Versar INC.
ENVIRONMENTAL RISK MANAGEMENT

Versar INC.

ORIGINAL
(Red)

441598

VOLATILE ANALYSIS
ANALYTICAL DATA PACKAGE

CLIENT : VERSAR DIV.31
SITE : CDM
PROJECT: 420.1 B#2
CONTROL: 2536
DATE : 05/23/90

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DELIVERABLES INDEX -- VOA ANALYSES ONLY

I. CASE NARRATIVE

A. The narrative contains: case and contract numbers, summary of QC analyses, discussion of any analytical problems, and documentation of all corrective actions.
B. Copy of Sample Traffic Reports.

II. QC SUMMARY

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B. Matrix Spike/Matrix Spike Duplicate Summary (Form III)
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D. GC/MS Tuning and Calibration Standard (Form V)

III. SAMPLE DATA

A. Organic Analysis Data Sheet (Form I)
B. Tentatively Identified Compounds (TIC)
C. Raw Data for the Volatile Sample Fraction
   1. Reconstructed Ion Chromatogram (s)
   2. Quantitation Report
   3. Raw HSL mass spectra and background subtract HSL mass spectra with lab generated HSL standard spectra
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Note: Samples arranged in alpha-numeric sequence.

IV. STANDARDS DATA

A. Initial Calibration Data (Form VI) in order if more than one instrument is used.
B. VOA standard(s) reconstructed ion chromatograms and quantitation reports for the initial calibration(s).
C. Continuing Calibration (Form VII) in order by instrument.
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E. Internal Standard Data (Form VIII).

V. RAW QC DATA

A. BFB (For each 12-hour period, for each GC/MS system)
   1. Bar graph spectrum
   2. Mass listing

V. RAW QC DATA (CONT'D)

B. Reagent Blank Data
   1. Organic Analysis Data Sheet (Form I)
   2. Tentatively Identified Compounds (TIC)
   3. Raw Data
      a. Reconstructed ion chromatogram(s) and quantitation report(s).
      b. HSL spectra with lab generated standard
         i. Raw HSL compound spectra
         ii. Enhanced or background subtracted spectra
         iii. Laboratory generated HSL standard spectra
         iv. GC/MS library search spectra for each TIC
         v. Quantitation/calculation of each TIC concentration

C. Matrix Spike/Matrix Spike Duplicate Data
   1. Tabulated results (Form I) of non-spiked HSL compounds.
   2. Reconstructed ion chromatograms and quantitation reports.

VI. SAMPLE PREPARATION

A. Parameter Request Sheet
B. Sample Receiving Log-In Information
C. VOA Sample Comments
D. Instrument Injection Logs
E. Field Chain of Custody
F. Copy(s) of Federal Express Airbills

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I. NARRATIVE

II. QC SUMMARY

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May 22, 1990

Narrative
Versar Division 31 - CDM
Volatile Organic Analysis - EPA CLP Protocol
Versar Project 420.1 - Batch 2
Control 2536

This report contains the analytical data for the volatile organic analysis of six (6) sludge samples. The samples listed below arrived at Versar on April 19, 1990. Results from the Toxicity Characteristic Leaching Procedure (TCLP) will be reported separately. Results for additional analytical parameters, including semivolatile organic analysis and TCLP, are provided separately.

SAMPLE LIST

1	3	6
2	5	7

//

GC/MS instrument calibration using BFB met requirements for volatile organic analysis. SPCC and CCC criteria were met for the volatile initial calibration curve and the continuing calibration standards. All GC/MS analyses occurred during the twelve hour period that followed daily instrument calibration. All sample analyses for volatile organic compounds were completed within eight days of sample receipt.

Volatile surrogate standard recovery values and internal standard area abundances and associated relative retention times met specified QC limits for all samples except sample 1 and the QC analyses performed on this sample. Since the QC analyses and the sample analysis are replicates of one another, no reanalyses have been performed. One set of matrix spike and matrix spike duplicate (MS/MSD) QC analyses was analyzed for the soil matrix. All recovery and relative (RPD) values were within specified limits. The samples were analyzed without dilution. Nontarget compounds were tentatively identified using the EPA/NBS Mass Spectral Database Library.

Detection limits and concentrations of volatile organic compounds in the soil samples are reported on a "dry weight" basis, which accounts for the moisture content of the samples. The sludge samples were analyzed using protocol developed for the soil matrix and "SOIL" appears as the matrix on the reporting forms.

Definitions of data qualifier flags used on the individual data summary pages are provided in the listing which immediately follows this case narrative.

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Please contact Janet Beckman, Laboratory Project Manager, should you have any questions or require additional information pertaining to the volatile organic analysis of these samples.

Data Release Approved By:

Linda E. Bock
GC/MS Data Quality Manager
Laboratory Operations

Narrative Reviewed By:

Debbie Maxwell for
Lawrence P. Pollack
GC/MS Quality Assurance Manager

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Data Qualifier Flags

J For Target Compounds: This flag is used when mass spectral data indicates the presence of a compound but the result is less than the specified detection limit but still greater than zero.

For Non Target Compounds: This flag indicates that the concentration is an estimated value, assuming a 1 to 1 response with the internal standard.

B This flag is used when the analyte is found in the blank as well as in the sample. It indicates possible/probable contamination and warns the data user to take appropriate action.

u This flag states that the compound was analyzed for but was not detected. The number is the minimum attainable detection limit for the sample.

X or T This flag states that the mass spectrum does not meet EPA CLP criteria for confirmation, but compound presence is strongly suspected.

E This flag is used to indicate that the quantitation of the analyte is outside the linear calibration of the curve and that dilution was required in order to properly quantitate.

D This flag is used to indicate the value for the target analyte was calculated from a dilution (see "E" flag above).

Y This flag is used when a matrix spike compound is also confirmed present in the unspiked sample.

Flags excerpted from and established by the US EPA Contract Lab Program (CLP) protocol.

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: VERSAR INC. Contract: _____

La. Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	1	125 *	85	72	0	1
02	2	106	87	70	0	0
03	3	103	86	71	0	0
04	5	108	93	83	0	0
05	6	111	94	84	0	0
06	7	111	95	87	0	0
07	1MS	117	75	62 *	0	1
08	1MSD	117	77	62 *	0	1
09	VBLK87	97	93	87	0	0
10	VBLK12	102	100	84	0	0

		QC LIMITS
S1 (TOL)	= Toluene-d8	(81-117)
S2 (BFB)	= Bromofluorobenzene	(74-121)
S3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

La Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix Spike - EPA Sample No.: 1 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	71.4	0	40.3	56 *	59-172
Trichloroethene	71.4	0	51.1	72	62-137
Benzene	71.4	0	78.6	110	66-142
Toluene	71.4	0	82.4	115	59-139
Chlorobenzene	71.4	0	67.0	94	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	71.4	41.1	58 *	-4	22	59-172
Trichloroethene	71.4	54.7	77	-7	24	62-137
Benzene	71.4	80.7	113	-3	21	66-142
Toluene	71.4	92.1	129	-11	21	59-139
Chlorobenzene	71.4	73.9	104	-10	21	60-133

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: CLP,,,VSTD20,L,W,17503,V,CC-020,25ML
INST R: SP1000 60/80 CARBOPACK 2M@45C > 225C@8C/M > 30M@225C

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERSAR INC. Contract: _____

La Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Lab File ID: U3387 Lab Sample ID: VBLK87

Date Analyzed: 04/26/90 Time Analyzed: 931

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: U

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	2	16427	U3393	1431
02	3	16428	U3394	1524
03	1MS	16426MS	U3398	1811
04	1MSD	16426MSD	U3399	1853

COMMENTS: CLP,,,VBLK87,L,S,VBLK87,V,BLANK,,5 ML,,
INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERSAR INC. Contract: _____

La. Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Lab File ID: U3412 Lab Sample ID: VBLK12

Date Analyzed: 04/27/90 Time Analyzed: 926

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: U

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	1	16426	U3420	1614
02	5	16429	U3413	1022
03	6	16430	U3414	1105
04	7	16431	U3415	1147

COMMENTS: CLP,,,VBLK12,L,S,VBLK12,V,BLANK,,5 ML,,
INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

ORIGINAL (Red)

La' Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Lab File ID: U3326 BFB Injection Date: 04/23/90

Instrument ID: U BFB Injection Time: 1549

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.4
75	30.0 - 60.0% of mass 95	46.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	68.8
175	5.0 - 9.0% of mass 174	4.5 (6.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	66.9 (97.3)1
177	5.0 - 9.0% of mass 176	3.5 (5.3)2

1-Value is % mass 174 2-Value is % mass 176

TE TUNE 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	22522	U3327	04/23/90	1623
02	VSTD200	22523	U3328	04/23/90	1721
03	VSTD150	22524	U3329	04/23/90	1809
04	VSTD100	22525	U3330	04/23/90	1852
05	VSTD020	22526	U3331	04/23/90	1935

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Lab File ID: U3385 BFB Injection Date: 04/26/90

Instrument ID: U BFB Injection Time: 0752

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	28.7
75	30.0 - 60.0% of mass 95	50.0
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	0.0 (0.0)1
174	Greater than 50.0% of mass 95	62.2
175	5.0 - 9.0% of mass 174	4.0 (6.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	61.6 (99.0)1
177	5.0 - 9.0% of mass 176	3.6 (5.8)2

1-Value is % mass 174 2-Value is % mass 176

THE TUNE 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	22546	U3386	04/26/90	830
02	VBLK87	VBLK87	U3387	04/26/90	931
03	2	16427	U3393	04/26/90	1431
04	3	16428	U3394	04/26/90	1524
05	1MS	16426MS	U3398	04/26/90	1811
06	1MSD	16426MSD	U3399	04/26/90	1853

FORM V VOA 1/87 Rev.

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Lab File ID: U3410 BFB Injection Date: 04/27/90

Instrument ID: U BFB Injection Time: 0745

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	28.0
75	30.0 - 60.0% of mass 95	52.4
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	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.1
175	5.0 - 9.0% of mass 174	5.5 (7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.3 (97.6)1
177	5.0 - 9.0% of mass 176	4.4 (6.2)2

1-Value is % mass 174 2-Value is % mass 176

THE TUNE 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	22554	U3411	04/27/90	821
02	VBLK12	VBLK12	U3412	04/27/90	926
03	5	16429	U3413	04/27/90	1022
04	6	16430	U3414	04/27/90	1105
05	7	16431	U3415	04/27/90	1147
06	1	16426	U3420	04/27/90	1614

Versar INC.

III. SAMPLE DATA PACKAGE

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1 ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16426

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3420

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 30 Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene chloride	7	U
67-64-1	Acetone	160	
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	7	U

1C-0015

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

1 ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16426

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3420

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 30 Date Analyzed: 04/27/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 4

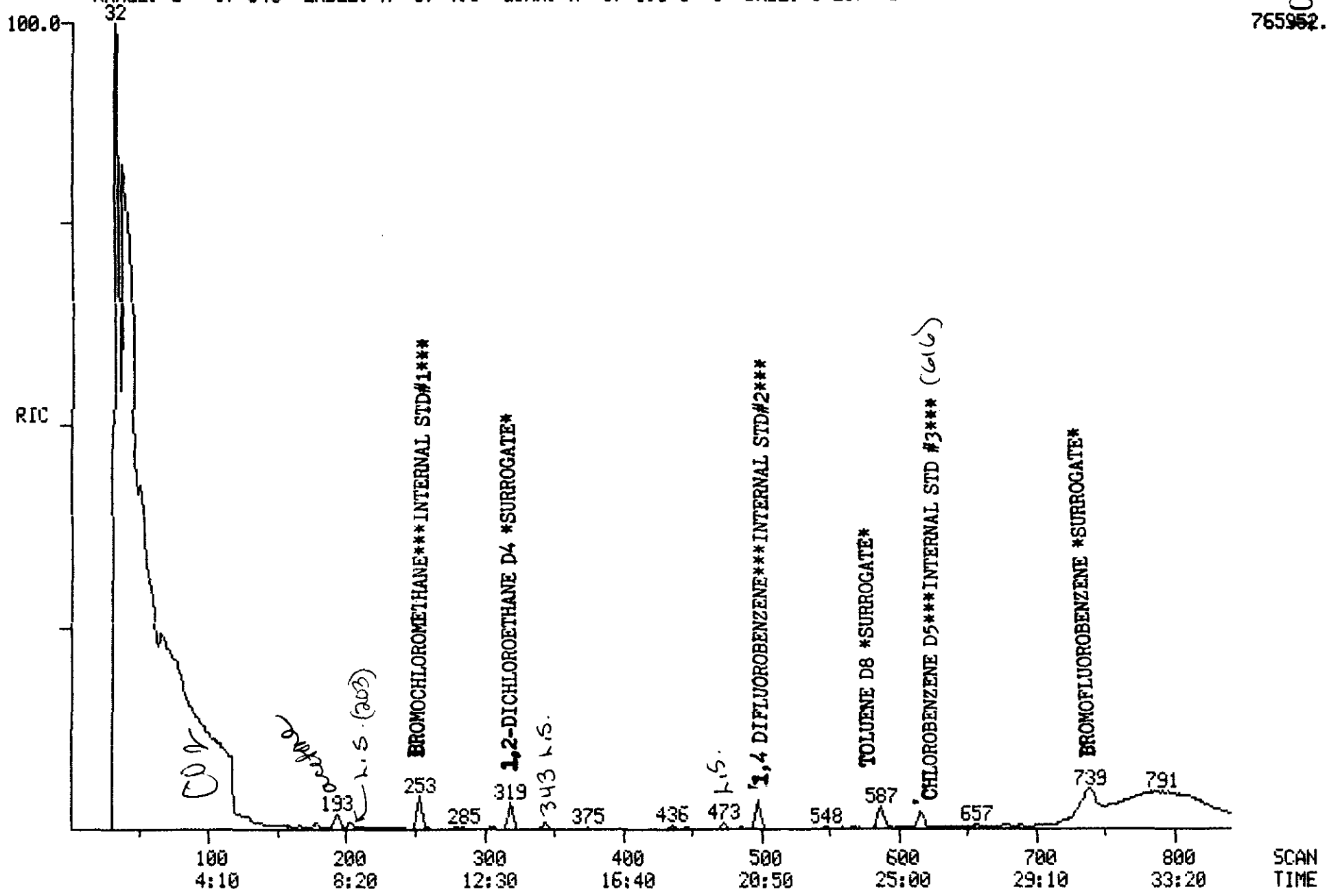
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 106-97-8	BUTANE	8.45	9.7	J
2. 109-66-0	PENTANE (ACN) (DOT)	14.29	15	J
3. 110-54-3	HEXANE (DOT)	19.70	13	J
4.	UNKNOWN PAH	32.96	80	J

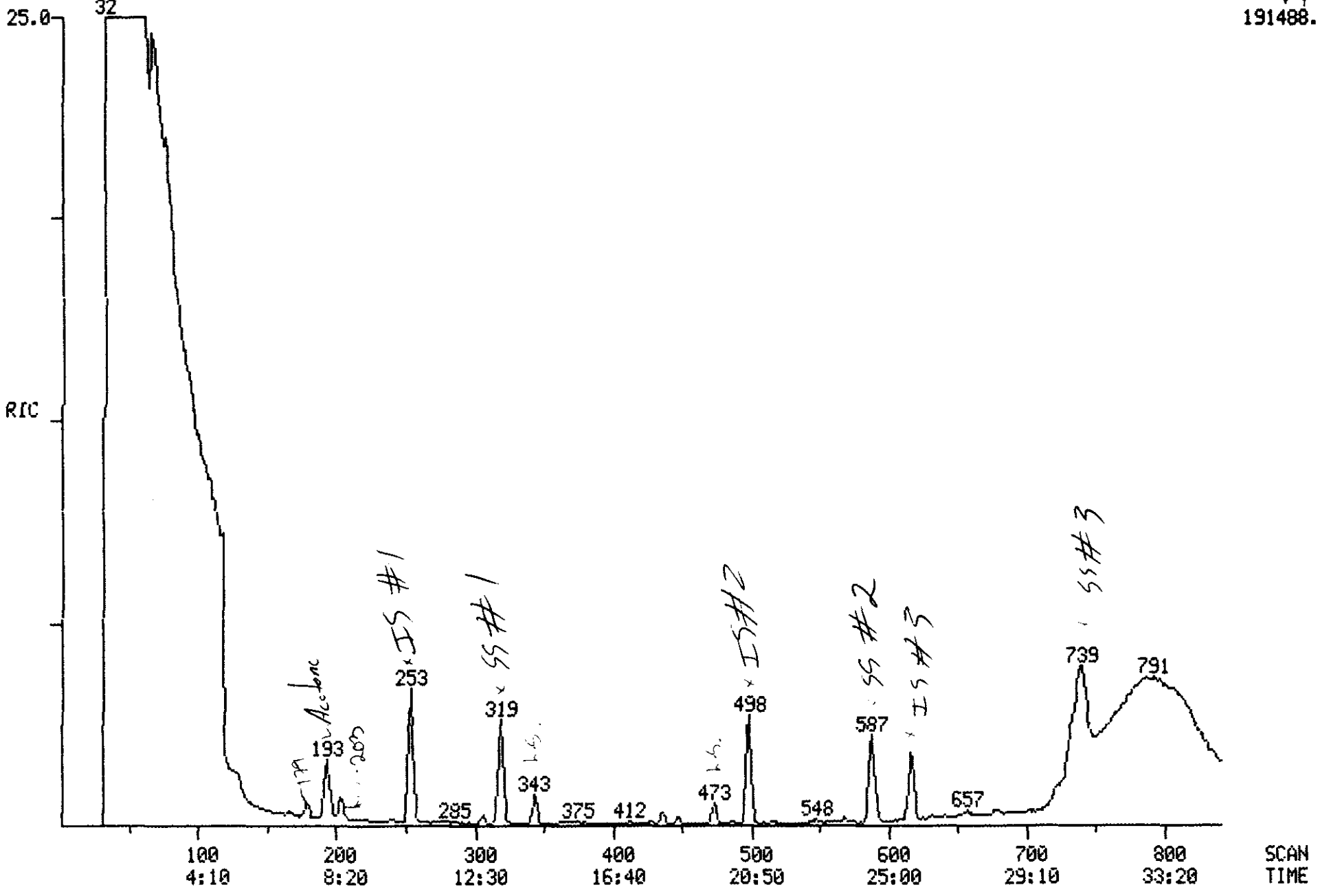
ORIGINAL

RIC DATA: U3420 #1 SCANS 1 TO 840
04/27/90 16:14:00 CALI: U3420 #2
SAMPLE: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

765952.



RIC DATA: U3420 #1 SCANS 1 TO 840
04/27/90 16:14:00 CALI: U3420 #2
SAMPLE: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100018

Quantitation Report File: U3420

Data: U3420.TI
04/27/90 16:14:00
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: 420.1.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

30.0 %

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

all IS areas low
2nd SS rec. high DD

Ready DD

u3420

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	253	10:32	1	1.000	A BB	23936. low	50.000 UG/L*	12.10
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	84	179	7:27	1	0.708	A BB	2411.	NC ~~3.971 UG/L~~	0.96
7	43	193	8:02	1	0.763	A BV	25863.	109.293 UG/L	26.44
8	76	217	9:02	1	0.858	A BB	172.	~~0.458 UG/L~~ BRL	0.11
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	65	319	13:17	1	1.261	A BB	34820.	36.217 UG/L%	8.76 72
15	NOT FOUND								
16	114	498	20:45	16	1.000	A BB	50685 low	50.000 UG/L*	12.10
17	72	319	13:17	1	1.261	A BB	600.	~~6.355 UG/L~~ BRL	1.54
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	98	587	24:27	31	0.953	A BB	36239.	62.515 UG/L%	15.12 high 125
31	117	616	25:40	31	1.000	A BB	25216. low	50.000 UG/L*	12.10
32	43	518	21:35	31	0.841	A BB	464.	~~1.269 UG/L~~ BRL	0.31
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	92	591	24:37	31	0.959	A BB	320.	~~0.995 UG/L~~ BRL	0.24
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	95	732	30:30	31	1.188	A BB	16081.	42.333 UG/L%	10.24 85

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:30	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:10		0.206						
3	3:20		0.317						
4	4:12		0.401						
5	5:15		0.500						
6	7:25	1.01	0.706	1.00	3.97	50.00	0.101	1.268	0.08
7	8:00	1.01	0.762	1.00	109.29	50.00	1.081	0.494	2.19
8	9:00	1.00	0.857	1.00	0.46	50.00	0.007	0.784	0.01
9	10:05		0.960						
10	11:22		1.083						
11	12:02		1.147						
12	12:37		1.202						

43420

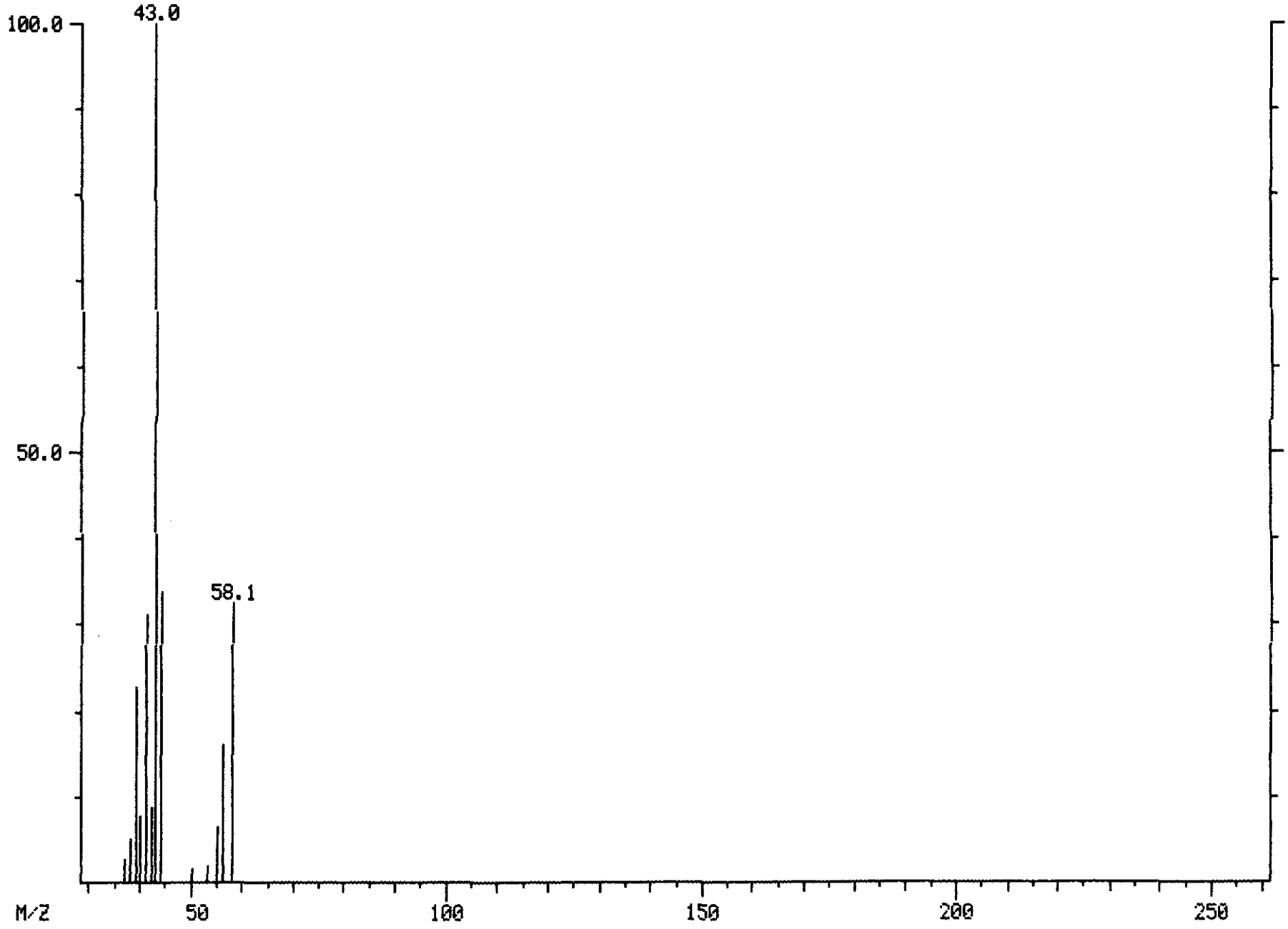
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:20		1.270						
14	13:15	1.00	1.262	1.00	36.22	50.00	1.455	2.008	0.72
15	9:27		0.901						
16	20:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:15	1.00	1.262	1.00	6.36	50.00	0.025	0.197	0.13
18	15:07		0.730						
19	15:05		0.728						
20	15:30		0.748						
21	16:55		0.817						
22	17:07		0.827						
23	17:40		0.853						
24	18:12		0.879						
25	18:17		0.883						
26	18:25		0.889						
27	18:22		0.887						
28	20:57		1.012						
29	14:42		0.710						
30	24:27	1.00	0.953	1.00	62.51	50.00	1.437	1.149	1.25
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30	1.00	0.838	1.00	1.27	50.00	0.018	0.725	0.03
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	0.99	50.00	0.013	0.638	0.02
37	25:47		1.005						
38	27:57		1.089						
39	32:25		1.263						
40	33:47		1.317						
41	32:42		1.274						
42	30:45	0.99	1.198	0.99	42.33	50.00	0.638	0.753	0.85

MASS SPECTRUM
04/27/90 16:14:00 + 8:02
SAMPLE: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE

DATA: U3420 #193
CALI: U3420 #2

BASE M/Z: 43
RIC: 15680.

100022

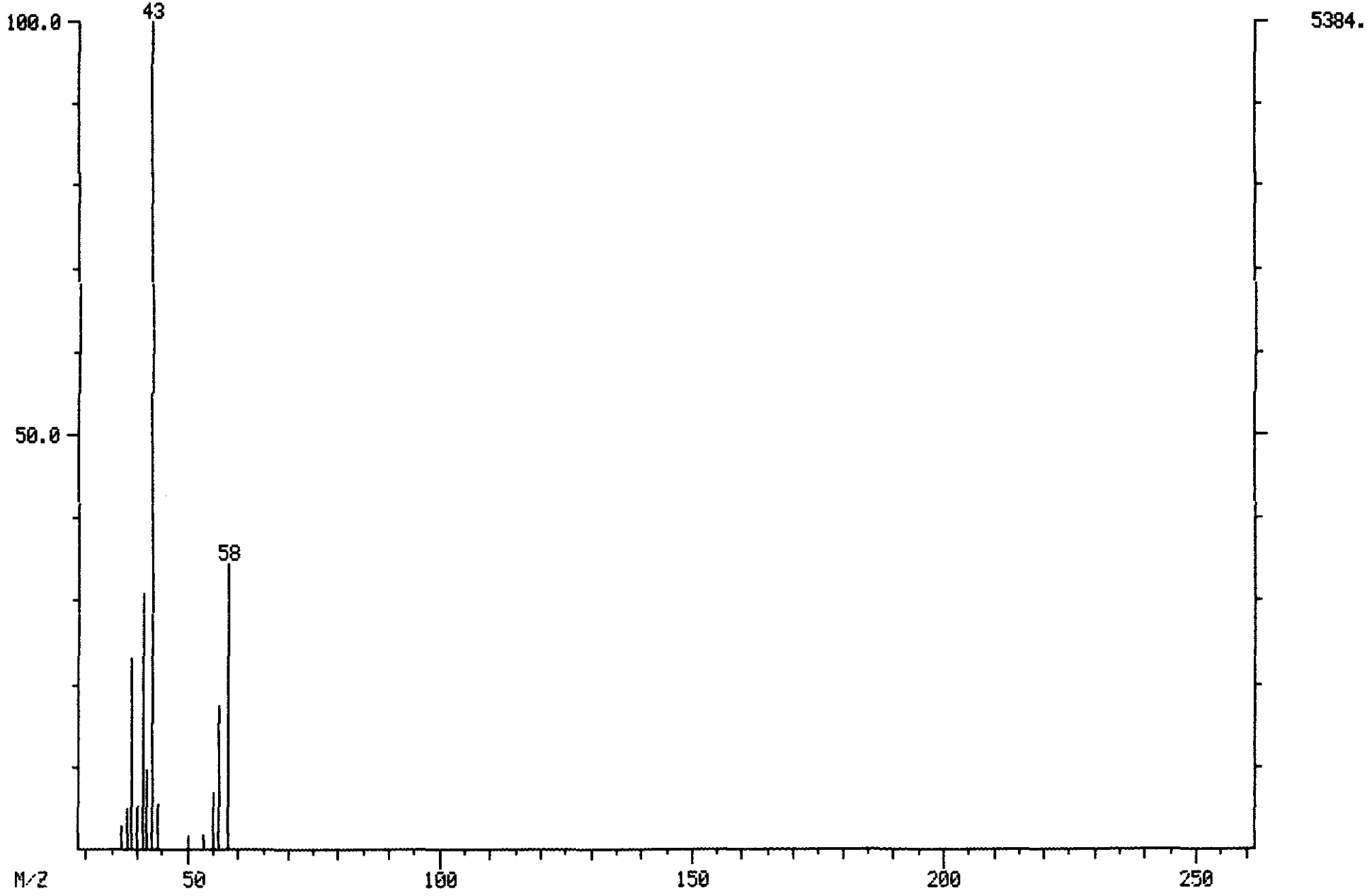


MASS SPECTRUM
04/27/90 16:14:00 + 8:02
SAMPLE: CLP,VERSCOM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE
ENHANCED (S 15B 2N 0T)

DATA: U3420 #193
CALI: U3420 #2

BASE M/Z: 43
RIC: 13168.

100023

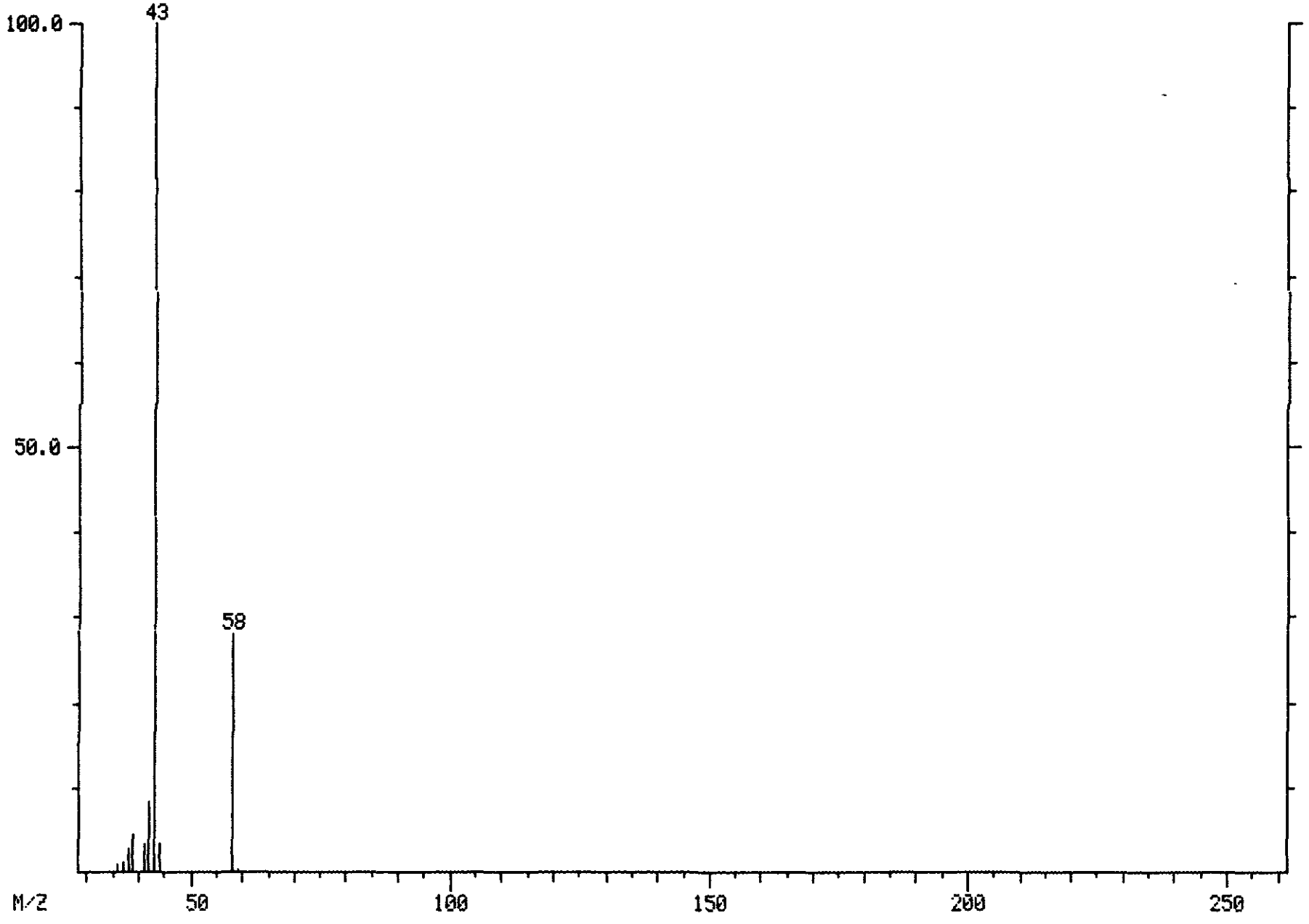


MASS SPECTRUM
04/27/90 8:21:00 + 8:00
SAMPLE: CLP,,,VSTD 50,L,S,22554,V,CC-050,,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE
ENHANCED (S 15B 2N 0T)

DATA: U3411 #192
CALI: U3411 #2

BASE M/Z: 43
RIC: 12368.

100024



Library Search Data: U3420 # 203 Base m/z: 43
04/27/90 16:14:00 + 8:27 Cali: U3420 # 2 RIC: 4127
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Enhanced (S 15B 2N OT)

42222 spectra in LIBRARYNB searched for maximum PURITY
78 matched at least 5 of the 6 largest peaks in the unknown

Rank	In.	Name
1	94	BUTANE
2	93	PROPANE, 2-METHYL-
3	1261	1-PROPEN-2-OL, ACETATE
4	847	PROPANE, 1-CHLORO-2-METHYL-
5	1204	PROPANE, 1-ISOCYANATO-2-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C4.H10	58	43	891	911	965
2	C4.H10	58	43	837	856	901
3	C5.H8.O2	100	43	756	773	916
4	C4.H9.CL	92	43	731	850	833
5	C5.H9.O.N	99	43	712	712	866

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	106-97-8
2	—	—	—	—	75-28-5
3	—	—	—	—	108-22-5
4	—	—	—	—	513-36-0
5	—	—	—	—	1873-29-6

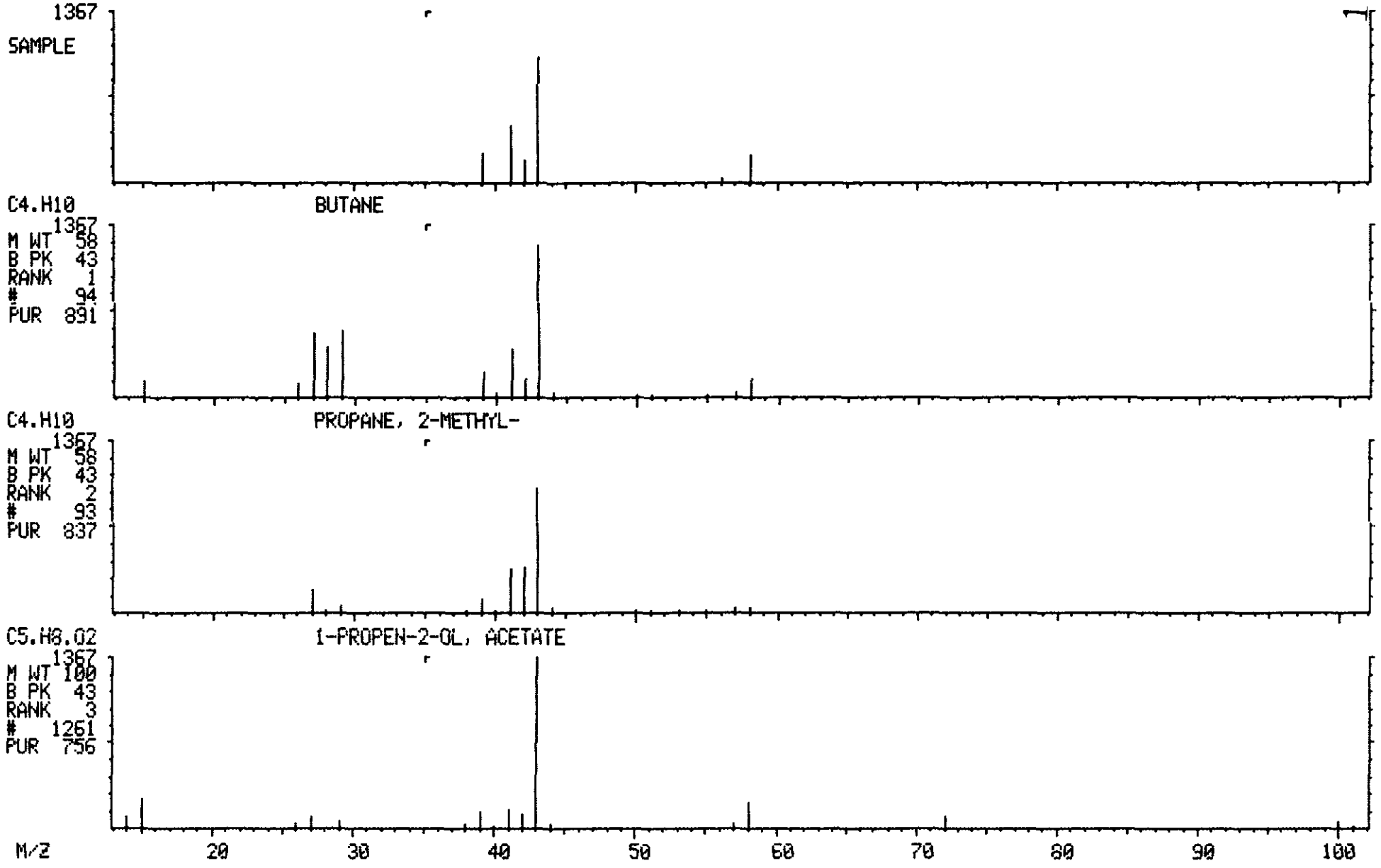
$\frac{4127}{30368} \times 50 = 6.79$

LIBRARY SEARCH
04/27/90 16:14:00 + 8:27
SAMPLE: CLP,VERSCOM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: U3420 # 203
CALI: U3420 # 2

BASE M/Z: 43
RIC: 4127.

100026



Library Search Data: U3420 # 343 Base m/z: 43
04/27/90 16:14:00 + 14:17 Cali: U3420 # 2 RIC: 6455
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Enhanced (S 15B 2N OT)

42222 spectra in LIBRARYNB searched for maximum PURITY
58 matched at least 6 of the 9 largest peaks in the unknown

Rank	In.	Name
1	265	PENTANE (ACN)(DOT)
2	253	OXIRANE, 2,2-DIMETHYL-
3	93	PROPANE, 2-METHYL-
4	249	1-PROPENE, 2-METHOXY-
5	2512	ETHER, 1-BUTYLVINYL METHYL

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C5.H12	72	43	974	974	991
2	C4.H8.O	72	41	905	914	935
3	C4.H10	58	43	827	919	865
4	C4.H8.O	72	42	801	821	833
5	C7.H14.O	114	42	783	794	871

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	109-66-0
2	—	—	—	—	558-30-5
3	—	—	—	—	75-28-5
4	—	—	—	—	116-11-0
5	—	—	—	—	16519-66-7

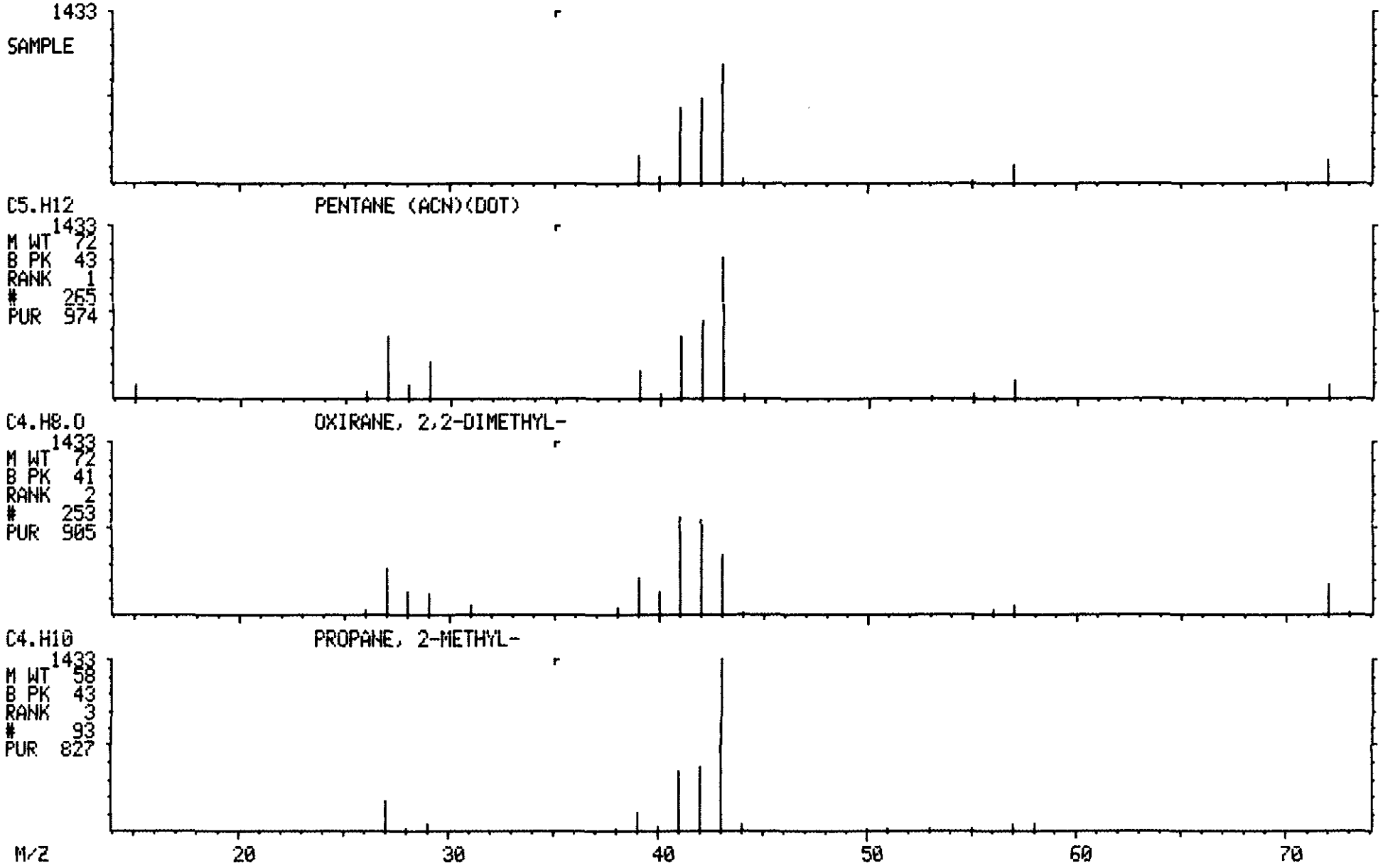
$\frac{6455}{30368} \times 50 = 10.62$

LIBRARY SEARCH
04/27/90 16:14:00 + 14:17
SAMPLE: CLP,VERSCOM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: U3420 # 343
CALI: U3420 # 2

BASE M/Z: 43
RIC: 6455.

100028



Library Search Data: U3420 # 473 Base m/z: 57
04/27/90 16:14:00 + 19:42 Cali: U3420 # 2 RIC: 4559
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Enhanced (S 15B 2N OT)

42222 spectra in LIBRARYNB searched for maximum PURITY
97 matched at least 6 of the 8 largest peaks in the unknown

Rank	In.	Name
1	664	HEXANE (DOT)
2	662	PENTANE, 3-METHYL-
3	633	PROPANAL, 2,2-DIMETHYL-
4	1548	PROPANE, 2-METHYL-1-NITRO-
5	1370	PENTANE, 2,4-DIMETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C6.H14	86	57	924	924	987
2	C6.H14	86	57	857	857	980
3	C5.H10.O	86	57	797	797	867
4	C4.H9.O2.N	103	41	782	882	802
5	C7.H16	100	43	768	768	888

Rank	Ret. Time	B.P. Int.	US. Par. 1	US. Par. 2	C.A.S. #
1	—	—	—	—	110-54-3
2	—	—	—	—	96-14-0
3	—	—	—	—	630-19-3
4	—	—	—	—	625-74-1
5	—	—	—	—	108-08-7

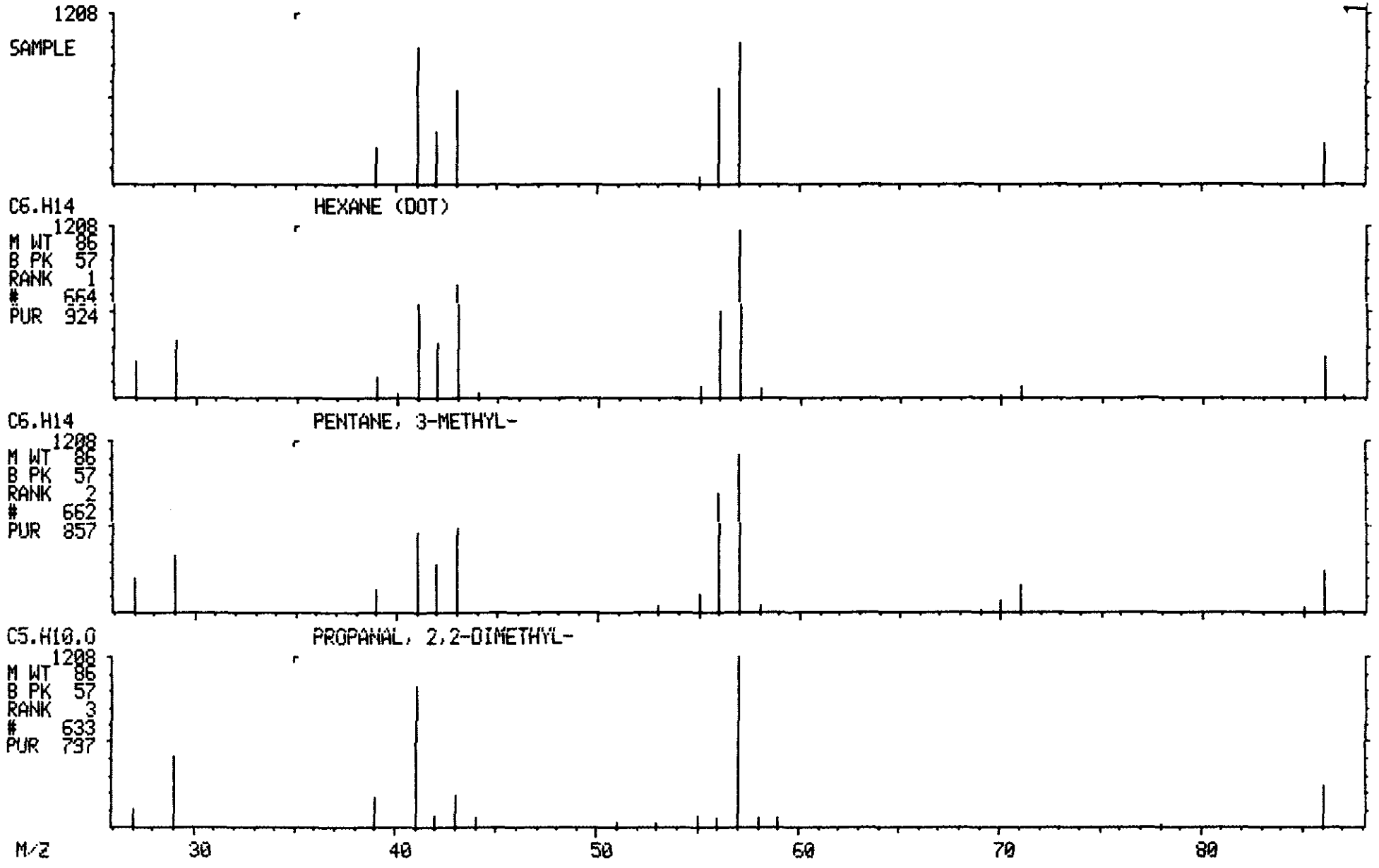
$\frac{4559}{25216} \times 50 = 9.03$

LIBRARY SEARCH
04/27/90 16:14:00 + 19:42
SAMPLE: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: U3420 # 473
CALI: U3420 # 2

BASE M/Z: 57
RIC: 4559.

100030



Library Search Data: U3420 # 791 Base m/z: 128
04/27/90 16:14:00 + 32:57 Cali: U3420 # 2 RIC: 17471.
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
791 - # 838 - # 750 X1.00

42222 spectra in LIBRARYNB searched for maximum PURITY
123 matched at least 5 of the 16 largest peaks in the unknown

PAH

Rank	In.	Name
1	3887	AZULENE
2	3886	NAPHTHALENE (ACN)(DOT)
3	3888	1H-INDENE, 1-METHYLENE-
4	8736	BICYCLO[4.4.1]UNDECA-1,3,5,7,9-PENTAEN-11-ONE
5	4116	1,4-BENZENEDICARBONITRILE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C10.H8	128	128	946	997	946
2	C10.H8	128	128	941	997	941
3	C10.H8	128	128	937	996	937
4	C11.H8.O	156	128	791	887	882
5	C8.H4.N2	128	128	729	895	749

Rank	Ret. Time	B.P. Int.	US. Par. 1	US. Par. 2	C.A.S. #
1	—	—	—	—	275-51-4
2	—	—	—	—	91-20-3
3	—	—	—	—	2471-84-3
4	—	—	—	—	36628-80-5
5	—	—	—	—	623-26-7

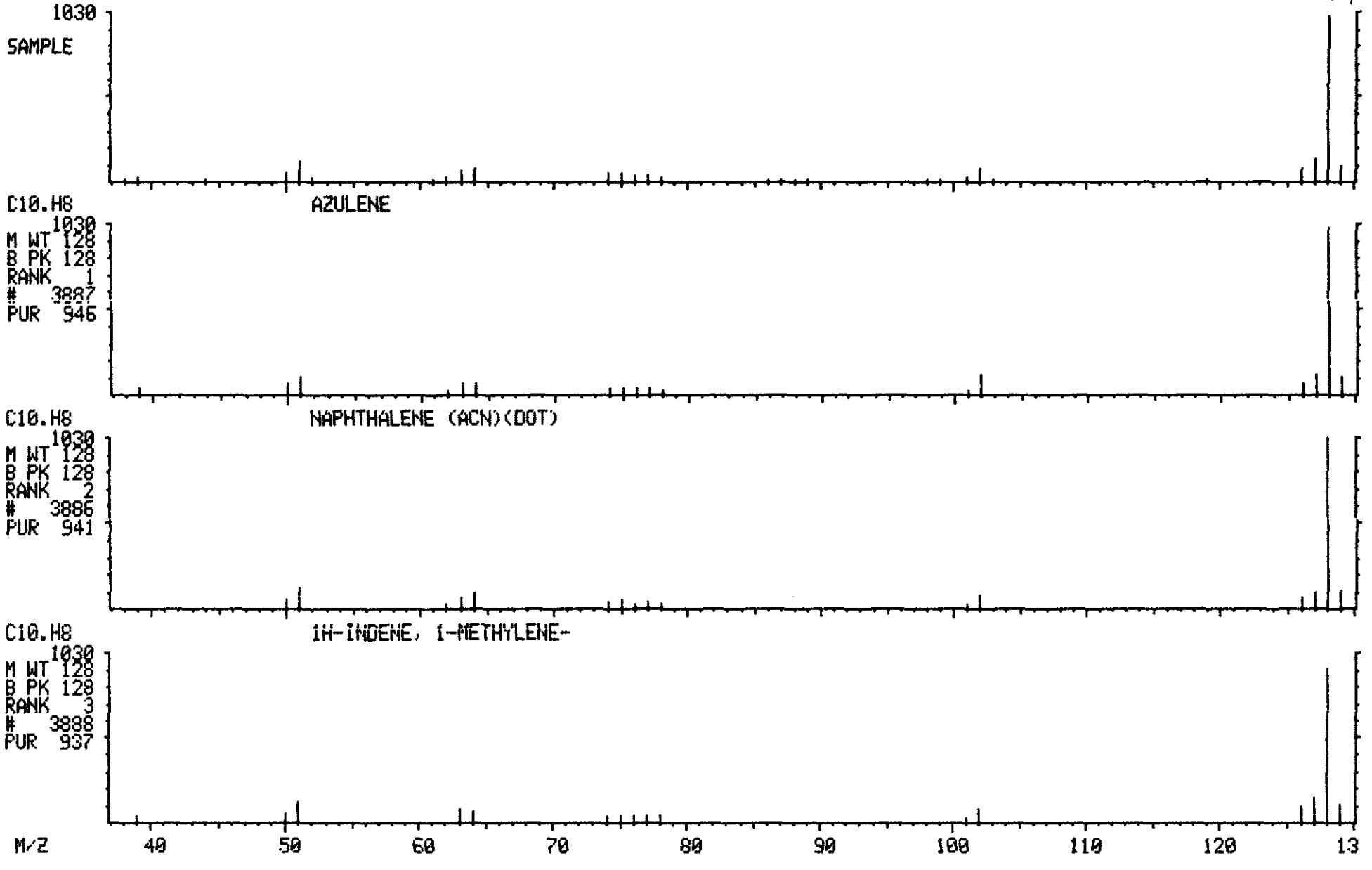
$\frac{17471}{15568} \times 50 = 56.11$

LIBRARY SEARCH
04/27/90 16:14:00 + 32:57
SAMPLE: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
791 - # 838 - # 750 X1.00

DATA: U3420 # 791
CALI: U3420 # 2

BASE M/Z: 128
RIC: 17471.

100032



```
                    >>>>INTERNAL STANDARD RIC REPORT<<<<
*****************************INTERNAL STANDARD#1*****************RIC
Mass List                      Data: U3420 # 253          Base m/z:  130
04/27/90 16:14:00 + 10:32      Cali: U3420 #   2          RIC:     30368.
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Enhanced (S 15B 2N OT)

     35       0.00    0.00        0. Minima     Min inten:      0.
     30                      #    0  Maxima
*****************************INTERNAL STANDARD#2*****************RIC
Mass List                      Data: U3420 # 498          Base m/z:  114
04/27/90 16:14:00 + 20:45      Cali: U3420 #   2          RIC:     25216.
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Enhanced (S 15B 2N OT)

     37       0.00    0.00        0. Minima     Min inten:      0.
     30                      #    0  Maxima
*****************************INTERNAL STANDARD#3*****************RIC
Mass List                      Data: U3420 # 616          Base m/z:  117
04/27/90 16:14:00 + 25:40      Cali: U3420 #   2          RIC:     15568.
Sample: CLP,VERSCDM,2536,1,L,S,16426,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Enhanced (S 15B 2N OT)

     38       0.00    0.00        0. Minima     Min inten:      0.
     30                      #    0  Maxima

    ANALYST: CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO CONTAMINATION
```

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2

La' Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16427

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3393

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 27 Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene chloride	7	U
67-64-1	Acetone	14	U
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	7	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16427

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3393

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 27 Date Analyzed: 04/26/90

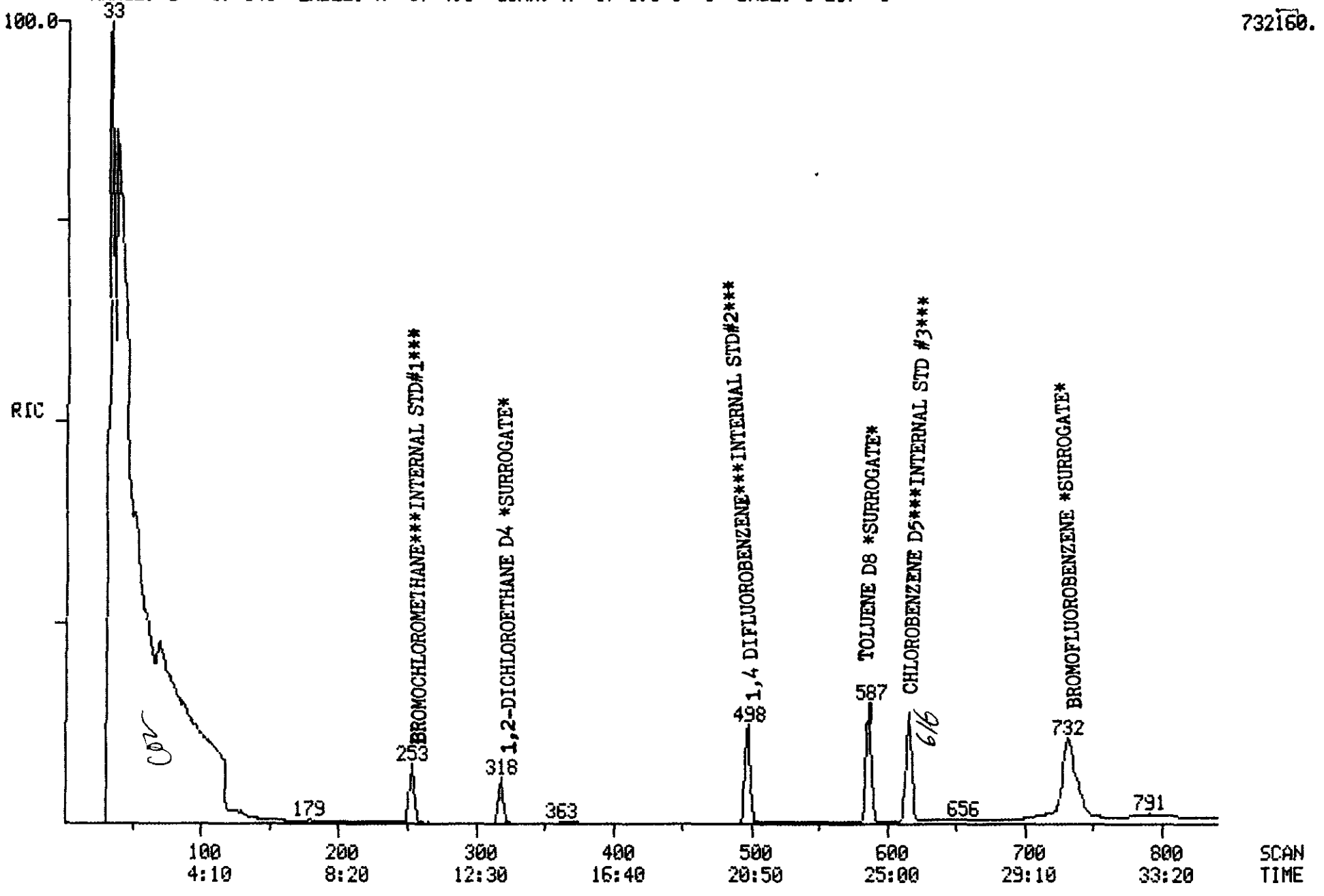
Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC DATA: U3393 #1 SCANS 1 TO 840
04/26/90 14:31:00 CALI: U3393 #2
SAMPLE: CLP,VERSCDM,2536,B2,L,S,16427,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



00036

Quantitation Report File: U3393

Data: U3393.TI
04/26/90 14:31:00
Sample: CLP,VERSCDM,2536,B2,L,S,16427,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: 420.1.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

INT STD + SURROG. COMP.
M.A. Templeton 4/26/90
27.5 %

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

Ready to

U3393

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	253	10:32	1	1.000	A BB	38573.	50.000 UG/L*	17.56
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	84	180	7:30	1	0.711	A BB	1258.	~~1.189 UG/L~~	0.42
7	43	193	8:02	1	0.763	A BB	179.	~~0.319 UG/L~~	0.11
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	65	318	13:15	1	1.257	A BB	61885.	35.065 UG/L%	12.31 70%
15	NOT FOUND								
16	114	498	20:45	16	1.000	A BB	165489.	50.000 UG/L*	17.56
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	98	586	24:25	31	0.951	A BB	186603.	53.162 UG/L%	18.67 106%
31	117	616	25:40	31	1.000	A BB	145981.	50.000 UG/L*	17.56
32	NOT FOUND								
33	43	556	23:10	31	0.903	A VV	1804.	~~0.814 UG/L~~	0.29
34	NOT FOUND								
35	NOT FOUND								
36	92	591	24:37	31	0.959	A BB	1121.	~~0.559 UG/L~~	0.20
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	106	796	33:10	31	1.292	A BB	300.	~~0.215 UG/L~~	0.08
41	NOT FOUND								
42	95	731	30:27	31	1.187	A BB	110417.	43.521 UG/L%	15.28 87%

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:32	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12		0.209						
3	3:22		0.320						
4	4:15		0.403						
5	5:15		0.498						
6	7:27	1.01	0.708	1.01	1.19	50.00	0.033	1.372	0.02
7	8:02	1.00	0.763	1.00	0.32	50.00	0.005	0.727	0.01
8	9:02		0.858						
9	10:07		0.960						
10	11:25		1.083						
11	12:05		1.146						
12	12:40		1.202						

43393

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:22		1.269						
14	13:17	1.00	1.261	1.00	35.06	50.00	1.604	2.288	0.70
15	9:30		0.901						
16	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:17		1.261						
18	15:10		0.731						
19	15:07		0.729						
20	15:32		0.749						
21	16:57		0.817						
22	17:10		0.827						
23	17:42		0.853						
24	18:12		0.878						
25	18:20		0.884						
26	18:25		0.888						
27	18:25		0.888						
28	21:00		1.012						
29	14:42		0.709						
30	24:27	1.00	0.953	1.00	53.16	50.00	1.278	1.202	1.06
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30		0.838						
33	23:02	1.01	0.898	1.01	0.81	50.00	0.012	0.759	0.02
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	0.56	50.00	0.008	0.686	0.01
37	25:47		1.005						
38	27:50		1.084						
39	32:00		1.247						
40	33:17	1.00	1.297	1.00	0.22	50.00	0.002	0.477	0.00
41	32:15		1.256						
42	30:27	1.00	1.187	1.00	43.52	50.00	0.756	0.869	0.87

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16428

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3394

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 28 Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene chloride	7	U
67-64-1	Acetone	14	U
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	7	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

3

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16428

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3394

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 28 Date Analyzed: 04/26/90

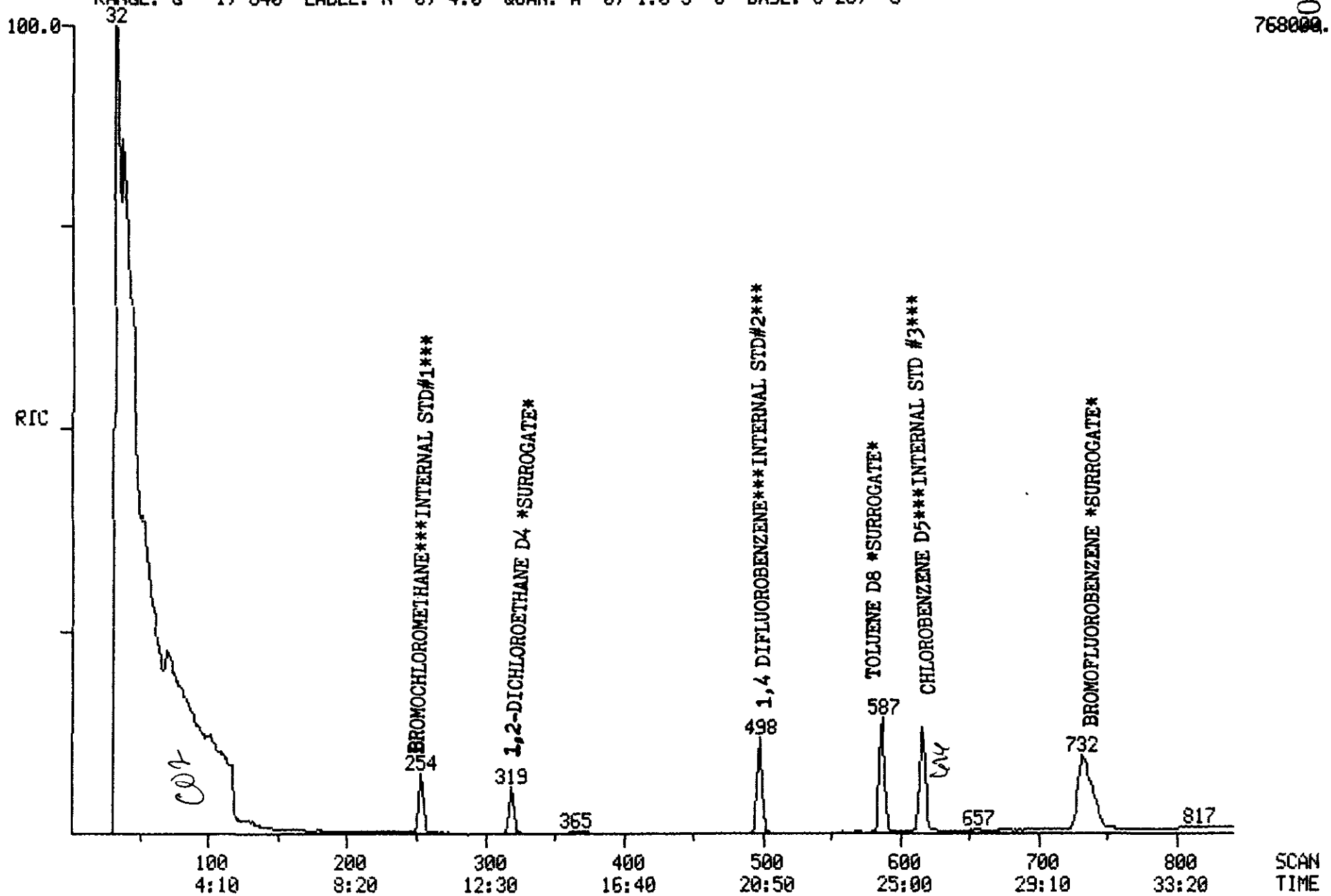
Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC DATA: U3394 #1 SCANS 1 TO 840
04/26/90 15:24:00 CALI: U3394 #2
SAMPLE: CLP,VERSCM,2536,B3,L,S,16428,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



000042

Quantitation Report File: U3394

Data: U3394.TI
04/26/90 15:24:00
Sample: CLP,VERSCM,2536,83,L,S,16428,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: 420.1.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

28.4 %

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

Ready DD

43394

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	254	10:35	1	1.000	A BB	38176	50.000 UG/L*	17.78
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	84	181	7:32	1	0.713	A BB	1005.	BRL ~~0.959 UG/L~~	0.34
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	65	319	13:17	1	1.256	A BB	62189.	35.604 UG/L%	12.66 71%
15	NOT FOUND								
16	114	498	20:45	16	1.000	A BB	164292.	50.000 UG/L*	17.78
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	98	587	24:27	31	0.953	A BB	179639.	51.263 UG/L%	18.23 103%
31	117	616	25:40	31	1.000	A BB	145738.	50.000 UG/L*	17.78
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	92	591	24:37	31	0.959	A BB	1063.	BRL ~~0.531 UG/L~~	0.19
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	95	732	30:30	31	1.188	A BB	108505.	42.839 UG/L%	15.24 86%

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:32	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12		0.209						
3	3:22		0.320						
4	4:15		0.403						
5	5:15		0.498						
6	7:27	1.01	0.708	1.01	0.96	50.00	0.026	1.372	0.02
7	8:02		0.763						
8	9:02		0.858						
9	10:07		0.960						
10	11:25		1.083						
11	12:05		1.146						
12	12:40		1.202						

U3394

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:22		1.269						
14	13:17	1.00	1.261	1.00	35.60	50.00	1.629	2.288	0.71
15	9:30		0.901						
16	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:17		1.261						
18	15:10		0.731						
19	15:07		0.729						
20	15:32		0.749						
21	16:57		0.817						
22	17:10		0.827						
23	17:42		0.853						
24	18:12		0.878						
25	18:20		0.884						
26	18:25		0.888						
27	18:25		0.888						
28	21:00		1.012						
29	14:42		0.709						
30	24:27	1.00	0.953	1.00	51.26	50.00	1.233	1.202	1.03
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30		0.838						
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	0.53	50.00	0.007	0.686	0.01
37	25:47		1.005						
38	27:50		1.084						
39	32:00		1.247						
40	33:17		1.297						
41	32:15		1.256						
42	30:27	1.00	1.187	1.00	42.84	50.00	0.745	0.869	0.86

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

5

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16429

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3413

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 54 Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene chloride	12	
67-64-1	Acetone	32	
75-15-0	Carbon disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	22	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon tetrachloride	11	U
108-05-4	Vinyl acetate	22	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	Trans-1,3-dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Total xylenes	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

5

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16429

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3413

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 54 Date Analyzed: 04/27/90

Column (pack/cap) PACK Dilution Factor: 1.0

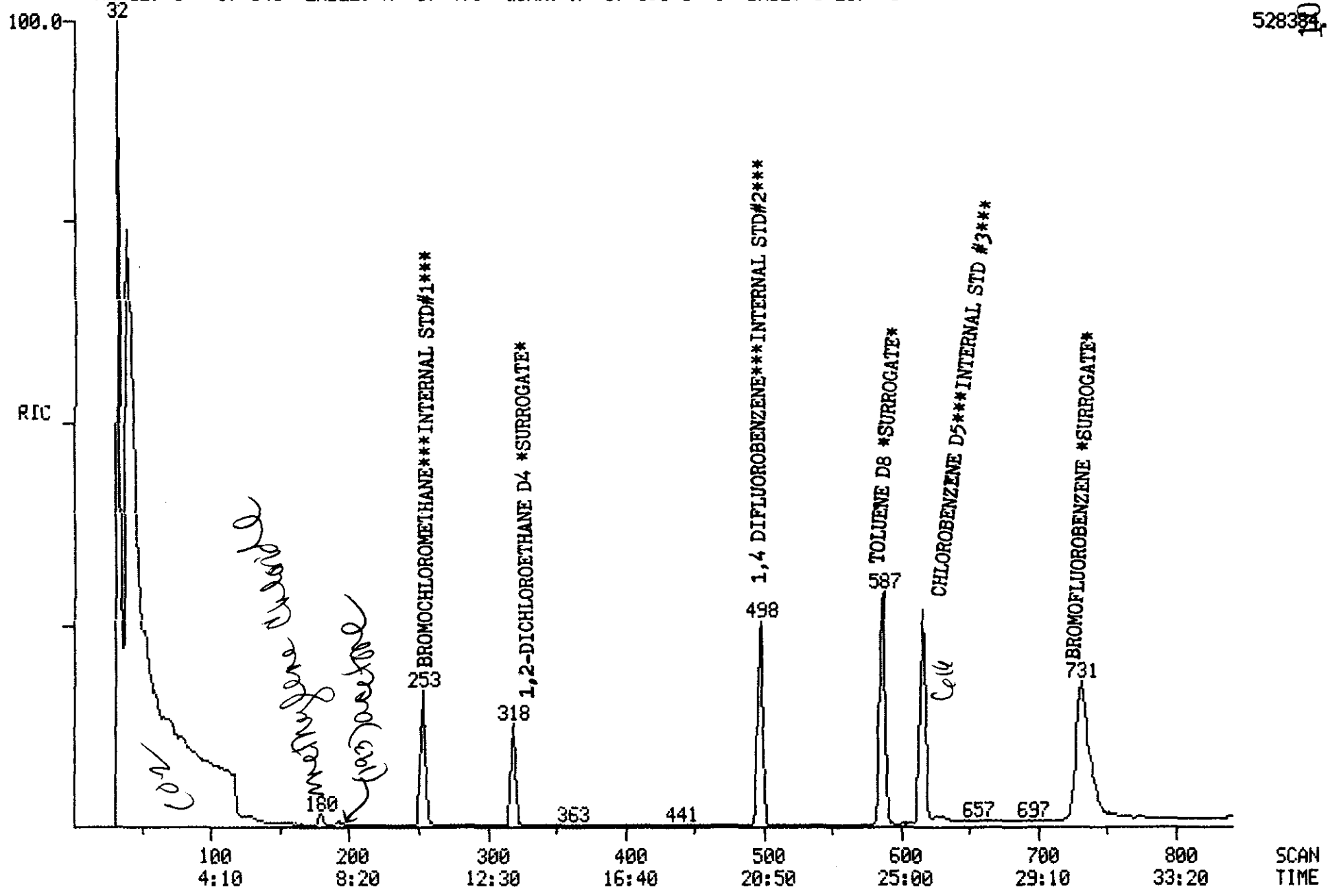
Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC DATA: U3413 #1 SCANS 1 TO 840
04/27/90 10:22:00 CALI: U3413 #2 5g/5mL
SAMPLE: CLP,VERSCOM,2536,05,L,S,16429,V,,420.1.0,B2,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

528384



100048

Quantitation Report File: U3413

Data: U3413.TI
04/27/90 10:22:00
Sample: CLP,VERSCDM,2536,B5,L,S,16429,V,,420.1.0,B2,5ML
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: 420.1.0

5g/5mL

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

54.5 %

INT STD & SURROG. COMPLIANT

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

Ready for

U3413

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
1	128	253	10:32	1	1.000	A BB	58714.	50.000 UG/L*	15.89	
2	NOT FOUND									
3	NOT FOUND									
4	NOT FOUND									
5	NOT FOUND									
6	84	180	7:30	1	0.711	A BB	8066.	~~5.415 UG/L~~	1.72	
7	43	193	8:02	1	0.763	A BV	8540.	~~14.712 UG/L~~	4.67	
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	65	318	13:15	1	1.257	A BB	98321.	41.690 UG/L%	13.25	83%
15	NOT FOUND									
16	114	498	20:45	16	1.000	A BB	241997.	50.000 UG/L*	15.89	
17	72	318	13:15	1	1.257	A BB	179.	~~0.773 UG/L~~ BDL	0.25	
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	78	437	18:12	16	0.878	A BB	733.	~~0.168 UG/L~~ BDL	0.05	
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	98	586	24:25	31	0.951	A BB	249604.	54.071 UG/L%	17.18	108%
31	117	616	25:40	31	1.000	A BB	200802.	50.000 UG/L*	15.89	
32	43	516	21:30	31	0.838	A BB	767.	~~0.264 UG/L~~ BDL	0.08	
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	92	591	24:37	31	0.959	A BB	2495.	~~0.974 UG/L~~ BDL	0.31	
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	106	774	32:15	31	1.256	A BB	683.	~~0.337 UG/L~~ BDL	0.11	
42	95	731	30:27	31	1.187	A BB	140128.	46.324 UG/L%	14.72	93%

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:30	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:10		0.206						
3	3:20		0.317						
4	4:12		0.401						
5	5:15		0.500						
6	7:25	1.01	0.706	1.01	5.42	50.00	0.137	1.268	0.11
7	8:00	1.01	0.762	1.00	14.71	50.00	0.145	0.494	0.29
8	9:00		0.857						
9	10:05		0.960						
10	11:22		1.083						
11	12:02		1.147						
12	12:37		1.202						

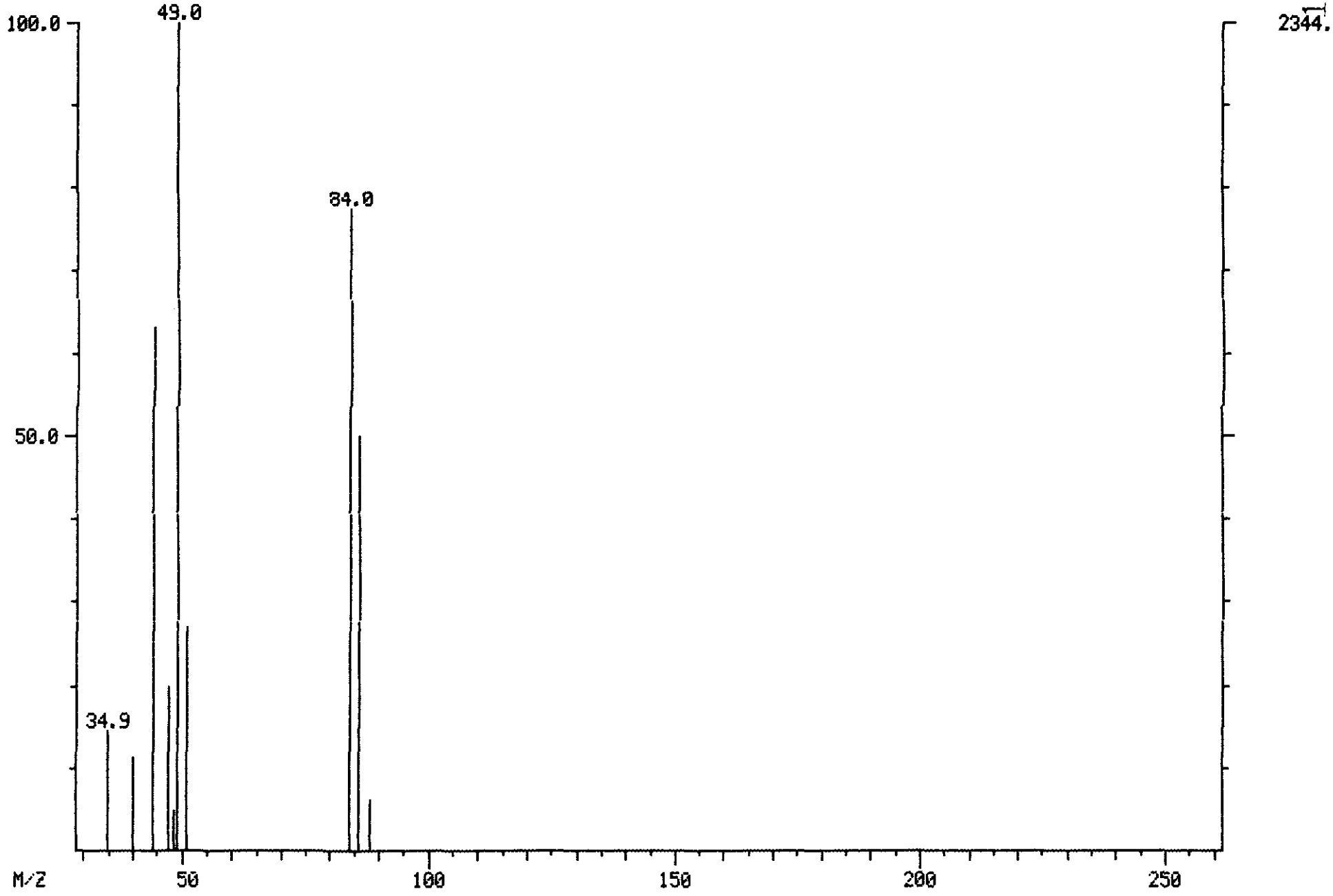
U3413

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:20		1.270						
14	13:15	1.00	1.262	1.00	41.69	50.00	1.675	2.008	0.83
15	9:27		0.901						
16	20:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:15	1.00	1.262	1.00	0.77	50.00	0.003	0.197	0.02
18	15:07		0.730						
19	15:05		0.728						
20	15:30		0.748						
21	16:55		0.817						
22	17:07		0.827						
23	17:40		0.853						
24	18:12	1.00	0.879	1.00	0.17	50.00	0.003	0.901	0.00
25	18:17		0.883						
26	18:25		0.889						
27	18:22		0.887						
28	20:57		1.012						
29	14:42		0.710						
30	24:27	1.00	0.953	1.00	54.07	50.00	1.243	1.149	1.08
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30	1.00	0.838	1.00	0.26	50.00	0.004	0.725	0.01
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	0.97	50.00	0.012	0.638	0.02
37	25:47		1.005						
38	27:57		1.089						
39	32:25		1.263						
40	33:47		1.317						
41	32:42	0.99	1.274	0.99	0.34	50.00	0.003	0.505	0.01
42	30:45	0.99	1.198	0.99	46.32	50.00	0.698	0.753	0.93

MASS SPECTRUM
04/27/90 10:22:00 + 7:30
SAMPLE: CLP,VERSCOM,2536,B5,L,S,16429,V,,420.1.0,B2,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C030 METHYLENE CHLORIDE

DATA: U3413 #180
CALI: U3413 #2

BASE M/Z: 49
RIC: 8768.



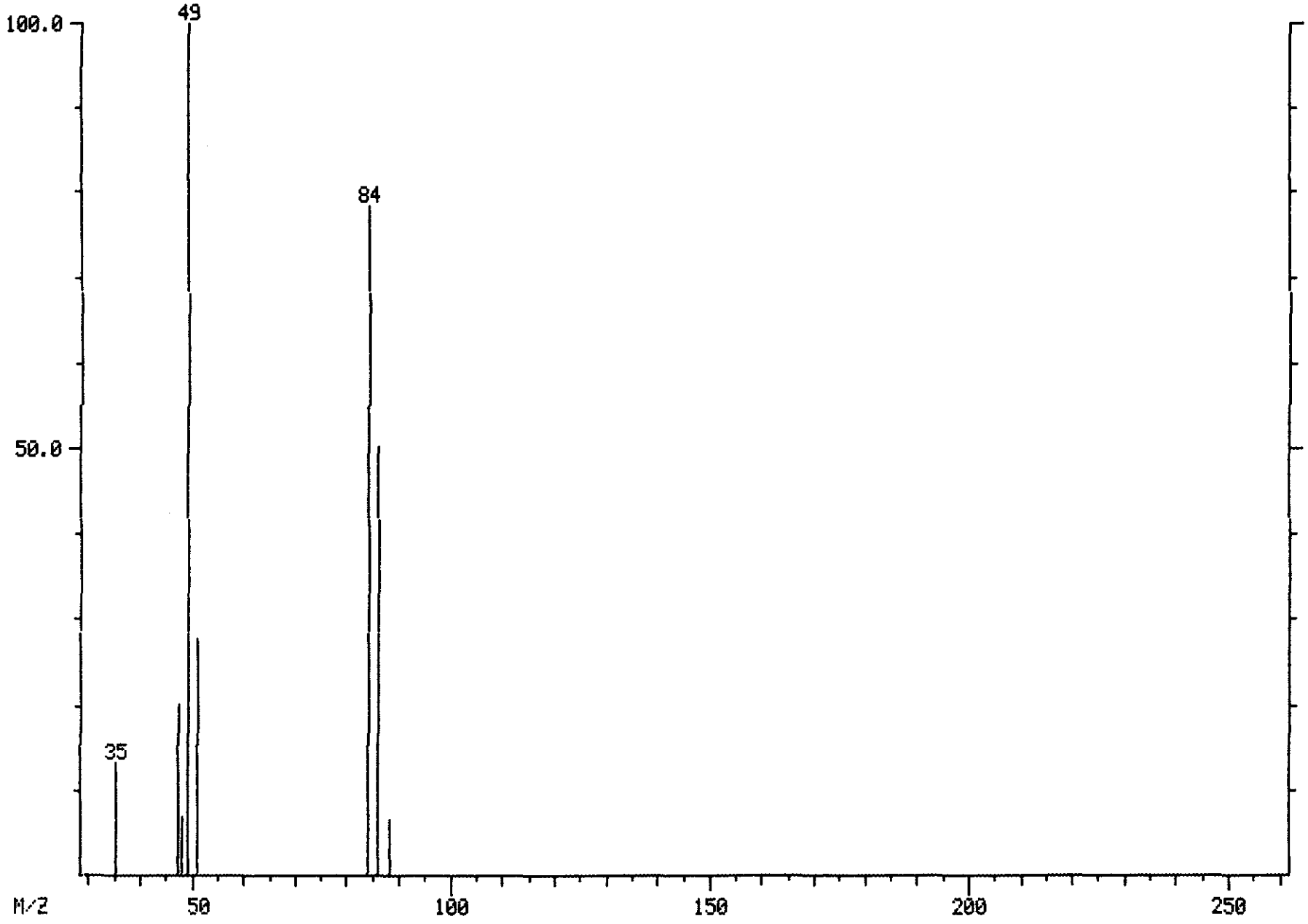
1100052

MASS SPECTRUM
04/27/90 10:22:00 + 7:30
SAMPLE: CLP,VERSCDM,2536,B5,L,S,16429,V,,420.1.0,B2,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C030 METHYLENE CHLORIDE
ENHANCED (S 15B 2N 0T)

DATA: U3413 #180
CALI: U3413 #2

BASE M/Z: 49
RIC: 6896.

100053

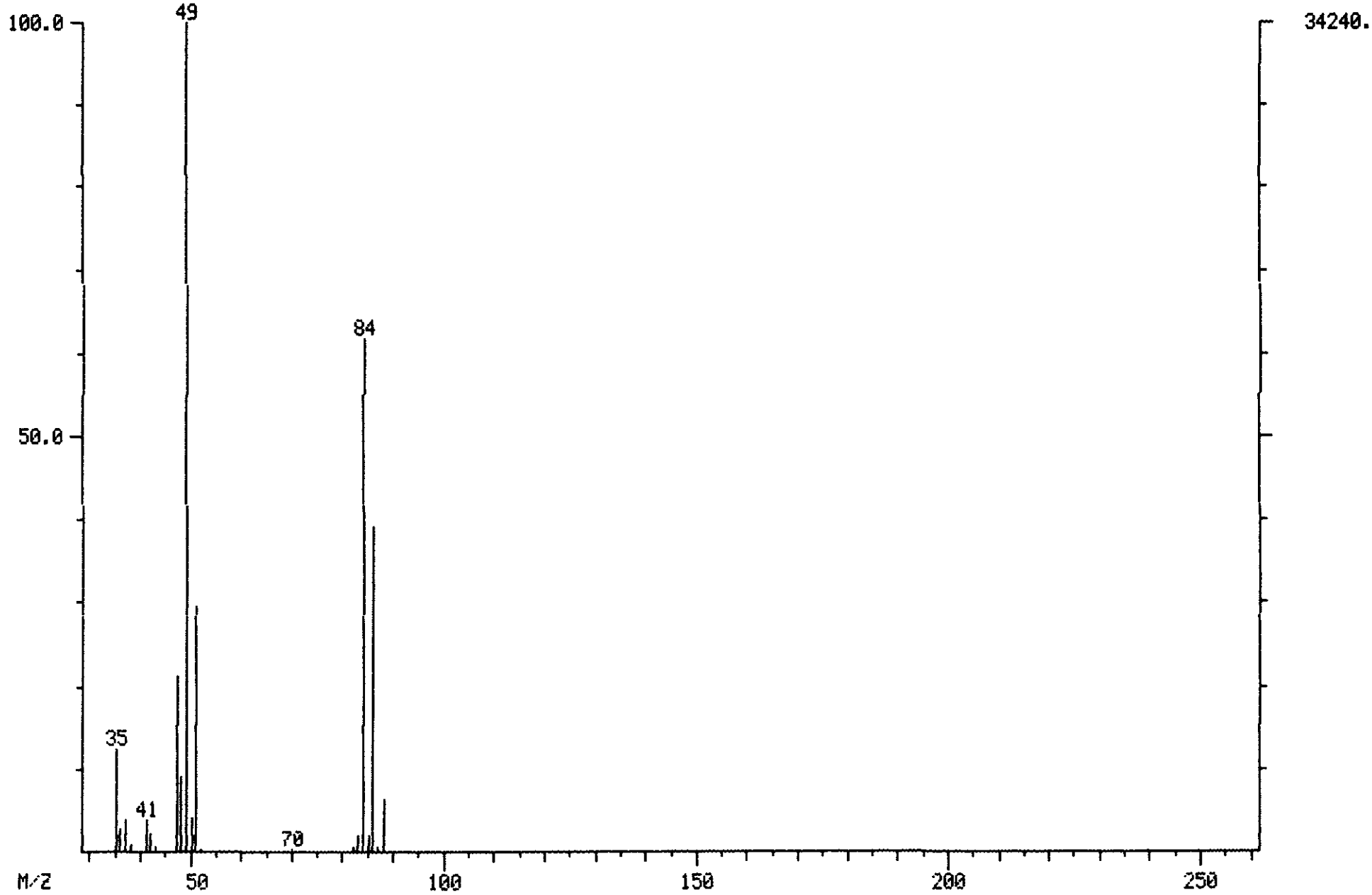


MASS SPECTRUM
04/27/90 8:21:00 + 7:25
SAMPLE: CLP,,,VSTD 50,L,S,22554,V,CC-050,,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C030 METHYLENE CHLORIDE
ENHANCED (S 15B 2N 0T)

DATA: U3411 #178
CALI: U3411 #2

BASE M/Z: 49
RIC: 103936.

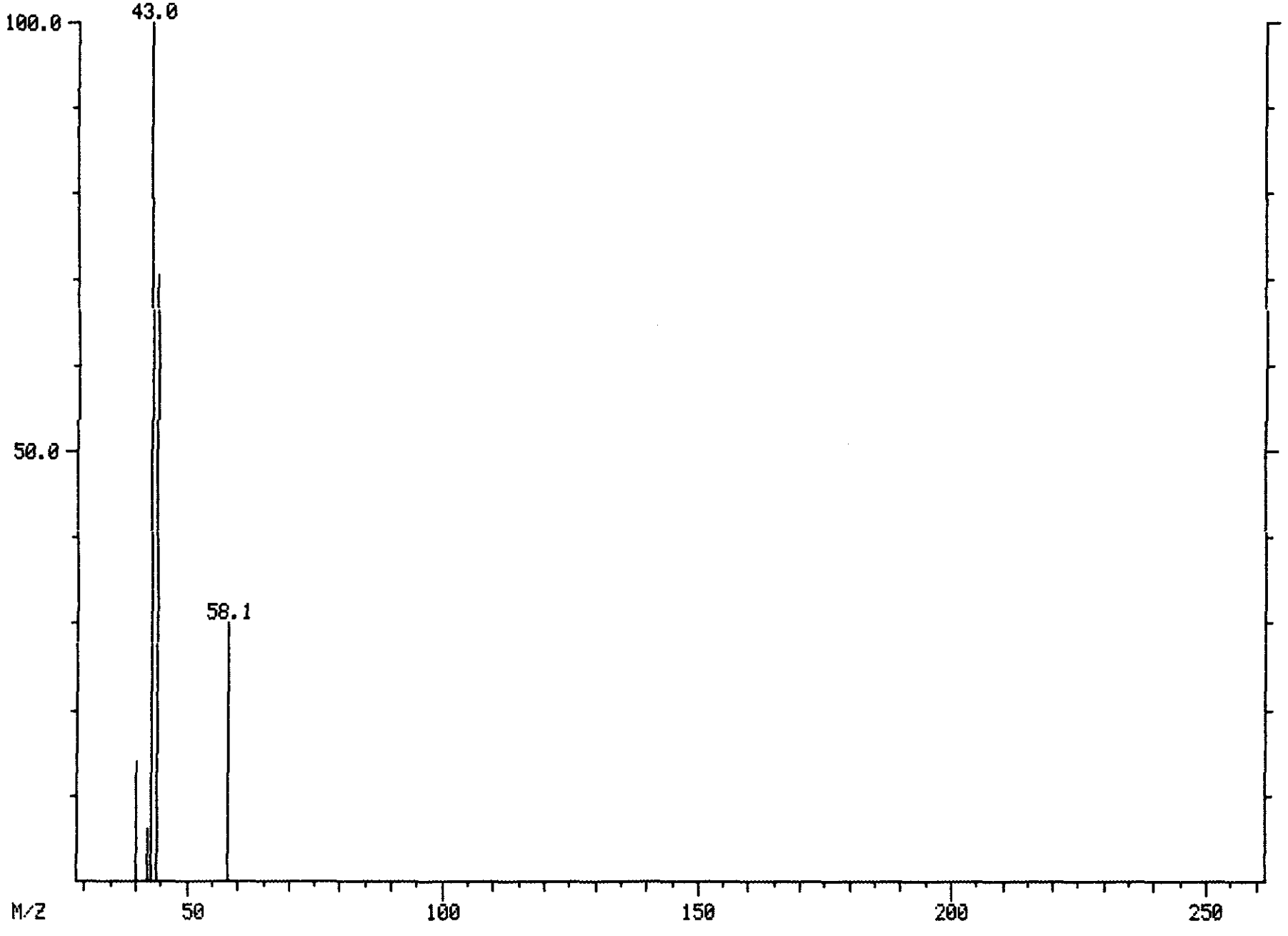
1000054



MASS SPECTRUM
04/27/90 10:22:00 + 8:02
SAMPLE: CLP,VERSCDM,2536,B5,L,S,16429,V,,420.1.0,B2,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE

DATA: U3413 #193
CALI: U3413 #2

BASE M/Z: 43
RIC: 4184.

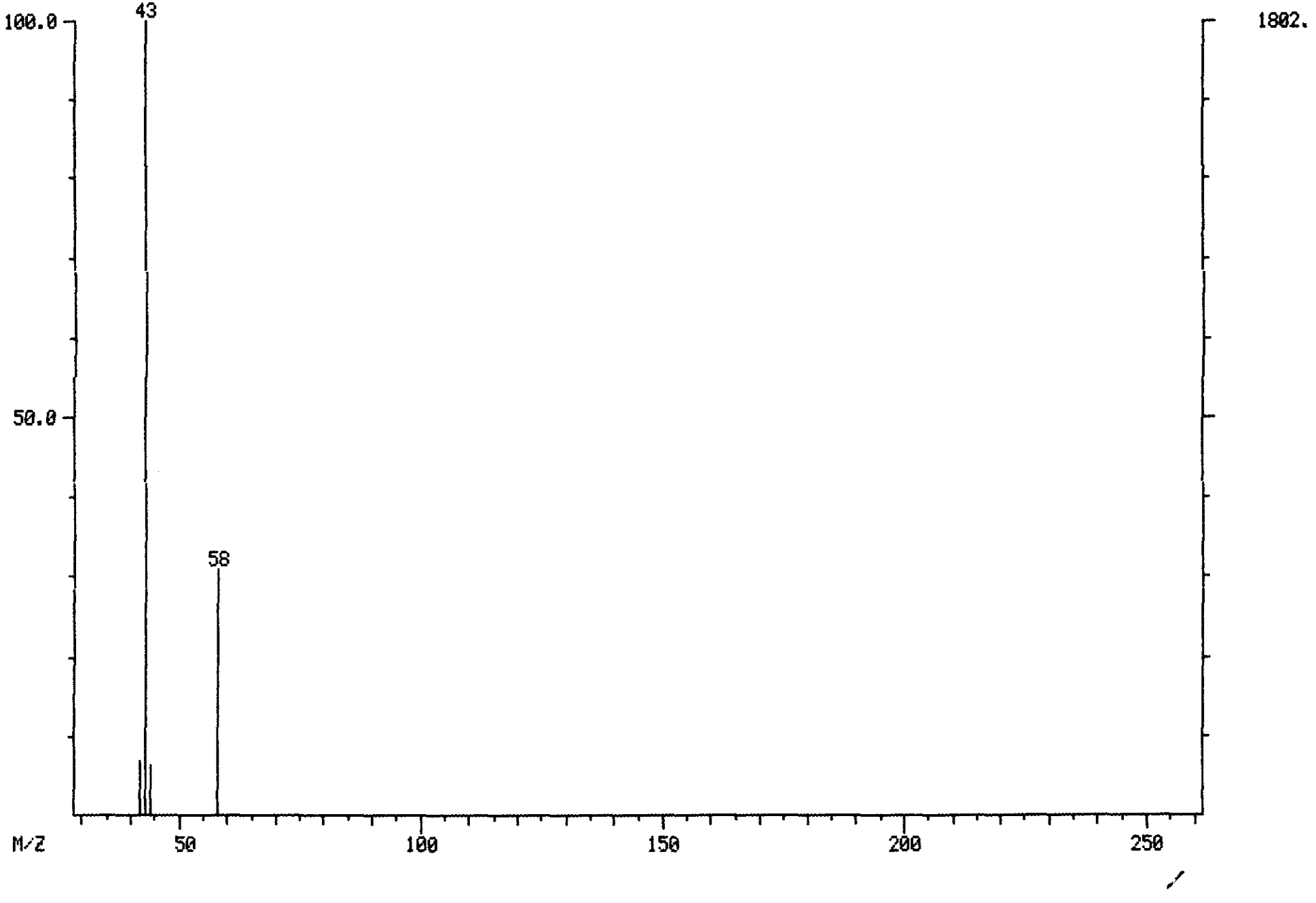


000055

MASS SPECTRUM
04/27/90 10:22:00 + 8:02
SAMPLE: CLP,VERSCOM,2536,B5,L,S,16429,V,,420.1.0,B2,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE
ENHANCED (S 15B 2N 0T)

DATA: U3413 #193
CALI: U3413 #2

BASE M/Z: 43
RIC: 2604.



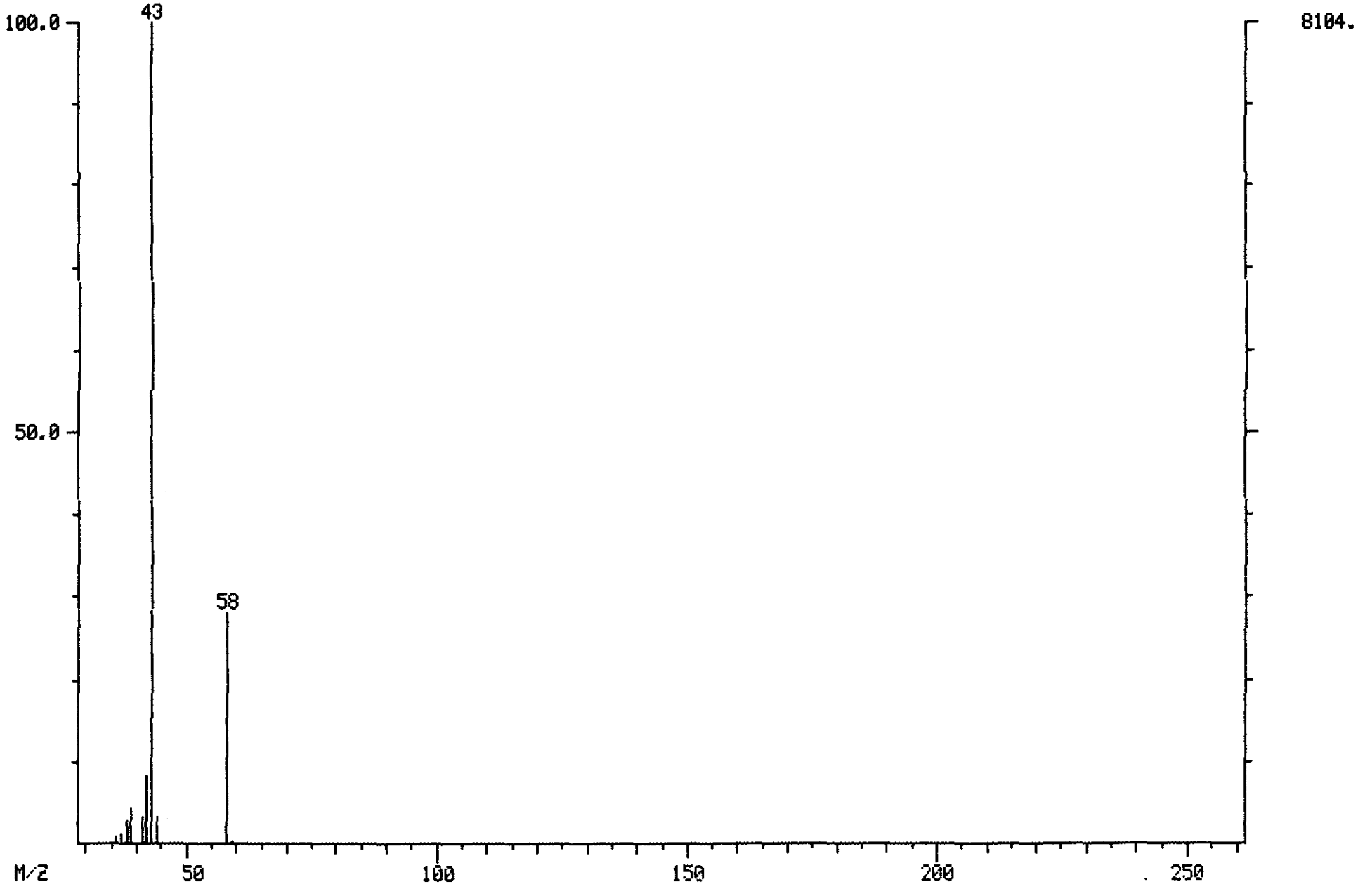
000056

MASS SPECTRUM
04/27/90 8:21:00 + 8:00
SAMPLE: CLP,,,VSTD 50,L,S,22554,V,CC-050,,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE
ENHANCED (S 15B 2N 0T)

DATA: U3411 #192
CALI: U3411 #2

BASE M/Z: 43
RIC: 12368.

100057



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

6

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16430

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3414

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 40 Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene chloride	8	U
67-64-1	Acetone	31	
75-15-0	Carbon disulfide	8	U
75-35-4	1,1-Dichloroethene	8	U
75-34-3	1,1-Dichloroethane	8	U
540-59-0	1,2-Dichloroethene (total)	8	U
67-66-3	Chloroform	8	U
107-06-2	1,2-Dichloroethane	8	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	8	U
56-23-5	Carbon tetrachloride	8	U
108-05-4	Vinyl acetate	17	U
75-27-4	Bromodichloromethane	8	U
78-87-5	1,2-Dichloropropane	8	U
10061-01-5	cis-1,3-Dichloropropene	8	U
79-01-6	Trichloroethene	8	U
124-48-1	Dibromochloromethane	8	U
79-00-5	1,1,2-Trichloroethane	8	U
71-43-2	Benzene	8	U
10061-02-6	Trans-1,3-dichloropropene	8	U
75-25-2	Bromoform	8	U
108-10-1	4-Methyl-2-pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	8	U
79-34-5	1,1,2,2-Tetrachloroethane	8	U
108-88-3	Toluene	8	U
108-90-7	Chlorobenzene	8	U
100-41-4	Ethylbenzene	8	U
100-42-5	Styrene	8	U
1330-20-7	Total xylenes	8	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

6

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16430

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3414

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 40 Date Analyzed: 04/27/90

Column (pack/cap) PACK Dilution Factor: 1.0

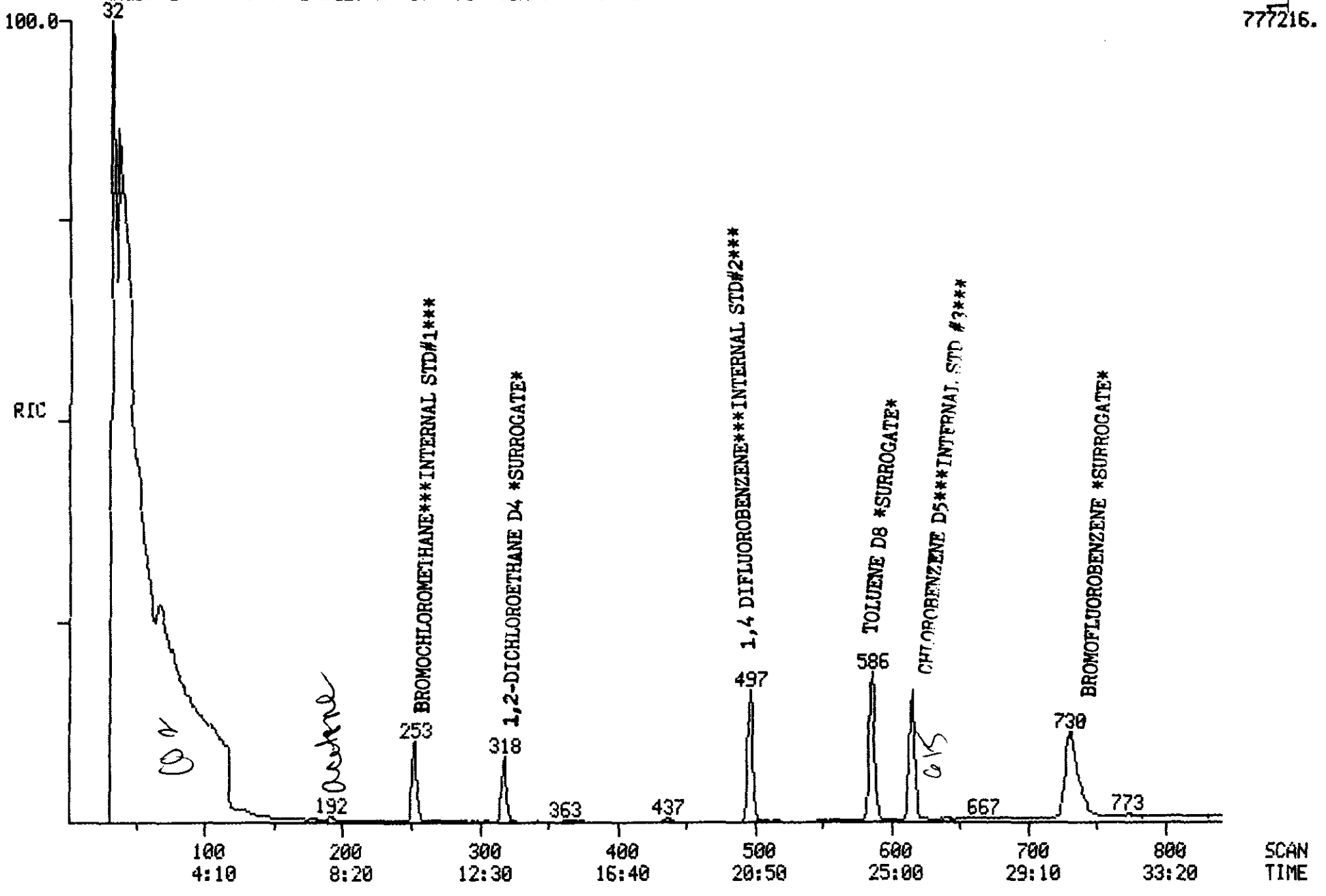
Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC DATA: U3414 #1 SCANS 1 TO 840
04/27/90 11:05:00 CALI: U3414 #2
SAMPLE: CLP,VERSCOM,2536,B6,L,S,16430,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

100060



Quantitation Report File: U3414

Data: U3414.TI
04/27/90 11:05:00
Sample: CLP,VERSCDM,2536,B6,L,S,16430,V,,420.1.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: 420.1.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

40.9 %

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

Ready

43414

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	252	10:30	1	1.000	A BB	53154.	50.000 UG/L*	15.39
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	84	179	7:27	1	0.710	A BB	2727.	BRL ~~2.022 UG/L~~	0.62
7	43	192	8:00	1	0.762	A BB	9800.	18.649 UG/L	5.74
8	NOT FOUND								
9	NOT FOUND								
10	63	253	10:32	1	1.004	A BB	176.	BRL ~~0.068 UG/L~~	0.02
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	65	318	13:15	1	1.262	A BB	89424.	41.884 UG/L%	12.89 84%
15	NOT FOUND								
16	114	497	20:42	16	1.000	A BB	226023.	50.000 UG/L*	15.39
17	72	319	13:17	1	1.266	A BB	963.	~~4.593 UG/L~~ BRL	1.41
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	78	437	18:12	16	0.879	A BB	7700.	~~1.890 UG/L~~ BRL	0.58
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	98	586	24:25	31	0.953	A BB	230466.	55.302 UG/L%	17.03 111%
31	117	615	25:37	31	1.000	A BB	181280.	50.000 UG/L*	15.39
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	106	774	32:15	31	1.259	A BB	3078.	BRL ~~1.940 UG/L~~	0.60
41	106	774	32:15	31	1.259	A BB	3078.	BRL ~~1.681 UG/L~~	0.52
42	95	731	30:27	31	1.189	A BB	127832.	46.810 UG/L%	14.41 94%

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:30	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:10		0.206						
3	3:20		0.317						
4	4:12		0.401						
5	5:15		0.500						
6	7:25	1.01	0.706	1.01	2.02	50.00	0.051	1.268	0.04
7	8:00	1.00	0.762	1.00	18.65	50.00	0.184	0.494	0.37
8	9:00		0.857						
9	10:05		0.960						
10	11:22	0.93	1.083	0.93	0.07	50.00	0.003	2.426	0.00
11	12:02		1.147						
12	12:37		1.202						

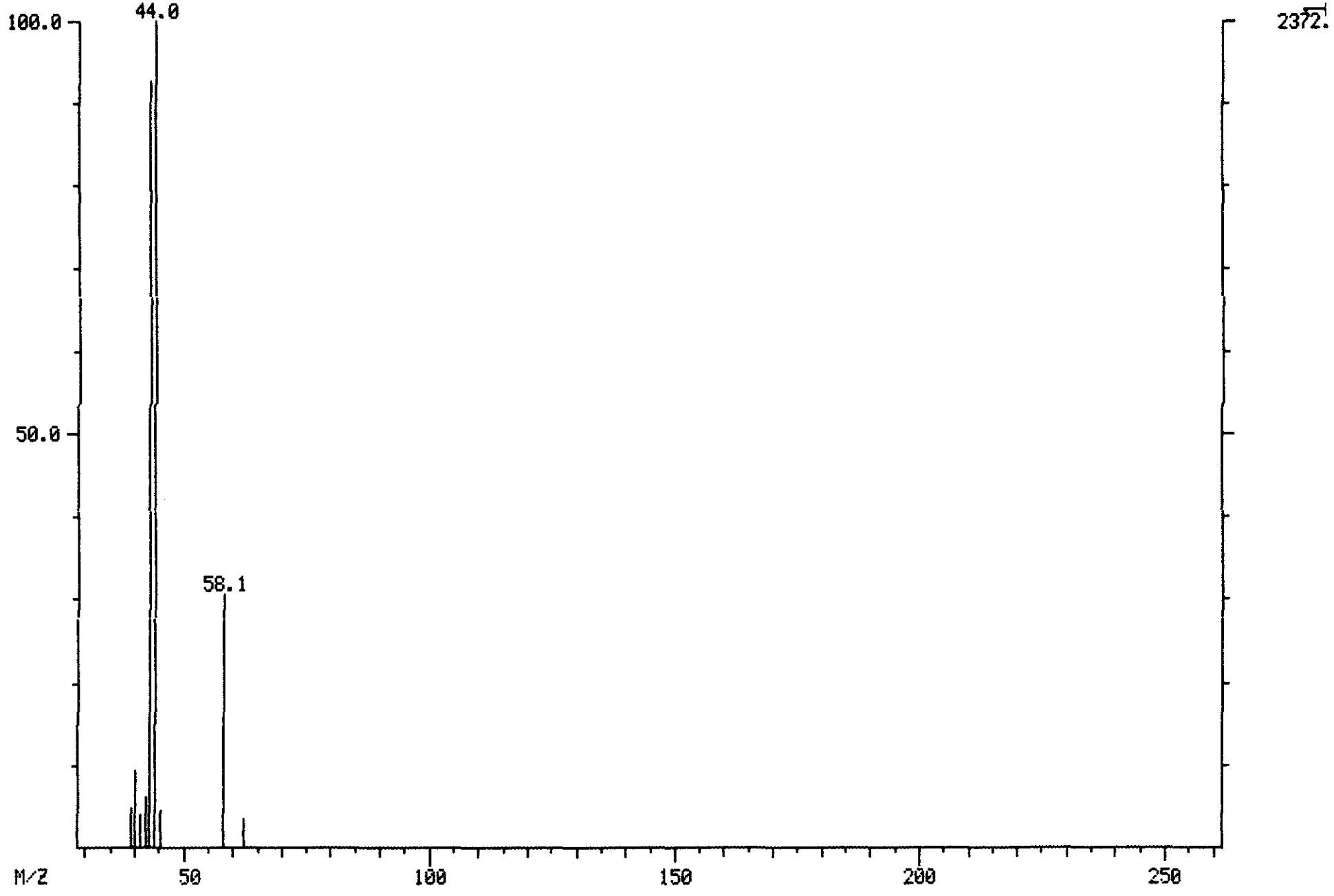
43414

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:20		1.270						
14	13:15	1.00	1.262	1.00	41.88	50.00	1.682	2.008	0.84
15	9:27		0.901						
16	20:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:15	1.00	1.262	1.00	4.59	50.00	0.018	0.197	0.09
18	15:07		0.730						
19	15:05		0.728						
20	15:30		0.748						
21	16:55		0.817						
22	17:07		0.827						
23	17:40		0.853						
24	18:12	1.00	0.879	1.00	1.89	50.00	0.034	0.901	0.04
25	18:17		0.883						
26	18:25		0.889						
27	18:22		0.887						
28	20:57		1.012						
29	14:42		0.710						
30	24:27	1.00	0.953	1.00	55.30	50.00	1.271	1.149	1.11
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30		0.838						
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37		0.959						
37	25:47		1.005						
38	27:57		1.089						
39	32:25		1.263						
40	33:47	0.95	1.317	0.96	1.94	50.00	0.017	0.438	0.04
41	32:42	0.99	1.274	0.99	1.68	50.00	0.017	0.505	0.03
42	30:45	0.99	1.198	0.99	46.81	50.00	0.705	0.753	0.94

MASS SPECTRUM
04/27/90 11:05:00 + 8:00
SAMPLE: CLP,VERSCOM,2536,B6,L,S,16430,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE

DATA: U3414 #192
CALI: U3414 #2

BASE M/Z: 44
RIC: 6080.



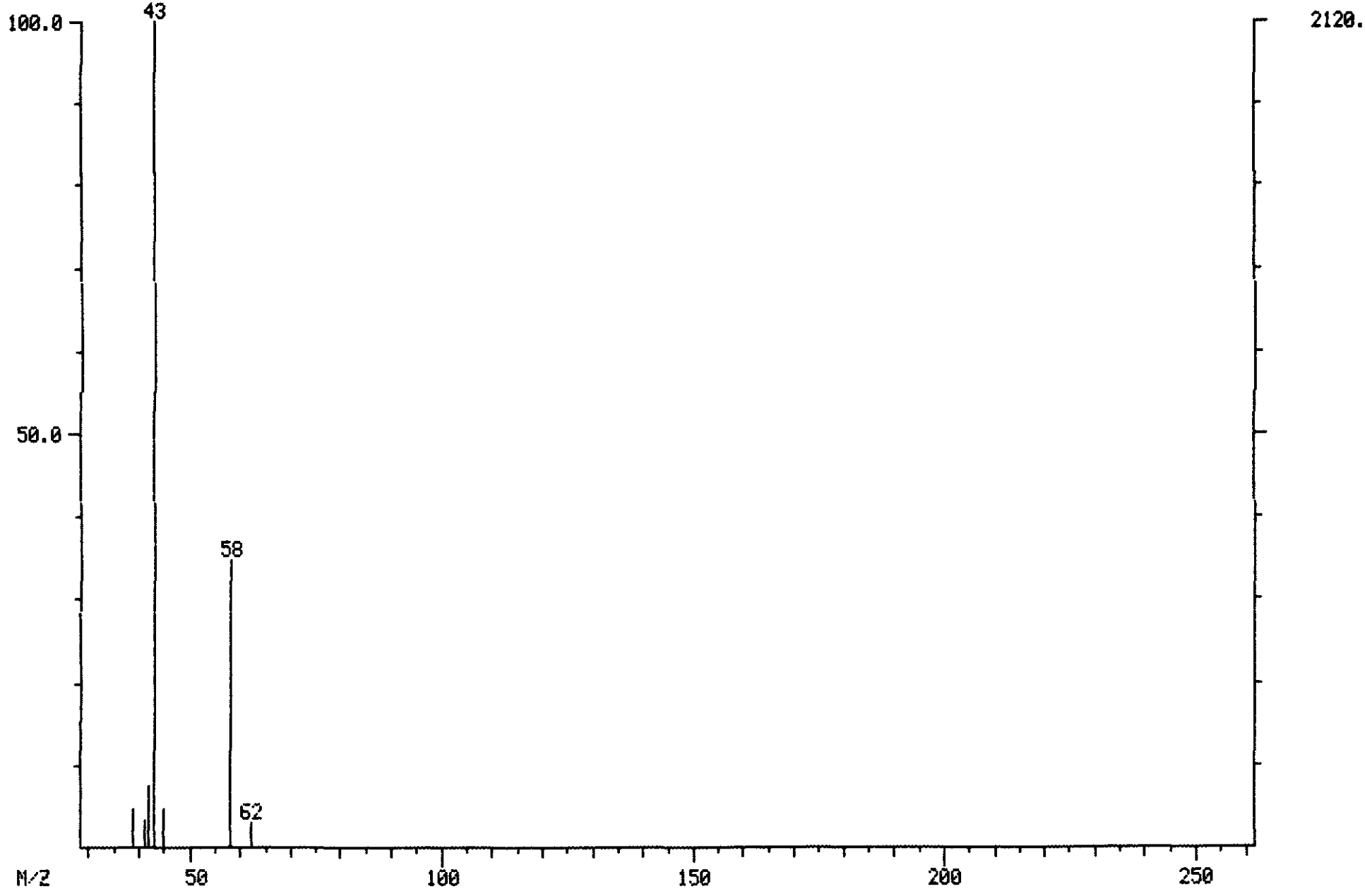
100064

MASS SPECTRUM
04/27/90 11:05:00 + 8:00
SAMPLE: CLP,VERSCOM,2536,B6,L,S,16430,V,,420.1.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE
ENHANCED (S 15B 2N 0T)

DATA: U3414 #192
CALI: U3414 #2

BASE M/Z: 43
RIC: 3352.

100065

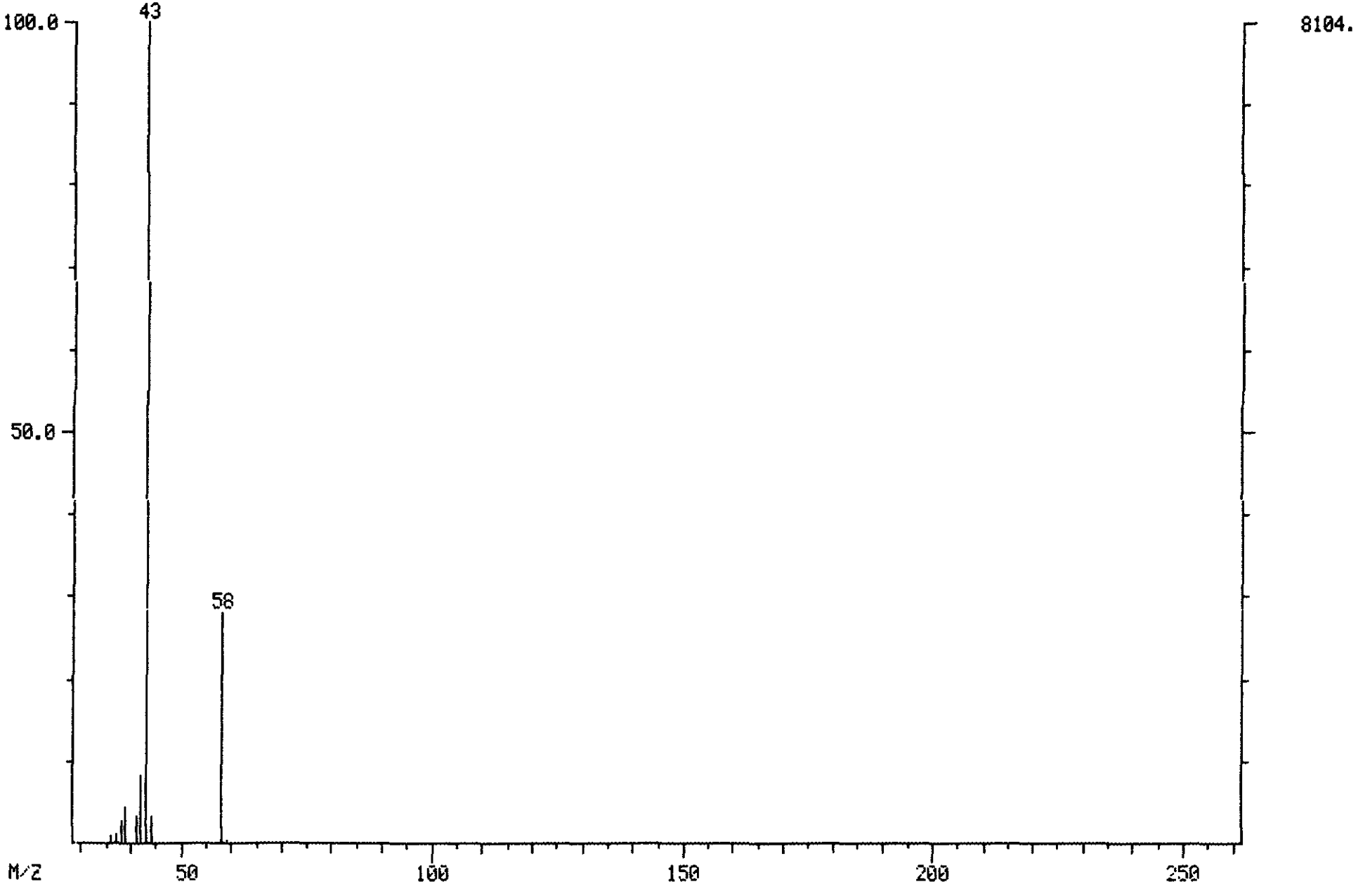


MASS SPECTRUM
04/27/90 8:21:00 + 8:00
SAMPLE: CLP,,,VSTD 50,L,S,22554,V,CC-050,,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
** NAME: C035 ACETONE
ENHANCED (S 15B 2N 0T)

DATA: U3411 #192
CALI: U3411 #2

BASE M/Z: 43
RIC: 12368.

100066



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

7

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16431

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3415

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 4 Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

7 ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16431

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3415

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 4 Date Analyzed: 04/27/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

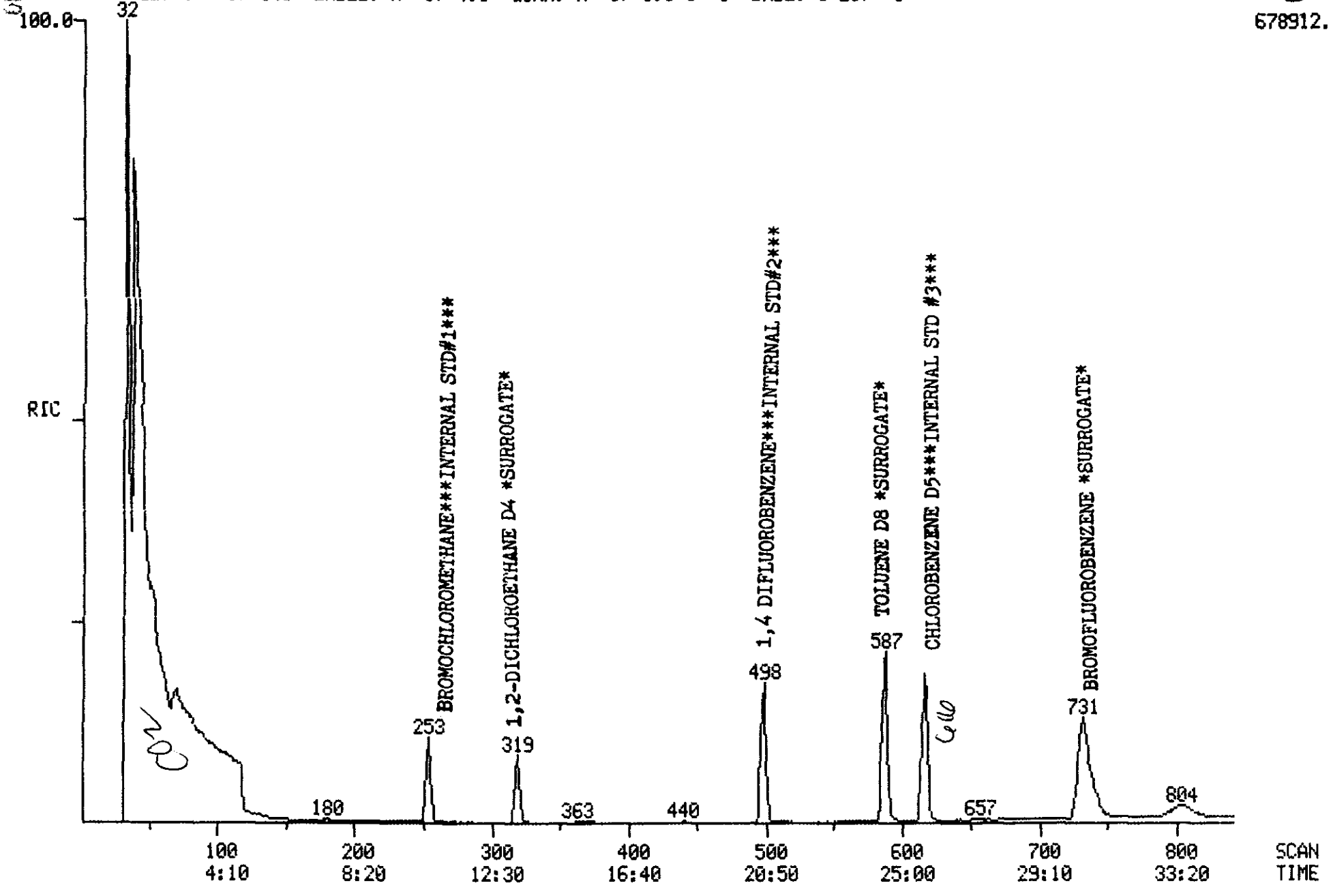
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC
04/27/90 11:47:00
DATA: U3415 #1
CALI: U3415 #2
SCANS 1 TO 840
SAMPLE: CLP,VERSCDM,2536,87,L,S,16431,V,,420.L.0,B2,5G/5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

ORIGINAL (Red)

00069

678912.



Quantitation Report File: U3415

ORIGINAL (Red)

Data: U3415.TI
04/27/90 11:47:00
Sample: CLP,VERSCDM,2536,B7,L,S,16431,V,,420.L.0,B2,5G/5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: 420.1.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT) 4.2 %
Resp. fac. from Library Entry

Int Std Compliant
Surrog. Compliant
M.A. Templeton
4/27/90

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

U3415

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
1	128	253	10:32	1	1.000	A BB	49516.	50.000 UG/L*	16.72	
2	NOT FOUND									
3	NOT FOUND									
4	NOT FOUND									
5	NOT FOUND									
6	84	179	7:27	1	0.708	A BB	2305.	~~1.835 UG/L~~	0.61	
7	43	193	8:02	1	0.763	A BB	480.	~~0.981 UG/L~~	0.33	
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	65	318	13:15	1	1.257	A BB	86229.	43.355 UG/L%	14.50	87%
15	NOT FOUND									
16	114	498	20:45	16	1.000	A BB	216099.	50.000 UG/L*	16.72	
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	98	587	24:27	31	0.953	A BB	231311.	55.328 UG/L%	18.50	111%
31	117	616	25:40	31	1.000	A BB	181858.	50.000 UG/L*	16.72	
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	92	591	24:37	31	0.959	A BB	545.	~~0.235 UG/L~~	0.08	
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	95	731	30:27	31	1.187	A BB	129587.	47.302 UG/L%	15.82	95%

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:30	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:10		0.206						
3	3:20		0.317						
4	4:12		0.401						
5	5:15		0.500						
6	7:25	1.01	0.706	1.00	1.83	50.00	0.047	1.268	0.04
7	8:00	1.01	0.762	1.00	0.98	50.00	0.010	0.494	0.02
8	9:00		0.857						
9	10:05		0.960						
10	11:22		1.083						
11	12:02		1.147						
12	12:37		1.202						

U3415 ORIGINAL (Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:20		1.270						
14	13:15	1.00	1.262	1.00	43.35	50.00	1.741	2.008	0.87
15	9:27		0.901						
16	20:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:15		1.262						
18	15:07		0.730						
19	15:05		0.728						
20	15:30		0.748						
21	16:55		0.817						
22	17:07		0.827						
23	17:40		0.853						
24	18:12		0.879						
25	18:17		0.883						
26	18:25		0.889						
27	18:22		0.887						
28	20:57		1.012						
29	14:42		0.710						
30	24:27	1.00	0.953	1.00	55.33	50.00	1.272	1.149	1.11
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30		0.838						
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	0.23	50.00	0.003	0.638	0.00
37	25:47		1.005						
38	27:57		1.089						
39	32:25		1.263						
40	33:47		1.317						
41	32:42		1.274						
42	30:45	0.99	1.198	0.99	47.30	50.00	0.713	0.753	0.95

Versar INC.

IV. STANDARDS DATA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: VERSAR INC. Contract: _____

La Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Instrument ID: U Calibration Date(s): 04/23/90 04/23/90

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = U3331 RRF50 = U3327
RRF100= U3330 RRF150= U3329 RRF200= U3328

COMPOUND		RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane	#	1.080	1.389	1.256	1.475	1.362	1.312	11.6#
Bromomethane		0.840	0.860	0.833	0.616	0.502	0.730	22.2
Vinyl chloride	*	1.027	1.115	1.140	1.009	0.973	1.053	6.8*
Chloroethane		0.549	0.601	0.608	0.577	0.606	0.588	4.3
Methylene chloride		1.147	1.277	1.250	1.317	1.299	1.258	5.3
Acetone		0.271	0.442	0.287	0.340	0.352	0.338	19.9
Carbon disulfide		0.937	1.267	1.120	1.240	1.304	1.174	12.7
1,1-Dichloroethene	*	0.977	1.052	1.160	1.222	1.212	1.125	9.5*
1,1-Dichloroethane	#	1.928	2.229	2.253	2.414	2.444	2.254	9.1#
1,2-Dichloroethene (total)		1.090	1.130	1.357	1.343	1.327	1.249	10.3
Chloroform	*	2.261	2.495	2.506	2.605	2.581	2.490	5.5*
1,2-Dichloroethane		1.402	1.784	1.766	1.851	1.898	1.740	11.3
2-Butanone		0.172	0.217	0.190	0.216	0.219	0.203	10.3
1,1,1-Trichloroethane		0.419	0.404	0.499	0.483	0.480	0.457	9.3
Carbon tetrachloride		0.399	0.378	0.448	0.441	0.430	0.419	7.1
Vinyl acetate		0.389	0.558	0.544	0.614	0.686	0.558	19.7
Bromodichloromethane		0.467	0.511	0.568	0.550	0.550	0.529	7.7
1,2-Dichloropropane	*	0.302	0.333	0.345	0.367	0.367	0.343	7.9*
Trans-1,3-Dichloropropene		0.556	0.600	0.680	0.658	0.653	0.629	8.0
Trichloroethene		0.427	0.412	0.447	0.450	0.430	0.433	3.6
Dibromochloromethane		0.473	0.464	0.481	0.455	0.424	0.459	4.8
1,1,2-Trichloroethane		0.309	0.315	0.319	0.322	0.314	0.316	1.6
Benzene		0.815	0.827	0.936	0.903	0.886	0.873	5.9
Trans-1,3-dichloropropene		0.294	0.320	0.362	0.346	0.346	0.334	8.0
Bromoform	#	0.427	0.433	0.508	0.476	0.454	0.460	7.2#
4-Methyl-2-pentanone		0.452	0.652	0.550	0.665	0.723	0.608	17.7
2-Hexanone		0.399	0.540	0.465	0.565	0.567	0.507	14.4
Tetrachloroethene		0.446	0.399	0.431	0.417	0.386	0.416	5.8
1,1,2,2-Tetrachloroethane	#	0.645	0.683	0.704	0.699	0.675	0.681	3.4#
Toluene	*	0.620	0.621	0.709	0.703	0.677	0.666	6.5*
Chlorobenzene	#	0.870	0.876	0.901	0.922	0.892	0.892	2.3#
Ethylbenzene	*	0.406	0.396	0.474	0.470	0.452	0.440	8.3*
Styrene		0.776	0.801	0.796	0.863	0.903	0.828	6.4
Total xylenes		0.438	0.448	0.452	0.497	0.524	0.472	7.8
m-Xylene		0.501	0.519	0.523	0.566	0.599	0.542	7.4
Toluene-d8		0.960	1.213	1.076	1.082	1.019	1.070	8.8
Bromofluorobenzene		0.694	0.832	0.755	0.767	0.731	0.756	6.7
1,2-Dichloroethane-d4		1.279	1.790	1.546	1.632	1.648	1.579	12.0

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: VERSAR INC. Contract: _____

La Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Instrument ID: U Calibration date: 04/26/90 Time: 830

Lab File ID: U3386 Init. Calib. Date(s): 04/23/90 04/23/90

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND		$\overline{RRF}$	RRF50	%D	
Chloromethane	#	1.312	1.348	-2.7	#
Bromomethane		0.730	0.855	-17.1	
Vinyl chloride	*	1.053	1.019	3.2	*
Chloroethane		0.588	0.682	-16.0	
Methylene chloride		1.258	1.372	-9.1	
Acetone		0.338	0.727	-99.9	
Carbon disulfide		1.174	1.045	11.0	
1,1-Dichloroethene	*	1.125	1.152	-2.4	*
1,1-Dichloroethane	#	2.254	2.837	-25.9	#
1,2-Dichloroethene (total)		1.249	1.354	-8.4	
Chloroform	*	2.490	2.959	-18.8	*
1,2-Dichloroethane		1.740	2.513	-44.4	
2-Butanone		0.203	0.236	-16.3	
1,1,1-Trichloroethane		0.457	0.493	-7.9	
Carbon tetrachloride		0.419	0.428	-2.1	
Vinyl acetate		0.558	0.791	-41.8	
Bromodichloromethane		0.529	0.580	-9.6	
1,2-Dichloropropane	*	0.343	0.392	-14.3	*
cis-1,3-Dichloropropene		0.629	0.679	-7.9	
Trichloroethene		0.433	0.433	0.0	
Dibromochloromethane		0.459	0.486	-5.9	
1,1,2-Trichloroethane		0.316	0.352	-11.4	
Benzene		0.873	0.889	-1.8	
Trans-1,3-dichloropropene		0.334	0.366	-9.6	
Bromoform	#	0.460	0.446	3.0	#
4-Methyl-2-pentanone		0.608	0.922	-51.6	
2-Hexanone		0.507	0.759	-49.7	
Tetrachloroethene		0.416	0.417	-0.2	
1,1,2,2-Tetrachloroethane	#	0.681	0.713	-4.7	#
Toluene	*	0.666	0.686	-3.0	*
Chlorobenzene	#	0.892	0.915	-2.6	#
Ethylbenzene	*	0.440	0.439	0.2	*
Styrene		0.828	0.862	-4.1	
Total xylenes		0.472	0.477	-1.1	
m-Xylene		0.542	0.559	-3.1	
Toluene-d8		1.070	1.202	-12.3	
Bromofluorobenzene		0.756	0.869	-15.0	
1,2-Dichloroethane-d4		1.579	2.288	-44.9	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: VERSAR INC. Contract: _____

La Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Instrument ID: U Calibration date: 04/27/90 Time: 821

Lab File ID: U3411 Init. Calib. Date(s): 04/23/90 04/23/90

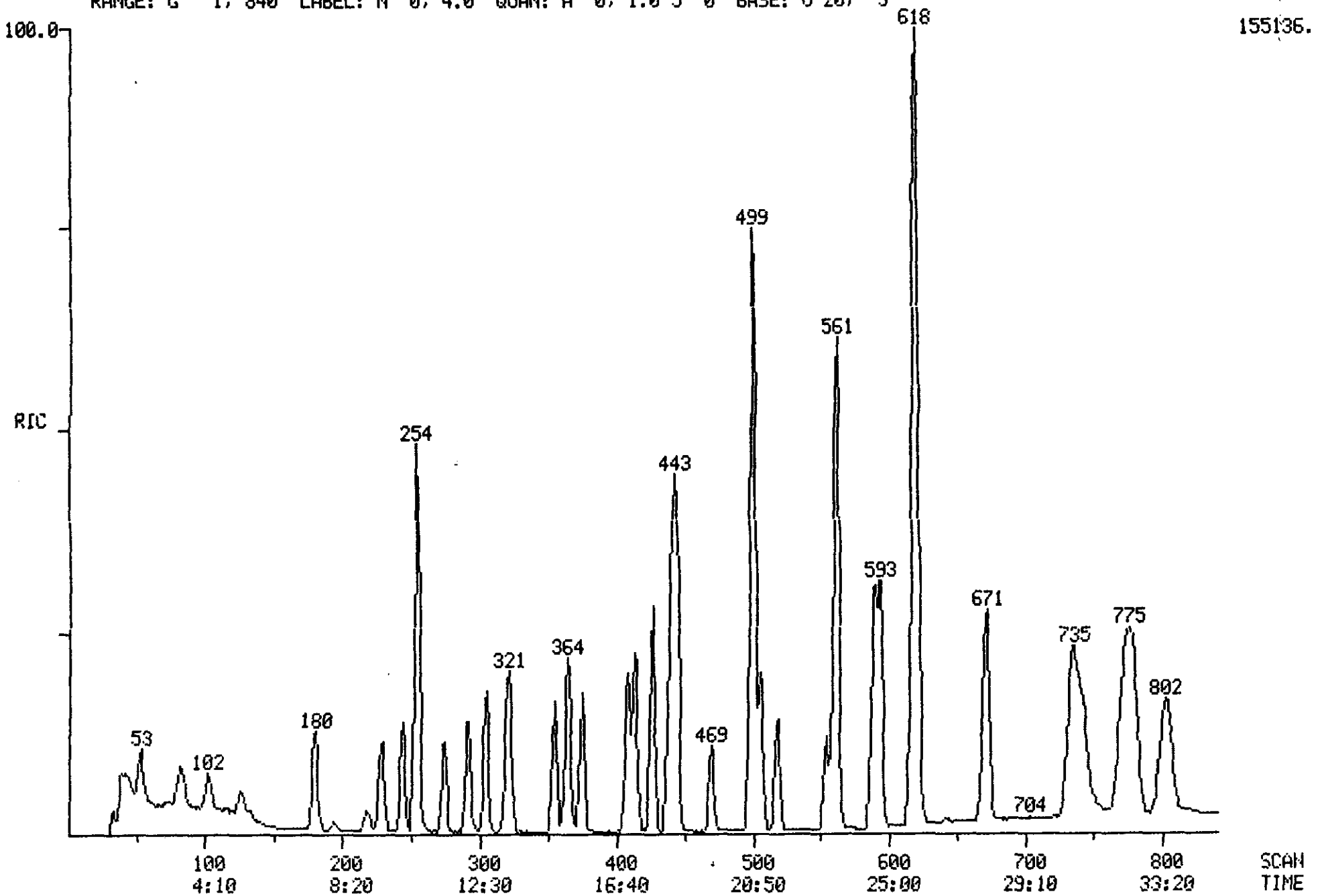
Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND		$\overline{RRF}$	RRF50	%D	
Chloromethane	#	1.312	1.321	-0.7	#
Bromomethane		0.730	1.030	-41.1	
Vinyl chloride	*	1.053	1.057	-0.4	*
Chloroethane		0.588	0.776	-32.0	
Methylene chloride		1.258	1.268	-0.8	
Acetone		0.338	0.494	-46.2	
Carbon disulfide		1.174	0.784	33.2	
1,1-Dichloroethene	*	1.125	0.992	11.8	*
1,1-Dichloroethane	#	2.254	2.426	-7.6	#
1,2-Dichloroethene (total)		1.249	1.193	4.5	
Chloroform	*	2.490	2.598	-4.3	*
1,2-Dichloroethane		1.740	2.119	-21.8	
2-Butanone		0.203	0.197	3.0	
1,1,1-Trichloroethane		0.457	0.496	-8.5	
Carbon tetrachloride		0.419	0.436	-4.1	
Vinyl acetate		0.558	0.619	-10.9	
Bromodichloromethane		0.529	0.585	-10.6	
1,2-Dichloropropane	*	0.343	0.382	-11.4	*
cis-1,3-Dichloropropene		0.629	0.675	-7.3	
Trichloroethene		0.433	0.466	-7.6	
Dibromochloromethane		0.459	0.527	-14.8	
1,1,2-Trichloroethane		0.316	0.342	-8.2	
Benzene		0.873	0.901	-3.2	
Trans-1,3-dichloropropene		0.334	0.361	-8.1	
Bromoform	#	0.460	0.493	-7.2	#
4-Methyl-2-pentanone		0.608	0.725	-19.2	
2-Hexanone		0.507	0.579	-14.2	
Tetrachloroethene		0.416	0.481	-15.6	
1,1,2,2-Tetrachloroethane	#	0.681	0.703	-3.2	#
Toluene	*	0.666	0.638	4.2	*
Chlorobenzene	#	0.892	0.892	0.0	#
Ethylbenzene	*	0.440	0.411	6.6	*
Styrene		0.828	0.770	7.0	
Total xylenes		0.472	0.438	7.2	
m-Xylene		0.542	0.505	6.8	
Toluene-d8		1.070	1.149	-7.4	
Bromofluorobenzene		0.756	0.753	0.4	
1,2-Dichloroethane-d4		1.579	2.008	-27.2	

RIC DATA: U3331 #1 SCANS 1 TO 840
04/23/90 19:35:00 CALI: U3331 #2
SAMPLE: CLP,,,VSTD20,L,S,22526,V,IC-020,,,5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

155136.



Quantitation Report File: U3331

ORIGINAL (Red)

Data: U3331.TI
04/23/90 19:35:00
Sample: CLP,,,VSTD20,L,S,22526,V,IC-020,,,5ML,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.012
Submitted by: VERSAR Analyst: DD Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

U 330 ORIGINAL (Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	254	10:35	1	1.000	A BB	50907.	50.000 UG/L*	5.38
2	50	53	2:12	1	0.209	A BB	22001.	20.000 UG/L	2.15
3	94	82	3:25	1	0.323	A BB	17104.	20.000 UG/L	2.15
4	62	102	4:15	1	0.402	A BB	20913.	20.000 UG/L	2.15
5	64	126	5:15	1	0.496	A BB	11174.	20.000 UG/L	2.15
6	84	179	7:27	1	0.705	A BB	23355.	20.000 UG/L	2.15
7	43	194	8:05	1	0.764	A BB	5517.	20.000 UG/L	2.15
8	76	218	9:05	1	0.858	A BB	19071.	20.000 UG/L	2.15
9	96	244	10:10	1	0.961	A BB	19888.	20.000 UG/L	2.15
10	63	275	11:27	1	1.083	A BB	39265.	20.000 UG/L	2.15
11	96	291	12:07	1	1.146	A BB	22195.	20.000 UG/L	2.15
12	83	305	12:42	1	1.201	A BB	46049.	20.000 UG/L	2.15
13	62	322	13:25	1	1.268	A BB	28541.	20.000 UG/L	2.15
14	65	320	13:20	1	1.260	A BB	26036.	20.000 UG/L%	2.15
15	101	228	9:30	1	0.898	A BB	38813.	20.000 UG/L	2.15
16	114	499	20:47	16	1.000	A BB	225674.	50.000 UG/L*	5.38
17	72	320	13:20	1	1.260	A BB	3498.	20.000 UG/L	2.15
18	43	366	15:15	16	0.733	A BB	35087.	20.000 UG/L	2.15
19	117	364	15:10	16	0.729	A VB	36013.	20.000 UG/L	2.15
20	83	375	15:37	16	0.752	A BB	42132.	20.000 UG/L	2.15
21	63	408	17:00	16	0.818	A BB	27305.	20.000 UG/L	2.15
22	75	413	17:12	16	0.828	A BB	50165.	20.000 UG/L	2.15
23	130	426	17:45	16	0.854	A BB	38565.	20.000 UG/L	2.15
24	78	439	18:17	16	0.880	A BB	73586.	20.000 UG/L	2.15
25	129	441	18:22	16	0.884	A BB	42725.	20.000 UG/L	2.15
26	97	444	18:30	16	0.890	A BB	27937.	20.000 UG/L	2.15
27	75	444	18:30	16	0.890	A BB	26535.	20.000 UG/L	2.15
28	173	505	21:02	16	1.012	A BB	38545.	20.000 UG/L	2.15
29	97	355	14:47	16	0.711	A BB	37856.	20.000 UG/L	2.15
30	98	588	24:30	31	0.953	A BB	80925.	20.000 UG/L%	2.15
31	117	617	25:42	31	1.000	A BB	210646.	50.000 UG/L*	5.38
32	43	518	21:35	31	0.840	A BB	38088.	20.000 UG/L	2.15
33	43	554	23:05	31	0.898	A BB	33600.	20.000 UG/L	2.15
34	164	561	23:22	31	0.909	A BB	37555.	20.000 UG/L	2.15
35	83	561	23:22	31	0.909	A BB	54357.	20.000 UG/L	2.15
36	92	593	24:42	31	0.961	A BB	52259.	20.000 UG/L	2.15
37	112	620	25:50	31	1.005	A BB	73346.	20.000 UG/L	2.15
38	106	670	27:55	31	1.086	A BB	34177.	20.000 UG/L	2.15
39	104	772	32:10	31	1.251	A BB	65388.	20.000 UG/L	2.15
40	106	802	33:25	31	1.300	A BB	36925.	20.000 UG/L	2.15
41	106	777	32:22	31	1.259	A BB	42193.	20.000 UG/L	2.15
42	95	734	30:35	31	1.190	A BB	58456.	20.000 UG/L%	2.15

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12	1.00	0.209	1.00	20.00	20.00	1.080	1.080	1.00
3	3:25	1.00	0.323	1.00	20.00	20.00	0.840	0.840	1.00
4	4:15	1.00	0.402	1.00	20.00	20.00	1.027	1.027	1.00
5	5:15	1.00	0.496	1.00	20.00	20.00	0.549	0.549	1.00
6	7:27	1.00	0.705	1.00	20.00	20.00	1.147	1.147	1.00
7	8:05	1.00	0.764	1.00	20.00	20.00	0.271	0.271	1.00
8	9:05	1.00	0.858	1.00	20.00	20.00	0.937	0.937	1.00
9	10:10	1.00	0.961	1.00	20.00	20.00	0.977	0.977	1.00
10	11:27	1.00	1.083	1.00	20.00	20.00	1.928	1.928	1.00
11	12:07	1.00	1.146	1.00	20.00	20.00	1.090	1.090	1.00
12	12:42	1.00	1.201	1.00	20.00	20.00	2.261	2.261	1.00

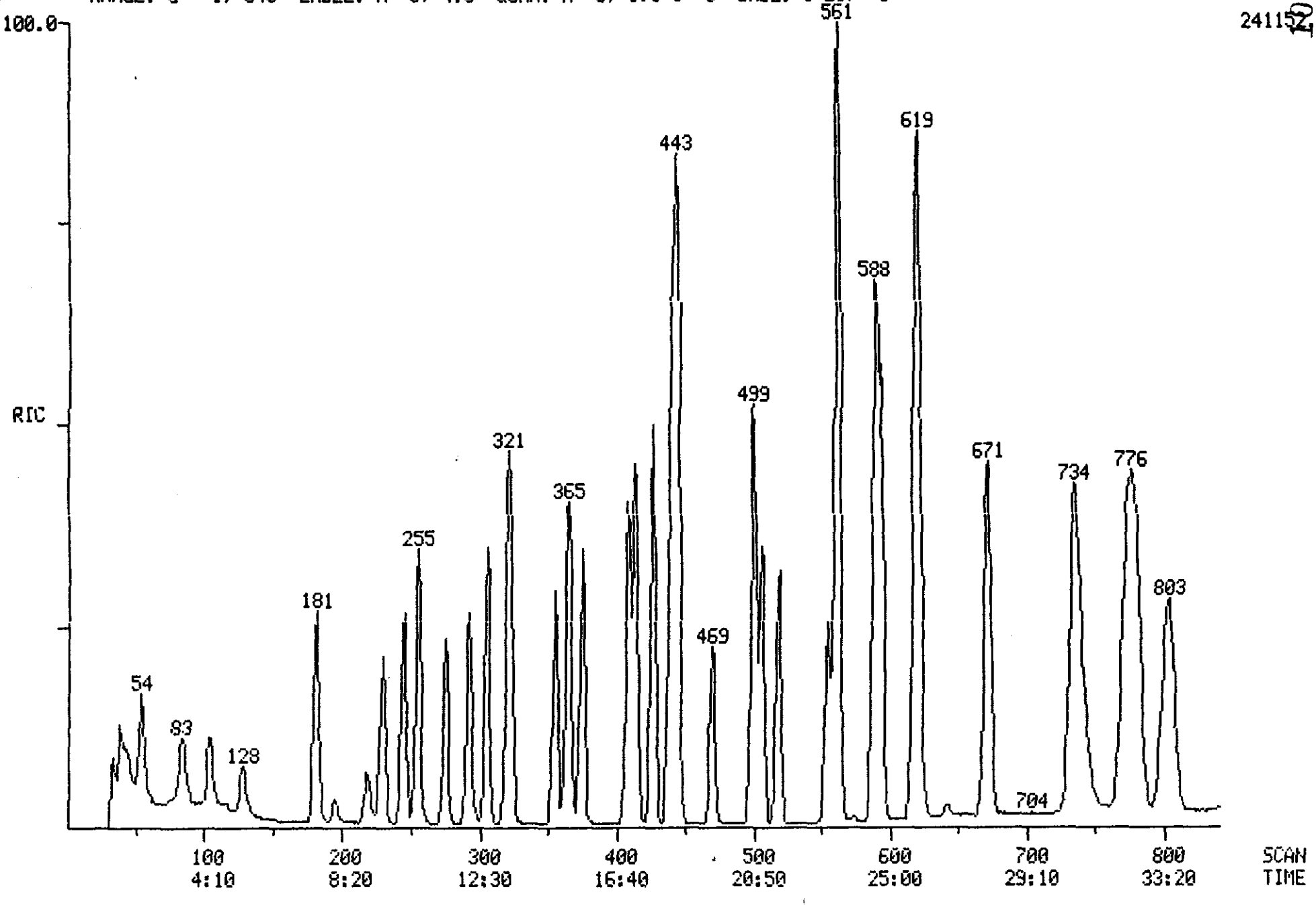
ORIGINAL (Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:25	1.00	1.268	1.00	20.00	20.00	1.402	1.402	1.00
14	13:20	1.00	1.260	1.00	20.00	20.00	1.279	1.279	1.00
15	9:30	1.00	0.898	1.00	20.00	20.00	1.906	1.906	1.00
16	20:47	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:20	1.00	1.260	1.00	20.00	20.00	0.172	0.172	1.00
18	15:15	1.00	0.733	1.00	20.00	20.00	0.389	0.389	1.00
19	15:10	1.00	0.729	1.00	20.00	20.00	0.399	0.399	1.00
20	15:37	1.00	0.752	1.00	20.00	20.00	0.467	0.467	1.00
21	17:00	1.00	0.818	1.00	20.00	20.00	0.302	0.302	1.00
22	17:12	1.00	0.828	1.00	20.00	20.00	0.556	0.556	1.00
23	17:45	1.00	0.854	1.00	20.00	20.00	0.427	0.427	1.00
24	18:17	1.00	0.880	1.00	20.00	20.00	0.815	0.815	1.00
25	18:22	1.00	0.884	1.00	20.00	20.00	0.473	0.473	1.00
26	18:30	1.00	0.890	1.00	20.00	20.00	0.309	0.309	1.00
27	18:30	1.00	0.890	1.00	20.00	20.00	0.294	0.294	1.00
28	21:02	1.00	1.012	1.00	20.00	20.00	0.427	0.427	1.00
29	14:47	1.00	0.711	1.00	20.00	20.00	0.419	0.419	1.00
30	24:30	1.00	0.953	1.00	20.00	20.00	0.960	0.960	1.00
31	25:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:35	1.00	0.840	1.00	20.00	20.00	0.452	0.452	1.00
33	23:05	1.00	0.898	1.00	20.00	20.00	0.399	0.399	1.00
34	23:22	1.00	0.909	1.00	20.00	20.00	0.446	0.446	1.00
35	23:22	1.00	0.909	1.00	20.00	20.00	0.645	0.645	1.00
36	24:42	1.00	0.961	1.00	20.00	20.00	0.620	0.620	1.00
37	25:50	1.00	1.005	1.00	20.00	20.00	0.870	0.870	1.00
38	27:55	1.00	1.086	1.00	20.00	20.00	0.406	0.406	1.00
39	32:10	1.00	1.251	1.00	20.00	20.00	0.776	0.776	1.00
40	33:25	1.00	1.300	1.00	20.00	20.00	0.438	0.438	1.00
41	32:22	1.00	1.259	1.00	20.00	20.00	0.501	0.501	1.00
42	30:35	1.00	1.190	1.00	20.00	20.00	0.694	0.694	1.00

RIC DATA: U3327 #1 SCANS 1 TO 840
04/23/90 16:23:00 CALI: U3327 #2
SAMPLE: CLP,,,VSTD50,L,S,22522,V,IC-050,,,5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

ORIGINAL (Red)

24115



100081

Quantitation Report File: U3327

ORIGINAL (Red)

Data: U3327.TI
04/23/90 16:23:00
Sample: CLP,,,VSTD50,L,S,22522,V,IC-050,,,5ML,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.012
Submitted by: VERSAR Analyst: DD Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

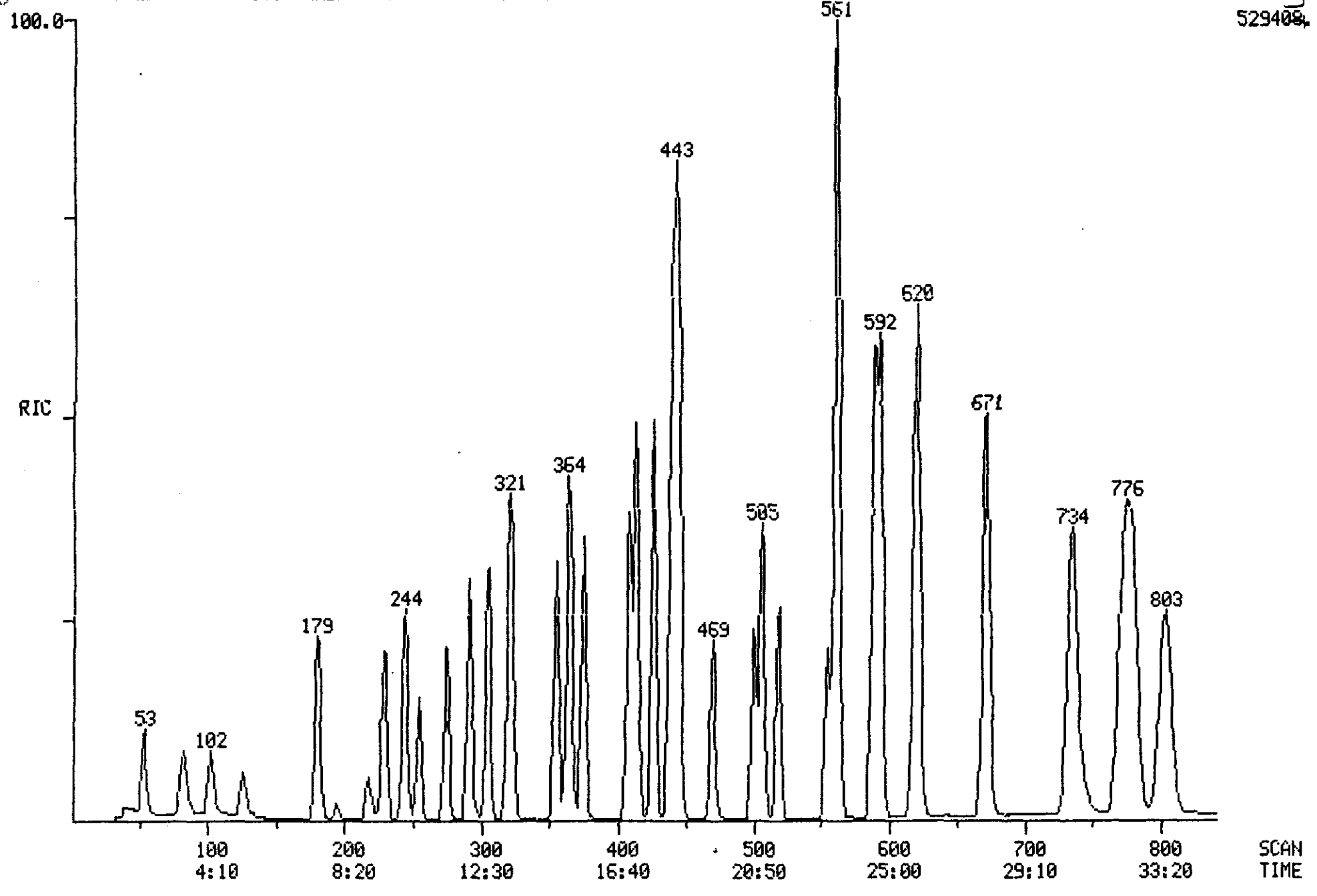
No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	255	10:37	1	1.000	A BB	52222.	50.000 UG/L*	2.38
2	50	54	2:15	1	0.212	A BB	72540.	50.000 UG/L	2.38
3	94	83	3:27	1	0.325	A BB	44892.	50.000 UG/L	2.38
4	62	104	4:20	1	0.408	A BB	58220.	50.000 UG/L	2.38
5	64	128	5:20	1	0.502	A BB	31368.	50.000 UG/L	2.38
6	84	181	7:32	1	0.710	A BB	66686.	50.000 UG/L	2.38
7	43	195	8:07	1	0.765	A BB	23081.	50.000 UG/L	2.38
8	76	218	9:05	1	0.855	A BB	66183.	50.000 UG/L	2.38
9	96	245	10:12	1	0.961	A BB	54961.	50.000 UG/L	2.38
10	63	275	11:27	1	1.078	A BB	116419.	50.000 UG/L	2.38
11	96	292	12:10	1	1.145	A BB	59012.	50.000 UG/L	2.38
12	83	305	12:42	1	1.196	A BB	130308.	50.000 UG/L	2.38
13	62	322	13:25	1	1.263	A BB	93181.	50.000 UG/L	2.38
14	65	320	13:20	1	1.255	A BB	93473.	50.000 UG/L%	2.38
15	101	230	9:35	1	0.902	A BB	103525.	50.000 UG/L	2.38
16	114	499	20:47	16	1.000	A BB	236574.	50.000 UG/L*	2.38
17	72	321	13:22	1	1.259	A BB	11317.	50.000 UG/L	2.38
18	43	366	15:15	16	0.733	A BB	131925.	50.000 UG/L	2.38
19	117	364	15:10	16	0.729	A VB	89337.	50.000 UG/L	2.38
20	83	375	15:37	16	0.752	A BB	120808.	50.000 UG/L	2.38
21	63	408	17:00	16	0.818	A BB	78730.	50.000 UG/L	2.38
22	75	413	17:12	16	0.828	A BB	142018.	50.000 UG/L	2.38
23	130	426	17:45	16	0.854	A BB	97488.	50.000 UG/L	2.38
24	78	439	18:17	16	0.880	A BB	195594.	50.000 UG/L	2.38
25	129	441	18:22	16	0.884	A BB	109733.	50.000 UG/L	2.38
26	97	444	18:30	16	0.890	A BB	74531.	50.000 UG/L	2.38
27	75	444	18:30	16	0.890	A BB	75643.	50.000 UG/L	2.38
28	173	505	21:02	16	1.012	A BB	102512.	50.000 UG/L	2.38
29	97	355	14:47	16	0.711	A BB	95527.	50.000 UG/L	2.38
30	98	588	24:30	31	0.953	A BB	262709.	50.000 UG/L%	2.38
31	117	617	25:42	31	1.000	A BB	216519.	50.000 UG/L*	2.38
32	43	518	21:35	31	0.840	A BB	141121.	50.000 UG/L	2.38
33	43	554	23:05	31	0.898	A BB	116928.	50.000 UG/L	2.38
34	164	561	23:22	31	0.909	A BB	86319.	50.000 UG/L	2.38
35	83	561	23:22	31	0.909	A BB	147916.	50.000 UG/L	2.38
36	92	593	24:42	31	0.961	A BB	134473.	50.000 UG/L	2.38
37	112	620	25:50	31	1.005	A BB	189769.	50.000 UG/L	2.38
38	106	670	27:55	31	1.086	A BB	85664.	50.000 UG/L	2.38
39	104	771	32:07	31	1.250	A BB	173441.	50.000 UG/L	2.38
40	106	803	33:27	31	1.301	A BB	97014.	50.000 UG/L	2.38
41	106	778	32:25	31	1.261	A BB	112396.	50.000 UG/L	2.38
42	95	734	30:35	31	1.190	A BB	180092.	50.000 UG/L%	2.38

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:37	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:15	1.00	0.212	1.00	50.00	50.00	1.389	1.389	1.00
3	3:27	1.00	0.325	1.00	50.00	50.00	0.860	0.860	1.00
4	4:20	1.00	0.408	1.00	50.00	50.00	1.115	1.115	1.00
5	5:20	1.00	0.502	1.00	50.00	50.00	0.601	0.601	1.00
6	7:32	1.00	0.710	1.00	50.00	50.00	1.277	1.277	1.00
7	8:07	1.00	0.765	1.00	50.00	50.00	0.442	0.442	1.00
8	9:05	1.00	0.855	1.00	50.00	50.00	1.267	1.267	1.00
9	10:12	1.00	0.961	1.00	50.00	50.00	1.052	1.052	1.00
10	11:27	1.00	1.078	1.00	50.00	50.00	2.229	2.229	1.00
11	12:10	1.00	1.145	1.00	50.00	50.00	1.130	1.130	1.00
12	12:42	1.00	1.196	1.00	50.00	50.00	2.495	2.495	1.00

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:25	1.00	1.263	1.00	50.00	50.00	1.784	1.784	1.00
14	13:20	1.00	1.255	1.00	50.00	50.00	1.790	1.790	1.00
15	9:35	1.00	0.902	1.00	50.00	50.00	1.982	1.982	1.00
16	20:47	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:22	1.00	1.259	1.00	50.00	50.00	0.217	0.217	1.00
18	15:15	1.00	0.733	1.00	50.00	50.00	0.558	0.558	1.00
19	15:10	1.00	0.729	1.00	50.00	50.00	0.378	0.378	1.00
20	15:37	1.00	0.752	1.00	50.00	50.00	0.511	0.511	1.00
21	17:00	1.00	0.818	1.00	50.00	50.00	0.333	0.333	1.00
22	17:12	1.00	0.828	1.00	50.00	50.00	0.600	0.600	1.00
23	17:45	1.00	0.854	1.00	50.00	50.00	0.412	0.412	1.00
24	18:17	1.00	0.880	1.00	50.00	50.00	0.827	0.827	1.00
25	18:22	1.00	0.884	1.00	50.00	50.00	0.464	0.464	1.00
26	18:30	1.00	0.890	1.00	50.00	50.00	0.315	0.315	1.00
27	18:30	1.00	0.890	1.00	50.00	50.00	0.320	0.320	1.00
28	21:02	1.00	1.012	1.00	50.00	50.00	0.433	0.433	1.00
29	14:47	1.00	0.711	1.00	50.00	50.00	0.404	0.404	1.00
30	24:30	1.00	0.953	1.00	50.00	50.00	1.213	1.213	1.00
31	25:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:35	1.00	0.840	1.00	50.00	50.00	0.652	0.652	1.00
33	23:05	1.00	0.898	1.00	50.00	50.00	0.540	0.540	1.00
34	23:22	1.00	0.909	1.00	50.00	50.00	0.399	0.399	1.00
35	23:22	1.00	0.909	1.00	50.00	50.00	0.683	0.683	1.00
36	24:42	1.00	0.961	1.00	50.00	50.00	0.621	0.621	1.00
37	25:50	1.00	1.005	1.00	50.00	50.00	0.876	0.876	1.00
38	27:55	1.00	1.086	1.00	50.00	50.00	0.396	0.396	1.00
39	32:07	1.00	1.250	1.00	50.00	50.00	0.801	0.801	1.00
40	33:27	1.00	1.301	1.00	50.00	50.00	0.448	0.448	1.00
41	32:25	1.00	1.261	1.00	50.00	50.00	0.519	0.519	1.00
42	30:35	1.00	1.190	1.00	50.00	50.00	0.832	0.832	1.00

RIC DATA: U3330 #1 SCANS 1 TO 840
04/23/90 18:52:00 CALI: U3330 #2
SAMPLE: CLP,,,VSTD100,L,S,22525,V,IC-100,,,5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



000085

Quantitation Report File: U3330

Data: U3330.TI
04/23/90 18:52:00
Sample: CLP,,,VSTD100,L,S,22525,V,IC-100,,,5ML,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.012
Submitted by: VERSAR Analyst: DD Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

U 3330

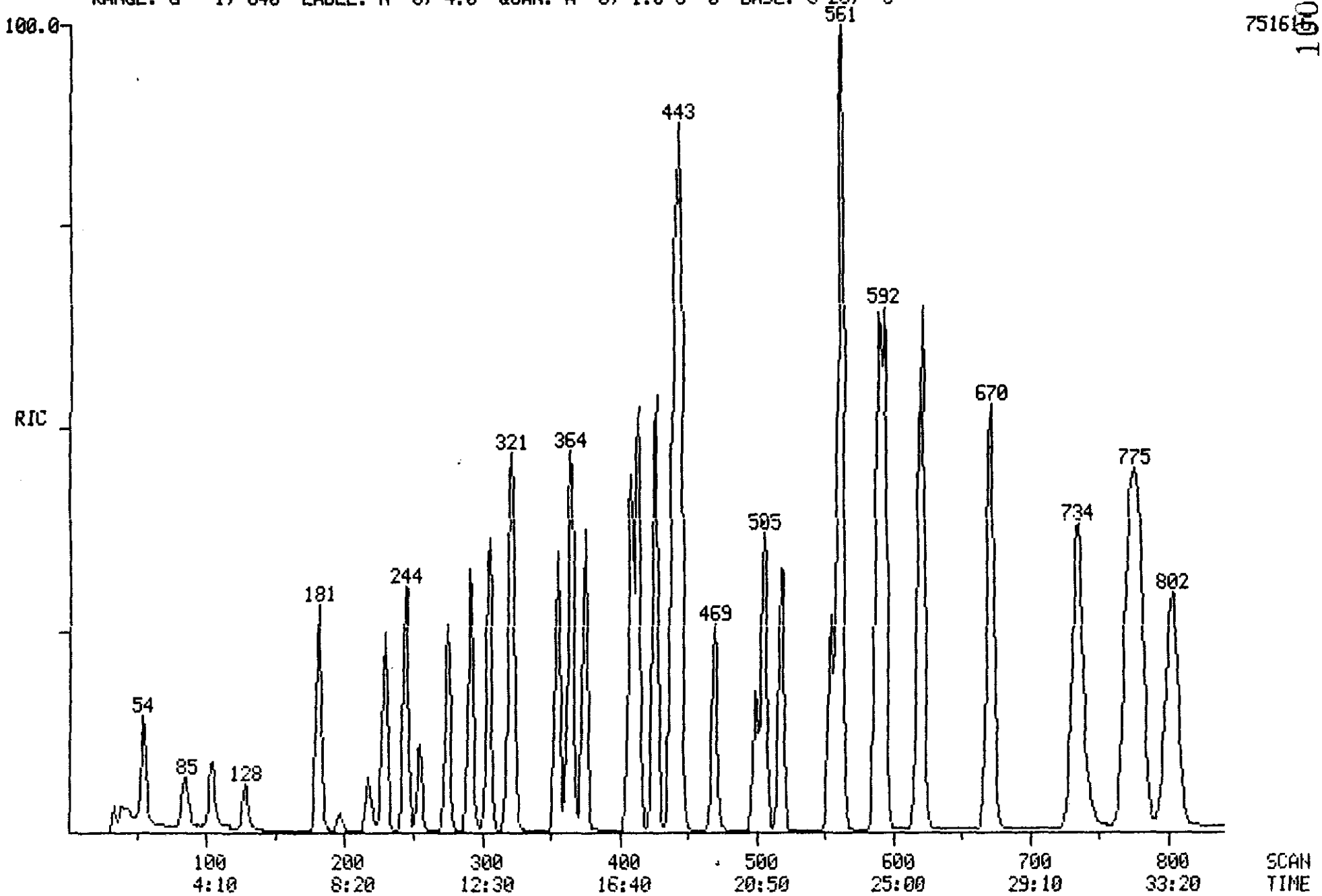
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	254	10:35	1	1.000	A BB	53689.	50.000 UG/L*	1.23
2	50	53	2:12	1	0.209	A BB	134860.	100.000 UG/L	2.47
3	94	82	3:25	1	0.323	A BB	89419.	100.000 UG/L	2.47
4	62	102	4:15	1	0.402	A BB	122456.	100.000 UG/L	2.47
5	64	126	5:15	1	0.496	A BB	65289.	100.000 UG/L	2.47
6	84	179	7:27	1	0.705	A BB	134225.	100.000 UG/L	2.47
7	43	194	8:05	1	0.764	A BB	30817.	100.000 UG/L	2.47
8	76	217	9:02	1	0.854	A BB	120245.	100.000 UG/L	2.47
9	96	244	10:10	1	0.961	A BB	124526.	100.000 UG/L	2.47
10	63	274	11:25	1	1.079	A BB	241903.	100.000 UG/L	2.47
11	96	291	12:07	1	1.146	A BB	145663.	100.000 UG/L	2.47
12	83	304	12:40	1	1.197	A BB	269138.	100.000 UG/L	2.47
13	62	322	13:25	1	1.268	A BB	189665.	100.000 UG/L	2.47
14	65	320	13:20	1	1.260	A BB	166045.	100.000 UG/L%	2.47
15	101	228	9:30	1	0.898	A BB	231085.	100.000 UG/L	2.47
16	114	499	20:47	16	1.000	A BB	242168.	50.000 UG/L*	1.23
17	72	320	13:20	1	1.260	A BB	20384.	100.000 UG/L	2.47
18	43	365	15:12	16	0.731	A BB	263466.	100.000 UG/L	2.47
19	117	363	15:07	16	0.727	A VB	217060.	100.000 UG/L	2.47
20	83	374	15:35	16	0.749	A BB	275016.	100.000 UG/L	2.47
21	63	408	17:00	16	0.818	A BB	167123.	100.000 UG/L	2.47
22	75	413	17:12	16	0.828	A BB	329532.	100.000 UG/L	2.47
23	130	426	17:45	16	0.854	A BB	216584.	100.000 UG/L	2.47
24	78	439	18:17	16	0.880	A BB	453441.	100.000 UG/L	2.47
25	129	441	18:22	16	0.884	A BB	232727.	100.000 UG/L	2.47
26	97	444	18:30	16	0.890	A BB	154332.	100.000 UG/L	2.47
27	75	443	18:27	16	0.888	A BB	175518.	100.000 UG/L	2.47
28	173	505	21:02	16	1.012	A BB	246098.	100.000 UG/L	2.47
29	97	354	14:45	16	0.709	A BB	241878.	100.000 UG/L	2.47
30	98	588	24:30	31	0.953	A BB	490301.	100.000 UG/L%	2.47
31	117	617	25:42	31	1.000	A BB	227837.	50.000 UG/L*	1.23
32	43	518	21:35	31	0.840	A BB	250526.	100.000 UG/L	2.47
33	43	554	23:05	31	0.898	A BV	211965.	100.000 UG/L	2.47
34	164	561	23:22	31	0.909	A BB	196273.	100.000 UG/L	2.47
35	83	561	23:22	31	0.909	A BB	320853.	100.000 UG/L	2.47
36	92	593	24:42	31	0.961	A BB	322912.	100.000 UG/L	2.47
37	112	620	25:50	31	1.005	A BB	410740.	100.000 UG/L	2.47
38	106	670	27:55	31	1.086	A BB	215985.	100.000 UG/L	2.47
39	104	772	32:10	31	1.251	A BB	362602.	100.000 UG/L	2.47
40	106	803	33:27	31	1.301	A BB	206056.	100.000 UG/L	2.47
41	106	778	32:25	31	1.261	A BB	238341.	100.000 UG/L	2.47
42	95	734	30:35	31	1.190	A BB	343986.	100.000 UG/L%	2.47

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12	1.00	0.209	1.00	100.00	100.00	1.256	1.256	1.00
3	3:25	1.00	0.323	1.00	100.00	100.00	0.833	0.833	1.00
4	4:15	1.00	0.402	1.00	100.00	100.00	1.140	1.140	1.00
5	5:15	1.00	0.496	1.00	100.00	100.00	0.608	0.608	1.00
6	7:27	1.00	0.705	1.00	100.00	100.00	1.250	1.250	1.00
7	8:05	1.00	0.764	1.00	100.00	100.00	0.287	0.287	1.00
8	9:02	1.00	0.854	1.00	100.00	100.00	1.120	1.120	1.00
9	10:10	1.00	0.961	1.00	100.00	100.00	1.160	1.160	1.00
10	11:25	1.00	1.079	1.00	100.00	100.00	2.253	2.253	1.00
11	12:07	1.00	1.146	1.00	100.00	100.00	1.357	1.357	1.00
12	12:40	1.00	1.197	1.00	100.00	100.00	2.506	2.506	1.00

U3336

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:25	1.00	1.268	1.00	100.00	100.00	1.766	1.766	1.00
14	13:20	1.00	1.260	1.00	100.00	100.00	1.546	1.546	1.00
15	9:30	1.00	0.898	1.00	100.00	100.00	2.152	2.152	1.00
16	20:47	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:20	1.00	1.260	1.00	100.00	100.00	0.190	0.190	1.00
18	15:12	1.00	0.731	1.00	100.00	100.00	0.544	0.544	1.00
19	15:07	1.00	0.727	1.00	100.00	100.00	0.448	0.448	1.00
20	15:35	1.00	0.749	1.00	100.00	100.00	0.568	0.568	1.00
21	17:00	1.00	0.818	1.00	100.00	100.00	0.345	0.345	1.00
22	17:12	1.00	0.828	1.00	100.00	100.00	0.680	0.680	1.00
23	17:45	1.00	0.854	1.00	100.00	100.00	0.447	0.447	1.00
24	18:17	1.00	0.880	1.00	100.00	100.00	0.936	0.936	1.00
25	18:22	1.00	0.884	1.00	100.00	100.00	0.481	0.481	1.00
26	18:30	1.00	0.890	1.00	100.00	100.00	0.319	0.319	1.00
27	18:27	1.00	0.888	1.00	100.00	100.00	0.362	0.362	1.00
28	21:02	1.00	1.012	1.00	100.00	100.00	0.508	0.508	1.00
29	14:45	1.00	0.709	1.00	100.00	100.00	0.499	0.499	1.00
30	24:30	1.00	0.953	1.00	100.00	100.00	1.076	1.076	1.00
31	25:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:35	1.00	0.840	1.00	100.00	100.00	0.550	0.550	1.00
33	23:05	1.00	0.898	1.00	100.00	100.00	0.465	0.465	1.00
34	23:22	1.00	0.909	1.00	100.00	100.00	0.431	0.431	1.00
35	23:22	1.00	0.909	1.00	100.00	100.00	0.704	0.704	1.00
36	24:42	1.00	0.961	1.00	100.00	100.00	0.709	0.709	1.00
37	25:50	1.00	1.005	1.00	100.00	100.00	0.901	0.901	1.00
38	27:55	1.00	1.086	1.00	100.00	100.00	0.474	0.474	1.00
39	32:10	1.00	1.251	1.00	100.00	100.00	0.796	0.796	1.00
40	33:27	1.00	1.301	1.00	100.00	100.00	0.452	0.452	1.00
41	32:25	1.00	1.261	1.00	100.00	100.00	0.523	0.523	1.00
42	30:35	1.00	1.190	1.00	100.00	100.00	0.755	0.755	1.00

RIC DATA: U3329 #1 SCANS 1 TO 840
04/23/90 18:09:00 CALI: U3329 #2
SAMPLE: CLP,,,VSTD150,L,S,22524,V,IC-150,,,5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100089

Quantitation Report File: U3329

Data: U3329.TI
04/23/90 18:09:00
Sample: CLP,,,VSTD150,L,S,22524,V,IC-150,,,5ML,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.012
Submitted by: VERSAR Analyst: DD Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	CO10 CHLOROMETHANE
3	CO15 BROMOMETHANE
4	CO20 VINYL CHLORIDE
5	CO25 CHLOROETHANE
6	CO30 METHYLENE CHLORIDE
7	CO35 ACETONE
8	CO40 CARBON DISULFIDE
9	CO45 1,1-DICHLOROETHENE
10	CO50 1,1-DICHLOROETHANE
11	CO53 1,2-DICHLOROETHENE (TOTAL)
12	CO60 CHLOROFORM
13	CO65 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	CO43 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

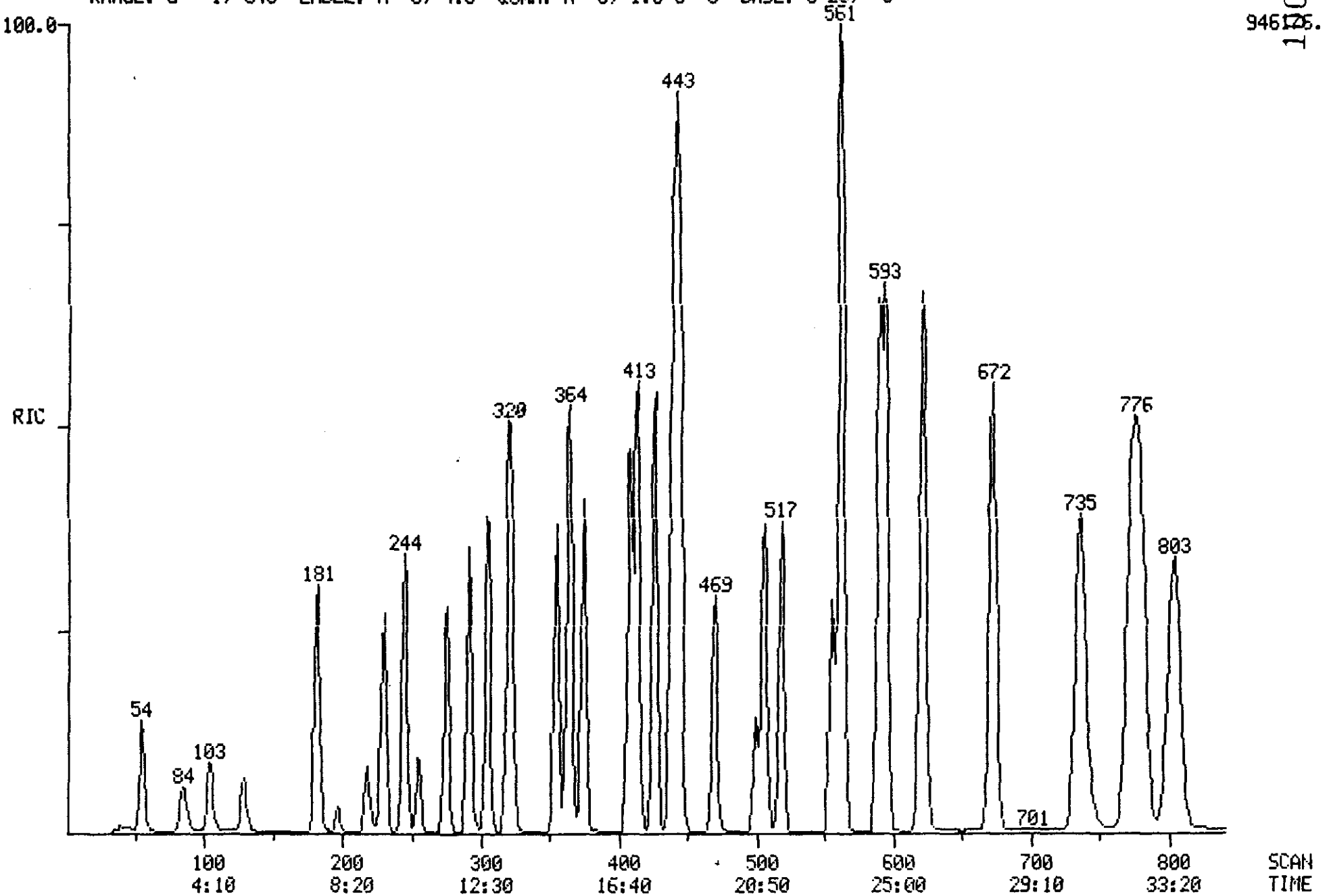
U3329

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	254	10:35	1	1.000	A BB	53747.	50.000	UG/L*	0.83
2	50	54	2:15	1	0.213	A BB	237817.	150.000	UG/L	2.50
3	94	85	3:32	1	0.335	A BB	99341.	150.000	UG/L	2.50
4	62	104	4:20	1	0.409	A BB	162659.	150.000	UG/L	2.50
5	64	128	5:20	1	0.504	A BB	93106.	150.000	UG/L	2.50
6	84	181	7:32	1	0.713	A BB	212375.	150.000	UG/L	2.50
7	43	197	8:12	1	0.776	A BB	54860.	150.000	UG/L	2.50
8	76	218	9:05	1	0.858	A BB	200009.	150.000	UG/L	2.50
9	96	244	10:10	1	0.961	A BB	196958.	150.000	UG/L	2.50
10	63	275	11:27	1	1.083	A BB	389207.	150.000	UG/L	2.50
11	96	291	12:07	1	1.146	A BB	216596.	150.000	UG/L	2.50
12	83	305	12:42	1	1.201	A BV	420054.	150.000	UG/L	2.50
13	62	322	13:25	1	1.268	A BB	298481.	150.000	UG/L	2.50
14	65	320	13:20	1	1.260	A BB	263071.	150.000	UG/L%	2.50
15	101	229	9:32	1	0.902	A BV	361755.	150.000	UG/L	2.50
16	114	499	20:47	16	1.000	A BB	244897.	50.000	UG/L*	0.83
17	72	321	13:22	1	1.264	A BB	34754.	150.000	UG/L	2.50
18	43	365	15:12	16	0.731	A BB	450762.	150.000	UG/L	2.50
19	117	364	15:10	16	0.729	A VB	324328.	150.000	UG/L	2.50
20	83	374	15:35	16	0.749	A BB	403995.	150.000	UG/L	2.50
21	63	408	17:00	16	0.818	A BB	269397.	150.000	UG/L	2.50
22	75	413	17:12	16	0.828	A BB	483101.	150.000	UG/L	2.50
23	130	426	17:45	16	0.854	A BV	330272.	150.000	UG/L	2.50
24	78	438	18:15	16	0.878	A BB	663409.	150.000	UG/L	2.50
25	129	441	18:22	16	0.884	A BB	334087.	150.000	UG/L	2.50
26	97	443	18:27	16	0.888	A BB	236773.	150.000	UG/L	2.50
27	75	443	18:27	16	0.888	A BB	254312.	150.000	UG/L	2.50
28	173	505	21:02	16	1.012	A BB	349604.	150.000	UG/L	2.50
29	97	355	14:47	16	0.711	A BB	354517.	150.000	UG/L	2.50
30	98	588	24:30	31	0.953	A BB	733141.	150.000	UG/L%	2.50
31	117	617	25:42	31	1.000	A BB	225904.	50.000	UG/L*	0.83
32	43	518	21:35	31	0.840	A BB	450561.	150.000	UG/L	2.50
33	43	554	23:05	31	0.898	A BV	382905.	150.000	UG/L	2.50
34	164	561	23:22	31	0.909	A BB	282622.	150.000	UG/L	2.50
35	83	560	23:20	31	0.908	A BB	473706.	150.000	UG/L	2.50
36	92	592	24:40	31	0.959	A BB	476505.	150.000	UG/L	2.50
37	112	620	25:50	31	1.005	A BB	624858.	150.000	UG/L	2.50
38	106	670	27:55	31	1.086	A BB	318425.	150.000	UG/L	2.50
39	104	771	32:07	31	1.250	A BB	585159.	150.000	UG/L	2.50
40	106	802	33:25	31	1.300	A BB	336825.	150.000	UG/L	2.50
41	106	778	32:25	31	1.261	A BB	383559.	150.000	UG/L	2.50
42	95	734	30:35	31	1.190	A BB	520031.	150.000	UG/L%	2.50

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:15	1.00	0.213	1.00	150.00	150.00	1.475	1.475	1.00
3	3:32	1.00	0.335	1.00	150.00	150.00	0.616	0.616	1.00
4	4:20	1.00	0.409	1.00	150.00	150.00	1.009	1.009	1.00
5	5:20	1.00	0.504	1.00	150.00	150.00	0.577	0.577	1.00
6	7:32	1.00	0.713	1.00	150.00	150.00	1.317	1.317	1.00
7	8:12	1.00	0.776	1.00	150.00	150.00	0.340	0.340	1.00
8	9:05	1.00	0.858	1.00	150.00	150.00	1.240	1.240	1.00
9	10:10	1.00	0.961	1.00	150.00	150.00	1.222	1.222	1.00
10	11:27	1.00	1.083	1.00	150.00	150.00	2.414	2.414	1.00
11	12:07	1.00	1.146	1.00	150.00	150.00	1.343	1.343	1.00
12	12:42	1.00	1.201	1.00	150.00	150.00	2.605	2.605	1.00

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:25	1.00	1.268	1.00	150.00	150.00	1.851	1.851	1.00
14	13:20	1.00	1.260	1.00	150.00	150.00	1.632	1.632	1.00
15	9:32	1.00	0.902	1.00	150.00	150.00	2.244	2.244	1.00
16	20:47	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:22	1.00	1.264	1.00	150.00	150.00	0.216	0.216	1.00
18	15:12	1.00	0.731	1.00	150.00	150.00	0.614	0.614	1.00
19	15:10	1.00	0.729	1.00	150.00	150.00	0.441	0.441	1.00
20	15:35	1.00	0.749	1.00	150.00	150.00	0.550	0.550	1.00
21	17:00	1.00	0.818	1.00	150.00	150.00	0.367	0.367	1.00
22	17:12	1.00	0.828	1.00	150.00	150.00	0.658	0.658	1.00
23	17:45	1.00	0.854	1.00	150.00	150.00	0.450	0.450	1.00
24	18:15	1.00	0.878	1.00	150.00	150.00	0.903	0.903	1.00
25	18:22	1.00	0.884	1.00	150.00	150.00	0.455	0.455	1.00
26	18:27	1.00	0.888	1.00	150.00	150.00	0.322	0.322	1.00
27	18:27	1.00	0.888	1.00	150.00	150.00	0.346	0.346	1.00
28	21:02	1.00	1.012	1.00	150.00	150.00	0.476	0.476	1.00
29	14:47	1.00	0.711	1.00	150.00	150.00	0.483	0.483	1.00
30	24:30	1.00	0.953	1.00	150.00	150.00	1.082	1.082	1.00
31	25:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:35	1.00	0.840	1.00	150.00	150.00	0.665	0.665	1.00
33	23:05	1.00	0.898	1.00	150.00	150.00	0.565	0.565	1.00
34	23:22	1.00	0.909	1.00	150.00	150.00	0.417	0.417	1.00
35	23:20	1.00	0.908	1.00	150.00	150.00	0.699	0.699	1.00
36	24:40	1.00	0.959	1.00	150.00	150.00	0.703	0.703	1.00
37	25:50	1.00	1.005	1.00	150.00	150.00	0.922	0.922	1.00
38	27:55	1.00	1.086	1.00	150.00	150.00	0.470	0.470	1.00
39	32:07	1.00	1.250	1.00	150.00	150.00	0.863	0.863	1.00
40	33:25	1.00	1.300	1.00	150.00	150.00	0.497	0.497	1.00
41	32:25	1.00	1.261	1.00	150.00	150.00	0.566	0.566	1.00
42	30:35	1.00	1.190	1.00	150.00	150.00	0.767	0.767	1.00

RIC DATA: U3328 #1 SCANS 1 TO 840
04/23/90 17:21:00 CALI: U3328 #2
SAMPLE: CLP,,,VSTD200,L,S,22523,V,IC-200,,,5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



170093

Quantitation Report File: U3328

Data: U3328.TI
04/23/90 17:21:00
Sample: CLP,,,VSTD200,L,S,22523,V,IC-200,,,5ML,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.012
Submitted by: VERSAR Analyst: DD Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

43328 (Rev)

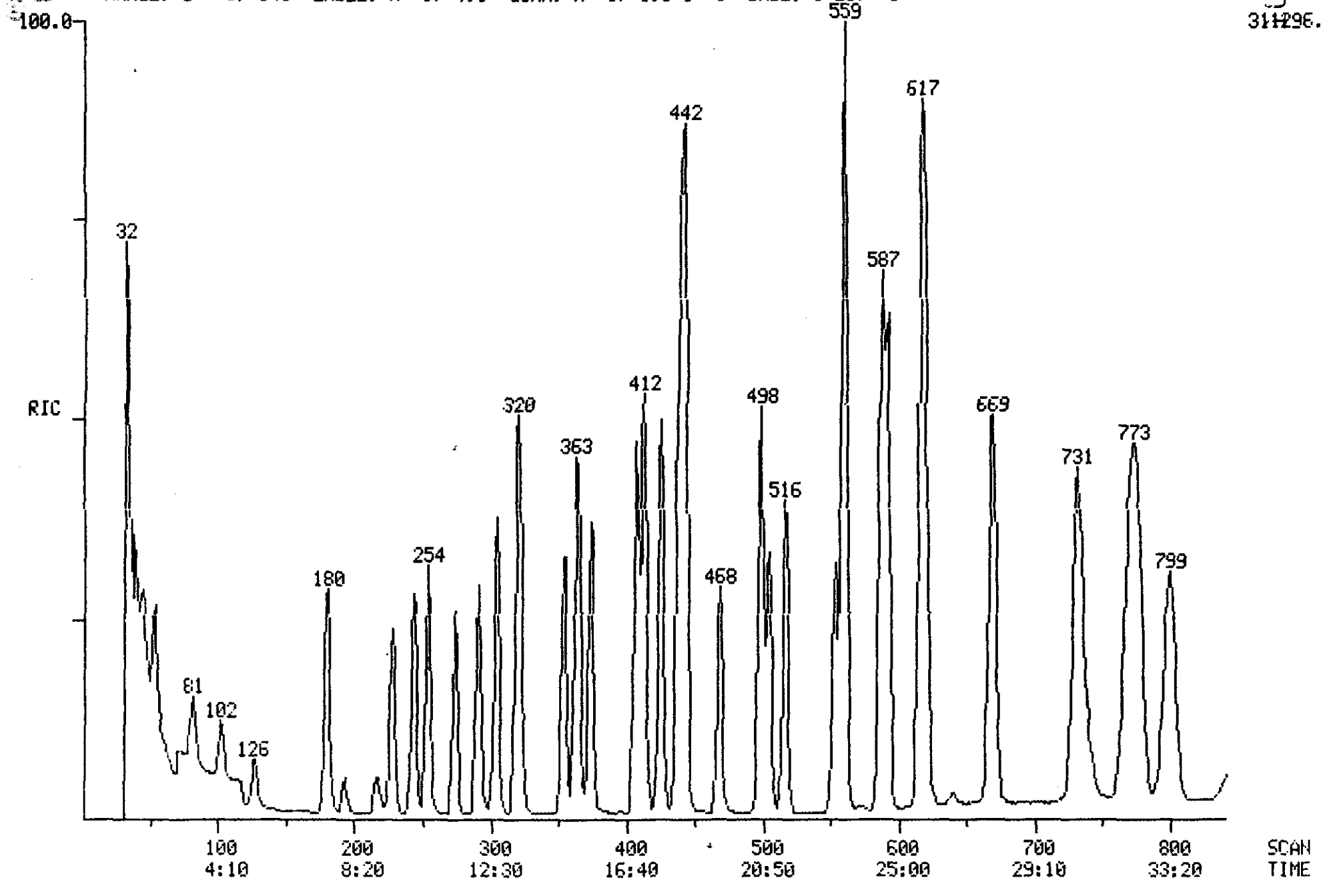
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	254	10:35	1	1.000	A BB	54651.	50.000	UG/L*	0.63
2	50	54	2:15	1	0.213	A BB	297663.	200.000	UG/L	2.52
3	94	84	3:30	1	0.331	A BB	109635.	200.000	UG/L	2.52
4	62	103	4:17	1	0.406	A BB	212773.	200.000	UG/L	2.52
5	64	128	5:20	1	0.504	A BB	132480.	200.000	UG/L	2.52
6	84	181	7:32	1	0.713	A BB	284031.	200.000	UG/L	2.52
7	43	196	8:10	1	0.772	A BB	76944.	200.000	UG/L	2.52
8	76	217	9:02	1	0.854	A BB	285027.	200.000	UG/L	2.52
9	96	244	10:10	1	0.961	A BB	264863.	200.000	UG/L	2.52
10	63	275	11:27	1	1.083	A BB	534173.	200.000	UG/L	2.52
11	96	291	12:07	1	1.146	A BB	290009.	200.000	UG/L	2.52
12	83	304	12:40	1	1.197	A BV	564119.	200.000	UG/L	2.52
13	62	322	13:25	1	1.268	A BB	415017.	200.000	UG/L	2.52
14	65	319	13:17	1	1.256	A BB	360329.	200.000	UG/L%	2.52
15	101	229	9:32	1	0.902	A BV	487557.	200.000	UG/L	2.52
16	114	499	20:47	16	1.000	A BB	246636.	50.000	UG/L*	0.63
17	72	320	13:20	1	1.260	A BB	47863.	200.000	UG/L	2.52
18	43	365	15:12	16	0.731	A BB	676553.	200.000	UG/L	2.52
19	117	363	15:07	16	0.727	A VB	423736.	200.000	UG/L	2.52
20	83	374	15:35	16	0.749	A BB	542994.	200.000	UG/L	2.52
21	63	407	16:57	16	0.816	A BB	361877.	200.000	UG/L	2.52
22	75	413	17:12	16	0.828	A BB	644101.	200.000	UG/L	2.52
23	130	425	17:42	16	0.852	A BV	424229.	200.000	UG/L	2.52
24	78	438	18:15	16	0.878	A BB	874082.	200.000	UG/L	2.52
25	129	440	18:20	16	0.882	A BB	418000.	200.000	UG/L	2.52
26	97	443	18:27	16	0.888	A BB	309621.	200.000	UG/L	2.52
27	75	443	18:27	16	0.888	A BB	341668.	200.000	UG/L	2.52
28	173	505	21:02	16	1.012	A BB	447819.	200.000	UG/L	2.52
29	97	354	14:45	16	0.709	A BB	473049.	200.000	UG/L	2.52
30	98	589	24:32	31	0.953	A BB	934041.	200.000	UG/L%	2.52
31	117	618	25:45	31	1.000	A BB	229121.	50.000	UG/L*	0.63
32	43	517	21:32	31	0.837	A BB	662164.	200.000	UG/L	2.52
33	43	555	23:07	31	0.898	A BB	519484.	200.000	UG/L	2.52
34	164	561	23:22	31	0.908	A BB	353490.	200.000	UG/L	2.52
35	83	561	23:22	31	0.908	A BB	618932.	200.000	UG/L	2.52
36	92	593	24:42	31	0.960	A BB	620898.	200.000	UG/L	2.52
37	112	621	25:52	31	1.005	A BB	817646.	200.000	UG/L	2.52
38	106	671	27:57	31	1.086	A BB	414518.	200.000	UG/L	2.52
39	104	772	32:10	31	1.249	A BB	828038.	200.000	UG/L	2.52
40	106	803	33:27	31	1.299	A BB	480534.	200.000	UG/L	2.52
41	106	779	32:27	31	1.261	A BB	548884.	200.000	UG/L	2.52
42	95	735	30:37	31	1.189	A BB	670094.	200.000	UG/L%	2.52

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:15	1.00	0.213	1.00	200.00	200.00	1.362	1.362	1.00
3	3:30	1.00	0.331	1.00	200.00	200.00	0.502	0.502	1.00
4	4:17	1.00	0.406	1.00	200.00	200.00	0.973	0.973	1.00
5	5:20	1.00	0.504	1.00	200.00	200.00	0.606	0.606	1.00
6	7:32	1.00	0.713	1.00	200.00	200.00	1.299	1.299	1.00
7	8:10	1.00	0.772	1.00	200.00	200.00	0.352	0.352	1.00
8	9:02	1.00	0.854	1.00	200.00	200.00	1.304	1.304	1.00
9	10:10	1.00	0.961	1.00	200.00	200.00	1.212	1.212	1.00
10	11:27	1.00	1.083	1.00	200.00	200.00	2.444	2.444	1.00
11	12:07	1.00	1.146	1.00	200.00	200.00	1.327	1.327	1.00
12	12:40	1.00	1.197	1.00	200.00	200.00	2.581	2.581	1.00

U3328 ORIGINAL (Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
13	13:25	1.00	1.268	1.00	200.00	200.00	1.898	1.898	1.00
14	13:17	1.00	1.256	1.00	200.00	200.00	1.648	1.648	1.00
15	9:32	1.00	0.902	1.00	200.00	200.00	2.230	2.230	1.00
16	20:47	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:20	1.00	1.260	1.00	200.00	200.00	0.219	0.219	1.00
18	15:12	1.00	0.731	1.00	200.00	200.00	0.686	0.686	1.00
19	15:07	1.00	0.727	1.00	200.00	200.00	0.430	0.430	1.00
20	15:35	1.00	0.749	1.00	200.00	200.00	0.550	0.550	1.00
21	16:57	1.00	0.816	1.00	200.00	200.00	0.367	0.367	1.00
22	17:12	1.00	0.828	1.00	200.00	200.00	0.653	0.653	1.00
23	17:42	1.00	0.852	1.00	200.00	200.00	0.430	0.430	1.00
24	18:15	1.00	0.878	1.00	200.00	200.00	0.886	0.886	1.00
25	18:20	1.00	0.882	1.00	200.00	200.00	0.424	0.424	1.00
26	18:27	1.00	0.888	1.00	200.00	200.00	0.314	0.314	1.00
27	18:27	1.00	0.888	1.00	200.00	200.00	0.346	0.346	1.00
28	21:02	1.00	1.012	1.00	200.00	200.00	0.454	0.454	1.00
29	14:45	1.00	0.709	1.00	200.00	200.00	0.480	0.480	1.00
30	24:32	1.00	0.953	1.00	200.00	200.00	1.019	1.019	1.00
31	25:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:32	1.00	0.837	1.00	200.00	200.00	0.723	0.723	1.00
33	23:07	1.00	0.898	1.00	200.00	200.00	0.567	0.567	1.00
34	23:22	1.00	0.908	1.00	200.00	200.00	0.386	0.386	1.00
35	23:22	1.00	0.908	1.00	200.00	200.00	0.675	0.675	1.00
36	24:42	1.00	0.960	1.00	200.00	200.00	0.677	0.677	1.00
37	25:52	1.00	1.005	1.00	200.00	200.00	0.892	0.892	1.00
38	27:57	1.00	1.086	1.00	200.00	200.00	0.452	0.452	1.00
39	32:10	1.00	1.249	1.00	200.00	200.00	0.903	0.903	1.00
40	33:27	1.00	1.299	1.00	200.00	200.00	0.524	0.524	1.00
41	32:27	1.00	1.261	1.00	200.00	200.00	0.599	0.599	1.00
42	30:37	1.00	1.189	1.00	200.00	200.00	0.731	0.731	1.00

RIC DATA: U3386 #1 SCANS 1 TO 840
04/26/90 8:30:00 CALI: U3386 #2
SAMPLE: CLP,,,VSTD50,L,S,22546,V,CC-050,,5 ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



Quantitation Report File: U3386

Data: U3386.TI
04/26/90 8:30:00
Sample: CLP,,,VSTD50,L,S,22546,V,CC-050,,5 ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

4 3386

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	253	10:32	1	1.000	A BB	55811.	50.000 UG/L*	2.38
2	50	53	2:12	1	0.209	A BB	75255.	50.000 UG/L	2.38
3	94	81	3:22	1	0.320	A BB	47726.	50.000 UG/L	2.38
4	62	102	4:15	1	0.403	A BB	56898.	50.000 UG/L	2.38
5	64	126	5:15	1	0.498	A BB	38043.	50.000 UG/L	2.38
6	84	179	7:27	1	0.708	A BB	76571.	50.000 UG/L	2.38
7	43	193	8:02	1	0.763	A BB	40566.	50.000 UG/L	2.38
8	76	217	9:02	1	0.858	A BB	58305.	50.000 UG/L	2.38
9	96	243	10:07	1	0.960	A BB	64277.	50.000 UG/L	2.38
10	63	274	11:25	1	1.083	A BB	158324.	50.000 UG/L	2.38
11	96	290	12:05	1	1.146	A BB	75558.	50.000 UG/L	2.38
12	83	304	12:40	1	1.202	A BB	165158.	50.000 UG/L	2.38
13	62	321	13:22	1	1.269	A BB	140234.	50.000 UG/L	2.38
14	65	319	13:17	1	1.261	A BB	127679.	50.000 UG/L%	2.38
15	101	228	9:30	1	0.901	A BB	129320.	50.000 UG/L	2.38
16	114	498	20:45	16	1.000	A BB	266706.	50.000 UG/L*	2.38
17	72	319	13:17	1	1.261	A BB	13148.	50.000 UG/L	2.38
18	43	364	15:10	16	0.731	A BB	210945.	50.000 UG/L	2.38
19	117	363	15:07	16	0.729	A VB	114071.	50.000 UG/L	2.38
20	83	373	15:32	16	0.749	A BB	154783.	50.000 UG/L	2.38
21	63	407	16:57	16	0.817	A BB	104618.	50.000 UG/L	2.38
22	75	412	17:10	16	0.827	A BB	180994.	50.000 UG/L	2.38
23	130	425	17:42	16	0.853	A BB	115430.	50.000 UG/L	2.38
24	78	437	18:12	16	0.878	A BB	237225.	50.000 UG/L	2.38
25	129	440	18:20	16	0.884	A BB	129732.	50.000 UG/L	2.38
26	97	442	18:25	16	0.888	A BB	93916.	50.000 UG/L	2.38
27	75	442	18:25	16	0.888	A BB	97645.	50.000 UG/L	2.38
28	173	504	21:00	16	1.012	A BB	118876.	50.000 UG/L	2.38
29	97	353	14:42	16	0.709	A BB	131529.	50.000 UG/L	2.38
30	98	587	24:27	31	0.953	A BB	304802.	50.000 UG/L%	2.38
31	117	616	25:40	31	1.000	A BB	253527.	50.000 UG/L*	2.38
32	43	516	21:30	31	0.838	A BB	233709.	50.000 UG/L	2.38
33	43	553	23:02	31	0.898	A BB	192526.	50.000 UG/L	2.38
34	164	559	23:17	31	0.907	A BB	105650.	50.000 UG/L	2.38
35	83	559	23:17	31	0.907	A BB	180766.	50.000 UG/L	2.38
36	92	591	24:37	31	0.959	A BB	174006.	50.000 UG/L	2.38
37	112	619	25:47	31	1.005	A BB	231882.	50.000 UG/L	2.38
38	106	668	27:50	31	1.084	A BB	111260.	50.000 UG/L	2.38
39	104	768	32:00	31	1.247	A BB	218497.	50.000 UG/L	2.38
40	106	799	33:17	31	1.297	A BB	120984.	50.000 UG/L	2.38
41	106	774	32:15	31	1.256	A BB	141730.	50.000 UG/L	2.38
42	95	731	30:27	31	1.187	A BB	220308.	50.000 UG/L%	2.38

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:32	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12	1.00	0.209	1.00	50.00	50.00	1.348	1.348	1.00
3	3:22	1.00	0.320	1.00	50.00	50.00	0.855	0.855	1.00
4	4:15	1.00	0.403	1.00	50.00	50.00	1.019	1.019	1.00
5	5:15	1.00	0.498	1.00	50.00	50.00	0.682	0.682	1.00
6	7:27	1.00	0.708	1.00	50.00	50.00	1.372	1.372	1.00
7	8:02	1.00	0.763	1.00	50.00	50.00	0.727	0.727	1.00
8	9:02	1.00	0.858	1.00	50.00	50.00	1.045	1.045	1.00
9	10:07	1.00	0.960	1.00	50.00	50.00	1.152	1.152	1.00
10	11:25	1.00	1.083	1.00	50.00	50.00	2.837	2.837	1.00
11	12:05	1.00	1.146	1.00	50.00	50.00	1.354	1.354	1.00
12	12:40	1.00	1.202	1.00	50.00	50.00	2.959	2.959	1.00

100099

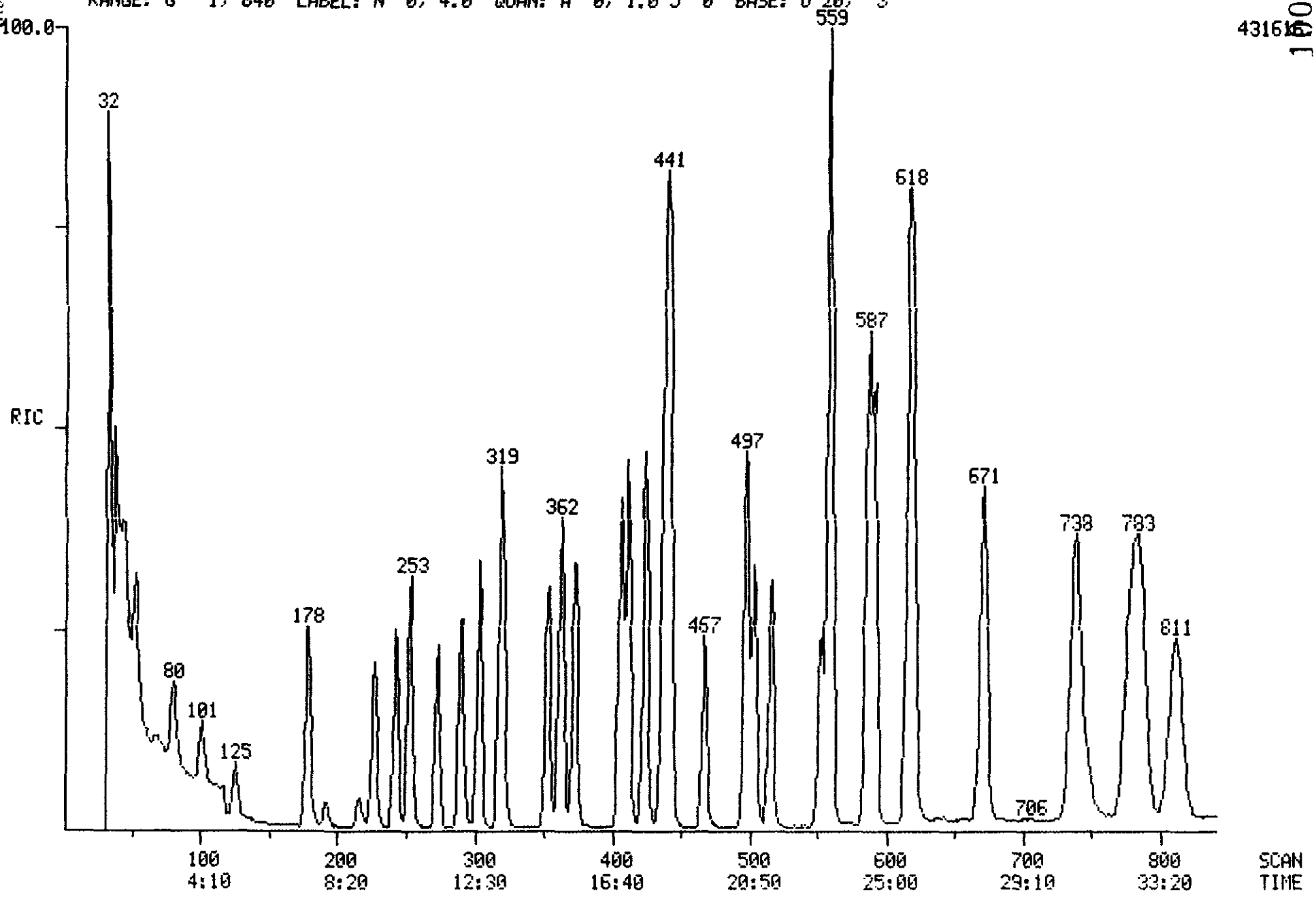
4 3386

ORIGINAL (Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
13	13:22	1.00	1.269	1.00	50.00	50.00	2.513	2.513	1.00
14	13:17	1.00	1.261	1.00	50.00	50.00	2.288	2.288	1.00
15	9:30	1.00	0.901	1.00	50.00	50.00	2.317	2.317	1.00
16	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:17	1.00	1.261	1.00	50.00	50.00	0.236	0.236	1.00
18	15:10	1.00	0.731	1.00	50.00	50.00	0.791	0.791	1.00
19	15:07	1.00	0.729	1.00	50.00	50.00	0.428	0.428	1.00
20	15:32	1.00	0.749	1.00	50.00	50.00	0.580	0.580	1.00
21	16:57	1.00	0.817	1.00	50.00	50.00	0.392	0.392	1.00
22	17:10	1.00	0.827	1.00	50.00	50.00	0.679	0.679	1.00
23	17:42	1.00	0.853	1.00	50.00	50.00	0.433	0.433	1.00
24	18:12	1.00	0.878	1.00	50.00	50.00	0.889	0.889	1.00
25	18:20	1.00	0.884	1.00	50.00	50.00	0.486	0.486	1.00
26	18:25	1.00	0.888	1.00	50.00	50.00	0.352	0.352	1.00
27	18:25	1.00	0.888	1.00	50.00	50.00	0.366	0.366	1.00
28	21:00	1.00	1.012	1.00	50.00	50.00	0.446	0.446	1.00
29	14:42	1.00	0.709	1.00	50.00	50.00	0.493	0.493	1.00
30	24:27	1.00	0.953	1.00	50.00	50.00	1.202	1.202	1.00
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30	1.00	0.838	1.00	50.00	50.00	0.922	0.922	1.00
33	23:02	1.00	0.898	1.00	50.00	50.00	0.759	0.759	1.00
34	23:17	1.00	0.907	1.00	50.00	50.00	0.417	0.417	1.00
35	23:17	1.00	0.907	1.00	50.00	50.00	0.713	0.713	1.00
36	24:37	1.00	0.959	1.00	50.00	50.00	0.686	0.686	1.00
37	25:47	1.00	1.005	1.00	50.00	50.00	0.915	0.915	1.00
38	27:50	1.00	1.084	1.00	50.00	50.00	0.439	0.439	1.00
39	32:00	1.00	1.247	1.00	50.00	50.00	0.862	0.862	1.00
40	33:17	1.00	1.297	1.00	50.00	50.00	0.477	0.477	1.00
41	32:15	1.00	1.256	1.00	50.00	50.00	0.559	0.559	1.00
42	30:27	1.00	1.187	1.00	50.00	50.00	0.869	0.869	1.00

RIC
04/27/90 8:21:00
DATA: U3411 #1
CALI: U3411 #2
SCANS 1 TO 840
SAMPLE: CLP,,,VSTD 50,L,S,22554,V,CC-050,,5ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

ORIGINAL (Red)



431616

160101

Quantitation Report File: U3411

ORIGINAL (Red)

Data: U3411.TI
04/27/90 8:21:00
Sample: CLP,,,VSTD 50,L,S,22554,V,CC-050,,5ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

U3411

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	252	10:30	1	1.000	A BB	80565.	50.000 UG/L*	2.38
2	50	52	2:10	1	0.206	A BB	106398.	50.000 UG/L	2.38
3	94	80	3:20	1	0.317	A BB	82997.	50.000 UG/L	2.38
4	62	101	4:12	1	0.401	A BB	85142.	50.000 UG/L	2.38
5	64	126	5:15	1	0.500	A BB	62501.	50.000 UG/L	2.38
6	84	178	7:25	1	0.706	A BB	102191.	50.000 UG/L	2.38
7	43	192	8:00	1	0.762	A BB	39825.	50.000 UG/L	2.38
8	76	216	9:00	1	0.857	A BB	63203.	50.000 UG/L	2.38
9	96	242	10:05	1	0.960	A BB	79942.	50.000 UG/L	2.38
10	63	273	11:22	1	1.083	A BB	195421.	50.000 UG/L	2.38
11	96	289	12:02	1	1.147	A BB	96122.	50.000 UG/L	2.38
12	83	303	12:37	1	1.202	A BB	209318.	50.000 UG/L	2.38
13	62	320	13:20	1	1.270	A BB	170736.	50.000 UG/L	2.38
14	65	318	13:15	1	1.262	A BB	161803.	50.000 UG/L%	2.38
15	101	227	9:27	1	0.901	A BB	162247.	50.000 UG/L	2.38
16	114	497	20:42	16	1.000	A BB	341843.	50.000 UG/L*	2.38
17	72	318	13:15	1	1.262	A BB	15888.	50.000 UG/L	2.38
18	43	363	15:07	16	0.730	A BB	211658.	50.000 UG/L	2.38
19	117	362	15:05	16	0.728	A VB	149107.	50.000 UG/L	2.38
20	83	372	15:30	16	0.748	A BB	200095.	50.000 UG/L	2.38
21	63	406	16:55	16	0.817	A BB	130554.	50.000 UG/L	2.38
22	75	411	17:07	16	0.827	A BB	230589.	50.000 UG/L	2.38
23	130	424	17:40	16	0.853	A BB	159213.	50.000 UG/L	2.38
24	78	437	18:12	16	0.879	A BB	308136.	50.000 UG/L	2.38
25	129	439	18:17	16	0.883	A BB	180282.	50.000 UG/L	2.38
26	97	442	18:25	16	0.889	A BB	116753.	50.000 UG/L	2.38
27	75	441	18:22	16	0.887	A BB	123440.	50.000 UG/L	2.38
28	173	503	20:57	16	1.012	A BB	168586.	50.000 UG/L	2.38
29	97	353	14:42	16	0.710	A BB	169724.	50.000 UG/L	2.38
30	98	587	24:27	31	0.953	A BB	387407.	50.000 UG/L%	2.38
31	117	616	25:40	31	1.000	A BB	337038.	50.000 UG/L*	2.38
32	43	516	21:30	31	0.838	A VV	244267.	50.000 UG/L	2.38
33	43	553	23:02	31	0.898	A BB	195134.	50.000 UG/L	2.38
34	164	559	23:17	31	0.907	A BB	162119.	50.000 UG/L	2.38
35	83	559	23:17	31	0.907	A BB	236925.	50.000 UG/L	2.38
36	92	591	24:37	31	0.959	A BB	214995.	50.000 UG/L	2.38
37	112	619	25:47	31	1.005	A BB	300539.	50.000 UG/L	2.38
38	106	671	27:57	31	1.089	A BB	138636.	50.000 UG/L	2.38
39	104	778	32:25	31	1.263	A BB	259648.	50.000 UG/L	2.38
40	106	811	33:47	31	1.317	A BB	147456.	50.000 UG/L	2.38
41	106	785	32:42	31	1.274	A BB	170247.	50.000 UG/L	2.38
42	95	738	30:45	31	1.198	A BB	253864.	50.000 UG/L%	2.38

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:30	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:10	1.00	0.206	1.00	50.00	50.00	1.321	1.321	1.00
3	3:20	1.00	0.317	1.00	50.00	50.00	1.030	1.030	1.00
4	4:12	1.00	0.401	1.00	50.00	50.00	1.057	1.057	1.00
5	5:15	1.00	0.500	1.00	50.00	50.00	0.776	0.776	1.00
6	7:25	1.00	0.706	1.00	50.00	50.00	1.268	1.268	1.00
7	8:00	1.00	0.762	1.00	50.00	50.00	0.494	0.494	1.00
8	9:00	1.00	0.857	1.00	50.00	50.00	0.784	0.784	1.00
9	10:05	1.00	0.960	1.00	50.00	50.00	0.992	0.992	1.00
10	11:22	1.00	1.083	1.00	50.00	50.00	2.426	2.426	1.00
11	12:02	1.00	1.147	1.00	50.00	50.00	1.193	1.193	1.00
12	12:37	1.00	1.202	1.00	50.00	50.00	2.598	2.598	1.00

U 3411
ORIGINAL
(Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:20	1.00	1.270	1.00	50.00	50.00	2.119	2.119	1.00
14	13:15	1.00	1.262	1.00	50.00	50.00	2.008	2.008	1.00
15	9:27	1.00	0.901	1.00	50.00	50.00	2.014	2.014	1.00
16	20:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:15	1.00	1.262	1.00	50.00	50.00	0.197	0.197	1.00
18	15:07	1.00	0.730	1.00	50.00	50.00	0.619	0.619	1.00
19	15:05	1.00	0.728	1.00	50.00	50.00	0.436	0.436	1.00
20	15:30	1.00	0.748	1.00	50.00	50.00	0.585	0.585	1.00
21	16:55	1.00	0.817	1.00	50.00	50.00	0.382	0.382	1.00
22	17:07	1.00	0.827	1.00	50.00	50.00	0.675	0.675	1.00
23	17:40	1.00	0.853	1.00	50.00	50.00	0.466	0.466	1.00
24	18:12	1.00	0.879	1.00	50.00	50.00	0.901	0.901	1.00
25	18:17	1.00	0.883	1.00	50.00	50.00	0.527	0.527	1.00
26	18:25	1.00	0.889	1.00	50.00	50.00	0.342	0.342	1.00
27	18:22	1.00	0.887	1.00	50.00	50.00	0.361	0.361	1.00
28	20:57	1.00	1.012	1.00	50.00	50.00	0.493	0.493	1.00
29	14:42	1.00	0.710	1.00	50.00	50.00	0.496	0.496	1.00
30	24:27	1.00	0.953	1.00	50.00	50.00	1.149	1.149	1.00
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30	1.00	0.838	1.00	50.00	50.00	0.725	0.725	1.00
33	23:02	1.00	0.898	1.00	50.00	50.00	0.579	0.579	1.00
34	23:17	1.00	0.907	1.00	50.00	50.00	0.481	0.481	1.00
35	23:17	1.00	0.907	1.00	50.00	50.00	0.703	0.703	1.00
36	24:37	1.00	0.959	1.00	50.00	50.00	0.638	0.638	1.00
37	25:47	1.00	1.005	1.00	50.00	50.00	0.892	0.892	1.00
38	27:57	1.00	1.089	1.00	50.00	50.00	0.411	0.411	1.00
39	32:25	1.00	1.263	1.00	50.00	50.00	0.770	0.770	1.00
40	33:47	1.00	1.317	1.00	50.00	50.00	0.438	0.438	1.00
41	32:42	1.00	1.274	1.00	50.00	50.00	0.505	0.505	1.00
42	30:45	1.00	1.198	1.00	50.00	50.00	0.753	0.753	1.00

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

La Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Lab File ID (Standard): U3386 Date Analyzed: 04/26/90

Instrument ID: U Time Analyzed: 830

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	55800	10.54	267000	20.75	254000	25.67
	UPPER LIMIT	111600		534000		508000	
	LOWER LIMIT	27900		133500		127000	
	EPA SAMPLE NO.						
01	2	38600	10.54	165000	20.75	146000	25.67
02	3	38200	10.59	164000	20.75	146000	25.67
03	1MS	23600 *	10.54	59000 *	20.75	32300 *	25.67
04	1MSD	19000 *	10.54	46700 *	20.75	24900 *	25.67
5	VBLK87	62300	10.54	275000	20.70	253000	25.62

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

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERSAR INC. Contract: _____

La Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Lab File ID (Standard): U3411 Date Analyzed: 04/27/90

Instrument ID: U Time Analyzed: 821

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) PACK

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	80600	10.50	342000	20.70	337000	25.67
	UPPER LIMIT	161200		684000		674000	
	LOWER LIMIT	40300		171000		168500	
	EPA SAMPLE NO.						
01	1	23900 *	10.54	50700 *	20.75	25200 *	25.67
02	5	58700	10.54	242000	20.75	201000	25.67
03	6	53200	10.50	226000	20.70	181000	25.62
04	7	49500	10.54	216000	20.75	182000	25.67
5	VBLK12	70100	10.54	276000	21.00	266000	26.04

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

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

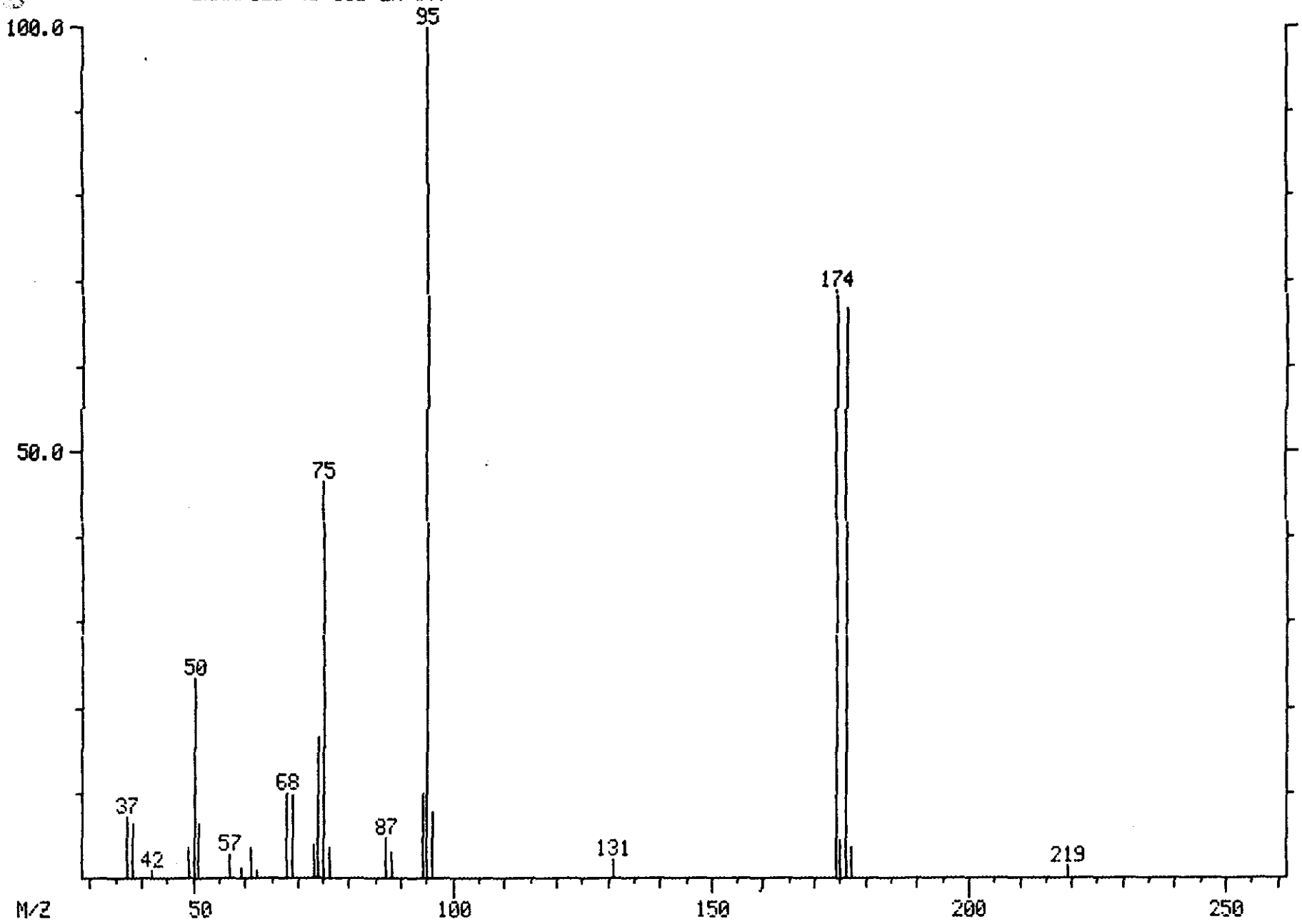
Versar INC.

V. RAW QC DATA

MASS SPECTRUM
04/23/90 15:49:00 + 9:12
SAMPLE: VOA BFB 50NG 2UL
CONDS.: INSTRUMENT U,COLUMN:SP-1000 ISOTHERMO @225C
** NAME: BROMOFLUOROBENZENE
ENHANCED (S 15B 2N 0T)

DATA: U3326 #221
CALI: U3326 #2

BASE M/Z: 95
RIC: 17280.



ORIGINAL

Mass List Data: U3326 # 221 Base m/z: 95
04/23/90 15:49:00 + 9:12 Cali: U3326 # 2 RIC: 17280.
Sample: VOA BFB 50NG 2UL
Conds.: INSTRUMENT U, COLUMN: SP-1000 ISOTHERMO @225C
Enhanced (S 15B 2N OT)

37 0.00 0.00 0. Minima Min inten: 0.
219 # 0 Maxima

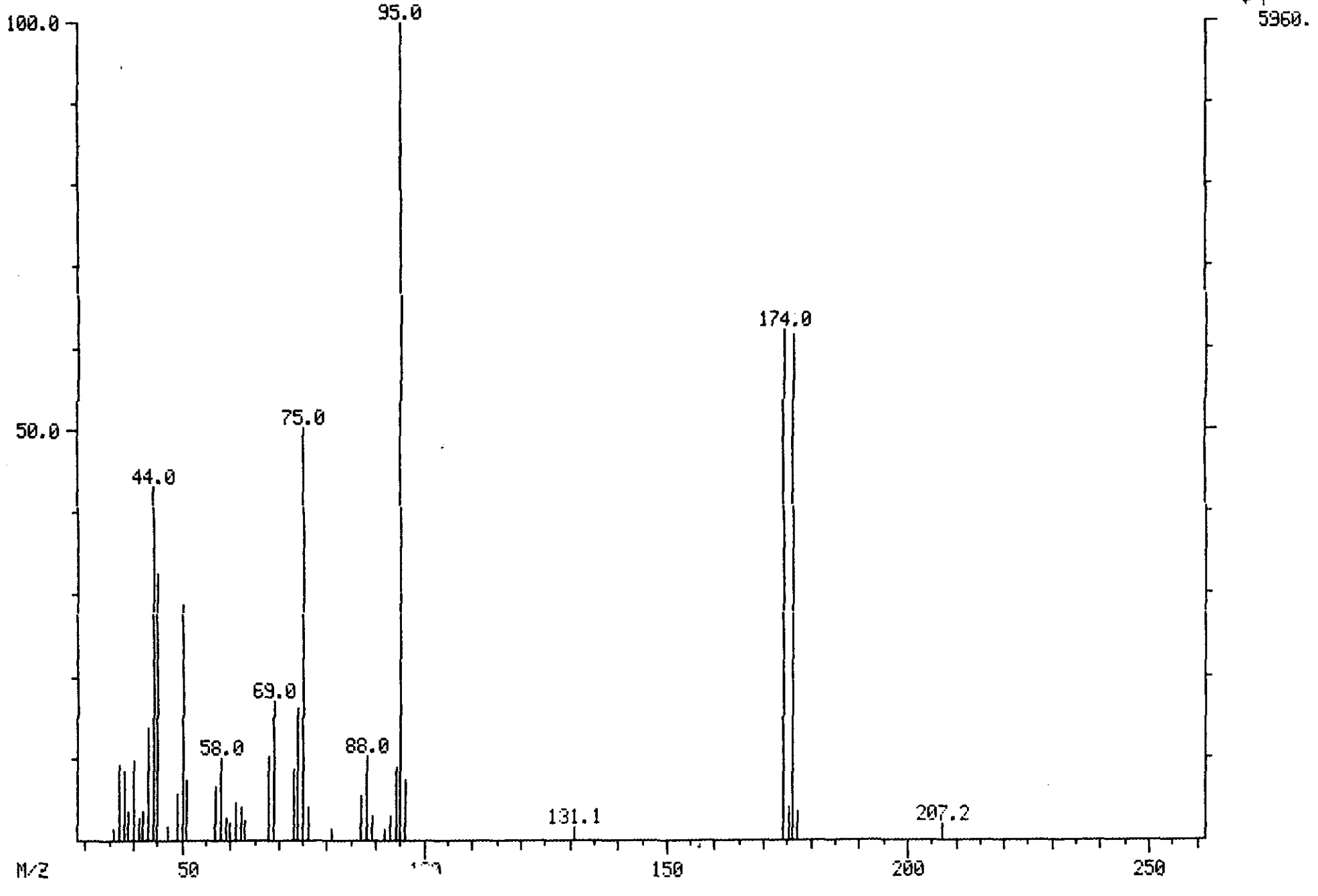
Mass	% RA	% RIC	Inten.
37.00?	7.32	1.74	301.
38.00?	6.25	1.49	257.
42.00?	0.80	0.19	33.
49.00?	3.55	0.84	146.
50.00?	23.42	5.57	963.
51.00?	6.23	1.48	256.
57.00?	2.70	0.64	111.
59.00?	1.00	0.24	41.
61.00?	3.60	0.86	148.
62.00?	0.75	0.18	31.
68.00?	9.97	2.37	410.
69.00	9.53	2.27	392.
73.00	3.89	0.93	160.
74.00	16.51	3.93	679.
75.00	46.50	11.06	1912.
76.00	3.60	0.86	148.
87.00	4.74	1.13	195.
88.00	3.11	0.74	128.
94.00	10.00	2.38	411.
95.00	100.00	23.80	4112.
96.00	7.86	1.87	323.
131.00	2.14	0.51	88.
174.00	68.77	16.37	2828.
175.00	4.52	1.08	186.
176.00	66.93	15.93	2752.
177.00	3.53	0.84	145.
219.00	1.29	0.31	53.

MASS SPECTRUM
04/26/90 7:52:00 + 10:30
SAMPLE: VOA BFB 50NG 2UL
CONDS.: INSTRUMENT U,COLUMN:SP-1000 ISOTHERMO @225C
** NAME: BROMOFLUOROBENZENE

DATA: U3385 #252
CALI: U3385 #2

BASE M/Z: 95
RIC: 34344.

100110



ORIGINAL (Red)

Mass List
04/26/90 7:52:00 + 10:30
Sample: VOA BFB 50NG 2UL
Conds.: INSTRUMENT U, COLUMN: SP-1000 ISOTHERMO @225C
#252

Data: U3385 # 252
Cali: U3385 # 2

Base m/z: 95
RIC: 34944.

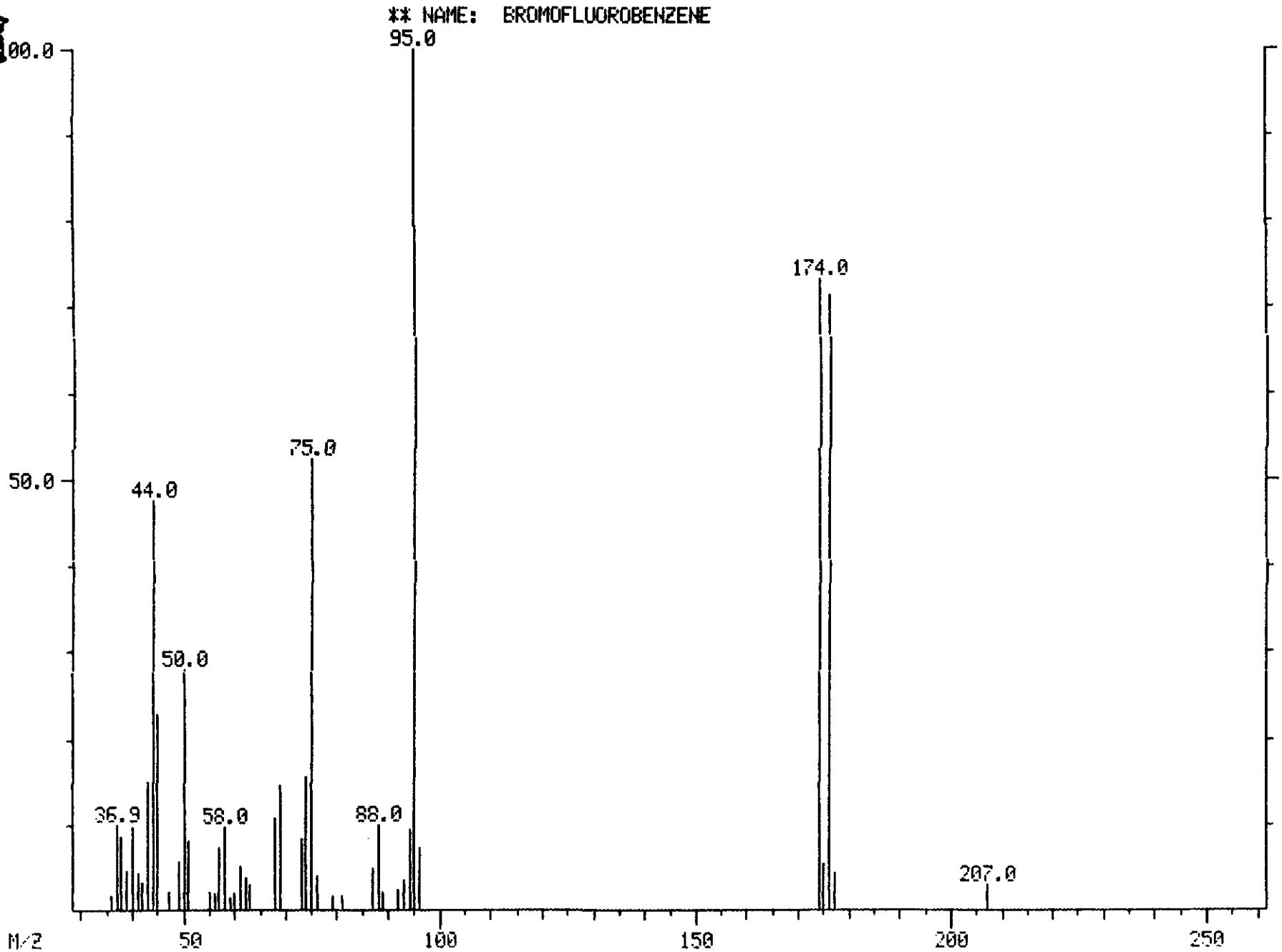
36	0.00	0.00	0.	Minima	Min inten: 0.
207			# 0	Maxima	
Mass	% RA	% RIC	Inten.		
36.00?	1.44	0.25	86.		
37.00?	9.06	1.55	540.		
38.00?	8.37	1.43	499.		
39.00?	3.54	0.60	211.		
40.00?	9.75	1.66	581.		
41.00?	2.75	0.47	164.		
42.00?	3.59	0.61	214.		
43.00?	13.66	2.33	814.		
44.00?	42.95	7.33	2560.		
45.00?	32.55	5.55	1940.		
47.00?	1.71	0.29	102.		
49.00?	5.69	0.97	339.		
50.00?	28.69	4.89	1710.		
51.00?	7.27	1.24	433.		
57.00?	6.48	1.10	386.		
58.00?	9.87	1.68	588.		
59.00?	2.73	0.47	163.		
60.00?	2.18	0.37	130.		
61.00?	4.58	0.78	273.		
62.00?	3.91	0.67	233.		
63.00?	2.55	0.43	152.		
68.00?	10.12	1.73	603.		
69.00	16.90	2.88	1007.		
73.00	8.66	1.48	516.		
74.00	16.17	2.76	964.		
75.00	50.20	8.56	2992.		
76.00	4.06	0.69	242.		
81.00	1.38	0.23	82.		
87.00	5.32	0.91	317.		
88.00	10.15	1.73	605.		
89.00	3.05	0.52	182.		
92.00	1.33	0.23	79.		
93.00	3.09	0.53	184.		
94.00	8.94	1.53	533.		
95.00	100.00	17.06	5960.		
96.00	7.25	1.24	432.		
131.00	1.58	0.27	94.		
174.00	62.21	10.61	3708.		
175.00	4.04	0.69	241.		
176.00	61.61	10.51	3672.		
177.00	3.54	0.60	211.		
207.00	1.85	0.31	110.		

MASS SPECTRUM
04/27/90 7:45:00 + 9:02
SAMPLE: VOA BFB 50NG 2UL
CONDS.: INSTRUMENT U,COLUMN:SP-1000 ISOTHERMO @225C

DATA: U3410 #217
CALI: U3410 #2

BASE M/Z: 95
RIC: 48448.

ORIGINAL (Red)



100112

ORIGINAL
(Red)

Mass List Data: U3410 # 217 Base m/z: 95
04/27/90 7:45:00 + 9:02 Cali: U3410 # 2 RIC: 48448.
Sample: VOA BFB 50NG 2UL
Conds.: INSTRUMENT U, COLUMN: SP-1000 ISOTHERMO @225C
#217

36 0.00 0.00 0. Minima Min inten: 0.
207 # 0 Maxima

Mass	% RA	% RIC	Inten.
36.00?	1.68	0.27	132.
37.00?	9.82	1.60	774.
38.00?	8.71	1.42	686.
39.00?	4.52	0.73	356.
40.00?	9.61	1.56	757.
41.00?	4.40	0.72	347.
42.00?	3.17	0.52	250.
43.00?	15.18	2.47	1196.
44.00?	47.72	7.76	3760.
45.00?	22.94	3.73	1808.
47.00?	2.21	0.36	174.
49.00?	5.67	0.92	447.
50.00?	28.02	4.56	2208.
51.00?	8.03	1.31	633.
55.00?	2.27	0.37	179.
56.00?	1.88	0.31	148.
57.00?	7.28	1.18	574.
58.00?	9.80	1.59	772.
59.00?	1.33	0.22	105.
60.00?	1.92	0.31	151.
61.00?	5.23	0.85	412.
62.00?	3.77	0.61	297.
63.00?	2.98	0.49	235.
68.00?	10.71	1.74	844.
69.00	14.54	2.37	1146.
73.00	8.44	1.37	665.
74.00	15.69	2.55	1236.
75.00	52.39	8.52	4128.
76.00	4.05	0.66	319.
79.00	1.60	0.26	126.
81.00	1.66	0.27	131.
87.00	4.77	0.78	376.
88.00	9.94	1.62	783.
89.00	2.09	0.34	165.
92.00	2.39	0.39	188.
93.00	3.60	0.59	284.
94.00	9.40	1.53	741.
95.00	100.00	16.26	7880.
96.00	7.21	1.17	568.
174.00	73.10	11.89	5760.
175.00	5.51	0.90	434.
176.00	71.37	11.61	5624.
177.00	4.42	0.72	348.
207.00	2.86	0.46	225.

ORIGINAL
(Red)

Versar INC.

REAGENT BLANK DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ORIGINAL
VBLK87 (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: VBLK87

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3387

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

% Moisture: not dec. _____ Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK87 ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: VBLK87

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3387

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

% Moisture: not dec. ____ Date Analyzed: 04/26/90

Column (pack/cap) PACK Dilution Factor: 1.0

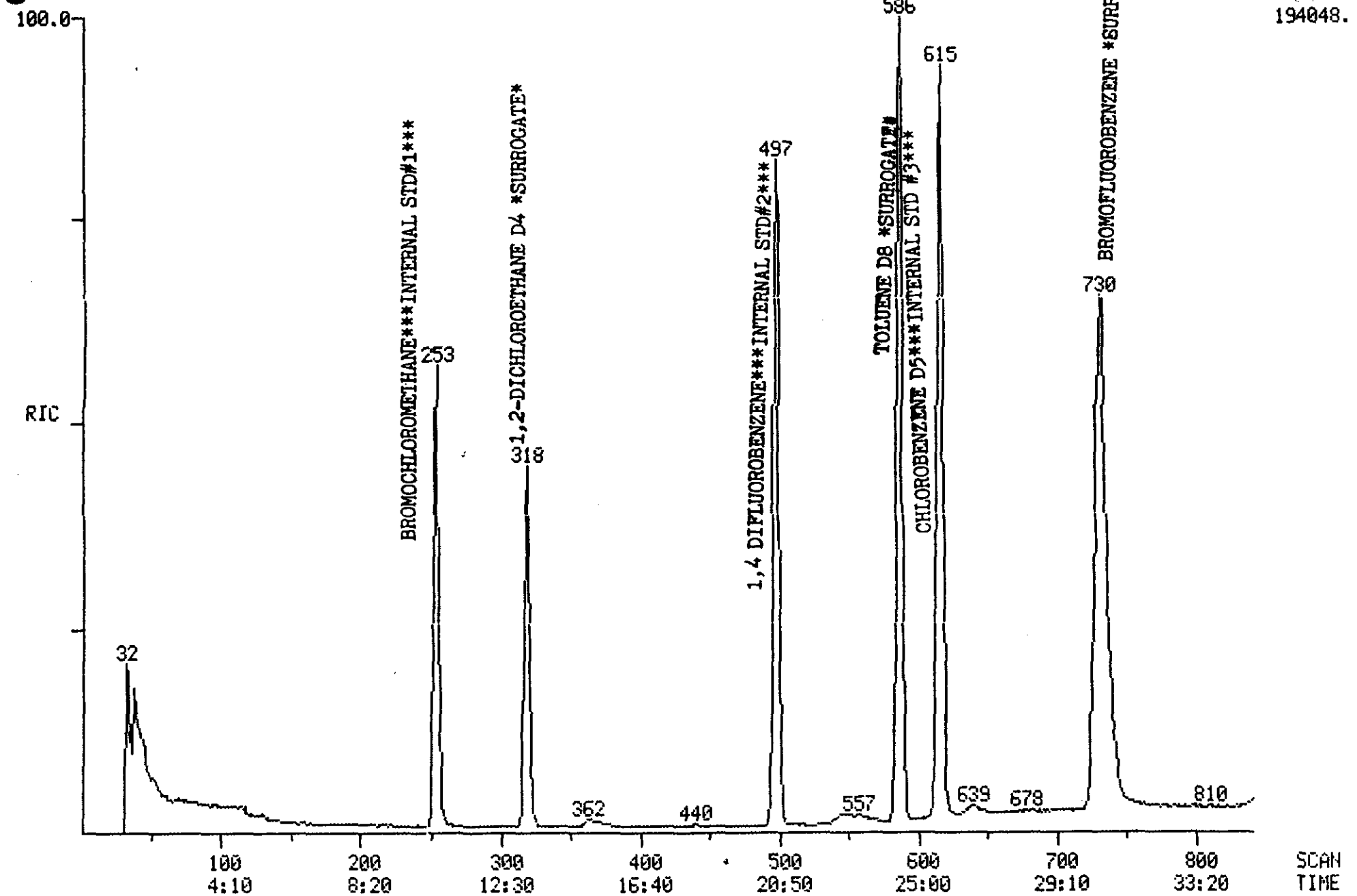
Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC DATA: U3387 #1 SCANS 1 TO 840
04/26/90 9:31:00 CALI: U3387 #2
SAMPLE: CLP,,,VBLK87,L,S,VBLK87,V,BLANK,,5 ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

ORIGINAL (Red)



117

Quantitation Report File: U3387

ORIGINAL (Red)

Data: U3387.TI
04/26/90 9:31:00
Sample: CLP,,,VBLK87,L,S,VBLK87,V,BLANK,,5 ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

INT STD + SURROG COMPLIANT
No HSL's
No L.S.
Ready For Forms
M. A. Templeton
4/26/90

43387

ORIGINAL (Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
1	128	253	10:32	1	1.000	A BB	62297.	50.000 UG/L*	17.29	
2	NOT FOUND									
3	NOT FOUND									
4	NOT FOUND									
5	NOT FOUND									
6	NOT FOUND									
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	63	254	10:35	1	1.004	A BB	252.	~~0.071 UG/L~~ BRL	0.02	
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	65	318	13:15	1	1.257	A BB	124310.	43.612 UG/L%	15.08	87%
15	NOT FOUND									
16	114	497	20:42	16	1.000	A BB	275411.	50.000 UG/L*	17.29	
17	NOT FOUND									
18	43	363	15:07	16	0.730	A BB	280.	~~0.064 UG/L~~ BRL	0.02	
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	98	586	24:25	31	0.953	A BB	294055.	48.410 UG/L%	16.74	97%
31	117	615	25:37	31	1.000	A BB	252620.	50.000 UG/L*	17.29	
32	43	515	21:27	31	0.837	A BB	737.	~~0.158 UG/L~~ BRL	0.05	
33	43	553	23:02	31	0.899	A BB	359.	~~0.094 UG/L~~ BRL	0.03	
34	NOT FOUND									
35	NOT FOUND									
36	92	590	24:35	31	0.959	A BB	666.	~~0.192 UG/L~~ BRL	0.07	
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	95	730	30:25	31	1.187	A BB	204931.	46.677 UG/L%	16.14	93%

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:32	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12		0.209						
3	3:22		0.320						
4	4:15		0.403						
5	5:15		0.498						
6	7:27		0.708						
7	8:02		0.763						
8	9:02		0.858						
9	10:07		0.960						
10	11:25	0.93	1.083	0.93	0.07	50.00	0.004	2.837	0.00
11	12:05		1.146						
12	12:40		1.202						

100119

U3387

ORIGINAL
(Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:22		1.269						
14	13:17	1.00	1.261	1.00	43.61	50.00	1.995	2.288	0.87
15	9:30		0.901						
16	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:17		1.261						
18	15:10	1.00	0.731	1.00	0.06	50.00	0.001	0.791	0.00
19	15:07		0.729						
20	15:32		0.749						
21	16:57		0.817						
22	17:10		0.827						
23	17:42		0.853						
24	18:12		0.878						
25	18:20		0.884						
26	18:25		0.888						
27	18:25		0.888						
28	21:00		1.012						
29	14:42		0.709						
30	24:27	1.00	0.953	1.00	48.41	50.00	1.164	1.202	0.97
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30	1.00	0.838	1.00	0.16	50.00	0.003	0.922	0.00
33	23:02	1.00	0.898	1.00	0.09	50.00	0.001	0.759	0.00
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	0.19	50.00	0.003	0.686	0.00
37	25:47		1.005						
38	27:50		1.084						
39	32:00		1.247						
40	33:17		1.297						
41	32:15		1.256						
42	30:27	1.00	1.187	1.00	46.68	50.00	0.811	0.869	0.93

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ORIGINAL
VBLK12 (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: VBLK12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3412

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

% Moisture: not dec. _____ Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	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	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK12 ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: VBLK12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3412

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

% Moisture: not dec. ____ Date Analyzed: 04/27/90

Column (pack/cap) PACK Dilution Factor: 1.0

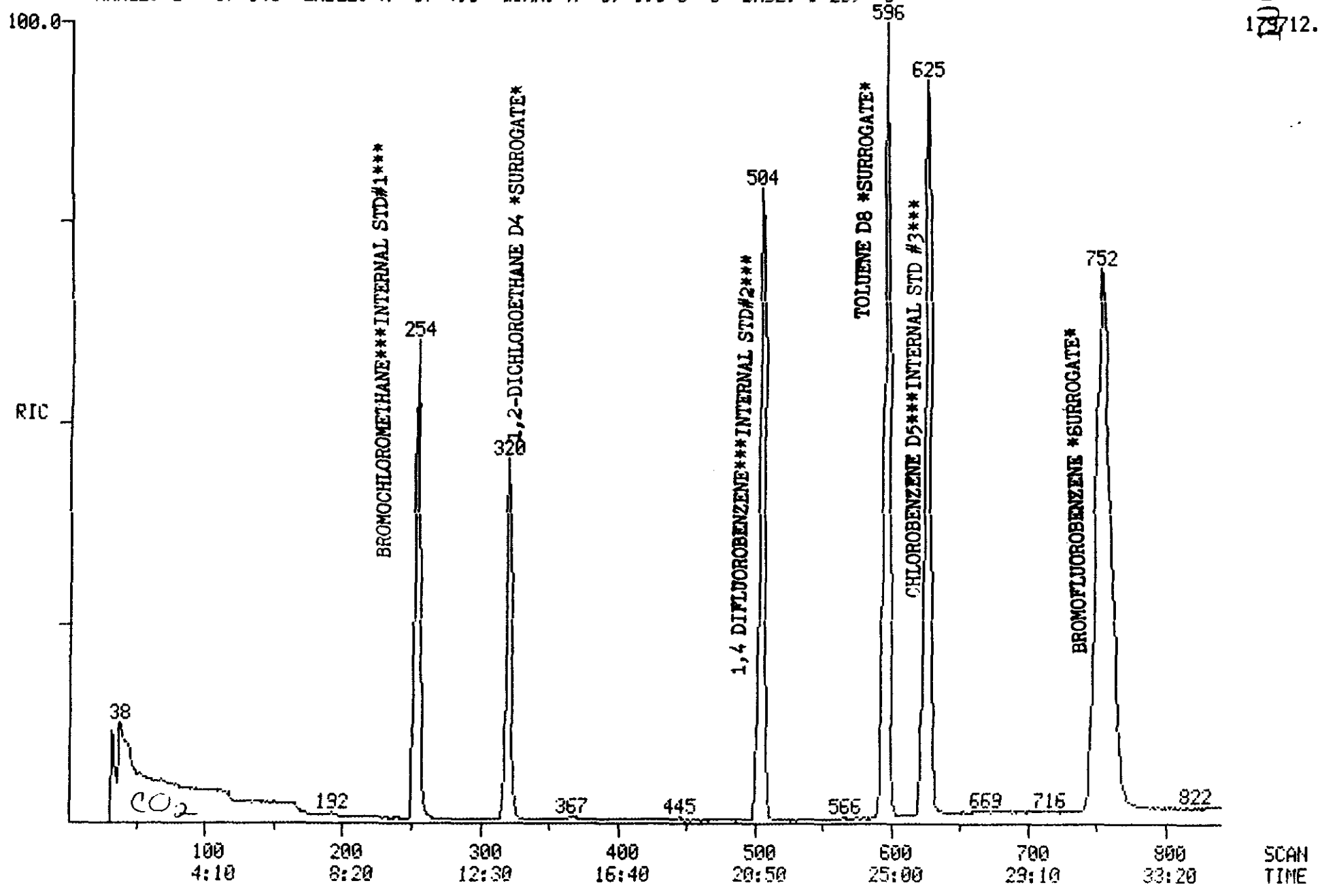
Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC DATA: U3412 #1 SCANS 1 TO 840
04/27/90 9:26:00 CALI: U3412 #2
SAMPLE: CLP,,,VBLK12,L,S,VBLK12,V,BLANK,,5 ML,,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

ORIGINAL (Red)



D00123
179712.

ORIGINAL
(Red)

Quantitation Report File: U3412

Data: U3412.TI
04/27/90 9:26:00
Sample: CLP,,,VBLK12,L,S,VBLK12,V,BLANK,,5 ML,,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: MAT Acct. No.: -

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

INT STD + SURRUG COMPLIANT
NO HSL's
NO LS.
Ready For Forms
M. A. Templeton
4/27/90

100124

ORIGINAL
(Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	253	10:32	1	1.000	A BB	70104.	50.000 UG/L*	17.03
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	NOT FOUND								
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	63	254	10:35	1	1.004	A BB	269.	~~0.079 UG/L~~ BRLO	0.03
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	65	320	13:20	1	1.265	A BB	118849.	42.207 UG/L%	14.37 84
15	NOT FOUND								
16	114	504	21:00	16	1.000	A BB	276334.	50.000 UG/L*	17.03
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	98	595	24:47	31	0.952	A BB	311994.	51.095 UG/L%	17.40 10.
31	117	625	26:02	31	1.000	A BB	265615.	50.000 UG/L*	17.03
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	92	600	25:00	31	0.960	A BB	538.	~~0.159 UG/L~~ BRLO	0.05
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	95	752	31:20	31	1.203	A BB	200557.	50.122 UG/L%	17.07 100

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:30	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:10		0.206						
3	3:20		0.317						
4	4:12		0.401						
5	5:15		0.500						
6	7:25		0.706						
7	8:00		0.762						
8	9:00		0.857						
9	10:05		0.960						
10	11:22	0.93	1.083	0.93	0.08	50.00	0.004	2.426	0.00
11	12:02		1.147						
12	12:37		1.202						

ORIGINAL
(Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:20		1.270						
14	13:15	1.01	1.262	1.00	42.21	50.00	1.695	2.008	0.84
15	9:27		0.901						
16	20:42	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:15		1.262						
18	15:07		0.730						
19	15:05		0.728						
20	15:30		0.748						
21	16:55		0.817						
22	17:07		0.827						
23	17:40		0.853						
24	18:12		0.879						
25	18:17		0.883						
26	18:25		0.889						
27	18:22		0.887						
28	20:57		1.012						
29	14:42		0.710						
30	24:27	1.01	0.953	1.00	51.09	50.00	1.175	1.149	1.02
31	25:40	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30		0.838						
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.02	0.959	1.00	0.16	50.00	0.002	0.638	0.00
37	25:47		1.005						
38	27:57		1.089						
39	32:25		1.263						
40	33:47		1.317						
41	32:42		1.274						
42	30:45	1.02	1.198	1.00	50.12	50.00	0.755	0.753	1.00

Versar INC.

ORIGINAL
(Red)

MATRIX SPIKE DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1MS ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16426MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3398

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 30 Date Analyzed: 04/26/90

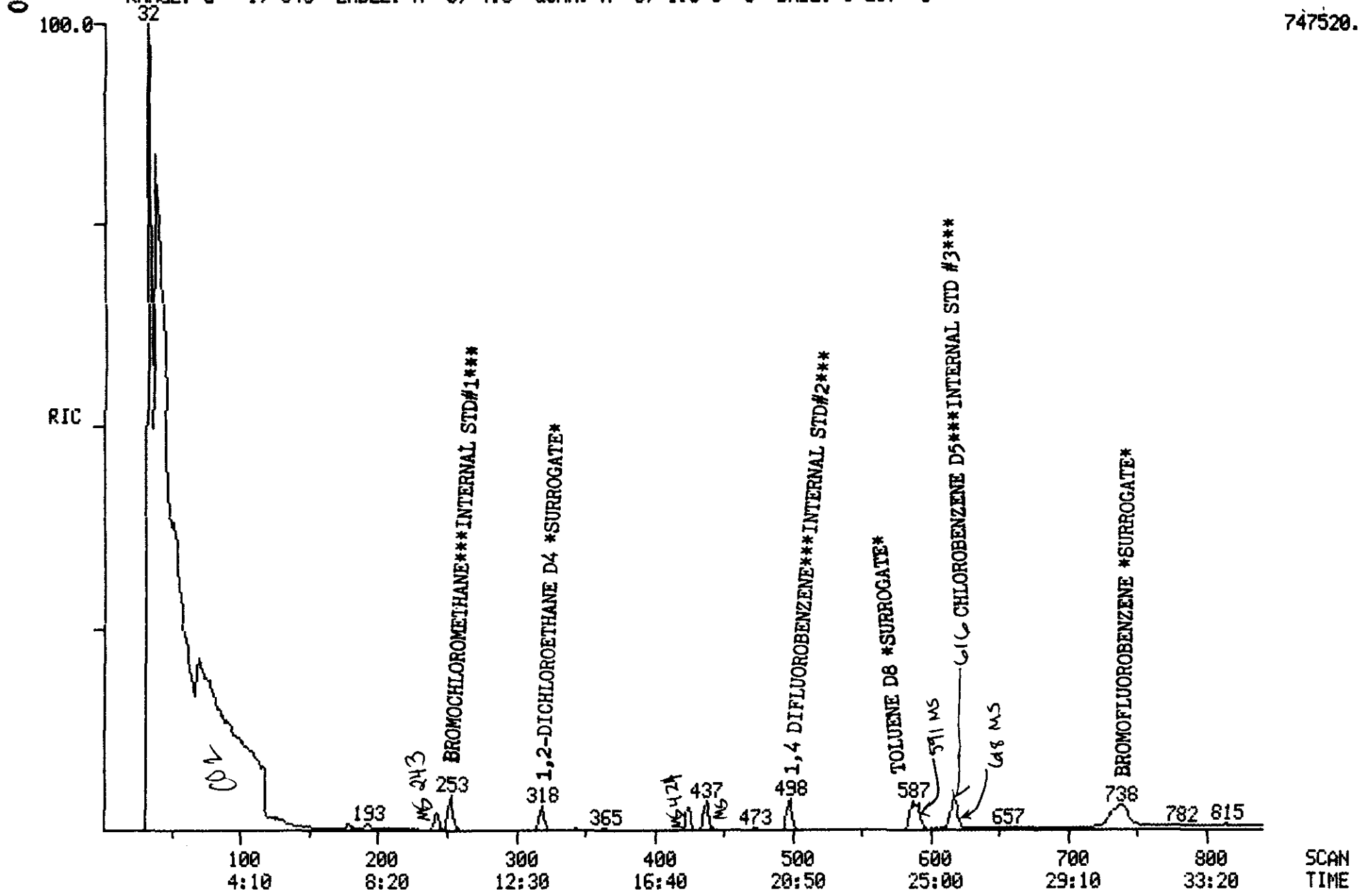
Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene chloride	11	
67-64-1	Acetone	51	
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	7	U

RIC DATA: U3398 #1 SCANS 1 TO 840
04/26/90 18:11:00 CALI: U3398 #2
SAMPLE: CLP,VERSCDM,2536,1MS,L,S,16426MS,V,,420.1.0,2,5G/5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

ORIGINAL (Red)

00129

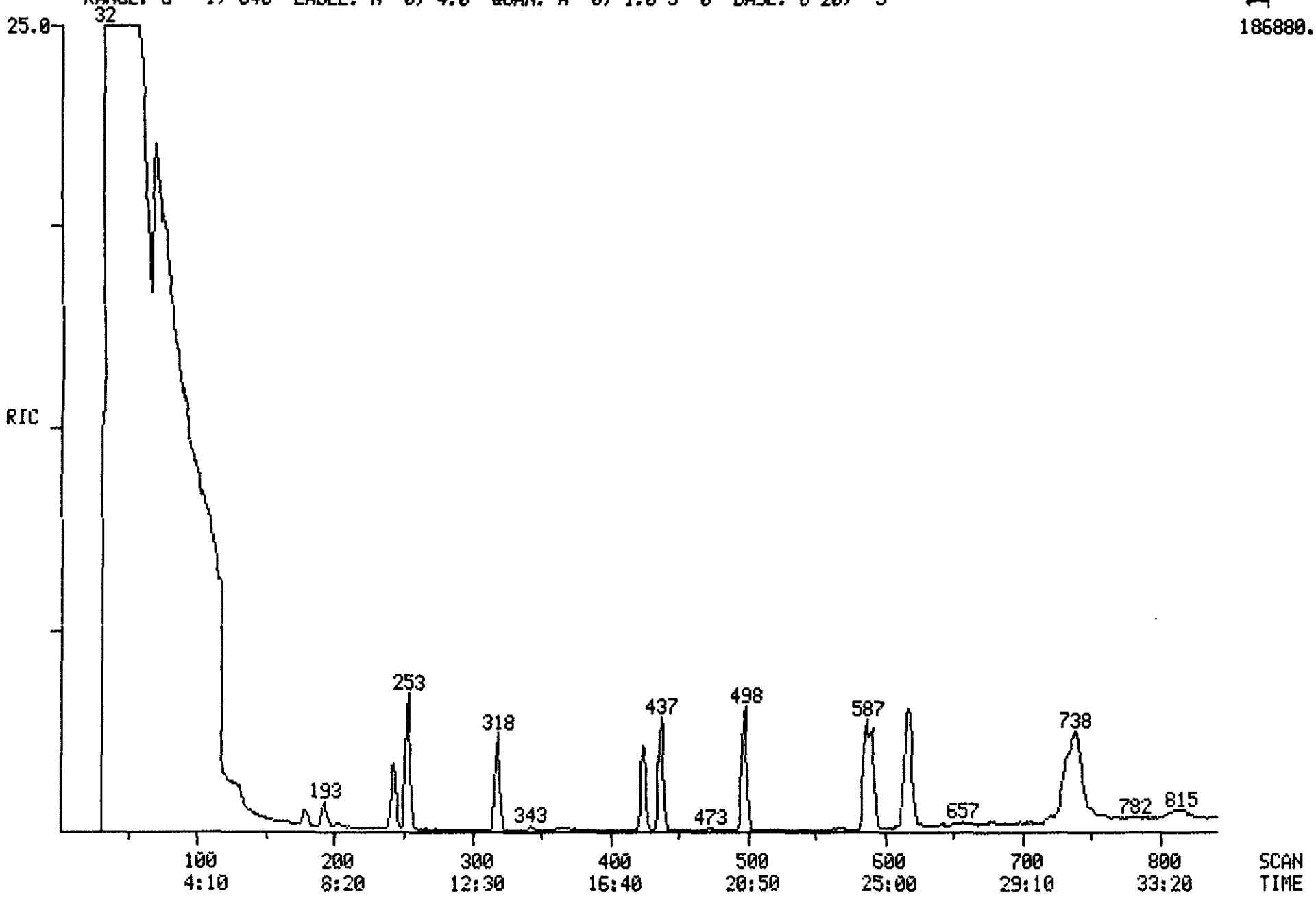


RIC DATA: U3398 #1 SCANS 1 TO 840
04/26/90 18:11:00 CALI: U3398 #2
SAMPLE: CLP,VERSCOM,2536,1MS,L,S,16426MS,V,,420.1.0,2,5G/5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

ORIGINAL (Red)

1100130

186880.



ORIGINAL (Red)

Quantitation Report File: U3398

Data: U3398.TI
04/26/90 18:11:00
Sample: CLP,VERSCDM,2536,1MS,L,S,16426MS,V,,420.1.0,2,5G/5ML,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: ALS 8 Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: DD Acct. No.: 420.1.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT) 30.0%
Resp. fac. from Library Entry

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

Ready for

43298
ORIGINAL
(Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)		Amount		%Tot	
1	128	253	10:32	1	1.000	A BB	23631.	IS low	50.000	UG/L*	9.19	
2	NOT FOUND											
3	NOT FOUND											
4	NOT FOUND											
5	NOT FOUND											
6	84	179	7:27	1	0.708	A BB	5099.		~~7.864~~	~~UG/L~~	1.45	
7	43	192	8:00	1	0.759	A BB	12258.		35.683	UG/L	6.56	
8	NOT FOUND											
9	96	243	10:07	1	0.960	A BB	15367.	MS	28.232	UG/L	5.19	
10	NOT FOUND											
11	NOT FOUND											
12	NOT FOUND											
13	NOT FOUND											
14	65	318	13:15	1	1.257	A BB	33483.		30.968	UG/L%	5.69	62 low
15	NOT FOUND											
16	114	498	20:45	16	1.000	A BB	59035.	low	50.000	UG/L*	9.19	
17	NOT FOUND											
18	NOT FOUND											
19	NOT FOUND											
20	NOT FOUND											
21	NOT FOUND											
22	NOT FOUND											
23	130	424	17:40	16	0.851	A BB	18288.	MS	35.788	UG/L	6.58	~~72~~
24	78	437	18:12	16	0.878	A BB	57749.	MS	54.989	UG/L	10.11	low
25	NOT FOUND											
26	NOT FOUND											
27	NOT FOUND											
28	NOT FOUND											
29	NOT FOUND											
30	98	587	24:27	31	0.953	A BB	45277.		58.377	UG/L%	10.73	72 lo
31	117	616	25:40	31	1.000	A BB	32256.	low	50.000	UG/L*	9.19	
32	NOT FOUND											
33	NOT FOUND											
34	NOT FOUND											
35	NOT FOUND											
36	92	591	24:37	31	0.959	A BB	25531.	MS	57.662	UG/L	10.60	
37	112	618	25:45	31	1.003	A BB	27677.	MS	46.907	UG/L	8.62	
38	NOT FOUND											
39	NOT FOUND											
40	NOT FOUND											
41	NOT FOUND											
42	95	732	30:30	31	1.188	A BB	21041.		37.534	UG/L%	6.90	75

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:32	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12		0.209						
3	3:22		0.320						
4	4:15		0.403						
5	5:15		0.498						
6	7:27	1.00	0.708	1.00	7.86	50.00	0.216	1.372	0.16
7	8:02	0.99	0.763	0.99	35.68	50.00	0.519	0.727	0.71
8	9:02		0.858						
9	10:07	1.00	0.960	1.00	28.23	50.00	0.650	1.152	0.56
10	11:25		1.083						
11	12:05		1.146						
12	12:40		1.202						

U3398 ORIGINAL (Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:22		1.269						
14	13:17	1.00	1.261	1.00	30.97	50.00	1.417	2.288	0.62
15	9:30		0.901						
16	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:17		1.261						
18	15:10		0.731						
19	15:07		0.729						
20	15:32		0.749						
21	16:57		0.817						
22	17:10		0.827						
23	17:42	1.00	0.853	1.00	35.79	50.00	0.310	0.433	0.72
24	18:12	1.00	0.878	1.00	54.99	50.00	0.978	0.889	1.10
25	18:20		0.884						
26	18:25		0.888						
27	18:25		0.888						
28	21:00		1.012						
29	14:42		0.709						
30	24:27	1.00	0.953	1.00	58.38	50.00	1.404	1.202	1.17
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30		0.838						
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	57.66	50.00	0.792	0.686	1.15
37	25:47	1.00	1.005	1.00	46.91	50.00	0.858	0.915	0.94
38	27:50		1.084						
39	32:00		1.247						
40	33:17		1.297						
41	32:15		1.256						
42	30:27	1.00	1.187	1.00	37.53	50.00	0.652	0.869	0.75

Versar INC.

ORIGINAL
(Red)

MATRIX SPIKE DUPLICATE DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1MSD ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 16426MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U3399

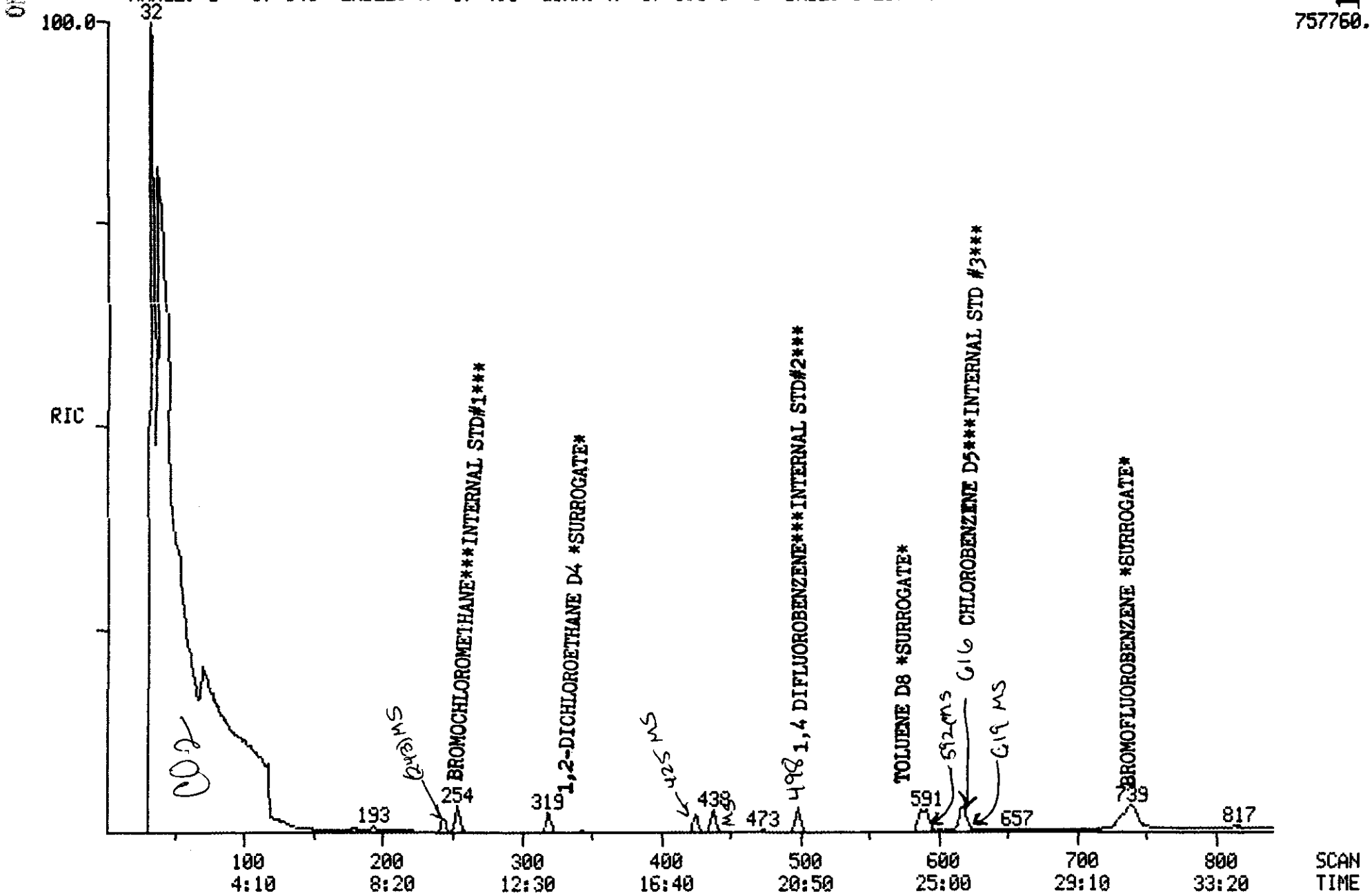
Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 30 Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene chloride	12	
67-64-1	Acetone	49	
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	7	U

RIC DATA: U3399 #1 SCANS 1 TO 840
04/26/90 18:53:00 CALI: U3399 #2
SAMPLE: CLP,VERSCDM,2536,1MSD,L,S,16426MSD,V,,420.1.0,2,5G/5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



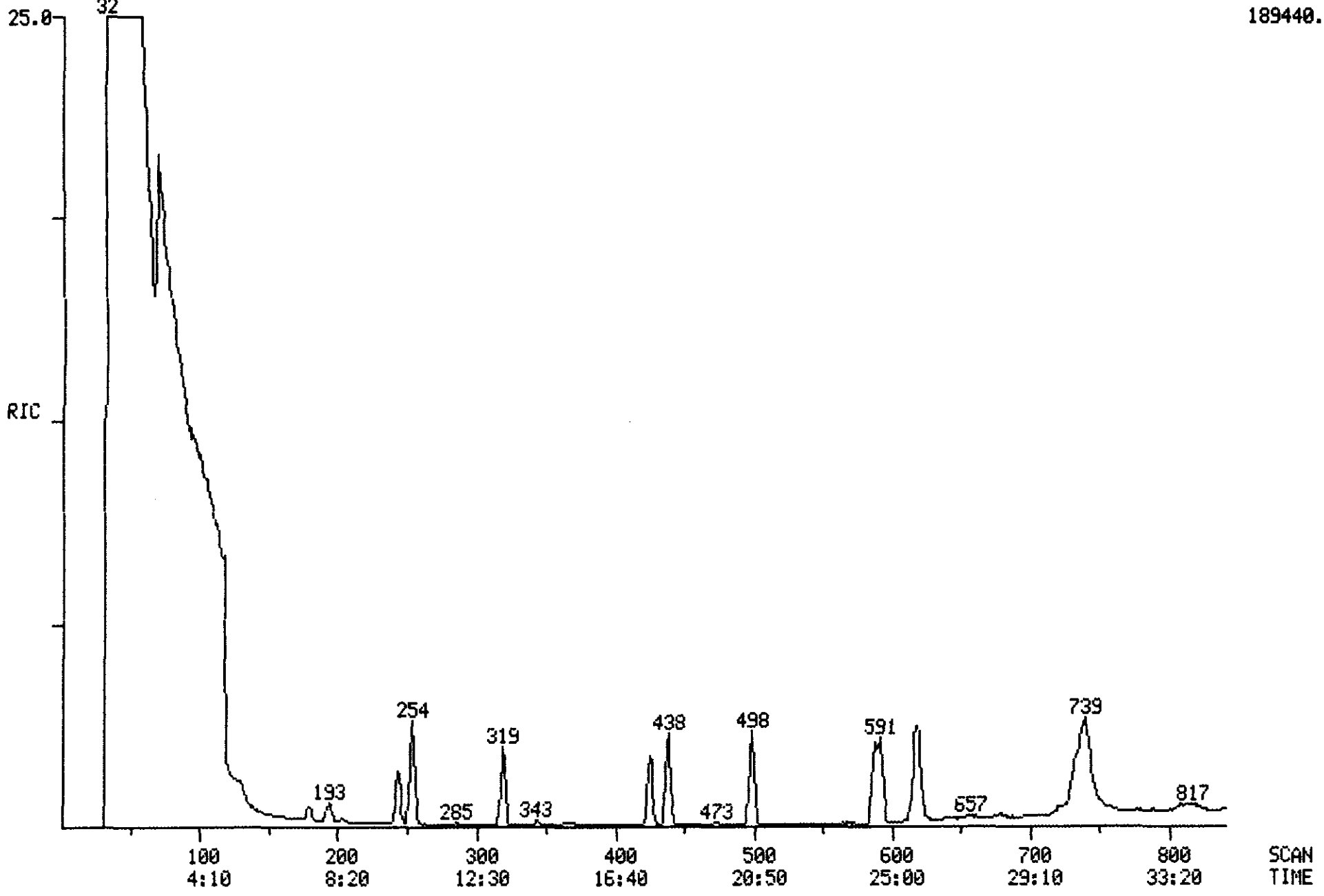
100136

ORIGINAL (Red)

RIC DATA: U3399 #1 SCANS 1 TO 840
04/26/90 18:53:00 CALI: U3399 #2
SAMPLE: CLP,VERSCOM,2536,1MSD,L,S,16426MSD,V,,420.1.0,2,5G/5ML,
CONDS.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
RANGE: G 1, 840 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

00137

189440.



ORIGINAL (Red)

Quantitation Report File: U3399

Data: U3399.TI
04/26/90 18:53:00
Sample: CLP,VERSCDM,2536,1MSD,L,S,16426MSD,V,,420.1.0,2,5G/5ML,
Conds.: INSTRUMENT U: SP-1000 COLUMN: 45C (3MIN) TO 225C @ 8C/MIN
Formula: - Instrument: U Weight: 0.011
Submitted by: VERSAR Analyst: DD Acct. No.: 420.1.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

30.0 %

No	Name
1	CI01 BROMOCHLOROMETHANE **IS#1**
2	C010 CHLOROMETHANE
3	C015 BROMOMETHANE
4	C020 VINYL CHLORIDE
5	C025 CHLOROETHANE
6	C030 METHYLENE CHLORIDE
7	C035 ACETONE
8	C040 CARBON DISULFIDE
9	C045 1,1-DICHLOROETHENE
10	C050 1,1-DICHLOROETHANE
11	C053 1,2-DICHLOROETHENE (TOTAL)
12	C060 CHLOROFORM
13	C065 1,2-DICHLOROETHANE
14	CS15 1,2-DICHLOROETHANE-D4 **SS#1**
15	C043 TRICHLOROFLUOROMETHANE
16	CI10 1,4-DIFLUOROBENZENE **IS#2**
17	C110 2-BUTANONE
18	C125 VINYL ACETATE
19	C120 CARBON TETRACHLORIDE
20	C130 BROMODICHLOROMETHANE
21	C140 1,2-DICHLOROPROPANE
22	C145 CIS-1,3-DICHLOROPROPENE
23	C150 TRICHLOROETHENE
24	C165 BENZENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C170 TRANS-1,3-DICHLOROPROPENE
28	C180 BROMOFORM
29	C115 1,1,1-TRICHLOROETHANE
30	CS05 TOLUENE-D8 **SS#2**
31	CI20 CHLOROBENZENE-D5 **IS#3**
32	C205 4-METHYL-2-PENTANONE
33	C210 2-HEXANONE
34	C220 TETRACHLOROETHENE
35	C225 1,1,2,2-TETRACHLOROETHANE
36	C230 TOLUENE
37	C235 CHLOROBENZENE
38	C240 ETHYLBENZENE
39	C245 STYRENE
40	C250 ORTHO & PARA XYLENE
41	C251 META-XYLENE
42	CS10 BROMOFLUOROBENZENE **SS#3**

all IS areas low
SS#1 recovery low
Ready

U3399 ORIGINAL (Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)		Amount		%Tot	
1	128	253	10:32	1	1.000	A BB	18985.	low	50.000	UG/L*	8.92	
2	NOT FOUND											
3	NOT FOUND											
4	NOT FOUND											
5	NOT FOUND											
6	84	180	7:30	1	0.711	A BB	4454.		8.550	UG/L	1.53	
7	43	193	8:02	1	0.763	A BV	9447.		34.230	UG/L	6.11	
8	NOT FOUND											
9	96	243	10:07	1	0.960	A BB	12589.	MS	28.788	UG/L	5.14	
10	NOT FOUND											
11	NOT FOUND											
12	NOT FOUND											
13	NOT FOUND											
14	65	319	13:17	1	1.261	A BB	26826.		30.883	UG/L%	5.51	62 low
15	NOT FOUND											
16	114	498	20:45	16	1.000	A BB	46705	low	50.000	UG/L*	8.92	
17	NOT FOUND											
18	NOT FOUND											
19	NOT FOUND											
20	NOT FOUND											
21	NOT FOUND											
22	NOT FOUND											
23	130	425	17:42	16	0.853	A BB	15502.	MS	38.345	UG/L	6.84	
24	78	438	18:15	16	0.880	A BB	46964.	MS	56.525	UG/L	10.09	
25	NOT FOUND											
26	NOT FOUND											
27	NOT FOUND											
28	NOT FOUND											
29	NOT FOUND											
30	98	587	24:27	31	0.953	A BB	35072.		58.496	UG/L%	10.44	117
31	117	616	25:40	31	1.000	A BB	24935	low	50.000	UG/L*	8.92	
32	NOT FOUND											
33	NOT FOUND											
34	NOT FOUND											
35	NOT FOUND											
36	92	592	24:40	31	0.961	A BB	22088.	MS	64.532	UG/L	11.51	
37	112	619	25:47	31	1.005	A BB	23561.	MS	51.655	UG/L	9.22	
38	NOT FOUND											
39	NOT FOUND											
40	NOT FOUND											
41	NOT FOUND											
42	95	732	30:30	31	1.188	A BB	16685.		38.502	UG/L%	6.87	77

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	10:32	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	2:12		0.209						
3	3:22		0.320						
4	4:15		0.403						
5	5:15		0.498						
6	7:27	1.01	0.708	1.01	8.55	50.00	0.235	1.372	0.17
7	8:02	1.00	0.763	1.00	34.23	50.00	0.498	0.727	0.68
8	9:02		0.858						
9	10:07	1.00	0.960	1.00	28.79	50.00	0.663	1.152	0.58
10	11:25		1.083						
11	12:05		1.146						
12	12:40		1.202						

U3399 ORIGINAL (Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	13:22		1.269						
14	13:17	1.00	1.261	1.00	30.88	50.00	1.413	2.288	0.62
15	9:30		0.901						
16	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
17	13:17		1.261						
18	15:10		0.731						
19	15:07		0.729						
20	15:32		0.749						
21	16:57		0.817						
22	17:10		0.827						
23	17:42	1.00	0.853	1.00	38.34	50.00	0.332	0.433	0.77
24	18:12	1.00	0.878	1.00	56.53	50.00	1.006	0.889	1.13
25	18:20		0.884						
26	18:25		0.888						
27	18:25		0.888						
28	21:00		1.012						
29	14:42		0.709						
30	24:27	1.00	0.953	1.00	58.50	50.00	1.407	1.202	1.17
31	25:40	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	21:30		0.838						
33	23:02		0.898						
34	23:17		0.907						
35	23:17		0.907						
36	24:37	1.00	0.959	1.00	64.53	50.00	0.886	0.686	1.29
37	25:47	1.00	1.005	1.00	51.65	50.00	0.945	0.915	1.03
38	27:50		1.084						
39	32:00		1.247						
40	33:17		1.297						
41	32:15		1.256						
42	30:27	1.00	1.187	1.00	38.50	50.00	0.669	0.869	0.77

Versar INC.

ORIGINAL (Red)

VI. SAMPLE PREPARATION PACKAGE

1. Parameter Request Sheet
2. Screening Data Summary (soils only)
3. Comments
   a. Extraction
   b. Volatiles
   c. Semivolatiles
   d. Pesticides
4. Extraction Worksheets
   a. Chronicle
   b. Dry Weight Factor (soils only)
   c. Dilution Factor (B) Worksheets
5. Injection Sequence Logs
6. Chain of Custody

4/29

VERSAR LABORATORY OPERATIONS
*** REVISED PARAMETER REQUEST SHEET ***

Deliver To: 48

Control: 2536
Code: VERSCDM
Batch: 2
Job Number: 420.1.0

Case: R3-7
SDG: 1
Quote: 9000194 - 90
Charge:

Manager: BECKMAN
Company: VERSAR DIV 31

Site: CDM

Received: 19-APR-90
Due: 17-MAY-90

Sampled: 18-APR-90
Report: 17-MAY-90

Comments: Protocols-Organic SOW 2/88; Inorganic Metals SOW 787 and CN SOW 788; TCLP by the new reg. Do sample QC on field # 1.

Test	Sample	X	C	Field Number	Matrix	Location	Other Tests		
BNAL - 48									
	16419	A		1	SLUDGE	C-82	XBNA		
	16420	A		2	SLUDGE	C-82	XBNA		
	16421	A		3	SLUDGE	C-82	XBNA		
	16422	A		5	SLUDGE	C-82	XBNA		
	16423	B		6	SLUDGE	C-82	XBNA		
	16424	B		7	SLUDGE	C-82	XBNA		
CLPM - 43									
	16401	A		1	SLUDGE	C-82			
	16402	A		2	SLUDGE	C-82			
	16403	A		3	SLUDGE	C-82			
	16404	A		5	SLUDGE	C-82			
	16405	B		6	SLUDGE	C-82			
	16432	B		7	SLUDGE	C-82			
CNM - 44									
	16406	A		1	SLUDGE	C-82	TS		
	16407	A		2	SLUDGE	C-82	TS		
	16408	A		3	SLUDGE	C-82	TS		
	16409	A		5	SLUDGE	C-82	TS		
	16410	B		6	SLUDGE	C-82	TS		
	16411	B		7	SLUDGE	C-82	TS		
PEST - 47									
	16412	A		1	SLUDGE	C-82	XPES		
	16413	A		2	SLUDGE	C-82	XPES		
	16414	A		3	SLUDGE	C-82	XPES		
	16415	A		5	SLUDGE	C-82	XPES		
	16416	B		6	SLUDGE	C-82	XPES		
	16417	B		7	SLUDGE	C-82	XPES		
TCBN - 48									
	16418	B		1	SLUDGE	C-82	TCLM	TCLX	XTCB
							TCPS	XTCP	TCHB
							XTCH		
TCHB - 47									
	16418	B		1	SLUDGE	C-82	TCLM	TCLX	TCBN
							XTCB	TCPS	XTCP
							XTCH		
TCLM - 43									

Continued ->

Control #: 2536

Test	Sample	X	C	Field Number	Matrix	Location	Other Tests		
	16418	B	1		SLUDGE	C-82	TCLX TCPS XTCH	TCBN XTCP	XTCB TCHB
TCLV - 48									
	16425	B	1		SLUDGE	GCMS	ZHE		
TCLX - 43									
	16418	B	1		SLUDGE	C-82	TCLM TCPS XTCH	TCBN XTCP	XTCB TCHB
TCPS - 47									
	16418	B	1		SLUDGE	C-82	TCLM XTCB XTCH	TCLX XTCP	TCBN TCHB
TS - 44									
	16406	A	1		SLUDGE	C-82	CNM		
	16407	A	2		SLUDGE	C-82	CNM		
	16408	A	3		SLUDGE	C-82	CNM		
	16409	A	5		SLUDGE	C-82	CNM		
	16410	B	6		SLUDGE	C-82	CNM		
	16411	B	7		SLUDGE	C-82	CNM		
VOAL - 48									
	16426	B	1		SLUDGE	GCMS			
	16427	B	2		SLUDGE	GCMS			
	16428	B	3		SLUDGE	GCMS			
	16429	B	5		SLUDGE	GCMS			
	16430	B	6		SLUDGE	GCMS			
	16431	B	7		SLUDGE	GCMS			
XBNA - 46									
	16419	A	1		SLUDGE	C-82	BNAL		
	16420	A	2		SLUDGE	C-82	BNAL		
	16421	A	3		SLUDGE	C-82	BNAL		
	16422	A	5		SLUDGE	C-82	BNAL		
	16423	B	6		SLUDGE	C-82	BNAL		
	16424	B	7		SLUDGE	C-82	BNAL		
XPES - 46									
	16412	A	1		SLUDGE	C-82	PEST		
	16413	A	2		SLUDGE	C-82	PEST		
	16414	A	3		SLUDGE	C-82	PEST		
	16415	A	5		SLUDGE	C-82	PEST		
	16416	B	6		SLUDGE	C-82	PEST		
	16417	B	7		SLUDGE	C-82	PEST		
XTCB - 46									
	16418	B	1		SLUDGE	C-82	TCLM TCPS XTCH	TCLX XTCP	TCBN TCHB
XTCH - 46									
	16418	B	1		SLUDGE	C-82	TCLM XTCB TCHB	TCLX TCPS	TCBN XTCP
XTCP - 46									
	16418	B	1		SLUDGE	C-82	TCLM XTCB XTCH	TCLX TCPS	TCBN TCHB
ZHE - 43									
	16425	B	1		SLUDGE	GCMS	TCLV		

100143

Versar INC.

page: ___

Date: 5/1/90

TOTAL SOLIDS

Project No.: 420.1-2/# 2536

Metler Balance Calibration

Zero	0.0000	0.0000
50 mg wt.	0.0500	0.0500
1 gram wt.	1.0000	1.0000
50 gram wt.	49.9989	49.9989

@105°C

NBS Standard Ref. Material 16326 T.V. = 98.7%

Sample #	Cruicible Wt. (g)	Crucible + Sample (g)	Dried Cruc. + Sample (g)	% Solids	~~% H2O~~	Comments
Blank	14.8786	—	14.8783	<10mg/l		(-3mg/l)
Chalk	14.3804	15.2842	15.2725	98.7		(100% Rec.)
16426 16406	12.7191	18.8187	16.9902	70.0	30.0	X̄ = 68.9
16406 Dup	15.8558	22.5982	20.4327	67.8		RPD = 3.19%
16427 16407	14.6478	20.7913	19.1032	72.5	27.5	
16428 16408	14.1460	21.9569	19.5444	71.6	28.4	
16429 16409	12.9367	21.3704	16.7774	45.5	54.5	
16430 16410	13.4027	23.4984	19.3720	59.1	40.9	
16431 16411	12.2980	24.3485	23.8515	95.8	4.2	
						100144

MJ 5/11/90

Analyst M Anderson

Date 5/8/90

VERSAR, INC.
GCMS INSTRUMENT ID 1
DATE 4-23-90

INJECTION LOG

Sectors Left 8394

Filename	ASCII Filename	Stream ID	Method	Case	SDG	Field Sample ID	Level	Matrix	Versar Sample No.	Frac.	Type	Project	Batch	Dil. F/T	Dil. F/T	Dil. F/T	Ext. Purged	Vol. Purged	Final Dil.	IS No.
U3311		130				BFB 50ng												2ul		
U3312		130				BFB 50ng	tuned at 7:58											2ul		
U3313		130	CLP			VSTD 50	L	S	22517	V	cc-050							5ml		22388
U3314		130				BFB 50ng												2ul		
U3315		130				BFB 50ng	Changed septum											2ul		
U3316		130				BFB 50ng												2ul		
U3317		130				BFB 50ng												2ul		
U3318		130				BFB 50ng												2ul		
U3319		130				BFB 50ng												2ul		
U3320		130				BFB 50ng												2ul		
U3321		130				BFB 50ng												2ul		
U3322		130				BFB 50ng												2ul		
U3323		130				BFB 50ng												2ul		
U3324		130				BFB 50ng												2ul		
U3325		130				BFB 50ng												2ul		
U3326	T	130				BFB 50ng			tuned @ 3:49 pm									2ul		

Analyst Signature DDruer Date 4-23-90

ORIGINAL (Red)

00145

000044

VERSAR, INC.
GCMS INSTRUMENT ID U
DATE 4-23-90

INJECTION LOG

U042390-.91

Filename	ASCII Filename	Stream ID	Method	Case	SDG	Field Sample ID	Level	Matrix	Versar Sample No.	Frac.	Type	Project	Batch	Dil. F/T	Dil. F/T	Dil. F/T	Ext. Purged	Vol. Purged	Final Dil.	IS No.
U3327	Std A	130	CLP			VSTD50	L	S	22522	V	IC 050							5ml		2235
U3328		130	CLP			VSTD 200	L	S	22523	V	IC 200							5ml		22
U3329		130	CLP			VSTD 150	L	S	22524	V	IC 150							5ml		
U3330		130	CLP			VSTD 100	L	S	22525	V	IC 100							5ml		
U3331		130	CLP			VSTD20	L	S	22526	V	IC 020							5ml		
U3332		130	CLP			VBLK32	L	S	VBLK32	V	BLK							5ml		2235
U3333		130	CLP	VERS NOSH	2533	48442	L	S	16330A	V	-	420. 1.0	1					5g/5ml		
U3334		130	CLP	PRC CEDR	2477	KS001001	L	S	14948	V	-	420. 61.0	1					1g/5ml	1/5	
U3335		130	CLP	VERS NOSH	2533	48442 RE	L	S	16330A RE	V	-	420. 1.0	1					5g/5ml		

Analyst Signature [signature] Date 4-23-90

ORIGINAL (Red)

000045

100146

VERSAR, INC.
GCMS INSTRUMENT ID U
DATE 4-26-90

INJECTION LOG

Sectors Left 7915

	Filename	ASCII Filename	Stream ID	Method	Case	SDG	Field Sample ID	Level	Matrix	Versar Sample No.	Frac.	Type	Project	Batch	Dil. F/T	Dil. F/T	Dil. F/T	Ext. Purged	Vol. Purged	Final Dil.	IS No.
3	U3385	T	130	CLP			BFB 50ng		tuned		@		7:52						2ul		
	U3386	Std	130	CLP			VSTD 50	L	S	22546	V	CC-050							5ml		22
	U3387	BLANK	130	CLP			VBLK 87	L	S	VBLK87	~~87~~ V	BLK							5ml		223
	U3388		130	CLP	ENGI HARL	2542	HV-SED-1	L	S	16627	V	-	420.52.0	5					5g/5ml		223
	U3389		130	CLP	ENGI HARL	2542	HV-SED-2	L	S	16628	V	-	420.52.0	5					5g/5ml		2238
	U3390		130	CLP	ENGI ALBA	2544	AL-GW-5D-SS1	L	S	16641	V	-	420.52.0	3					5g/5ml		2238
	U3391		130	CLP	ENGI ALBA	2562	AL-GW-40-S1	L	S	16895	V	-	420.52.0	4					5g/5ml		2238
	U3392		130	CLP	VERS CDM	2536	B 1	L	S	16426	V	-	420.1.0	2					5g/5ml		2238
	U3393		130	CLP	VERS CDM	2536	B 2	L	S	16427	V	-	420.1.0	2					5g/5ml		2238
	U3394		130	CLP	VERS CDM	2536	B 3	L	S	16428	V	-	420.1.0	2					5g/5ml		2238
NB	U3395		130	CLP	VERS CDM	2536	5 ~~4~~	L	S	16429	V	-	420.1.0	2					5g/5ml		2238
NB	U3396		130	CLP	VERS CDM	2536	6	L	S	16430	V	-	420.1.0	2					5g/5ml		2238
NB	U3397		130	CLP	VERS CDM	2536	7	L	S	16431	V	-	420.1.0	2					5g/5ml		2238
	U3398	MS	130	CLP	VERS CDM	2536	1 MS	L	S	16426 MS	V	-	420.1.0	2					5g/5ml		2238
	U3399	MSD	130	CLP	VERS CDM	2536	1 MSD	L	S	16426 MSD	V	-	420.1.0	2					5g/5ml		2238
ALS	~~U3400~~		~~130~~	~~CLP~~	~~E+E AVIEY~~	~~2605~~	~~EWWP-372~~	~~L~~	~~SW~~ SD	~~17760~~	~~V~~	~~-~~	~~420.51.0~~	~~96~~		~~100 ml/5ml~~			~~5ml~~	~~5~~	~~2238~~

(instrument RESET)

Analyst Signature DPrew Date 4-26-90

ORIGINAL

00147

VERSAR, INC.
GCMS INSTRUMENT ID 4
DATE 4-27-90 MAT

INJECTION LOG

Sectors Free 4700

Filename	ASCII Filename	Stream ID	Method	Case	SDG	Field Sample ID	Level	Matrix	Versar Sample No.	Frac.	Type	Project	Batch	Dil. F/T	Dil. F/T	Dil. F/T	Ext. Purged	Vol. Purged	Final Dil.	IS No.
3 U3410	T					BFB 50ng		tuned		@		7:45						2ml		
U3411	MAT STD 4/27	130	CLP			MAT VS ID 58 ~~22554~~	L	S	22554	V	00-050							5ml		22388
U3412	BLANK	130	CLP			VBLK12	L	S	VBLK12	V	BLK							5ml		22388
U3413		130	CLP	VERS CDM	2536	B5	L	S	16429	V	-	420. 1.0	2					5g/5ml		22388
U3414		130	CLP	VERS CDM	2536	B6	L	S	16430	V	-	420. 1.0	2					5g/5ml		22388
U3415		130	CLP	VERS CDM	2536	B7	L	S	16431	V	-	420. 1.0	2					5g/5ml		22388
U3416		130	CLP	GTI YORK	2453	SSII-3B	L	S	14579	V	-	420. 33.0	2					5g/5ml		22388
U3417		130	CLP	GTI YORK	2453	SSII-9B	L	S	14580	V	-	420. 33.0	2					5g/5ml		22388
U3418		130	CLP	GTI YORK	2454	SSII-6B	L	S	14606	V	-	420. 33.0	3					5g/5ml		22388
U3419		130	CLP	GTI YORK	2454	SSII-10B	L	S	14608	V	-	420. 33.0	3					5g/5ml		22388
U3420	**	130	CLP	VERSCDM	2536	1	L	S	16426	V	-	420. 1.0	2					5g/5ml		22388
U3421		130	CLP	ICF ARROW	2549	SS29	L	S	16723	V	-	420. 58.0	10					5g/5ml		22388
U3422		130	CLP			SS30	L	S	16724	V	-							5g/5ml		22388
U3423		130	CLP			SS31	L	S	16725	V	-							5g/5ml		22388
U3424		130	CLP			SS29 MS	L	S	16723MS	V	-							5g/5ml		22388
U3425		130	CLP			SS29 MSD	L	S	16723MSD	V	-							5g/5ml		22388

ORIGINAL (Red)

100148

Analyst Signature DDrew Date 4-27-90

Office of Enforcement

CHAIN OF CUSTODY RECORD

Curtis Bldg., F[illegible] & Walnut Sts.
Philadelphia, Pe[illegible]sylvania 19106

PROJ. NO.: R3-7

PROJECT NAME: R3-7

SAMPLERS: (Signature) Sharon E. Schaffer, Laurie B. Wyl

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCLP VOA	TCLP BNA/Metals	VOA	BNA	Pest./PCB		REMARKS
													Tag #'s.
1	4/18/90	1000		X	Location 1 (Sludge)	10	2	2	2	1/2	1/2		3-10683 52, 53, 54, 55, 56, 57, 58, 60
					~~Location 2~~ SES 4/18/90					SES 4/18/90	SES 4/18/90		
					~~Location 3~~ SES 4/18/90								
					~~Location 5~~ SES 4/18/90								
					~~Location 6~~ SES 4/18/90								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E. Schaffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		J. L. Monaco	4/19/90 0900	Shipped via Federal Express Airbill # 2294123705	

ORIGINAL (RED)

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

100149

3-18549

ENVIRONMENTAL PROTECTION AGENCY
Offi f Enforcement

REGION 3
Curtis Bldg., C x Walnut Sts.
Philadelphia, Pennsylvania 19106

HAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
R3-7	R3-7

SAMPLERS: (Signature) Sharon E. Schaeffer Laurie B Wyl

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TAL Metals	Cyanide					REMARKS
													Tag #'s.
1	4/18/90	1000		X	Location 1 (Sludge)	2	1	1					3-1068341, 62.

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E Schaeffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) J. R. Morrison	Date / Time 4/19/90 0900	Remarks Shipped via Federal Express Airbill # 2294123705	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

ORIGINAL (Red)

1001150

ENVIRONMENTAL PROTECTION AGENCY
Offi[illegible] f Enforcement

REG[illegible]N 3
Curtis Bldg., 6[illegible] & Walnut Sts.
Philadelphia, Pennsylvania 19106

[illegible]HAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
R3-7	R3-7

SAMPLERS: (Signature) Sharon E. Schaeffer. Laurie B. Wyl[illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	~~TCL~~ VOA	BNA	PCB/Pest.	TAL Metals	Cyanide		REMARKS Tag #'s
2	4/18/90	1135		X	Location 2	6	2	1	1	1	1		3-1068359, 63, 64, 65, 66, 67
3	4/18/90	1145		X	Location 3	6	2	1	1	1	1		3-1068368, 69, 70, 71, 72, 73
5	4/18/90	1430		X	Location 5	6	2	1	1	1	1		3-1068374, 75, 76, 77, 78, 79
6	4/18/90	1455		X	Location 6	SES 4/18/90 ~~6~~ 10	2	~~1~~ 2	~~1~~ 2	~~1~~ 2	~~1~~ 2	SES 4/18/90	3-1068380, 81, 82, 83, 84, 85, 86, 87, 88, 89
7	4/18/90	1505		X	Location 7	SES 4/18/90 ~~6~~ 10	2	~~1~~ 2	~~1~~ 2	~~1~~ 2	~~1~~ 2	SES 4/18/90	3-1068390, 91, 92, 93, 94, 95, 96, 97, 98, 99

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E. Schaeffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature) J. L. Morrison	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) J. L. Morrison	Date / Time 4/19/90 0900	Remarks Shipped via Federal Express Airbill # 4026936093	

100151

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

ORIGINAL

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 3
Curtis Bldg., 6th & Walnut Sts.
Philadelphia, Pennsylvania 19106

CHAIN OF CUSTODY RECORD

PROJ. NO.: R3-7
PROJECT NAME: R3-7
SAMPLERS: (Signature) Sharon E. Schaeffer, Laurie B. Wyl

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TAL Metals	Cyanide					REMARKS
													Tag #'s
1	4/18/90	1000		X	Location 1 (Sludge)	2	1	1					3-1068341, 62.

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E. Schaeffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) J. T. Morrison	Date / Time 4/19/90 0900	Remarks Shipped via Federal Express Airbill # 2294123705	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

ORIGINAL

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

2506

REGION 3
Curtis Bldg., 6th & Walnut Sts.
Philadelphia, Pennsylvania 19106

CHAIN OF CUSTODY RECORD

PROJ. NO.: R3-7
PROJECT NAME: R3-7

SAMPLERS: (Signature) Sharon E. Schaeffer. Laurie B. Weyl

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	~~Tot~~ SES 4/18/90 VOA	BNA	PCB/Pest.	TAL Metals	Cyanide		REMARKS Tag #'s
2	4/18/90	1135		X	Location 2	6	2	1	1	1	1		3-1068359, 63, 64, 65, 66, 67
3	4/18/90	1145		X	Location 3	6	2	1	1	1	1		3-1068368, 69, 70, 71, 72, 73
5	4/18/90	1430		X	Location 5	6	2	1	1	1	1		3-1068374, 75, 76, 77, 78, 79
6	4/18/90	1455		X	Location 6	SES 4/18/90 ~~6~~ 10	2	~~1~~ 2	~~1~~ 2	~~1~~ 2	~~1~~ 2		SES 4/18/90 3-1068380, 81, 82, 83, 84, 85, 86, 87, 88, 89
7	4/18/90	1505		X	Location 7	SES 4/18/90 ~~6~~ 10	2	~~1~~ 2	~~1~~ 2	~~1~~ 2	~~1~~ 2		SES 4/18/90 3-1068390, 91, 92, 93, 94, 95, 96, 97, 98, 99

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E. Schaeffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature) J. L. Morrison	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) J. L. Morrison	Date / Time 4/19/90 0900	Remarks Shipped via Federal Express Airbill # 4026936093	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

Office of Enforcement

REGION 3
Curtis Bldg., 6th & Walnut Sts.
Philadelphia, Pennsylvania 19106

CHAIN OF CUSTODY RECORD

PROJ. NO.: R3-7
PROJECT NAME: R3-7
SAMPLERS: (Signature) Sharon E. Schaffer, Laurie B. Wyl

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCLP VOA	TCLP BNA/Metals	VOA	BNA	Pest./PCB	REMARKS Tag #'s
1	4/18/90	1000		X	Location 1 (Sludge)	10	2	2	2	½	½	3-10683 52, 53, 54, 55, 56, 57, 58, 60
					~~Location 2~~ SES 4/18/90					SES 4/18/90	SES 4/18/90	
					~~Location 3~~ SES 4/18/90							
					~~Location 5~~ SES 4/18/90							
					~~Location 6~~ SES 4/18/90							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E. Schaffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		[illegible]	4/19/90 0900	Shipped via Federal Express Airbill # 2294123705	

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