30073 SDG

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 544-5491

Client: Watauga County, NC Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC 28607 Phone: (704) 265-8003 Fax:(704) 265-8003	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 3rd Assessment Monitoring JN: 6520-20 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? _X_ Yes ___ No (See Not Carrier: FEDERAL EXPRESS Tracking No.: HKYA9900

Box 1: Matrix		Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	
SW. Surface Water	T. Trip Blank	A. HCl	E. NaOH	F. Filtered	C. Composite	Copy to Consultant: _X_ Yes ___ No
GW. Groundwater	E. Equipment Blank	B. HNO_3	F. ZnAc	U. Unfiltered	G. Grab	Bill: _X_ Client ___ Consultant
L. Leachate	P. Product	C. H_2SO_4	G. Other (specify)			Preserved and shipped on ice: _X_ Yes ___ No
S. Soil	O. Other	D. $Na_2S_2O_3$	H. None			

Sample I.D.	Date 1995	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment)											Special Instructions/Comments
										CLP VOLATILES	CLP TOTAL METALS											
MW 17	2/7	1710	GW	..	U	G	<2		3	2	1											SEE ATTACHED PARAMETER LISTS ** TOTAL METALS - PRESERVATIVE: NITRIC ACID VOLATILES - PRESERVATIVE: HCl Attn: Kathy Dever - hold S1, S2, S3, S4, S5, on for processing with SDG 3 which will arrive Saturday 2-11-95
MW 4	2/7	1805	GW	..	U	G	<2		3	2	1											
S3	2/7	1415	SW	..	U	G	<2		3	2	1											
S1	2/7	1425	SW	..	U	G	<2		3	2	1											
S2	2/7	1440	SW	..	U	G	<2		3	2	1											
S5	2/7	1455	SW	..	U	G	<2		3	2	1											
L1	2/7	1505	L	..	U	G	<2		3	2	1											
S4	2/7	1620	SW	..	U	G	<2		3	2	1											
MW2	2/8	0945	GW	..	U	G	<2		3	2	1											

Client's Special Instructions: TOTAL CLP VOA LIST + DICHLORODIFLUOROMETHANE + TIC ANALYSIS; CLP TOTAL METALS; Ba, Cd, Fe, Hg (TOTALS ONLY)

Lab: Received in Good Condition? ✓ Yes ___ No Custody Seal Intact? ✓ Yes ___ No Temp. on arrival 4 Received on Ice ✓ Describe problems, if any:

Sampler Name (print): JEFF PACK	Date: 2-8-95	#1 Relinquished By (Sig.): Jeff Pack	Date: 2-8-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Requested:
Sampler Signature: Jeff Pack	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:	
Sampler Name (print): ERIK RUDIN	Date: 2-8-95	#1 Received By (Sig.): B J Payne	Date: 2-8-95	#2 Received By (Sig.): J. Purdie	Date: 2-10-95	60 (No s)
Sampler Signature: Erik Rudin	Time: 1300	Company Name: Watauga Co. Lf.	Time: 1302	Company Name: CompuChem	Time: 0930	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

30073 00003 SAMPLE DATA PACKAGE 273

CHAIN OF CUSTODY RECORD 30073

SDG 3

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 544-5491

Client: Watauga County, NC
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC 28607
Phone: (704) 265-8003 Fax:(704) 265-8003

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552 0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 3rd Assessment Monitoring
JN: 6520-20 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note 1)
Carrier: Federal Express
Tracking No.: HKYA9
Saturday Delivery

Box 1: Matrix
SW. Surface Water
GW. Groundwater
L. Leachate
S. Soil
T. Trip Blank
E. Equipment Blank
P. Product
O. Other

Box 2: Preservative
A. HCl
B. HNO_3
C. H_2SO_4
D. $Na_2S_2O_3$
E. NaOH
F. ZnAc
G. Other (specify)
H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
												SEE ATTACHED PARAMETER LISTS ** TOTAL METALS - PRESERVATIVE: NITRIC ACID VOLATILES - PRESERVATIVE: HCl Attn: Katy Dower: This is the remainder of SDG 3. Please analyze with other S1, S2, S3, S4, S5, and L1 samples shipped on 2-9-95.
SFW 2	2/9	1520	GW	..	U	G	<2		3	2	1	4°C.
SFW 3	2/9	1610	GW	..	U	G	<2		3	2	1	
SFW 1	2/10	0925	GW	..	U	G	<2		3	2	1	
TRIP BLANK 3	2/6	0800	T	..	U	G	<2		3	2	1	
				..	U	G	<2					
				..	U	G	<2					
				..	U	G	<2					
				..	U	G	<2					
				..	U	G	<2					

RECEIVED IN GOOD CONDITION MS 2/11/95.

Client's Special Instructions: TOTAL CLP VOA LIST + DICHLORODIFLUOROMETHANE + TIC ANALYSIS; CLP TOTAL METALS; Ba, Cd, Fe, Hg (TOTALS ONLY)

Lab: Received in Good Condition? ___Yes ___No Custody Seal Intact? ___Yes ___No Temp. on arrival _____ Received on Ice _____ Describe problems, if any:

Sampler Name (print): Jeff Pack	Date: 2-10-95	#1 Relinquished By (Sig.):	Date: 2-10-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 1306	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:	
Sampler Name (print): Erin Rudin	Date: 2-10-95	#1 Received By (Sig.):	Date: 2/10/95	#2 Received By (Sig.): MS	Date: 2/11/95	60 (No. Days)
Sampler Signature:	Time: 1300	Company Name: Watauga Co. LF	Time: 1300	Company Name: CompuChem ENV	Time: 0930	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

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30073 00003 SAMPLE DATA PACKAGE

C. VOLATILE DATA

1. Q C Summary

2. Sample Data

3. Standards. Data

4. Raw Q C Data

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30073

SDG # : 00003

1. Q C Summary

a. Form II VOA
System Monitoring Compound Summary

b. Form III VOA
Matrix Spike / Matrix Spike Duplicate Summary

c. Form IV VOA
Method Blank Summary

d. Form V VOA
GC/MS Instrument Performance Check

e. Form VIII VOA
Internal Standard Area and Retention Time Summary

a. Form II VOA

System Monitoring Compound Summary

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKJD	102	91	98		0
02	TRIPBLK3	102	91	102		0
03	S3	105	94	108		0
04	S1	104	93	106		0
05	S4	100	96	108		0
06	SFW1	101	90	104		0
07	SFW2	107	93	106		0
08	SFW3	96	92	100		0
09	SFW1MSD	100	98	102		0
10	SFW1MS	101	100	102		0
11	S2	105	99	113		0
12	S5	98	92	106		0
13	VBLKML	97	93	98		0
14	L1	89	86	98		0
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

b. Form III VOA

Matrix Spike / Matrix Spike Duplicate Summary

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix Spike - EPA Sample No.: SFW1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	78.46	157*	61-145
Trichloroethene	50.00	0.000	50.54	101	71-120
Benzene	50.00	0.000	53.00	106	76-127
Toluene	50.00	0.000	44.21	88	76-125
Chlorobenzene	50.00	0.000	48.02	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	77.85	156*	1	14	61-145
Trichloroethene	50.00	50.29	100	1	14	71-120
Benzene	50.00	52.37	105	1	11	76-127
Toluene	50.00	43.83	88	0	13	76-125
Chlorobenzene	50.00	47.77	96	0	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 2 out of 10 outside limits

COMMENTS: _____

c. Form IV VOA

Method Blank Summary

If more than a single form is necessary, forms must be arranged in chronological order by date of analysis of the blank.

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID: CB950215B56.D Lab Sample ID: VBLKJD

Date Analyzed: 02/15/95 Time Analyzed: 1918

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIPBLK3	683992	CR083992B56.D	2125
02	S3	683849	CN083849A56.D	2259
03	S1	683851	CN083851A56.D	2328
04	S4	683871	CN083871A56.D	0122
05	SFW1	683983	CN083983A56.D	0200
06	SFW2	683984	CN083984A56.D	0254
07	SFW3	683985	CN083985A56.D	0333
08	SFW1MSD	683835	CN083835B56.D	0446
09	SFW1MS	683834	CR083834C56.D	0516
10	S2	683853	CR083853C56.D	0543
11	S5	683855	CR083855C56.D	0616
12				
13				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID: CB950216A56.D Lab Sample ID: VBLKML

Date Analyzed: 02/16/95 Time Analyzed: 0904

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50056

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	L1	683833	C2R83833A56.D	1138
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
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23				
24				
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26				
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28				
29				
30				

COMMENTS:

d. Form V VOA

GC/MS Instrument Performance Check

BFB in chronological order by instrument.

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID: BG950214B56.D BFB Injection Date: 02/14/95

Instrument ID: F50056 BFB Injection Time: 1725

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.1
75	30.0 - 66.0% of mass 95	47.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.2 (0.3)1
174	50.0 - 120.0% of mass 95	84.4
175	4.0 - 9.0% of mass 174	6.0 (7.1)1
176	93.0 - 101.0% of mass 174	82.5 (97.8)1
177	5.0 - 9.0% of mass 176	5.2 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	CT950214B56.D	02/14/95	1755
02	VSTD020	VSTD020	CU950214B56.D	02/14/95	1835
03	VSTD050	VSTD050	CV950214B56.D	02/14/95	1912
04	VSTD100	VSTD100	CW950214B56.D	02/14/95	1950
05	VSTD200	VSTD200	CY950214B56.D	02/14/95	2135
06					
07					
08					
09					
10					
11					
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID: BF950215B56.D BFB Injection Date: 02/15/95

Instrument ID: F50056 BFB Injection Time: 1825

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	21.3
75	30.0 - 66.0% of mass 95	49.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	50.0 - 120.0% of mass 95	86.0
175	4.0 - 9.0% of mass 174	5.9 (6.9)1
176	93.0 - 101.0% of mass 174	83.3 (96.9)1
177	5.0 - 9.0% of mass 176	5.4 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	CS950215B56.D	02/15/95	1837
02	VBLKJD	VBLKJD	CB950215B56.D	02/15/95	1918
03	TRIPBLK3	683992	CR083992B56.D	02/15/95	2125
04	S3	683849	CN083849A56.D	02/15/95	2259
05	S1	683851	CN083851A56.D	02/15/95	2328
06	S4	683871	CN083871A56.D	02/16/95	0122
07	SFW1	683983	CN083983A56.D	02/16/95	0200
08	SFW2	683984	CN083984A56.D	02/16/95	0254
09	SFW3	683985	CN083985A56.D	02/16/95	0333
10	SFW1MSD	683835	CN083835B56.D	02/16/95	0446
11	SFW1MS	683834	CR083834C56.D	02/16/95	0516
12	S2	683853	CR083853C56.D	02/16/95	0543
13	S5	683855	CR083855C56.D	02/16/95	0616
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID: BF950216A56.D BFB Injection Date: 02/16/95

Instrument ID: F50056 BFB Injection Time: 0809

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	21.3
75	30.0 - 66.0% of mass 95	48.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.1 (0.1)1
174	50.0 - 120.0% of mass 95	83.8
175	4.0 - 9.0% of mass 174	5.7 (6.8)1
176	93.0 - 101.0% of mass 174	81.3 (96.9)1
177	5.0 - 9.0% of mass 176	5.1 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	CS950216A56.D	02/16/95	0818
02	VBLKML	VBLKML	CB950216A56.D	02/16/95	0904
03	L1	683833	C2R83833A56.D	02/16/95	1138
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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19					
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22					

e. Form VIII VOA

Internal Standard Area and Retention Time Summary

In chronological order by instrument.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID (Standard): CS950215B56.D Date Analyzed: 02/15/95

Instrument ID: F50056 Time Analyzed: 1837

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	81762	5.84	329717	7.50	340942	12.02
	UPPER LIMIT	163524	6.34	659434	8.00	681884	12.52
	LOWER LIMIT	40881	5.34	164858	7.00	170471	11.52
	EPA SAMPLE No.						
01	VBLKJD	92571	5.86	337927	7.51	354446	12.03
02	TRIPBLK3	78468	5.81	318268	7.46	338960	11.97
03	S3	70963	5.79	305425	7.45	327736	11.95
04	S1	71390	5.79	309479	7.43	329452	11.94
05	S4	67216	5.83	292190	7.47	310596	11.98
06	SFW1	67524	5.79	297945	7.42	314833	11.94
07	SFW2	62283	5.81	273178	7.43	289117	11.95
08	SFW3	67481	5.82	290401	7.46	301748	11.95
09	SWF1MSD	75006	5.77	300804	7.41	316702	11.90
10	SWF1MS	76204	5.79	299945	7.43	315993	11.94
11	S2	66363	5.77	287250	7.41	309241	11.92
12	S5	67901	5.79	289410	7.43	314572	11.90
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Lab File ID (Standard): CS950216A56.D Date Analyzed: 02/16/95

Instrument ID: F50056 Time Analyzed: 0818

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	72863		5.87		295065		7.52		308913		12.03	
	UPPER LIMIT	145726		6.37		590130		8.02		617826		12.53	
	LOWER LIMIT	36432		5.37		147532		7.02		154456		11.53	
	EPA SAMPLE No.												
01	VBLKML	80470		5.87		299990		7.51		316422		12.03	
02	L1	68734		5.82		298164		7.46		321275		11.97	
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

2. Sample Data

Sample data shall be arranged in packets with the Organic Analysis Data Sheet (Form I VOA, including Form I VOA-TIC), followed by the raw data for volatile samples. These sample packets should then be placed in increasing EPA number order, considering both letters and numbers in ordering samples.

. TCL Results - Organic Analysis Data Sheet (Form I VOA).
Tabulated results (identification and quantitation) of the specified target compounds.

. Tentatively Identified Compounds (Form I VOA-TIC).
This form must be included even if no compounds are found.

. Reconstructed total ion chromatogram (RIC) for each sample, sample extract, standard, blank and spike sample.

. For each sample, by each compound identified :

Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (TCL) that are identified in the sample and corresponding background-subtracted TCL standard mass spectra. Compound names must be clearly marked on all spectra.

Copies of mass spectra of nonsurrogate organic compounds (tentatively identified compounds) with associated best-match spectra (three best matches).

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683833

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R83833A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	6	J
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683833

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R83833A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

L1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683833

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R83833A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2000	JB
2.					
3.					
4.					
5.					
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14.					
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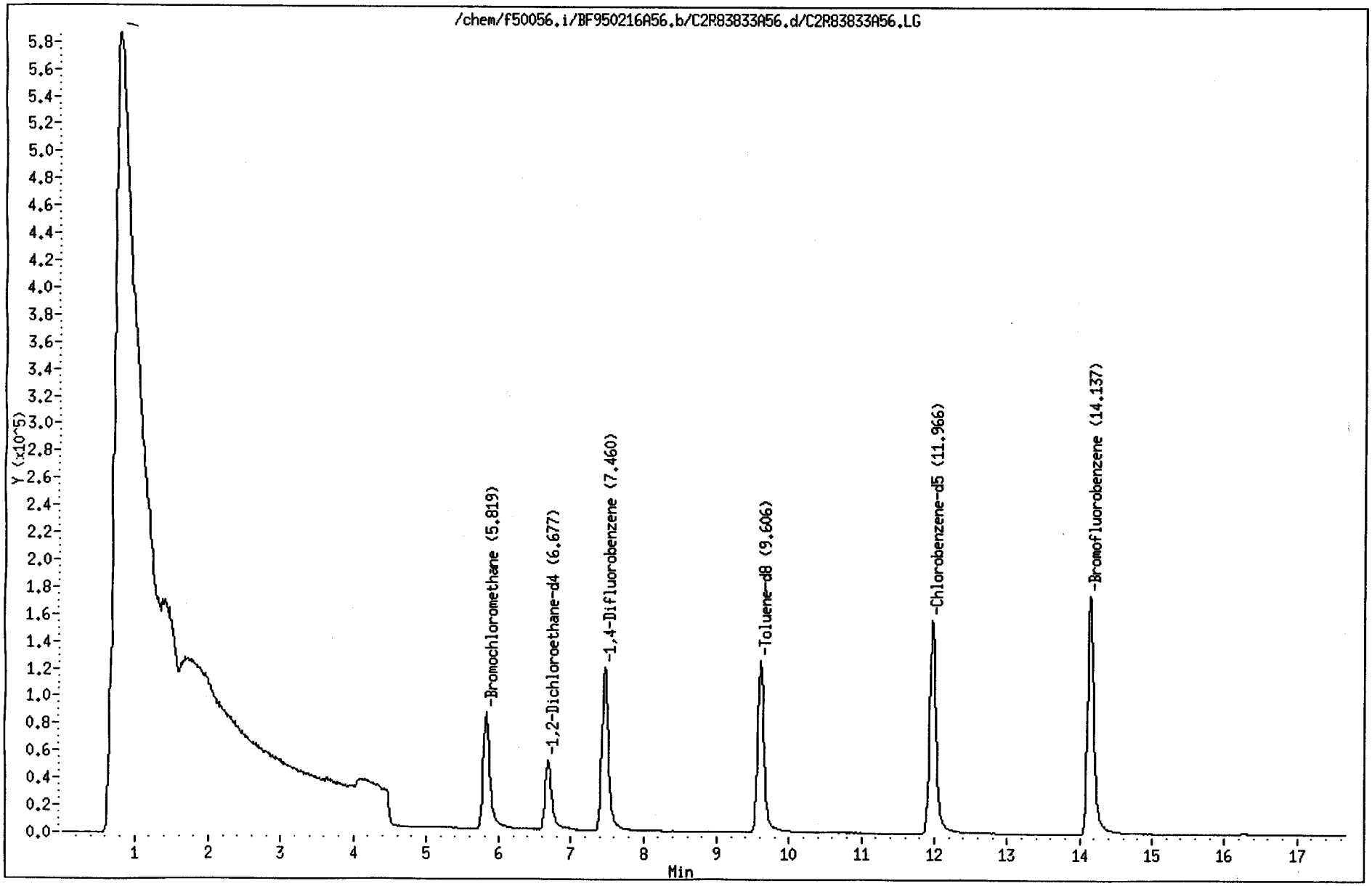
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50056.i/BF950216A56.b/C2R83833A56.d
Date : 16-FEB-1995 11:38
Client ID: L1
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2141
Column diameter: 0.53



Data File: /chem/f50056.i/BF950216A56.b/C2R83833A56.d
Report Date: 20-Feb-1995 15:12

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/C2R83833A56.d
Lab Smp Id: 683833 Client Smp ID: L1
Inj Date : 16-FEB-1995 11:38
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.819	5.869	(1.000)	68734	250.0	
* 2	1,4-Difluorobenzene	114.00	7.460	7.523	(1.000)	298164	250.0	
* 3	Chlorobenzene-d5	117.00	11.966	12.029	(1.000)	321275	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.677	6.728	(1.147)	126763	245.7	49.14
$ 5	Toluene-d8	98.00	9.606	9.669	(0.803)	257903	222.6	44.52
$ 6	Bromofluorobenzene	95.00	14.150	14.213	(1.182)	233247	214.5	42.90(R)
7	Dichlorodiflouromethane	85.00		0.972	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00	1.717	1.729	(0.295)	7025	31.14	6.23(a)
12	1,1-Dichloroethene	96.00		2.840	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00	3.648	3.686	(0.627)	2496	6.43	1.28(a)
16	trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.670	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.554	Compound Not Detected.			
19	2-Butanone	43.00		5.768	Compound Not Detected.			
20	Chloroform	83.00		6.122	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.198	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
23	Benzene	78.00		6.740	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/C2R83833A56.d
Report Date: 20-Feb-1995 15:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.841		Compound Not Detected.		
25	Trichloroethene	130.00		7.788		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.091		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.328		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.732		Compound Not Detected.		
30	Toluene	91.00		9.770		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.300		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.540		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.603		Compound Not Detected.		
34	2-Hexanone	43.00		11.158		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.680		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Data File: /chem/f50056.i/BF950216A56.b/C2R83833A56.d

Date : 16-FEB-1995 11:38

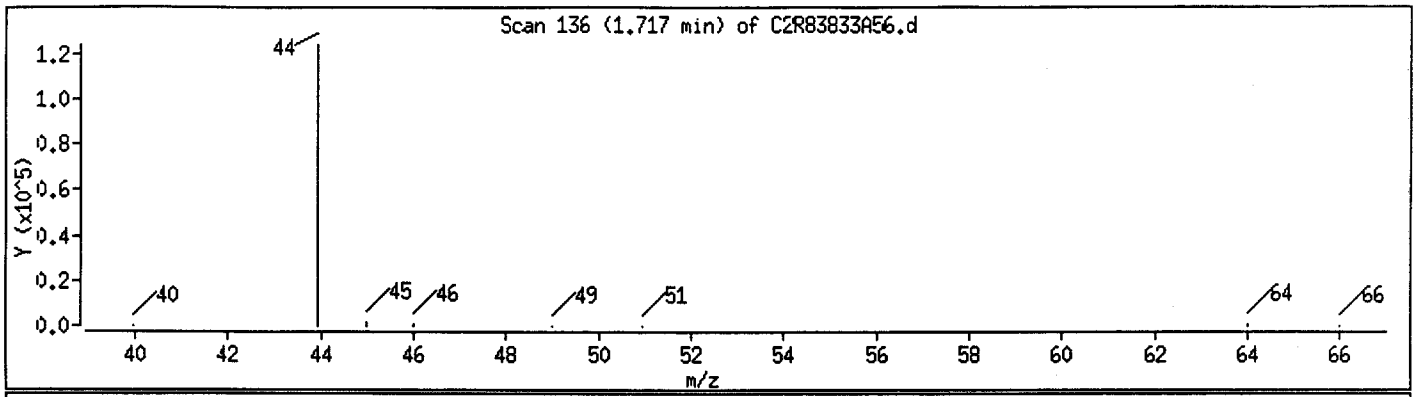
Client ID: L1 Instrument: f50056.i

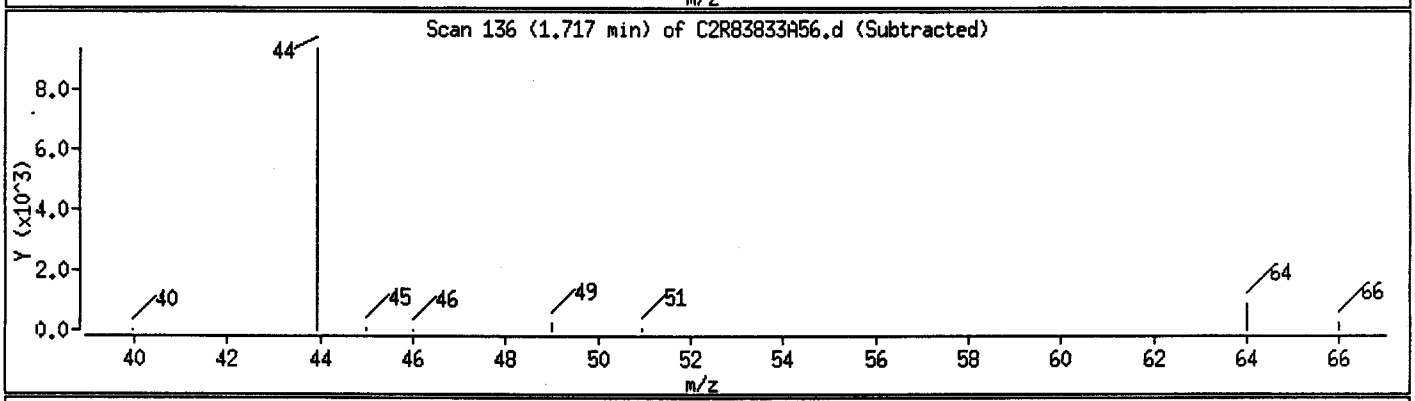
Sample Info:

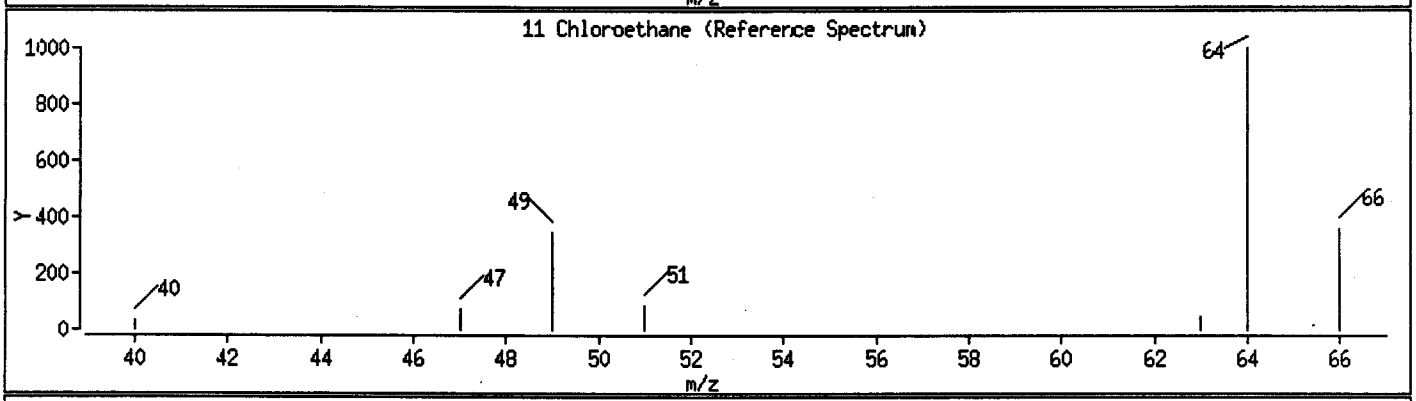
Purge Volume: 5.0 Operator: 2141

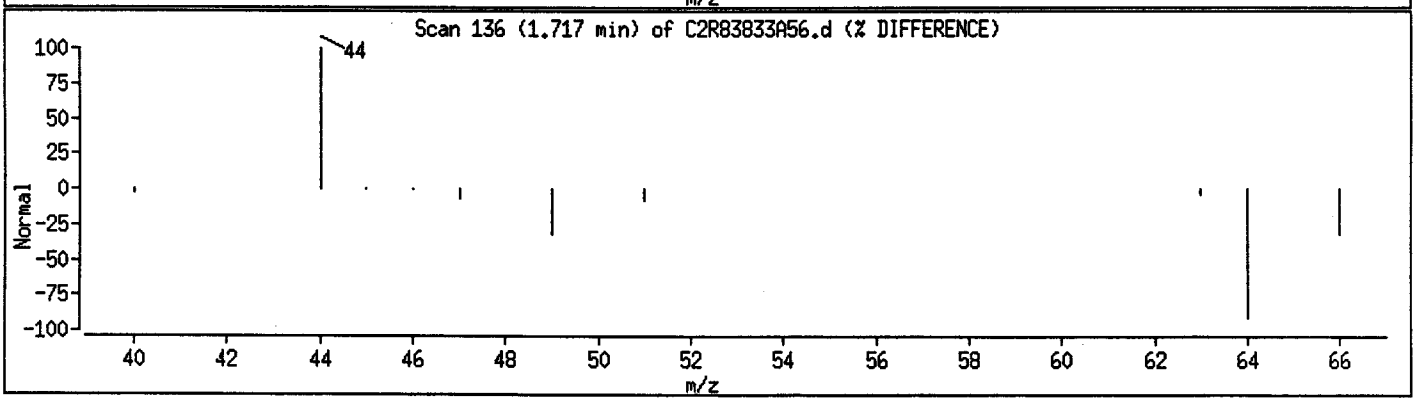
Column phase: DB624 Column diameter: 0.53

11 Chloroethane









Data File: /chem/f50056.i/BF950216A56.b/C2R83833A56.d

Date : 16-FEB-1995 11:38

Client ID: L1

Instrument: f50056.i

Sample Info:

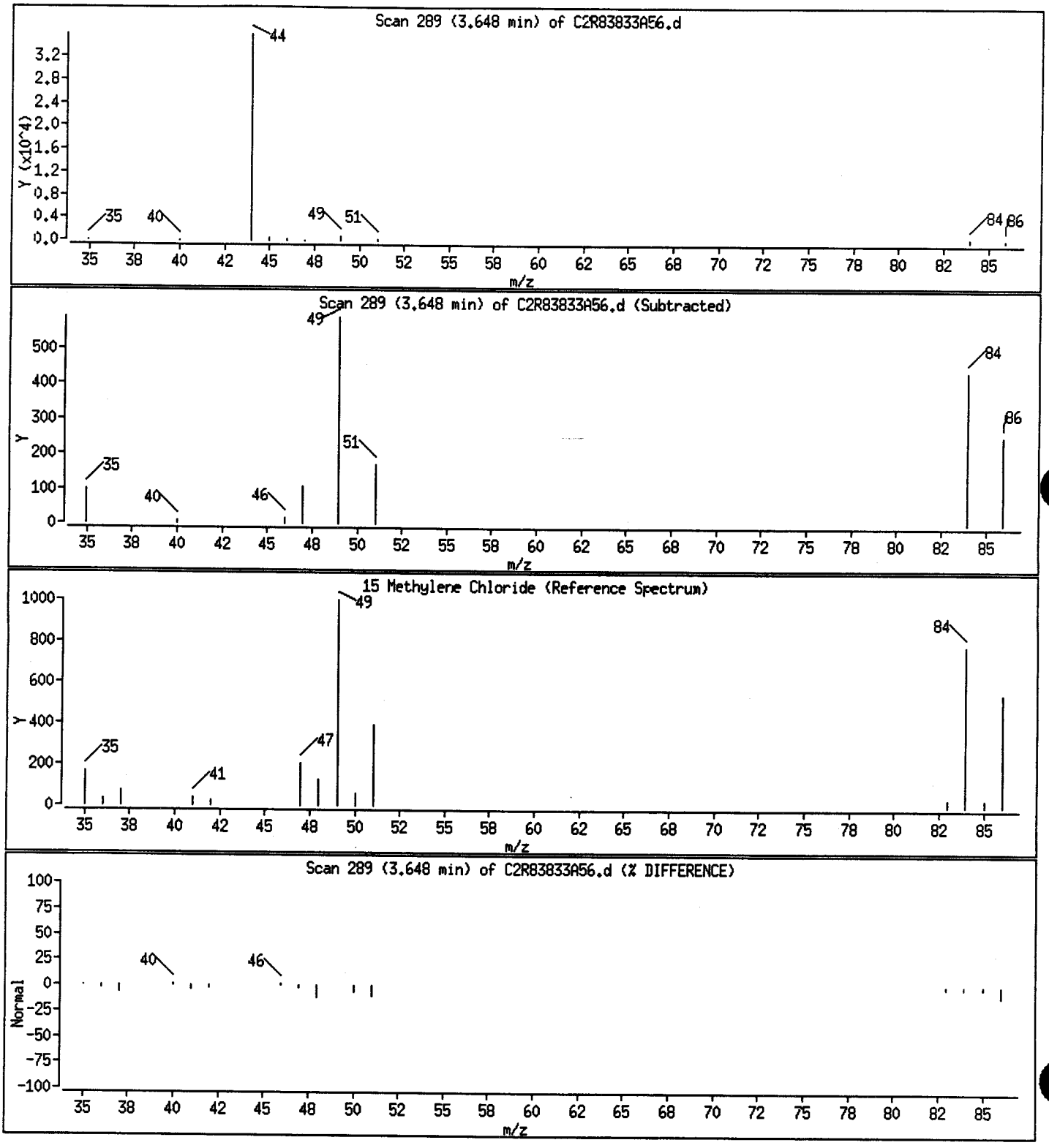
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BF950216A56.b/C2R83833A56.d

Date : 16-FEB-1995 11:38

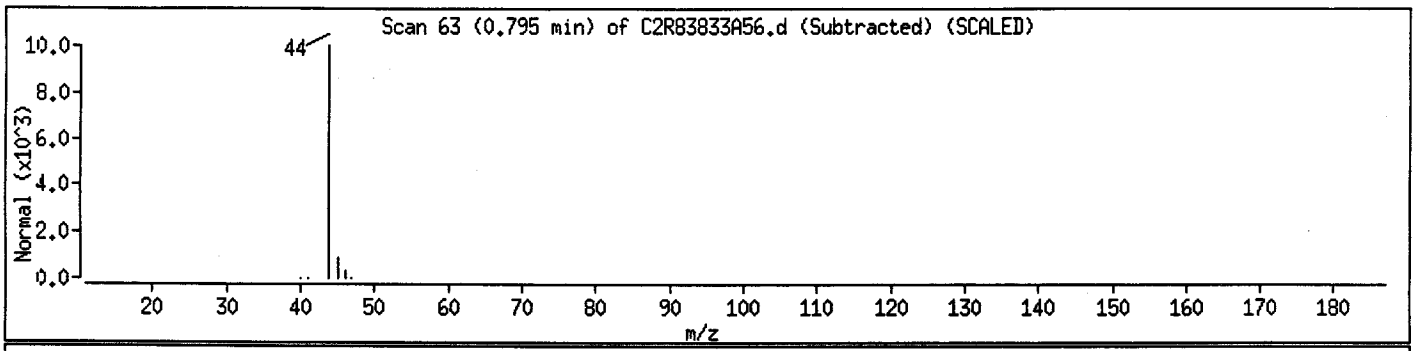
Client ID: L1 Instrument: f50056.i

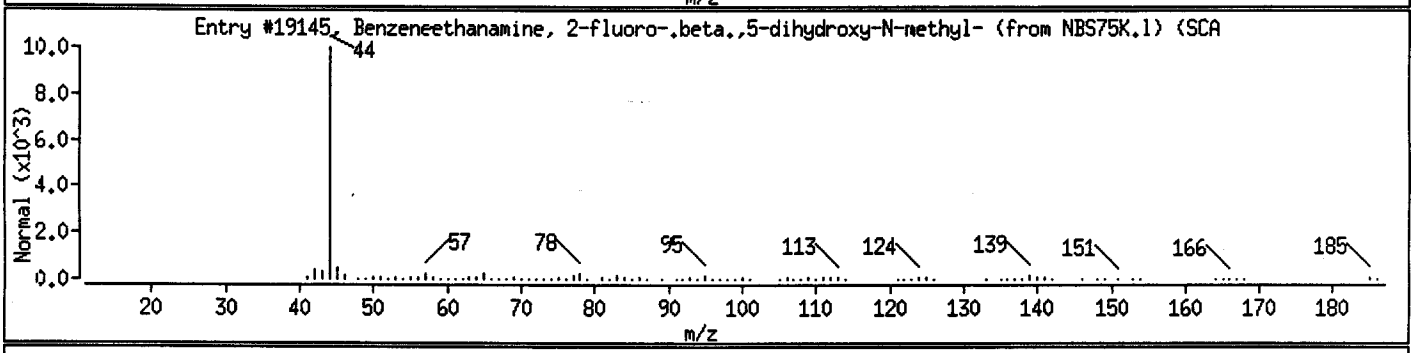
Sample Info:

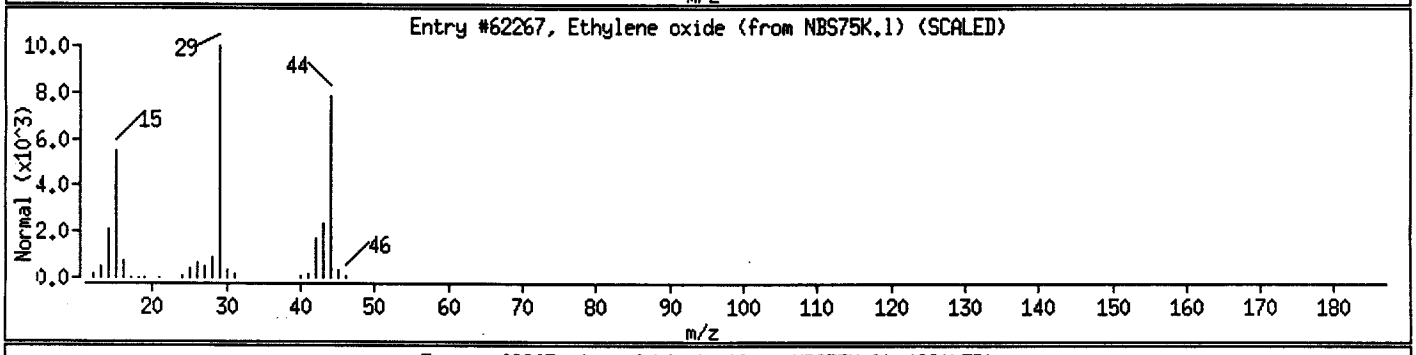
Purge Volume: 5.0 Operator: 2141

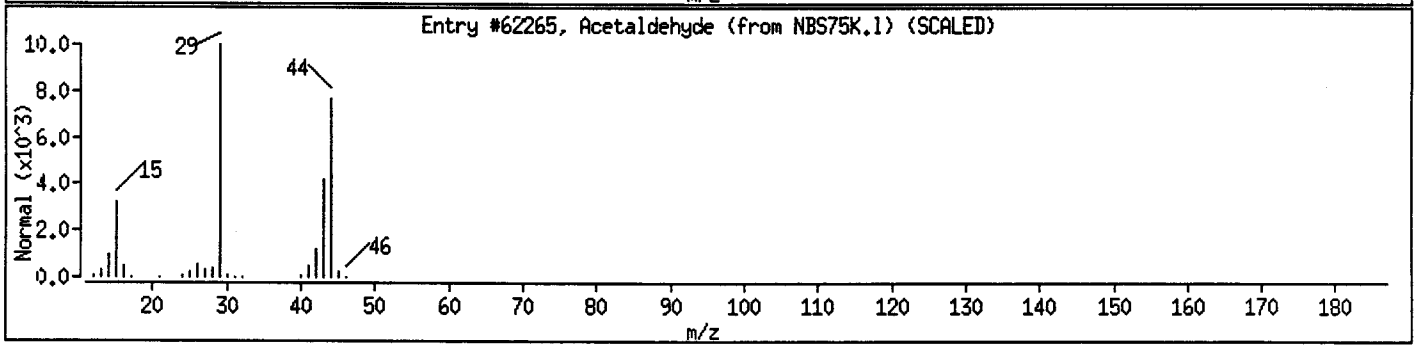
Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Ethylene oxide	75-21-8	NBS75K.l	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44









LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

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GC/MS ANALYSIS HW2-16-95
AMOUNT PURGED: 500 0. UL
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950216A56
BLANK FILENAME: CB950216A56
STANDARD FILENAME: CS950216A56
SAMPLE FILENAME: C2R83833A56

ANALYST(S): INJECTION: 2141 WORKUP: 2141 MR

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE JA

DISPOSITION: [✓] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 01

[ ] REINJECT NEAT
[ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 01

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW dstuder DATE 2/20/95 AUDITOR _____ DATE ____/____/____

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ____/____/____

==========

FINAL REVIEW: INITIALS _____ DATE ____/____/____

QUALITY ASSURANCE NOTICE

CompuChem ID# 683533
Client ID# L1
Instrument Blank ID# CB950216A56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 63 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID JKS / 983

Date 2.2095

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083851A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083851A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083851A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	1900	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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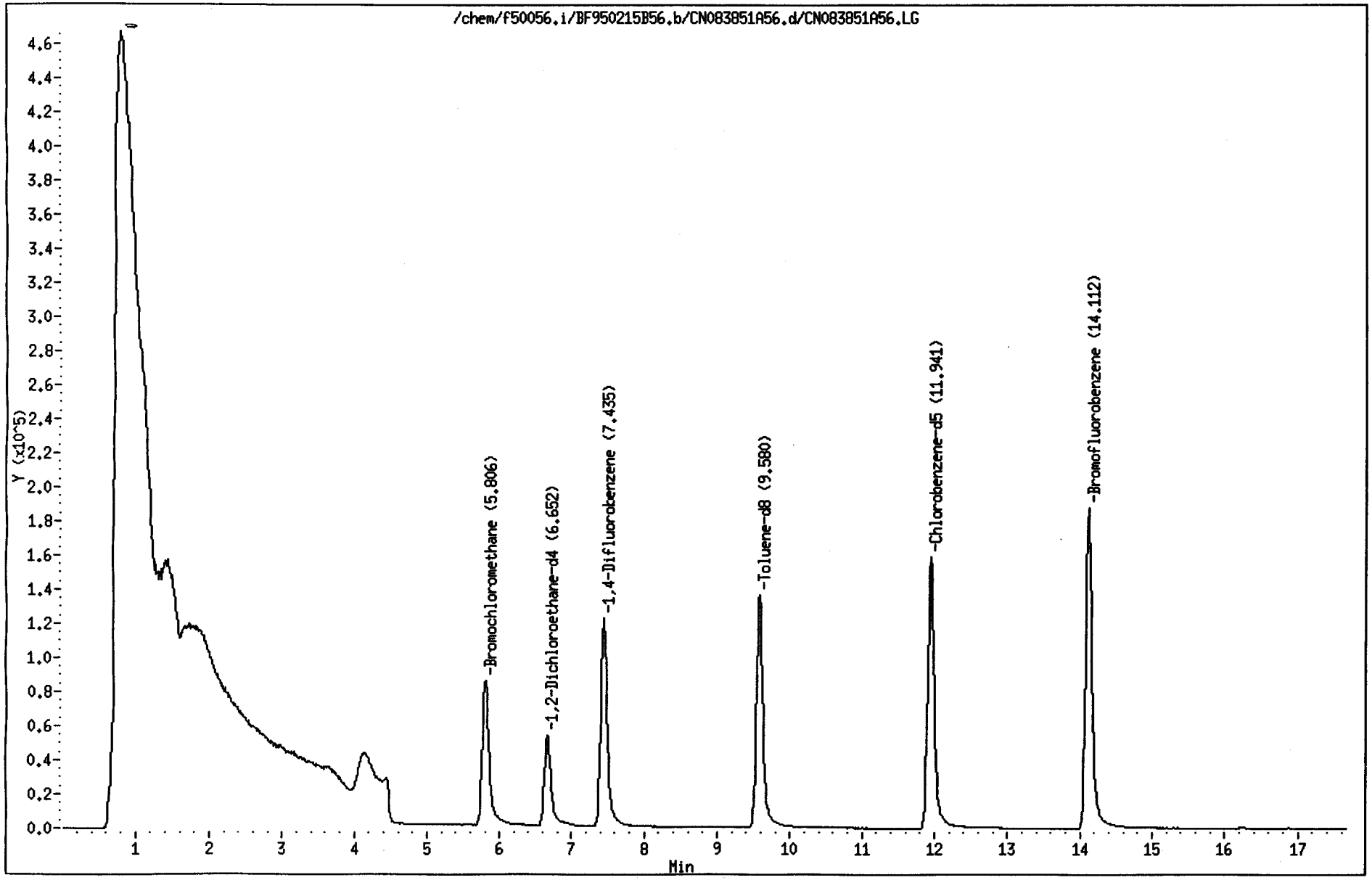
29.					
30.					

Data File: /chem/f50056.i/BF950215B56.b/CN083851A56.d
Date : 15-FEB-1995 23:28
Client ID: S1
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



200
30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950215B56.b/CN083851A56.d
Report Date: 20-Feb-1995 12:26

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CN083851A56.d
Lab Smp Id: 683851 Client Smp ID: S1
Inj Date : 15-FEB-1995 23:28
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.794	5.844	(1.000)	71390	250.0	
*	2 1,4-Difluorobenzene	114.00	7.435	7.498	(1.000)	309479	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	12.017	(1.000)	329452	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.703	(1.148)	134329	265.6	53.13
$	5 Toluene-d8	98.00	9.580	9.644	(0.802)	287117	259.8	51.97
$	6 Bromofluorobenzene	95.00	14.112	14.188	(1.182)	250792	232.2	46.45
	7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
	10 Bromomethane	94.00		1.565	Compound Not Detected.			
	11 Chloroethane	64.00		1.704	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
	13 Acetone	43.00		3.156	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
	15 Methylene Chloride	84.00		3.661	Compound Not Detected.			
	16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
	19 2-Butanone	43.00		5.731	Compound Not Detected.			
	20 Chloroform	83.00		6.097	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
	23 Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CN083851A56.d
Report Date: 20-Feb-1995 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
	25 Trichloroethene	130.00		7.763		Compound Not Detected.		
	26 1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
	27 Bromodichloromethane	83.00		8.609		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
	30 Toluene	91.00		9.745		Compound Not Detected.		
	31 trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
	33 Tetrachloroethene	164.00		10.590		Compound Not Detected.		
	34 2-Hexanone	43.00		11.146		Compound Not Detected.		
	35 Dibromochloromethane	129.00		11.083		Compound Not Detected.		
	36 Chlorobenzene	112.00		12.054		Compound Not Detected.		
	37 Ethylbenzene	106.00		12.357		Compound Not Detected.		
	38 m,p-Xylene	106.00		12.585		Compound Not Detected.		
	39 o-Xylene	106.00		13.254		Compound Not Detected.		
	40 Styrene	104.00		13.304		Compound Not Detected.		
	41 Bromoform	173.00		13.531		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M	44 Xylene (Total)	106.00		13.254		Compound Not Detected.		

Data File: /chem/f50056.i/BF950215B56.b/CN083851A56.d

Date : 15-FEB-1995 23:28

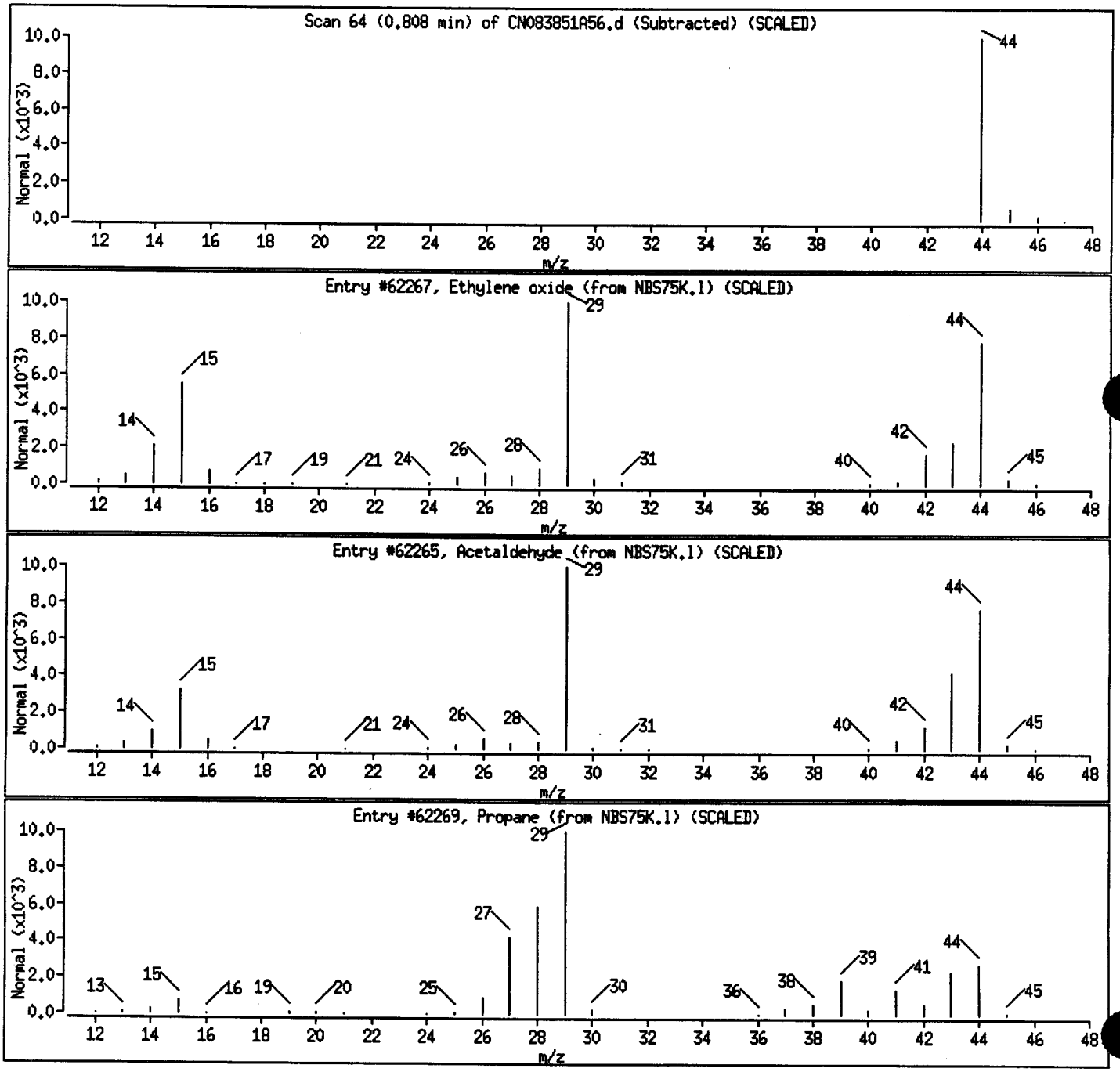
Client ID: S1 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.1	62265	3	C2H4O	44
Propane	74-98-6	NBS75K.1	62269	2	C3H8	44



LAB INSTRUCTIONS:
PPS#115 + DICHLORODIFLUOROMETHANE

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00003 DUE DATE: 03/10/9

VOA J[ ] J3[ ] D[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683851
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

Sample date: 020795 Report type: 0

SAMPLE ID#: S1

GC/MS ANALYSIS 2/11/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename [illegible] Disk ( )
Blank Filename [illegible] Disk ( )
Standard Filename [illegible] Disk ( )
Sample Filename [illegible] Disk ( )

ANALYST(S): Injection [illegible] Work-up [illegible]

GC/MS REVIEW

CONDITION CODE: ok

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 01

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review [illegible] Date 2/20/95 Auditor_____ Date____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s):_____/_____

QA COMMENTS:

Initials_____ Date____/____/____

FINAL REVIEW: Initials_____ Date____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683551
Client ID# 51
Instrument Blank ID# CB9502158S6
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 64 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / RF

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083853C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	26	
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	7	J

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083853C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083853C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.77	2200	JB
2.		UNKNOWN HYDROCARBON	8.65	6	J
3.					
4.					
5.					
6.					
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24.					
25.					
26.					
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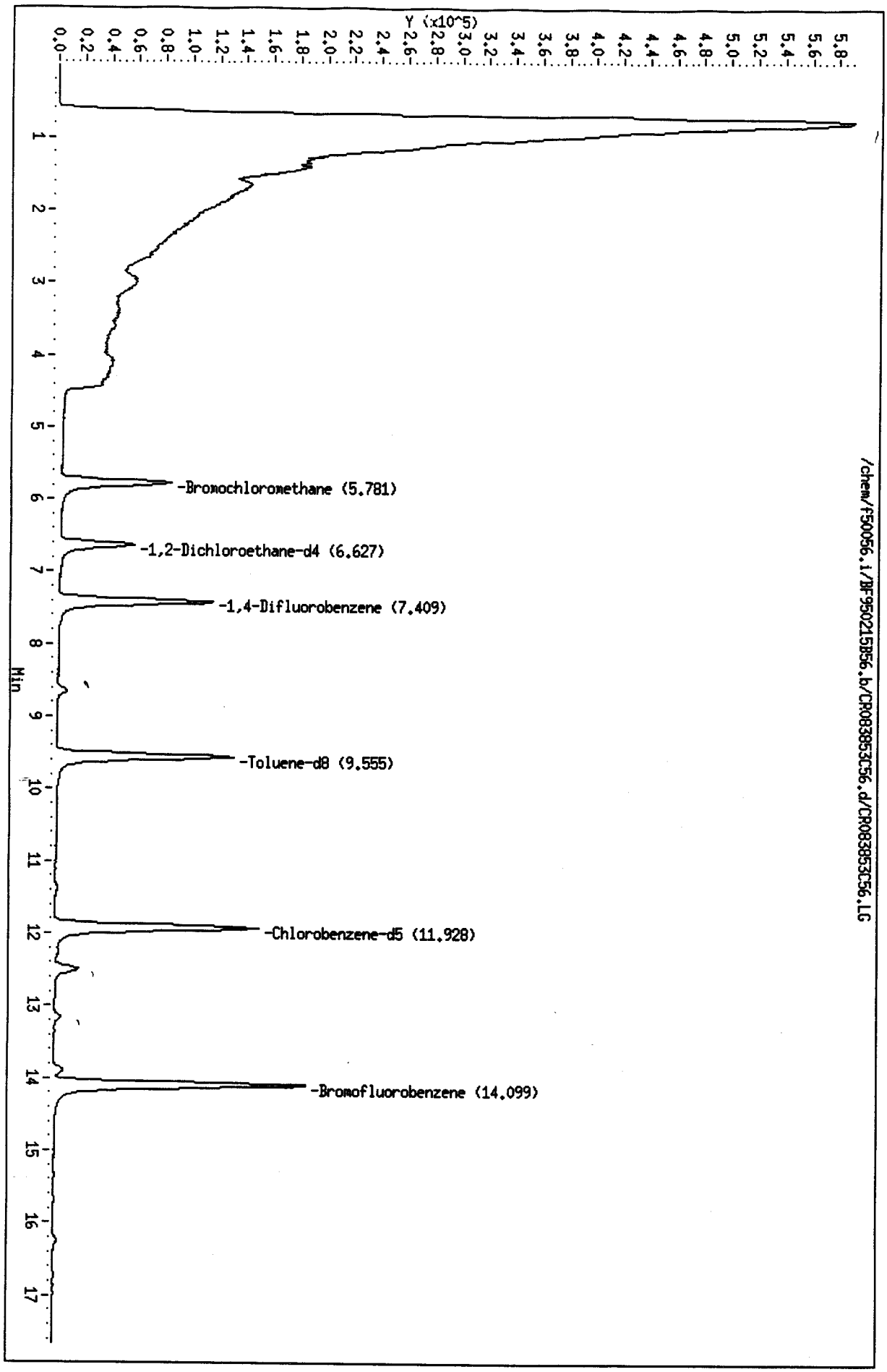
30.					


Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d
Date : 16-FEB-1995 05:43
Client ID: S2
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
/chem/f50056.i/BF950215B56.b/CR083853C56.d/CR083853C56.LG
Y (x10^5)
Min
-Bromochloromethane (5.781)
-1,2-Dichloroethane-d4 (6.627)
-1,4-Difluorobenzene (7.409)
-Toluene-d8 (9.555)
-Chlorobenzene-d5 (11.928)
-Bromofluorobenzene (14.099)

Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CR083853C56.d
Lab Smp Id: 683853 Client Smp ID: S2
Inj Date : 16-FEB-1995 05:43
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.768	5.844	(1.000)	66363	250.0	
* 2	1,4-Difluorobenzene	114.00	7.409	7.498	(1.000)	287250	250.0	
* 3	Chlorobenzene-d5	117.00	11.916	12.017	(1.000)	309241	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.627	6.703	(1.149)	132632	282.1	56.43
$ 5	Toluene-d8	98.00	9.555	9.644	(0.802)	273008	263.2	52.64
$ 6	Bromofluorobenzene	95.00	14.087	14.188	(1.182)	250778	247.4	49.48
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10	Bromomethane	94.00		1.565	Compound Not Detected.			
11	Chloroethane	64.00	1.679	1.704	(0.291)	25467	128.1	25.62
12	1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15	Methylene Chloride	84.00	3.623	3.661	(0.628)	3466	10.21	2.04(a)
16	trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
19	2-Butanone	43.00		5.731	Compound Not Detected.			
20	Chloroform	83.00		6.097	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23	Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d
Report Date: 20-Feb-1995 12:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
25	Trichloroethene	130.00		7.763		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.609		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
30	Toluene	91.00		9.745		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.590		Compound Not Detected.		
34	2-Hexanone	43.00		11.146		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.083		Compound Not Detected.		
36	Chlorobenzene	112.00		12.054		Compound Not Detected.		
37	Ethylbenzene	106.00		12.357		Compound Not Detected.		
38	m,p-Xylene	106.00	12.509	12.585	(1.050)	20422	29.51	5.90(a)
39	o-Xylene	106.00	13.165	13.254	(1.105)	5348	7.35	1.47(a)
40	Styrene	104.00		13.304		Compound Not Detected.		
41	Bromoform	173.00		13.531		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00				25770	35.40	7.08(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d

Date : 16-FEB-1995 05:43

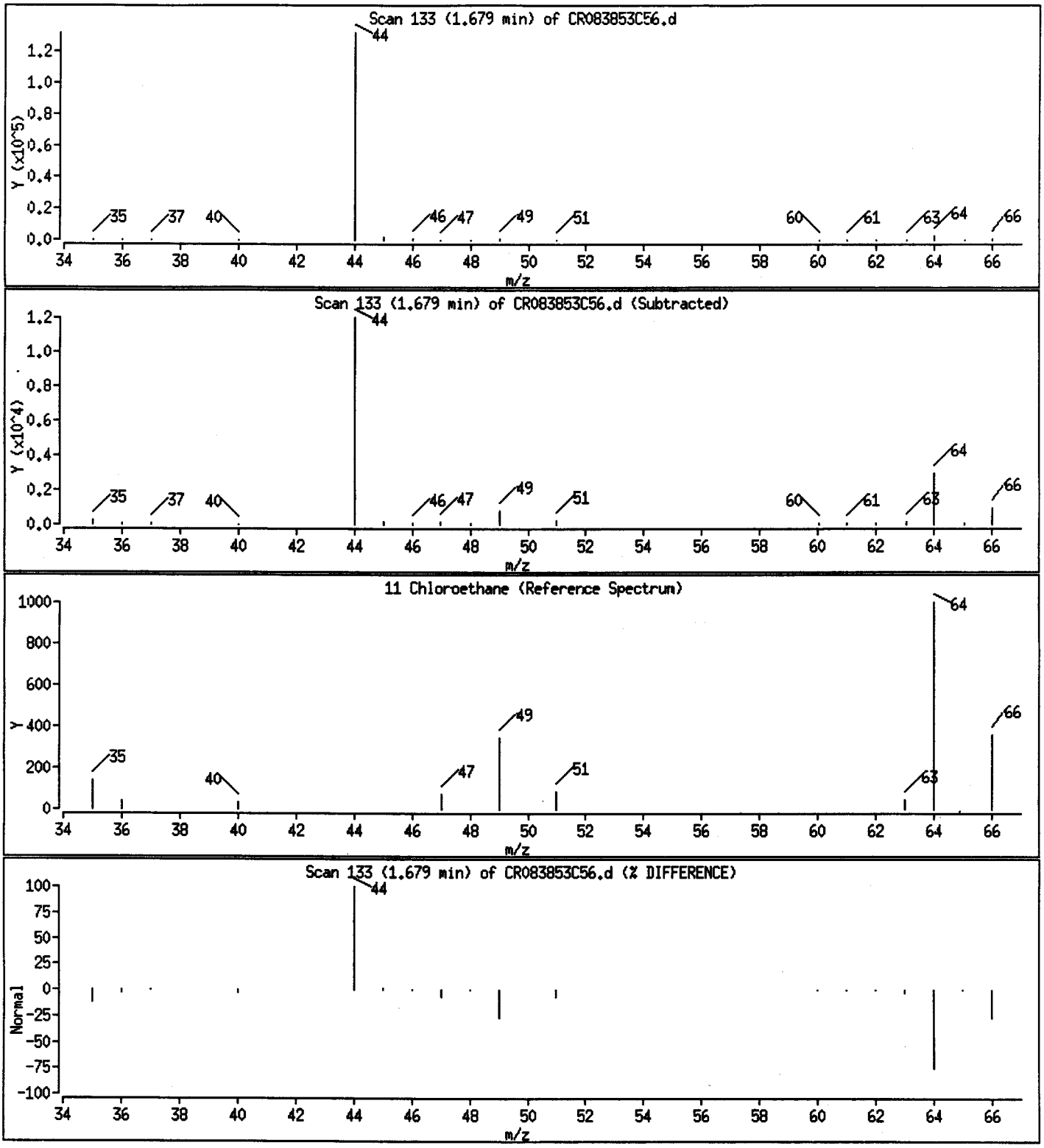
Client ID: S2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

11 Chloroethane



Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d

Date : 16-FEB-1995 05:43

Client ID: S2

Instrument: f50056.i

Sample Info:

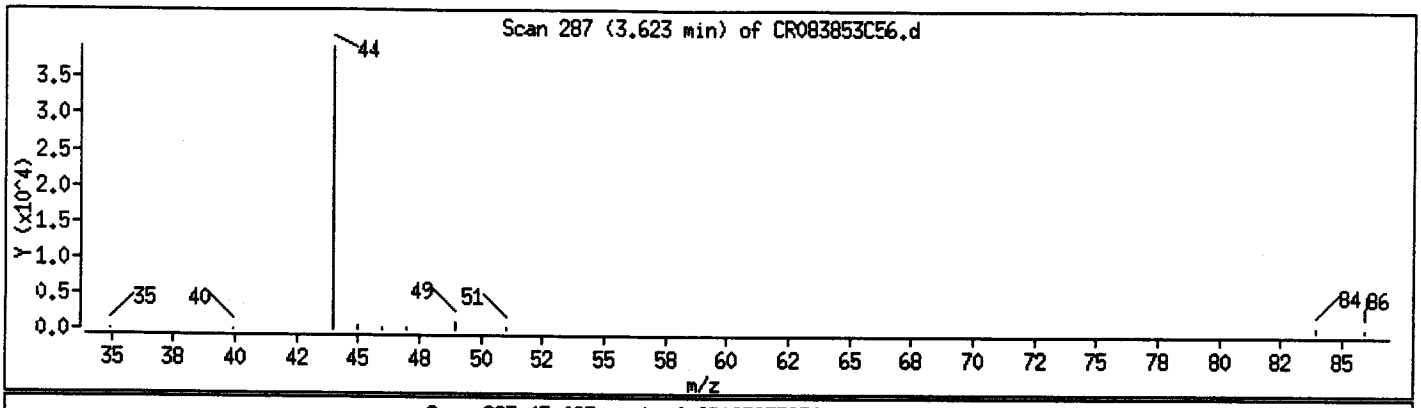
Purge Volume: 5.0

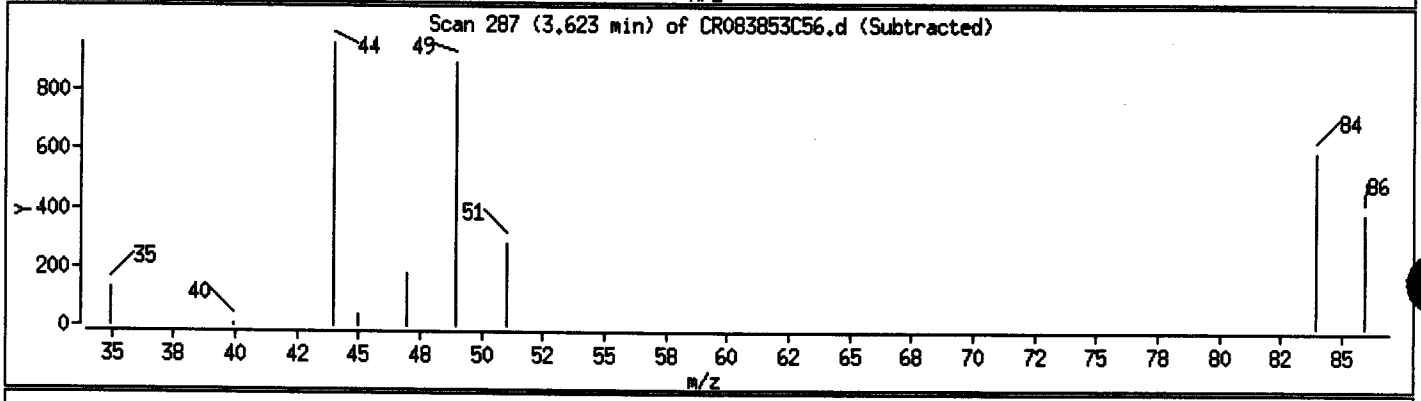
Operator: 1948

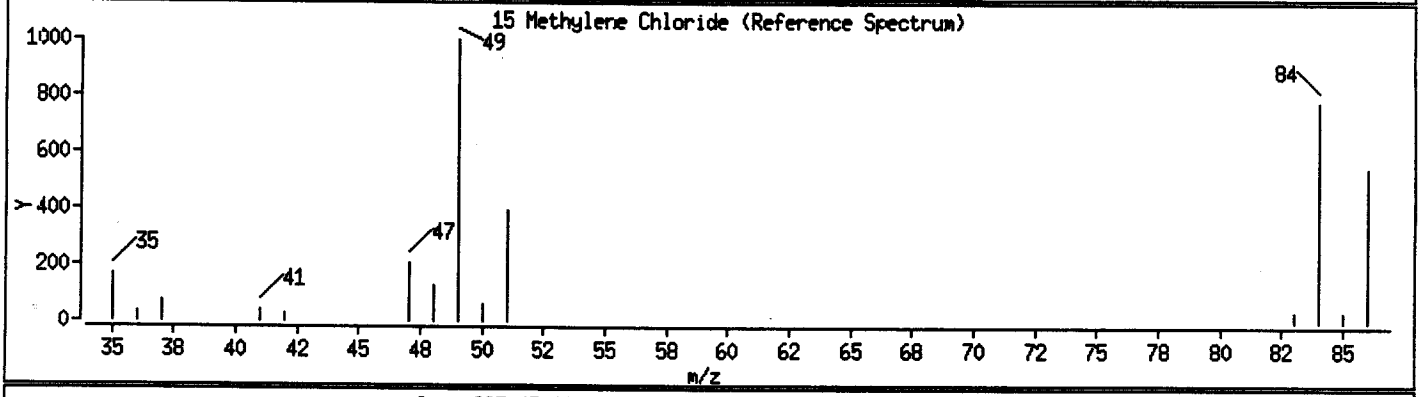
Column phase: DB624

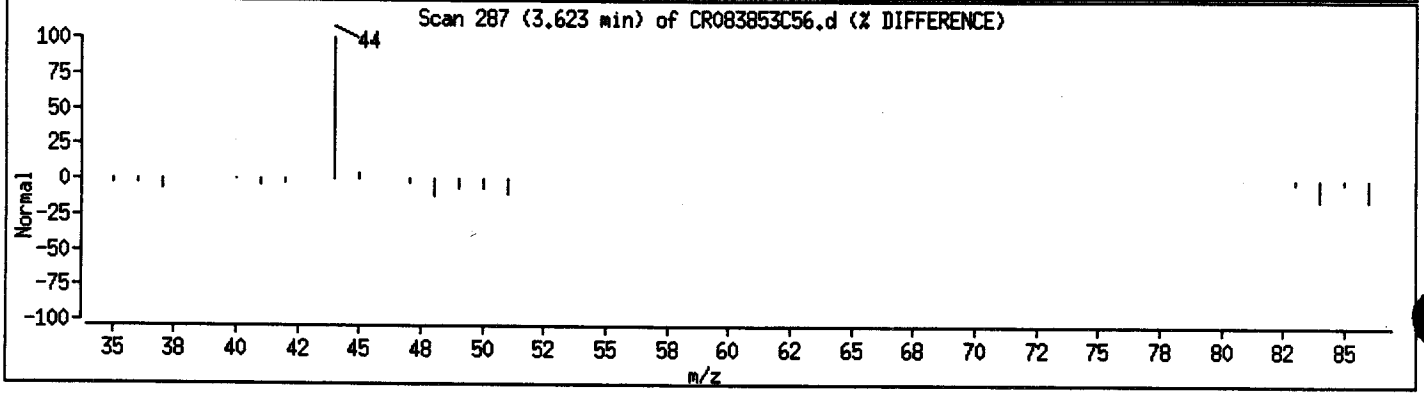
Column diameter: 0.53

15 Methylene Chloride









Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d

Date : 16-FEB-1995 05:43

Client ID: S2

Instrument: f50056.i

Sample Info:

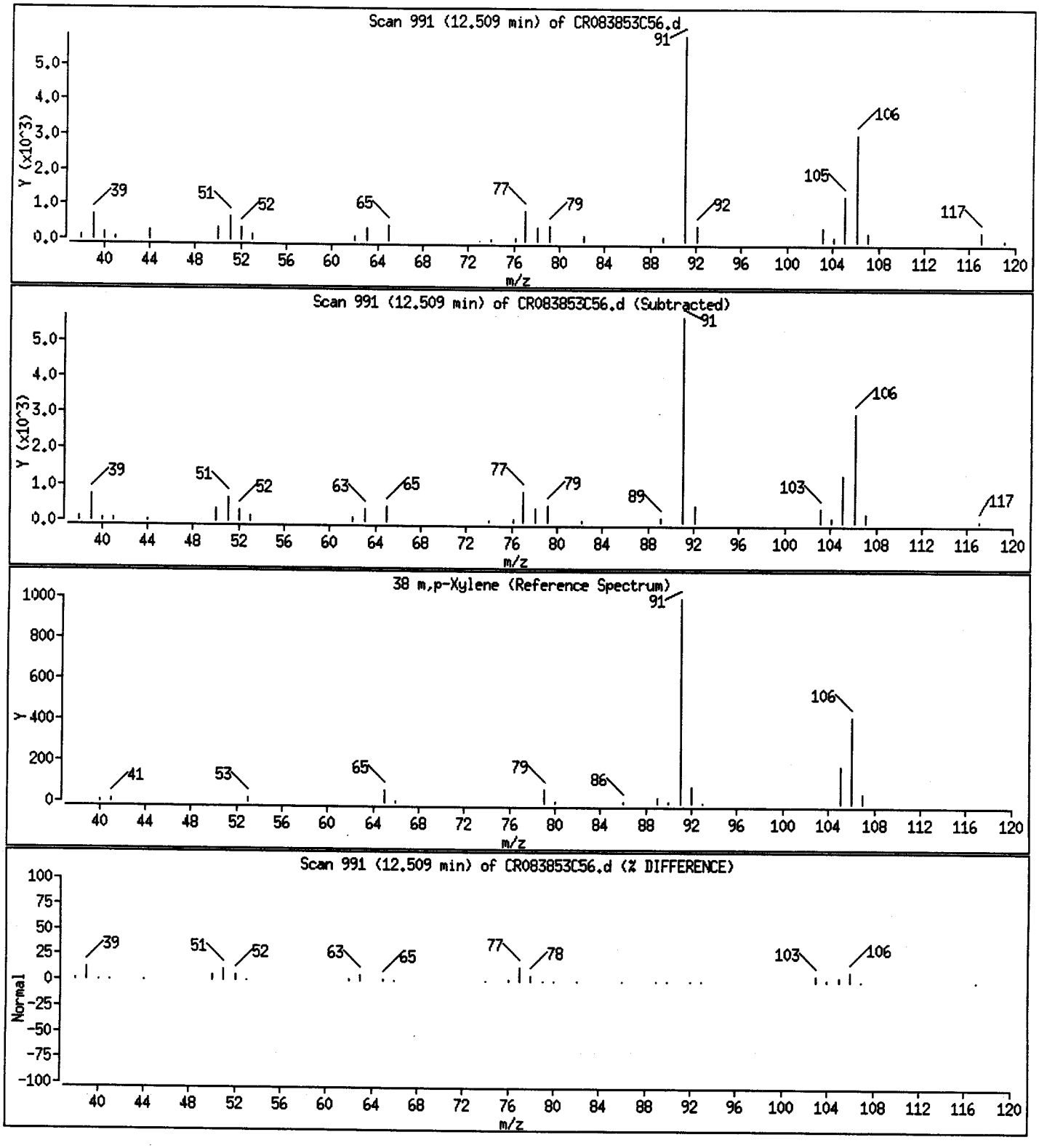
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

38 m,p-Xylene



Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d

Date : 16-FEB-1995 05:43

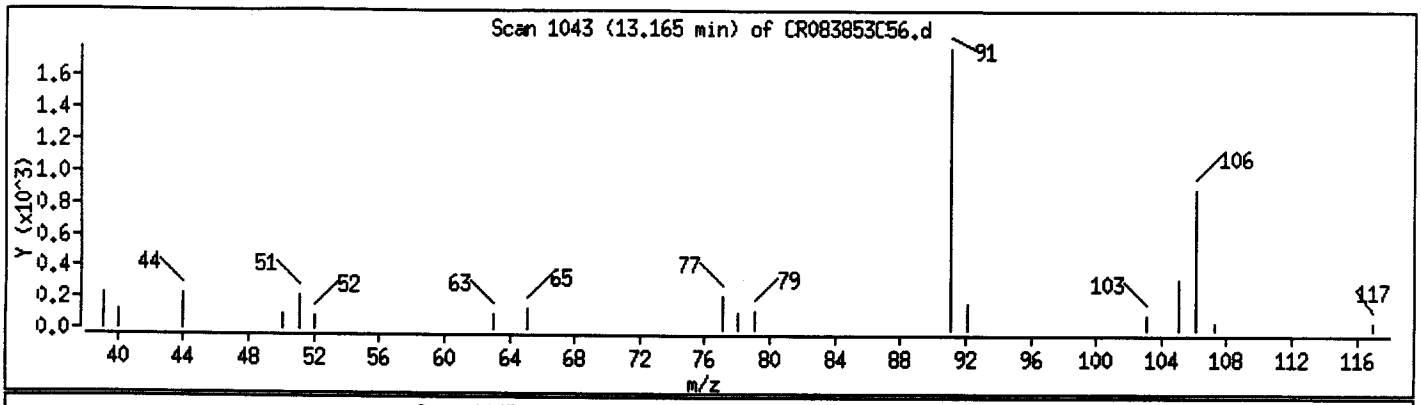
Client ID: S2 Instrument: f50056.i

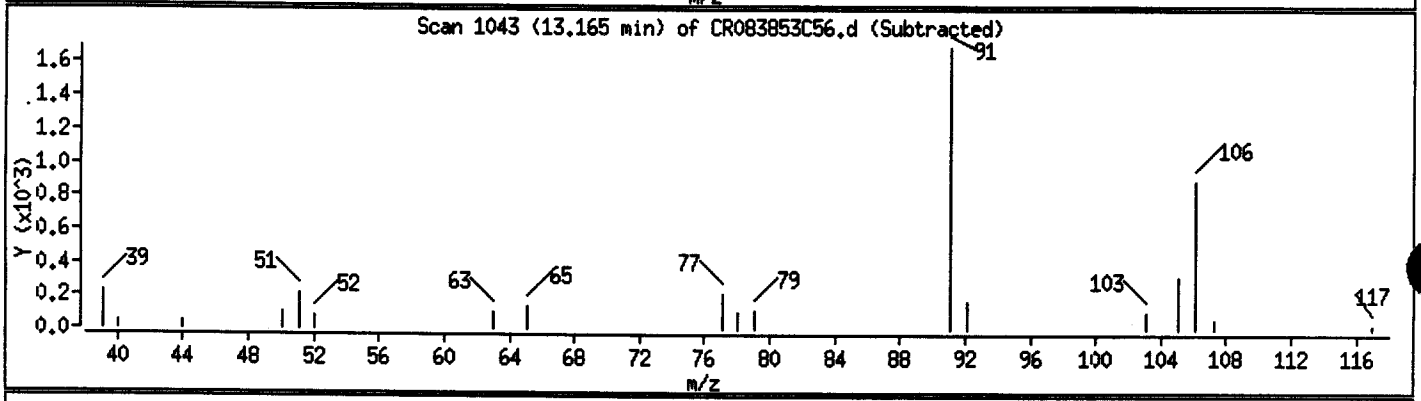
Sample Info:

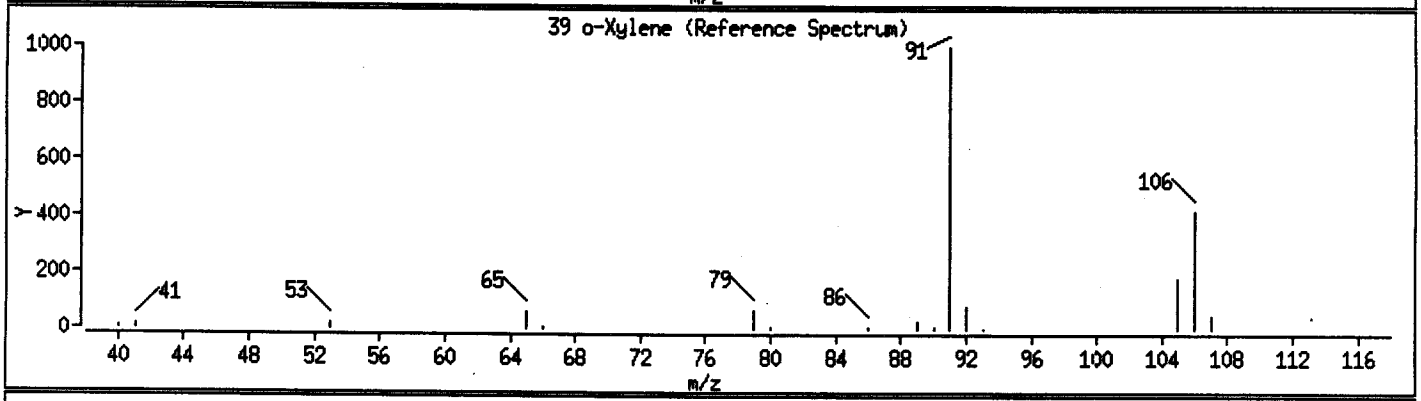
Purge Volume: 5.0 Operator: 1948

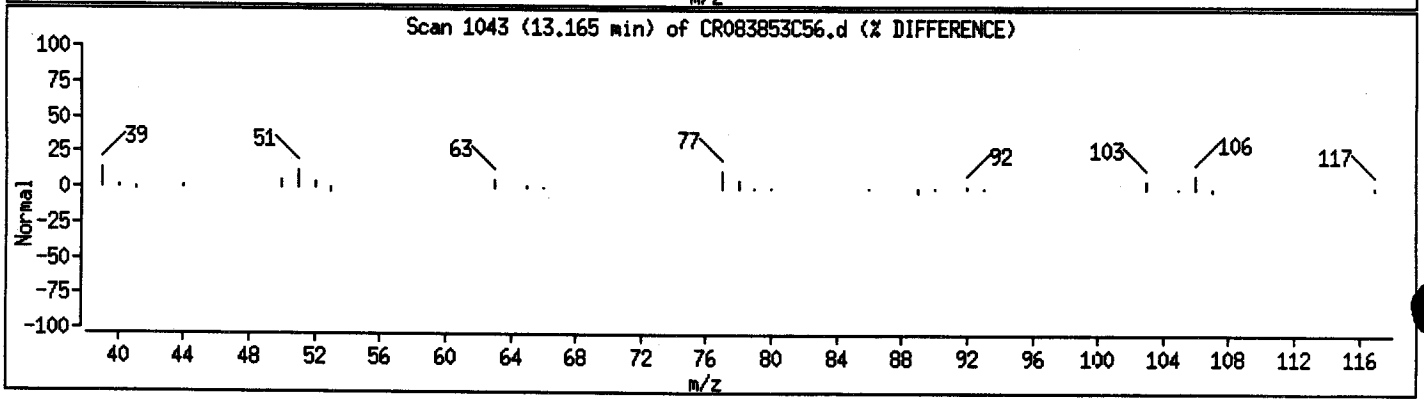
Column phase: DB624 Column diameter: 0.53

39 o-Xylene









Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d

Date : 16-FEB-1995 05:43

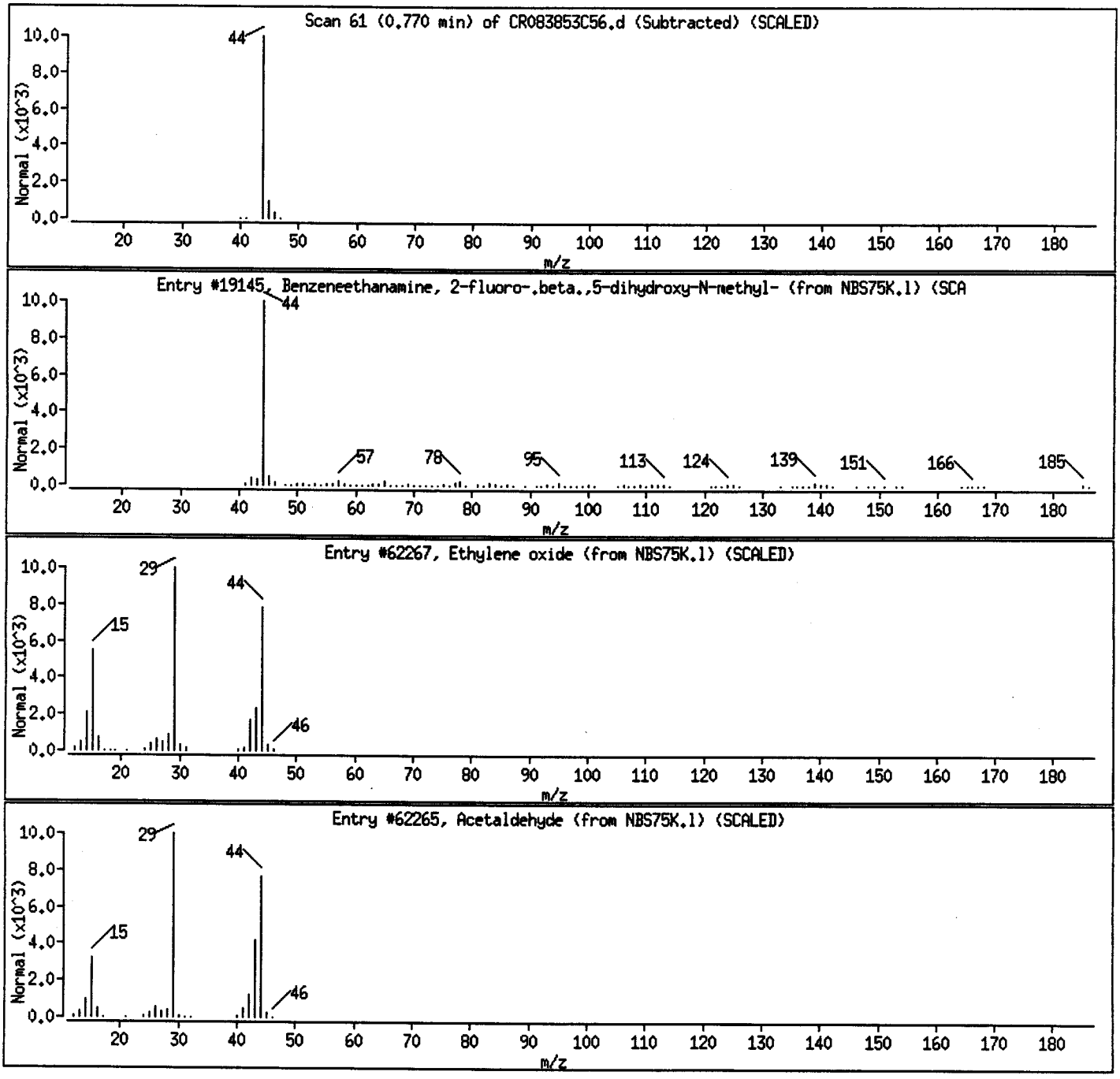
Client ID: S2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Ethylene oxide	75-21-8	NBS75K.l	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44



Data File: /chem/f50056.i/BF950215B56.b/CR083853C56.d

Date : 16-FEB-1995 05:43

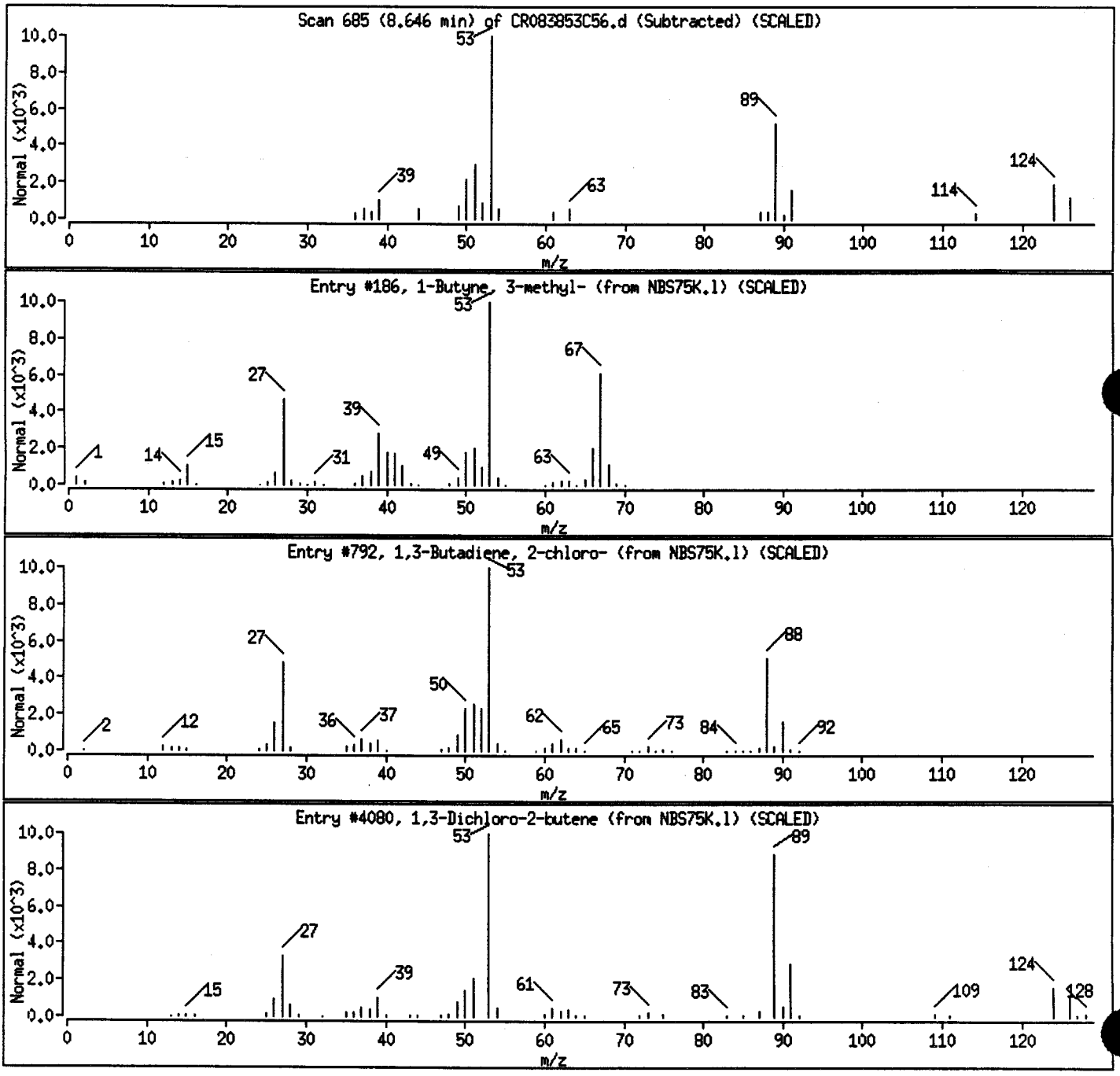
Client ID: S2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
unknown hydrocarbon						
1-Butyne, 3-methyl-	598-23-2	NBS75K.l	186	50	C5H8	68
1,3-Butadiene, 2-chloro-	126-99-8	NBS75K.l	792	50	C4H5Cl	88
1,3-Dichloro-2-butene	926-57-8	NBS75K.l	4080	40	C4H6Cl2	124



PPS#: _____

.AB INSTRUCTIONS:

RECEIPT DATE: 02/10/95 CASE#: 30073-00003 SAS#: DUE DATE:

VOA
GC/MS WORKSHEET COMPUCHEM#: 683553R' J[ ] J3[ ] D[ ] (:1)
2J[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: Report type: A

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: S2

GC/MS ANALYSIS: VS 2/16/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BF950215BS6 Disk ( )
Blank Filename CB950215BS6 Disk ( )
Standard Filename CS950215BS6 Disk ( )
Sample Filename CR083553CS6 Disk ( )

ANALYST(S): Injection 1948 L.A. Smith Work-up 1948 L.A. Smith

/MS REVIEW

CONDITION CODE JA

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 02

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 01

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review [signature] Date 2/20/95 Auditor_____ Date___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s):_____/_____

QA COMMENTS:

Initials_____ Date___/___/___

FINAL REVIEW: Initials_____ Date___/___/___

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683553
Client ID# 52
Instrument Blank ID# CB950215B56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 61 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DC / 88

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083849A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083849A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083849A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2000	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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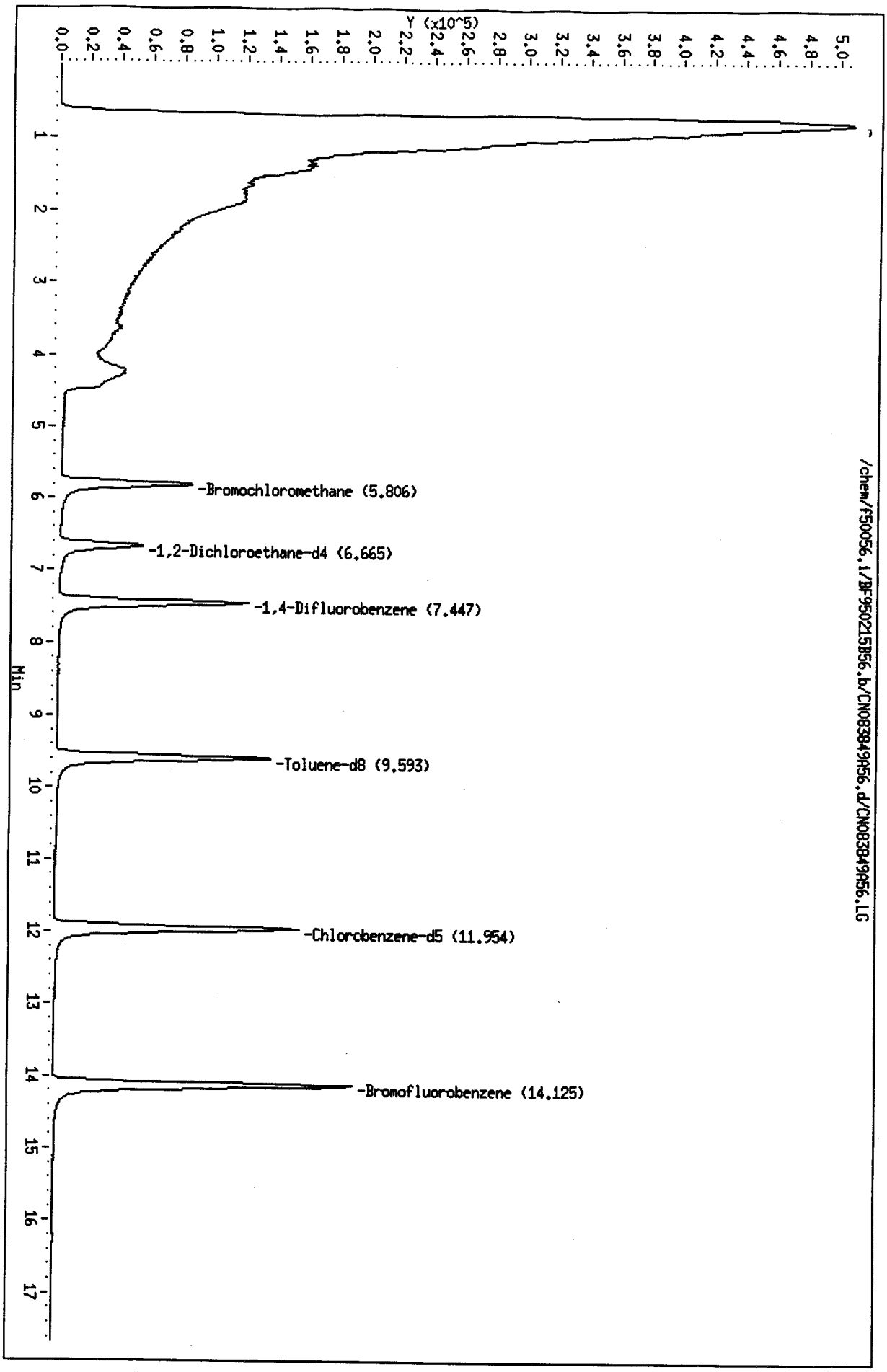
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BF950215B56.b/CN0838A9A56.d
Date : 15-FEB-1995 22:59
Client ID: S3
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
/chem/f50056.i/BF950215B56.b/CN0838A9A56.d/CN0838A9A56.LG
Y (x10^5)
Min
-Bromochloromethane (5.806)
-1,2-Dichloroethane-d4 (6.665)
-1,4-Difluorobenzene (7.447)
-Toluene-d8 (9.593)
-Chlorobenzene-d5 (11.954)
-Bromofluorobenzene (14.125)

Data File: /chem/f50056.i/BF950215B56.b/CN083849A56.d
Report Date: 20-Feb-1995 12:26

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CN083849A56.d
Lab Smp Id: 683849 Client Smp ID: S3
Inj Date : 15-FEB-1995 22:59
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.794	5.844	(1.000)	70963	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.498	(1.000)	305425	250.0	
*	3 Chlorobenzene-d5	117.00	11.954	12.017	(1.000)	327736	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.703	(1.148)	135670	269.9	53.98
$	5 Toluene-d8	98.00	9.593	9.644	(0.803)	288407	262.4	52.47
$	6 Bromofluorobenzene	95.00	14.125	14.188	(1.182)	251965	234.5	46.91
	7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
	10 Bromomethane	94.00		1.565	Compound Not Detected.			
	11 Chloroethane	64.00		1.704	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
	13 Acetone	43.00		3.156	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.635	3.661	(0.627)	5802	15.98	3.20(a)
	16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
	19 2-Butanone	43.00		5.731	Compound Not Detected.			
	20 Chloroform	83.00		6.097	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
	23 Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CN083849A56.d
Report Date: 20-Feb-1995 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
25	Trichloroethene	130.00		7.763		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.609		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
30	Toluene	91.00		9.745		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.590		Compound Not Detected.		
34	2-Hexanone	43.00		11.146		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.083		Compound Not Detected.		
36	Chlorobenzene	112.00		12.054		Compound Not Detected.		
37	Ethylbenzene	106.00		12.357		Compound Not Detected.		
38	m,p-Xylene	106.00		12.585		Compound Not Detected.		
39	o-Xylene	106.00		13.254		Compound Not Detected.		
40	Styrene	104.00		13.304		Compound Not Detected.		
41	Bromoform	173.00		13.531		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.254		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/CN083849A56.d

Date : 15-FEB-1995 22:59

Client ID: S3

Instrument: f50056.i

Sample Info:

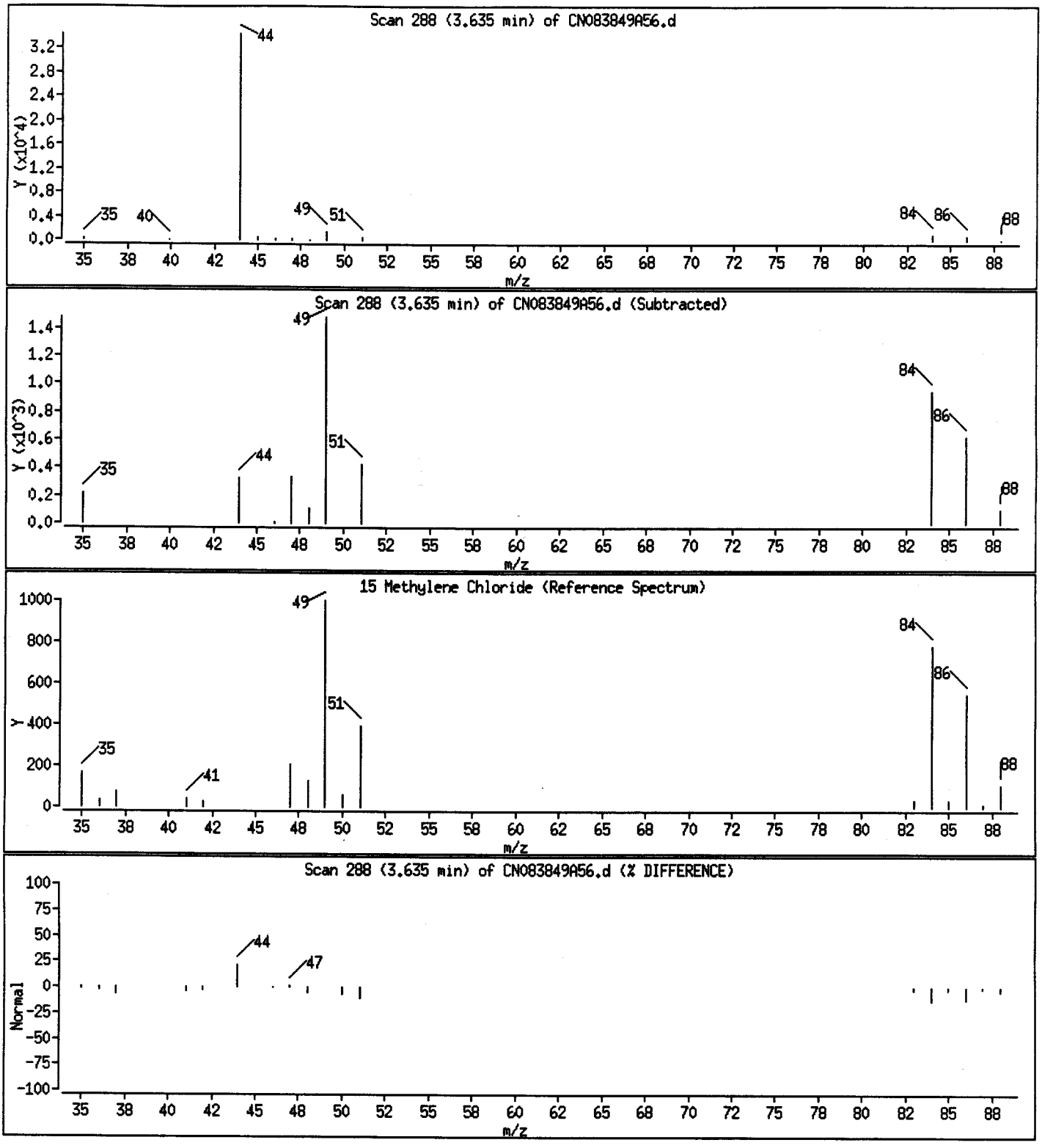
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BF950215B56.b/CN083849A56.d

Date : 15-FEB-1995 22:59

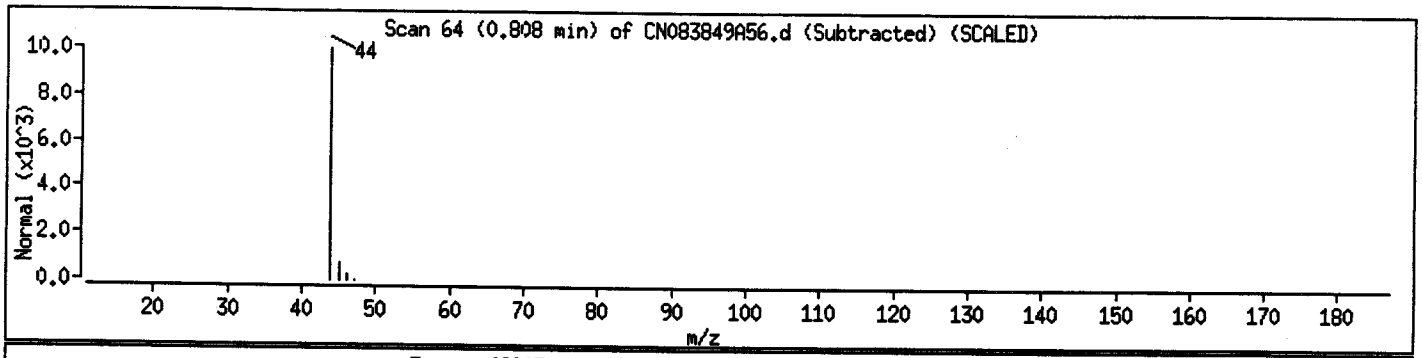
Client ID: S3 Instrument: f50056.i

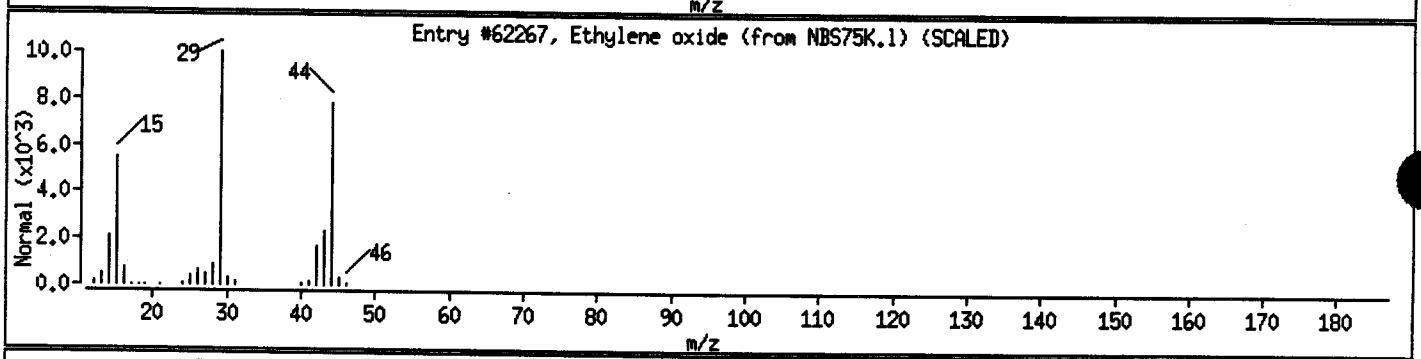
Sample Info:

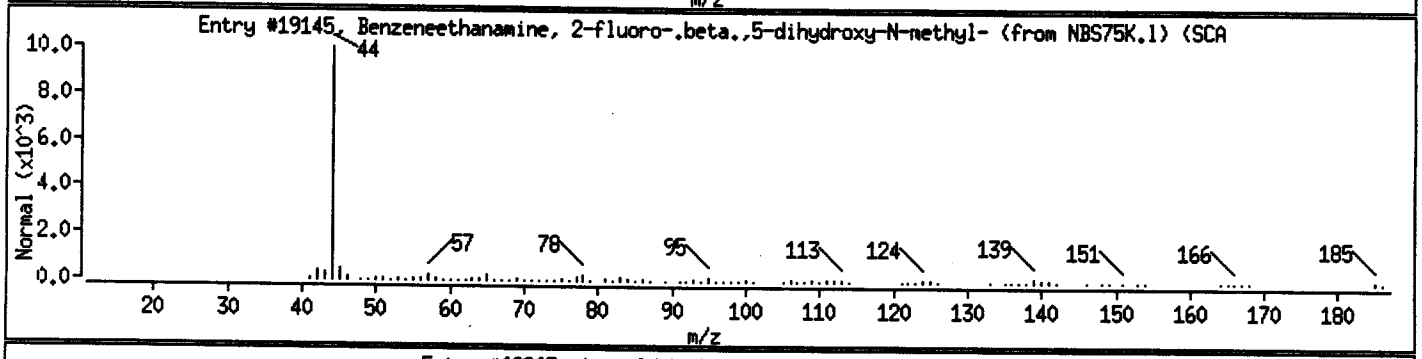
Purge Volume: 5.0 Operator: 2011

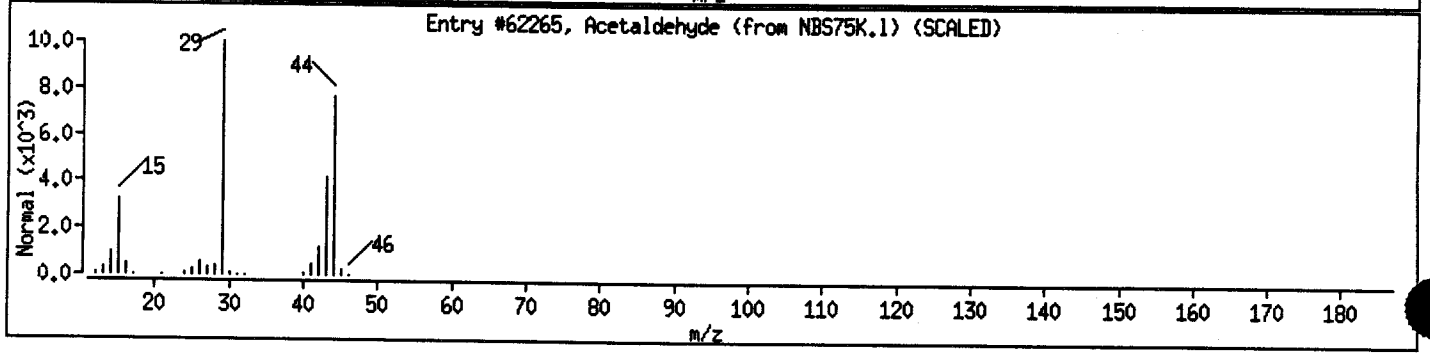
Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44









LAB INSTRUCTIONS:
PPS#115 + DICHLORODIFLUOROMETHANE

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00003 DUE DATE: 03/10/9

VOA
GC/MS WORKSHEET COMPUCHEM#: 683849

J1[ ] J3[ ] D1[ ] (:1)
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

Sample date: 020795 Report type: 0

SAMPLE ID#: S3

GC/MS ANALYSIS CK 2/15/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added _____ ul
Surrogate Standard Volume Added _____ ul
BFB Filename V5-950215S56 Disk ( )
Blank Filename CB950215B56 Disk ( )
Standard Filename CS950215B56 Disk ( )
Sample Filename CN08384S6B56 Disk ( )

ANALYST(S): Injection 2011 Work-up JKiehl

GC/MS REVIEW

CONDITION CODE: 01C

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 01

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review JKiehl Date 2/20/95 Auditor _____ Date ____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ____/____/____

FINAL REVIEW: Initials _____ Date ____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683849
Client ID# S3
Instrument Blank ID# CB950215B5B
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 64 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / RF

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683871

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083871A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	2	J
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	45	
540-59-0	1,2-Dichloroethene (total)	42	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	8	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	12	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683871

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083871A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S4

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683871

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083871A56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	1600	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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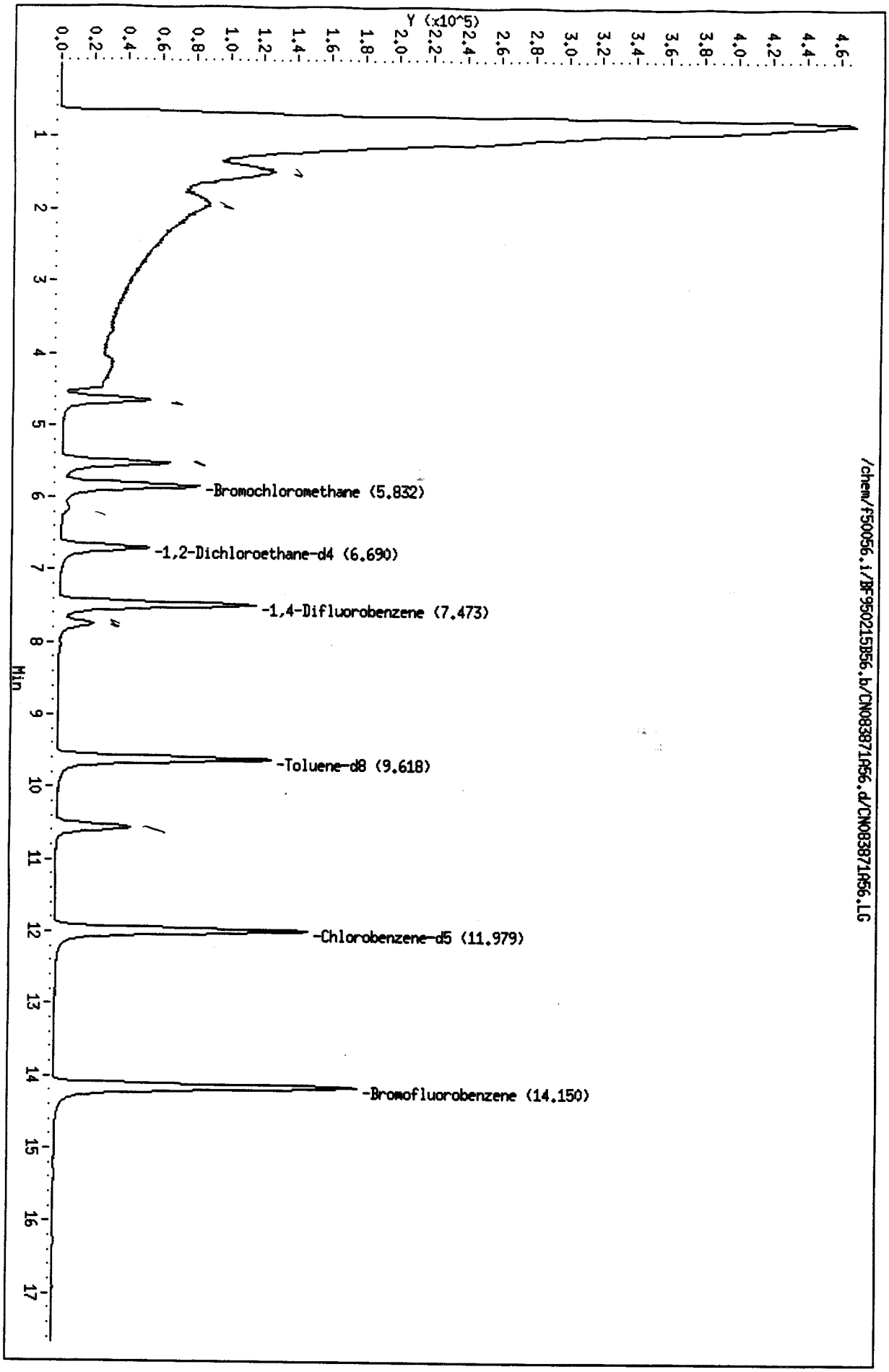
29.					
30.					


Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d
Date : 16-FEB-1995 01:22
Client ID: S4
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
/chem/f50056.i/BF950215B56.b/CN083871A56.d/CN083871A56.LG
Y (x10^5)
Min
-Bromochloromethane (5.832)
-1,2-Dichloroethane-d4 (6.690)
-1,4-Difluorobenzene (7.473)
-Toluene-d8 (9.618)
-Chlorobenzene-d5 (11.979)
-Bromofluorobenzene (14.150)

Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d
Report Date: 20-Feb-1995 12:26

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CN083871A56.d
Lab Smp Id: 683871 Client Smp ID: S4
Inj Date : 16-FEB-1995 01:22
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.832	5.844	(1.000)	67216	250.0	
* 2 1,4-Difluorobenzene	114.00	7.473	7.498	(1.000)	292190	250.0	
* 3 Chlorobenzene-d5	117.00	11.979	12.017	(1.000)	310596	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.690	6.703	(1.147)	128169	269.2	53.84
$ 5 Toluene-d8	98.00	9.618	9.644	(0.803)	261326	250.8	50.17
$ 6 Bromofluorobenzene	95.00	14.162	14.188	(1.182)	245446	241.1	48.22
7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8 Chloromethane	50.00		1.111	Compound Not Detected.			
9 Vinyl Chloride	62.00	1.262	1.224	(0.216)	2151	10.41	2.08(a)
10 Bromomethane	94.00		1.565	Compound Not Detected.			
11 Chloroethane	64.00	1.742	1.704	(0.299)	2504	12.44	2.49(a)
12 1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13 Acetone	43.00		3.156	Compound Not Detected.			
14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15 Methylene Chloride	84.00	3.686	3.661	(0.632)	2400	6.98	1.40(a)
16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17 1,1-Dichloroethane	63.00	4.645	4.645	(0.797)	166359	225.9	45.18
18 cis-1,2-Dichloroethene	96.00	5.516	5.529	(0.946)	89333	201.7	40.34
19 2-Butanone	43.00		5.731	Compound Not Detected.			
20 Chloroform	83.00		6.097	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00	6.160	6.172	(0.824)	7683	9.24	1.85(a)
22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23 Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d
Report Date: 20-Feb-1995 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 1,2-Dichloroethane	62.00		6.816	Compound Not Detected.			
	25 Trichloroethene	130.00	7.750	7.763	(1.037)	20186	40.58	8.12(a)
	26 1,2-Dichloropropane	63.00		8.066	Compound Not Detected.			
	27 Bromodichloromethane	83.00		8.609	Compound Not Detected.			
	28 cis-1,3-Dichloropropene	75.00		9.303	Compound Not Detected.			
	29 4-Methyl-2-Pentanone	43.00		9.707	Compound Not Detected.			
	30 Toluene	91.00		9.745	Compound Not Detected.			
	31 trans-1,3-Dichloropropene	75.00		10.275	Compound Not Detected.			
	32 1,1,2-Trichloroethane	97.00		10.515	Compound Not Detected.			
	33 Tetrachloroethene	164.00	10.552	10.590	(0.881)	38079	59.24	11.85
	34 2-Hexanone	43.00		11.146	Compound Not Detected.			
	35 Dibromochloromethane	129.00		11.083	Compound Not Detected.			
	36 Chlorobenzene	112.00		12.054	Compound Not Detected.			
	37 Ethylbenzene	106.00		12.357	Compound Not Detected.			
	38 m,p-Xylene	106.00		12.585	Compound Not Detected.			
	39 o-Xylene	106.00		13.254	Compound Not Detected.			
	40 Styrene	104.00		13.304	Compound Not Detected.			
	41 Bromoform	173.00		13.531	Compound Not Detected.			
	42 1,1,2,2-Tetrachloroethane	83.00		14.667	Compound Not Detected.			
M	43 1,2-Dichloroethene (total)	96.00				89333	209.8	41.97
M	44 Xylene (Total)	106.00		13.254	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

Client ID: S4

Instrument: f50056.i

Sample Info:

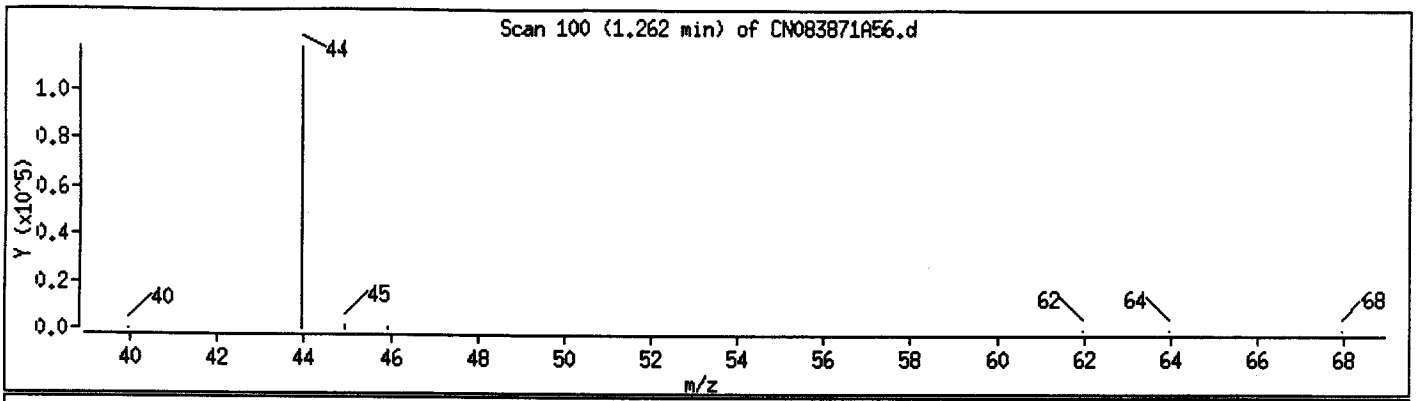
Purge Volume: 5.0

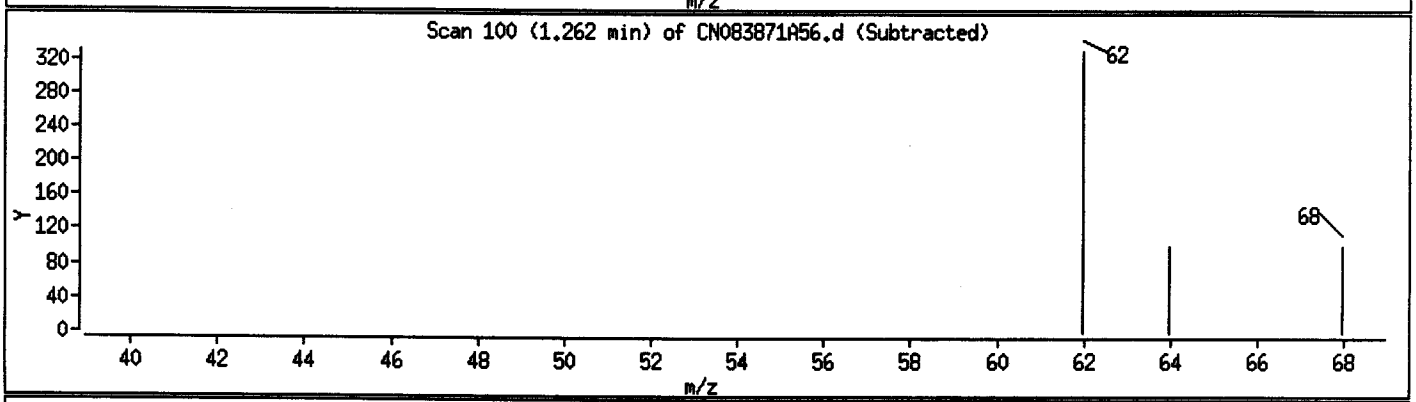
Operator: 1948

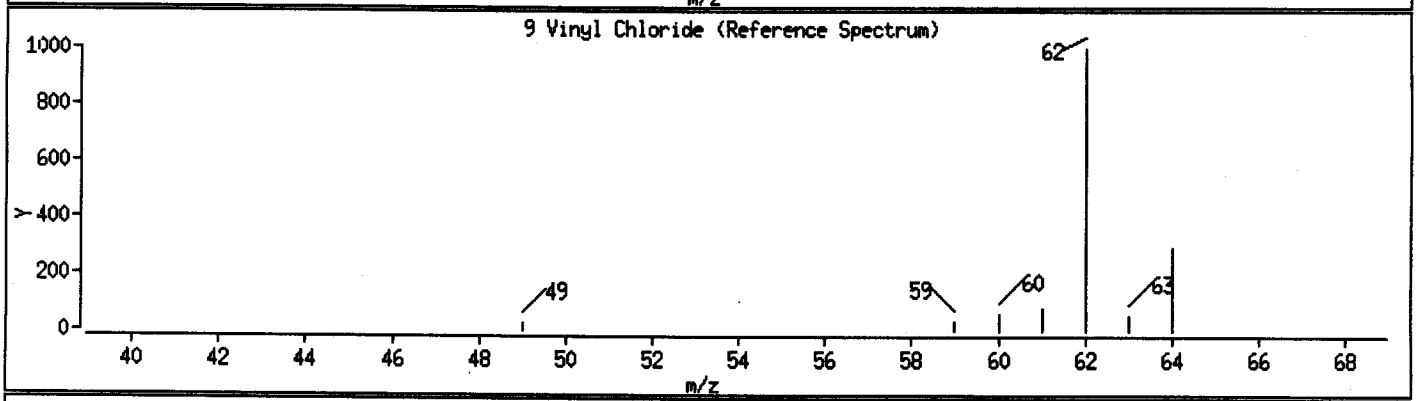
Column phase: DB624

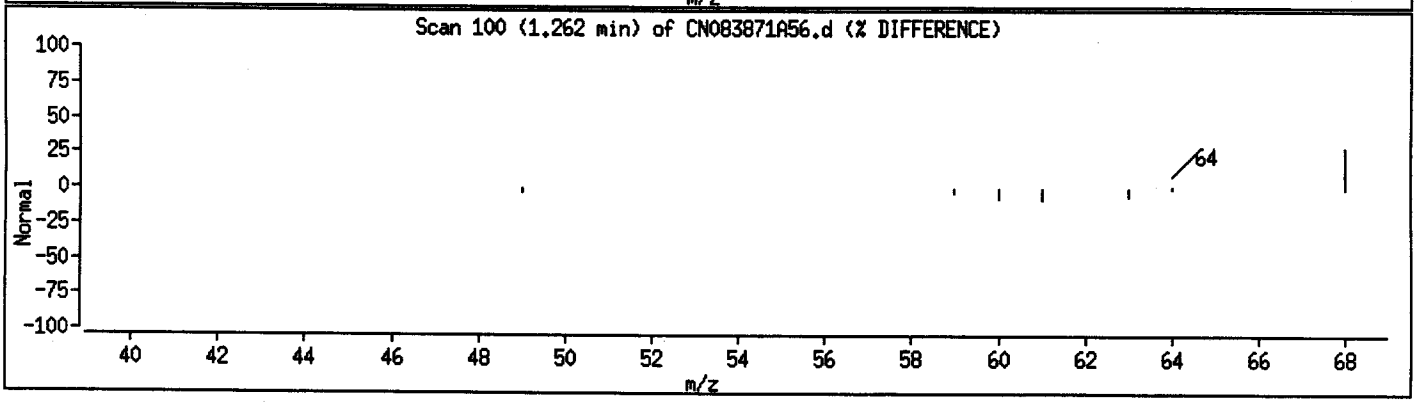
Column diameter: 0.53

9 Vinyl Chloride









Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

Client ID: S4

Instrument: f50056.i

Sample Info:

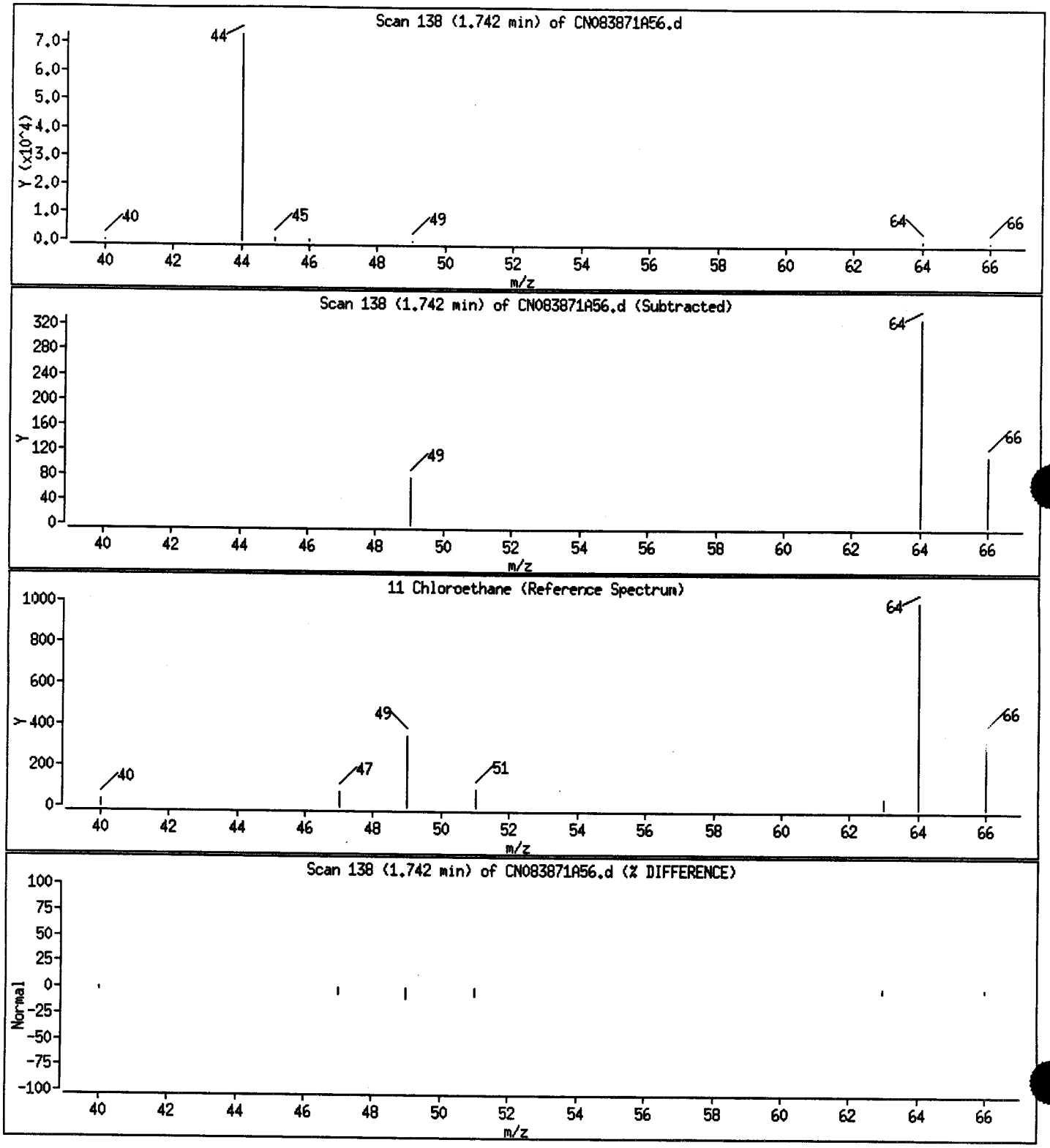
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

11 Chloroethane



Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

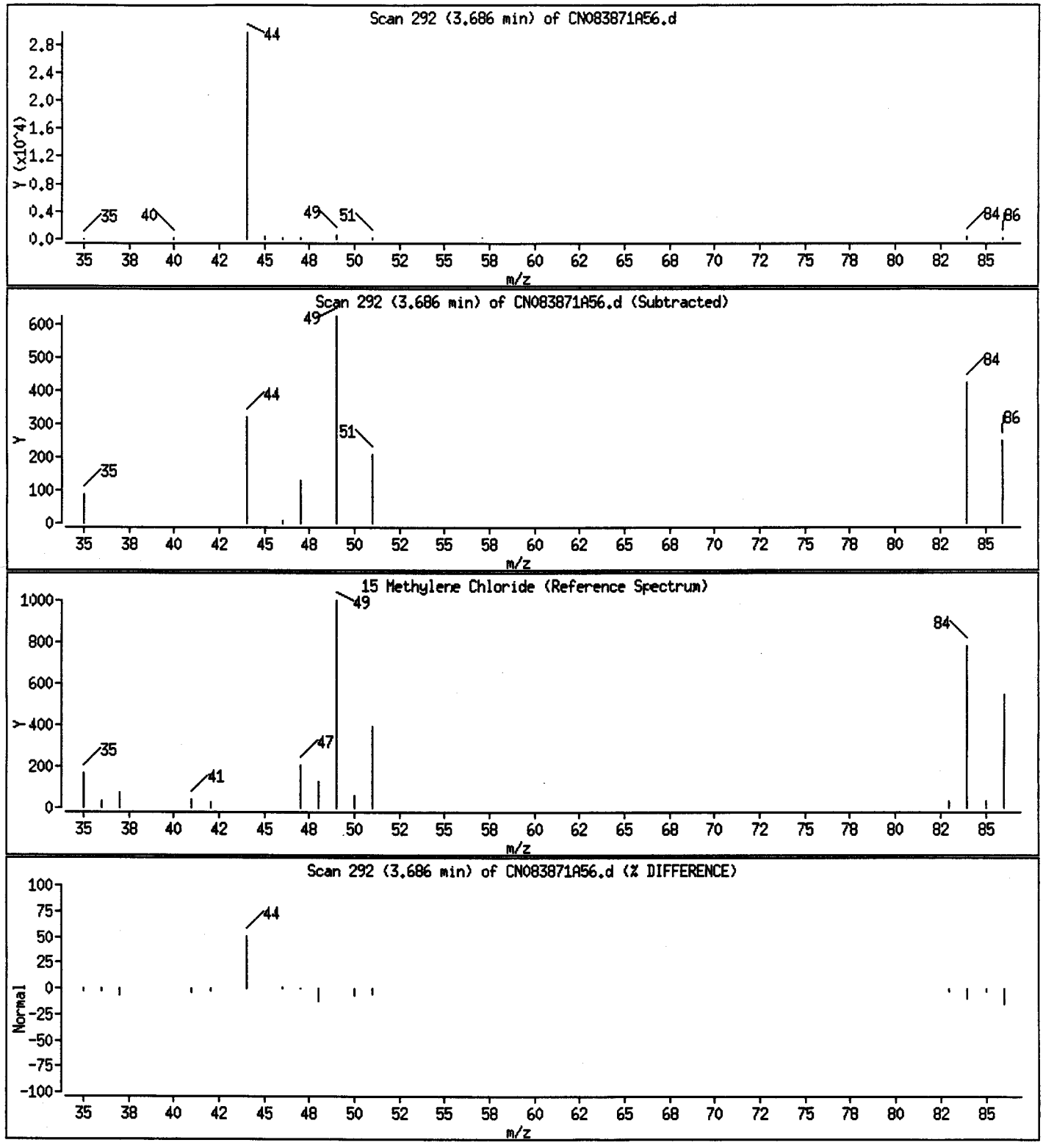
Client ID: S4 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride



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Date : 16-FEB-1995 01:22

Client ID: S4

Instrument: f50056.i

Sample Info:

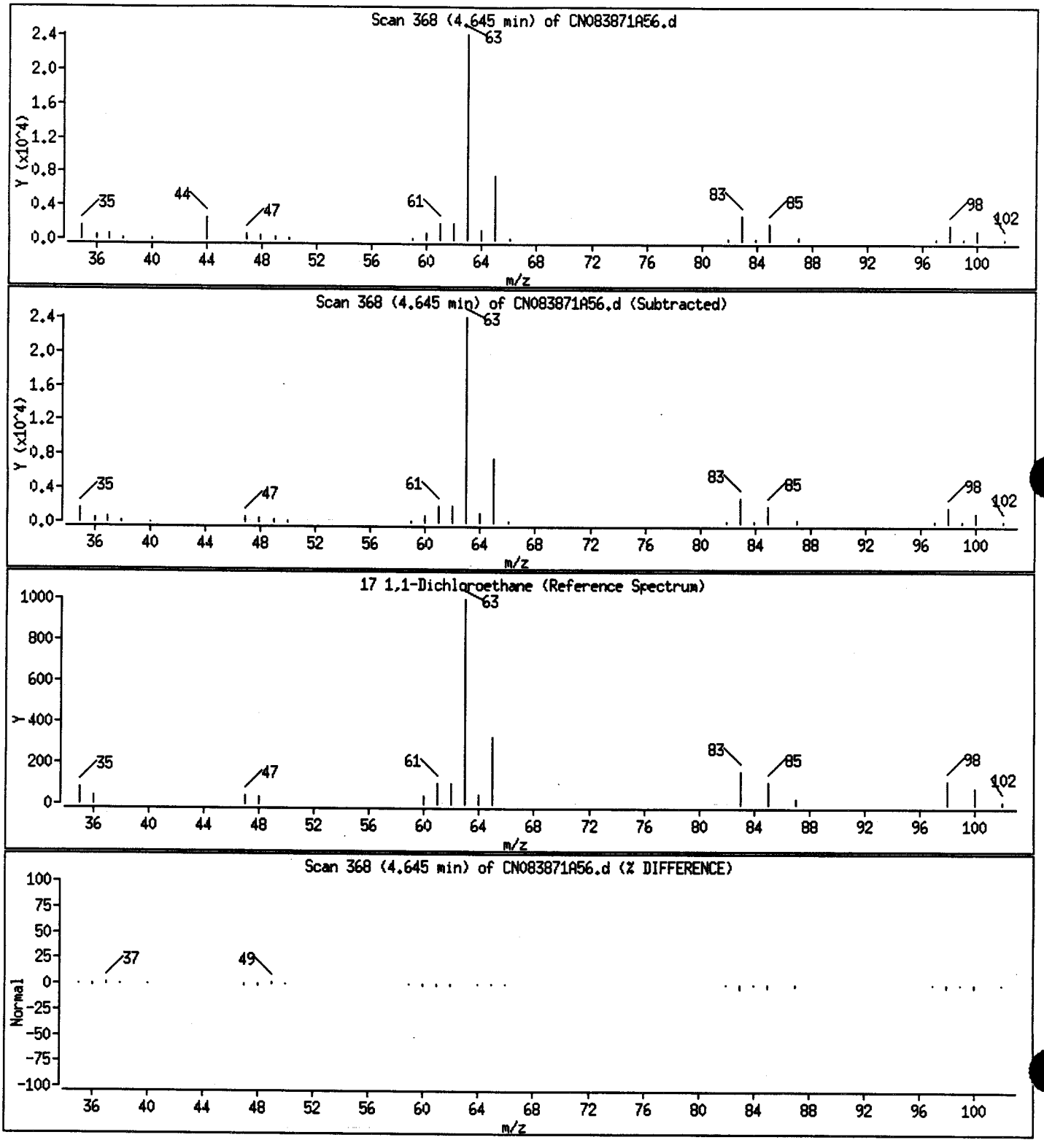
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

Client ID: S4

Instrument: f50056.i

Sample Info:

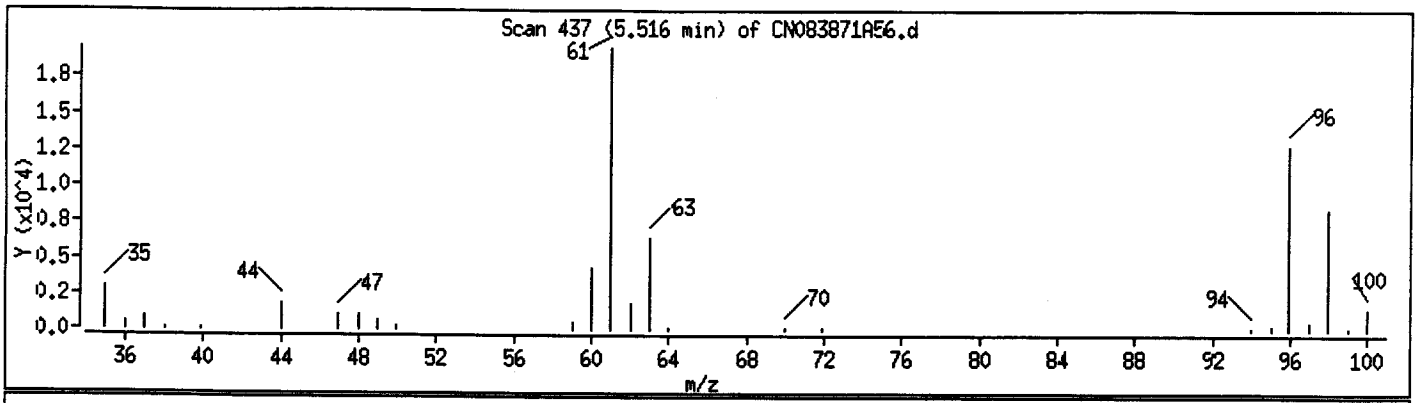
Purge Volume: 5.0

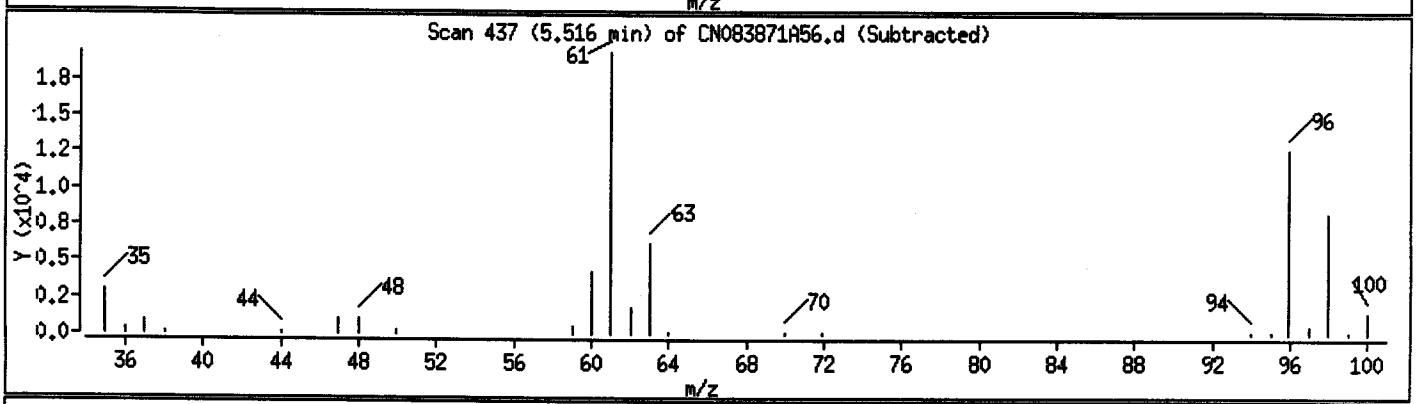
Operator: 1948

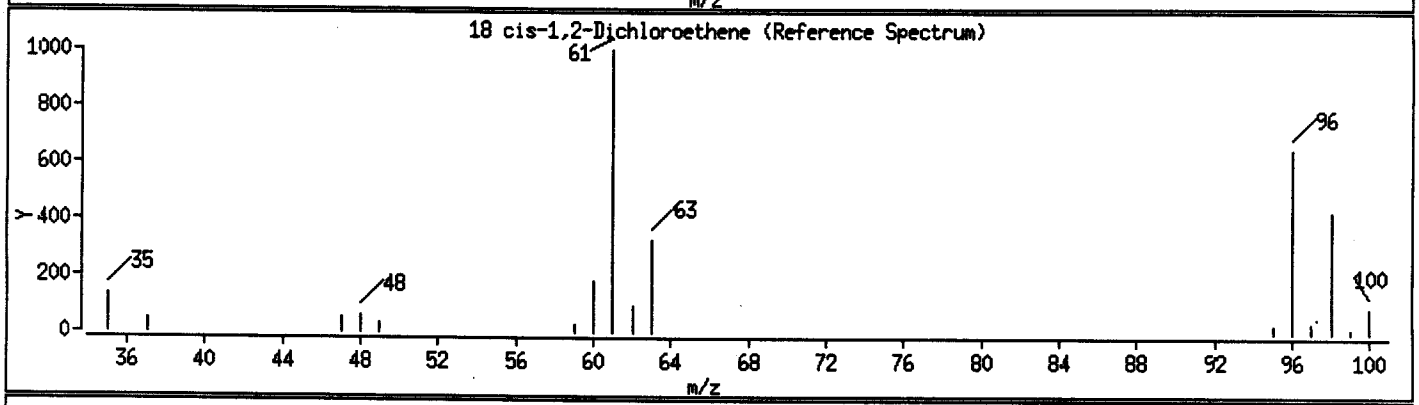
Column phase: DB624

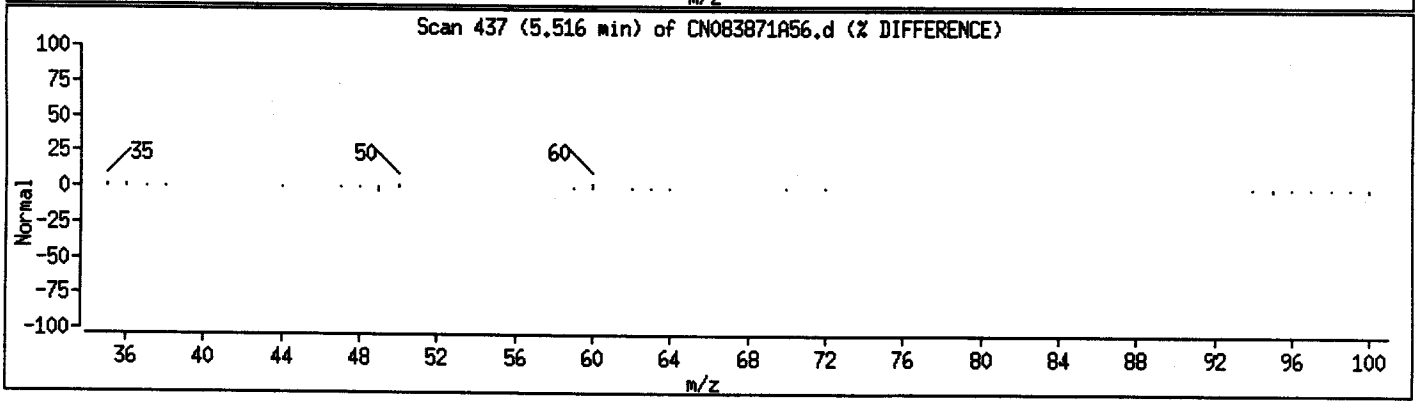
Column diameter: 0.53

18 cis-1,2-Dichlorcethene









Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

Client ID: S4

Instrument: f50056.i

Sample Info:

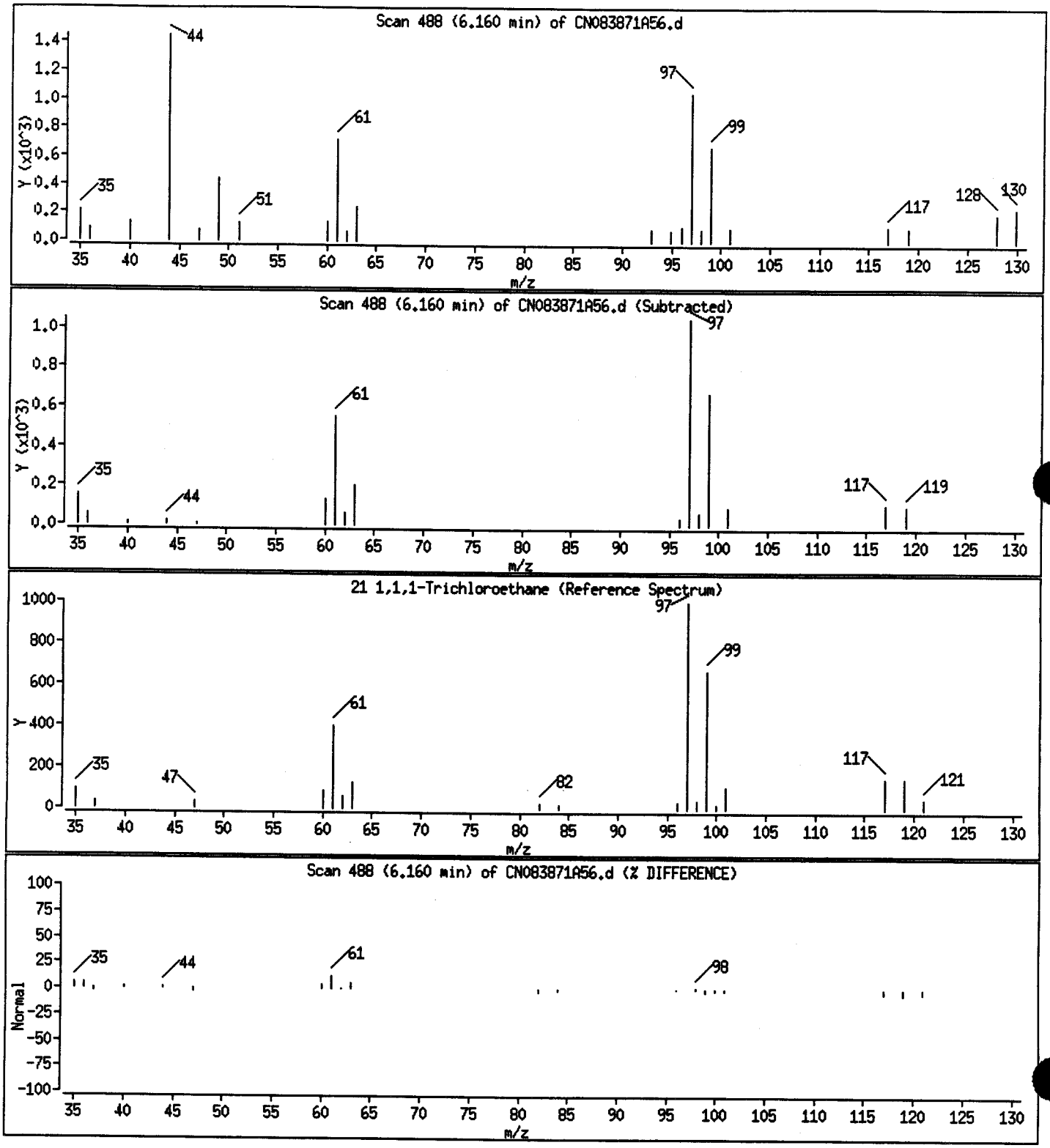
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

21 1,1,1-Trichloroethane



Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

Client ID: S4

Instrument: f50056.i

Sample Info:

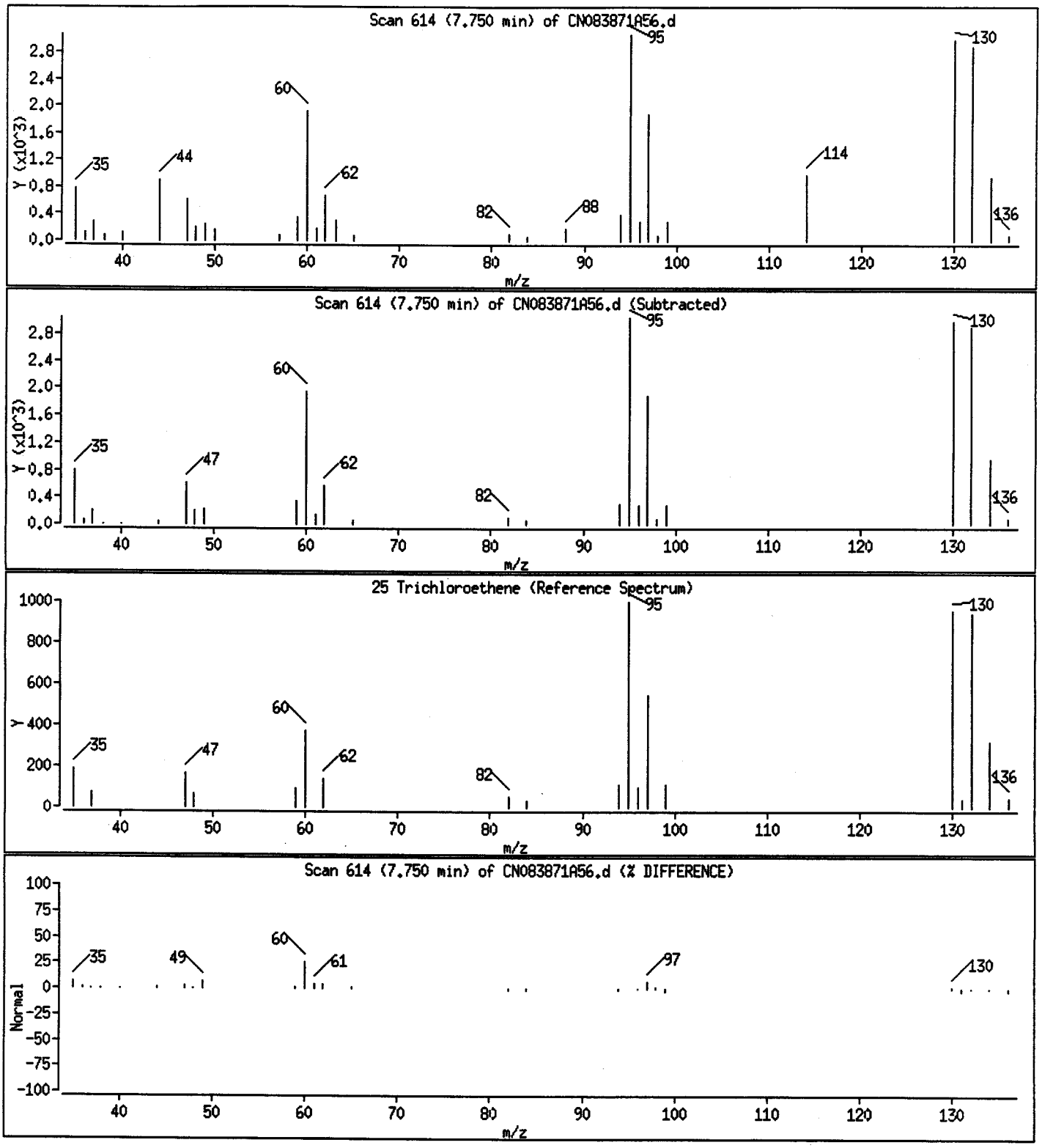
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

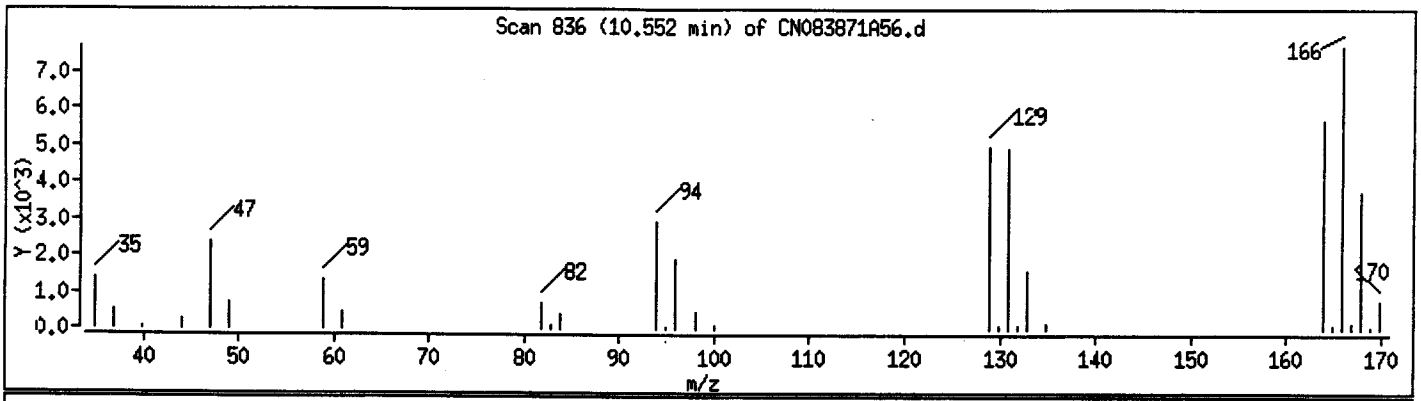
Client ID: S4 Instrument: f50056.i

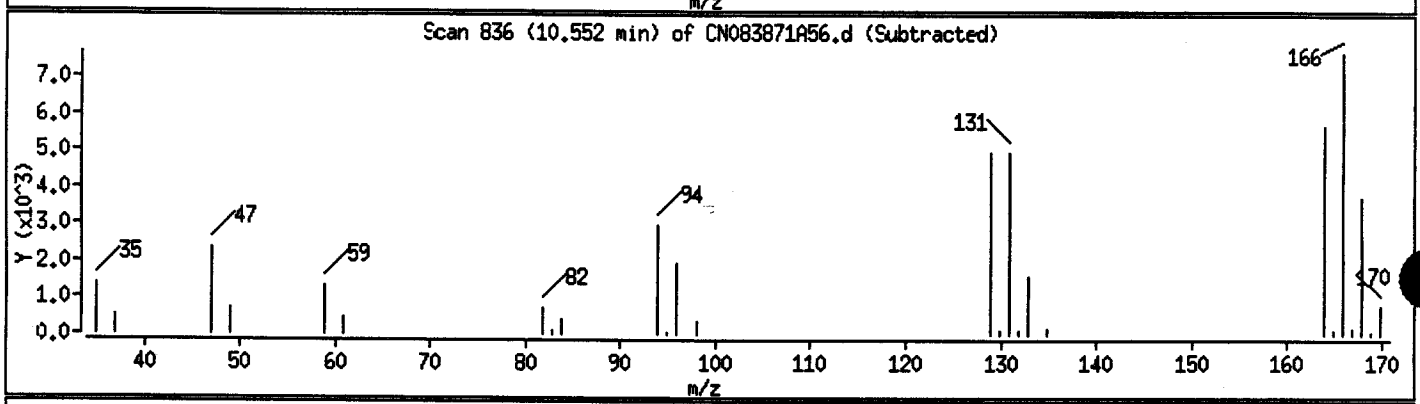
Sample Info:

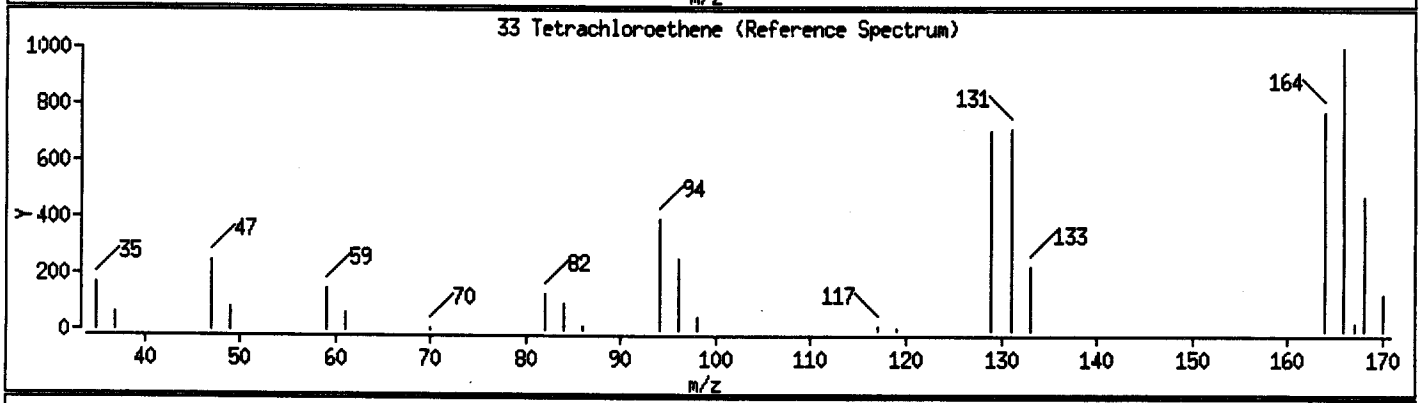
Purge Volume: 5.0 Operator: 1948

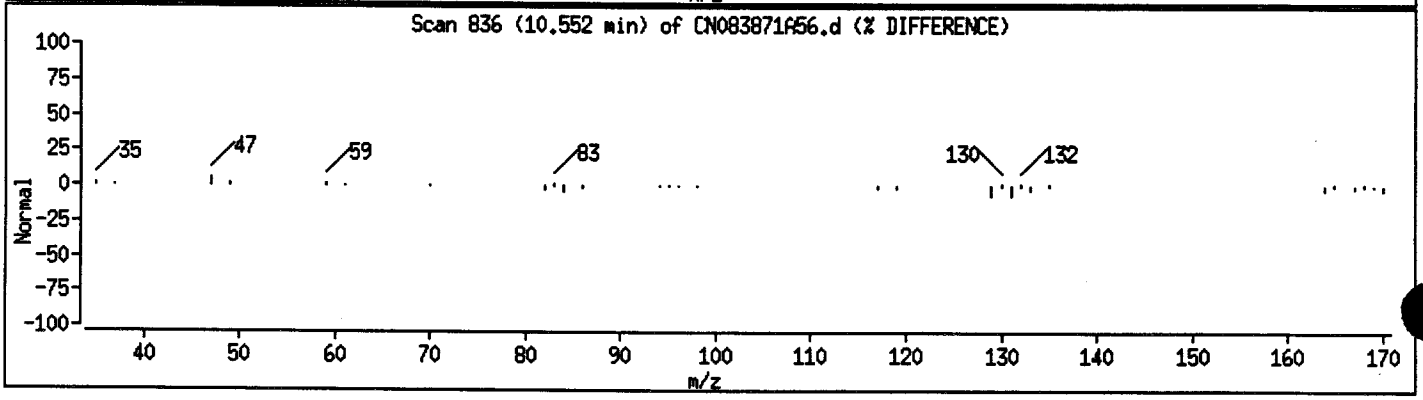
Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene









Data File: /chem/f50056.i/BF950215B56.b/CN083871A56.d

Date : 16-FEB-1995 01:22

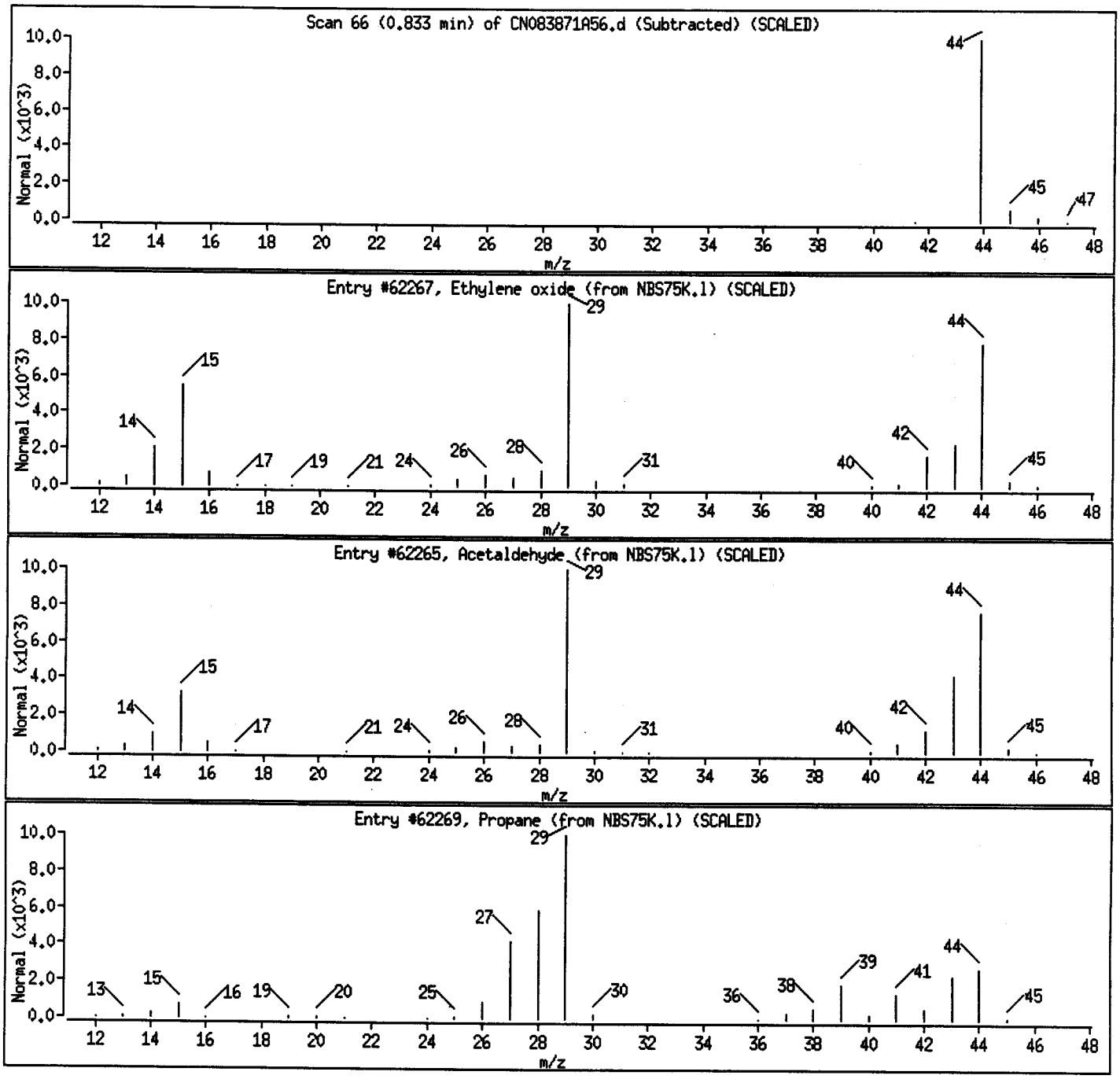
Client ID: S4 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62265	3	C2H4O	44
Propane	74-98-6	NBS75K.l	62269	2	C3H8	44



LAB INSTRUCTIONS: PPS#: _____
PPS#115 + DICHLORODIFLUOROMETHANE

RECEIPT DATE: 02/10/95 CASE#: 30073 00003 DUE DATE: 03/10

VOA J[ ] J3[ ] D[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683871 J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020795 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: S4

GC/MS ANALYSIS
Amount Purged: [ ] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added _____ ul
Surrogate Standard Volume Added _____ ul
BFB Filename _____ Disk ( )
Blank Filename _____ Disk ( )
Standard Filename _____ Disk ( )
Sample Filename _____ Disk ( )

ANALYST(S): Injection _____ Work-up _____

GC/MS REVIEW

CONDITION CODE: 01c

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 01

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review _____ Date 2/20/95 Auditor _____ Date ____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ____/____/____

FINAL REVIEW: Initials _____ Date ____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683871
Client ID# S4
Instrument Blank ID# CB950215B56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 66 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / FF

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S5

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083855C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S5

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083855C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S5

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083855C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.78	2100	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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22.					
23.					
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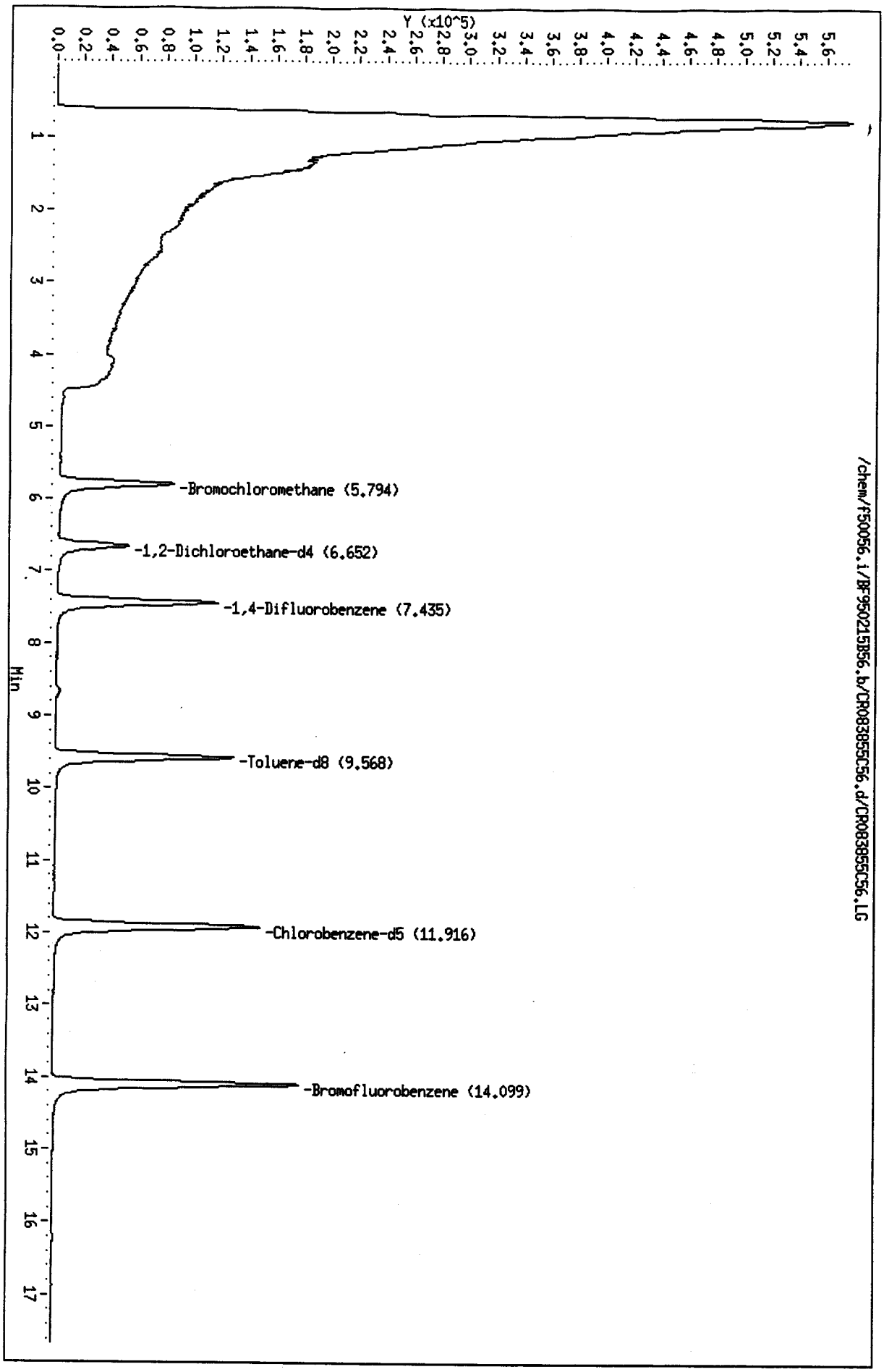
25.					
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BF9502150856.b/CR083855C56.d
Date : 16-FEB-1995 06:16
Client ID: S5
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^5)
/chem/f50056.i/BF9502150856.b/CR083855C56.d/CR083855C56.LG
-Bromochloromethane (5.794)
-1,2-Dichloroethane-d4 (6.652)
-1,4-Difluorobenzene (7.435)
-Toluene-d8 (9.568)
-Chlorobenzene-d5 (11.916)
-Bromofluorobenzene (14.099)
Min

Data File: /chem/f50056.i/BF950215B56.b/CR083855C56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CR083855C56.d
Lab Smp Id: 683855 Client Smp ID: S5
Inj Date : 16-FEB-1995 06:16
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.794	5.844	(1.000)	67901	250.0	
* 2	1,4-Difluorobenzene	114.00	7.435	7.498	(1.000)	289410	250.0	
* 3	Chlorobenzene-d5	117.00	11.903	12.017	(1.000)	314572	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.639	6.703	(1.146)	127514	265.1	53.02
$ 5	Toluene-d8	98.00	9.568	9.644	(0.804)	259059	245.5	49.11
$ 6	Bromofluorobenzene	95.00	14.099	14.188	(1.185)	238609	231.4	46.28
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10	Bromomethane	94.00		1.565	Compound Not Detected.			
11	Chloroethane	64.00	1.691	1.704	(0.292)	6954	34.19	6.84(a)
12	1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15	Methylene Chloride	84.00		3.661	Compound Not Detected.			
16	trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
19	2-Butanone	43.00		5.731	Compound Not Detected.			
20	Chloroform	83.00		6.097	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23	Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CR083855C56.d
Report Date: 20-Feb-1995 12:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
25	Trichloroethene	130.00		7.763		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.609		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
30	Toluene	91.00		9.745		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.590		Compound Not Detected.		
34	2-Hexanone	43.00		11.146		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.083		Compound Not Detected.		
36	Chlorobenzene	112.00		12.054		Compound Not Detected.		
37	Ethylbenzene	106.00		12.357		Compound Not Detected.		
38	m,p-Xylene	106.00		12.585		Compound Not Detected.		
39	o-Xylene	106.00		13.254		Compound Not Detected.		
40	Styrene	104.00		13.304		Compound Not Detected.		
41	Bromoform	173.00		13.531		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.254		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/CR083855C56.d

Date : 16-FEB-1995 06:16

Client ID: S5

Instrument: f50056.i

Sample Info:

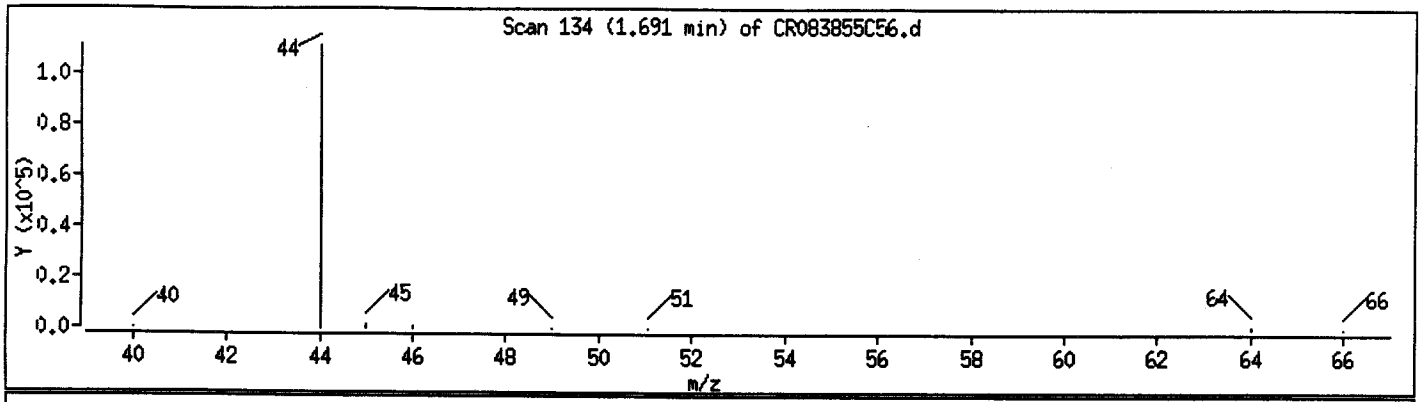
Purge Volume: 5.0

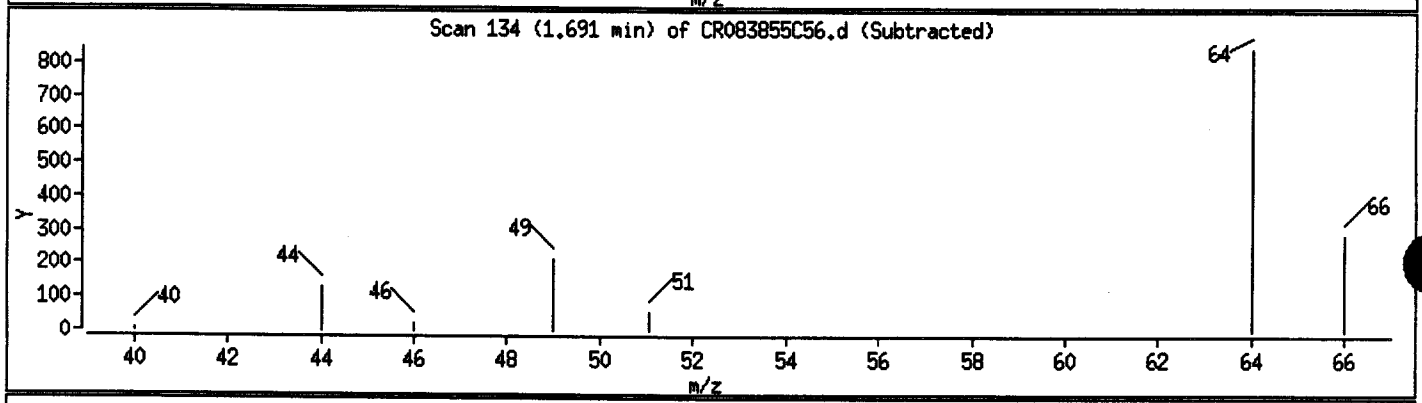
Operator: 1948

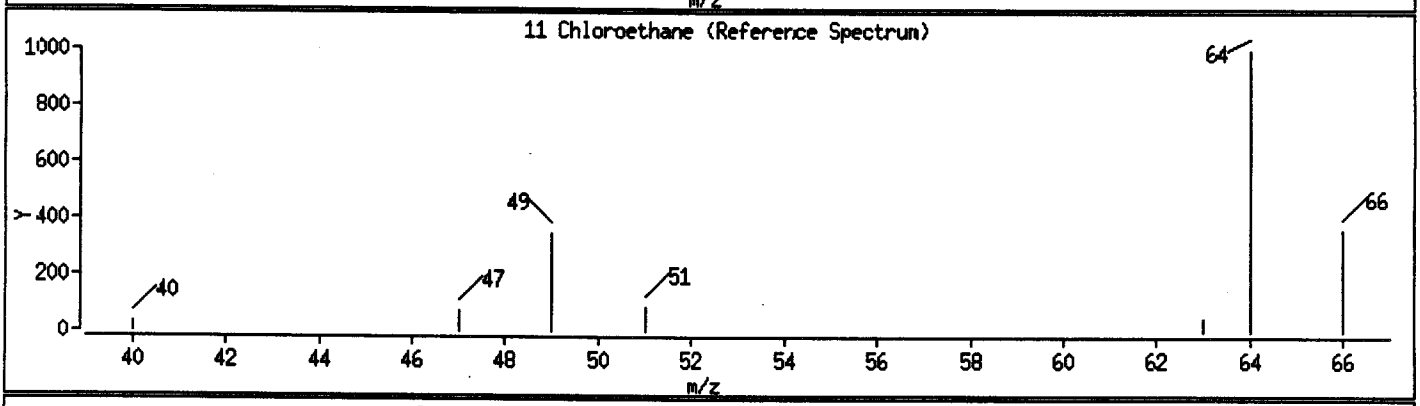
Column phase: DB624

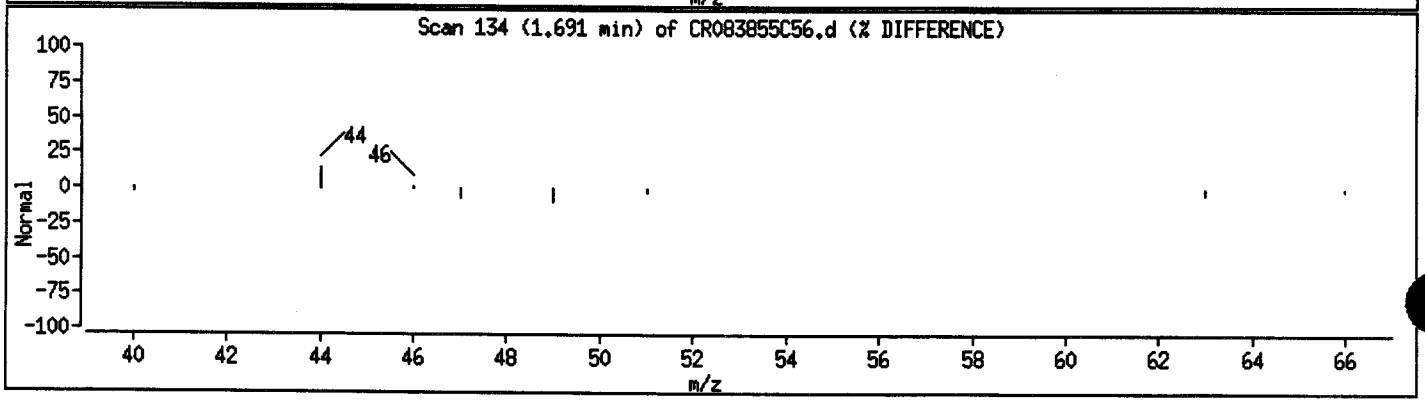
Column diameter: 0.53

11 Chloroethane









Data File: /chem/f50056.i/BF950215B56.b/CR083855C56.d

Date : 16-FEB-1995 06:16

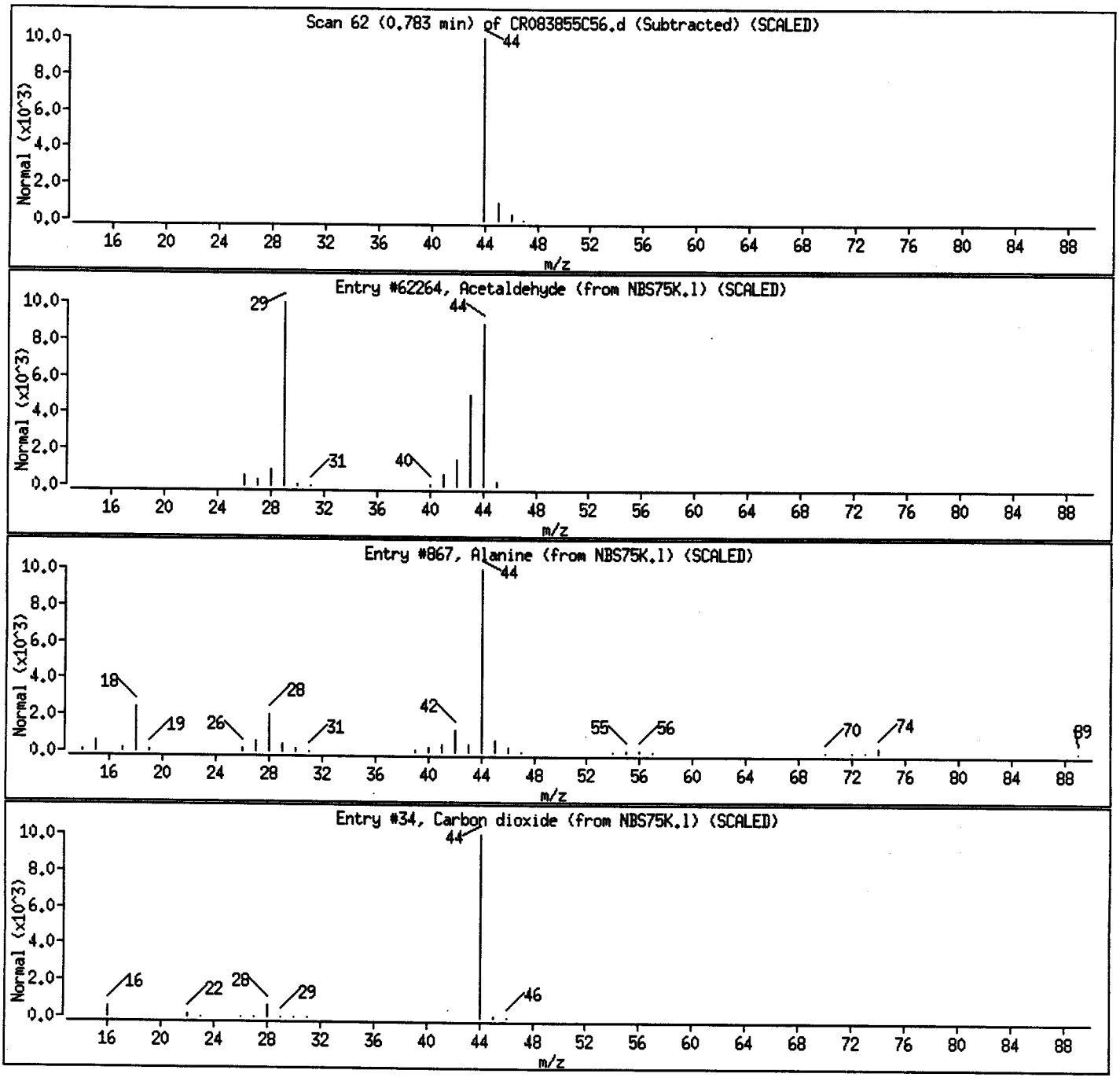
Client ID: S5 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Acetaldehyde	75-07-0	NBS75K.l	62264	2	C2H4O	44
Alanine	56-41-7	NBS75K.l	867	2	C3H7NO2	89
Carbon dioxide	124-38-9	NBS75K.l	34	2	CO2	44



AB INSTRUCTIONS:

PPS#: _____

ECEIPT DATE: 2/10/95 CASE#: 30073 SAS#: DUE DATE:

VOA
C/MS WORKSHEET

COMPUCHEM#: 6535552

J[ ] J3[ ] D[ ] (:1)
2J[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

Sample date: Report type: A

SAMPLE ID#: 55

GC/MS ANALYSIS: VS 2/16/95

Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BF9502155BSC. Disk ( )
Blank Filename CB9502155BSC. Disk ( )
Standard Filename CS9502155BSC Disk ( )
Sample Filename CR0X3455C5C Disk ( )

ANALYST(S): Injection 1948 V.A Smith Work-up 1948 V.A Smith

GC/MS REVIEW

CONDITION CODE: JA

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 1

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required _____

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review OStuhr Date 2/20/95 Auditor _____ Date ___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ___/___/___

FINAL REVIEW: Initials _____ Date ___/___/___

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 653855
Client ID# 35
Instrument Blank ID# CB950215B56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 62 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / 983

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683983

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083983A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683983

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083983A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SFW1

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683983

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083983A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.83	1500	JB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
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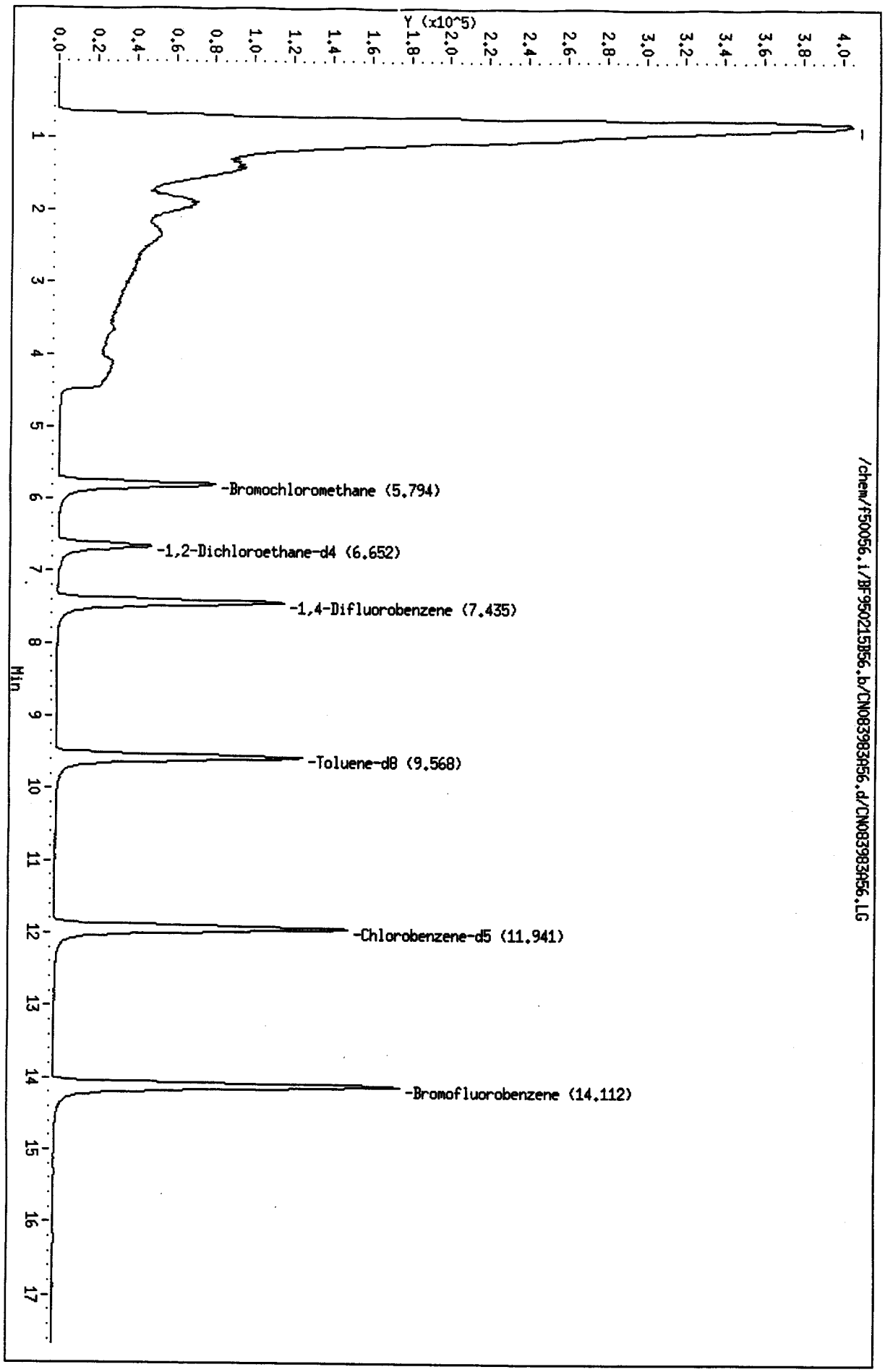
25.					
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BF9502153B56.b/CN0839833A56.d
Date : 16-FEB-1995 02:00
Client ID: SFW1
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BF9502153B56.b/CN0839833A56.d/CN0839833A56.LG
-Bromochloromethane (5.794)
-1,2-Dichloroethane-d4 (6.652)
-1,4-Difluorobenzene (7.435)
-Toluene-d8 (9.568)
-Chlorobenzene-d5 (11.941)
-Bromofluorobenzene (14.112)

Data File: /chem/f50056.i/BF950215B56.b/CN083983A56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CN083983A56.d
Lab Smp Id: 683983 Client Smp ID: SFW1
Inj Date : 16-FEB-1995 02:00
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.794	5.844	(1.000)	67524	250.0	
* 2 1,4-Difluorobenzene	114.00	7.422	7.498	(1.000)	297945	250.0	
* 3 Chlorobenzene-d5	117.00	11.941	12.017	(1.000)	314833	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.652	6.703	(1.148)	123869	259.0	51.79
$ 5 Toluene-d8	98.00	9.568	9.644	(0.801)	267209	253.0	50.61
$ 6 Bromofluorobenzene	95.00	14.112	14.188	(1.182)	233496	226.2	45.25
7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8 Chloromethane	50.00		1.111	Compound Not Detected.			
9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10 Bromomethane	94.00		1.565	Compound Not Detected.			
11 Chloroethane	64.00		1.704	Compound Not Detected.			
12 1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13 Acetone	43.00		3.156	Compound Not Detected.			
14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15 Methylene Chloride	84.00	3.648	3.661	(0.630)	3130	9.06	1.81(a)
16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17 1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
18 cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
19 2-Butanone	43.00		5.731	Compound Not Detected.			
20 Chloroform	83.00		6.097	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23 Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CN083983A56.d
Report Date: 20-Feb-1995 12:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
25	Trichloroethene	130.00		7.763		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.609		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
30	Toluene	91.00		9.745		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.590		Compound Not Detected.		
34	2-Hexanone	43.00		11.146		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.083		Compound Not Detected.		
36	Chlorobenzene	112.00		12.054		Compound Not Detected.		
37	Ethylbenzene	106.00		12.357		Compound Not Detected.		
38	m,p-Xylene	106.00		12.585		Compound Not Detected.		
39	o-Xylene	106.00		13.254		Compound Not Detected.		
40	Styrene	104.00		13.304		Compound Not Detected.		
41	Bromoform	173.00		13.531		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.254		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/CN083983A56.d

Date : 16-FEB-1995 02:00

Client ID: SFW1

Instrument: f50056.i

Sample Info:

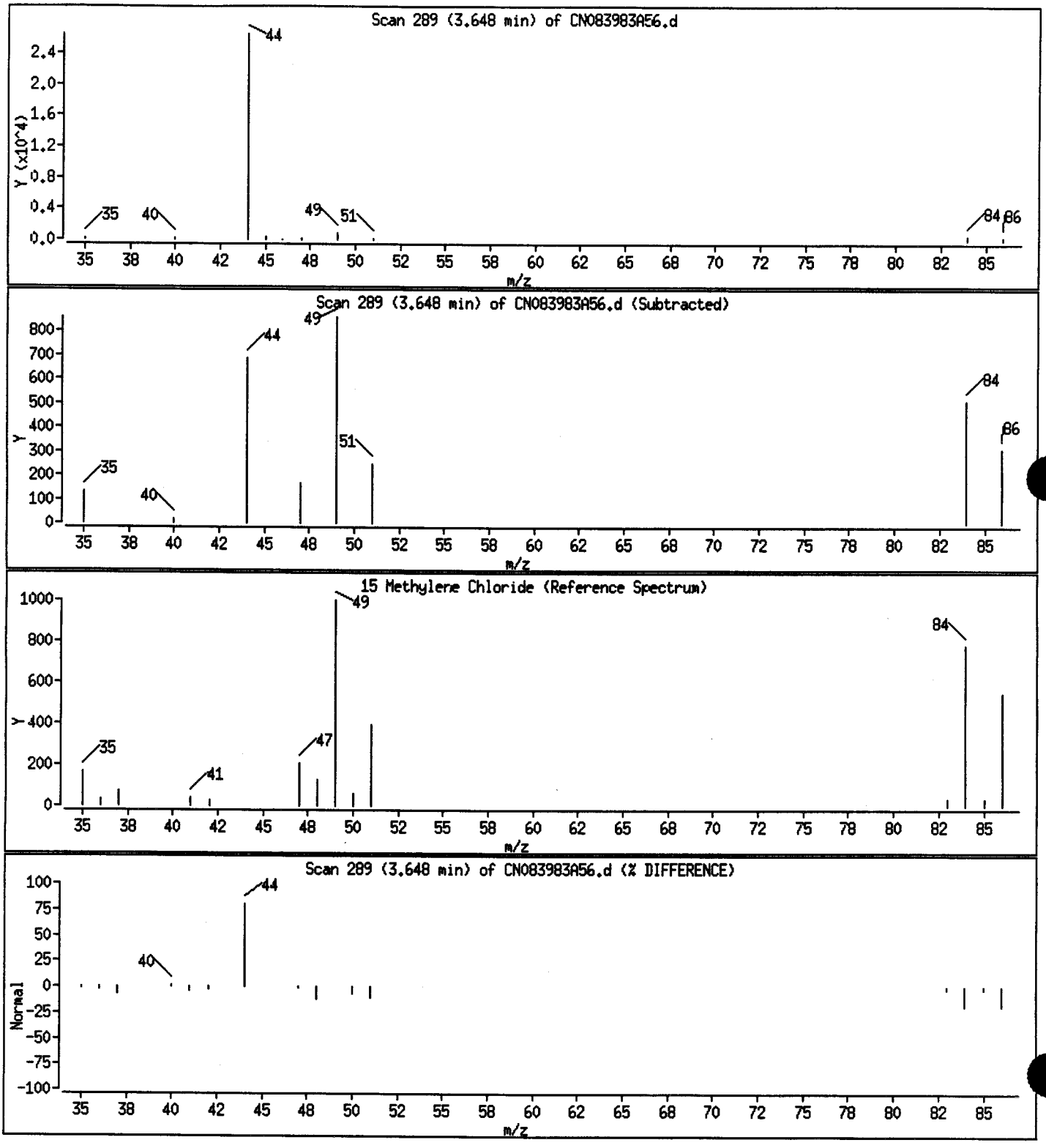
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50056.i/BF950215B56.b/CN083983A56.d

Date : 16-FEB-1995 02:00

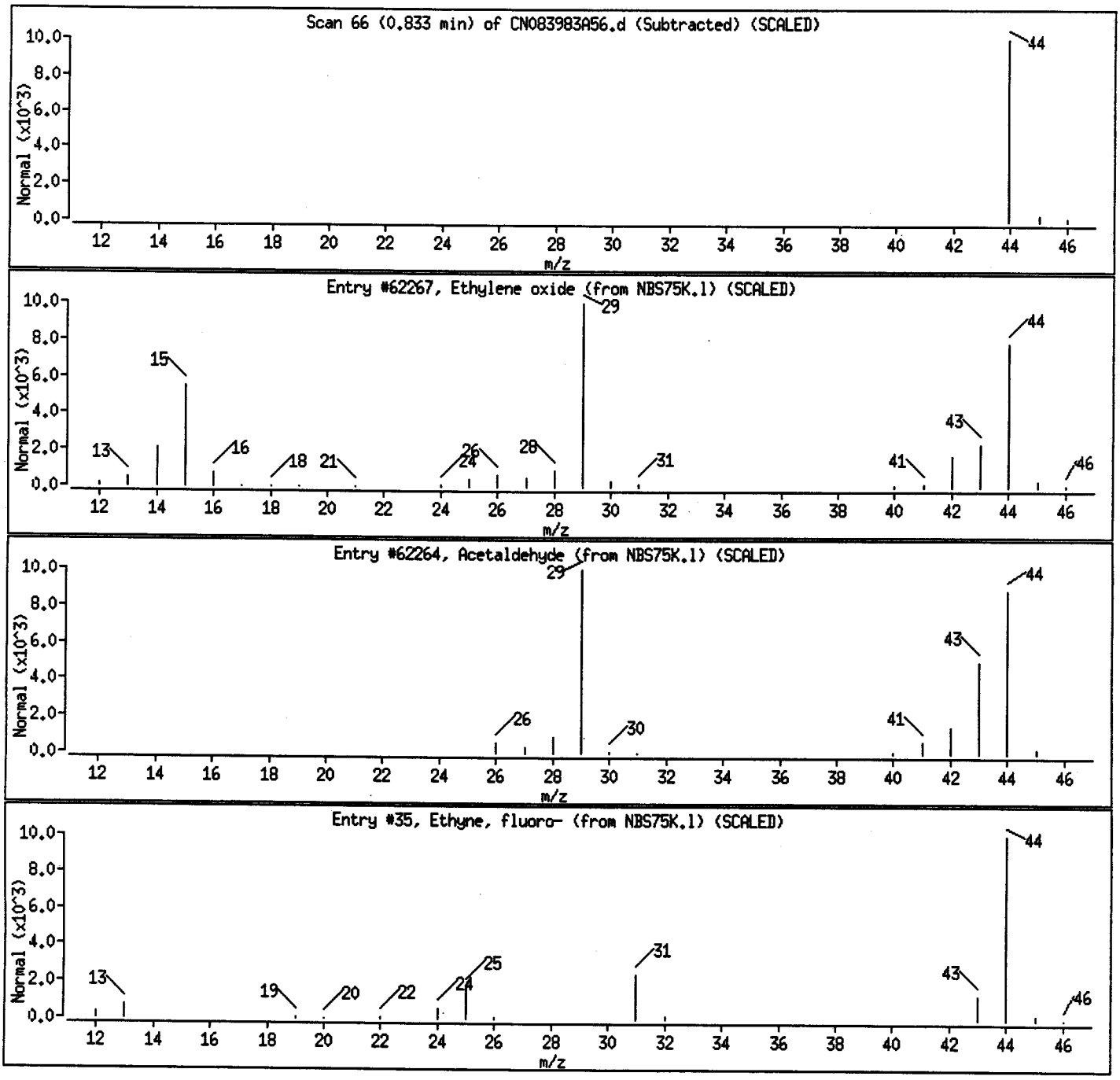
Client ID: SFW1 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	5	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.l	62264	3	C2H4O	44
Ethyne, fluoro-	2713-09-9	NBS75K.l	35	3	C2HF	44



LAB INSTRUCTIONS:
SEE PPS# 115 VOA+DCDFM

PPS#: _____

RECEIPT DATE: 02/11/95 CASE#: 30073 00003 DUE DATE: 03/10

VOA
GC/MS WORKSHEET COMPUCHEM#: 683983

J[ ] J3[ ] D[ ] (:1)
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 021095 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: SFW1

GC/MS ANALYSIS 2/16/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BF950215B56 Disk ( )
Blank Filename CB950215B56 Disk ( )
Standard Filename CS950215B56 Disk ( )
Sample Filename CN083983A56 Disk ( )

ANALYST(S): Injection 1948 V.A. Smith Work-up 1945 V.A. Smith

GC/MS REVIEW

CONDITION CODE OK

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 01

COMMENTS:

#GC/MS Review [signature] Date 2/20/95 Auditor_____ Date____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials_____ Date____/____/____

FINAL REVIEW: Initials_____ Date____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683983
Client ID# SFW1
Instrument Blank ID# CB9502158S6
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 66 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / EF

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683984

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083984A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	18	
540-59-0	1,2-Dichloroethene (total)	6	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	6	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	8	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683984

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083984A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SFW2

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683984

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083984A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.80	2400	JB
2.					
3.					
4.					
5.					
6.					
7.					
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9.					
10.					
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20.					
21.					
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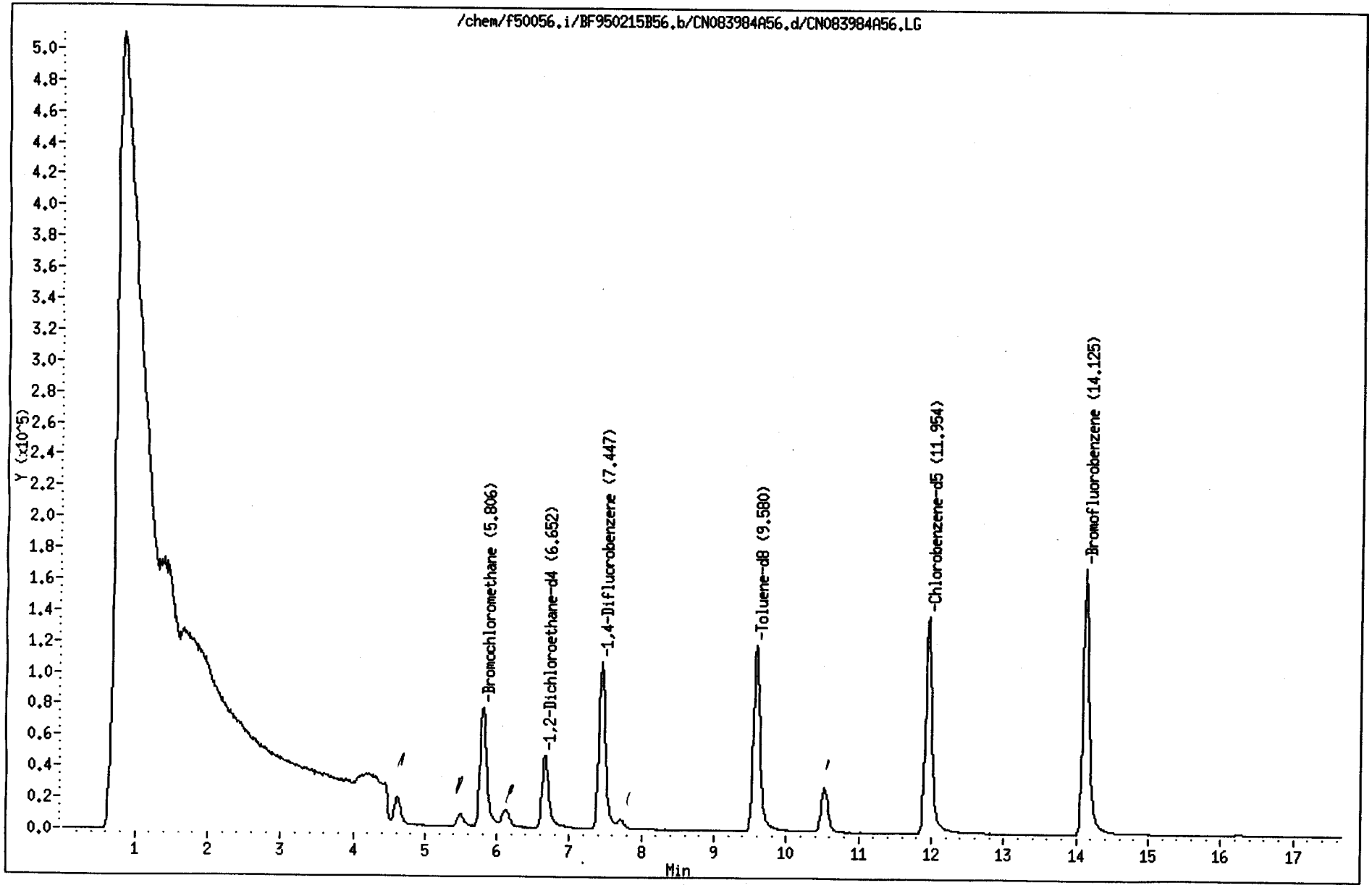
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50056.i/BF950215B56.b/CN083984A56.d
Date : 16-FEB-1995 02:54
Client ID: SFW2
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 1948
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

130

Data File: /chem/f50056.i/BF950215B56.b/CN083984A56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CN083984A56.d
Lab Smp Id: 683984 Client Smp ID: SFW2
Inj Date : 16-FEB-1995 02:54
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.806	5.844	(1.000)	62283	250.0	
*	2 1,4-Difluorobenzene	114.00	7.435	7.498	(1.000)	273178	250.0	
*	3 Chlorobenzene-d5	117.00	11.954	12.017	(1.000)	289117	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.703	(1.146)	117122	265.5	53.09
$	5 Toluene-d8	98.00	9.580	9.644	(0.801)	259820	267.9	53.59
$	6 Bromofluorobenzene	95.00	14.125	14.188	(1.182)	221414	233.6	46.73
	7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
	10 Bromomethane	94.00		1.565	Compound Not Detected.			
	11 Chloroethane	64.00		1.704	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
	13 Acetone	43.00		3.156	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
	15 Methylene Chloride	84.00		3.661	Compound Not Detected.			
	16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00	4.607	4.645	(0.793)	59952	87.85	17.57
	18 cis-1,2-Dichloroethene	96.00	5.503	5.529	(0.948)	11919	29.04	5.81(a)
	19 2-Butanone	43.00		5.731	Compound Not Detected.			
	20 Chloroform	83.00		6.097	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00	6.122	6.172	(0.823)	23336	30.02	6.00(a)
	22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
	23 Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CN083984A56.d
Report Date: 20-Feb-1995 12:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816	Compound Not Detected.			
25	Trichloroethene	130.00	7.712	7.763	(1.037)	5206	11.19	2.24(a)
26	1,2-Dichloropropane	63.00		8.066	Compound Not Detected.			
27	Bromodichloromethane	83.00		8.609	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		9.303	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		9.707	Compound Not Detected.			
30	Toluene	91.00		9.745	Compound Not Detected.			
31	trans-1,3-Dichloropropene	75.00		10.275	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		10.515	Compound Not Detected.			
33	Tetrachloroethene	164.00	10.527	10.590	(0.881)	24815	41.48	8.30(a)
34	2-Hexanone	43.00		11.146	Compound Not Detected.			
35	Dibromochloromethane	129.00		11.083	Compound Not Detected.			
36	Chlorobenzene	112.00		12.054	Compound Not Detected.			
37	Ethylbenzene	106.00		12.357	Compound Not Detected.			
38	m,p-Xylene	106.00		12.585	Compound Not Detected.			
39	o-Xylene	106.00		13.254	Compound Not Detected.			
40	Styrene	104.00		13.304	Compound Not Detected.			
41	Bromoform	173.00		13.531	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		14.667	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00				11919	30.22	6.04(a)
M 44	Xylene (Total)	106.00		13.254	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/CN083984A56.d

Date : 16-FEB-1995 02:54

Client ID: SFW2

Instrument: f50056.i

Sample Info:

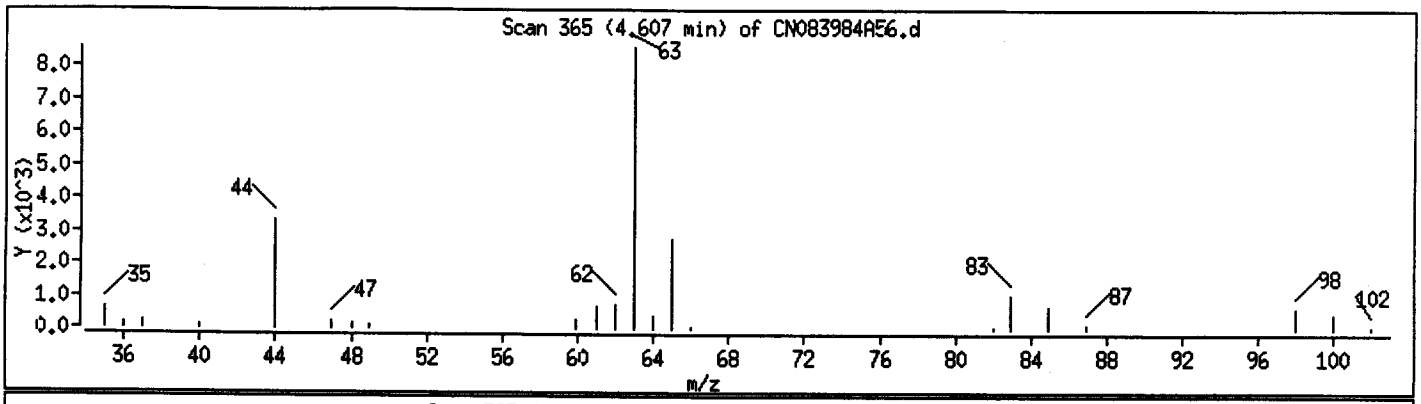
Purge Volume: 5.0

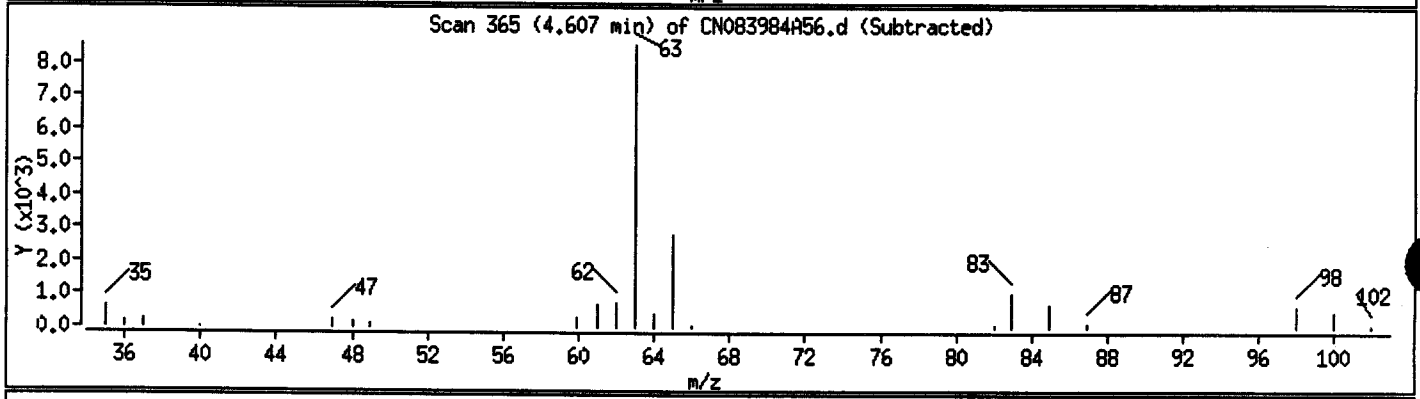
Operator: 1948

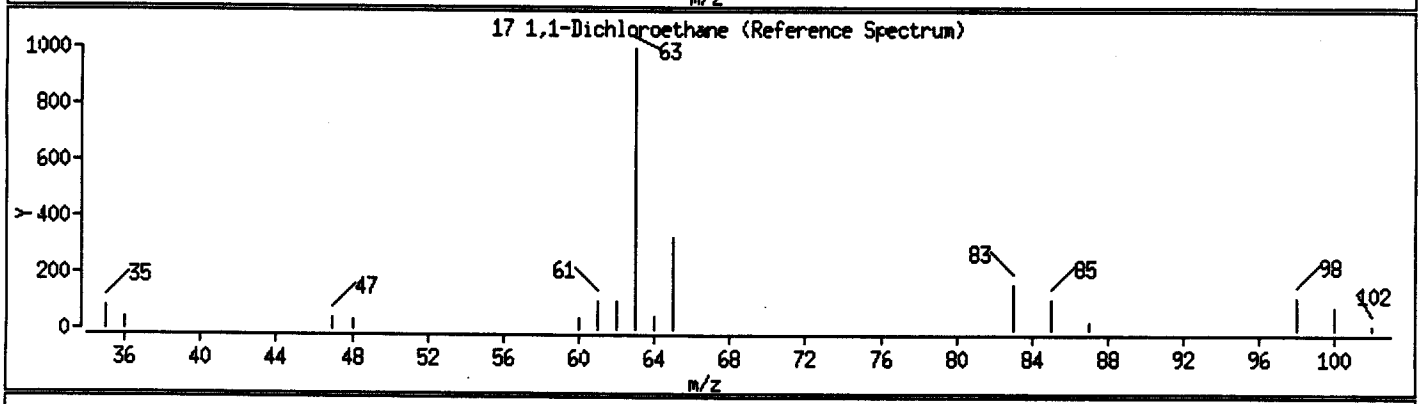
Column phase: DB624

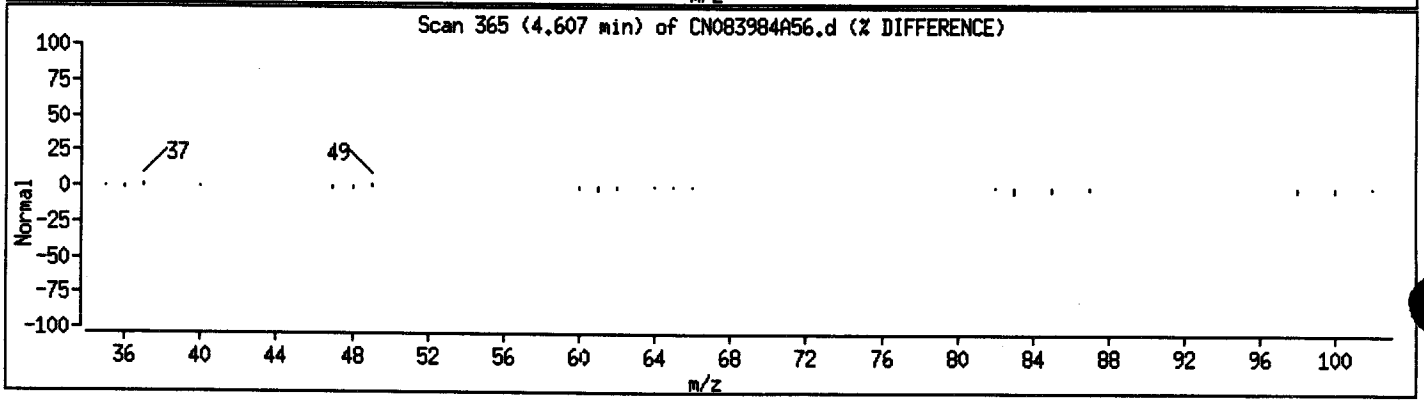
Column diameter: 0.53

17 1,1-Dichloroethane









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Date : 16-FEB-1995 02:54

Client ID: SFW2

Instrument: f50056.i

Sample Info:

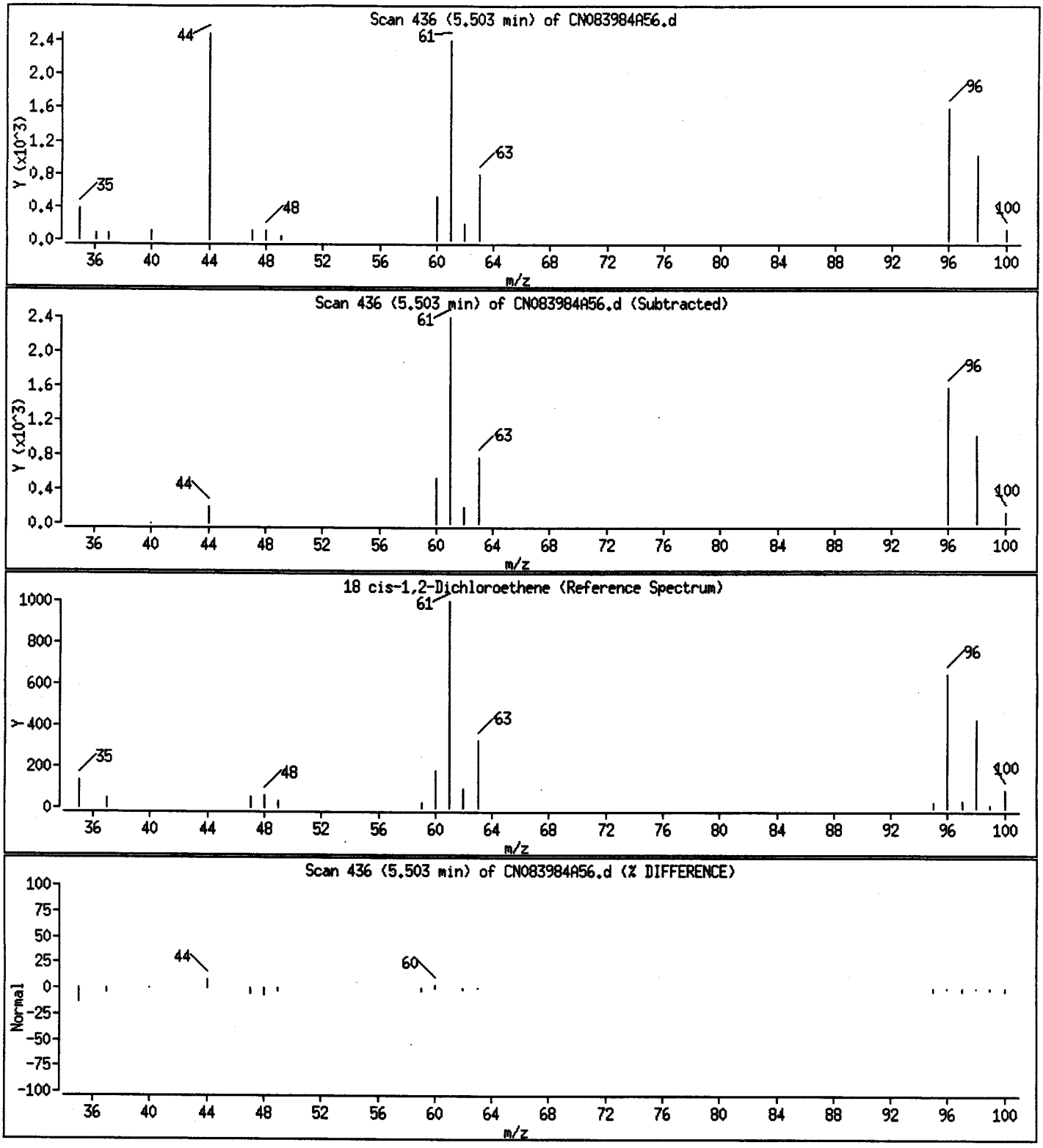
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

18 cis-1,2-Dichlorcethene



Data File: /chem/f50056.i/BF950215B56.b/CN083984A56.d

Date : 16-FEB-1995 02:54

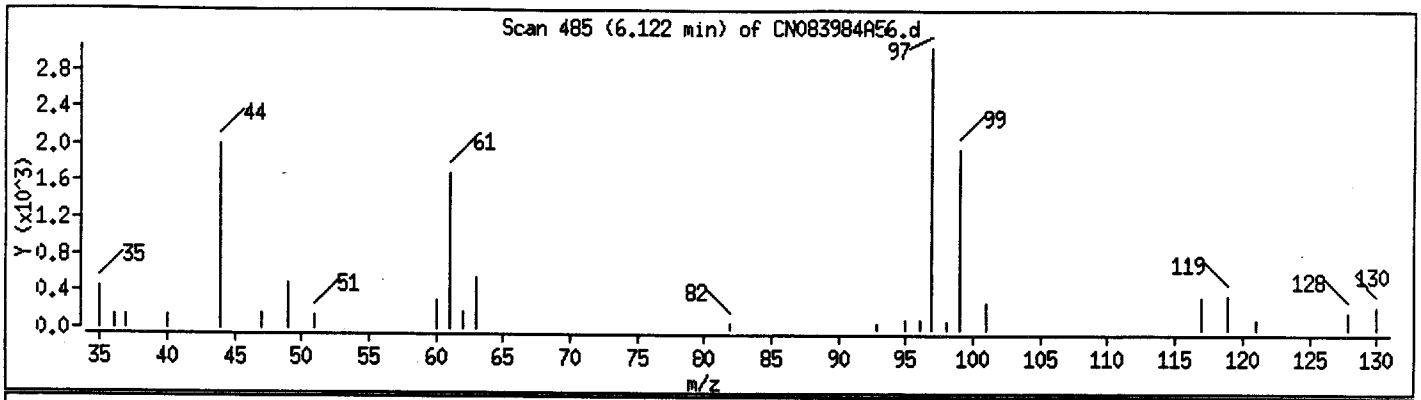
Client ID: SFW2 Instrument: f50056.i

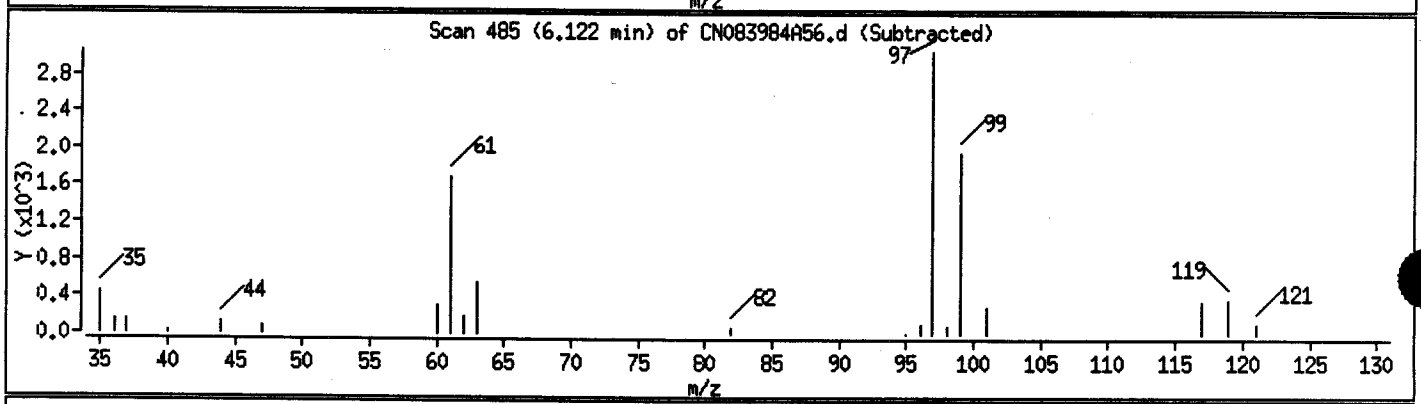
Sample Info:

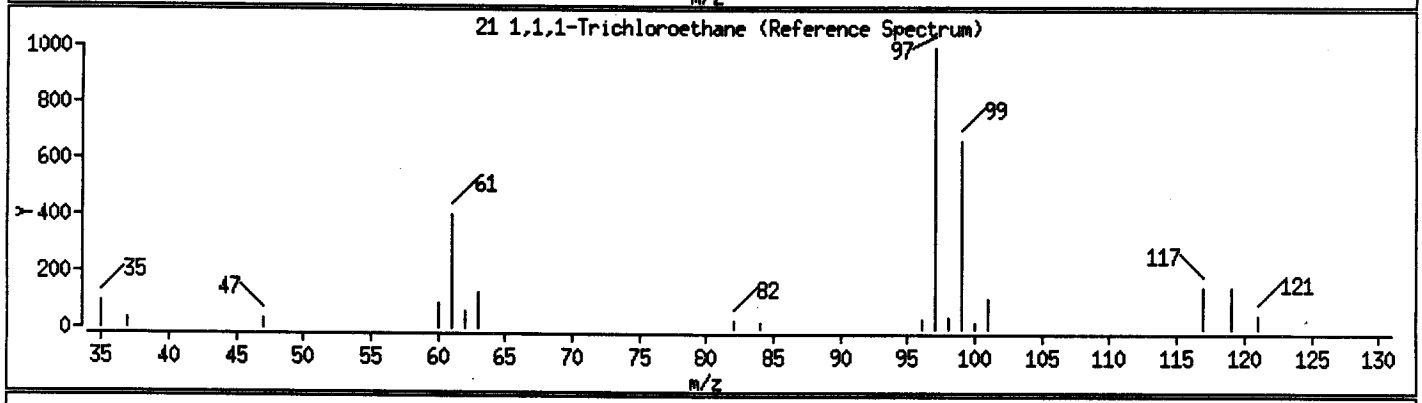
Purge Volume: 5.0 Operator: 1948

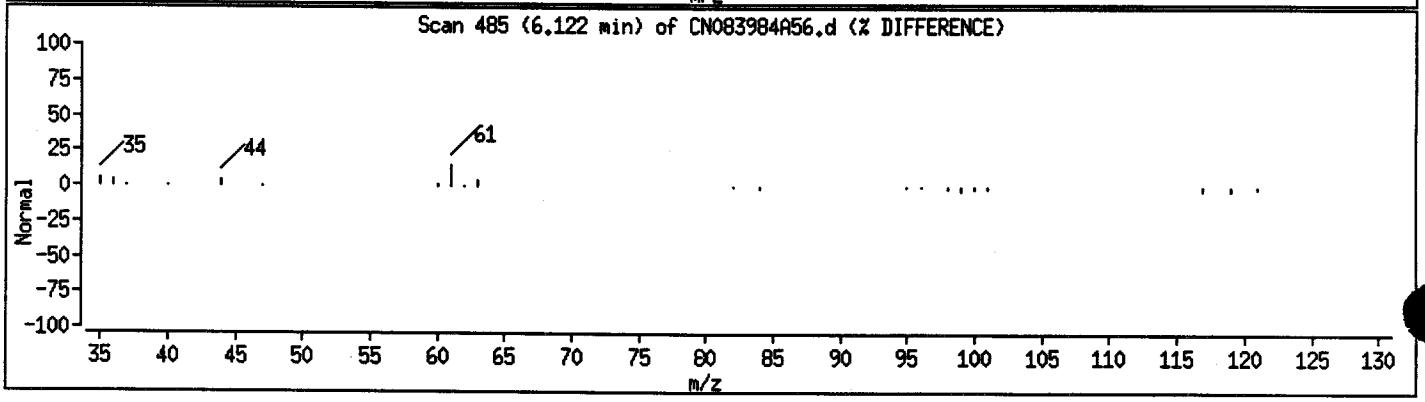
Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane









Data File: /chem/f50056.i/BF950215B56.b/CN083984A56.d

Date : 16-FEB-1995 02:54

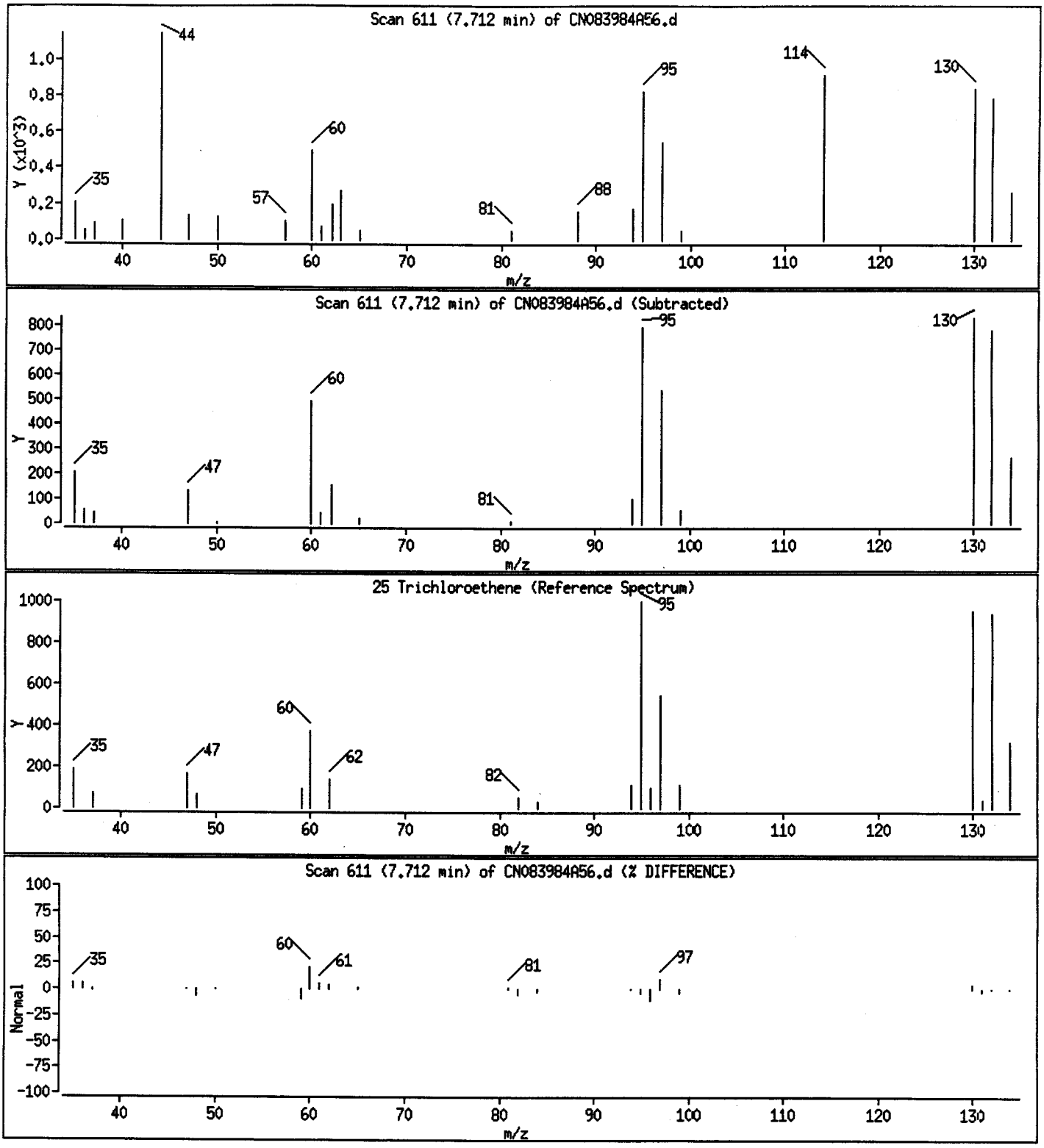
Client ID: SFW2 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

25 Trichloroethene



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Date : 16-FEB-1995 02:54

Client ID: SFW2

Instrument: f50056.i

Sample Info:

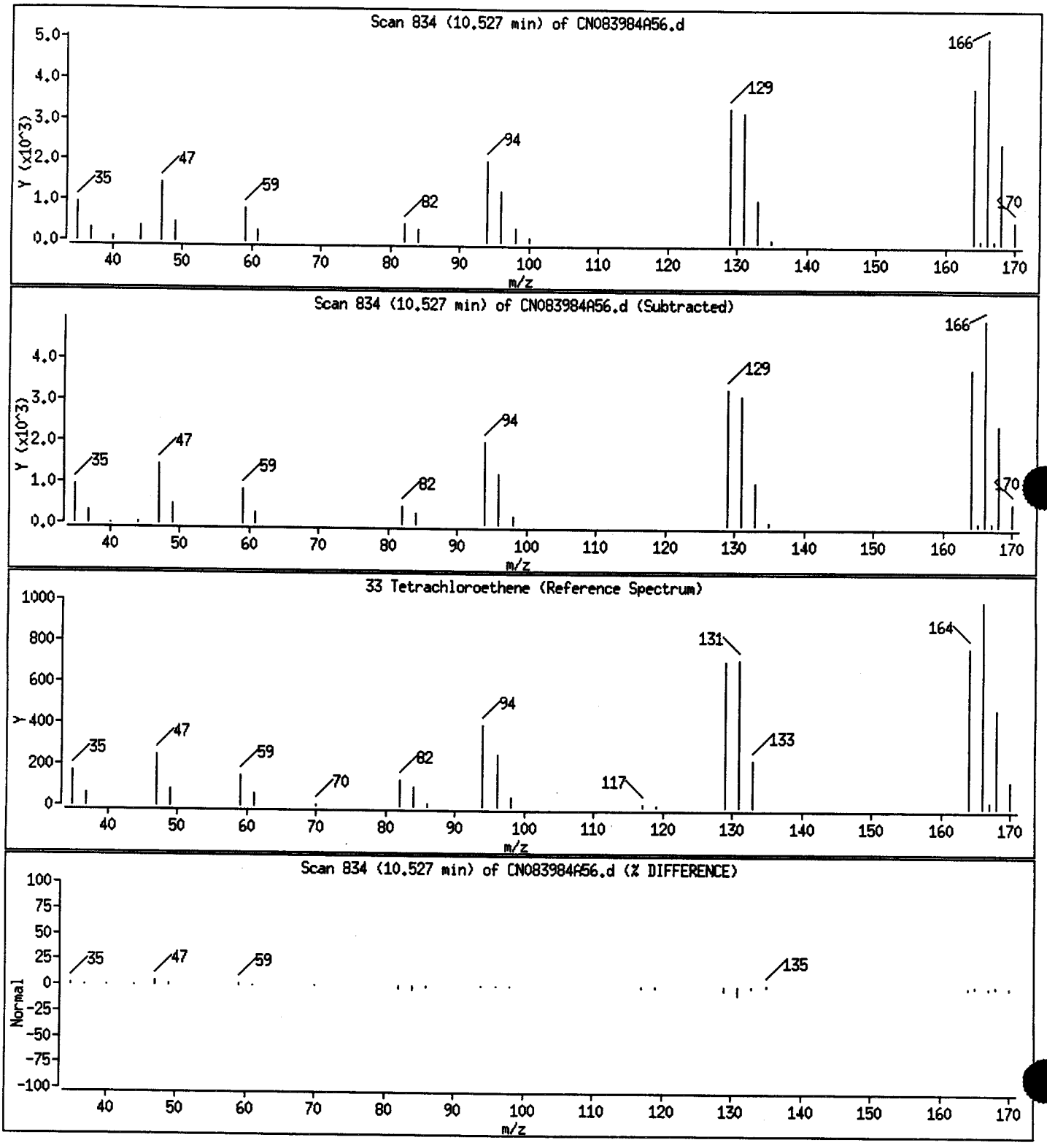
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BF950215B56.b/CN083984A56.d

Date : 16-FEB-1995 02:54

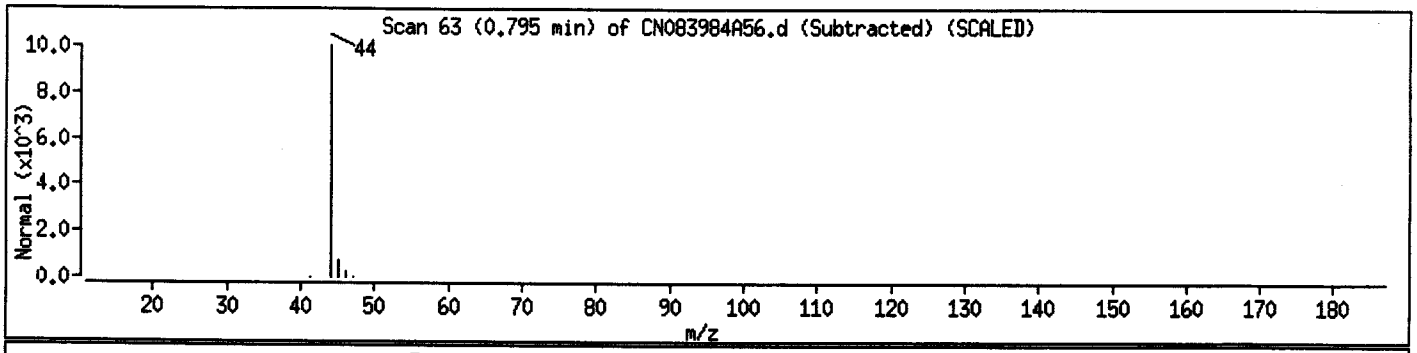
Client ID: SFW2 Instrument: f50056.i

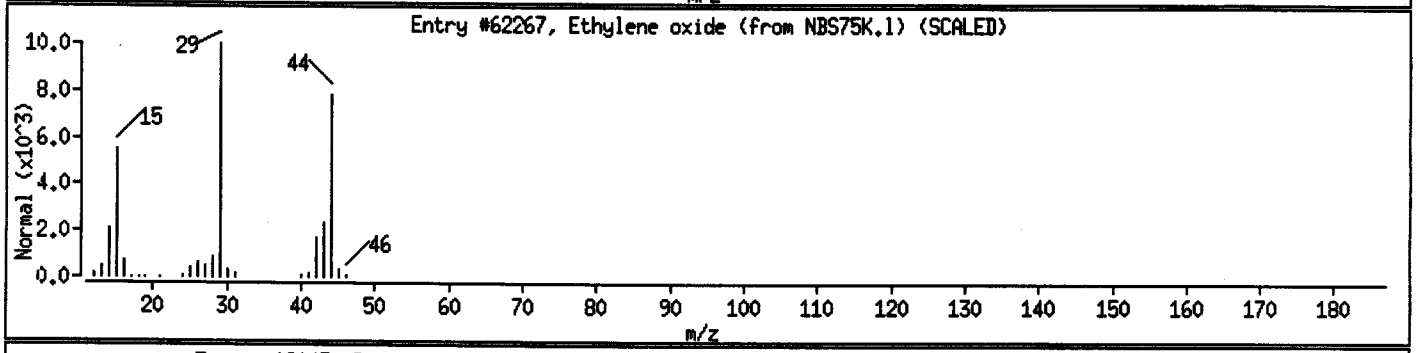
Sample Info:

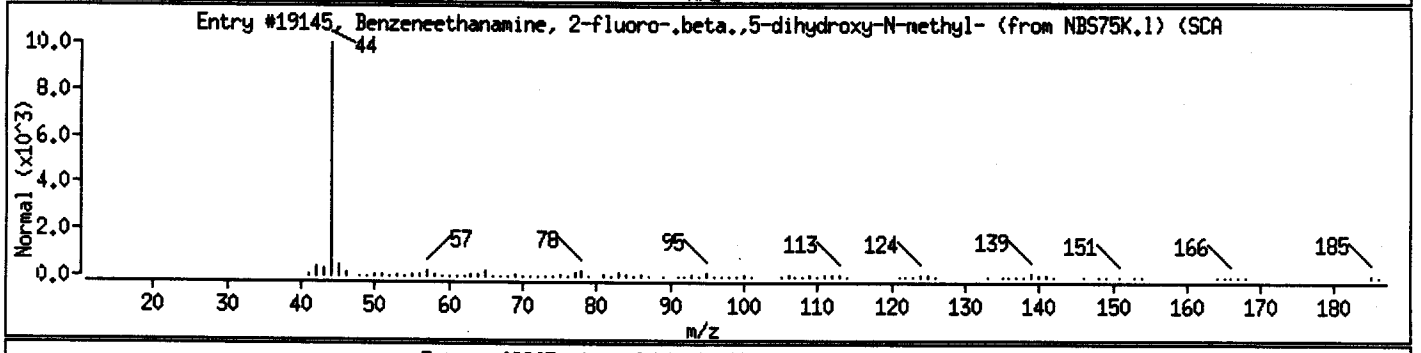
Purge Volume: 5.0 Operator: 1948

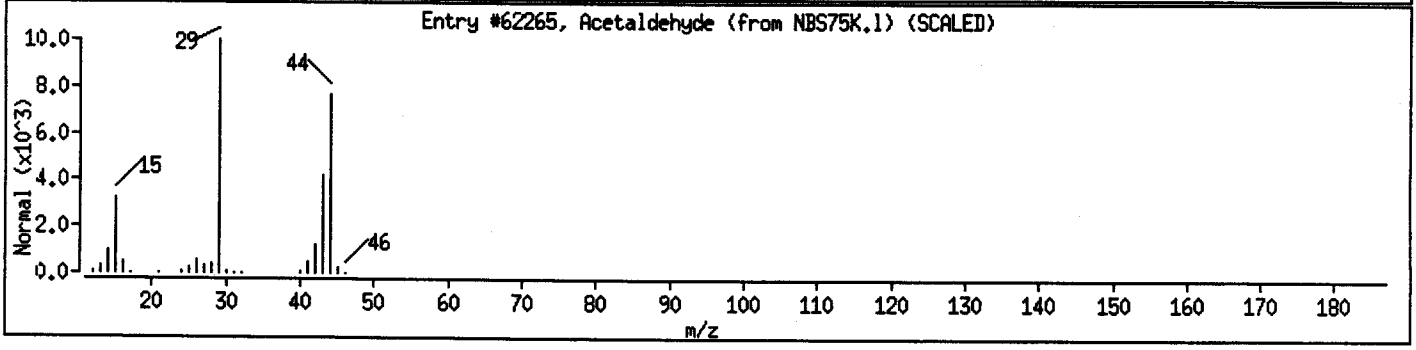
Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44









LAB INSTRUCTIONS:
SEE PPS# 115 VOA+DCDFM

PPS#: _____

RECEIPT DATE: 02/11/95 CASE#: 30073 00003 DUE DATE: 03/10

VOA
GC/MS WORKSHEET COMPUCHEM#: 683984

J[ ] J3[ ] D[ ] (:1)
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020995 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: SFW2

GC/MS ANALYSIS VS 2/16/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BF950215B56 Disk ( )
Blank Filename CB950215B56 Disk ( )
Standard Filename CS950215B56 Disk ( )
Sample Filename CNC53984A56 Disk ( )

ANALYST(S): Injection 1948 Vd Smith Work-up 1948 Vd Smith

GC/MS REVIEW

CONDITION CODE | OK |

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 01

COMMENTS:

#GC/MS Review [signature] Date 2/20/95 Auditor_____ Date____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials_____ Date____/____/____

FINAL REVIEW: Initials_____ Date____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683984
Client ID# SFW2
Instrument Blank ID# CB950215B56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 63 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / 88

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683985

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083985A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	11	
540-59-0	1,2-Dichloroethene (total)	3	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	7	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683985

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083985A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SFW3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683985

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083985A56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.81	2200	JB
2.					
3.					
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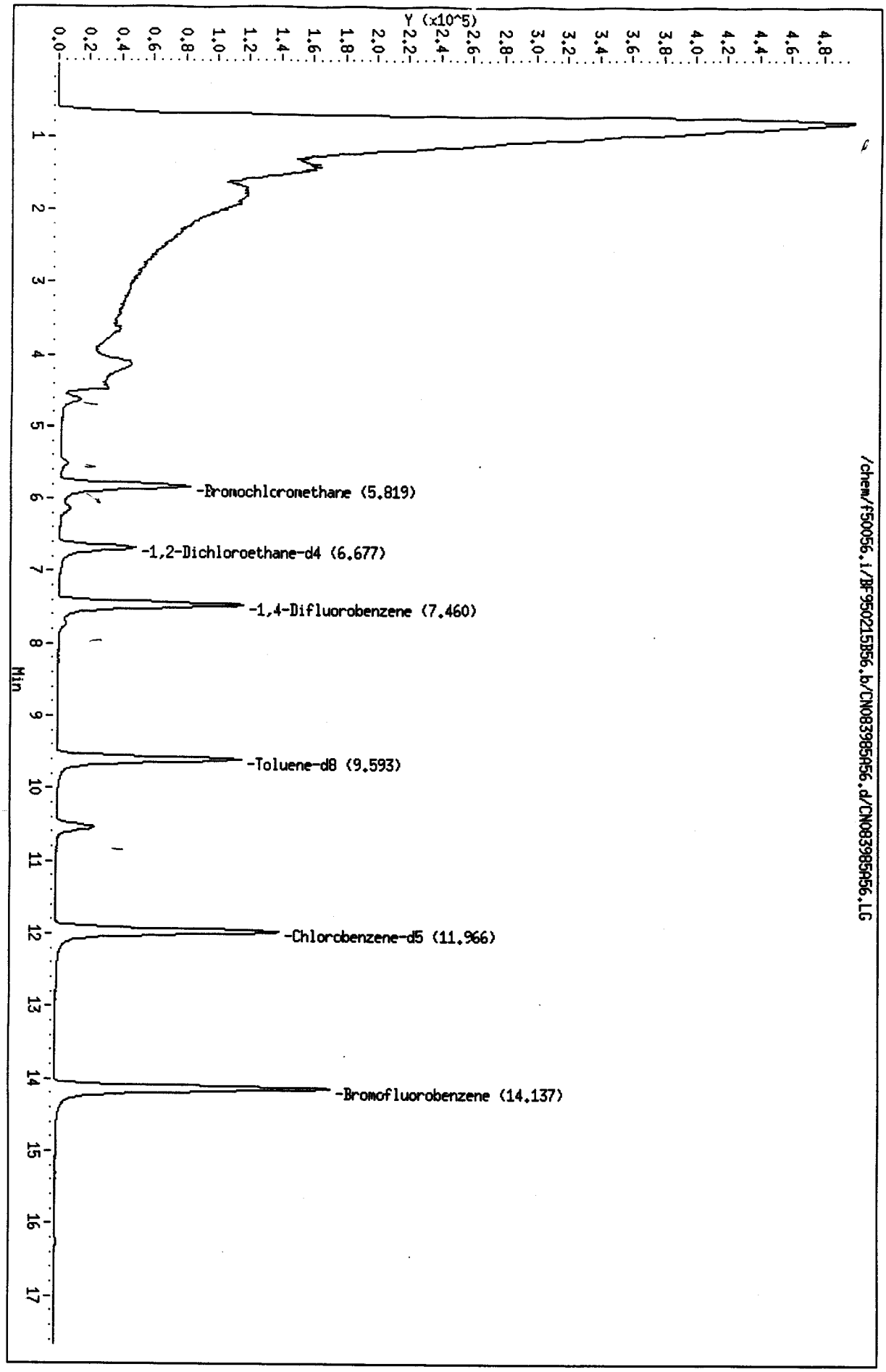

Data File: /chem/f50056.i/BF950215B56.b/CN083985A56.d
Date : 16-FEB-1995 03:33
Client ID: SFW3
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
/chem/f50056.i/BF950215B56.b/CN083985A56.d/CN083985A56.LG
Y (x10^5)
Min
-Bromochloromethane (5.819)
-1,2-Dichloroethane-d4 (6.677)
-1,4-Difluorobenzene (7.460)
-Toluene-d8 (9.593)
-Chlorobenzene-d5 (11.966)
-Bromofluorobenzene (14.137)

Data File: /chem/f50056.i/BF950215B56.b/CN083985A56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CN083985A56.d
Lab Smp Id: 683985 Client Smp ID: SFW3
Inj Date : 16-FEB-1995 03:33
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.819	5.844	(1.000)	67481	250.0	
* 2 1,4-Difluorobenzene	114.00	7.460	7.498	(1.000)	290401	250.0	
* 3 Chlorobenzene-d5	117.00	11.954	12.017	(1.000)	301748	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.677	6.703	(1.147)	119548	250.1	50.02
$ 5 Toluene-d8	98.00	9.593	9.644	(0.803)	242374	239.5	47.90
$ 6 Bromofluorobenzene	95.00	14.137	14.188	(1.183)	227928	230.4	46.09
7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8 Chloromethane	50.00		1.111	Compound Not Detected.			
9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10 Bromomethane	94.00		1.565	Compound Not Detected.			
11 Chloroethane	64.00		1.704	Compound Not Detected.			
12 1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13 Acetone	43.00		3.156	Compound Not Detected.			
14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15 Methylene Chloride	84.00	3.661	3.661	(0.629)	3033	8.79	1.76(a)
16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17 1,1-Dichloroethane	63.00	4.632	4.645	(0.796)	39520	53.45	10.69
18 cis-1,2-Dichloroethene	96.00	5.503	5.529	(0.946)	6880	15.47	3.09(a)
19 2-Butanone	43.00		5.731	Compound Not Detected.			
20 Chloroform	83.00		6.097	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00	6.147	6.172	(0.824)	12111	14.66	2.93(a)
22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23 Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CN083985A56.d
Report Date: 20-Feb-1995 12:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816	Compound Not Detected.			
25	Trichloroethene	130.00	7.738	7.763	(1.037)	3791	7.67	1.53(a)
26	1,2-Dichloropropane	63.00		8.066	Compound Not Detected.			
27	Bromodichloromethane	83.00		8.609	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		9.303	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		9.707	Compound Not Detected.			
30	Toluene	91.00		9.745	Compound Not Detected.			
31	trans-1,3-Dichloropropene	75.00		10.275	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		10.515	Compound Not Detected.			
33	Tetrachloroethene	164.00	10.540	10.590	(0.882)	20618	33.02	6.60(a)
34	2-Hexanone	43.00		11.146	Compound Not Detected.			
35	Dibromochloromethane	129.00		11.083	Compound Not Detected.			
36	Chlorobenzene	112.00		12.054	Compound Not Detected.			
37	Ethylbenzene	106.00		12.357	Compound Not Detected.			
38	m,p-Xylene	106.00		12.585	Compound Not Detected.			
39	o-Xylene	106.00		13.254	Compound Not Detected.			
40	Styrene	104.00		13.304	Compound Not Detected.			
41	Bromoform	173.00		13.531	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		14.667	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00				6880	16.10	3.22(a)
M 44	Xylene (Total)	106.00		13.254	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950215B56.b/CN083985A56.d

Date : 16-FEB-1995 03:33

Client ID: SFW3

Instrument: f50056.i

Sample Info:

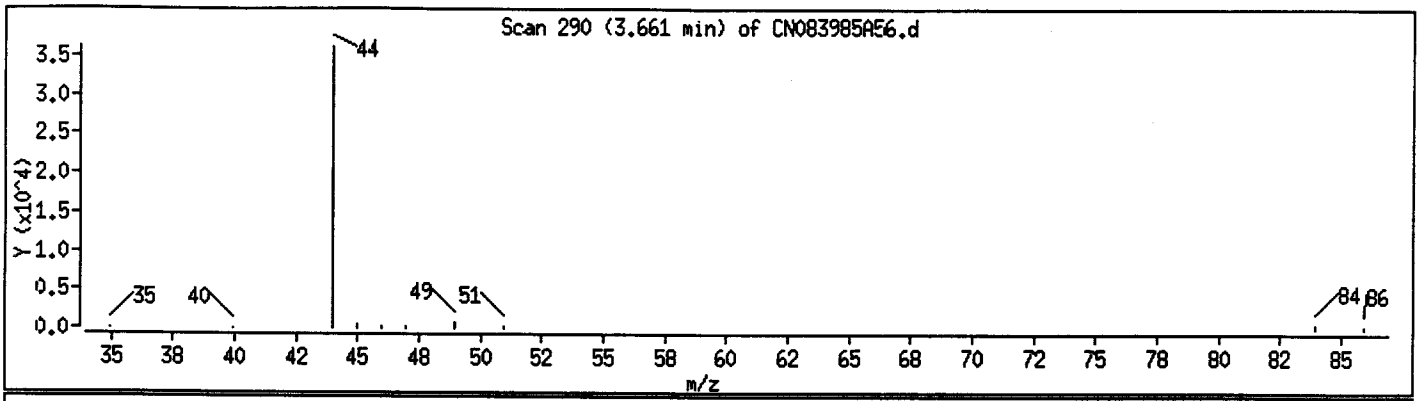
Purge Volume: 5.0

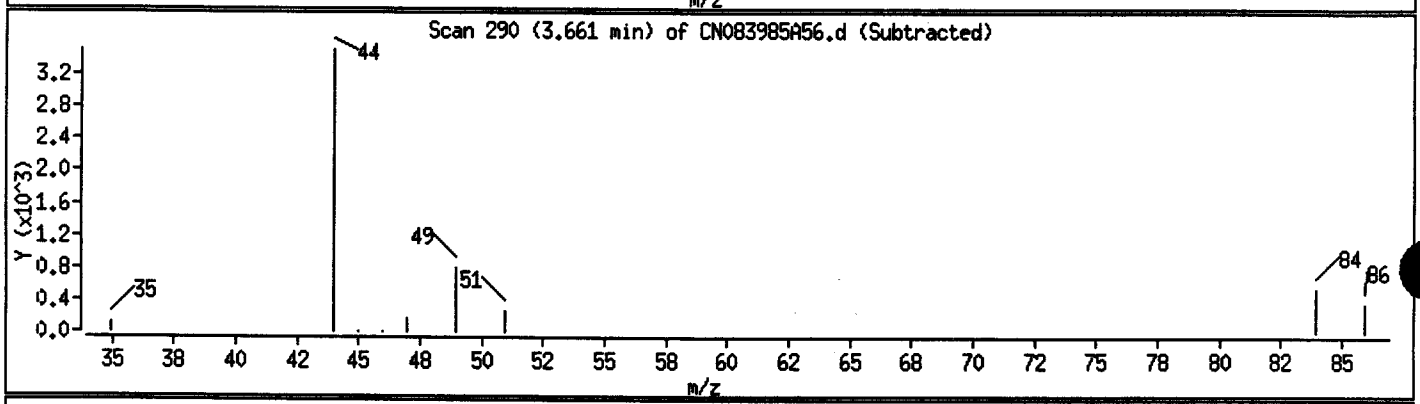
Operator: 1948

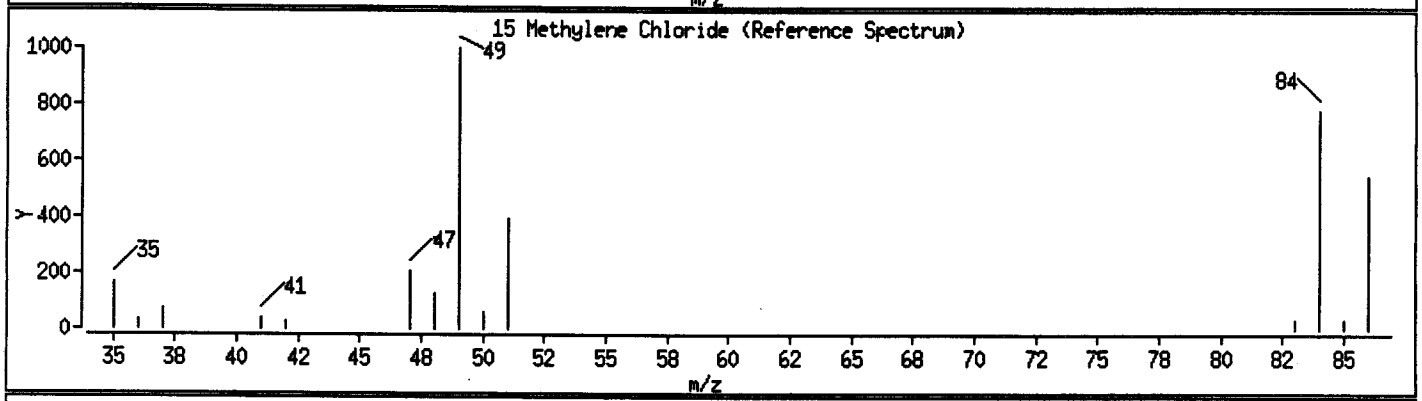
Column phase: DB624

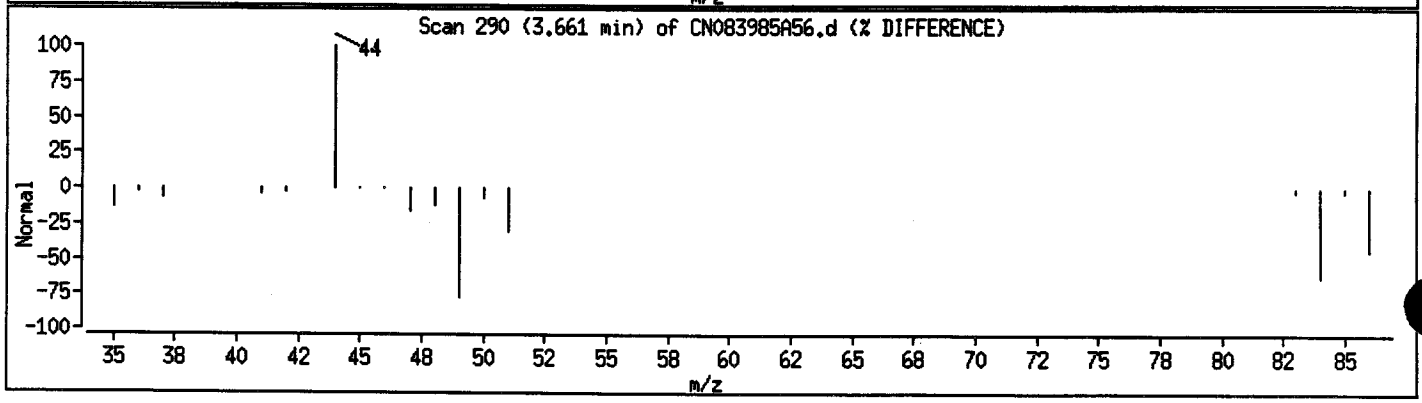
Column diameter: 0.53

15 Methylene Chloride









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Date : 16-FEB-1995 03:33

Client ID: SFW3

Instrument: f50056.i

Sample Info:

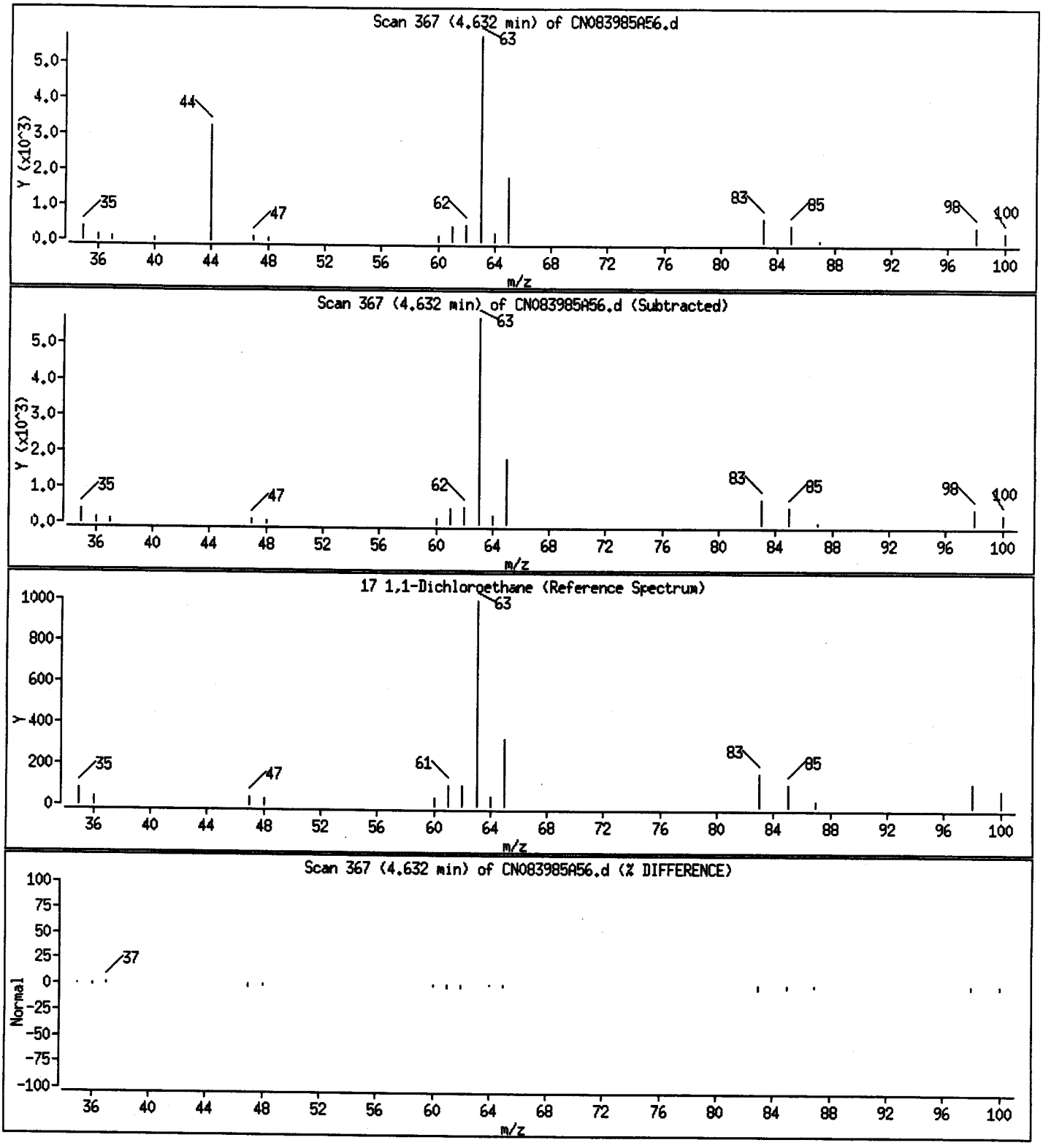
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



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Date : 16-FEB-1995 03:33

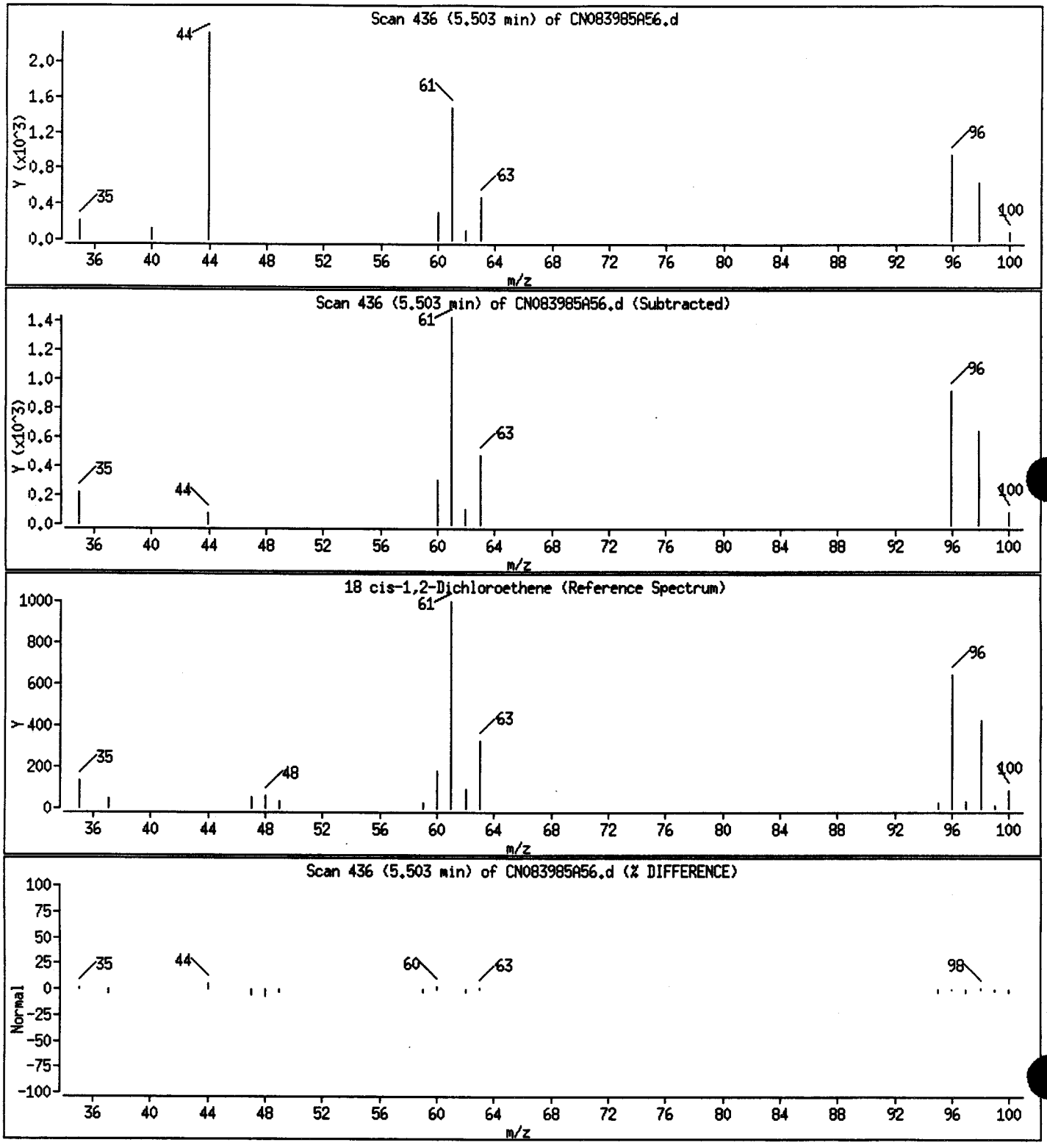
Client ID: SFW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

18 cis-1,2-Dichloroethene



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Date : 16-FEB-1995 03:33

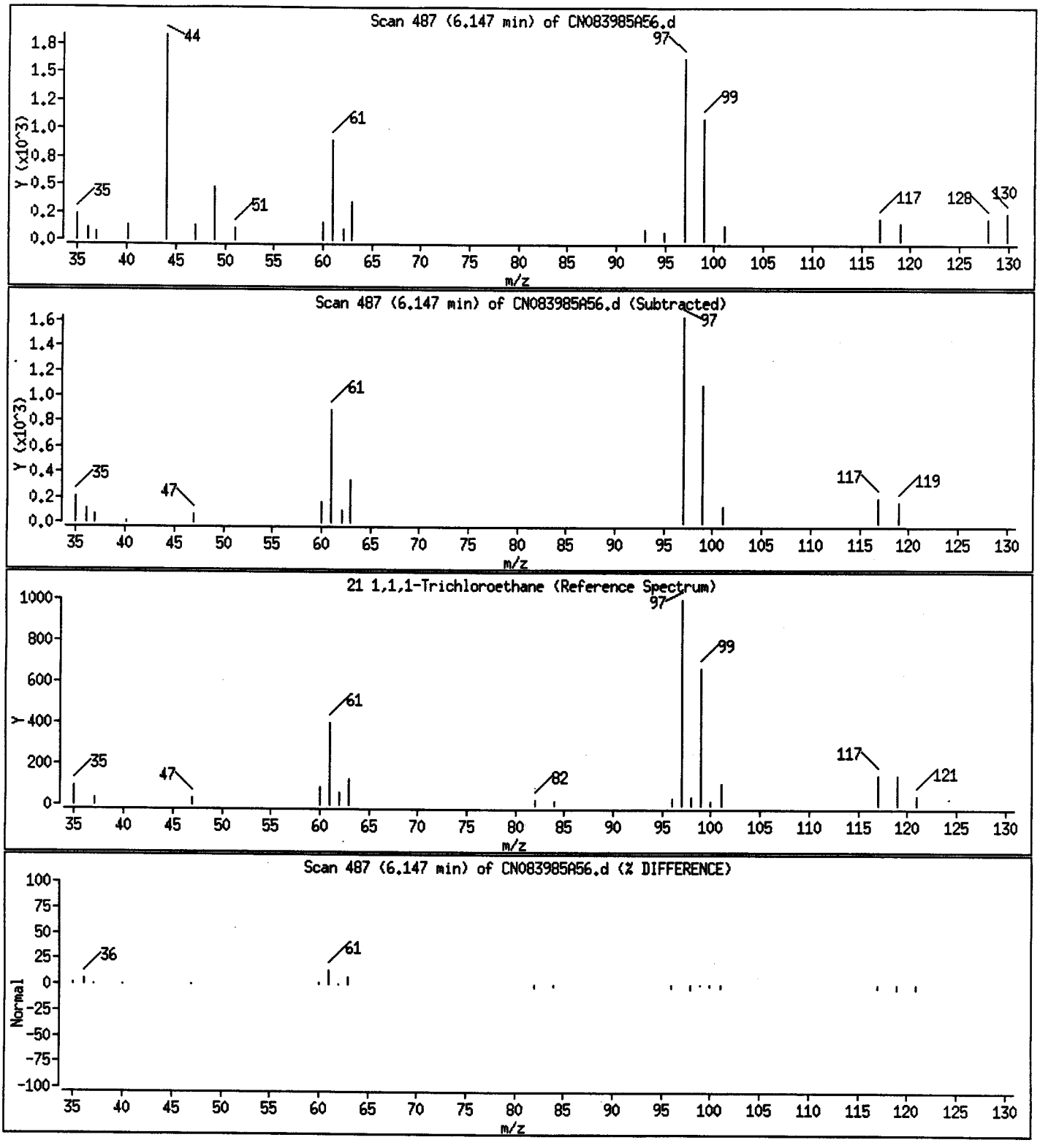
Client ID: SFW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

21 1,1,1-Trichloroethane



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Date : 16-FEB-1995 03:33

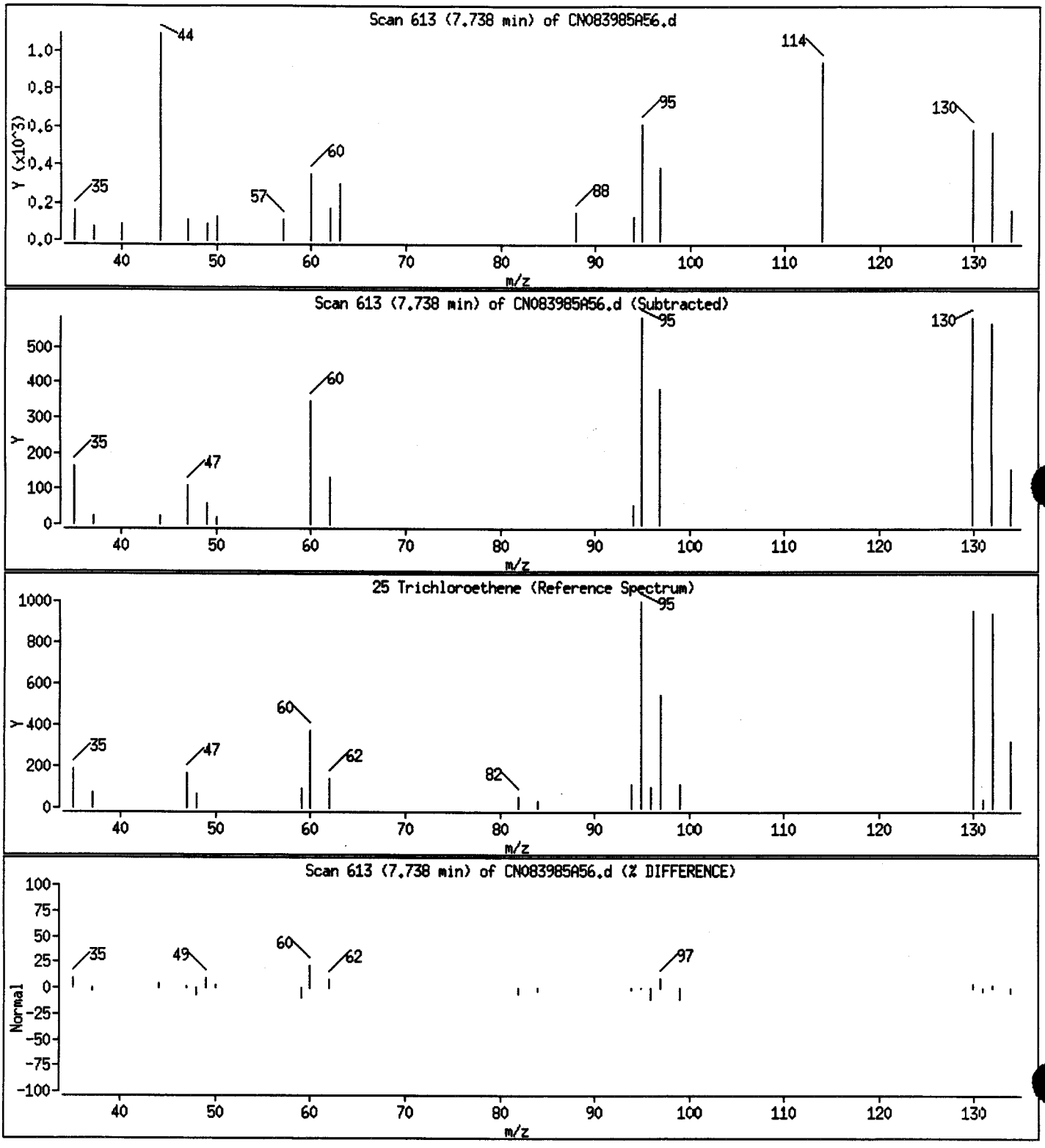
Client ID: SFW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

25 Trichloroethene



Data File: /chem/f50056.i/BF950215B56.b/CN083985A56.d

Date : 16-FEB-1995 03:33

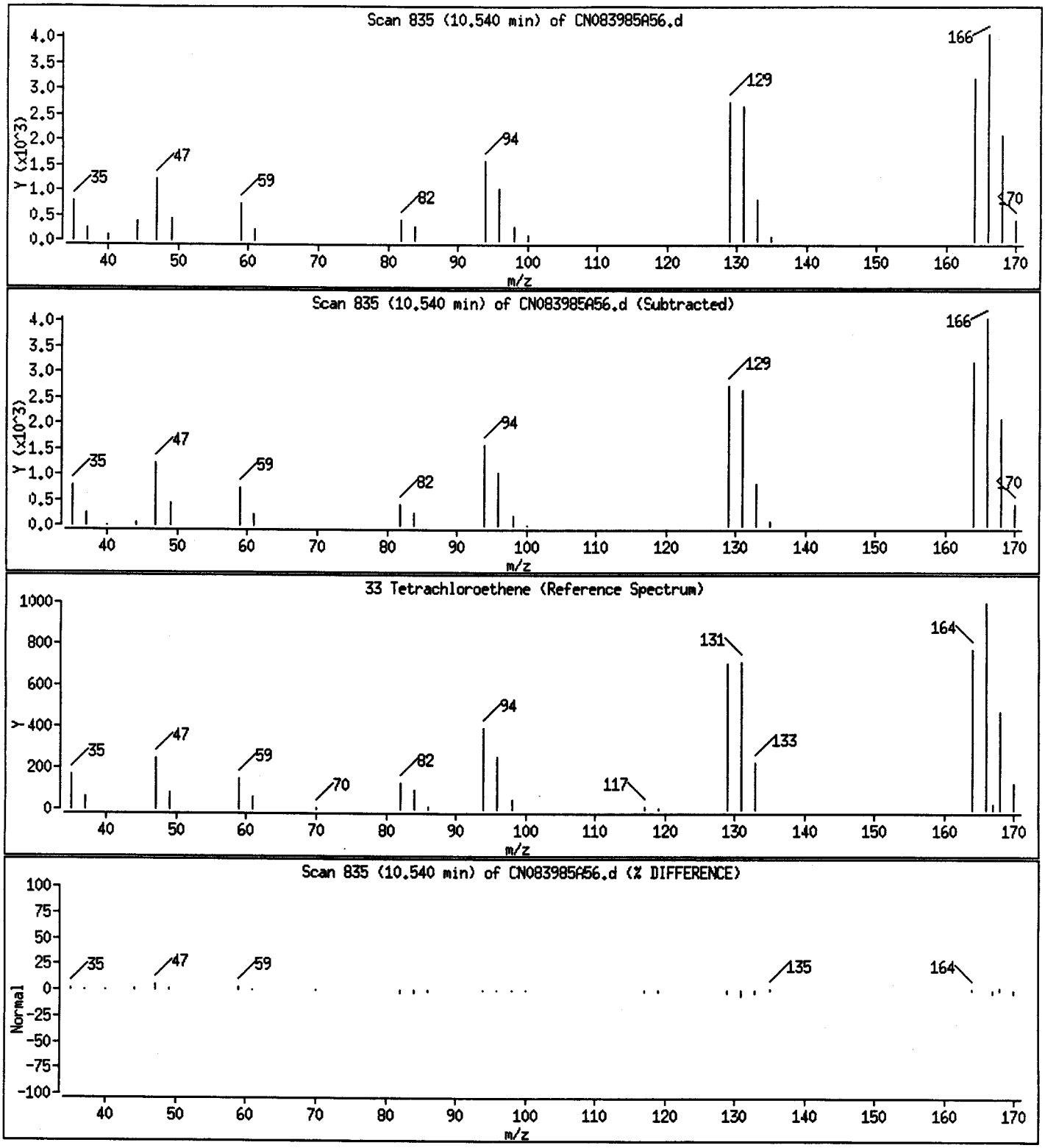
Client ID: SFW3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 1948

Column phase: DB624 Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50056.i/BF950215B56.b/CN083985A56.d

Date : 16-FEB-1995 03:33

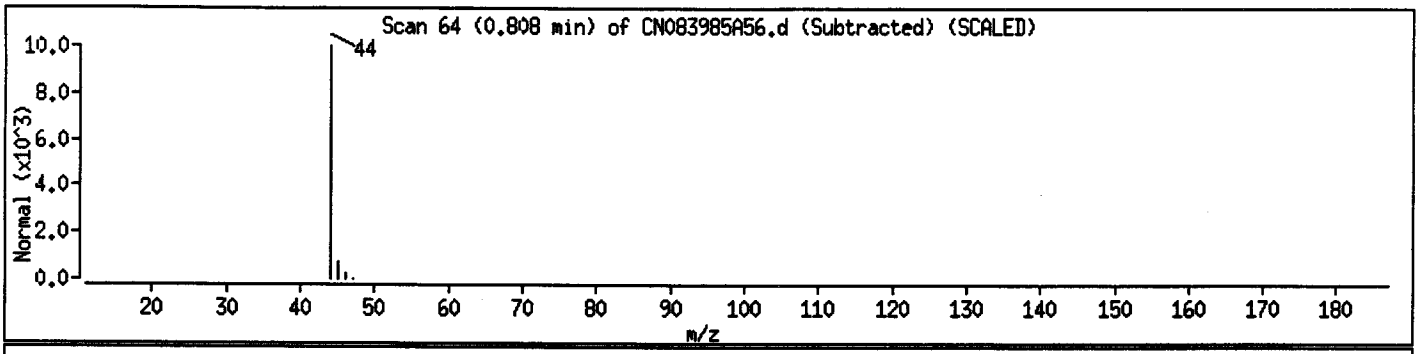
Client ID: SFW3 Instrument: f50056.i

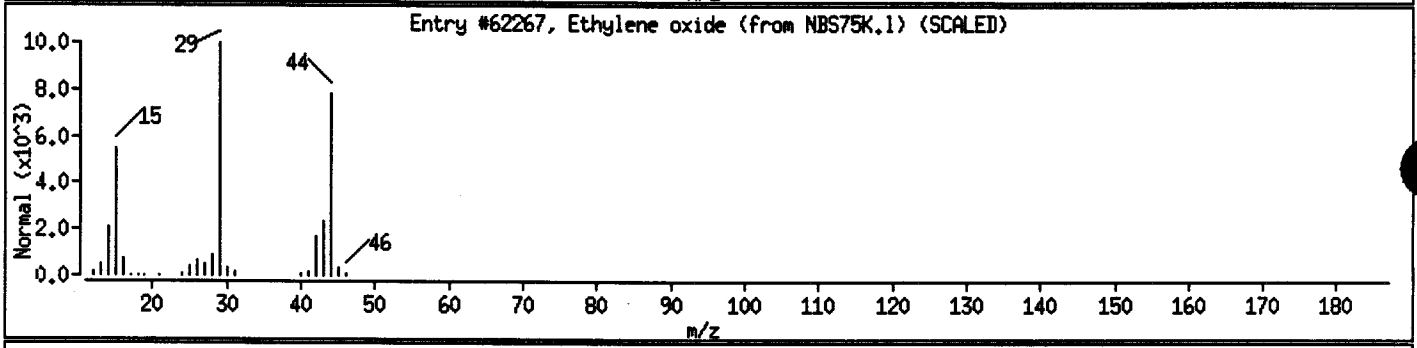
Sample Info:

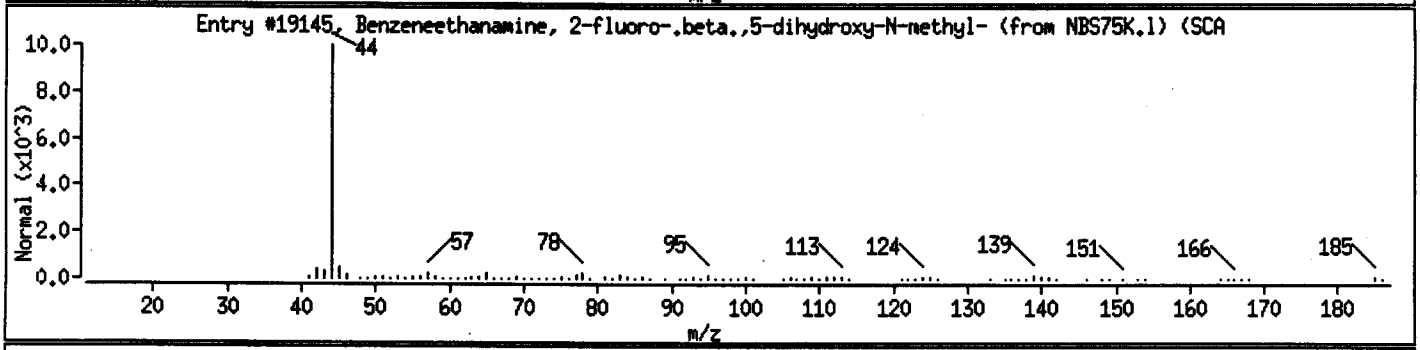
Purge Volume: 5.0 Operator: 1948

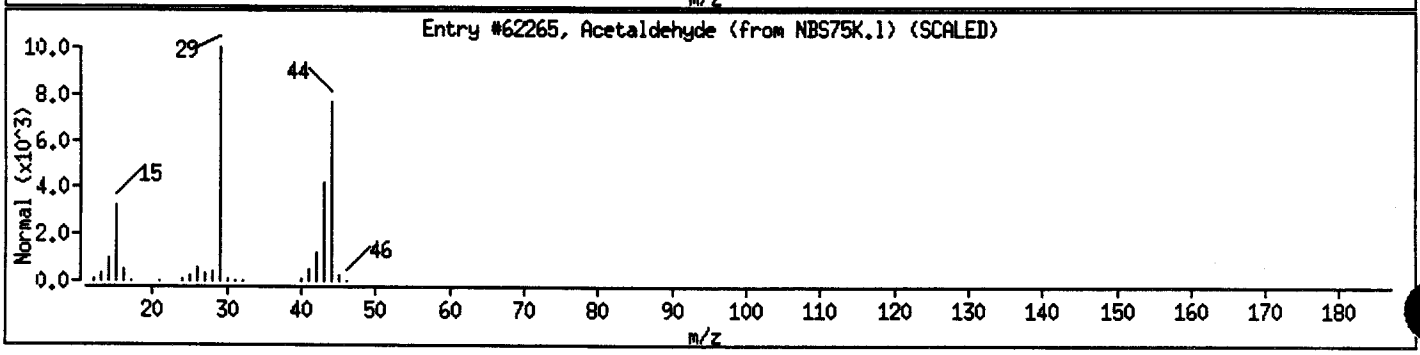
Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44









LAB INSTRUCTIONS:
SEE PPS# 115 VOA+DCDFM

PPS#: _____

RECEIPT DATE: 02/11/95 CASE#: 30073 00003 DUE DATE: 03/10/9

VOA
GC/MS WORKSHEET COMPUCHEM#: 683985

J[ ] J3[ ] D[ ] (:1)
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: 020995 Report type: 0

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: SFW3

GC/MS ANALYSIS

Amount Purged: [✓] 5 mls or [ ] VS 2/16/95 Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename B4950215B56 Disk ( )
Blank Filename CB4950215B56 Disk ( )
Standard Filename CS4950215B56 Disk ( )
Sample Filename CN0S3985A56 Disk ( )

ANALYST(S): Injection 1948VA Smith Work-up 1948VA Smith

GC/MS REVIEW

CONDITION CODE | OK |

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01 [ ] Reinject Neat

Quality Assurance Notice(s): [ ] Dilute (:1)
Notices Required 01

COMMENTS:

#GC/MS Review [signature] Date 2 / 20 / 95 Auditor_____ Date____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s):_____/_____

QA COMMENTS:

Initials_____ Date____/____/____

FINAL REVIEW: Initials_____ Date____/____/____

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683985
Client ID# SF03
Instrument Blank ID# CB950215B56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 64 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / 883

Date 2-20-95

QAN-V-14
901001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683992

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083992B56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLK3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683992

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083992B56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLK3

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683992

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083992B56.D

Level: (low/med) LOW Date Received: 02/11/95

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.82	170	JB
2.					
3.					
4.					
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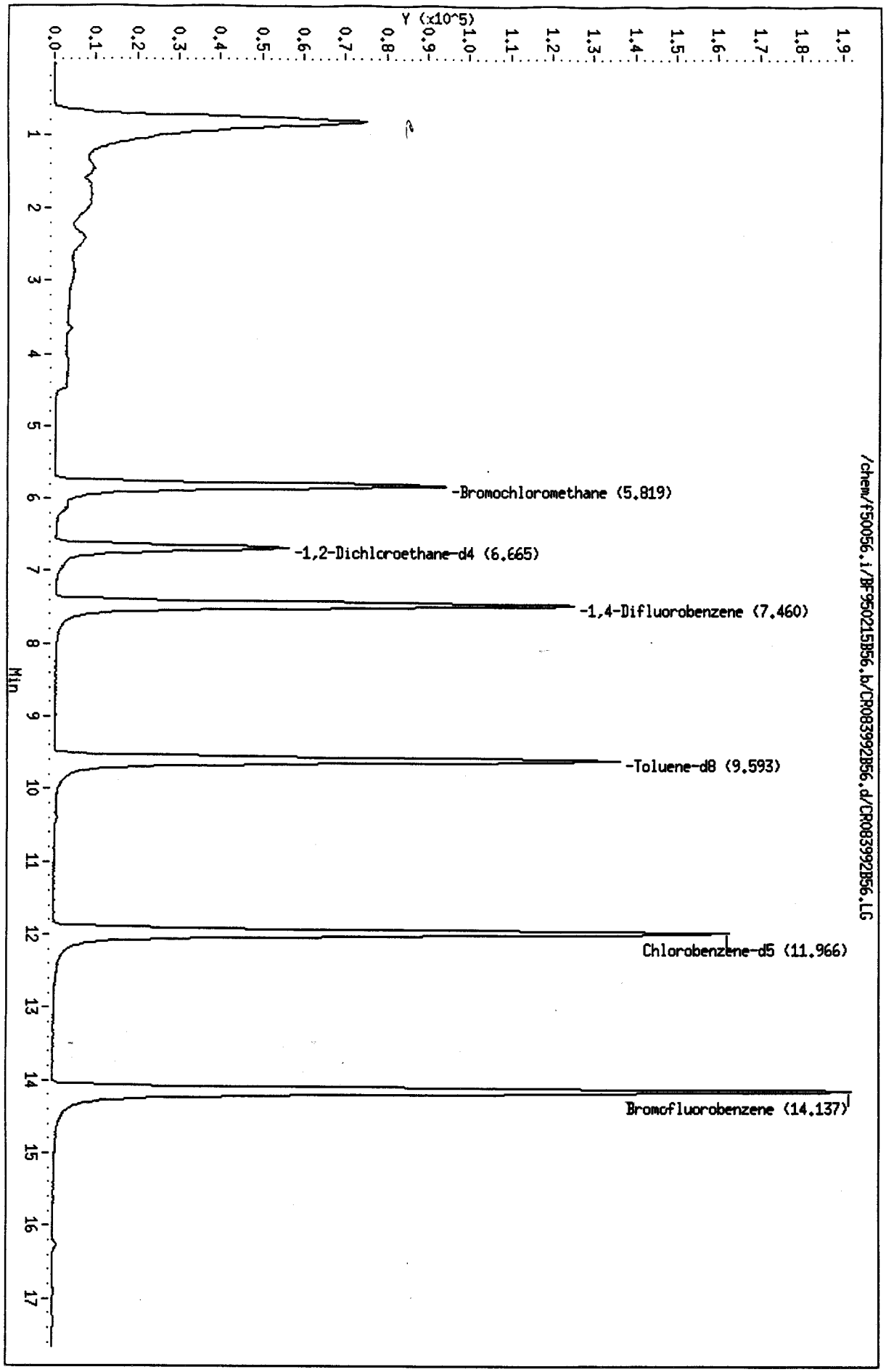

Data File: /chem/f50056.i/BF950215B56.b/CR083992B56.d
Date : 15-FEB-1995 21:25
Client ID: TRIPBLK3
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^5)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Min
-Bromochloromethane (5.819)
-1,2-Dichloroethane-d4 (6.665)
-1,4-Difluorobenzene (7.460)
-Toluene-d8 (9.593)
Chlorobenzene-d5 (11.966)
Bromofluorobenzene (14.137)
/chem/f50056.i/BF950215B56.b/CR083992B56.d/CR083992B56.LG

Data File: /chem/f50056.i/BF950215B56.b/CR083992B56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CR083992B56.d
Lab Smp Id: 683992 Client Smp ID: TRIPBLK3
Inj Date : 15-FEB-1995 21:25
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.806	5.844	(1.000)	78468	250.0	
* 2	1,4-Difluorobenzene	114.00	7.460	7.498	(1.000)	318268	250.0	
* 3	Chlorobenzene-d5	117.00	11.966	12.017	(1.000)	338960	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.665	6.703	(1.148)	141209	254.0	50.81
$ 5	Toluene-d8	98.00	9.593	9.644	(0.802)	291556	256.4	51.29
$ 6	Bromofluorobenzene	95.00	14.137	14.188	(1.181)	254016	228.6	45.72
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10	Bromomethane	94.00		1.565	Compound Not Detected.			
11	Chloroethane	64.00		1.704	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15	Methylene Chloride	84.00		3.661	Compound Not Detected.			
16	trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
19	2-Butanone	43.00		5.731	Compound Not Detected.			
20	Chloroform	83.00		6.097	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23	Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CR083992B56.d
Report Date: 20-Feb-1995 12:27

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
25	Trichloroethene	130.00		7.763		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.609		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
30	Toluene	91.00		9.745		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.590		Compound Not Detected.		
34	2-Hexanone	43.00		11.146		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.083		Compound Not Detected.		
36	Chlorobenzene	112.00		12.054		Compound Not Detected.		
37	Ethylbenzene	106.00		12.357		Compound Not Detected.		
38	m,p-Xylene	106.00		12.585		Compound Not Detected.		
39	o-Xylene	106.00		13.254		Compound Not Detected.		
40	Styrene	104.00		13.304		Compound Not Detected.		
41	Bromoform	173.00		13.531		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.254		Compound Not Detected.		

Data File: /chem/f50056.i/BF950215B56.b/CR083992B56.d

Date : 15-FEB-1995 21:25

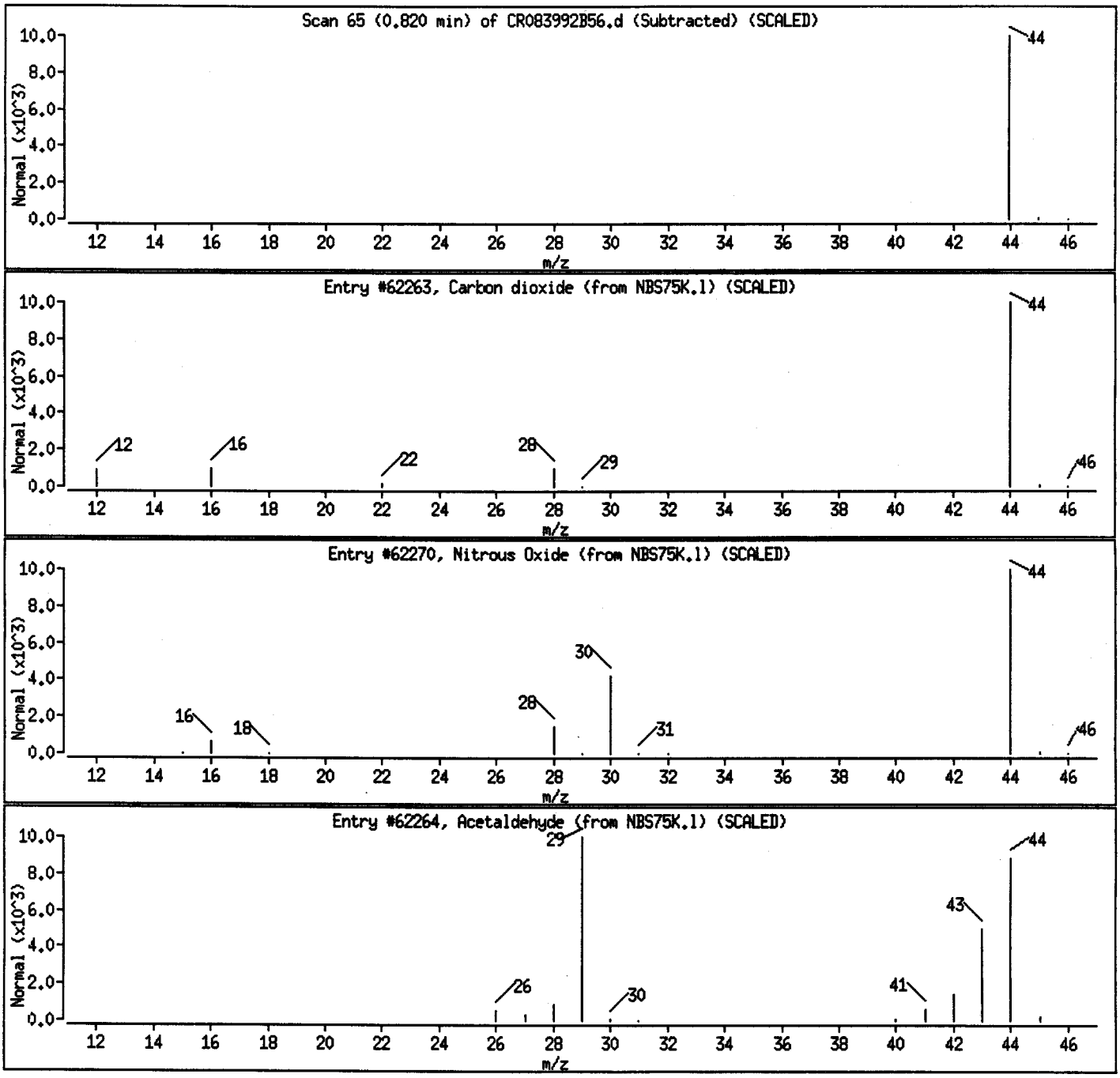
Client ID: TRIPBLK3 Instrument: f50056.i

Sample Info:

Purge Volume: 5.0 Operator: 2011

Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	62263	5	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.l	62270	3	N2O	44
Acetaldehyde	75-07-0	NBS75K.l	62264	2	C2H4O	44



AB INSTRUCTIONS:

PPS#: _____

ECEIPT DATE: CASE#: 30073 00003 SAS#: DUE DATE:

VOA
C/MS WORKSHEET COMPUCHEM#: 683992R1

J[ ] J3[ ] D[ ] (:1)
2J[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: Report type: A

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: TRIPBLANK3

GC/MS ANALYSIS: 8/JR 2/15/95
mount Purged: [ ] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
nternal Standard Volume Added _____ ul
urrogate Standard Volume Added _____ ul
FB Filename BFGS0215B56 Disk ( )
lank Filename CBGS0215B56 Disk ( )
tandard Filename CSGS0215B56 Disk ( )
ample Filename CR083992B56 Disk ( )

ANALYST(S): Injection 2011 Work-up [signature]

GC/MS REVIEW

CONDITION CODE JA

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 01

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 01

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review [signature] Date 2/20/95 Auditor_____ Date___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials_____ Date___/___/___

FINAL REVIEW: Initials_____ Date___/___/___

AC1169

QUALITY ASSURANCE NOTICE

CompuChem ID# 683992
Client ID# TRIPBLK 3
Instrument Blank ID# CB9502/15B56
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 65 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID [illegible] / 983

Date 2-20-95

QAN-V-14
901001

3. Standards Data

a. Form VI VOA
Initial Calibration Data

b. Form VII VOA
Continuing Calibration Data

a. Form VI VOA

Initial Calibration Data

In order by instrument.

(1) VOA standards reconstructed ion chromatograms and quantitation reports for the initial (five point) calibration. Spectra not required.

(2) All initial calibration data must be included, regardless of when it was performed and for which case. When more than one initial calibration is performed, the data must be put in chronological order, by instrument.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Instrument ID: F50056 Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =CT950214B56.D RRF20 =CU950214B56.D
RRF50 =CV950214B56.D RRF100=CW950214B56.D RRF200=CY950214B56.D

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Chloromethane	0.541	0.599	0.581	0.641	0.672	0.607	8.4
Bromomethane *	1.185	1.255	1.156	1.161	1.056	1.163	6.1*
Vinyl Chloride *	0.800	0.888	0.841	0.897	0.900	0.865	5.0*
Chloroethane	0.768	0.857	0.775	0.775	0.690	0.773	7.6
Methylene Chloride	1.755	1.383	1.366	1.303	1.152	1.392	16.0
Acetone	0.418	0.180	0.200	0.210	0.243	0.250	38.6
Carbon Disulfide	4.859	4.176	4.195	4.118	3.528	4.175	11.3
1,1-Dichloroethene *	1.095	0.951	0.985	0.960	0.809	0.960	10.6*
1,1-Dichloroethane *	3.404	2.832	2.886	2.825	2.505	2.891	11.2*
1,2-Dichloroethene (total)	1.942	1.656	1.662	1.598	1.384	1.648	12.1
Chloroform *	4.067	3.454	3.457	3.256	2.689	3.384	14.6*
1,2-Dichloroethane *	2.442	2.041	2.116	2.010	1.722	2.066	12.5*
2-Butanone	0.491	0.315	0.380	0.362	0.374	0.385	16.9
1,1,1-Trichloroethane *	0.919	0.760	0.737	0.673	0.549	0.727	18.5*
Carbon Tetrachloride *	0.820	0.687	0.691	0.654	0.549	0.680	14.3*
Bromodichloromethane *	0.833	0.695	0.739	0.698	0.595	0.712	12.1*
1,2-Dichloropropane	0.511	0.412	0.408	0.385	0.328	0.409	16.2
cis-1,3-Dichloropropene *	0.588	0.493	0.539	0.521	0.457	0.520	9.4*
Trichloroethene *	0.567	0.450	0.452	0.420	0.353	0.449	17.3*
Dibromochloromethane *	0.836	0.652	0.721	0.664	0.532	0.681	16.2*
1,1,2-Trichloroethane *	0.463	0.356	0.376	0.338	0.271	0.361	19.3*
Benzene *	1.218	1.002	0.972	0.869	0.697	0.952	20.0*
trans-1,3-Dichloropropene *	0.510	0.419	0.485	0.482	0.423	0.464	8.7*
Bromoform *	0.595	0.435	0.522	0.498	0.418	0.494	14.4*
4-Methyl-2-Pentanone	0.353	0.228	0.275	0.264	0.265	0.277	16.6
2-Hexanone	0.182	0.097	0.145	0.149	0.175	0.150	22.5
Tetrachloroethene *	0.694	0.561	0.544	0.506	0.432	0.547	17.5*
1,1,2,2-Tetrachloroethane *	0.724	0.445	0.520	0.512	0.491	0.538	20.0*
Toluene *	1.274	0.968	0.940	0.888	0.838	0.982	17.4*
Chlorobenzene *	1.209	0.999	1.030	0.990	0.873	1.020	11.9*
Ethylbenzene *	0.548	0.455	0.473	0.458	0.404	0.468	11.1*
Styrene *	1.150	0.920	0.936	0.880	0.758	0.929	15.3*
Xylene (Total) *	0.770	0.622	0.620	0.569	0.477	0.612	17.4*
Dichlorodiflouromethane	0.449	0.523	0.491	0.535	0.518	0.503	6.9
Toluene-d8	0.962	0.880	0.822	0.814	0.798	0.855	7.9
Bromofluorobenzene *	0.938	0.838	0.817	0.816	0.766	0.835	7.6*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Instrument ID: F50056 Calibration Date(s): 02/14/95 02/14/95

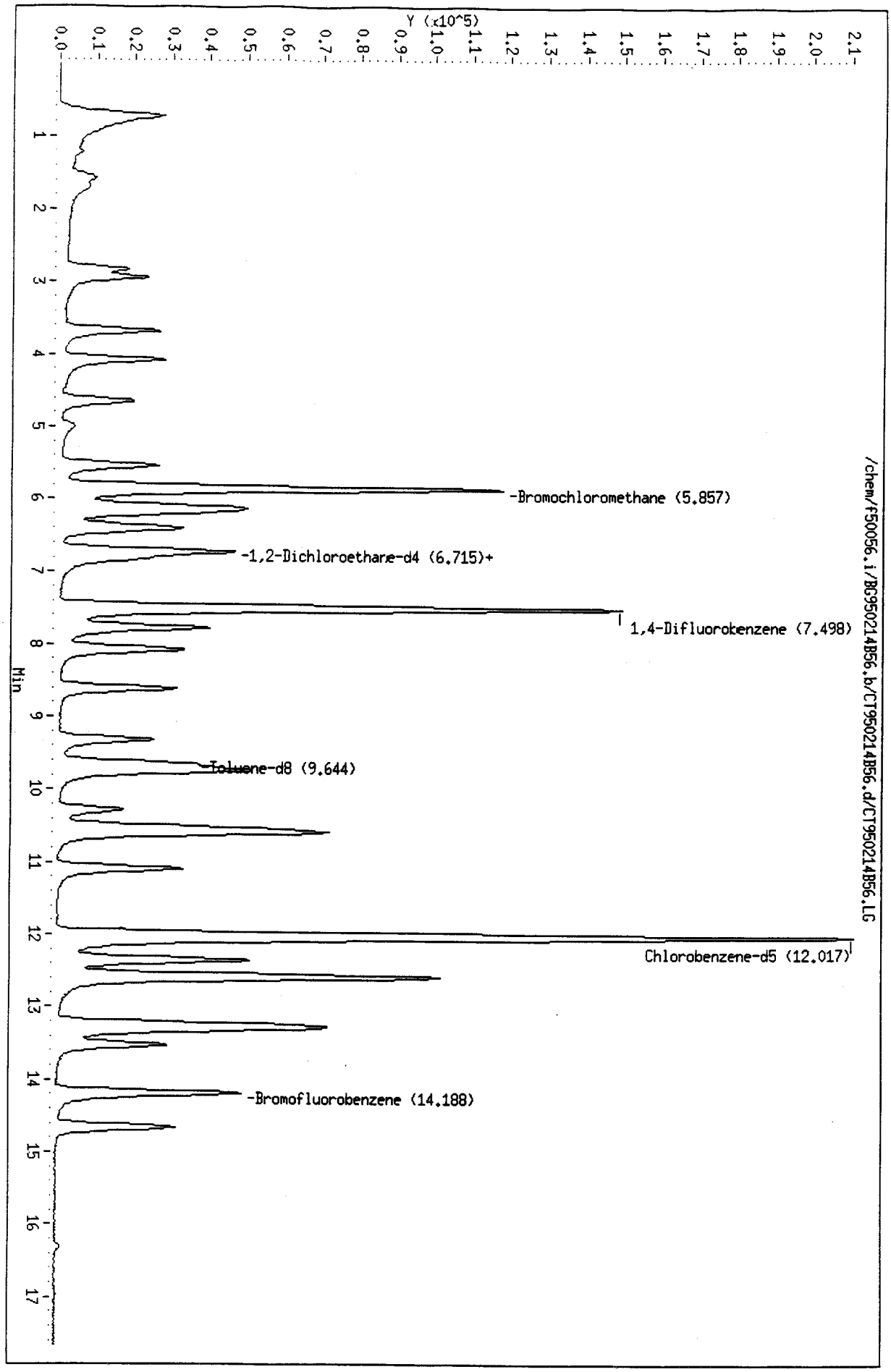
Heated Purge: (Y/N) N Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =CT950214B56.D RRF20 =CU950214B56.D
RRF50 =CV950214B56.D RRF100=CW950214B56.D RRF200=CY950214B56.D

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
1,2-Dichloroethane-d4	1.896	1.790	1.761	1.705	1.503	1.731	8.4

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.


Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Date : 14-FEB-1995 17:55
Client ID: VSTD010
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BG950214B56.b/CT950214B56.d/CT950214B56.LG
-Bromochloromethane (5.857)
-1,2-Dichloroethane-d4 (6.715)+
1,4-Difluorobenzene (7.498)
Toluene-d8 (9.644)
Chlorobenzene-d5 (12.017)
-Bromofluorobenzene (14.188)

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CT950214B56.d
Lab Smp Id: VSTD010 Client Smp ID: VSTD010
Inj Date : 14-FEB-1995 17:55
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.857	5.857	(1.000)	98183	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	380576	250.0	
*	3 Chlorobenzene-d5	117.00	12.004	12.004	(1.000)	384769	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.715	(1.147)	37230	50.00	54.77
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	74051	50.00	56.26
$	6 Bromofluorobenzene	95.00	14.188	14.188	(1.182)	72167	50.00	56.16
	7 Dichlorodiflouromethane	85.00	0.959	0.959	(0.164)	8809	50.00	44.57(aM)
	8 Chloromethane	50.00	1.098	1.098	(0.187)	10622	50.00	44.56(aM)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	15701	50.00	46.20(a)
	10 Bromomethane	94.00	1.578	1.578	(0.269)	23269	50.00	50.96
	11 Chloroethane	64.00	1.717	1.717	(0.293)	15077	50.00	49.67(a)
	12 1,1-Dichloroethene	96.00	2.827	2.827	(0.483)	21499	50.00	57.01
	13 Acetone	43.00	3.156	3.156	(0.539)	8201	50.00	83.50
	14 Carbon Disulfide	76.00	2.941	2.941	(0.502)	95407	50.00	58.18
	15 Methylene Chloride	84.00	3.686	3.686	(0.629)	34471	50.00	63.06
	16 trans-1,2-Dichloroethene	96.00	4.077	4.077	(0.696)	36695	50.00	58.53
	17 1,1-Dichloroethane	63.00	4.658	4.658	(0.795)	66835	50.00	58.87
	18 cis-1,2-Dichloroethene	96.00	5.541	5.541	(0.946)	39576	50.00	59.26
	19 2-Butanone	43.00	5.768	5.768	(0.985)	9649	50.00	63.89(M)
	20 Chloroform	83.00	6.109	6.109	(1.043)	79853	50.00	60.08
	21 1,1,1-Trichloroethane	97.00	6.185	6.185	(0.825)	69955	50.00	63.17
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	62437	50.00	60.29
	23 Benzene	78.00	6.715	6.715	(0.896)	92714	50.00	64.00

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d
Report Date: 16-Feb-1995 17:58

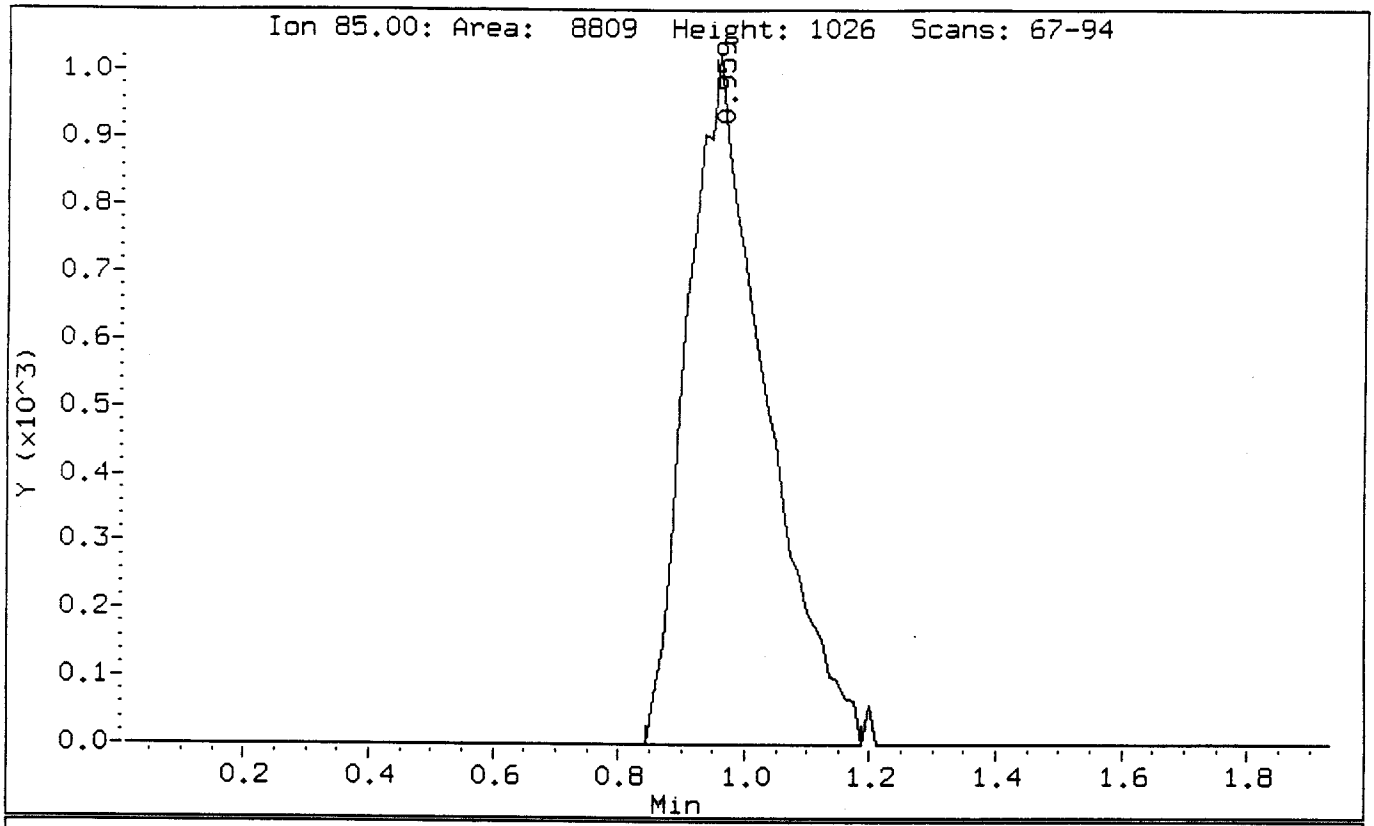
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.829	6.829	(1.166)	47953	50.00	59.09
25	Trichloroethene	130.00	7.775	7.775	(1.037)	43190	50.00	63.25
26	1,2-Dichloropropane	63.00	8.066	8.066	(1.076)	38900	50.00	62.49
27	Bromodichloromethane	83.00	8.609	8.609	(1.148)	63439	50.00	58.54
28	cis-1,3-Dichloropropene	75.00	9.315	9.315	(1.242)	44737	50.00	56.54
29	4-Methyl-2-Pentanone	43.00	9.719	9.719	(0.810)	27146	50.00	63.66
30	Toluene	91.00	9.745	9.745	(0.812)	98052	50.00	64.89
31	trans-1,3-Dichloropropene	75.00	10.275	10.275	(1.370)	38821	50.00	54.97
32	1,1,2-Trichloroethane	97.00	10.515	10.515	(1.402)	35243	50.00	64.16
33	Tetrachloroethene	164.00	10.590	10.590	(0.882)	53400	50.00	63.39
34	2-Hexanone	43.00	11.171	11.171	(0.931)	14035	50.00	60.90
35	Dibromochloromethane	129.00	11.095	11.095	(1.480)	63604	50.00	61.36
36	Chlorobenzene	112.00	12.054	12.054	(1.004)	93005	50.00	59.25
37	Ethylbenzene	106.00	12.345	12.345	(1.028)	42159	50.00	58.58
38	m,p-Xylene	106.00	12.585	12.585	(1.048)	117003	100.0	131.1
39	o-Xylene	106.00	13.254	13.254	(1.104)	59264	50.00	62.95
40	Styrene	104.00	13.304	13.304	(1.108)	88465	50.00	61.89
41	Bromoform	173.00	13.531	13.531	(1.805)	45259	50.00	60.23
42	1,1,2,2-Tetrachloroethane	83.00	14.655	14.655	(1.221)	55705	50.00	67.22
M 43	1,2-Dichloroethene (total)	96.00				76271	100.0	117.8
M 44	Xylene (Total)	106.00				176267	50.00	187.2

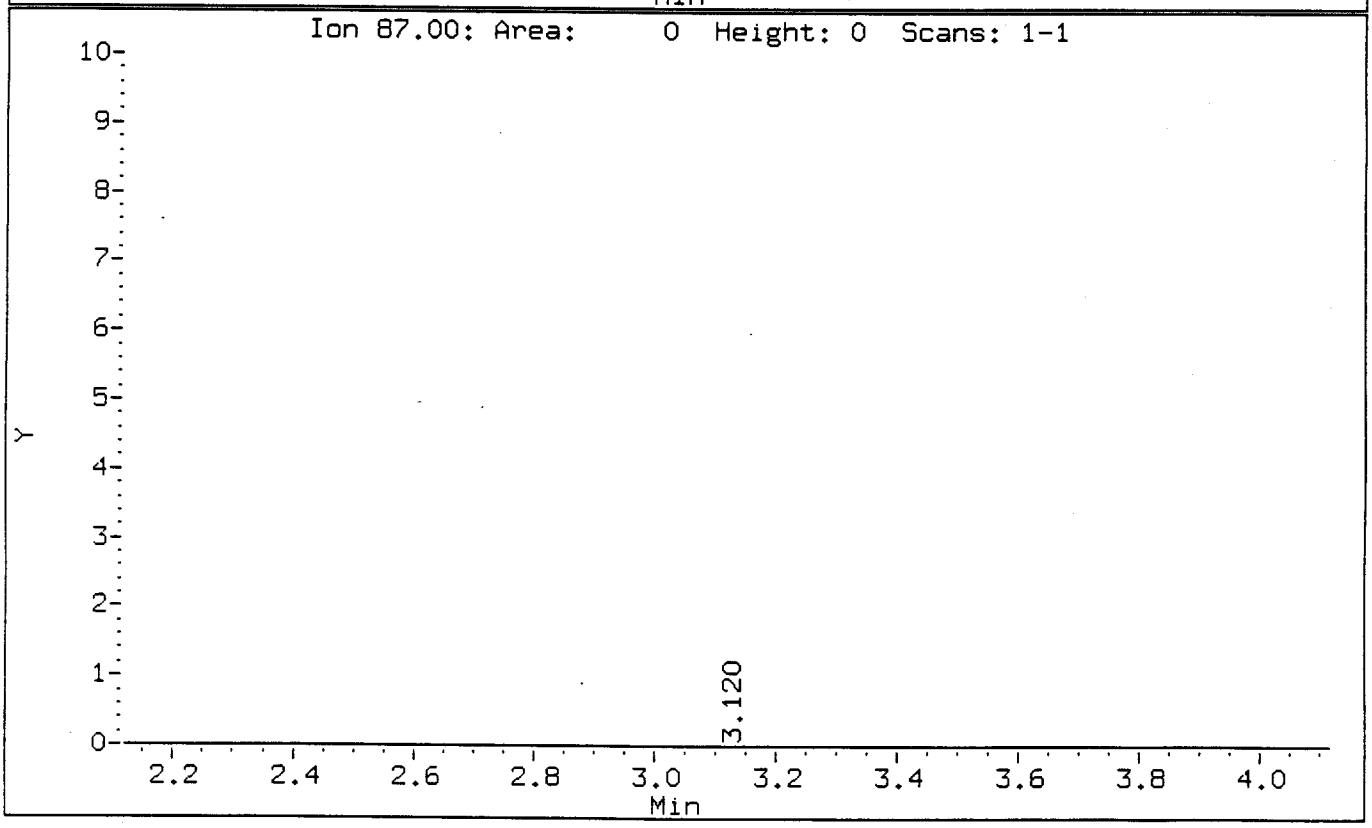
QC Flag Legend

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

Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d/CT950214B56.LG
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

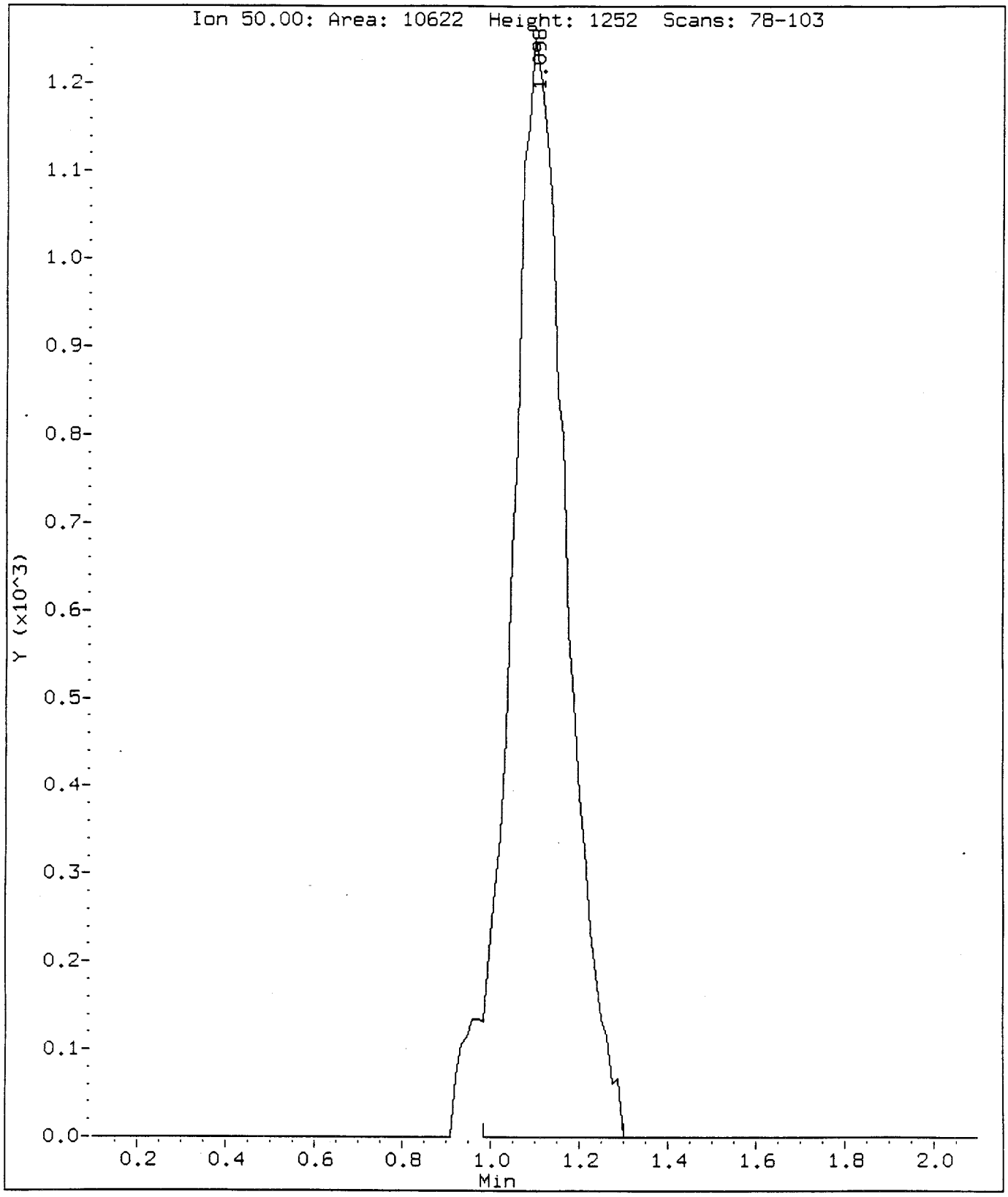
Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





Data File: /chem/f50056.i/BG950214B56.b/CT950214B56.d/CT950214B56.LG
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

Compound: Chloromethane
CAS Number: 74-87-3



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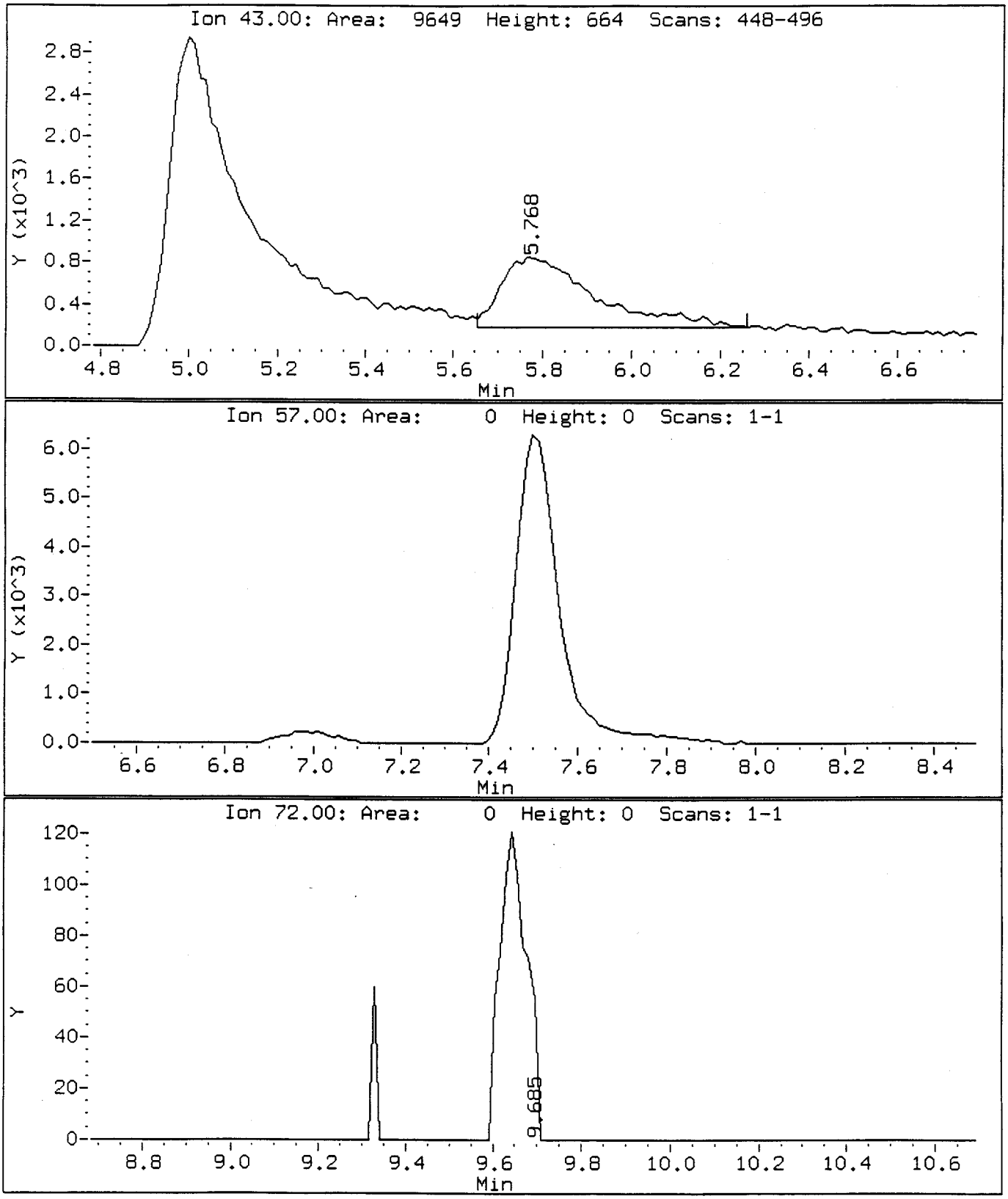
Injection Date: 14-FEB-95 17:55
Instrument: f50056.i
Client Sample ID: VSTD010

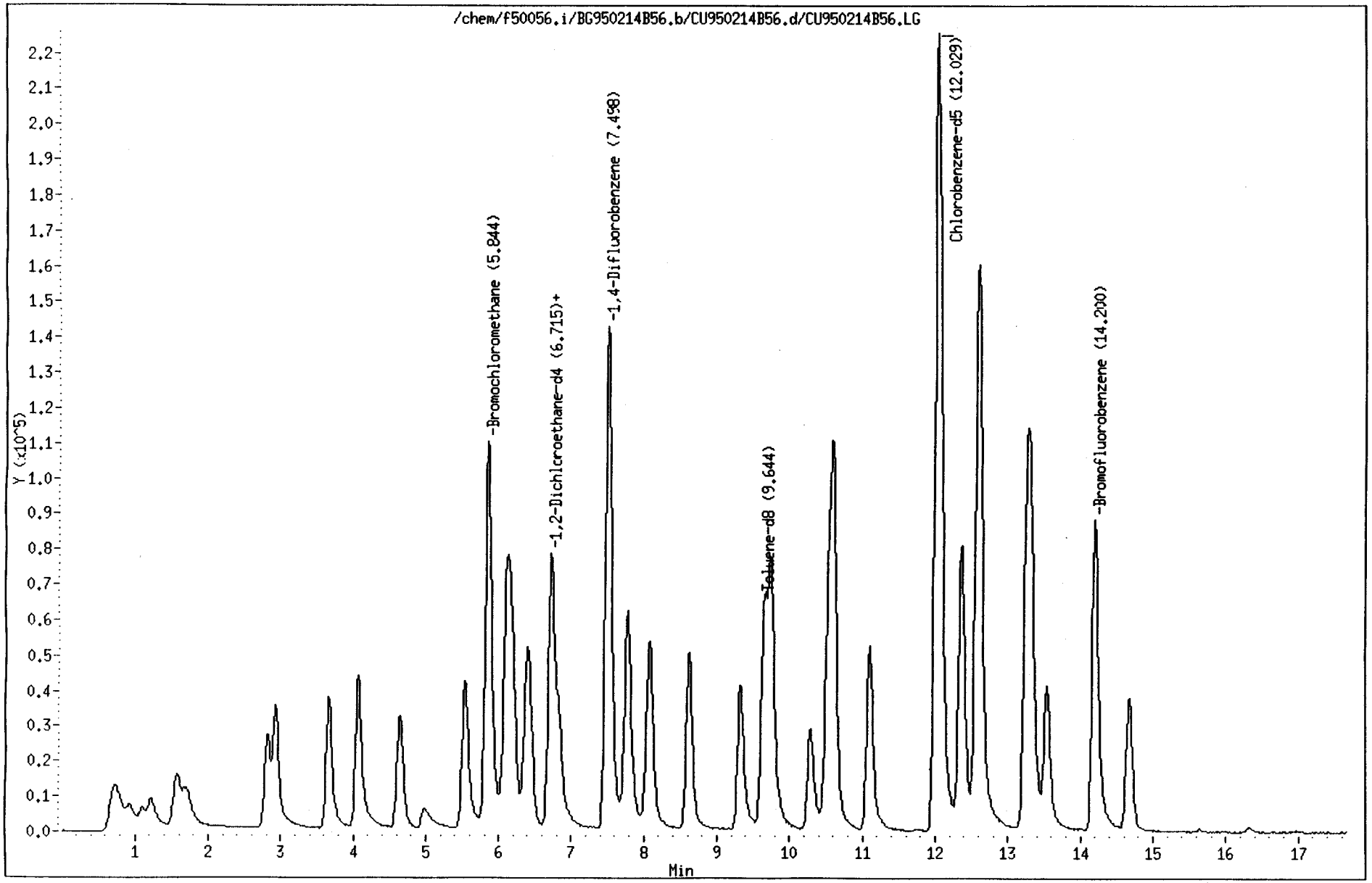
Compound: 2-Butanone
CAS Number: 78-93-3



Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Date : 14-FEB-1995 18:35
Client ID: VSTD020
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CU950214B56.d
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 14-FEB-1995 18:35
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.844	5.844	(1.000)	92122	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	366169	250.0	
*	3 Chlorobenzene-d5	117.00	12.017	12.017	(1.000)	372017	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.715	6.715	(1.149)	65975	100.0	103.4
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	130876	100.0	102.8
$	6 Bromofluorobenzene	95.00	14.200	14.200	(1.182)	124769	100.0	100.4
	7 Dichlorodiflouromethane	85.00	0.934	0.934	(0.160)	19288	100.0	104.0(M)
	8 Chloromethane	50.00	1.098	1.098	(0.188)	22083	100.0	98.74(M)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	32729	100.0	102.6
	10 Bromomethane	94.00	1.578	1.578	(0.270)	46260	100.0	108.0
	11 Chloroethane	64.00	1.704	1.704	(0.292)	31580	100.0	110.9
	12 1,1-Dichloroethene	96.00	2.815	2.815	(0.482)	35055	100.0	99.07
	13 Acetone	43.00	3.156	3.156	(0.540)	6627	100.0	71.91
	14 Carbon Disulfide	76.00	2.928	2.928	(0.501)	153899	100.0	100.0
	15 Methylene Chloride	84.00	3.661	3.661	(0.626)	50948	100.0	99.33
	16 trans-1,2-Dichloroethene	96.00	4.064	4.064	(0.695)	59060	100.0	100.4
	17 1,1-Dichloroethane	63.00	4.632	4.632	(0.793)	104356	100.0	97.97
	18 cis-1,2-Dichloroethene	96.00	5.529	5.529	(0.946)	62962	100.0	100.5
	19 2-Butanone	43.00	5.781	5.781	(0.989)	11603	100.0	81.88(M)
	20 Chloroform	83.00	6.109	6.109	(1.045)	127279	100.0	102.0
	21 1,1,1-Trichloroethane	97.00	6.172	6.172	(0.823)	111246	100.0	104.4
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	100650	100.0	101.0
	23 Benzene	78.00	6.715	6.715	(0.896)	146746	100.0	105.3

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d
Report Date: 16-Feb-1995 17:58

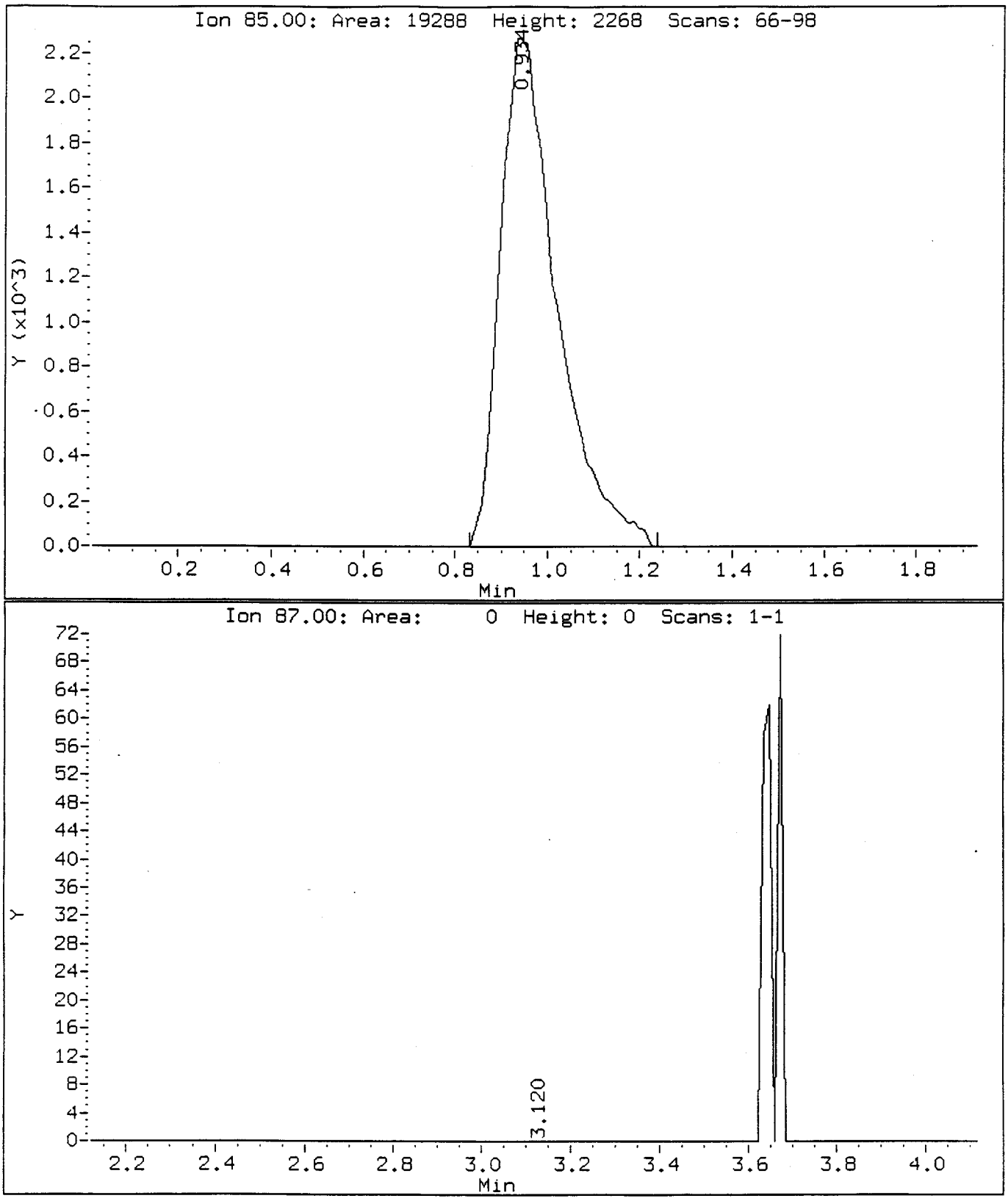
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.829	6.829	(1.168)	75191	100.0	98.75
	25 Trichloroethene	130.00	7.775	7.775	(1.037)	65934	100.0	100.4
	26 1,2-Dichloropropane	63.00	8.078	8.078	(1.077)	60319	100.0	100.7
	27 Bromodichloromethane	83.00	8.609	8.609	(1.148)	101787	100.0	97.61
	28 cis-1,3-Dichloropropene	75.00	9.315	9.315	(1.242)	72274	100.0	94.93
	29 4-Methyl-2-Pentanone	43.00	9.719	9.719	(0.809)	33925	100.0	82.28
	30 Toluene	91.00	9.745	9.745	(0.811)	144015	100.0	98.58
	31 trans-1,3-Dichloropropene	75.00	10.287	10.287	(1.372)	61438	100.0	90.41
	32 1,1,2-Trichloroethane	97.00	10.527	10.527	(1.404)	52143	100.0	98.66
	33 Tetrachloroethene	164.00	10.590	10.590	(0.881)	83496	100.0	102.5
	34 2-Hexanone	43.00	11.171	11.171	(0.930)	14433	100.0	64.77
	35 Dibromochloromethane	129.00	11.095	11.095	(1.480)	95478	100.0	95.74
	36 Chlorobenzene	112.00	12.067	12.067	(1.004)	148613	100.0	97.92
	37 Ethylbenzene	106.00	12.370	12.370	(1.029)	67725	100.0	97.34
	38 m,p-Xylene	106.00	12.597	12.597	(1.048)	179254	200.0	207.7
	39 o-Xylene	106.00	13.254	13.254	(1.103)	92578	100.0	101.7
	40 Styrene	104.00	13.317	13.317	(1.108)	136851	100.0	99.03
	41 Bromoform	173.00	13.531	13.531	(1.805)	63716	100.0	88.13
	42 1,1,2,2-Tetrachloroethane	83.00	14.680	14.680	(1.222)	66171	100.0	82.58
M	43 1,2-Dichloroethene (total)	96.00				122022	200.0	200.9
M	44 Xylene (Total)	106.00				271832	100.0	298.6

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CU950214B56.d/CU950214B56.LG
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8



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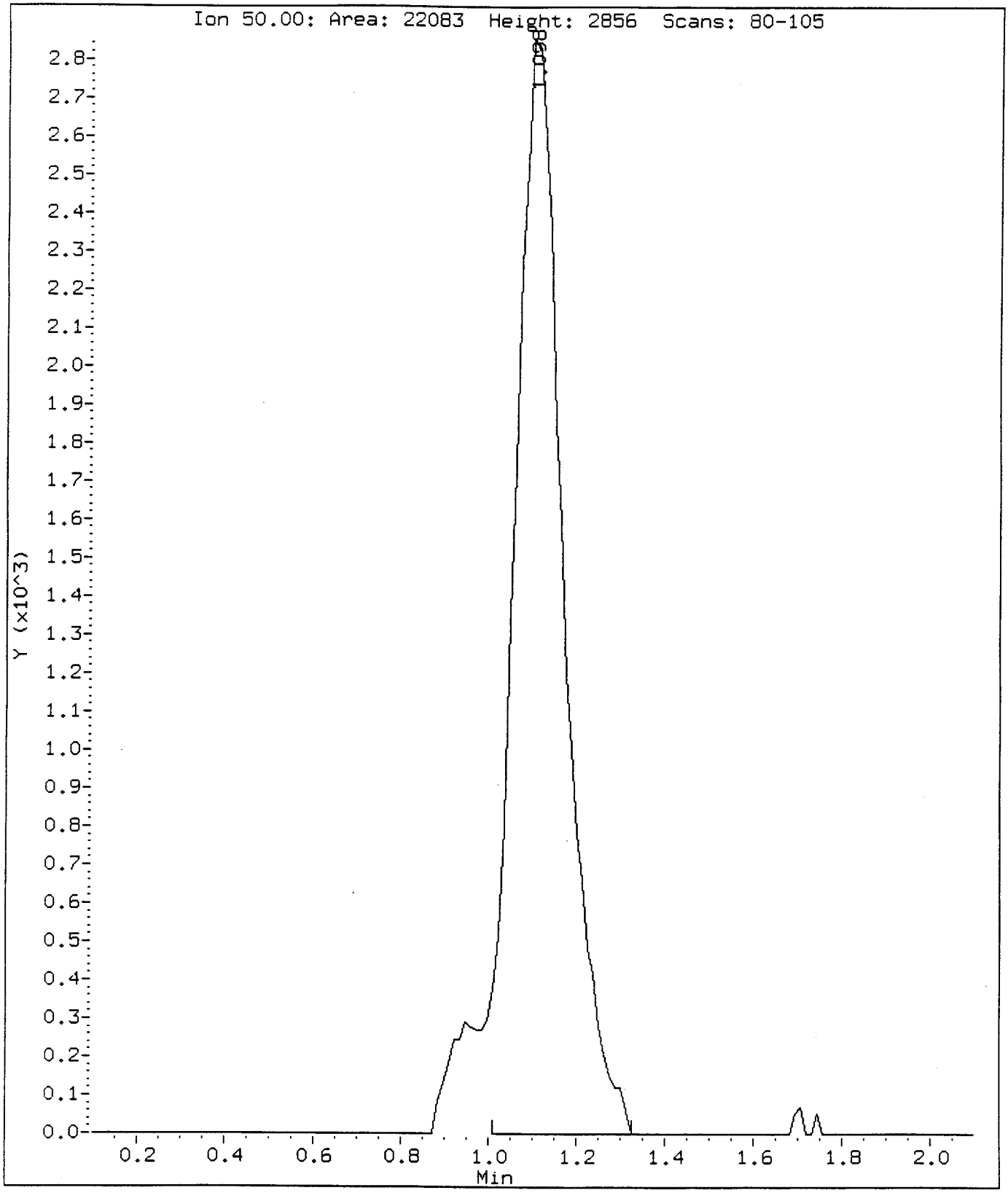
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

Compound: Chloromethane
CAS Number: 74-87-3



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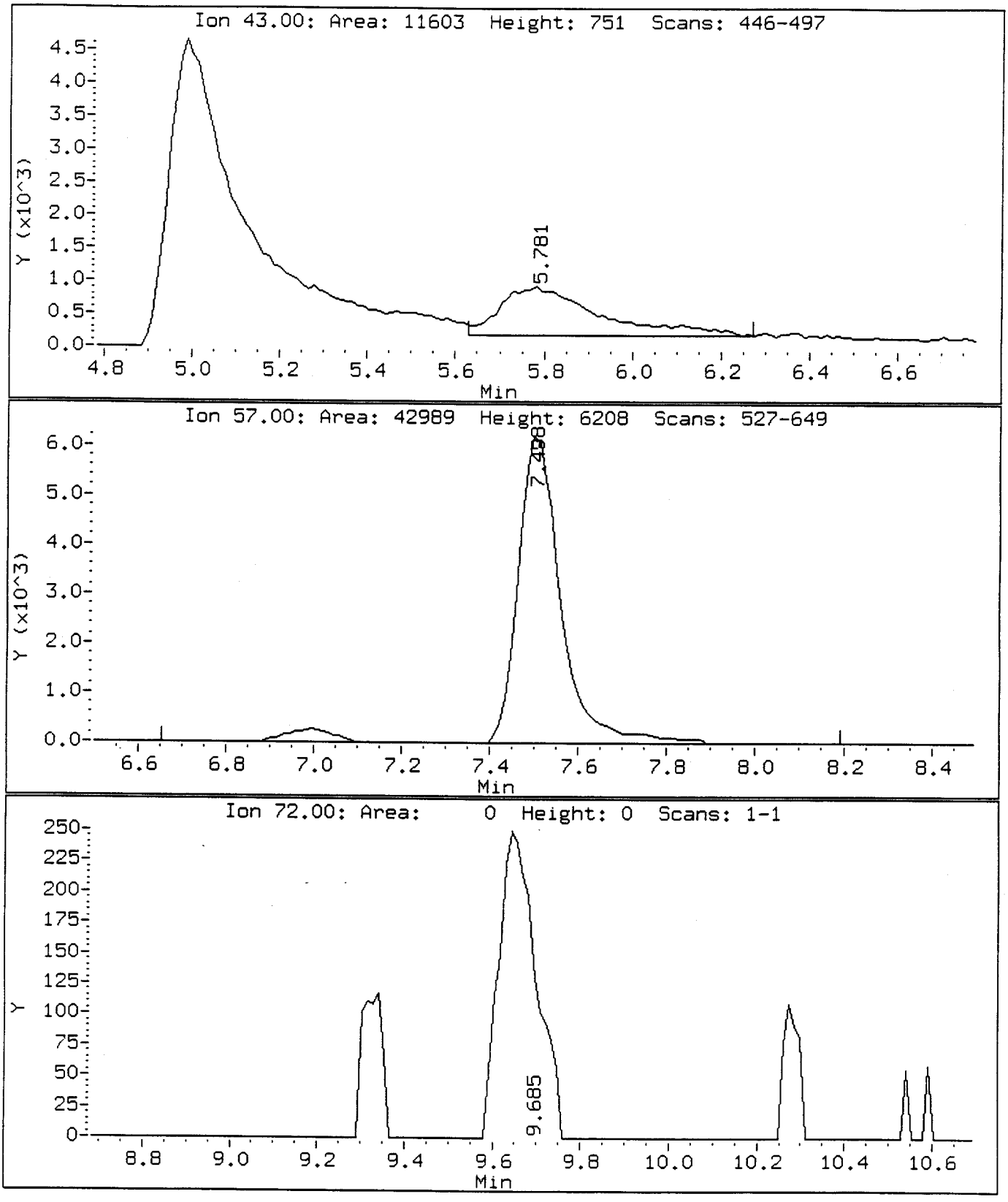
Injection Date: 14-FEB-95 18:35
Instrument: f50056.i
Client Sample ID: VSTD020

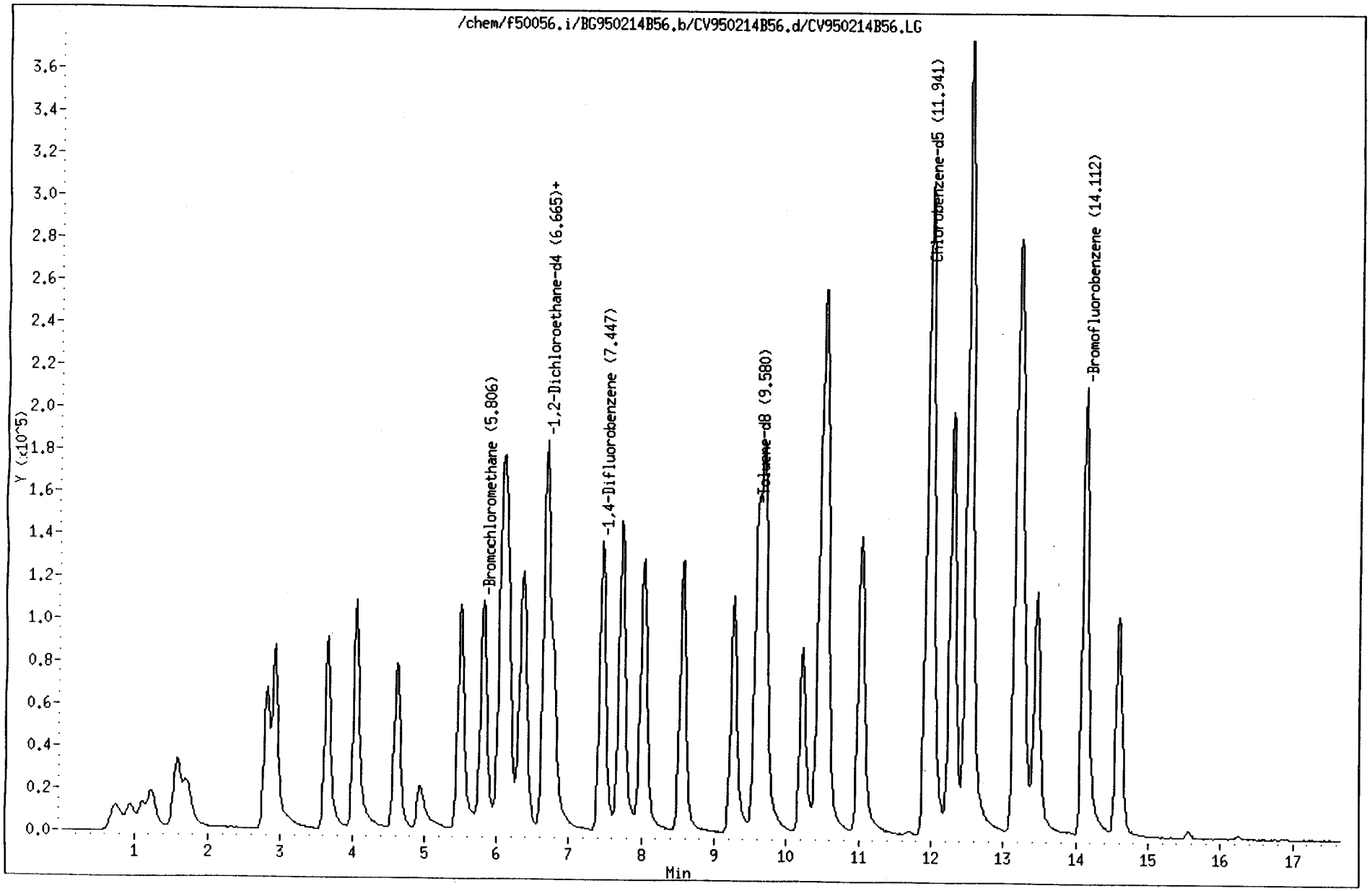
Compound: 2-Butanone
CAS Number: 78-93-3



Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Date : 14-FEB-1995 19:12
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CV950214B56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 14-FEB-1995 19:12
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
*	1 Bromochloromethane	128.00	5.806	5.806	(1.000)	85449	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.447	(1.000)	342995	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	11.941	(1.000)	347565	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.665	6.665	(1.148)	150459	250.0	254.3
$	5 Toluene-d8	98.00	9.580	9.580	(0.802)	285693	250.0	240.3
$	6 Bromofluorobenzene	95.00	14.112	14.112	(1.182)	283841	250.0	244.5
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.163)	41973	250.0	244.0
	8 Chloromethane	50.00	1.123	1.123	(0.193)	49665	250.0	239.4
	9 Vinyl Chloride	62.00	1.237	1.237	(0.213)	71900	250.0	243.1
	10 Bromomethane	94.00	1.578	1.578	(0.272)	98792	250.0	248.6(M)
	11 Chloroethane	64.00	1.717	1.717	(0.296)	66198	250.0	250.6(M)
	12 1,1-Dichloroethene	96.00	2.802	2.802	(0.483)	84204	250.0	256.5
	13 Acetone	43.00	3.130	3.130	(0.539)	17072	250.0	199.7
	14 Carbon Disulfide	76.00	2.916	2.916	(0.502)	358436	250.0	251.2
	15 Methylene Chloride	84.00	3.648	3.648	(0.628)	116734	250.0	245.4
	16 trans-1,2-Dichloroethene	96.00	4.039	4.039	(0.696)	136423	250.0	250.0
	17 1,1-Dichloroethane	63.00	4.607	4.607	(0.793)	246630	250.0	249.6
	18 cis-1,2-Dichloroethene	96.00	5.491	5.491	(0.946)	147672	250.0	254.1
	19 2-Butanone	43.00	5.693	5.693	(0.980)	32472	250.0	247.0
	20 Chloroform	83.00	6.059	6.059	(1.043)	295395	250.0	255.4
	21 1,1,1-Trichloroethane	97.00	6.135	6.135	(0.824)	252798	250.0	253.3
	22 Carbon Tetrachloride	117.00	6.349	6.349	(0.853)	236955	250.0	253.9
	23 Benzene	78.00	6.665	6.665	(0.895)	333376	250.0	255.3

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d
Report Date: 16-Feb-1995 17:58

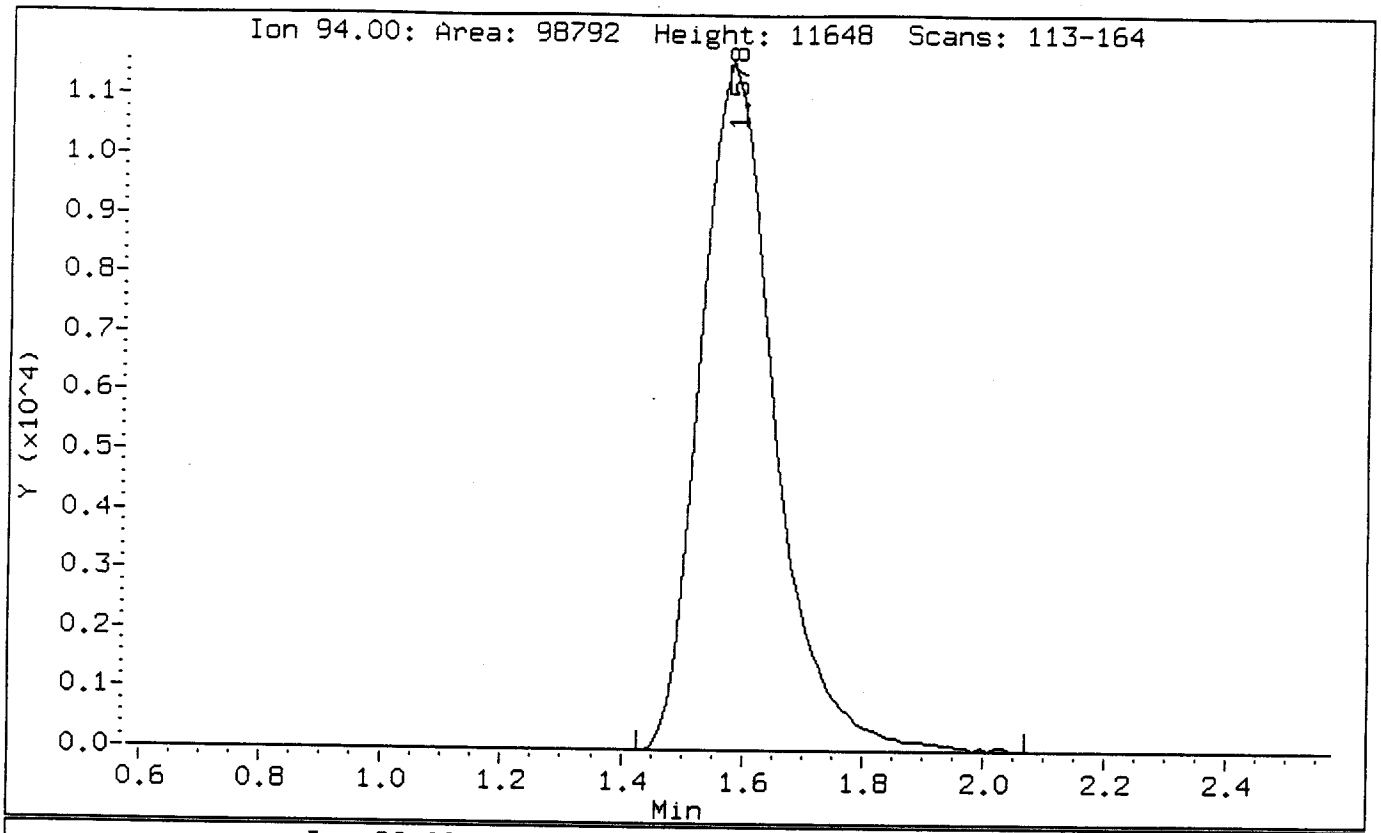
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.778	6.778	(1.167)	180839	250.0	256.0
	25 Trichloroethene	130.00	7.712	7.712	(1.036)	155014	250.0	251.9
	26 1,2-Dichloropropane	63.00	8.015	8.015	(1.076)	140104	250.0	249.7
	27 Bromodichloromethane	83.00	8.558	8.558	(1.149)	253324	250.0	259.4
	28 cis-1,3-Dichloropropene	75.00	9.252	9.252	(1.242)	184881	250.0	259.2
	29 4-Methyl-2-Pentanone	43.00	9.644	9.644	(0.808)	95676	250.0	248.4
	30 Toluene	91.00	9.681	9.681	(0.811)	326841	250.0	239.5
	31 trans-1,3-Dichloropropene	75.00	10.212	10.212	(1.371)	166491	250.0	261.6
	32 1,1,2-Trichloroethane	97.00	10.451	10.451	(1.403)	129109	250.0	260.8
	33 Tetrachloroethene	164.00	10.515	10.515	(0.881)	189081	250.0	248.5
	34 2-Hexanone	43.00	11.070	11.070	(0.927)	50465	250.0	242.4
	35 Dibromochloromethane	129.00	11.019	11.019	(1.480)	247328	250.0	264.8
	36 Chlorobenzene	112.00	11.991	11.991	(1.004)	357905	250.0	252.4
	37 Ethylbenzene	106.00	12.282	12.282	(1.029)	164343	250.0	252.8
	38 m,p-Xylene	106.00	12.522	12.522	(1.049)	404739	500.0	502.0
	39 o-Xylene	106.00	13.178	13.178	(1.104)	215569	250.0	253.5
	40 Styrene	104.00	13.241	13.241	(1.109)	325270	250.0	251.9
	41 Bromoform	173.00	13.456	13.456	(1.807)	179007	250.0	264.3
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.222)	180825	250.0	241.6
M	43 1,2-Dichloroethene (total)	96.00				284095	500.0	504.2
M	44 Xylene (Total)	106.00				620308	250.0	729.4

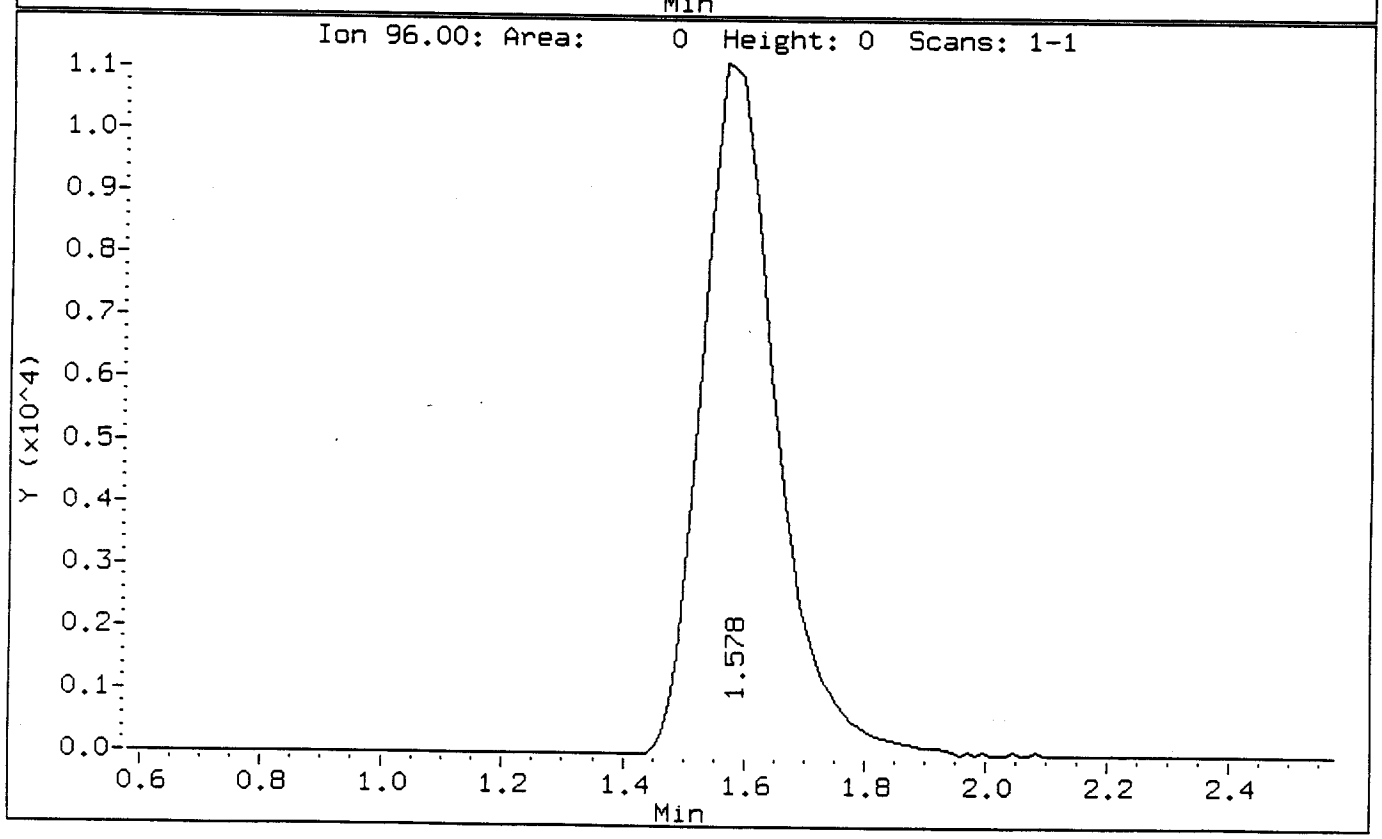
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d/CV950214B56.LG
Injection Date: 14-FEB-95 19:12
Instrument: f50056.i
Client Sample ID: VSTD050

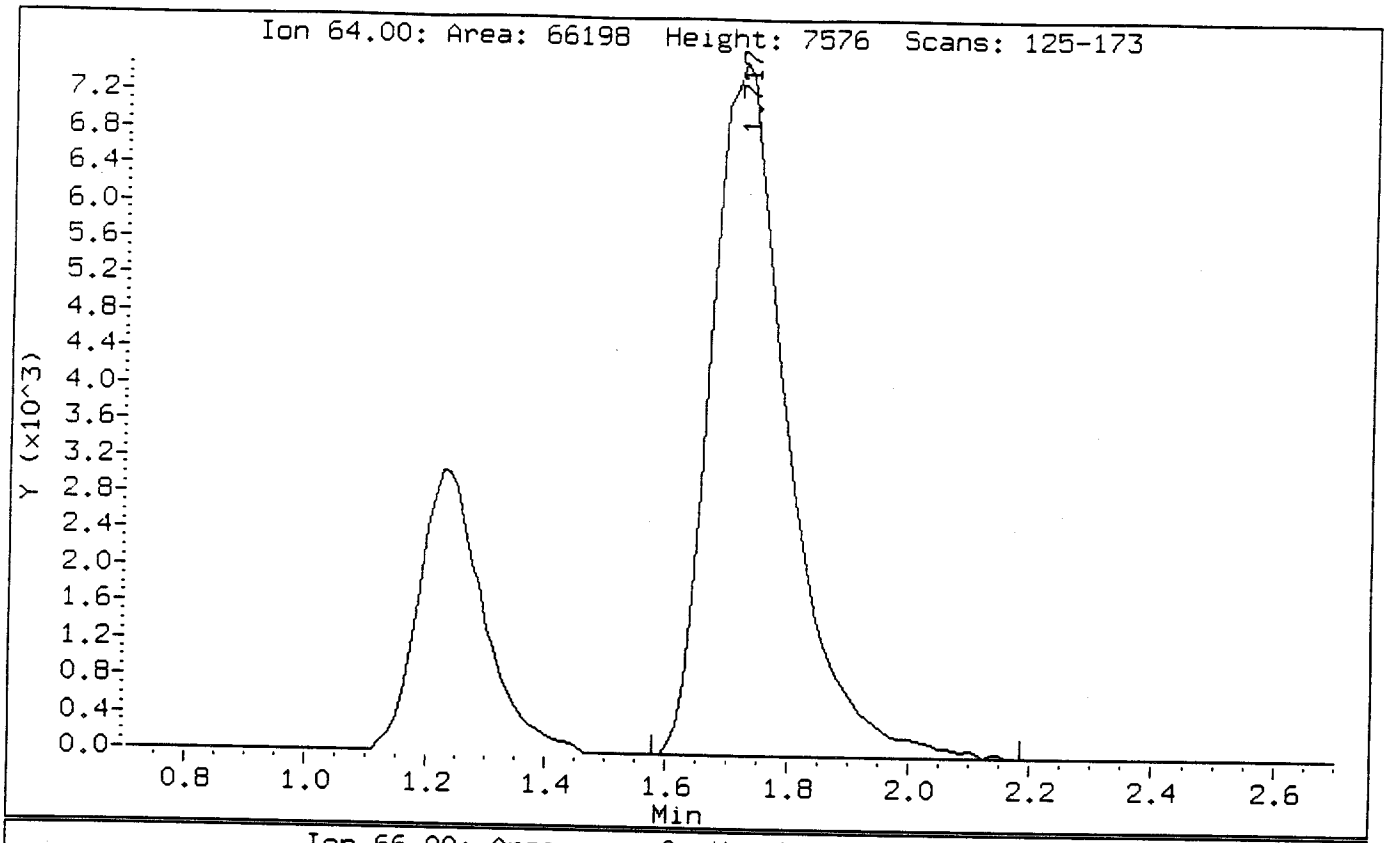
Compound: Bromomethane
CAS Number: 74-83-9

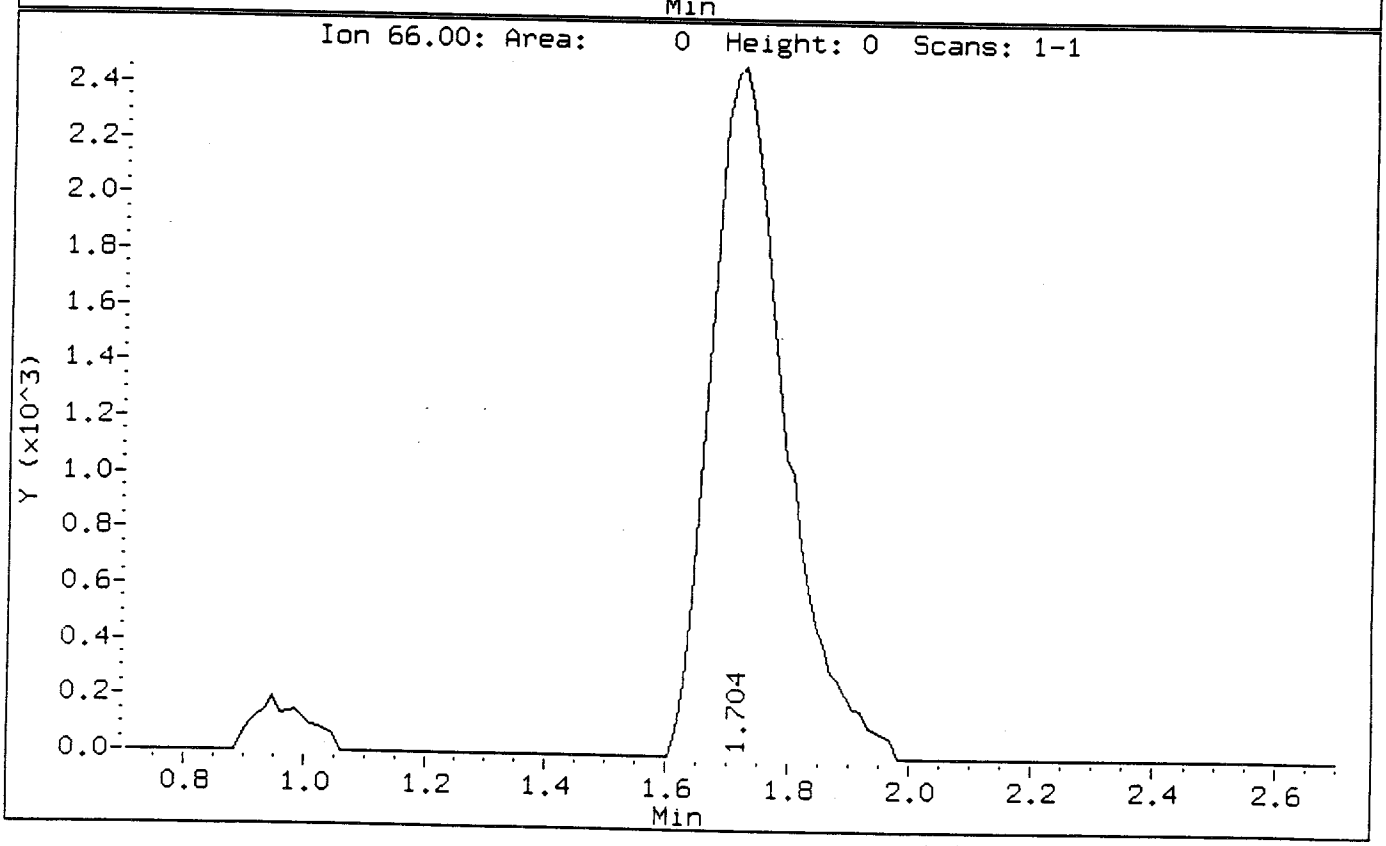




Data File: /chem/f50056.i/BG950214B56.b/CV950214B56.d/CV950214B56.LG
Injection Date: 14-FEB-95 19:12
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3

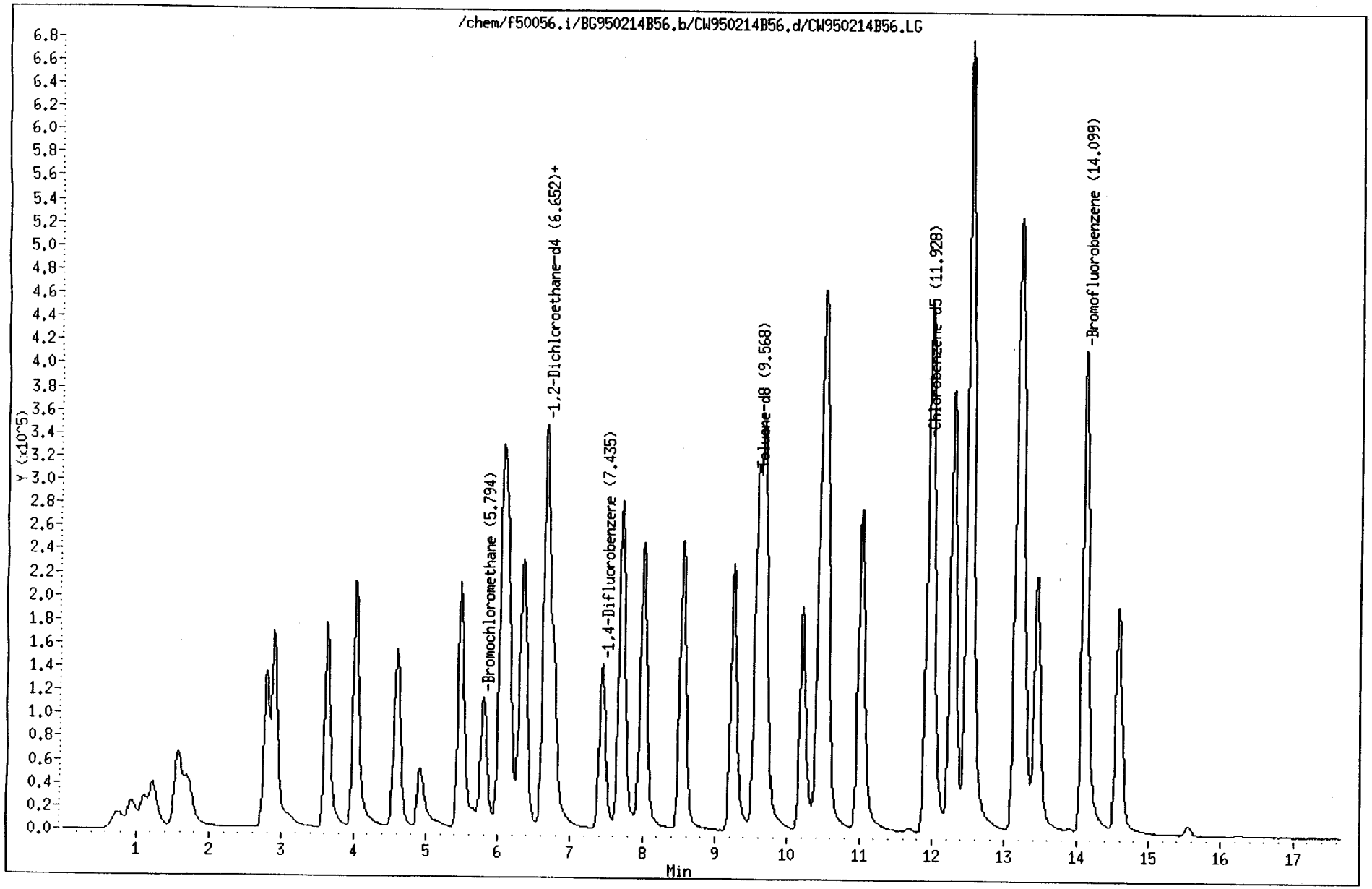




Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Date : 14-FEB-1995 19:50
Client ID: VSTD100
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CW950214B56.d
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 14-FEB-1995 19:50
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
*	1 Bromochloromethane	128.00	5.794	5.794	(1.000)	84710	250.0	
*	2 1,4-Difluorobenzene	114.00	7.435	7.435	(1.000)	350426	250.0	
*	3 Chlorobenzene-d5	117.00	11.928	11.928	(1.000)	338836	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.639	6.639	(1.146)	288835	500.0	492.5
$	5 Toluene-d8	98.00	9.568	9.568	(0.802)	551810	500.0	476.0
$	6 Bromofluorobenzene	95.00	14.099	14.099	(1.182)	552753	500.0	488.5
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.163)	90624	500.0	531.4
	8 Chloromethane	50.00	1.111	1.111	(0.192)	108630	500.0	528.2
	9 Vinyl Chloride	62.00	1.224	1.224	(0.211)	151987	500.0	518.4
	10 Bromomethane	94.00	1.565	1.565	(0.270)	196646	500.0	499.1(M)
	11 Chloroethane	64.00	1.704	1.704	(0.294)	131347	500.0	501.5(M)
	12 1,1-Dichloroethene	96.00	2.790	2.790	(0.481)	162700	500.0	500.0
	13 Acetone	43.00	3.118	3.118	(0.538)	35538	500.0	419.4
	14 Carbon Disulfide	76,00	2.891	2.891	(0.499)	697755	500.0	493.2
	15 Methylene Chloride	84.00	3.623	3.623	(0.625)	220810	500.0	468.2
	16 trans-1,2-Dichloroethene	96.00	4.014	4.014	(0.693)	262911	500.0	486.1
	17 1,1-Dichloroethane	63.00	4.595	4.595	(0.793)	478687	500.0	488.7
	18 cis-1,2-Dichloroethene	96.00	5.478	5.478	(0.946)	278538	500.0	483.4
	19 2-Butanone	43.00	5.680	5.680	(0.980)	61397	500.0	471.2
	20 Chloroform	83.00	6.034	6.034	(1.041)	551600	500.0	481.0
	21 1,1,1-Trichloroethane	97.00	6.109	6.109	(0.822)	471872	500.0	462.7
	22 Carbon Tetrachloride	117.00	6.336	6.336	(0.852)	458507	500.0	480.8
	23 Benzene	78.00	6.652	6.652	(0.895)	609001	500.0	456.6

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d
Report Date: 16-Feb-1995 17:58

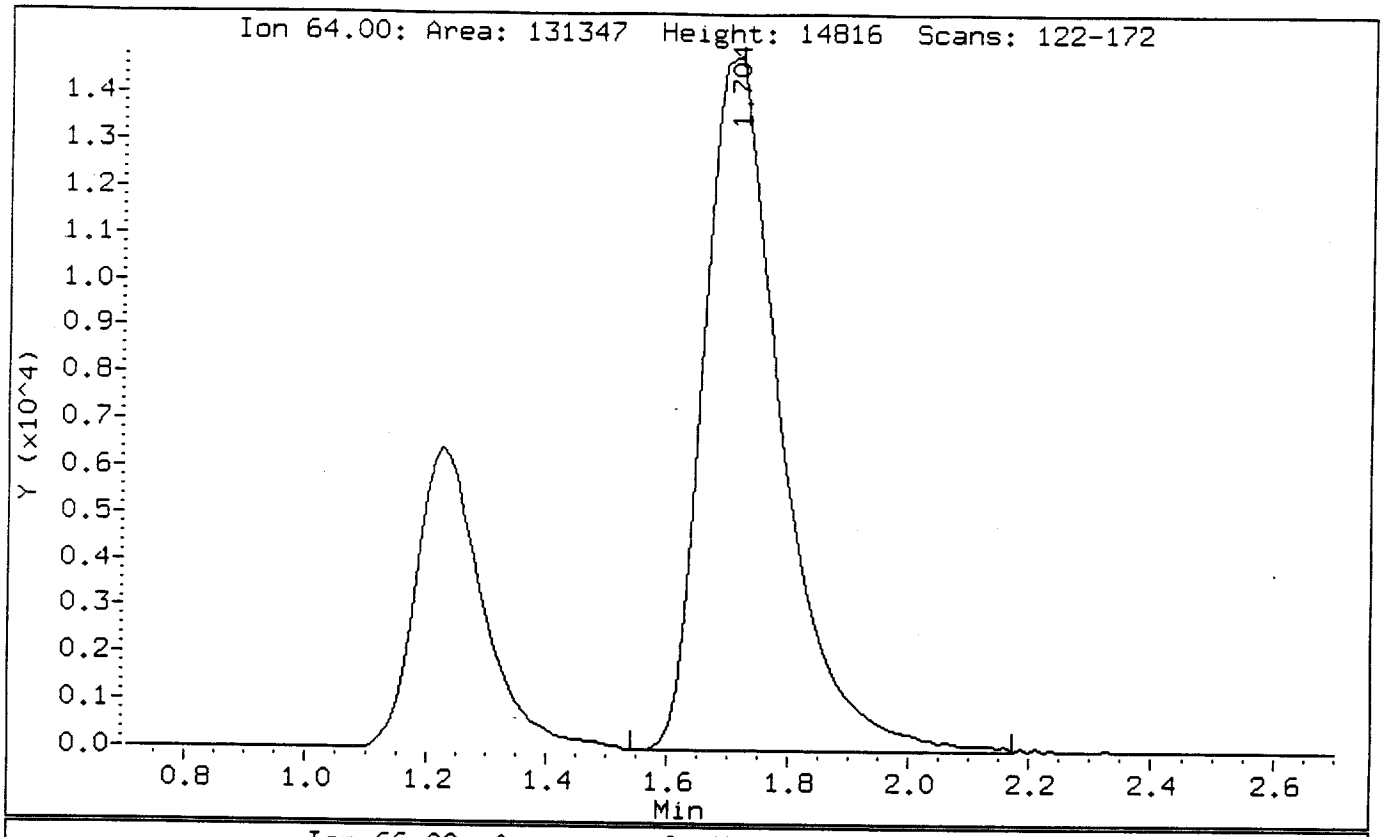
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.753	6.753	(1.166)	340603	500.0	486.5
	25 Trichloroethene	130.00	7.700	7.700	(1.036)	294617	500.0	468.6
	26 1,2-Dichloropropane	63.00	8.003	8.003	(1.076)	269648	500.0	470.4
	27 Bromodichloromethane	83.00	8.545	8.545	(1.149)	488996	500.0	490.0
	28 cis-1,3-Dichloropropene	75.00	9.240	9.240	(1.243)	365475	500.0	501.6
	29 4-Methyl-2-Pentanone	43.00	9.644	9.644	(0.808)	179092	500.0	476.9
	30 Toluene	91.00	9.669	9.669	(0.811)	601843	500.0	452.3
	31 trans-1,3-Dichloropropene	75.00	10.199	10.199	(1.372)	337472	500.0	518.9
	32 1,1,2-Trichloroethane	97.00	10.439	10.439	(1.404)	236998	500.0	468.6
	33 Tetrachloroethene	164.00	10.502	10.502	(0.880)	342820	500.0	462.2
	34 2-Hexanone	43.00	11.057	11.057	(0.927)	100796	500.0	496.6
	35 Dibromochloromethane	129.00	11.007	11.007	(1.480)	465191	500.0	487.4
	36 Chlorobenzene	112.00	11.979	11.979	(1.004)	670872	500.0	485.3
	37 Ethylbenzene	106.00	12.269	12.269	(1.029)	310231	500.0	489.5
	38 m,p-Xylene	106.00	12.509	12.509	(1.049)	709723	1000	902.9
	39 o-Xylene	106.00	13.165	13.165	(1.104)	385519	500.0	465.0
	40 Styrene	104.00	13.228	13.228	(1.109)	596614	500.0	474.0
	41 Bromoform	173.00	13.456	13.456	(1.810)	349167	500.0	504.7
	42 1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.223)	347195	500.0	475.7
M	43 1,2-Dichloroethene (total)	96.00				541449	1000	969.4
M	44 Xylene (Total)	106.00				1095242	500.0	1321

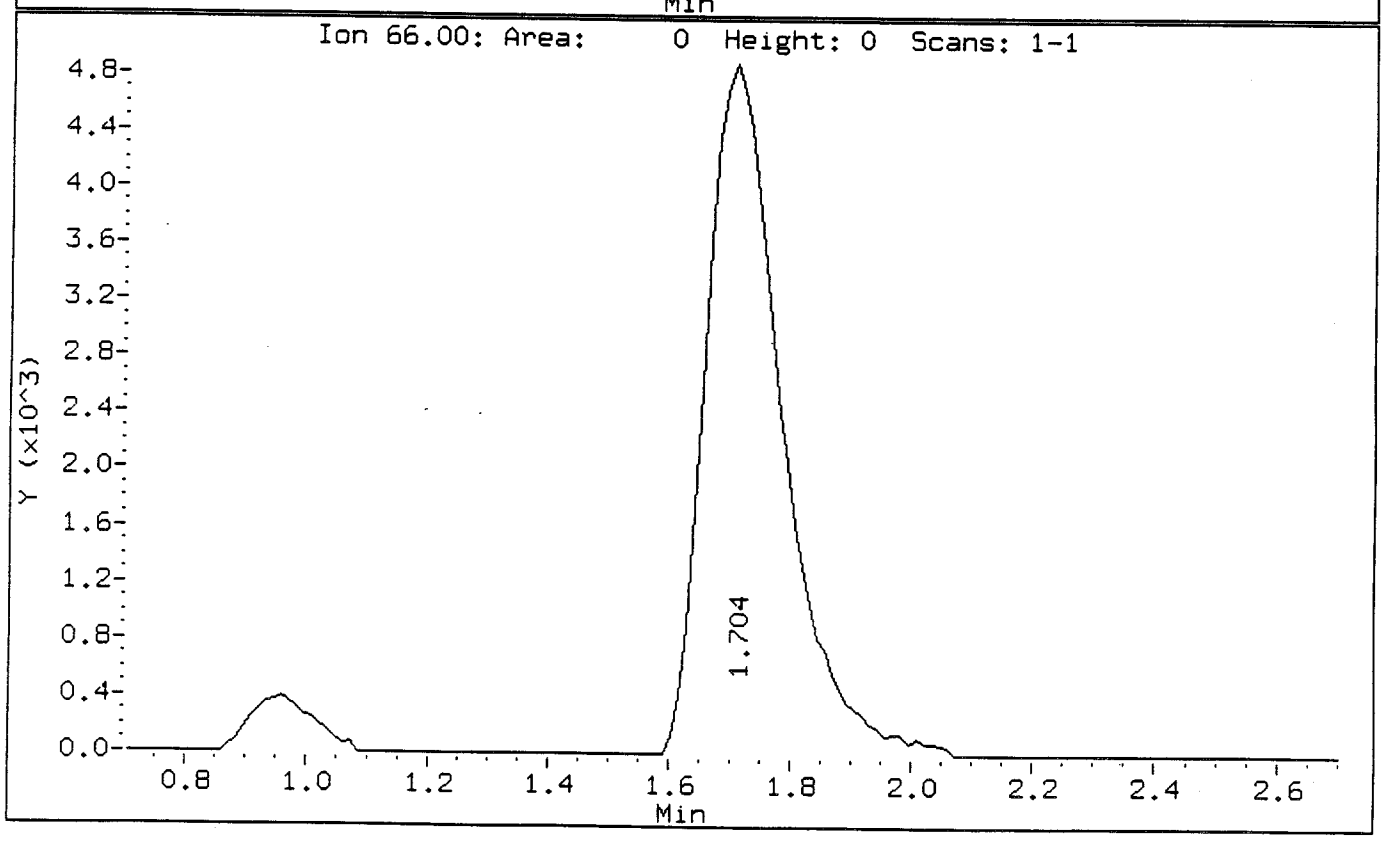
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BG950214B56.b/CW950214B56.d/CW950214B56.LG
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3





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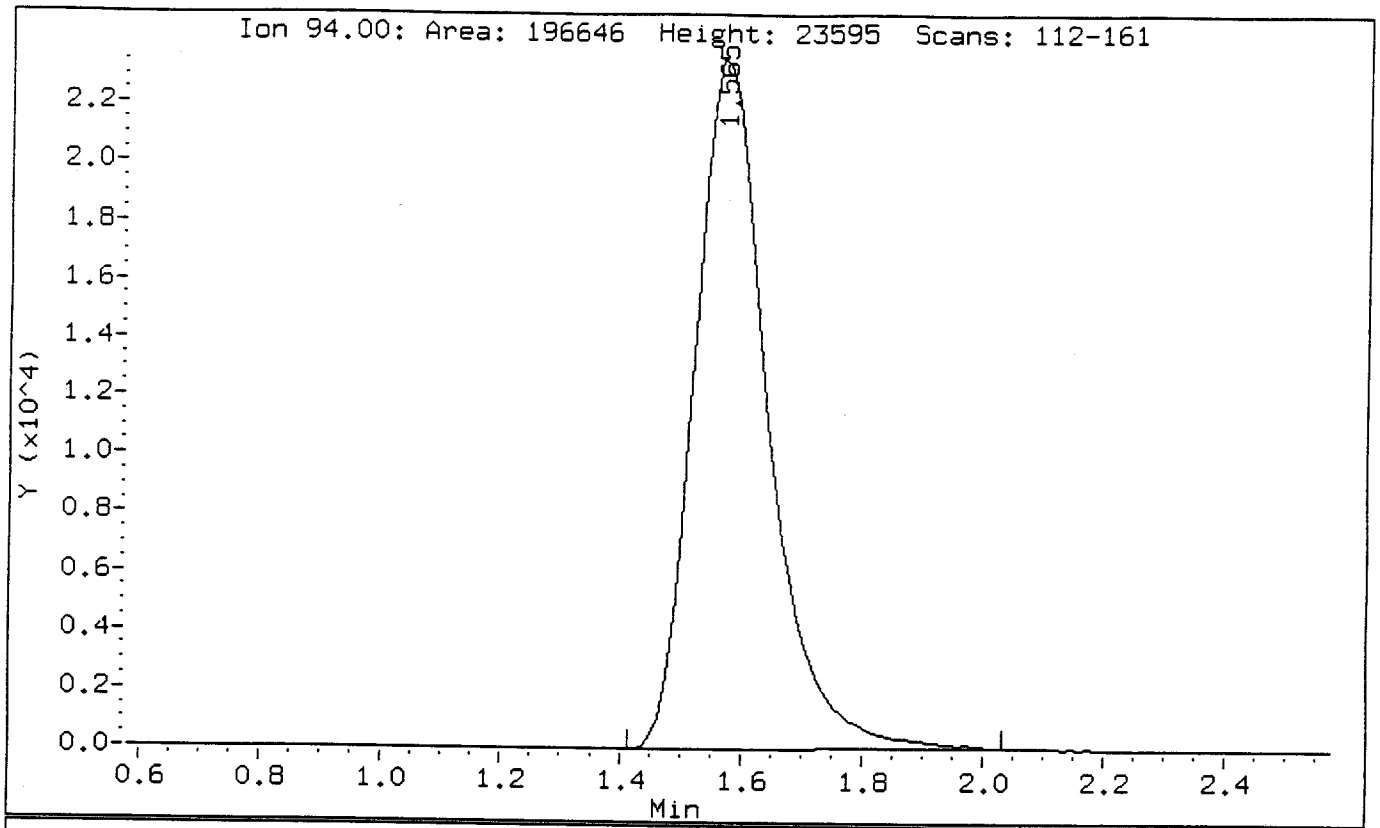
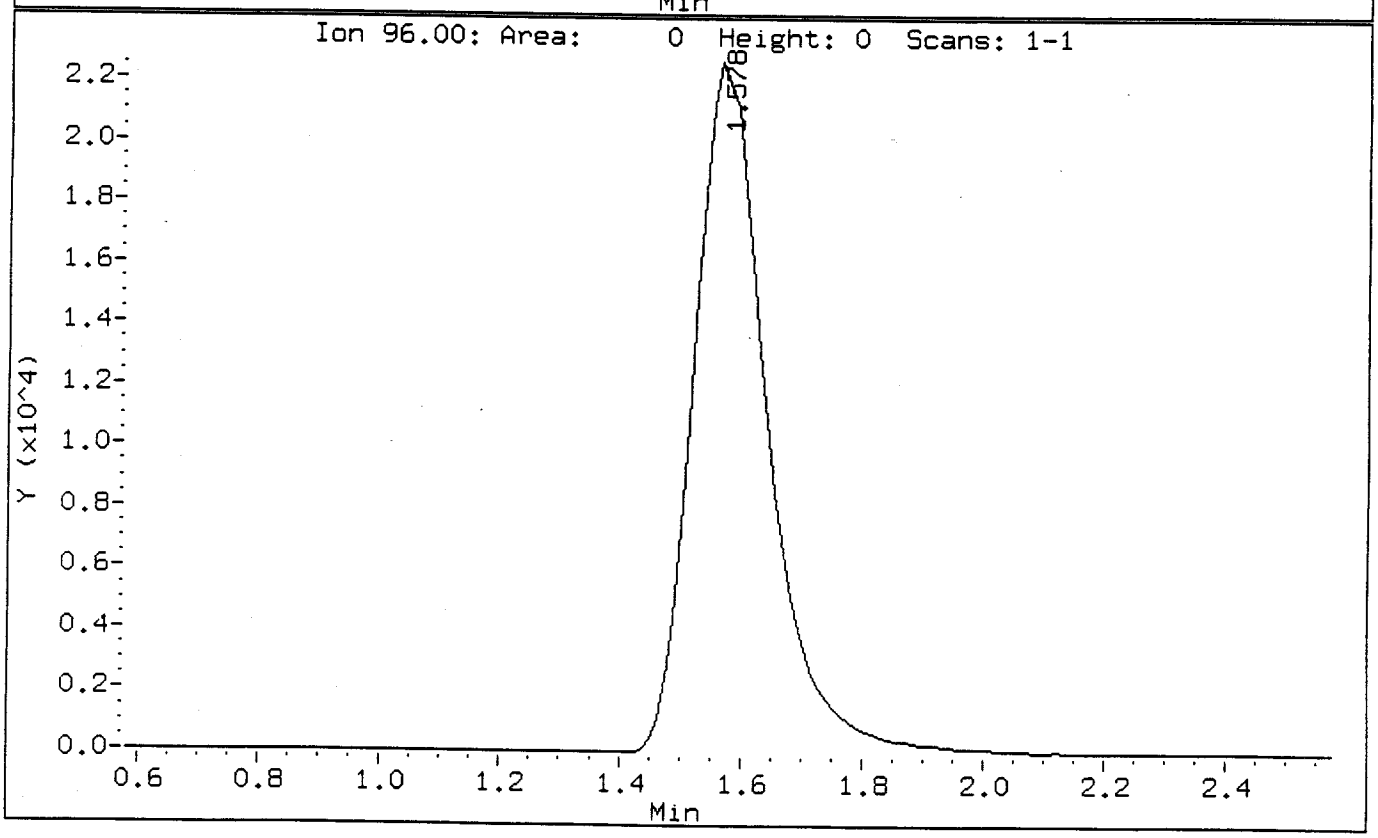
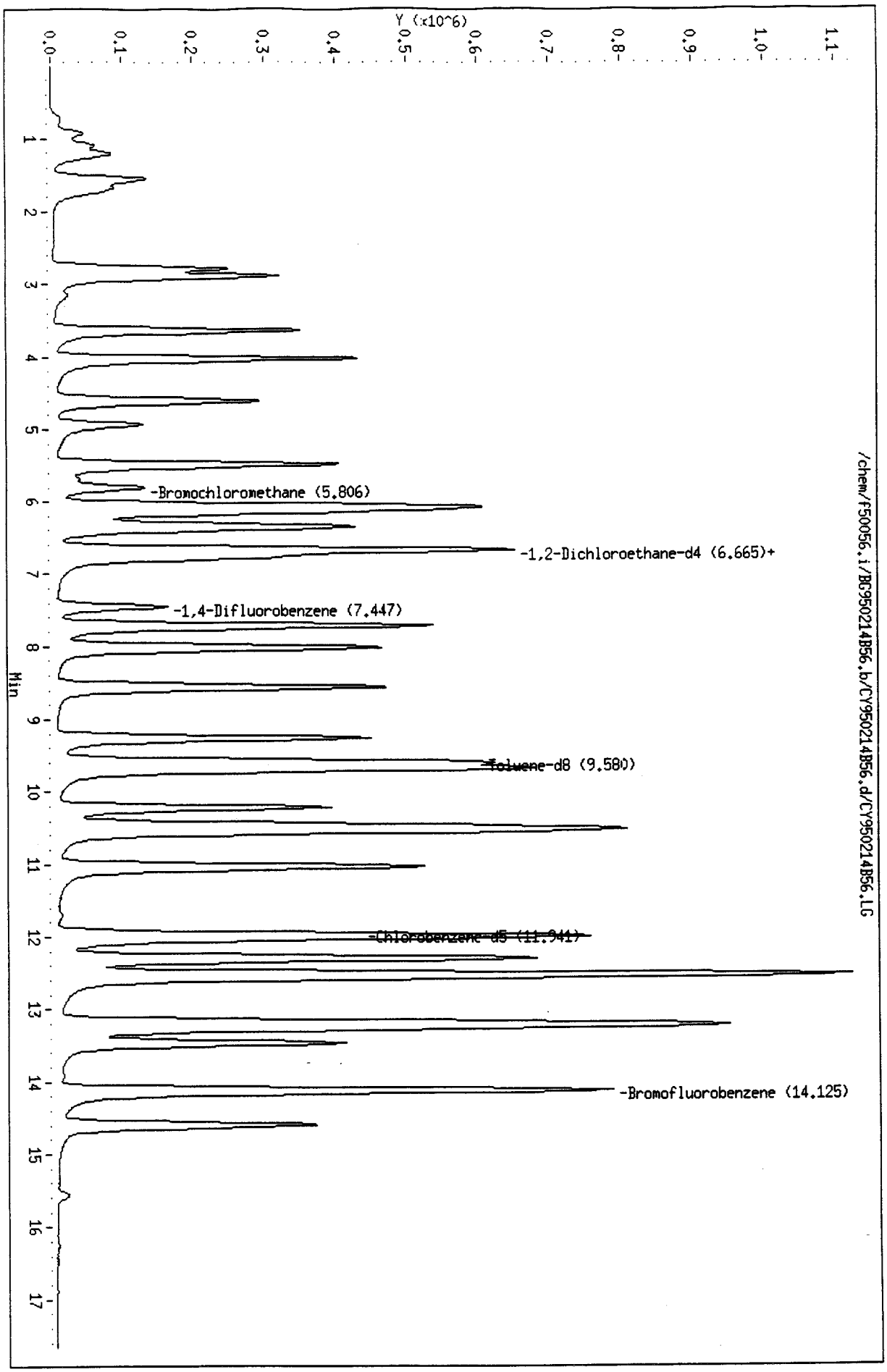
Injection Date: 14-FEB-95 19:50
Instrument: f50056.i
Client Sample ID: VSTD100

Compound: Bromomethane
CAS Number: 74-83-9






Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Date : 14-FEB-1995 21:35
Client ID: VSTD200
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2011
Column diameter: 0.53
Y (x10^6)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Min
-Bromochloromethane (5.806)
-1,2-Dichloroethane-d4 (6.665)+
-1,4-Difluorobenzene (7.447)
-Toluene-d8 (9.580)
-Chlorobenzene-d5 (11.941)
-Bromofluorobenzene (14.125)
/chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG

Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Report Date: 16-Feb-1995 17:58

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BG950214B56.b/CY950214B56.d
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 14-FEB-1995 21:35
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BG950214B56.b/W390CLPDCDFM.m
Meth Date : 16-Feb-1995 17:58 armour Quant Type: ISTD
Cal Date : 14-FEB-1995 19:12 Cal File: CV950214B56.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
*	1 Bromochloromethane	128.00	5.806	5.806	(1.000)	92411	250.0	
*	2 1,4-Difluorobenzene	114.00	7.447	7.447	(1.000)	386888	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	11.941	(1.000)	342184	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.652	(1.146)	555433	1000	868.1
$	5 Toluene-d8	98.00	9.580	9.580	(0.802)	1092604	1000	933.4
$	6 Bromofluorobenzene	95.00	14.125	14.125	(1.183)	1048142	1000	917.2
	7 Dichlorodiflouromethane	85.00	0.934	0.934	(0.161)	191592	1000	1030(A)
	8 Chloromethane	50.00	1.086	1.086	(0.187)	248464	1000	1107(AM)
	9 Vinyl Chloride	62.00	1.224	1.224	(0.211)	332827	1000	1040(A)
	10 Bromomethane	94.00	1.553	1.553	(0.267)	390511	1000	908.6(M)
	11 Chloroethane	64.00	1.691	1.691	(0.291)	255019	1000	892.6(M)
	12 1,1-Dichloroethene	96.00	2.790	2.790	(0.480)	299226	1000	843.0
	13 Acetone	43.00	3.156	3.156	(0.543)	89957	1000	973.1
	14 Carbon Disulfide	76.00	2.891	2.891	(0.498)	1303954	1000	844.9
	15 Methylene Chloride	84.00	3.635	3.635	(0.626)	425815	1000	827.6
	16 trans-1,2-Dichloroethene	96.00	4.014	4.014	(0.691)	503351	1000	853.0
	17 1,1-Dichloroethane	63.00	4.607	4.607	(0.793)	926128	1000	866.8
	18 cis-1,2-Dichloroethene	96.00	5.478	5.478	(0.943)	519539	1000	826.6
	19 2-Butanone	43.00	5.693	5.693	(0.980)	138320	1000	973.0
	20 Chloroform	83.00	6.059	6.059	(1.043)	993890	1000	794.4
	21 1,1,1-Trichloroethane	97.00	6.135	6.135	(0.824)	848855	1000	754.0
	22 Carbon Tetrachloride	117.00	6.349	6.349	(0.853)	849344	1000	806.8
	23 Benzene	78.00	6.665	6.665	(0.895)	1079157	1000	732.8

Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d
Report Date: 16-Feb-1995 17:58

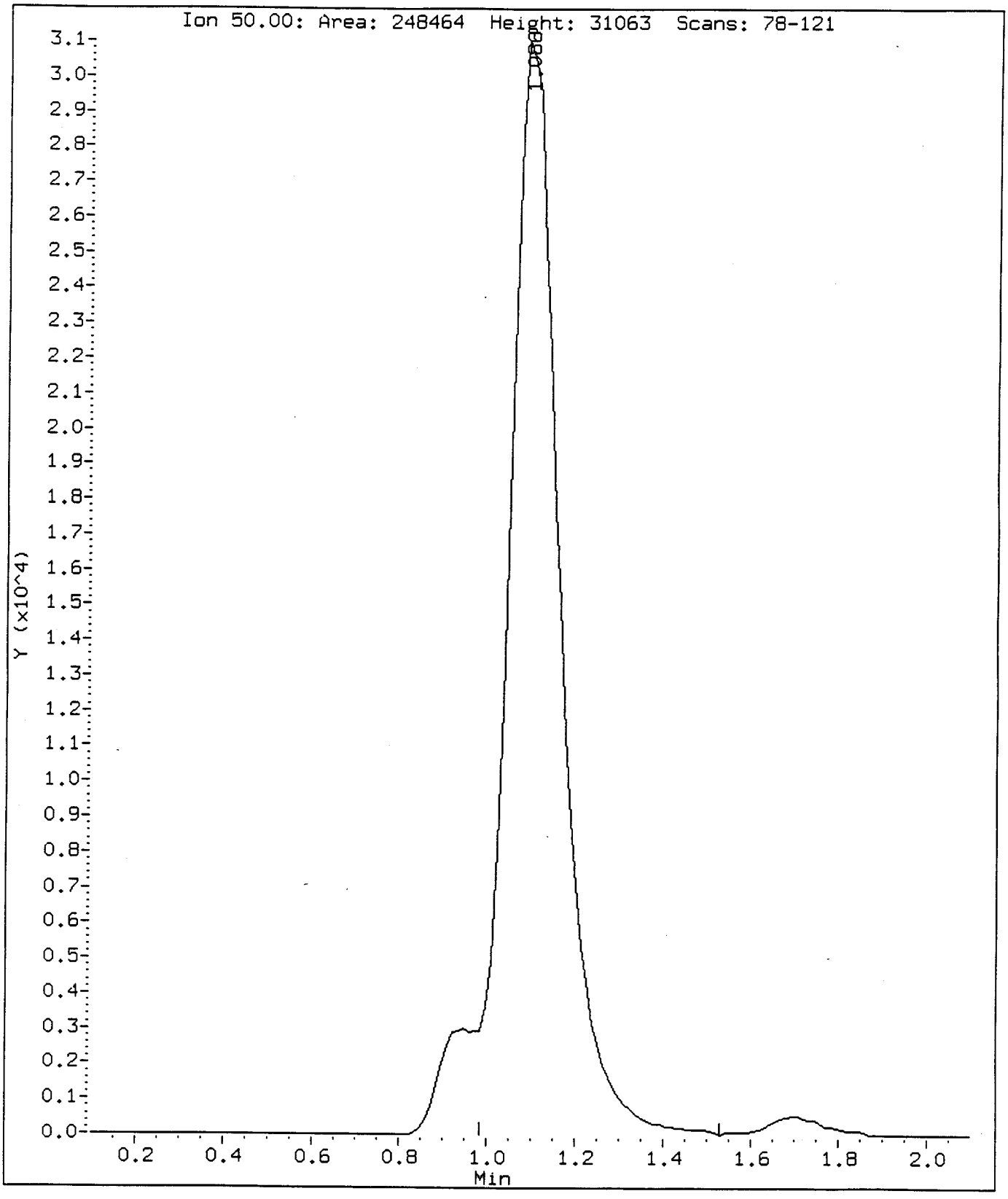
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	6.766	6.766	(1.165)	636594	1000	833.5
25	Trichloroethene	130.00	7.712	7.712	(1.036)	545926	1000	786.5
26	1,2-Dichloropropane	63.00	8.015	8.015	(1.076)	508295	1000	803.2
27	Bromodichloromethane	83.00	8.558	8.558	(1.149)	920714	1000	835.7
28	cis-1,3-Dichloropropene	75.00	9.252	9.252	(1.242)	707548	1000	879.6
29	4-Methyl-2-Pentanone	43.00	9.656	9.656	(0.809)	362895	1000	956.9
30	Toluene	91.00	9.681	9.681	(0.811)	1147234	1000	853.8
31	trans-1,3-Dichloropropene	75.00	10.212	10.212	(1.371)	655057	1000	912.4
32	1,1,2-Trichloroethane	97.00	10.451	10.451	(1.403)	418766	1000	749.9
33	Tetrachloroethene	164.00	10.527	10.527	(0.882)	590731	1000	788.6
34	2-Hexanone	43.00	11.070	11.070	(0.927)	240132	1000	1172(A)
35	Dibromochloromethane	129.00	11.019	11.019	(1.480)	823471	1000	781.5
36	Chlorobenzene	112.00	11.991	11.991	(1.004)	1194358	1000	855.6
37	Ethylbenzene	106.00	12.294	12.294	(1.030)	553369	1000	864.6
38	m,p-Xylene	106.00	12.534	12.534	(1.050)	1180996	2000	1488
39	o-Xylene	106.00	13.178	13.178	(1.104)	653110	1000	780.0
40	Styrene	104.00	13.254	13.254	(1.110)	1037454	1000	816.2
41	Bromoform	173.00	13.468	13.468	(1.808)	647303	1000	847.4
42	1,1,2,2-Tetrachloroethane	83.00	14.592	14.592	(1.222)	672262	1000	912.1
M 43	1,2-Dichloroethene (total)	96.00				1022890	2000	1679
M 44	Xylene (Total)	106.00				1834106	1000	2190

QC Flag Legend

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

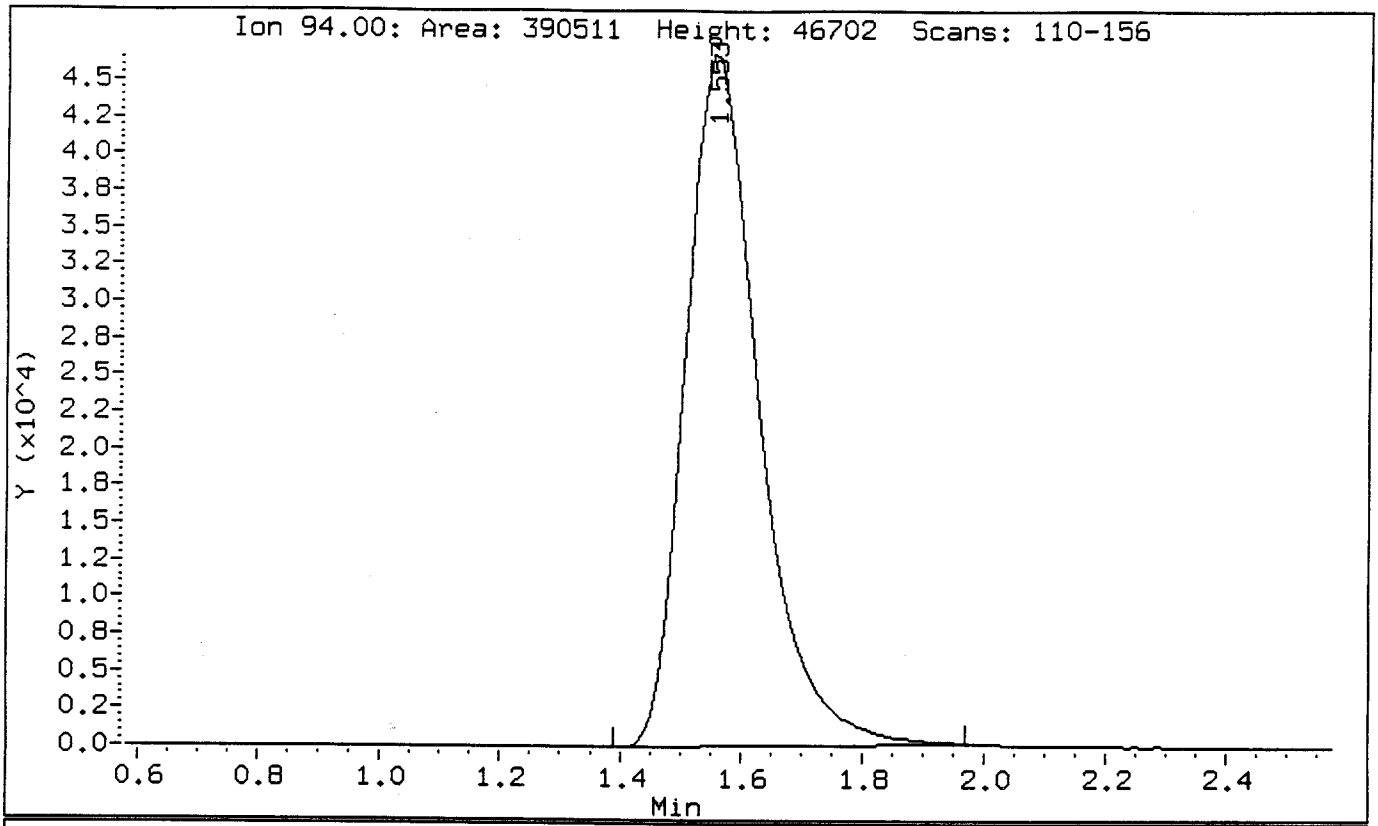
Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

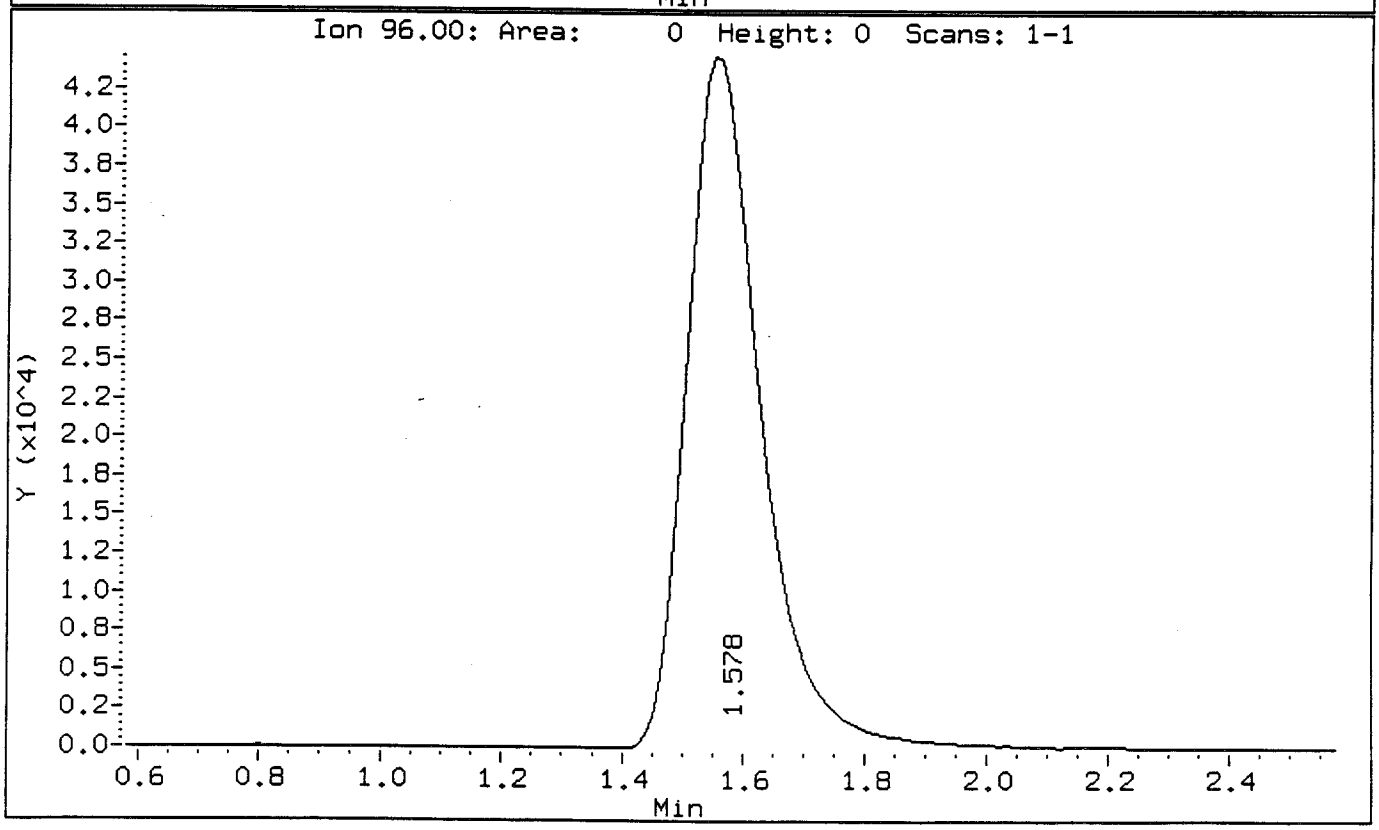
Compound: Chloromethane
CAS Number: 74-87-3



Data File: /chem/f50056.i/BG950214B56.b/CY950214B56.d/CY950214B56.LG
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

Compound: Bromomethane
CAS Number: 74-83-9





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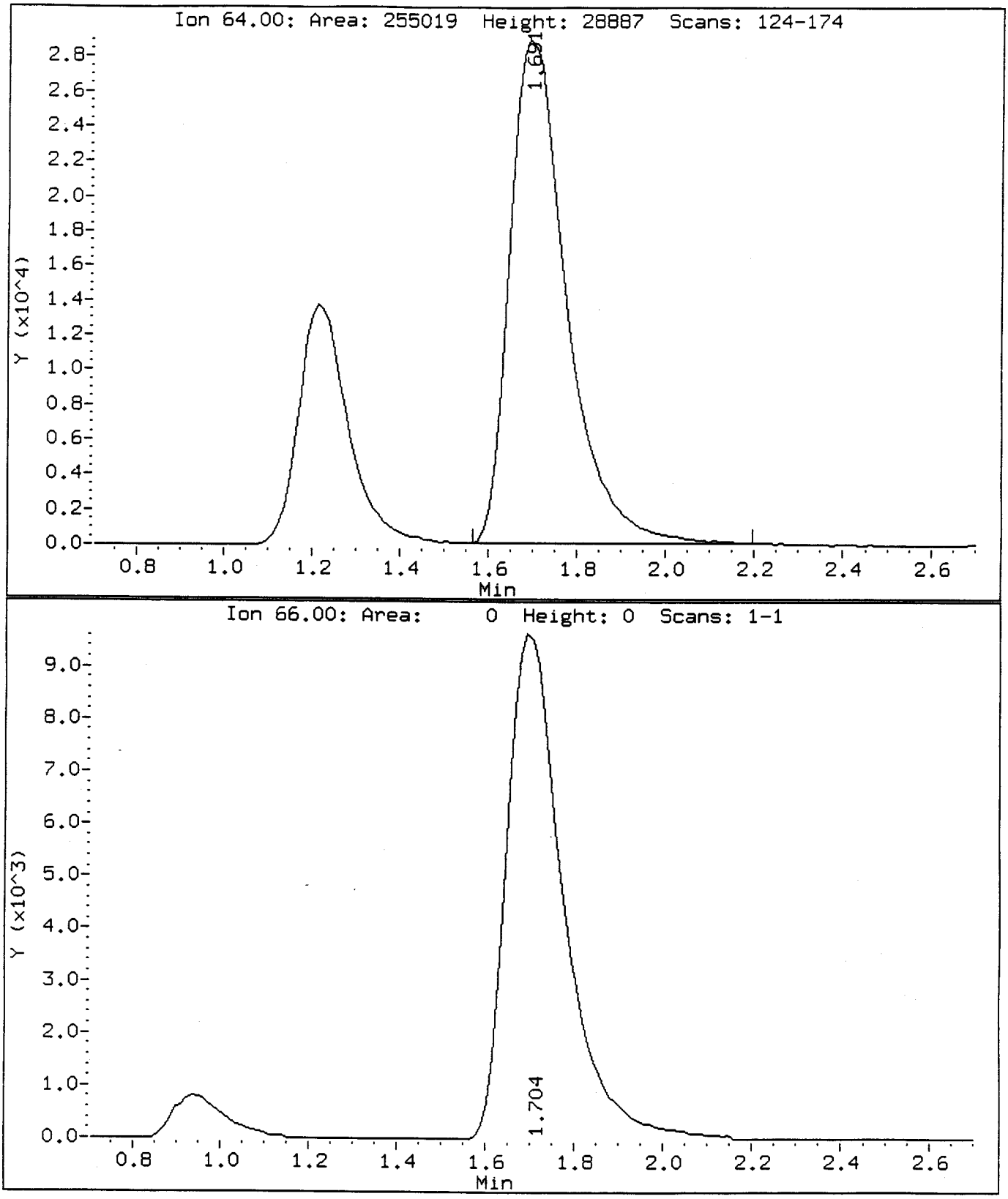
Injection Date: 14-FEB-95 21:35
Instrument: f50056.i
Client Sample ID: VSTD200

Compound: Chloroethane
CAS Number: 75-00-3



COMPUCHEM LABORATORIES, INC.
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 1153 1725 SHIFT(S) (A) / (B) ✓ (C) ✓
TIME TUNE EXPIRES 16:53 0525 DATE 2/14/95
LINKER/METHOD Nov 5 vol Dichlorflurorm
PREVENTIVE MAINTENANCE Dtrap from #6 to #3 VS 2/14/95

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, Et
1		BG9502141C56	/	2/14/95	4:53	BFB	—	7008	2ul	1948	Lot#42750 LC=SC
2		CT9502141C56		2/14/95	5:15	VSTD010	—	—	5ml	1948	Lot#7N7
3		CU9502141C56		2/14/95	5:57	VSTD020	—	—	5ml	1948	
4		CV9502141C56		2/14/95	6:51	VSTD050	—	—	5ml	1948	
5		CW9502141C56		2/14/95	8:18	VSTD100	—	—	5ml	1948	
6		CX9502141C56		2/14/95	8:53	VSTD200	—	—	5ml	1948	
7	✓	CY9502141C56 MB 2/14/95		/ /	10:21	VSTD010				2141	
8	✓	CZ9502141C56		/ /	11:57						
9		CA9502141C56		/ /	13:14						
10		CS9502141A56		/ /	14:02	VSTD200					
11		BF9502141B56	/	2/14/95	16:18	BFB	—	700x	2uL	2011	42750 LC=SC
12	✓	CS9502141B56		/ /	16:31	Vstd050		—	5mL		TN7 (42755,42755
13		BG9502141B56	/	/ /	17:25	BFB		700's	2uL		42750 LEM 30
14		CT9502141B56	/	/ /	17:55	Vstd010		—	5mL		(42755,42755
15		CU9502141B56	/	/ /	18:35	Vstd020					
16		CV9502141B56	/	/ /	19:12	Vstd050					Good
17		CW9502141B56	/	/ /	19:50	Vstd100					ICAL
18	✓	CX9502141B56		/ /	20:27	Vstd200					
19		CY9502141C56	/	/ /	21:35	Vstd200	✓	✓	✓	✓	
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						

2/14/95

VERIFIED
SUPERVISOR APPROVAL M. S. Kanai
ENVELOPE NAME

300973 00003 SAMPLE DATA PACKAGE 63

b. Form VII VOA

Continuing Calibration Data

In order by instrument.

(1) VOA standard reconstructed ion chromatograms and quantitation reports for the continuing calibration. Spectra not required.

(2) When more than one continuing calibration is performed, forms must be in chronological order, within fraction and instrument.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Instrument ID: F50056 Calibration Date: 02/15/95 Time: 1837

Lab File ID: CS950215B56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.607	0.532		12.3	
Bromomethane	1.163	1.082	0.100	7.0	25.0
Vinyl Chloride	0.865	0.769	0.100	11.2	25.0
Chloroethane	0.773	0.749		3.1	
Methylene Chloride	1.392	1.279		8.1	
Acetone	0.250	0.148		40.7	
Carbon Disulfide	4.175	3.841		8.0	
1,1-Dichloroethene	0.960	0.936	0.100	2.6	25.0
1,1-Dichloroethane	2.891	2.739	0.200	5.2	25.0
1,2-Dichloroethene (total)	1.648	1.583		3.9	
Chloroform	3.384	3.354	0.200	0.9	25.0
1,2-Dichloroethane	2.066	2.029	0.100	1.8	25.0
2-Butanone	0.385	0.231		39.9	
1,1,1-Trichloroethane	0.727	0.711	0.100	2.2	25.0
Carbon Tetrachloride	0.680	0.664	0.100	2.4	25.0
Bromodichloromethane	0.712	0.689	0.200	3.2	25.0
1,2-Dichloropropane	0.409	0.386		5.6	
cis-1,3-Dichloropropene	0.520	0.498	0.200	4.1	25.0
Trichloroethene	0.449	0.426	0.300	5.1	25.0
Dibromochloromethane	0.681	0.666	0.100	2.2	25.0
1,1,2-Trichloroethane	0.361	0.349	0.100	3.4	25.0
Benzene	0.952	0.927	0.500	2.6	25.0
trans-1,3-Dichloropropene	0.464	0.436	0.100	6.1	25.0
Bromoform	0.494	0.467	0.100	5.4	25.0
4-Methyl-2-Pentanone	0.277	0.223		19.4	
2-Hexanone	0.150	0.105		29.9	
Tetrachloroethene	0.547	0.517	0.200	5.5	25.0
1,1,2,2-Tetrachloroethane	0.538	0.449	0.500	16.7	25.0
Toluene	0.982	0.960	0.400	2.2	25.0
Chlorobenzene	1.020	0.972	0.500	4.7	25.0
Ethylbenzene	0.468	0.453	0.100	3.2	25.0
Styrene	0.929	0.890	0.300	4.2	25.0
Xylene (Total)	0.612	0.588	0.300	3.8	25.0
Dichlorodiflouromethane	0.503	0.465		7.7	
Toluene-d8	0.855	0.839		2.0	
Bromofluorobenzene	0.835	0.819	0.200	1.8	25.0

All other compounds must meet a minimum RRF of 0.010.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Instrument ID: F50056 Calibration Date: 02/15/95 Time: 1837

Lab File ID: CS950215B56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

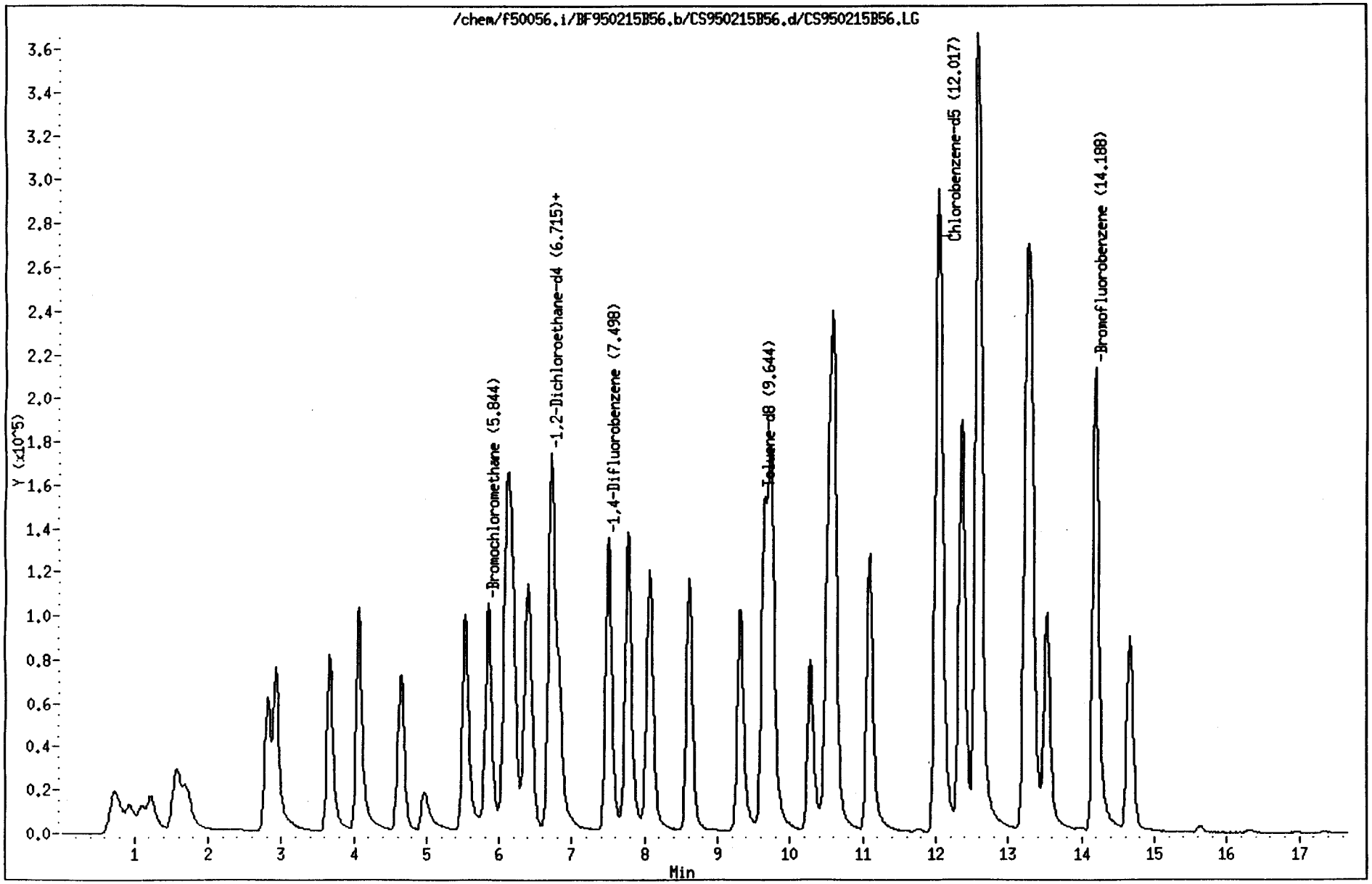
GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
1,2-Dichloroethane-d4	1.731	1.771		-2.3	

All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d
Date : 15-FEB-1995 18:37
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i
Operator: 0211
Column diameter: 0.53



Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d
Report Date: 20-Feb-1995 12:27

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CS950215B56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 15-FEB-1995 18:37
Operator : 0211 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	5.844	5.844	(1.000)	81762	250.0	
*	2 1,4-Difluorobenzene	114.00	7.498	7.498	(1.000)	329717	250.0	
*	3 Chlorobenzene-d5	117.00	12.017	12.017	(1.000)	340942	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.703	6.703	(1.147)	144791	250.0	255.8
$	5 Toluene-d8	98.00	9.644	9.644	(0.803)	285884	250.0	245.1
$	6 Bromofluorobenzene	95.00	14.188	14.188	(1.181)	279395	250.0	245.4
	7 Dichlorodiflouromethane	85.00	0.947	0.947	(0.162)	37998	250.0	230.8
	8 Chloromethane	50.00	1.111	1.111	(0.190)	43520	250.0	219.2
	9 Vinyl Chloride	62.00	1.224	1.224	(0.209)	62860	250.0	222.1
	10 Bromomethane	94.00	1.565	1.565	(0.268)	88441	250.0	232.6(M)
	11 Chloroethane	64.00	1.704	1.704	(0.292)	61225	250.0	242.2(M)
	12 1,1-Dichloroethene	96.00	2.815	2.815	(0.482)	76492	250.0	243.6
	13 Acetone	43.00	3.156	3.156	(0.540)	12129	250.0	148.3
	14 Carbon Disulfide	76.00	2.928	2.928	(0.501)	314024	250.0	230.0
	15 Methylene Chloride	84.00	3.661	3.661	(0.626)	104549	250.0	229.7
	16 trans-1,2-Dichloroethene	96.00	4.064	4.064	(0.695)	124232	250.0	238.0
	17 1,1-Dichloroethane	63.00	4.645	4.645	(0.795)	223973	250.0	236.9
	18 cis-1,2-Dichloroethene	96.00	5.529	5.529	(0.946)	134679	250.0	242.2
	19 2-Butanone	43.00	5.731	5.731	(0.981)	18901	250.0	150.3
	20 Chloroform	83.00	6.097	6.097	(1.043)	274247	250.0	247.8
	21 1,1,1-Trichloroethane	97.00	6.172	6.172	(0.823)	234560	250.0	244.5
	22 Carbon Tetrachloride	117.00	6.400	6.400	(0.854)	218807	250.0	243.9
	23 Benzene	78.00	6.715	6.715	(0.896)	305704	250.0	243.6

Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d
Report Date: 20-Feb-1995 12:27

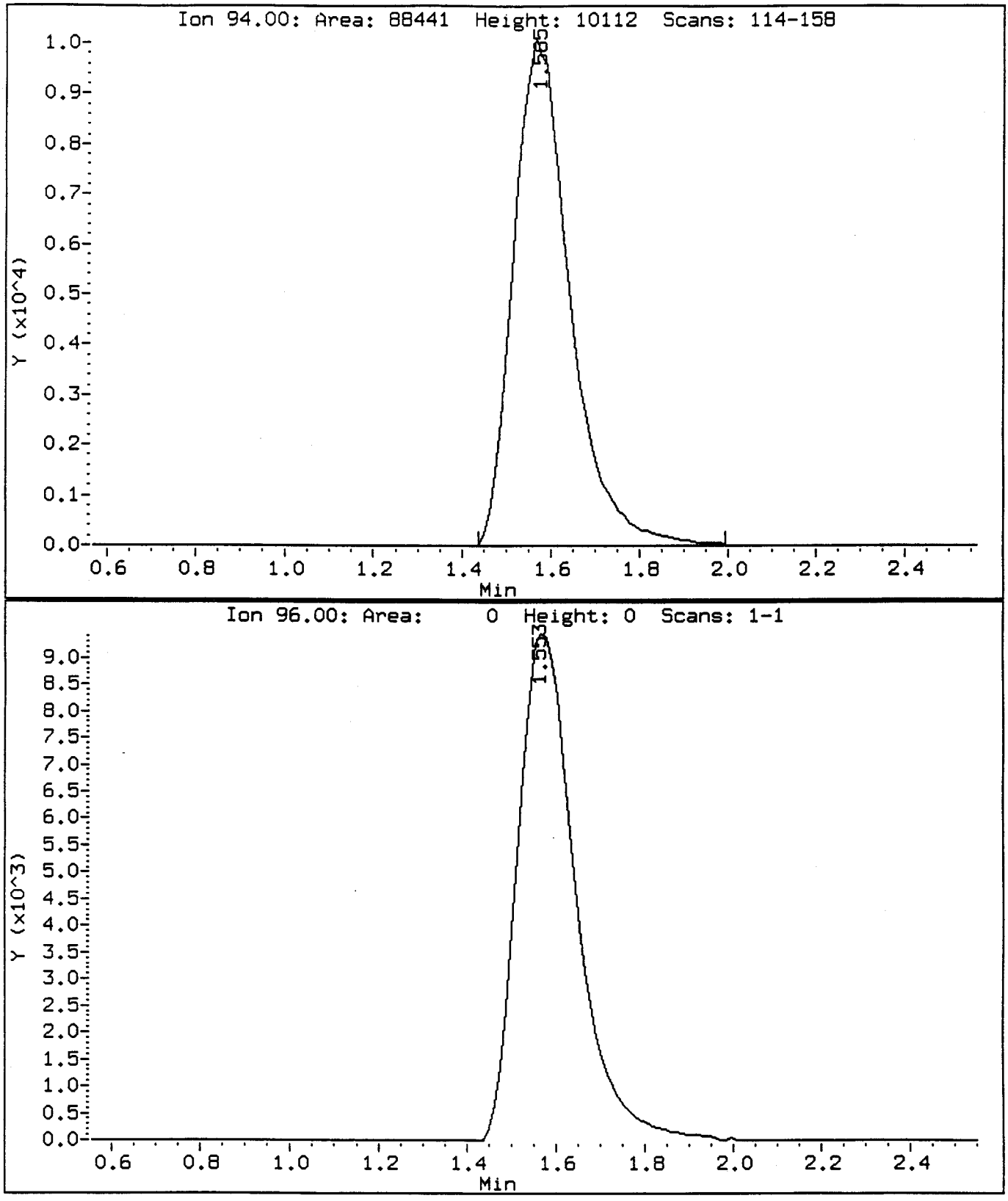
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.816	6.816	(1.166)	165878	250.0	245.5
	25 Trichloroethene	130.00	7.763	7.763	(1.035)	140329	250.0	237.2
	26 1,2-Dichloropropane	63.00	8.066	8.066	(1.076)	127217	250.0	235.9
	27 Bromodichloromethane	83.00	8.609	8.609	(1.148)	227218	250.0	242.0
	28 cis-1,3-Dichloropropene	75.00	9.303	9.303	(1.241)	164335	250.0	239.7
	29 4-Methyl-2-Pentanone	43.00	9.707	9.707	(0.808)	76121	250.0	201.4
	30 Toluene	91.00	9.745	9.745	(0.811)	327280	250.0	244.4
	31 trans-1,3-Dichloropropene	75.00	10.275	10.275	(1.370)	143641	250.0	234.8
	32 1,1,2-Trichloroethane	97.00	10.515	10.515	(1.402)	114965	250.0	241.6
	33 Tetrachloroethene	164.00	10.590	10.590	(0.881)	176389	250.0	236.3
	34 2-Hexanone	43.00	11.146	11.146	(0.928)	35779	250.0	175.2
	35 Dibromochloromethane	129.00	11.083	11.083	(1.478)	219668	250.0	244.6
	36 Chlorobenzene	112.00	12.054	12.054	(1.003)	331230	250.0	238.1
	37 Ethylbenzene	106.00	12.357	12.357	(1.028)	154379	250.0	242.1
	38 m,p-Xylene	106.00	12.585	12.585	(1.047)	381430	500.0	482.2
	39 o-Xylene	106.00	13.254	13.254	(1.103)	200640	250.0	240.5
	40 Styrene	104.00	13.304	13.304	(1.107)	303482	250.0	239.6
	41 Bromoform	173.00	13.531	13.531	(1.805)	153990	250.0	236.5
	42 1,1,2,2-Tetrachloroethane	83.00	14.667	14.667	(1.221)	152994	250.0	208.3
M	43 1,2-Dichloroethene (total)	96.00				258911	500.0	480.3
M	44 Xylene (Total)	106.00				582070	250.0	697.7

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BF950215B56.b/CS950215B56.d/CS950215B56.LG
Injection Date: 15-FEB-95 18:37
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Bromomethane
CAS Number: 74-83-9



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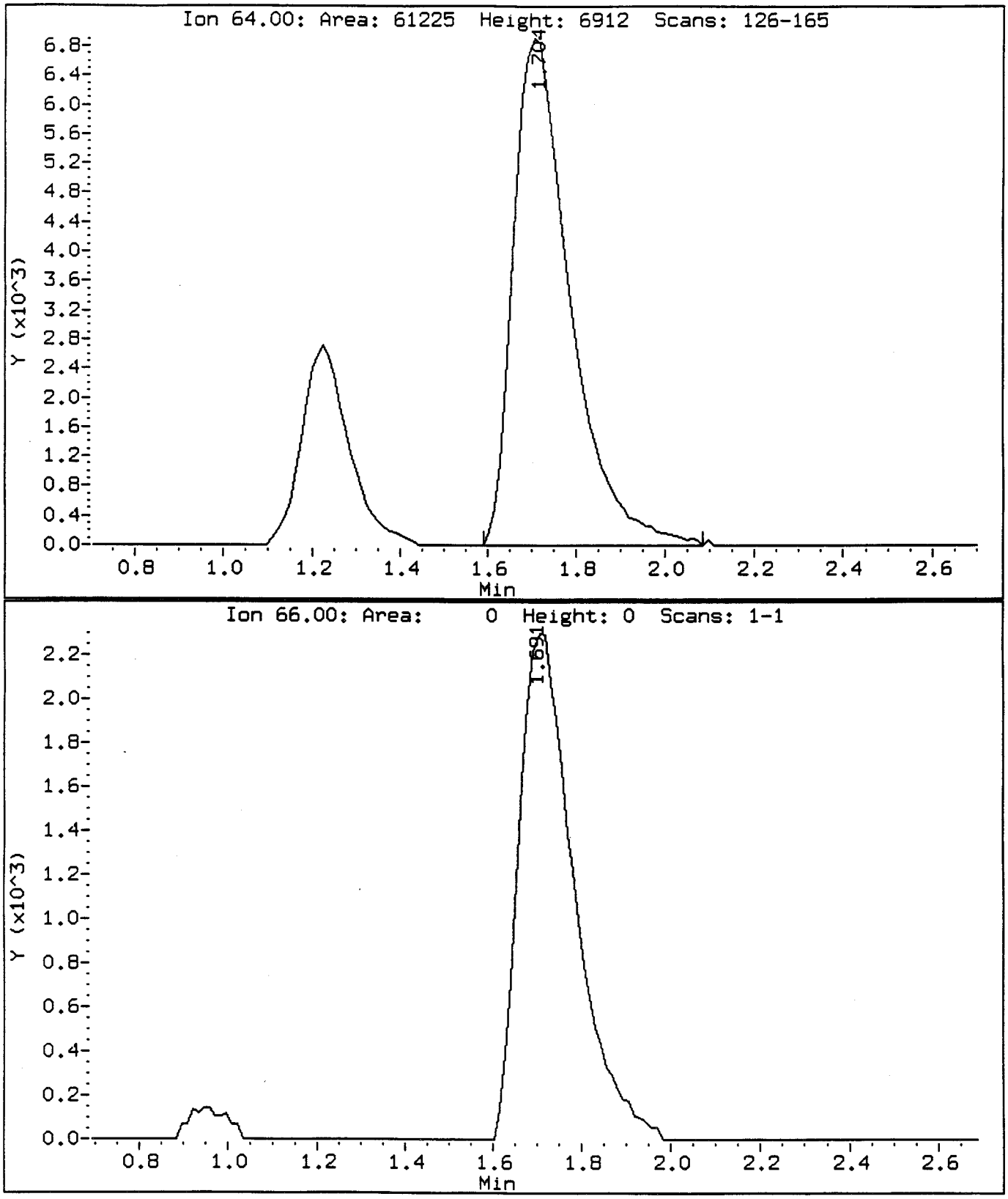
Injection Date: 15-FEB-95 18:37
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3



COMPUCHEM LABORATORIES, INC.
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 18:25
TIME TUNE EXPIRES 6:25
PREVENTIVE MAINTENANCE None JR 2/15/95

SHIFT(S) (A) ____ (B) — (C) /
DATE 2/15/95
LINKER/METHOD NWSW + DiCIF

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition, Etc
1		BFG50215B56	/	2/15/95	18:25	BFB	—	7008	2uL	2011	42750 LL=5
2		CS950215B56	/	/ /	18:37	Vstd050		—	5mL		IN7 (42493, 42492)
3		CB950215B56	/	/ /	19:18	VolkJD					
4		C3R83863B56	/	/ /	20:17	MW6	30073		2mL		
5		C3R83869B56	/	/ /	20:47	MW2			325uL		
6		CR083922B56	/	/ /	21:25	Trbik3			5mL		
7	/	CN083833A56 VS 2/16/95	SH	/ /	21:56	L1					
8		CN083849A56 VS 2/16/95	/	/ /	22:59	S3					
9		CN083851A56 VS 2/16/95	/	/ /	23:28	S1					
10	/	CN083853A56	SL	2/16/95	0:09	S2	30073	—	5mL	1948	
11	/	CN083855A56	SL	2/16/95	0:44	S5	30073		5mL	1948	
12		CN083871A56	/	2/16/95	1:22	S4	30073		5mL	1948	
13		CN083783A56	/	2/16/95	2:00	SFW1	30073	—	5mL	1948	
14		CN083784A56	/	2/16/95	2:54	SFW2	30073	—	5mL	1948	
15		CN083785A56	/	2/16/95	3:33	SFW3	30073	—	5mL	1948	
16		CN083834B56	SM	2/16/95	4:15	SFW1MS	30073	—	5mL	1948	Lot # 42781
17		CN083835B56	/	2/16/95	4:46	SFW1MSD	30073	—	5mL	1948	
18		CR083834C56	/	2/16/95	5:16	SFW1MS	30073	—	5mL	1948	
19		CR083853C56	/	2/16/95	5:43	S2	30073	—	5mL	1948	
20		CR083855C56	/	2/16/95	6:16	S5	30073	—	5mL	1948	
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						
				/ /	:						VS 2/16/95

VERIFIED ____
SUPERVISOR APPROVAL Mark D. B 2/1
ENVELOPE NAME ____

54

30073 00003 SAMPLE DATA PACKAGE

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Instrument ID: F50056 Calibration Date: 02/16/95 Time: 0818

Lab File ID: CS950216A56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.607	0.618		-1.9	
Bromomethane	1.163	1.169	0.100	-0.6	25.0
Vinyl Chloride	0.865	0.837	0.100	3.3	25.0
Chloroethane	0.773	0.821		-6.2	
Methylene Chloride	1.392	1.412		-1.5	
Acetone	0.250	0.191		23.7	
Carbon Disulfide	4.175	3.749		10.2	
1,1-Dichloroethene	0.960	1.130	0.100	-17.7	25.0
1,1-Dichloroethane	2.891	2.986	0.200	-3.3	25.0
1,2-Dichloroethene (total)	1.648	1.671		-1.4	
Chloroform	3.384	3.518	0.200	-3.9	25.0
1,2-Dichloroethane	2.066	2.174	0.100	-5.2	25.0
2-Butanone	0.385	0.244		36.6	
1,1,1-Trichloroethane	0.727	0.738	0.100	-1.5	25.0
Carbon Tetrachloride	0.680	0.686	0.100	-0.8	25.0
Bromodichloromethane	0.712	0.706	0.200	0.9	25.0
1,2-Dichloropropane	0.409	0.402		1.6	
cis-1,3-Dichloropropene	0.520	0.509	0.200	2.1	25.0
Trichloroethene	0.449	0.436	0.300	2.7	25.0
Dibromochloromethane	0.681	0.686	0.100	-0.8	25.0
1,1,2-Trichloroethane	0.361	0.366	0.100	-1.5	25.0
Benzene	0.952	0.956	0.500	-0.4	25.0
trans-1,3-Dichloropropene	0.464	0.459	0.100	1.0	25.0
Bromoform	0.494	0.480	0.100	2.8	25.0
4-Methyl-2-Pentanone	0.277	0.250		9.7	
2-Hexanone	0.150	0.122		18.3	
Tetrachloroethene	0.547	0.517	0.200	5.4	25.0
1,1,2,2-Tetrachloroethane	0.538	0.478	0.500	11.3	25.0 ✓
Toluene	0.982	1.061	0.400	-8.1	25.0
Chlorobenzene	1.020	0.997	0.500	2.3	25.0
Ethylbenzene	0.468	0.458	0.100	2.0	25.0
Styrene	0.929	0.925	0.300	0.4	25.0
Xylene (Total)	0.612	0.595	0.300	2.8	25.0
Dichlorodiflouromethane	0.503	0.482		4.3	
Toluene-d8	0.855	0.902		-5.4	
Bromofluorobenzene	0.835	0.846	0.200	-1.4	25.0

All other compounds must meet a minimum RRF of 0.010.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Instrument ID: F50056 Calibration Date: 02/16/95 Time: 0818

Lab File ID: CS950216A56.D Init. Calibration Date(s): 02/14/95 02/14/95

Heated Purge: (Y/N) N Init. Calibration Times: 1755 2135

GC Column:DB624 ID: 0.53 (mm)

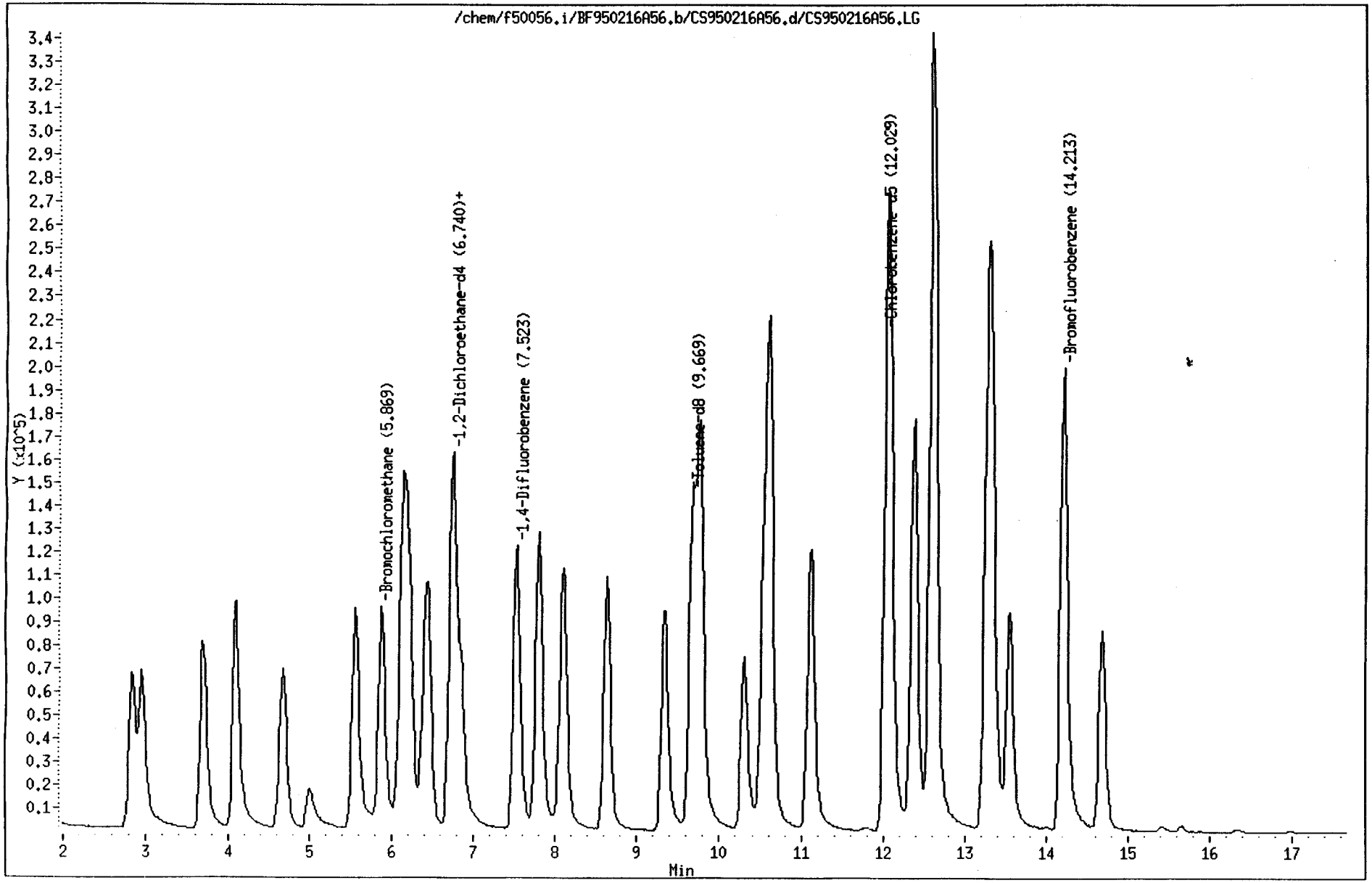
COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
1,2-Dichloroethane-d4	1.731	1.876		-8.4	

All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d
Date : 16-FEB-95 08:18
Client ID: VSTD050
Sample Info: VSTD050: 2141: 1:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2141
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d
Report Date: 20-Feb-1995 15:13

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CS950216A56.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 16-FEB-95 08:18
Operator : 2141 Inst ID: f50056.i
Smp Info : VSTD050: 2141: 1:
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
*	1 Bromochloromethane	128.00	5.869	5.869	(1.000)	72863	250.0		
*	2 1,4-Difluorobenzene	114.00	7.523	7.523	(1.000)	295065	250.0		
*	3 Chlorobenzene-d5	117.00	12.029	12.029	(1.000)	308913	250.0		
$	4 1,2-Dichloroethane-d4	65.00	6.728	6.728	(1.146)	136722	250.0	271.0	
$	5 Toluene-d8	98.00	9.669	9.669	(0.804)	278529	250.0	263.6	
$	6 Bromofluorobenzene	95.00	14.213	14.213	(1.182)	261391	250.0	253.4	
	7 Dichlorodiflouromethane	85.00	0.972	0.972	(0.166)	35084	250.0	239.2	
	8 Chloromethane	50.00	1.111	1.111	(0.189)	45053	250.0	254.7	
	9 Vinyl Chloride	62.00	1.237	1.237	(0.211)	60953	250.0	241.7	(M)
	10 Bromomethane	94.00	1.590	1.590	(0.271)	85207	250.0	251.4	(M)
	11 Chloroethane	64.00	1.729	1.729	(0.295)	59787	250.0	265.4	(M)
	12 1,1-Dichloroethene	96.00	2.840	2.840	(0.484)	82347	250.0	294.2	
	13 Acetone	43.00	3.156	3.156	(0.538)	13905	250.0	190.8	
	14 Carbon Disulfide	76.00	2.954	2.954	(0.503)	273198	250.0	224.5	
	15 Methylene Chloride	84.00	3.686	3.686	(0.628)	102912	250.0	253.7	
	16 trans-1,2-Dichloroethene	96.00	4.077	4.077	(0.695)	116581	250.0	250.6	
	17 1,1-Dichloroethane	63.00	4.670	4.670	(0.796)	217563	250.0	258.2	
	18 cis-1,2-Dichloroethene	96.00	5.554	5.554	(0.946)	126907	250.0	256.1	
	19 2-Butanone	43.00	5.768	5.768	(0.983)	17761	250.0	158.5	
	20 Chloroform	83.00	6.122	6.122	(1.043)	256333	250.0	259.9	
	21 1,1,1-Trichloroethane	97.00	6.198	6.198	(0.824)	217777	250.0	253.6	
	22 Carbon Tetrachloride	117.00	6.425	6.425	(0.854)	202285	250.0	251.9	
	23 Benzene	78.00	6.740	6.740	(0.896)	281974	250.0	251.0	

AES 2.20.95

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d
Report Date: 20-Feb-1995 15:13

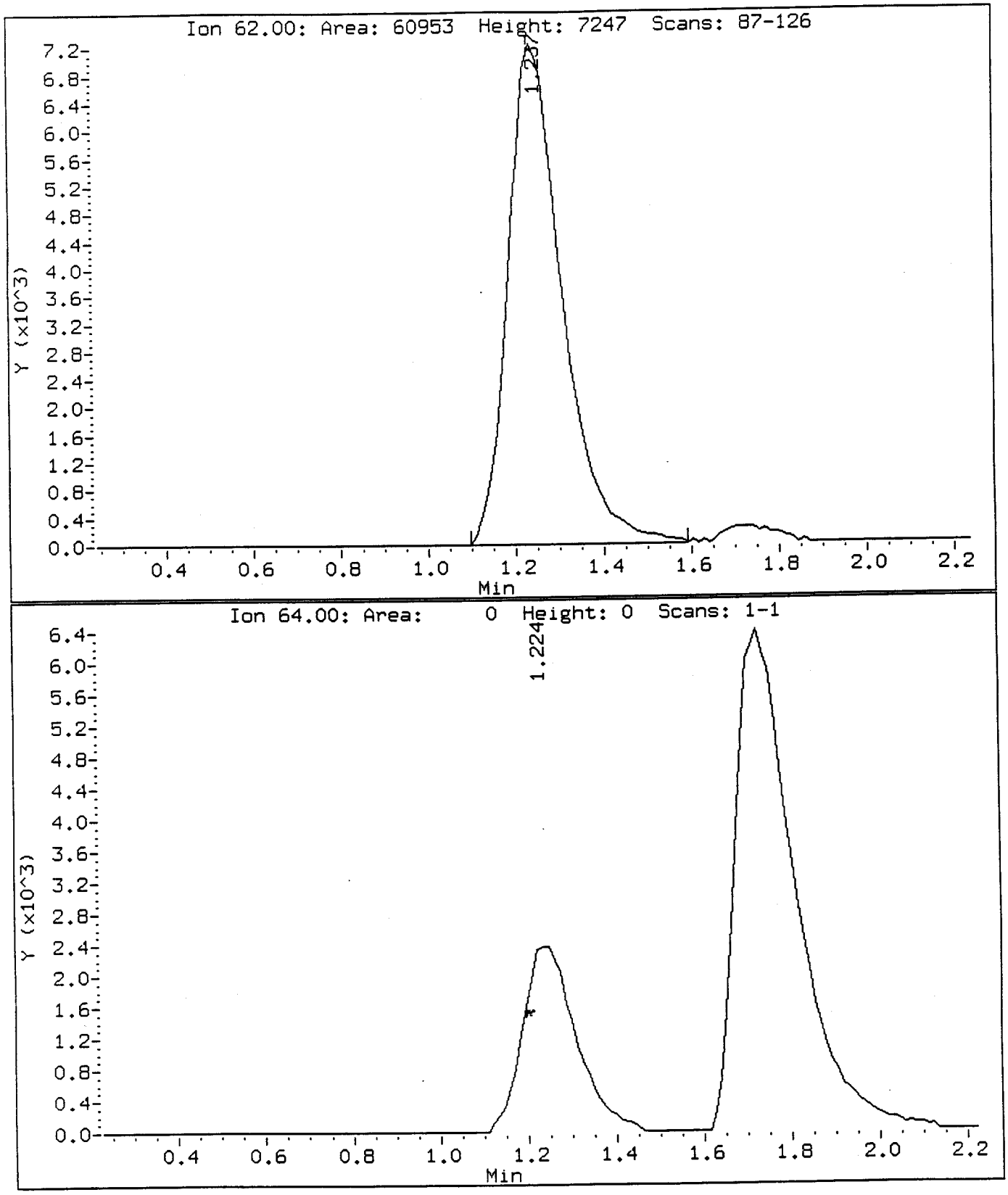
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	6.841	6.841	(1.166)	158397	250.0	263.0
	25 Trichloroethene	130.00	7.788	7.788	(1.035)	128773	250.0	243.2
	26 1,2-Dichloropropane	63.00	8.091	8.091	(1.075)	118742	250.0	246.0
	27 Bromodichloromethane	83.00	8.634	8.634	(1.148)	208242	250.0	247.8
	28 cis-1,3-Dichloropropene	75.00	9.328	9.328	(1.240)	150224	250.0	244.9
	29 4-Methyl-2-Pentanone	43.00	9.732	9.732	(0.809)	77332	250.0	225.9
	30 Toluene	91.00	9.770	9.770	(0.812)	327757	250.0	270.2
	31 trans-1,3-Dichloropropene	75.00	10.300	10.300	(1.369)	135496	250.0	247.4
	32 1,1,2-Trichloroethane	97.00	10.540	10.540	(1.401)	108121	250.0	253.9
	33 Tetrachloroethene	164.00	10.603	10.603	(0.881)	159858	250.0	236.4
	34 2-Hexanone	43.00	11.158	11.158	(0.928)	37776	250.0	204.2
	35 Dibromochloromethane	129.00	11.120	11.120	(1.478)	202492	250.0	252.0
	36 Chlorobenzene	112.00	12.080	12.080	(1.004)	307938	250.0	244.3
	37 Ethylbenzene	106.00	12.383	12.383	(1.029)	141533	250.0	245.0
	38 m,p-Xylene	106.00	12.610	12.610	(1.048)	349898	500.0	488.2
	39 o-Xylene	106.00	13.279	13.279	(1.104)	183758	250.0	243.1
	40 Styrene	104.00	13.342	13.342	(1.109)	285751	250.0	249.0
	41 Bromoform	173.00	13.557	13.557	(1.802)	141506	250.0	242.9
	42 1,1,2,2-Tetrachloroethane	83.00	14.680	14.680	(1.220)	147564	250.0	221.8
M	43 1,2-Dichloroethene (total)	96.00				243488	500.0	506.8
M	44 Xylene (Total)	106.00				533656	250.0	706.0

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50056.i/BF950216A56.b/CS950216A56.d/CS950216A56.LG
Injection Date: 16-FEB-95 08:18
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Vinyl Chloride
CAS Number: 75-01-4



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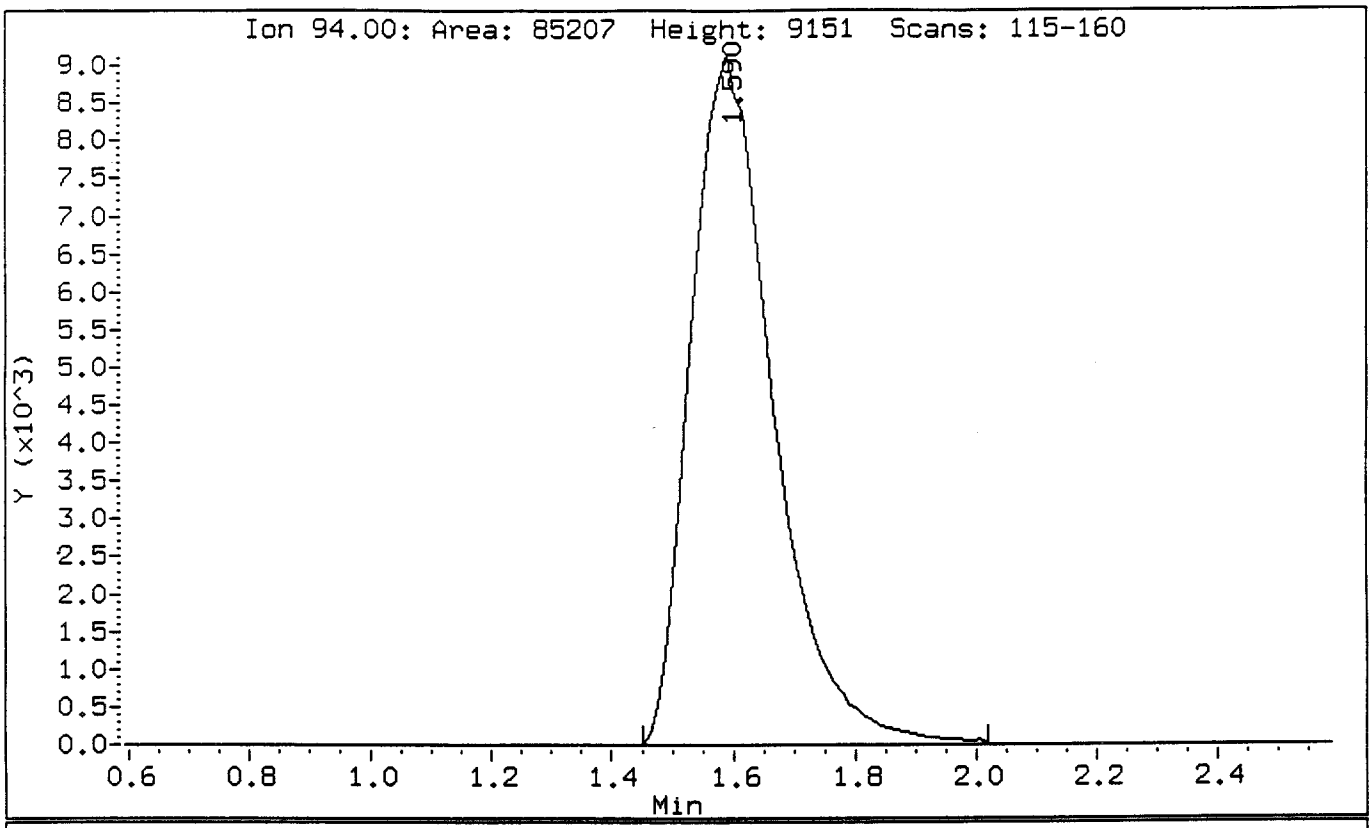
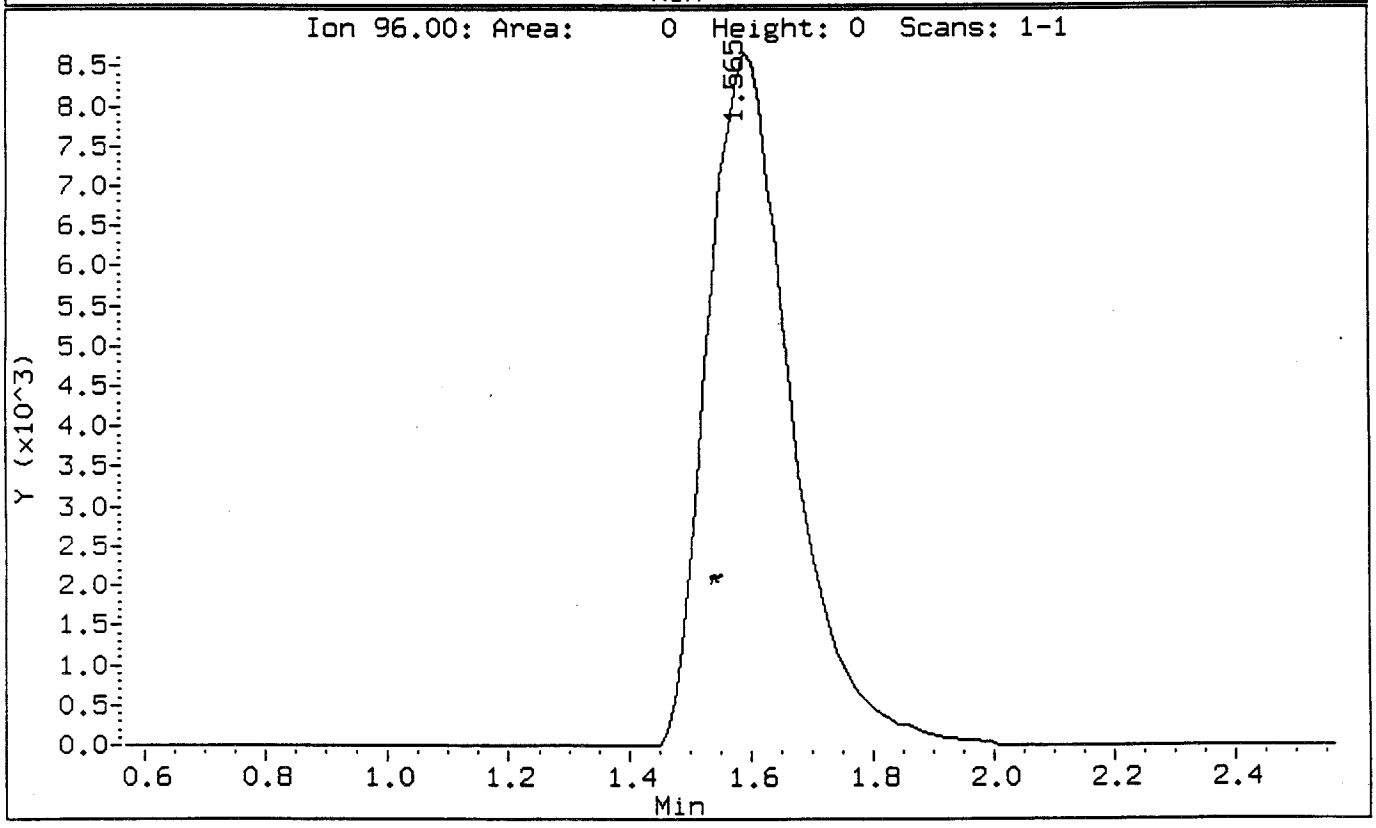
Injection Date: 16-FEB-95 08:18
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Bromomethane
CAS Number: 74-83-9





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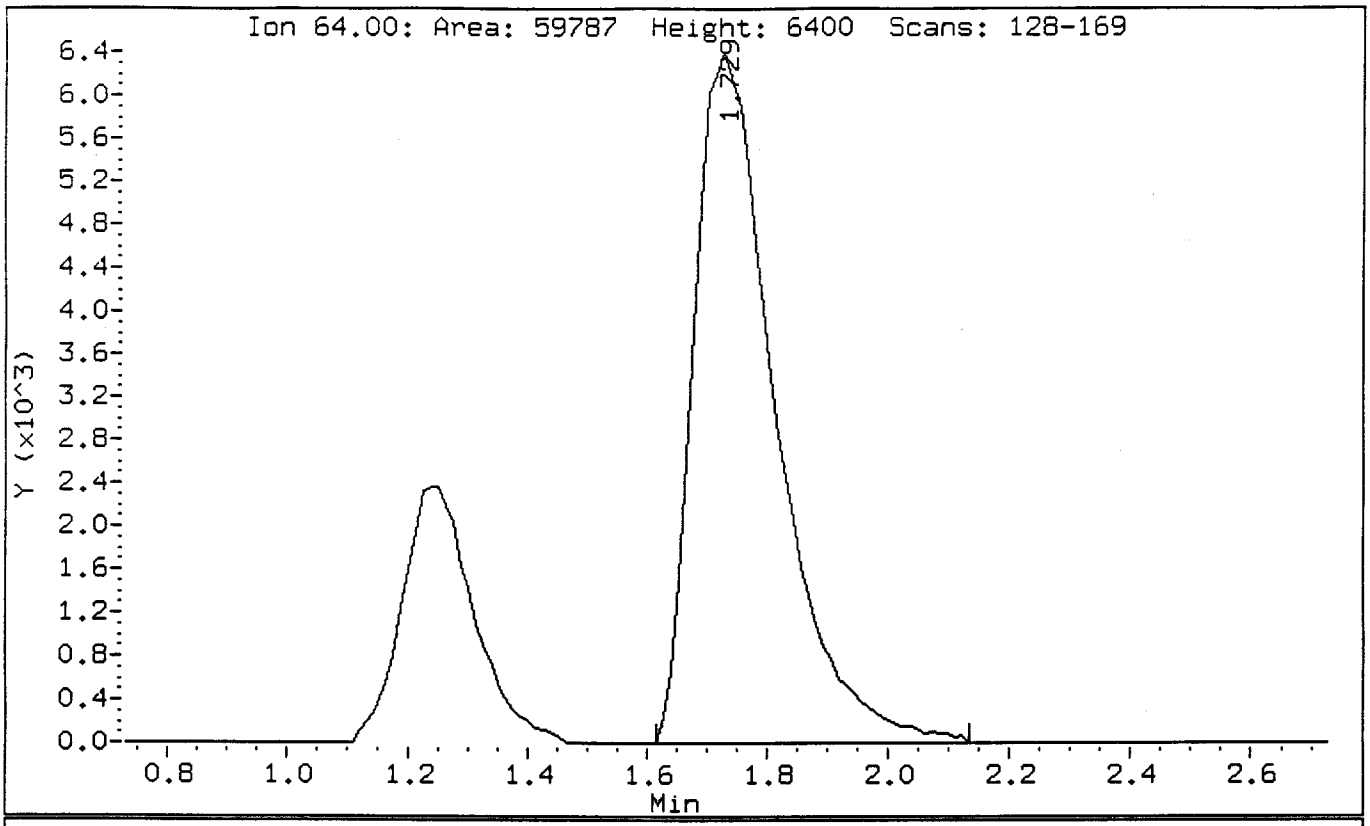
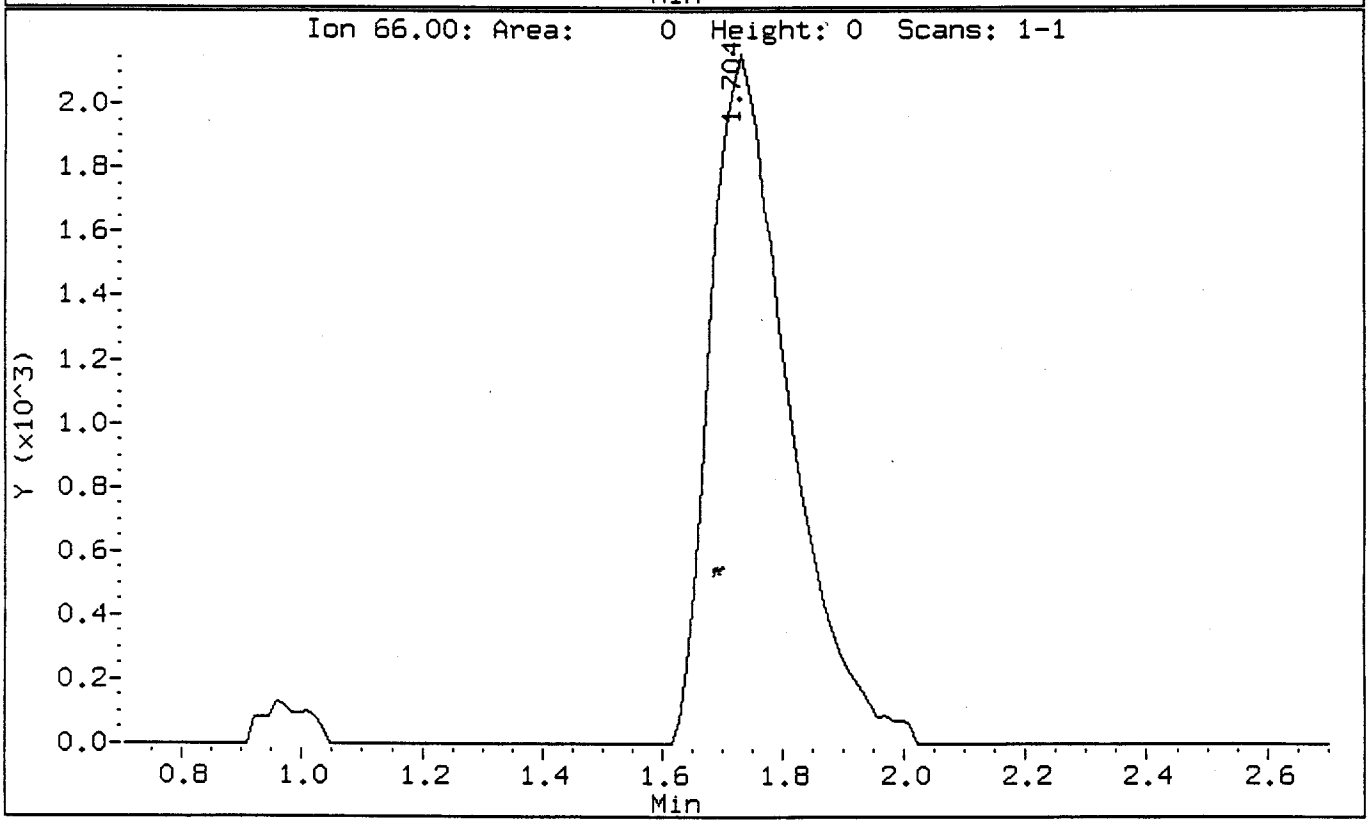
Injection Date: 16-FEB-95 08:18
Instrument: f50056.i
Client Sample ID: VSTD050

Compound: Chloroethane
CAS Number: 75-00-3





[redacted] LABORATORIES, INC.

[redacted] MS ANALYSIS LOG

VOLATILE

[redacted] TIME OF TUNE 8:04 SHIFT(S) (A) 1 (B) [redacted]

TIME TUNE EXPIRES 20:09 DATE 2.16.95

LINKER/METHOD NWSW+DCFM

PREVENTIVE MAINTENANCE None

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition
1		BF950216A56	/	2/16/95	8:09	BFB	—	7008	2ul	Z141	LC=SC42750
2		C5950216A56	/	/ /	8:18	VSTD050	—	—	5mL		TNT (42493 42492)
3		CB950216D56	/	/ /	9:04	VBLKML	—	—			
4		CN083877A56	/	/ /	9:59	VHBLK43	30073				
5	/	CR083833A56	SL	/ /	10:31	L1					
6	/	CN083991A56	SL	/ /	11:03	TRIPBLK2					
7		CZR83833A52	/	/ /	11:38	L1					
8		CR083991A56	/	/ /	12:21	TRIPBLK2					
9	/	CN083879A56	PT	/ /	12:54	VBBLK51				2011	
10		CN083986A56	/	/ /	14:01	MW9					
11		CN083987A56	/	/ /	14:49	MW9MS					42781
12		CN083988A56	/	/ /	15:26	MW9MSD					↓
13		CN083990A56	/	/ /	16:02	MW12					
14		CK083879A56	/	/	16:41	~~VBBLK51~~ TRIPBLK2 2/16/95					
15				/ /	:						
16				/ /	:						
17				/ /	:						
18				/ /	:						
19				/ /	:						
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						
				/ /	:						

JK 2/15/95

VERIFIED

SUPERVISOR APPROVAL [signature] 2/16/95

ENVELOPE NAME

30073 00003 SAMPLE DATA PACKAGE

45

4. Raw Q C Data

a. B F B Data

b. Blank Data

c. Matrix Spike Data

d. Matrix Spike Duplicate Data

a. B F B Data

For each 12 hour period, for each GC/MS system utilized.

(1) Bar graph spectrum

(2) Mass listing

(3) Reconstructed total ion chromatogram (RIC)

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d

Date : 14-FEB-1995 17:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

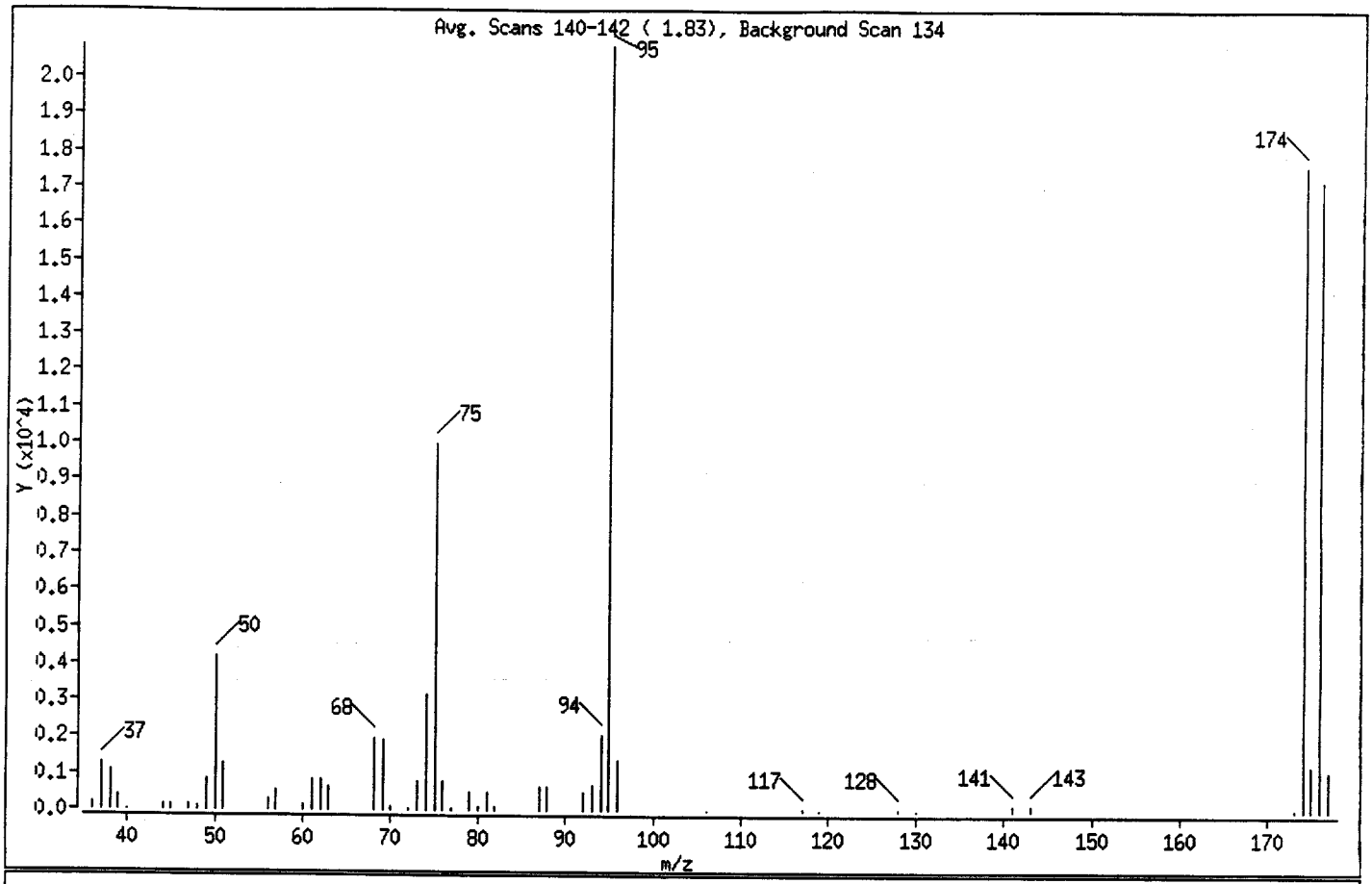
Volume Injected (uL): 2.0

Operator: 2011

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	8.00 - 40.00% of mass 95	20.12
75	30.00 - 66.00% of mass 95	47.87
96	5.00 - 9.00% of mass 95	6.54
173	Less than 2.00% of mass 174	0.22 (0.26)
174	50.00 - 120.00% of mass 95	84.42
175	4.00 - 9.00% of mass 174	5.98 (7.08)
176	93.00 - 101.00% of mass 174	82.53 (97.76)
177	5.00 - 9.00% of mass 176	5.18 (6.27)

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d

Date : 14-FEB-1995 17:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

Data File: BG950214B56.d

Spectrum : Avg. Scans 140-142 (1.83), Background Scan 134

Largest m/z: 95.00

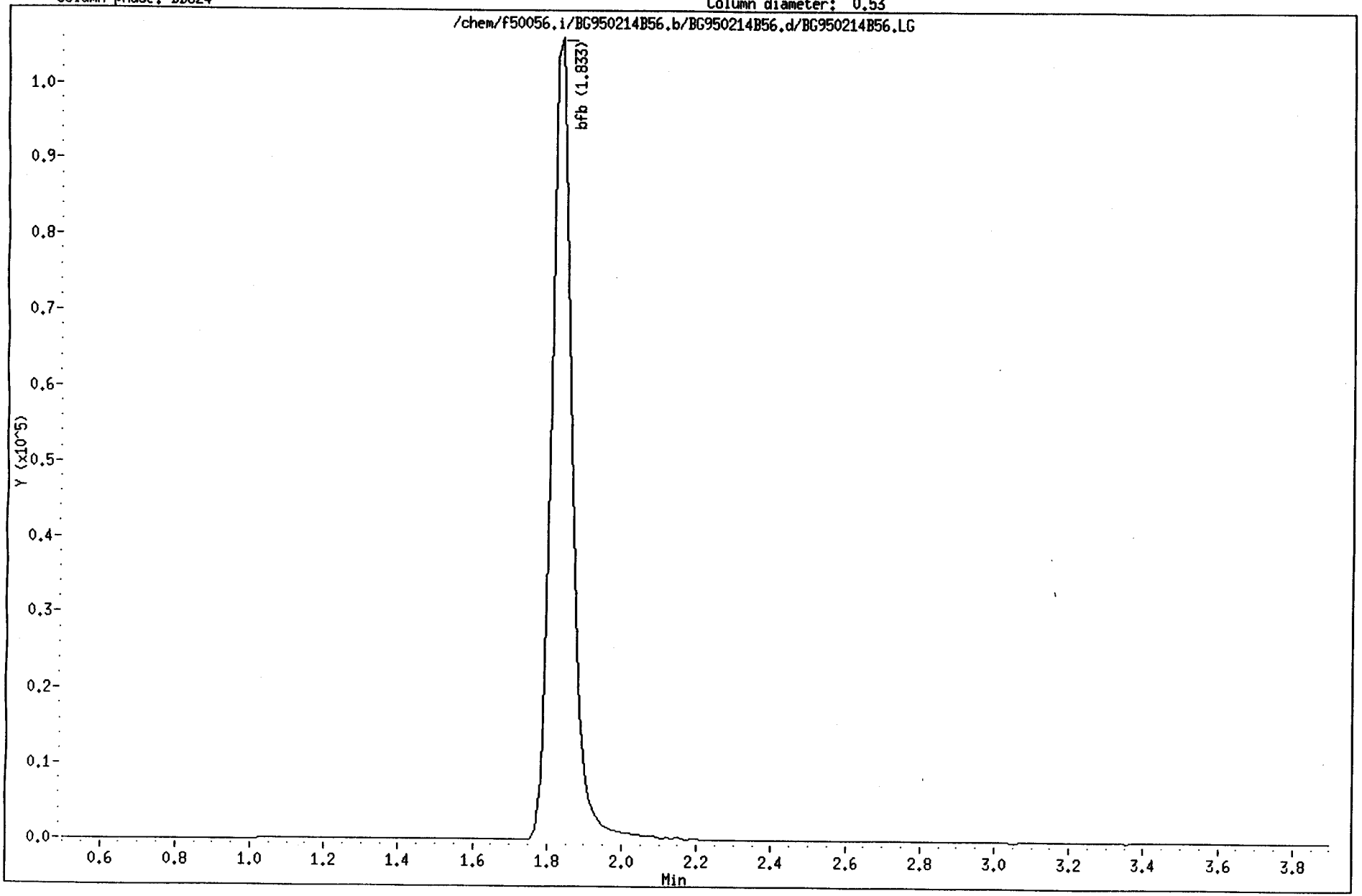
Number of peaks: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	197	57.00	540	77.00	55	117.00	70
37.00	1258	60.00	152	79.00	478	119.00	21
38.00	1077	61.00	861	80.00	108	128.00	36
39.00	387	62.00	856	81.00	478	130.00	17
40.00	18	63.00	631	82.00	77	141.00	144
44.00	124	68.00	1988	87.00	624	143.00	142
45.00	158	69.00	1944	88.00	641	173.00	46
47.00	171	70.00	110	92.00	480	174.00	17592
48.00	98	72.00	49	93.00	713	175.00	1246
49.00	850	73.00	788	94.00	2093	176.00	17200
50.00	4193	74.00	3146	95.00	20840	177.00	1079
51.00	1266	75.00	9978	96.00	1363		
56.00	277	76.00	807	106.00	19		

Data File: /chem/f50056.i/BG950214B56.b/BG950214B56.d
Date : 14-FEB-1995 17:25
Client ID: BFB
Sample Info:
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950215B56.b/BF950215B56.d

Date : 15-FEB-1995 18:25

Client ID: BFB

Instrument: f50056.i

Sample Info:

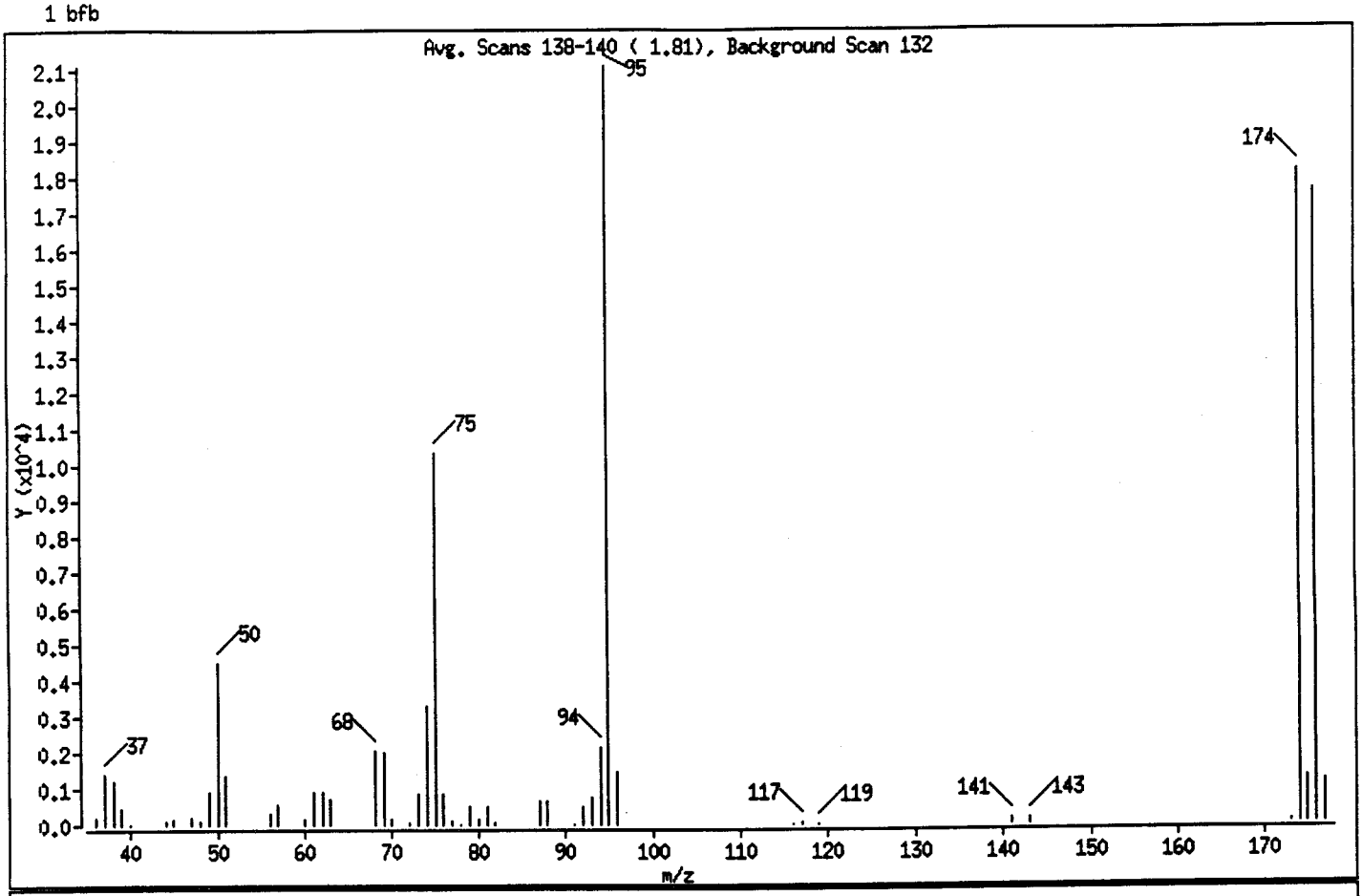
Volume Injected (uL): 2.0

Operator: 2141

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	8.00 - 40.00% of mass 95	21.28
75	30.00 - 66.00% of mass 95	49.04
96	5.00 - 9.00% of mass 95	6.76
173	Less than 2.00% of mass 174	0.30 (0.35)
174	50.00 - 120.00% of mass 95	85.98
175	4.00 - 9.00% of mass 174	5.95 (6.91)
176	93.00 - 101.00% of mass 174	83.32 (96.91)
177	5.00 - 9.00% of mass 176	5.43 (6.52)

Data File: /chem/f50056.i/BF950215B56.b/BF950215B56.d

Date : 15-FEB-1995 18:25

Client ID: BFB Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0 Operator: 2141

Column phase: DB624 Column diameter: 0.53

Data File: BF950215B56.d

Spectrum : Avg. Scans 138-140 (1.81), Background Scan 132

Largest m/z: 95.00

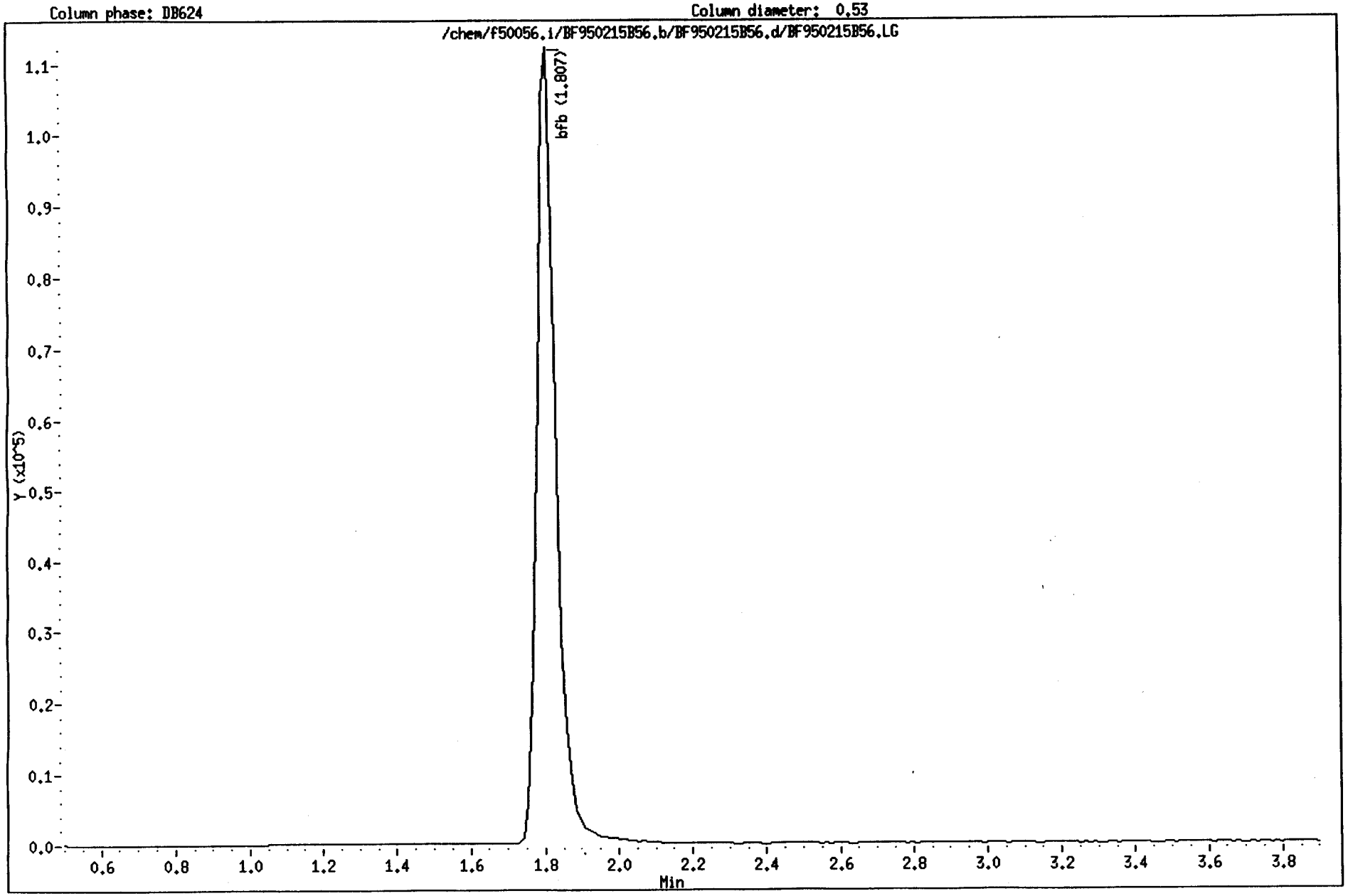
Number of peaks: 50

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	220	57.00	575	77.00	97	96.00	1428
37.00	1376	60.00	153	78.00	18	116.00	16
38.00	1210	61.00	907	79.00	497	117.00	68
39.00	431	62.00	920	80.00	132	119.00	20
40.00	14	63.00	683	81.00	512	141.00	130
44.00	116	68.00	2069	82.00	55	143.00	152
45.00	166	69.00	1998	87.00	643	173.00	64
47.00	195	70.00	134	88.00	669	174.00	18144
48.00	110	72.00	52	91.00	22	175.00	1255
49.00	893	73.00	852	92.00	496	176.00	17584
50.00	4492	74.00	3317	93.00	733	177.00	1146
51.00	1354	75.00	10352	94.00	2152		
56.00	293	76.00	867	95.00	21104		

Data File: /chem/f50056.i/BF950215B56.b/BF950215B56.d
Date : 15-FEB-1995 18:25
Client ID: BFB
Sample Info:
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50056.i

Operator: 2141
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950216A56.b/BF950216A56.d

Date : 16-FEB-1995 08:09

Client ID: BFB

Instrument: f50056.i

Sample Info:

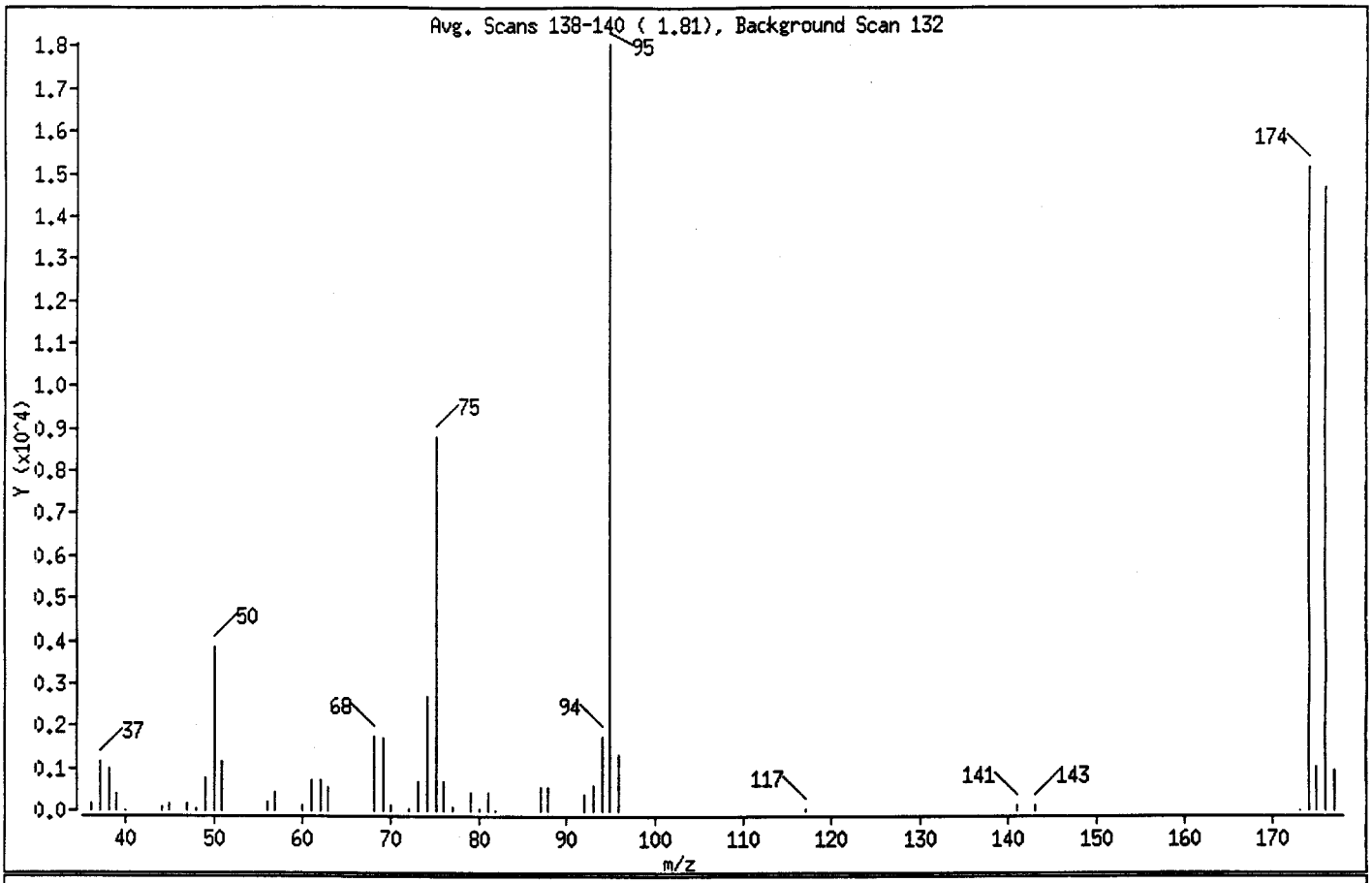
Volume Injected (uL): 2.0

Operator: 2141

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	8.00 - 40.00% of mass 95	21.26
75	30.00 - 66.00% of mass 95	48.86
96	5.00 - 9.00% of mass 95	7.23
173	Less than 2.00% of mass 174	0.09 (0.11)
174	50.00 - 120.00% of mass 95	83.82
175	4.00 - 9.00% of mass 174	5.71 (6.81)
176	93.00 - 101.00% of mass 174	81.26 (96.94)
177	5.00 - 9.00% of mass 176	5.15 (6.33)

Data File: /chem/f50056.i/BF950216A56.b/BF950216A56.d

Date : 16-FEB-1995 08:09

Client ID: BFB

Instrument: f50056.i

Sample Info:

Volume Injected (uL): 2.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

Data File: BF950216A56.d

Spectrum : Avg. Scans 138-140 (1.81), Background Scan 132

Largest m/z: 95.00

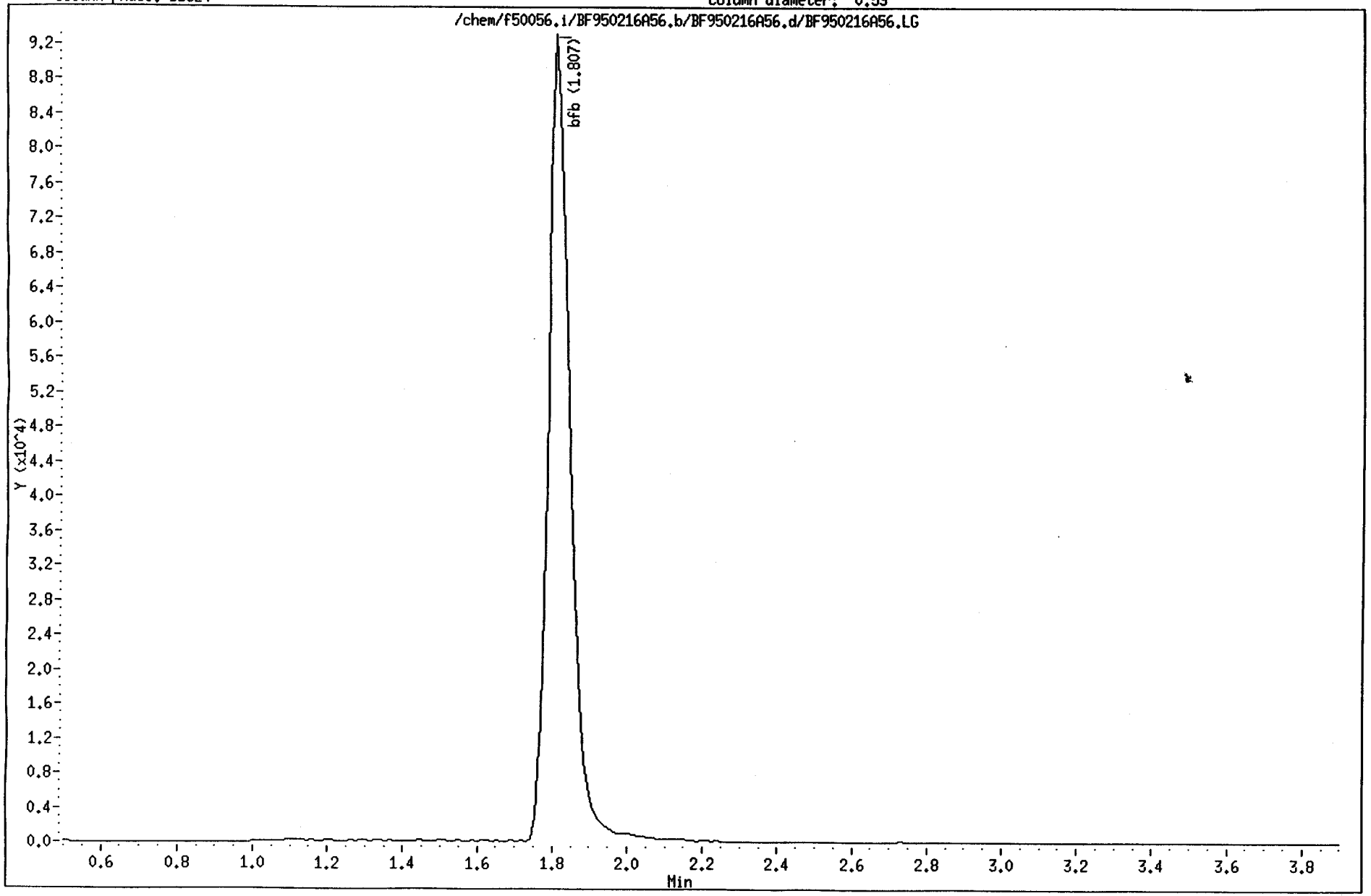
Number of peaks: 46

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	172	56.00	228	75.00	8829	95.00	18064
37.00	1143	57.00	439	76.00	698	96.00	1306
38.00	993	60.00	133	77.00	66	117.00	47
39.00	383	61.00	731	79.00	410	141.00	114
40.00	8	62.00	726	80.00	60	143.00	122
44.00	86	63.00	559	81.00	424	173.00	17
45.00	160	68.00	1736	82.00	18	174.00	15146
47.00	161	69.00	1710	87.00	542	175.00	1032
48.00	62	70.00	141	88.00	539	176.00	14682
49.00	790	72.00	23	92.00	393	177.00	930
50.00	3841	73.00	684	93.00	617		
51.00	1136	74.00	2694	94.00	1766		

Data File: /chem/f50056.i/BF950216A56.b/BF950216A56.d
Date : 16-FEB-1995 08:09
Client ID: BFB
Sample Info:
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50056.i

Operator: 2141
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

b. Blank Data

In chronological order.

(1) Form I VOA
Blank's Organic Analysis Data Sheet (OADS)

(2) Form I VOA–TIC
Blank's Tentatively Identified Compounds; even if none found.

(3) RIC and quantitation report

(4) TCL spectra with lab generated standard.

(5) GC/MS library search spectra for TICs

(6) Quantitation / calculation of TICs

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKJD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950215B56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/15/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.73	16	J
2.					
3.					
4.					
5.					
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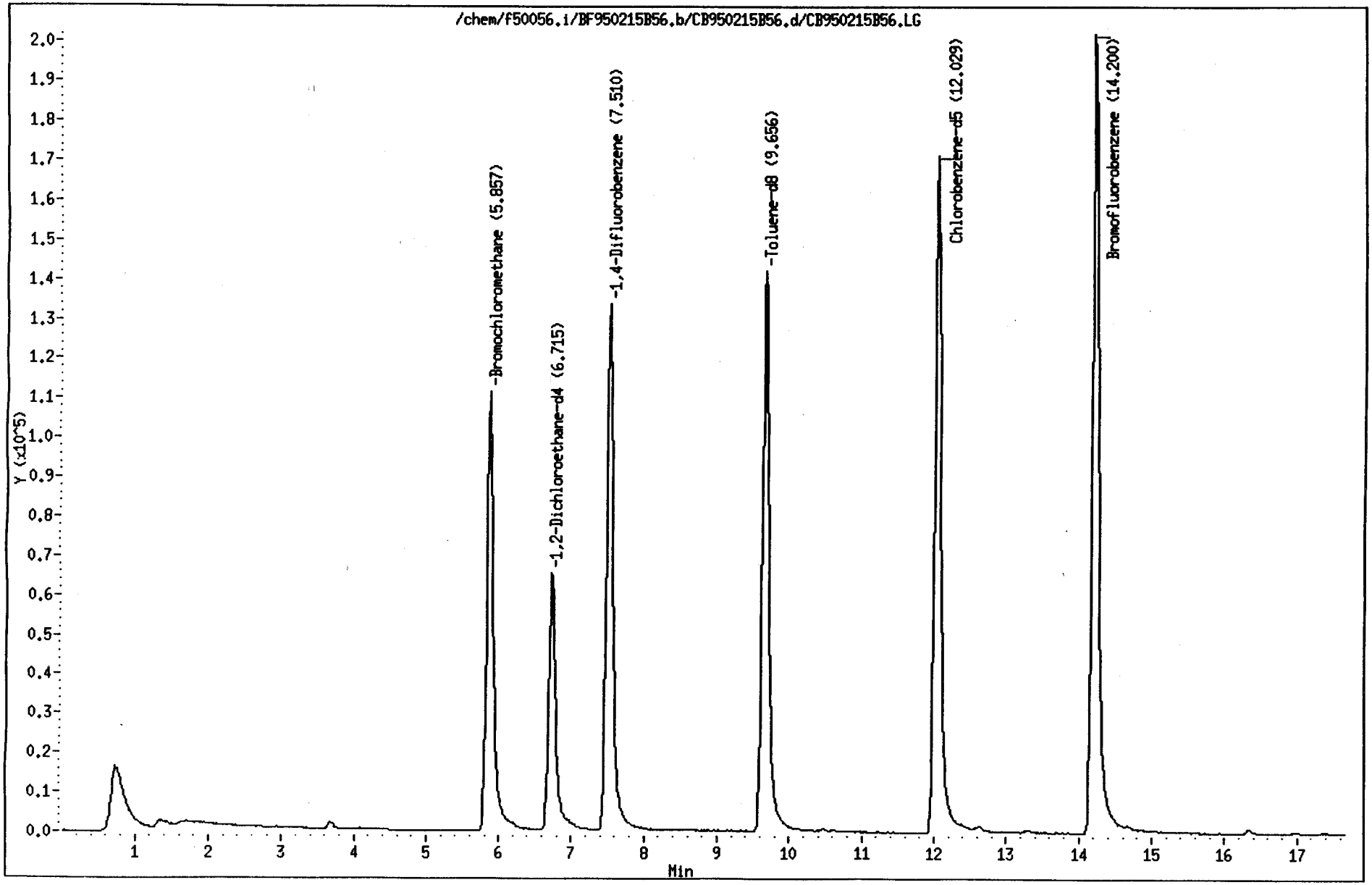
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d
Date : 15-FEB-1995 19:18
Client ID: VBLKJD
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 2011
Column diameter: 0.53



30073 00003 SAMPLE DATA PACKAGE

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d
Report Date: 20-Feb-1995 12:26

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CB950215B56.d
Lab Smp Id: VBLKJD Client Smp ID: VBLKJD
Inj Date : 15-FEB-1995 19:18
Operator : 2011 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 11:58 studt Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.857	5.844	(1.000)	92571	250.0	
* 2	1,4-Difluorobenzene	114.00	7.510	7.498	(1.000)	337927	250.0	
* 3	Chlorobenzene-d5	117.00	12.029	12.017	(1.000)	354446	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.715	6.703	(1.147)	161268	245.9	49.19
$ 5	Toluene-d8	98.00	9.656	9.644	(0.803)	303236	255.1	51.01
$ 6	Bromofluorobenzene	95.00	14.200	14.188	(1.180)	265594	228.6	45.72
7	Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10	Bromomethane	94.00		1.565	Compound Not Detected.			
11	Chloroethane	64.00		1.704	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		2.815	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15	Methylene Chloride	84.00		3.661	Compound Not Detected.			
16	trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
19	2-Butanone	43.00		5.731	Compound Not Detected.			
20	Chloroform	83.00		6.097	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23	Benzene	78.00		6.715	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d
Report Date: 20-Feb-1995 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.816		Compound Not Detected.		
25	Trichloroethene	130.00		7.763		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.066		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.609		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.303		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.707		Compound Not Detected.		
30	Toluene	91.00		9.745		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.275		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.515		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.590		Compound Not Detected.		
34	2-Hexanone	43.00		11.146		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.083		Compound Not Detected.		
36	Chlorobenzene	112.00		12.054		Compound Not Detected.		
37	Ethylbenzene	106.00		12.357		Compound Not Detected.		
38	m,p-Xylene	106.00		12.585		Compound Not Detected.		
39	o-Xylene	106.00		13.254		Compound Not Detected.		
40	Styrene	104.00		13.304		Compound Not Detected.		
41	Bromoform	173.00		13.531		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.667		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.254		Compound Not Detected.		

Data File: /chem/f50056.i/BF950215B56.b/CB950215B56.d

Date : 15-FEB-1995 19:18

Client ID: VBLKJD

Instrument: f50056.i

Sample Info:

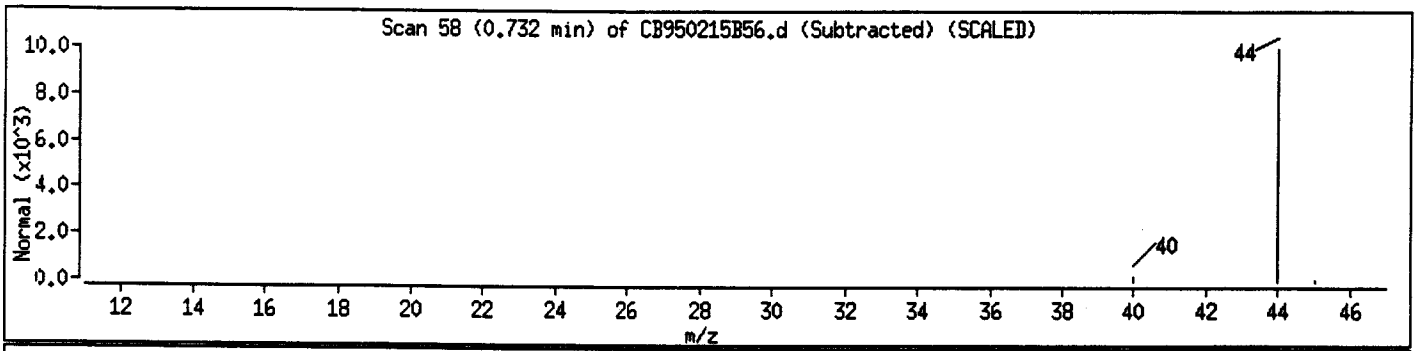
Purge Volume: 5.0

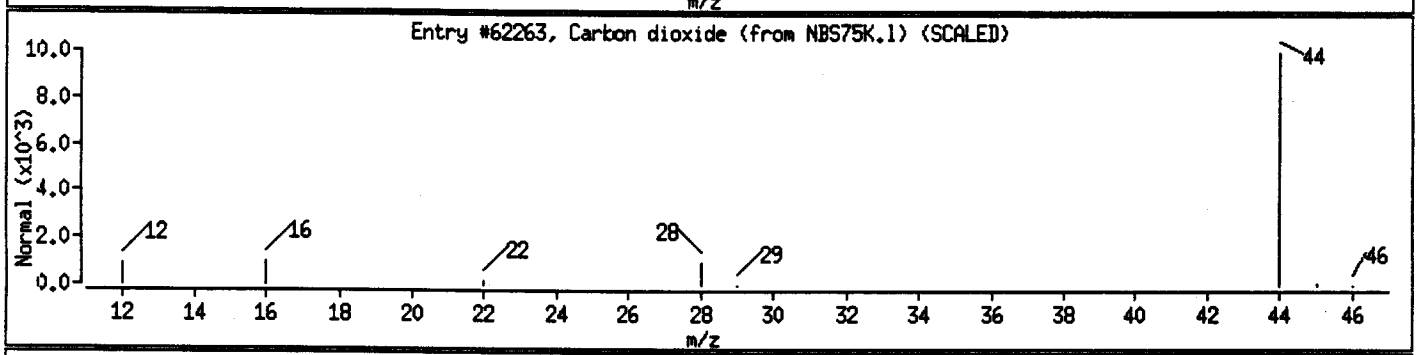
Operator: 2011

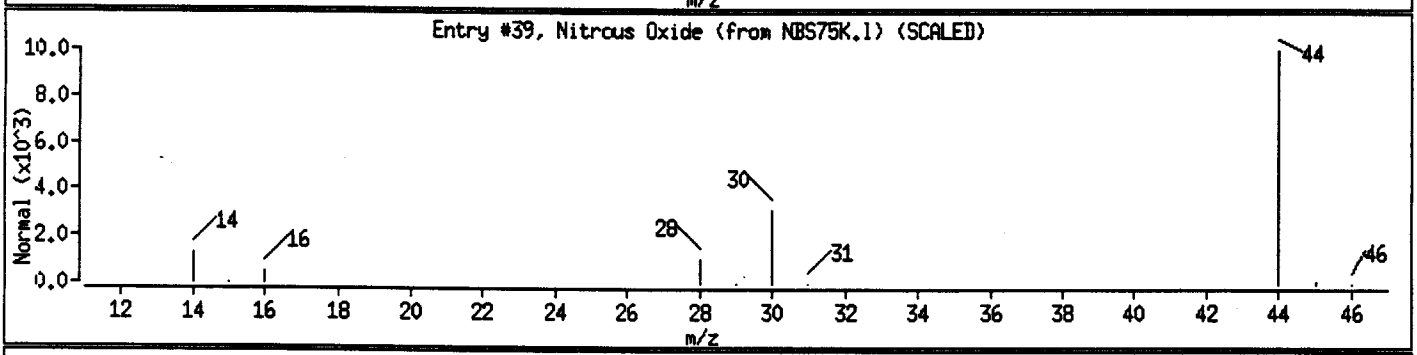
Column phase: DB624

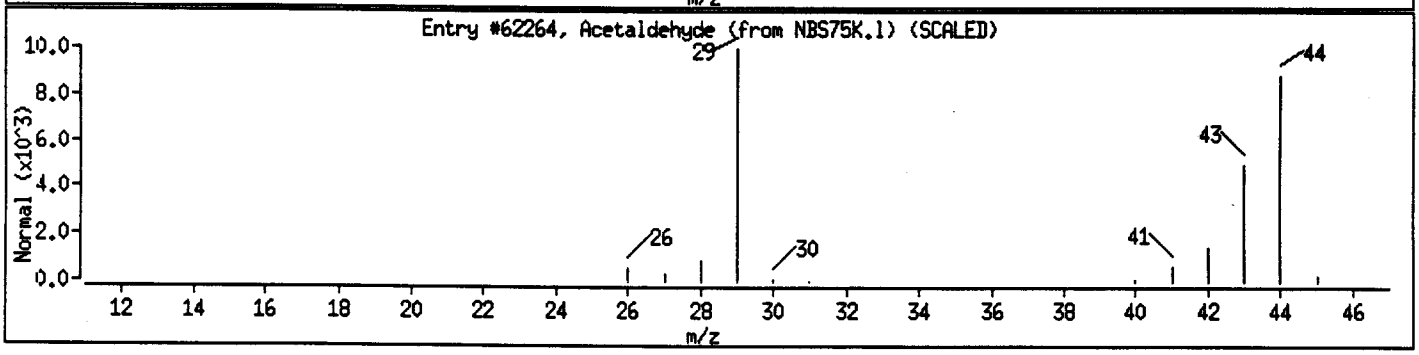
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	62263	3	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.l	39	3	N2O	44
Acetaldehyde	75-07-0	NBS75K.l	62264	2	C2H4O	44









QUALITY ASSURANCE NOTICE

CompuChem ID# CB9502150856
Client ID# VBLKJD
Instrument Blank ID# CB9502150856
Case# 30073

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 58 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID DE / FF

Date 2-20-95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKML

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: VBLKML

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950216A56.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	0.72	19	J
2.					
3.					
4.					
5.					
6.					
7.					
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9.					
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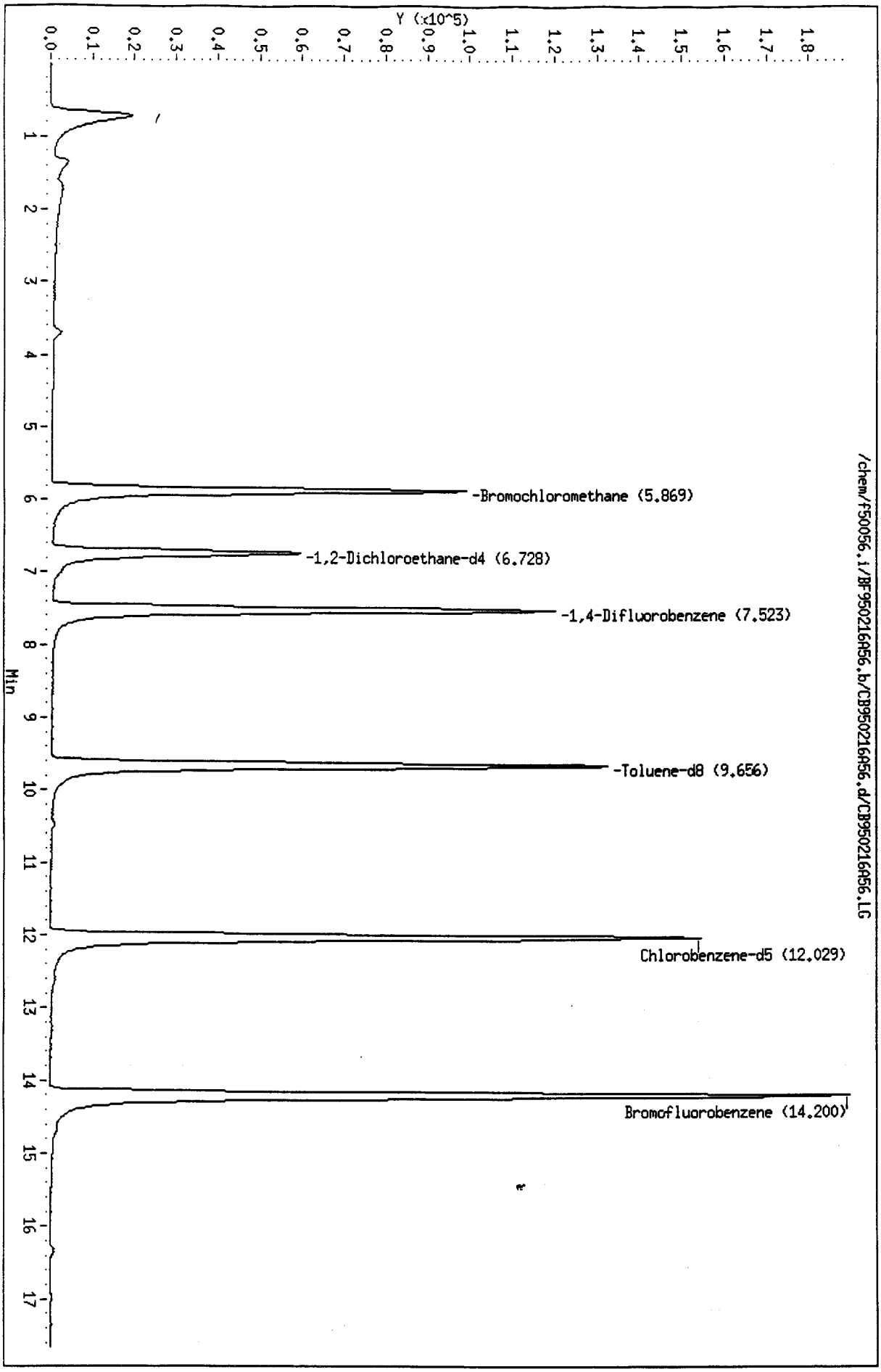
25.					
26.					
27.					
28.					
29.					
30.					


Data File: /chem/f50056.i/BF9502160056.b/CB9502160056.d
Date : 16-FEB-1995 09:04
Client ID: VBLKML
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 2141
Column diameter: 0.53
Y (x10^5)
Min
/chem/f50056.i/BF9502160056.b/CB9502160056.d/CB9502160056.LG
-Bromochloromethane (5.869)
-1,2-Dichloroethane-d4 (6.728)
-1,4-Difluorobenzene (7.523)
-Toluene-d8 (9.656)
Chlorobenzene-d5 (12.029)
Bromofluorobenzene (14.200)

Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d
Report Date: 20-Feb-1995 15:12

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950216A56.b/CB950216A56.d
Lab Smp Id: VBLKML Client Smp ID: VBLKML
Inj Date : 16-FEB-1995 09:04
Operator : 2141 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950216A56.b/W390CLPDCDFM.m
Meth Date : 20-Feb-1995 14:24 studt Quant Type: ISTD
Cal Date : 16-FEB-95 08:18 Cal File: CS950216A56.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1	Bromochloromethane	128.00	5.869	5.869	(1.000)	80470	250.0	
* 2	1,4-Difluorobenzene	114.00	7.510	7.523	(1.000)	299990	250.0	
* 3	Chlorobenzene-d5	117.00	12.029	12.029	(1.000)	316422	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	6.728	6.728	(1.146)	148771	246.3	49.26
$ 5	Toluene-d8	98.00	9.656	9.669	(0.803)	276024	241.9	48.37
$ 6	Bromofluorobenzene	95.00	14.200	14.213	(1.180)	249720	233.2	46.63
7	Dichlorodiflouromethane	85.00		0.972	Compound Not Detected.			
8	Chloromethane	50.00		1.111	Compound Not Detected.			
9	Vinyl Chloride	62.00		1.237	Compound Not Detected.			
10	Bromomethane	94.00		1.590	Compound Not Detected.			
11	Chloroethane	64.00		1.729	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		2.840	Compound Not Detected.			
13	Acetone	43.00		3.156	Compound Not Detected.			
14	Carbon Disulfide	76.00		2.954	Compound Not Detected.			
15	Methylene Chloride	84.00	3.698	3.686	(0.630)	2723	5.99	1.20(a)
16	trans-1,2-Dichloroethene	96.00		4.077	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		4.670	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		5.554	Compound Not Detected.			
19	2-Butanone	43.00		5.768	Compound Not Detected.			
20	Chloroform	83.00		6.222	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		6.198	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		6.425	Compound Not Detected.			
23	Benzene	78.00		6.740	Compound Not Detected.			

Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d
Report Date: 20-Feb-1995 15:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		6.841		Compound Not Detected.		
25	Trichloroethene	130.00		7.788		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		8.091		Compound Not Detected.		
27	Bromodichloromethane	83.00		8.634		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		9.328		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		9.732		Compound Not Detected.		
30	Toluene	91.00		9.770		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		10.300		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		10.540		Compound Not Detected.		
33	Tetrachloroethene	164.00		10.603		Compound Not Detected.		
34	2-Hexanone	43.00		11.158		Compound Not Detected.		
35	Dibromochloromethane	129.00		11.120		Compound Not Detected.		
36	Chlorobenzene	112.00		12.080		Compound Not Detected.		
37	Ethylbenzene	106.00		12.383		Compound Not Detected.		
38	m,p-Xylene	106.00		12.610		Compound Not Detected.		
39	o-Xylene	106.00		13.279		Compound Not Detected.		
40	Styrene	104.00		13.342		Compound Not Detected.		
41	Bromoform	173.00		13.557		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		14.680		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		13.279		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d

Date : 16-FEB-1995 09:04

Client ID: VBLKML

Instrument: f50056.i

Sample Info:

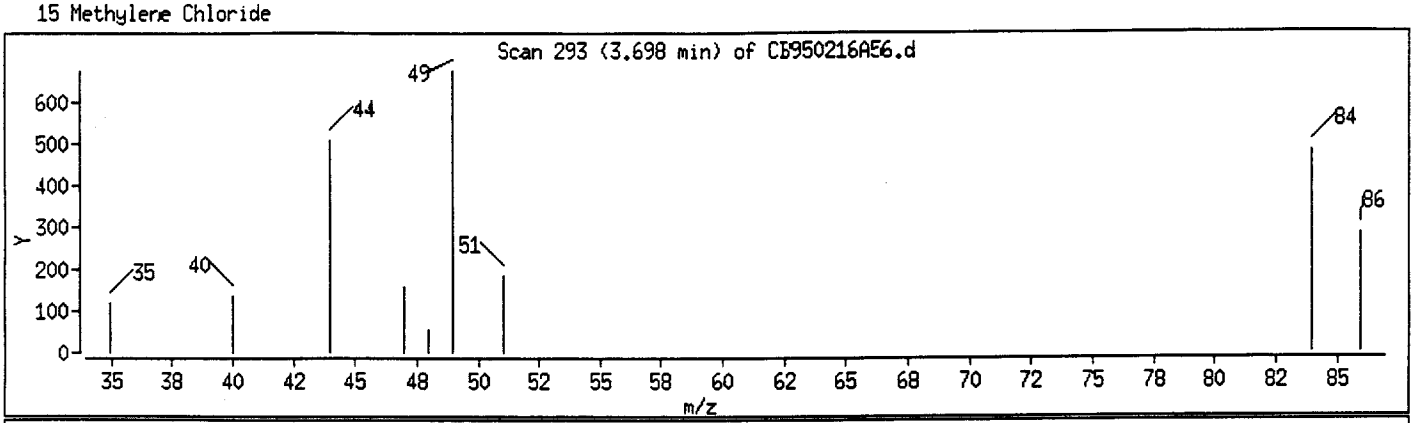
Purge Volume: 5.0

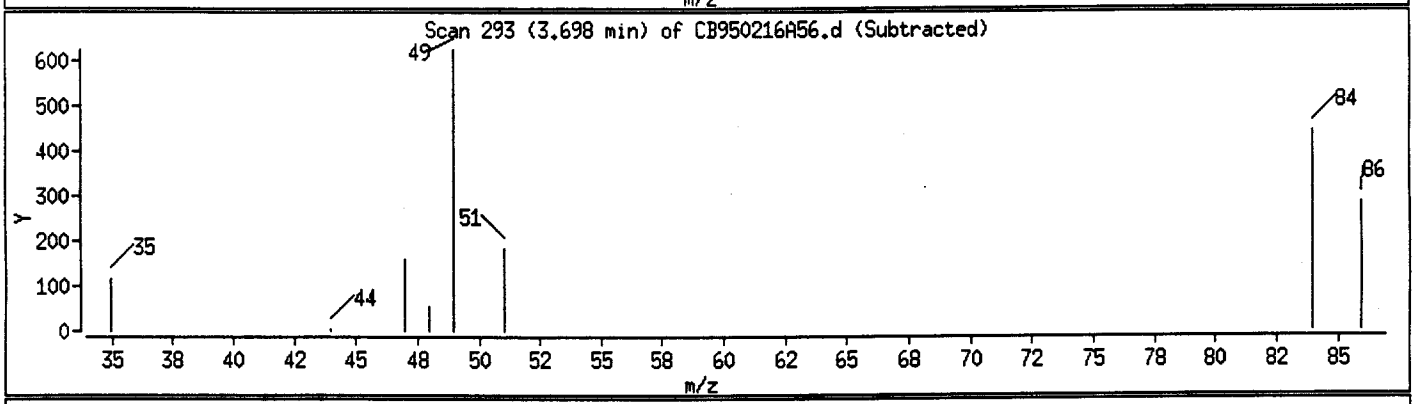
Operator: 2141

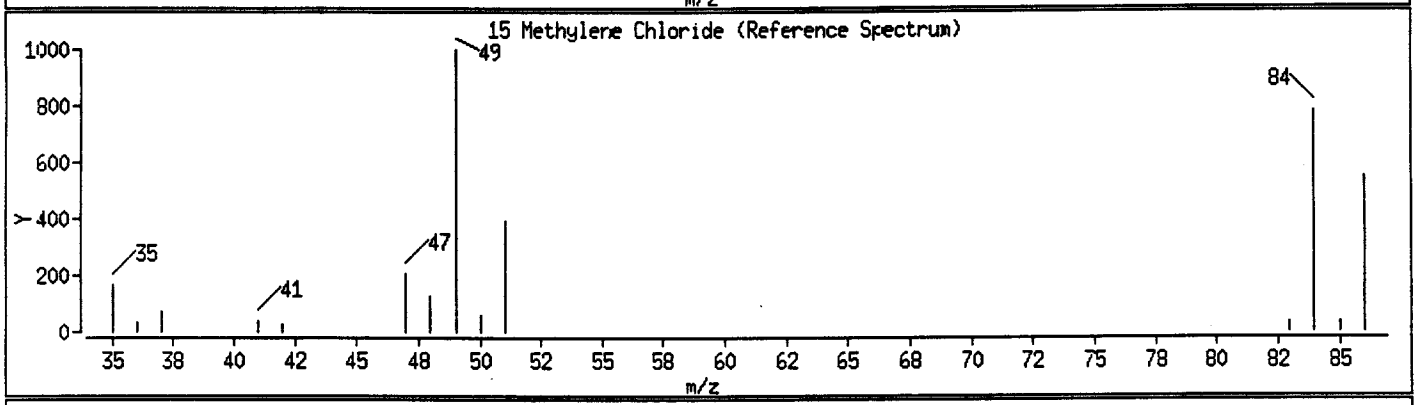
Column phase: DB624

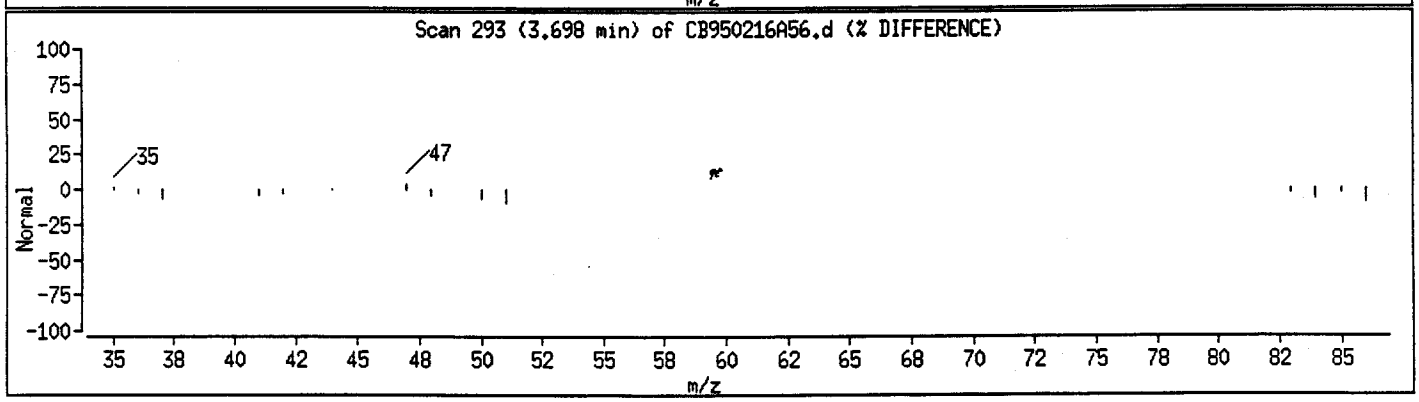
Column diameter: 0.53

15 Methylene Chloride









Data File: /chem/f50056.i/BF950216A56.b/CB950216A56.d

Date : 16-FEB-1995 09:04

Client ID: VBLKML

Instrument: f50056.i

Sample Info:

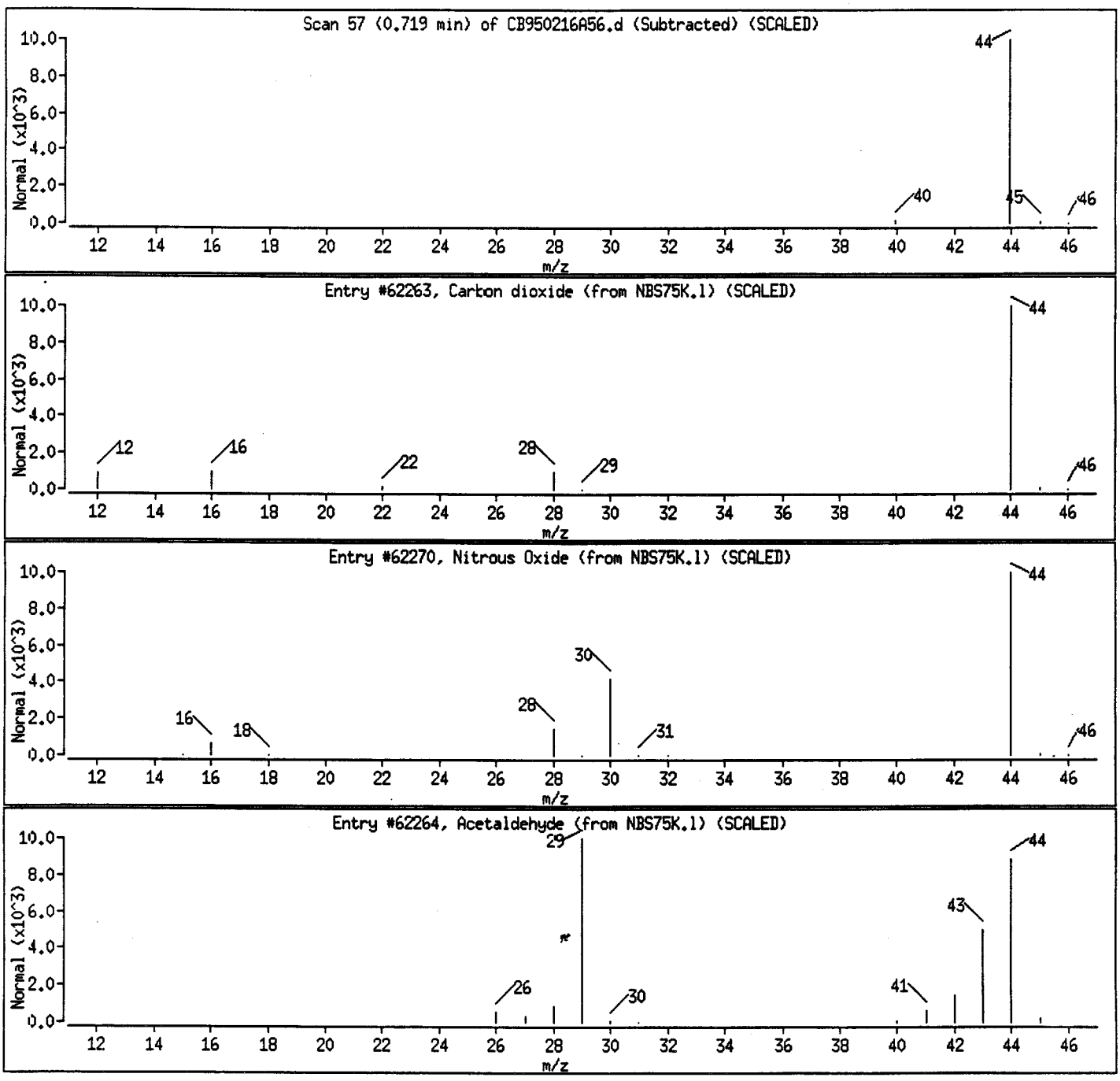
Purge Volume: 5.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Carbon dioxide	124-38-9	NBS75K.l	62263	5	CO2	44
Nitrous Oxide	10024-97-2	NBS75K.l	62270	3	N2O	44
Acetaldehyde	75-07-0	NBS75K.l	62264	3	C2H4O	44



QUALITY ASSURANCE NOTICE

CompuChem ID# CB950216A56
Client ID# VBLK ML
Instrument Blank ID# CB950216A56
Case# _____

The early-eluting peak on the RIC (Reconstructed Ion Chromatogram) of the volatile fraction at scans # 57 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

- trap replacement
- reconditioning and/or replacing column
- replacing six-port valve in Tekmar
- cleaning of the separator
- cleaning or replacing source
- replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID CK /983

Date 2·20·95

QAN-V-14
901001

c. Matrix Spike Data

(1) Form I VOA

Matrix Spike's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683834

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083834C56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	78	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	51	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	53	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	44	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1MS

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683834

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR083834C56.D

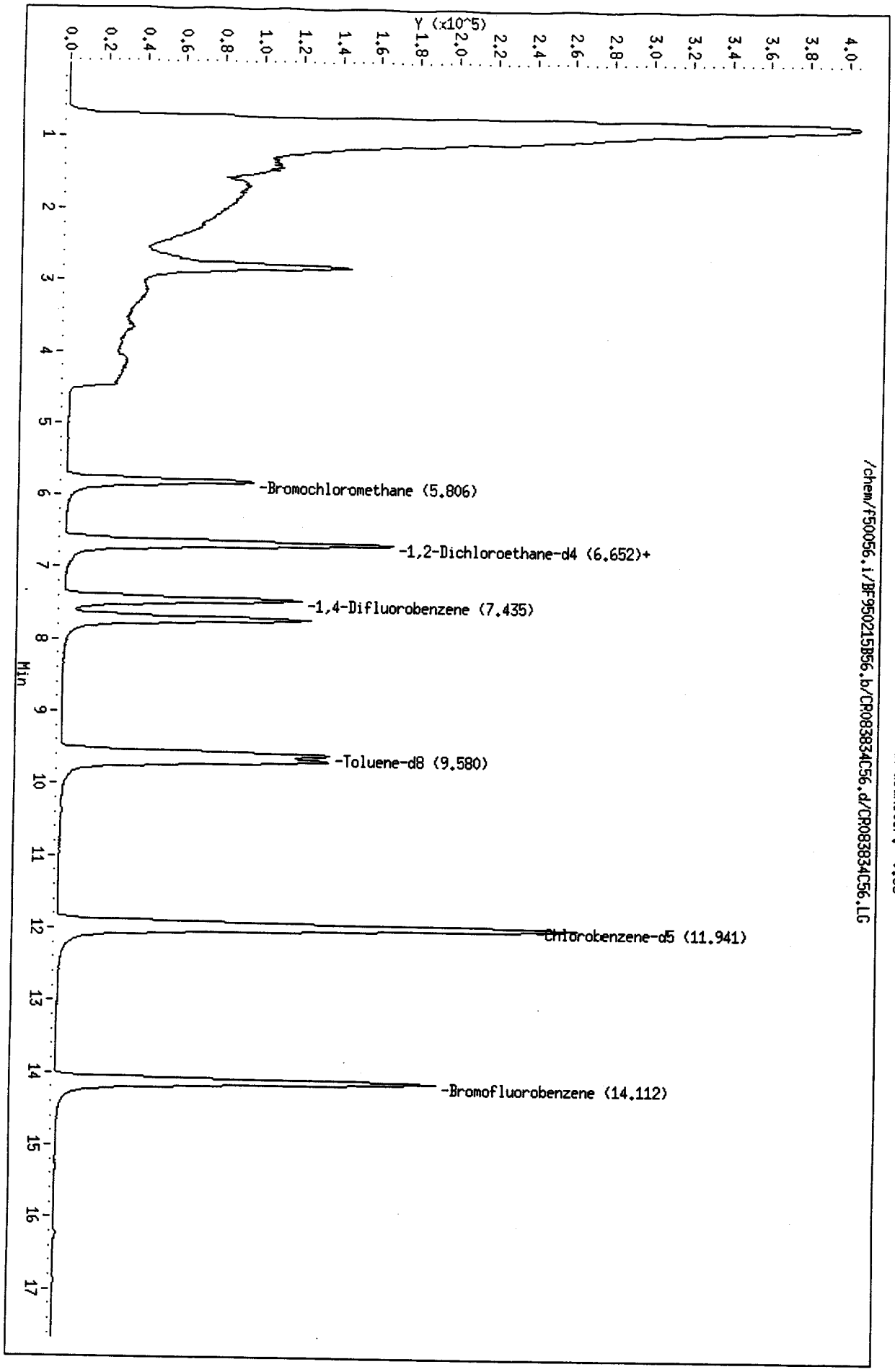
Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U


Data File: /chem/f50056.i/BF950215B56.b/CR083834C56.d
Date : 16-FEB-1995 05:16
Client ID: SFW1MS
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50056.i
Operator: 1948
Column diameter: 0.53
Y (x10^5)
Min
-Bromochloromethane (5.806)
-1,2-Dichloroethane-d4 (6.652)+
-1,4-Difluorobenzene (7.435)
-Toluene-d8 (9.580)
-Chlorobenzene-d5 (11.941)
-Bromofluorobenzene (14.112)
/chem/f50056.i/BF950215B56.b/CR083834C56.d/CR083834C56.LG

Data File: /chem/f50056.i/BF950215B56.b/CR083834C56.d
Report Date: 24-Feb-1995 17:19

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CR083834C56.d
Lab Smp Id: 683834 Client Smp ID: SFW1MS
Inj Date : 16-FEB-1995 05:16
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 24-Feb-1995 17:18 bass Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	5.794	5.844	(1.000)	76204	250.0	
*	2 1,4-Difluorobenzene	114.00	7.435	7.498	(1.000)	299945	250.0	
*	3 Chlorobenzene-d5	117.00	11.941	12.017	(1.000)	315993	250.0	
$	4 1,2-Dichloroethane-d4	65.00	6.652	6.703	(1.148)	137691	255.1	51.02
$	5 Toluene-d8	98.00	9.580	9.644	(0.802)	266944	251.9	50.37
$	6 Bromofluorobenzene	95.00	14.112	14.188	(1.182)	258232	249.3	49.86
	7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
	8 Chloromethane	50.00		1.111	Compound Not Detected.			
	9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
	10 Bromomethane	94.00		1.565	Compound Not Detected.			
	11 Chloroethane	64.00		1.704	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00	2.802	2.815	(0.484)	111879	392.3	78.46(R)
	13 Acetone	43.00		3.156	Compound Not Detected.			
	14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
	15 Methylene Chloride	84.00	3.648	3.661	(0.630)	4773	12.24	2.45(a)
	16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
	19 2-Butanone	43.00		5.731	Compound Not Detected.			
	20 Chloroform	83.00		6.097	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
	23 Benzene	78.00	6.665	6.715	(0.896)	294773	265.0	53.00
	24 1,2-Dichloroethane	62.00		6.816	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CR083834C56.d
Report Date: 24-Feb-1995 17:19

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	7.700	7.763	(1.036)	129045	252.7	50.54
26	1,2-Dichloropropane	63.00		8.066	Compound Not Detected.			
27	Bromodichloromethane	83.00		8.609	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		9.303	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		9.707	Compound Not Detected.			
30	Toluene	91.00	9.669	9.745	(0.810)	268204	221.0	44.21
31	trans-1,3-Dichloropropene	75.00		10.275	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		10.515	Compound Not Detected.			
33	Tetrachloroethene	164.00		10.590	Compound Not Detected.			
34	2-Hexanone	43.00		11.146	Compound Not Detected.			
35	Dibromochloromethane	129.00		11.083	Compound Not Detected.			
36	Chlorobenzene	112.00	11.979	12.054	(1.003)	294850	240.1	48.02
37	Ethylbenzene	106.00		12.357	Compound Not Detected.			
38	m,p-Xylene	106.00		12.585	Compound Not Detected.			
39	o-Xylene	106.00		13.254	Compound Not Detected.			
40	Styrene	104.00		13.304	Compound Not Detected.			
41	Bromoform	173.00		13.531	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		14.667	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00		1.000	Compound Not Detected.			
M 44	Xylene (Total)	106.00		13.254	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

LAB INSTRUCTIONS:

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00003 SAS#: DUE DATE:

VOA
GC/MS WORKSHEET COMPUCHEM#: 683834R1

J1[ ] J3[ ] D1[ ] (:1)
2J[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample date: Report type: A

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

SAMPLE ID#: DWF1MS 989/1623

GC/MS ANALYSIS: VS 2/16/95
Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/5000ul Sparged
Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BF9502 15B56 Disk ( )
Blank Filename CB9502 15B56 Disk ( )
Standard Filename CS9502 15B56 Disk ( )
Sample Filename CR083834C56 Disk ( )

ANALYST(S): Injection 1948 V.A Smith Work-up 1948 V.A Smith

GC/MS REVIEW

CONDITION CODE: JA

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 0

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 0

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review DGrubt Date 2/20/95 Auditor _____ Date ___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ___/___/___

FINAL REVIEW: Initials _____ Date ___/___/___

AC1169

d. Matrix Spike Duplicate Data

(1) Form I VOA

Matrix Spike Duplicate's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SFW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683835

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083835B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	78	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	52	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	44	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFW1MSD

Lab Name: COMPUCHEM ENV. CORP. Contract: (3-90)-REVS

Lab Code: COMPU Case No.: 30073 SAS No.: SDG No.: 00003

Matrix: (soil/water) WATER Lab Sample ID: 683835

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN083835B56.D

Level: (low/med) LOW Date Received: 02/10/95

% Moisture: not dec. _____ Date Analyzed: 02/16/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

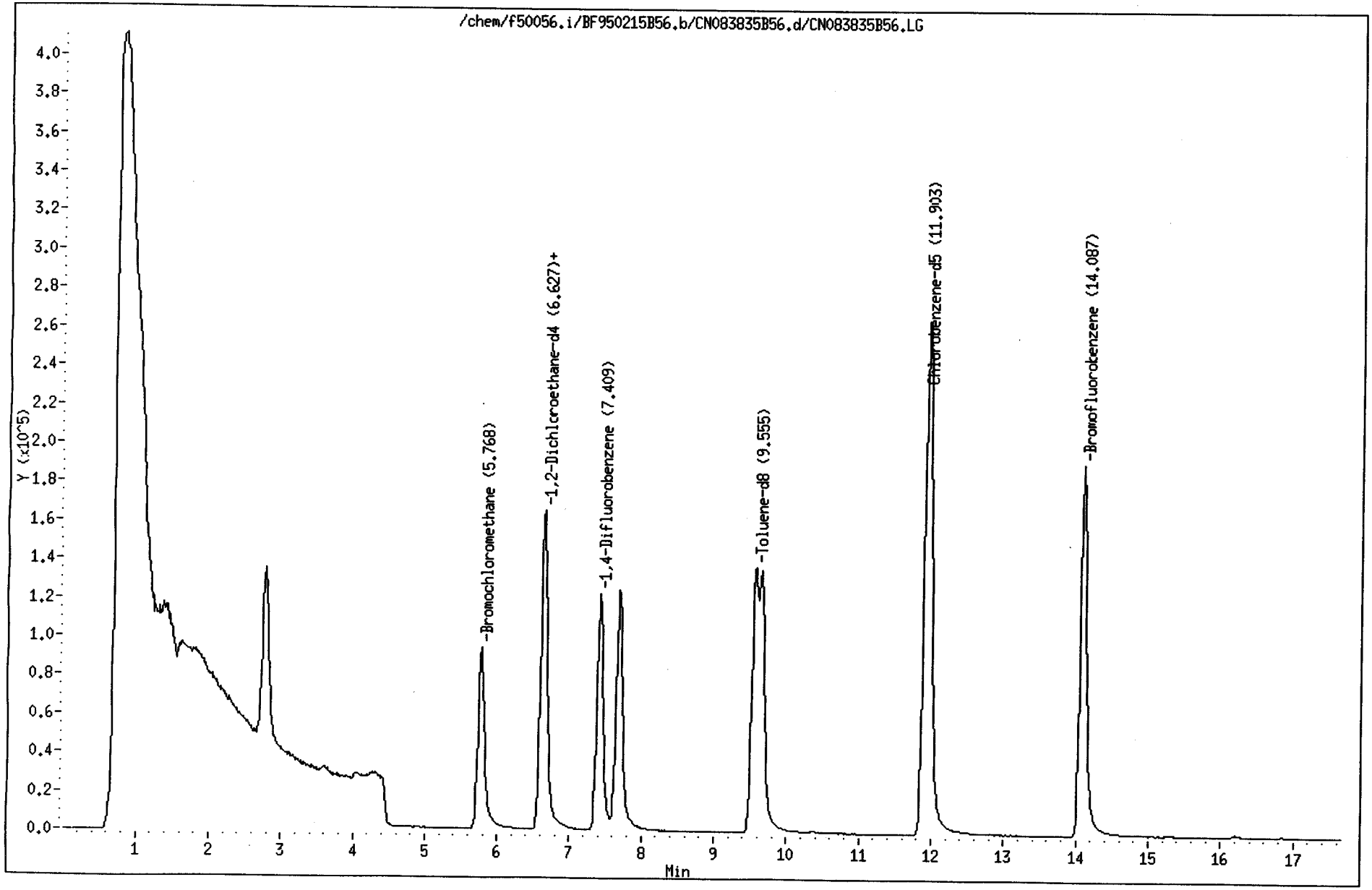
Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	10	U

Data File: /chem/f50056.i/BF950215B56.b/CN083835B56.d
Date : 16-FEB-1995 04:46
Client ID: SFW1MSD
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50056.i

Operator: 1948
Column diameter: 0.53



Data File: /chem/f50056.i/BF950215B56.b/CN083835B56.d
Report Date: 24-Feb-1995 17:19

CompuChem Environmental Corporation

Data file : /chem/f50056.i/BF950215B56.b/CN083835B56.d
Lab Smp Id: 683835 Client Smp ID: SFW1MSD
Inj Date : 16-FEB-1995 04:46
Operator : 1948 Inst ID: f50056.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50056.i/BF950215B56.b/W390CLPDCDFM.m
Meth Date : 24-Feb-1995 17:18 bass Quant Type: ISTD
Cal Date : 15-FEB-1995 18:37 Cal File: CS950215B56.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	5.768	5.844	(1.000)	75006	250.0	
* 2 1,4-Difluorobenzene	114.00	7.409	7.498	(1.000)	300804	250.0	
* 3 Chlorobenzene-d5	117.00	11.903	12.017	(1.000)	316702	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	6.614	6.703	(1.147)	135816	255.6	51.12
$ 5 Toluene-d8	98.00	9.543	9.644	(0.802)	266150	250.6	50.11
$ 6 Bromofluorobenzene	95.00	14.087	14.188	(1.183)	254265	244.9	48.98
7 Dichlorodiflouromethane	85.00		0.947	Compound Not Detected.			
8 Chloromethane	50.00		1.111	Compound Not Detected.			
9 Vinyl Chloride	62.00		1.224	Compound Not Detected.			
10 Bromomethane	94.00		1.565	Compound Not Detected.			
11 Chloroethane	64.00		1.704	Compound Not Detected.			
12 1,1-Dichloroethene	96.00	2.764	2.815	(0.479)	109255	389.2	77.85(R)
13 Acetone	43.00		3.156	Compound Not Detected.			
14 Carbon Disulfide	76.00		2.928	Compound Not Detected.			
15 Methylene Chloride	84.00	3.623	3.661	(0.628)	2899	7.56	1.51(a)
16 trans-1,2-Dichloroethene	96.00		4.064	Compound Not Detected.			
17 1,1-Dichloroethane	63.00		4.645	Compound Not Detected.			
18 cis-1,2-Dichloroethene	96.00		5.529	Compound Not Detected.			
19 2-Butanone	43.00		5.731	Compound Not Detected.			
20 Chloroform	83.00		6.097	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00		6.172	Compound Not Detected.			
22 Carbon Tetrachloride	117.00		6.400	Compound Not Detected.			
23 Benzene	78.00	6.627	6.715	(0.894)	292140	261.9	52.37
24 1,2-Dichloroethane	62.00		6.816	Compound Not Detected.			

Data File: /chem/f50056.i/BF950215B56.b/CN083835B56.d
Report Date: 24-Feb-1995 17:19

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	25 Trichloroethene	130.00	7.674	7.763	(1.036)	128768	251.4	50.29
	26 1,2-Dichloropropane	63.00		8.066	Compound Not Detected.			
	27 Bromodichloromethane	83.00		8.609	Compound Not Detected.			
	28 cis-1,3-Dichloropropene	75.00		9.303	Compound Not Detected.			
	29 4-Methyl-2-Pentanone	43.00		9.707	Compound Not Detected.			
	30 Toluene	91.00	9.644	9.745	(0.810)	266495	219.1	43.83
	31 trans-1,3-Dichloropropene	75.00		10.275	Compound Not Detected.			
	32 1,1,2-Trichloroethane	97.00		10.515	Compound Not Detected.			
	33 Tetrachloroethene	164.00		10.590	Compound Not Detected.			
	34 2-Hexanone	43.00		11.146	Compound Not Detected.			
	35 Dibromochloromethane	129.00		11.083	Compound Not Detected.			
	36 Chlorobenzene	112.00	11.954	12.054	(1.004)	293940	238.8	47.77
	37 Ethylbenzene	106.00		12.357	Compound Not Detected.			
	38 m,p-Xylene	106.00		12.585	Compound Not Detected.			
	39 o-Xylene	106.00		13.254	Compound Not Detected.			
	40 Styrene	104.00		13.304	Compound Not Detected.			
	41 Bromoform	173.00		13.531	Compound Not Detected.			
	42 1,1,2,2-Tetrachloroethane	83.00		14.667	Compound Not Detected.			
M	43 1,2-Dichloroethene (total)	96.00		1.000	Compound Not Detected.			
M	44 Xylene (Total)	106.00		13.254	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

LAB INSTRUCTIONS:
PPS#115 + DICHLORODIFLUOROMETHANE

PPS#: _____

RECEIPT DATE: 02/10/95 CASE#: 30073 00003 DUE DATE: 02/24/9

VOA J1[ ] J3[ ] D1[ ] (:1)
GC/MS WORKSHEET COMPUCHEM#: 683835
J2[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; WATER; 3/90 SOW

Sample Prep Code--- 0
Instrument Code---- 428
Compound List------ 643
Surrogate Std------ 424
Internal Std------- 36

Sample date: Report type: 0

SAMPLE ID#: SWF1 MSD

GC/MS ANALYSIS VS 2/16/95

Amount Purged: [✓] 5 mls or [ ] Dilution _____ ul/ul Purged

Internal Standard Volume Added 5 ul
Surrogate Standard Volume Added 5 ul
BFB Filename BF950215B56 Disk ( )
Blank Filename CB950215B56 Disk ( )
Standard Filename CS950215B56 Disk ( )
Sample Filename CNU83835B56 Disk ( )

QC

ANALYST(S): Injection 1948 V.A.Smith Work-up 1948 V.A.Smith

GC/MS REVIEW

CONDITION CODE: OK

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found: 0

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required 0

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review [illegible] Date 2/20/95 Auditor _____ Date ____/____/____

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ____/____/____

FINAL REVIEW: Initials _____ Date ____/____/____

AC1169

END OF REPORT

Section III

SECTION III

SW-846 METHOD 8021 VOLATILES

SECTION 3.1

SW-846 VOLATILES REPORTING QUALIFIERS

NONE

SECTION 3.2

DAA SW-846 VOLATILES DATA VALIDATION FORMS

GC-Volatile Organic Data Validation for Methods 8021.

Data validation was done on laboratory analytical results generated from method 8021, for the February 6-10, 1995, third Assessment Monitoring event at the Watauga County Landfill. USEPA SW-846 method 8021 was prescribed to analyze for twelve specified parameters; benzene, chloroethane, 1,1,-dichloroethane, 1,1,-dichloroethene, cis-1,2-dichloroethene, trans-1,3-dichloropropene, dichlorodifluoromethane, methylene chloride, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, and vinyl chloride.. Ground water samples were collected from monitoring wells MW-5, MW-7, MW-13, MW-14, MW-15, MW-16, and MW-18.

GC analyses were performed by CT&E Environmental Services Inc. of Charleston, WV. CT&E analyzed for the aforementioned parameters following the prescribed GC method. The certificate of analysis prepared by CT&E laboratory included: extraction notes, instrument calibration data, raw chromatographic data printouts, Quality Assurance/Quality Control documentation, and tabulated results.

Validation of the laboratory's compliance with GC method 8021 encompassed review of the following items: sample holding times, sample preservation requirements, sample extraction procedures, laboratory QA/QC performance checks, instrument calibrations, blank analyses, surrogate spike analyses, and matrix spike analyses. Review of transcriptions from raw data to summary sheets and specific calculations were performed on random data points.

Method 8021 Review. Overall the data set for method 8021 was complete in its presentation and data was of acceptable quality. The data set exhibited the analyst's ability to achieve the reported LOQ of 1.0 μg/l for the target parameters, with the first nonzero calibration standard at a concentration of 2.0 μg/l. Criteria for sample preservation, storage temperature, and holding times were met. Method retention time criteria were met. Surrogate recoveries for all samples were within laboratory control limits of 100 ± 20%. Blank analysis criteria were met and no target parameters were identified above the LOQs in the trip or laboratory control blanks. Trichloroethene and tetrachloroethene were detected in the laboratory control blanks and the trip blank. The sample LOQs for the aforementioned target parameters were raised to 2.0 μg/l and 2.5 μg/l, respectively in accordance with standard CLP validation protocol. This documentation procedure was followed to denote the possibility that concentrations of trichloroethene and tetrachloroethene detected in the monitoring wells were due to an exterior source and not representative of groundwater quality. Matrix spikes were performed and no indication of matrix interference was observed for the target parameters. The matrix spike and spike duplicate analyses exhibited acceptable recoveries of 100 ± 20%. Target parameters were detected in MW-7 and MW-15, above the respective LOQs, and required no additional validation qualifiers. No target parameters were identified above the LOQs in the remaining wells, (MW-5, MW-13, MW-16, and MW-18). Results for target parameters not detected above the LOQs in the samples were validated as "U".

File Name: C:\STOLTE\LANDFILL\NC\WATAUGA\VALID\3RDASS.VAL

Method 8021 G.C. Volatile Data Review

Wells: MW5, MW7, MW13, MW14, MW15, MW16, MW18

QC Samples: MW5MS, MW5 MSD, TRIP BLANK

Laboratory: CT&E Environmental Services, Inc.

"X" denotes items reviewed. A detailed evaluation follows each item reviewed.

Does Laboratory analyte list correspond to analyte list requested by DAA? X YES __NO

A. TECHNICAL HOLDING TIMES AND PRESERVATION REQUIREMENTS:

1. 14 days maximum holding time? X YES __NO
2. Cool 4°C (+-2°C)? X YES __NO
3. pH adjusted <2 with H_2SO_4, or $NaSo_4$? X YES __NO

Comments:

1. All samples were analyzed within 7 days of collection - 14 day holding time criteria met.
2. All samples were received at 4°C as noted on Chain of Custody Record - criteria met.
3. All samples were received with a pH range of 1.5-2.0 - pH criteria met.

B. INSTRUMENT QC HISTORY DOCUMENTATION CRITERIA:

1. Documentation of Purge and Trap operation within SW846 guidelines? X YES __NO
2. Instrument specific LOD for target analytes? X YES __NO
3. Instrument specific LOQ for target analytes? X YES __NO
4. Instrument specific Check Sample Data? X YES __NO
5. Instrument Working Range for target analytes? X YES __NO
6. Lab acceptable surrogates %recovery ranges? X YES __NO
7. Lab acceptable matrix spike recovery ranges for target analytes? X YES __NO
8. Sample analysis log sheet? X YES __NO
9. Chromatogram and integration report for each sample? X YES __NO

Comments:

3. Instrument LOQ's specified a 1.0 ug/l for all target analytes. Criteria met.
6. All surrogate % recovery ranges acceptable. Criteria met.
7. Matrix spike recovery ranges acceptable for target analytes. Criteria met.

C. CHECK SAMPLES CRITERIA:

1. QC check sample data is from G.C. used for analyses? X YES __NO

2. QC check sample contains all target analytes outlined in RFP? X YES __NO

3. QC check samples analyzed in quadruplicate? X YES __NO

4. Reported average recovery (X) of target analytes from check samples? X YES __NO

5. Reported Standard deviation(s) for the recovery of target analytes quadruplicated? X YES __NO

6. Reported acceptable laboratory ranges for X and S values? X YES __NO

7. QC check samples are within established laboratory acceptable range for target analytes? X YES __NO

Comments:

1. Instrument GC11 used for all analyses.

D. INITIAL GC CALIBRATION CRITERIA:

1. Five point calibration run prior to analyses (dL to upper end) (2.0, 5.0, 10.0, 20.0, and 40.0 ug/l standards) X YES __NO

2. Calibration Type: External

   a. Determined External Calibration Factor (CF) for target analytes? X N/A __YES __NO

   $$CF = \frac{\text{Total Area of Target Analyte Peak}}{\text{Mass Target Analyte (ng)}}$$

b. Determined Internal Calibration Factor (CF) for target analytes?__N/A _X_YES __NO

$CF = (A_s * C_{is})/(C_s * A_{is})$

A_s = Analyte Response
A_{is} = Internal Standard Response
C_s = Analyte Concentration
C_{is} = Internal Standard Concentration

3. The % Relative Standard Deviation (%RSD) of all target analytes CF is <20% over the established working range? __N/A _X_YES __NO

$\%RSD = SD/(CF)_a \times 100$

$$SD = \frac{\sqrt{\sum^{5}_{i=1}(CF_i - CF_a)^2}}{5-1}$$

CF_i = Analyte Calibration factor from "i" run of the 5 point calibration (i = 1,2,3,4, or 5).

CF_a = Average Calibration factor for target analyte from 5 point calibration.

$$CF_a = \frac{(\sum^{5}_{i=1} RF_i)}{5}$$

4. Quantitation Methods used by laboratory:

Calibration Factor

5. List target analytes with %RSD≥20% over established working range.

None

Comments:

Laboratory performed all initial calibration procedures in accordance with criteria.

E. CONTINUING CALIBRATION CRITERIA:

1. Continiuing Calibration standard performed at least once every working day? X YES __NO

2. Target analytes responses have a % Difference (%Diff) of ±15% from previously run standards? X YES __NO

$$\%\text{Difference} = \frac{R_1 - R_2}{R_1} \times 100$$

Comments:

1. Continuing calibration standards run in sample analysis batch. All criteria met. (CCVS identified on matrix blank data sheets as CCal11.
2. All responses are < 15% Difference. Criteria met.

F. SURROGATES CRITERIA:

1. All Samples, Standards, Blanks, and Checks are spiked with at least 2 surrogate compounds? X YES __NO

2. List surrogate compounds used and laboratory's acceptable surrogate % Recovery Limits:

Fluorobenzene (80-120%)
4-bromochlorobenzene (80-120%)

3. List samples whose surrogate %recovery are not within laboratory Acceptable limits:

None

Comments:

Surrogate recoveries for all samples were analyzed in the batch. No surrogate summary table for PID analyses and Hall detector summary table does not match individual chromatograms. Laboratory notified.

G. RETENTION TIMES CRITERIA:

1. Reported daily Retention Time (RT) window for target analytes, with the mid-point being set from the continuous calibration standard run for that working day? _X_YES __NO

Daily RT Window = midpoint +- 3 times standard deviation.

Comments:

Retention time criteria met.

H. REAGENT/SYSTEM BLANKS CRITERIA:

1. Reagent/System Blank run prior to analyzing any batch samples? _X_YES __NO
2. Reagent Blank run after 20 batch samples? _X_YES __NO
3. List target analytes identified in the Reagent/system blanks:

Blanks for files GCIIB15.006, .011, .015, and .019, trichloroethene at 0.5 ug/l; the sample LOQ was raised to 2.5 ug/l as per CLP guidance.

4. Trip blank run per analytical batch _X_YES __NO
5. List target analytes identified in trip blanks.

trichloroethene at 0.5 ug/l and tetrachloroethene at 0.4 ug/l.

Comments:

Blank criteria met, the parameters trichloroethene and tetrachloroethene sample LOQs were raised to 2.5 ug/l and 2.0 ug/l respectively to reflect CLP validation protocol.

I. MATRIX SPIKES CRITERIA:

1. Matrix spike and Matrix spike duplicate was run per sample batch or every 20 samples whichever may occur first? X YES __NO

2. Matrix spikes contain target analytes? X YES __NO

3. Spike and Spike duplicate run on specific batch matrix? X YES __NO

4. List laboratory's acceptable %recovery matrix spike ranges:

   1,1-dichloroethene (80-120%)
   TCE (80-120%)
   Chlorobenzene (80-120%)
   Benzene (80-120%)
   Toluene (80-120%)

5. List matrix spike target analytes not within acceptable laboratory recoveries:

   None; criteria met.

6. Was a check standard run to address problem of failed Matrix Spike? X N/A __YES __NO

7. Did check standard for failed target analyte fall within acceptable recovery range and problem identified as "Matrix Interference"? X N/A __YES __NO

8. Any analytes flagged as "Estimated Concentration"? __YES X NO

9. List Analytes labeled as "Estimated Concentrations":

   None

Comments:

Matrix spike criteria met, no indication of interference associated with the matrix.

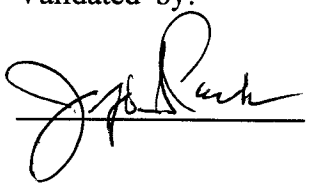
J. DAA CORRECTIVE ACTION STEPS TAKEN AND NOTES

1) 1,1-dichloroethene does not appear in raw data summary analysis reports. Lab notified and submitted addendum in which 1,1-dichloroethene was included, criteria met.
2) Notified lab that (surrogate) % recovery table was deficient of SMC2. Laboratory submitted addendum and criteria met.
3) Notified lab retention time window did not match for 1,1,1-trichloroethane, laboratory provided addendum and criteria met.

K. VALIDATION SIGN OFF:

Draper Aden Associates conducted a data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data evaluation was conducted using SW-846 Method requirements and CLP data validation guidelines. Random representative data points were selected for calculation verification. Validation of this data set is not considered to be a comprehensive evaluation.

Validated by: Date:



5-22-95

Analytical Data Set Notes

METHOD	DETECTED ANALYTES	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8021	Benzene	MW7	3.6	3.6	No action taken
8021	chloroethane	MW7	28	28	No action taken
8021	1,1-dichloroethane	MW7	2.9	2.9	No action taken
8021	cis-1,2-dichloroethene	MW7	7.2	7.2	No action taken
8021	trans-1,3-dichloropropene	MW7	ND	U	LOQ equal to 1.0 ug/l
8021	dichlorodifluoromethane	MW7	ND	U	LOQ equal to 1.0 ug/l
8021	methylene chloride	MW7	1.5	1.5	No action taken
8021	tetrachloroethene	MW7	ND	U	LOQ equal to 1.0 ug/l
8021	1,1,1-trichloroethane	MW7	ND	U	LOQ equal to 1.0 ug/l
8021	trichloroethene	MW7	1.7	U	LOQ equals to 2.5 ug/l
8021	vinyl chloride	MW7	3.6	3.6	No action taken

"J" denotes estimated value
"U" denotes less than PQL
"B" denotes also detected in Lab blank

See Data Review Packet for additional information if necessary.

Analytical Data Set Notes

METHOD	DETECTED ANALYTES	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8021	Benzene	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	chloroethane	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	1,1-dichloroethane	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	cis-1,2-dichloroethene	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	trans-1,3-dichloropropene	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	dichlorodifluoromethane	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	methylene chloride	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	tetrachloroethene	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	1,1,1-trichloroethane	MW5	ND	U	LOQ equal to 1.0 ug/l
8021	trichloroethene	MW5	ND	U	LOQ equal to 2.5 ug/l
8021	vinyl chloride	MW5	ND	U	LOQ equal to 1.0 ug/l

"J" denotes estimated value
"U" denotes less than PQL
"B" denotes also detected in Lab blank

See Data Review Packet for additional information if necessary.

Analytical Data Set Notes

METHOD	DETECTED ANALYTES	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8021	Benzene	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	chloroethane	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	1,1-dichloroethane	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	cis-1,2-dichloroethene	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	trans-1,3-dichloropropene	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	dichlorodifluoromethane	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	methylene chloride	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	tetrachloroethene	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	1,1,1-trichloroethane	MW13	ND	U	LOQ equal to 1.0 ug/l
8021	trichloroethene	MW13	ND	U	LOQ equal to 2.5 ug/l
8021	vinyl chloride	MW13	ND	U	LOQ equal to 1.0 ug/l

"J" denotes estimated value
"U" denotes less than PQL
"B" denotes also detected in Lab blank

See Data Review Packet for additional information if necessary.

Analytical Data Set Notes

METHOD	DETECTED ANALYTES	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8021	Benzene	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	chloroethane	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	1,1-dichloroethane	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	cis-1,2-dichloroethene	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	trans-1,3-dichloropropene	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	dichlorodifluoromethane	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	methylene chloride	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	tetrachloroethene	MW14	ND	U	LOQ equal to 1.0 ug/l
8021	1,1,1-trichloroethane	MW14	1.0	1.0	No action taken
8021	trichloroethene	MW14	ND	U	LOQ equal to 2.5 ug/l
8021	vinyl chloride	MW14	ND	U	LOQ equal to 1.0 ug/l

"J" denotes estimated value
"U" denotes less than PQL
"B" denotes also detected in Lab blank

See Data Review Packet for additional information if necessary.

Analytical Data Set Notes

METHOD	DETECTED ANALYTES	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8021	Benzene	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	chloroethane	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	1,1-dichloroethane	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	cis-1,2-dichloroethene	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	trans-1,3-dichloropropene	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	dichlorodifluoromethane	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	methylene chloride	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	tetrachloroethene	MW15	ND	U	LOQ equal to 1.0 ug/l
8021	1,1,1-trichloroethane	MW15	2.5	2.5	No action taken
8021	trichloroethene	MW15	ND	U	LOQ equal to 2.5 ug/l
8021	vinyl chloride	MW15	ND	U	LOQ equal to 1.0 ug/l

"J" denotes estimated value
"U" denotes less than PQL
"B" denotes also detected in Lab blank

See Data Review Packet for additional information if necessary.

Analytical Data Set Notes

METHOD	DETECTED ANALYTES	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8021	Benzene	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	chloroethane	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	1,1-dichloroethane	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	cis-1,2-dichloroethene	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	trans-1,3-dichloropropene	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	dichlorodifluoromethane	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	methylene chloride	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	tetrachloroethene	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	1,1,1-trichloroethane	MW16	ND	U	LOQ equal to 1.0 ug/l
8021	trichloroethene	MW16	ND	U	LOQ equal to 2.5 ug/l
8021	vinyl chloride	MW16	ND	U	LOQ equal to 1.0 ug/l

"J" denotes estimated value
"U" denotes less than PQL
"B" denotes also detected in Lab blank

See Data Review Packet for additional information if necessary.

Analytical Data Set Notes

METHOD	DETECTED ANALYTES	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
8021	Benzene	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	chloroethane	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	1,1-dichloroethane	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	cis-1,2-dichloroethene	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	trans-1,3-dichloropropene	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	dichlorodifluoromethane	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	methylene chloride	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	tetrachloroethene	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	1,1,1-trichloroethane	MW18	ND	U	LOQ equal to 1.0 ug/l
8021	trichloroethene	MW18	ND	U	LOQ equal to 2.5 ug/l
8021	vinyl chloride	MW18	ND	U	LOQ equal to 1.0 ug/l

"J" denotes estimated value
"U" denotes less than PQL
"B" denotes also detected in Lab blank

See Data Review Packet for additional information if necessary.

SECTION 3.3

REVISIONS TO ORIGINAL DATA SET

Draper Aden Associates
CONSULTING ENGINEERS
2206 South Main Street
Blacksburg, Virginia 24060
(703) 552-0444

March 28, 1995

Mr. Jon Pauley
CT&E Environmental Services
1258 Greenbrier Street
Charleston, WV 25311

RE: Watauga County Landfill, CT&E No. 295-02-0262-001/010
Analytical Results, 3rd Assessment Monitoring Event, February 6-10, 1995
Required Revisions to Report - 8021 Method
DAA JN: 6520-20

Dear Mr. Pauley,

Draper Aden Associates has received the complete analytical data set for the Watauga County Landfill. We appreciate the efficient and timely manner in which the samples were analyzed and reported to us. After preliminary validation, the following problems were found to exist and require resolution. Please correct the following issues and forward them to DAA with an itemized letter of explanation.

GC - 8021

1.) The target parameter 1,1-dichloroethene was not included in the raw data reports for each of the wells. The compound was included in the calibration procedures. Please explain and provide an update.

2.) The retention time criteria for trichloroethane, benzene, and cis-1,2-dichloroethene do not match the sample analysis batch. Please explain and provide an update. Also include 4-bromochlorobenzene in the retention time criteria log.

3.) The surrogate recovery table needs a second column for SMC2, to identify the % recoveries of the PID. Several values of SMC1 for the ELCD are also incorrect and need revision. The recoveries do not match the specific chromatograms. Please explain and provide an update. (See attachment)

In addition to the above, the following discrepancies were also noted within the overall data package but require revision for future packages only.

1.) CT&E Project No.'s do not match on pages 000001, 000002, and 000006. The correct number is 295-02-0262-001/010.

2.) Sample receipt dates on page 000006 are incorrectly identified as 2-10-95.

3.) Cooler temperatures are noted as 4° C on the C.O.C., but are noted as 6° C in the Case Narrative.

4.) Case narrative states 1,4-bromochlorobenzene was used as the internal standard and the summary pages refer to 4-bromochlorobenzene. Why is there a difference in nomenclature?

5.) Table column heading on page 000009 should read Precision % RSD, not Precision % Recovery.

6.) The analysis time for the 5 ppb calibration standard should be 1208 on the sample analysis log sheet, instead of 1245.

7.) The 10 ppb CCVS is consistently labeled as CCAL11 on all data sheets. Need consistency.

8.) All analysis dates on sample analysis log sheet should be 2/15/95 instead of 2/11/95.

I would like to thank you for your continued willingness to produce the highest quality analytical and reporting packages. I look forward to your response to these issues by April 6, 1995. If you have any questions concerning this matter or if I can be of any assistance, please do not hesitate to contact me.

Sincerely,
DRAPER ADEN ASSOCIATES

Chad Allen
Environmental Scientist
Watauga County Project Coordinator

CA:

cc: William D. Newcomb, CPG, Groundwater Program Manager, DAA
Janet M. Cleary, Senior Environmental Scientist, DAA
Matt H. Stolte, Environmental Engineer, DAA

(8021 = 3.)

2A

000170

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT&E-ES, INC. Contract: Draper Aden

Lab Code: Case No.: SAS No.: SDG No.: gc11b15-1

Hail PDS?

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	OTHER #	TOT OUT
01	mb11	102	102			0
02	blank	98				0
03	blankMS	98				0
04	blankMSD	92				0
05	mb11	91	101			0
06	2-262-10tb	100	101			0
07	mw5	93	102			0
08	mw5MS	92	102			0
09	mw5MSD	100	101			0
10	mb11	96	102			0
11	2-262-1mw7	98	101			0
12	2-262-5mw13	92	102			0
13	2-262-6mw14	89	102			0
14	mb11	98	105			0
15	2-262-7mw16	104	479			0
16	2-262-8mw18	93	100			0
17	2-262-9mw15	95	100			0
18	mb11	96	100			0
19	2-262-3	98				0
20	2-262-4	97				0
21	mb11	94				0
22	mb11	94				0
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

SMC1 = 2-Bromo-1-chloropropan (80-120)

SMC2 = a,a,a - TFT (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3.9.95

CT&E Environmental Services Inc.
Laboratory Division

1258 Greenbrier Street
Charleston, WV 25311-1002
Tel: (304) 346-0725
Fax: (304) 346-0761

April 4, 1995

Mr. Chad Allen
Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060

Dear Chad:

As per your March 28th letter, please find enclosed the required revisions for the Watauga County Landfill.

The enclosed revisions include revised Laboratory Analysis Reports which include the target analyte 1,1-dichloroethene. This compound was inadvertently omitted from this report form. Also included is the corrected retention time criteria log indicating the correct retention times for trichloroethane and cis-1,2-dichloroethene. 4-bromochlorobenzene has also been included.

The surrogate recovery table has also been revised to reflect correct surrogate recoveries as well as the surrogate recoveries from the PID. Incorrect surrogate recoveries were originally reported as a result of the reprocessing of the data when the form was generated. With the newly implemented procedures for the handling of electronic data in the laboratory, these types of problems should not occur in subsequent packages.

Should you have any questions or require additional information, please do not hesitate to call.

Sincerely,

J. Pauley

Jon Pauley
Production Manager

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-001 Respectfully Submitted:

MW7 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/08/95 10:10
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	3.6	1.0	ug/L	SW8021	02/15/95 15:27 JC
Chloroethane[75-00-3]	28	1.0	ug/L	SW8021	02/15/95 15:27 JC
1,1-Dichloroethane[75-34-3]	2.9	1.0	ug/L	SW8021	02/15/95 15:27 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
cis-1,2-Dichloroethene[156-59-2]	7.2	1.0	ug/L	SW8021	02/15/95 15:27 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
Methylene Chloride[75-09-2]	1.5	1.0	ug/L	SW8021	02/15/95 15:27 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
Trichloroethene[79-01-6]	1.7	1.0	ug/L	SW8021	02/15/95 15:27 JC
Vinyl chloride[75-01-4]	3.6	0.50	ug/L	SW8021	02/15/95 15:27 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	98	------	% REC	SW8021	02/15/95 15:27 JC
a,a,a-Trifluorotoluene<SURROGATE>	101	------	% REC	SW8021	02/15/95 15:27 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, **Baltimore, MD 21227-1410** — Tel: (410) 247-7400 Fax: (410) 247-7402
4440 Glen Este-Withamsville Road, Suite 900, **Cincinnati, OH 45245-1331** — Tel: (513) 752-9696 Fax: (513) 752-2614

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-002 Respectfully Submitted:

MW5 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/08/95 10:45
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 12:35 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	93	------	% REC	SW8021	02/15/95 12:35 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 12:35 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
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ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

R, pg 198

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-005 Respectfully Submitted:

MW13 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/08/95 17:20
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 16:03 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	92	------	% REC	SW8021	02/15/95 16:03 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 16:03 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

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CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-006 Respectfully Submitted:

MW14 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/09/95 9:45
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
1,1,1-Trichloroethane[71-55-6]	1.0	1.0	ug/L	SW8021	02/15/95 16:40 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 16:40 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	89	------	% REC	SW8021	02/15/95 16:40 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 16:40 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-007 Respectfully Submitted:

MW16 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/09/95 10:50
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 17:54 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	104	------	% REC	SW8021	02/15/95 17:54 JC
a,a,a-Trifluorotoluene<SURROGATE>	99	------	% REC	SW8021	02/15/95 17:54 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, **Baltimore, MD 21227-1410** — Tel: (410) 247-7400 Fax: (410) 247-7402
4440 Glen Este-Withamsville Road, Suite 900, **Cincinnati, OH 45245-1331** — Tel: (513) 752-9696 Fax: (513) 752-2614

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-008 Respectfully Submitted:

MW18 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/09/95 12:15
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 18:31 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	93	------	% REC	SW8021	02/15/95 18:31 JC
a,a,a-Trifluorotoluene<SURROGATE>	100	------	% REC	SW8021	02/15/95 18:31 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
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CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-009 Respectfully Submitted:

MW15 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/10/95 11:50
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
1,1,1-Trichloroethane[71-55-6]	2.5	1.0	ug/L	SW8021	02/15/95 19:08 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 19:08 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	95	------	% REC	SW8021	02/15/95 19:08 JC
a,a,a-Trifluorotoluene<SURROGATE>	100	------	% REC	SW8021	02/15/95 19:08 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-010 Respectfully Submitted:

TRIP BLANK GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/06/95 8:00
Date Received 02/11/95

Sampled by CLIENT

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 11:43 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	100	------	% REC	SW8021	02/15/95 11:43 JC
a,a,a-Trifluorotoluene<SURROGATE>	101	------	% REC	SW8021	02/15/95 11:43 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
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ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-011 Respectfully Submitted:

LABORATORY BLANK
WATAUGA COUNTY LANDFILL

Date Sampled 02/06/95
Date Received 02/11/95

Sampled by CT&E

R040395 1437

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
1,1-Dichloroethene[75-35-4]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 14:50 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	96	------	% REC	SW8021	02/15/95 14:50 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 14:50 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
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ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

CT&E - Environmental Services

Retention Time Criteria Log Sheet

Instrument Name:	HP5890II
Instrument ID :	GC11
Retention Times Update :	2/15/95
Printout Date :	4/3/95

		Date :	2/15/95			
Analyte Name	CAS #	Standard Replicates (#)	Average Replicates Ret. Times (min)	Standard Deviation (STD) (min)	3*STD (min)	Retention Time Window (min)
Dichlorodifluoromethane	75-71-8	4	3.38	0.01	0.04	3.34 - 3.42
Vinyl Chloride	75-01-42	4	3.68	0.01	0.03	3.65 - 3.70
Bromomethane	74-83-9	4	4.32	0.01	0.04	4.28 - 4.36
Chloroethane	75-00-3	4	4.38	0.02	0.06	4.32 - 4.44
Trichlorofluoromethane	75-69-4	4	5.14	0.01	0.03	5.11 - 5.16
1,1-Dichloroethene	75-35-4	4	6.07	0.01	0.02	6.05 - 6.10
Methylene Chloride	75-09-2	4	6.40	0.01	0.03	6.37 - 6.43
trans-1,2-Dichloroethene	156-60-5	4	7.94	0.01	0.02	7.92 - 7.96
1,1-Dichloroethane	75-34-3	4	8.60	0.00	0.01	8.59 - 8.62
cis-1,2-Dichloroethene	156-59-2	4	10.44	0.01	0.02	10.42 - 10.46
Bromochloromethane	74-97-5	4	10.96	0.01	0.03	10.93 - 10.98
Chloroform	67-66-3	4	11.25	0.01	0.03	11.22 - 11.28
1,2-Dichloroethane	107-06-2	4	13.82	0.01	0.04	13.78 - 13.85
1,1,1-Trichloroethane	71-55-6	4	14.12	0.01	0.03	14.10 - 14.15
Carbon Tetrachloride	56-23-5	4	15.39	0.01	0.02	15.37 - 15.42
Dibromomethane	74-95-3	4	17.55	0.01	0.04	17.51 - 17.60
1,2-Dichloropropane	78-87-5	4	17.77	0.01	0.04	17.73 - 17.80
Trichloroethene	79-01-6	4	17.98	0.01	0.02	17.96 - 18.00
Dichlorobromomethane	75-27-4	4	18.11	0.02	0.06	18.05 - 18.17
cis-1,3-Dichloropropene	10061-01-5	4	20.13	0.01	0.02	20.10 - 20.15
trans-1,3-Dichloropropene	10061-02-6	4	21.11	0.02	0.05	21.06 - 21.15
1,1,2-Trichloroethane	79-00-5	4	21.32	0.01	0.03	21.28 - 21.35
Dibromochlorormethane	124-48-1	4	22.11	0.01	0.03	22.09 - 22.14
Tetrachloroethene	127-18-4	4	22.83	0.01	0.03	22.80 - 22.85
1,1,1,2-Tetrachloroethane	630-20-6	4	23.72	0.01	0.04	23.68 - 23.75
Bromoform	75-25-2	4	24.42	0.01	0.03	24.40 - 24.45

CT&E Environmental Services Inc.

CT&E - Environmental Services

Retention Time Criteria Log Sheet

Instrument Name : HP5890II
Instrument ID : GC11
Retention Times Update : 2/15/95
Printout Date : 4/3/95

		Date :	4/3/95			
Analyte Name	CAS #	Standard Replicates (#)	Continuing Calibration Ret. Times (min)	Standard Deviation (STD) (min)	3*STD (min)	Retention Time Window (min)
1,1,2,2,-Tetrachloroethane	79-34-5	4	24.87	0.01	0.02	24.85 - 24.90
1,2,3-Trichloropropane	96-18-4	4	25.04	0.01	0.04	24.99 - 25.08
Benzene	71-43-2	4	15.61	0.01	0.02	15.59 - 15.63
Toluene	108-88-3	4	21.65	0.01	0.04	21.61 - 21.68
Chlorobenzene	108-90-7	4	23.80	0.01	0.03	23.77 - 23.83
Ethylbenzene	100-41-4	4	24.11	0.03	0.08	24.03 - 24.19
m/p-Xylene		4	24.39	0.01	0.03	24.36 - 24.43
o-Xylene	95-47-6	4	24.87	0.01	0.04	24.83 - 24.91
1,3-Dichlorobenzene	541-73-1	4	26.72	0.01	0.04	26.68 - 26.76
1,4-Dichlorobenzene	106-46-7	4	26.79	0.01	0.04	26.76 - 26.83
1,2-Dichlorobenzene	95-50-1	4	27.16	0.01	0.03	27.13 - 27.19
SURROGATES/INTERNAL STDS						
4-Bromochlorobenzene	2199-69-1	4	28.07	0.02	0.05	28.01 - 28.12
aaa-Trifluorotoluene(surr)	98-06-8	4	19.12	0.01	0.04	19.08 - 19.17
Bromochloropropane(surr)	109-70-6	4	21.60	0.01	0.03	21.57 - 21.62

R1 p3 17c

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT&E-ES,INC. Contract: Draper Aden

Lab Code: Case No.: SAS No.: SDG No.: gc11b15-1

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	mb11	103	102			0
02	blank	99	101			0
03	blankMS	98	101			0
04	blankMSD	92	101			0
05	mb11	91	101			0
06	2-262-10tb	100	101			0
07	mw5	93	102			0
08	mw5MS	92	102			0
09	mw5MSD	100	101			0
10	mb11 as samp	96	102			0
11	2-262-1mw7	98	101			0
12	2-262-5mw13	92	102			0
13	2-262-6mw14	89	102			0
14	mb11	99	103			0
15	2-262-7mw16	104	99			0
16	2-262-8mw18	93	100			0
17	2-262-9mw15	95	100			0
18	mb11	96	100			0
19	mb11	94	101			0
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

SMC1 = 2-Bromo-1-chloropropan (80-120)
SMC2 = a,a,a-Trifluorotoluene (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

SECTION 3.4

SW-846 VOLATILES ANALYTICAL DATA

CT&E Environmental Services Inc.

000001

ANALYTICAL RESULTS

Watauga County, NC

JN: 6520-20

CT&E No. 295-02-262-1/9

Client:
County of Watauga
Post Office Box 143
Boone, North Carolina 28607

prepared by
CT&E Environmental Services Inc.
1258 Greenbrier Street
Charleston, West Virginia 25311
Telephone: 304-346-0725
Facsimile: 304-346-0761

CT&E Environmental Services Inc.

000002

Analytical Results Submitted to Draper Aden Associates

Draper Aden Project Name: Watauga County Landfill, Third Assessment Monitoring

Draper Aden Project Number: 6520-20

Sampling Date: February 10, 1995

C,T,&E Laboratory Project Number: 295-02-0262-001/010

Analysis: Selected volatile compounds by Method 8021

Receipt Date: February 11, 1995

Results Submission Date: March 3, 1995

CHAIN OF CU[illegible]DY RECORD

2-262-1/10

Laboratory: CT&E Environmental Services 1258 Greenbrier Street Charleston, WV 25311 (304) 346-0725 FAX (304) 346-0761 Attn: Jon Pauley

Client: Watauga County Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC Phone: (704) 265-8003 Fax: (704) 265-8018	Consultant: Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	Sample Site: Watauga County Landfill Location: Watauga County, NC Event: 3rd Assessment Monitoring JN: 6520-20 Lab JN: 000003	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? X Yes ___ No (See Note 1) Carrier: Federal Express Tracking No.: HKY A9 Saturday Delivery

Box 1: Matrix	Box 2: Preservative	Box 3: Filtered/Unfiltered	Box 4: Sample Type	
SW. Surface Water GW. Groundwater L. Leachate S. Soil T. Trip Blank E. Equipment Blank P. Product O. Other	A. HCl B. HNO_3 C. H_2SO_4 D. $Na_2S_2O_3$ E. NaOH F. ZnAc G. Other (specify) H. None	F. Filtered U. Unfiltered	C. Composite G. Grab	Copy to Consultant: X Yes ___ No Bill: X Client ___ Consultant Preserved and shipped on ice: X Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8021 VOLATILES											Special Instructions/Comments
MW7	2/8	1010	GW	A	U	G	<2		3	3											SEE ATTACHED PARAMETER LISTS ** VOLATILES - PRESERVATIVE: HCl PLEASE PROVIDE RESULTS AND RAW DATA FOR ANY OTHER PARAMETERS TYPICALLY ANALYZED BY CT&E FOR THIS METHOD.
MW5	2/8	1045	GW	A	U	G	<2		3	3											
MW5 MS	2/8	1045	GW	A	U	G	<2	X	3	3											
MW5 MSD	2/8	1045	GW	A	U	G	<2	X	3	3											
MW13	2/8	1720	GW	A	U	G	<2		3	3											
MW14	2/9	0945	GW	A	U	G	<2		3	3											
MW16	2/9	1050	GW	A	U	G	<2		3	3											
MW18	2/9	1215	GW	A	U	G	<2		3	3											
MW15	2/10	1150	GW	A	U	G	<2		3	3											

Client's Special Instructions:

Lab: Received in Good Condition? ✓ Yes ___ No Custody Seal Intact? ✓ Yes ___ No Temp. on arrival 4°C Received on Ice Yes Describe problems, if any: None

Sampler Name (print): JEFF PACK	Date: 2-10-95	#1 Relinquished By (Sig.): [signature]	Date: 2-10-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:	
Sampler Name (print): ERIK RUDIN	Date: 2-10-95	#1 Received By (Sig.): [signature]	Date: 2/10/95	#2 Received By (Sig.): [signature]	Date: 2-11-95	60 (No. Days)
Sampler Signature: [signature]	Time: 1300	Company Name: Watauga Co. Lf.	Time: 1300	Company Name: CT&E	Time: 10:45	

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.

Note: Always mail invoice and [illegible] to consultant.

CHAIN OF CUST Y RECORD

2-262-010

Laboratory: CT&E Environmental Services 1258 Greenbrier Street Charleston, WV 25311 (304) 346-0725 FAX (304) 346-0761 Attn: Jon Pauley

Client: Watauga County
Attn: Mr. Jim Ratchford
Address: P.O. Box 143
Boone, NC
Phone: (704) 265-8003 Fax: (704) 265-8018

Consultant: Draper Aden Assoc.
Attn: Janet M. Cleary
2206 South Main Street
Blacksburg, Virginia 24060
Phone: (703) 552-0444 Fax: (703) 552-0291

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 3rd Assessment Monitoring
JN: 6520-20
000001
Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Note 1)
Carrier: Federal Express
Tracking No.: HKYA9
Saturday Delivery

Box 1: Matrix
SW. Surface Water — T. Trip Blank
GW. Groundwater — E. Equipment Blank
L. Leachate — P. Product
S. Soil — O. Other

Box 2: Preservative
A. HCl — E. NaOH
B. HNO_3 — F. ZnAc
C. H_2SO_4 — G. Other (specify)
D. $Na_2S_2O_3$ — H. None

Box 3: Filtered/Unfiltered
F. Filtered
U. Unfiltered

Box 4: Sample Type
C. Composite
G. Grab

Copy to Consultant: _X_ Yes ___ No
Bill: _X_ Client ___ Consultant
Preserved and shipped on ice: _X_ Yes ___ No

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): 8021 VOLATILES											Special Instructions/Comments
TRIP BLANK	2/6	0800	T	A	U	G	<2		3	3											SEE ATTACHED PARAMETER LISTS ** VOLATILES - PRESERVATIVE: HCl PLEASE PROVIDE RESULTS AND RAW DATA FOR ANY OTHER PARAMETERS TYPICALLY ANALYZED BY CT&E FOR THIS METHOD.
				A	U	G	<2														
				A	U	G	<2														
				A	U	G	<2														
				A	U	G	<2														
				A	U	G	<2														
				A	U	G	<2														
				A	U	G	<2														
				A	U	G	<2														

Client's Special Instructions:

Lab: Received in Good Condition? ✓ Yes ___ No Custody Seal Intact? ✓ Yes ___ No Temp. on arrival 4°C Received on Ice Yes Describe problems, if any: None

Sampler Name (print): JEFF PACK	Date: 2-10-95	#1 Relinquished By (Sig.):	Date: 2-10-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:	
Sampler Signature:	Time: 1300	Company Name: Draper Aden Associates	Time: 1300	Company Name:	Time:		
Sampler Name (print): ED RUDIN	Date: 2-10-95	#1 Received By (Sig.):	Date: 2/10/95	#2 Received By (Sig.):	Date: 2-11-95	60 (No. Days)	
Sampler Signature:	Time: 1300	Company Name: Watauga Co. Lf.	Time: 1300	Company Name: CT&E	Time: 10:45		

Note (1): If "No" lab to hold samples to await remainder of project maximizing batch size and minimizing QC ratio. If "Yes", lab to begin processing.
Note: Always mail invoice and results to consultant.

FEDERAL EXPRESS

USE THIS AIRBILL FOR SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
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QUESTIONS? CALL 800-238-5355 TOLL FREE.

0785547486

AIRBILL
PACKAGE
TRACKING NUMBER

0785547486

2-262-1/10

RECIPIENT'S COPY

1 From (Your Name) Please Print: Barbara Payne
Company: Watauga County Finance Office
Street Address: 842 W. King St., Rm 017
City: Boone
State: NC
ZIP Required: 28607
Your Phone Number (Very Important): (704) 264-4702
Department/Floor No.:
Date:

2 To (Recipient's Name) Please Print: Shawn Miller
Company: CT & E Environmental Services
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 1256 Greenbrier St.
City: Charleston
State: WV
ZIP Required: 25311
Recipient's Phone Number (Very Important): (304) 340-4725
Department/Floor No.:

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.)

3 PAYMENT: 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No 3 [ ] Bill 3rd Party FedEx Acct. No 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning)
- 11 [ ] OTHER PACKAGING
- 16 [ ] FEDEX LETTER*
- 12 [ ] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon, No Saturday delivery)
- 51 [ ] OTHER PACKAGING
- 56 [ ] FEDEX LETTER*
- 52 [ ] FEDEX PAK*
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day)
- 30 [ ] ECONOMY*

Government Overnight (Restricted for authorized users only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

* Economy Letter Rate not available. Minimum charge: One pound Economy rate

Freight Service (for packages over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT**

† Delivery commitment may be later in some areas
** Declared Value Limit $500. Call for delivery schedule

5 DELIVERY AND SPECIAL HANDLING (Check services required)

Weekday Service
- 1 [ ] HOLD AT FEDEX LOCATION WEEKDAY (Fill in Section H)
- 2 [ ] DELIVER WEEKDAY

Saturday Service
- 31 [ ] HOLD AT FEDEX LOCATION SATURDAY (Fill in Section H)
- 3 [X] DELIVER SATURDAY (Extra charge) (Not available to all locations)
- 9 [ ] SATURDAY PICK-UP (Extra charge)

Special Handling
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 6 [ ] DRY ICE (Dangerous Goods Shipper's Declaration not required) Dry Ice, 9, UN 1845 x kg 904 III
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

	PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE (See right)
Total	Total	Total	

DIM SHIPMENT (Chargeable Weight) [ ] lbs L x W x H

Received At: [ ] Regular Stop [ ] Drop Box [ ] On-Call Stop [ ] Station

H IF HOLD AT FEDEX LOCATION, Print FEDEX Address Here
Street Address:
City:
State:
ZIP Required:

Emp. No.: Date:
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del [ ] Chg. To Hold
Street Address:
City: State: Zip:
Received By: X
Date/Time Received: FedEx Employee Number

7 Release Signature:

Total Charges

REVISION DATE 12/92
FORMAT #158
158

000003

CT&E Environmental Services Inc.

CASE NARRATIVE

Laboratory Number 294-2-0262-001/010

295 JRL 2-16-95

DATE: March 3, 1995

OBJECTIVE: Analysis of ten water samples which include seven monitoring well samples, one matrix spike, one matrix spike duplicate, and one trip blank for selected compounds by Method 8021.

SAMPLE RECEIPT OBSERVATIONS:
All water samples were received in a single cooler by CT & E Environmental Services. *The temperature of the cooler was 6C° on receipt.

Sample Description	CT & E Number	Date Received	Cooler Temperature
MW7	2-0262-001	2-10-95	*
MW5	2-0262-002	2-10-95	*
MW5 MS	2-0262-003	2-10-95	*
MW5 MSD	2-0262-004	2-10-95	*
MW13	2-0262-005	2-10-95	*
MW14	2-0262-006	2-10-95	*
MW16	2-0262-007	2-10-95	*
MW18	2-0262-008	2-10-95	*
MW15	2-0262-009	2-10-95	*
Trip Blank	2-0262-010	2-10-95	*

METHOD 8021:
All water samples were analyzed according to the guidelines of Method 8021. Summarized below are the pH readings for the sample vials which were taken with narrow-range pH paper.

Laboratory Number	SW8021 pH
2-0262-001	2.0
2-0262-002	2.0
2-0262-003	2.0
2-0262-004	1.5
2-0262-005	2.0
2-0262-006	2.0
2-0262-007	2.0
2-0262-008	2.0
2-0262-009	2.0
2-0262-010	2.0

4-bromochlorobenzene JRL 2-16-95

The internal standards 1,4-Bromochlorobenzene and Fluorobenzene were added in the amount of 0.50 micrograms (µg) to 0.005 liters (L) of the liquid sample immediately prior to analysis by GC. The surrogate standards 2-Bromo-1-chloropropane and a,a,a-Trifluorotoluene were also added in the amount of 0.50µg to 0.005L of sample immediately prior to analysis by GC. The results reported relate only to those items tested.

The GC analysis conditions were as follows:

Purge and Trap: Tekmar LSC-3000
Purge Time: 11 minutes

Desorb Temperature:	225°
Desorb Time:	4 minutes
Bakeout Time:	11 minutes
Bakeout Temperature:	225°

Column: J&W VRX Column, 75 meter x 0.45mm ID x 2.5 micron film thickness
Oven Temperature Programming: 35°C, hold 12 minutes
5°/minute to 60°, hold 1 minute
15°/minute to 200°, hold 3 minutes
Total run time: 30.33 minutes

Instrument: GC-11
Model: HP5890 Series II with
OIC 4430 photoionization Detector
OIC 5220 Hall ELC Detector

SAMPLE CALCULATIONS:

$$\text{Response Factor} = \frac{(\text{area analyte}) \times (\text{amt IS})}{(\text{area IS}) \times (\text{amt analyte})}$$

$$\text{Concentration in } \mu g/L = \frac{(\text{area analyte in sample}) \times (\text{amt IS}) \times DF}{(\text{area IS}) \times (\text{ICAL ARF}) \times (\text{samplvol})}$$

where:

ICAL = Initial Calibration
IS = Internal Standard
ARF = Average Response Factor
amt analyte = amount of analyte in µg
amt IS = amount if IS in µg
sampvol = volume of sample analyzed in liters
DF = Dilution Factor

REPORT:

Enclosed with the case narrative are copies of the chain-of-custody and lists of the required compounds, methods, LOQ's and LOD's. The submitted data includes quantitation reports, chromatograms, and interim reports. As a result of the GC data software configuration, summary reports include only detected target analytes, internal standards, and surrogates. The quantitation report header lists computer batch filename, Laboratory ID number, injection date and time, analyst's initials, method used, method name, initial calibration date, dilution factor, sample type, and GC number. The response factors used for all calculations are response factors from the initial calibration listed in the header. All initial and continuing calibration summaries are located in the back of the data package. The concentration reported is in mg/L for the liquid samples. The retention time (RT) will be listed for all analytes which are detected. The quantitation limit for all analytes was established from the Laboratory's current MDL study.

CT&E Environmental Services Inc.

RESULTS:
All surrogate standard percent recoveries were within Method 8021 quality control criteria for the matrix. Sample 02-0262-001 had target analyte concentrations above the GC/MS LOQ's. Included for evaluation are the GC/MS background subtracted spectra and associated reference spectra.

All method blanks were free of any interferences. Blank, 11b1511-01R.d, was selected to be reported as a sample.
The matrix spike/matrix spike duplicate met all acceptance criteria.
The sampling to analysis holding time of fourteen days was met for all samples.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Submitted by,

Martha A. McElfresh

Martha A McElfresh
QA/QC Officer

The total number of pages in the data package 272

SW8021 Precision and Accuracy Statement

for Analytes of Interest

Effective: 10/17/1994

Parameter	Spike Level (ug/l)	LOD (ug/l)	LOQ (ug/l)	Accuracy (% Recovery)	Precision (%RSD) (% Recovery)
Dichlorodifluoromethane	2.0	0.372	1.0	78.64	7.53
Choroethane	2.0	0.221	1.0	104.57	3.19
Vinyl Chloride	2.0	0.329	0.5	97.36	5.38
Bromoethane	2.0	0.370	1.0	82.00	7.18
Trichlorofluoromethane	2.0	0.257	1.0	107.70	3.79
1,1-Dichloroethene	2.0	0.302	1.0	112.57	4.27
Methylene Chloride	2.0	0.262	1.0	115.36	3.62
1,1-Dichloroethane	2.0	0.417	1.0	109.50	6.06
cis-1,2-Dichloroethene	2.0	0.394	1.0	111.43	5.62
trans-1,2-Dichloroethene	2.0	0.249	1.0	112.86	3.50
Bromochloromethane	2.0	0.431	1.0	106.07	6.47
Chloroform	2.0	0.325	1.0	113.00	4.58
1,2-Dichloroethane	2.0	0.228	1.0	110.79	3.27
1,1,1-Trichloroethane	2.0	0.300	1.0	114.43	4.17
Carbon Tetrachloride	2.0	0.304	1.0	115.79	4.17
Dibromomethane	2.0	0.422	1.0	101.57	6.61
1,2-Dichloropropane	2.0	0.404	1.0	110.43	5.81
Trichloroethene	2.0	0.300	1.0	119.21	4.01
Dichlorobromomethane	2.0	0.762	1.0	103.21	11.75
cis-1,3-Dichloropropane	2.0	0.264	1.0	111.93	3.75
trans-1,3-Dichloropropene	2.0	0.287	1.0	113.93	4.01
1,1,2-Trichloroethane	2.0	0.288	1.0	111.36	4.11
Dibromochloromethane	2.0	0.318	1.0	139.29	3.64
Tetrachlorethene	2.0	0.258	1.0	123.93	3.31
1,1,1,2-Tetrachloroethane	2.0	0.349	1.0	107.29	5.17
Bromoform	2.0	0.430	1.0	113.36	6.03
1,1,2,2-Tetrachloroethane	2.0	0.335	1.0	114.93	4.64
1,2,3-Trichloropropane	2.0	0.534	1.0	114.07	7.44
Benzene	2.0	0.210	1.0	104.57	3.19
Toluene	2.0	0.209	1.0	103.21	3.22
Chlorobenzene	2.0	0.402	1.0	108.36	2.95
Ethylbenzene	2.0	0.395	1.0	116.29	5.40
p/m-Xylene	2.0	1.136	1.0	123.18	7.33
o-Xylene	2.0	0.395	1.0	114.57	5.48
1,3-Dichlorobenzene	2.0	0.766	1.0	106.96	5.70
1,4-Dichlorobenzene	2.0	0.457	1.0	112.86	3.22
1,2-Dichlorobenzene	2.0	0.558	1.0	106.64	4.16

CT&E Environmental Services Inc.

00010

CT&E - Environmental Services

Laboratory Project ID# : 295-02-0262-001/010
Project Name : Watauga County
Sampling Date : 2/10/94

MDL Study Results and Laboratory Control Limits for Analytical Batch

Instrument Name : HP 5890II
Instrument ID : GC11
MDL Study Performance Date : 10/17/94

Item :		Laboratory MDL Studies			QC Check Sample				QCControl
Date :		10/17/94							
		Sample Replicate	Determined LOD	Determined LOQ	Sample Replicate	Reported Value		Laboratory Control Limits	Spike Control Limits
Analyte Name	CAS #	(#)	(ug/L)	(ug/L)	(#)	X	s	3s	(% Recovery)
Dichlorodifluoromethane	75-71-8	7	0.372	1	4	4.18	0.163	0.489	73.82 - 93.38
Vinyl Chloride	75-01-42	7	0.329	1	4	5.32	0.186	0.558	95.2 - 117.6
Bromomethane	74-83-9	7	0.370	1	4	5.29	0.246	0.738	91.0 - 120.6
Chloroethane	75-00-3	7	0.221	1	4	4.68	0.174	0.522	83.2 - 104.0
Trichlorofluoromethane	75-69-4	7	0.257	1	4	5.46	0.103	0.309	103.0 - 115.4
1,1-Dichloroethene	75-35-4	7	0.302	1	4	5.41	0.119	0.357	101.1 - 115.3
Methylene Chloride	75-09-2	7	0.262	1	4	5.40	0.095	0.285	102.3 - 113.7
ans-1,2-Dichloroethene	156-60-5	7	0.249	1	4	5.38	0.156	0.468	98.2 - 117.0
,1-Dichloroethane	75-34-3	7	0.417	1	4	5.42	0.102	0.306	102.3 - 114.5
cis-1,2-Dichloroethene	156-59-2	7	0.394	1	4	5.40	0.275	0.825	91.5 - 124.5
Bromochloromethane	74-97-5	7	0.431	1	4	5.45	0.300	0.9	91.0 - 127.0
Chloroform	67-66-3	7	0.325	1	4	5.40	0.099	0.297	102.1 - 113.9
1,2-Dichloroethane	107-06-2	7	0.228	1	4	5.32	0.120	0.36	99.2 - 113.6
1,1,1-Trichloroethane	71-55-6	7	0.300	1	4	5.43	0.136	0.408	100.4 - 116.8
Carbon Tetrachloride	56-23-5	7	0.304	1	4	5.44	0.127	0.381	101.2 - 116.4
Dibromomethane	74-95-3	7	0.422	1	4	5.38	0.338	1.014	87.3 - 127.9
1,2-Dichloropropane	78-87-5	7	0.404	1	4	5.39	0.110	0.33	101.2 - 114.4
Trichloroethene	79-01-6	7	0.300	1	4	5.51	0.158	0.474	100.7 - 119.7
Dichlorobromomethane	75-27-4	7	0.762	1	4	5.44	0.074	0.222	104.4 - 113.2
cis-1,3-Dichloropropene	10061-01-5	7	0.264	1	4	5.35	0.084	0.252	102.0 - 112.0
trans-1,3-Dichloropropene	10061-02-6	7	0.287	1	4	5.29	0.106	0.318	99.4 - 112.2
1,1,2-Trichloroethane	79-00-5	7	0.288	1	4	5.26	0.115	0.345	98.3 - 112.1
Dibromochlorormethane	124-48-1	7	0.318	1	4	5.67	0.126	0.378	105.8 - 121.0
Tetrachloroethene	127-18-4	7	0.258	1	4	5.64	0.117	0.351	105.8 - 119.8
1,1,1,2-Tetrachloroethane	630-20-6	7	0.349	1	4	5.68	0.288	0.864	96.3 - 130.9
Bromoform	75-25-2	7	0.430	1	4	5.38	0.122	0.366	100.3 - 114.9
1,1,2,2,-Tetrachloroethane	79-34-5	7	0.335	1	4	5.17	0.085	0.255	98.3 - 108.5
1,2,3-Trichloropropane	96-18-4	7	0.534	1	4	5.32	0.278	0.834	89.7 - 123.1
Benzene	71-43-2	7	0.210	1	4	5.16	0.090	0.27	97.8 - 108.6
Toluene	108-88-3	7	0.209	1	4	5.26	0.100	0.3	99.2 - 111.2
Chlorobenzene	108-90-7	7	0.402	1	4	10.37	0.150	0.45	99.2 - 108.2
Ethylbenzene	100-41-4	7	0.395	1	4	5.20	0.070	0.21	99.8 - 108.2
p/m-Xylene		7	1.136	1	4	10.40	0.187	0.561	98.4 - 109.6
o-Xylene	95-47-6	7	0.395	1	4	5.20	0.052	0.156	100.9 - 107.1
1,3-Dichlorobenzene	541-73-1	7	0.768	1	4	10.58	0.248	0.744	98.4 - 113.2
1,4-Dichlorobenzene	106-46-7	7	0.457	1	4	10.54	0.052	0.156	103.8 - 107.0
1,2-Dichlorobenzene	95-50-1	7	0.558	1	4	10.80	0.234	0.702	100.98 - 115.0

CT&E - Environmental Services

Sample Analysis Log Sheet

Instrument Name: HP5890II
Instrument ID : GC11
Analysis Date : 2/7/95
Analyst : JC

nalyst Signature : _____ **Date :** 2-22 95

Sample Name		Analysis			Comments
Laboratory Number	Run #	Date	Time	File Number	
Instrument Blank	1	2/7/95	10:54	GC11B07.001	Instrument Blank-Not submitted
2ug/L calibration level	2	2/7/95	11:31	GC11B07.002	Initial Calibration level 1
5ug/L calibration level	3	2/7/95	12:45	GC11B07.003	Initial Calibration level 2
10ug/L calibration level	4	2/7/95	12:45	GC11B07.004	Initial Calibration level 3
20ug/L calibration level	5	2/7/95	13:23	GC11B07.005	Initial Calibration level 4
40ug/L calibration level	6	2/7/95	14:00	GC11B07.006	Initial Calibration level 5

GC11B07.003 run on 2/7/95 at 1208. JC 2/16/95

CT&E Environmental Services Inc.

00013

CT&E - Environmental Services

Sample Analysis Log Sheet

Instrument Name: HP5890II
Instrument ID : GC11
Analysis Date : 2/15/95
Analyst : JC

nalyst Signature : J. Carter **Date :** 2-28-95

Sample Name		Analysis			Comments
Laboratory Number	Run #	Date	Time	File Number	
Method Blank	1	2/11/95	08:02	GC11B15.001	
10ug/L CCVS	2	2/11/95	08:39	GC11B15.002	Calibration Verification Check TE
Method Blank	3	2/11/95	09:15	GC11B15.003	
Method Blank MS	4	2/11/95	09:52	GC11B15.004	Reagent Water Spike*
Method Blank MSD	5	2/11/95	10:29	GC11B15.005	Reagent Water Spike Duplicate*
Method Blank	6	2/11/95	11:06	GC11B15.006	
2-262-010	7	2/11/95	11:43	GC11B15.007	Trip Blank
2-262-002	8	2/11/95	12:35	GC11B15.008	MW5
2-262-003	9	2/11/95	13:36	GC11B15.009	MW5 MS
2-262-004	10	2/11/95	14:13	GC11B15.010	MW5 MSD
Method Blank	11	2/11/95	14:50	GC11B15.011	mb11
2-262-001	12	2/11/95	15:27	GC11B15.012	MW7
2-262-005	13	2/11/95	16:03	GC11B15.013	MW13
2-262-006	14	2/11/95	16:40	GC11B15.014	MW14
Method Blank	15	2/11/95	17:17	GC11B15.015	mb15
2-262-007	16	2/11/95	17:54	GC11B15.016	MW16
2-262-008	17	2/11/95	18:31	GC11B15.017	MW18
2-262-009	18	2/11/95	19:08	GC11B15.018	MW15
Method Blank	19	2/11/95	19:45	GC11B15.019	
2-262-003	20	2/11/95	20:22	GC11B15.020	MW5 MS-Not Spiked*
2-262-004	21	2/11/95	20:59	GC11B15.021	MW5 MSD-Not Spiked*
Method Blank	22	2/11/95	21:36	GC11B15.022	

*Not submitted in data package.

all dates should be 2/15/95

Tuesday

Volatile Analysis Run Log

Analyst: JL
Instrument: GC11002
Column Description: DB1RX
Log In Time: 10.15
Detector: PID Hall
Column Temp: PROG

Date: 2-7-95

00012

GC11502.dat

File Name	Client	Lab No.	Injected Sample Description	Vessel	Report Printed
11bli.dat		Blank	5ml H2O 5ul soil/INT	1	
2		2	2 ul STD 5 661/662 STD	2	
3		5	5	3	
4		10	10	4	
5		20	20	5	
6		40	40	6	
7		Blank		7	
8		Blank spike	8240	8	
9		Blank SD	8240	9	
10		Blank		10	
11		10		11	
12		Blank		12	
				13	

form:vart.xl

Technical Testing Laboratories, Inc
Volatile Analysis Run Log

00011

Wed

Date: 2-15-95

Analyst: TD Log In Time 7:30
Instrument: 6C11 Detector: Pin Hall
Column Description: DAVRX Column Temp: PROG

File Name	Client	Lab No.	Injected Sample Description		Vessel	Report Printed
6C11B1501.DAT		Blank	5ml H2O 5ml surr/int		1	
2		10 PPB CVS	↓	10ml STD 5	2	
3		Blank	↓		3	
4		Blank SPIKE	5ml STD 8240		4	
5		Blank SP	↓		5	
6		Blank	5ml H2O		6	
7	DRAPER ADEN TB.	2-262-10	5ml sample		7	
8	20STD ~~[illegible]~~	2-262-2	5ml sample	~~2.5ml 40ug/ml CLP~~	8	
9	↓ MSD	2-262-9		2.5ml 40ug/ml CLP	9	
10	MSD	Blank 4		↓	10	
11	~~DRAPER ADEN~~	~~2-262-2~~ Blank			11	
12		2-262-1			12	
13		2-262-5			13	
14		2-262-6			14	
15		Blank.			15	
16	DRAPER ADEN	2-262-7			16	
17	↓	2-262-8			[illegible]	

Technical Testing Laboratories, Inc
Volatile Analysis Run Log

00015

Date: 2-15-95

Analyst: TL Log In Time

Instrument: GC11 Detector: PID Hall

Column Description: DBVRX Column Temp: PROG

File Name	Client	Lab No.	Injected Sample Description	Vessel	Report Printed
GC11B1518.RAW	AT DRAPER	2-262-9		2	
19		BLANK		3	
20		2-262-3		4	
21		2-262-4		5	
22		BLANK		6	
23		10 PPB QVS		7	
24		BLANK		8	
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					

CT&E Environmental Services Inc. Charleston,WV

INITIAL CALIBRATION DATA

Start Cal Date : 11-JAN-95 08:40
End Cal Date : 11-JAN-1995 08:40
Quant Method : ISTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/gc11.i/gc11b07-1.b/gc11_601.m
Cal Date : 07-Feb-1995 15:53 1work
Curve Type : Average

Calibration File Names:
Level 1: /chem/gc11.i/gc11b07-1.b/11b0702-01R.d
Level 2: /chem/gc11.i/gc11b07-1.b/11b0703-01R.d
Level 3: /chem/gc11.i/gc11b07-1.b/11b0704-01R.d
Level 4: /chem/gc11.i/gc11b07-1.b/11b0705-01R.d
Level 5: /chem/gc11.i/gc11b07-1.b/11b0706-01R.d

2 ug/L 5 ug/L 10 ug/L 20 ug/L 40 ug/L

Compound	10 Level 1	25 Level 2	50 Level 3	100 Level 4	200 Level 5	RRF	% RSD	
1 DICHLORODIFLUOROMETHANE	0.61337	0.83369	0.74071	0.70260	0.73293	0.72466	10.928	✓
2 VINYL CHLORIDE	0.89106	1.21499	1.08500	1.10478	1.01440	1.06205	11.265	✓
3 BROMOMETHANE	0.57288	1.02630	0.90606	0.86586	0.86606	0.84743	19.701	
4 CHLOROETHANE	0.76701	0.92882	0.92417	0.82716	0.80908	0.85125	8.469	✓
5 TRICHLOROFLUOROMETHANE	1.67863	2.13946	1.98377	1.96231	2.06933	1.96670	8.941	
6 1 1-DICHLOROETHENE	1.72840	2.24554	1.95879	1.87584	1.80658	1.92303	10.366	✓
7 METHYLENE CHLORIDE	2.54793	3.26629	2.97705	3.03072	2.86828	2.93805	8.923	✓
8 trans-1 2-DICHLOROETHENE	1.94335	2.45473	2.21802	2.21188	2.07498	2.18059	8.730	
9 1,1-DICHLOROETHANE	2.03571	2.65275	2.32181	2.84365	2.23367	2.41752	13.494	✓
10 cis-1 2-DICHLOROETHENE	1.99153	2.46020	2.17505	2.15129	2.08002	2.17162	8.125	✓
11 BROMOCHLOROMETHANE	1.13586	1.40018	1.36270	1.36674	1.33990	1.32107	8.005	
12 CHLOROFORM	2.80441	3.50767	3.13360	3.03534	2.90547	3.07730	8.812	
13 1 2-DICHLOROETHANE	1.55074	2.02043	1.74262	1.82319	1.74609	1.77661	9.532	
14 1 1 1-TRICHLOROETHANE	2.49275	3.15643	2.63067	2.61477	2.59051	2.69703	9.727	✓
15 CARBON TETRACHLORIDE	2.55108	3.34034	2.95056	2.84985	2.77682	2.89373	10.011	
16 DIBROMOMETHANE	0.70193	0.92823	0.88771	0.83225	0.36941	0.84390	10.257	
17 1,2-DICHLOROPROPANE	1.62603	2.05126	1.79630	1.84240	1.82444	1.82808	8.290	
18 TRICHLOROETHENE	2.36460	2.90096	2.53859	2.45464	2.26594	2.60495	10.460	✓
19 BROMODICHLOROMETHANE	2.20226	2.62690	2.40937	2.37843	2.36447	2.39629	6.340	
20 cis-1,3 DICHLOROPROPENE	1.53078	2.01012	1.87768	1.82404	1.66054	1.78063	10.537	
21 trans-1,3-DICHLOROPROPENE	1.35860	1.63485	1.56071	1.52503	1.38343	1.49252	7.913	✓
22 1 1 2-TRICHLOROETHANE	1.69743	2.06289	1.97157	1.95876	1.69671	1.87747	9.029	
24 DIBROMOCHLOROMETHANE	2.01910	1.73558	1.53270	1.44801	1.40415	1.62791	15.544	
25 TETRACHLOROETHENE	2.30954	3.08766	2.64890	2.53951	1.97106	2.51133	16.472	✓
26 1 1 1 2-TETRACHLOROETHANE	1.88749	2.50581	2.22871	2.17091	1.56115	2.07082	17.370	
27 BROMOFORM spcc	0.73146	1.13333	0.92047	0.88860	0.87147	0.90907	15.922	
28 1 1 2 2-TETRACHLOROETHANE	1.06264	1.34053	1.23628	1.26799	1.08957	1.19940	9.931	

CT&E Environmental Services Inc. Charleston,WV

INITIAL CALIBRATION DATA

Start Cal Date : 11-JAN-95 08:40
End Cal Date : 11-JAN-1995 08:40
Quant Method : ISTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/gc11.i/gc11b07-1.b/gc11_601.m
Cal Date : 07-Feb-1995 15:53 lwork
Curve Type : Average

Compound	10 Level 1	25 Level 2	50 Level 3	100 Level 4	200 Level 5	RRF	% RSD	
29 1,2,3-TRICHLOROPROPANE	0.94939	1.14154	1.14681	1.12154	1.01682	1.07522	8.176	
33 CHLOROBENZENE (conf. only)	0.87474	1.27191	1.09954	1.05251	0.88323	1.03639	15.950	
34 1 3-DICHLBENZENE (conf. only)	1.00169	1.30330	1.18691	1.08724	0.70809	1.05745	21.317	<-
35 1 4-DICHLBENZENE (conf. only)	1.87840	2.01865	1.52812	1.29757	0.92920	1.53039	28.765	<-
36 1 2-DICHLBENZENE (conf. only)	1.23245	1.48051	1.33572	1.18333	0.85509	1.21742	19.082	
$ 23 2-Bromo-1-chloropropane	1.24823	1.35639	1.34476	1.39042	1.47921	1.36380	6.113	

00018 ~~0001~~

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-1.b/11b0702-01R.d
Lab Smp Id:
Inj Date : 07-FEB-1995 11:31
Operator : jc Inst ID: gc11.i
Smp Info : 2.0 ppb std
Misc Info : Created from: 11b0702.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-1.b/gc11_601.m
Meth Date : 07-Feb-1995 16:29 1work Quant Type: ISTD
Cal Date : 07-FEB-1995 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	
RT	EXP RT (REL RT)	RESPONSE			
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1	
28.072	28.083 (1.000)	1420783	125		
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4	
21.584	21.604 (0.769)	1773457	125	114	
1 DICHLORODIFLUOROMETHANE				CAS #: 75-71-8	
3.377	3.368 (0.120)	69717	10.0	8.46	
2 VINYL CHLORIDE				CAS #: 75-01-4	
3.678	3.630 (0.131)	101280	10.0	8.39	
3 BROMOMETHANE				CAS #: 74-83-9	
4.283	4.283 (0.152)	65115	10.0	6.76	(M)
4 CHLOROETHANE				CAS #: 75-00-3	
4.333	4.383 (0.000)	87180	10.0	9.01	(M)
5 TRICHLOROFLUOROMETHANE				CAS #: 75-69-4	
5.133	5.133 (0.183)	190797	10.0	8.54	(M)

00019

~~00020~~

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
6	1 1-DICHLOROETHENE				CAS #: 75-35-4
6.063	6.047 (0.216)	196454	10.0	8.99	
7	METHYLENE CHLORIDE				CAS #: 75-09-2
6.386	6.387 (0.228)	289604	10.0	8.67	
8	trans-1 2-DICHLOROETHENE				CAS #: 156-60-5
7.920	7.922 (0.282)	220886	10.0	8.91	
9	1,1-DICHLOROETHANE				CAS #: 75-34-3
8.580	8.589 (0.306)	231384	10.0	8.42	
10	cis-1 2-DICHLOROETHENE				CAS #: 156-59-2
10.408	10.429 (0.371)	226363	10.0	9.17	
11	BROMOCHLOROMETHANE				CAS #: 74-97-5
10.932	10.985 (0.389)	129105	10.0	8.60	
12	CHLOROFORM				CAS #: 67-66-3
11.215	11.246 (0.400)	318757	10.0	9.11	
13	1 2-DICHLOROETHANE				CAS #: 107-06-2
13.787	13.824 (0.491)	176261	10.0	8.73	
14	1 1 1-TRICHLOROETHANE				CAS #: 71-55-6
14.090	14.115 (0.502)	283332	10.0	9.24	
15	CARBON TETRACHLORIDE				CAS #: 56-23-5
15.361	15.393 (0.547)	289963	10.0	8.82	
16	DIBROMOMETHANE				CAS #: 74-95-3
17.527	17.563 (0.624)	79783	10.0	8.32	
17	1,2-DICHLOROPROPANE				CAS #: 78-87-5
17.743	17.783 (0.632)	184819	10.0	8.89	
18	TRICHLOROETHENE				CAS #: 79-01-6
17.945	17.982 (0.639)	325598	10.0	11.0	
19	BROMODICHLOROMETHANE				CAS #: 75-27-4
18.083	18.131 (0.644)	250315	10.0	9.19	
20	cis-1,3 DICHLOROPROPENE				CAS #: 542-75-6
20.108	20.129 (0.716)	173992	10.0	8.60	
21	trans-1,3-DICHLOROPROPENE				CAS #: 542-75-6
21.097	21.119 (0.752)	154422	10.0	9.10	

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
22 1 1 2-TRICHLOROETHANE				CAS #: 79-00-5
21.307	21.326 (0.759)	192934	10.0	9.04
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.105	22.124 (0.787)	229496	10.0	12.4
25 TETRACHLOROETHENE				CAS #: 127-18-4
22.823	22.842 (0.813)	262508	10.0	9.20
26 1 1 1 2-TETRACHLOROETHANE				CAS #: 630-26-6
23.715	23.725 (0.845)	214537	10.0	9.11
27 BROMOFORM spcc				CAS #: 75-25-2
24.424	24.436 (0.870)	83140	10.0	8.05
28 1 1 2 2-TETRACHLOROETHANE				CAS #: 79-34-5
24.871	24.884 (0.886)	120783	10.0	8.86
29 1,2,3-TRICHLOROPROPANE				CAS #: 96-18-4
25.037	25.048 (0.892)	107910	10.0	8.83
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7
23.806	23.824 (0.848)	198850	20.0	16.9
34 1 3-DICHLBENZENE (conf. only)				CAS #: 541-73-1
26.733	26.742 (0.952)	227710	20.0	18.9
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.806	26.823 (0.955)	427008	20.0	24.5
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.171	27.181 (0.968)	280168	20.0	20.2

QC Flag Legend

M - Compound response manually integrated.

00021

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0702-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-1.b/gc11_601.m
Misc Info: Created from: 11b0702.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245

Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1664334	832167	3328668	1420783	-14.63
31 FLUOROBENZENE (conf.	31981	15990	63962	0	-100.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.09	27.59	28.59	28.07	-0.05
31 FLUOROBENZENE (conf.	16.51	16.01	17.01	0.00	-100.00

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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

00022

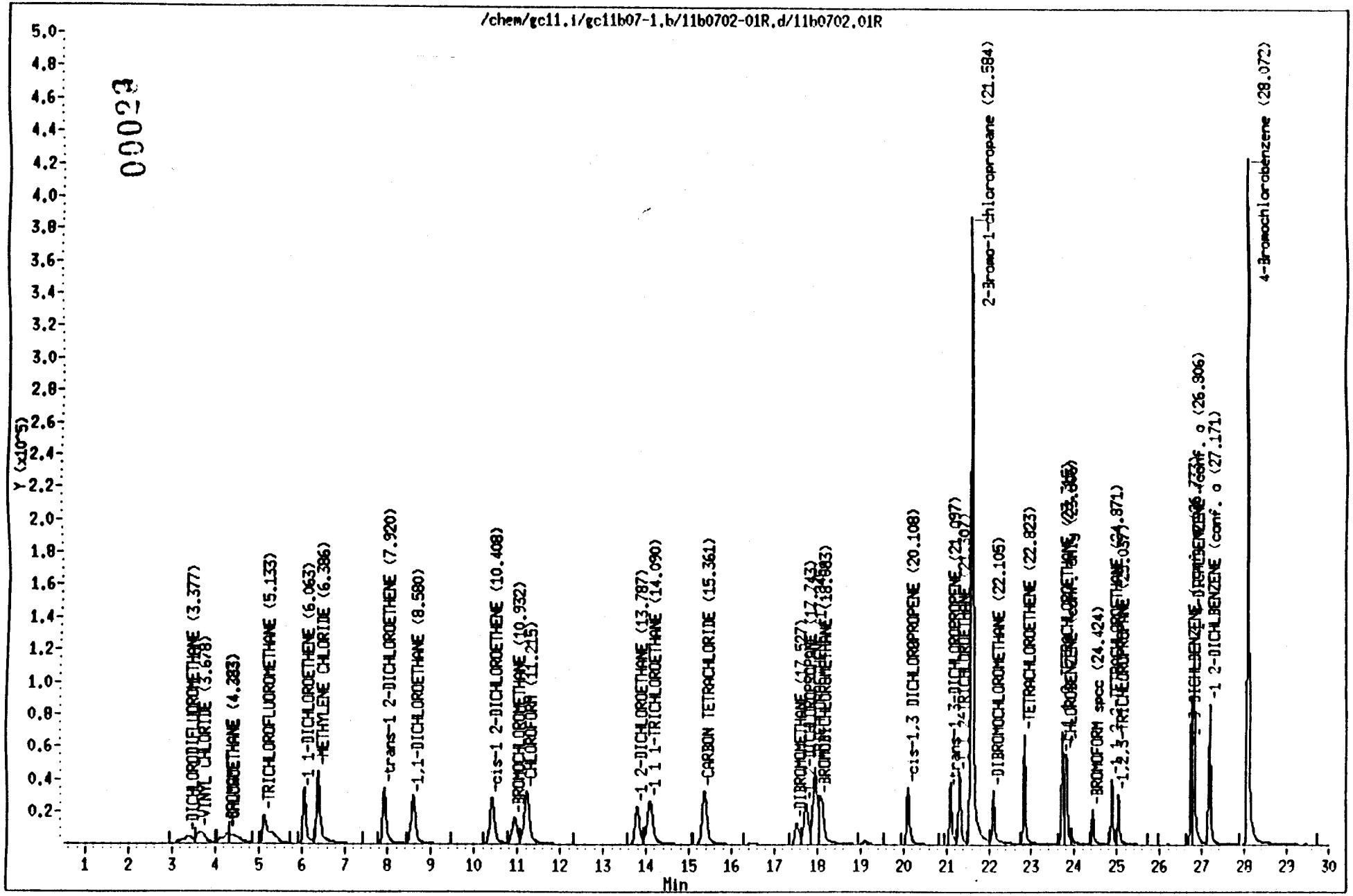
Client Name:
Client SDG: gc11b07-1
Lab Smp Id:
Sample Location:
Sample Point:
Sample Date:
Date Received:
Sample Matrix: WATER
Quant Type: ISTD
Analysis Type: VOA
Level: LOW
Data Type: GC DATA
Operator: jc
Misc Info: Created from: 11b0702.01R, 07-Feb-1995 15:45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
75-71-8	DICHLORODIFLUOROMETHANE	0.00169	
75-01-4	VINYL CHLORIDE	0.00168	
74-83-9	BROMOMETHANE	0.00135	
75-00-3	CHLOROETHANE	0.00180	
75-69-4	TRICHLOROFLUOROMETHANE	0.00171	
75-35-4	1 1-DICHLOROETHENE	0.00180	
75-09-2	METHYLENE CHLORIDE	0.00173	
156-60-5	trans-1 2-DICHLOROETHENE	0.00178	
75-34-3	1,1-DICHLOROETHANE	0.00168	
156-59-2	cis-1 2-DICHLOROETHENE	0.00183	
74-97-5	BROMOCHLOROMETHANE	0.00172	
67-66-3	CHLOROFORM	0.00182	
107-06-2	1 2-DICHLOROETHANE	0.00174	
71-55-6	1 1 1-TRICHLOROETHANE	0.00185	
56-23-5	CARBON TETRACHLORIDE	0.00176	
74-95-3	DIBROMOMETHANE	0.00166	
78-87-5	1,2-DICHLOROPROPANE	0.00178	
79-01-6	TRICHLOROETHENE	0.00220	
75-27-4	BROMODICHLOROMETHANE	0.00184	
542-75-6	cis-1,3 DICHLOROPROPENE	0.00172	
542-75-6	trans-1,3-DICHLOROPROPENE	0.00182	
79-00-5	1 1 2-TRICHLOROETHANE	0.00181	
124-48-1	DIBROMOCHLOROMETHANE	0.00248	
127-18-4	TETRACHLOROETHENE	0.00184	
630-26-6	1 1 1 2-TETRACHLOROETHANE	0.00182	
75-25-2	BROMOFORM spcc	0.00161	
79-34-5	1 1 2 2-TETRACHLOROETHANE	0.00177	
96-18-4	1,2,3-TRICHLOROPROPANE	0.00176	
108-90-7	CHLOROBENZENE (conf. only)	0.00338	
460-00-4	2-Bromo-1-chloropropane	0.0229	

Data File: /chem/gc11.i/gc11b07-1.b/11b0702-01R.d
Date: [redacted]EB-1995 11:31
Client ID:
Sample Info: 2.0 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53

00023



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-1.b/11b0703-01R.d
Lab Smp Id:
Inj Date : 07-FEB-1995 12:08
Operator : jc Inst ID: gc11.i
Smp Info : 5.0 ppb
Misc Info : Created from: 11b0703.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-1.b/gc11_601.m
Meth Date : 07-Feb-1995 16:29 lwork Quant Type: ISTD
Cal Date : 07-FEB-1995 12:08 Cal File: 11b0703-01R.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: SOIL
Concentration Formula: (Uf)*(100/S)*(Vt/Va)*(1/Ws)

Name	Value	Description
S	100.000	% solid
Uf	0.001	conversion factor
Ws	5.000	Weight of sample extracted (g)
Vt	5.000	volume final ext (ml)
Va	0.250	vol of aliq. ext (ml)

			AMOUNTS CAL-AMT	AMOUNTS ON-COL	
RT	EXP RT (REL RT)	RESPONSE	(ng)	(ng)	
30 4-Bromochlorobenzene				CAS #: 2199-69-1	
28.083	28.083 (1.000)	1564350	125		
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4	
21.597	21.604 (0.769)	2121876	125	124	
1 DICHLORODIFLUOROMETHANE				CAS #: 75-71-8	
3.377	3.368 (0.120)	260836	25.0	28.8	
2 VINYL CHLORIDE				CAS #: 75-01-4	
3.652	3.630 (0.130)	380134	25.0	28.6	
3 BROMOMETHANE				CAS #: 74-83-9	
4.317	4.283 (0.154)	321099	25.0	30.3	(M)
4 CHLOROETHANE				CAS #: 75-00-3	
4.383	4.383 (0.000)	290599	25.0	27.3	(M)

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
5 TRICHLOROFLUOROMETHANE				CAS #: 75-69-4	
5.133	5.133 (0.000)	669373	25.0	27.2	(M)
6 1 1-DICHLOROETHENE				CAS #: 75-35-4	
6.063	6.047 (0.216)	702562	25.0	29.2	
7 METHYLENE CHLORIDE				CAS #: 75-09-2	
6.390	6.387 (0.228)	1021924	25.0	27.8	
8 trans-1 2-DICHLOROETHENE				CAS #: 156-60-5	
7.925	7.922 (0.282)	768010	25.0	28.1	
9 1,1-DICHLOROETHANE				CAS #: 75-34-3	
8.586	8.589 (0.306)	829965	25.0	27.4	
10 cis-1 2-DICHLOROETHENE				CAS #: 156-59-2	
10.423	10.429 (0.371)	769723	25.0	28.3	
11 BROMOCHLOROMETHANE				CAS #: 74-97-5	
10.943	10.985 (0.390)	438073	25.0	26.5	
12 CHLOROFORM				CAS #: 67-66-3	
11.228	11.246 (0.400)	1097444	25.0	28.5	
13 1 2-DICHLOROETHANE				CAS #: 107-06-2	
13.806	13.824 (0.492)	632132	25.0	28.4	
14 1 1 1-TRICHLOROETHANE				CAS #: 71-55-6	
14.108	14.115 (0.502)	987551	25.0	29.2	
15 CARBON TETRACHLORIDE				CAS #: 56-23-5	
15.377	15.393 (0.548)	1045092	25.0	28.8	
16 DIBROMOMETHANE				CAS #: 74-95-3	
17.541	17.563 (0.625)	290414	25.0	27.5	
17 1,2-DICHLOROPROPANE				CAS #: 78-87-5	
17.762	17.783 (0.632)	641778	25.0	28.0	
18 TRICHLOROETHENE				CAS #: 79-01-6	
17.963	17.982 (0.640)	907624	25.0	27.8	
19 BROMODICHLOROMETHANE				CAS #: 75-27-4	
18.111	18.131 (0.645)	821877	25.0	27.4	
20 cis-1,3 DICHLOROPROPENE				CAS #: 542-75-6	
20.121	20.129 (0.716)	628905	25.0	28.2	

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
21 trans-1,3-DICHLOROPROPENE				CAS #: 542-75-6
21.107	21.119 (0.752)	511494	25.0	27.4
22 1 1 2-TRICHLOROETHANE				CAS #: 79-00-5
21.318	21.326 (0.759)	645417	25.0	27.5
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.117	22.124 (0.788)	543012	25.0	26.6
25 TETRACHLOROETHENE				CAS #: 127-18-4
22.833	22.842 (0.813)	966035	25.0	30.7
26 1 1 1 2-TETRACHLOROETHANE				CAS #: 630-26-6
23.724	23.725 (0.845)	783993	25.0	30.2
27 BROMOFORM spcc				CAS #: 75-25-2
24.433	24.436 (0.870)	354586	25.0	31.2
28 1 1 2 2-TETRACHLOROETHANE				CAS #: 79-34-5
24.881	24.884 (0.886)	419412	25.0	27.9
29 1,2,3-TRICHLOROPROPANE				CAS #: 96-18-4
25.047	25.048 (0.892)	357153	25.0	26.5
* 31 FLUOROBENZENE (conf. only)				CAS #: 462-06-6
16.504	16.523 (1.000)	16784	125	
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7
23.816	23.824 (0.848)	795882	50.0	61.4
34 1 3-DICHLBENZENE (conf. only)				CAS #: 541-73-1
26.740	26.742 (0.952)	815529	50.0	61.6
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.817	26.823 (0.955)	1263151	50.0	66.0
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.182	27.181 (0.968)	926412	50.0	60.8

QC Flag Legend

M - Compound response manually integrated.

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0703-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-1.b/gc11_601.m
Misc Info: Created from: 11b0703.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245

Level: MED
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1664334	832167	3328668	1564350	-6.01
31 FLUOROBENZENE (conf.	31981	15990	63962	16784	-47.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.09	27.59	28.59	28.08	-0.0
31 FLUOROBENZENE (conf.	16.51	16.01	17.01	16.50	-0.

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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id:
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b0703.01R, 07-Feb-1995 15:45

Client SDG: gc11b07-1
Sample Point:
Date Received:
Quant Type: ISTD
Level: MED
Operator: jc

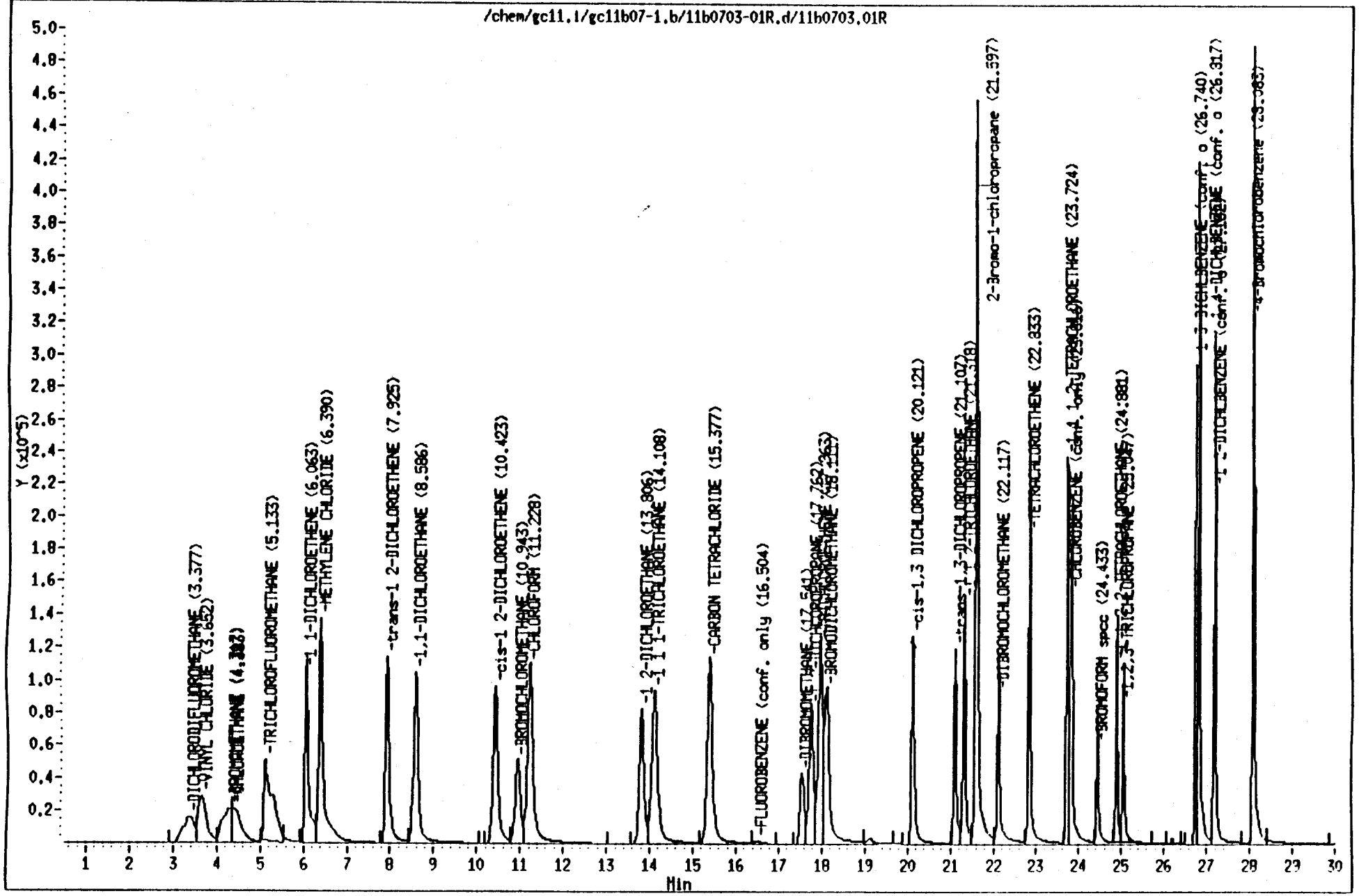
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/Kg	Q
75-71-8	DICHLORODIFLUOROMETHANE	0.115	
75-01-4	VINYL CHLORIDE	0.114	
74-83-9	BROMOMETHANE	0.121	
75-00-3	CHLOROETHANE	0.109	
75-69-4	TRICHLOROFLUOROMETHANE	0.109	
75-35-4	1 1-DICHLOROETHENE	0.117	
75-09-2	METHYLENE CHLORIDE	0.111	
156-60-5	trans-1 2-DICHLOROETHENE	0.112	
75-34-3	1,1-DICHLOROETHANE	0.110	
156-59-2	cis-1 2-DICHLOROETHENE	0.113	
74-97-5	BROMOCHLOROMETHANE	0.106	
67-66-3	CHLOROFORM	0.114	
107-06-2	1 2-DICHLOROETHANE	0.114	
71-55-6	1 1 1-TRICHLOROETHANE	0.117	
56-23-5	CARBON TETRACHLORIDE	0.115	
74-95-3	DIBROMOMETHANE	0.110	
78-87-5	1,2-DICHLOROPROPANE	0.112	
79-01-6	TRICHLOROETHENE	0.111	
75-27-4	BROMODICHLOROMETHANE	0.110	
542-75-6	cis-1,3 DICHLOROPROPENE	0.113	
542-75-6	trans-1,3-DICHLOROPROPENE	0.110	
79-00-5	1 1 2-TRICHLOROETHANE	0.110	
124-48-1	DIBROMOCHLOROMETHANE	0.107	
127-18-4	TETRACHLOROETHENE	0.123	
630-26-6	1 1 1 2-TETRACHLOROETHANE	0.121	
75-25-2	BROMOFORM spcc	0.125	
79-34-5	1 1 2 2-TETRACHLOROETHANE	0.112	
96-18-4	1,2,3-TRICHLOROPROPANE	0.106	
108-90-7	CHLOROBENZENE (conf. only)	0.245	
460-00-4	2-Bromo-1-chloropropane	0.497	

Data File: /chem/gc11.1/gc11b07-1.b/11b0703-01R.d
Date: [redacted]ER-1995 12:08
Client ID:
Sample Info: 5.0 ppb

Column phase: db624

Instrument: gc11.1

Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-1.b/11b0704-01R.d
Lab Smp Id:
Inj Date : 07-FEB-1995 12:45
Operator : jc Inst ID: gc11.i
Smp Info : 10 ppb std
Misc Info : Created from: 11b0704.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-1.b/gc11_601.m
Meth Date : 07-Feb-1995 16:29 lwork Quant Type: ISTD
Cal Date : 07-FEB-1995 12:45 Cal File: 11b0704-01R.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1	
28.086	28.083 (1.000)	1664334	125		
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4	
21.603	21.604 (0.769)	2238122	125	123	
1 DICHLORODIFLUOROMETHANE				CAS #: 75-71-8	
3.397	3.368 (0.121)	493116	50.0	51.1	
2 VINYL CHLORIDE				CAS #: 75-01-4	
3.670	3.630 (0.131)	722322	50.0	51.1	
3 BROMOMETHANE				CAS #: 74-83-9	
4.300	4.283 (0.153)	603193	50.0	53.4	(M)
4 CHLOROETHANE				CAS #: 75-00-3	
4.383	4.383 (0.000)	615253	50.0	54.3	(M)
5 TRICHLOROFLUOROMETHANE				CAS #: 75-69-4	
5.133	5.133 (0.000)	1320662	50.0	50.4	(M)

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RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
6	1 1-DICHLOROETHENE			CAS #: 75-35-4
6.077	6.047 (0.216)	1304029	50.0	50.9
7	METHYLENE CHLORIDE			CAS #: 75-09-2
6.405	6.387 (0.228)	1981923	50.0	50.7
8	trans-1 2-DICHLOROETHENE			CAS #: 156-60-5
7.941	7.922 (0.283)	1476610	50.0	50.8
9	1,1-DICHLOROETHANE			CAS #: 75-34-3
8.606	8.589 (0.306)	1545707	50.0	48.0
10	cis-1 2-DICHLOROETHENE			CAS #: 156-59-2
10.448	10.429 (0.372)	1448002	50.0	50.1
11	BROMOCHLOROMETHANE			CAS #: 74-97-5
10.964	10.985 (0.390)	907192	50.0	51.6
12	CHLOROFORM			CAS #: 67-66-3
11.254	11.246 (0.401)	2086145	50.0	50.9
13	1 2-DICHLOROETHANE			CAS #: 107-06-2
13.828	13.824 (0.492)	1160123	50.0	49.0
14	1 1 1-TRICHLOROETHANE			CAS #: 71-55-6
14.131	14.115 (0.503)	1751326	50.0	48.8
15	CARBON TETRACHLORIDE			CAS #: 56-23-5
15.393	15.393 (0.548)	1964288	50.0	51.0
16	DIBROMOMETHANE			CAS #: 74-95-3
17.560	17.563 (0.625)	590979	50.0	52.6
17	1,2-DICHLOROPROPANE			CAS #: 78-87-5
17.779	17.783 (0.633)	1195854	50.0	49.1
18	TRICHLOROETHENE			CAS #: 79-01-6
17.982	17.982 (0.640)	1690027	50.0	48.7
19	BROMODICHLOROMETHANE			CAS #: 75-27-4
18.127	18.131 (0.645)	1604001	50.0	50.3
20	cis-1,3 DICHLOROPROPENE			CAS #: 542-75-6
20.132	20.129 (0.717)	1250035	50.0	52.7
21	trans-1,3-DICHLOROPROPENE			CAS #: 542-75-6
21.117	21.119 (0.752)	1039019	50.0	52.3

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
22 1 1 2-TRICHLOROETHANE				CAS #: 79-00-5
21.327	21.326 (0.759)	1312541	50.0	52.5
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.122	22.124 (0.788)	1020372	50.0	47.1
25 TETRACHLOROETHENE				CAS #: 127-18-4
22.837	22.842 (0.813)	1763461	50.0	52.7
26 1 1 1 2-TETRACHLOROETHANE				CAS #: 630-26-6
23.730	23.725 (0.845)	1483727	50.0	53.8
27 BROMOFORM spcc				CAS #: 75-25-2
24.437	24.436 (0.870)	612786	50.0	50.6
28 1 1 2 2-TETRACHLOROETHANE				CAS #: 79-34-5
24.884	24.884 (0.886)	823033	50.0	51.5
29 1,2,3-TRICHLOROPROPANE				CAS #: 96-18-4
25.051	25.048 (0.892)	763467	50.0	53.3
* 31 FLUOROBENZENE (conf. only)				CAS #: 462-06-6
16.515	16.523 (1.000)	31981	125	
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7
23.821	23.824 (0.848)	1464003	100	106
34 1 3-DICHLBENZENE (conf. only)				CAS #: 541-73-1
26.746	26.742 (0.952)	1580335	100	112
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.820	26.823 (0.955)	2034636	100	99.8
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.184	27.181 (0.968)	1778467	100	110

QC Flag Legend

M - Compound response manually integrated.

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CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0704-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-1.b/gc11_601.m
Misc Info: Created from: 11b0704.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1664334	832167	3328668	1664334	0.00
31 FLUOROBENZENE (conf.	31981	15990	63962	31981	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.09	27.59	28.59	28.09	0.00
31 FLUOROBENZENE (conf.	16.51	16.01	17.01	16.51	0.

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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id:
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b0704.01R, 07-Feb-1995 15:45

Client SDG: gc11b07-1
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
75-71-8	DICHLORODIFLUOROMETHANE	0.0102	
75-01-4	VINYL CHLORIDE	0.0102	
74-83-9	BROMOMETHANE	0.0107	
75-00-3	CHLOROETHANE	0.0108	
75-69-4	TRICHLOROFLUOROMETHANE	0.0101	
75-35-4	1 1-DICHLOROETHENE	0.0102	
75-09-2	METHYLENE CHLORIDE	0.0101	
156-60-5	trans-1 2-DICHLOROETHENE	0.0102	
75-34-3	1,1-DICHLOROETHANE	0.00960	
156-59-2	cis-1 2-DICHLOROETHENE	0.0100	
74-97-5	BROMOCHLOROMETHANE	0.0103	
67-66-3	CHLOROFORM	0.0102	
107-06-2	1 2-DICHLOROETHANE	0.00981	
71-55-6	1 1 1-TRICHLOROETHANE	0.00975	
56-23-5	CARBON TETRACHLORIDE	0.0102	
74-95-3	DIBROMOMETHANE	0.0105	
78-87-5	1,2-DICHLOROPROPANE	0.00983	
79-01-6	TRICHLOROETHENE	0.00974	
75-27-4	BROMODICHLOROMETHANE	0.0100	
542-75-6	cis-1,3 DICHLOROPROPENE	0.0105	
542-75-6	trans-1,3-DICHLOROPROPENE	0.0104	
79-00-5	1 1 2-TRICHLOROETHANE	0.0105	
124-48-1	DIBROMOCHLOROMETHANE	0.00942	
127-18-4	TETRACHLOROETHENE	0.0105	
630-26-6	1 1 1 2-TETRACHLOROETHANE	0.0108	
75-25-2	BROMOFORM spcc	0.0101	
79-34-5	1 1 2 2-TETRACHLOROETHANE	0.0103	
96-18-4	1,2,3-TRICHLOROPROPANE	0.0107	
108-90-7	CHLOROBENZENE (conf. only)	0.0212	
460-00-4	2-Bromo-1-chloropropane	0.0246	

Data File: /chem/gc11.i/gc11b07-1.b/11b0704-01R.d
Date: FEB-1995 12:45
Client ID:
Sample Info: 10 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53

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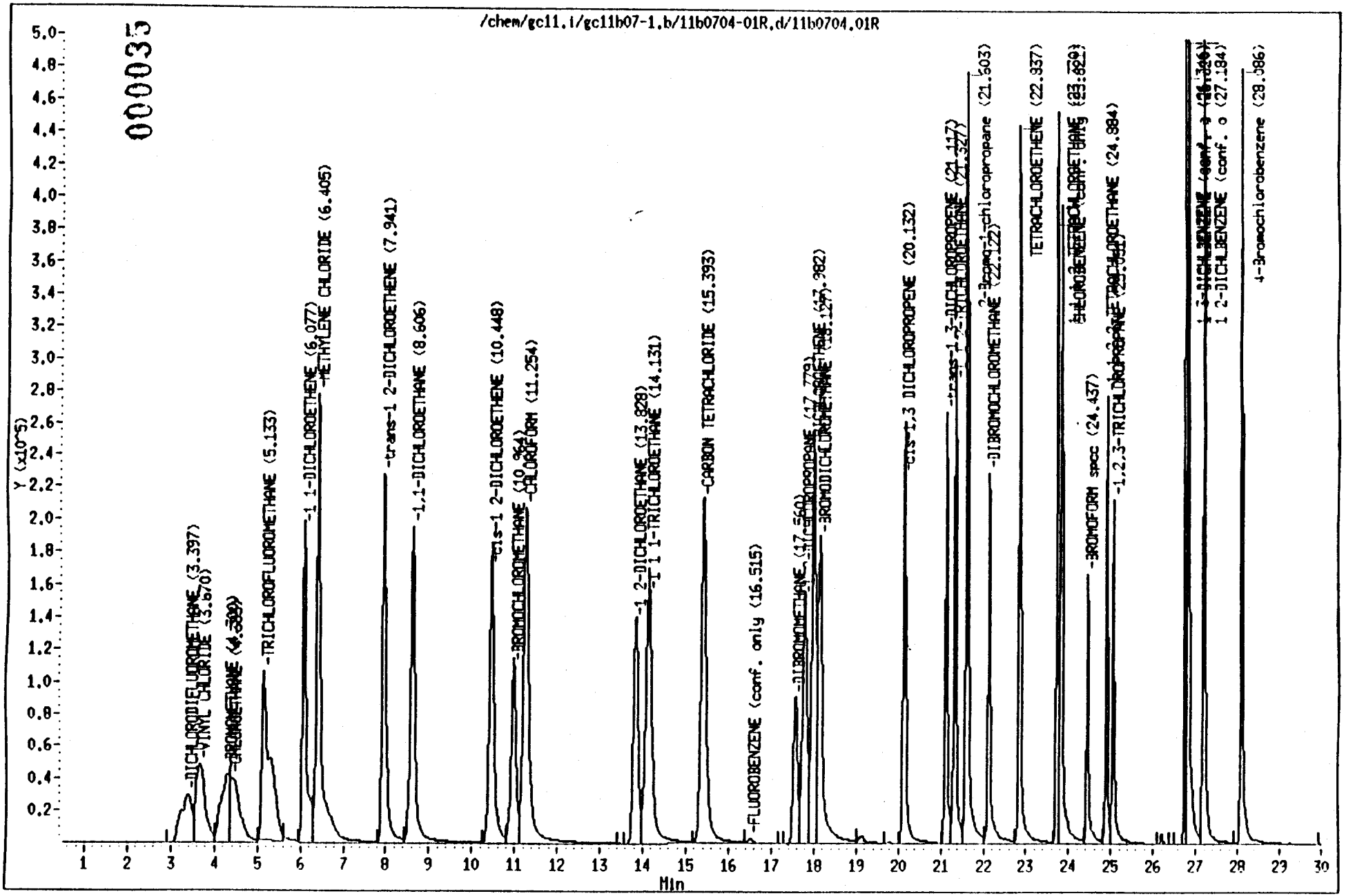

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-1.b/11b0705-01R.d
Lab Smp Id:
Inj Date : 07-FEB-1995 13:23
Operator : jc Inst ID: gc11.i
Smp Info : 20 ppb std
Misc Info : Created from: 11b0705.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-1.b/gc11_601.m
Meth Date : 07-Feb-1995 16:30 lwork Quant Type: ISTD
Cal Date : 07-FEB-1995 13:23 Cal File: 11b0705-01R.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	
RT	EXP RT (REL RT)	RESPONSE			
* 30	4-Bromochlorobenzene				CAS #: 2199-69-1
28.091	28.083 (1.000)	1613790	125		
$ 23	2-Bromo-1-chloropropane				CAS #: 460-00-4
21.611	21.604 (0.769)	2243850	125	127	
1	DICHLORODIFLUOROMETHANE				CAS #: 75-71-8
3.401	3.368 (0.121)	907083	100	97.0	
2	VINYL CHLORIDE				CAS #: 75-01-4
3.673	3.630 (0.131)	1426305	100	104	
3	BROMOMETHANE				CAS #: 74-83-9
4.314	4.283 (0.154)	1117853	100	102	
4	CHLOROETHANE				CAS #: 75-00-3
4.420	4.383 (0.157)	1067884	100	97.2	
5	TRICHLOROFLUOROMETHANE				CAS #: 75-69-4
5.150	5.133 (0.183)	2533401	100	99.8	(M)

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
6 1 1-DICHLOROETHENE				CAS #: 75-35-4	
6.078	6.047 (0.216)	2421768	100	97.5	
7 METHYLENE CHLORIDE				CAS #: 75-09-2	
6.410	6.387 (0.228)	3912752	100	103	
8 trans-1 2-DICHLOROETHENE				CAS #: 156-60-5	
7.950	7.922 (0.283)	2855603	100	101	
9 1,1-DICHLOROETHANE				CAS #: 75-34-3	
8.613	8.589 (0.307)	3671245	100	118	
10 cis-1 2-DICHLOROETHENE				CAS #: 156-59-2	
10.458	10.429 (0.372)	2777381	100	99.1	
11 BROMOCHLOROMETHANE				CAS #: 74-97-5	
10.980	10.985 (0.000)	1764503	100	103	(M)
12 CHLOROFORM				CAS #: 67-66-3	
11.268	11.246 (0.401)	3918717	100	98.6	
13 1 2-DICHLOROETHANE				CAS #: 107-06-2	
13.838	13.824 (0.493)	2353801	100	103	
14 1 1 1-TRICHLOROETHANE				CAS #: 71-55-6	
14.142	14.115 (0.503)	3375756	100	97.0	
15 CARBON TETRACHLORIDE				CAS #: 56-23-5	
15.413	15.393 (0.549)	3679251	100	98.5	
16 DIBROMOMETHANE				CAS #: 74-95-3	
17.572	17.563 (0.626)	1074464	100	98.6	
17 1,2-DICHLOROPROPANE				CAS #: 78-87-5	
17.792	17.783 (0.633)	2378595	100	101	
18 TRICHLOROETHENE				CAS #: 79-01-6	
17.995	17.982 (0.641)	3169017	100	94.2	
19 BROMODICHLOROMETHANE				CAS #: 75-27-4	
18.139	18.131 (0.646)	3070633	100	99.2	
20 cis-1,3 DICHLOROPROPENE				CAS #: 542-75-6	
20.141	20.129 (0.717)	2354889	100	102	
21 trans-1,3-DICHLOROPROPENE				CAS #: 542-75-6	
21.124	21.119 (0.752)	1968861	100	102	

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RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
22 1 1 2-TRICHLOROETHANE				CAS #: 79-00-5
21.334	21.326 (0.759)	2528821	100	104
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.131	22.124 (0.788)	1869431	100	88.9
25 TETRACHLOROETHENE				CAS #: 127-18-4
22.846	22.842 (0.813)	3278590	100	101
26 1 1 1 2-TETRACHLOROETHANE				CAS #: 630-26-6
23.735	23.725 (0.845)	2802718	100	105
27 BROMOFORM spcc				CAS #: 75-25-2
24.443	24.436 (0.870)	1147216	100	97.7
28 1 1 2 2-TETRACHLOROETHANE				CAS #: 79-34-5
24.889	24.884 (0.886)	1637022	100	106
29 1,2,3-TRICHLOROPROPANE				CAS #: 96-18-4
25.056	25.048 (0.892)	1447940	100	104
* 31 FLUOROBENZENE (conf. only)				CAS #: 462-06-6
16.522	16.523 (1.000)	40284	125	
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7
23.829	23.824 (0.848)	2717639	200	203
34 1 3-DICHLBENZENE (conf. only)				CAS #: 541-73-1
26.750	26.742 (0.952)	2807332	200	206
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.824	26.823 (0.955)	3350409	200	170
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.188	27.181 (0.968)	3055429	200	194

QC Flag Legend

M - Compound response manually integrated.

000039

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0705-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-1.b/gc11_601.m
Misc Info: Created from: 11b0705.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1664334	832167	3328668	1613790	-3.04
31 FLUOROBENZENE (conf.	31981	15990	63962	40284	25.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.09	27.59	28.59	28.09	0.02
31 FLUOROBENZENE (conf.	16.51	16.01	17.01	16.52	0.

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.

CT&E Environmental Services Inc. Charleston,WV

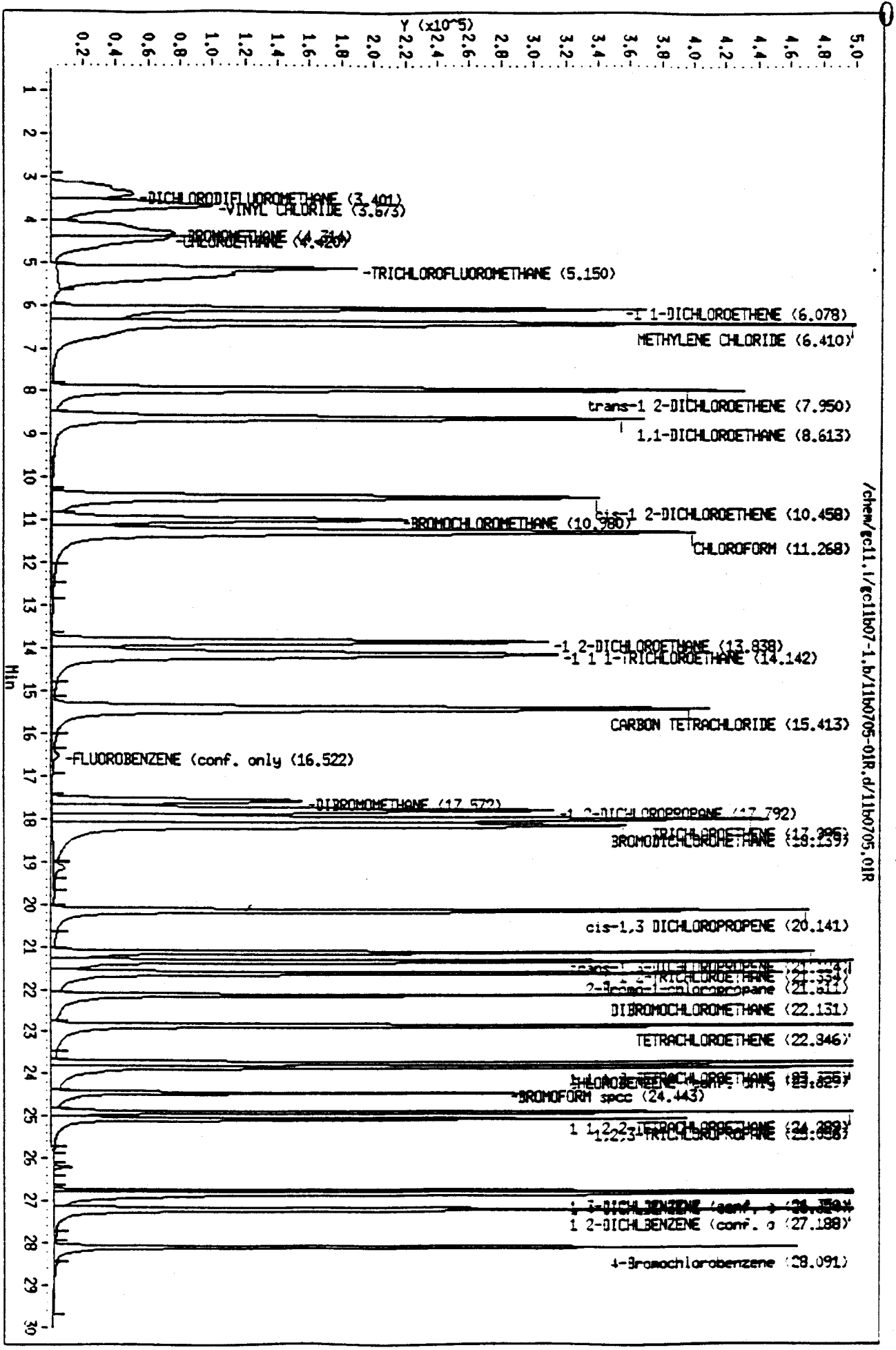
TARGET COMPOUNDS

Client Name: Client SDG: gc11b07-1
Lab Smp Id:
Sample Location: Sample Point:
Sample Date: Date Received:
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: LOW
Data Type: GC DATA Operator: jc
Misc Info: Created from: 11b0705.01R, 07-Feb-1995 15:45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
75-71-8	DICHLORODIFLUOROMETHANE	0.0194	
75-01-4	VINYL CHLORIDE	0.0208	
74-83-9	BROMOMETHANE	0.0204	
75-00-3	CHLOROETHANE	0.0194	
75-69-4	TRICHLOROFLUOROMETHANE	0.0200	
75-35-4	1 1-DICHLOROETHENE	0.0195	
75-09-2	METHYLENE CHLORIDE	0.0206	
156-60-5	trans-1 2-DICHLOROETHENE	0.0203	
75-34-3	1,1-DICHLOROETHANE	0.0235	
156-59-2	cis-1 2-DICHLOROETHENE	0.0198	
74-97-5	BROMOCHLOROMETHANE	0.0207	
67-66-3	CHLOROFORM	0.0197	
107-06-2	1 2-DICHLOROETHANE	0.0205	
71-55-6	1 1 1-TRICHLOROETHANE	0.0194	
56-23-5	CARBON TETRACHLORIDE	0.0197	
74-95-3	DIBROMOMETHANE	0.0197	
78-87-5	1,2-DICHLOROPROPANE	0.0202	
79-01-6	TRICHLOROETHENE	0.0188	
75-27-4	BROMODICHLOROMETHANE	0.0198	
542-75-6	cis-1,3 DICHLOROPROPENE	0.0205	
542-75-6	trans-1,3-DICHLOROPROPENE	0.0204	
79-00-5	1 1 2-TRICHLOROETHANE	0.0209	
124-48-1	DIBROMOCHLOROMETHANE	0.0178	
127-18-4	TETRACHLOROETHENE	0.0202	
630-26-6	1 1 1 2-TETRACHLOROETHANE	0.0210	
75-25-2	BROMOFORM spcc	0.0195	
79-34-5	1 1 2 2-TETRACHLOROETHANE	0.0211	
96-18-4	1,2,3-TRICHLOROPROPANE	0.0209	
108-90-7	CHLOROBENZENE (conf. only)	0.0406	
460-00-4	2-Bromo-1-chloropropane	0.0255	

Data File: /chem/gc11.i/gc11b07-1.b/11b0705-01R.d
Date: -FEB-1995 13:23
Client ID:
Sample Info: 20 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



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CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-1.b/11b0706-01R.d
Lab Smp Id:
Inj Date : 07-FEB-1995 14:00
Operator : jc Inst ID: gc11.i
Smp Info : 40 ppb std
Misc Info : Created from: 11b0706.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-1.b/gc11_601.m
Meth Date : 07-Feb-1995 16:30 lwork Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)		
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1		
28.096	28.083 (1.000)	1602527	125			
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4		
21.615	21.604 (0.769)	2370469	125	136		
1 DICHLORODIFLUOROMETHANE				CAS #: 75-71-8		
3.356	3.368 (0.119)	1879267	200	202		(A)
2 VINYL CHLORIDE				CAS #: 75-01-4		
3.650	3.630 (0.130)	2600956	200	191		(M)
3 BROMOMETHANE				CAS #: 74-83-9		
4.303	4.283 (0.153)	2220603	200	204		(A)
4 CHLOROETHANE				CAS #: 75-00-3		
4.412	4.383 (0.157)	2074522	200	190		
5 TRICHLOROFLUOROMETHANE				CAS #: 75-69-4		
5.133	5.133 (0.183)	5305857	200	210		(AM)

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
6	1 1-DICHLOROETHENE			CAS #: 75-35-4	
6.079	6.047 (0.216)	4632140	200	188	
7	METHYLENE CHLORIDE			CAS #: 75-09-2	
6.415	6.387 (0.228)	7354400	200	195	
8	trans-1 2-DICHLOROETHENE			CAS #: 156-60-5	
7.953	7.922 (0.283)	5320331	200	190	
9	1,1-DICHLOROETHANE			CAS #: 75-34-3	
8.620	8.589 (0.307)	5727228	200	185	
10	cis-1 2-DICHLOROETHENE			CAS #: 156-59-2	
10.465	10.429 (0.372)	5333267	200	192	
11	BROMOCHLOROMETHANE			CAS #: 74-97-5	
10.985	10.985 (0.000)	3435562	200	203	(AM)
12	CHLOROFORM			CAS #: 67-66-3	
11.279	11.246 (0.401)	7449741	200	189	
13	1 2-DICHLOROETHANE			CAS #: 107-06-2	
13.847	13.824 (0.493)	4477049	200	196	
14	1 1 1-TRICHLOROETHANE			CAS #: 71-55-6	
14.148	14.115 (0.504)	6642189	200	192	
15	CARBON TETRACHLORIDE			CAS #: 56-23-5	
15.417	15.393 (0.549)	7119877	200	192	
16	DIBROMOMETHANE			CAS #: 74-95-3	
17.584	17.563 (0.626)	2229196	200	206	(A)
17	1,2-DICHLOROPROPANE			CAS #: 78-87-5	
17.801	17.783 (0.634)	4677937	200	200	
18	TRICHLOROETHENE			CAS #: 79-01-6	
18.005	17.982 (0.641)	5809976	200	174	
19	BROMODICHLOROMETHANE			CAS #: 75-27-4	
18.148	18.131 (0.646)	6062596	200	197	
20	cis-1,3 DICHLOROPROPENE			CAS #: 542-75-6	
20.144	20.129 (0.717)	4257694	200	186	
21	trans-1,3-DICHLOROPROPENE			CAS #: 542-75-6	
21.129	21.119 (0.752)	3547164	200	185	

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
22 1 1 2-TRICHLOROETHANE				CAS #: 79-00-5
21.340	21.326 (0.760)	4350446	200	181
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.134	22.124 (0.788)	3600312	200	172
25 TETRACHLOROETHENE				CAS #: 127-18-4
22.845	22.842 (0.813)	5053886	200	157
26 1 1 1 2-TETRACHLOROETHANE				CAS #: 630-26-6
23.742	23.725 (0.845)	4002868	200	151
27 BROMOFORM spcc				CAS #: 75-25-2
24.447	24.436 (0.870)	2234481	200	192
28 1 1 2 2-TETRACHLOROETHANE				CAS #: 79-34-5
24.896	24.884 (0.886)	2793705	200	182
29 1,2,3-TRICHLOROPROPANE				CAS #: 96-18-4
25.060	25.048 (0.892)	2607175	200	189
* 31 FLUOROBENZENE (conf. only)				CAS #: 462-06-6
16.535	16.523 (1.000)	99385	125	
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7
23.832	23.824 (0.848)	4529304	400	341
34 1 3-DICHLBENZENE (conf. only)				CAS #: 541-73-1
26.758	26.742 (0.952)	3631157	400	268
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.825	26.823 (0.955)	4765017	400	243
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.192	27.181 (0.968)	4384997	400	281

QC Flag Legend

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

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0706-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-1.b/gc11_601.m
Misc Info: Created from: 11b0706.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1664334	832167	3328668	1602527	-3.71
31 FLUOROBENZENE (conf.	31981	15990	63962	99385	210.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.09	27.59	28.59	28.10	0.0
31 FLUOROBENZENE (conf.	16.51	16.01	17.01	16.54	0.

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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

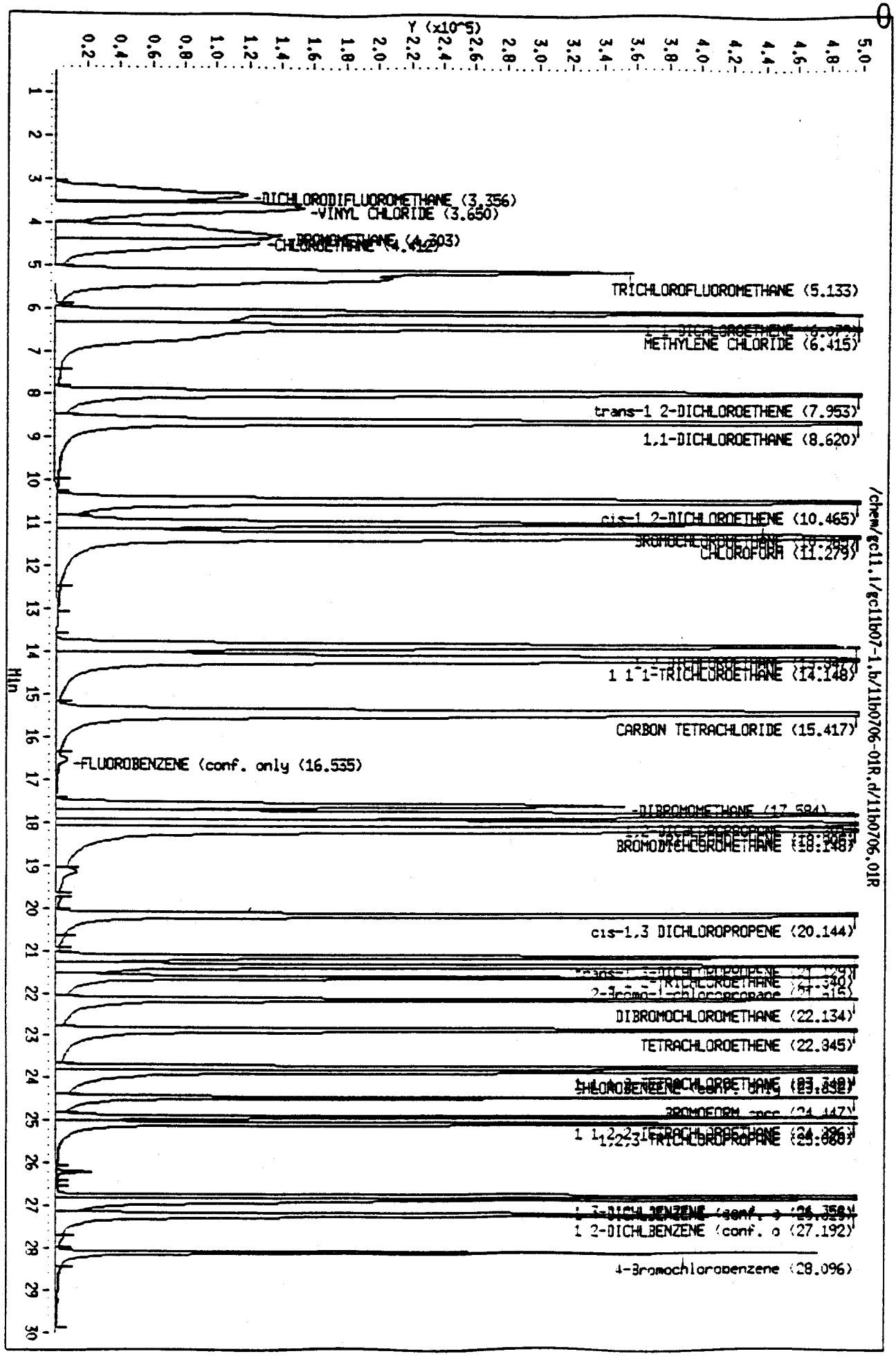
Client Name: Client SDG: gc11b07-1
Lab Smp Id:
Sample Location: Sample Point:
Sample Date: Date Received:
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: LOW
Data Type: GC DATA Operator: jc
Misc Info: Created from: 11b0706.01R, 07-Feb-1995 15:45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
75-71-8	DICHLORODIFLUOROMETHANE	0.0404	E
75-01-4	VINYL CHLORIDE	0.0382	
74-83-9	BROMOMETHANE	0.0409	E
75-00-3	CHLOROETHANE	0.0380	
75-69-4	TRICHLOROFLUOROMETHANE	0.0421	E
75-35-4	1 1-DICHLOROETHENE	0.0376	
75-09-2	METHYLENE CHLORIDE	0.0390	
156-60-5	trans-1 2-DICHLOROETHENE	0.0381	
75-34-3	1,1-DICHLOROETHANE	0.0370	
156-59-2	cis-1 2-DICHLOROETHENE	0.0383	
74-97-5	BROMOCHLOROMETHANE	0.0406	E
67-66-3	CHLOROFORM	0.0378	
107-06-2	1 2-DICHLOROETHANE	0.0393	
71-55-6	1 1 1-TRICHLOROETHANE	0.0384	
56-23-5	CARBON TETRACHLORIDE	0.0384	
74-95-3	DIBROMOMETHANE	0.0412	E
78-87-5	1,2-DICHLOROPROPANE	0.0399	
79-01-6	TRICHLOROETHENE	0.0348	
75-27-4	BROMODICHLOROMETHANE	0.0395	
542-75-6	cis-1,3 DICHLOROPROPENE	0.0373	
542-75-6	trans-1,3-DICHLOROPROPENE	0.0371	
79-00-5	1 1 2-TRICHLOROETHANE	0.0361	
124-48-1	DIBROMOCHLOROMETHANE	0.0345	
127-18-4	TETRACHLOROETHENE	0.0314	
630-26-6	1 1 1 2-TETRACHLOROETHANE	0.0302	
75-25-2	BROMOFORM spcc	0.0383	
79-34-5	1 1 2 2-TETRACHLOROETHANE	0.0363	
96-18-4	1,2,3-TRICHLOROPROPANE	0.0378	
108-90-7	CHLOROBENZENE (conf. only)	0.0682	
460-00-4	2-Bromo-1-chloropropane	0.0271	

000047

Data File: /chem/gc11.1/gc11b07-1.b/11b0706-01R.d
Date: -FEB-1995 14:00
Client ID:
Sample Info: 40 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.1
Operator: jc
Column diameter: 0.53



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~~00004~~

Report Date : 07-Feb-1995 16:43 000048 Page 1

CT&E Environmental Services Inc. Charleston,WV

INITIAL CALIBRATION DATA

Start Cal Date : 11-JAN-95 08:40
End Cal Date : 11-JAN-1995 08:40
Quant Method : ISTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/gc11.i/gc11b07-2.b/gc11_602.m
Cal Date : 07-Feb-1995 16:36 lwork
Curve Type : Average

Calibration File Names:
Level 1: /chem/gc11.i/gc11b07-2.b/11b0702-01R.d
Level 2: /chem/gc11.i/gc11b07-2.b/11b0703-01R.d
Level 3: /chem/gc11.i/gc11b07-2.b/11b0704-01R.d
Level 4: /chem/gc11.i/gc11b07-2.b/11b0705-01R.d
Level 5: /chem/gc11.i/gc11b07-2.b/11b0706-01R.d

2.0 ug/L 5.0 ug/L 10.0 ug/L 20 ug/L 40 ug/L

Compound	10 Level 1	25 Level 2	50 Level 3	100 Level 4	200 Level 5	RRF	% RSD	
1 BENZENE	1.25967	1.65166	1.65202	1.68278	1.65603	1.58043	11.375	
4 TOLUENE ccc	1.63698	1.78717	1.66120	1.61229	1.53350	1.64623	5.603	
7 ETHYLBENZENE ccc	1.03878	1.46203	1.46686	1.47097	1.42053	1.37183	13.651	
8 m/p-XYLENE	1.24116	1.67677	1.67126	1.69233	1.63527	1.58336	12.153	
9 o-XYLENE	1.01490	1.40618	1.41680	1.42906	1.38911	1.33121	13.328	
5 TETRACHLOROETHENE	0.53491	0.69963	0.68381	0.70741	0.68931	0.66302	10.888	
6 CHLOROBENZENE spcc	1.16355	1.54559	1.54250	1.55750	1.50676	1.46318	11.520	
10 1 3-DICHLOROBENZENE	0.89789	1.18755	1.18485	1.20826	1.17687	1.13108	11.571	
11 1 4-DICHLOROBENZENE	1.57548	1.73413	1.54414	1.48238	1.40496	1.54822	7.923	
12 1 2-DICHLOROBENZENE	0.77192	1.06936	1.06112	1.07710	1.04328	1.00455	13.006	
14 VINYL CHLORIDE (conf. only)	*****	*****	*****	0.14652	0.10347	0.12501	24.336	<-
15 1 1-DICHLORETHENE (conf. only	0.42148	0.52905	0.64664	0.66527	0.64829	0.58215	18.032	
16 t-1 2-DICHLETHENE (conf. only	1.02207	1.37068	1.38335	1.39709	1.35023	1.30469	12.181	
17 c-1 2-DICHLETHENE (conf. only	*****	0.73643	0.73999	0.76943	0.73638	0.74556	2.146	<-
18 TRICHLOROETHENE (conf. only)	0.91819	0.98320	0.95510	0.93425	0.90004	0.93815	3.447	
19 c-1,3 DICHLPROPENE (conf. onl	*****	0.33076	0.33491	0.34015	0.33112	0.33423	1.307	<-
20 t-1,3-DICHLPROPENE (conf. onl	0.32477	0.42471	0.44574	0.45730	0.44283	0.41907	12.384	
$ 3 aaa-TFT	0.61076	0.60854	0.61586	0.61347	0.59877	0.60949	1.078	

000049

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-2.b/11b0702-01R.d
Lab Smp Id:
Inj Date : 07-FEB-95 11:31
Operator : jc Inst ID: gc11.i
Smp Info : 2.0 ppb std
Misc Info : Created from: 11b0702.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-2.b/gc11_602.m
Meth Date : 07-Feb-1995 16:45 1work Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	
RT	EXP RT	(REL RT)	RESPONSE		
2 FLUOROBENZENE					CAS #: 462-06-6
16.482	16.523	(1.000)	10469	125	
$ 3 aaa-TFT					CAS #: 2037-26-5
19.101	19.142	(1.159)	6394	125	125
1 BENZENE					CAS #: 71-43-2
15.581	15.629	(0.945)	1055	10.0	7.97
4 TOLUENE ccc					CAS #: 108-88-3
21.644	21.604	(1.313)	1371	10.0	9.94
7 ETHYLBENZENE ccc					CAS #: 100-41-4
24.123	24.067	(1.464)	870	10.0	7.57
8 m/p-XYLENE					CAS #: 108-38-3
24.394	24.350	(1.480)	2079	20.0	15.7
9 o-XYLENE					CAS #: 95-47-6
24.868	24.817	(1.509)	850	10.0	7.62

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
5 TETRACHLOROETHENE				CAS #: 127-18-4
22.812	22.842 (1.384)	448	10.0	8.07
6 CHLOROBENZENE spcc				CAS #: 108-90-7
23.795	23.725 (1.444)	1949	20.0	15.9
10 1 3-DICHLOROBENZENE				CAS #: 541-73-1
26.720	26.714 (1.621)	1504	20.0	15.9
11 1 4-DICHLOROBENZENE				CAS #: 106-46-7
26.797	26.788 (1.626)	2639	20.0	20.4
12 1 2-DICHLOROBENZENE				CAS #: 95-50-1
27.161	27.181 (1.648)	1293	20.0	15.4
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.059	28.083 (1.000)	14584	125	
15 1 1-DICHLORETHENE (conf. only)				CAS #: 75-35-4
6.052	6.047 (0.367)	353	10.0	7.24
16 t-1 2-DICHLETHENE (conf. only)				CAS #: 156-60-5
7.909	7.922 (0.480)	856	10.0	7.83
18 TRICHLOROETHENE (conf. only)				CAS #: 79-01-6
17.933	17.982 (1.088)	769	10.0	9.79
20 t-1,3-DICHLPROPENE (conf. only				CAS #: 542-75-6
21.085	21.119 (1.279)	272	10.0	7.75

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0702-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-2.b/gc11_602.m
Misc Info: Created from: 11b0702.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245

Level: MED
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	11436	5718	22872	10469	-8.46
13 4-Bromochlbenzene (c	16765	8382	33530	14584	-13.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.52	16.02	17.02	16.48	-0
13 4-Bromochlbenzene (c	28.07	27.57	28.57	28.06	-0.

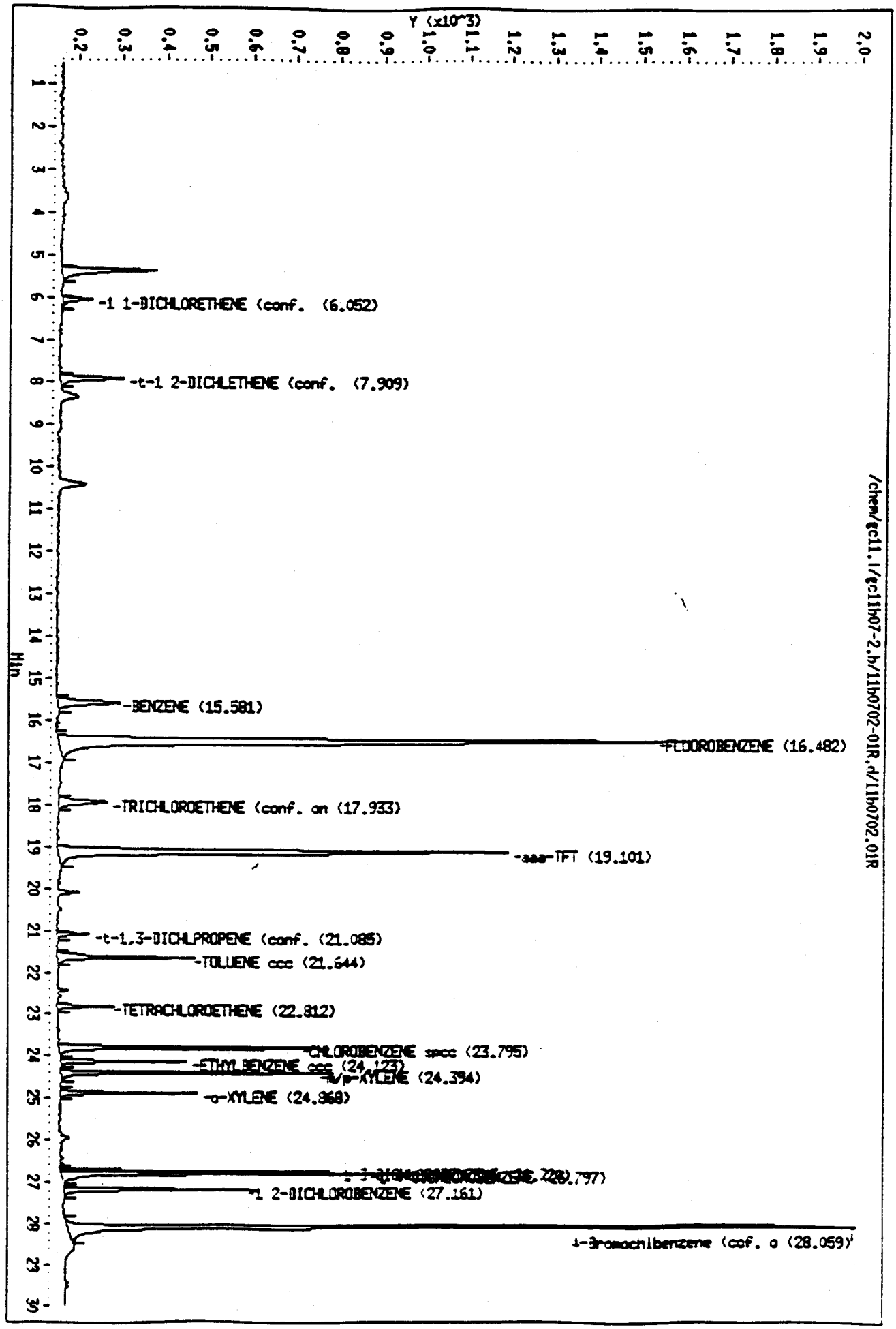
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name: Client SDG: gc11b07-2
Lab Smp Id:
Sample Location: Sample Point:
Sample Date: Date Received:
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: MED
Data Type: GC DATA Operator: jc
Misc Info: Created from: 11b0702.01R, 07-Feb-1995 15:45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.00159	
108-88-3	TOLUENE ccc	0.00199	
100-41-4	ETHYLBENZENE ccc	0.00151	
108-38-3	m/p-XYLENE	0.00314	
95-47-6	o-XYLENE	0.00152	
127-18-4	TETRACHLOROETHENE	0.00161	
108-90-7	CHLOROBENZENE spcc	0.00318	
541-73-1	1 3-DICHLOROBENZENE	0.00318	
106-46-7	1 4-DICHLOROBENZENE	0.00407	
95-50-1	1 2-DICHLOROBENZENE	0.00307	
79-01-6	TRICHLOROETHENE (conf. only)	0.00196	
2037-26-5	aaa-TFT	0.0250	



Data file: /chem/gc11.1/gc11h07-2.b/11h0702-01R.d
Date: 07-FEB-95 11:31
Client ID:
Sample Info: 2.0 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.1

Operator: jc
Column diameter: 0.53

Data File: /chem/gc11.i/gc11b07-2.b/11b0703-01R.d
Report Date: 07-Feb-1995 16:45

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-2.b/11b0703-01R.d
Lab Smp Id:
Inj Date : 07-FEB-95 12:08
Operator : jc Inst ID: gc11.i
Smp Info : 5.0 ppb
Misc Info : Created from: 11b0703.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-2.b/gc11_602.m
Meth Date : 07-Feb-1995 16:45 lwork Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS CAL-AMT	AMOUNTS ON-COL
RT	EXP RT (REL RT)	RESPONSE	(ng)	(ng)
2 FLUOROBENZENE				CAS #: 462-06-6
16.503	16.523 (1.000)	11549	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.118	19.142 (1.158)	7028	125	125
1 BENZENE				CAS #: 71-43-2
15.600	15.629 (0.945)	3815	25.0	26.1
4 TOLUENE ccc				CAS #: 108-88-3
21.654	21.604 (1.312)	4128	25.0	27.1
7 ETHYLBENZENE ccc				CAS #: 100-41-4
24.132	24.067 (1.462)	3377	25.0	26.6
8 m/p-XYLENE				CAS #: 108-38-3
24.402	24.350 (1.479)	7746	50.0	52.9
9 o-XYLENE				CAS #: 95-47-6
24.877	24.817 (1.507)	3248	25.0	26.4

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
5	TETRACHLOROETHENE			CAS #: 127-18-4
22.820	22.842 (1.383)	1616	25.0	26.4
6	CHLOROBENZENE spcc			CAS #: 108-90-7
23.803	23.725 (1.442)	7140	50.0	52.8
10	1 3-DICHLOROBENZENE			CAS #: 541-73-1
26.729	26.714 (1.620)	5486	50.0	52.5
11	1 4-DICHLCROBENZENE			CAS #: 106-46-7
26.803	26.788 (1.624)	8011	50.0	56.0
12	1 2-DICHLOROBENZENE			CAS #: 95-50-1
27.168	27.181 (1.646)	4940	50.0	53.2
* 13	4-Bromochlbenzene (cof. only)			CAS #: 2199-69-1
28.069	28.083 (1.000)	16345	125	
15	1 1-DICHLORETHENE (conf. only)			CAS #: 75-35-4
6.053	6.047 (0.367)	1222	25.0	22.7
16	t-1 2-DICHLETHENE (conf. only)			CAS #: 156-60-5
7.914	7.922 (0.480)	3166	25.0	26.3
17	c-1 2-DICHLETHENE (conf. only)			CAS #: 156-59-2
10.411	10.429 (0.631)	1701	25.0	24.7
18	TRICHLOROETHENE (conf. only)			CAS #: 79-01-6
17.956	17.982 (1.088)	2271	25.0	26.2
19	c-1,3 DICHLPROPENE (conf. only			CAS #: 542-75-6
20.111	20.129 (1.219)	764	25.0	24.7
20	t-1,3-DICHLPROPENE (conf. only			CAS #: 542-75-6
21.097	21.119 (1.278)	981	25.0	25.3

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0703-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-2.b/gc11_602.m
Misc Info: Created from: 11b0703.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245
Level: MED
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	11436	5718	22872	11549	0.99
13 4-Bromochlbenzene (c	16765	8382	33530	16345	-2.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.52	16.02	17.02	16.50	-0.08
13 4-Bromochlbenzene (c	28.07	27.57	28.57	28.07	-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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

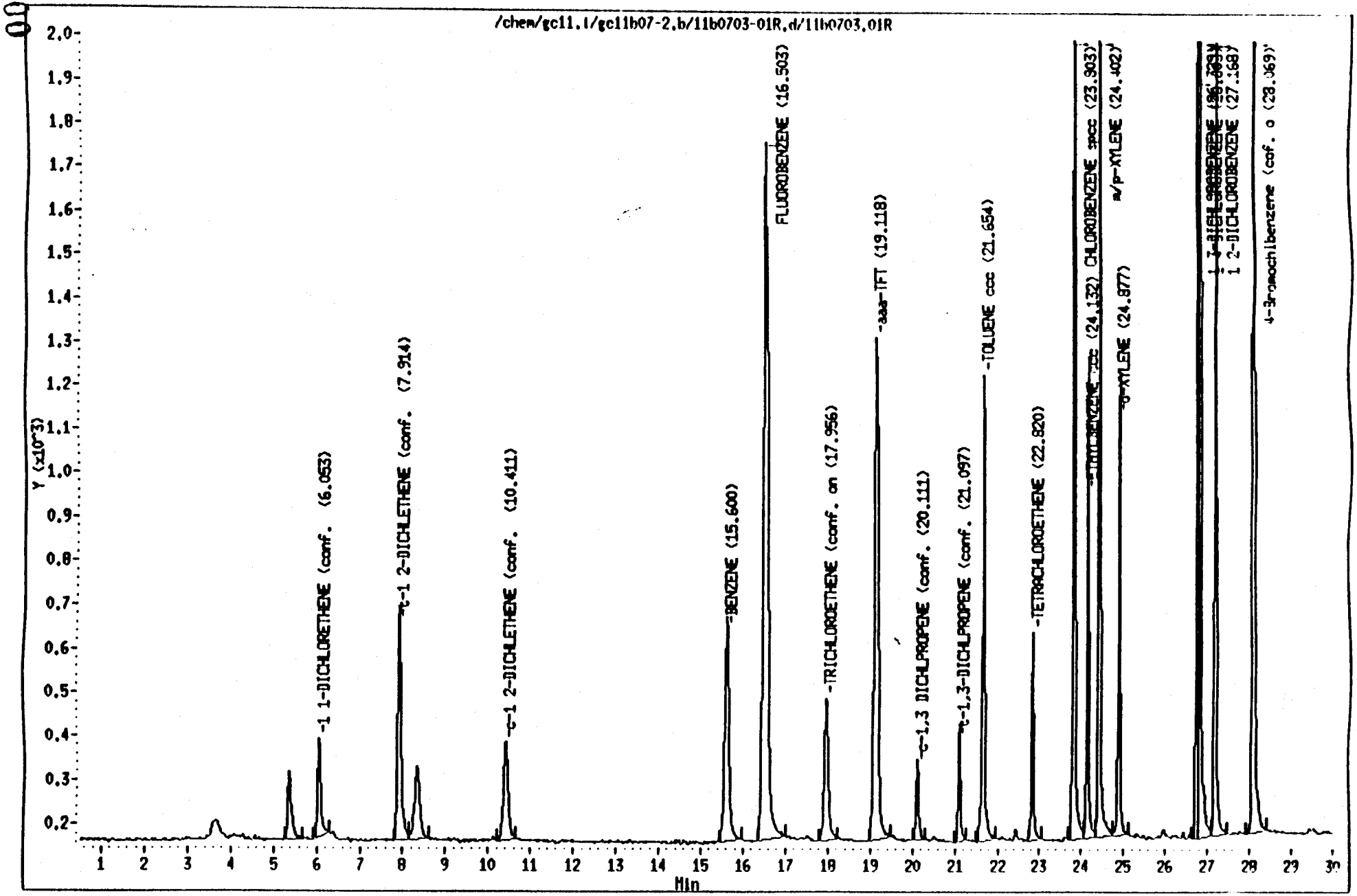
Client Name: Client SDG: gc11b07-2
Lab Smp Id:
Sample Location: Sample Point:
Sample Date: Date Received:
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: MED
Data Type: GC DATA Operator: jc
Misc Info: Created from: 11b0703.01R, 07-Feb-1995 15:45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.00522	
108-88-3	TOLUENE ccc	0.00543	
100-41-4	ETHYLBENZENE ccc	0.00533	
108-38-3	m/p-XYLENE	0.0106	
95-47-6	o-XYLENE	0.00528	
127-18-4	TETRACHLOROETHENE	0.00528	
108-90-7	CHLOROBENZENE spcc	0.0106	
541-73-1	1 3-DICHLOROBENZENE	0.0105	
106-46-7	1 4-DICHLOROBENZENE	0.0112	
95-50-1	1 2-DICHLOROBENZENE	0.0106	
79-01-6	TRICHLOROETHENE (conf. only)	0.00524	
2037-26-5	aaa-TFT	0.0250	

000058

Data File: /chem/gc11.i/gc11b07-2.b/11b0703-01R.d
Date : 07-FEB-95 12:08
Client ID:
Sample Info: 5.0 ppb
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b07-2.b/11b0704-01R.d
Report Date: 07-Feb-1995 16:45

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-2.b/11b0704-01R.d
Lab Smp Id:
Inj Date : 07-FEB-95 12:45
Operator : jc Inst ID: gc11.i
Smp Info : 10 ppb std
Misc Info : Created from: 11b0704.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-2.b/gc11_602.m
Meth Date : 07-Feb-1995 16:45 lwork Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS	
			CAL-AMT	ON-COL
RT	EXP RT (REL RT)	RESPONSE	(ng)	(ng)
**	====== ========	========	=======	=======
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.517	16.523 (1.000)	11436	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.130	19.142 (1.158)	7043	125	126
1 BENZENE				CAS #: 71-43-2
15.614	15.629 (0.945)	7557	50.0	52.3
4 TOLUENE ccc				CAS #: 108-88-3
21.661	21.604 (1.311)	7599	50.0	50.4
7 ETHYLBENZENE ccc				CAS #: 100-41-4
24.136	24.067 (1.461)	6710	50.0	53.5
8 m/p-XYLENE				CAS #: 108-38-3
24.406	24.350 (1.478)	15290	100	106
9 o-XYLENE				CAS #: 95-47-6
24.882	24.817 (1.506)	6481	50.0	53.2

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
5	TETRACHLOROETHENE			CAS #: 127-18-4
22.826	22.842 (1.382)	3128	50.0	51.6
6	CHLOROBENZENE spcc			CAS #: 108-90-7
23.809	23.725 (1.441)	14112	100	105
10	1 3-DICHLOROBENZENE			CAS #: 541-73-1
26.733	26.714 (1.618)	10840	100	105
11	1 4-DICHLOROBENZENE			CAS #: 106-46-7
26.808	26.788 (1.623)	14127	100	99.7
12	1 2-DICHLOROBENZENE			CAS #: 95-50-1
27.171	27.181 (1.645)	9708	100	106
* 13	4-Bromochlbenzene (cof. only)			CAS #: 2199-69-1
28.073	28.083 (1.000)	16765	125	
15	1 1-DICHLORETHENE (conf. only)			CAS #: 75-35-4
6.064	6.047 (0.367)	2958	50.0	55.5
16	t-1 2-DICHLETHENE (conf. only)			CAS #: 156-60-5
7.931	7.922 (0.480)	6328	50.0	53.0
17	c-1 2-DICHLETHENE (conf. only)			CAS #: 156-59-2
10.432	10.429 (0.632)	3385	50.0	49.6
18	TRICHLOROETHENE (conf. only)			CAS #: 79-01-6
17.970	17.982 (1.088)	4369	50.0	50.9
19	c-1,3 DICHLPROPENE (conf. only			CAS #: 542-75-6
20.118	20.129 (1.218)	1532	50.0	50.1
20	t-1,3-DICHLPROPENE (conf. only			CAS #: 542-75-6
21.103	21.119 (1.278)	2039	50.0	53.2

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0704-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-2.b/gc11_602.m
Misc Info: Created from: 11b0704.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245
Level: MED
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	11436	5718	22872	11436	0.00
13 4-Bromochlbenzene (c	16765	8382	33530	16765	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.52	16.02	17.02	16.52	0
13 4-Bromochlbenzene (c	28.07	27.57	28.57	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id:
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b0704.01R, 07-Feb-1995 15:45

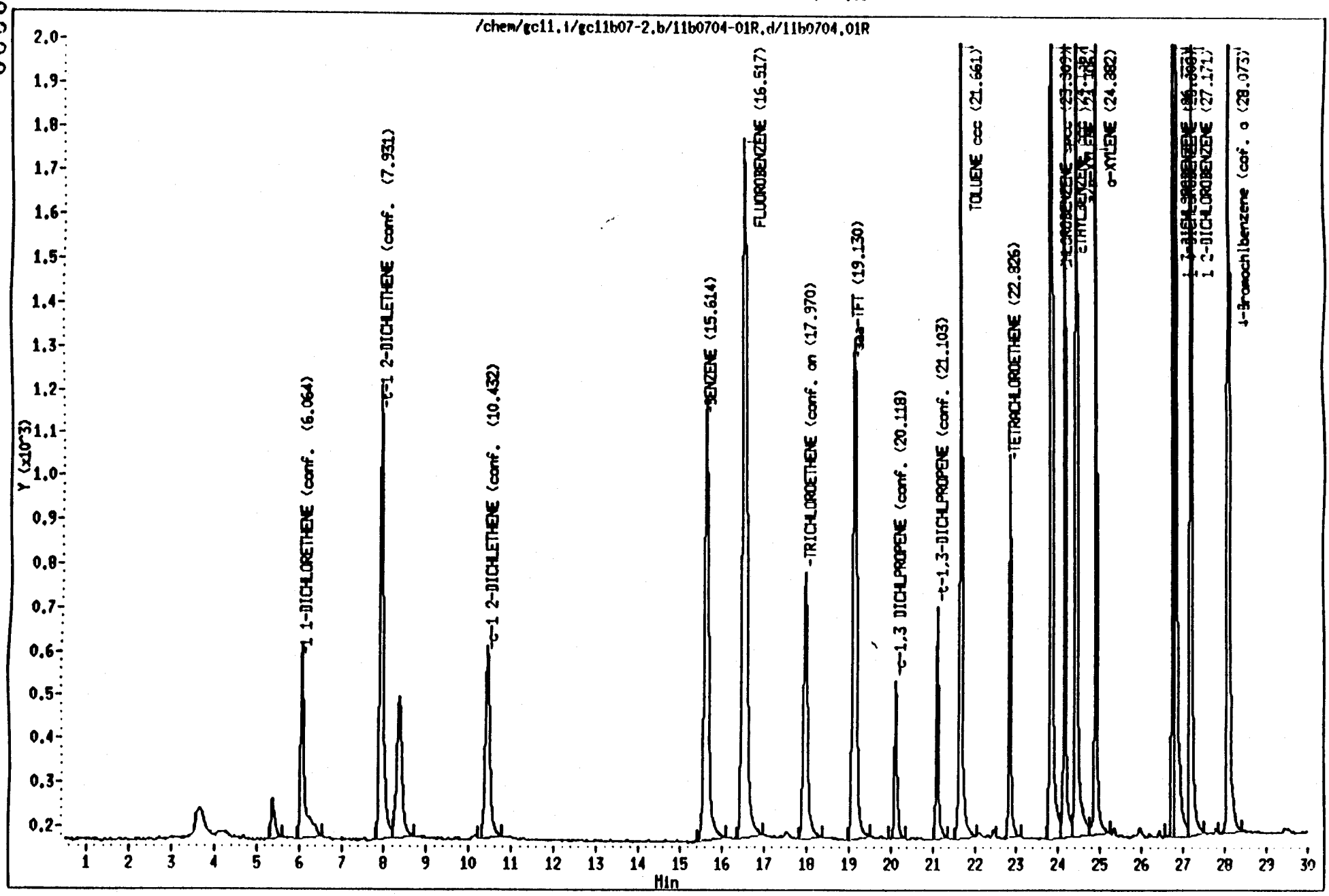
Client SDG: gc11b07-2
Sample Point:
Date Received:
Quant Type: ISTD
Level: MED
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.0104	
108-88-3	TOLUENE ccc	0.0101	
100-41-4	ETHYLBENZENE ccc	0.0107	
108-38-3	m/p-XYLENE	0.0211	
95-47-6	o-XYLENE	0.0106	
127-18-4	TETRACHLOROETHENE	0.0103	
108-90-7	CHLOROBENZENE spcc	0.0211	
541-73-1	1 3-DICHLOROBENZENE	0.0210	
106-46-7	1 4-DICHLOROBENZENE	0.0199	
95-50-1	1 2-DICHLOROBENZENE	0.0211	
79-01-6	TRICHLOROETHENE (conf. only)	0.0102	
2037-26-5	aaa-TFT	0.0253	

Data File: /chem/gc11.i/gc11b07-2.b/11b0704-01R.d
Date: 07-FEB-95 12:45
Client ID:
Sample Info: 10 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53

000063



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-2.b/11b0705-01R.d
Lab Smp Id:
Inj Date : 07-FEB-95 13:23
Operator : jc Inst ID: gc11.i
Smp Info : 20 ppb std
Misc Info : Created from: 11b0705.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-2.b/gc11_602.m
Meth Date : 07-Feb-1995 16:45 lwork Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS CAL-AMT	AMOUNTS ON-COL	
RT	EXP RT (REL RT)	RESPONSE	(ng)	(ng)	
*	2 FLUOROBENZENE			CAS #: 462-06-6	
16.532	16.523 (1.000)	11065	125		
$	3 aaa-TFT			CAS #: 2037-26-5	
19.142	19.142 (0.000)	6788	125	126	(M)
	1 BENZENE			CAS #: 71-43-2	
15.629	15.629 (0.000)	14896	100	106	(M)
	4 TOLUENE ccc			CAS #: 108-88-3	
21.668	21.604 (1.311)	14272	100	97.9	
	7 ETHYLBENZENE ccc			CAS #: 100-41-4	
24.143	24.067 (1.460)	13021	100	107	
	8 m/p-XYLENE			CAS #: 108-38-3	
24.414	24.350 (1.477)	29961	200	214	
	9 o-XYLENE			CAS #: 95-47-6	
24.886	24.817 (1.505)	12650	100	107	

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
5 TETRACHLOROETHENE				CAS #: 127-18-4
22.834	22.842 (1.381)	6262	100	107
6 CHLOROBENZENE spcc				CAS #: 108-90-7
23.816	23.725 (1.441)	27574	200	213
10 1 3-DICHLOROBENZENE				CAS #: 541-73-1
26.736	26.714 (1.617)	21391	200	214
11 1 4-DICHLOROBENZENE				CAS #: 106-46-7
26.813	26.788 (1.622)	26244	200	191
12 1 2-DICHLOROBENZENE				CAS #: 95-50-1
27.176	27.181 (1.644)	19069	200	214
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.079	28.083 (1.000)	16336	125	
14 VINYL CHLORIDE (conf. only)				CAS #: 75-01-4
3.664	3.630 (0.222)	1297	100	117
15 1 1-DICHLORETHENE (conf. only)				CAS #: 75-35-4
6.066	6.047 (0.367)	5889	100	114
16 t-1 2-DICHLETHENE (conf. only)				CAS #: 156-60-5
7.937	7.922 (0.480)	12367	100	107
17 c-1 2-DICHLETHENE (conf. only)				CAS #: 156-59-2
10.444	10.429 (0.632)	6811	100	103
18 TRICHLOROETHENE (conf. only)				CAS #: 79-01-6
17.986	17.982 (1.088)	8270	100	99.6
19 c-1,3 DICHLPROPENE (conf. only				CAS #: 542-75-6
20.129	20.129 (1.218)	3011	100	102
20 t-1,3-DICHLPROPENE (conf. only				CAS #: 542-75-6
21.113	21.119 (1.277)	4048	100	109

QC Flag Legend

M - Compound response manually integrated.

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY 000066

Instrument ID: gc11.i
Lab File ID: 11b0705-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-2.b/gc11_602.m
Misc Info: Created from: 11b0705.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245
Level: MED
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	11436	5718	22872	11065	-3.24
13 4-Bromochlbenzene (c	16765	8382	33530	16336	-2.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.52	16.02	17.02	16.53	0.09
13 4-Bromochlbenzene (c	28.07	27.57	28.57	28.08	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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

000067

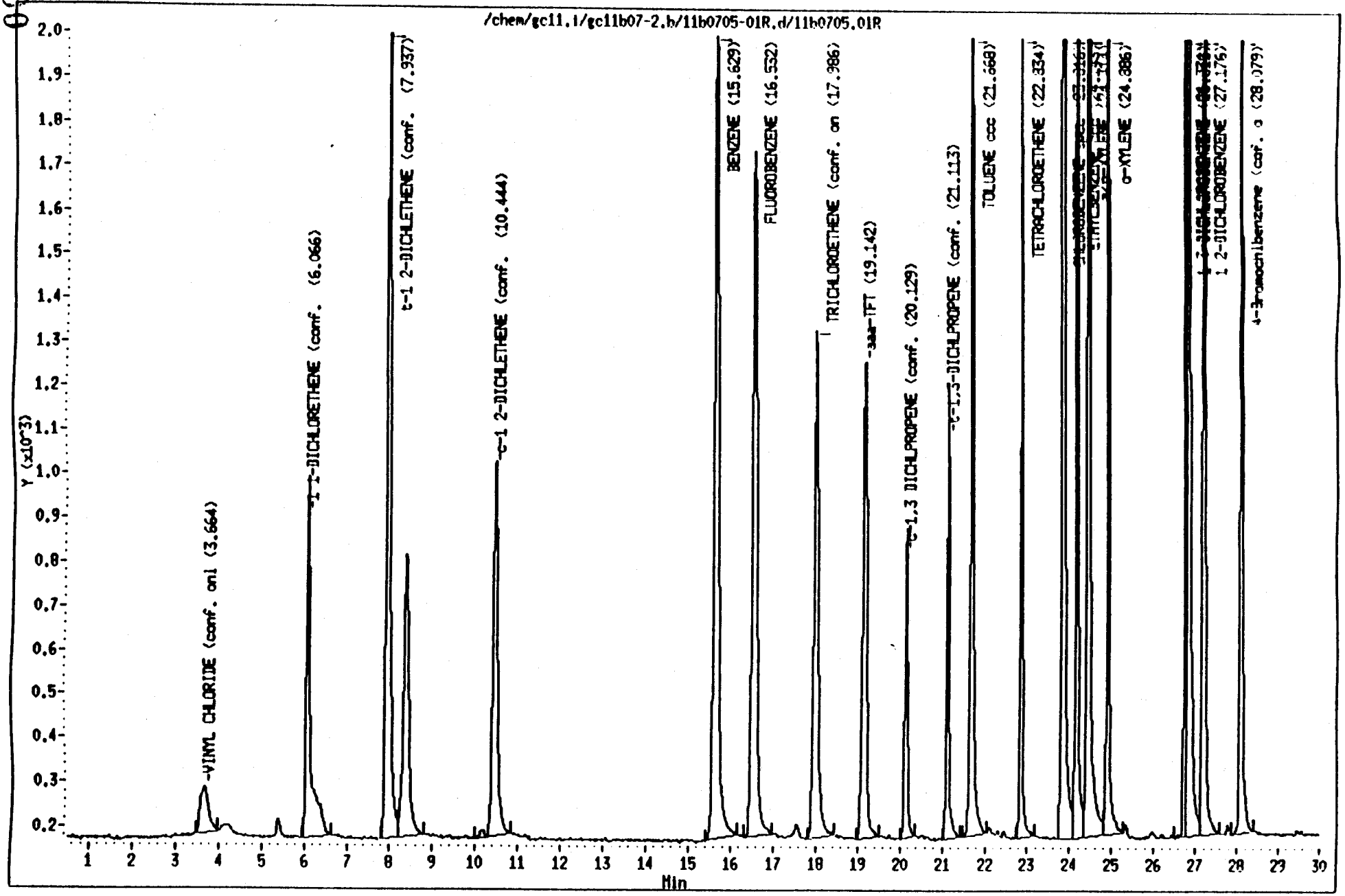
Client Name: Client SDG: gc11b07-2
Lab Smp Id:
Sample Location: Sample Point:
Sample Date: Date Received:
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: MED
Data Type: GC DATA Operator: jc
Misc Info: Created from: 11b0705.01R, 07-Feb-1995 15:45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.0213	
108-88-3	TOLUENE ccc	0.0196	
100-41-4	ETHYLBENZENE ccc	0.0214	
108-38-3	m/p-XYLENE	0.0428	
95-47-6	o-XYLENE	0.0215	
127-18-4	TETRACHLOROETHENE	0.0213	
108-90-7	CHLOROBENZENE spcc	0.0426	
541-73-1	1 3-DICHLOROBENZENE	0.0427	
106-46-7	1 4-DICHLOROBENZENE	0.0383	
95-50-1	1 2-DICHLOROBENZENE	0.0429	
75-01-4	VINYL CHLORIDE (conf. only)	0.0234	
79-01-6	TRICHLOROETHENE (conf. only)	0.0199	
2037-26-5	aaa-TFT	0.0252	

Data File: /chem/gc11.i/gc11b07-2.b/11b0705-01R.d
Date : 07-FEB-95 13:23
Client ID:
Sample Info: 20 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53

000068



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b07-2.b/11b0706-01R.d
Lab Smp Id:
Inj Date : 07-FEB-95 14:00
Operator : jc Inst ID: gc11.i
Smp Info : 40 ppb std
Misc Info : Created from: 11b0706.01R, 07-Feb-1995 15:45
Comment :
Method : /chem/gc11.i/gc11b07-2.b/gc11_602.m
Meth Date : 07-Feb-1995 16:45 lwork Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS		
			CAL-AMT	ON-COL	
RT	EXP RT (REL RT)	RESPONSE	(ng)	(ng)	
* 2 FLUOROBENZENE				CAS #: 462-06-6	
16.538	16.523 (1.000)	11380	125		
$ 3 aaa-TFT				CAS #: 2037-26-5	
19.147	19.142 (1.158)	6814	125	123	
1 BENZENE				CAS #: 71-43-2	
15.635	15.629 (0.945)	30153	200	210	(A)
4 TOLUENE ccc				CAS #: 108-88-3	
21.671	21.604 (1.310)	27922	200	186	
7 ETHYLBENZENE ccc				CAS #: 100-41-4	
24.148	24.067 (1.460)	25865	200	207	(A)
8 m/p-XYLENE				CAS #: 108-38-3	
24.417	24.350 (1.476)	59550	400	413	(A)
9 o-XYLENE				CAS #: 95-47-6	
24.891	24.817 (1.505)	25293	200	209	(A)

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
5 TETRACHLOROETHENE				CAS #: 127-18-4	
22.836	22.842 (1.381)	12551	200	208	(A)
6 CHLOROBENZENE spcc				CAS #: 108-90-7	
23.820	23.725 (1.440)	54870	400	412	(A)
10 1 3-DICHLOROBENZENE				CAS #: 541-73-1	
26.742	26.714 (1.617)	42857	400	416	(A)
11 1 4-DICHLOROBENZENE				CAS #: 106-46-7	
26.817	26.788 (1.622)	51163	400	363	
12 1 2-DICHLOROBENZENE				CAS #: 95-50-1	
27.182	27.181 (1.644)	37992	400	415	(A)
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1	
28.083	28.083 (1.000)	16641	125		
14 VINYL CHLORIDE (conf. only)				CAS #: 75-01-4	
3.678	3.630 (0.222)	1884	200	166	
15 1 1-DICHLORETHENE (conf. only)				CAS #: 75-35-4	
6.066	6.047 (0.367)	11804	200	223	(A)
16 t-1 2-DICHLETHENE (conf. only)				CAS #: 156-60-5	
7.940	7.922 (0.480)	24585	200	207	(A)
17 c-1 2-DICHLETHENE (conf. only)				CAS #: 156-59-2	
10.451	10.429 (0.632)	13408	200	198	
18 TRICHLOROETHENE (conf. only)				CAS #: 79-01-6	
17.992	17.982 (1.088)	16388	200	192	
19 c-1,3 DICHLPROPENE (conf. only				CAS #: 542-75-6	
20.133	20.129 (1.217)	6029	200	198	
20 t-1,3-DICHLPROPENE (conf. only				CAS #: 542-75-6	
21.117	21.119 (1.277)	8063	200	211	(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b0706-01R.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b07-2.b/gc11_602.m
Misc Info: Created from: 11b0706.01R, 07-Feb-1995 15:45

Calibration Date: 02/07/95
Calibration Time: 1245
Level: MED
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	11436	5718	22872	11380	-0.49
13 4-Bromochlbenzene (c	16765	8382	33530	16641	-0.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.52	16.02	17.02	16.54	0
13 4-Bromochlbenzene (c	28.07	27.57	28.57	28.08	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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name: Client SDG: gc11b07-2
Lab Smp Id:
Sample Location: Sample Point:
Sample Date: Date Received:
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: MED
Data Type: GC DATA Operator: jc
Misc Info: Created from: 11b0706.01R, 07-Feb-1995 15:45

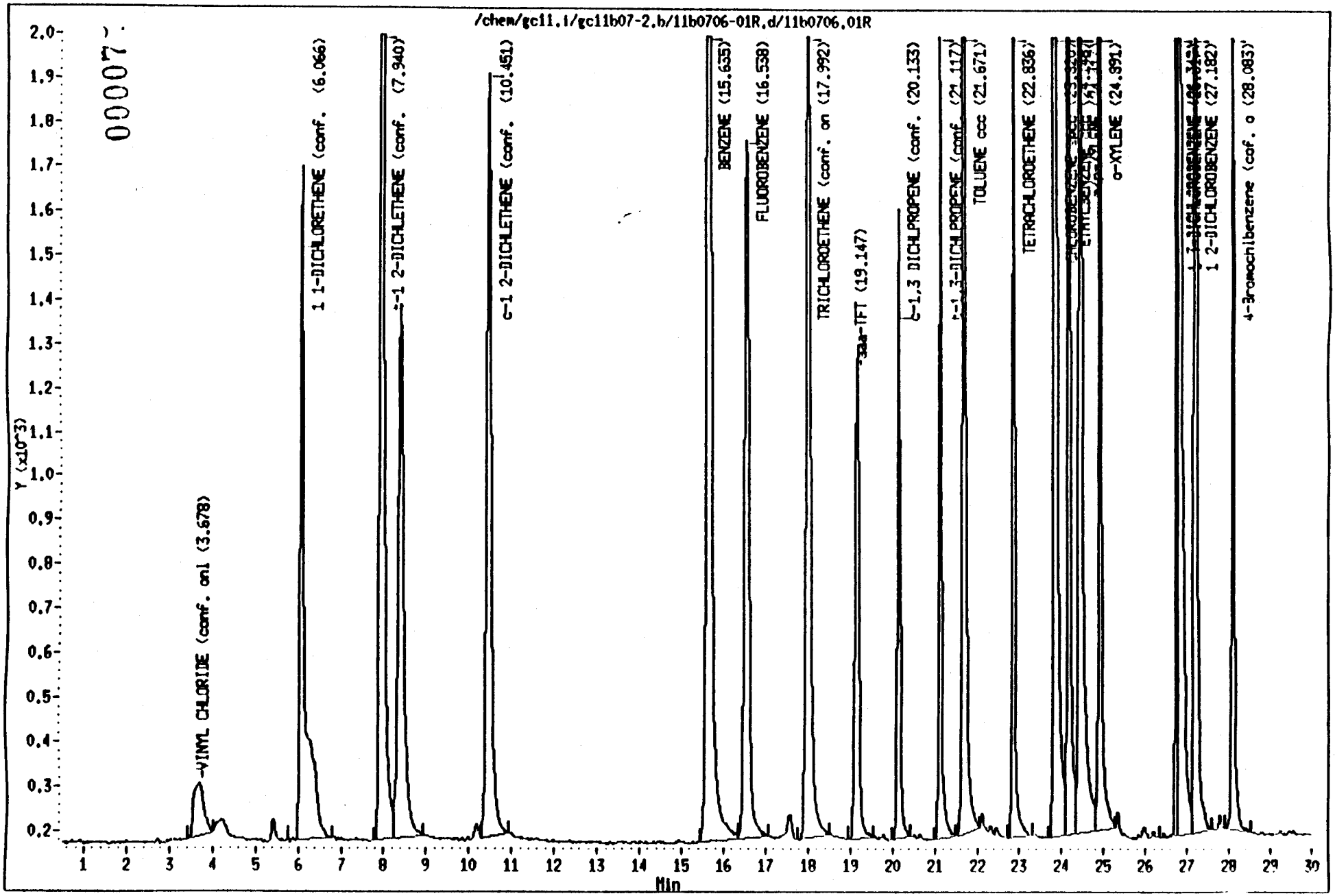
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.0419	E
108-88-3	TOLUENE ccc	0.0373	
100-41-4	ETHYLBENZENE ccc	0.0414	E
108-38-3	m/p-XYLENE	0.0826	E
95-47-6	o-XYLENE	0.0417	E
127-18-4	TETRACHLOROETHENE	0.0416	E
108-90-7	CHLOROBENZENE spcc	0.0824	E
541-73-1	1 3-DICHLOROBENZENE	0.0832	E
106-46-7	1 4-DICHLOROBENZENE	0.0726	
95-50-1	1 2-DICHLOROBENZENE	0.0831	E
75-01-4	VINYL CHLORIDE (conf. only)	0.0331	
79-01-6	TRICHLOROETHENE (conf. only)	0.0384	
2037-26-5	aaa-TFT	0.0246	

Data File: /chem/gc11.i/gc11b07-2.b/11b0706-01R.d
Date: [redacted]-FEB-95 14:00
Client: [redacted]:
Sample Info: 40 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53

/chem/gc11.i/gc11b07-2.b/11b0706-01R.d/11b0706.01R

00007



CT&E Environmental Services Inc. Charleston,WV

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc11.i
Lab File ID: 11b1502-01R.d
Analysis Type: WATER
Lab Sample ID: ccal11
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m

Injection Date: 15-FEB-1995 08:39
Init. Calibration Date(s): JAN/11/95 02/07/95
Init. Calibration Times: 08:40 14:00
Quant Type: ISTD

	COMPOUND	$\overline{RRF}$	RF50	MIN RRF	%D	MAX %D
	1 DICHLORODIFLUOROMETHANE	0.725	0.638	0.010	12.0	15.0
	2 VINYL CHLORIDE	1.062	1.091	0.010	2.7	15.0
	3 BROMOMETHANE	0.847	0.851	0.010	0.4	15.0
	4 CHLOROETHANE	0.851	0.749	0.010	12.0	15.0
	5 TRICHLOROFLUOROMETHANE	1.967	2.053	0.010	4.4	15.0
	6 1 1-DICHLOROETHENE	1.923	1.927	0.010	0.2	15.0
	7 METHYLENE CHLORIDE	2.938	2.858	0.010	2.7	15.0
	8 trans-1 2-DICHLOROETHENE	2.181	2.109	0.010	3.3	15.0
	9 1,1-DICHLOROETHANE	2.418	2.259	0.300	6.6	15.0
	10 cis-1 2-DICHLOROETHENE	2.172	2.130	0.010	1.9	15.0
	11 BROMOCHLOROMETHANE	1.321	1.335	0.010	1.0	15.0
	12 CHLOROFORM	3.077	3.020	0.010	1.9	15.0
	13 1 2-DICHLOROETHANE	1.777	1.747	0.010	1.7	15.0
	14 1 1 1-TRICHLOROETHANE	2.697	2.687	0.010	0.4	15.0
	15 CARBON TETRACHLORIDE	2.894	2.875	0.010	0.6	15.0
	16 DIBROMOMETHANE	0.844	0.833	0.010	1.2	15.0
	17 1,2-DICHLOROPROPANE	1.828	1.796	0.010	1.8	15.0
	18 TRICHLOROETHENE	2.605	2.516	0.010	3.4	15.0
	19 BROMODICHLOROMETHANE	2.396	2.232	0.010	6.9	15.0
	20 cis-1,3 DICHLOROPROPENE	1.781	1.717	0.010	3.6	15.0
	21 trans-1,3-DICHLOROPROPENE	1.493	1.426	0.010	4.5	15.0
	22 1 1 2-TRICHLOROETHANE	1.877	1.826	0.010	2.8	15.0
$	23 2-Bromo-1-chloropropane	1.364	1.337	0.010	2.0	15.0
	24 DIBROMOCHLOROMETHANE	1.628	1.393	0.010	14.4	15.0
	25 TETRACHLOROETHENE	2.511	2.663	0.010	6.0	15.0
	26 1 1 1 2-TETRACHLOROETHANE	2.071	2.121	0.010	2.4	15.0
	33 CHLOROBENZENE (conf. only)	1.036	1.109	0.300	7.0	15.0
	27 BROMOFORM spcc	0.909	0.825	0.250	9.2	15.0
	28 1 1 2 2-TETRACHLOROETHANE	1.199	1.149	0.300	4.2	15.0
	29 1,2,3-TRICHLOROPROPANE	1.075	1.029	0.010	4.3	15.0
	34 1 3-DICHLBENZENE (conf. only	1.057	1.153	0.010	9.0	15.0
	35 1 4-DICHLBENZENE (conf. only	1.530	1.392	0.010	9.0	15.0
	36 1 2-DICHLBENZENE (conf. only	1.217	1.240	0.010	1.8	15.0

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1502-01R.d
Lab Smp Id: ccal11 Client Smp ID: ccal11
Inj Date : 15-FEB-1995 08:39
Operator : jc Inst ID: gc11.i
Smp Info : 10 ppb std
Misc Info : Created from: 11b1502.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	
1 DICHLORODIFLUOROMETHANE				CAS #: 75-71-8	
3.370	3.368 (0.120)	385816	50.0	44.0	
2 VINYL CHLORIDE				CAS #: 75-01-4	
3.687	3.630 (0.131)	659724	50.0	51.4	
3 BROMOMETHANE				CAS #: 74-83-9	
4.300	4.333 (0.153)	514471	50.0	50.2	
4 CHLOROETHANE				CAS #: 75-00-3	
4.429	4.417 (0.158)	453299	50.0	44.0	
5 TRICHLOROFLUOROMETHANE				CAS #: 75-69-4	
5.133	5.133 (0.183)	1241693	50.0	52.2	(M)
6 1 1-DICHLOROETHENE				CAS #: 75-35-4	
6.078	6.047 (0.217)	1165758	50.0	50.1	
7 METHYLENE CHLORIDE				CAS #: 75-09-2	
6.403	6.387 (0.228)	1728669	50.0	48.6	

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	8 trans-1 2-DICHLOROETHENE			CAS #: 156-60-5
7.940	7.922 (0.283)	1275625	50.0	48.4
	9 1,1-DICHLOROETHANE			CAS #: 75-34-3
8.601	8.589 (0.306)	1366180	50.0	46.7
	10 cis-1 2-DICHLOROETHENE			CAS #: 156-59-2
10.432	10.429 (0.372)	1288570	50.0	49.0
	11 BROMOCHLOROMETHANE			CAS #: 74-97-5
10.955	10.985 (0.390)	807270	50.0	50.5
	12 CHLOROFORM			CAS #: 67-66-3
11.240	11.246 (0.400)	1826379	50.0	49.1
	13 1 2-DICHLOROETHANE			CAS #: 107-06-2
13.806	13.824 (0.492)	1056466	50.0	49.2
	14 1 1 1-TRICHLOROETHANE			CAS #: 71-55-6
14.114	14.115 (0.503)	1624992	50.0	49.8
	15 CARBON TETRACHLORIDE			CAS #: 56-23-5
15.384	15.393 (0.548)	1739181	50.0	49.7
	16 DIBROMOMETHANE			CAS #: 74-95-3
17.543	17.563 (0.625)	504131	50.0	49.4
	17 1,2-DICHLOROPROPANE			CAS #: 78-87-5
17.766	17.783 (0.633)	1086339	50.0	49.1
	18 TRICHLOROETHENE			CAS #: 79-01-6
17.965	17.982 (0.640)	1521890	50.0	48.3
	19 BROMODICHLOROMETHANE			CAS #: 75-27-4
18.105	18.131 (0.645)	1349820	50.0	46.6
	20 cis-1,3 DICHLOROPROPENE			CAS #: 542-75-6
20.122	20.129 (0.717)	1038764	50.0	48.2
	21 trans-1,3-DICHLOROPROPENE			CAS #: 542-75-6
21.108	21.119 (0.752)	862209	50.0	47.8
	22 1 1 2-TRICHLOROETHANE			CAS #: 79-00-5
21.319	21.326 (0.759)	1104214	50.0	48.6
$	23 2-Bromo-1-chloropropane			CAS #: 460-00-4
21.594	21.604 (0.769)	2021254	125	122

000077

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.115	22.124 (0.788)	842477	50.0	42.8
25 TETRACHLOROETHENE				CAS #: 127-18-4
22.829	22.842 (0.813)	1610401	50.0	53.0
26 1 1 1 2-TETRACHLOROETHANE				CAS #: 630-26-6
23.719	23.725 (0.845)	1283109	50.0	51.2
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7
23.811	23.824 (0.848)	1341839	100	107
27 BROMOFORM spcc				CAS #: 75-25-2
24.425	24.436 (0.870)	499098	50.0	45.4
28 1 1 2 2-TETRACHLOROETHANE				CAS #: 79-34-5
24.872	24.850 (0.886)	694950	50.0	47.9
29 1,2,3-TRICHLOROPROPANE				CAS #: 96-18-4
25.037	25.017 (0.892)	622297	50.0	47.8
34 1 3-DICHLBENZENE (conf. only)				CAS #: 541-73-1
26.732	26.742 (0.952)	1394810	100	109
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.805	26.823 (0.955)	1683880	100	91.0
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.170	27.181 (0.968)	1499693	100	102
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.070	28.083 (1.000)	1512109	125	

QC Flag Legend

M - Compound response manually integrated.

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1502-01R.d
Lab Smp Id: ccal11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1502.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 2213
Client Smp ID: ccal11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1529470	764735	3058940	1512109	-1.14

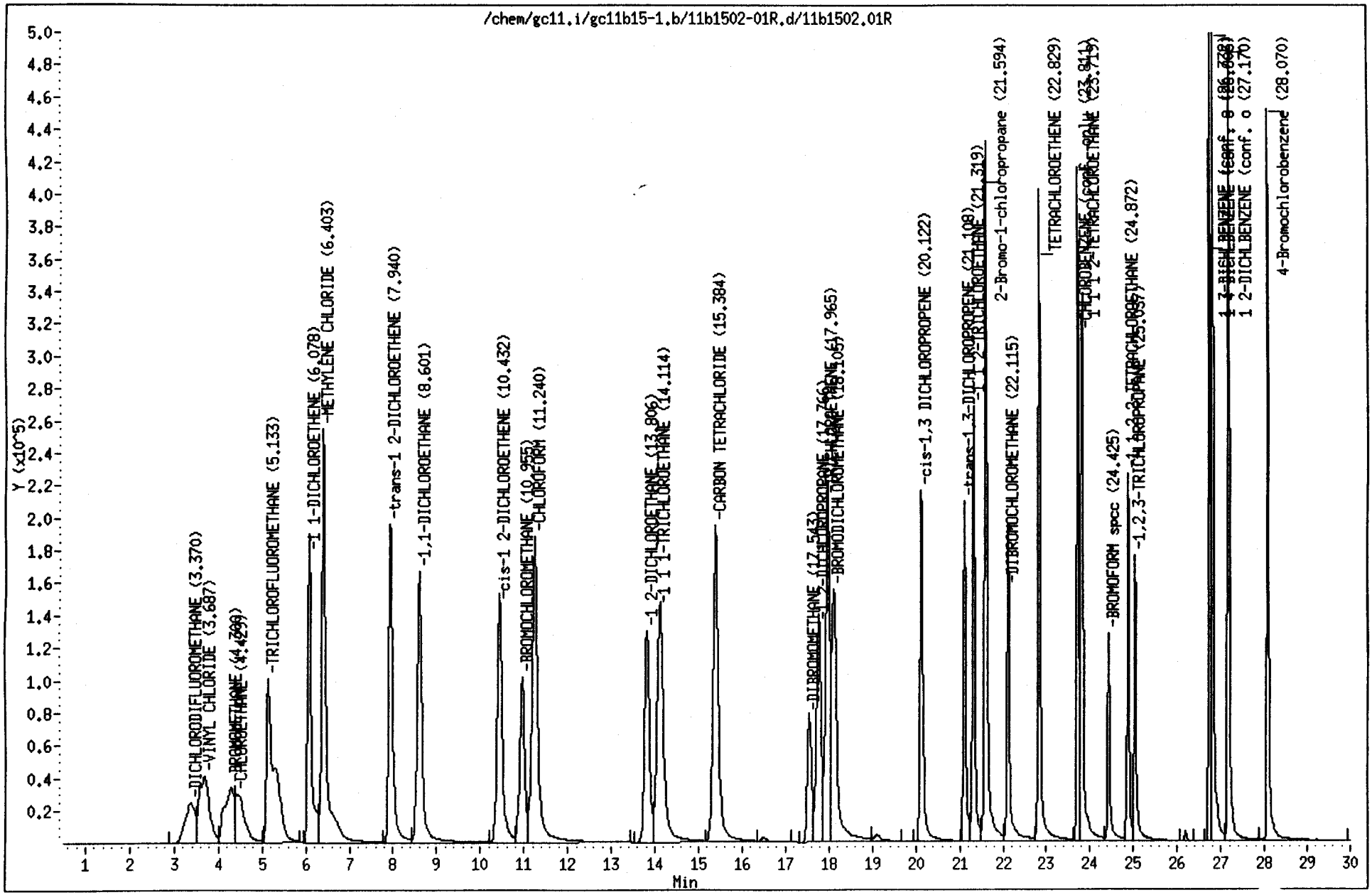
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.06	27.56	28.56	28.07	0.04

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.

000079

Data File: /chem/gc11.i/gc11b15-1.b/11b1502-01R.d
Date : 15-FEB-1995 08:39
Client ID: ccal11
Sample Info: 10 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc11.i
Lab File ID: 11b1502-01R.d
Analysis Type: WATER
Lab Sample ID: ccal11
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m

Injection Date: 15-FEB-1995 08:39
Init. Calibration Date(s): JAN/11/95 JAN/11/95
Init. Calibration Times: 08:40 08:40
Quant Type: ISTD

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
$ 3 aaa-TFT	0.609	0.615	0.010	0.9	15.0	
1 BENZENE	1.580	1.535	0.010	2.9	15.0	
4 TOLUENE ccc	1.646	1.572	0.010	4.5	15.0	
7 ETHYLBENZENE ccc	1.372	1.371	0.010	0.0	15.0	
8 m/p-XYLENE	1.583	1.561	0.010	1.4	15.0	
9 o-XYLENE	1.331	1.302	0.010	2.2	15.0	
5 TETRACHLOROETHENE	0.663	0.738	0.010	11.4	15.0	
6 CHLOROBENZENE spcc	1.463	1.433	0.300	2.0	15.0	
10 1 3-DICHLOROBENZENE	1.131	1.091	0.010	3.6	15.0	
11 1 4-DICHLOROBENZENE	1.548	1.329	0.010	14.1	15.0	
12 1 2-DICHLOROBENZENE	1.005	0.968	0.010	3.7	15.0	
14 VINYL CHLORIDE (conf. only)	0.125	++++	0.010	++++	15.0	<-
15 1 1-DICHLORETHENE (conf. onl	0.582	0.493	0.010	15.4	15.0	<-
16 t-1 2-DICHLETHENE (conf. onl	1.305	1.307	0.010	0.2	15.0	
17 c-1 2-DICHLETHENE (conf. onl	0.746	0.693	0.010	7.1	15.0	
18 TRICHLOROETHENE (conf. only)	0.938	0.874	0.010	6.8	15.0	
19 c-1,3 DICHLPROPENE (conf. on	0.334	0.298	0.010	10.8	15.0	
20 t-1,3-DICHLPROPENE (conf. on	0.419	0.418	0.010	0.4	15.0	

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1502-01R.d
Lab Smp Id: ccal11 Client Smp ID: ccal11
Inj Date : 15-FEB-1995 08:39
Operator : jc Inst ID: gc11.i
Smp Info : 10 ppb std
Misc Info : Created from: 11b1502.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			AMOUNTS CAL-AMT ng)	AMOUNTS ON-COL ng)	
RT	EXP RT (REL RT)	RESPONSE			
* 2 FLUOROBENZENE					CAS #: 462-06-6
16.503	16.523 (1.000)	10249	125		
$ 3 aaa-TFT					CAS #: 2037-26-5
19.119	19.142 (1.159)	6301	125	126	
1 BENZENE					CAS #: 71-43-2
15.599	15.629 (0.945)	6294	50.0	48.6	
4 TOLUENE ccc					CAS #: 108-88-3
21.652	21.604 (1.312)	6444	50.0	47.7	
7 ETHYLBENZENE ccc					CAS #: 100-41-4
24.126	24.067 (1.462)	5622	50.0	50.0	
8 m/p-XYLENE					CAS #: 108-38-3
24.396	24.350 (1.478)	12802	100	98.6	
9 o-XYLENE					CAS #: 95-47-6
24.869	24.817 (1.507)	5336	50.0	48.9	

RT	EXP RT (REL RT)	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
5 TETRACHLOROETHENE				CAS #: 127-18-4
22.817	22.842 (1.383)	3027	50.0	55.7
6 CHLOROBENZENE spcc				CAS #: 108-90-7
23.799	23.725 (1.442)	11753	100	98.0
10 1 3-DICHLOROBENZENE				CAS #: 541-73-1
26.718	26.714 (1.619)	8944	100	96.4
11 1 4-DICHLOROBENZENE				CAS #: 106-46-7
26.794	26.788 (1.624)	10898	100	85.8
12 1 2-DICHLOROBENZENE				CAS #: 95-50-1
27.157	27.181 (1.646)	7933	100	96.3
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.058	28.083 (1.000)	14434	125	
15 1 1-DICHLORETHENE (conf. only)				CAS #: 75-35-4
6.063	6.047 (0.367)	2020	50.0	42.3
16 t-1 2-DICHLETHENE (conf. only)				CAS #: 156-60-5
7.928	7.922 (0.480)	5359	50.0	50.1
17 c-1 2-DICHLETHENE (conf. only)				CAS #: 156-59-2
10.422	10.429 (0.632)	2841	50.0	46.5
18 TRICHLOROETHENE (conf. only)				CAS #: 79-01-6
17.956	17.982 (1.088)	3583	50.0	46.6
19 c-1,3 DICHLPROPENE (conf. only				CAS #: 542-75-6
20.110	20.129 (1.219)	1222	50.0	44.6
20 t-1,3-DICHLPROPENE (conf. only				CAS #: 542-75-6
21.096	21.119 (1.278)	1712	50.0	49.8

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1502-01R.d
Lab Smp Id: ccal11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1502.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: ccal11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	10249	0.00
13 4-Bromochlbenzene (c	14434	7217	28868	14434	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.50	0.00
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.06	0.00

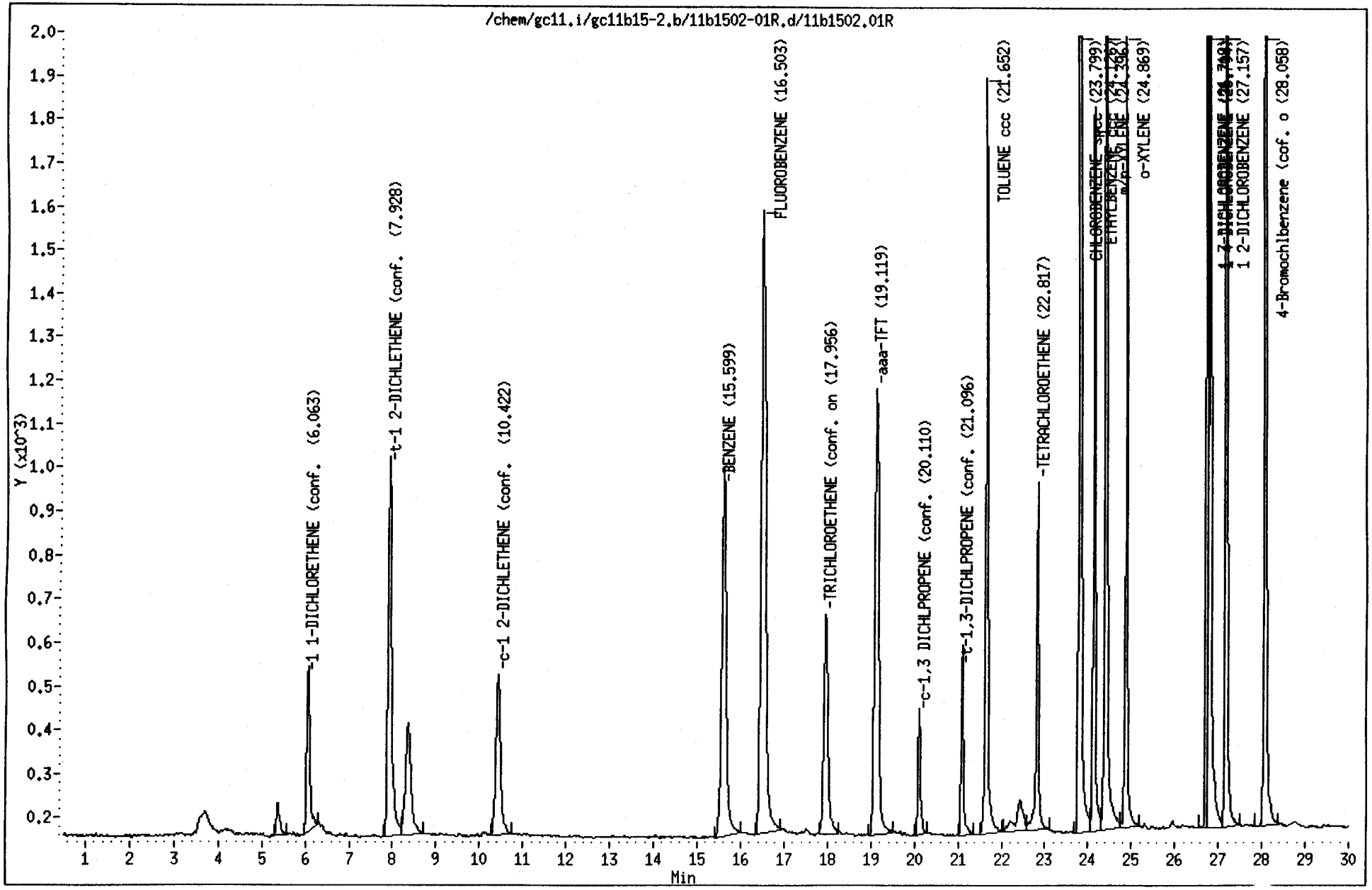
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

000084

Data File: /chem/gc11.i/gc11b15-2.b/11b1502-01R.d
Date : 15-FEB-1995 08:39
Client ID: ccal11
Sample Info: 10 ppb std
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b15-1.b/11b1503-01R.d
Report Date: 21-Feb-1995 16:05

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1503-01R.d
Lab Smp Id: blank Client Smp ID: blank
Inj Date : 15-FEB-95 09:15
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1503.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			CONCENTRATIONS ON-COL	FINAL
RT	EXP RT (REL RT)	RESPONSE	(ng)	(mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.984	17.982 (0.640)	98811	3.20	0
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.601	21.604 (0.769)	1988550	123	0.0246
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.115	22.124 (0.787)	77550	4.02	0
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.820	26.823 (0.955)	60241	3.33	0
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.185	27.181 (0.968)	35036	2.43	0
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.087	28.083 (1.000)	1479206	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1503-01R.d
Lab Smp Id: blank
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1503.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: blank
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1479206	-2.18

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.09	0.06

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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: blank
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: blank
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1503.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0246	98.57	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: blank
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1503.01R, 21-Feb-1995 12:16

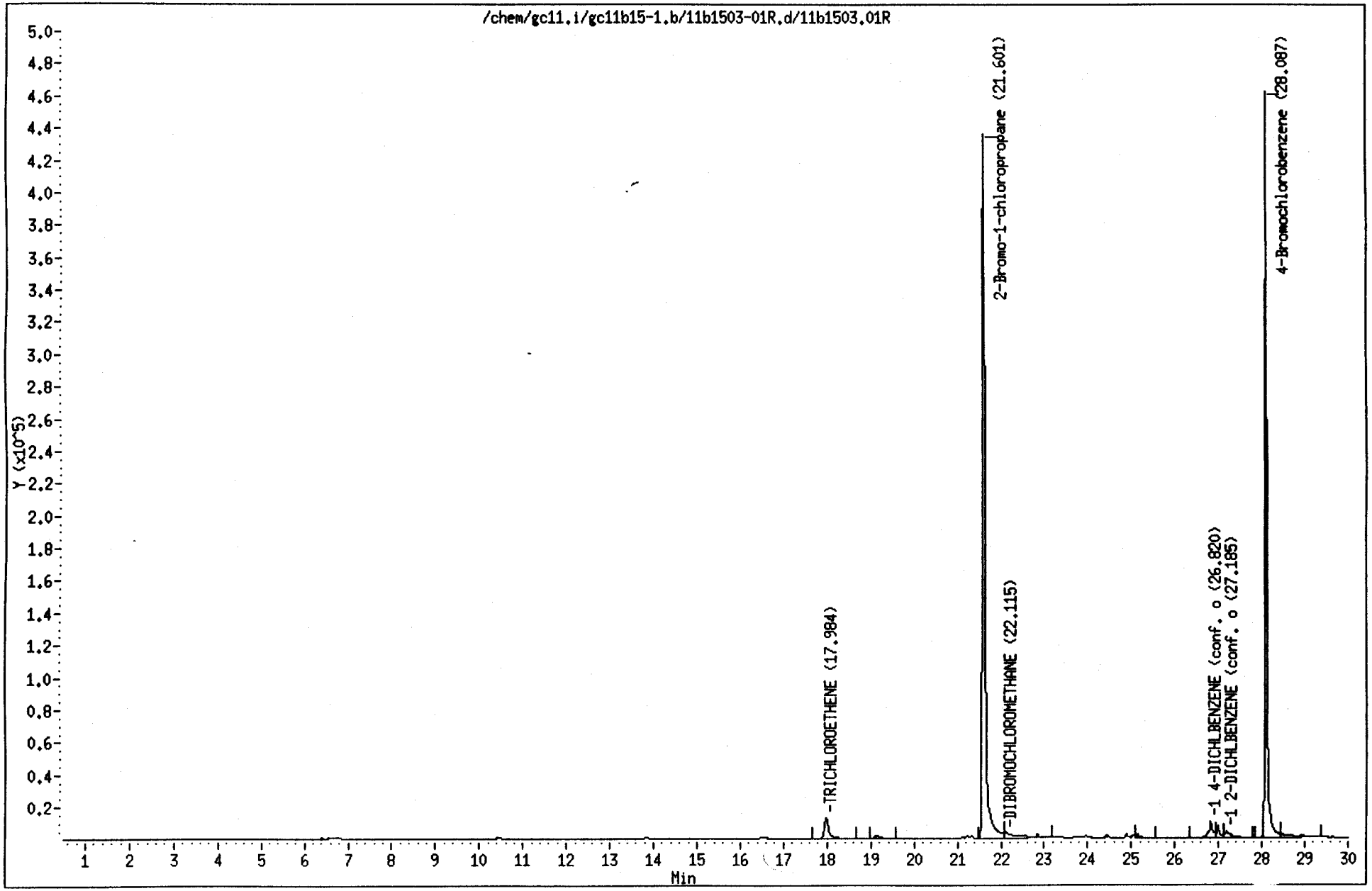
Client SDG: gc11b15-1
Client Smp ID: blank
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000641	
124-48-1	DIBROMOCHLOROMETHANE	0.000805	
460-00-4	2-Bromo-1-chloropropane	0.0246	

000089

Data File: /chem/gc11.i/gc11b15-1.b/11b1503-01R.d
Date : 15-FEB-95 09:15
Client ID: blank
Sample Info: blank
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc.

000090

CT&E - Environmental Services

Laboratory Project ID# : 295-02-0262-001/010
Project Name : Watauga County
Sampling Date : 2/10/94

Retention Time Criteria Log Sheet

Instrument Name: HP5890II
Instrument ID : GC11
Retention Times Update : 10/6/94
Printout Date : 3/1/95

		Date :	10/6/94			
Analyte Name	CAS #	Standard Replicates (#)	Average Replicates Ret. Times (min)	Standard Deviation (STD) (min)	3*STD (min)	Retention Time Window (min)
Dichlorodifluoromethane	75-71-8	4	3.367	0.0085	0.0255	3.342 - 3.393
Vinyl Chloride	75-01-42	4	3.683	0.021	0.063	3.620 - 3.746
Bromomethane	74-83-9	4	4.300	0.021	0.063	4.237 - 4.363
Chloroethane	75-00-3	4	4.433	0.0341	0.1023	4.331 - 4.535
Trichlorofluoromethane	75-69-4	4	5.133	0.008	0.024	5.109 - 5.157
1,1-Dichloroethene	75-35-4	4	6.083	0.008	0.024	6.059 - 6.107
Methylene Chloride	75-09-2	4	6.400	0.008	0.024	6.376 - 6.424
trans-1,2-Dichloroethene	156-60-5	4	7.950	0.0085	0.0255	7.925 - 7.976
1,1-Dichloroethane	75-34-3	4	8.617	0.0085	0.0255	8.592 - 8.643
cis-1,2-Dichloroethene	156-59-2	4	10.467	0.0085	0.0255	10.442 - 10.493
Bromochloromethane	74-97-5	4	10.983	0.0085	0.0255	10.958 - 11.009
Chloroform	67-66-3	4	11.283	0.0092	0.0276	11.255 - 11.311
1,2-Dichloroethane	107-06-2	4	13.867	0.0085	0.0255	13.842 - 13.893
1,1,1-Trichloroethane	71-55-6	4	14.167	0.0085	0.0255	14.142 - 14.193
Carbon Tetrachloride	56-23-5	4	15.433	0.0085	0.0255	15.408 - 15.459
Dibromomethane	74-95-3	4	17.600	0.0085	0.0255	17.575 - 17.626
1,2-Dichloropropane	78-87-5	4	17.817	0.0085	0.0255	17.792 - 17.843
Trichloroethene	79-01-6	4	18.033	0.008	0.024	18.009 - 18.057
Dichlorobromomethane	75-27-4	4	18.167	0.0098	0.0294	18.138 - 18.196
cis-1,3-Dichloropropene	10061-01-5	4	20.150	0.0098	0.0294	20.121 - 20.179
trans-1,3-Dichloropropene	10061-02-6	4	21.330	0.0098	0.0294	21.301 - 21.359
1,1,2-Trichloroethane	79-00-5	4	21.350	0.0098	0.0294	21.321 - 21.379
Dibromochlorormethane	124-48-1	4	22.133	0.0085	0.0255	22.108 - 22.159
Tetrachloroethene	127-18-4	4	22.850	0.0085	0.0255	22.825 - 22.876
1,1,1,2-Tetrachloroethane	630-20-6	4	23.733	0.0098	0.0294	23.704 - 23.762
Bromoform	75-25-2	4	24.450	0.0098	0.0294	24.421 - 24.479

10.432

14.114

17.982

21.108

4-Bromo Chlorobenzene not included

CT&E Environmental Services Inc.

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000091

CT&E - Environmental Services

Laboratory Project ID# : 295-02-0262-001/010
Project Name : Watauga County
Sampling Date : 2/10/94

Retention Time Criteria Log Sheet

Instrument Name: HP5890II
Instrument ID : GC11
Retention Times Update : 10/6/94
Printout Date : 3/1/95

		Date :	10/6/94			
Analyte Name	CAS #	Standard Replicates (#)	Average Replicates Ret. Times (min)	Standard Deviation (STD) (min)	3*STD (min)	Retention Time Window (min)
1,1,2,2,-Tetrachloroethane	79-34-5	4	24.900	0.0098	0.0294	24.871 - 24.929
1,2,3-Trichloropropane	96-18-4	4	25.067	0.0098	0.0294	25.0376 - 25.0964
Benzene	71-43-2	4	15.650	0.0098	0.0294	15.6206 - 15.6794
Toluene	108-88-3	4	21.683	0.008	0.024	21.659 - 21.707
Chlorobenzene	108-90-7	4	23.817	0.008	0.024	23.793 - 23.841
Ethylbenzene	100-41-4	4	24.150	0.008	0.024	24.126 - 24.174
p/m-Xylene		4	24.417	0.008	0.024	24.393 - 24.441
o-Xylene	95-47-6	4	24.883	0.0085	0.0255	24.8575 - 24.9085
1,3-Dichlorobenzene	541-73-1	4	26.733	0.0085	0.0255	26.7075 - 26.7585
1,4-Dichlorobenzene	106-46-7	4	26.817	0.0085	0.0255	26.7915 - 26.8425
1,2-Dichlorobenzene	95-50-1	4	27.183	0.0085	0.0255	27.1575 - 27.2085
SURROGATES						
aaa-Trifluorotoluene(surr)	98-06-8	100	19.150	0.0098	0.0294	19.1206 - 19.1794
Bromochloropropane(surr)	109-70-6	100	21.617	0.008	0.024	21.593 - 21.641

15.581

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1501-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-1995 08:02
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1501.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:03 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)	
18 TRICHLOROETHENE				CAS #: 79-01-6	
17.967	17.982 (0.640)	105611	4.20	0	
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4	
21.583	21.604 (0.769)	1691979	128	0.0257	(M)
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1	
21.583	22.124 (0.787)	1691979	108	0.0215	(M)
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7	
26.801	26.823 (0.955)	79520	5.38	0.00108	
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1	
28.067	28.083 (1.000)	1206878	125		

QC Flag Legend

M - Compound response manually integrated.

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1501-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1501.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 2213
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1529470	764735	3058940	1206878	-21.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.06	27.56	28.56	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1501.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0257	102.80	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1501.01R, 21-Feb-1995 12:16

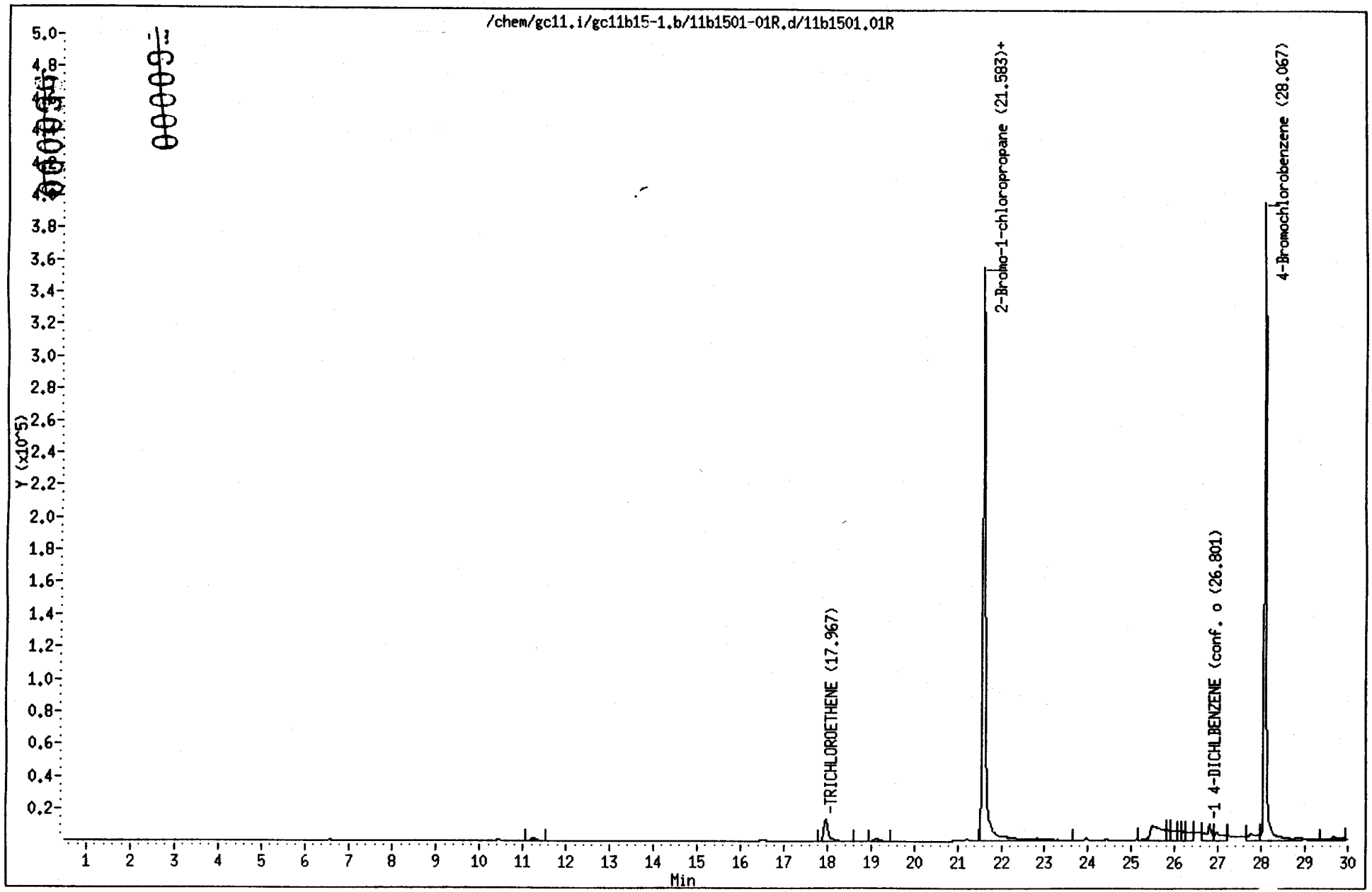
Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000840	
124-48-1	DIBROMOCHLOROMETHANE	0.0215	
460-00-4	2-Bromo-1-chloropropane	0.0257	

Data File: /chem/gc11.i/gc11b15-1.b/11b1501-01R.d
Date : 15-FEB-1995 08:02
Client ID: mb11
Sample Info: blank
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b15-2.b/11b1501-01R.d
Report Date: 21-Feb-1995 17:47

000097

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1501-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-1995 08:02
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1501.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:44 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.500	16.523 (1.000)	8350	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.113	19.142 (1.158)	5201	128	0.0255
4 TOLUENE ccc				CAS #: 108-88-3
21.645	21.604 (1.312)	295	2.68	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.053	28.083 (1.000)	11404	125	

CT&E Environmental Services Inc. Charleston,WV 000098

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1501-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1501.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	8350	-18.53
13 4-Bromochlbenzene (c	14434	7217	28868	11404	-20.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.50	-0.02
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.05	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1501.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0255	102.20	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

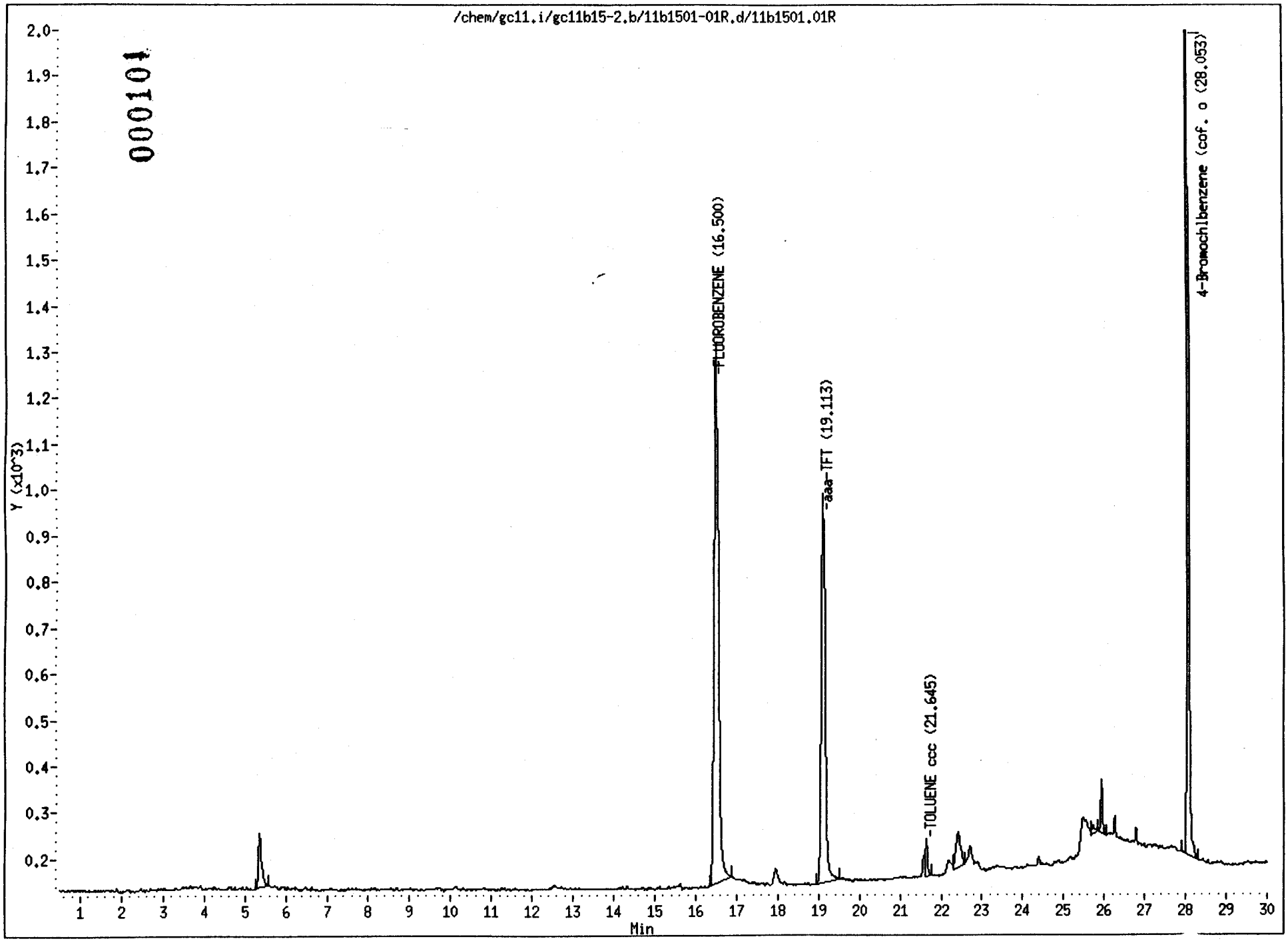
Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1501.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000536	
2037-26-5	aaa-TFT	0.0255	

Data file: /chem/gc11.i/gc11b15-2.b/11b1501-01R.d

Page



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1503-01R.d
Lab Smp Id: blank Client Smp ID: blank
Inj Date : 15-FEB-95 09:15
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1503.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.519	16.523 (1.000)	10473	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.129	19.142 (1.158)	6465	127	0.0253
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.073	28.083 (1.000)	14944	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1503-01R.d
Lab Smp Id: blank
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1503.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: blank
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	10473	2.19
13 4-Bromochlbenzene (c	14434	7217	28868	14944	3.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.52	0.10
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.07	0.06

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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: blank
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: blank
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1503.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0253	101.28	80-120

CT&E Environmental Services Inc. Charleston,WV

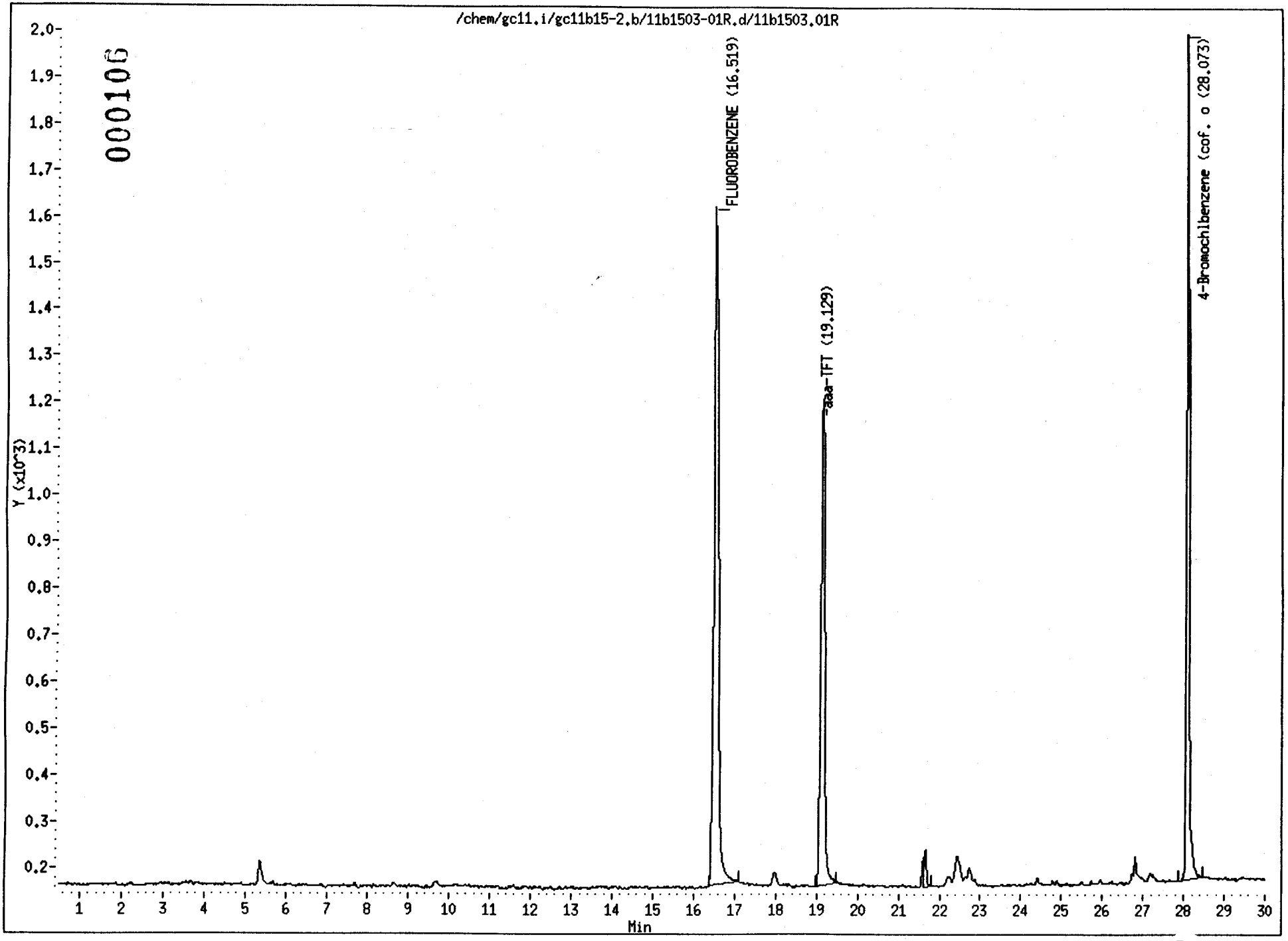
TARGET COMPOUNDS

000105

Client Name:
Lab Smp Id: blank
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1503.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: blank
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
2037-26-5	aaa-TFT	0.0253	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000106
FLUORODBENZENE (16.519)
aaa-TFT (19.129)
4-Bromochlbenzene (cof. o (28.073)
Y (x10^3)
Min

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1506-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 11:06
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1506.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			CONCENTRATIONS ON-COL	FINAL
RT	EXP RT (REL RT)	RESPONSE	(ng)	(mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.989	17.982 (0.641)	86508	2.53	0
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.599	21.604 (0.769)	2044118	114	0.0228
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.109	22.124 (0.787)	89050	4.17	0
35 1 4-DICHLBENZENE (conf. only)				CAS #: 106-46-7
26.816	26.823 (0.955)	53583	2.67	0
36 1 2-DICHLBENZENE (conf. only)				CAS #: 95-50-1
27.178	27.181 (0.968)	32484	2.03	0
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.084	28.083 (1.000)	1639565	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1506-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1506.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1639565	8.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.08	0.05

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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1506.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0228	91.42	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1506.01R, 21-Feb-1995 12:16

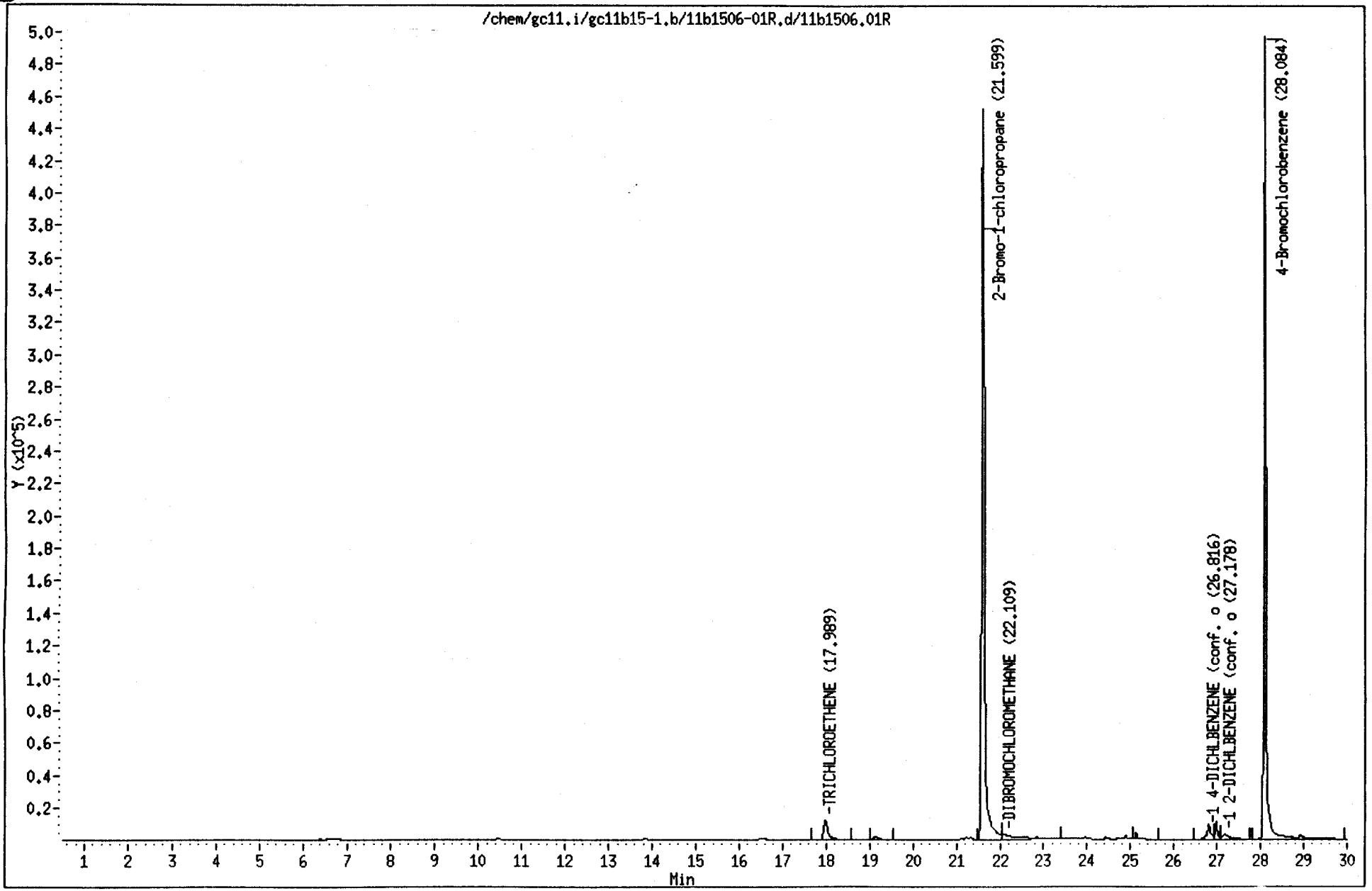
Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000506	
124-48-1	DIBROMOCHLOROMETHANE	0.000834	
460-00-4	2-Bromo-1-chloropropane	0.0228	

0001111

Data file: /chem/gc11.i/gc11b15-1.b/11b1506-01R.d
Date : 15-FEB-95 11:06
Client ID: mb11
Sample Info: blank
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b15-2.b/11b1506-01R.d
Report Date: 21-Feb-1995 17:58

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1506-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-1995 11:06
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1506.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.525	16.523 (1.000)	10555	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.133	19.142 (1.158)	6507	126	0.0253
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.069	28.083 (1.000)	15344	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1506-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1506.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	10555	2.99
13 4-Bromochlbenzene (c	14434	7217	28868	15344	6.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.53	0.13
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1506.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0253	101.15	80-120

CT&E Environmental Services Inc. Charleston,WV

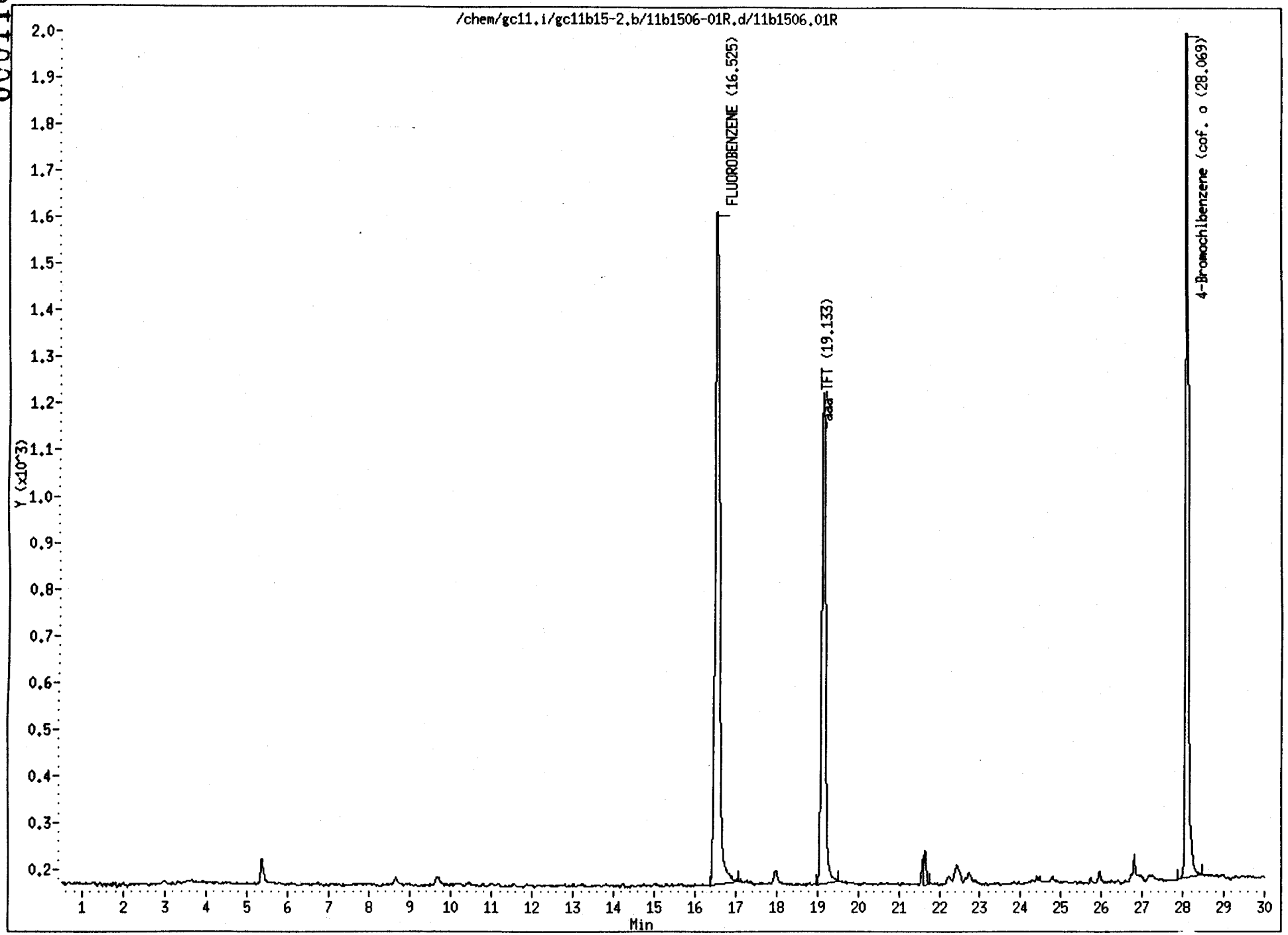
TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1506.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
2037-26-5	-------aaa-TFT	0.0253	

000116


/chem/gc11.i/gc11b15-2.b/11b1506-01R.d/11b1506.01R
FLUOROBENZENE (16.525)
TFT (19.133)
4-Bromochlbenzene (cof. o (28.069)
Y (x10^3)
Min

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

LABORATORY BLANK
WATAUGA COUNTY LANDFILL

Laboratory Number 295-02-0262-011 Respectfully Submitted:

RCM

Date Sampled 02/06/95
Date Received 02/11/95

Sampled by CT&E

030295 0957

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 14:50 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 14:50 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	96	------	% REC	SW8021	02/15/95 14:50 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 14:50 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

Data File: /chem/gc11.i/gc11b15-1.b/11b1511-01R.d
Report Date: 21-Feb-1995 16:06

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1511-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 14:50
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1511.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

	RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
	18 TRICHLOROETHENE				CAS #: 79-01-6
	17.955	17.982 (0.640)	79975	2.92	0
$	23 2-Bromo-1-chloropropane				CAS #: 460-00-4
	21.585	21.604 (0.769)	1721130	120	0.0240
*	30 4-Bromochlorobenzene				CAS #: 2199-69-1
	28.070	28.083 (1.000)	1313505	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1511-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1511.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1313505	-13.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1511.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0240	96.08	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1511.01R, 21-Feb-1995 12:16

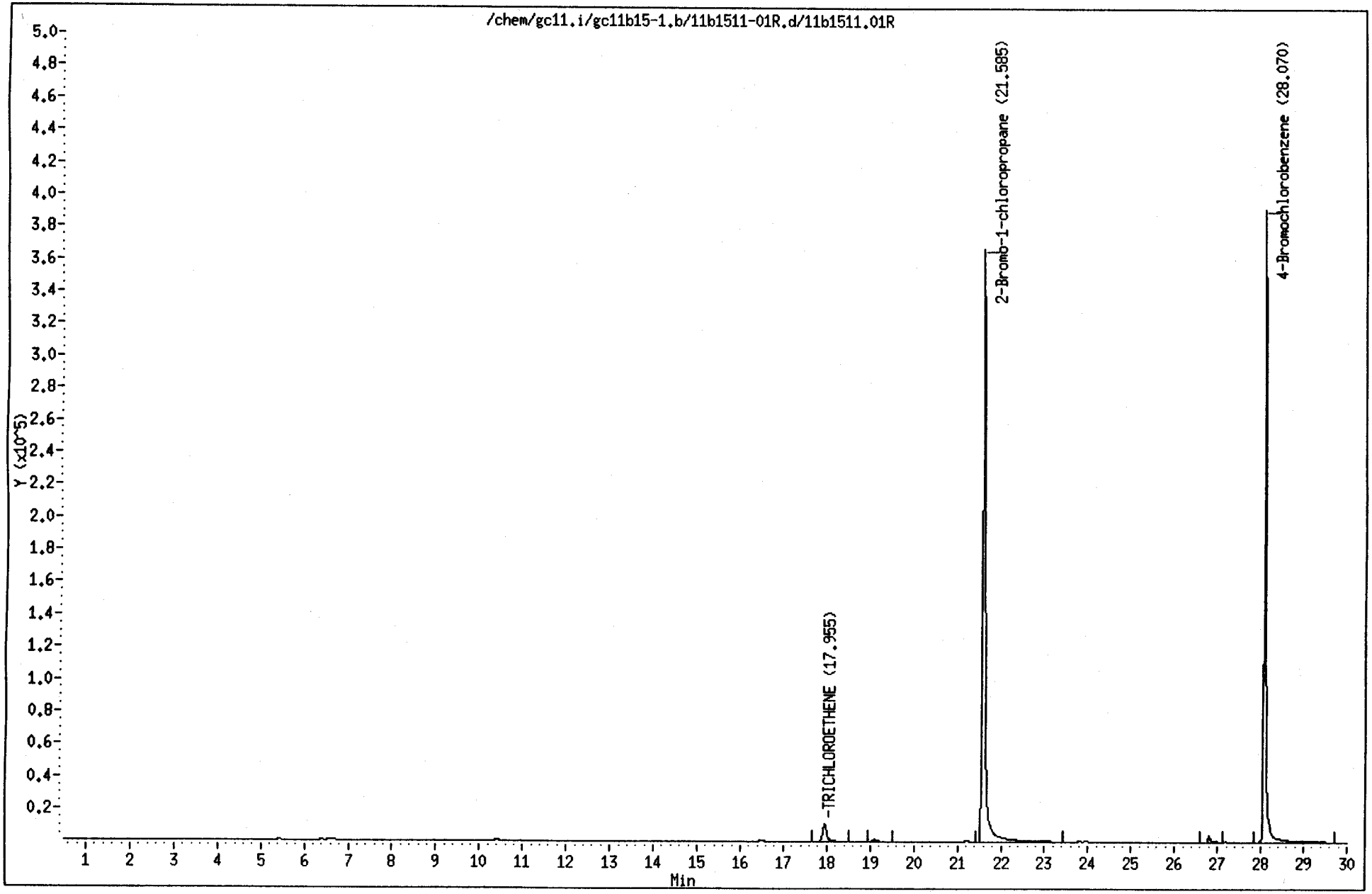
Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000584	
460-00-4	2-Bromo-1-chloropropane	0.0240	

Data File: /chem/gc11.i/gc11b15-1.b/11b1511-01R.d
Date : 15-FEB-95 14:50
Client ID: mb11
Sample Info: blank
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1511-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 14:50
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1511.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.485	16.523 (1.000)	9014	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.104	19.142 (1.159)	5608	128	0.0255
4 TOLUENE ccc				CAS #: 108-88-3
21.646	21.604 (1.313)	472	3.98	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.057	28.083 (1.000)	12991	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1511-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1511.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	9014	-12.05
13 4-Bromochlbenzene (c	14434	7217	28868	12991	-10.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.49	-0.11
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.06	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1511.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0255	102.08	80-120

CT&E Environmental Services Inc. Charleston,WV

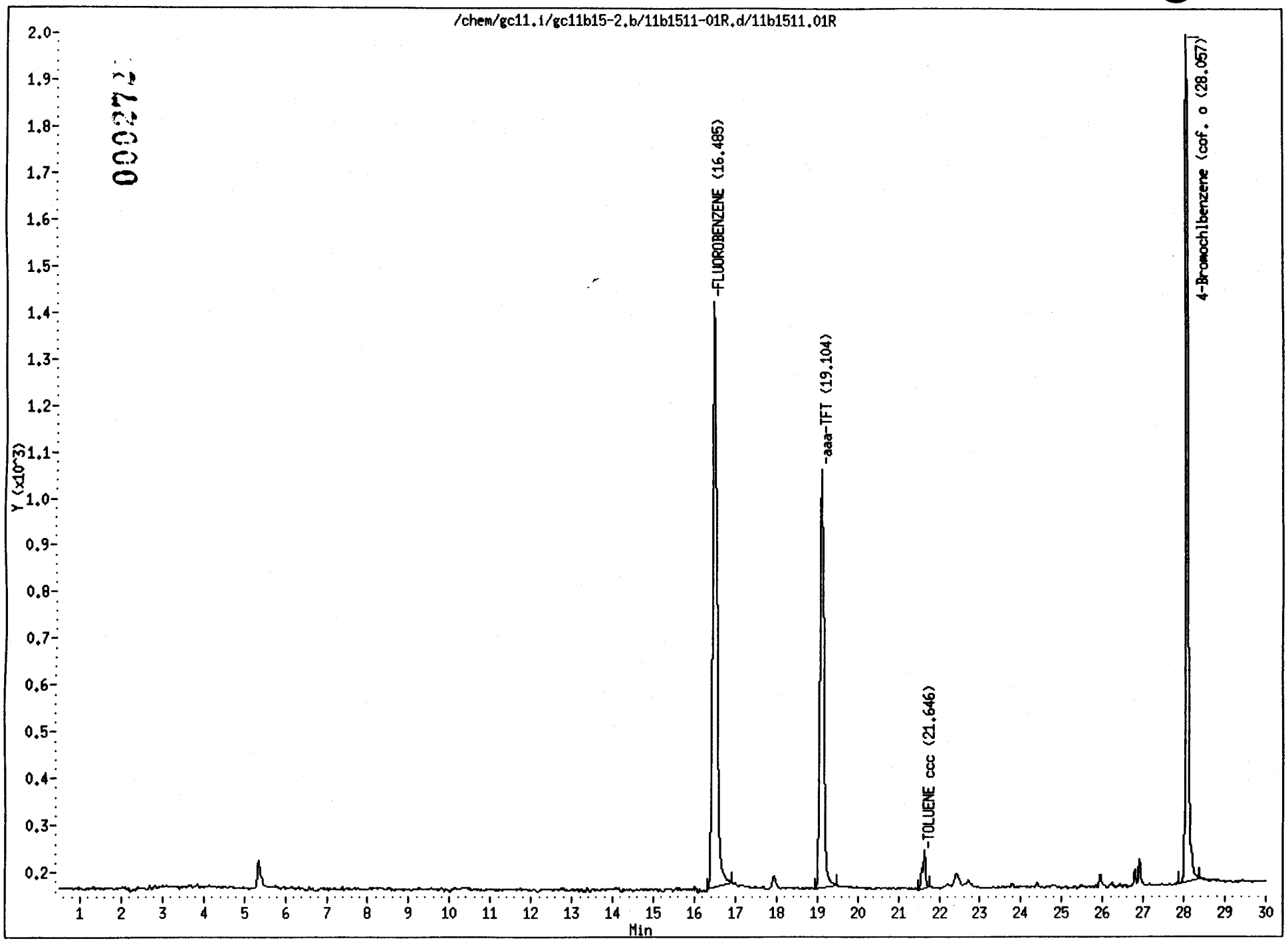
TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1511.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000795	
2037-26-5	aaa-TFT	0.0255	

Data file: /chem/gc11.i/gc11b15-2.b/11b1511-01R.d



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1515-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 17:17
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1515.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

	RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
	18 TRICHLOROETHENE				CAS #: 79-01-6
	17.960	17.982 (0.640)	75271	2.64	0
$	23 2-Bromo-1-chloropropane				CAS #: 460-00-4
	21.592	21.604 (0.769)	1838368	123	0.0246
*	30 4-Bromochlorobenzene				CAS #: 2199-69-1
	28.068	28.083 (1.000)	1367466	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1515-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1515.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1367466	-9.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1515.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0246	98.57	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1515.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

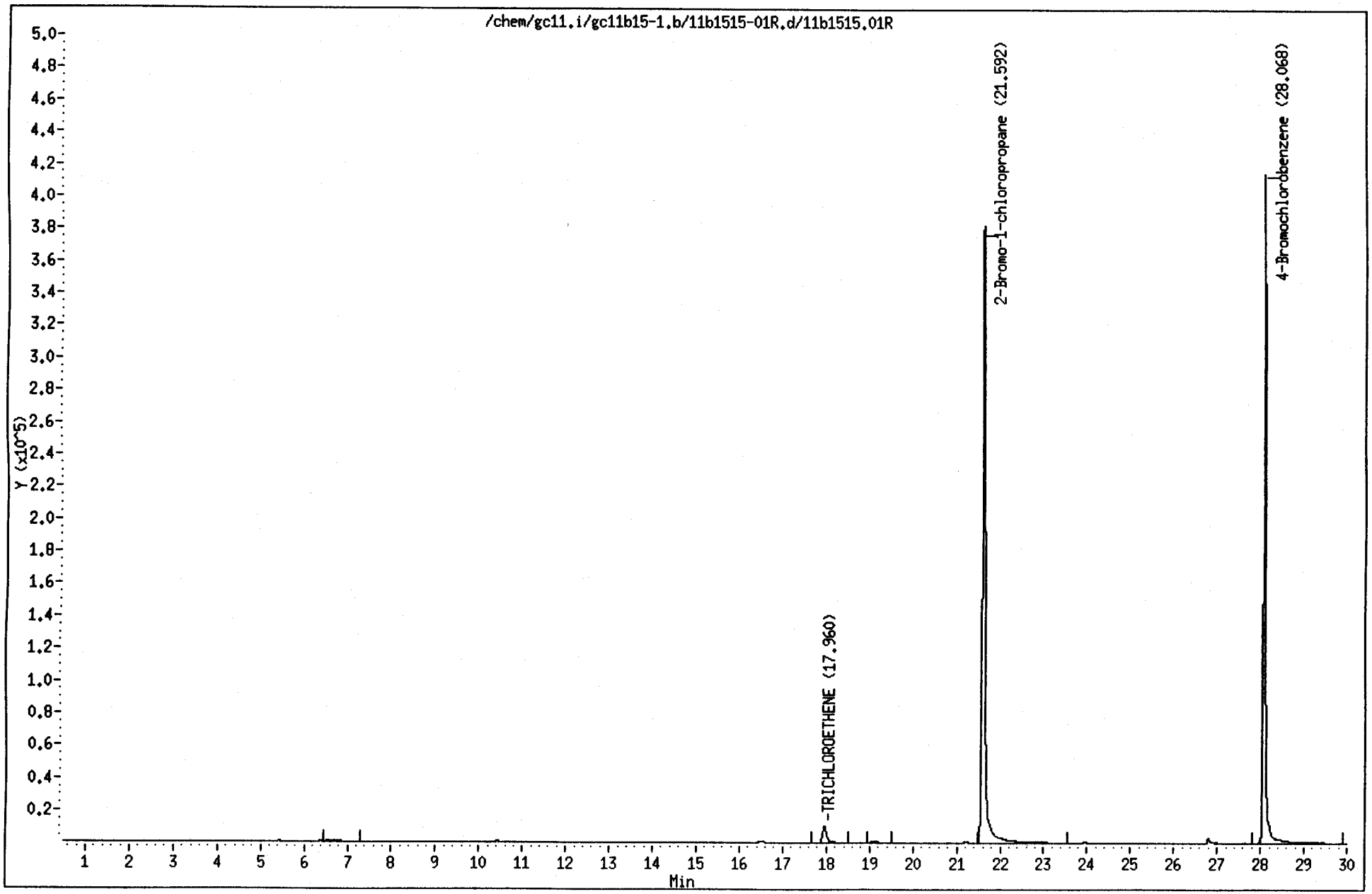
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000528	
460-00-4	2-Bromo-1-chloropropane	0.0246	

000121

Data File: /chem/gc11.i/gc11b15-1.b/11b1515-01R.d
Date : 15-FEB-95 17:17
Client ID: mb11
Sample Info: blank
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1515-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 17:17
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1515.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			CONCENTRATIONS ON-COL	FINAL
RT	EXP RT (REL RT)	RESPONSE	(ng)	(mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.497	16.523 (1.000)	9234	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.112	19.142 (1.159)	5780	128	0.0257
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.053	28.083 (1.000)	13636	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1515-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1515.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	9234	-9.90
13 4-Bromochlbenzene (c	14434	7217	28868	13636	-5.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.50	-0.04
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.05	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1515.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0257	102.70	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

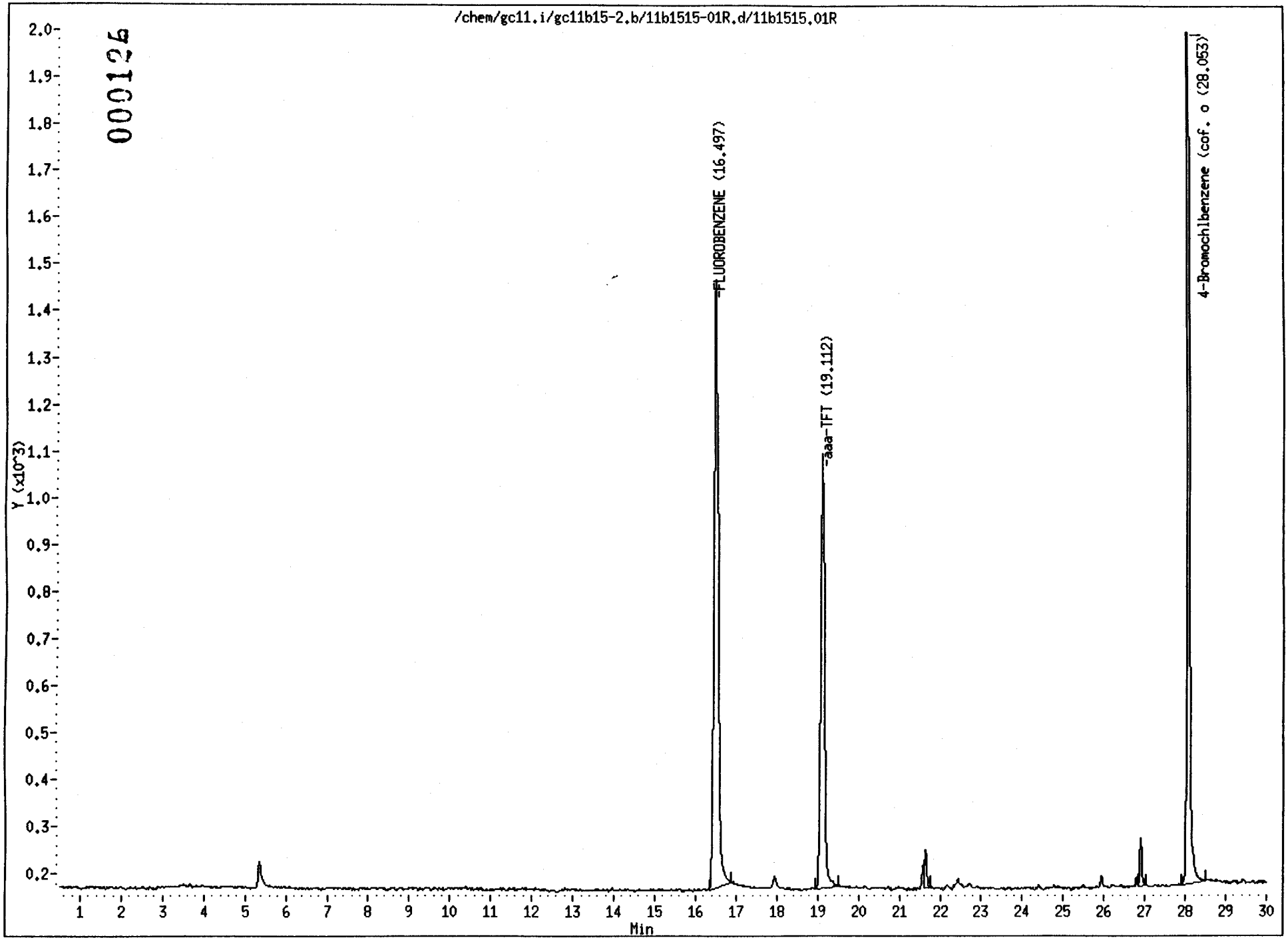
Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1515.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
2037-26-5	aaa-TFT	0.0257	

Data F /chem/gc11.i/gc11b15-2.b/11b1515-01R.d

Page



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1519-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 19:45
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1519.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.486	16.523 (1.000)	10220	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.106	19.142 (1.159)	6246	125	0.0251
4 TOLUENE ccc				CAS #: 108-88-3
21.648	21.604 (1.313)	482	3.58	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.053	28.083 (1.000)	15404	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1519-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1519.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	10220	-0.28
13 4-Bromochlbenzene (c	14434	7217	28868	15404	6.72

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.49	-0.10
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.05	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1519.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0251	100.28	80-120

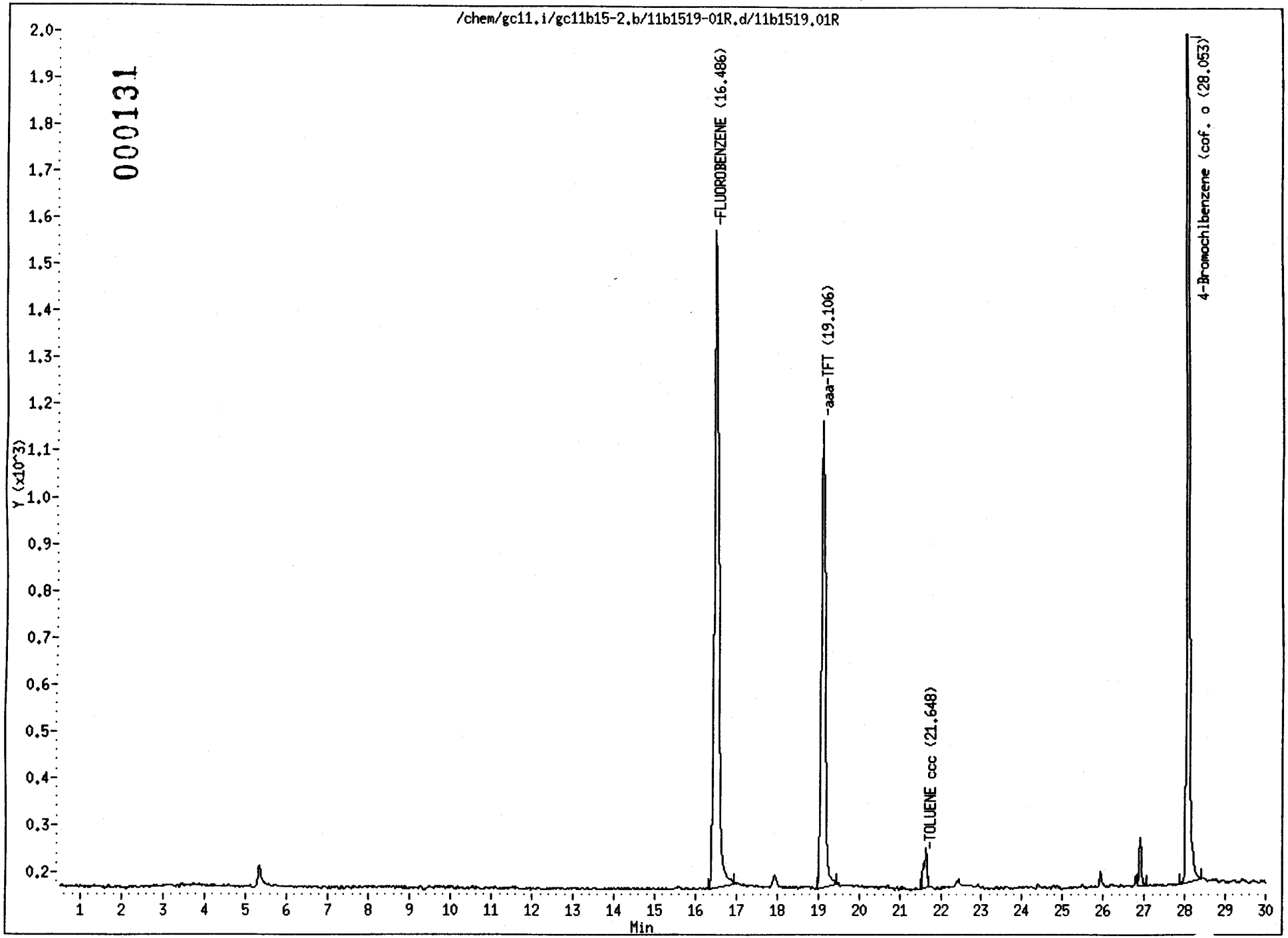
CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1519.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000716	
2037-26-5	aaa-TFT	0.0251	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000131
-FLUOROBENZENE (16.486)
-aaa-TFT (19.106)
-TOLUENE ccc (21.648)
4-Bromochlbenzene (cof. o (28.053)
Y (x10^3)
Min

Data File: /chem/gc11.i/gc11b15-1.b/11b1519-01R.d
Report Date: 21-Feb-1995 16:07

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1519-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 19:45
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1519.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			CONCENTRATIONS ON-COL	FINAL
RT	EXP RT (REL RT)	RESPONSE	(ng)	(mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.954	17.982 (0.640)	77566	2.42	0
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.589	21.604 (0.769)	2021016	120	0.0241
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.067	28.083 (1.000)	1537917	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1519-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1519.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1537917	1.71

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1519.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0241	96.36	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1519.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

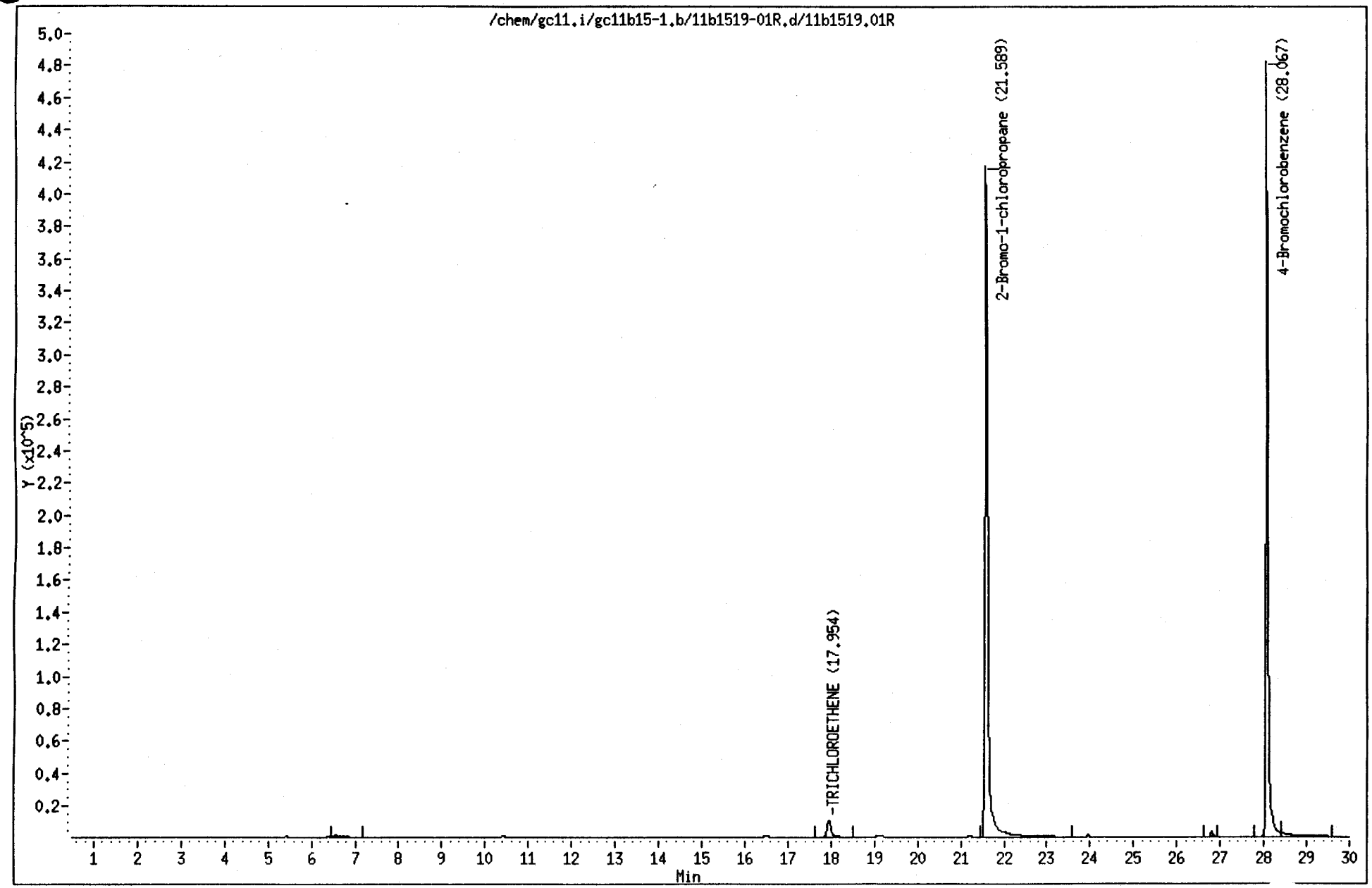
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000484	
460-00-4	2-Bromo-1-chloropropane	0.0241	

000130

Data [redacted] /chem/gc11.i/gc11b15-1.b/11b1519-01R.d
Date : 15-FEB-95 19:45
Client ID: mb11
Sample Info: blank
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b15-1.b/11b1522-01R.d
Report Date: 21-Feb-1995 16:07

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1522-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 21:36
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1522.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.946	17.982 (0.639)	74076	2.63	0
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.577	21.604 (0.769)	1724876	117	0.0234
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.063	28.083 (1.000)	1350926	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1522-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1522.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1350926	-10.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.06	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1522.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0234	93.62	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

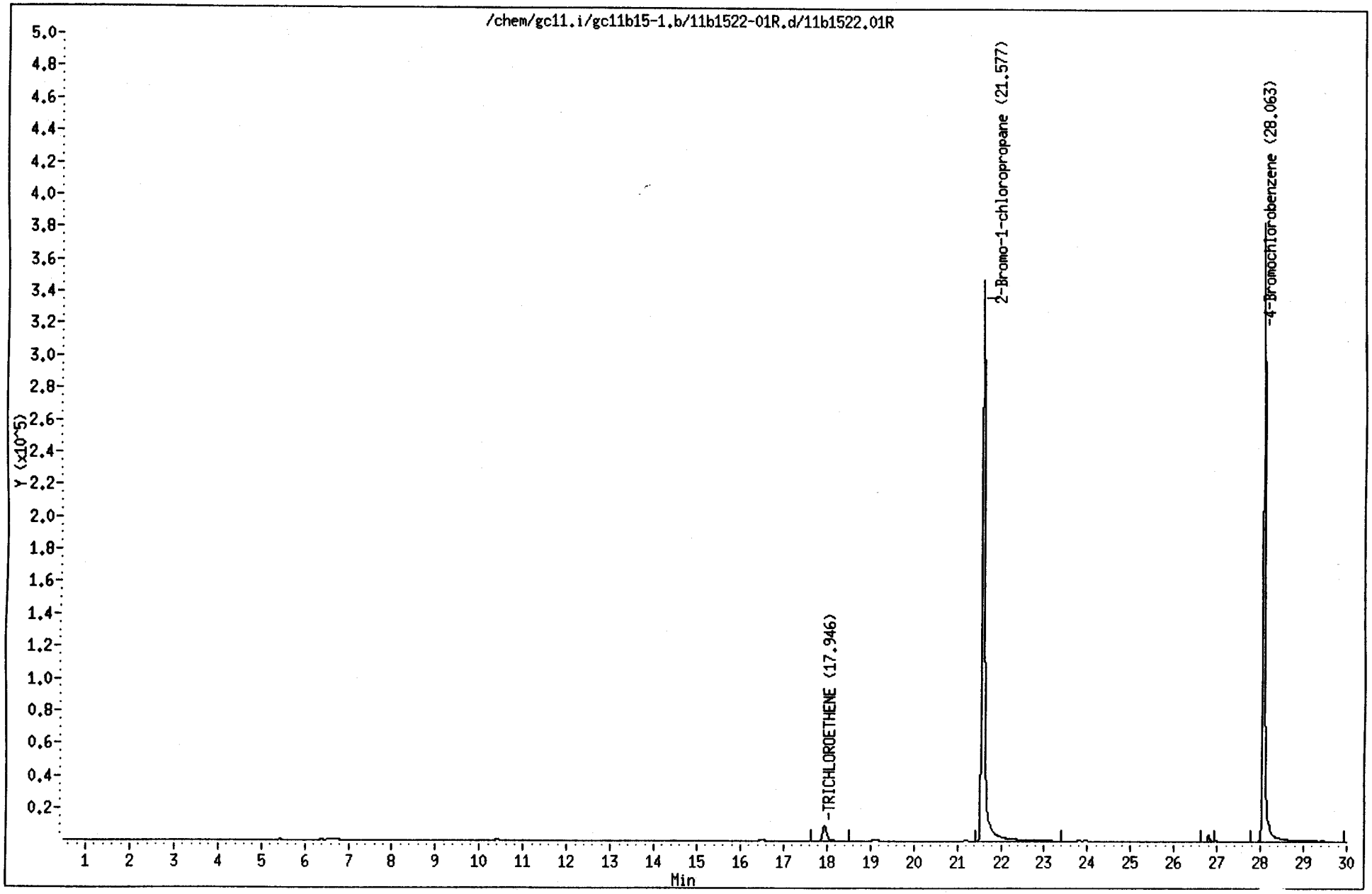
Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1522.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000526	
460-00-4	2-Bromo-1-chloropropane	0.0234	

Data File: /chem/gc11.i/gc11b15-1.b/11b1522-01R.d
Date : 15-FEB-95 21:36
Client ID: mb11
Sample Info: blank
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b15-2.b/11b1522-01R.d
Report Date: 21-Feb-1995 17:59

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1522-01R.d
Lab Smp Id: mb11 Client Smp ID: mb11
Inj Date : 15-FEB-95 21:36
Operator : jc Inst ID: gc11.i
Smp Info : blank
Misc Info : Created from: 11b1522.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.479	16.523 (1.000)	8951	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.097	19.142 (1.159)	5530	127	0.0253
4 TOLUENE ccc				CAS #: 108-88-3
21.636	21.604 (1.313)	298	2.53	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.050	28.083 (1.000)	13401	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1522-01R.d
Lab Smp Id: mb11
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1522.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mb11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	8951	-12.66
13 4-Bromochlbenzene (c	14434	7217	28868	13401	-7.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.48	-0.14
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.05	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mb11
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mb11
Operator: jc
SampleType: BLANK
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1522.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0253	101.37	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

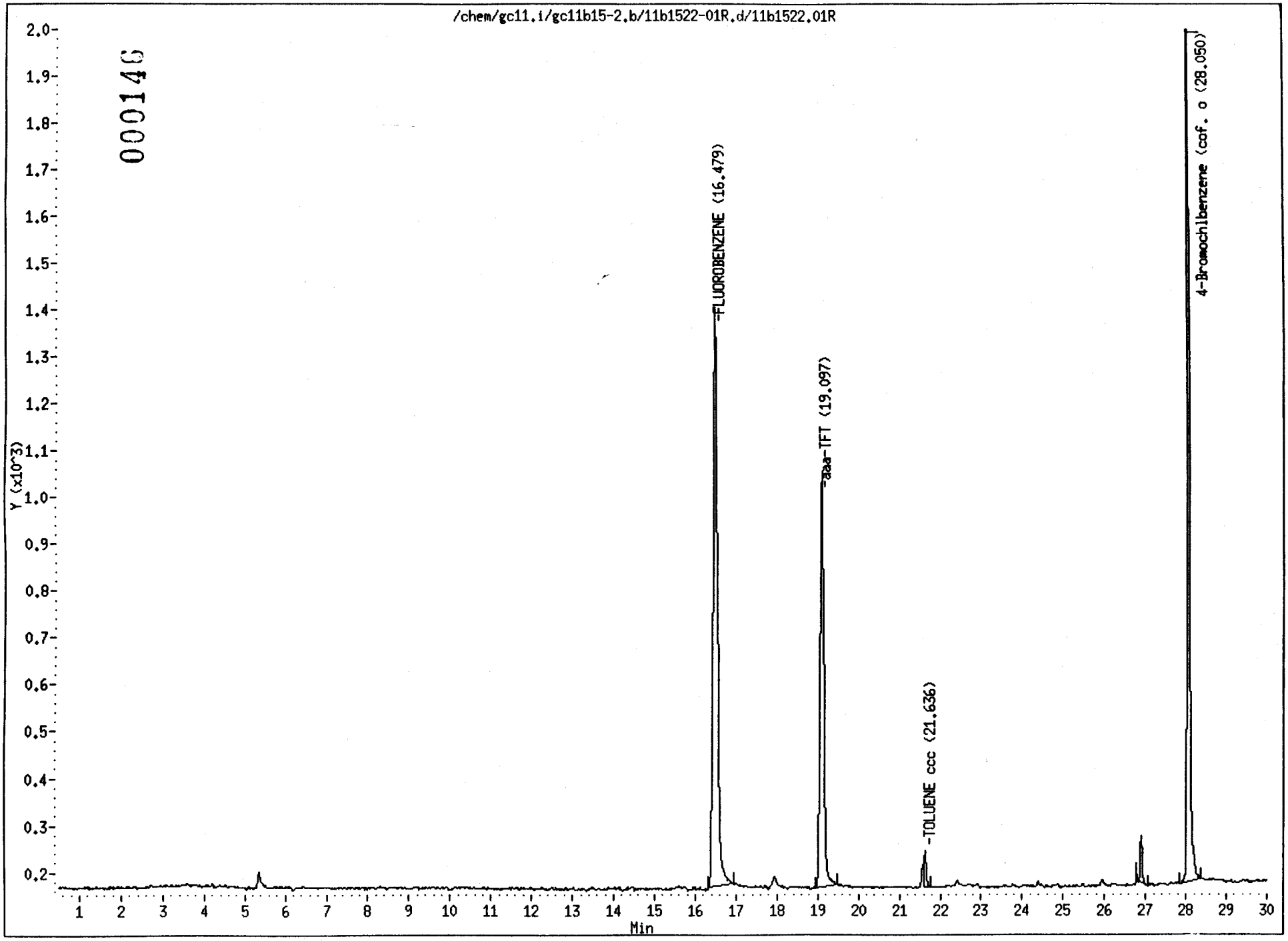
Client Name:
Lab Smp Id: mb11
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1522.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mb11
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000506	
2037-26-5	aaa-TFT	0.0253	

Data file: /chem/gc11.i/gc11b15-2.b/11b1522-01R.d

Page



WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

000147

Lab Name: CT&E-ES,INC. Contract: Draper Aden

Lab Code: Case No.: SAS No.: SDG No.: gc11b15-1

Matrix Spike - EPA Sample No.: mw5

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC #	QC. LIMITS REC.
1 1-DICHLOROETHENE	100	0.000	112	112	80-120
TRICHLOROETHENE	100	2.50	107	104	80-120
CHLOROBENZENE (conf. on	100	0.000	101	101	80-120

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1 1-DICHLOROETHENE	100	118	118	5	25	80-120
TRICHLOROETHENE	100	111	108	4	25	80-120
CHLOROBENZENE (conf. on	100	108	108	7	25	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 3 outside limits
Spike Recovery: 0 out of 6 outside limits

COMMENTS: _____

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mw5MS
Level: LOW
Data Type: GC DATA
SpikeList File: clp.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mw5MS
Operator: jc
SampleType: MS
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1509.01R, 21-Feb-1995 12:16

SPIKE COMPOUND	AMOUNT ADDED ng	AMOUNT RECOVERED ng	% RECOVERED	LIMITS
6 1 1-DICHLOROETHENE	100	112	112.40	80-120
18 TRICHLOROETHENE	100	107	106.78	80-120
33 CHLOROBENZENE (con	100	101	100.97	80-120

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0229	91.61	80-1

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1509-01R.d
Lab Smp Id: mw5MS Client Smp ID: mw5MS
Inj Date : 15-FEB-1995 13:36
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-3 ms draper
Misc Info : Created from: 11b1509.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 22-Feb-1995 13:04 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
6 1 1-DICHLOROETHENE				CAS #: 75-35-4
6.061	6.047 (0.216)	2311561	112	0.0225
18 TRICHLOROETHENE				CAS #: 79-01-6
17.965	17.982 (0.640)	2974530	107	0.0214
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.593	21.604 (0.769)	1670099	114	0.0229
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.104	22.124 (0.787)	61368	3.52	0
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7
23.811	23.824 (0.848)	1119051	101	0.0202
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.074	28.083 (1.000)	1336755	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1509-01R.d
Lab Smp Id: mw5MS
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1509.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mw5MS
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1336755	-11.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mw5MS
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1509.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mw5MS
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
75-35-4	1 1-DICHLOROETHENE	0.0225	
79-01-6	TRICHLOROETHENE	0.0214	
124-48-1	DIBROMOCHLOROMETHANE	0.000705	
108-90-7	CHLOROBENZENE (conf. only)	0.0202	
460-00-4	2-Bromo-1-chloropropane	0.0229	

000152

Data [redacted] /chem/gc11.i/gc11b15-1.b/11b1509-01R.d
Date : 15-FEB-1995 13:36
Client ID: mw5MS
Sample Info: 2-262-3 ms draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53

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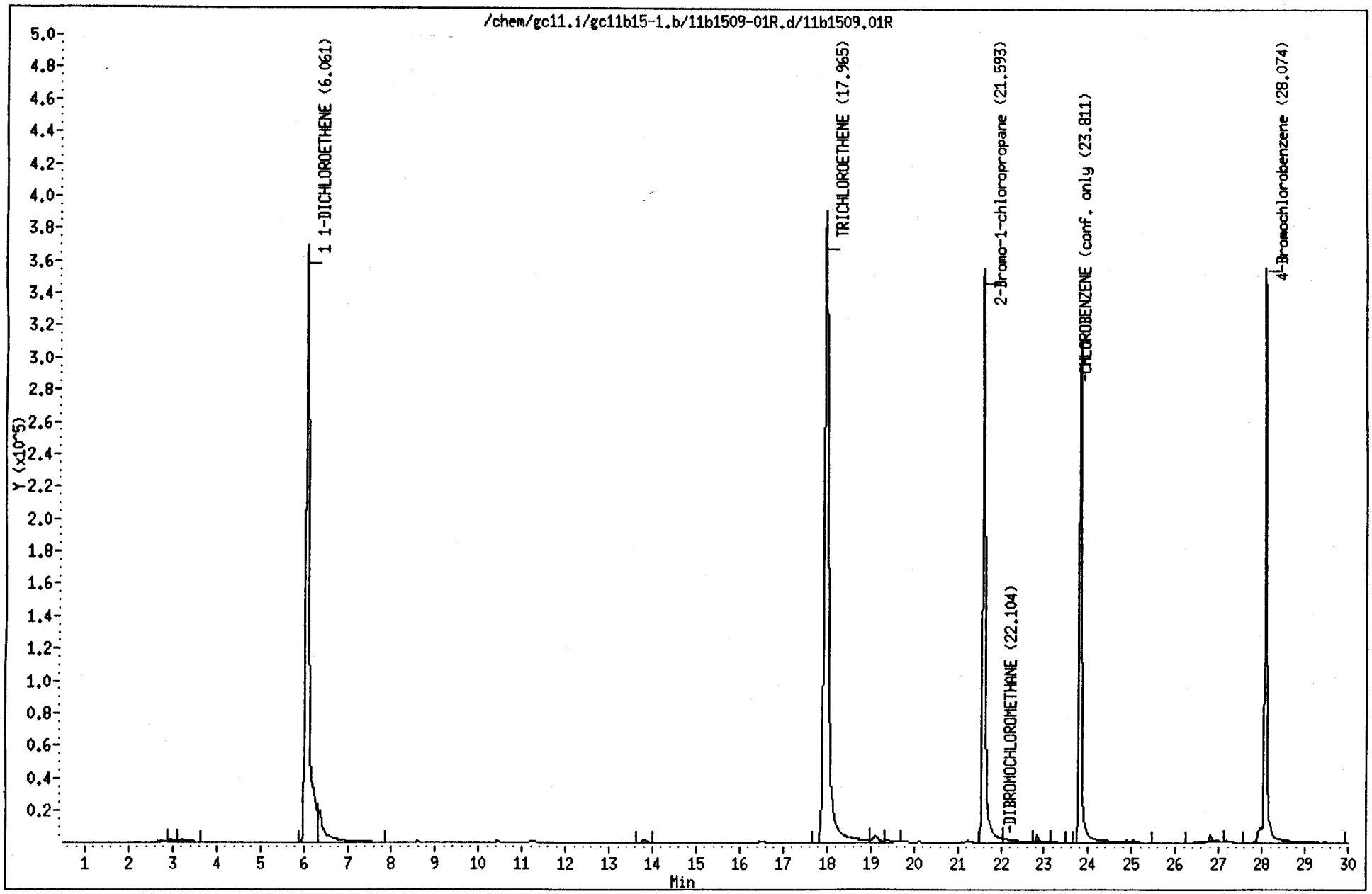


CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mw5MS
Level: LOW
Data Type: GC DATA
SpikeList File: clp.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mw5MS
Operator: jc
SampleType: MS
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1509.01R, 21-Feb-1995 12:16

SPIKE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
1 BENZENE	0.0200	0.0212	105.82	80-120
4 TOLUENE ccc	0.0200	0.0196	97.97	80-120
6 CHLOROBENZENE spcc	0.0200	0.0203	101.42	80-120

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0254	101.63	80-120

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1509-01R.d
Lab Smp Id: mw5MS Client Smp ID: mw5MS
Inj Date : 15-FEB-1995 13:36
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-3 ms draper
Misc Info : Created from: 11b1509.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 22-Feb-1995 13:16 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.499	16.523 (1.000)	9299	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.118	19.142 (1.159)	5760	127	0.0254
1 BENZENE				CAS #: 71-43-2
15.594	15.629 (0.945)	12441	106	0.0212
4 TOLUENE ccc				CAS #: 108-88-3
21.651	21.604 (1.312)	11998	98.0	0.0196 NN
6 CHLOROBENZENE spcc				CAS #: 108-90-7
23.798	23.725 (1.442)	11039	101	0.0203 NN
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.062	28.083 (1.000)	12094	125	
15 1 1-DICHLORETHENE (conf. only)				CAS #: 75-35-4
6.048	6.047 (0.367)	5006	116	0.0231 NN

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (mg/L)
18 TRICHLOROETHENE (conf. only)				CAS #: 79-01-6
17.953	17.982 (1.088)	6660	95.4	0.0191

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1509-01R.d
Lab Smp Id: mw5MS
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1509.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 2213
Client Smp ID: mw5MS
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10098	5049	20196	9299	-7.91
13 4-Bromochlbenzene (c	14711	7356	29422	12094	-17.79

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.49	15.99	16.99	16.50	0.08
13 4-Bromochlbenzene (c	28.05	27.55	28.55	28.06	0.0

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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mw5MS
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1509.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mw5MS
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.0212	
108-88-3	TOLUENE ccc	0.0196	
108-90-7	CHLOROBENZENE spcc	0.0203	
79-01-6	TRICHLOROETHENE (conf. only)	0.0191	
2037-26-5	aaa-TFT	0.0254	

00153

Data: /chem/gc11.i/gc11b15-2.b/11b1509-01R.d

Date : 15-FEB-1995 13:36

Client ID: mw5MS

Sample Info: 2-262-3 ms draper

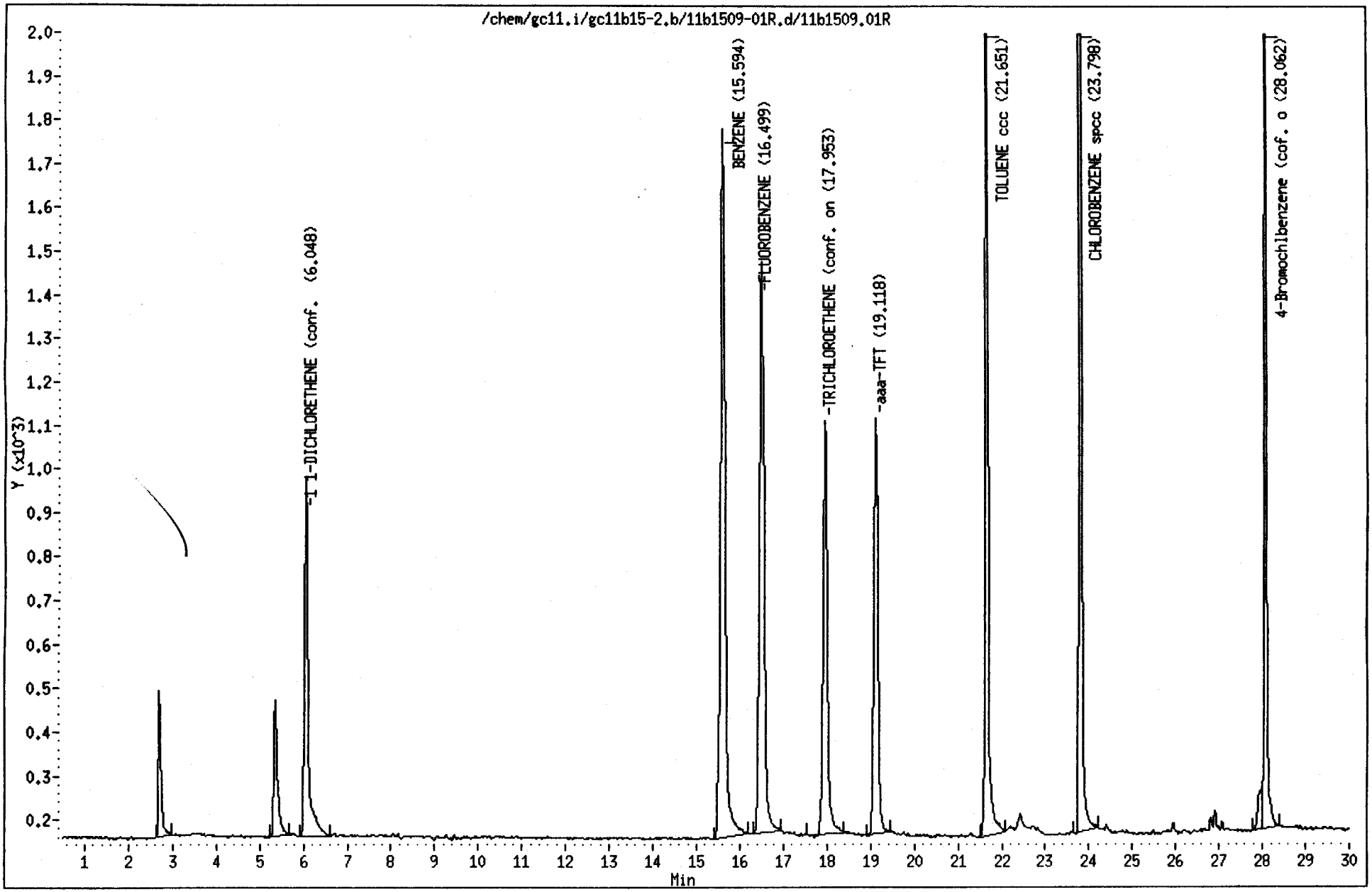
Purge Volume: 5.0

Column phase: dbvrx

Instrument: gc11.i

Operator: jc

Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mw5MSD
Level: LOW
Data Type: GC DATA
SpikeList File: clp.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mw5MSD
Operator: jc
SampleType: MSD
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1510.01R, 21-Feb-1995 12:16

SPIKE COMPOUND	AMOUNT ADDED ng	AMOUNT RECOVERED ng	% RECOVERED	LIMITS
6 1 1-DICHLOROETHENE	100	118	117.88	80-120
18 TRICHLOROETHENE	100	111	110.78	80-120
33 CHLOROBENZENE (con	100	108	108.39	80-120

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0249	99.69	80-120

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1510-01R.d
Lab Smp Id: mw5MSD Client Smp ID: mw5MSD
Inj Date : 15-FEB-1995 14:13
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-4 msd draper
Misc Info : Created from: 11b1510.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 22-Feb-1995 13:04 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)	
6 1 1-DICHLOROETHENE				CAS #: 75-35-4	
6.067	6.047 (0.216)	2508826	118	0.0236	(M)
18 TRICHLOROETHENE				CAS #: 79-01-6	
17.958	17.982 (0.640)	3193679	111	0.0222	
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4	
21.590	21.604 (0.769)	1880932	125	0.0249	
33 CHLOROBENZENE (conf. only)				CAS #: 108-90-7	
23.813	23.824 (0.848)	1243213	108	0.0217	
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1	
28.069	28.083 (1.000)	1383426	125		

QC Flag Legend

M - Compound response manually integrated.

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1510-01R.d
Lab Smp Id: mw5MSD
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1510.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mw5MSD
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1383426	-8.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mw5MSD
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1510.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mw5MSD
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

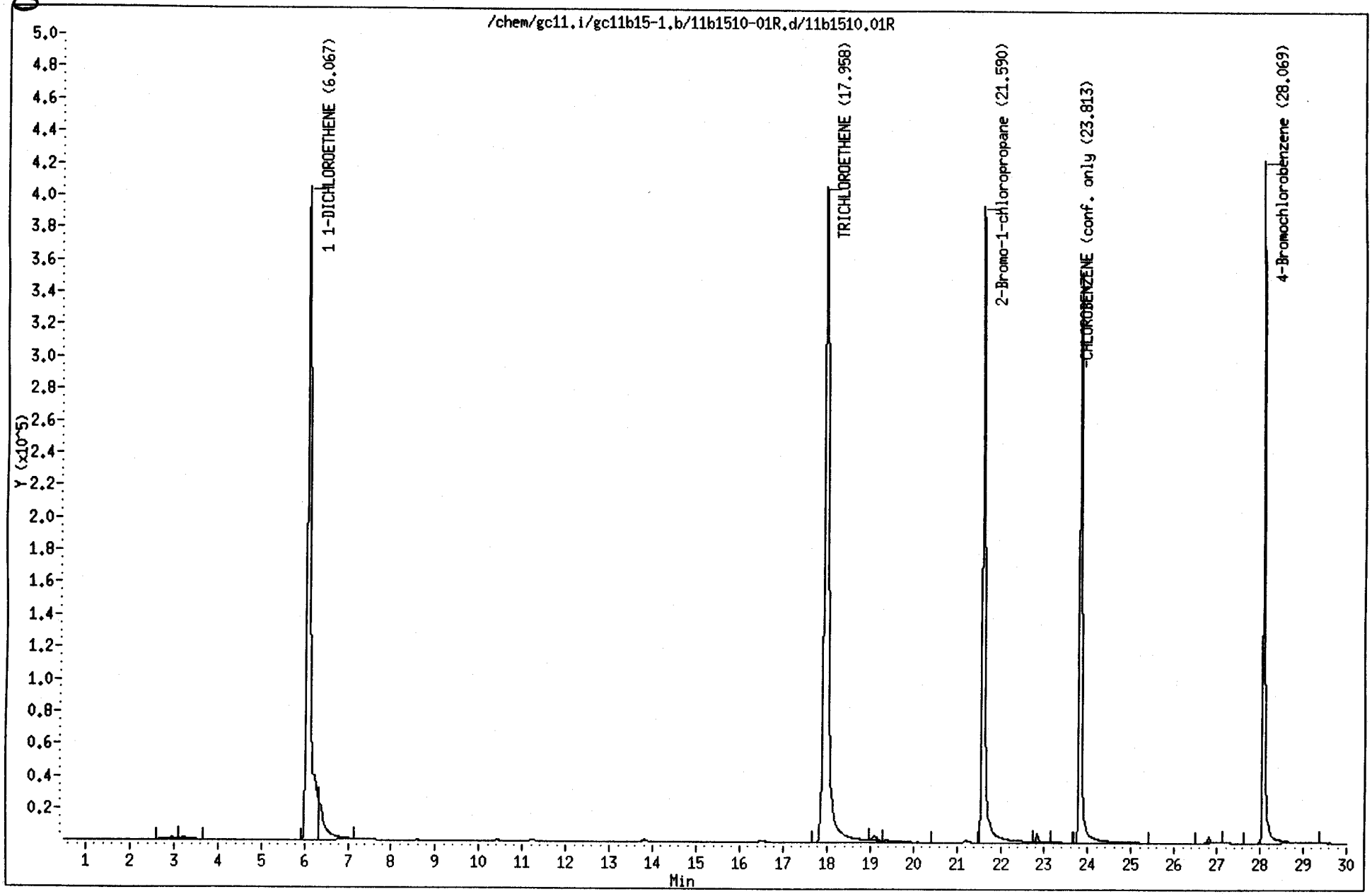
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
75-35-4	1 1-DICHLOROETHENE	0.0236	
79-01-6	TRICHLOROETHENE	0.0222	
108-90-7	CHLOROBENZENE (conf. only)	0.0217	
460-00-4	2-Bromo-1-chloropropane	0.0249	

Data File: /chem/gc11.i/gc11b15-1.b/11b1510-01R.d
Date : 15-FEB-1995 14:13
Client ID: mw5MSD
Sample Info: 2-262-4 msd draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53

00163



CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mw5MSD
Level: LOW
Data Type: GC DATA
SpikeList File: clp.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mw5MSD
Operator: jc
SampleType: MSD
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1510.01R, 21-Feb-1995 12:16

SPIKE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
1 BENZENE	0.0200	0.0225	112.36	80-120
4 TOLUENE ccc	0.0200	0.0207	103.54	80-120
6 CHLOROBENZENE spcc	0.0200	0.0220	110.03	80-120

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0253	101.33	80-1

Data File: /chem/gc11.i/gc11b15-2.b/11b1510-01R.d
Report Date: 22-Feb-1995 13:16

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1510-01R.d
Lab Smp Id: mw5MSD Client Smp ID: mw5MSD
Inj Date : 15-FEB-1995 14:13
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-4 msd draper
Misc Info : Created from: 11b1510.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 22-Feb-1995 13:16 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.495	16.523 (1.000)	9748	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.111	19.142 (1.159)	6020	127	0.0253
1 BENZENE				CAS #: 71-43-2
15.591	15.629 (0.945)	13848	112	0.0225
4 TOLUENE ccc				CAS #: 108-88-3
21.650	21.604 (1.312)	13292	104	0.0207 NN
6 CHLOROBENZENE spcc				CAS #: 108-90-7
23.800	23.725 (1.443)	12555	110	0.0220 NN
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.055	28.083 (1.000)	13531	125	
15 1 1-DICHLORETHENE (conf. only)				CAS #: 75-35-4
6.052	6.047 (0.367)	5494	121	0.0242 NN

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (mg/L)
18 TRICHLOROETHENE (conf. only)				CAS #: 79-01-6
17.946	17.982 (1.088)	7469	102	0.0204

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1510-01R.d
Lab Smp Id: mw5MSD
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1510.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 2213
Client Smp ID: mw5MSD
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10098	5049	20196	9748	-3.47
13 4-Bromochlbenzene (c	14711	7356	29422	13531	-8.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.49	15.99	16.99	16.50	0.06
13 4-Bromochlbenzene (c	28.05	27.55	28.55	28.06	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.

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mw5MSD
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1510.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mw5MSD
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

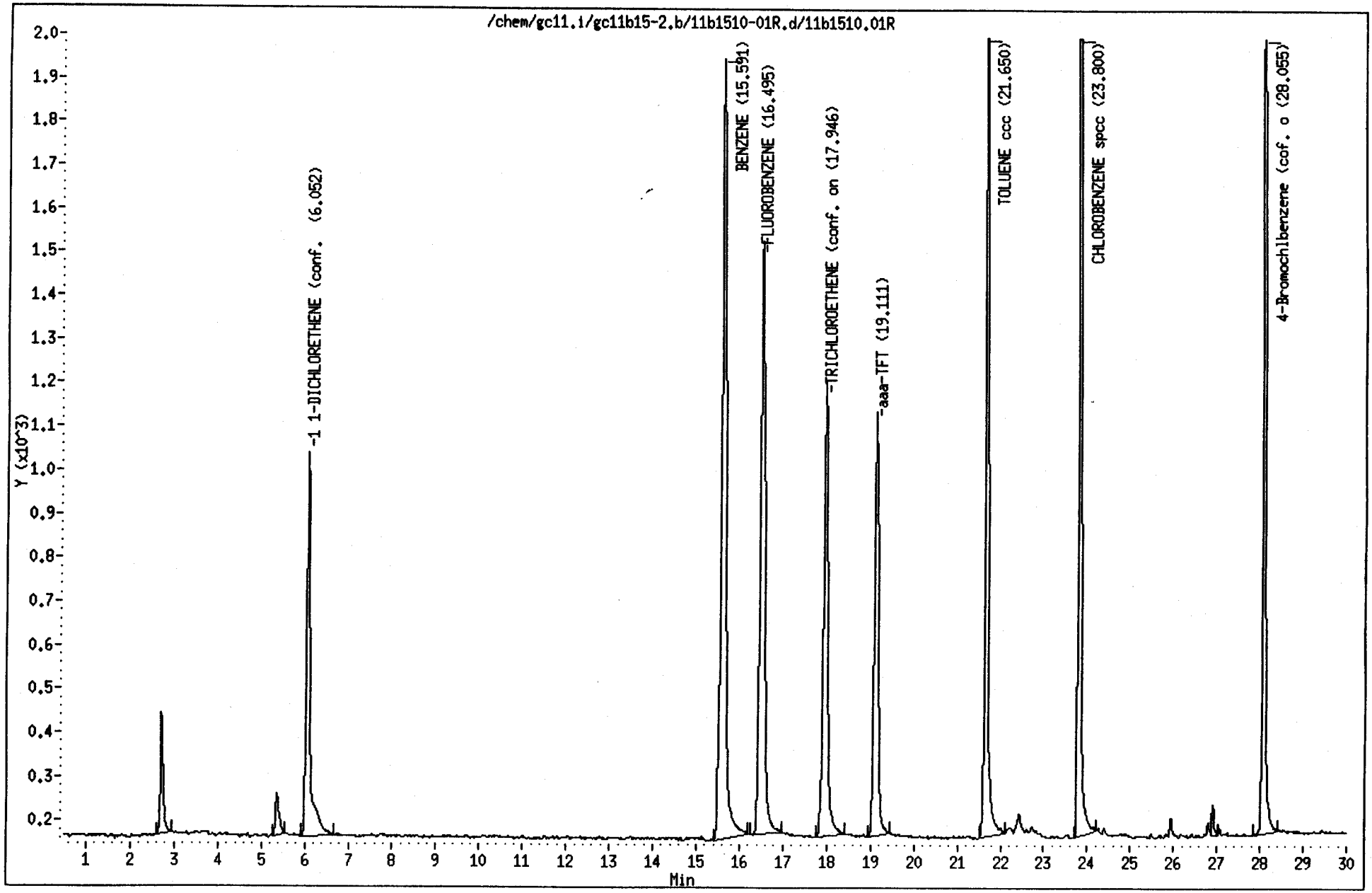
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.0225	
108-88-3	TOLUENE ccc	0.0207	
108-90-7	CHLOROBENZENE spcc	0.0220	
79-01-6	TRICHLOROETHENE (conf. only)	0.0204	
2037-26-5	aaa-TFT	0.0253	

000169

Data File: /chem/gc11.i/gc11b15-2.b/11b1510-01R.d
Date : 15-FEB-1995 14:13
Client ID: mw5MSD
Sample Info: 2-262-4 msd draper
Purge Volume: 5.0
Column phase: dbvrx

Instrument: gc11.i

Operator: jc
Column diameter: 0.53



2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT&E-ES,INC. Contract: Draper Aden

Lab Code: Case No.: SAS No.: SDG No.: gc11b15-1

Hail Pass?

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	mb11	99	102			0
02	blank	98				0
03	blankMS	98				0
04	blankMSD	93				0
05	mb11	91	101			0
06	2-262-10tb	100	101			0
07	mw5	93	102			0
08	mw5MS	92	102			0
09	mw5MSD	100	101			0
10	mb11	96	102			0
11	2-262-1mw7	98	101			0
12	2-262-5mw13	92	102			0
13	2-262-6mw14	89	102			0
14	mb11	98	103			0
15	2-262-7mw16	104	99			0
16	2-262-8mw18	93	100			0
17	2-262-9mw15	95	100			0
18	mb11	96	100			0
19	2-262-3	98				0
20	2-262-4	97				0
21	mb11	94				0
22	mb11	94				0
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

SMC1 = 2-Bromo-1-chloropropan (80-120)

SMC2 = a,a,a-TFT (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3.9.95

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

000171

Lab Name: CT&E-ES,INC. Contract: Draper Aden

Lab Code: Case No.: SAS No.: SDG No.: GC11B15-1

Lab File ID (Standard): 11B1502-01R Date Analyzed: 02/15/95

Instrument ID: GC11 Time Analyzed: 0839

GC Column:db624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1512109	28.07				
	UPPER LIMIT	3024218	28.57				
	LOWER LIMIT	756054	27.57				
	EPA SAMPLE NO.						
01	BLANK	1479206	28.09				
02	BLANKMS	1619110	28.08				
03	BLANKMSD	1681054	28.08				
04	MB11	1639565	28.08				
05	2-262-10TB	1449817	28.07				
06	MW5	1329891	28.08				
07	MW5MS	1336755	28.07				
08	MW5MSD	1383426	28.07				
09	MB11	1313505	28.07				
10	2-262-1MW7	1324547	28.07				
11	2-262-5MW13	1356536	28.08				
12	2-262-6MW14	1328995	28.08				
13	MB11	1367466	28.07				
14	2-262-7MW16	1268773	28.07				
15	2-262-8MW18	1337992	28.07				
16	2-262-9MW15	1514460	28.07				
17	MB11	1537917	28.07				
18	2-262-3	1342732	28.06				
19	2-262-4	1471923	28.06				
20	MB11	1350926	28.06				
21							
22							

IS1 = 4-Bromochlorobenzene

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

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

3/90 MM 3.9.95

CT&E Environmental Services Inc.
Laboratory Division

000172

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-001 Respectfully Submitted:

MW7 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/08/95 10:10
Date Received 02/11/95

Sampled by CLIENT

022495 0727

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	3.6	1.0	ug/L	SW8021	02/15/95 15:27 JC
Chloroethane[75-00-3]	28	1.0	ug/L	SW8021	02/15/95 15:27 JC
1,1-Dichloroethane[75-34-3]	2.9	1.0	ug/L	SW8021	02/15/95 15:27 JC
cis-1,2-Dichloroethene[156-59-2]	7.2	1.0	ug/L	SW8021	02/15/95 15:27 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
Methylene Chloride[75-09-2]	1.5	1.0	ug/L	SW8021	02/15/95 15:27 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 15:27 JC
Trichloroethene[79-01-6]	1.7	1.0	ug/L	SW8021	02/15/95 15:27 JC
Vinyl chloride[75-01-4]	3.6	0.50	ug/L	SW8021	02/15/95 15:27 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	98	------	% REC	SW8021	02/15/95 15:27 JC
a,a,a-Trifluorotoluene<SURROGATE>	101	------	% REC	SW8021	02/15/95 15:27 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, **Baltimore, MD 21227-1410** — Tel: (410) 247-7400 Fax: (410) 247-7402
4440 Glen Este-Withamsville Road, Suite 900, **Cincinnati, OH 45245-1331** — Tel: (513) 752-9696 Fax: (513) 752-2614

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1512-01R.d
Lab Smp Id: 2-262-1mw7 Client Smp ID: 2-262-1mw7
Inj Date : 15-FEB-95 15:27
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-1 draper
Misc Info : Created from: 11b1512.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)	
2 VINYL CHLORIDE				CAS #: 75-01-4	
3.667	3.630 (0.130)	200390	17.8	0.00356	(M)
3 BROMOMETHANE				CAS #: 74-83-9	
4.317	4.333 (0.000)	261403	29.1	0.00582	(M)
4 CHLOROETHANE				CAS #: 75-00-3	
4.433	4.417 (0.000)	1249468	138	0.0277	(M)
7 METHYLENE CHLORIDE				CAS #: 75-09-2	
6.392	6.387 (0.228)	232558	7.47	0.00149	
8 trans-1 2-DICHLOROETHENE				CAS #: 156-60-5	
7.925	7.922 (0.282)	298025	12.9	0.00258	
9 1,1-DICHLOROETHANE				CAS #: 75-34-3	
8.593	8.589 (0.306)	374926	14.6	0.00293	
10 cis-1 2-DICHLOROETHENE				CAS #: 156-59-2	
10.418	10.429 (0.371)	826521	35.9	0.00718	

		CONCENTRATIONS ON-COL	FINAL
RT	EXP RT (REL RT) RESPONSE	(ng)	(mg/L)
13	1 2-DICHLOROETHANE		CAS #: 107-06-2
13.805	13.824 (0.492) 38188	2.03	0
17	1,2-DICHLOROPROPANE		CAS #: 78-87-5
17.762	17.783 (0.633) 152235	7.86	0.00157
18	TRICHLOROETHENE		CAS #: 79-01-6
17.965	17.982 (0.640) 233461	8.46	0.00169
$ 23	2-Bromo-1-chloropropane		CAS #: 460-00-4
21.590	21.604 (0.769) 1769235	122	0.0245
35	1 4-DICHLBENZENE (conf. only)		CAS #: 106-46-7
26.813	26.823 (0.955) 40779	2.51	0
* 30	4-Bromochlorobenzene		CAS #: 2199-69-1
28.073	28.083 (1.000) 1324547	125	

QC Flag Legend

M - Compound response manually integrated.

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1512-01R.d
Lab Smp Id: 2-262-1mw7
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1512.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-1mw7
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1324547	-12.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-1mw7
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-1mw7
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1512.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0245	97.94	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-1mw7
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1512.01R, 21-Feb-1995 12:16

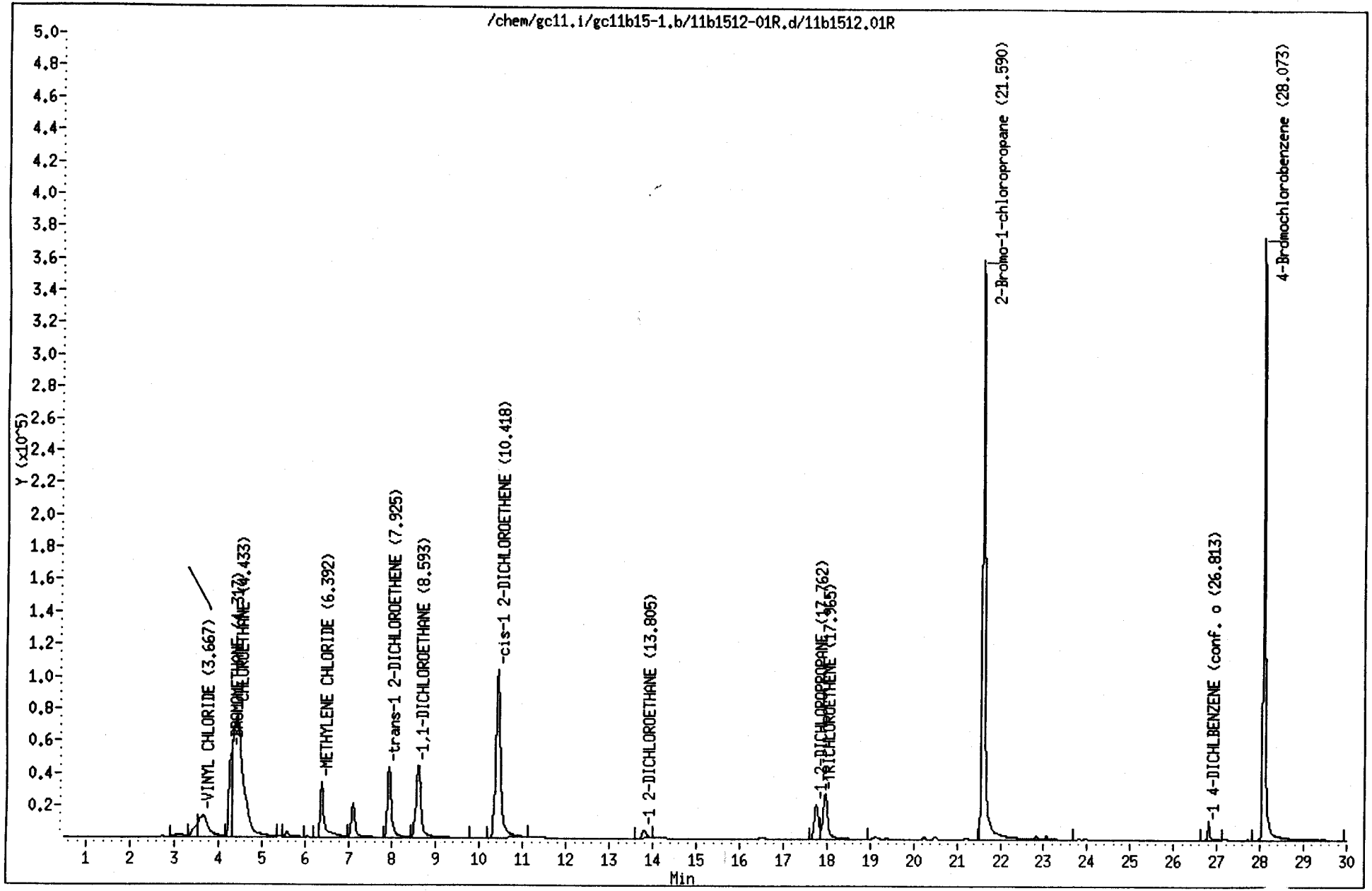
Client SDG: gc11b15-1
Client Smp ID: 2-262-1mw7
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
75-01-4	VINYL CHLORIDE	0.00356	
74-83-9	BROMOMETHANE	0.00582	
75-00-3	CHLOROETHANE	0.0277	
75-09-2	METHYLENE CHLORIDE	0.00149	
156-60-5	trans-1 2-DICHLOROETHENE	0.00258	
75-34-3	1,1-DICHLOROETHANE	0.00293	
156-59-2	cis-1 2-DICHLOROETHENE	0.00718	
107-06-2	1 2-DICHLOROETHANE	0.000406	
78-87-5	1,2-DICHLOROPROPANE	0.00157	
79-01-6	TRICHLOROETHENE	0.00169	
460-00-4	2-Bromo-1-chloropropane	0.0245	

Data File: /chem/gc11.i/gc11b15-1.b/11b1512-01R.d
Date : 15-FEB-95 15:27
Client ID: 2-262-1mw7
Sample Info: 2-262-1 draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i

Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b15-2.b/11b1512-01R.d
Report Date: 21-Feb-1995 17:58

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1512-01R.d
Lab Smp Id: 2-262-1mw7 Client Smp ID: 2-262-1mw7
Inj Date : 15-FEB-95 15:27
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-1 draper
Misc Info : Created from: 11b1512.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.500	16.523 (1.000)	9463	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.117	19.142 (1.159)	5843	127	0.0253
1 BENZENE				CAS #: 71-43-2
15.595	15.629 (0.945)	2160	18.0	0.00361
4 TOLUENE ccc				CAS #: 108-88-3
21.650	21.604 (1.312)	778	6.24	0.00125
9 o-XYLENE				CAS #: 95-47-6
24.872	24.817 (1.507)	313	3.10	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.061	28.083 (1.000)	13071	125	
15 1 1-DICHLORETHENE (conf. only)				CAS #: 75-35-4
6.072	6.047 (0.368)	3236	73.4	0.0147

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
16 t-1 2-DICHLETHENE (conf. only)				CAS #: 156-60-5
7.916	7.922 (0.480)	965	9.77	0.00195
17 c-1 2-DICHLETHENE (conf. only)				CAS #: 156-59-2
10.407	10.429 (0.631)	1877	33.2	0.00665
18 TRICHLOROETHENE (conf. only)				CAS #: 79-01-6
18.004	17.982 (1.091)	908	12.8	0.00256

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1512-01R.d
Lab Smp Id: 2-262-1mw7
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1512.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-1mw7
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	9463	-7.67
13 4-Bromochlbenzene (c	14434	7217	28868	13071	-9.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.50	-0.02
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.06	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-1mw7
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-1mw7
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1512.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0253	101.31	80-120

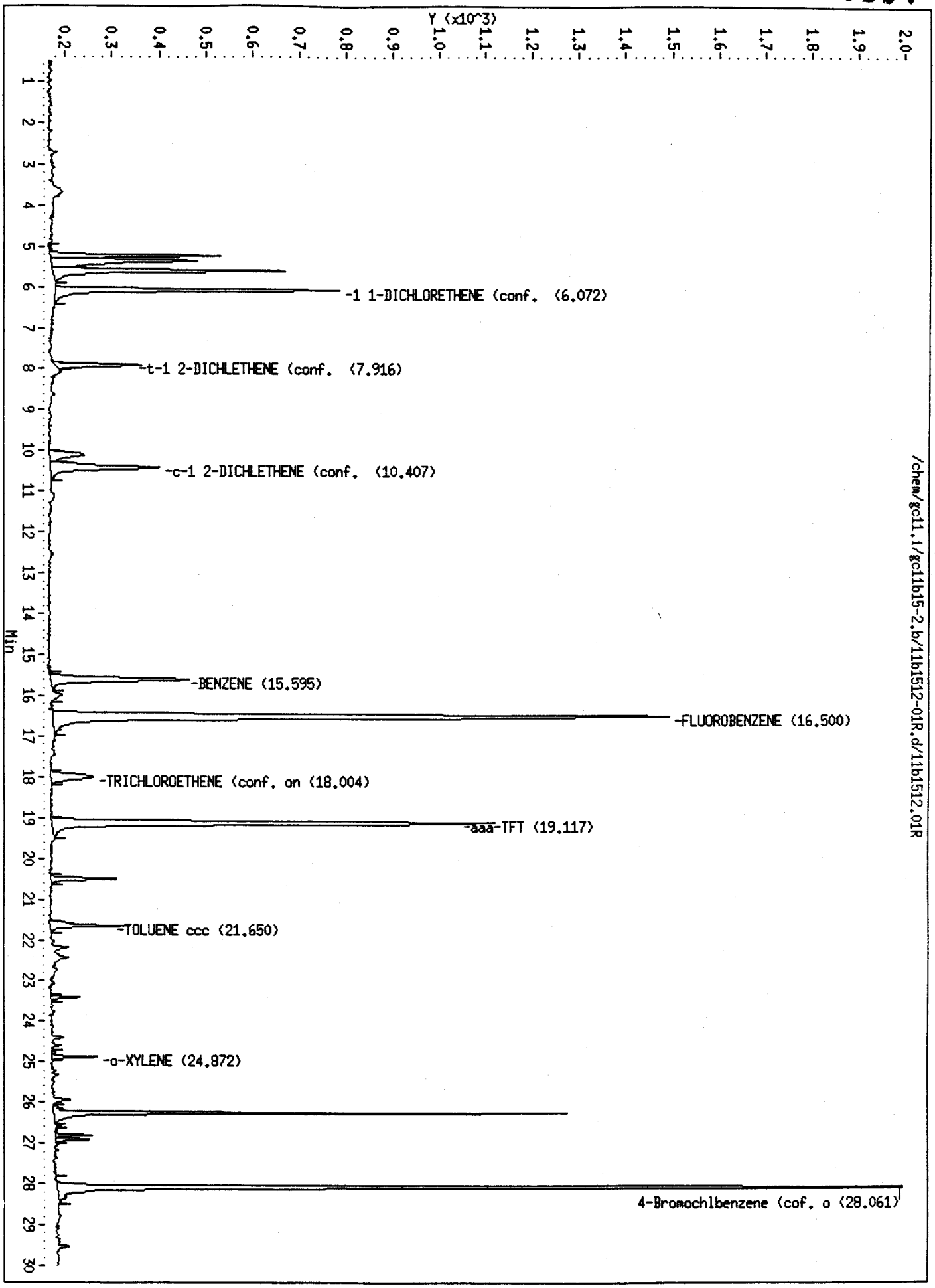
CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-1mw7
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1512.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-1mw7
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-43-2	BENZENE	0.00361	
108-88-3	TOLUENE ccc	0.00125	
95-47-6	o-XYLENE	0.000621	
79-01-6	TRICHLOROETHENE (conf. only)	0.00256	
2037-26-5	aaa-TFT	0.0253	



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/chem/gc11.i/gc11b15-2.b/11b1512-01R.d/11b1512.01R

Data File: /chem/msd1.i/c031a.b/c031a1201012.d

Date : 03-MAR-1995 15:50

Client ID: 2-262-1mw7

Instrument: msd1.i

Sample Info: 2-262-1 mw7 8260 conf

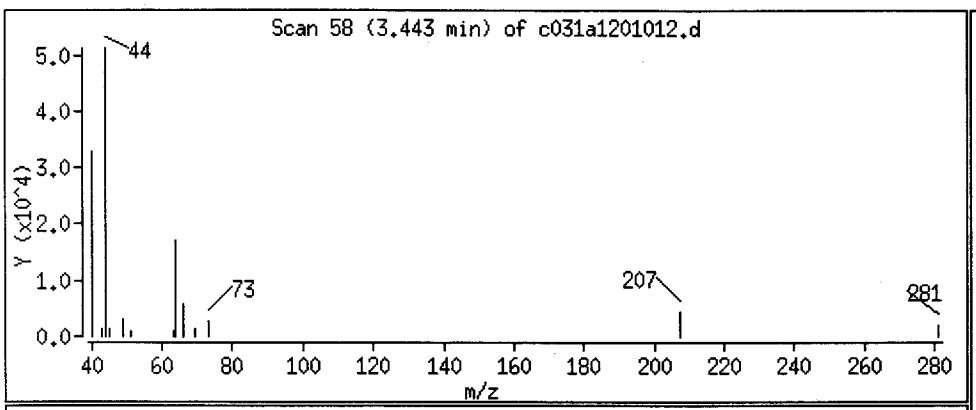
Purge Volume: 5.0

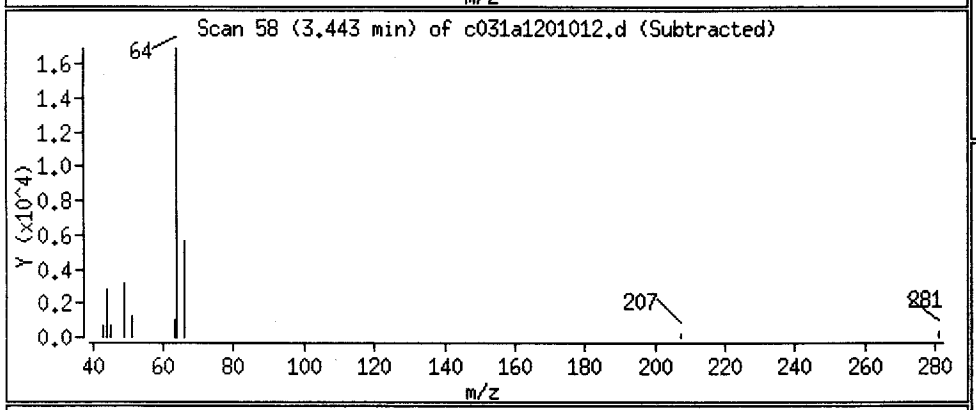
Operator: sgm

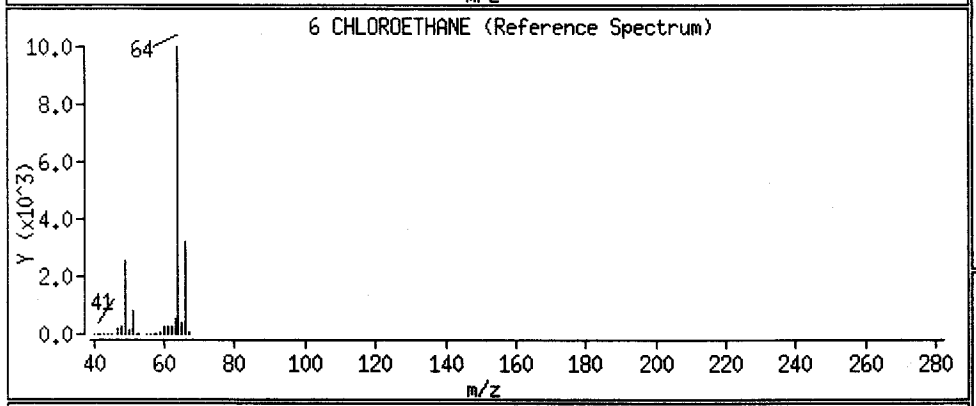
Column phase: db624

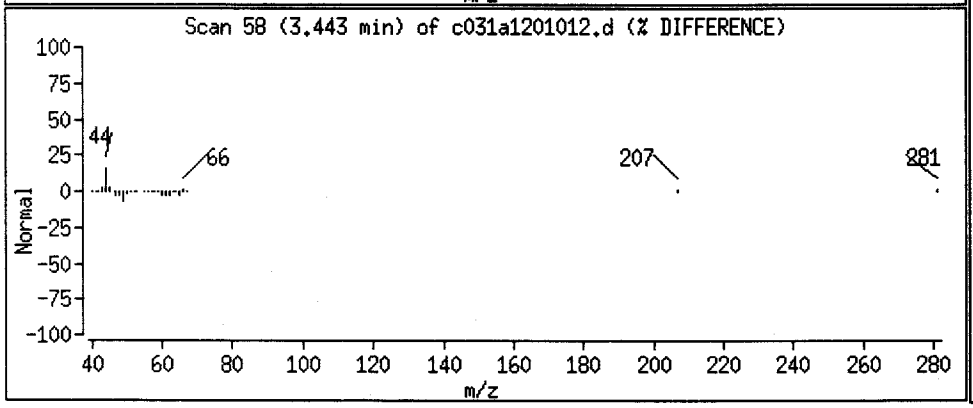
Column diameter: 0.53

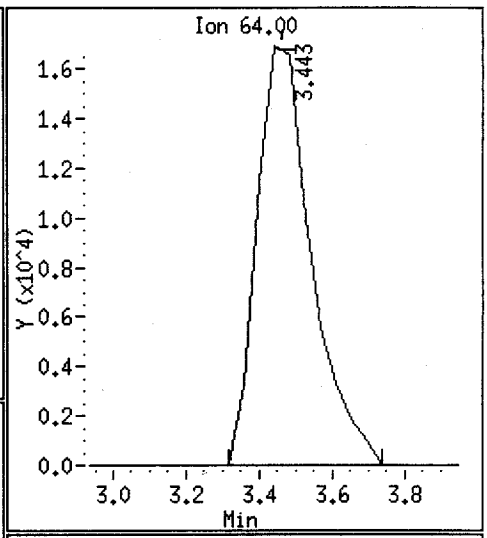
6 CHLOROETHANE

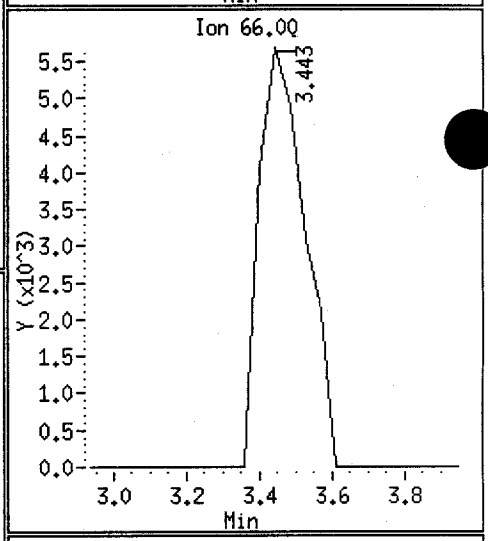


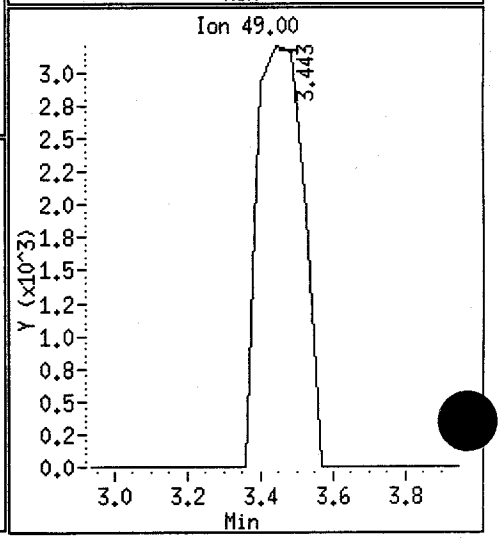












000184 B

Data File: /chem/msd1.i/c031a.b/c031a1201012.d

Date : 03-MAR-1995 15:50

Client ID: 2-262-1mw7

Instrument: msd1.i

Sample Info: 2-262-1 mw7 8260 conf

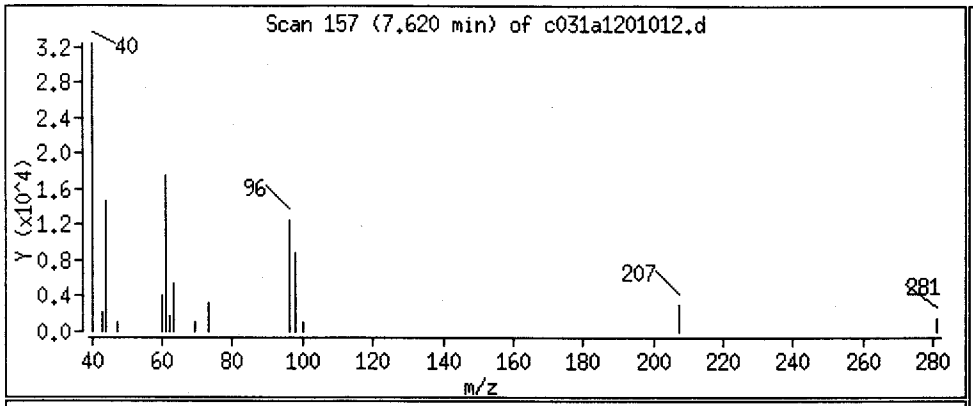
Purge Volume: 5.0

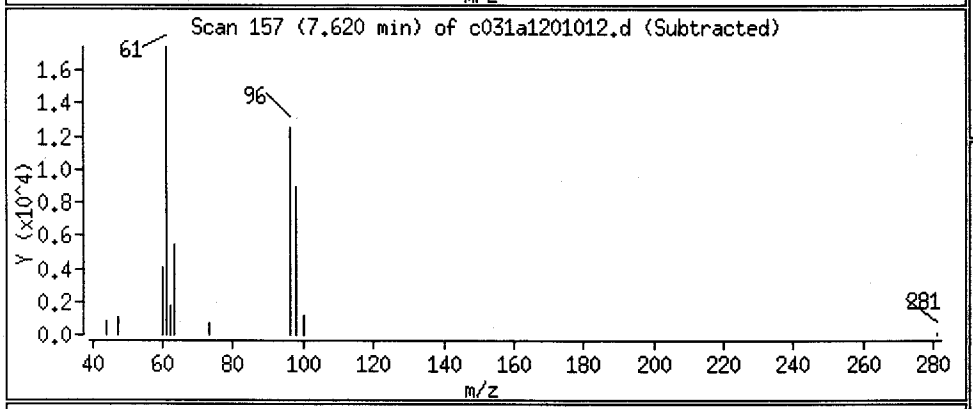
Operator: sgm

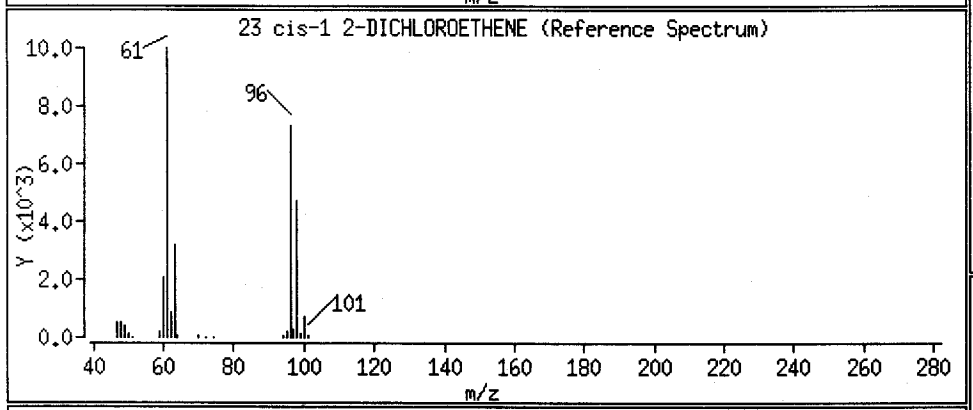
Column phase: db624

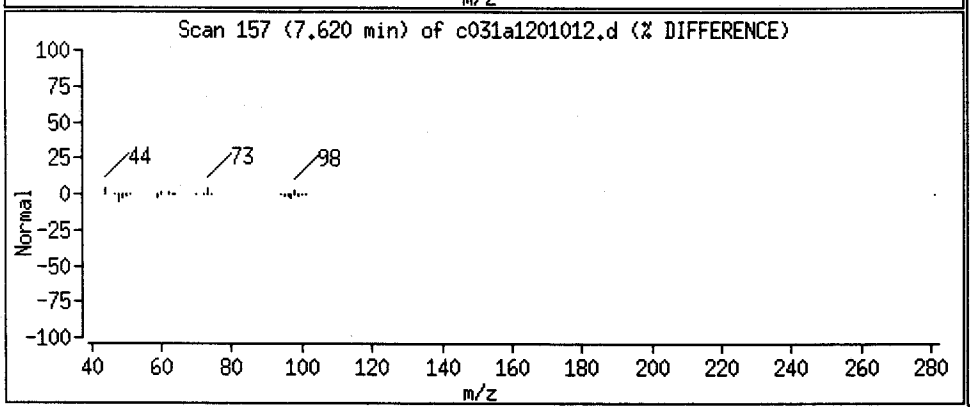
Column diameter: 0.53

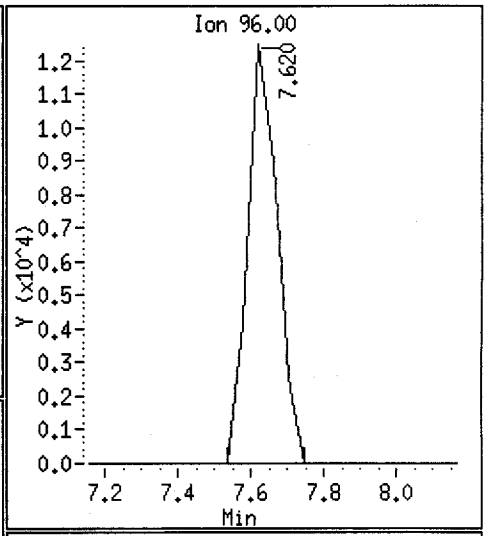
23 cis-1 2-DICHLOROETHENE

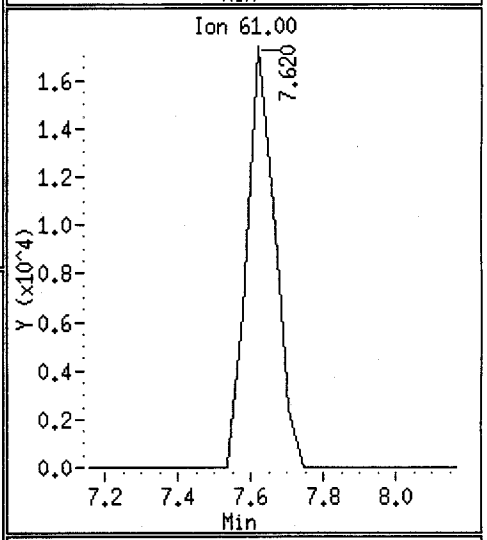


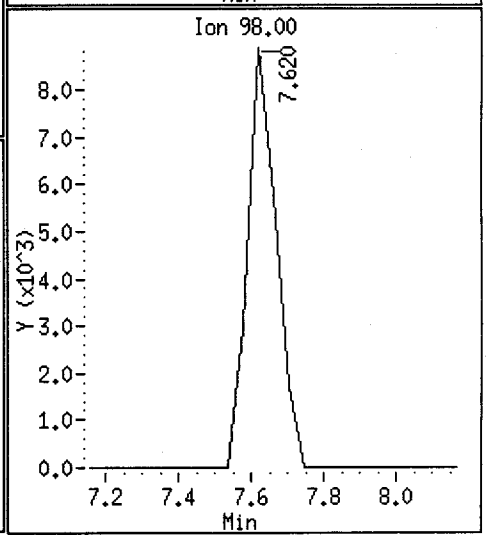












CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-002 Respectfully Submitted: RCM-4

MW5 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/08/95 10:45
Date Received 02/11/95

Sampled by CLIENT

022495 0727

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 12:35 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 12:35 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	93	------	% REC	SW8021	02/15/95 12:35 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 12:35 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, **Baltimore, MD 21227-1410** — Tel: (410) 247-7400 Fax: (410) 247-7402
4440 Glen Este-Withamsville Road, Suite 900, **Cincinnati, OH 45245-1331** — Tel: (513) 752-9696 Fax: (513) 752-2614

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1508-01R.d
Lab Smp Id: mw5 Client Smp ID: mw5
Inj Date : 15-FEB-95 12:35
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-2 draper
Misc Info : Created from: 11b1508.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.990	17.982 (0.641)	69215	2.50	0 ND
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.600	21.604 (0.769)	1686022	116	0.0232
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.081	28.083 (1.000)	1329891	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1508-01R.d
Lab Smp Id: mw5
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1508.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mw5
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1329891	-12.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.08	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mw5
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mw5
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1508.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0232	92.96	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: mw5
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1508.01R, 21-Feb-1995 12:16

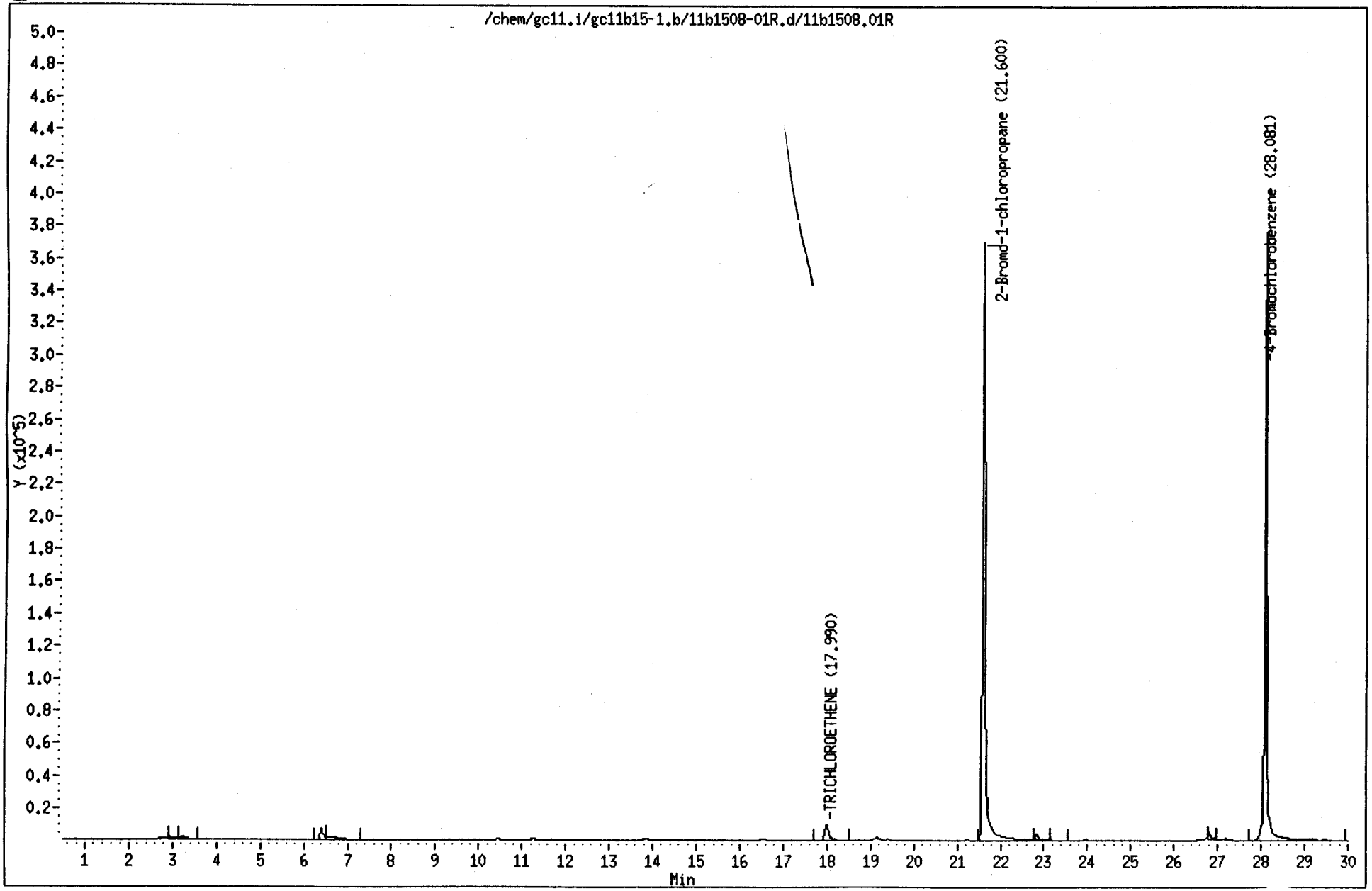
Client SDG: gc11b15-1
Client Smp ID: mw5
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000499	
460-00-4	2-Bromo-1-chloropropane	0.0232	

000130

Data File: /chem/gc11.i/gc11b15-1.b/11b1508-01R.d
Date : 15-FEB-95 12:35
Client ID: mw5
Sample Info: 2-262-2 draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1508-01R.d
Lab Smp Id: mw5 Client Smp ID: mw5
Inj Date : 15-FEB-95 12:35
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-2 draper
Misc Info : Created from: 11b1508.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.526	16.523 (1.000)	9072	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.133	19.142 (1.158)	5646	128	0.0255
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.067	28.083 (1.000)	12797	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1508-01R.d
Lab Smp Id: mw5
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1508.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: mw5
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	9072	-11.48
13 4-Bromochlbenzene (c	14434	7217	28868	12797	-11.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.53	0.14
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: mw5
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: mw5
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1508.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0255	102.11	80-120

CT&E Environmental Services Inc. Charleston,WV

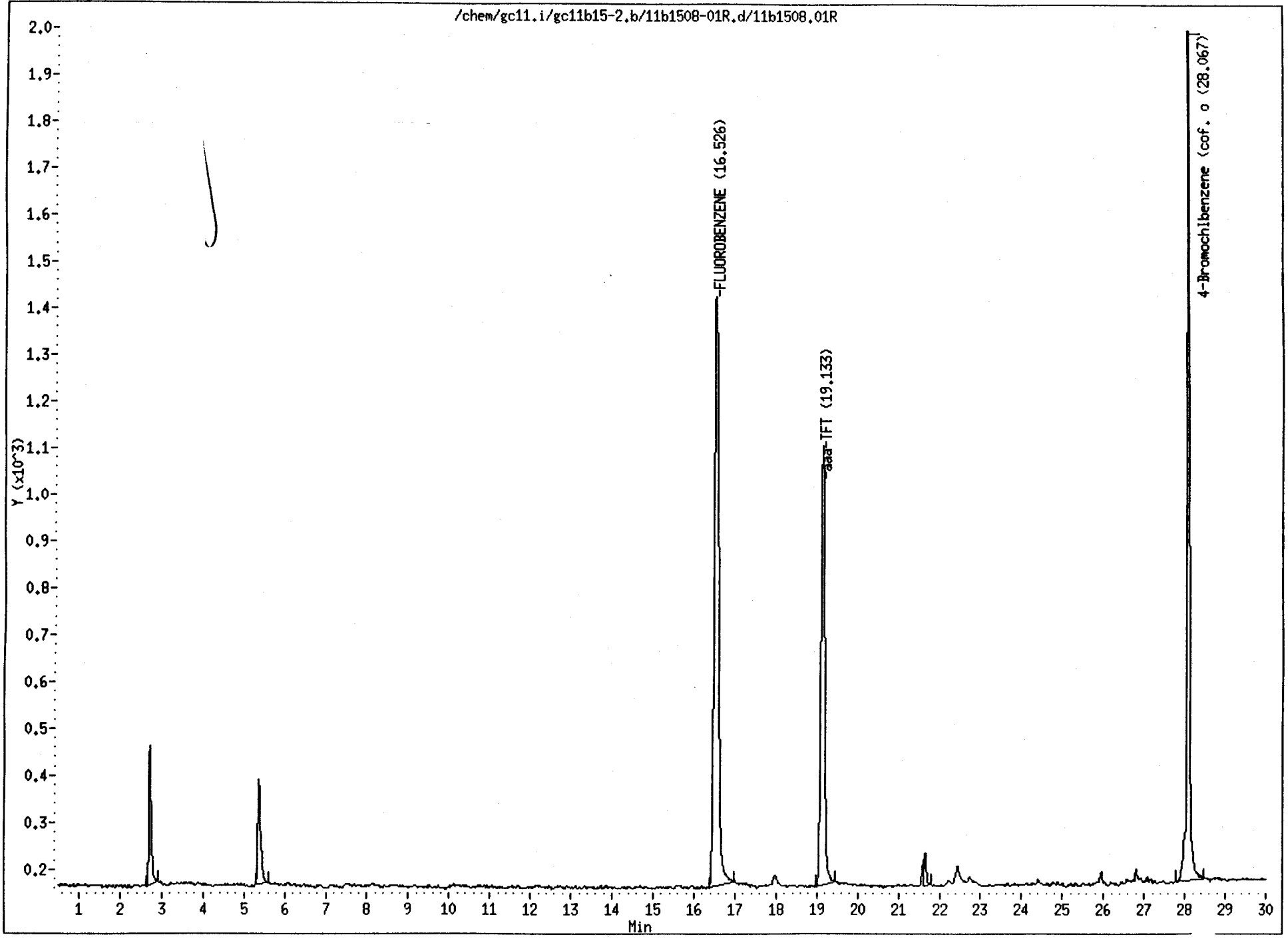
TARGET COMPOUNDS

Client Name:
Lab Smp Id: mw5
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1508.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: mw5
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
2037-26-5	-------aaa-TFT	0.0255	

000195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Y (x10^3)
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
-FLUOROBENZENE (16.526)
aaa-TFT (19.133)
4-Bromochlbenzene (cof. o (28.067)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Min

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-005 Respectfully Submitted:

MW13 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/08/95 17:20
Date Received 02/11/95

Sampled by CLIENT

022495 0727

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 16:03 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 16:03 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	92	------	% REC	SW8021	02/15/95 16:03 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 16:03 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1513-01R.d
Lab Smp Id: 2-262-5mw13 Client Smp ID: 2-262-5mw13
Inj Date : 15-FEB-95 16:03
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-5 draper
Misc Info : Created from: 11b1513.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.969	17.982 (0.640)	64881	2.30	0 ND
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.595	21.604 (0.769)	1706944	115	0.0231
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.077	28.083 (1.000)	1356536	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1513-01R.d
Lab Smp Id: 2-262-5mw13
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1513.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-5mw13
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1356536	-10.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.08	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-5mw13
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-5mw13
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1513.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0231	92.26	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-5mw13
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1513.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-5mw13
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000459	
460-00-4	2-Bromo-1-chloropropane	0.0231	

Data /chem/gc11.i/gc11b15-1.b/11b1513-01R.d

Date : 15-FEB-95 16:03

Client ID: 2-262-5mw13

Instrument: gc11.i

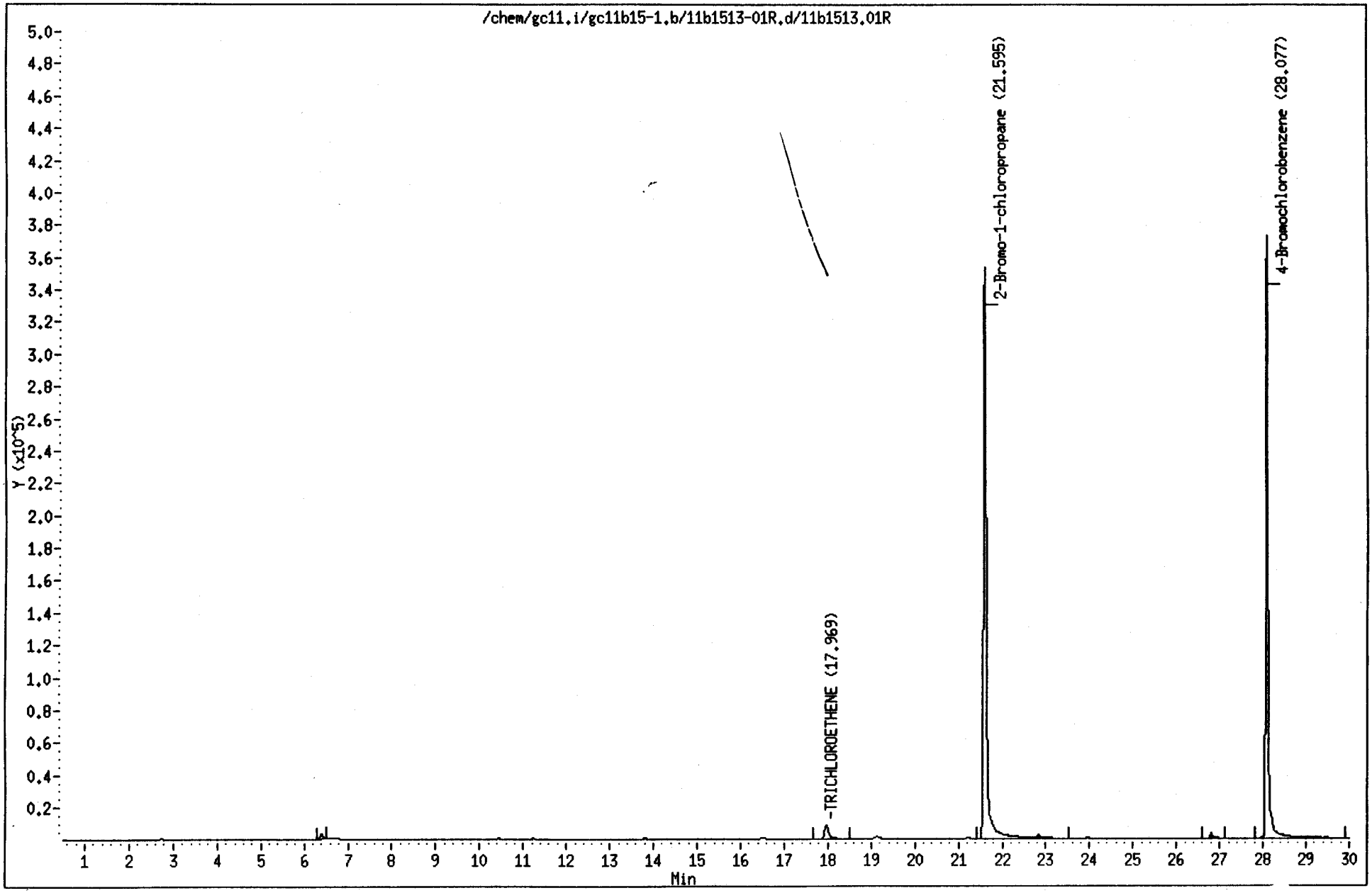
Sample Info: 2-262-5 draper

Purge Volume: 5.0

Operator: jc

Column phase: db624

Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1513-01R.d
Lab Smp Id: 2-262-5mw13 Client Smp ID: 2-262-5mw13
Inj Date : 15-FEB-95 16:03
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-5 draper
Misc Info : Created from: 11b1513.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.501	16.523 (1.000)	8818	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.120	19.142 (1.159)	5491	128	0.0255
4 TOLUENE ccc				CAS #: 108-88-3
21.654	21.604 (1.312)	308	2.65	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.065	28.083 (1.000)	13025	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1513-01R.d
Lab Smp Id: 2-262-5mw13
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1513.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-5mw13
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	8818	-13.96
13 4-Bromochlbenzene (c	14434	7217	28868	13025	-9.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.50	-0.01
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.06	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

000204

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-5mw13
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-5mw13
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1513.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0255	102.17	80-120

CT&E Environmental Services Inc. Charleston,WV

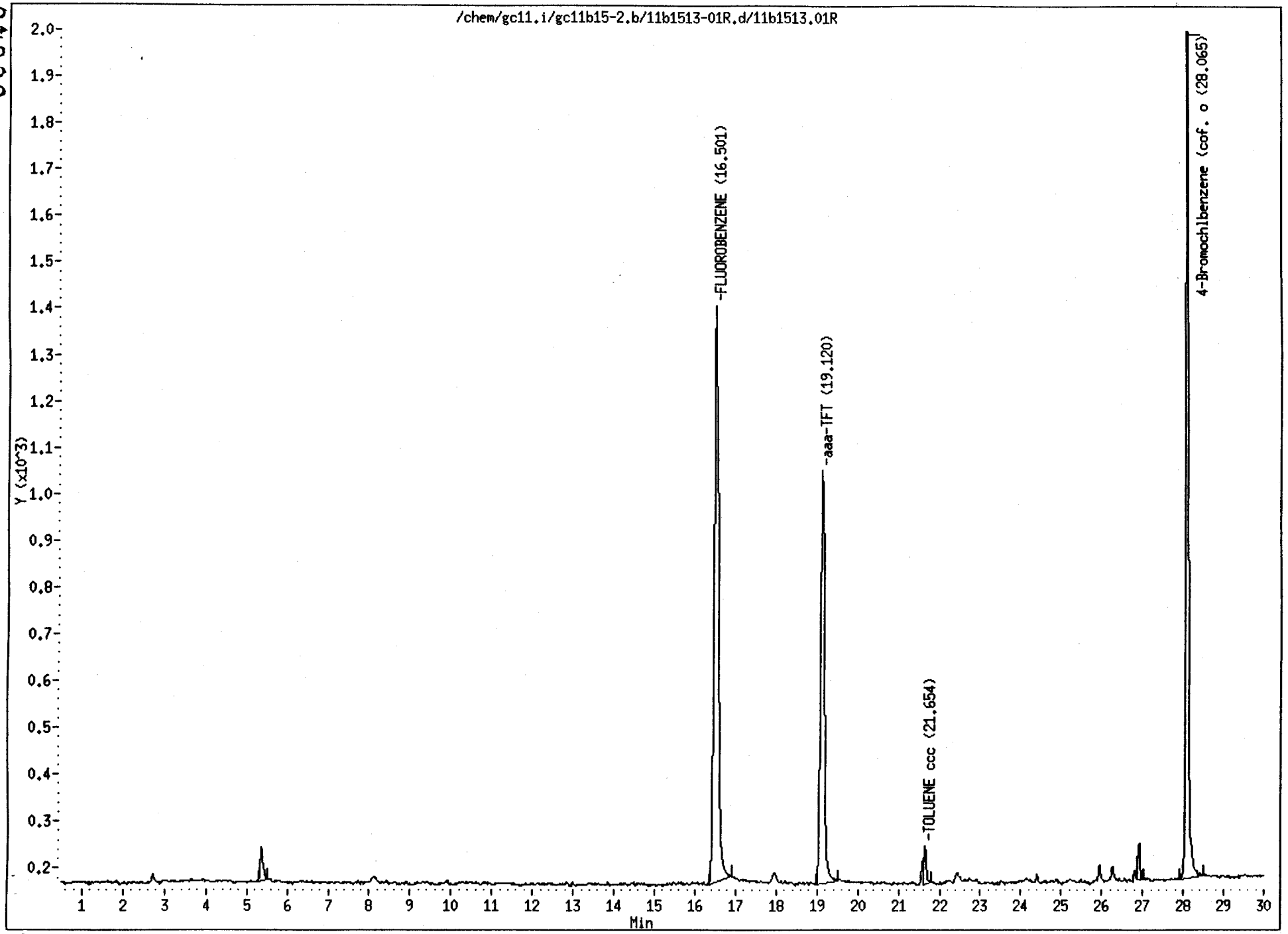
TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-5mw13
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1513.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-5mw13
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000530	
2037-26-5	aaa-TFT	0.0255	

000208


/chem/gc11.i/gc11b15-2.b/11b1513-01R.d/11b1513.01R
-FLUOROBENZENE (16.501)
-aaa-TFT (19.120)
-TOLUENE ccc (21.654)
4-Bromochlbenzene (cof. o (28.065)
Y (x10^3)
Min

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-006 Respectfully Submitted:

RCM-14

MW14 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/09/95 9:45
Date Received 02/11/95

Sampled by CLIENT

022495 0727

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
1,1,1-Trichloroethane[71-55-6]	1.0	1.0	ug/L	SW8021	02/15/95 16:40 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 16:40 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 16:40 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	89	------	% REC	SW8021	02/15/95 16:40 JC
a,a,a-Trifluorotoluene<SURROGATE>	102	------	% REC	SW8021	02/15/95 16:40 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1514-01R.d
Lab Smp Id: 2-262-6mw14 Client Smp ID: 2-262-6mw14
Inj Date : 15-FEB-95 16:40
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-6 draper
Misc Info : Created from: 11b1514.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
14 1 1 1-TRICHLOROETHANE				CAS #: 71-55-6
14.115	14.115 (0.503)	145162	5.06	0.00101
18 TRICHLOROETHENE				CAS #: 79-01-6
17.977	17.982 (0.640)	69931	2.52	0 ND
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.599	21.604 (0.769)	1615252	111	0.0223
24 DIBROMOCHLOROMETHANE				CAS #: 124-48-1
22.105	22.124 (0.787)	56542	3.27	0 ND
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.076	28.083 (1.000)	1328995	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1514-01R.d
Lab Smp Id: 2-262-6mw14
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1514.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-6mw14
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1328995	-12.11

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.08	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-6mw14
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk

Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-6mw14
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD

Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1514.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0223	89.12	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

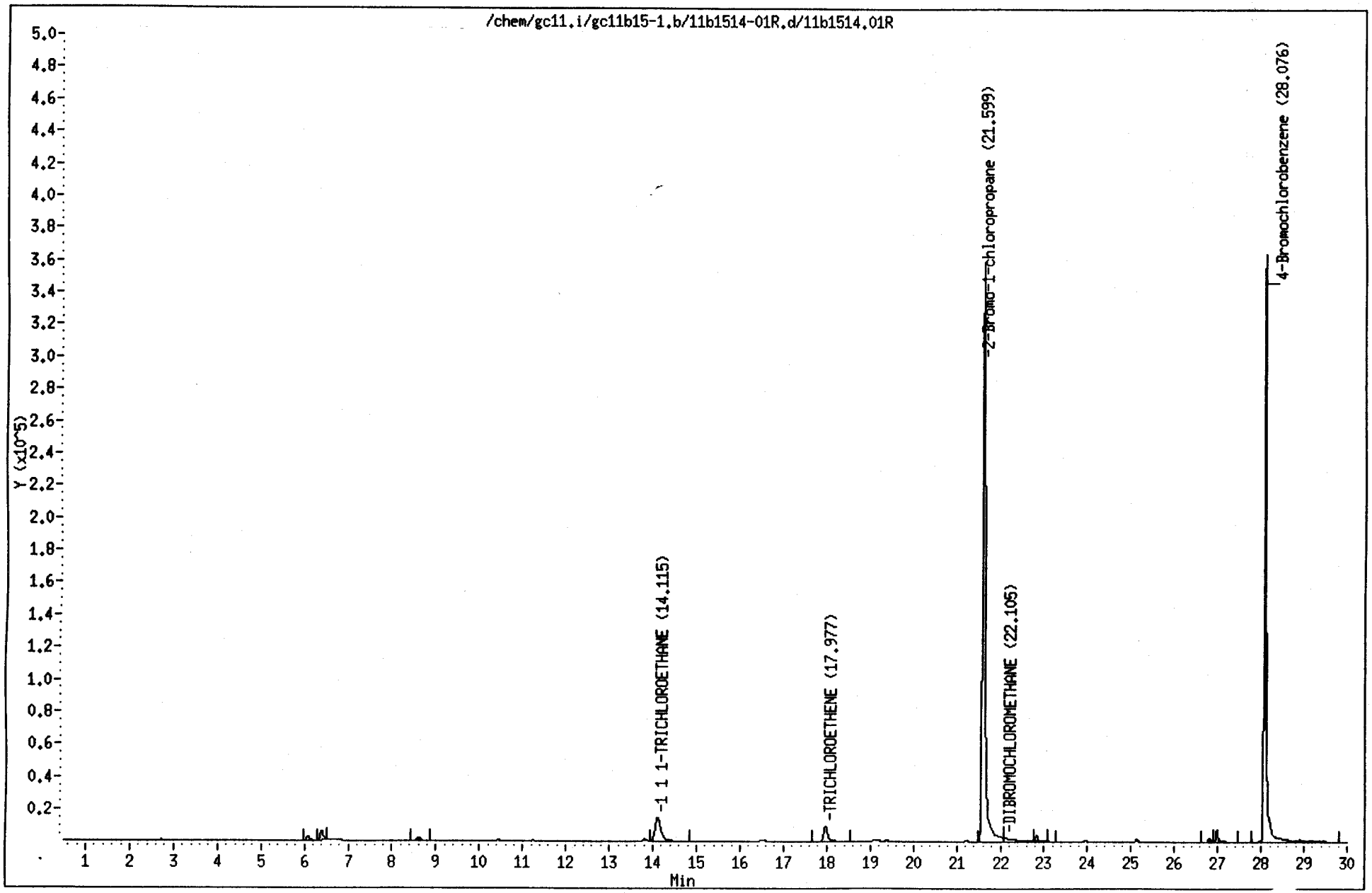
Client Name:
Lab Smp Id: 2-262-6mw14
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1514.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-6mw14
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-55-6	1 1 1-TRICHLOROETHANE	0.00101	
79-01-6	TRICHLOROETHENE	0.000505	
124-48-1	DIBROMOCHLOROMETHANE	0.000653	
460-00-4	2-Bromo-1-chloropropane	0.0223	

Data File: /chem/gc11.i/gc11b15-1.b/11b1514-01R.d
Date : 15-FEB-95 16:40
Client ID: 2-262-6mw14
Sample Info: 2-262-6 draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1514-01R.d
Lab Smp Id: 2-262-6mw14 Client Smp ID: 2-262-6mw14
Inj Date : 15-FEB-95 16:40
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-6 draper
Misc Info : Created from: 11b1514.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.506	16.523 (1.000)	8931	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.123	19.142 (1.159)	5559	128	0.0255
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.064	28.083 (1.000)	12879	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1514-01R.d
Lab Smp Id: 2-262-6mw14
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1514.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-6mw14
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	8931	-12.86
13 4-Bromochlbenzene (c	14434	7217	28868	12879	-10.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.51	0.02
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.06	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-6mw14
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-6mw14
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1514.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0255	102.13	80-120

CT&E Environmental Services Inc. Charleston,WV

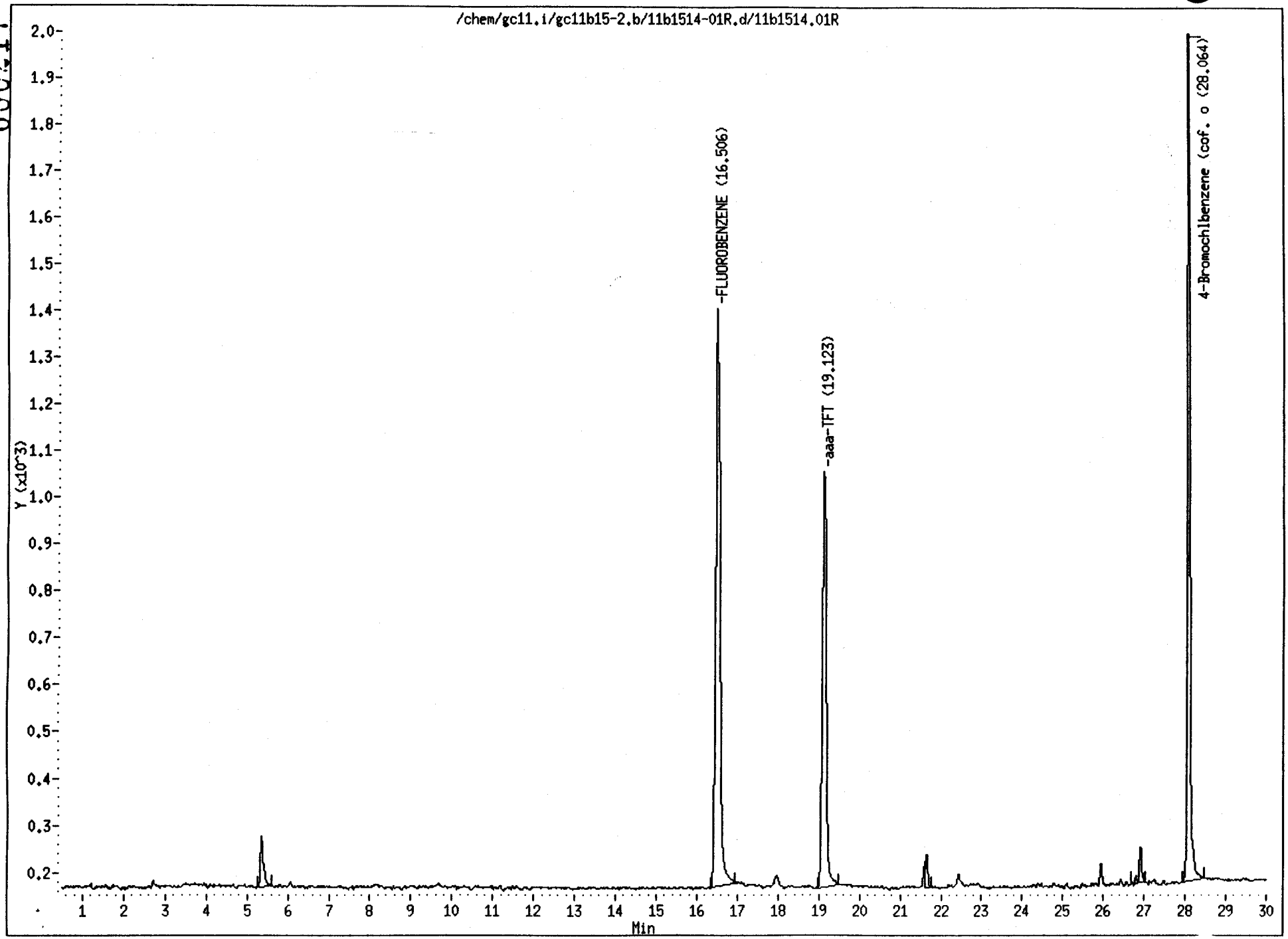
TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-6mw14
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1514.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-6mw14
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
2037-26-5	aaa-TFT	0.0255	

000217


/chem/gc11.i/gc11b15-2.b/11b1514-01R.d/11b1514.01R
-FLUOROBENZENE (16.506)
-aaa-TFT (19.123)
4-Bromochlbenzene (cof. o (28.064)
Y (x10^3)
Min

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-007 Respectfully Submitted:

MW16 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/09/95 10:50
Date Received 02/11/95

Sampled by CLIENT

022495 0727

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 17:54 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 17:54 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	104	------	% REC	SW8021	02/15/95 17:54 JC
a,a,a-Trifluorotoluene<SURROGATE>	99	------	% REC	SW8021	02/15/95 17:54 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1516-01R.d
Lab Smp Id: 2-262-7mw16 Client Smp ID: 2-262-7mw16
Inj Date : 15-FEB-95 17:54
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-7 draper
Misc Info : Created from: 11b1516.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

			CONCENTRATIONS ON-COL	FINAL
RT	EXP RT (REL RT)	RESPONSE	(ng)	(mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.950	17.982 (0.640)	65439	2.47	0 ND
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.584	21.604 (0.769)	1790934	129	0.0259
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.066	28.083 (1.000)	1268773	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1516-01R.d
Lab Smp Id: 2-262-7mw16
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1516.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-7mw16
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1268773	-16.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-7mw16
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-7mw16
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1516.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0259	103.50	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

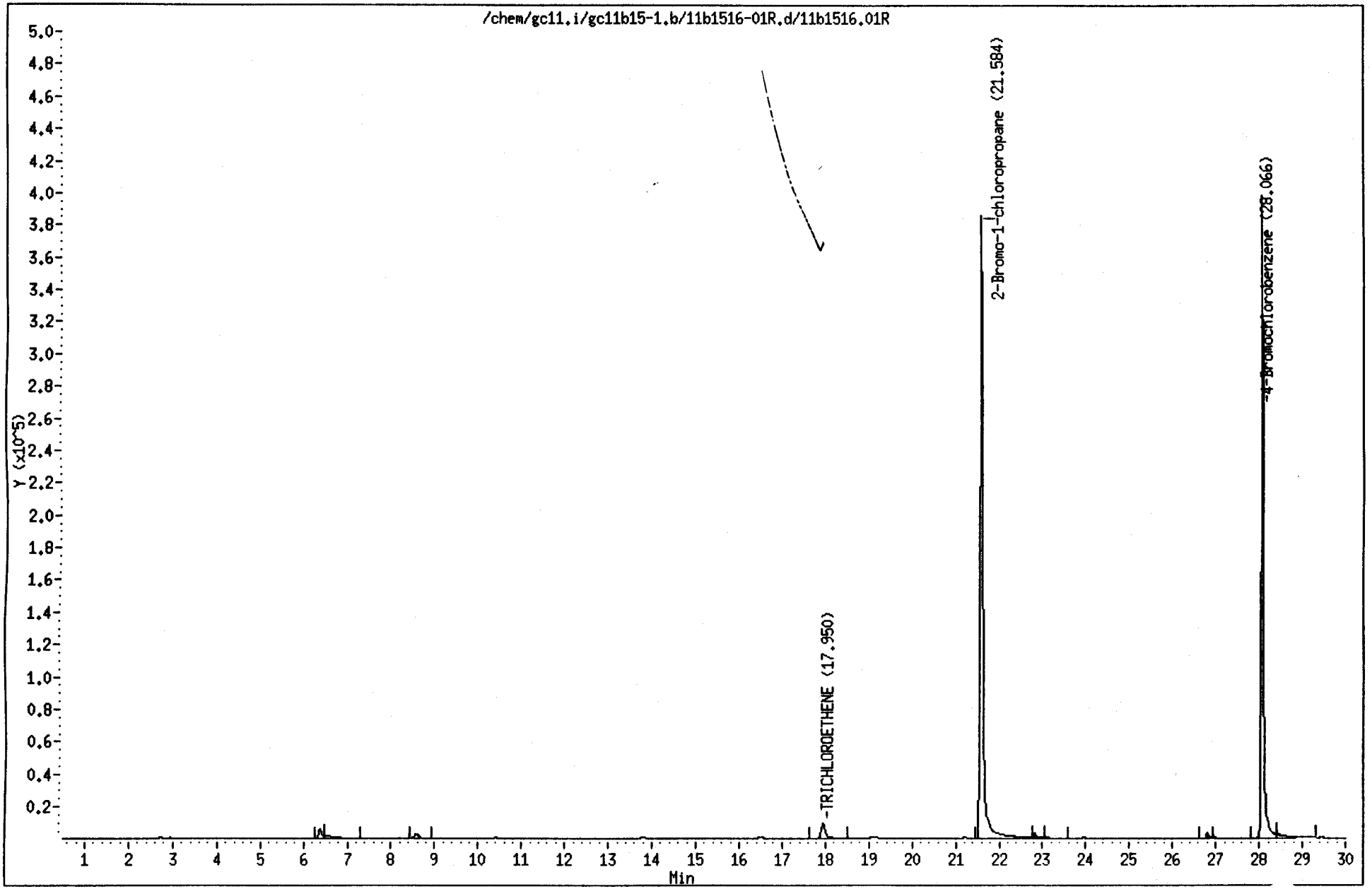
Client Name:
Lab Smp Id: 2-262-7mw16
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1516.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-7mw16
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000495	
460-00-4	2-Bromo-1-chloropropane	0.0259	

Data P /chem/gc11.i/gc11b15-1.b/11b1516-01R.d
Date : 15-FEB-95 17:54
Client ID: 2-262-7mw16
Sample Info: 2-262-7 draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1516-01R.d
Lab Smp Id: 2-262-7mw16 Client Smp ID: 2-262-7mw16
Inj Date : 15-FEB-95 17:54
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-7 draper
Misc Info : Created from: 11b1516.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.486	16.523 (1.000)	9012	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.102	19.142 (1.159)	5435	124	0.0247
4 TOLUENE ccc				CAS #: 108-88-3
21.645	21.604 (1.313)	413	3.48	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.052	28.083 (1.000)	12744	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1516-01R.d
Lab Smp Id: 2-262-7mw16
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1516.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-7mw16
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	9012	-12.07
13 4-Bromochlbenzene (c	14434	7217	28868	12744	-11.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.49	-0.11
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.05	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-7mw16
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-7mw16
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1516.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0247	98.95	80-120

CT&E Environmental Services Inc. Charleston,WV

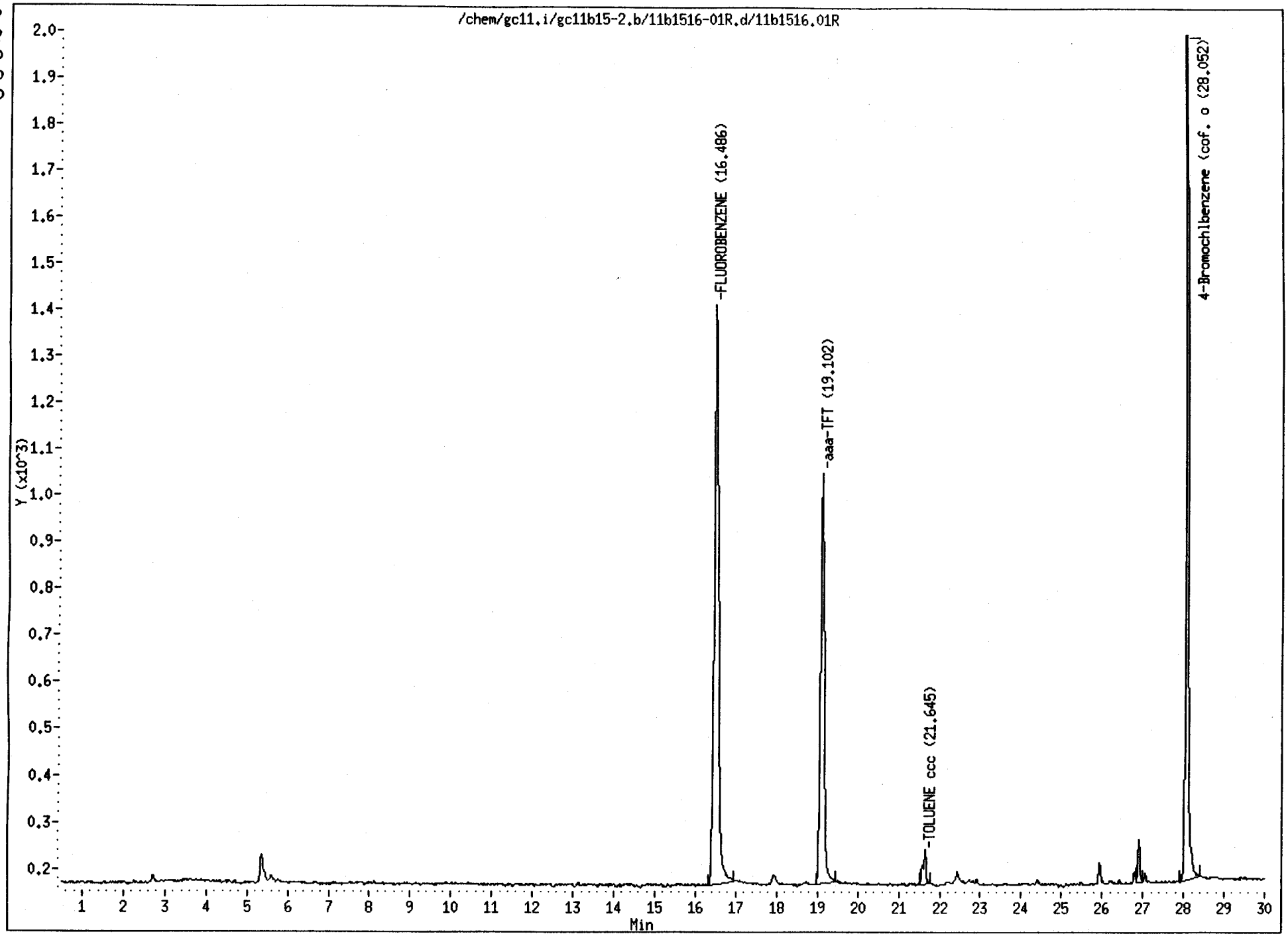
TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-7mw16
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1516.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-7mw16
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000696	
2037-26-5	aaa-TFT	0.0247	

000228


/chem/gc11.i/gc11b15-2.b/11b1516-01R.d/11b1516.01R
-FLUOROBENZENE (16.486)
-aaa-TFT (19.102)
-TOLUENE ccc (21.645)
4-Bromochlbenzene (caf. o (28.052)
Y (x10^3)
Min

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-008 Respectfully Submitted:

MW18 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/09/95 12:15
Date Received 02/11/95

Sampled by CLIENT

022495 0727

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 18:31 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 18:31 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	93	------	% REC	SW8021	02/15/95 18:31 JC
a,a,a-Trifluorotoluene<SURROGATE>	100	------	% REC	SW8021	02/15/95 18:31 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1517-01R.d
Lab Smp Id: 2-262-8mw18 Client Smp ID: 2-262-8mw18
Inj Date : 15-FEB-95 18:31
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-8 draper
Misc Info : Created from: 11b1517.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
18 TRICHLOROETHENE				CAS #: 79-01-6
17.955	17.982 (0.640)	63949	2.29	0
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.590	21.604 (0.769)	1701688	116	0.0233
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.068	28.083 (1.000)	1337992	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1517-01R.d
Lab Smp Id: 2-262-8mw18
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1517.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-8mw18
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1337992	-11.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-8mw18
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-8mw18
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1517.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0233	93.26	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

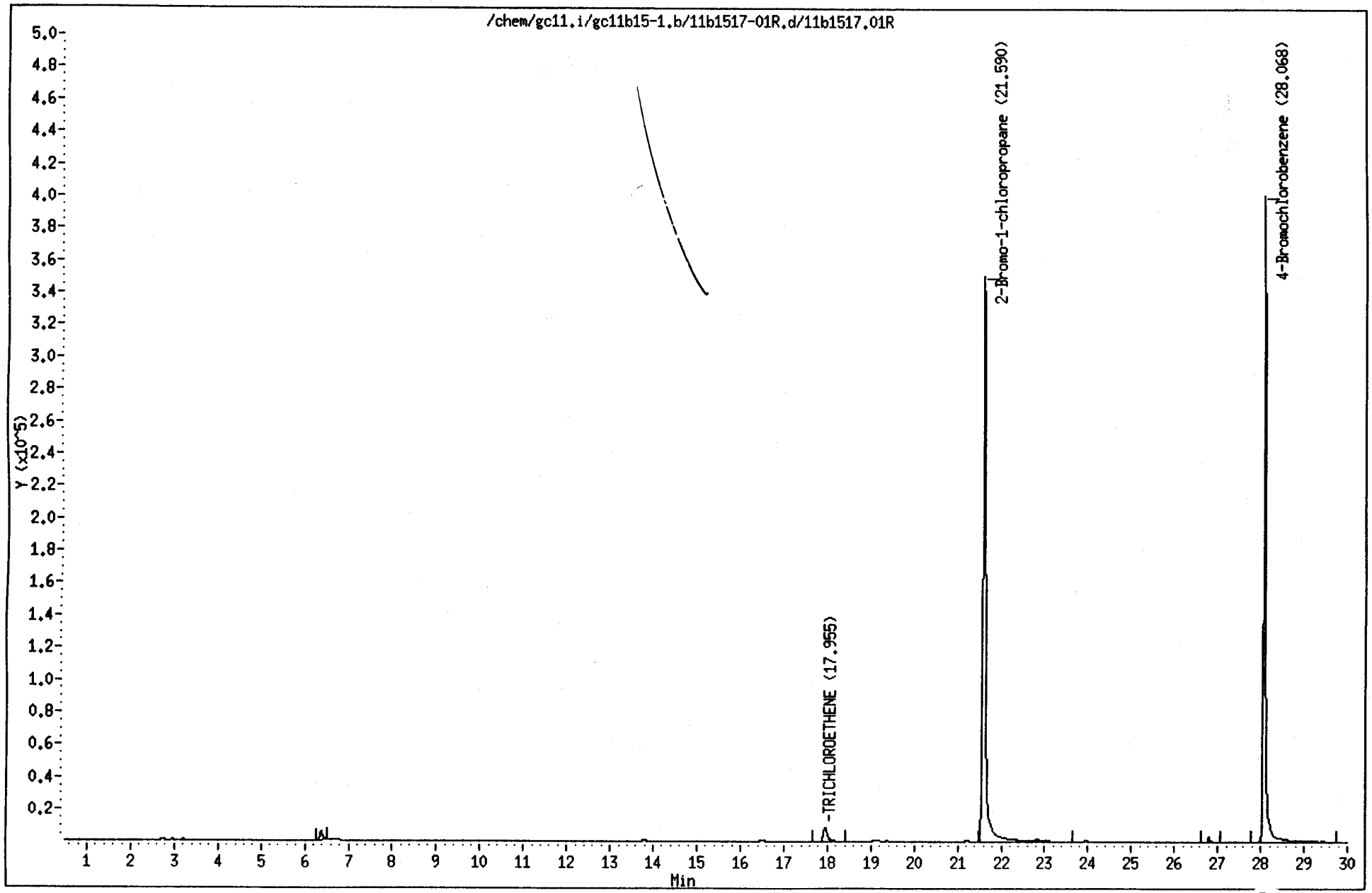
Client Name:
Lab Smp Id: 2-262-8mw18
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1517.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-8mw18
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000459	
460-00-4	2-Bromo-1-chloropropane	0.0233	

Data File: /chem/gc11.i/gc11b15-1.b/11b1517-01R.d
Date : 15-FEB-95 18:31
Client ID: 2-262-8mw18
Sample Info: 2-262-8 draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



Data File: /chem/gc11.i/gc11b15-2.b/11b1517-01R.d
Report Date: 21-Feb-1995 17:59

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1517-01R.d
Lab Smp Id: 2-262-8mw18 Client Smp ID: 2-262-8mw18
Inj Date : 15-FEB-95 18:31
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-8 draper
Misc Info : Created from: 11b1517.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.486	16.523 (1.000)	8836	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.108	19.142 (1.159)	5411	126	0.0251
4 TOLUENE ccc				CAS #: 108-88-3
21.650	21.604 (1.313)	419	3.60	0
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.054	28.083 (1.000)	12866	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1517-01R.d
Lab Smp Id: 2-262-8mw18
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1517.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-8mw18
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	8836	-13.79
13 4-Bromochlbenzene (c	14434	7217	28868	12866	-10.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.49	-0.10
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.05	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-8mw18
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-8mw18
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1517.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0251	100.48	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

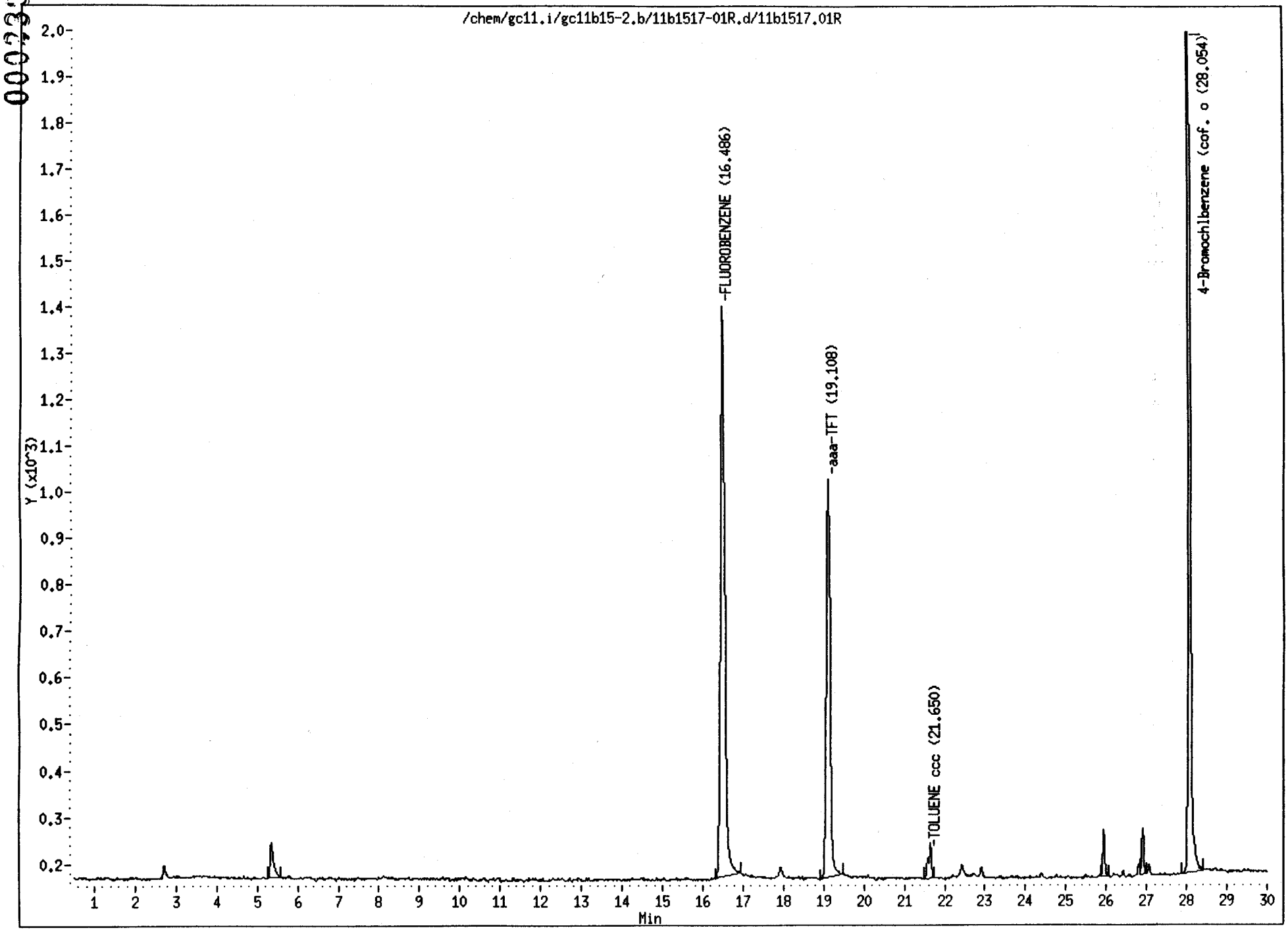
Client Name:
Lab Smp Id: 2-262-8mw18
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1517.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-8mw18
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000720	
2037-26-5	aaa-TFT	0.0251	

Data file: /chem/gc11.i/gc11b15-2.b/11b1517-01R.d

Page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-009 Respectfully Submitted:

RCM-9

MW15 GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/10/95 11:50
Date Received 02/11/95

Sampled by CLIENT

022495 0727

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
1,1,1-Trichloroethane[71-55-6]	2.5	1.0	ug/L	SW8021	02/15/95 19:08 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 19:08 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 19:08 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	95	------	% REC	SW8021	02/15/95 19:08 JC
a,a,a-Trifluorotoluene<SURROGATE>	100	------	% REC	SW8021	02/15/95 19:08 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

1258 Greenbrier Street, **Charleston, WV 25311-1002** — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, **Baltimore, MD 21227-1410** — Tel: (410) 247-7400 Fax: (410) 247-7402
4440 Glen Este-Withamsville Road, Suite 900, **Cincinnati, OH 45245-1331** — Tel: (513) 752-9696 Fax: (513) 752-2614

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1518-01R.d
Lab Smp Id: 2-262-9mw15 Client Smp ID: 2-262-9mw15
Inj Date : 15-FEB-95 19:08
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-9 draper
Misc Info : Created from: 11b1518.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
14 1 1 1-TRICHLOROETHANE				CAS #: 71-55-6
14.080	14.115 (0.502)	404581	12.4	0.00248 ✓
18 TRICHLOROETHENE				CAS #: 79-01-6
17.950	17.982 (0.640)	66506	2.11	0 ND
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4
21.580	21.604 (0.769)	1957373	118	0.0237
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1
28.068	28.083 (1.000)	1514460	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1518-01R.d
Lab Smp Id: 2-262-9mw15
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1518.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-9mw15
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1514460	0.16

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-9mw15
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-9mw15
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1518.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0237	94.77	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-9mw15
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1518.01R, 21-Feb-1995 12:16

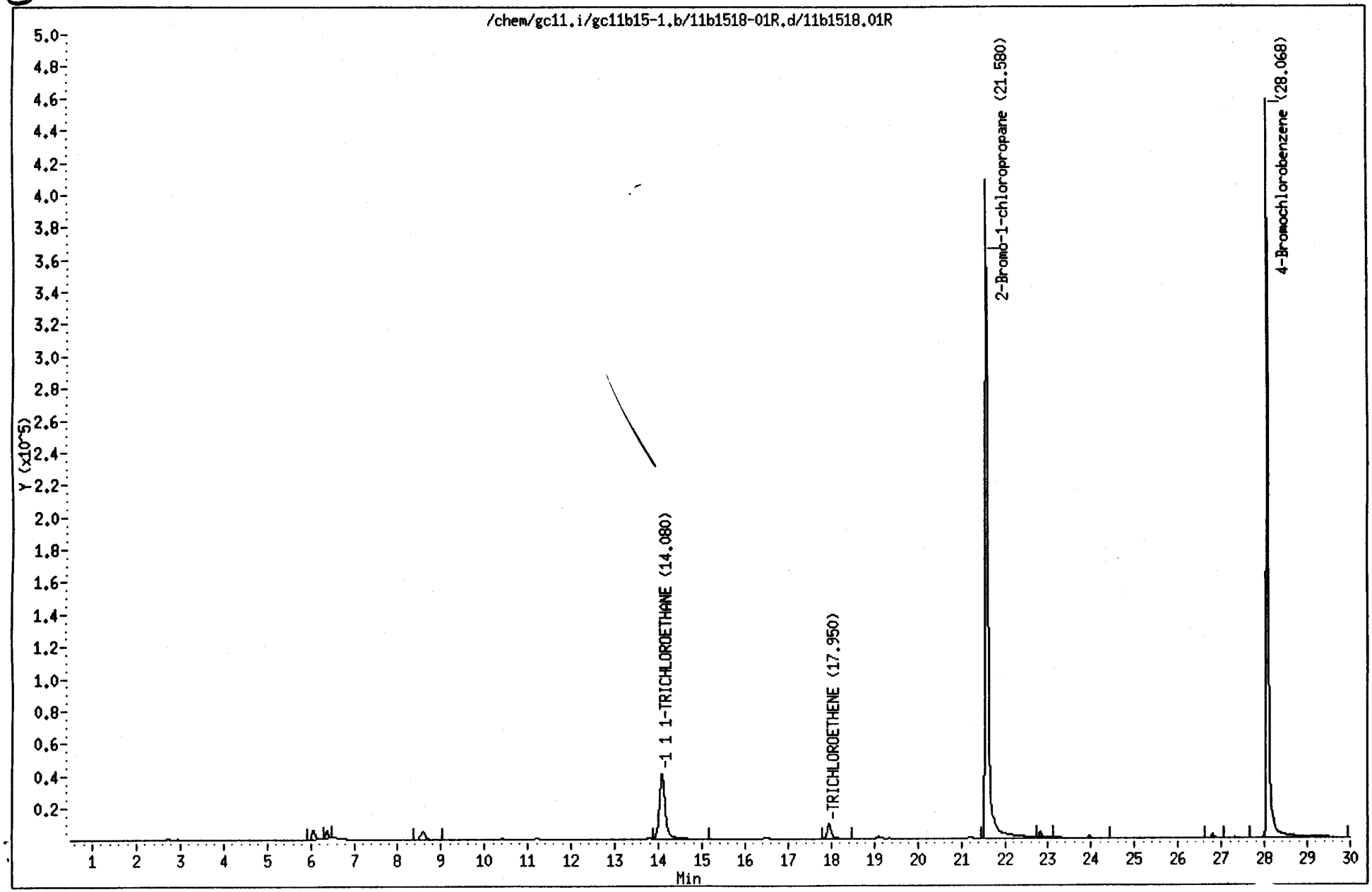
Client SDG: gc11b15-1
Client Smp ID: 2-262-9mw15
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
71-55-6	1 1 1-TRICHLOROETHANE	0.00248	
79-01-6	TRICHLOROETHENE	0.000421	
460-00-4	2-Bromo-1-chloropropane	0.0237	

Data File: /chem/gc11.i/gc11b15-1.b/11b1518-01R.d
Date : 15-FEB-95 19:08
Client ID: 2-262-9mw15
Sample Info: 2-262-9 draper
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53

0002345



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1518-01R.d
Lab Smp Id: 2-262-9mw15 Client Smp ID: 2-262-9mw15
Inj Date : 15-FEB-95 19:08
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-9 draper
Misc Info : Created from: 11b1518.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.481	16.523 (1.000)	10021	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.100	19.142 (1.159)	6120	125	0.0250
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.054	28.083 (1.000)	14555	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1518-01R.d
Lab Smp Id: 2-262-9mw15
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1518.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-9mw15
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	10021	-2.22
13 4-Bromochlbenzene (c	14434	7217	28868	14555	0.84

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.48	-0.13
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.05	-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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-9mw15
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-9mw15
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1518.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0250	100.20	80-120

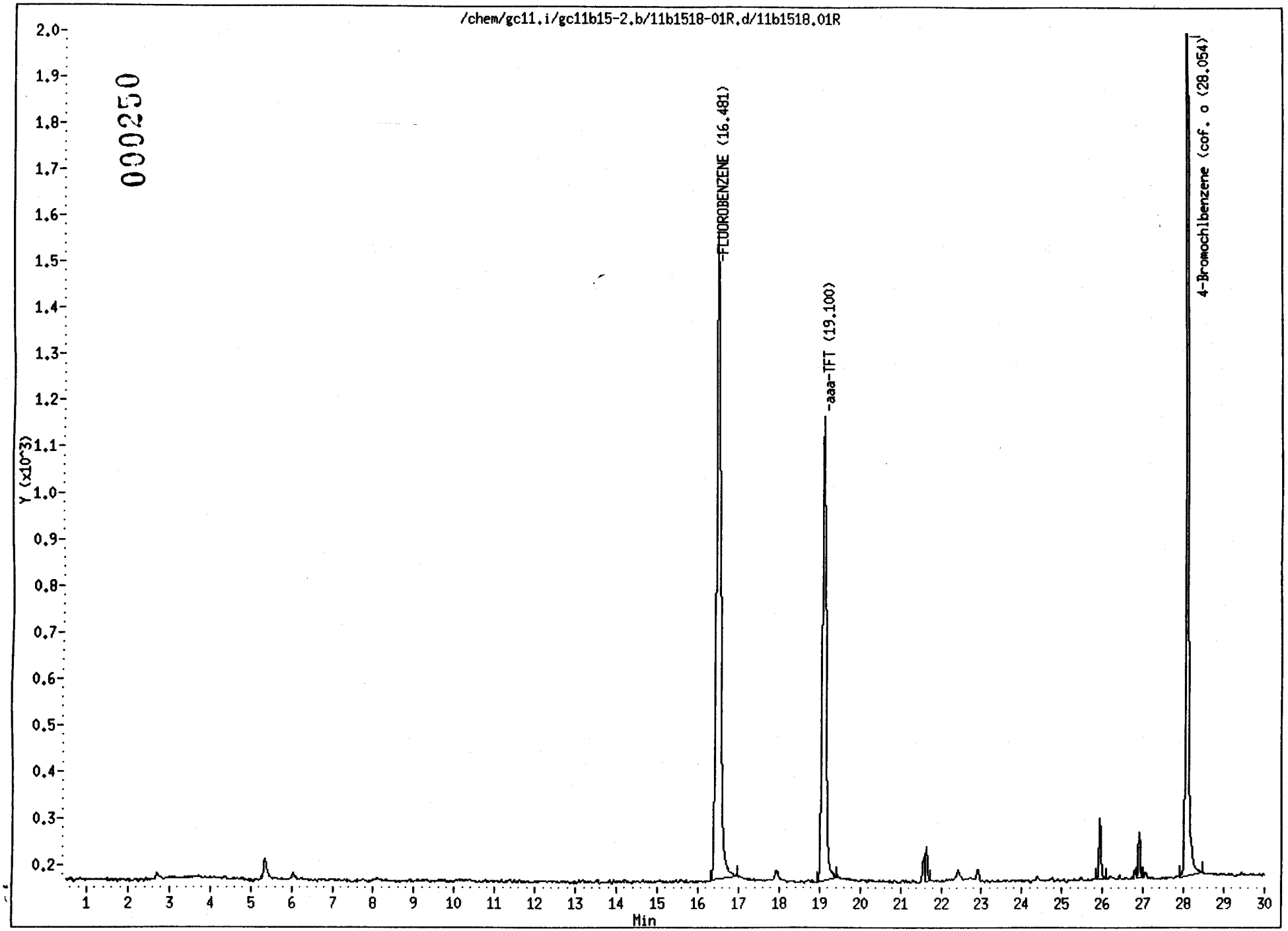
CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-9mw15
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1518.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-9mw15
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
2037-26-5	aaa-TFT	0.0250	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000250
-FLUOROBENZENE (16.481)
-aaa-TFT (19.100)
4-Bromochlbenzene (cof. o (28.054)
Y (x10^3)
Min

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

Janet M. Cleary
DRAPER ADEN ASSOCIATES

Laboratory Number 295-02-0262-010 Respectfully Submitted:

TRIP BLANK GRAB
WATAUGA COUNTY LANDFILL

Date Sampled 02/06/95 8:00
Date Received 02/11/95

Sampled by CLIENT

022495 0728

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	LOQ	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Benzene[71-43-2]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Chloroethane[75-00-3]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
1,1-Dichloroethane[75-34-3]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
cis-1,2-Dichloroethene[156-59-2]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
trans-1,3-Dichloropropene[10061-02-6]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Dichlorodifluoromethane[75-71-8]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Methylene Chloride[75-09-2]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Tetrachloroethene[127-18-4]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
1,1,1-Trichloroethane[71-55-6]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Trichloroethene[79-01-6]	ND	1.0	ug/L	SW8021	02/15/95 11:43 JC
Vinyl chloride[75-01-4]	ND	0.50	ug/L	SW8021	02/15/95 11:43 JC
SURROGATE RECOVERY - VOLATILE FRACTION					
2-Bromo-1-chloropropane <SURROGATE>	100	------	% REC	SW8021	02/15/95 11:43 JC
a,a,a-Trifluorotoluene<SURROGATE>	101	------	% REC	SW8021	02/15/95 11:43 JC

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the LOQ - Limit of Quantitation.

CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-1.b/11b1507-01R.d
Lab Smp Id: 2-262-10tb Client Smp ID: 2-262-10tb
Inj Date : 15-FEB-95 11:43
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-10 draper tb
Misc Info : Created from: 11b1507.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-1.b/gc11_601.m
Meth Date : 21-Feb-1995 16:05 smandir Quant Type: ISTD
Cal Date : 07-FEB-1995 14:00 Cal File: 11b0706-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)	
18 TRICHLOROETHENE				CAS #: 79-01-6	
17.978	17.982 (0.640)	81045	2.68	0	ND
$ 23 2-Bromo-1-chloropropane				CAS #: 460-00-4	
21.597	21.604 (0.769)	1983987	125	0.0251	
25 TETRACHLOROETHENE				CAS #: 127-18-4	
22.832	22.842 (0.813)	60681	2.08	0	ND
* 30 4-Bromochlorobenzene				CAS #: 2199-69-1	
28.074	28.083 (1.000)	1449817	125		

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1507-01R.d
Lab Smp Id: 2-262-10tb
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1507.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-10tb
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	1512109	756054	3024218	1449817	-4.12

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
30 4-Bromochlorobenzene	28.07	27.57	28.57	28.07	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-10tb
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-10tb
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-1.b/gc11_601.m
Misc Info: Created from: 11b1507.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 23 2-Bromo-1-chloropr	0.0250	0.0251	100.34	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

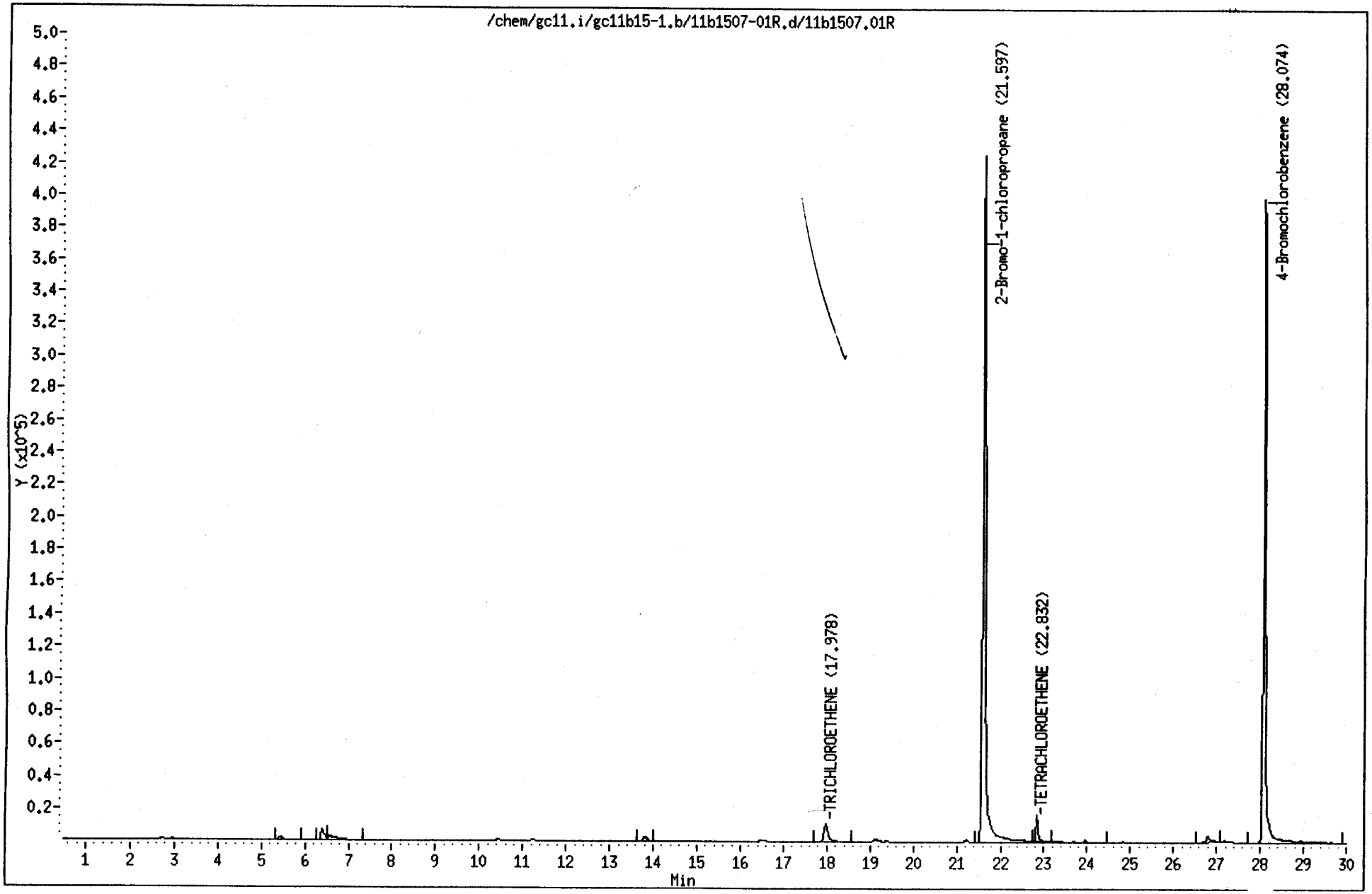
Client Name:
Lab Smp Id: 2-262-10tb
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1507.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-10tb
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
79-01-6	TRICHLOROETHENE	0.000536	
127-18-4	TETRACHLOROETHENE	0.000417	
460-00-4	2-Bromo-1-chloropropane	0.0251	

Data File: /chem/gc11.i/gc11b15-1.b/11b1507-01R.d
Date : 15-FEB-95 11:43
Client ID: 2-262-10tb
Sample Info: 2-262-10 draper tb
Purge Volume: 5.0
Column phase: db624

Instrument: gc11.i
Operator: jc
Column diameter: 0.53



CT&E Environmental Services Inc. Charleston,WV

601/8020 VOLATILES

Data file : /chem/gc11.i/gc11b15-2.b/11b1507-01R.d
Lab Smp Id: 2-262-10tb Client Smp ID: 2-262-10tb
Inj Date : 15-FEB-95 11:43
Operator : jc Inst ID: gc11.i
Smp Info : 2-262-10 draper tb
Misc Info : Created from: 11b1507.01R, 21-Feb-1995 12:16
Comment :
Method : /chem/gc11.i/gc11b15-2.b/gc11_602.m
Meth Date : 21-Feb-1995 17:47 smandir Quant Type: ISTD
Cal Date : 07-FEB-95 11:31 Cal File: 11b0702-01R.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.12 Sample Matrix: WATER
Concentration Formula: Uf/Vo

Name	Value	Description
Uf	0.001	conversion factor
Vo	5.000	volume purged

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (mg/L)
* 2 FLUOROBENZENE				CAS #: 462-06-6
16.507	16.523 (1.000)	10296	125	
$ 3 aaa-TFT				CAS #: 2037-26-5
19.124	19.142 (1.159)	6354	126	0.0253
4 TOLUENE ccc				CAS #: 108-88-3
21.655	21.604 (1.312)	526	3.88	0 ND
* 13 4-Bromochlbenzene (cof. only)				CAS #: 2199-69-1
28.062	28.083 (1.000)	13974	125	

CT&E Environmental Services Inc. Charleston,WV

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc11.i
Lab File ID: 11b1507-01R.d
Lab Smp Id: 2-262-10tb
Analysis Type: VOA
Quant Type: ISTD
Operator: jc
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1507.01R, 21-Feb-1995 12:16

Calibration Date: 02/15/95
Calibration Time: 0839
Client Smp ID: 2-262-10tb
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	10249	5124	20498	10296	0.46
13 4-Bromochlbenzene (c	14434	7217	28868	13974	-3.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 FLUOROBENZENE	16.50	16.00	17.00	16.51	0.02
13 4-Bromochlbenzene (c	28.06	27.56	28.56	28.06	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.

CT&E Environmental Services Inc. Charleston,WV

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2-262-10tb
Level: LOW
Data Type: GC DATA
SpikeList File: 8240mix.spk
Client SDG: gc11b15-1
Fraction: VOA
Client Smp ID: 2-262-10tb
Operator: jc
SampleType: SAMPLE
Quant Type: ISTD
Method File: /chem/gc11.i/gc11b15-2.b/gc11_602.m
Misc Info: Created from: 11b1507.01R, 21-Feb-1995 12:16

SURROGATE COMPOUND	CONC ADDED mg/L	CONC RECOVERED mg/L	% RECOVERED	LIMITS
$ 3 aaa-TFT	0.0250	0.0253	101.26	80-120

CT&E Environmental Services Inc. Charleston,WV

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2-262-10tb
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: GC DATA
Misc Info: Created from: 11b1507.01R, 21-Feb-1995 12:16

Client SDG: gc11b15-1
Client Smp ID: 2-262-10tb
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: jc

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) mg/L	Q
108-88-3	TOLUENE ccc	0.000776	
2037-26-5	aaa-TFT	0.0253	

Data file: /chem/gc11.i/gc11b15-2.b/11b1507-01R.d

Page

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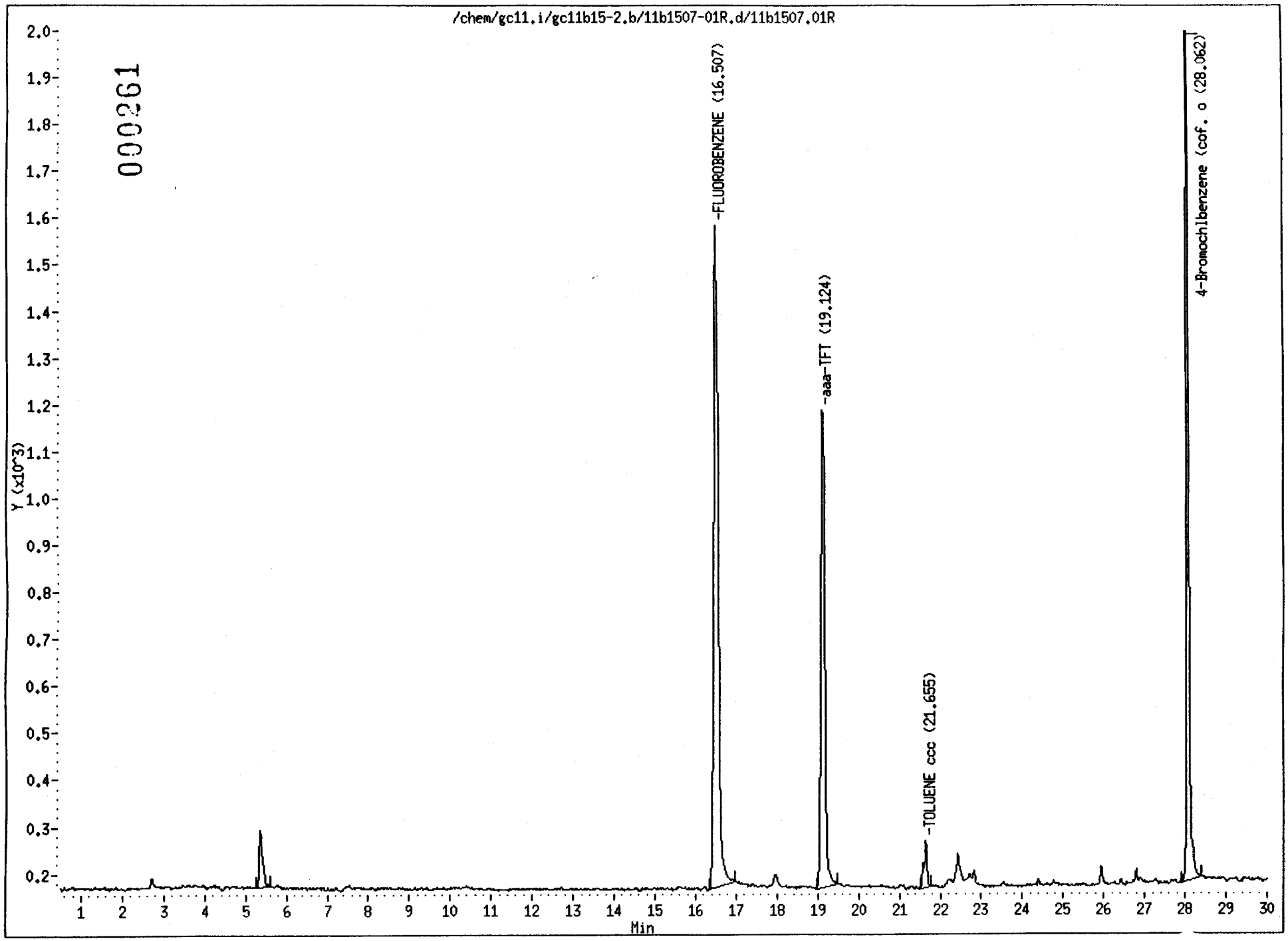

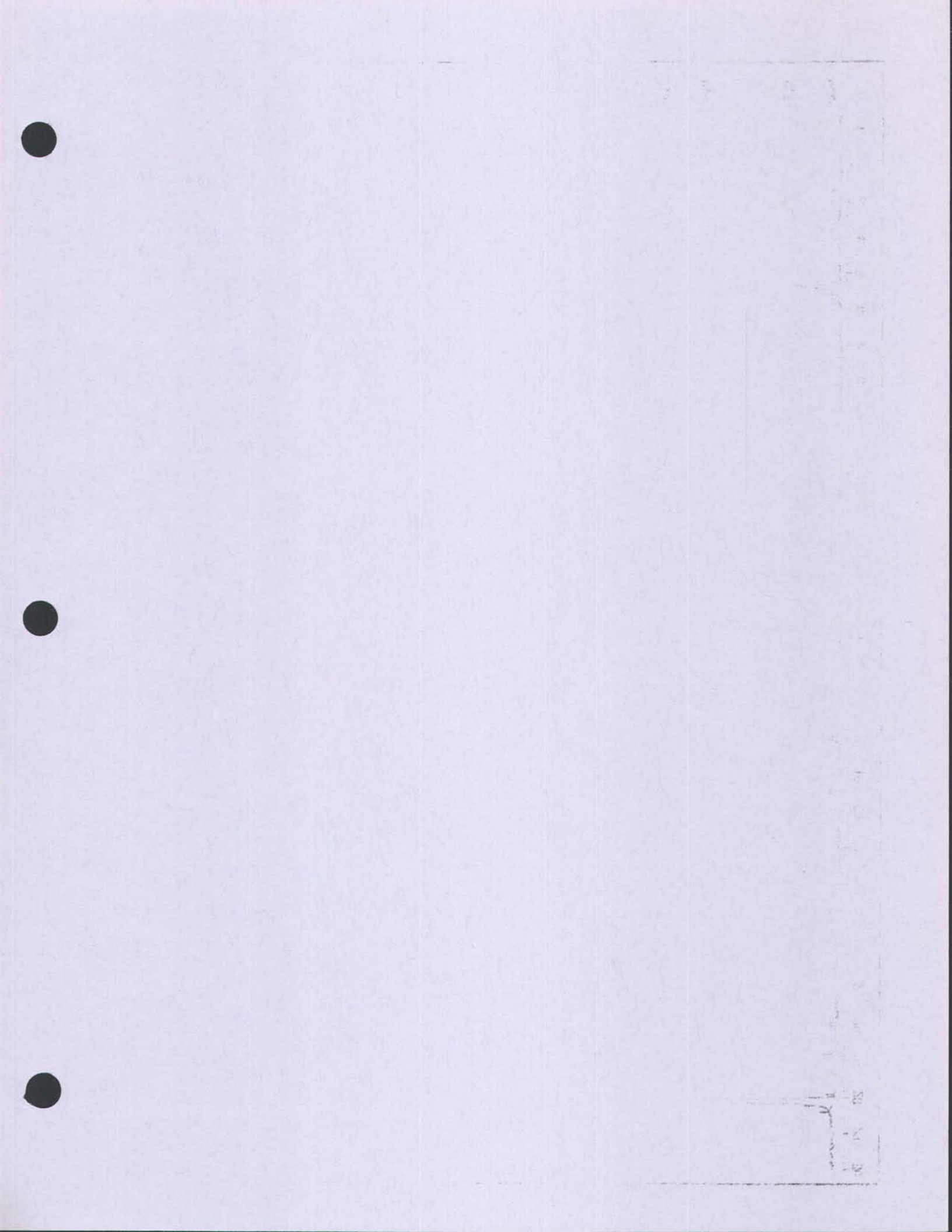

SECTION III

SW-846 METHOD 8021 VOLATILES

Draper Aden Associates
Engineering • Surveying • Environmental Services

2206 South Main Street
Blacksburg, Virginia 24060
(540) 552-0444 • Fax (540) 552-0291
daa@daa.com • www.daa.com

December 14, 2006

Mr. Ervin Lane
Hydrogeologist, Groundwater Compliance Unit
Solid Waste Section, Division of Waste Management
North Carolina Department of Environment and Natural Resources
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Re: Watauga County Landfill, Permit #95-02
Assessment Monitoring Program
DAA Job No. 6520-39

Dear Mr. Lane:

Please find enclosed a report presenting the results of the semiannual Assessment Monitoring event conducted at the Watauga County Landfill on September 27-28, 2006. Preliminary, unvalidated analytical result summary tables for the event were submitted on October 27, 2006. The report discusses sampling procedures, analytical results and overall conclusions of the monitoring event. The report concludes with a natural attenuation demonstration update incorporating the September 2006 data set and current guidance on developing a monitored natural attenuation remedial proposal.

Note that we have also included the environmental monitoring data and a report copy in electronic form in Appendix E, and a Solid Waste Environmental Data Form in lieu of a cover letter, as required by NCDENR Solid Waste Section's New Guidelines for Electronic Submittal of Environmental Monitoring Data, issued on October 27, 2006.

In addition to the complete electronic analytical data tables, notification tables of groundwater or surface water values that attain or exceed reporting limits, and notification tables of groundwater or surface water values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards, are also included as noted on the attached Solid Waste Environmental Data Form. The required electronic data tables are provided in the EDD folder contained in Appendix E. Hard copies of the notification files are attached. Note that no surface water values attained or exceeded NC 2B surface water standards based on human health (organism only) criteria.

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The format and naming convention for the data submissions are as specified by the electronic submittal guidelines. Note that these data files provide un-validated results. Validated results are discussed the report narrative [Section 4.0 (Data Validation) and Section 5.0 (Results)] and are summarized in the Monitoring Result Tables 2A-2C.

The next semiannual event is scheduled for March 2007. If you should have any questions or comments concerning the report or the next event, please do not hesitate to contact me.

Sincerely,
DRAPER ADEN ASSOCIATES

Jeffrey E. Smith
Project Geologist

Attachments: MONITORING REPORT

cc: Mr. Robert Nelson, Watauga County Manager (with enclosure)
Mr. James Potter, Watauga County Landfill Manager (with enclosure)
Mr. Michael Lawless, C.P.G., Groundwater Project Manager, DAA

Groundwater Monitoring Data from Monitoring Wells that equal or exceed reporting limits.

FACILITY #	WELL ID #	CAS Number	SWS ID #	PARAMETER	RESULT	UNITS	Q	D.F.	COL. DATE	EXT. DATE	ANAL. DATE
95-02	MW-10	75-35-4	77	1,1-Dichloroethene	5.9	ug/L		2	28-Sep-06		06-Oct-06
95-02	MW-10	75-34-3	75	1,1-Dichloroethane	3.3	ug/L		2	28-Sep-06		06-Oct-06
95-02	MW-10	71-55-6	200	1,1,1-Trichloroethane	25	ug/L		2	28-Sep-06		06-Oct-06
95-02	MW-10	127-18-4	192	Tetrachloroethene	1.5	ug/L		2	28-Sep-06		06-Oct-06
95-02	MW-11	75-01-4	211	Vinyl Chloride	2.8	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	75-00-3	41	Chloroethane	7.5	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	75-35-4	77	1,1-Dichloroethene	0.45	ug/L	J	1	28-Sep-06		09-Oct-06
95-02	MW-11	75-09-2	140	Methylene Chloride	0.39	ug/L	J	1	28-Sep-06		09-Oct-06
95-02	MW-11	156-60-5	79	trans-1,2-Dichloroethene	0.67	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	75-34-3	75	1,1-Dichloroethane	21	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	156-59-2	78	cis-1,2-Dichloroethene	18	ug/L		2	28-Sep-06		09-Oct-06
95-02	MW-11	71-55-6	200	1,1,1-Trichloroethane	1.2	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	71-43-2	16	Benzene	0.27	ug/L	J	1	28-Sep-06		09-Oct-06
95-02	MW-11	107-06-2	76	1,2-Dichloroethane	0.53	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	79-01-6	201	Trichloroethene	2.7	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	78-87-5	82	1,2-Dichloropropane	0.42	ug/L	J	1	28-Sep-06		09-Oct-06
95-02	MW-11	127-18-4	192	Tetrachloroethene	2.7	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	108-90-7	39	Chlorobenzene	0.34	ug/L	J	1	28-Sep-06		09-Oct-06
95-02	MW-11	106-46-7	71	1,4-Dichlorobenzene	2.6	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-12	75-01-4	211	Vinyl Chloride	2.6	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	75-00-3	41	Chloroethane	4.9	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	75-35-4	77	1,1-Dichloroethene	0.36	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	75-09-2	140	Methylene Chloride	0.53	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	156-60-5	79	trans-1,2-Dichloroethene	0.61	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	75-34-3	75	1,1-Dichloroethane	20	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	156-59-2	78	cis-1,2-Dichloroethene	43	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	67-66-3	44	Chloroform	0.92	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	71-43-2	16	Benzene	0.36	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	107-06-2	76	1,2-Dichloroethane	0.85	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	79-01-6	201	Trichloroethene	3.1	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	78-87-5	82	1,2-Dichloropropane	0.67	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	127-18-4	192	Tetrachloroethene	3.1	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	108-90-7	39	Chlorobenzene	0.35	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	106-46-7	71	1,4-Dichlorobenzene	2.6	ug/L		3.125	28-Sep-06		11-Oct-06

Groundwater Monitoring Data from Monitoring Wells that equal or exceed reporting limits.

FACILITY #	WELL ID #	CAS Number	SWS ID #	PARAMETER	RESULT	UNITS	Q	D.F.	COL. DATE	EXT. DATE	ANAL. DATE
95-02	MW-15	75-35-4	77	1,1-Dichloroethene	0.27	ug/L	J	1	28-Sep-06		06-Oct-06
95-02	MW-15	71-55-6	200	1,1,1-Trichloroethane	0.59	ug/L		1	28-Sep-06		06-Oct-06
95-02	MW-15	106-46-7	71	1,4-Dichlorobenzene	0.12	ug/L	J	1	28-Sep-06		06-Oct-06
95-02	MW-17	75-00-3	41	Chloroethane	0.71	ug/L		1	28-Sep-06		06-Oct-06
95-02	MW-17	74-88-4	142	Iodomethane	0.48	ug/L	J	1	28-Sep-06		06-Oct-06
95-02	MW-17	75-34-3	75	1,1-Dichloroethane	3.2	ug/L		1	28-Sep-06		06-Oct-06
95-02	MW-17	156-59-2	78	cis-1,2-Dichloroethene	11	ug/L		1	28-Sep-06		06-Oct-06
95-02	MW-17	79-01-6	201	Trichloroethene	1.6	ug/L		1	28-Sep-06		06-Oct-06
95-02	MW-17	78-87-5	82	1,2-Dichloropropane	0.12	ug/L	J	1	28-Sep-06		06-Oct-06
95-02	MW-17	127-18-4	192	Tetrachloroethene	1.6	ug/L		1	28-Sep-06		06-Oct-06
95-02	MW-19	67-64-1	3	Acetone	2.9	ug/L	J	1	27-Sep-06		07-Oct-06
95-02	MW-2	75-01-4	211	Vinyl Chloride	0.48	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-2	75-00-3	41	Chloroethane	0.39	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-2	75-35-4	77	1,1-Dichloroethene	75	ug/L		25	27-Sep-06		06-Oct-06
95-02	MW-2	75-09-2	140	Methylene Chloride	0.43	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-2	75-34-3	75	1,1-Dichloroethane	46	ug/L		25	27-Sep-06		06-Oct-06
95-02	MW-2	156-59-2	78	cis-1,2-Dichloroethene	0.25	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-2	71-55-6	200	1,1,1-Trichloroethane	350	ug/L		25	27-Sep-06		06-Oct-06
95-02	MW-2	79-01-6	201	Trichloroethene	0.73	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-2	127-18-4	192	Tetrachloroethene	5.6	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-2	91-20-3	148	Naphthalene	0.11	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-3	75-01-4	211	Vinyl Chloride	3.6	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	75-00-3	41	Chloroethane	8.7	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	74-88-4	142	Iodomethane	3.3	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	75-09-2	140	Methylene Chloride	0.68	ug/L	J	5	28-Sep-06		06-Oct-06
95-02	MW-3	156-60-5	79	trans-1,2-Dichloroethene	0.91	ug/L	J	5	28-Sep-06		06-Oct-06
95-02	MW-3	75-34-3	75	1,1-Dichloroethane	17	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	156-59-2	78	cis-1,2-Dichloroethene	59	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	107-06-2	76	1,2-Dichloroethane	0.8	ug/L	J	5	28-Sep-06		06-Oct-06
95-02	MW-3	79-01-6	201	Trichloroethene	5.4	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	78-87-5	82	1,2-Dichloropropane	0.51	ug/L	J	5	28-Sep-06		06-Oct-06
95-02	MW-3	127-18-4	192	Tetrachloroethene	5.4	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	106-46-7	71	1,4-Dichlorobenzene	3.4	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-8	79-01-6	201	Trichloroethene	0.39	ug/L	J	1	28-Sep-06		09-Oct-06

Groundwater Monitoring Data from Monitoring Wells that equal or exceed reporting limits.

FACILITY #	WELL ID #	CAS Number	SWS ID #	PARAMETER	RESULT	UNITS	Q	D.F.	COL. DATE	EXT. DATE	ANAL. DATE
95-02	MW-9	75-71-8	74	Dichlorodifluoromethane	0.44	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-9	75-01-4	211	Vinyl Chloride	0.76	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	75-00-3	41	Chloroethane	2.9	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	75-09-2	140	Methylene Chloride	0.18	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-9	156-60-5	79	trans-1,2-Dichloroethene	0.32	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-9	75-34-3	75	1,1-Dichloroethane	6.3	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	156-59-2	78	cis-1,2-Dichloroethene	5.3	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	71-43-2	16	Benzene	1.6	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	79-01-6	201	Trichloroethene	1.2	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	127-18-4	192	Tetrachloroethene	0.85	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	108-90-7	39	Chlorobenzene	0.25	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-9	106-46-7	71	1,4-Dichlorobenzene	0.88	ug/L		1	27-Sep-06		06-Oct-06

Surface Water Monitoring Data that equal or exceed reporting limits.

FACILITY #	WELL ID #	CAS NUMBER	SWS ID #	PARAMETER	RESULT	UNITS	Q	D. F.	COLL. DATE	EXT. DATE	ANAL. DATE
95-02	S-1	75-09-2	140	Methylene Chloride	2	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-2	75-09-2	140	Methylene Chloride	2	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-2	75-34-3	75	1,1-Dichloroethane	6	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-2	156-59-2	78	cis-1,2-Dichloroethene	1	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-2	71-43-2	16	Benzene	2	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-3	75-09-2	140	Methylene Chloride	1	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-4	75-34-3	75	1,1-Dichloroethane	2	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-4	156-59-2	78	cis-1,2-Dichloroethene	6	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-5	75-71-8	74	Dichlorodifluoromethane	4	ug/L	J	1	09/27/2006		29-Sep-06
95-02	S-5	75-00-3	41	Chloroethane	3	ug/L	J	1	09/27/2006		29-Sep-06

Groundwater Monitoring Data from Private Water Supply Wells (non-potable use) that equal or exceed reporting limits.

FACILITY #	WELL ID #	CAS Number	SWS ID #	PARAMETER	RESULT	UNITS	Q	D. F.	COLLECT DATE	EXT. DATE	ANAL DATE
95-02	BREMCO	75-34-3	75	1,1-Dichloroethane	1.6	ug/l		1	27-Sep-06		03-Oct-06

Groundwater Values that Attain or Exceed NC 2L Standards

FACILITY #	WELL ID #	CAS Number	SWS ID #	PARAMETER	RESULT	2L Std	UNITS	Q	D. F.	COL. DATE	EXT. DATE	ANAL. DATE
95-02	MW-10	127-18-4	192	Tetrachloroethene	1.5	0.7	ug/L		2	28-Sep-06		06-Oct-06
95-02	MW-11	127-18-4	192	Tetrachloroethene	2.7	0.7	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	107-06-2	76	1,2-Dichloroethane	0.53	0.38	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	106-46-7	71	1,4-Dichlorobenzene	2.6	1.4	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-11	75-01-4	211	Vinyl Chloride	2.8	0.015	ug/L		1	28-Sep-06		09-Oct-06
95-02	MW-12	107-06-2	76	1,2-Dichloroethane	0.85	0.38	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	78-87-5	82	1,2-Dichloropropane	0.67	0.51	ug/L	J	3.125	28-Sep-06		11-Oct-06
95-02	MW-12	75-01-4	211	Vinyl Chloride	2.6	0.015	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	127-18-4	192	Tetrachloroethene	3.1	0.7	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	79-01-6	201	Trichloroethene	3.1	2.8	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-12	106-46-7	71	1,4-Dichlorobenzene	2.6	1.4	ug/L		3.125	28-Sep-06		11-Oct-06
95-02	MW-17	127-18-4	192	Tetrachloroethene	1.6	0.7	ug/L		1	28-Sep-06		06-Oct-06
95-02	MW-2	71-55-6	200	1,1,1-Trichloroethane	350	200	ug/L		25	27-Sep-06		06-Oct-06
95-02	MW-2	75-35-4	77	1,1-Dichloroethene	75	7	ug/L		25	27-Sep-06		06-Oct-06
95-02	MW-2	75-01-4	211	Vinyl Chloride	0.48	0.015	ug/L	J	1	27-Sep-06		06-Oct-06
95-02	MW-2	127-18-4	192	Tetrachloroethene	5.6	0.7	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-3	106-46-7	71	1,4-Dichlorobenzene	3.4	1.4	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	75-01-4	211	Vinyl Chloride	3.6	0.015	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	79-01-6	201	Trichloroethene	5.4	2.8	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	127-18-4	192	Tetrachloroethene	5.4	0.7	ug/L		5	28-Sep-06		06-Oct-06
95-02	MW-3	107-06-2	76	1,2-Dichloroethane	0.8	0.38	ug/L	J	5	28-Sep-06		06-Oct-06
95-02	MW-3	78-87-5	82	1,2-Dichloropropane	0.51	0.51	ug/L	J	5	28-Sep-06		
95-02	MW-9	71-43-2	16	Benzene	1.6	1	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	127-18-4	192	Tetrachloroethene	0.85	0.7	ug/L		1	27-Sep-06		06-Oct-06
95-02	MW-9	75-01-4	211	Vinyl Chloride	0.76	0.015	ug/L		1	27-Sep-06		06-Oct-06