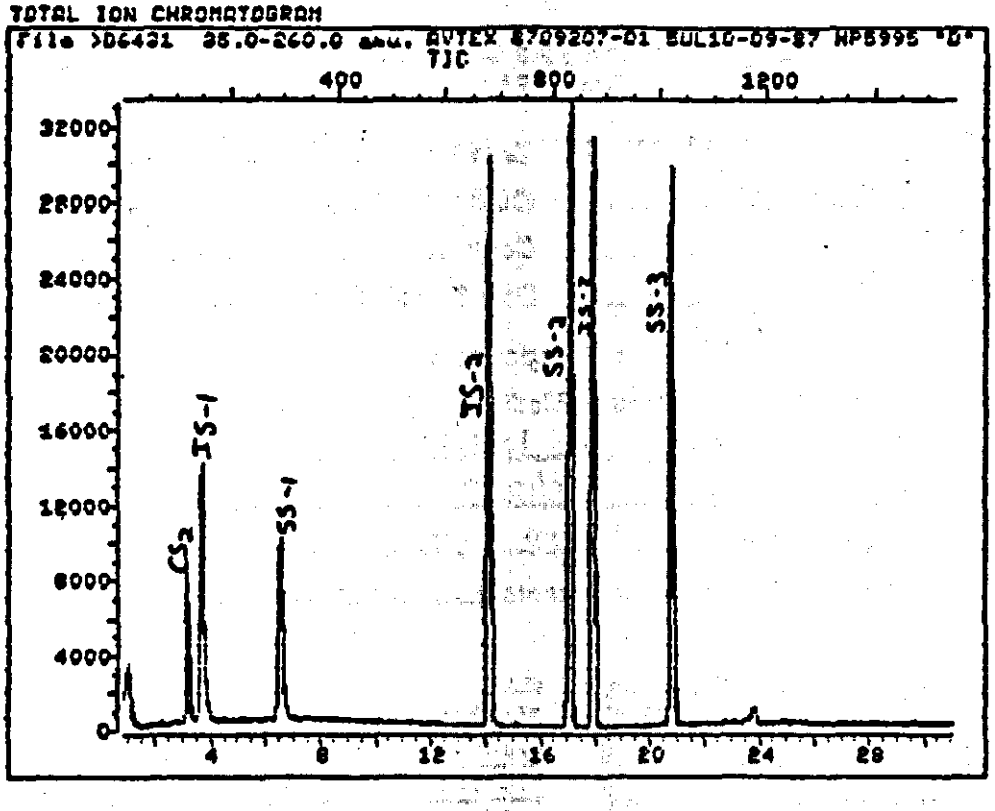
135933

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >D6431::D2
Name: AVTEX 8709207-01 5UL 1:1000 S1-I
Misc: 10-09-87 HP5995 "D" ALS.2

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

Operator ID: MARK
Quant Time: 871014 09:38
Injected at: 8710~~21~~10 00:23

AR303008

QUANT REPORT

Operator ID: MARK Quant Rev: 4 Quant Time: 871014 09:38
Output File: ^D6431::D2 Injected at: 871011 00:23
Data File: >D6431::D2 Dilution Factor: 1.00 ORIGINAL (Red)
Name: AVTEX 8709207-01 SUL
Misc: 10-09-87 HP5995 "D" ALS.2

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

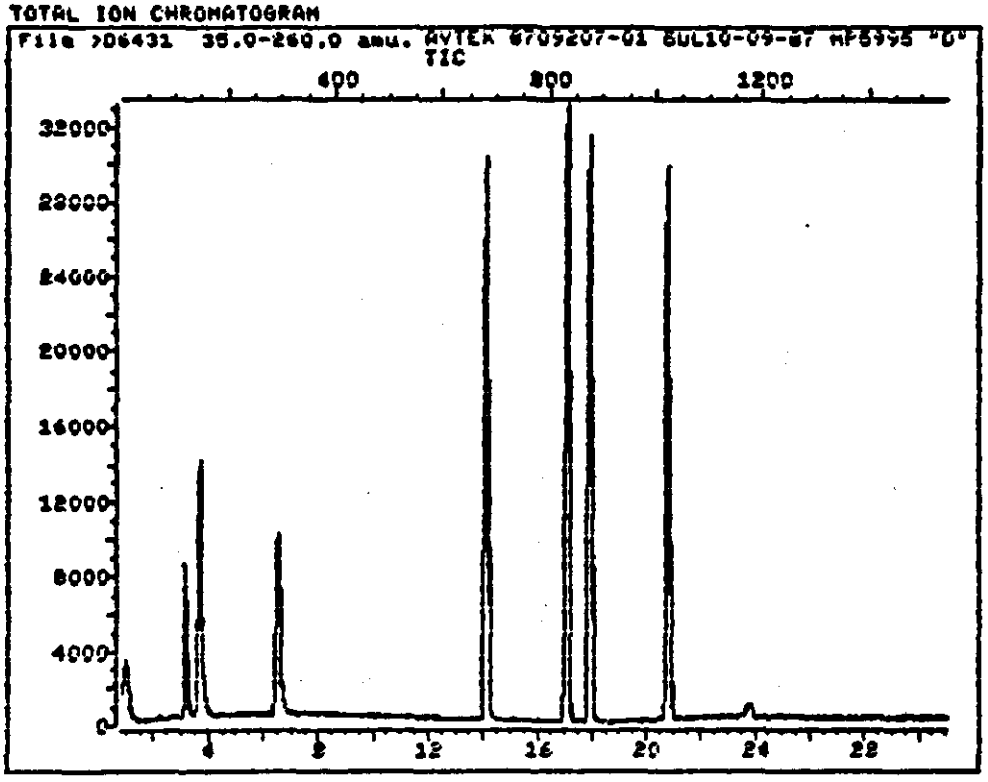
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	3.66	145	23720	50.00	UG/L	92
6)	METHYLENE CHLORIDE	2.21	71	276	.46	UG/L	100
7)	ACETONE	2.68	95	360	1.05	UG/L	100
7)	ACETONE	2.94	108	29	.08	UG/L	100
8)	CARBON DISULFIDE	3.15	119	41674	27.98	UG/L	100
8)	CARBON DISULFIDE	3.62	143	71	.05	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	6.55	293	40657	99.17	UG/L	93
15)	*1,4-DIFLUOROBENZENE IS-2	14.09	679	87997	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	17.90	874	71837	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	17.08	832	86975	100.38	UG/L	87
39)	BROMOFLUOROBENZENE (SS-3)	20.77	1021	48787	102.97	UG/L	82

F.S.

* Compound is ISTD

AR303009

TOTAL ION CHROMATOGRAM



Data File: >D6431::D2
Name: AVTEX 8709207-01 SUL
Misc: 10-09-87 HP5995 "D" ALS.2

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

Operator ID: MARK
Quant Time: 871014 09:38
Injected at: 871011 00:23

ORIGINAL (Red)

QUANT REPORT

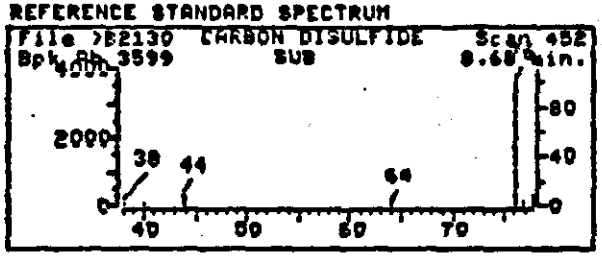
Operator ID: MARK Quant Rev: 4 Quant Time: 871014 09:38
Output File: ^D6431::D2 Injected at: 871011 00:23
Data File: >D6431::D2 Dilution Factor: 1.00
Name: AVTEX 8709207-01 SUL
Misc: 10-09-87 HP5995 "D" ALS.2

ID File: VOA524::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 524 HP 5995 "D"
Last Calibration: 871014 09:31

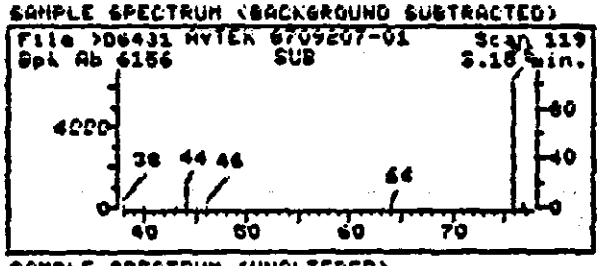
	Compound	R.T.	Scan#	Area	Conc	Units	Q
7)	ACETONE	2.68	95	360	1.05	UG/L	100
8)	CARBON DISULFIDE	3.15	119	41674	27.98	UG/L	100

AR303011

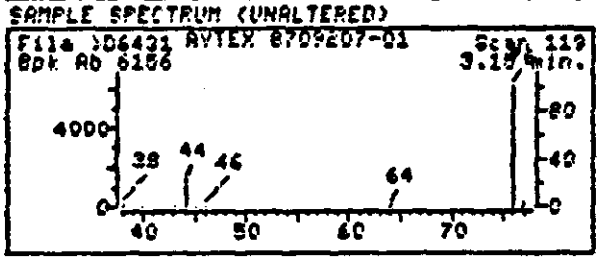
REFERENCE STANDARD SPECTRUM

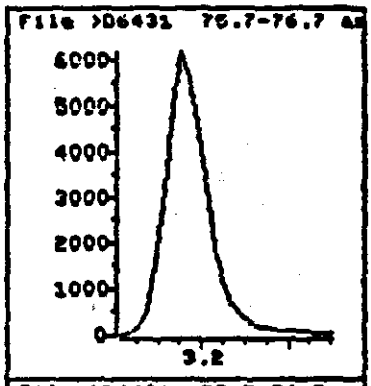


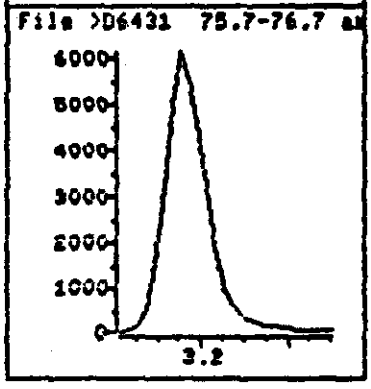
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







ORIGINAL (Red)

Data File: >D6431::D2
Name: AVTEX 8709207-01 SUL
Misc: 10-09-87 HP5995 "D" ALS.2
Quant Time: 871014 09:38
Injected at: 871011 00:23

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 119
Retention Time: 3.15 min.
Area: 41674
Concentration: 27.98 UG/L
q-value: 100

Sample Number
S1-E

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8709207
Lab Sample ID No: 8709207-02
QC Report No:
Sample Matrix: Water
Contract No: 68-01-7278
Data Release Authorized By: Rose Marquis
Date Sample Received: 9/24/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/1/87
Date Analyzed: 10/1/87
Conc/Dil Factor: 1:10 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	680
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be clearly

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng on the final column should be confirmed by GC/MS

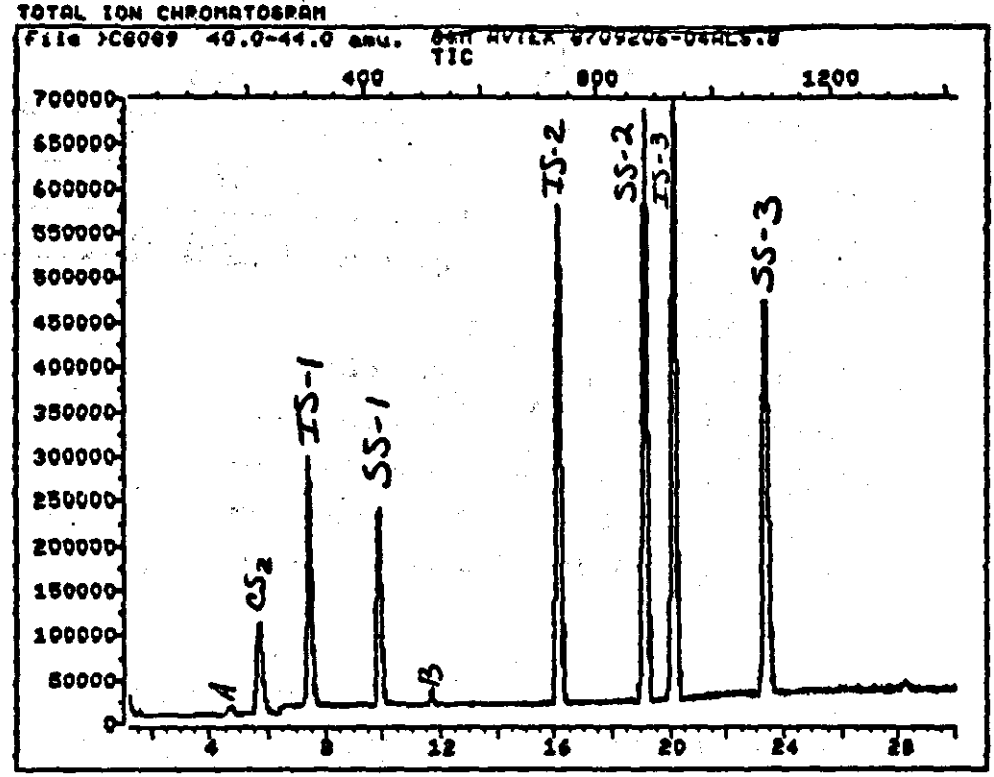
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully defined and their use explained in the data summary report.

NR not reported

AR303013

TOTAL ION CHROMATOGRAM



S1-E
8709207-02

Data File: >C8089::UP
Name: G&M AVTEX 8709207-02
Misc: ALS.8

1:10

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

Operator ID:
Quant Time: 871002 09:43
Injected at: 871001 21:57

1:10

ORIGINAL (Red)

AR303014

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 871002 09:43
Output File: ^C8089::P3 Injected at: 871001 21:57
Data File: >C8089::UP Dilution Factor: 1.00
Name: G&M AVTEX 8709205-04
Misc: ALS.8

ORIGINAL (Red)

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	7.40	305	543186	50.00	UG/L	100
8)	CARBON DISULFIDE	5.65	219	901776	67.83	UG/L	98
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.87	427	734568	102.43	UG/L	93
15)	•1,4-DIFLUOROBENZENE IS-2	16.12	735	2146701	50.00	UG/L	100
30)	•D5-CHLOROBENZENE IS-3	20.08	930	2078087	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	19.08	881	2073219	102.06	UG/L	90
39)	BROMOFLUOROBENZENE (SS-3)	23.31	1089	1188202	101.80	UG/L	91

• Compound is ISTD

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 871002 09:43
Output File: ^C8089::P3 Injected at: 871001 21:57
Data File: >C8089::UP Dilution Factor: 1.00
Name: S&M AVTEX 8709206-04
Misc: ALS.8

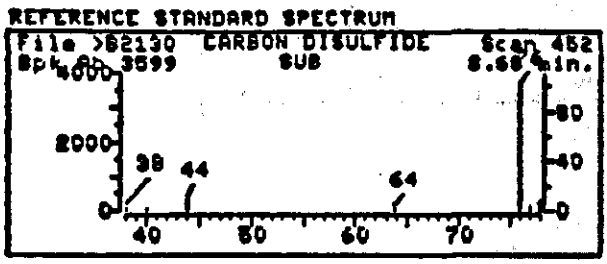
ORIGINAL (Red)

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

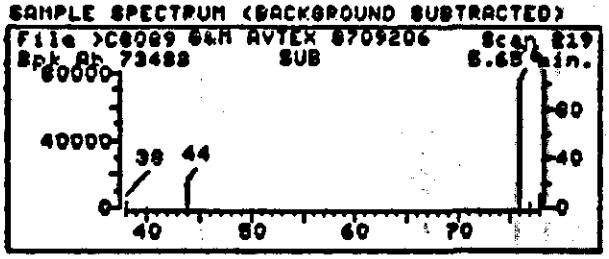
	Compound	R.T.	Scan#	Area	Conc	Units	Q
8)	CARBON DISULFIDE	5.65	219	901775	67.83	UG/L	98

AR303016

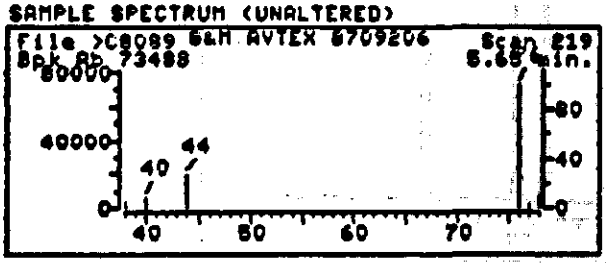
REFERENCE STANDARD SPECTRUM

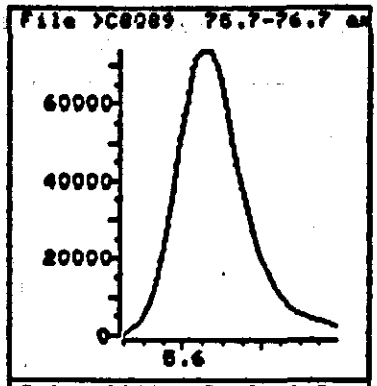


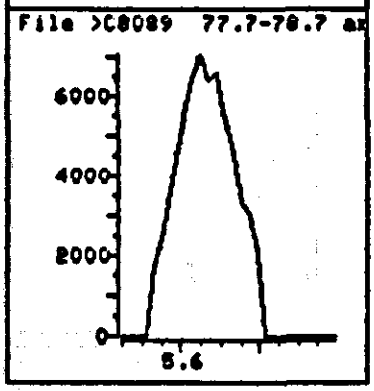
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



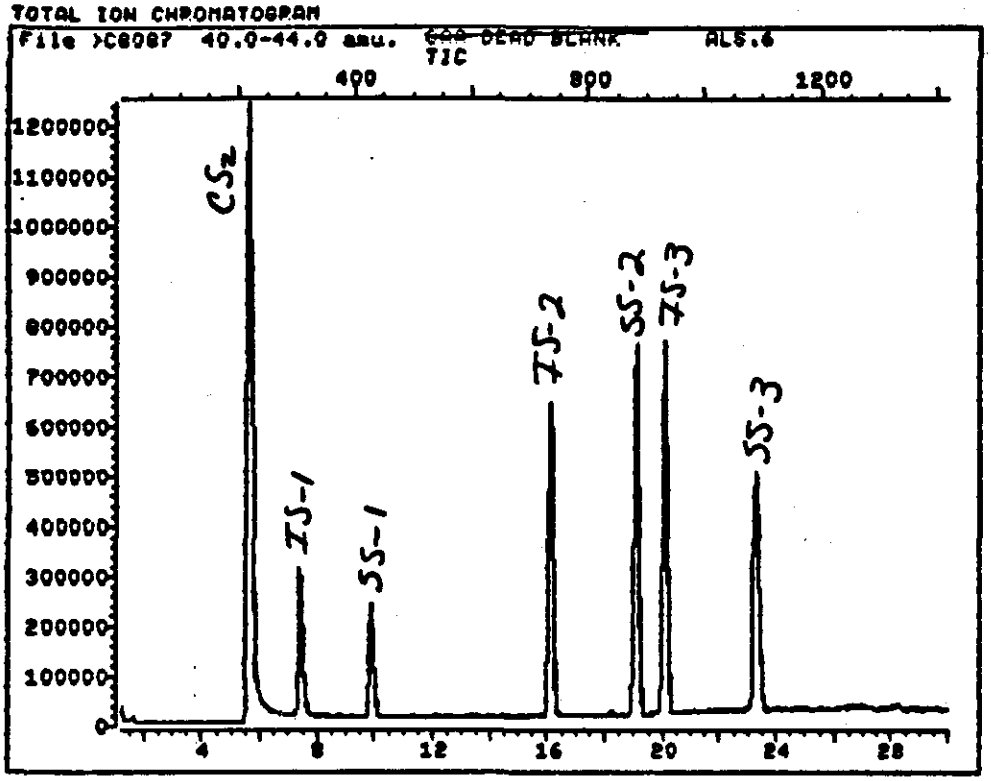




Data File: >C8089::UP
Name: G&M AVTEX 8709206-04
Misc: ALS.8
Quant Time: 871002 09:43
Injected at: 871001 21:57

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 219
Retention Time: 5.65 min.
Area: 901776
Concentration: 67.83 UG/L
q-value: 98

TOTAL ION CHROMATOGRAM



S2 - I

Data File: >CB087::UP
Name: ~~GAA DEAD BLANK~~
Misc: ALS.6 Grm Autex 8709207-03

1:100

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-05 (INSTR. C)
Last Calibration: 871001 16:19

Operator ID:
Quant Time: 871002 09:37
Injected at: 871001 20:33

AR303018

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 871002 09:37
Output File: ^C8087::P3 Injected at: 871001 20:33
Data File: >C8087::UP Dilution Factor: 1.00
Name: CAA DEAD BLANK
Misc: ALS.6

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	7.42	306	568645	50.00	UG/L	100
8)	CARBON DISULFIDE	5.61	217	9807438	704.71	UG/L	97
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.90	428	741900	98.82	UG/L	93
15)	*1,4-DIFLUOROBENZENE IS-2	16.12	735	2369804	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	20.06	929	2256149	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	19.07	880	2280942	103.42	UG/L	91
39)	BROMOFLUOROBENZENE (SS-3)	23.28	1087	1273104	100.47	UG/L	87

* Compound is ISTD

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 871002 09:37
Output File: ^C8087::P3 Injected at: 871001 20:33
Data File: >C8087::UP Dilution Factor: 1.00
Name: CAA DEAD BLANK
Misc: ALS.6

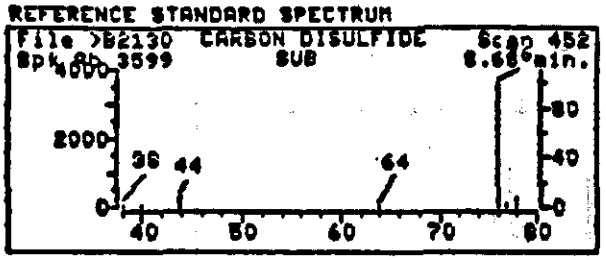
ORIGINAL (Red)

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

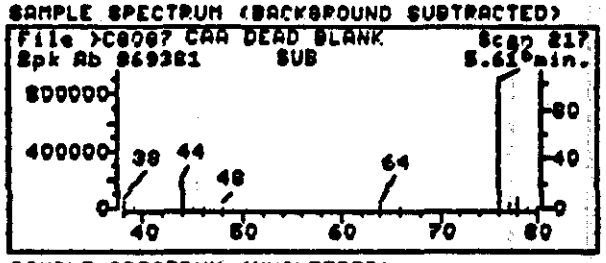
	Compound	R.T.	Scan#	Area	Conc	Units	q
B)	CARBON DISULFIDE	5.61	217	9807438	704.71	UG/L	97

AR303020

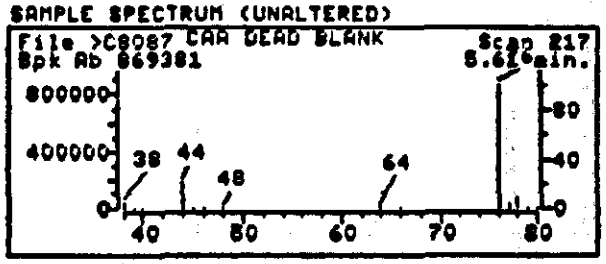
REFERENCE STANDARD SPECTRUM

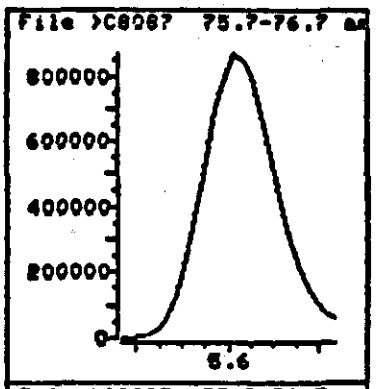


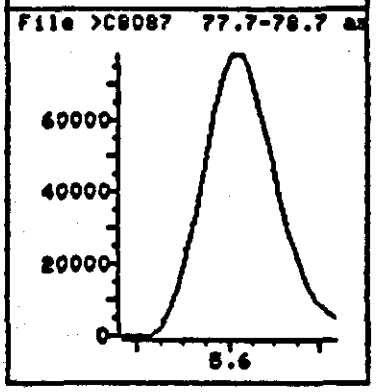
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





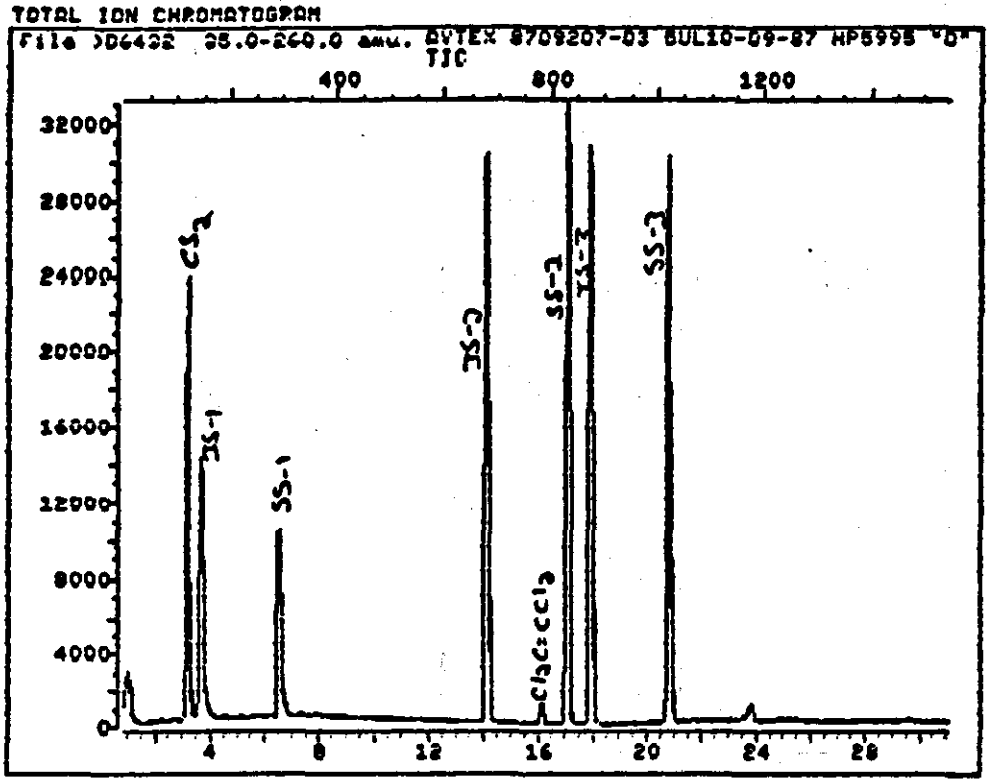


ORIGINAL (Red)

Data File: >C8087::UP
Name: CAA DEAD BLANK
Misc: ALS.6
Quant Time: 871002 09:37
Injected at: 871001 20:33

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 217
Retention Time: 5.61 min.
Area: 9807438
Concentration: 704.71 UG/L
q-value: 97

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

SD-I

Data File: >D6432::D2
Name: AVTEX 8709207-03 SUL 1:100
Misc: 10-09-87 HP5995 "D" ALS.3

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

Operator ID: MARK
Quant Time: 871014 09:40
Injected at: 871015 01:02

QUANT REPORT

Operator ID: MARK
Output File: ^D6432::D2
Data File: >D6432::D2
Name: AVTEX 8709207-03 SUL
Misc: 10-09-87 HP5995 "D" ALS.3

Quant Rev: 4 Quant Time: 871014 09:40
Injected at: 871011 01:02
Dilution Factor: 1.00

ORIGINAL (Red)

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

	Compound	R.T.	Scan#	Area	Conc	Units	Q
1)	•BROMOCHLOROMETHANE IS-1	3.64	144	23168	50.00	UG/L	91
6)	METHYLENE CHLORIDE	2.21	71	334	.57	UG/L	100
7)	ACETONE	2.64	93	494	1.48	UG/L	100 FR.
7)	ACETONE	2.76	99	29	.09	UG/L	100 ✓
8)	CARBON DISULFIDE	3.15	119	117121	80.51	UG/L	100
8)	CARBON DISULFIDE	3.70	147	200	.14	UG/L	100
8)	CARBON DISULFIDE	3.79	152	110	.08	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	6.53	292	41019	102.44	UG/L	93
15)	•1,4-DIFLUOROBENZENE IS-2	14.07	678	87591	50.00	UG/L	100
30)	•D5-CHLOROBENZENE IS-3	17.88	873	70208	50.00	UG/L	100 ✓
33)	TETRACHLOROETHYLENE	16.14	784	1031	1.63	UG/L	91
35)	D-8 TOLUENE (SS-2)	17.06	831	85496	100.96	UG/L	91
39)	BROMOFLUOROBENZENE (SS-3)	20.77	1021	47699	103.01	UG/L	82

• Compound is ISTD

QUANT REPORT

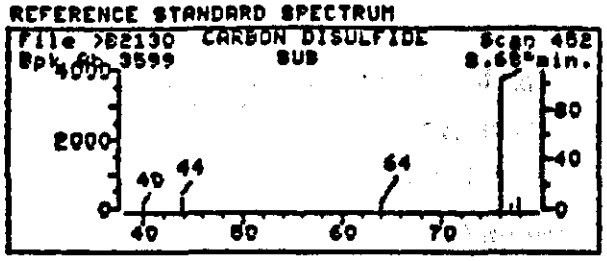
ORIGINAL (Red)

Operator ID: MARK Quant Rev: 4 Quant Time: 871014 09:40
Output File: ^D6432::D2 Injected at: 871011 01:02
Data File: >D6432::D2 Dilution Factor: 1.00
Name: AUTEX 8709207-03 SUL
Misc: 10-09-87 HP5995 "D" ALS.3

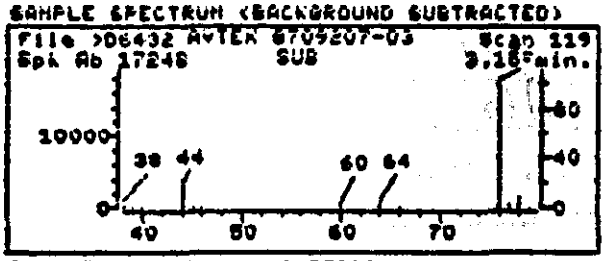
ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

	Compound	R.T.	Scan#	Area	Conc	Units	q
7)	ACETONE	2.64	93	494	1.48	UG/L	100
8)	CARBON DISULFIDE	3.15	119	117121	80.51	UG/L	100
33)	TETRACHLOROETHYLENE	16.14	784	1031	1.63	UG/L	91

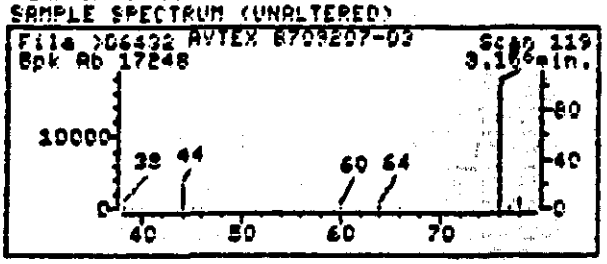
REFERENCE STANDARD SPECTRUM

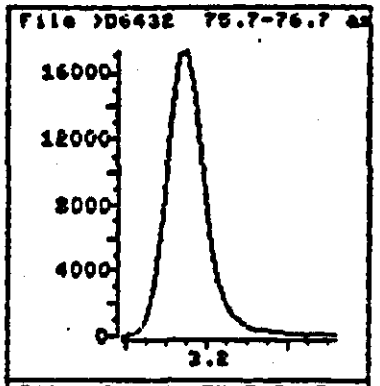


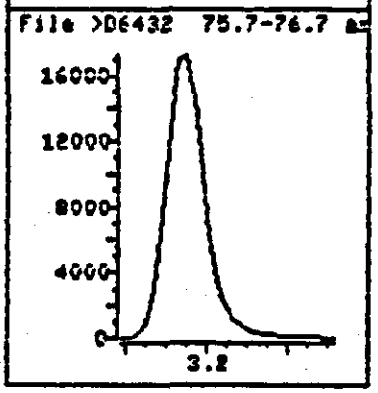
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







Data File: >D6432::D2
Name: AVTEX 8709207-03 SUL
Misc: 10-09-87 HPS995 "D" ALS.3
Quant Time: 871014 09:40
Injected at: 871011 01:02

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 119
Retention Time: 3.15 min.
Area: 117121
Concentration: 80.51 UG/L
q-value: 100

ORIGINAL

AR303025

Sample Number
S2-E

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc. Case No: P709207
Lab Sample ID No: 9709207-04 QC Report No: ORIGINAL (Red)
Sample Matrix: Water Contract No: ~~68-01-7278~~ fm
Data Release Authorized By: Rona Marquis Date Sample Received: 9/24/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/1/87
Date Analyzed: 10/1/87
Conc/Dil Factor: 1:10 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
64-1	Acetone	NR
75-15-0	Carbon Disulfide	2000
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
73-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

B This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

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

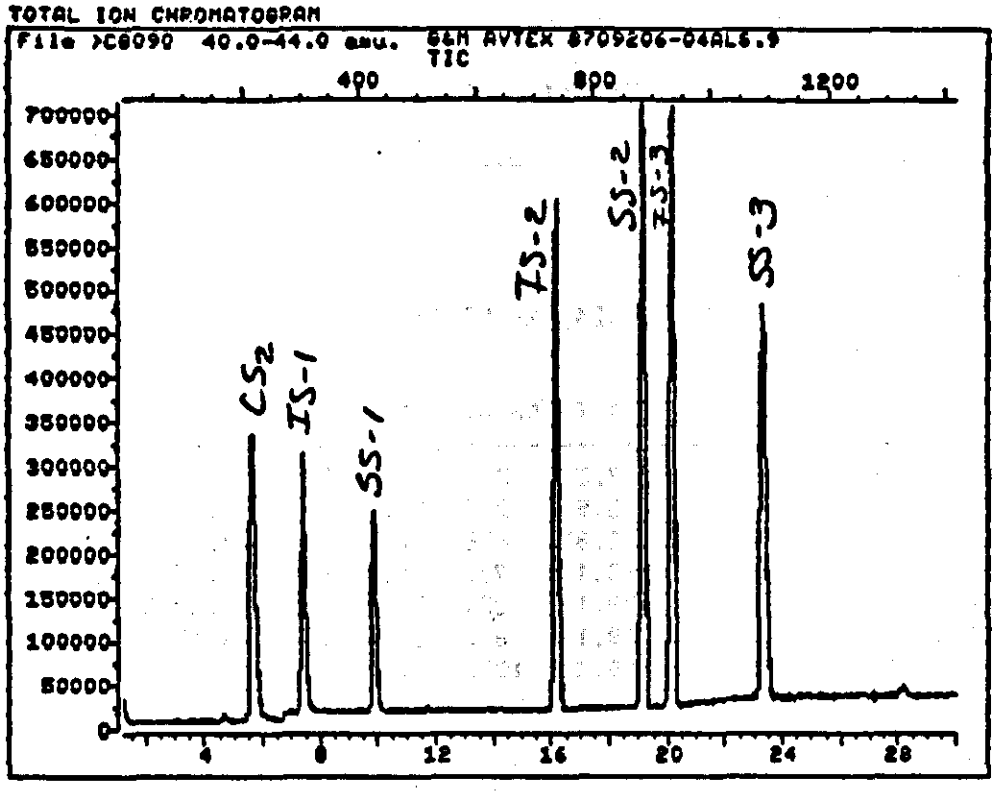
Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and placed on the data summary report.

NR not reported

AR308026

2384

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

S2-E

Data File: >C8090::UP
Name: G&M AVTEX 8709207-04
Misc: ALS.9

G&M 8709207-04

1:10

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

Operator ID:
Quant Time: 871002 09:46
Injected at: 871001 22:39

1:10

AR303027

QUANT REPORT

ORIGINAL (Red)

Operator ID: Quant Rev: 4 Quant Time: 871002 09:46
Output File: ^C8090::P3 Injected at: 871001 22:39
Data File: >C8090::UP Dilution Factor: 1.00
Name: G&M AVTEX 8709206-04
Misc: ALS.9

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

	Compound	R.T.	Scan#	Area	Conc	Units	Q
1)	•BROMOCHLOROMETHANE IS-1	7.38	304	570407	50.00	UG/L	100
8)	CARBON DISULFIDE	5.61	217	2766722	198.19	UG/L	98
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.85	426	773350	102.69	UG/L	91
15)	•1,4-DIFLUOROBENZENE IS-2	16.14	736	2194126	50.00	UG/L	100
30)	•D5-CHLOROBENZENE IS-3	20.10	931	2114686	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	19.11	882	2180142	105.46	UG/L	91
39)	BROMOFLUOROBENZENE (SS-3)	23.30	1088	1194116	100.54	UG/L	91

• Compound is ISTD

QUANT REPORT

ORIGINAL (Red)

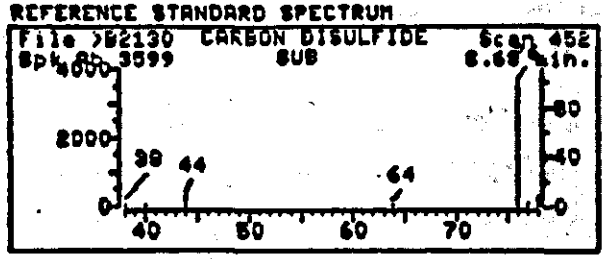
Operator ID: Quant Rev: 4 Quant Time: 871002 09:46
Output File: ^C8090::P3 Injected at: 871001 22:39
Data File: >C8090::UP Dilution Factor: 1.00
Name: 6&M AVTEX 8709206-04
Misc: ALS.9

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 16:19

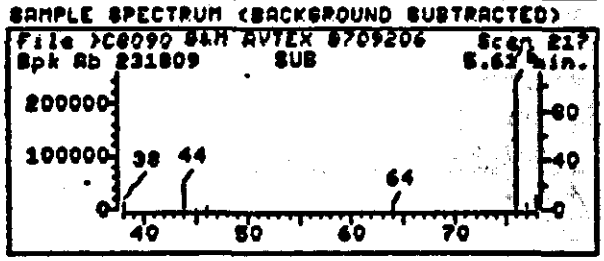
	Compound	R.T.	Scan#	Area	Conc	Units	q
6)	CARBON DISULFIDE	5.61	217	2766722	198.19	UG/L	98

AR303029

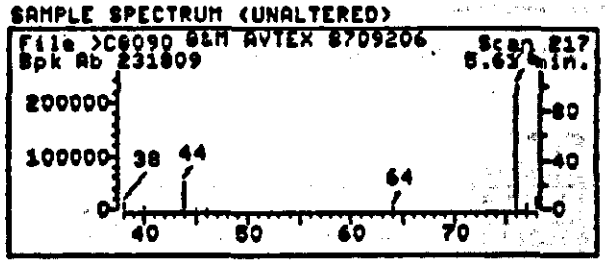
REFERENCE STANDARD SPECTRUM

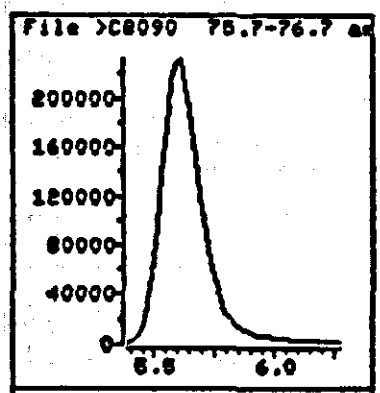


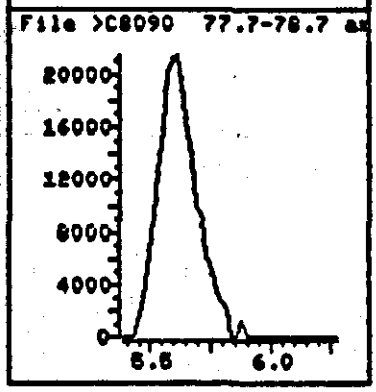
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







ORIGINAL (Red)

Data File: >C8090::UP
Name: G&M AVTEX 8709206-04
Misc: ALS.S
Quant Time: 871002 09:46
Injected at: 871001 22:39

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 217
Retention Time: 5.61 min.
Area: 2765722
Concentration: 198.19 UG/L
q-value: 98

AR303030

Sample Number
S3-E

ORIGINAL (Rcd)

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc. Case No: 8709207
Lab Sample ID No: 8709207-05 QC Report No:
Sample Matrix: Water Contract No: 68-01-7278
Data Release Authorized By: Rosa Marquez Date Sample Received: 9/24/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/1/87
Date Analyzed: 10/1/87
Conc/Dil Factor: 1:100 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
64-1	Acetone	NR
.15-0	Carbon Disulfide	2600
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be clear.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 2 µg/l is calculated, report as 2J.

B This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and submitted as part of the data summary report.

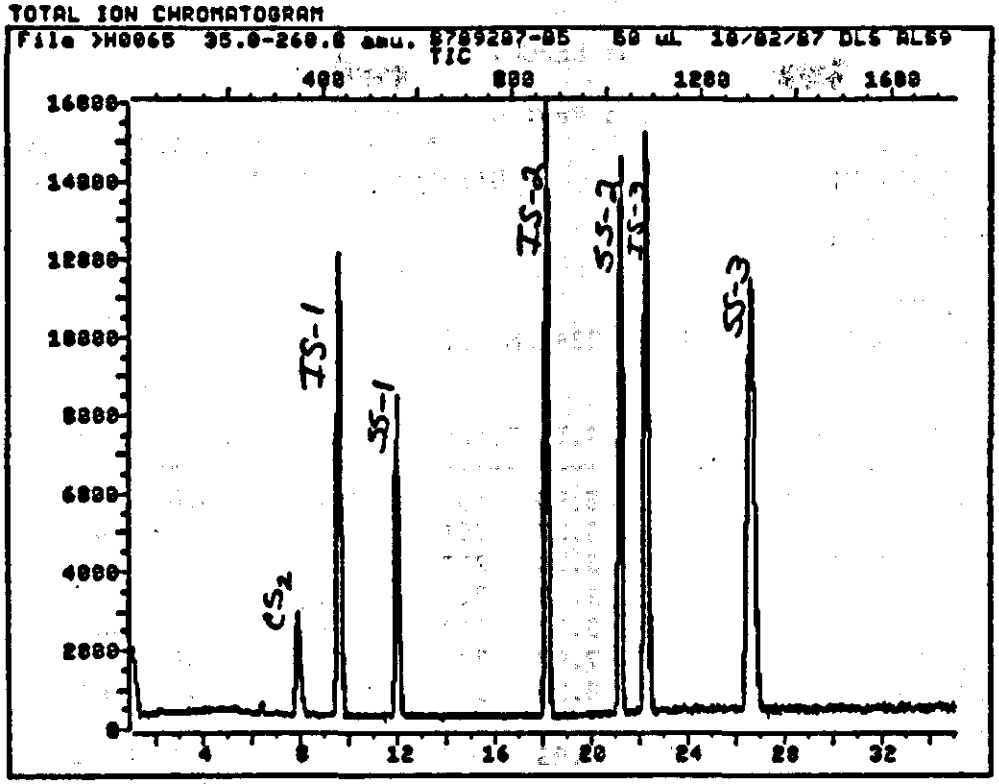
AR303031

NR not reported

AR303031

Form I 11/85

TOTAL ION CHROMATOGRAM



S3-E

Data File: >H0065::H1
Name: 8709207-05 50 uL
Misc: 10/02/87 DLS ALS9

Quant Output File: ^H0065::QU

1:100

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:16

Operator ID: DENNIS
Quant Time: 871002 22:35
Injected at: 871002 21:54

Scale S3

AR303032

QUANT REPORT

Operator ID: DENNIS Quant Rev: 5 Quant Time: 871007 11:03
Output File: ^H0065::QU Injected at: 871002 21:54
Data File: >H0065::H1 Dilution Factor: 1.00000
Name: 8709207-05 50 uL
Misc: 10/02/87 DLS ALS9

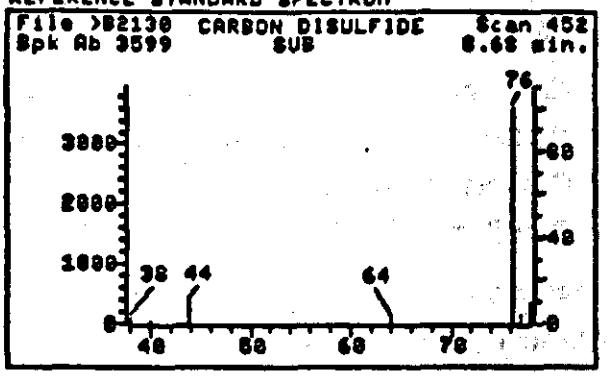
ORIGINAL (first)

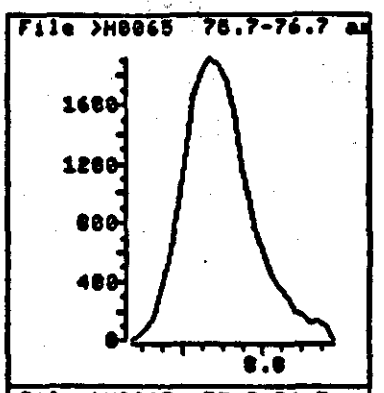
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871007 10:43

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.53	431	18100	50.00	UG/L	100
5)	METHYLENE CHLORIDE	5.27	264	52	.15	UG/L	100
5)	METHYLENE CHLORIDE	5.34	268	274	.78	UG/L	100
7)	ACETONE	5.91	297	127	1.85	UG/L	100
7)	ACETONE	5.97	300	205	3.00	UG/L	100
8)	CARBON DISULFIDE	7.87	346	22676	28.50	UG/L	100
8)	CARBON DISULFIDE	8.20	363	97	.12	UG/L	100
8)	CARBON DISULFIDE	8.34	370	53	.08	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.95	555	30204	104.16	UG/L	94
15)	*1,4-DIFLUOROBENZENE IS-2	18.12	871	51562	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	22.19	1079	43925	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	21.13	1025	48373	97.31	UG/L	83
39)	BROMOFLUOROBENZENE (SS-3)	26.60	1305	43067	104.48	UG/L	81

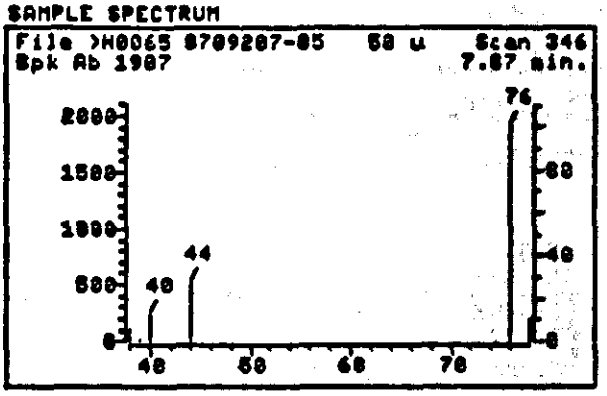
* Compound is ISTD

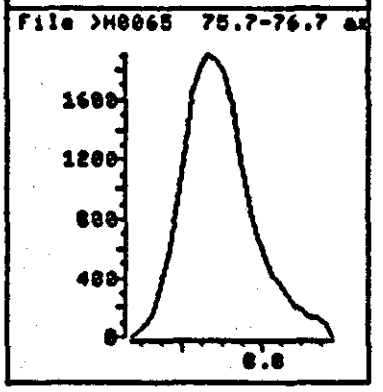
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM





Data File: >H0065::H1
Name: 8709207-05 50 uL
Misc: 10/02/87 DLS ALS9
Quant Time: 871002 22:35
Injected at: 871002 21:54

Quant Output File: ^H0065::QU

Quant ID File: HVOAID::P1
Last Calibration: 870918 09:16

Compound No: 6
Compound Name: CARBON DISULFIDE
Scan Number: 346
Retention Time: 7.87 min.
Quant Ion: 76.0
Area: 22676
Concentration: ~~12.53~~ UG/L
28.49 µg/L
q-value: 100

✓

ORIGINAL

AR303034

Sample Number
SC-I

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8709207
Lab Sample ID No: 8709207-06
QC Report No:
Sample Matrix: Water
Contract No: 68-01-7278
Data Release Authorized By: Rose Marquis
Date Sample Received: 9/24/87 ORIGINAL (Red)

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/1/87
Date Analyzed: 10/1/87
Conc/Dil Factor: 1:100 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	5 or 100
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be added.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

B This flag applies to inorganic parameters where the identification has been confirmed by GC/MS. Single components exceeding 210 ng on the final extract should be confirmed by GC/MS.

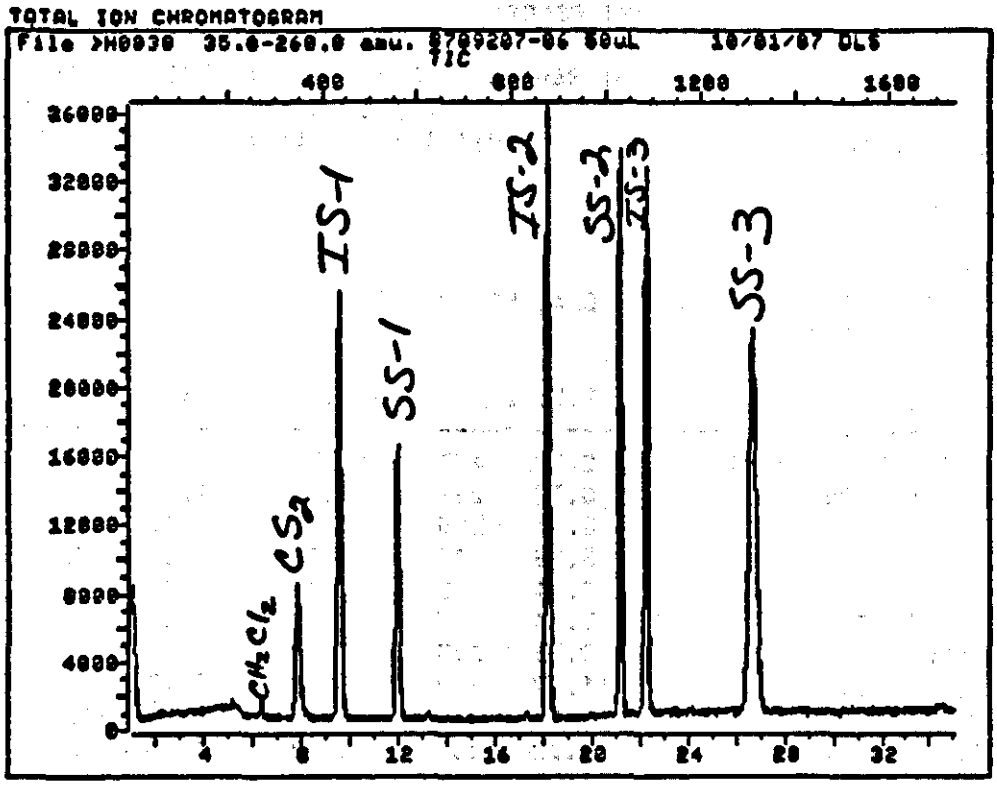
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and documented in the data summary report.

NR not reported

AR303035

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0038::H1
Name: 8709207-06 50uL
Misc: 10/01/87 DLS

Quant Output File: ^H0038::QU

SC-I

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:16

Operator ID: DENNIS
Quant Time: 871002 10:00
Injected at: 871001 15:53

QUANT REPORT

Operator ID: DENNIS Quant Rev: 5 Quant Time: 871002 10:00
Output File: ^H0038::QU Injected at: 871001 16:53
Data File: >H0038::H1 Dilution Factor: 1.00000
Name: 8709207-06 50uL
Misc: 10/01/87 DLS

ORIGINAL (Red)

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 524, HP 5970 'H'
Last Calibration: 870918 09:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.52	433	44372	50.00	UG/L	100
6)	METHYLENE CHLORIDE	6.32	269	2275	1.94	UG/L	100
7)	ACETONE	6.91	299	331	2.07	UG/L	100
7)	ACETONE	6.96	302	106	.66	UG/L	100
7)	ACETONE	7.04	306	205	1.28	UG/L	100
8)	CARBON DISULFIDE	7.84	347	65892	20.54	UG/L	100
8)	CARBON DISULFIDE	8.35	373	581	.18	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.97	558	55811	87.12	UG/L	95
15)	*1,4-DIFLUOROBENZENE IS-2	18.14	874	129012	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	22.22	1083	105548	50.00	UG/L	100
32)	2-HEXANONE	20.66	1003	201	.40	UG/L	81
35)	D-8 TOLUENE (SS-2)	21.15	1028	116131	106.01	UG/L	83
39)	BROMOFLUOROBENZENE (SS-3)	26.66	1310	89492	91.56	UG/L	92

* Compound is ISTD

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 871002 10:00
Output File: ^H0038::QU Injected at: 871001 16:53
Data File: >H0038::H1 Dilution Factor: 1.00000
Name: 8709207-06 50uL
Misc: 10/01/87 DLS

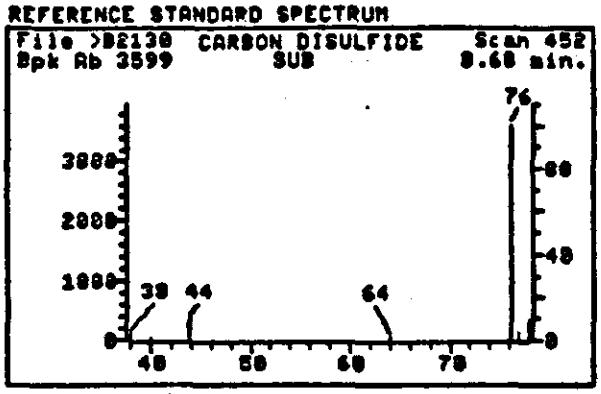
ORIGINAL (Red)

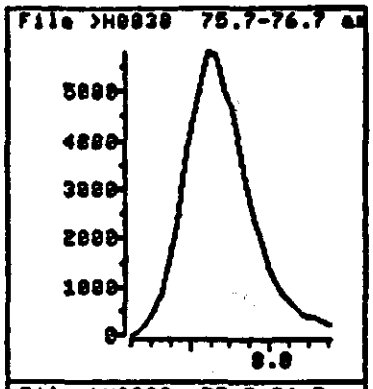
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
6)	METHYLENE CHLORIDE	6.32	269	2275	1.94	UG/L	100 ✓
7)	ACETONE	6.91	299	331	2.07	UG/L	100 F.P
8)	CARBON DISULFIDE	7.84	347	65892	20.54	UG/L	100 ✓
~~14)~~	~~D4 1,2-DICHLOROETHANE (GC 1)~~	~~11.87~~	~~558~~	~~55811~~	~~67.12~~	~~UG/L~~	~~95~~
32)	2-HEXANONE	20.66	1003	201	.40	UG/L	81 F.P.

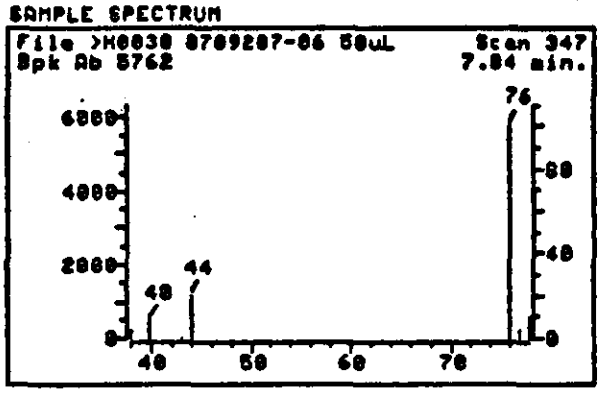
AR303038

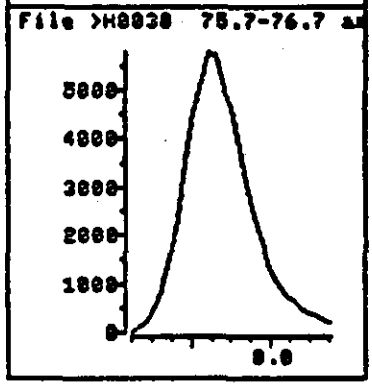
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM



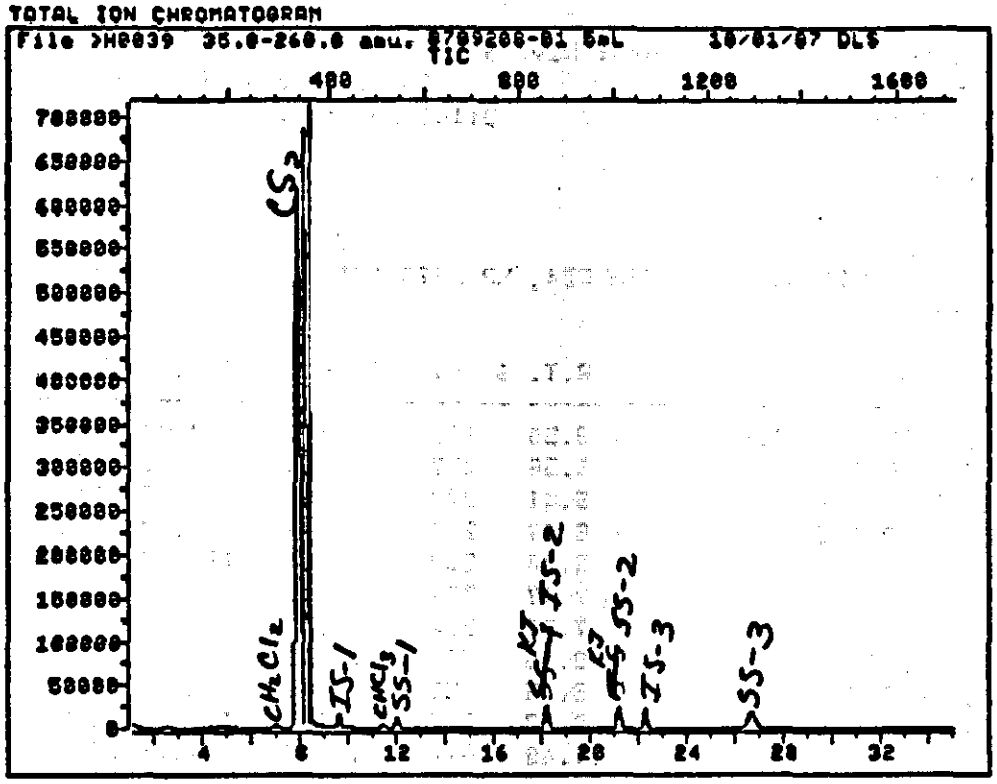


Data File: >H0038::H1 Quant Output File: ^H0038::QU
Name: 8709207-06 50uL
Misc: 10/01/87 DLS
Quant Time: 871002 10:00 Quant ID File: HVOAID::P1
Injected at: 871001 16:53 Last Calibration: 870918 09:16

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 347
Retention Time: 7.84 min.
Quant Ion: 76.0
Area: 55892
Concentration: 20.54 UG/L
q-value: 100

ORIGINAL (Red)

TOTAL ION CHROMATOGRAM



Data File: >H0039::H1
Name: 8709208-01 5mL
Misc: 10/01/87 DLS

Quant Output File: ^H0039::QU

SC-E

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:16

Operator ID: DENNIS
Quant Time: 871001 18:15
Injected at: 871001 17:34

rerun

1:100.

AR303040

QUANT REPORT

ORIGINAL (Red)

Operator ID: DENNIS Quant Rev: 6 Quant Time: 871001 18:15
Output File: ^H0039::QU Injected at: 871001 17:34
Data File: >H0039::H1 Dilution Factor: 1.00000
Name: 8709208-01 5mL
Misc: 10/01/87 DLS

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.58	418	25270	50.00	UG/L	100
6)	METHYLENE CHLORIDE	6.36	267	368	.55	UG/L	100
6)	METHYLENE CHLORIDE	6.41	270	283	.42	UG/L	100
6)	METHYLENE CHLORIDE	6.47	273	64	.10	UG/L	100
7)	ACETONE	6.98	299	14364	158.03	UG/L	100
7)	ACETONE	7.47	324	63	.69	UG/L	100
7)	ACETONE	7.67	334	151	1.66	UG/L	100
8)	CARBON DISULFIDE	8.15	352	5595405M	3063.30	UG/L	100
8)	CARBON DISULFIDE	8.15	352	1332743	729.63	UG/L	100
8)	CARBON DISULFIDE	8.37	356	201119	110.11	UG/L	100
12)	CHLOROFORM	11.46	514	14914	7.96	UG/L	99
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.97	540	36684	100.55	UG/L	94
15)	*1,4-DIFLUOROBENZENE IS-2	18.18	858	89810	50.00	UG/L	100
16)	2-BUTANONE (MEK)	12.00	542	85	3.48	UG/L	46
30)	*D5-CHLOROBENZENE IS-3	22.22	1065	77942	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	21.19	1012	83399	103.09	UG/L	83
39)	BROMOFLUOROBENZENE (SS-3)	26.66	1292	38190	52.91	UG/L	86

* Compound is ISTD

QUANT REPORT

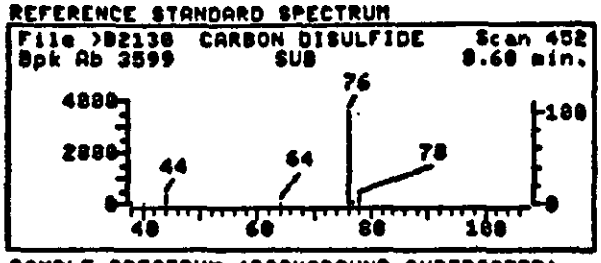
Operator ID: DENNIS Quant Rev: 6 Quant Time: 871001 18:15
Output File: ^H0039::QU Injected at: 871001 17:34
Data File: >H0039::H1 Dilution Factor: 1.00000
Name: 8709208-01 5mL
Misc: 10/01/87 DLS

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 524, HP 5970 'H'
Last Calibration: 870918 09:16

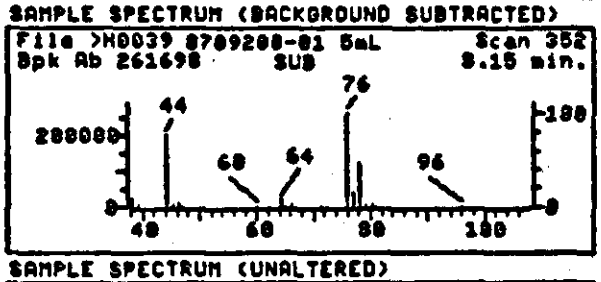
ORIGINAL (Red)

	Compound	R.T.	Scan#	Area	Conc	Units	q
7)	ACETONE	6.98	299	14364	158.03	UG/L	100
8)	CARBON DISULFIDE	8.15	352	5595405M	3063.30	UG/L	100
12)	CHLOROFORM	11.46	514	14914	7.96	UG/L	99
16)	2-BUTANONE (MEK)	12.00	542	85	3.48	UG/L	46

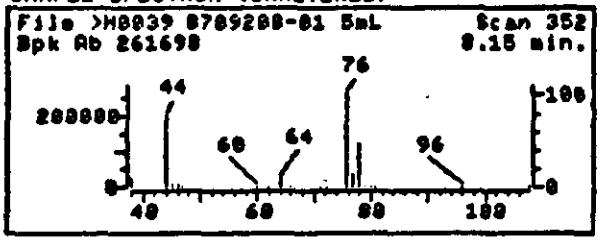
REFERENCE STANDARD SPECTRUM

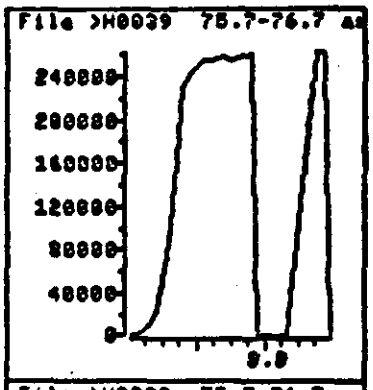


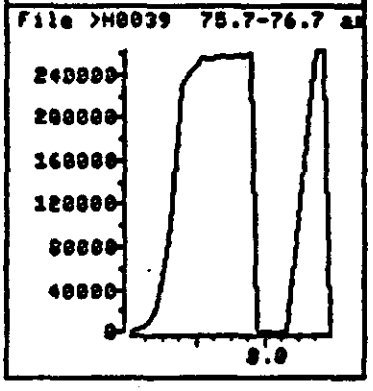
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







ORIGINAL (Red)

Data File: >H0039::H1
Name: 8709208-01 5mL
Misc: 10/01/87 DLS
Quant Time: 871001 18:15
Injected at: 871001 17:34

Quant Output File: ^H0039::QU

Quant ID File: HVOAID::P1
Last Calibration: 870918 09:16

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 352
Retention Time: 8.15 min.
Quant Ion: 76.0
Area: 5595405M
Concentration: 3063.30 UG/L
q-value: 100

Sample Number
Trip Blank

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8709208
Lab Sample ID No: 8709208-02
QC Report No:
Sample Matrix: Water
Contract No: 68-01-7278
Data Release Authorized By: Rose Marquis
Date Sample Received: 9/24/87

ORIGINAL (Red)

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/1/87
Date Analyzed: 10/1/87
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	~~5~~ 6
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be stated.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample.

L Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

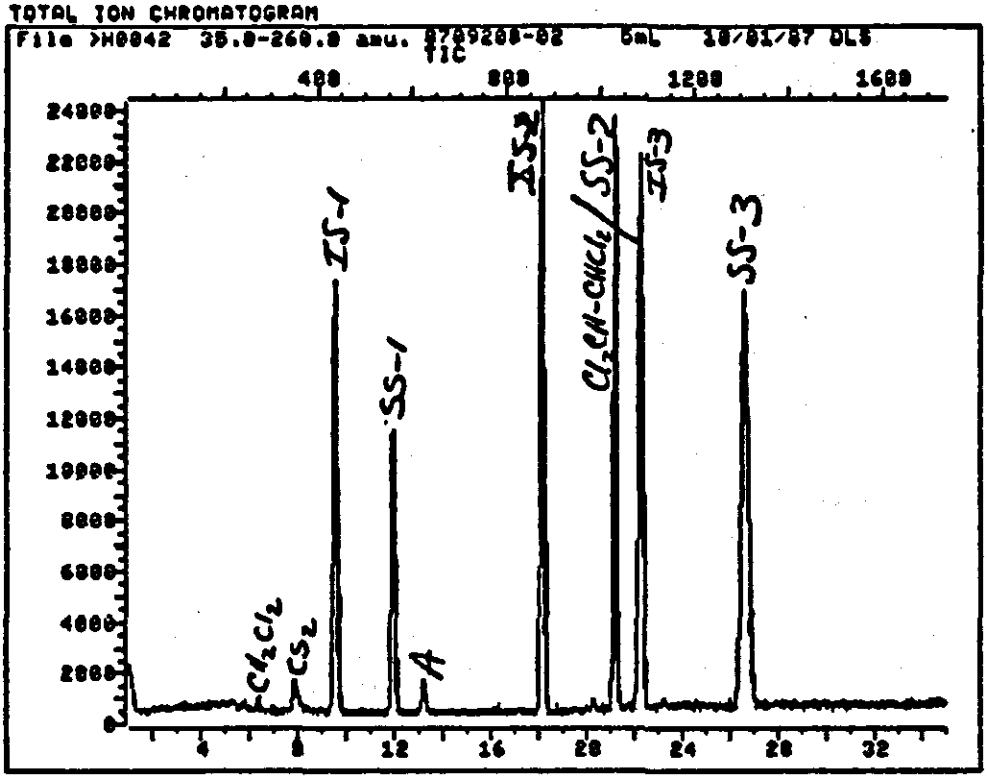
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully defined and footnotes attached to the data summary report.

NR not reported

AR303044

TOTAL ION CHROMATOGRAM



Data File: >H0042::H1 Quant Output File: ^H0042::QU
Name: 8709208-02 5mL
Misc: 10/01/87 DLS

Trip Blank

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:16

Operator ID: DENNIS
Quant Time: 871001 20:20
Injected at: 871001 19:39

rerun
cont.
FBB

AR303045

ORIGINAL (Red)

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 871001 20:20
Output File: ^H0042::QU Injected at: 871001 19:39
Data File: >H0042::H1 Dilution Factor: 1.00000
Name: 8709208-02 5mL
Misc: 10/01/87 DLS

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.53	433	28743	50.00	UG/L	100
6)	METHYLENE CHLORIDE	6.32	269	1346	1.77	UG/L	100
7)	ACETONE	6.97	302	344	3.33	UG/L	100
7)	ACETONE	7.01	304	222	2.15	UG/L	100
7)	ACETONE	7.07	307	66	.64	UG/L	100
8)	CARBON DISULFIDE	7.89	349	13329	6.42	UG/L	100 C.o.
8)	CARBON DISULFIDE	8.28	369	137	.07	UG/L	100
8)	CARBON DISULFIDE	8.47	379	104	.05	UG/L	100
13)	1,2-DICHLOROETHANE	12.07	563	98	.08	UG/L	56
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.95	557	39352	94.83	UG/L	92
15)	*1,4-DIFLUOROBENZENE IS-2	18.12	873	84732	50.00	UG/L	100
26)	BENZENE	16.07	768	219	.12	UG/L	100
26)	BENZENE	16.15	772	33	.02	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	22.23	1083	72748	50.00	UG/L	100
34)	1,1,2,2-TETRACHLOROETHANE	20.29	984	1579	1.83	UG/L	83
35)	D-8 TOLUENE (SS-2)	21.15	1028	77230	102.28	UG/L	85
36)	TOLUENE	21.31	1036	1689	1.36	UG/L	100
39)	BROMOFLUOROBENZENE (SS-3)	26.62	1308	64679	96.01	UG/L	89

* Compound is ISTD

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 871001 20:20
Output File: ^H0042::QU Injected at: 871001 19:39
Data File: >H0042::H1 Dilution Factor: 1.00000
Name: 8709208-02 5mL
Misc: 10/01/87 DLS

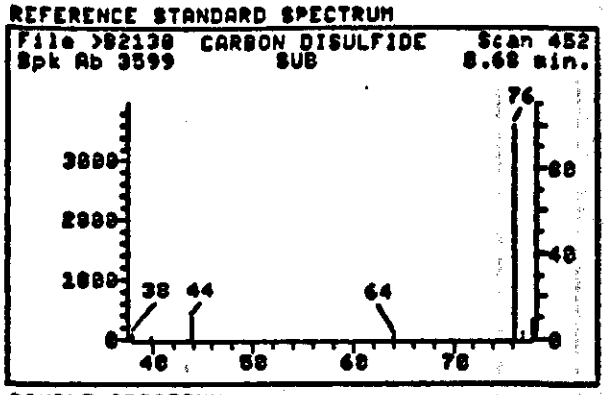
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870918 09:16

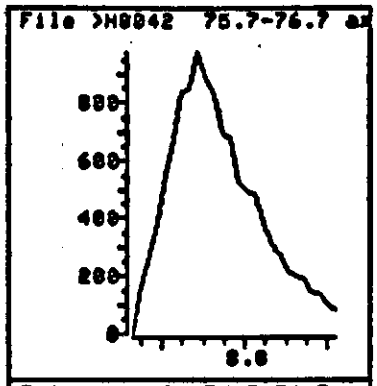
	Compound	R.T.	Scan#	Area	Conc	Units	q	
6)	METHYLENE CHLORIDE	6.32	269	1346	1.77	UG/L	100	✓
7)	ACETONE	6.97	302	344	3.33	UG/L	100	F.P.
8)	CARBON DISULFIDE	7.89	349	13329	6.42	UG/L	100	✓
34)	1,1,2,2-TETRACHLOROETHANE	20.29	984	1579	1.83	UG/L	83	✓
36)	TOLUENE	21.31	1036	1689	1.36	UG/L	100	F.P.

ORIGINAL (Red)

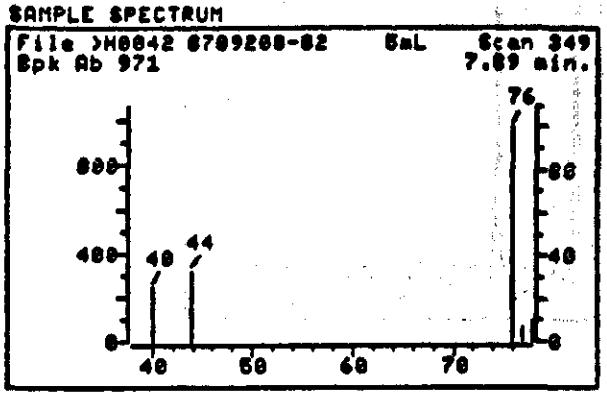
AR303047

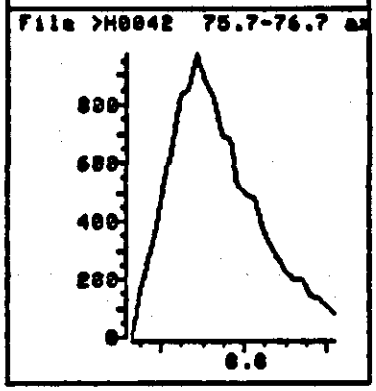
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM



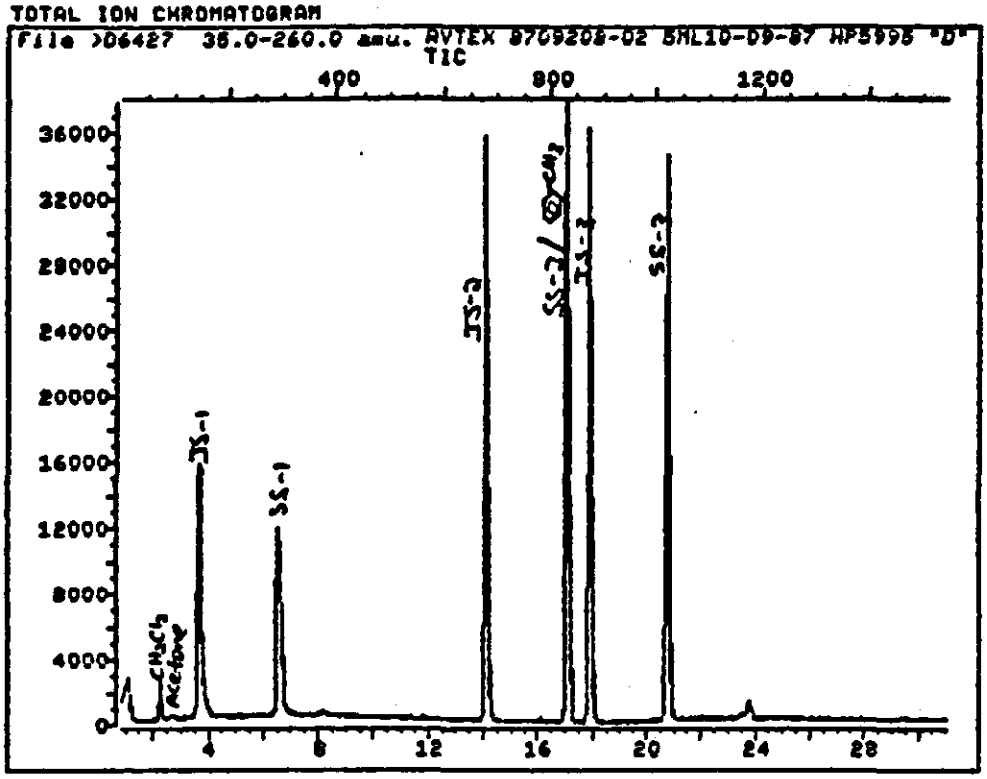


Data File: >H0042::H1 Quant Output File: ^H0042::QU
Name: 8709208-02 5mL
Misc: 10/01/87 DLS
Quant Time: 871001 20:20 Quant ID File: HVOAID::P1
Injected at: 871001 19:39 Last Calibration: 870918 09:16

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 349
Retention Time: 7.89 min.
Quant Ion: 76.0
Area: 13329
Concentration: 6.42 UG/L
q-value: 100

AR303048

TOTAL ION CHROMATOGRAM



Data File: >D6427::D2
Name: AVTEX 8709208-02 5ML
Misc: 10-09-87 HP5995 "D" AL5.8

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871010 20:44

Operator ID: MARK
Quant Time: 871010 22:25
Injected at: 8710~~1~~9 21:47

ORIGINAL

AR303049

QUANT REPORT

Operator ID: MARK Quant Rev: 4 Quant Time: 871010 22:25
Output File: ^D6427::D2 Injected at: 871010 21:47
Data File: >D6427::D2 Dilution Factor: 1.00
Name: AVTEX 8709208-02 5ML
Misc: 10-09-87 HP5995 "D" ALS.8

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871010 20:44

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	3.66	144	26677	50.00	UG/L	85
6)	METHYLENE CHLORIDE	2.26	72	3239	4.76	UG/L	100 ✓
7)	ACETONE	2.29	74	452	1.17	UG/L	100
7)	ACETONE	2.45	82	158	.41	UG/L	100
7)	ACETONE	2.49	84	206	.54	UG/L	100
7)	ACETONE	2.69	94	1742	4.53	UG/L	100 ✓
7)	ACETONE	2.94	107	80	.21	UG/L	100
8)	CARBON DISULFIDE	3.17	119	577	.34	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	6.53	291	46295	100.41	UG/L	94
15)	•1,4-DIFLUOROBENZENE IS-2	14.07	677	102941	50.00	UG/L	100
26)	BENZENE	11.85	563	288	.11	UG/L	100
30)	•D5-CHLOROBENZENE IS-3	17.88	872	83243	50.00	UG/L	100
33)	TETRACHLOROETHYLENE	16.13	782	271	.36	UG/L	93
35)	D-8 TOLUENE (SS-2)	17.06	830	100530	100.13	UG/L	91
36)	TOLUENE	17.20	837	2753	1.75	UG/L	99 ✓
39)	BROMOFLUOROBENZENE (SS-3)	20.78	1020	55586	101.24	UG/L	81

• Compound is ISTD

AR303050

Sample Number
T1-I

ORIGINAL

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 871003-4
Lab Sample ID No: 871003-4-01
QC Report No:
Sample Matrix: Water
Contract No: - -
Data Release Authorized By: Fiona Marquis
Date Sample Received: 10/2/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/9/87
Date Analyzed: 10/9/87
Conc/Dil Factor: 1:100 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
09-2	Methylene Chloride	NR
-64-1	Acetone	NR
75-15-0	Carbon Disulfide	9800
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be stated.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample.

J Indicates an estimated value. This flag is used either when calculating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.

B This flag applies to organic parameters where the chromatogram has been confirmed by GC/MS. Single component pesticides ≥ 10 ng/ul in the final extract should be confirmed by GC/MS.

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

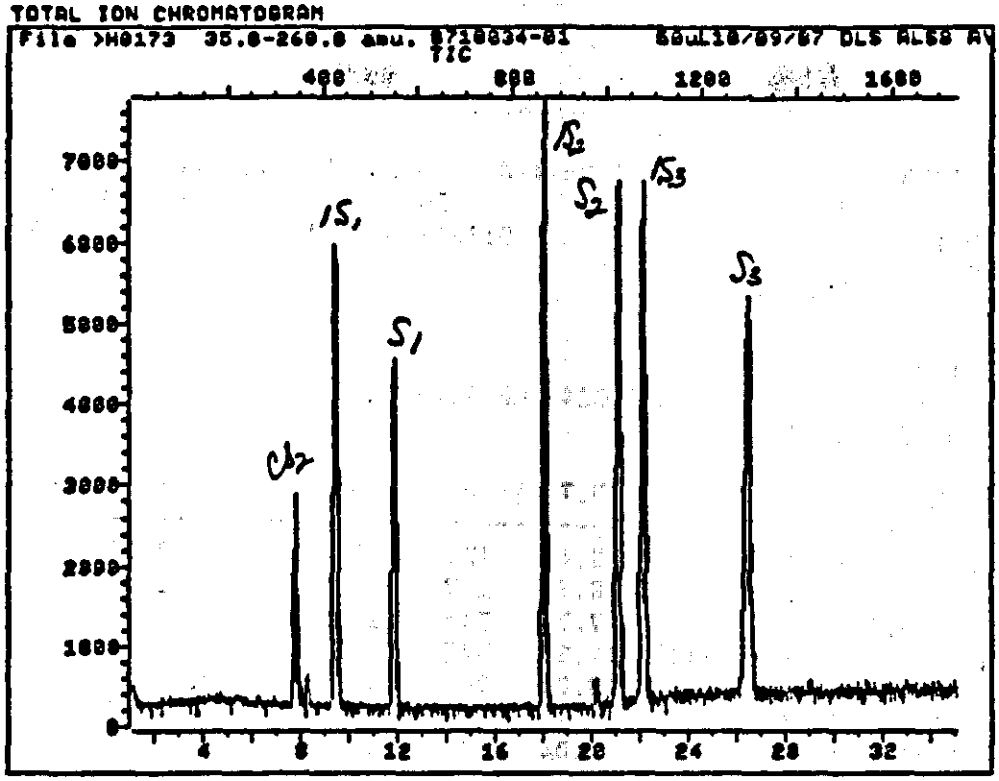
Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described, with definitions attached to the data summary report.

NR not reported

AR303051

AR303051

TOTAL ION CHROMATOGRAM



Data File: >H0173::H1 Quant Output File: ^H0173::H3
Name: 8710034-01 50uL
Misc: 10/09/87 DLS ALS8 AUTEX

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

Operator ID: ELISSA
Quant Time: 871010 11:30
Injected at: 871009 17:01

T1-I

AR303052

QUANT REPORT

Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:30
Output File: ^H0173::H3 Injected at: 871009 17:01
Data File: >H0173::H1 Dilution Factor: 1.00000
Name: 8710034-01 50uL
Misc: 10/09/87 DLS ALS8 AVTEX

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.40	424	6456	50.00	UG/L	100
7)	ACETONE	6.92	297	155M	2.22	UG/L	100
8)	CARBON DISULFIDE	7.76	340	20347	98.09	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.84	549	15556	103.87	UG/L	97
15)	*1,4-DIFLUOROBENZENE IS-2	18.04	866	19501	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	22.10	1074	15842	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	21.04	1020	18943	100.81	UG/L	77
39)	BROMOFLUOROBENZENE (SS-3)	26.44	1296	19093	112.09	UG/L	63

* Compound is ISTD

QUANT REPORT

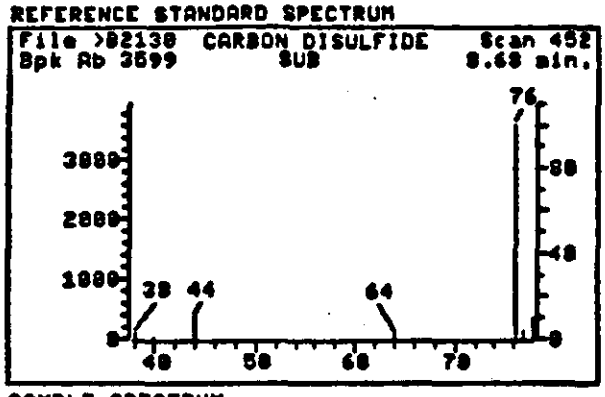
Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:30
Output File: ^H0173::H3 Injected at: 871009 17:01
Data File: >H0173::H1 Dilution Factor: 1.00000
Name: 8710034-01 50uL
Misc: 10/09/87 DLS ALS8 AVTEX

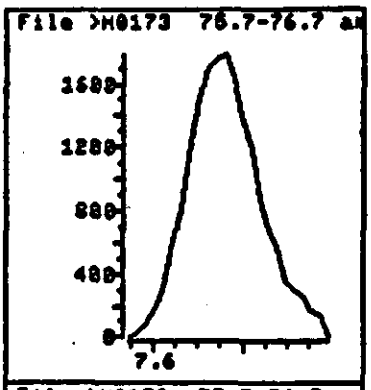
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
7)	ACETONE	6.92	297	155M	2.22	UG/L	100
8)	CARBON DISULFIDE	7.76	340	20347	98.09	UG/L	100

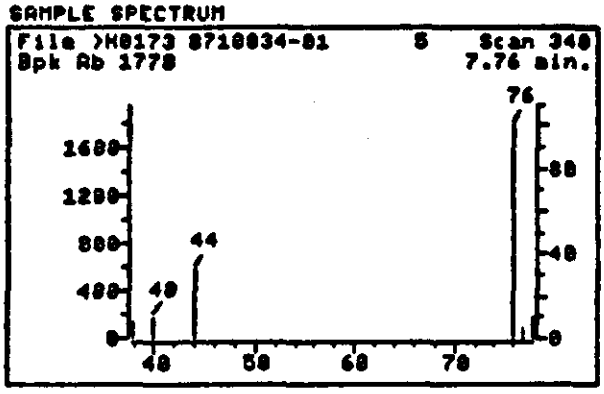
AR303054

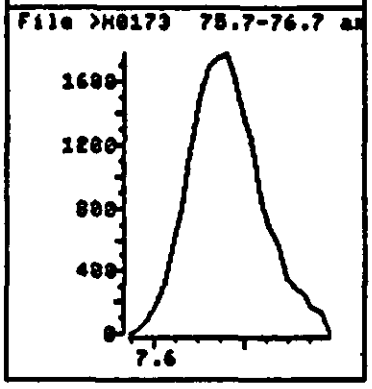
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM



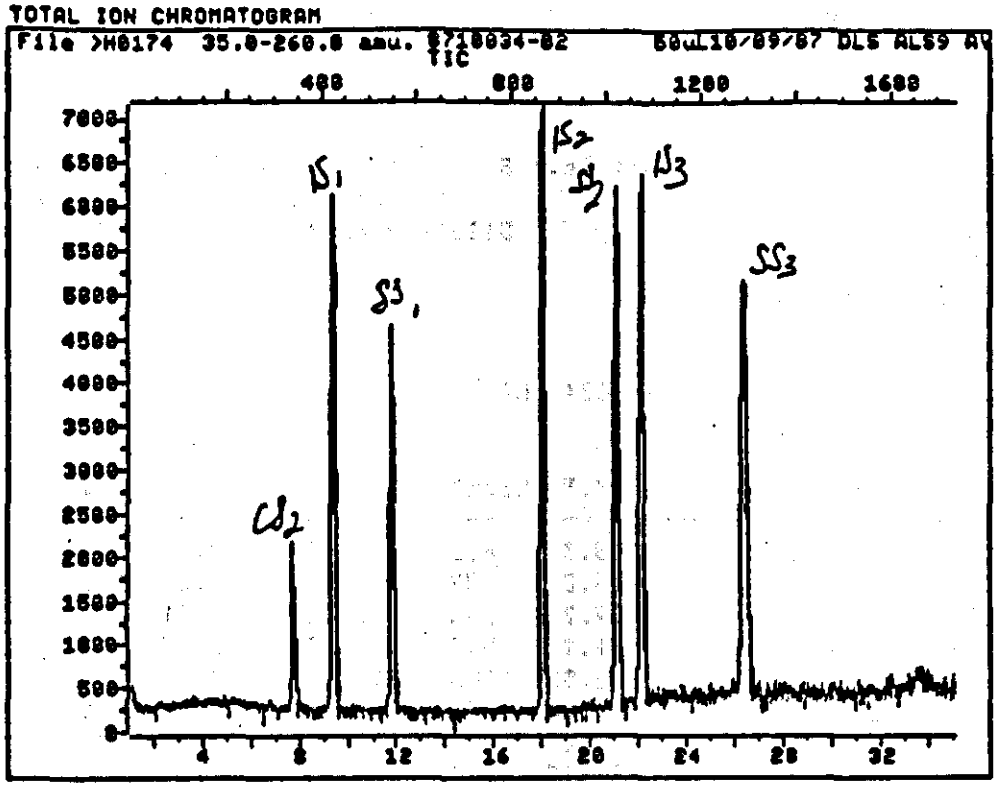


Data File: >H0173::H1 Quant Output File: ^H0173::H3
Name: 8710034-01 50uL
Misc: 10/09/87 DLS ALS8 AVTEX
Quant Time: 871010 11:30 Quant ID File: HVOAID::P1
Injected at: 871009 17:01 Last Calibration: 871009 12:58

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 340
Retention Time: 7.76 min.
Quant Ion: 76.0
Area: 20347
Concentration: 98.09 UG/L
q-value: 100

AR303055

TOTAL ION CHROMATOGRAM



Data File: >H0174::H1 Quant Output File: ^H0174::H3
Name: 8710034-02 ~~EPUL~~ 50µL
Misc: 10/09/87 DLS ALS9 AVTEX

T2-I

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

Operator ID: ELISSA
Quant Time: 871010 11:31
Injected at: 871009 17:42

QUANT REPORT

Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:31
Output File: ^H0174::H3 Injected at: 871009 17:42
Data File: >H0174::H1 Dilution Factor: 1.00000
Name: 8710034-02 50uL
Misc: 10/09/87 DLS ALS9 AVTEX

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.37	423	6604	50.00	UG/L	100
7)	ACETONE	6.81	292	261M	3.66	UG/L	100
8)	CARBON DISULFIDE	7.73	339	13964	65.81	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.79	547	16098	105.08	UG/L	91
15)	*1,4-DIFLUOROBENZENE IS-2	18.00	865	17792	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	22.04	1072	14638	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	21.01	1019	17346	99.90	UG/L	81
36)	TOLUENE	21.19	1028	100	.39	UG/L	82
39)	BROMOFLUOROBENZENE (SS-3)	26.34	1292	14430	91.68	UG/L	77

* Compound is ISTD

QUANT REPORT

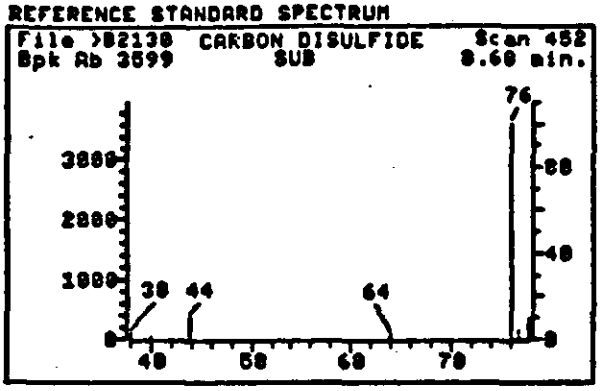
Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:31
Output File: ^H0174::H3 Injected at: 871009 17:42
Data File: >H0174::H1 Dilution Factor: 1.00000
Name: 8710034-02 50uL
Misc: 10/09/87 DLS ALS9 AVTEX

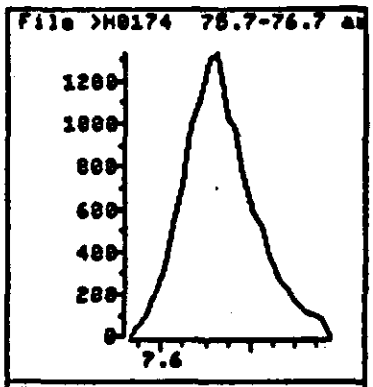
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
7)	ACETONE	6.81	292	261M	3.66	UG/L	100
8)	CARBON DISULFIDE	7.73	339	13964	65.81	UG/L	100

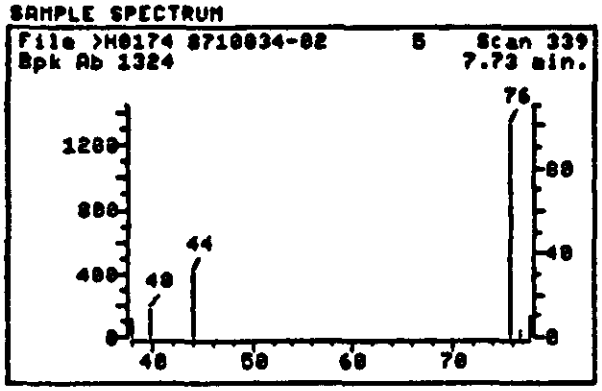
AR303058

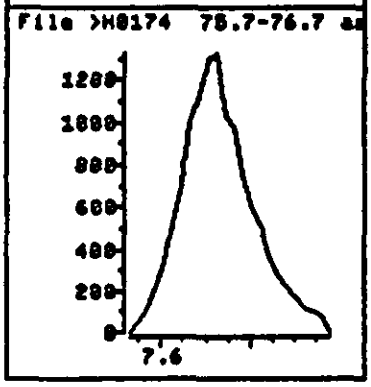
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM





ORIGINAL (Red)

Data File: >H0174::H1 Quant Output File: ^H0174::H3
Name: 8710034-02 50uL
Misc: 10/09/87 DLS ALS9 AVTEX
Quant Time: 871010 11:31 Quant ID File: HVOAID::P1
Injected at: 871009 17:42 Last Calibration: 871009 12:58

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 339
Retention Time: 7.73 min.
Quant Ion: 76.0
Area: 13964
Concentration: 55.81 UG/L
q-value: 100

Sample Number
TC-I

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8710034
Lab Sample ID No: 8710034-03
QC Report No:
Sample Matrix: Water
Contract No:
Data Release Authorized By: Kara Marques
Date Sample Received: 10/2/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/9/87
Date Analyzed: 10/9/87
Conc/Dil Factor: 1:100 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
[illegible]-00-3	Chloroethane	NR
[illegible]09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	5 JT 8 JO
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be stated.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the sample specific detection limit for the sample with the U (e.g., 10U) based on instrument detection/dilution factor. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the sample specific detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ug/L in the final extract should be confirmed by GC/MS.

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

Other Other specific flags and footnotes may be added to properly define the results. If used, they must be fully defined and such definitions attached to the data summary report.

NR not rej

AR303060

QUANT REPORT

Operator ID: ELISSA Quant Rev: 5 Quant Time: 871010 11:33
Output File: ^H0175::H3 Injected at: 871009 18:24
Data File: >H0175::H1 Dilution Factor: 1.00000
Name: 8710034-03 50uL
Misc: 10/09/87 DLS ALS10 AVTEX

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 524, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.38	424	5464	50.00	UG/L	100
8)	CARBON DISULFIDE	7.72	339	18414	88.66	UG/L	100
14)	D4-1,2-DICHLORDETHANE (SS-1)	11.80	548	16202	108.05	UG/L	99
15)	*1,4-DIFLUOROBENZENE IS-2	17.99	865	18003	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	22.04	1072	15149	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	21.02	1020	17408	96.88	UG/L	85
39)	BROMOFLUOROBENZENE (SS-3)	26.37	1294	18168	111.54	UG/L	72

* Compound is ISTD

QUANT REPORT

Operator ID: ELISSA
Output File: ^H0175::H3
Data File: >H0175::H1
Name: 8710034-03 50uL
Misc: 10/09/87 DLS ALS10 AVTEX

Quant Rev: 6 Quant Time: 871010 11:33
Injected at: 871009 18:24
Dilution Factor: 1.00000

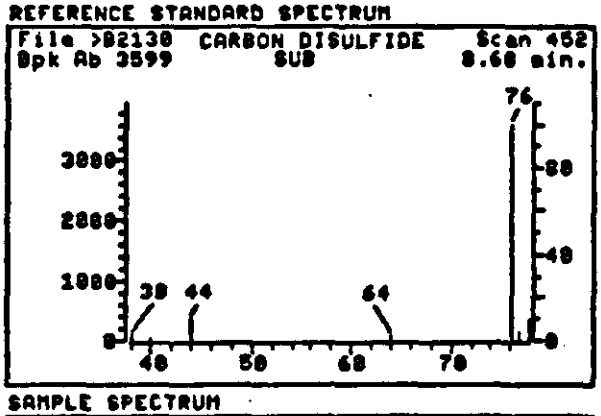
ORIGINAL

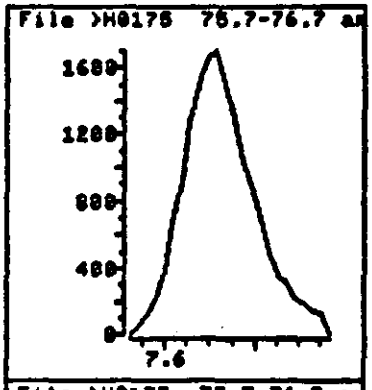
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
8)	CARBON DISULFIDE	7.72	339	18414	88.66	UG/L	100

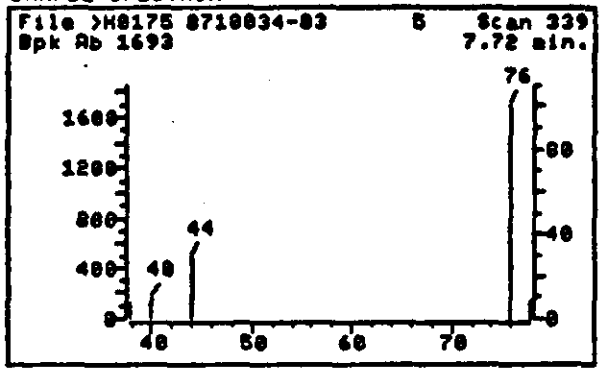
AR303062

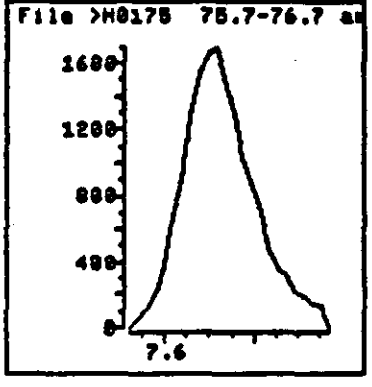
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM





Data File: >H0175::H1 Quant Output File: ^H0175::H3
Name: 8710034-03 50uL
Misc: 10/09/87 DLS ALS10 AVTEX
Quant Time: 871010 11:33 Quant ID File: HVOAID::P1
Injected at: 871009 18:24 Last Calibration: 871009 12:58

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 339
Retention Time: 7.72 min.
Quant Ion: 76.0
Area: 18414
Concentration: 88.65 UG/L
q-value: 100

ORIGINAL (Red)

Sample Number
T1-E

Organics Analysis Data Sheet
(Page 1)

ORIGINAL

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8710034
Lab Sample ID No: 8710034-04
QC Report No:
Sample Matrix: Water
Contract No:
Data Release Authorized By: Rona Marquis
Date Sample Received: 10/2/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/9/87
Date Analyzed: 10/9/87
Conc/Dil Factor: 1:100 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	5-41 7000
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be stated.

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample.

J — Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.

C — This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10 ng on the final extract should be confirmed by GC/MS.

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

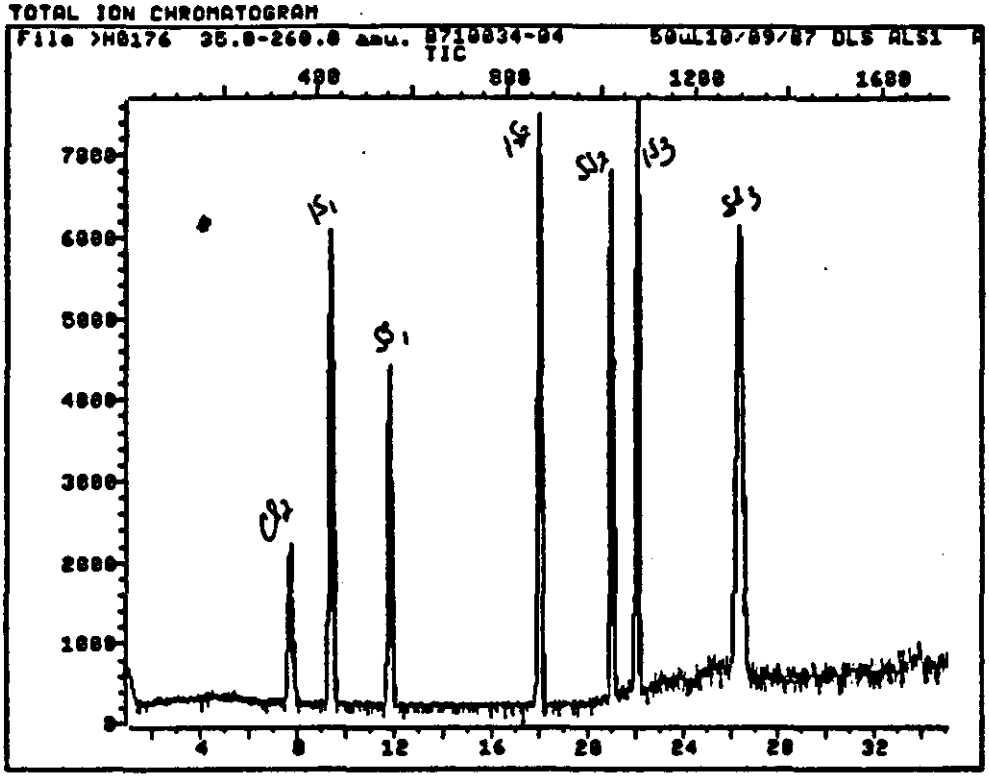
Other — Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NR not reported

AR303064

AR303064

TOTAL ION CHROMATOGRAM



Data File: >H0176::H1 Quant Output File: ^H0176::H3
Name: 8710034-04 50uL
Misc: 10/09/87 DLS ALS1 AVTEX

T1-E

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

Operator ID: ELISSA
Quant Time: 871010 11:35
Injected at: 871009 19:06

ORIGINAL (Red)

QUANT REPORT

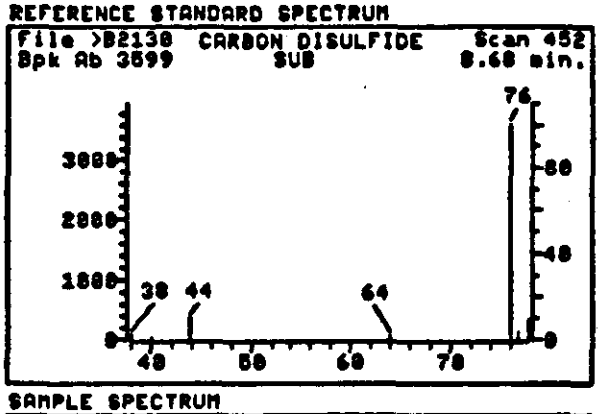
Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:35
Output File: ^H0176::H3 Injected at: 871009 19:06
Data File: >H0176::H1 Dilution Factor: 1.00000
Name: 8710034-04 50uL
Misc: 10/09/87 DLS ALS1 AVTEX

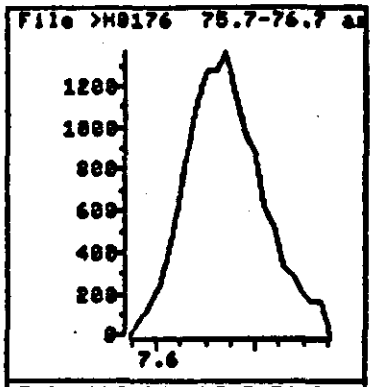
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
8)	CARBON DISULFIDE	7.74	342	14887	70.35	UG/L	100

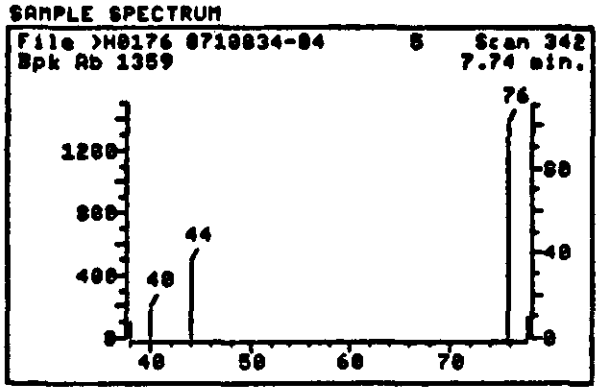
AR303066

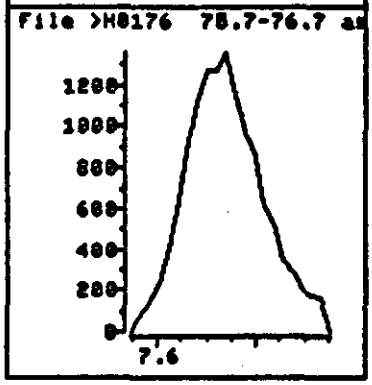
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM





Data File: >H0176::H1 Quant Output File: ^H0176::H3
Name: 8710034-04 50uL
Misc: 10/09/87 DLS ALS1 AVTEX
Quant Time: 871010 11:35 Quant ID File: HVOAID::P1
Injected at: 871009 19:06 Last Calibration: 871009 12:58

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 342
Retention Time: 7.74 min.
Quant Ion: 76.0
Area: 14887
Concentration: 70.35 UG/L
q-value: 100

Sample Number
T2-E

Organics Analysis Data Sheet
(Page 1)

ORIGINAL (Red)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8710 024
Lab Sample ID No: 87-10-034-05
QC Report No:
Sample Matrix: Water
Contract No:
Data Release Authorized By: Kara Marquis
Date Sample Received: 10/6/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/9/87
Date Analyzed: 10/9/87
Conc/Dil Factor: 1:100 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	~~5~~ 11 2200
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explained.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on the appropriate concentration/dilution factor. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/L and a concentration of 2 ug/L is calculated, report as 2J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/uL in the final extract should be confirmed by GC/MS.

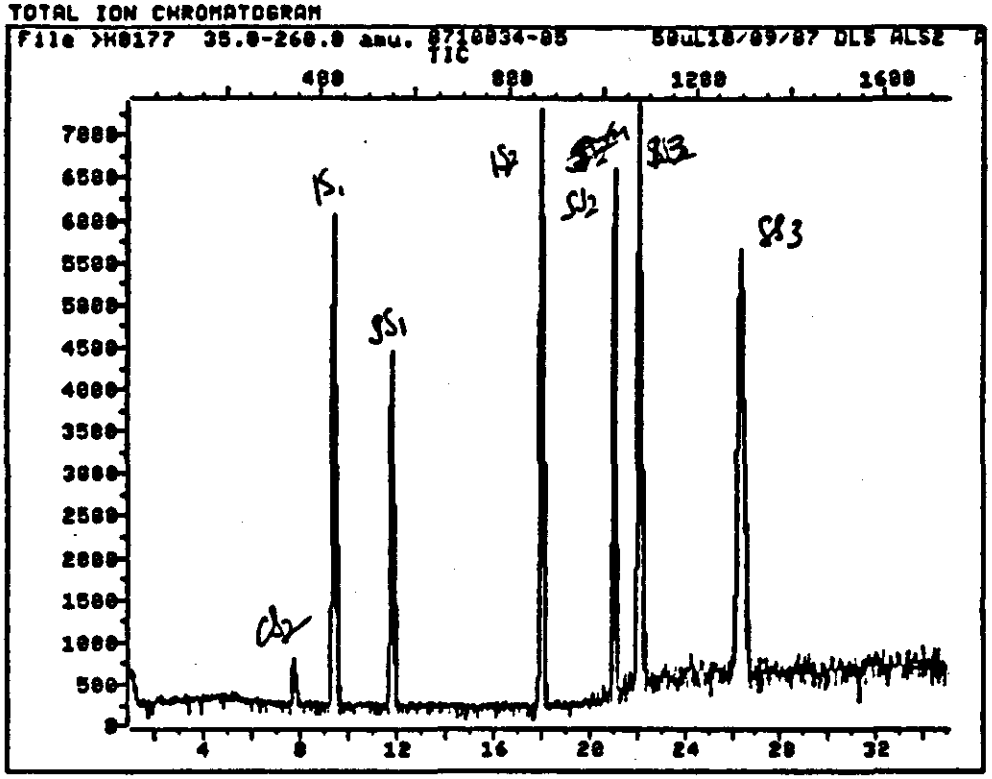
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such definitions attached to the data summary report.

NR not reported

AR303068

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0177::H1 Quant Output File: ^H0177::H3
Name: 8710034-05 ~~Spot~~ Sample
Misc: 10/09/87 DLS ALS2 AVTEX

T2-E

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

Operator ID: ELISSA
Quant Time: 871010 11:36
Injected at: 871009 19:47

AR303069

QUANT REPORT

Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:36
Output File: ^H0177::H3 Injected at: 871009 19:47
Data File: >H0177::H1 Dilution Factor: 1.00000
Name: 8710034-05 50uL
Misc: 10/09/87 DLS ALS2 AVTEX

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	8.38	425	6326	50.00	UG/L	100
8)	CARBON DISULFIDE	7.73	341	4382	21.56	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.82	550	16076	109.55	UG/L	95
15)	•1,4-DIFLUOROBENZENE IS-2	18.01	867	18413	50.00	UG/L	100
30)	•D5-CHLOROBENZENE IS-3	22.05	1074	15327	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	21.02	1021	18182	100.01	UG/L	82
39)	BROMOFLUOROBENZENE (SS-3)	26.37	1295	18710	113.53	UG/L	72

• Compound is ISTD

ORIGINAL (Red)

QUANT REPORT

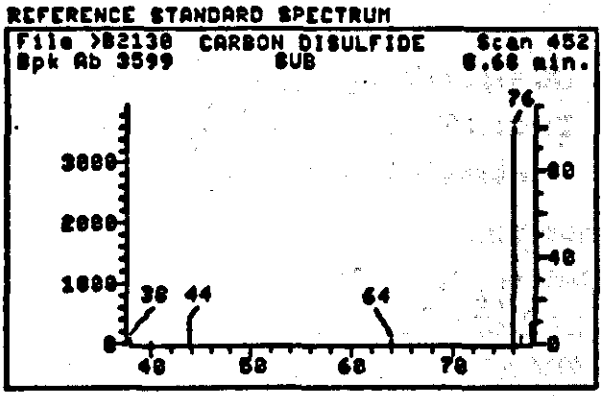
Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:36
Output File: ^H0177::H3 Injected at: 871009 19:47
Data File: >H0177::H1 Dilution Factor: 1.00000
Name: 8710034-05 50uL
Misc: 10/09/87 DLS ALS2 AVTEX

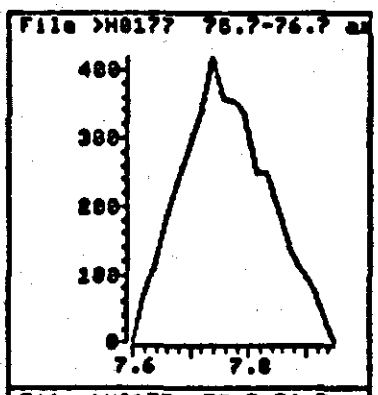
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
8)	CARBON DISULFIDE	7.73	341	4382	21.56	UG/L	100

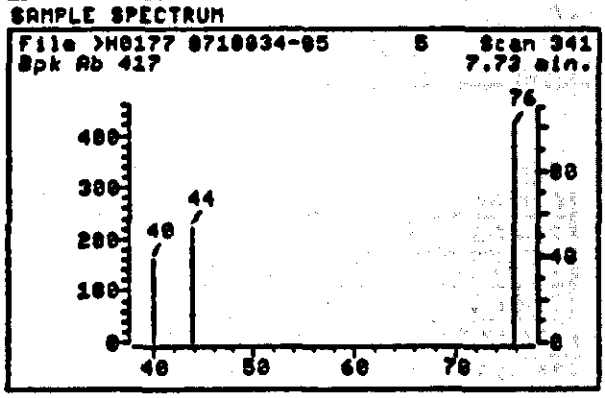
AR303071

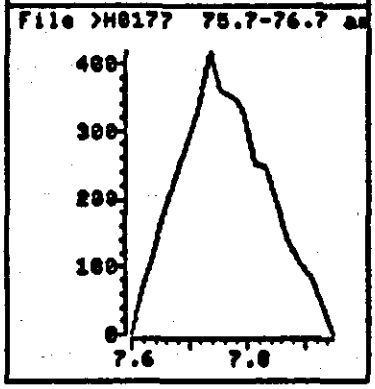
REFERENCE STANDARD SPECTRUM





SAMPLE SPECTRUM





Data File: >H0177::H1 Quant Output File: ^H0177::H3
Name: 8710034-05 50uL
Misc: 10/09/87 DLS ALS2 AVTEX
Quant Time: 871010 11:36 Quant ID File: HVOAID::P1
Injected at: 871009 19:47 Last Calibration: 871009 12:58

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 341
Retention Time: 7.73 min.
Quant Ion: 76.0
Area: 4382
Concentration: 21.56 UG/L
q-value: 100

ORIGINAL (Red)

AR303072

Sample Number
T3-E

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8710-034
Lab Sample ID No: 8710034-06
QC Report No:
Sample Matrix: Water
Contract No: 68-01-7278
Data Release Authorized By: Rona Marques
Date Sample Received: 10/2/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/5/87
Date Analyzed: 10/9/87
Conc/Dil Factor: 1:10 pH
Percent Moisture: (Not Decanted) N/A

ORIGINAL (Red)

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	5 J 8 ug/L
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on appropriate concentration/dilution factor. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample.

J — Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

B — This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

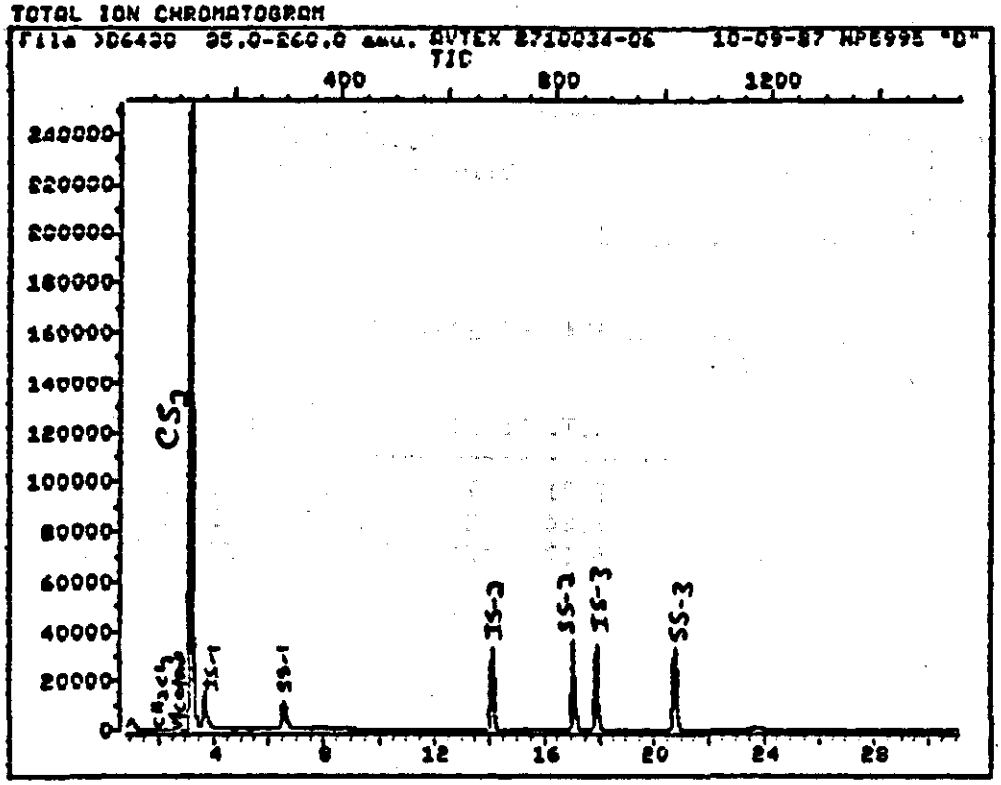
B — This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other — Other laboratory flags and footnotes may be required to properly define the results. If used, they must be fully described and their meaning attached to the data summary report.

NR not reported

AR303073

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >D6430::D2
Name: AVTEX 8710034-06
Misc: 10-09-87 HP5995 "D" ALS.1 .5MLS

T3-E

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

Operator ID: MARK
Quant Time: 871014 09:36
Injected at: 8710~~10~~ 9 23:44

Rerun 1:100

AR303074

ORIGINAL (Red)

QUANT REPORT

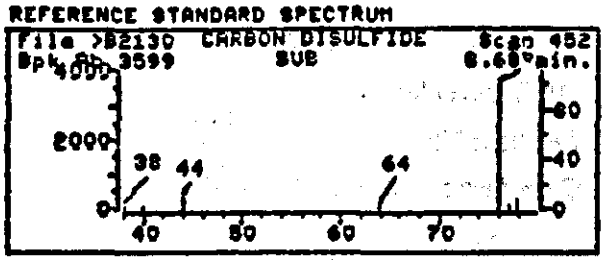
Operator ID: MARK Quant Rev: 4 Quant Time: 871014 09:36
Output File: ^D6430::D2 Injected at: 871010 23:44
Data File: >D6430::D2 Dilution Factor: 1.00
Name: AVTEX 8710034-06
Misc: 10-09-87 HP5995 "D" ALS.1 .5MLS

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871014 09:31

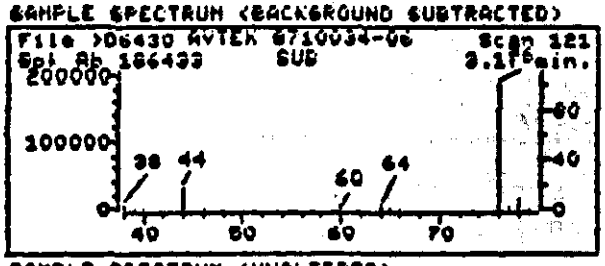
	Compound	R.T.	Scan#	Area	Conc	Units	q
6)	METHYLENE CHLORIDE	2.21	72	918	1.43	UG/L	100
7)	ACETONE	2.64	94	5587	15.40	UG/L	100
8)	CARBON DISULFIDE	3.17	121	1319987	836.16	UG/L	100

AR303075

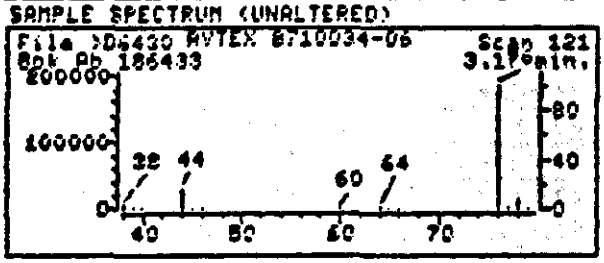
REFERENCE STANDARD SPECTRUM

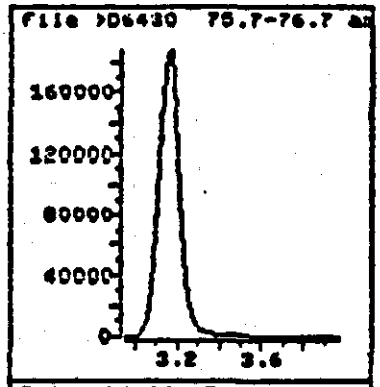


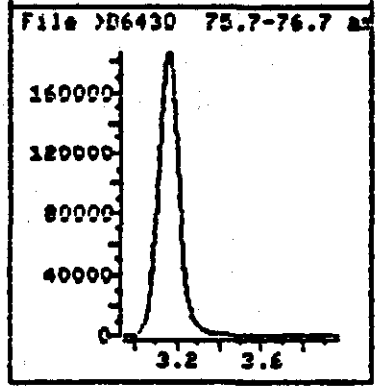
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







Data File: >D6430::D2
Name: AVTEX 8710034-06
Misc: 10-09-87 HP5995 "D" ALS.1 .5MLS
Quant Time: 871014 09:36
Injected at: 871010 23:44

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 121
Retention Time: 3.17 min.
Area: 1319997
Concentration: 836.16 UG/L
q-value: 100

✓

AR303076

Sample Number
T3-E
Rerun

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc. Case No: 8760-034
Lab Sample ID No: 8710-034-06 DC Report No:
Sample Matrix: Water Contract No: 68-01-7278
Data Release Authorized By: Rona Marquis Date Sample Received: 10/2/87

ORIGINAL

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10/20/87
Date Analyzed: 10/20/87
Conc/Dil Factor: 1:100 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	3 J / 3000
75-35-4	1, 1-Dichloroethene	NR
75-34-3	1, 1-Dichloroethane	NR
156-60-5	Trans-1, 2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1, 2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1, 1, 1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	NR
10061-02-6	Trans-1, 3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1, 1, 2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1, 3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1, 1, 2, 2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be stated.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

B This flag applies to organic parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

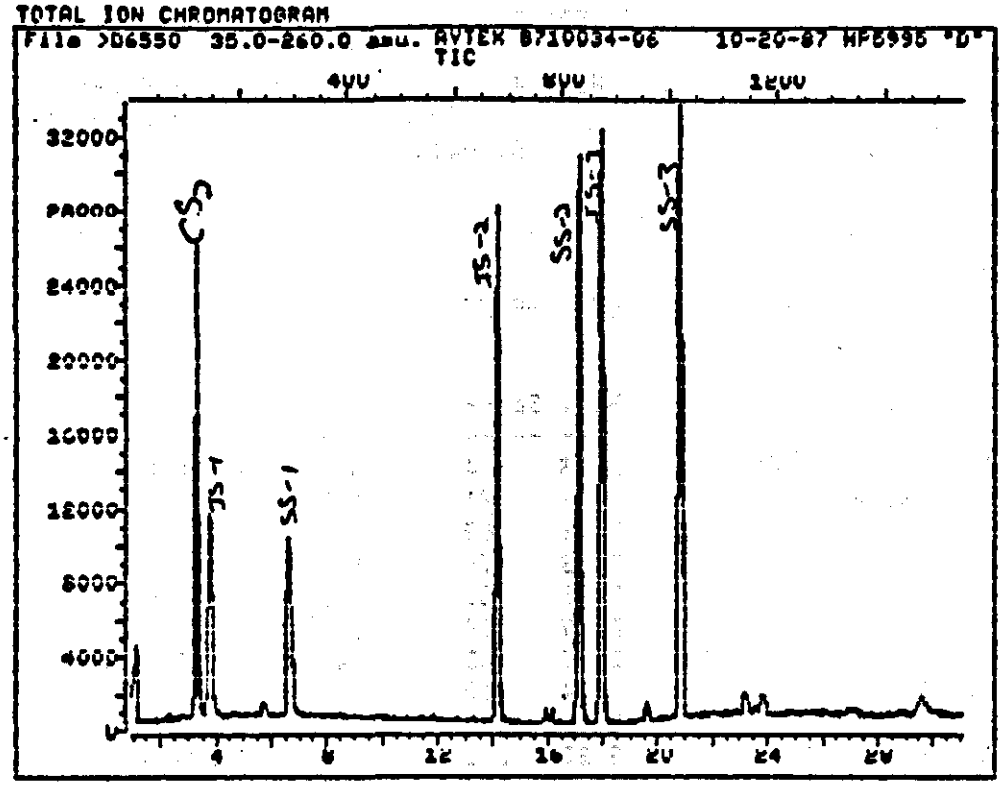
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully defined and their application described in the data summary report.

NR not reported

AR303077

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >D6550::D2
Name: AVTEX 8710034-06
Misc: 10-20-87 HP5995 "D" ALS 31:100

73-E

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871020 09:49

Operator ID: MANAGER
Quant Time: 871020 14:16
Injected at: 871020 13:41

AR303078

ORIGINAL (Red)

QUANT REPORT

Operator ID: MANAGER Quant Rev: 4 Quant Time: 871020 14:18
Output File: "D6550::49 Injected at: 871020 13:41
Data File: >D6550::D2 Dilution Factor: 1.00
Name: AVTEX 8710034-06
Misc: 10-20-87 HP5995 "D" ALS 3 100

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871020 09:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	3.73	144	16976	50.00	UG/L	86
6)	METHYLENE CHLORIDE	2.30	71	499	1.25	UG/L	100
7)	ACETONE	2.26	69	139	.70	UG/L	100
7)	ACETONE	2.36	74	168	.85	UG/L	100
7)	ACETONE	2.73	93	991	5.00	UG/L	100
7)	ACETONE	2.87	100	140	.71	UG/L	100
7)	ACETONE	2.93	103	142	.72	UG/L	100
8)	CARBON DISULFIDE	3.24	115	124260	128.77	UG/L	100
12)	CHLOROFORM	5.72	246	2625	2.32	UG/L	97
14)	D4-1,2-DICHLOROETHANE (SS-1)	6.60	291	38968	102.98	UG/L	92
15)	*1,4-DIFLUOROBENZENE IS-2	14.14	677	83255	50.00	UG/L	100
26)	BENZENE	11.90	562	600	.33	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	17.53	871	75348	50.00	UG/L	100
32)	2-HEXANONE	15.94	769	865	1.59	UG/L	86
33)	TETRACHLOROETHYLENE	16.18	781	777	1.32	UG/L	90
35)	D-8 TOLUENE (SS-2)	17.11	829	81761	100.22	UG/L	86
36)	TOLUENE	17.25	836	218	.18	UG/L	90
39)	BROMOFLUOROBENZENE (SS-3)	20.61	1018	52318	100.99	UG/L	78

* Compound is ISTD

QUANT REPORT

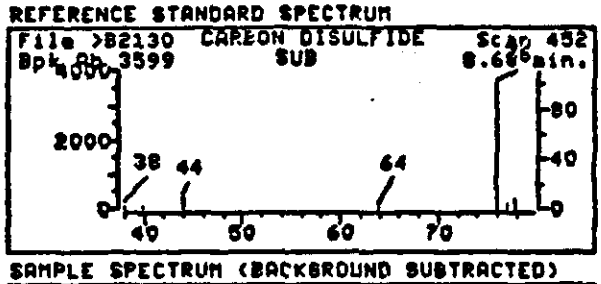
ORIGINAL (Red)

Operator ID: MANAGER Quant Rev: 4 Quant Time: 871020 14:18
Output File: *D6550::49 Injected at: 871020 13:41
Data File: >D6550::D2 Dilution Factor: 1.00
Name: AVTEX 8710034-06
Misc: 10-20-87 HP5995 "D" ALS 3 100

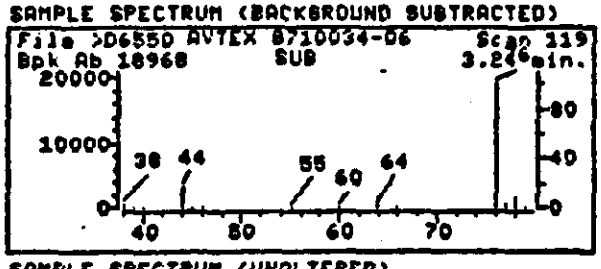
ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871020 09:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
6)	METHYLENE CHLORIDE	2.30	71	499	1.25	UG/L	100
7)	ACETONE	2.73	93	991	5.00	UG/L	100
8)	CARBON DISULFIDE	3.24	119	124280	128.77	UG/L	100
12)	CHLOROFORM	5.72	246	2625	2.32	UG/L	97
32)	2-HEXANONE	15.94	769	865	1.59	UG/L	86
33)	TETRACHLOROETHYLENE	16.18	781	777	1.32	UG/L	90

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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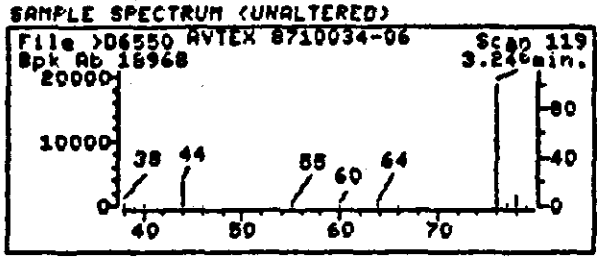
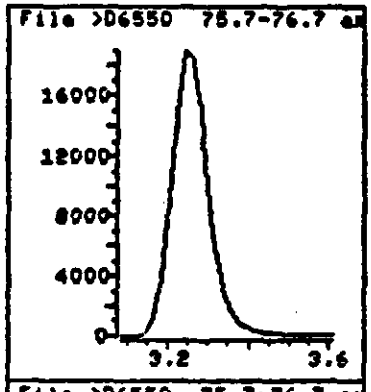
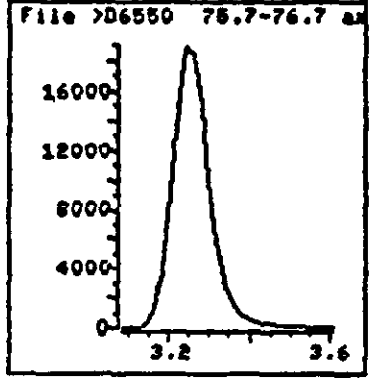


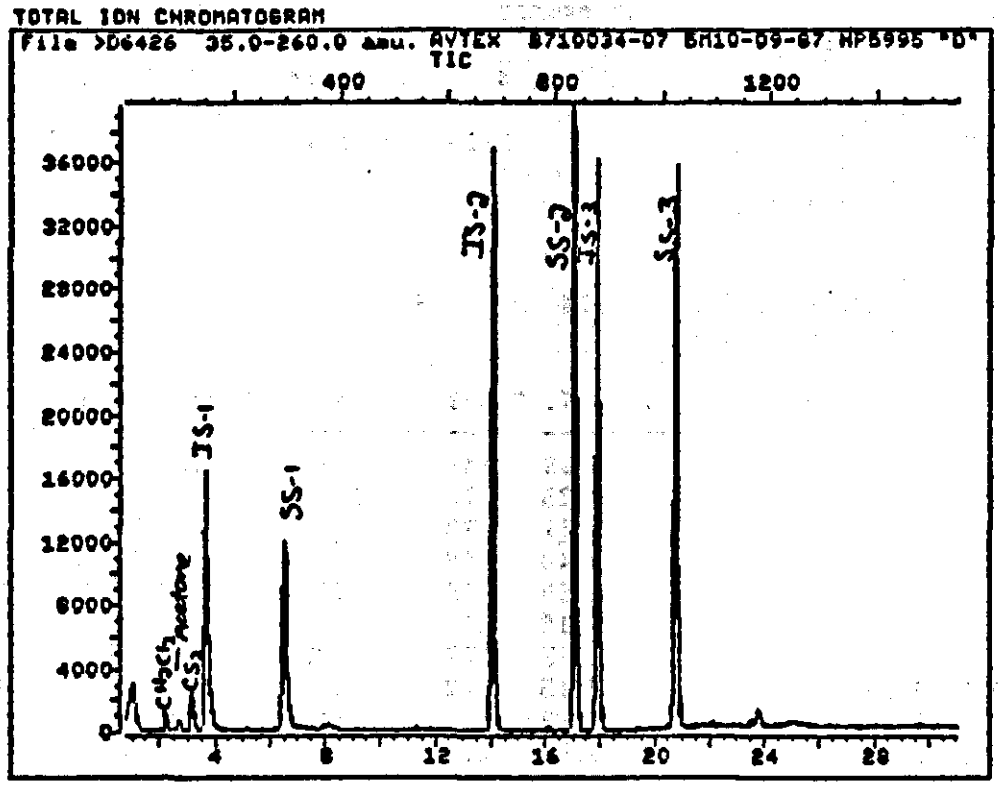




Data File: >D6550::D2
Name: AVTEX 8710034-06
Misc: 10-20-87 HP5995 "D" ALS 3 100
Quant Time: 871020 14:18
Injected at: 871020 13:41

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 119
Retention Time: 3.24 min.
Area: 124280
Concentration: 128.77 UG/L
q-value: 100

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >D6426::D2
Name: AVTEX 8710034-07 SM
Misc: 10-09-87 HP5995 "D" ALS.7

Trip Blank

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871010 20:44

Operator ID: MARK
Quant Time: 871010 21:46
Injected at: 871~~10~~ 9 21:08

AR303082

QUANT REPORT

ORIGINAL (Red)

Operator ID: MARK Quant Rev: 4 Quant Time: 871010 21:46
Output File: ^D6426::D2 Injected at: 871010 21:08
Data File: >D6426::D2 Dilution Factor: 1.00
Name: AVTEX 8710034-07 5M
Misc: 10-09-87 HP5995 "D" ALS.7

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871010 20:44

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	3.66	148	28021	50.00	UG/L	94
6)	METHYLENE CHLORIDE	2.23	75	1676	2.35	UG/L	100 ✓
7)	ACETONE	2.31	79	215	.53	UG/L	100
7)	ACETONE	2.48	88	182	.45	UG/L	100
7)	ACETONE	2.68	98	3977	9.84	UG/L	100 ✓
7)	ACETONE	3.19	124	82	.20	UG/L	100
7)	ACETONE	3.25	127	82	.20	UG/L	100
8)	CARBON DISULFIDE	3.15	122	11847	6.73	UG/L	100 ✓
8)	CARBON DISULFIDE	3.38	134	110	.06	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	6.51	294	48490	100.12	UG/L	94
15)	*1,4-DIFLUOROBENZENE IS-2	14.07	681	108435	50.00	UG/L	100
16)	2-BUTANONE (MEK)	7.00	319	372	.74	UG/L	88
26)	BENZENE	11.84	567	536	.20	UG/L	100
26)	BENZENE	11.94	572	28	.01	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	17.90	877	85186	50.00	UG/L	100
33)	TETRACHLOROETHYLENE	16.12	786	284	.37	UG/L	95
35)	D-8 TOLUENE (SS-2)	17.06	834	105237	102.42	UG/L	88
36)	TOLUENE	17.21	842	953	.59	UG/L	98
38)	ETHYL BENZENE	19.44	956	114	.11	UG/L	8
39)	BROMOFLUOROBENZENE (SS-3)	20.77	1024	57110	101.64	UG/L	80
40)	STYRENE	21.55	1064	410	.20	UG/L	85
41)	M-XYLENE	21.73	1073	337	.29	UG/L	87
42)	O-XYLENE	21.73	1073	337	.29	UG/L	87

* Compound is ISTD

ORIGINAL (Red)

QUANT REPORT

Operator ID: MARK
Output File: "D6426::D2
Data File: >D6426::D2
Name: AVTEX 8710034-07 5M
Misc: 10-09-87 HP5995 "D" ALS.7

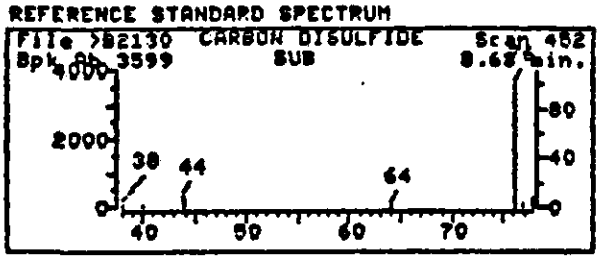
Quant Rev: 4
Quant Time: 871010 21:46
Injected at: 871010 21:08
Dilution Factor: 1.00

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871010 20:44

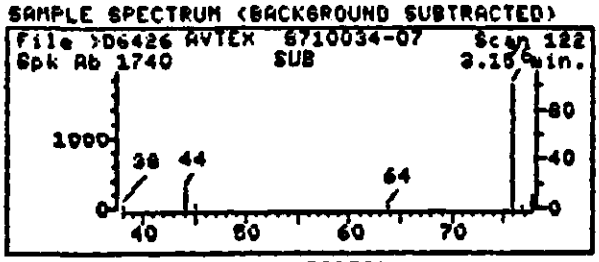
	Compound	R.T.	Scan#	Area	Conc	Units	q
6)	METHYLENE CHLORIDE	2.23	75	1676	2.35	UG/L	100
7)	ACETONE	2.68	98	3977	9.84	UG/L	100
8)	CARBON DISULFIDE	3.15	122	11847	6.73	UG/L	100

AR303084

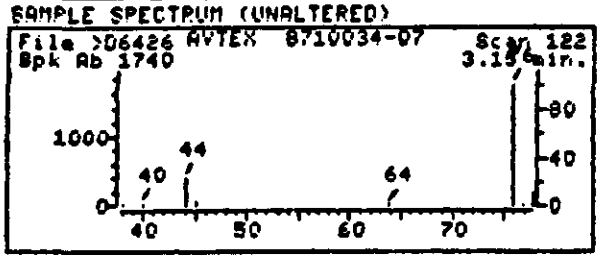
REFERENCE STANDARD SPECTRUM

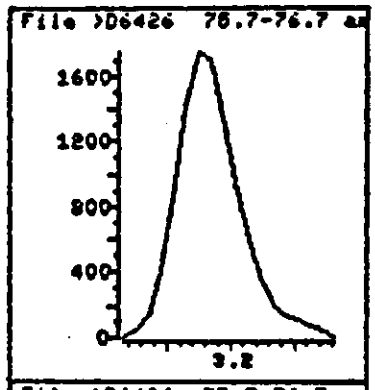


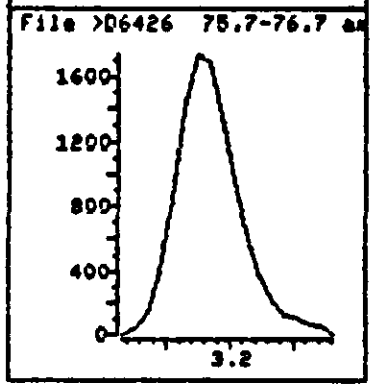
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







Data File: >D6426::D2
Name: AVTEX 8710034-07 5M
Misc: 10-09-87 HP5995 "D" ALS.7
Quant Time: 871010 21:46
Injected at: 871010 21:08

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 122
Retention Time: 3.15 min.
Area: 11847
Concentration: 5.73 UG/L
q-value: 100

Sample Number
Trip Blank
Rerun

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8710034
Lab Sample ID No: 8710034-07
QC Report No:
Sample Matrix: Water
Contract No: 68-01-7278
Data Release Authorized By:
Date Sample Received: 10/2/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/20/87
Date Analyzed: 10/20/87
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
[illegible]-09-2	Methylene Chloride	NR
[illegible]-64-1	Acetone	NR
[illegible]-15-0	Carbon Disulfide	5 U 3 J
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
[illegible]-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be added.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the sample quantitation limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The decimal should read U. Compound was analyzed for but not detected. The number is the sample quantitation limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/µl in the final extract should be confirmed by GC/MS.

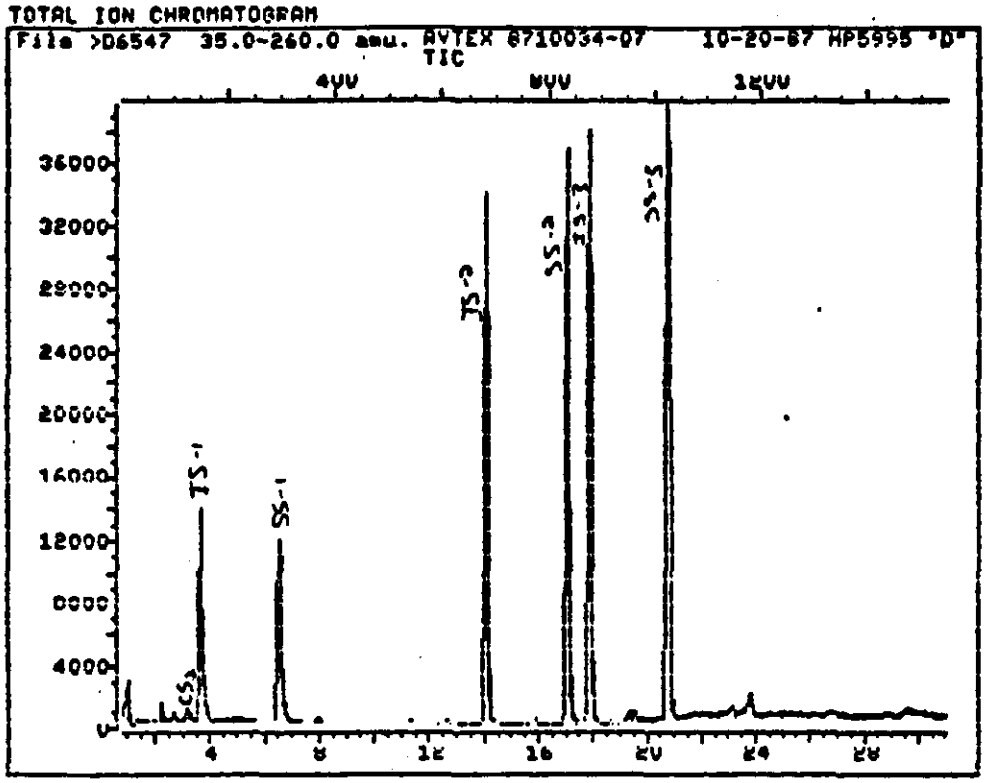
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully defined and footnoted to the data summary report.

NR not reported

AR303086

TOTAL ION CHROMATOGRAM



Date File: >D6547::D2
Name: AVTEX 8710034-07
Misc: 10-20-87 HP5995 "D" ALS 10 5MLS

Trip Blank

Id File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871020 09:49

Operator ID: MANAGER
Quant Time: 871020 12:21
Injected at: 871020 11:43

ORIGINAL

ORIGINAL

QUANT REPORT

Operator ID: MANAGER Quant Rev: 4 Quant Time: 871020 12:21
Output File: "D6547::49 Injected at: 871020 11:43
Data File: >D6547::D2 Dilution Factor: 1.00
Name: AVTEX 8710034-07
Misc: 10-20-87 HP5995 "D" ALS 10 5MLS

ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871020 09:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	3.63	146	21637	50.00	UG/L	94
6)	METHYLENE CHLORIDE	2.22	74	1580	3.08	UG/L	100
7)	ACETONE	1.99	62	145	.57	UG/L	100
7)	ACETONE	2.32	79	509	2.00	UG/L	100
7)	ACETONE	2.46	86	159	.62	UG/L	100
7)	ACETONE	2.65	96	3379	13.25	UG/L	100
7)	ACETONE	2.89	108	181	.71	UG/L	100
8)	CARBON DISULFIDE	3.16	122	3447	2.78	UG/L	100
8)	CARBON DISULFIDE	3.34	131	33	.05	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	6.52	294	48284	99.19	UG/L	93
15)	•1,4-DIFLUOROBENZENE IS-2	14.06	660	100010	50.00	UG/L	100
26)	BENZENE	11.84	566	302	.14	UG/L	100
30)	•D5-CHLOROBENZENE IS-3	17.87	875	87299	50.00	UG/L	100
32)	2-HEXANONE	15.68	763	214	.34	UG/L	52
35)	D-8 TOLUENE (SS-2)	17.05	833	98336	104.04	UG/L	88
36)	TOLUENE	17.21	841	1012	.72	UG/L	98
39)	BROMOFLUOROBENZENE (SS-3)	20.77	1023	62490	104.11	UG/L	81
41)	M-XYLENE	21.70	1071	118	.13	UG/L	1
41)	M-XYLENE	22.08	1090	88	.10	UG/L	1
42)	O-XYLENE	21.70	1071	118	.12	UG/L	1
42)	O-XYLENE	22.08	1090	88	.09	UG/L	1

• Compound is ISTD

AR303088

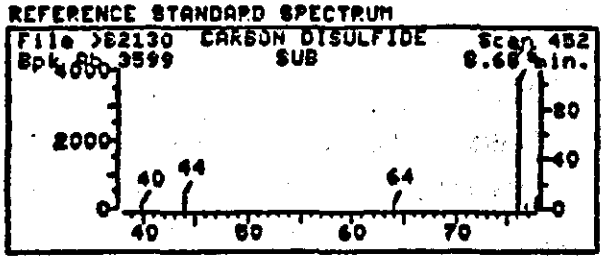
QUANT REPORT

Operator ID: MANAGER Quant Rev: 4 Quant Time: 871020 12:21
Output File: "D6547::49 Injected at: 871020 11:43
Data File: >D6547::D2 Dilution Factor: 1.00
Name: AVTEX 8710034-07
Misc: 10-20-87 HP5995 "D" ALS 10 5MLS

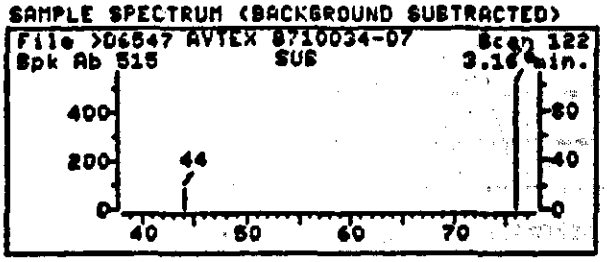
ID File: VOA624::D1
Title: VOLATILE ORGANIC ANALYSIS EPA 624 HP 5995 "D"
Last Calibration: 871020 09:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
6)	METHYLENE CHLORIDE	2.22	74	1580	3.08	UG/L	100
7)	ACETONE	2.65	96	3379	13.25	UG/L	100
8)	CARBON DISULFIDE	3.16	122	3447	2.78	UG/L	100

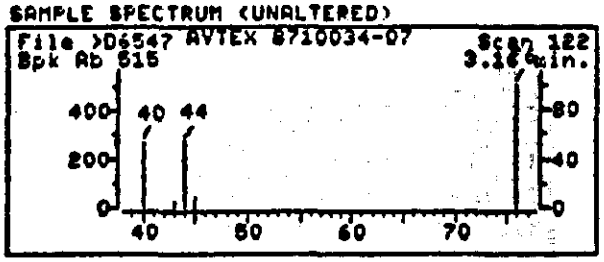
REFERENCE STANDARD SPECTRUM

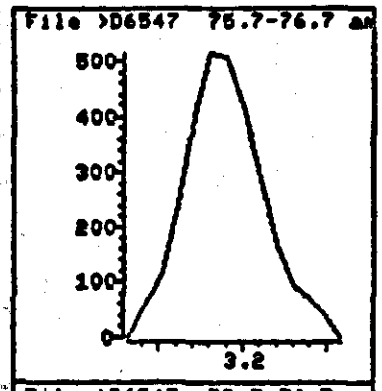


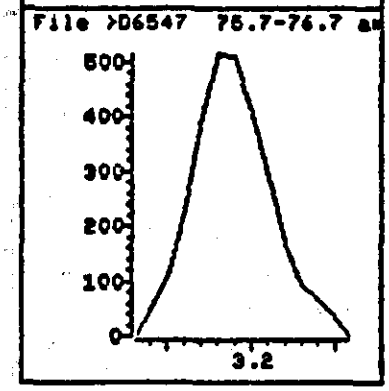
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







Data File: >D6547::D2
Name: AVTEX 8710034-07
Misc: 10-20-87 HP5995 "D" ALS 10 5MLS
Quant Time: 871020 12:21
Injected at: 871020 11:43

Compound No: 8
Compound Name: CARBON DISULFIDE
Scan Number: 122
Retention Time: 3.16 min.
Area: 3447
Concentration: 2.78 UG/L
q-value: 100

Sample Number
TC-E

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cambridge Analytical Assoc.
Case No: 8710035
Lab Sample ID No: 8710035-01
QC Report No:
Sample Matrix: Water
Contract No:
Data Release Authorized By: Rona Marquis
Date Sample Received: 10/2/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 10/9/87
Date Analyzed: 10/9/87
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted) N/A

CAS Number		ug/Ug ug/Kg (Circle One)
74-87-3	Chloromethane	NR
74-83-9	Bromomethane	NR
75-01-4	Vinyl Chloride	NR
75-00-3	Chloroethane	NR
75-09-2	Methylene Chloride	NR
67-64-1	Acetone	NR
75-15-0	Carbon Disulfide	5
75-35-4	1,1-Dichloroethene	NR
75-34-3	1,1-Dichloroethane	NR
156-60-5	Trans-1,2-Dichloroethene	NR
67-66-3	Chloroform	NR
107-06-2	1,2-Dichloroethane	NR
78-93-3	2-Butanone	NR
71-55-6	1,1,1-Trichloroethane	NR
56-23-5	Carbon Tetrachloride	NR
108-05-4	Vinyl Acetate	NR
75-27-4	Bromodichloromethane	NR

CAS Number		ug/Ug ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	NR
10061-02-6	Trans-1,3-Dichloropropene	NR
79-01-6	Trichloroethene	NR
124-48-1	Dibromochloromethane	NR
79-00-5	1,1,2-Trichloroethane	NR
71-43-2	Benzene	NR
10061-01-5	cis-1,3-Dichloropropene	NR
110-75-8	2-Chloroethylvinylether	NR
75-25-2	Bromoform	NR
108-10-1	4-Methyl-2-Pentanone	NR
591-78-6	2-Hexanone	NR
127-18-4	Tetrachloroethene	NR
79-34-5	1,1,2,2-Tetrachloroethane	NR
108-88-3	Toluene	NR
108-90-7	Chlorobenzene	NR
100-41-4	Ethylbenzene	NR
100-42-5	Styrene	NR
	Total Xylenes	NR

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be supplied.

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected. Report the sample specific detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J — Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

B — This flag serves to provide qualitative information when the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

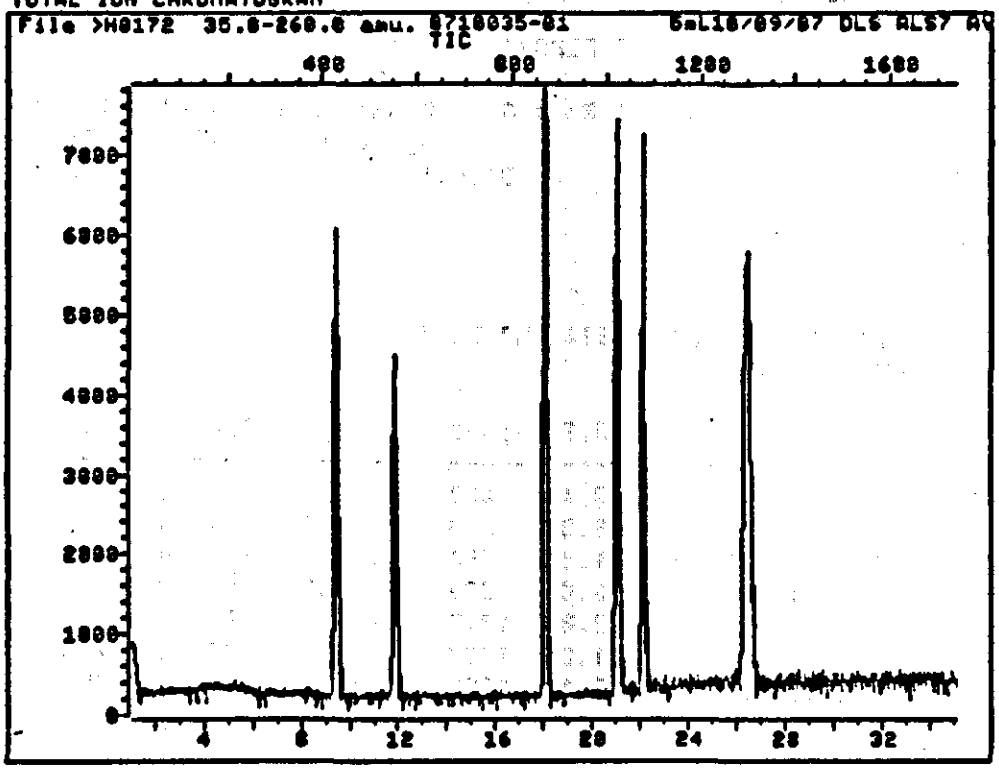
B — This flag is used when the analyte is found in the blank as well as sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other — Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and submitted/attached to the data summary report.

NR not reported

AR303091

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0172::H1 Quant Output File: ^H0172::H3
Name: 8710035-01 5mL
Misc: 10/09/87 DLS ALS7 AVTEX

TC-E

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

Operator ID: ELISSA
Quant Time: 871010 11:28
Injected at: 871009 16:19

ORIGINAL (Red)

QUANT REPORT

Operator ID: ELISSA Quant Rev: 6 Quant Time: 871010 11:28
Output File: *H0172::H3 Injected at: 871009 16:19
Data File: >H0172::H1 Dilution Factor: 1.00000
Name: 8710035-01 5mL
Misc: 10/09/87 DLS AL57 AVTEX

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 871009 12:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.43	427	6335	50.00	UG/L	100
7)	ACETONE	6.87	296	133	1.94	UG/L	100
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.83	550	15826	107.69	UG/L	98
15)	*1,4-DIFLUOROBENZENE IS-2	18.04	868	19887	50.00	UG/L	100
30)	*D5-CHLOROBENZENE IS-3	22.09	1075	16867	50.00	UG/L	100
35)	D-8 TOLUENE (SS-2)	21.05	1022	19611	98.02	UG/L	92
39)	BROMOFLUOROBENZENE (SS-3)	26.40	1296	20738M	114.35	UG/L	72

* Compound is ISTD

Cambridge Analytical Associates

ORIGINAL (Red)

IV STANDARDS DATA PACKAGE

~~Continuing Calibration Check~~
~~Volatile HSL Compounds~~ Detection Limits

ORIGINAL (Red)

Case No: _____ Region: _____

Contractor: Cambridge Analytical Associates

Contract No: 68-01-7278

Instrument ID: HP 5993 'C'

Calibration Date: _____

Time: _____

Laboratory ID: _____

Initial Calibration Date: _____

C

Minimum RF for SPCC is 0.300 (0.25 for Bromoform)

Maximum %D for CCC is 25%

Compound	$\bar{x}$ ug/L (ppb)	$\bar{x}$	3σ	% RSD	
Chloromethane	25.18	8.326	24.98	33.07%	
Bromomethane	20.40	0.170	0.510	0.83%	
Vinyl Chloride	20.35	2.053	6.16	10.09%	
Chloroethane	20.42	0.589	1.77	2.88%	
Methylene Chloride	20.12	3.801	11.40	18.89%	
Acetone	48.45	21.213	63.64	43.78%	
Carbon Disulfide	17.75	0.410	1.23	2.31%	
1,1-Dichloroethene	18.54	0.465	1.40	2.51%	
1,1-Dichloroethane	20.71	0.570	1.71	2.75%	
Trans-1,2-Dichloroethene	20.42	0.684	2.05	3.35%	
Chloroform	20.66	0.434	1.30	2.10%	
1,2-Dichloroethane	20.71	0.500	1.50	2.41%	
2-Butanone	34.66	0.847	2.54	2.44%	
1,1,1-Trichloroethane	20.98	0.516	1.55	2.46%	
Carbon Tetrachloride	21.04	0.579	1.74	2.75%	
Vinyl Acetate	17.78	2.56	7.68	14.40%	
Bromodichloromethane	20.85	0.460	1.38	2.21%	
1,2-Dichloropropane	21.53	0.430	1.30	2.03%	
Trans-1,3-Dichloropropene	20.45	0.485	1.46	2.37%	
Trichloroethene	28.26	0.968	2.90	4.55%	
Dibromochloromethane	20.19	0.562	1.69	2.78%	
1,1,2-Trichloroethane	21.64	0.493	1.48	2.28%	
Benzene	21.25	0.498	1.49	2.34%	
cis-1,3-Dichloropropene	20.34	0.641	1.92	3.15%	
2-Chloroethylvinylether	19.92	2.747	8.24	14.60%	
Bromoform	19.95	0.561	1.68	2.83%	
4-Methyl-2-Pentanone	22.84	1.137	3.41	4.98%	
2-Hexanone	29.91	2.987	8.96	10.02%	
Tetrachloroethene	21.23	0.781	2.34	3.67%	
1,1,2,2-Tetrachloroethane	21.59	1.528	4.58	7.08%	
Toluene	21.33	0.778	2.33	3.65%	
Chlorobenzene	21.18	0.329	0.987	1.55%	
Ethylbenzene	21.65	0.110	0.330	0.508%	
Styrene	21.90	0.691	1.89	2.96%	
Total Xylenes	21.14	0.674	2.02	3.19%	

RF_{50} -Response Factor from daily standard file at 50 ug/l
RF -Average Response Factor from initial calibration Form VI

%D -Percent Difference
CCC -Calibration Check Compounds (•)
SPCC -System Performance Check Compounds (••)

Form VII

AR303095

Sample Number
DETECTION LIMITS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CAMBRIDGE ANALYTICAL ASSOCIATES
Case No: 7082
Lab Sample ID No: OWA DETECTION LIMITS
QC Report No: 19
Sample Matrix: WATER
Contract No: 68-01-6791
Data Release Authorized By:
Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed: 12/20/85
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

OWA

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	9.6
74-83-9	Bromomethane	6.2
[illegible]-01-4	Vinyl Chloride	5.8
[illegible]-00-3	Chloroethane	4.7
75-09-2	Methylene Chloride	2.8
67-64-1	Acetone	6.8
75-15-0	Carbon Disulfide	4.0
75-35-4	1,1-Dichloroethene	3.2
75-34-3	1,1-Dichloroethane	3.8
156-60-5	Trans-1,2-Dichloroethene	4.1
67-66-3	Chloroform	2.2
107-06-2	1,2-Dichloroethane	2.7
78-93-3	2-Butanone	5.6
71-55-6	1,1,1-Trichloroethane	3.3
56-23-5	Carbon Tetrachloride	2.3
108-05-4	Vinyl Acetate	7.0
75-27-4	Bromodichloromethane	2.4

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	2.9
10061-02-6	Trans-1,3-Dichloropropene	3.6
79-01-6	Trichloroethene	2.0
124-48-1	Dibromochloromethane	2.3
79-00-5	1,1,2-Trichloroethane	2.2
71-43-2	Benzene	2.7
10061-01-5	cis-1,3-Dichloropropene	3.4
110-75-8	2-Chloroethylvinylether	5.7
75-25-2	Bromoform	4.6
108-10-1	4-Methyl-2-Pentanone	6.9
591-78-6	2-Hexanone	8.6
127-18-4	Tetrachloroethene	3.0
79-34-5	1,1,2,2-Tetrachloroethane	2.0
108-88-3	Toluene	2.4
108-90-7	Chlorobenzene	2.2
100-41-4	Ethylbenzene	2.1
100-42-5	Styrene	1.7
	Total Xylenes	2.0

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but [illegible]

C This flag applies to pesticide parameters where the identification has been confirmed by GC-MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC-MS.

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

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

BASED ON 3X STD AT 4X CRDL.

AR303096

Initial Calibration Data
MSL Compounds

SP10Hm

Case No: 1709172 Instrument ID: HP 5970 'H'

Contractor: CAMBRIDGE ANALYTICAL Calibration Date: ~~09/14/87~~ 9/10/87

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % RSD for CCC is 30.0%

Laboratory ID:	>H0016	>H0014	>H0017	>H0015	>H0013				
	RF	RF	RF	RF	RF				
Compound	20.00	50.00	100.00	150.00	200.00	$\overline{RF}$	% RSD	CCC	SPCC
CHLOROMETHANE	~~.26231~~	~~.25000~~	~~.24016~~	~~.23041~~	~~.22503~~	~~.25591~~	4.829		** see next page
BROMOMETHANE	.53136	.51027	.53289	.50752	.52933	.52227	2.359		
VINYL CHLORIDE	.40729	.42772	.42787	.42140	.47290	.43143	5.713	*	
CHLOROETHANE	.32954	.33341	.33368	.32449	.36976	.33016	5.336		
METHYLENE CHLORIDE	1.17430	1.04777	.98815	.95096	1.07828	1.04787	8.248		
ACETONE	.28011	.18584	.13332	.22993	.15400	.19664	30.107		
CARBON DISULFIDE	2.13005	2.30052	2.34752	2.07327	2.43997	2.25828	6.767		
1,1-DICHLOROETHENE	~~1.08524~~	~~1.05617~~	~~1.03517~~	~~1.09079~~	~~1.11736~~	~~1.06854~~	4.095	*	see next page
1,1-DICHLOROETHANE	2.01276	2.01645	2.02579	1.91640	2.08437	2.01116	3.002	**	
TRANS-1,2,DICHLOROETHENE	.95225	.98464	.96520	.92148	1.02728	.97017	4.054		
CHLOROFORM	3.06520	2.98456	3.06224	2.85321	2.89423	2.97189	3.243	*	
1,2-DICHLOROETHANE	2.04572	1.97220	2.00263	1.85765	1.91016	1.95767	3.809		
D4-1,2-DICHLOROETHANE (SS-1)	.77224	.76053	.82269	.80192	.80350	.79217	3.189		(Conc=100.0,100.0,100.0,100.0,100
2-BUTANONE (MEK)	.01902	.01858	.01555	.02302	.02200	.01963	15.124		
1,1,1-TRICHLOROETHANE	1.24504	1.06828	1.09023	1.01595	1.02570	1.08906	8.481		
CARBON TETRACHLORIDE	.94525	.96012	1.01437	.97800	.99215	.97798	2.760		
VINYL ACETATE	.21553	.20892	.18202	.17947	.22045	.20126	9.542		
BROMODICHLOROMETHANE	1.06249	1.09229	1.10219	1.09747	1.12015	1.09452	1.913		
1,2-DICHLORO PROPANE	.38179	.39915	.37096	.38549	.41553	.39058	4.405	*	
CIS-1,3-DICHLOROPROPENE	.51934	.54601	.54568	.53863	.60196	.55048	5.596		
TRICHLOROETHENE	.58589	.61760	.59239	.72707	.61894	.62838	9.088		
DIBROMOCHLOROMETHANE	.93861	.92502	.94478	.90033	.94545	.93084	2.034		
1,1,2-TRICHLOROETHANE	.35000	.34565	.33014	.32635	.34250	.33893	3.009		
BENZENE	.86392	.89182	.85950	.87549	.93471	.88509	3.438		
TRANS-1,3-DICHLOROPROPENE	.55509	.56601	.54039	.54388	.58119	.55731	2.999		
2-CHLOROETHYLVINYLETHER	.19168	.20333	.08208	.18267	.17315	.16658	29.135		
BROMOFORM	.70794	.71509	.71691	.69954	.73377	.71545	1.796	**	
4-METHYL-2-PENTANONE	.26723	.23611	.22510	.21927	.24950	.23944	8.080		
2-HEXANONE	.28422	.16240	.15696	.18445	.16796	.17520	18.965		
TETRACHLOROETHYLENE	.67765	.67095	.68436	.65455	.64812	.66713	2.300		
1,1,2,2-TETRACHLOROETHANE	.58971	.60612	.56212	.37383	.60619	.54759	18.041	**	
D-8 TOLUENE (SS-2)	.49172	.50236	.49132	.50181	.49976	.49739	1.056		(Conc=100.0,100.0,100.0,100.0,100

RF - Response Factor (Subscript is amount in US/L)

$\overline{RF}$ - Average Response Factor

RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303097

ORIGINAL (Red)

Corrected Rf values

Compound	Rf 20	Rf 50	Rf 100	Rf 150	Rf 200	$\overline{Rf}$	%RSD	
chloromethane	0.2281	0.2243	0.2162	0.2073	0.235	0.2222	4.829	(22.5, 57.5, 115, 172.5, 22
1,1 dichloroethane	1.1392	1.1769	1.1480	1.118	1.241	1.1646	4.095	(18, 45, 90, 135, 180,

AR303098

Initial Calibration Data
HSL Compounds

Case No: 8709172 Instrument ID: HP 5970 "W"

Contractor: CAMBRIDGE ANALYTICAL Calibration Date: 09/11/87

Contract No:

ORIGINAL (Red)

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % RSD for CCC is 30.0%

Laboratory ID: >H0016 >H0014 >H0017 >H0015 >H0013

Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC	
TOLUENE	.70361	.71045	.67466	.68328	.72276	.69095	2.823	*		
CHLOROBENZENE	1.00250	1.02110	.99587	.99802	1.04765	1.01303	2.148		**	
ETHYL BENZENE	.49077	.48853	.47904	.46756	.49688	.48456	2.366	*		
BROMOFLUOROBENZENE (SS-3)	.48160	.49563	.48525	.48721	.48117	.48697	1.226			(Conc=100.0,100.0,100.0,100.0,100
STYRENE	.99850	.67519	.99962	.97026	1.03328	.93539	15.732			
M-XYLENE	.56803	.57269	.55762	.53414	.56397	.56329	3.531			
O-XYLENE	.62141	.60972	.57537	.55787	.50935	.59154	4.234			

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303099

Initial Calibration Data
HSL Compounds

ORIGINAL (Red)

Case No: 8709173 Instrument ID: HP 5973 "C" SC1193

Contractor: CAS Calibration Date: 05/11/87

Contract No: 68-01-7270

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30.0%

Laboratory ID:	X7767	X7768	X7769	X7770	X7771				
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC	
CHLOROMETHANE	.30763	.27004	.15159	.11053	.08623	.18680	51.061		**	(Conc=23.0,57.5,115.0,172.5,230.0
BROMOMETHANE	.26917	.24812	.19285	.15313	.11241	.19339	32.358			
VINYL CHLORIDE	.35258	.40178	.33657	.27582	.23081	.32091	20.955	*		
CHLOROETHANE	.22723	.24511	.22795	.18466	.15176	.20734	18.944			
METHYLENE CHLORIDE	.43466	.42559	.41860	.42459	.40153	.42099	2.922			
ACETONE	.42725	.45719	.55753	.51648	.56386	.51646	8.820			
CARBON DISULFIDE	1.47721	1.50509	1.62059	1.54954	1.64165	1.59260	6.299			(Conc=17.5,35.0,87.5,131.5,175.0) for see next page
1,1-DICHLOROETHENE	1.23145	1.23456	1.26855	1.21860	1.21157	1.23294	1.784	*		(Conc=18.0,45.0,90.0,135.0,180.0)
1,1-DICHLOROETHANE	2.52854	2.61618	2.64815	2.51356	2.52121	2.56553	2.420		**	
TRANS-1,2,DICHLOROETHENE	1.05623	1.07259	1.07251	1.04595	1.05840	1.06114	1.877			
CHLOROFORM	2.66353	2.63367	2.65975	2.47759	2.50539	2.58799	3.453	*		
1,2-DICHLOROETHANE	1.89352	1.81752	1.92089	1.84262	1.80924	1.85798	2.621			
D4-1,2-DICHLOROETHANE (SS-1)	.75956	.78136	.83259	.80488	.84031	.80374	4.230			(Conc=100.0,100.0,100.0,100.0,100
2-BUTANONE (MEK)	.01320	.00662	.01201	.00955	.02513	.01342	52.752			
1,1,1-TRICHLOROETHANE	.45493	.44559	.45789	.46285	.44813	.45448	1.378			
CARBON TETRACHLORIDE	.52239	.50456	.51312	.53739	.51620	.51853	2.374			
VINYL ACETATE	.22234	.12994	.23857	.21138	.25872	.21219	23.242			
BROMODICHLOROMETHANE	.49729	.48533	.50216	.50750	.50004	.49866	1.678			
1,2-DICHLORO PROPANE	.31533	.33054	.34634	.34043	.33349	.33323	3.523	*		
CIS-1,3-DICHLOROPROPENE	.25720	.26219	.27616	.27631	.27461	.26970	3.481			(Conc=35.0,70.0,140.0,210.0,280.0 for see next page
TRICHLOROETHENE	.32357	.33203	.35481	.39764	.34593	.35300	7.562			
DIBROMOCHLOROMETHANE	.46887	.42569	.46186	.46819	.47571	.46206	3.363			
1,1,2-TRICHLOROETHANE	.23748	.21969	.22369	.21965	.21809	.22372	3.561			
BENZENE	1.00307	.93061	1.02542	1.01400	.98695	1.00501	1.605			
TRANS-1,3-DICHLOROPROPENE	.30755	.30134	.31714	.31435	.30917	.30999	2.018			(Conc=23.0,57.5,115.0,172.5,230.0 for see next page
2-CHLOROETHYLVINYLETHER	.19327	.18150	.19792	.21174	.20780	.19905	5.526			
BROMOFORM	.25868	.22088	.25669	.25364	.28520	.25624	8.970		**	
4-METHYL-2-PENTANONE	.40393	.36117	.43650	.41643	.47293	.41819	9.052			
2-HEXANONE	.30195	.14643	.23798	.19653	.35951	.24048	33.917			
TETRACHLOROETHYLENE	.25676	.24206	.24585	.26009	.25762	.25248	3.165			
1,1,2,2-TETRACHLOROETHANE	.45987	.36645	.38038	.32850	.40728	.38762	12.167		**	
D-8 TOLUENE (SS-2)	.52857	.54619	.54682	.55528	.54117	.54401	1.041			(Conc=100.0,100.0,100.0,100.0,100
TOLUENE	.79799	.74855	.75185	.75443	.73641	.75765	3.098	*		
CHLOROBENZENE	1.03857	.96454	.99504	1.00753	1.00073	1.00124	2.650		**	
ETHYL BENZENE	.54606	.53135	.54151	.55223	.54566	.54336	1.422	*		
BROMOFLUOROBENZENE (SS-3)	.29990	.29981	.30958	.30711	.30506	.30429	1.432			(Conc=100.0,100.0,100.0,100.0,100

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303100

ORIGINAL

	Rf 20	Rf 50	Rf 100	Rf 150	Rf 200	$\overline{Rf}$ (J)	% diff
trans 1,3 dichloropropene	0.3537	0.3465	0.3647	0.3620	0.3555	0.3565	2.01
cis 1,3 dichloropropene	0.3601	0.3671	0.3866	0.3897	0.3845	0.3776	3.48
Cl_2	1.2926	1.3185	1.4180	1.5052	1.4364	1.3941	6.29

Initial Calibration Data
MSL Compounds

Case No: 8709173 Instrument ID: HP 5973 "C" SE1193

Contractor: CRR Calibration Date: 09/11/87

Contract No: 68-01-7278

ORIGINAL (Red)

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30.0%

Laboratory ID: XC7767 XC7768 XC7769 XC7770 XC7771

Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC
STYRENE	1.25315	1.16649	1.24062	1.23105	1.17620	1.21418	3.276		
M-XYLENE	.72623	.65853	.70691	.69563	.65761	.69097	4.056		
O-XYLENE	.76497	.70835	.75226	.75462	.72432	.74103	3.158		

RF - Response Factor (Subscript is amount in NG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303102

Initial Calibration Data
Volatile HSL Compounds

Case No: _____ Region: _____ Instrument I.D: OWA

Contractor: Cambridge Analytical Associates Calibration Date: 9/19/18

Contract No: 68-01-7278

ORIGINAL

Minimum $\overline{RF}$ for SPCC is 0.300 (0.25 for Bromoform) Maximum % RSD for CCC is 30%

Laboratory ID	10A170 1067	10A170 1068	10A170 1069	10A170 1070	10A170 1071			
Compound	RF_{20}	RF_{50}	RF_{100}	RF_{150}	RF_{200}	$\overline{RF}$	% RSD	CCC* SPCC**
Chloromethane	~~1.060~~	~~0.996~~	~~0.935~~	~~0.911~~	~~0.811~~	~~0.942~~	10	**
Bromomethane	0.600	0.571	0.602	0.599	0.586	0.584	4	
Vinyl Chloride	1.033	0.958	0.941	0.970	0.965	0.953	6	*
Chloroethane	0.651	0.610	0.617	0.625	0.588	0.616	3	
Methylene Chloride	0.940	0.914	0.911	0.903	0.820	0.900	5	
Acetone	0.258	~~0.084~~	0.0994	0.202	0.282	0.180	52	
Carbon Disulfide	3.176	3.148	3.133	3.361	3.092	3.182	3	
1,1-Dichloroethene	~~1.401~~	~~1.376~~	~~1.352~~	~~1.421~~	~~1.284~~	~~1.310~~	5	*
1,1-Dichloroethane	3.277	3.019	3.018	3.147	2.935	3.079	4	**
Trans-1,2-Dichloroethene	1.324	1.311	1.318	1.346	1.225	1.312	4	
Chloroform	2.857	2.747	2.690	2.924	2.617	2.747	4	*
1,2-Dichloroethane	~~0.037~~	2.084	1.958	2.051	1.899	2.036	6	
2-Butanone	~~0.0039~~	0.015	0.017	0.020	0.027	0.018	36	
1,1,1-Trichloroethane	0.372	0.363	0.349	0.370	0.337	0.354	4	
Carbon Tetrachloride	0.254	0.284	0.278	0.293	0.273	0.282	3	
Vinyl Acetate	~~0.030~~	0.074	0.067	0.513	0.065	0.157	124	
Bromodichloromethane	0.478	0.526	0.541	0.575	0.551	0.536	6	
1,2-Dichloropropane	0.503	0.501	0.476	0.533	0.494	0.501	4	*
Trans-1,3-Dichloropropene	0.342	0.375	0.414	0.424	0.423	0.398	10	
Trichloroethene	0.390	0.379	0.368	0.476	0.351	0.383	3	
Dibromochloromethane	0.302	0.347	0.368	0.398	0.341	0.359	10	
1,1,2-Trichloroethane	0.330	0.343	0.344	0.363	0.337	0.343	4	*
Benzene	1.453	1.274	1.220	1.201	1.128	1.257	9	
cis-1,3-Dichloropropene	0.377	0.407	0.431	0.475	0.449	0.428	9	
2-Chloroethylvinylether	0.295	0.316	0.332	0.393	0.351	0.337	11	
Bromoform	0.167	0.209	0.220	0.245	0.241	0.216	14	**
4-Methyl-2-Pentanone	0.634	0.618	0.601	0.762	0.715	0.663	9	
2-Hexanone	0.363	0.369	0.355	0.466	0.514	0.413	17	
Tetrachloroethene	0.401	0.357	0.336	0.360	0.324	0.356	8	
1,1,2,2-Tetrachloroethane	0.621	0.645	0.660	0.587	0.649	0.626	10	**
Toluene	0.767	0.730	0.718	0.744	0.671	0.725	5	*
Chlorobenzene	0.939	0.906	0.897	0.938	0.863	0.907	4	**
Ethylbenzene	0.510	0.583	0.498	0.535	0.480	0.509	4	*
Styrene	0.922	0.898	0.896	0.952	0.884	0.910	3	
Total Xylenes	1.176	1.177	1.144	1.281	1.146	1.174	3	

RF -Response Factor (subscript is the amount of ug/L)
$\overline{RF}$ -Average Response Factor
%RSD -Percent Relative Standard Deviation

CCC -Calibration Check Compounds (*)
SPCC -System Performance Check Compounds (**)

Form VI

AR303103

Corrected Rf values

Compound	Rf 20	Rf 50	Rf 100	Rf 150	Rf 200	$\bar{Rf}$	%RSD
chloroethene	0.9218	0.8601	0.8128	0.7922	0.7054	0.8197	10 (20,57.5,115,172.5,23
1,1 dichloroethene	1.6323	1.5250	1.5018	1.5787	1.4266	1.5329	5 (18,45,90,135,18

AR303104

Initial Calibration Data
MSL Compounds

Case No: _____ Instrument ID: MF5993

Contractor: CRR _____ Calibration Date: ~~10/01/93~~ 9/30/93

Contract No: 68-01-7278

ORIGINAL

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30.0%

Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC	
Laboratory ID:	XC0062	XC0063	XC0064	XC0065	XC0066					
CHLOROMETHANE	.18633	.16036	.10553	.07354	.05929	.11701	46.001		**	(Conc=23.0,57.5,115.0,172.5,230.0
BROMOMETHANE	.18121	.19864	.15431	.11589	.08964	.14854	30.762			
VINYL CHLORIDE	.28751	.30249	.25784	.19996	.17971	.24550	21.904	*		
CHLOROETHANE	.18259	.19585	.19123	.14808	.14596	.17274	13.878			
METHYLENE CHLORIDE	.41618	.40431	.38438	.34733	.35743	.38203	7.742			
ACETONE	.51791	.51677	.49349	.51847	.46371	.48997	7.744			
CARBON DISULFIDE	1.38434	1.41613	1.38287	1.22221	1.40089	1.40129	10.699			
1,1-DICHLOROETHENE	1.18474	1.22436	1.09214	1.05931	1.03454	1.11902	7.320	*		(Conc=18.0,45.0,90.0,135.0,180.0)
1,1-DICHLOROETHANE	2.26562	2.37313	2.29356	2.11281	2.13377	2.23578	4.931		**	
TRANS-1,2,DICHOROETHENE	1.05983	1.08743	1.05059	.97534	.98120	1.03088	4.845			
CHLOROFORM	2.64374	2.66562	2.60042	2.37463	2.31423	2.51973	6.474	*		
1,2-DICHLOROETHANE	1.77694	1.78264	1.74968	1.61517	1.58454	1.70179	5.553			
D4-1,2-DICHLOROETHANE (SS-1)	.65989	.68189	.71640	.71128	.72710	.69931	3.958			(Conc=100.0,100.0,100.0,100.0,100
2-BUTANONE (MEK)	-	.01121	.01696	.01618	.02132	.01642	25.233			
1,1,1-TRICHLOROETHANE	.47820	.49582	.48578	.45300	.44669	.47188	4.489			
CARBON TETRACHLORIDE	.52169	.54665	.54457	.51942	.52050	.53057	2.597			
VINYL ACETATE	.35534	.15700	.22662	.18480	.22760	.23027	33.001			
BROMODICHLOROMETHANE	.50090	.52703	.52386	.50093	.49796	.51014	2.758			
1,2-DICHLORO PROPANE	.30572	.32581	.32720	.30606	.30205	.31417	4.205	*		
CIS-1,3-DICHLOROPROPENE	.36180	.38413	.38618	.36790	.35945	.37196	3.384			
TRICHLOROETHENE	.35504	.37544	.37356	.35623	.35372	.36280	2.961			
DIBROMOCHLOROMETHANE	.46099	.47765	.47763	.45103	.44687	.46284	3.123			
1,1,2-TRICHLOROETHANE	.23342	.23961	.22937	.21320	.20462	.22406	6.514			
BENZENE	.99213	1.04375	1.01305	.96181	.93250	.98865	4.385			
TRANS-1,3-DICHLOROPROPENE	.33526	.35440	.34789	.32186	.31208	.33510	5.293			
2-CHLOROETHYLVINYLETHER	.15385	.15448	.14535	.15959	.16015	.15468	3.847			
BROMOFORM	.27066	.26716	.27562	.28032	.29208	.27733	3.613		**	
4-METHYL-2-PENTANONE	.36592	.37452	.44074	.50346	.41712	.42035	13.244			
2-HEXANONE	.28233	.19591	.26555	.27886	.30879	.26629	15.905			
TETRACHLOROETHYLENE	.28980	.28627	.29272	.28830	.29468	.28837	1.083			
1,1,2,2-TETRACHLOROETHANE	.48603	.46265	.44993	.45204	.42607	.45535	4.776		**	
D-8 TOLUENE (SS-2)	.48012	.49425	.50382	.51485	.50668	.50154	2.896			(Conc=100.0,100.0,100.0,100.0,100
TOLUENE	.82543	.80933	.81495	.78600	.76208	.79972	3.145	*		
CHLOROBENZENE	1.08378	1.07406	1.10228	1.04899	1.02489	1.06679	2.839		**	
ETHYL BENZENE	.56522	.55279	.56789	.52474	.51997	.54612	4.119	*		
BROMOFLUOROBENZENE (SS-3)	.27466	.27762	.29310	.28730	.29599	.28653	3.682			(Conc=100.0,100.0,100.0,100.0,100

AR303105

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303105

Initial Calibration Data
MSL Compounds

Case No: _____ Instrument ID: MS993

Contractor: CDM Calibration Date: 10/01/87

Contract No: 68-01-7278

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30.0%

Laboratory ID:	XC8062	XC8063	XC8064	XC8065	XC8066				
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC
STYRENE	1.25331	1.26105	1.28157	1.20460	1.19419	1.23895	3.045		
M-XYLENE	.68152	.67547	.68565	.64169	.64122	.66511	3.292		
O-XYLENE	.73333	.73988	.74848	.64169	.70680	.71416	6.078		

AR303106

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - Special Purpose Compounds

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: HP5973

Contractor: CRA Calibration Date: ~~10/01/87~~ 9/30/87

Contract No: 68-01-7270

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30.0%

Laboratory ID:	XC8062	XC8063	XC8064	XC8065	XC8066				
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC	
CHLOROMETHANE	.18633	.16036	.10553	.07354	.05929	.11701	46.881		**	(Conc=23.0,57.5,115.0,172.5,230.0
BROMOMETHANE	.18421	.19864	.15431	.11589	.08964	.14854	30.762			
VINYL CHLORIDE	.28751	.30249	.25784	.19936	.17971	.24550	21.904	*		
CHLOROETHANE	.18259	.19585	.19123	.14808	.14595	.17274	13.870			
METHYLENE CHLORIDE	.41610	.40490	.38438	.34733	.35743	.38203	7.742			
ACETONE	.51741	.51677	.44349	.51847	.45371	.48997	7.744			
CARBON DISULFIDE	1.58434	1.41613	1.38287	1.22221	1.40089	1.48129	18.699			
1,1-DICHLOROETHENE	1.18474	1.22436	1.09214	1.05931	1.03454	1.11502	7.320	*		(Conc=18.0,45.0,90.0,135.0,180.0)
1,1-DICHLOROETHANE	2.26562	2.37313	2.29356	2.11201	2.13377	2.23578	4.931		**	
TRANS-1,2,DICHLOROETHENE	1.05983	1.08743	1.05059	.97534	.98120	1.03088	4.845			
CHLOROFORM	2.64374	2.66562	2.60042	2.37463	2.31423	2.51973	6.474	*		
1,2-DICHLOROETHANE	1.77694	1.78264	1.74968	1.61517	1.58454	1.70179	5.553			
D4-1,2-DICHLOROETHANE (SS-1)	.65389	.68189	.71640	.71128	.72710	.69931	3.958			(Conc=100.0,100.0,100.0,100.0,100
2-BUTANONE (MEK)	-	.01121	.01696	.01618	.02132	.01642	25.233			
1,1,1-TRICHLOROETHANE	.47828	.49582	.48570	.45300	.44669	.47190	4.489			
CARBON TETRACHLORIDE	.52169	.54665	.54457	.51942	.52050	.53057	2.537			
VINYL ACETATE	.35534	.15700	.22662	.18480	.22760	.23027	33.001			
BROMODICHLOROMETHANE	.50090	.52703	.52386	.50093	.49796	.51014	2.758			
1,2-DICHLORO PROPANE	.30572	.32501	.32728	.30606	.30206	.31417	4.226	*		
CIS-1,3-DICHLOROPROPENE	.36188	.38443	.38618	.36790	.35945	.37195	3.384			
TRICHLOROETHENE	.35504	.37544	.37356	.35623	.35372	.36280	2.961			
DIBROMOCHLOROMETHANE	.46099	.47765	.47763	.45103	.44687	.46204	3.123			
1,1,2-TRICHLOROETHANE	.23342	.23961	.22937	.21328	.20462	.22406	6.514			
BENZENE	.99213	1.04375	1.01305	.96181	.93250	.98865	4.385			
TRANS-1,3-DICHLOROPROPENE	.33926	.35140	.34789	.32186	.31208	.33510	5.293			
2-CHLOROETHYLVINYLETHER	.15385	.15448	.14535	.15959	.16015	.15468	3.847			
BROMOFORM	.27066	.26716	.27562	.28032	.29208	.27733	3.613		**	
4-METHYL-2-PENTANONE	.36592	.37452	.44074	.50346	.41712	.42035	13.244			
2-HEXANONE	.28233	.19591	.26555	.27886	.30879	.26629	15.905			
TETRACHLOROETHYLENE	.28980	.28627	.29272	.28838	.28468	.28837	1.083			
1,1,2,2-TETRACHLOROETHANE	.46603	.46265	.44993	.45204	.42607	.45535	4.776		**	
D-8 TOLUENE (SS-2)	.48812	.49425	.50382	.51485	.50668	.50154	2.896			(Conc=100.0,100.0,100.0,100.0,100
TOLUENE	.82543	.80533	.81435	.78608	.76288	.79972	3.145	*		
CHLOROBENZENE	1.08370	1.07406	1.10228	1.04899	1.02489	1.06679	2.839		**	
ETHYL BENZENE	.56522	.55279	.56789	.52474	.51597	.54612	4.119	*		
BROMOFLUOROBENZENE (SS-3)	.27466	.27762	.29318	.28730	.29999	.28653	3.682			(Conc=100.0,100.0,100.0,100.0,100

AR303107

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
BSL Compounds

Case No: _____ Instrument ID: HP5993

Contractor: CMS Calibration Date: 10/01/87

Contract No: 68-01-7270

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30.0%

Laboratory ID:	XC8062	XC8063	XC8064	XC8065	XC8066				
Compound	$RF_{20.00}$	$RF_{50.00}$	$RF_{100.00}$	$RF_{150.00}$	$RF_{200.00}$	$\overline{RF}$	% RSD	CCC	SPCC
STYRENE	1.25331	1.26105	1.28157	1.20460	1.19419	1.23895	3.045		
M-XYLENE	.68152	.67547	.68565	.64169	.64122	.66511	3.292		
O-XYLENE	.73393	.73988	.74848	.64169	.70680	.71416	6.878		

AR303108

RF_{x} - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (6) SPCC - System Performance Check Compounds (6)

Initial Calibration Data
HSL Compounds

ORIGINAL (Red)

Case No: _____ Instrument ID: HP5995 "D"

Contractor: CAA Calibration Date: ~~10/16/87~~ 10/9/87

Contract No: _____

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % RSD for CCC is 30.0%

Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC
Laboratory ID:	>D6417	>D6418	>D6419	>D6420	>D6421				
CHLOROMETHANE	~~.40950~~	~~.34638~~	~~.13572~~	~~.29405~~	~~.12018~~	~~.22072~~	43.819		**
BROMOMETHANE	.33052	.51697	.41199	.21043	.16770	.32752	43.793		
VINYL CHLORIDE	.64340	.87382	.86254	.23506	.12538	.54804	63.912	*	
CHLOROETHANE	.73844	.79830	.97701	.33506	.11217	.59219	60.207		
METHYLENE CHLORIDE	1.02156	1.26254	1.24114	1.10613	.94803	1.11588	12.219		
ACETONE	.35516	.13602	.19392	.28246	.63619	.32075	60.847		
CARBON DISULFIDE	2.45401	3.14907	3.32840	3.02954	2.93412	2.97903	11.021		
1,1-DICHLOROETHENE	~~.99238~~	~~1.24112~~	~~1.27476~~	~~1.10279~~	~~1.16311~~	~~1.17907~~	9.770	*	
1,1-DICHLOROETHANE	2.02804	2.67175	2.65274	2.56116	2.49598	2.48193	10.616		**
TRANS-1,2,DICHOROETHENE	.92224	1.18776	1.22466	1.17444	1.17744	1.13731	10.717		
CHLOROFORM	2.24721	2.98670	3.00850	2.90691	2.81923	2.79371	11.256	*	
1,2-DICHLOROETHANE	1.81794	2.32294	2.33250	2.30932	2.27514	2.21157	9.998		
D4-1,2-DICHLOROETHANE (SS-1)	4.17535	1.78316	.91314	.64268	.52627	1.60812	94.342		
2-BUTANONE (MEK)	.09620	.09055	.10249	.12516	.21292	.12546	40.352		
1,1,1-TRICHLOROETHANE	.49636	.69028	.72279	.67785	.63576	.64461	13.736		
CARBON TETRACHLORIDE	.45652	.58638	.63753	.58834	.55626	.56500	11.908		
VINYL ACETATE	.01181	.01131	.01222	.01221	.01118	.01175	4.141		
BROMODICHLOROMETHANE	.25547	.29527	.31191	.30128	.28818	.29042	7.364		
1,2-DICHLORO PROPANE	.33784	.42710	.42940	.40179	.37737	.39470	9.679	*	
TRANS-1,3-DICHLOROPROPENE	.40016	.50467	.53971	.52753	.50439	.49529	11.165		
TRICHLOROETHENE	.36838	.43305	.45774	.42452	.39965	.41667	8.173		
DIBROMOCHLOROMETHANE	.39073	.48803	.52580	.51248	.49518	.48244	11.059		
1,1,2-TRICHLOROETHANE	.26108	.28391	.31264	.32553	.26849	.29033	9.605		
BENZENE	.98070	1.20080	1.20728	1.14902	1.06417	1.12040	8.643		
CIS-1,3-DICHLOROPROPENE	.40178	.49826	.52930	.51706	.49294	.48787	10.307		
2-CHLOROETHYLVINYLETHER	.12729	.11409	.14626	.15234	.15094	.13819	12.150		
BROMOFORM	.23583	.28850	.32557	.32722	.33508	.30244	13.678		**
4-METHYL-2-PENTANONE	.38724	.42883	.49859	.51411	.50073	.46590	11.838		
2-HEXANONE	.27668	.24067	.31305	.37212	.49060	.33862	28.898		
TETRACHLOROETHYLENE	.35912	.42337	.44477	.42674	.40374	.41155	7.951		
1,1,2,2-TETRACHLOROETHANE	.46709	.51580	.52692	.54715	.55695	.52318	6.723		**
D-8 TOLUENE (SS-2)	3.09687	1.26066	.61284	.41537	.30938	1.13902	101.409		
TOLUENE	.78032	.95463	.96777	.95354	.88470	.90819	8.647	*	
CHLOROBENZENE	.89908	1.11822	1.11150	1.06994	1.00297	1.04034	8.778		**
ETHYL BENZENE	.46802	.57914	.58417	.55931	.51189	.54051	9.169	*	
BROMOFLUOROBENZENE (SS-3)	1.63375	.66471	.33551	.22455	.16650	.60500	100.253		

AR303109

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Contractor: CAA Time: 10:46

Contract No: 68-01-7276 Laboratory ID: >C7957

Instrument ID: HP 5993 "C" SE1193 Initial Calibration Date: 09/11/87

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
STYRENE	1.21410	1.08740	10.44		
M-XYLENE	.69097	.58513	15.32		
O-XYLENE	.74103	.64602	12.82		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

AR303110

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

&k2S

Continuing Calibration Check
HSL Compounds

ORIGINAL (Red)

Case No: 8709173 Calibration Date: 09/25/87

Contractor: CAA Time: 10:30

Contract No: 68-01-7278 Laboratory ID: >C7979

Instrument ID: HP 5993 "C" SE1193 Initial Calibration Date: 09/11/87

Minimum $\bar{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25.0%

Compound	$\bar{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	.18680	~~.07661~~ 0.044	~~58.35~~ 64.34		** Y
BROMOMETHANE	.19339	.10349	46.49		
VINYL CHLORIDE	.32091	.13028	59.40	* Y	
CHLOROETHANE	.20734	.12145	41.43		
METHYLENE CHLORIDE	.42099	.18305	56.52		
ACETONE	.51646	.43972	14.86		
CARBON DISULFIDE 1.3941	~~1.59280~~	.84544 0.9237	46.92		
1-DICHLOROETHENE	1.23294	~~.83135~~	~~32.87~~ 25.08		
,1-DICHLOROETHANE	2.56553	1.99272	22.33		**
TRANS-1,2,DICHOROETHENE	1.06114	.93768	11.63		
CHLOROFORM	2.58799	2.37890	8.08	*	
1,2-DICHLOROETHANE	1.85798	1.59957	13.91		
D4-1,2-DICHLOROETHANE (SS-1)	.80374	1.49366	85.84		
2-BUTANONE (MEK)	.01342	.01036	22.79		
1,1,1-TRICHLOROETHANE	.45448	.37147	18.26		
CARBON TETRACHLORIDE	.51853	.41420	20.12		
VINYL ACETATE	.21219	.18300	13.76		
BROMODICHLOROMETHANE	.49866	.39911	19.96		
1,2-DICHLORO PROPANE	.33323	.24261	27.19	*	
CIS-1,3-DICHLOROPROPENE 0.3776	~~.26970~~	.30001	~~11.24~~ 20.52		
TRICHLOROETHENE	.35300	.28955	17.97		
DIBROMOCHLOROMETHANE	.46206	.39163	15.24		
1,1,2-TRICHLOROETHANE	.22372	.18985	15.14		
BENZENE	1.00501	.79631	20.77		
TRANS-1,3-DICHLOROPROPENE 0.3565	~~.30999~~	.28900	~~6.77~~ 18.93		
2-CHLOROETHYLVINYLETHER	.19905	.16790	15.65		
BROMOFORM	.25624	.23260	9.22		**
4-METHYL-2-PENTANONE	.41819	.28102	32.80		
2-HEXANONE	.24848	.18800	24.34		
TETRACHLOROETHYLENE	.25248	.21366	15.38		
1,1,2,2-TETRACHLOROETHANE	.38762	.36019	7.08		**
D-8 TOLUENE (SS-2)	.54401	.95656	75.84		
TOLUENE	.75785	.63146	16.68	*	
CHLOROBENZENE	1.00124	.82811	17.29		**
ETHYL BENZENE	.54336	.44571	17.97	*	
BROMOFLUOROBENZENE (SS-3)	.30429	.56983	87.26		

AR303111

RF - Response Factor from daily standard file at 50.00 ng

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Form VII Page 1 of 2

Continuing Calibration Check
HSL Compounds

ORIGINAL (Red)

Case No: 8709173 Calibration Date: 09/25/87

Contractor: CAA Time: 10:30

Contract No: 68-01-7278 Laboratory ID: >C7979

Instrument ID: HP 5993 "C" SE1193 Initial Calibration Date: 09/11/87

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
STYRENE	1.21410	1.01530	16.37		
M-XYLENE	.69097	.55424	19.79		
O-XYLENE	.74103	.58360	21.24		

Continuing Calibration Check
Volatile HSL Compounds

Case No: 8709/7L Region: _____

Contractor: Cambridge Analytical Associates

Contract No: 68-01-6791

Instrument ID: OWA

Calibration Date: 09/25/87

Time: 12:09

Laboratory ID: VOASTD1077

Initial Calibration Date: 09/14/87 (Red) FINAL

Minimum RF for SPCC is 0.300 (0.25 for Bromoform)

Maximum %D for CCC is 25%

Compound	RF	RF_{50}	%D	CCC	SPCC
Chloromethane 0.8197	0.445	0.5438 0.4680	43		
Bromomethane	0.584	0.433	26		••
Vinyl Chloride	0.953	0.582	39		
Chloroethane	0.616	0.505	5.5	•	
Methylene Chloride	0.900	0.983	9.2		
Acetone	0.190	0.063	65		
Carbon Disulfide	3.162	2.752	14		
1,1-Dichloroethene 1.5329	~~1.3804~~	~~1.424~~ 1.3050	15		
1,1-Dichloroethane	3.074	3.306	7.5	•	
Trans-1,2-Dichloroethene	1.312	1.202	8.4		••
Chloroform	2.747	2.803	2.0		
1,2-Dichloroethane	2.036	2.096	2.9	•	
2-Butanone	0.018	0.027	50		
1,1,1-Trichloroethane	0.358	0.336	6.1		
Carbon Tetrachloride	0.282	0.245	13		
Vinyl Acetate	0.159	0.0675	58		
Bromodichloromethane	0.536	0.551	2.8		
1,2-Dichloropropane	0.501	0.595	14		
Trans-1,3-Dichloropropene	0.398	0.439	9.0	•	
Trichloroethene	0.383	0.336	12		
Dibromochloromethane	0.359	0.344	4.2		
1,1,2-Trichloroethane	0.343	0.361	5.2		
Benzene	1.257	1.240	1.4		
Cis-1,3-Dichloropropene	0.428	0.404	5.6		
2-Chloroethylvinylether	0.337	0.423	26		
Bromoform	0.216	0.184	15		
4-Methyl-2-Pentanone	0.662	0.757	14		••
2-Hexanone	0.413	0.497	20		
Tetrachloroethene	0.356	0.281	21		
1,1,2,2-Tetrachloroethane	0.626	0.762	22		
Toluene	0.725	0.738	1.8		••
Chlorobenzene	0.902	0.897	1.1	•	
Ethylbenzene	0.504	0.507	0.39		••
Styrene	0.910	0.918	3.7	•	
Total Xylenes	1.174	1.198	2.0		

RF_{50} - Response Factor from daily standard file at 50 ug/l
RF - Average Response Factor from initial calibration Form VI

%D - Percent Difference
CCC - Calibration Check Compounds (•)
SPCC - System Performance Check Compounds (••)

Form VII

AB303113

ORIGINAL

Continuing Calibration Check
HSL Compounds

Case No: 8709178Y

Calibration Date: 09/25/87

Contractor: CAA

Time: 10:30

Contract No: 68-01-7278

Laboratory ID: >C7979

Instrument ID: HP 5993 "C" SE1193

Initial Calibration Date: 09/11/87

Minimum RF for SPCC is 0.3

Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC
CHLOROMETHANE	.18680	.07661	58.99		**Y
BROMOMETHANE	.19339	.10349	46.49		
VINYL CHLORIDE	.32091	.13028	59.40	* Y	
CHLOROETHANE	.20734	.12145	41.43		
METHYLENE CHLORIDE	.42099	.18305	56.52		
ACETONE	.51646	.43972	14.86		
CARBON DISULFIDE	1.3941 ~~1.81260~~	.84544	46.92		
1,1-DICHLOROETHENE	1.23294	.83135	32.57	*\	
1,1-DICHLOROETHANE	2.56553	1.99272	22.33		**
TRANS-1,2,DICHOROETHENE	1.06114	.93768	11.63		
CHLOROFORM	2.58799	2.37890	8.08	*	
1,2-DICHLOROETHANE	1.85798	1.59957	13.91		
D4-1,2-DICHLOROETHANE (SS-1)	.80374	1.49366	85.84		
2-BUTANONE (MEK)	.01342	.01036	22.79		
1,1,1-TRICHLOROETHANE	.45448	.37147	18.26		
CARBON TETRACHLORIDE	.51853	.41420	20.12		
VINYL ACETATE	.21219	.18300	13.76		
BROMODICHLOROMETHANE	.49866	.39911	19.96		
1,2-DICHLORO PROPANE	.33323	.24261	27.19	*	
CIS-1,3-DICHLOROPROPENE	0.3776 ~~.26270~~	.30001	11.24		
TRICHLOROETHENE	.35300	.28955	17.97		
DIBROMOCHLOROMETHANE	.46206	.39163	15.24		
1,1,2-TRICHLOROETHANE	.22372	.18985	15.14		
BENZENE	1.00501	.79631	20.77		
TRANS-1,3-DICHLOROPROPENE	0.3565 ~~.38989~~	.28900	6.77		
2-CHLOROETHYLVINYLETHER	.19905	.16790	15.65		
BROMOFORM	.25624	.23260	9.22		**
4-METHYL-2-PENTANONE	.41819	.28102	32.80		
2-HEXANONE	.24848	.18800	24.34		
TETRACHLOROETHYLENE	.25248	.21366	15.38		
1,1,2,2-TETRACHLOROETHANE	.38762	.36019	7.08		
D-8 TOLUENE (SS-2)	.54401	.95656	75.84		
TOLUENE	.75785	.63146	16.68	*	
CHLOROBENZENE	1.00124	.82811	17.29		**
ETHYL BENZENE	.54336	.44571	17.97	*	
BROMOFLUOROBENZENE (SS-3)	.30429	.56983	87.26		

AR303114

RF - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Form VII Page 1 of 2

ORIGINAL

Continuing Calibration Check
HSL Compounds

Case No: 709172 Calibration Date: 09/25/87

Contractor: CAA Time: 10:30

Contract No: 68-01-7278 Laboratory ID: >C7979

Instrument ID: HP 5993 "C" SE1193 Initial Calibration Date: 09/11/87

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
STYRENE	1.21410	1.01530	16.37		
M-XYLENE	.69097	.55424	19.79		
O-XYLENE	.74103	.58360	21.24		

ORIGINAL (Red)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 10/01/87

Contractor: CHERRIDGE ANALYTICAL | Time: 14:10

Contract No: | Laboratory ID: XB0036

Instrument ID: HP 5970 "B" | Initial Calibration Date: ~~09/11/87~~ 9/10/87

Minimum $\overline{RF}$ for SPCC is 0.300 | Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	0.22218 ~~.25551~~	0.2769 ~~.31845~~	24.65 ~~24.65~~		**
BROMOMETHANE	.52227	.48645	6.86		
VINYL CHLORIDE	.43143	.48907	13.36	*	
CHLOROETHANE	.33816	.39659	17.28		
METHYLENE CHLORIDE	1.04787	.99452	5.09		
ACETONE	.19644	.25807	31.21		
CARBON DISULFIDE	2.25828	2.16755	4.02		
1,1-DICHLOROETHENE	1.6148 ~~1.84831~~	1.82101 ~~1.82101~~	12.83 ~~2.53~~	*	
1,1-DICHLOROETHANE	2.01116	2.04527	1.70		**
TRANS-1,2,DICHLOROETHENE	.97017	.95665	1.39		
CHLOROFORM	2.97189	2.68208	9.75	*	
1,2-DICHLOROETHANE	1.95767	1.53941	21.37		
D4-1,2-DICHLOROETHANE (SS-1)	.79217	.67119	15.27		(Conc=100.00)
2-BUTANONE (MEK)	.01963	.02297	16.97		
1,1,1-TRICHLOROETHANE	1.08906	.87501	19.65		
CARBON TETRACHLORIDE	.97798	.83913	14.20		
VINYL ACETATE	.20128	.16640	17.33		
BROMODICHLOROMETHANE	1.09492	.90890	16.99		
1,2-DICHLORO PROPANE	.39058	.41811	7.05	*	
CIS-1,3-DICHLOROPROPENE	.55048	.50274	8.67		
TRICHLOROETHENE	.62838	.68360	8.79		
DIBROMOCHLOROMETHANE	.93084	.75362	19.04		
1,1,2-TRICHLOROETHANE	.33893	.30400	10.31		
BENZENE	.88509	.90116	1.82		
TRANS-1,3-DICHLOROPROPENE	.55731	.47354	15.03		
2-CHLOROETHYLVINYLETHER	.16658	.12600	24.36		
BROMOFORM	.71545	.48133	32.72		**
4-METHYL-2-PENTANONE	.23944	.26980	12.68		
2-HEXANONE	.17520	.23537	34.35		
TETRACHLOROETHYLENE	.66713	.57531	13.76		
1,1,2,2-TETRACHLOROETHANE	.54759	.88463	84.54		**
D-8 TOLUENE (SS-2)	.49739	.54058	8.68		(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 NG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303116

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 10/01/87

Contractor: CAMBRIDGE ANALYTICAL | Time: 14:10

Contract No: | Laboratory ID: >MD036

Instrument ID: HP 5970 "H" | Initial Calibration Date: 09/11/87

Minimum $\overline{RF}$ for SPCC is 0.300 | Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
TOLUENE	.69895	.73169	4.68	*		
CHLOROBENZENE	1.01303	.99183	2.09		**	
ETHYL BENZENE	.48456	.49256	1.67	*		
BROMOFLUOROBENZENE (SS-3)	.48697	.43178	11.34			(Conc=100.00)
STYRENE	.93539	.99040	5.89			
M-XYLENE	.56329	.57750	2.52			
O-XYLENE	.59154	.58932	.38			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303117

Continuing Calibration Check
HSL Compounds

Case No: _____ Calibration Date: 10/01/87

Contractor: CMB Time: 12:21

Contract No: 68-01-7278 Laboratory ID: MCB080

Instrument ID: HP5973 Initial Calibration Date: ~~10/01/87~~ 9/30/87

ORIGINAL (Red)

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.11701	.14474	23.70		**	(Conc=57.50)
BROMOMETHANE	.14859	.15871	6.85			
VINYL CHLORIDE	.24550	.23193	5.53	*		
CHLOROETHANE	.17274	.17109	.96			
METHYLENE CHLORIDE	.38203	.37911	.77			
ACETONE	.48957	.54116	10.45			
CARBON DISULFIDE	1.48129	1.22370	17.39			
1,1-DICHLOROETHENE	1.11502	1.16823	4.40	*		(Conc=45.00)
1,1-DICHLOROETHANE	2.23578	2.21589	.71		**	
TRANS-1,2,DICHLOROETHENE	1.03088	1.05463	2.30			
CHLOROFORM	2.51973	2.58812	2.71	*		
1,2-DICHLOROETHANE	1.70179	1.74737	2.68			
D4-1,2-DICHLOROETHANE (SS-1)	.65931	.66014	5.00			(Conc=100.00)
2-BUTANONE (MEK)	.81642	.81909	16.28			
1,1,1-TRICHLOROETHANE	.47188	.46944	.52			
CARBON TETRACHLORIDE	.53057	.52452	1.18			
VINYL ACETATE	.23027	.22879	.64			
BROMODICHLOROMETHANE	.51014	.50557	.89			
1,2-DICHLORO PROPANE	.31417	.30371	3.33	*		
CIS-1,3-DICHLOROPROPENE	.37195	.37255	.16			
TRICHLOROETHENE	.36280	.35165	3.07			
DIBROMOCHLOROMETHANE	.46284	.46831	1.18			
1,1,2-TRICHLOROETHANE	.22406	.23391	4.40			
BENZENE	.98865	.99546	.69			
TRANS-1,3-DICHLOROPROPENE	.33510	.35620	6.30			
2-CHLOROETHYLVINYLETHER	.15468	.14756	4.61			
BROMOFORM	.27733	.28191	1.65		**	
4-METHYL-2-PENTANONE	.42035	.38508	8.39			
2-HEXANONE	.26629	.29595	11.14			
TETRACHLOROETHYLENE	.28837	.28983	.51			
1,1,2,2-TETRACHLOROETHANE	.45535	.48583	6.69		**	
D-8 TOLUENE (SS-2)	.80154	.98877	2.55			(Conc=100.00)
TOLUENE	.79972	.82198	2.16	*		
CHLOROBENZENE	1.06679	1.05720	2.85		**	
ETHYL BENZENE	.54612	.57399	5.10	*		
BROMOFLUOROBENZENE (SS-3)	.28653	.28083	1.99			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 NG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303118

Continuing Calibration Check
MSL Compounds

Case No: _____ Calibration Date: 10/01/87

Contractor: CMB Time: 12:24

Contract No: 68-01-7278 Laboratory ID: XCMBB

Instrument ID: HP5973 Initial Calibration Date: 10/01/87

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
STYRENE	1.23895	1.32604	7.03		
M-XYLENE	.66571	.71131	6.85		
O-XYLENE	.71416	.78021	9.25		

RF - Response factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

ORIGINAL

AR303119

AR303119

Continuing Calibration Check
HSL Compounds

Case No: 8709172 Calibration Date: 10/02/87

Contractor: CAMBRIDGE ANALYTICAL Time: 13:16

Contract No: Laboratory ID: MM0055

Instrument ID: HP 5970 'H' Initial Calibration Date: ~~09/11/87~~ 9/10/87

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE 0.2222	~~.6651~~	~~.60710~~ 0.2670	20.19		**	
BROMOMETHANE	.52227	.44887	14.05			
VINYL CHLORIDE	.43143	.43078	.15	*		
CHLOROETHANE	.33816	.37690	11.45			
METHYLENE CHLORIDE	1.04707	.97249	7.19			
ACETONE	.19664	.18952	3.62			
CARBON DISULFIDE	2.25828	2.19822	2.66			
1,1-DICHLOROETHENE 1.1646	~~1.07434~~	~~.99324~~ 1.0705	8.87	*		
1,1-DICHLOROETHANE	2.01116	2.14506	6.66		**	
TRANS-1,2,DICHOROETHENE	.97017	.89129	8.13			
CHLOROFORM	2.97189	2.83725	4.53	*		
1,2-DICHLOROETHANE	1.95767	1.80221	7.94			
D4-1,2-DICHLOROETHANE (SS-1)	.79217	.80104	1.12			(Conc=100.00)
2-BUTANONE (MEK)	.01963	.01864	5.04			
1,1,1-TRICHLOROETHANE	1.08906	.98491	9.56			
CARBON TETRACHLORIDE	.97798	.99292	1.53			
VINYL ACETATE	.20128	.19671	2.27			
BROMODICHLOROMETHANE	1.09492	1.02279	6.59			
1,2-DICHLORO PROPANE	.39058	.44537	14.03	*		
CIS-1,3-DICHLOROPROPENE	.55048	.52190	5.19			
TRICHLOROETHENE	.62838	.48808	22.33			
DIBROMOCHLOROMETHANE	.93084	.81852	12.07			
1,1,2-TRICHLOROETHANE	.33893	.32516	4.06			
BENZENE	.88509	.91059	2.88			
TRANS-1,3-DICHLOROPROPENE	.55731	.51988	6.72			
2-CHLOROETHYLVINYLETHER	.16658	.10053	39.65			
BROMOFORM	.71545	.53078	25.81		**	
4-METHYL-2-PENTANONE	.23944	.33376	39.39			
2-HEXANONE	.19520	.24048	37.26			
TETRACHLOROETHYLENE	.66713	.54753	17.93			
1,1,2,2-TETRACHLOROETHANE	.54759	.58672	7.15		**	
D-8 TOLUENE (SS-2)	.49739	.56587	13.77			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303120

Continuing Calibration Check
NSL Compounds

ORIGINAL

Case No: 709172 Calibration Date: 10/02/87

Contractor: CAMBRIDGE ANALYTICAL Time: 13:16

Contract No: Laboratory ID: >H0055

Instrument ID: HP 5970 "H" Initial Calibration Date: 09/11/87

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
TOLUENE	.69895	.73830	5.63	*		
CHLOROBENZENE	1.01303	.95635	5.59		**	
ETHYL BENZENE	.48156	.47711	1.54	*		
BROMOFLUOROBENZENE (SS-3)	.48697	.46921	3.65			(Conc=100.00)
STYRENE	.93539	.98646	5.46			
M-XYLENE	.56329	.55326	1.78			
O-XYLENE	.59154	.58560	.99			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303121

AR303121

Continuing Calibration Check
HSL Compounds

ORIGINAL (Red)

Case No: | Calibration Date: 10/09/87

Contractor: CAMBRIDGE ANALYTICAL | Time: 09:50

Contract No: | Laboratory ID: XW0166

Instrument ID: HP 5970 "W" | Initial Calibration Date: ~~09/17/87~~ 9/10/87

Minimum $\overline{RF}$ for SPCC is 0.300 | Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	[illegible]	0.1504	32.16		**	
BROMOMETHANE	.52227	.26480	49.30			
VINYL CHLORIDE	.43143	.18773	[illegible]	*		
CHLOROETHANE	.33816	.26742	20.92			
METHYLENE CHLORIDE	1.04787	1.09705	4.69			
ACETONE	.19664	.54059	174.91			
CARBON DISULFIDE	2.25828	1.60655	28.86			
1,1-DICHLOROETHENE	1.04834	0.2817	73.02	*		
1,1-DICHLOROETHANE	2.01116	2.82226	40.33		**	
TRANS-1,2,DICHOROETHENE	.97017	.86035	11.32			
CHLOROFORM	2.97189	3.64102	22.52	*		
1,2-DICHLOROETHANE	1.95767	2.64264	34.99			
D4-1,2-DICHLOROETHANE (SS-1)	.79217	1.15988	46.42			(Conc=100.00)
2-BUTANONE (MEK)	.01963	.01232	37.28			
1,1,1-TRICHLOROETHANE	1.08906	1.27845	17.39			
CARBON TETRACHLORIDE	.97798	1.29980	32.91			
VINYL ACETATE	.20128	.05321	73.57			
BROMODICHLOROMETHANE	1.09492	1.43274	30.85			
1,2-DICHLORO PROPANE	.39058	.67244	[illegible]	*		
CIS-1,3-DICHLOROPROPENE	.55048	.72189	31.14			
TRICHLOROETHENE	.62838	.50107	20.26			
DIBROMOCHLOROMETHANE	.93084	.95269	2.35			
1,1,2-TRICHLOROETHANE	.33893	.43327	27.83			
BENZENE	.88509	1.10342	24.67			
TRANS-1,3-DICHLOROPROPENE	.55731	.69093	23.98			
2-CHLOROETHYLVINYLETHER	.16658	.21159	27.02			
BROMOFORM	.71545	.55684	22.17		**	
4-METHYL-2-PENTANONE	.23944	.68292	185.21			
2-HEXANONE	.17520	.58623	234.61			
TETRACHLOROETHYLENE	.66713	.53675	19.54			
1,1,2,2-TETRACHLOROETHANE	.54759	.76485	39.67		**	
D-8 TOLUENE (SS-2)	.49739	.59308	19.24			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303122

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 10/09/87

Contractor: CAMBRIDGE ANALYTICAL | Time: 09:50

Contract No: | Laboratory ID: XH0166

Instrument ID: HP 5970 "H" | Initial Calibration Date: 09/11/87

Minimum $\overline{RF}$ for SPCC is 0.300 | Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
TOLUENE	.69895	.87382	[illegible]	*		
CHLOROBENZENE	1.01303	1.14249	[illegible]		**	
ETHYL BENZENE	.48456	.56926	17.48	*		
BROMOFLUOROBENZENE (SS-3)	.48697	.53761	10.40			(Conc=100.00)
STYRENE	.93539	1.20199	28.50			
M-XYLENE	.56329	.65581	16.43			
O-XYLENE	.59154	.67545	14.18			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

AR303123

AR303123

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 10/10/87

Contractor: CAA | Time: 18:49

Contract No: | Laboratory ID: >D6424

Instrument ID: HP5995 | Initial Calibration Date: 10/10/87

Minimum $\overline{RF}$ for SPCC is 0.300 | Maximum % Diff for CCC is 25.00%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	~~.22872~~ 0.7917	~~.14949~~ 0.10247	35.81		**
BROMOMETHANE	.32752	.24742	24.46		
VINYL CHLORIDE	.54804	.71982	31.34	*	
CHLOROETHANE	.59219	.86768	46.52		
METHYLENE CHLORIDE	1.11588	1.27410	14.18		
ACETONE	.32075	.72138	124.90		
CARBON DISULFIDE	2.97903	3.13962	5.39		
1,1-DICHLOROETHENE	1.3100 ~~1.19407~~	~~0.25228~~ 1.2319	6.21	*	
1,1-DICHLOROETHANE	2.48193	2.56652	3.41		**
TRANS-1,2,DICHOROETHENE	1.13731	1.16570	2.50		
ORODFORM	2.79371	2.89317	3.56	*	
-DICHLOROETHANE	2.21157	2.31010	4.46		
4-1,2-DICHLOROETHANE (SS-1)	1.60812	1.72835	7.48		
2-BUTANONE (MEK)	.12546	.23227	85.13		
1,1,1-TRICHLOROETHANE	.64461	.70570	9.48		
CARBON TETRACHLORIDE	.56500	.63595	12.56		
VINYL ACETATE	.81187	-	-		
BROMODICHLOROMETHANE	.29042	.33550	15.52		
1,2-DICHLORO PROPANE	.39470	.42474	7.61	*	
TRANS-1,3-DICHLOROPROPENE	.49529	.55243	11.54		
TRICHLOROETHENE	.41667	.48362	16.07		
DIBROMOCHLOROMETHANE	.48244	.55451	14.94		
1,1,2-TRICHLOROETHANE	.27116	.29539	8.94		
BENZENE	1.12040	1.23536	10.26		
CIS-1,3-DICHLOROPROPENE	.48787	.53709	10.09		
2-CHLOROETHYLVINYLETHER	.13819	.11327	18.03		
BROMOFORM	.30244	.35142	16.19		**
4-METHYL-2-PENTANONE	.46590	.50469	8.33		
2-HEXANONE	.33862	.48204	42.35		
TETRACHLOROETHYLENE	.41155	.45006	9.36		
1,1,2,2-TETRACHLOROETHANE	.52318	.58383	11.59		**
D-8 TOLUENE (SS-2)	1.13902	1.20614	5.89		
TOLUENE	.90819	.94465	4.01	*	
CHLOROBENZENE	1.04034	1.10297	6.02		**
ETHYL BENZENE	.54051	.58193	7.66	*	
BROMOFLUOROBENZENE (SS-3)	.60500	.65957	9.02		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

AR303124

AR303124

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 10/10/87

Contractor: CAA Time: 18:49

Contract No: Laboratory ID: >D6424

Instrument ID: HP5995 Initial Calibration Date: 10/10/87

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % Diff for CCC is 25.00%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
STYRENE	1.14084	1.21243	6.28		
M-XYLENE	.62235	~~.69299~~	~~11.34~~ 0.32		
O-XYLENE	.65315	.69299	6.10		

AR303125

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

ORIGINAL (Red)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 10/20/87

Contractor: CAA | Time: 08:59

Contract No: | Laboratory ID: >D6544

Instrument ID: HP5995 | Initial Calibration Date: ~~10/16/87~~ 10/19/87

Minimum $\overline{RF}$ for SPCC is 0.300 | Maximum % Diff for CCC is 25.00%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.19193	.06952	63.78		**	(Conc=57.50)
BROMOMETHANE	.32752	.21196	35.28			
VINYL CHLORIDE	.54804	.42481	22.49	*		
CHLOROETHANE	.59219	.72392	22.24			
METHYLENE CHLORIDE	1.11588	1.17307	5.12			
ACETONE	.32075	.58390	82.04			
CARBON DISULFIDE	2.97903	2.84255	4.58			
1,1-DICHLOROETHENE	1.31007	1.34162	2.41	*		(Conc=45.00)
1,1-DICHLOROETHANE	2.48193	2.59220	4.44		**	
TRANS-1,2,DICHOROETHENE	1.13731	1.36411	19.94			
CHLOROFORM	2.79371	3.33287	19.30	*		
1,2-DICHLOROETHANE	2.21157	2.88187	30.31			
D4-1,2-DICHLOROETHANE (SS-1)	1.60812	2.22914	38.62			
2-BUTANONE (MEK)	.12546	.18103	44.29			
1,1,1-TRICHLOROETHANE	.64461	.68517	6.29			
CARBON TETRACHLORIDE	.56500	.60027	6.24			
VINYL ACETATE	.81175	.81207	2.73			
BROMODICHLOROMETHANE	.29042	.29544	1.73			
1,2-DICHLORO PROPANE	.39470	.38055	3.59	*		
TRANS-1,3-DICHLOROPROPENE	.49529	.51085	3.14			
TRICHLOROETHENE	.41667	.43113	3.47			
DIBROMOCHLOROMETHANE	.48244	.50361	4.39			
1,1,2-TRICHLOROETHANE	.29033	.33432	15.15			
BENZENE	1.12040	1.07566	3.99			
CIS-1,3-DICHLOROPROPENE	.48787	.49493	1.45			
2-CHLOROETHYLVINYLETHER	.13819	.17315	25.30			
BROMOFORM	.30244	.31288	3.45		**	
4-METHYL-2-PENTANONE	.46590	.40151	13.82			
2-HEXANONE	.33862	.36030	6.40			
TETRACHLOROETHYLENE	.41155	.38947	5.36			
1,1,2,2-TETRACHLOROETHANE	.52318	.48187	7.90		**	
D-8 TOLUENE (SS-2)	1.13902	1.08273	4.94			
TOLUENE	.90819	.80214	11.68	*		
CHLOROBENZENE	1.04034	.90830	12.69		**	
STYRENE BENZENE	.54051	.47305	12.48	*		
BROMOFLUOROBENZENE (SS-3)	.60500	.68753	13.64			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

AR303126

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

ORIGINAL (Red)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 10/20/87

Contractor: CAA Time: 08:59

Contract No: Laboratory ID: >D6544

Instrument ID: HP5995 Initial Calibration Date: 10/16/87

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % Diff for CCC is 25.00%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
STYRENE	1.14084	.98863	13.34		
M-XYLENE	.62235	.52450	15.72		
O-XYLENE	.65315	.55036	15.74		

AR303127

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

Cambridge Analytical Associates

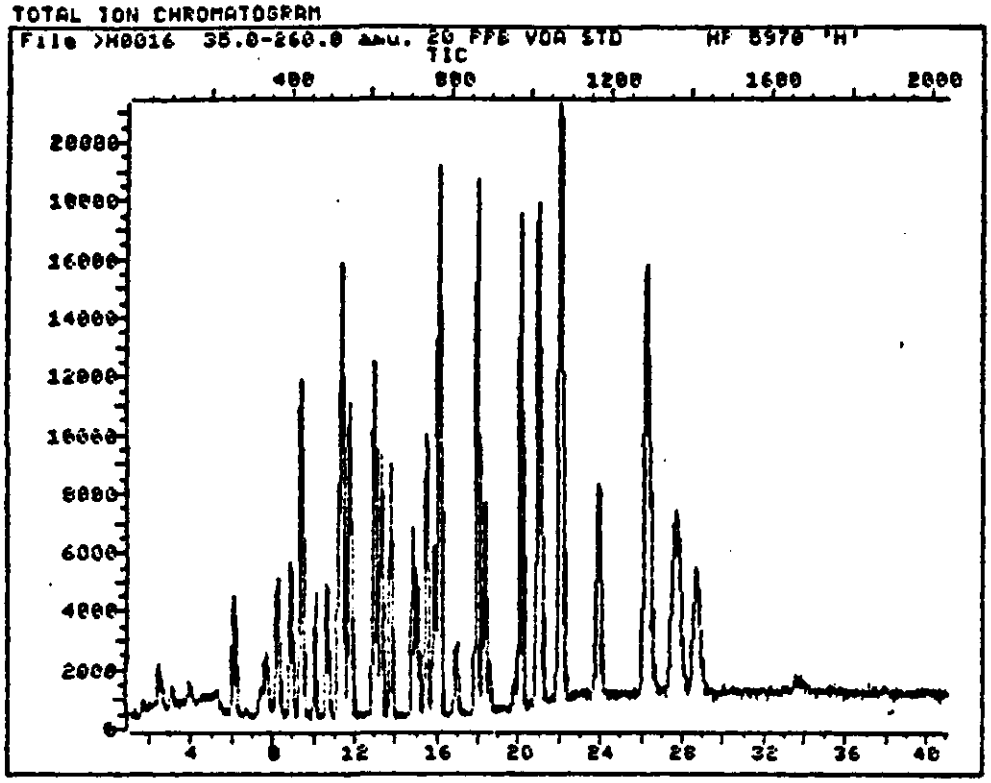
ORIGINAL (Red)

IV STANDARDS DATA PACKAGE

E. VOA Standards

AR303128

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0016::H1 Quant Output File: ^H0016::QU
Name: 20 PPB VOA STD
Misc: HP 5970 'H'

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

Operator ID: MARK
Quant Time: 870910 18:07
Injected at: 870910 17:25

QUANT REPORT

Operator ID: MARK
Output File: ^H0016::QU
Data File: >H0016::H1
Name: 20 PPB VOA STD
Misc: HP 5970 'H'

Quant Rev: 6
Quant Time: 870910 18:07
Injected at: 870910 17:25
Dilution Factor: 1.00000

ORIGINAL (Red)

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

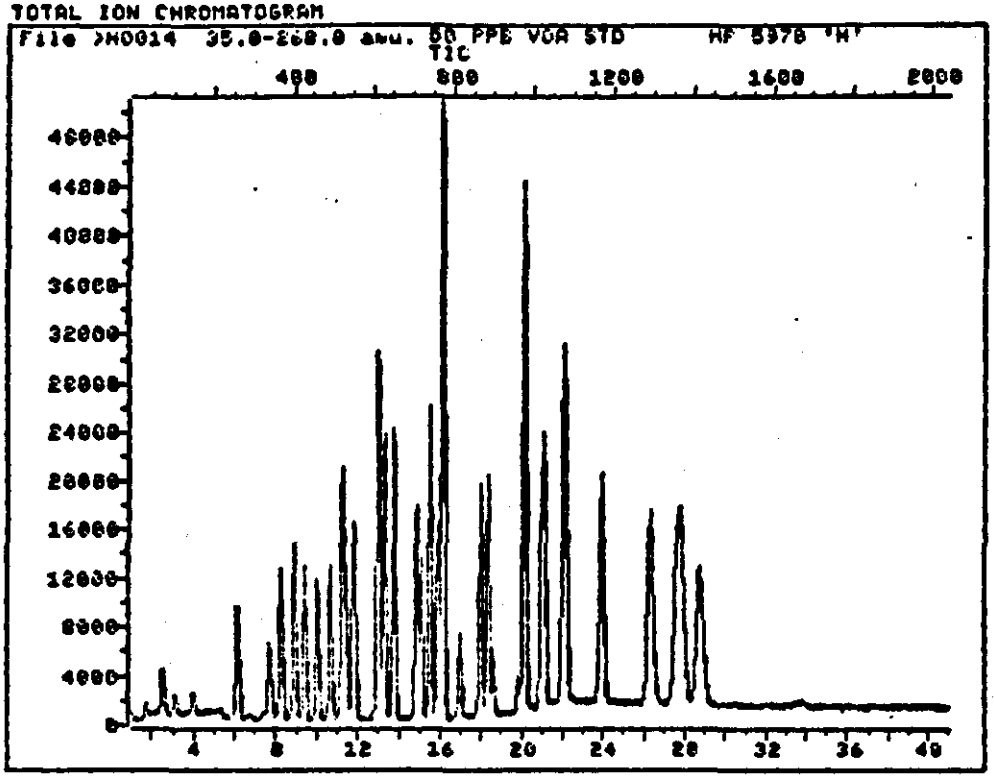
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	9.33	421	22607	50.00	UG/L	100
2)	CHLOROMETHANE	1.70	31	2372	20.33	UG/L	100
3)	BROMOMETHANE	2.47	70	4805	20.83	UG/L	96
4)	VINYL CHLORIDE	3.03	99	3683	19.04	UG/L	100
5)	CHLOROETHANE	3.93	145	2980	19.77	UG/L	100
6)	METHYLENE CHLORIDE	6.07	254	10619	22.42	UG/L	100
7)	ACETONE	6.71	287	2533M	30.15	UG/L	100
8)	CARBON DISULFIDE	7.61	333	19262	18.52	UG/L	100
9)	1,1-DICHLOROETHENE	8.82	395	9271	19.36	UG/L	95
10)	1,1-DICHLOROETHANE	10.05	458	18201	19.96	UG/L	95
11)	TRANS-1,2,DICHOROETHENE	10.66	490	8611	19.34	UG/L	79
12)	CHLOROFORM	11.25	519	27718	20.54	UG/L	96
13)	1,2-DICHLOROETHANE	11.87	551	18499	20.75	UG/L	93
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.78	546	34916	101.54	UG/L	88
15)	•1,4-DIFLUOROBENZENE IS-2	17.96	862	63229	50.00	UG/L	100
16)	2-BUTANONE (MEK)	11.74	544	481M	20.47	UG/L	89
17)	1,1,1-TRICHLOROETHANE	12.97	607	31489	23.31	UG/L	77
18)	CARBON TETRACHLORIDE	13.30	624	23907	19.69	UG/L	97
19)	VINYL ACETATE	13.05	611	5451M	20.63	UG/L	25
20)	BROMODICHLOROMETHANE	13.77	648	26872	19.45	UG/L	95
21)	1,2-DICHLORO PROPANE	14.85	703	9656	19.13	UG/L	98
22)	CIS-1,3-DICHLOROPROPENE	15.08	715	13135	19.00	UG/L	97
23)	TRICHLOROETHENE	15.51	737	14818	18.97	UG/L	90
24)	DIBROMOCHLOROMETHANE	16.10	767	23739	20.29	UG/L	90
25)	1,1,2-TRICHLOROETHANE	16.16	770	8852	20.25	UG/L	92
26)	BENZENE	15.86	755	21850	19.37	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	16.14	769	14039	19.61	UG/L	97
28)	2-CHLOROETHYLVINYLETHER	16.96	811	4848	18.85	UG/L	72
29)	BROMOFORM	18.31	880	17905	19.69	UG/L	84
30)	•D5-CHLOROBENZENE IS-3	22.01	1069	57965	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	18.58	894	6196	22.64	UG/L	93
32)	2-HEXANONE	19.83	958	4735	25.15	UG/L	91
33)	TETRACHLOROETHYLENE	20.11	972	15712	20.20	UG/L	85
34)	1,1,2,2-TETRACHLOROETHANE	20.15	974	13673	19.46	UG/L	85
35)	D-8 TOLUENE (SS-2)	20.97	1016	57005	97.88	UG/L	82
36)	TOLUENE	21.13	1024	16314	19.81	UG/L	96
37)	CHLOROBENZENE	22.10	1074	23244	19.64	UG/L	93
38)	ETHYL BENZENE	23.89	1165	11379	20.09	UG/L	95
39)	BROMOFLUOROBENZENE (SS-3)	26.25	1286	55832	97.17	UG/L	91
40)	STYRENE	27.58	1354	23153M	29.58	UG/L	
41)	M-XYLENE	27.78	1364	13634M	20.54	UG/L	70
42)	O-XYLENE	28.68	1410	14408M	20.38	UG/L	

• Compound is ISTD

AR303130

AR303130

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0014::H1 Quant Output File: ^H0005::QU
Name: 50 PPB VOA STD
Misc: HP 5970 'H'

Id File: HVOAID::F1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 11:48

Operator ID: MARK
Quant Time: 870910 16:34
Injected at: 870910 15:52

AR303131

QUANT REPORT

Operator ID: MARK Quant Rev: 6 Quant Time: 870910 17:14
Output File: ^H0014::QU Injected at: 870910 15:52
Data File: >H0014::H1 Dilution Factor: 1.00000
Name: 50 PPB VOA STD
Misc: HP 5970 'H'

ORIGINAL (Red)

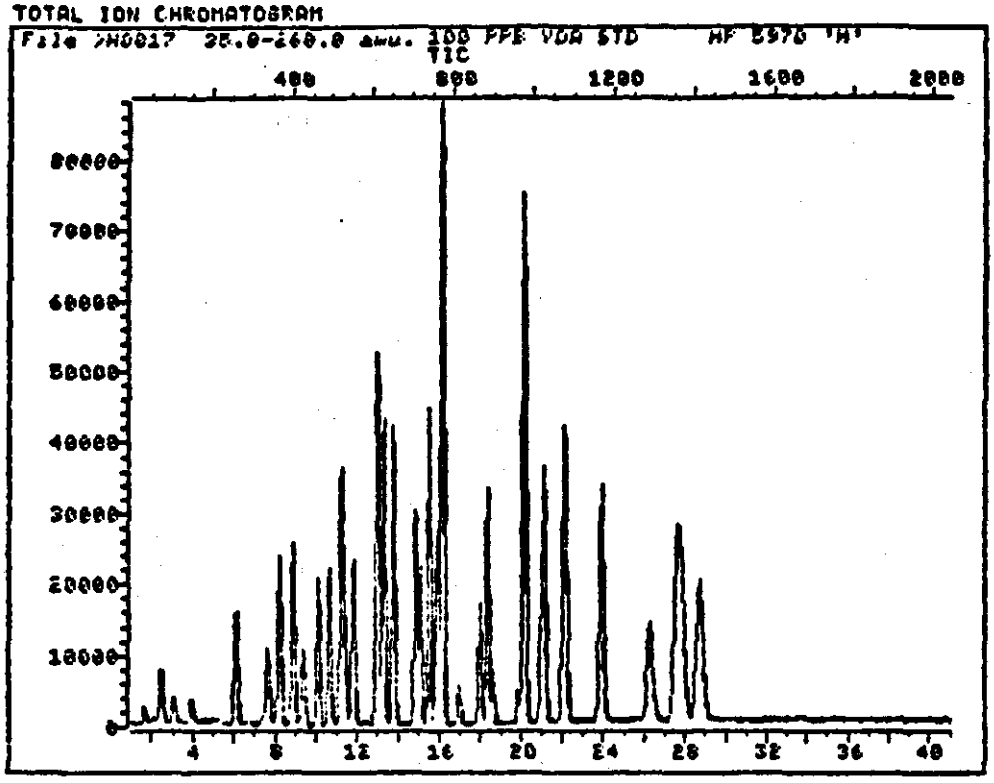
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE, IS-1	9.34	423	24930	50.00	UG/L	100
2)	CHLOROMETHANE	1.69	32	6432	50.00	UG/L	100
3)	BROMOMETHANE	2.43	70	12721	50.00	UG/L	88
4)	VINYL CHLORIDE	3.04	101	10663	50.00	UG/L	100
5)	CHLOROETHANE	3.92	146	6312	50.00	UG/L	100
6)	METHYLENE CHLORIDE	6.07	256	26121	50.00	UG/L	100
7)	ACETONE	6.70	288	4633M	50.00	UG/L	100
8)	CARBON DISULFIDE	7.62	335	57352	50.00	UG/L	100
9)	1,1-DICHLOROETHENE	8.83	397	26405	50.00	UG/L	93
10)	1,1-DICHLOROETHANE	10.04	459	50271	50.00	UG/L	96
11)	TRANS-1,2,DICHOROETHENE	10.69	492	24547	50.00	UG/L	76
12)	CHLOROFORM	11.25	521	74405	50.00	UG/L	99
13)	1,2-DICHLOROETHANE	11.86	552	49167	50.00	UG/L	92
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.78	548	37920	100.00	UG/L	90
15)	•1,4-DIFLUOROBENZENE IS-2	17.95	863	67649	50.00	UG/L	100
16)	2-BUTANONE (MEK)	11.74	546	1257	50.00	UG/L	94
17)	1,1,1-TRICHLOROETHANE	12.96	608	72268	50.00	UG/L	77
18)	CARBON TETRACHLORIDE	13.33	627	64951	50.00	UG/L	94
19)	VINYL ACETATE	13.05	613	14133M	50.00	UG/L	8
20)	BROMODICHLOROMETHANE	13.76	650	73692	50.00	UG/L	95
21)	1,2-DICHLORO PROPANE	14.85	705	27002	50.00	UG/L	97
22)	CIS-1,3-DICHLOROFROPENE	15.07	716	36931	50.00	UG/L	97
23)	TRICHLOROETHENE	15.50	738	41780	50.00	UG/L	93
24)	DIBROMOCHLOROMETHANE	16.11	769	62577	50.00	UG/L	94
25)	1,1,2-TRICHLOROETHANE	16.15	771	23383	50.00	UG/L	91
26)	BENZENE	15.87	757	60331	50.00	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	16.13	770	38290	50.00	UG/L	96
28)	2-CHLOROETHYLVINYLETHER	16.89	814	13755	50.00	UG/L	88
29)	BROMOFORM	18.32	882	48646	50.00	UG/L	86
30)	•D5-CHLOROBENZENE IS-3	22.00	1070	61267	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	18.59	896	14466	50.00	UG/L	94
32)	2-HEXANONE	19.84	960	8950	50.00	UG/L	89
33)	TETRACHLOROETHYLENE	20.10	973	41107	50.00	UG/L	98
34)	1,1,2,2-TETRACHLOROETHANE	20.16	976	37135	50.00	UG/L	99
35)	D-8 TOLUENE (SS-2)	20.94	1016	61556	100.00	UG/L	79
36)	TOLUENE	21.12	1025	43527	50.00	UG/L	94
37)	CHLOROBENZENE	22.10	1075	62560	50.00	UG/L	89
38)	ETHYL BENZENE	23.92	1166	28931	50.00	UG/L	95
39)	BROMOFLUOROBENZENE (SS-3)	26.25	1287	60731	100.00	UG/L	97
40)	STYRENE	27.56	1354	41367	50.00	UG/L	52
41)	M-XYLENE	27.76	1364	35087	50.00	UG/L	92
42)	O-XYLENE	28.70	1412	37356	50.00	UG/L	90

• Compound is ISTD

AR303132

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0017::H1 Quant Output File: ^H0017::QU
Name: 100 PPB VOA STD
Misc: HP 5970 'H'

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA E24, HP 5970 'H'
Last Calibration: 870910 17:14

Operator ID: MARK
Quant Time: 870910 18:54
Injected at: 870910 18:12

QUANT REPORT

Operator ID: MARK Quant Rev: 6 Quant Time: 870910 18:54
Output File: ^H0017::QU Injected at: 870510 18:12
Data File: >H0017::H1 Dilution Factor: 1.00000
Name: 100 PPB VOA STD
Misc: HP 5970 'H'

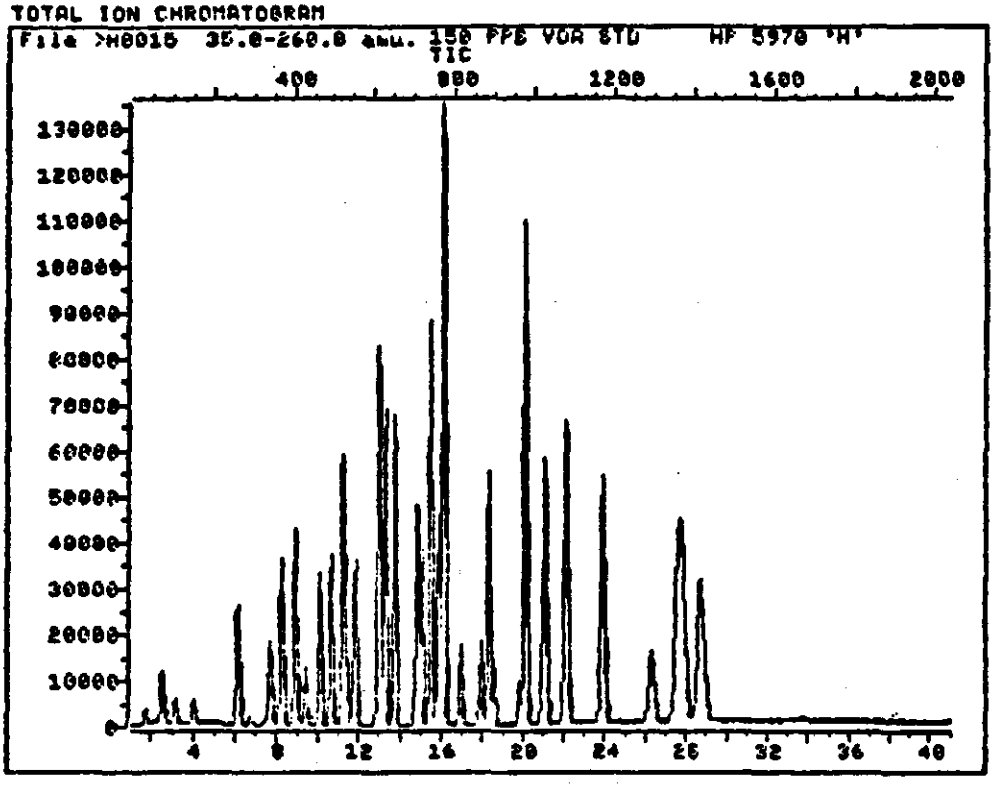
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA E24, HP 5970 'H'
Last Calibration: 870910 17:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	9.36	424	21482M	50.00	UG/L	100
2)	CHLOROMETHANE	1.67	31	10681	96.36	UG/L	100
3)	BROMOMETHANE	2.43	70	22895	104.43	UG/L	98
4)	VINYL CHLORIDE	3.02	100	18383	100.04	UG/L	100
5)	CHLOROETHANE	3.90	145	14333	100.06	UG/L	100
6)	METHYLENE CHLORIDE	6.05	255	42455	94.31	UG/L	100
7)	ACETONE	6.66	286	5728M	71.74	UG/L	100
8)	CARBON DISULFIDE	7.58	333	100859	102.04	UG/L	100
9)	1,1-DICHLOROETHENE	8.83	397	44389	97.55	UG/L	93
10)	1,1-DICHLOROETHANE	10.04	459	87036	100.46	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	10.69	492	41469	98.03	UG/L	82
12)	CHLOROFORM	11.25	521	131566	102.60	UG/L	92
13)	1,2-DICHLOROETHANE	11.86	552	86041	101.54	UG/L	88
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.78	548	35346	108.17	UG/L	92
15)	•1,4-DIFLUOROBENZENE IS-2	17.94	863	59463	50.00	UG/L	100
16)	2-BUTANONE (MEK)	11.72	545	1849	83.67	UG/L	96
17)	1,1,1-TRICHLOROETHANE	12.96	608	129668	102.06	UG/L	73
18)	CARBON TETRACHLORIDE	13.31	626	120635	105.65	UG/L	96
19)	VINYL ACETATE	13.05	613	21647	87.13	UG/L	75
20)	BROMODICHLOROMETHANE	13.76	649	131079	100.91	UG/L	98
21)	1,2-DICHLORO PROPANE	14.87	706	44117	92.94	UG/L	99
22)	CIS-1,3-DICHLOROPROPENE	15.07	716	64896	99.79	UG/L	97
23)	TRICHLOROETHENE	15.48	737	70451	95.92	UG/L	93
24)	DIBROMOCHLOROMETHANE	16.09	768	112359	102.14	UG/L	93
25)	1,1,2-TRICHLOROETHANE	16.16	772	39262	95.51	UG/L	92
26)	BENZENE	15.87	757	102217	96.38	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	16.11	769	64266	95.47	UG/L	96
28)	2-CHLOROETHYLVINYLETHER	16.97	813	9762	40.37	UG/L	76
29)	BROMOFORM	18.30	881	85259	99.70	UG/L	85
30)	•D5-CHLOROBENZENE IS-3	22.00	1070	53889	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	18.59	896	24261	95.34	UG/L	98
32)	2-HEXANONE	19.84	960	16917	96.65	UG/L	97
33)	TETRACHLOROETHYLENE	20.10	973	73759	102.00	UG/L	93
34)	1,1,2,2-TETRACHLOROETHANE	20.16	976	60584	92.74	UG/L	94
35)	D-8 TOLUENE (SS-2)	20.96	1017	52954	97.80	UG/L	86
36)	TOLUENE	21.10	1024	72713	94.86	UG/L	93
37)	CHLOROBENZENE	22.11	1076	107333	97.53	UG/L	89
38)	ETHYL BENZENE	23.87	1166	51630	88.06	UG/L	93
39)	BROMOFLUOROBENZENE (SS-3)	26.24	1287	52730M	98.71	UG/L	94
40)	STYRENE	27.51	1352	107737M	149.05	UG/L	[illegible]
41)	M-XYLENE	27.79	1366	60099	97.37	UG/L	85
42)	O-XYLENE	28.69	1412	62443	95.82	UG/L	85

• Compound is ISTD

AR303134

TOTAL ION CHROMATOGRAM



Okiu... (Red)

Data File: >H0015::H1 Quant Output File: ^H0015::QU
Name: 150 PPB VOA STD
Misc: HP 5970 'H'

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

Operator ID: MARK
Quant Time: 870910 17:21
Injected at: 870910 16:36

QUANT REPORT

ORIGINAL (Red)

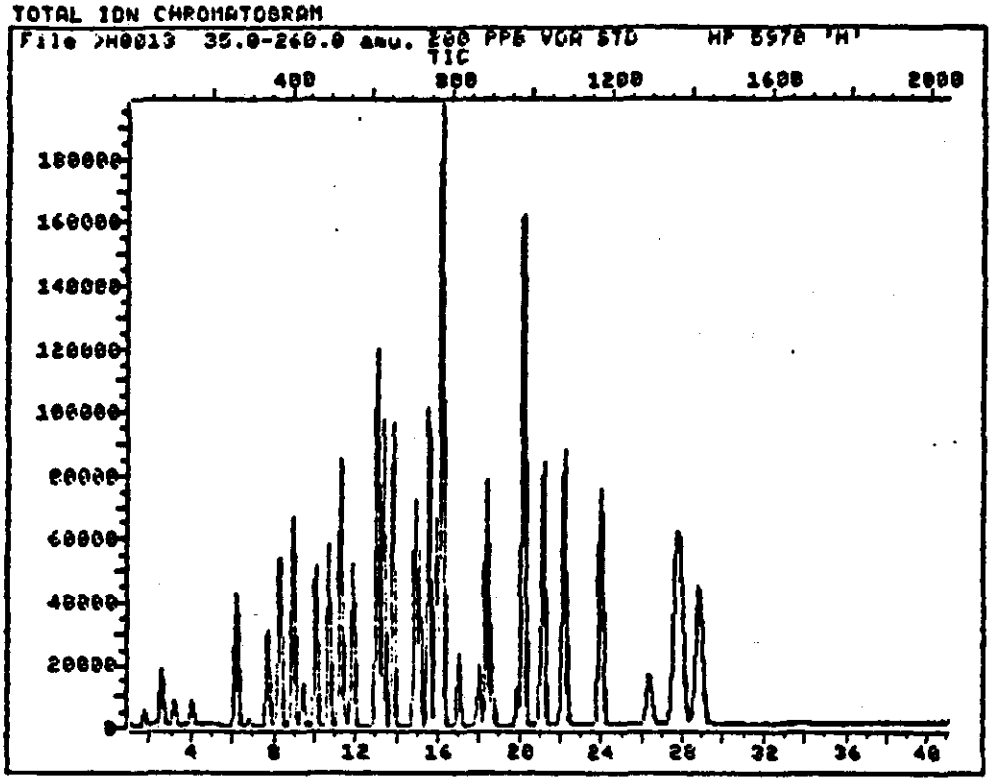
Operator ID: MARK Quant Rev: 6 Quant Time: 870910 17:21
Output File: ^H0015::QU Injected at: 870910 16:38
Data File: >H0015::H1 Dilution Factor: 1.00000
Name: 150 PPB VOA STD
Misc: HP 5970 'H'

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	9.32	422	25035	50.00	UG/L	100
2)	CHLOROMETHANE	1.67	31	17906	138.61	UG/L	100
3)	BROMOMETHANE	2.46	71	38117	149.19	UG/L	98
4)	VINYL CHLORIDE	3.06	102	31649	147.78	UG/L	100
5)	CHLOROETHANE	3.82	146	24371	145.99	UG/L	100
6)	METHYLENE CHLORIDE	6.08	256	71417	136.13	UG/L	100
7)	ACETONE	6.70	288	17269	185.59	UG/L	100
8)	CARBON DISULFIDE	7.62	335	155713	135.18	UG/L	100
9)	1,1-DICHLOROETHENE	8.83	397	75615	142.58	UG/L	96
10)	1,1-DICHLOROETHANE	10.07	460	143931	142.55	UG/L	97
11)	TRANS-1,2,DICHOROETHENE	10.67	491	69208	140.38	UG/L	78
12)	CHLOROFORM	11.26	521	214290	143.40	UG/L	98
13)	1,2-DICHLOROETHANE	11.87	552	139519	141.29	UG/L	95
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.77	547	40152	105.44	UG/L	90
15)	•1,4-DIFLUOROBENZENE IS-2	17.97	864	64192	50.00	UG/L	100
16)	2-BUTANONE (MEK)	11.75	546	4434	185.87	UG/L	97
17)	1,1,1-TRICHLOROETHANE	12.98	609	195648	142.65	UG/L	76
18)	CARBON TETRACHLORIDE	13.31	626	188340	152.79	UG/L	95
19)	VINYL ACETATE	13.06	613	34562	128.86	UG/L	75
20)	BROMODICHLOROMETHANE	13.76	649	211347	150.71	UG/L	97
21)	1,2-DICHLORO PROPANE	14.66	705	74237	144.87	UG/L	93
22)	CIS-1,3-DICHLOROPROPENE	15.08	716	103727	147.76	UG/L	95
23)	TRICHLOROETHENE	15.53	739	140016	176.59	UG/L	97
24)	DIBROMOCHLOROMETHANE	16.11	769	173381	145.99	UG/L	99
25)	1,1,2-TRICHLOROETHANE	16.15	771	62847	141.62	UG/L	88
26)	BENZENE	15.88	757	168599	147.25	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	16.13	770	104738	144.13	UG/L	95
28)	2-CHLOROETHYLVINYLETHER	16.97	813	35177	134.76	UG/L	79
29)	BROMOFORM	18.32	882	134714	145.92	UG/L	84
30)	•D5-CHLOROBENZENE IS-3	22.00	1070	60064	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	18.60	896	39510	139.30	UG/L	93
32)	2-HEXANONE	19.83	959	33236	170.36	UG/L	94
33)	TETRACHLOROETHYLENE	20.10	973	117944	146.33	UG/L	95
34)	1,1,2,2-TETRACHLOROETHANE	20.18	977	67361	82.51	UG/L	89
35)	D-8 TOLUENE (SS-2)	20.97	1017	60282	99.89	UG/L	83
36)	TOLUENE	21.10	1024	123121	144.26	UG/L	97
37)	CHLOROBENZENE	22.10	1075	179835	146.61	UG/L	99
38)	ETHYL BENZENE	23.88	1166	84250	143.56	UG/L	95
39)	BROMOFLUOROBENZENE (SS-3)	26.27	1288	58528	98.30	UG/L	89
40)	STYRENE	27.58	1355	174833	215.55	UG/L	57
41)	M-XYLENE	27.78	1365	96248	139.98	UG/L	88
42)	O-XYLENE	28.72	1413	100524	137.24	UG/L	90

• Compound is ISTD

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0013::H1 Quant Output File: ^H0013::QU
Name: 200 PPB VOA STD
Misc: HP 5970 'H'

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

Operator ID: MARK
Quant Time: 870910 17:19
Injected at: 870910 15:05

AR303137

QUANT REPORT

ORIGINAL (Red)

Operator ID: MARK Quant Rev: 6 Quant Time: 870910 17:19
Output File: ^H0013::QU Injected at: 870910 15:05
Data File: >H0013::H1 Dilution Factor: 1.00000
Name: 200 PPB VOA STD
Misc: HP 5970 'H'

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	9.38	425	26959	50.00	UG/L	100
2)	CHLOROMETHANE	1.73	34	29140	209.47	UG/L	100
3)	BROMOMETHANE	2.51	74	57081	207.47	UG/L	96
4)	VINYL CHLORIDE	3.10	104	50996M	221.13	UG/L	100
5)	CHLOROETHANE	3.96	149	39873	221.80	UG/L	100
6)	METHYLENE CHLORIDE	6.13	259	116269	205.81	UG/L	100
7)	ACETONE	6.76	291	16607	165.74	UG/L	100
8)	CARBON DISULFIDE	7.66	337	263117	212.12	UG/L	100
9)	1,1-DICHLOROETHENE	8.87	399	120492	210.95	UG/L	92
10)	1,1-DICHLOROETHANE	10.10	462	224770	206.73	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	10.71	493	110778	208.66	UG/L	78
12)	CHLOROFORM	11.27	522	312102	193.95	UG/L	95
13)	1,2-DICHLOROETHANE	11.90	554	205984	193.71	UG/L	89
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.60	549	43323	105.65	UG/L	94
15)	*1,4-DIFLUOROBENZENE IS-2	17.99	865	66779	50.00	UG/L	100
16)	2-BUTANONE (MEK)	11.78	548	5876	236.78	UG/L	94
17)	1,1,1-TRICHLOROETHANE	13.02	611	273980	192.03	UG/L	78
18)	CARBON TETRACHLORIDE	13.35	628	265019	206.67	UG/L	93
19)	VINYL ACETATE	13.07	614	59887	211.05	UG/L	75
20)	BROMODICHLOROMETHANE	13.80	651	299211	205.10	UG/L	97
21)	1,2-DICHLORO PROPANE	14.89	707	110994	208.21	UG/L	94
22)	CIS-1,3-DICHLOROPROPENE	15.11	718	160792	220.17	UG/L	95
23)	TRICHLOROETHENE	15.52	739	165328	200.43	UG/L	90
24)	DIBROMOCHLOROMETHANE	16.15	771	252545	204.42	UG/L	99
25)	1,1,2-TRICHLOROETHANE	16.19	773	91486	196.17	UG/L	87
26)	BENZENE	15.91	759	249677	209.62	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	16.17	772	155244	205.36	UG/L	99
28)	2-CHLOROETHYLVINYLETHER	17.01	815	46250	170.31	UG/L	80
29)	BROMOFORM	18.34	883	196001	204.08	UG/L	87
30)	*D5-CHLOROBENZENE IS-3	22.02	1071	61391	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	18.61	897	61267	211.33	UG/L	96
32)	2-HEXANONE	19.87	961	41246	206.85	UG/L	86
33)	TETRACHLOROETHYLENE	20.12	974	159155	193.20	UG/L	99
34)	1,1,2,2-TETRACHLOROETHANE	20.20	978	148858	200.02	UG/L	96
35)	D-8 TOLUENE (SS-2)	20.98	1018	61361	89.48	UG/L	83
36)	TOLUENE	21.14	1026	177484	203.47	UG/L	99
37)	CHLOROBENZENE	22.14	1077	257265	205.20	UG/L	90
38)	ETHYL BENZENE	23.92	1168	122017	203.42	UG/L	96
39)	BROMOFLUOROBENZENE (SS-3)	26.31	1290	59079	97.08	UG/L	86
40)	STYRENE	27.60	1356	253737	306.07	UG/L	56
41)	M-XYLENE	27.83	1368	138490	196.95	UG/L	85
42)	O-XYLENE	28.75	1415	144723M	193.		92

* Compound is ISTD

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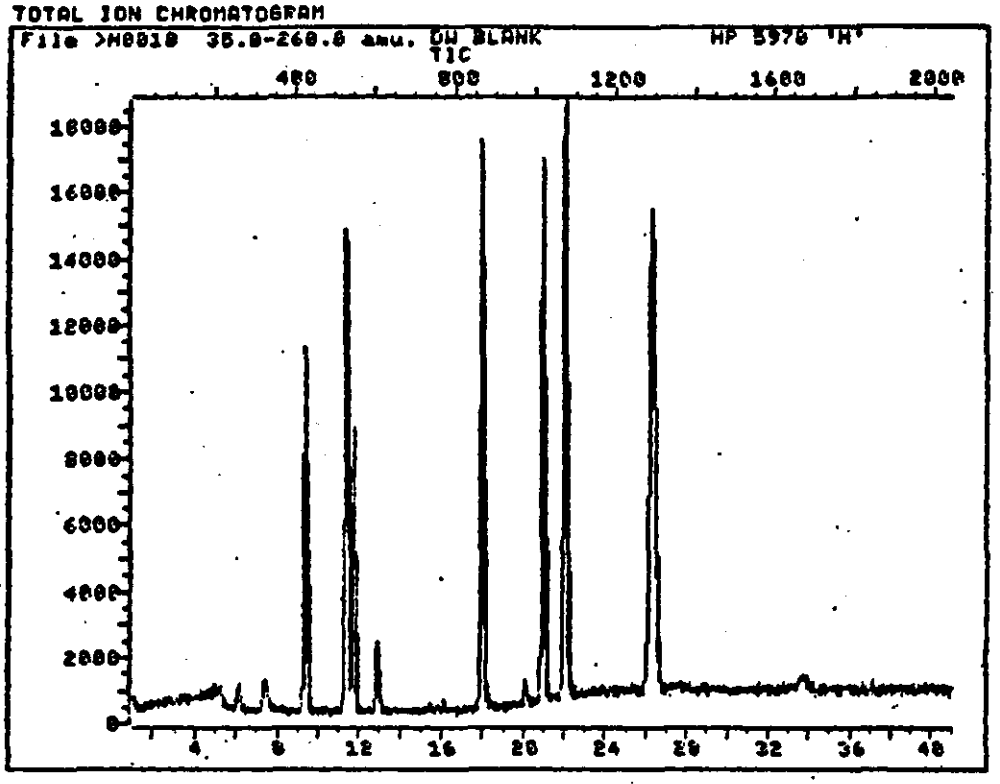
TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0018::H1 Quant Output File: ^H0018::QU
Name: DW BLANK
Misc: HP 5970 'H'

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

Operator ID: MARK
Quant Time: 870910 19:40
Injected at: 870910 16:59

AR303139

QUANT REPORT

Operator ID: MARK Quant Rev: 6 Quant Time: 870910 19:40
Output File: ^H0018::QU Injected at: 870910 18:59
Data File: >H0018::H1 Dilution Factor: 1.00000
Name: DW BLANK
Misc: HP 5970 'H'

ORIGINAL (Red)

ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

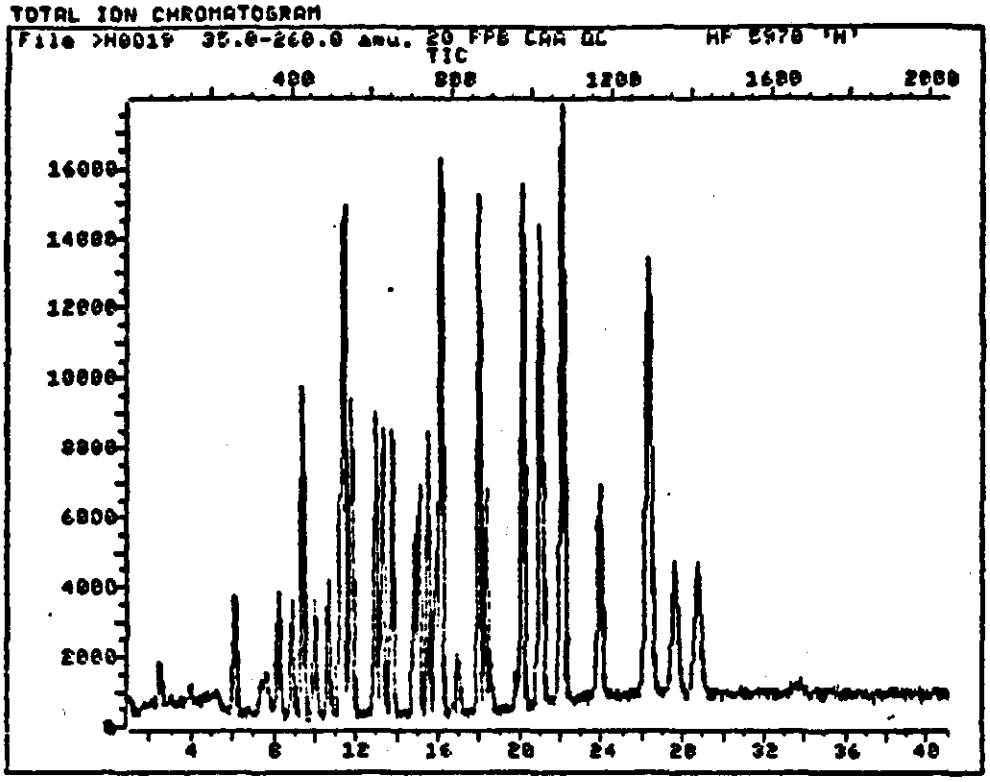
	Compound	R.T.	Scan#	Area	Conc	Units	q	
1)	•BROMOCHLOROMETHANE IS-1	9.31	422	21595	50.00	UG/L	100	
6)	METHYLENE CHLORIDE	6.09	257	2031	4.49	UG/L	100	
7)	ACETONE	6.77	292	218	2.72	UG/L	100	
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.78	548	33225	101.15	UG/L	87	101%
15)	•1,4-DIFLUOROBENZENE IS-2	17.96	864	59638	50.00	UG/L	100	
17)	1,1,1-TRICHLOROETHANE	12.91	606	6659	5.23	UG/L	79	
30)	•D5-CHLOROBENZENE IS-3	22.00	1071	56346	50.00	UG/L	100	
35)	D-8 TOLUENE (SS-2)	20.95	1017	55479	98.00	UG/L	82	98%
39)	BROMOFLUOROBENZENE (SS-3)	26.27	1289	54514	97.60	UG/L	87	98%

• Compound is ISTD

AR303140

AR303140

TOTAL ION CHROMATOGRAM



ORIGINAL (Red)

Data File: >H0019::H1 Quant Output File: ^H0019::QU
Name: 20 PPB CAA QC
Misc: HP 5970 'H'

Id File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

Operator ID: MARK
Quant Time: 870910 20:27
Injected at: 870910 19:45

AR303141

QUANT REPORT

Operator ID: MARK Quant Rev: 6 Quant Time: 870910 20:27
Output File: ^H0019::QU Injected at: 870910 19:45
Data File: >H0019::H1 Dilution Factor: 1.00000
Name: 20 PPB CAA QC
Misc: HP 5970 'H'

ORIGINAL (Red)

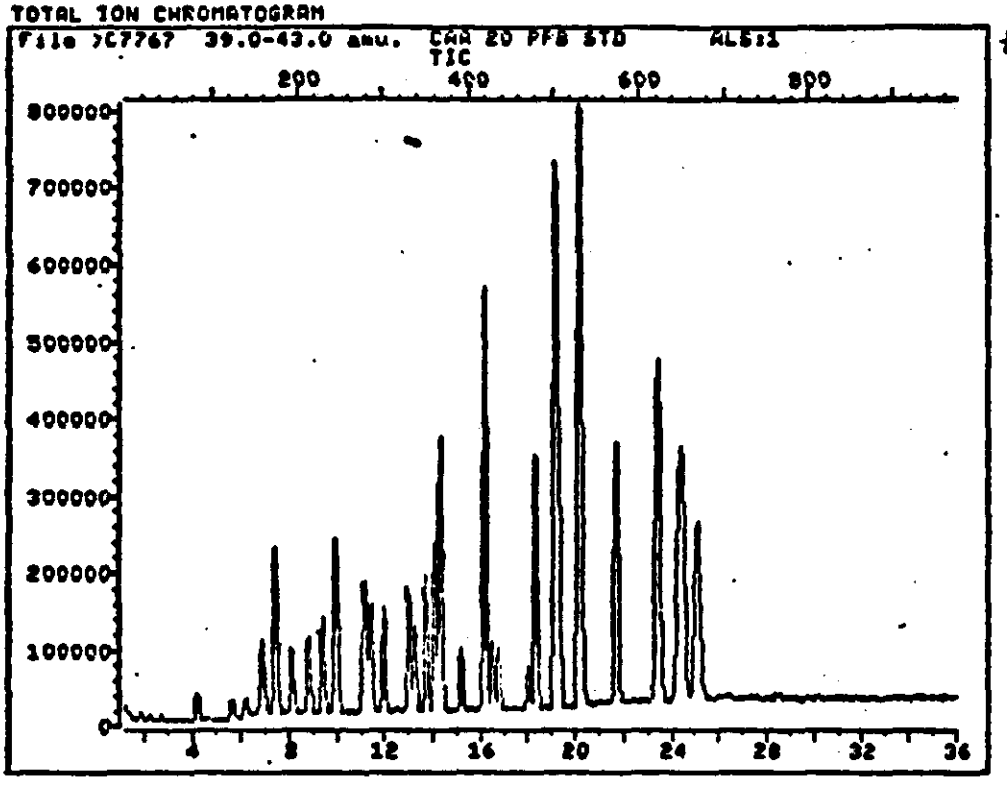
ID File: HVOAID::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5970 'H'
Last Calibration: 870910 17:14

	Compound	R.T.	Scan#	Area	Conc	Units	q	
1)	•BROMOCHLOROMETHANE IS-1	9.35	424	18462	50.00	UG/L	100	
2)	CHLOROMETHANE	1.71	33	1252M	13.14	UG/L	100	66%
3)	BROMOMETHANE	2.43	70	4097	21.74	UG/L	89	109%
4)	VINYL CHLORIDE	3.00	99	1338	8.47	UG/L	100	43%
5)	CHLOROETHANE	3.92	146	1751	14.22	UG/L	100	71%
6)	METHYLENE CHLORIDE	6.05	255	9145	23.64	UG/L	100	118%
7)	ACETONE	6.70	288	1259	18.35	UG/L	100	92%
8)	CARBON DISULFIDE	7.59	334	20379M	23.99	UG/L	100	120%
9)	1,1-DICHLOROETHENE	8.83	397	5591	14.30	UG/L	92	77%
10)	1,1-DICHLOROETHANE	10.04	459	14096	18.93	UG/L	97	95%
11)	TRANS-1,2,DICHOROETHENE	10.69	492	7310	20.11	UG/L	81	101%
12)	CHLOROFORM	11.25	521	23707	21.51	UG/L	97	108%
13)	1,2-DICHLOROETHANE	11.88	553	16938	23.26	UG/L	97	116%
14)	D4-1,2-DICHLOROETHANE (SS-1)	11.76	547	29449	104.87	UG/L	88	10
15)	•1,4-DIFLUOROBENZENE IS-2	17.96	864	50609	50.00	UG/L	100	
16)	2-BUTANONE (MEK)	11.76	547	309M	16.43	UG/L	60	82%
17)	1,1,1-TRICHLOROETHANE	12.95	608	28242	26.12	UG/L	73	130%
18)	CARBON TETRACHLORIDE	13.28	625	22254	22.90	UG/L	91	115%
19)	VINYL ACETATE	13.36	629	7442	35.19	UG/L	67	176%
20)	BROMODICHLOROMETHANE	13.77	650	25221	22.81	UG/L	97	114%
21)	1,2-DICHLORO PROPANE	14.85	705	7439	18.41	UG/L	98	92%
22)	CIS-1,3-DICHLOROPROPENE	15.06	716	17395	31.43	UG/L	95	157%
23)	TRICHLOROETHENE	15.51	739	12856	20.57	UG/L	99	103%
24)	DIBROMOCHLOROMETHANE	16.10	769	19939	21.30	UG/L	92	107%
25)	1,1,2-TRICHLOROETHANE	16.16	772	7515	21.48	UG/L	85	108%
26)	BENZENE	15.87	757	17308	19.17	UG/L	100	96%
27)	TRANS-1,3-DICHLOROPROPENE	16.14	771	10553	18.59	UG/L	94	92%
28)	2-CHLOROETHYLVINYLETHER	16.86	813	3636	17.67	UG/L	74	88%
29)	BROMOFORM	18.31	882	16076	22.09	UG/L	63	110%
30)	•D5-CHLOROBENZENE IS-3	22.01	1071	46593	50.00	UG/L	100	
31)	4-METHYL-2-PENTANONE	18.57	895	4628	21.03	UG/L	89	105%
32)	2-HEXANONE	19.84	960	3013	19.91	UG/L	90	100%
33)	TETRACHLOROETHYLENE	20.11	974	14093	22.54	UG/L	99	113%
34)	1,1,2,2-TETRACHLOROETHANE	20.15	976	11897	21.06	UG/L	90	105%
35)	D-8 TOLUENE (SS-2)	20.95	1017	46420	99.16	UG/L	86	99
36)	TOLUENE	21.11	1025	13642	20.61	UG/L	95	103%
37)	CHLOROBENZENE	22.09	1075	21200	22.28	UG/L	94	112%
38)	ETHYL BENZENE	23.87	1166	10100M	22.19	UG/L	24	111%
39)	BROMOFLUOROBENZENE (SS-3)	26.27	1289	47099M	101.98	UG/L		102
40)	STYRENE	27.52	1353	18670M	29.67	UG/L		
42)	O-XYLENE	28.72	1414	12151M	21.39	UG/L	95	107%

• Compound is ISTD

• Compound is ISTD

TOTAL ION CHROMATOGRAM



#P5993C

ORIGINAL (Red)

Data File: >C7767::UP
Name: CAA 20 PPB STD
Misc: ALS:1

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

Operator ID:
Quant Time: 870911 21:05
Injected at: 870911 ~~10:53~~ SOL
13:05

AR303143

ORIGINAL (Red)

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 870911 21:05
Output File: ^C7767::P3 Injected at: 870911 18:53
Data File: >C7767::UP Dilution Factor: 1.00
Name: CAA 20 PPB STD
Misc: ALS:1

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

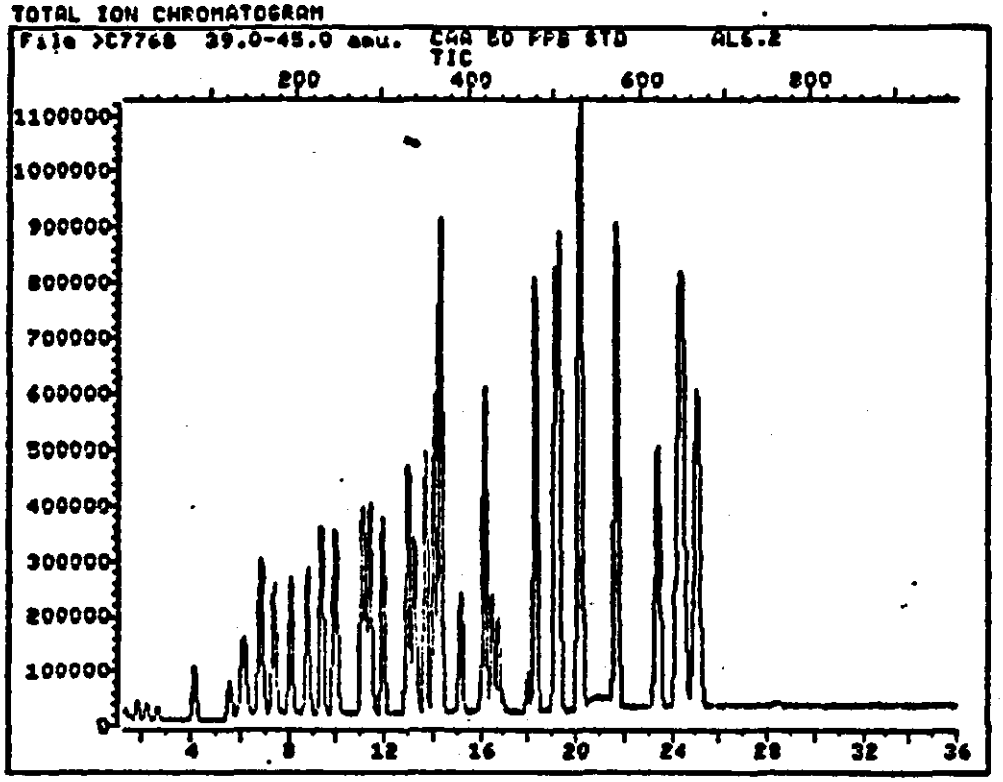
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	7.44	175	439518	50.00	UG/L	100
2)	CHLOROMETHANE	1.41	6	62196	45.01	UG/L	100
3)	BROMOMETHANE	1.87	19	45793	26.26	UG/L	96
4)	VINYL CHLORIDE	2.26	30	61887	28.53	UG/L	100
5)	CHLOROETHANE	2.23	29	16789	9.58	UG/L	100
5)	CHLOROETHANE	2.69	42	39949	22.80	UG/L	100
6)	METHYLENE CHLORIDE	4.22	85	76416	17.85	UG/L	100
7)	ACETONE	6.79	157	85662	17.79	UG/L	100
8)	CARBON DISULFIDE	5.62	124	227241	18.37	UG/L	99
9)	1,1-DICHLOROETHENE	6.90	160	184848	17.56	UG/L	94
10)	1,1-DICHLOROETHANE	8.12	194	444536	17.88	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	8.83	214	185693	16.55	UG/L	80
12)	CHLOROFORM	9.44	231	468268	17.41	UG/L	99
13)	1,2-DICHLOROETHANE	10.04	248	333950	17.97	UG/L	94
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.84	245	667679	100.61	UG/L	94
15)	•1,4-DIFLUOROBENZENE IS-2	16.19	420	2064746	50.00	UG/L	100
16)	2-BUTANONE (MEK)	9.94	245	11400	15.71	UG/L	89
17)	1,1,1-TRICHLOROETHANE	11.12	278	375729	18.36	UG/L	78
18)	CARBON TETRACHLORIDE	11.44	287	431443	17.79	UG/L	96
18)	VINYL ACETATE	11.23	281	183629	19.14	UG/L	100
19)	VINYL ACETATE	11.58	291	47744	4.98	UG/L	100
20)	BROMODICHLOROMETHANE	11.98	302	410711	18.38	UG/L	95
21)	1,2-DICHLORO PROPANE	13.01	331	260432	18.55	UG/L	90
22)	CIS-1,3-DICHLOROPROPENE	13.26	338	297393	17.53	UG/L	95
23)	TRICHLOROETHENE	13.73	351	275499	17.37	UG/L	97
24)	DIBROMOCHLOROMETHANE	14.30	367	387236	17.82	UG/L	99
25)	1,1,2-TRICHLOROETHANE	14.34	368	196133	18.49	UG/L	92
26)	BENZENE	14.09	361	832561	18.10	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	14.34	368	292108	17.44	UG/L	95
28)	2-CHLOROETHYLVINYLETHER	15.19	392	159622	16.40	UG/L	86
29)	BROMOFORM	16.52	429	213645	17.26	UG/L	88
30)	•D5-CHLOROBENZENE IS-3	20.16	531	2069214	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	16.77	436	334325	19.15	UG/L	89
32)	2-HEXANONE	18.05	472	249919	19.22	UG/L	96
33)	TETRACHLOROETHYLENE	18.34	480	212535	17.13	UG/L	95
34)	1,1,2,2-TETRACHLOROETHANE	18.37	481	376491	17.79	UG/L	94
35)	D-8 TOLUENE (SS-2)	19.16	503	2187466	101.15	UG/L	
36)	TOLUENE	19.30	507	660486	17.49	UG/L	
37)	CHLOROBENZENE	20.27	534	859611	17.56	UG/L	90
38)	ETHYL BENZENE	21.73	575	451865	17.22	UG/L	98
39)	BROMOFLUOROBENZENE (SS-3)	23.42	622	1241108	97.41	UG/L	92
40)	STYRENE	24.31	647	1037215	17.03	UG/L	91
41)	M-XYLENE	24.49	652	601093	17.30	UG/L	96
42)	O-XYLENE	24.49	652	601093	16.37	UG/L	88
42)	O-XYLENE	25.09	668	537158	[illegible]	UG/L	92

AR303144

AR303144

ORIGINAL (Red)

TOTAL ION CHROMATOGRAM



Data File: >C7768::UP
Name: CAA 50 PPB STD
Misc: ALS.2

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

Operator ID:
Quant Time: 870911 21:01
Injected at: 870911 ~~20:12~~ 13:47

AR303145

ORIGINAL (Red)

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 870911 21:01
Output File: ^C7768::P3 Injected at: 870911 20:12
Data File: >C7768::UP Dilution Factor: 1.00
Name: CAA 50 PPB STD
Misc: ALS.2

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	7.41	173	479529	50.00	UG/L	100
3)	BROMOMETHANE	1.84	17	118979	62.63	UG/L	97
4)	VINYL CHLORIDE	2.23	28	194103	81.88	UG/L	100
5)	CHLOROETHANE	2.23	28	58517	30.61	UG/L	100
5)	CHLOROETHANE	2.69	41	117539	61.48	UG/L	100
6)	METHYLENE CHLORIDE	4.19	83	204082	43.69	UG/L	100
7)	ACETONE	6.76	155	219235	41.73	UG/L	100
7)	ACETONE	7.05	163	2986	.57	UG/L	100
8)	CARBON DISULFIDE	6.68	122	632240	45.64	UG/L	98
9)	1,1-DICHLOROETHENE	6.87	158	532805	44.02	UG/L	99
10)	1,1-DICHLOROETHANE	8.12	193	1254532	46.51	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	8.84	213	514338	42.02	UG/L	82
12)	CHLOROFORM	9.41	229	1262922	43.03	UG/L	89
13)	1,2-DICHLOROETHANE	10.05	247	871554	42.97	UG/L	95
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.94	244	749365	103.49	UG/L	93
15)	*1,4-DIFLUOROBENZENE IS-2	16.20	419	2186243	50.00	UG/L	100
16)	2-BUTANONE (MEK)	8.94	244	14470	18.84	UG/L	95
17)	1,1,1-TRICHLOROETHANE	11.12	277	980724	45.25	UG/L	81
18)	CARBON TETRACHLORIDE	11.12	277	146133	5.69	UG/L	95
18)	CARBON TETRACHLORIDE	11.45	286	1103091	42.97	UG/L	95
19)	VINYL ACETATE	11.23	280	284090	27.96	UG/L	100
19)	VINYL ACETATE	11.59	290	108676	10.70	UG/L	100
20)	BROMODICHLOROMETHANE	11.98	301	1061046	44.84	UG/L	97
21)	1,2-DICHLORO PROPANE	13.01	330	722645	48.60	UG/L	89
22)	CIS-1,3-DICHLOROPROPENE	13.26	337	802505	44.69	UG/L	95
23)	TRICHLOROETHENE	13.73	350	725892	43.22	UG/L	96
24)	DIBROMOCHLOROMETHANE	14.31	366	952522	41.41	UG/L	97
25)	1,1,2-TRICHLOROETHANE	14.34	367	480301	42.77	UG/L	94
26)	BENZENE	14.09	360	2165723	44.47	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	14.34	367	757618	42.72	UG/L	95
28)	2-CHLOROETHYLVINYLETHER	15.20	391	403367	36.74	UG/L	86
29)	BROMOFORM	16.53	428	482891	36.84	UG/L	87
30)	*D5-CHLOROBENZENE IS-3	20.17	530	2178374	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	16.20	419	6682	.36	UG/L	48
31)	4-METHYL-2-PENTANONE	16.78	435	786758	42.80	UG/L	87
32)	2-HEXANONE	18.06	471	318972	23.31	UG/L	97
33)	TETRACHLOROETHYLENE	18.35	479	527306	40.36	UG/L	98
34)	1,1,2,2-TETRACHLOROETHANE	18.35	479	798264	35.83	UG/L	
35)	D-8 TOLUENE (SS-2)	19.17	502	2379631	104.54	UG/L	
36)	TOLUENE	19.31	506	1630631	41.01	UG/L	86
37)	CHLOROBENZENE	20.25	532	2101120	40.77	UG/L	91
38)	ETHYL BENZENE	21.71	573	1157479	41.89	UG/L	
39)	BROMOFLUOROBENZENE (SS-3)	23.43	621	1306186	97.38	UG/L	
40)	STYRENE	24.29	645	2541060	39.64	UG/L	
41)	M-XYLENE						

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AR303146

ORIGINAL (red)

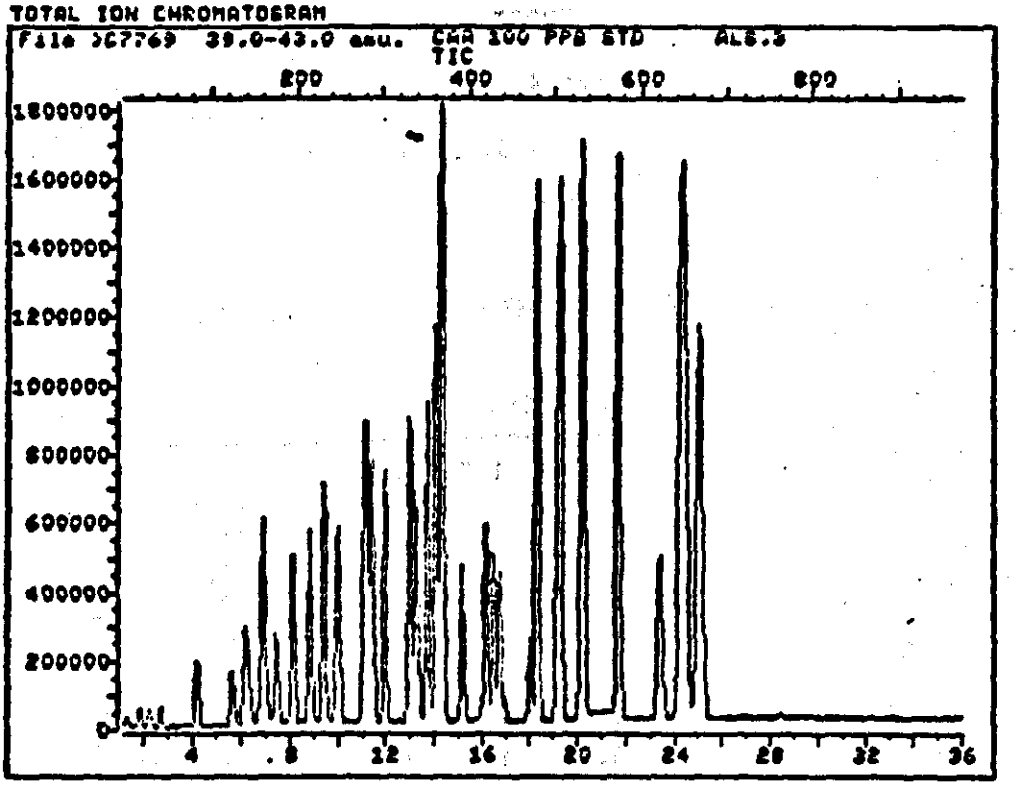
	Compound	R.T.	Scan#	Area	Conc	Units	Q
42)	O-XYLENE	25.08	557	1544448	39.96	UG/L	92

* Compound is ISTD

AR303147

ORIGINAL (Red)

TOTAL ION CHROMATOGRAM



Data File: >C7769::UP
Name: CAA 100 PPB STD
Misc: ALS.3

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

Operator ID:
Quant Time: 870911 21:03
Injected at: 870911 ~~18:03~~ 14:29

AR303148

AR303148

ORIGINAL (Red)

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 870911 21:03
Output File: ^C7769::P3 Injected at: 870911 19:03
Data File: >C7769::UP Dilution Factor: 1.00
Name: CAA 100 PPB STD
Misc: ALS.3

ID File: CV524::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 524, HP 5993-OS (INSTR. C)
Last Calibration: 870911 10:54

	Compound	R.T.	Scan#	Area	Conc	Units	Q
1)	•BROMOCHLOROMETHANE IS-1	7.44	175	483439	50.00	UG/L	100
2)	CHLOROMETHANE	1.41	5	168556	110.89	UG/L	100
3)	BROMOMETHANE	1.87	19	186460	87.20	UG/L	99
4)	VINYL CHLORIDE	2.26	30	325423	136.16	UG/L	100
5)	CHLOROETHANE	2.26	30	101101	52.45	UG/L	100
5)	CHLOROETHANE	2.73	43	220376	114.34	UG/L	100
6)	METHYLENE CHLORIDE	4.23	85	404733	85.95	UG/L	100
7)	ACETONE	5.80	157	539065	101.78	UG/L	100
8)	CARBON DISULFIDE	5.62	124	1371053	100.75	UG/L	98
9)	1,1-DICHLOROETHENE	5.91	160	1103878	90.46	UG/L	98
10)	1,1-DICHLOROETHANE	8.16	195	2560436	94.16	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	8.84	214	1036986	84.03	UG/L	93
12)	CHLOROFORM	9.45	231	2571651	86.92	UG/L	99
13)	1,2-DICHLOROETHANE	10.05	248	1857266	90.84	UG/L	95
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.95	245	805009	110.28	UG/L	90
15)	•1,4-DIFLUOROBENZENE IS-2	16.21	420	2119652	50.00	UG/L	100
16)	2-BUTANONE (MEK)	9.95	245	50893	68.33	UG/L	91
17)	1,1,1-TRICHLOROETHANE	11.13	278	1941120	92.38	UG/L	81
18)	CARBON TETRACHLORIDE	11.13	278	290697	11.68	UG/L	91
18)	CARBON TETRACHLORIDE	11.45	287	2175256	87.39	UG/L	95
19)	VINYL ACETATE	10.56	262	2399	.24	UG/L	100
19)	VINYL ACETATE	11.24	281	1011368	102.68	UG/L	100
19)	VINYL ACETATE	11.59	291	261687	26.57	UG/L	100
19)	VINYL ACETATE	11.92	300	3048	.31	UG/L	100
20)	BROMODICHLOROMETHANE	11.99	302	2133032	92.98	UG/L	96
21)	1,2-DICHLORO PROPANE	13.02	331	1468246	101.85	UG/L	83
22)	CIS-1,3-DICHLOROPROPENE	13.27	338	1639014	94.14	UG/L	97
23)	TRICHLOROETHENE	13.74	351	1504153	92.37	UG/L	94
24)	DIBROMOCHLOROMETHANE	14.32	367	1957976	87.79	UG/L	98
25)	1,1,2-TRICHLOROETHANE	14.35	368	948303	87.10	UG/L	94
26)	BENZENE	13.27	338	14253	.30	UG/L	100
26)	BENZENE	14.07	360	4347055	92.06	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	14.32	367	1546134	89.91	UG/L	95
28)	2-CHLOROETHYLVINYLETHER	15.17	391	839033	78.83	UG/	89
29)	BROMOFORM	16.54	429	1088180	85.62	UG/	
30)	•D5-CHLOROBENZENE IS-3	20.15	530	2425818	50.00	UG/	
31)	4-METHYL-2-PENTANONE	16.79	436	1855826	103.45	UG/L	87
32)	2-HEXANONE	18.04	471	1011799	75.76	UG/L	97
33)	TETRACHLOROETHYLENE	18.36	480	1045259	81.98	UG/L	96
34)	1,1,2,2-TETRACHLOROETHANE	18.36	480	1619798	74.50	UG/	93
35)	D-8 TOLUENE (SS-2)	19.18	503	2333374	105.04	UG/	
36)	TOLUENE	19.32	507	3196599	82.38	UG/L	96
37)	CHLOROBENZENE	20.26	533	4230549	84.13	UG/L	90
38)	ETHYL BENZENE	21.73	574	2302298	85.38	UG/L	97

AR303149

AR303149

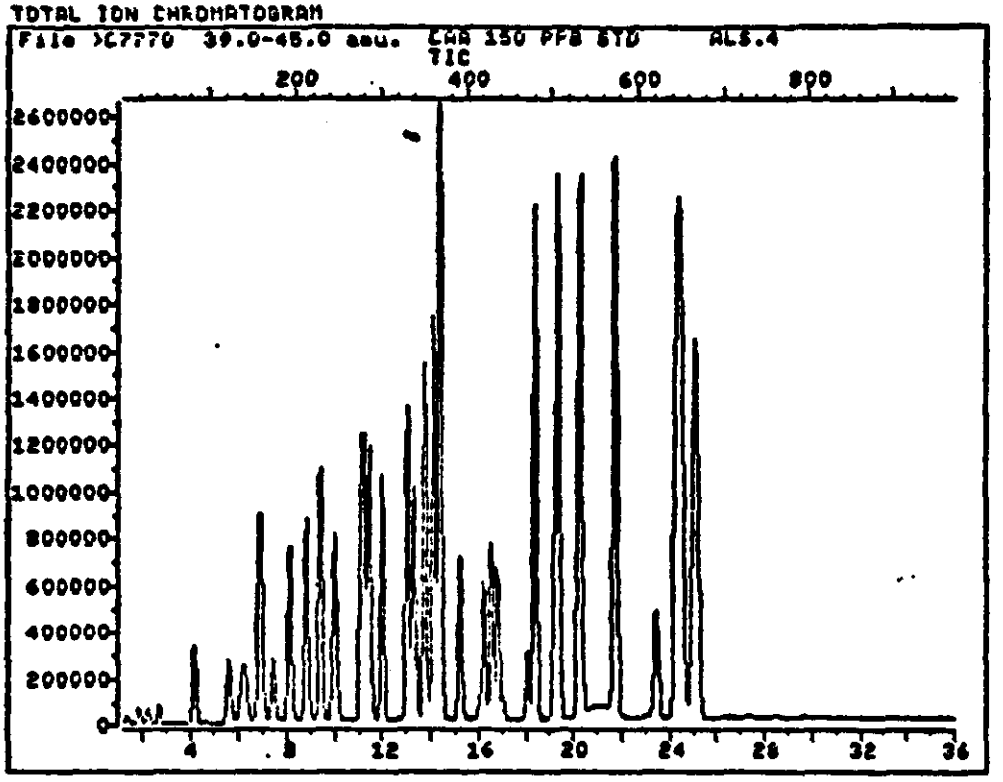
	Compound	R.T.	Scan#	Area	Conc	Units	Q
41)	M-XYLENE	24.45	650	3005545	84.18	UG/L	94
42)	O-XYLENE	24.45	650	3005545	79.69	UG/L	87
42)	O-XYLENE	25.06	667	3198332	84.80	UG/L	93

* Compound is ISTD

AR303150

AR303150

TOTAL ION CHROMATOGRAM



Data File: >C7770::UP
Name: CAA 150 PPB STD
Misc: ALS.4

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

Operator ID:
Quant Time: 870911 20:17
Injected at: 870911 ~~19:11~~ 15:12

AR303151

ORIGINAL

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 870911 20:17
Output File: ^C7770::F1 Injected at: 870911 19:11
Data File: >C7770::UP Dilution Factor: 1.00
Name: CAA 150 PPB STD
Misc: ALS.4

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	7.41	174	527336	50.00	UG/L	100
2)	CHLOROMETHANE	1.41	6	215641	130.06	UG/L	100
3)	BROMOMETHANE	1.87	19	242246	115.77	UG/L	98
4)	VINYL CHLORIDE	2.23	29	442671	169.80	UG/L	100
4)	VINYL CHLORIDE	2.69	42	13117	5.03	UG/L	100
5)	CHLOROETHANE	2.23	29	144206	68.59	UG/L	100
5)	CHLOROETHANE	2.69	42	292128	138.95	UG/L	100
6)	METHYLENE CHLORIDE	4.19	84	671702	130.76	UG/L	100
7)	ACETONE	5.77	156	817076	141.43	UG/L	100
8)	CARBON DISULFIDE	5.55	122	2381193	160.41	UG/L	98
9)	1,1-DICHLOROETHENE	6.87	159	1735046	130.34	UG/L	98
10)	1,1-DICHLOROETHANE	8.09	193	3976471	134.06	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	8.80	213	1654704	122.92	UG/L	82
12)	CHLOROFORM	9.41	230	3919574	121.45	UG/L	98
13)	1,2-DICHLOROETHANE	10.02	247	2915039	130.70	UG/L	94
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.81	244	848886	106.61	UG/L	92
15)	•1,4-DIFLUOROBENZENE IS-2	16.22	420	2146941	50.00	UG/L	100
16)	2-BUTANONE (MEK)	9.91	244	61487	81.51	UG/L	91
17)	1,1,1-TRICHLOROETHANE	11.10	277	2981118	140.08	UG/L	82
18)	CARBON TETRACHLORIDE	11.10	277	452003	17.93	UG/L	92
18)	CARBON TETRACHLORIDE	11.42	286	3461243	137.28	UG/L	95
19)	VINYL ACETATE	10.77	268	6630	.66	UG/L	100
19)	VINYL ACETATE	11.20	280	1361449	136.47	UG/L	100
19)	VINYL ACETATE	11.49	288	235429	23.60	UG/L	100
19)	VINYL ACETATE	11.85	298	3067	.31	UG/L	100
19)	VINYL ACETATE	11.85	301	2521	.25	UG/L	100
20)	BROMODICHLOROMETHANE	11.89	302	3268728	140.67	UG/L	96
21)	1,2-DICHLORO PROPANE	13.03	331	2192631	150.17	UG/L	89
22)	CIS-1,3-DICHLOROPROPENE	13.28	338	2509878	142.32	UG/L	97
23)	TRICHLOROETHENE	13.75	351	2561154	155.27	UG/L	94
24)	DIBROMOCHLOROMETHANE	14.32	367	3015527	133.48	UG/L	97
25)	1,1,2-TRICHLOROETHANE	14.36	368	1414725	128.29	UG/L	[illegible]
26)	BENZENE	14.07	360	6531004	136.56	UG/L	
27)	TRANS-1,3-DICHLOROPROPENE	14.36	368	2331337	133.85	UG/L	
28)	2-CHLOROETHYLVINYLETHER	15.22	392	1363755	126.50	UG/L	88
29)	BROMOFORM	16.54	429	1672287	129.90	UG/L	88
30)	•D5-CHLOROBENZENE IS-3	20.20	531	2069988	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	16.80	436	2586043	148.84	UG/L	87
32)	2-HEXANONE	18.08	472	1220424	93.84	UG/L	98
33)	TETRACHLOROETHYLENE	18.37	480	1615177	130.10	UG/l	
34)	1,1,2,2-TETRACHLOROETHANE	18.37	480	2039994	86.36	UG/L	[illegible]
35)	D-8 TOLUENE (SS-2)	19.19	503	2298864	106.28	UG/L	89
36)	TOLUENE	19.33	507	4684982	123.99	UG/L	95

AR303152

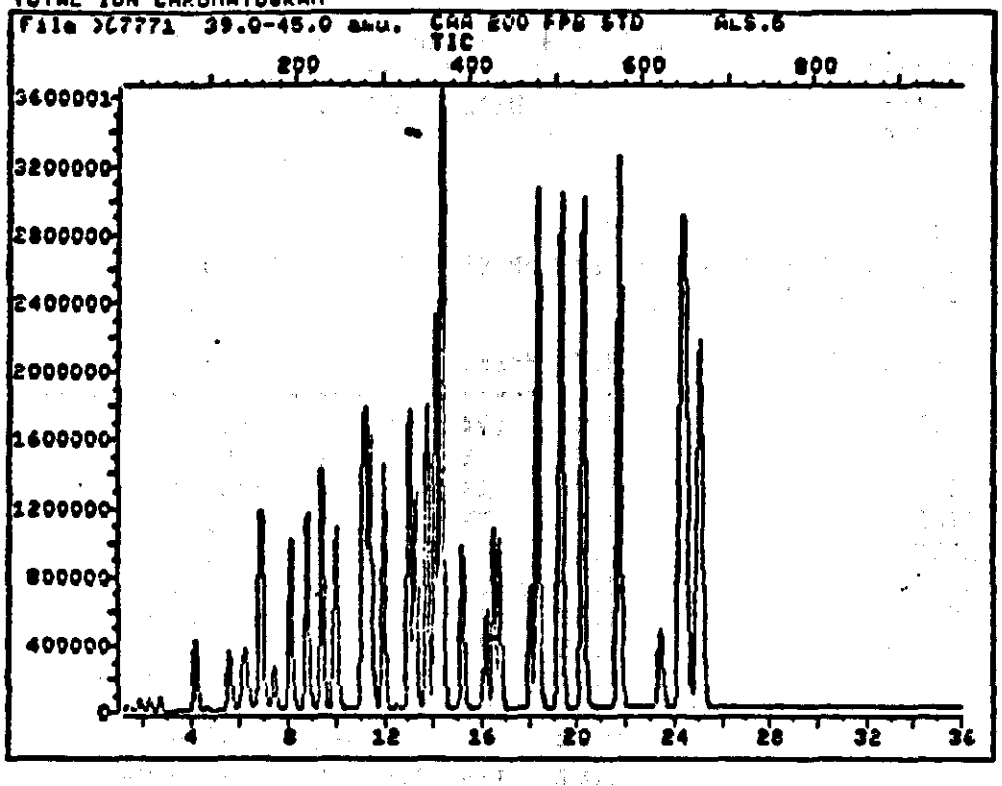
	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	STYRENE	24.28	645	7663419	125.80	UG/L	92
41)	M-XYLENE	24.46	650	4319840	124.25	UG/L	95
42)	O-XYLENE	24.46	650	4319840	117.63	UG/L	87
42)	O-XYLENE	25.03	666	4686156	127.60	UG/L	91

* Compound is ISTD

AR303153

ORIGINAL (Red)

TOTAL ION CHROMATOGRAM



Data File: >C7771::UP
Name: CAA 200 PPB STD
Misc: ALS.5

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

Operator ID:
Quant Time: 870911 20:40
Injected at: 870911 ~~19:18~~ 16:56

AR303154

ORIGINAL (Red)

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 870911 20:40
Output File: ^C7771::P3 Injected at: 870911 19:18
Data File: >C7771::UP Dilution Factor: 1.00
Name: CAA 200 PPB STD
Misc: ALS.5

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 870911 10:54

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	7.41	174	527013	50.00	UG/L	100
2)	CHLOROMETHANE	1.41	6	209053	126.16	UG/L	100
3)	BROMOMETHANE	1.91	20	236970	113.32	UG/L	97
4)	VINYL CHLORIDE	2.27	30	486561	186.75	UG/L	100
4)	VINYL CHLORIDE	2.69	42	15520	5.96	UG/L	100
5)	CHLOROETHANE	2.27	30	156247	74.36	UG/L	100
5)	CHLOROETHANE	2.69	42	319922	152.26	UG/L	100
6)	METHYLENE CHLORIDE	4.19	84	846454	164.88	UG/L	100
7)	ACETONE	6.77	156	1188636	205.87	UG/L	100
7)	ACETONE	7.41	174	8065	1.40	UG/L	100
8)	CARBON DISULFIDE	5.55	122	3027914	204.10	UG/L	97
9)	1,1-DICHLOROETHENE	6.87	159	2298641	172.79	UG/L	97
10)	1,1-DICHLOROETHANE	8.09	193	5314845	179.30	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	8.81	213	2231167	165.84	UG/L	81
12)	CHLOROFORM	9.41	230	5281502	163.75	UG/L	98
13)	1,2-DICHLOROETHANE	10.02	247	3814177	171.12	UG/L	95
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.91	244	885706	111.30	UG/L	86
15)	•1,4-DIFLUOROBENZENE IS-2	15.22	420	2199664	50.00	UG/L	100
16)	2-BUTANONE (MEK)	9.91	244	221084	286.04	UG/L	89
17)	1,1,1-TRICHLOROETHANE	11.10	277	3942934	180.83	UG/L	81
18)	CARBON TETRACHLORIDE	11.10	277	603449	23.36	UG/L	90
18)	CARBON TETRACHLORIDE	11.42	286	4533061	175.49	UG/L	94
19)	VINYL ACETATE	10.77	268	2758	.27	UG/L	100
19)	VINYL ACETATE	10.96	273	2715	.27	UG/L	100
19)	VINYL ACETATE	11.21	280	2276391	222.71	UG/L	100
19)	VINYL ACETATE	11.56	290	531276	51.98	UG/L	100
20)	BROMODICHLOROMETHANE	11.96	301	4399721	184.81	UG/L	96
21)	1,2-DICHLORO PROPANE	13.03	331	2934242	196.14	UG/L	92
22)	CIS-1,3-DICHLOROPROPENE	13.28	338	3382656	187.22	UG/L	97
23)	TRICHLOROETHENE	13.75	351	3052476	180.63	UG/L	94
24)	DIBROMOCHLOROMETHANE	14.32	367	4185591	180.83	UG/L	98
25)	1,1,2-TRICHLOROETHANE	14.36	368	1918830	169.84	UG/L	93
26)	BENZENE	14.07	360	8683806	177.22	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	14.32	367	3128346	175.30	UG/L	97
28)	2-CHLOROETHYLVINYLETHER	15.18	391	1828398	165.53	UG/L	87
29)	BROMOFORM	16.55	429	2510298	190.33	UG/L	
30)	•D5-CHLOROBENZENE IS-3	20.20	531	2113686	50.00	UG/L	
31)	4-METHYL-2-PENTANONE	16.80	436	3998504	224.16	UG/L	87
32)	2-HEXANONE	18.08	472	3039532	228.89	UG/L	96
33)	TETRACHLOROETHYLENE	18.37	480	2178148	171.82	UG/L	96
34)	1,1,2,2-TETRACHLOROETHANE	18.41	481	3443489	159.29	UG/	
35)	D-8 TOLUENE (SS-2)	19.19	503	2287736	103.58	UG/L	90
36)	TOLUENE	19.34	507	6226164	161.37	UG/L	95
37)	CHLOROBENZENE	20.27	533	8450890	159.22	UG/L	90
38)	ETHYL BENZENE	21.74	574	4613399	172.07	UG/L	96

AR303155

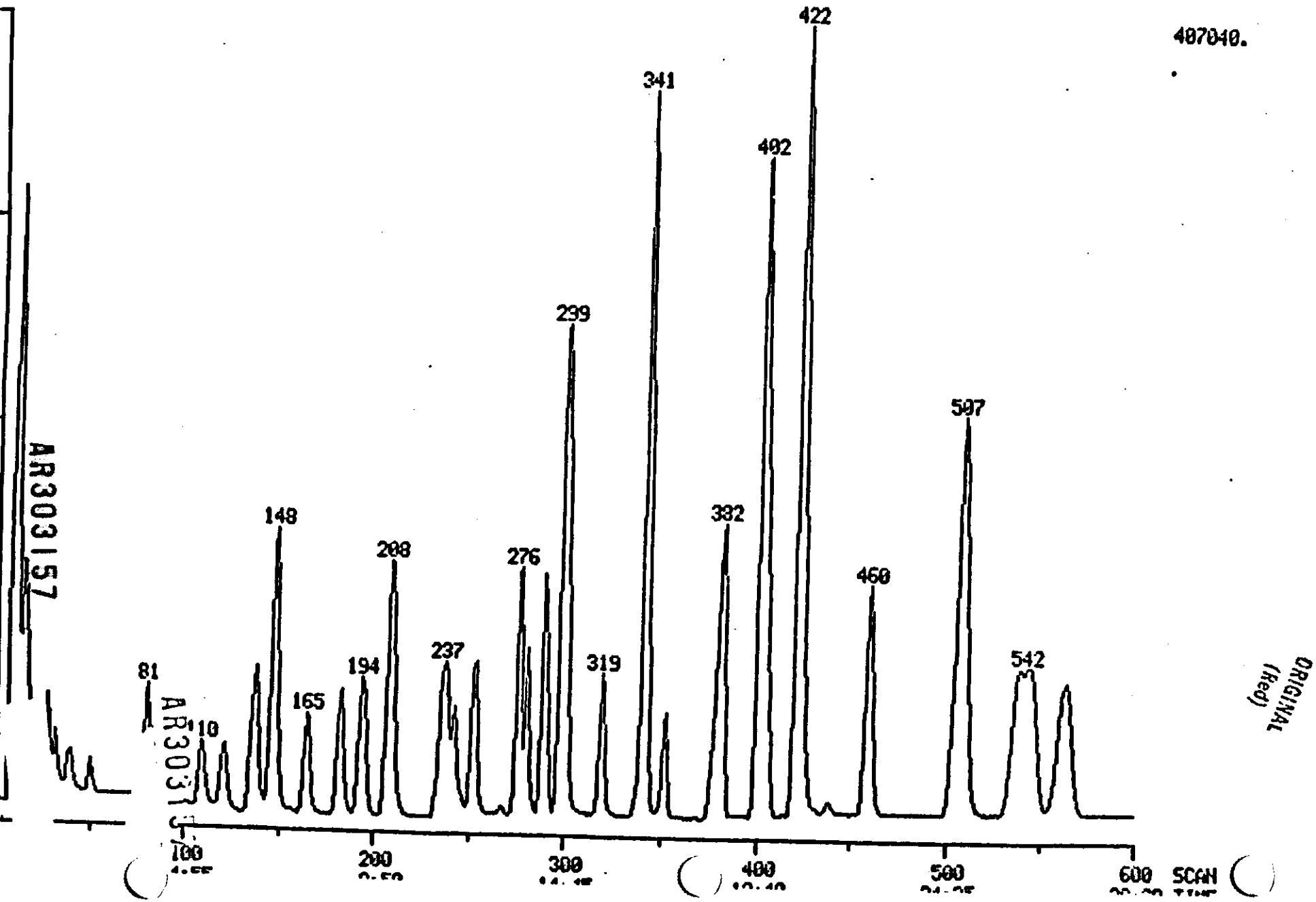
AR303155

	Compound	R.T.	Scan#	Area	Conc	Units	Q
40)	STYRENE	24.28	645	8944488	159.87	UG/L	92
41)	M-XYLENE	24.50	651	5559096	156.59	UG/L	93
42)	O-XYLENE	24.50	651	5559096	148.24	UG/L	85
42)	O-XYLENE	25.07	667	5123907	163.30	UG/L	81

* Compound is ISTD

AR303156

RIC A/S,4 VOA STD, CAR 20ppb STD.
09/19/87 10:08:00 5 mls DATA: VOASTD1067 SCANS 1 TO 600
SAMPLE: Finnigan OWA



AR303157

AR303157

ORIGINAL (Red)

ATA: VOASTD1067.TI
9/19/87 10:08:00
AMPLE:
UBMITTED BY: ANALYST:

DUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
SP. FAC. FROM LIBRARY ENTRY

ORIGINAL (Red)

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
21	1,2-DICHLOROPROPANE
[illegible]	CIS-1,3-DICHLOROPROPENE
[illegible]	TRICHLOROETHYLENE
[illegible]	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	148	7:17	1	1.000	A BB	92294.	50.000 UG/L	

AR303158

AR303158

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	22	1:05	1	0.149	A BB	39134.	12.895	UG/L	1.28
3	94	32	1:34	1	0.216	A BB	22141.	12.519	UG/L	1.24
4	62	40	1:58	1	0.270	A BV	38125.	14.046	UG/L	1.40
5	64	51	2:30	1	0.345	A BB	23305.	13.034	UG/L	1.29
6	84	81	3:59	1	0.547	A BB	34701.	12.181	UG/L	1.21
7	43	97	4:46	1	0.655	A BB	9312.	27.913	UG/L	2.77
8	76	110	5:24	1	0.743	A BB	117233.	14.295	UG/L	1.42
9	96	138	6:47	1	0.932	A BB	54235.	14.910	UG/L	1.48
10	63	165	8:07	1	1.115	A BB	120996.	14.544	UG/L	1.45
11	96	182	8:57	1	1.230	A BB	48887.	14.382	UG/L	1.43
12	83	194	9:32	1	1.311	A BB	105468.	13.933	UG/L	1.38
13	NOT	FOUND								
14	65	208	10:14	1	1.405	A BB	161886.	100.453	PRCNT	9.98
15	114	341	16:46	15	1.000	A BB	433190.	50.000	UG/L	4.97
16	NOT	FOUND								
17	97	235	11:33	15	0.689	A BB	64457.	15.133	UG/L	1.50
18	117	242	11:54	15	0.710	A VB	49132.	15.057	UG/L	1.50
19	NOT	FOUND								
20	83	252	12:23	15	0.739	A BB	84539.	12.315	UG/L	1.22
21	63	275	13:31	15	0.806	A BB	87144.	13.346	UG/L	1.33
22	75	300	14:45	15	0.880	A BB	59213.	11.317	UG/L	1.12
23	130	289	14:13	15	0.848	A BV	67632.	13.981	UG/L	1.39
24	129	298	14:39	15	0.874	A BB	52284.	10.864	UG/L	1.08
25	97	300	14:45	15	0.880	A BB	57181.	11.246	UG/L	1.12
26	78	298	14:39	15	0.874	A BB	251708.	15.912	UG/L	1.58
27	75	280	13:46	15	0.821	A BB	65269.	12.288	UG/L	1.22
28	63	319	15:41	15	0.935	A BB	51062.	10.418	UG/L	1.04
29	173	342	16:49	15	1.003	A BB	28959.	9.936	UG/L	0.99
30	98	40[illegible]	19:43	15	1.176	A BB	403455.	95.727	PRCNT	9.51
31	117	4[illegible]			[illegible].000	A BB	381164.	50.000	UG/L	4.97
[illegible]	43	3[illegible]			[illegible].834	A BB	96652.	14.554	UG/L	1.45
[illegible]	43	3[illegible]			[illegible].895	A BB	55337.	14.305	UG/L	1.42
[illegible]4	164	3[illegible]			[illegible].907	A BB	61074.	16.736	UG/L	1.66
35	83	3[illegible]			0.900	A BB	94673.	12.370	UG/L	1.23
36	92	4[illegible]			0.960	A BB	116898.	14.744	UG/L	1.47
37	112	4[illegible]			1.005	A BB	143171.	14.069	UG/L	1.40
38	106	[illegible]			1.093	A BB	77697.	14.405	UG/L	1.43
39	104	[illegible]			1.276	A BB	140499.	13.732	UG/L	1.36
40	106				1.292	A BB	88236.	13.958	UG/L	1.39
41	106				1.335	A BB	91018.	13.384	UG/L	1.33
42	98	40[illegible]	[illegible]		0.952	A BB	403455.	104.780	PRCNT	10.41
43	95	507	24:56	31	1.204	A BB	327138.	96.545	PRCNT	9.59

ORIGINAL

AR303159

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 46 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUA

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	148	146	954	876	1	1	1	0
2	23	23	805	774	2	1	1	0
3	33	32	643	575	3	1	1	0
4	41	40	656	612	4	1	1	0
5	51	51	724	673	5	1	1	0
6	81	81	929	666	6	1	1	0
7	92	97	722	652	7	1	1	0
8	111	110	999	613	8	1	1	0
9	138	138	954	750	9	1	1	0
10	166	165	907	841	10	1	1	0
11	184	183	936	749	11	1	1	0
12	196	194	943	832	12	1	1	0
14	210	208	978	823	14	1	1	0

ORIGINAL (Red)

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 18 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUB

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
15	341	341	995	801	1	1	1	0
17	235	235	869	681	3	1	1	0
18	242	242	880	796	4	1	1	0
20	253	253	966	837	6	1	1	0
21	276	276	942	875	7	1	1	0
22	301	300	852	345	8	1	1	0
3	289	289	977	862	9	1	1	0
24	298	298	801	275	10	1	1	0
25	300	300	920	449	11	1	1	0
26	298	298	820	547	12	1	1	0
27	280	280	721	623	13	1	1	0
28	320	319	742	719	14	1	1	0
29	342	342	775	120	15	1	1	0
30	401	401	971	904	16	1	1	0

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7286 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUC

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
31	421	421	979	850	1	1	1	0
32	351	352	866	829	2	1	1	0
33	376	377	834	678	3	1	1	0
34	381	382	960	839	4	1	1	0
35	379	380	847	606	5	1	1	0
36	404	405	947	805	6	1	1	0
37	423	423	981	383	7	1	1	0
38	459	460	986	850	8	1	1	0
39	536	537	934	789	9	1	1	0
	543	562	995	743	10	2 **	1	
41	561	562	984	735	11	2 **	1	0
42	401	401	971	904	12	1	1	0

AR303160

AR303160

JUMBER OF COMPOUNDS IDENTIFIED 40
DATA PROCESSING OF VOASTD1067 COMPLETED ON 9/19/87 11:33:40

ORIGINAL (Red)

AR303161

ATA: VOASTD1067.TI
9/19/87 10:08:00
AMPLE:
UBMITTED BY: ANALYST:

ORIGINAL (Red)

MOUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
ESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
21	1,2-DICHLOROPROPANE
22	CIS-1,3-DICHLOROPROPENE
	TRICHLOROETHYLENE
	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	148	7:17	1	1.000	A BB	92294.	50.000 UG/L	4.03

AR303162

AR303162

2	50	22	1:05	1	0.149	A	BB	39134.	21.283	UG/L	1.73
3	94	32	1:34	1	0.216	A	BB	22141.	21.015	UG/L	1.71
4	62	40	1:58	1	0.270	A	BV	38125.	21.550	UG/L	1.75
5	64	51	2:30	1	0.345	A	BB	23305.	20.691	UG/L	1.68
6	84	81	3:59	1	0.547	A	BB	34701.	20.565	UG/L	1.67
7	43	97	4:46	1	0.655	A	BB	9312.	27.913	UG/L	2.27
8	76	110	5:24	1	0.743	A	BB	117233.	20.173	UG/L	1.64
9	96	138	6:47	1	0.932	A	BB	54235.	21.408	UG/L	1.74
10	63	165	8:07	1	1.115	A	BB	120996.	21.714	UG/L	1.77
11	96	182	8:57	1	1.230	A	BB	48887.	20.206	UG/L	1.64
12	83	194	9:32	1	1.311	A	BB	105468.	20.796	UG/L	1.69
13	NOT	FOUND									
14	65	208	10:14	1	1.405	A	BB	161886.	109.418	PRCNT	8.90
15	114	341	16:46	15	1.000	A	BB	433190.	50.000	UG/L	4.07
16	NOT	FOUND									
17	97	235	11:33	15	0.689	A	BB	64457.	20.502	UG/L	1.67
18	117	242	11:54	15	0.710	A	VB	49132.	19.998	UG/L	1.63
19	NOT	FOUND									
20	83	252	12:23	15	0.739	A	BB	84539.	18.563	UG/L	1.51
21	63	275	13:31	15	0.806	A	BB	87144.	20.091	UG/L	1.64
22	75	300	14:45	15	0.880	A	BB	59213.	18.240	UG/L	1.48
23	130	289	14:13	15	0.848	A	BV	67632.	20.578	UG/L	1.67
24	129	298	14:39	15	0.874	A	BB	52284.	17.402	UG/L	1.42
25	97	300	14:45	15	0.880	A	BB	57181.	19.216	UG/L	1.56
26	78	298	14:39	15	0.874	A	BB	251708.	22.804	UG/L	1.86
27	75	280	13:46	15	0.821	A	BB	65269.	18.533	UG/L	1.51
28	63	319	15:41	15	0.935	A	BB	51062.	18.647	UG/L	1.52
29	173	342	16:49	15	1.003	A	BB	28959.	16.005	UG/L	1.30
30	98	401	19:43	15	1.176	A	BB	403455.	97.187	PRCNT	7.91
31	117	421	20:42	31	1.000	A	BB	381164.	50.000	UG/L	4.07
32	43	351	17:15	31	0.834	A	BB	96652.	20.527	UG/L	1.67
[illegible]	43	377	18:32	31	0.895	A	BB	55337.	19.691	UG/L	1.60
[illegible]	164	382	18:47	31	0.907	A	BB	61074.	22.300	UG/L	1.81
[illegible]	83	379	18:38	31	0.900	A	BB	94673.	19.255	UG/L	1.57
36	92	404	19:52	31	0.960	A	BB	116898.	21.005	UG/L	1.71
37	112	423	20:48	31	1.005	A	BB	143171.	20.728	UG/L	1.69
38	106	460	22:37	31	1.093	A	BB	77697.	19.505	UG/L	1.59
39	104	537	26:24	31	1.276	A	BB	140499.	20.518	UG/L	1.67
40	106	544	26:45	31	1.292	A	BB	88236.	20.060	UG/L	1.63
41	106	562	27:38	31	1.335	A	BB	91018.	19.888	UG/L	1.62
42	98	401	19:43	31	0.952	A	BB	403455.	99.478	PRCNT	8.10
43	95	507	24:56	31	1.204	A	BB	327138.	101.337	PRCNT	8.25

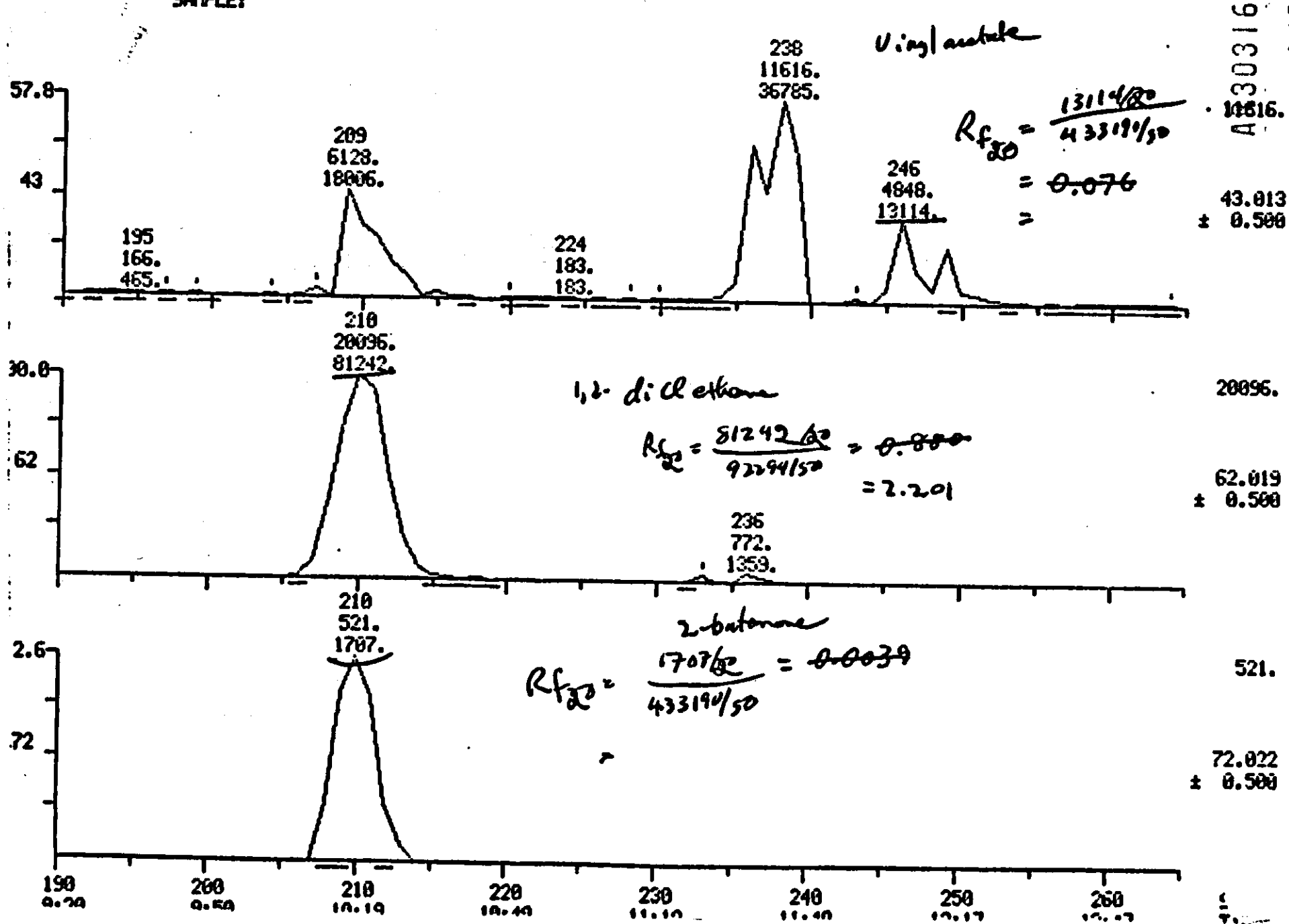
NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
1	7:20	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:08	0.96	0.154	0.96	21.29	20.00	1.060	0.996	1.06
3	1:37	0.97	0.221	0.98	21.02	20.00	0.600	0.571	1.05
4	2:01	0.98	0.275	0.98	21.55	20.00	1.033	0.958	1.08
5	2:30	1.00	0.342	1.01	20.69	20.00	0.631	0.610	1.03
6	3:59	1.00	0.544	1.01	20.57	20.00	0.940	0.914	1.03
7	4:31	1.05	0.622	1.05	27.91	20.00	0.252	0.181	1.40
8	5:27	0.99	0.745	1.00	20.17	20.00	3.176	3.148	1.01
9	6:50	0.99	0.933	1.00	21.41	20.00	1.469	1.372	1.07
10	8:13	0.99	1.121	0.99	21.71	20.00	3.277	3.019	1.09
11	9:03	0.99	1.235	1.00	20.21	20.00	1.324	1.311	1.01
12	9:38	0.99	1.315	1.00	20.80	20.00	2.857	2.747	1.04

NU	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R. FAC	R. FAC(L)	RATIO
13	10:25		1.423			50.00		2.084	
14	10:19	0.99	1.409	1.00	109.42	100.00	0.877	0.802	1.09
15	16:52	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
16	10:25		0.618			50.00		0.015	
17	11:39	0.99	0.691	1.00	20.50	20.00	0.372	0.363	1.03
18	12:00	0.99	0.711	1.00	20.00	20.00	0.284	0.284	1.00
19	12:20		0.732			50.00		0.074	
20	12:32	0.99	0.743	0.99	18.56	20.00	0.488	0.526	0.93
21	13:37	0.99	0.808	1.00	20.09	20.00	0.503	0.501	1.00
22	14:51	0.99	0.880	1.00	18.24	20.00	0.342	0.375	0.91
23	14:18	0.99	0.848	1.00	20.58	20.00	0.390	0.379	1.03
24	14:42	1.00	0.872	1.00	17.40	20.00	0.302	0.347	0.87
25	14:51	0.99	0.880	1.00	19.22	20.00	0.330	0.343	0.96
26	14:42	1.00	0.872	1.00	22.80	20.00	1.453	1.274	1.14
27	13:52	0.99	0.822	1.00	18.53	20.00	0.377	0.407	0.93
28	15:47	0.99	0.936	1.00	18.65	20.00	0.295	0.316	0.93
29	16:55	0.99	1.003	1.00	16.01	20.00	0.167	0.209	0.80
30	19:46	1.00	1.172	1.00	97.19	20.00	2.328	0.479	4.86
31	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	17:21	0.99	0.836	1.00	20.53	20.00	0.634	0.618	1.03
33	18:35	1.00	0.896	1.00	19.69	20.00	0.363	0.369	0.98
34	18:50	1.00	0.908	1.00	22.30	20.00	0.401	0.359	1.12
35	18:44	0.99	0.903	1.00	19.25	20.00	0.621	0.645	0.96
36	19:58	1.00	0.962	1.00	21.00	20.00	0.767	0.730	1.05
37	20:51	1.00	1.005	1.00	20.73	20.00	0.939	0.906	1.04
38	22:40	1.00	1.092	1.00	19.50	20.00	0.510	0.523	0.98
39	26:27	1.00	1.275	1.00	20.52	20.00	0.922	0.898	1.03
40	26:48	1.00	1.291	1.00	20.06	20.00	0.579	0.577	1.00
41	27:41	1.00	1.334	1.00	19.89	20.00	0.597	0.600	0.99
42	19:46	1.00	0.953	1.00	99.48	100.00	0.529	0.532	0.99
43	25:02	1.00	1.206	1.00	101.34	100.00	0.429	0.423	1.01

MASS CHROMATOGRAMS
09/19/87 10:03:00
SAMPLE:

DATA: VOASTD1067

SCANS 190 TO 265



AR303165

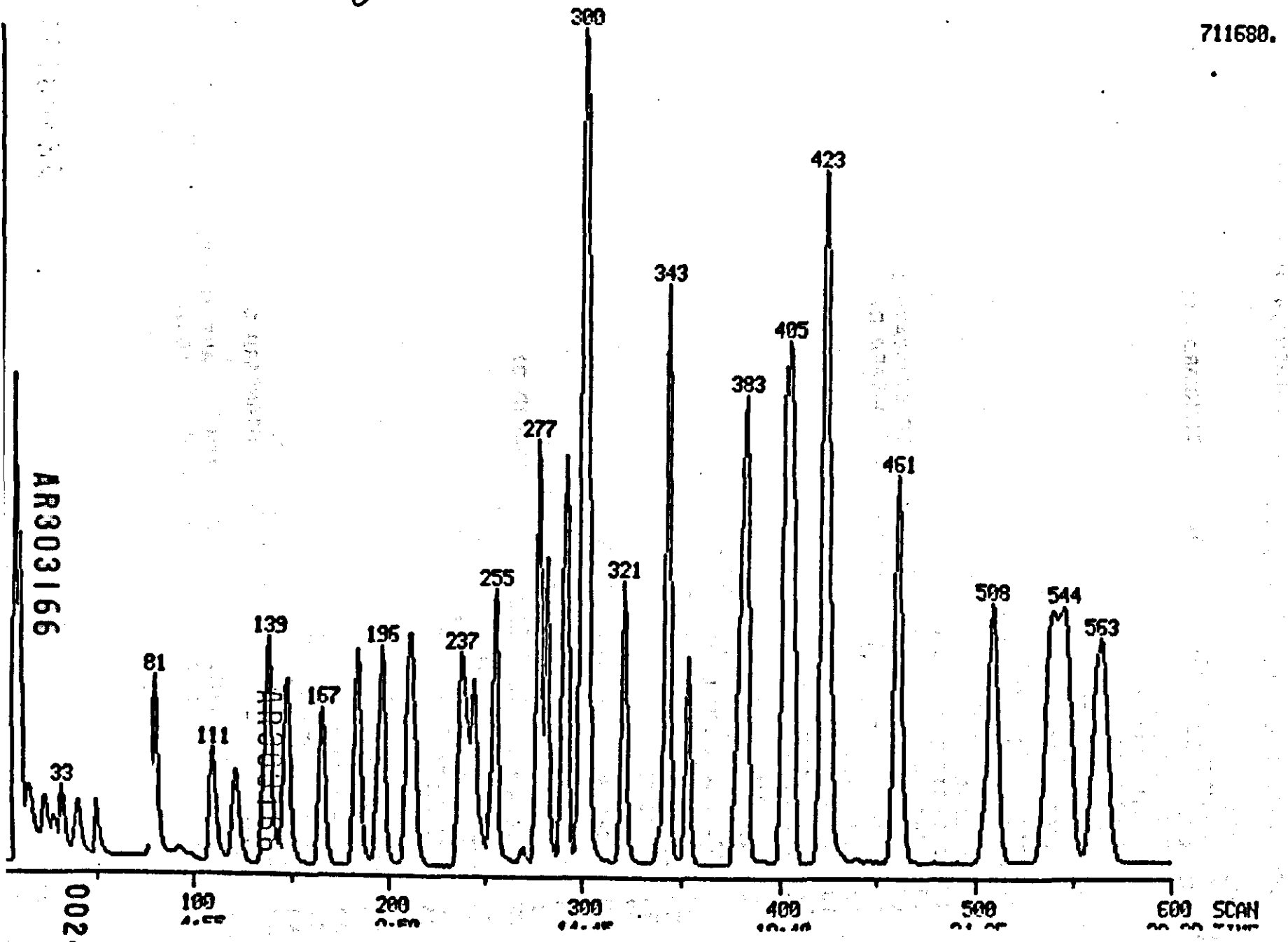
AR303165

RIC
09/19/87 10:58:00
SAMPLE:

Abs voastd CAA 50ppb std 5 mls
Ranger DW4

DATA: VOASTD1068

SCANS 1 TO 600



AR303166

Original (Red)

0024

DATA: VOASTD106B.TI
09/19/87 10:58:00
SAMPLE:
SUBMITTED BY: ANALYST:

ORIGINAL (Red)

AMOUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
21	1,2-DICHLOROPROPANE
22	CIS-1,3-DICHLOROPROPENE
	TRICHLOROETHYLENE
24	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	149	7:20	1	1.000	A BB	103106.	50.000 UG/L	

AR303167

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	23	1:08	1	0.154	A VV	102697.	30.290	UG/L	1.75
3	94	33	1:37	1	0.221	A BB	58850.	29.785	UG/L	1.72
4	62	41	2:01	1	0.275	A BV	98821.	32.590	UG/L	1.89
5	64	51	2:30	1	0.342	A VB	62913.	31.496	UG/L	1.82
6	84	81	3:59	1	0.544	A BB	94250.	29.615	UG/L	1.71
7	NOT	FOUND								
8	76	111	5:27	1	0.745	A BB	324614.	35.432	UG/L	2.05
9	96	139	6:50	1	0.933	A BB	141509.	34.824	UG/L	2.01
10	63	167	8:13	1	1.121	A BB	311246.	33.490	UG/L	1.94
11	96	184	9:03	1	1.235	A BB	135145.	35.589	UG/L	2.06
12	83	196	9:38	1	1.315	A BB	283276.	33.497	UG/L	1.94
13	62	212	10:25	1	1.423	A BB	214882.	33.344	UG/L	1.93
14	65	210	10:19	1	1.409	A BB	165284.	91.807	PRCNT	5.31
15	114	343	16:52	15	1.000	A BB	478077.	50.000	UG/L	2.89
16	72	212	10:25	15	0.618	A BB	7107.	33.187	UG/L	1.92
17	97	237	11:39	15	0.691	A BB	173488.	36.907	UG/L	2.13
18	117	244	12:00	15	0.711	A VB	135573.	37.647	UG/L	2.18
19	43	251	12:20	15	0.732	A BV	35262.	52.024	UG/L	3.01
20	83	255	12:32	15	0.743	A BB	251300.	33.170	UG/L	1.92
21	63	277	13:37	15	0.808	A BB	239343.	33.214	UG/L	1.92
22	75	302	14:51	15	0.880	A BB	179132.	31.022	UG/L	1.79
23	130	291	14:18	15	0.848	A BV	181358.	33.971	UG/L	1.97
24	129	299	14:42	15	0.872	A BB	165789.	31.213	UG/L	1.81
25	97	302	14:51	15	0.880	A VB	164202.	29.261	UG/L	1.69
26	78	299	14:42	15	0.872	A BB	609080.	34.888	UG/L	2.02
27	75	282	13:52	15	0.822	A BB	194339.	33.152	UG/L	1.92
28	63	321	15:47	15	0.936	A BB	151102.	27.935	UG/L	1.62
29	173	344	16:55	15	1.003	A BB	99641.	31.040	UG/L	1.80
30	98	402	19:46	15	1.172	A BB	458147.	98.497	PRCNT	5.70
31	117	422	20:45	31	1.000	A BB	430576.	50.000	UG/L	2.89
32	43	353	17:21	31	0.836	A BB	265946.	35.452	UG/L	2.05
[illegible]	43	378	18:35	31	0.896	A BB	158729.	36.324	UG/L	2.10
[illegible]	164	353	18:50	31	0.908	A BB	154687.	37.525	UG/L	2.17
35	83	381	18:44	31	0.903	A BB	277713.	32.121	UG/L	1.86
36	92	406	19:58	31	0.962	A BB	314340.	35.097	UG/L	2.03
37	112	424	20:51	31	1.005	A BB	390135.	33.938	UG/L	1.96
38	106	461	22:40	31	1.092	A BB	224995.	36.927	UG/L	2.14
39	104	538	26:27	31	1.275	A BB	386761.	33.464	UG/L	1.94
40	106	545	26:48	31	1.291	A BB	248442.	34.789	UG/L	2.01
41	106	563	27:41	31	1.334	A BB	258487.	33.649	UG/L	1.95
42	98	402	19:46	31	0.953	A BB	458147.	105.329	PRCNT	6.09
43	95	509	25:02	31	1.206	A BB	364673.	95.271	PRCNT	5.51

ORIGINAL (Red)

AR303168

AR303168

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 63 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUA

ORIGINAL (Red)

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	149	149	922	842	1	1	1	0
2	23	24	894	860	2	1	1	0
3	33	33	854	818	3	1	1	0
4	41	41	798	747	4	1	1	0
5	51	51	889	838	5	1	1	0
6	82	81	945	804	6	1	1	0
8	112	111	979	714	8	1	1	0
9	139	139	881	731	9	1	1	0
10	167	167	941	899	10	1	1	0
11	185	185	967	836	11	1	1	0
12	197	196	925	868	12	1	1	0
13	213	212	819	680	13	1	1	0
14	211	210	972	770	14	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 30 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUB

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
15	343	343	971	659	1	1	1	0
16	212	212	879	107	2	1	1	0
17	237	237	932	832	3	1	1	0
18	244	244	913	835	4	1	1	0
19	252	251	775	482	5	1	1	0
20	255	255	961	897	6	1	1	0
21	278	277	913	863	7	1	1	0
22	303	302	872	382	8	1	1	0
23	291	291	964	893	9	1	1	0
24	300	300	835	303	10	1	1	0
25	302	302	921	483	11	1	1	0
26	300	300	922	555	12	1	1	0
27	282	282	728	652	13	1	1	0
28	322	321	842	804	14	1	1	0
29	344	343	879	232	15	1	1	0
30	403	403	947	815	16	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 8244 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUC

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
31	422	422	996	799	1	1	1	0
32	352	353	854	823	2	1	1	0
33	377	378	921	760	3	1	1	0
34	382	383	956	855	4	1	1	0
35	380	381	938	745	5	1	1	0
36	405	406	940	837	6	1	1	0
37	424	424	951	568	7	1	1	0
[illegible]	460	461	963	877	8	1	1	[illegible]
[illegible]	537	538	963	859	9	1	1	0
40	544	563	994	850	10	2 **	1	0

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41	562	563	984	B41	11	2	1	0
42	402	403	947	B15	12	1	1	0
43	507	508	982	B45	13	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 42
DATA PROCESSING OF VOASTD106B COMPLETED ON 9/19/87 12:25:21

ORIGINAL

AR303170

DATA: VOASTD10&B.TI
09/19/87 10:58:00
SAMPLE:
SUBMITTED BY: ANALYST:

NT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
21	1,2-DICHLOROPROPANE
22	CIS-1,3-DICHLOROPROPENE
23	TRICHLOROETHYLENE
24	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	XTOT
1	130	149	7:20	1	1.000	A BB	103106.	50.000 UG/L	2.89

AR303171

AR303171

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	23	1:08	1	0.154	A VV	102697.	30.290	UG/L	1.75
3	94	33	1:37	1	0.221	A BB	58850.	29.785	UG/L	1.72
4	62	41	2:01	1	0.275	A BV	98821.	32 590	UG/L	1.89
5	64	51	2:30	1	0.342	A VB	62913.	31.496	UG/L	1.82
6	84	81	3:59	1	0.544	A BB	94250.	29.615	UG/L	1.71
	NOT	FOUND								
8	76	111	5:27	1	0.745	A BB	324614.	35.432	UG/L	2.05
9	96	139	6:50	1	0.933	A BB	141509.	34.824	UG/L	2.01
10	63	167	8:13	1	1.121	A BB	311246.	33.490	UG/L	1.94
11	96	184	9:03	1	1.235	A BB	135145.	35.589	UG/L	2.06
12	83	196	9:38	1	1.315	A BB	283276.	33.497	UG/L	1.94
13	62	212	10:25	1	1.423	A BB	214882.	33.344	UG/L	1.93
14	65	210	10:19	1	1.409	A BB	165284.	91.807	PRCNT	5.31
15	114	343	16:52	15	1.000	A BB	478077.	50.000	UG/L	2.89
16	72	212	10:25	15	0.618	A BB	7107.	33.187	UG/L	1.92
17	97	237	11:39	15	0.691	A BB	173468.	36.907	UG/L	2.13
18	117	244	12:00	15	0.711	A VB	135573.	37.647	UG/L	2.18
19	43	251	12:20	15	0.732	A BV	35262.	52.024	UG/L	3.01
20	83	255	12:32	15	0.743	A BB	251300.	33.170	UG/L	1.92
21	63	277	13:37	15	0.808	A BB	239343.	33.214	UG/L	1.92
22	75	302	14:51	15	0.880	A BB	179132.	31.022	UG/L	1.79
23	130	291	14:18	15	0.848	A BV	181358.	33.971	UG/L	1.97
24	129	299	14:42	15	0.872	A BB	165789.	31.213	UG/L	1.81
25	97	302	14:51	15	0.880	A VB	164202.	29.261	UG/L	1.69
26	78	299	14:42	15	0.872	A BB	609080.	34.888	UG/L	2.02
27	75	282	13:52	15	0.822	A BB	194339.	33.152	UG/L	1.92
28	63	321	15:47	15	0.936	A BB	151102.	27.935	UG/L	1.62
29	173	344	16:55	15	1.003	A BB	99841.	31.040	UG/L	1.80
30	98	402	19:46	15	1.172	A BB	458147.	98.497	PRCNT	5.70
31	117	422	20:45	31	1.000	A BB	430576.	50.000	UG/L	2.89
32	43	353	17:21	31	0.836	A BB	265946.	35.452	UG/L	2.05
33	43	378	18:35	31	0.896	A BB	158729.	36.324	UG/L	2.10
34	164	383	18:50	31	0.908	A BB	154687.	37.525	UG/L	2.17
35	83	381	18:44	31	0.903	A BB	277713.	32.121	UG/L	1.86
36	92	406	19:58	31	0.962	A BB	314340.	35.097	UG/L	2.03
37	112	424	20:51	31	1.005	A BB	390135.	33.938	UG/L	1.96
38	106	461	22:40	31	1.092	A BB	224995.	36.927	UG/L	2.14
39	104	538	26:27	31	1.275	A BB	386761.	33.464	UG/L	1.94
40	106	545	26:48	31	1.291	A BB	248442.	34.789	UG/L	2.01
41	106	563	27:41	31	1.334	A BB	258487.	33.649	UG/L	1.95
42	98	402	19:46	31	0.953	A BB	458147.	105.329	PRCNT	6.09
43	95	509	25:02	31	1.206	A BB	364673.	95.271	PRCNT	5.51

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
1	7:17	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:08	1.00	0.155	0.99	30.29	50.00	0.996	1.644	0.61
3	1:37	1.00	0.223	0.99	29.79	50.00	0.571	0.958	0.60
4	2:01	1.00	0.277	0.99	32.59	50.00	0.958	1.470	0.65
5	2:30	1.00	0.345	0.99	31.50	50.00	0.610	0.969	0.63
6	3:59	1.00	0.547	0.99	29.61	50.00	0.914	1.543	0.59
7	4:31		0.622			50.00		0.181	
8	5:27	1.00	0.750	0.99	35.43	50.00	3.148	4.443	0.71
9	6:47	1.01	0.932	1.00	34.82	50.00	1.372	1.971	0.70
10	8:10	1.01	1.122	1.00	33.49	50.00	3.019	4.507	0.67
11	9:03	1.00	1.243	0.99	35.59	50.00	1.311	1.841	0.71
12	9:38	1.00	1.324	0.99	33.50	50.00	2.747	4.1[illegible]	

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
13	10:25	1.00	1.432	0.99	33.34	50.00	2.084	3.125	0.67
14	10:19	1.00	1.419	0.99	91.81	100.00	0.802	0.873	0.92
15	16:49	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
16	10:22	1.00	0.617	1.00	33.19	50.00	0.015	0.022	0.66
	11:36	1.00	0.690	1.00	36.91	50.00	0.363	0.492	0.74
	11:57	1.00	0.711	1.00	37.65	50.00	0.284	0.377	0.75
19	12:23	1.00	0.735	1.00	52.02	50.00	0.074	0.071	1.04
20	12:29	1.00	0.743	1.00	33.17	50.00	0.526	0.792	0.66
21	13:37	1.00	0.810	1.00	33.21	50.00	0.501	0.754	0.66
22	14:51	1.00	0.883	1.00	31.02	50.00	0.375	0.604	0.62
23	14:15	1.00	0.848	1.00	33.97	50.00	0.379	0.558	0.68
24	14:42	1.00	0.874	1.00	31.21	50.00	0.347	0.556	0.62
25	14:48	1.00	0.880	1.00	29.26	50.00	0.343	0.587	0.59
26	14:42	1.00	0.874	1.00	34.89	50.00	1.274	1.826	0.70
27	13:49	1.00	0.822	1.00	33.15	50.00	0.407	0.613	0.66
28	15:47	1.00	0.939	1.00	27.94	50.00	0.316	0.566	0.56
29	16:52	1.00	1.003	1.00	31.04	50.00	0.209	0.336	0.62
30	19:46	1.00	1.175	1.00	98.50	100.00	0.479	0.486	0.98
31	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	17:18	1.00	0.834	1.00	35.45	50.00	0.618	0.871	0.71
33	18:32	1.00	0.893	1.00	36.32	50.00	0.369	0.507	0.73
34	18:47	1.00	0.905	1.00	37.53	50.00	0.359	0.479	0.75
35	18:41	1.00	0.900	1.00	32.12	50.00	0.645	1.004	0.64
36	19:55	1.00	0.960	1.00	35.10	50.00	0.730	1.040	0.70
37	20:51	1.00	1.005	1.00	33.94	50.00	0.906	1.335	0.68
38	22:37	1.00	1.090	1.00	36.93	50.00	0.523	0.708	0.74
39	26:24	1.00	1.273	1.00	33.46	50.00	0.898	1.342	0.67
40	26:45	1.00	1.289	1.00	34.79	50.00	0.577	0.829	0.70
41	27:38	1.00	1.332	1.00	33.65	50.00	0.600	0.892	0.67
	19:46	1.00	0.953	1.00	105.33	100.00	0.532	0.505	1.05
	24:56	1.00	1.201	1.00	95.27	100.00	0.423	0.444	0.95

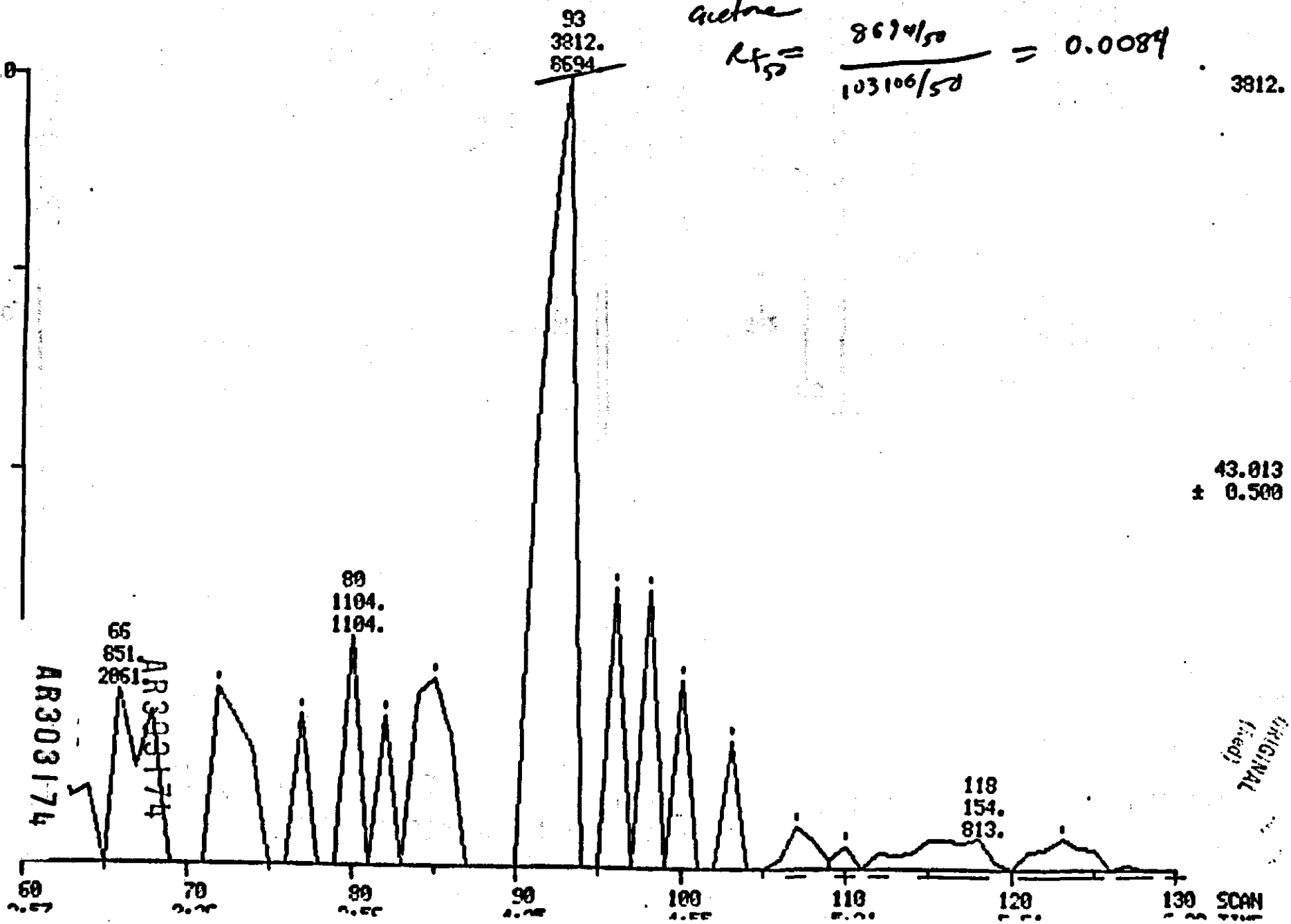
MASS CHROMATOGRAM
09/19/87 10:58:00
SAMPLE:

DATA: VOASTD1068

SCANS 60 TO 130

acetone

$RF_{50} = \frac{8694/50}{103106/50} = 0.0084$



AR303174

AR303174

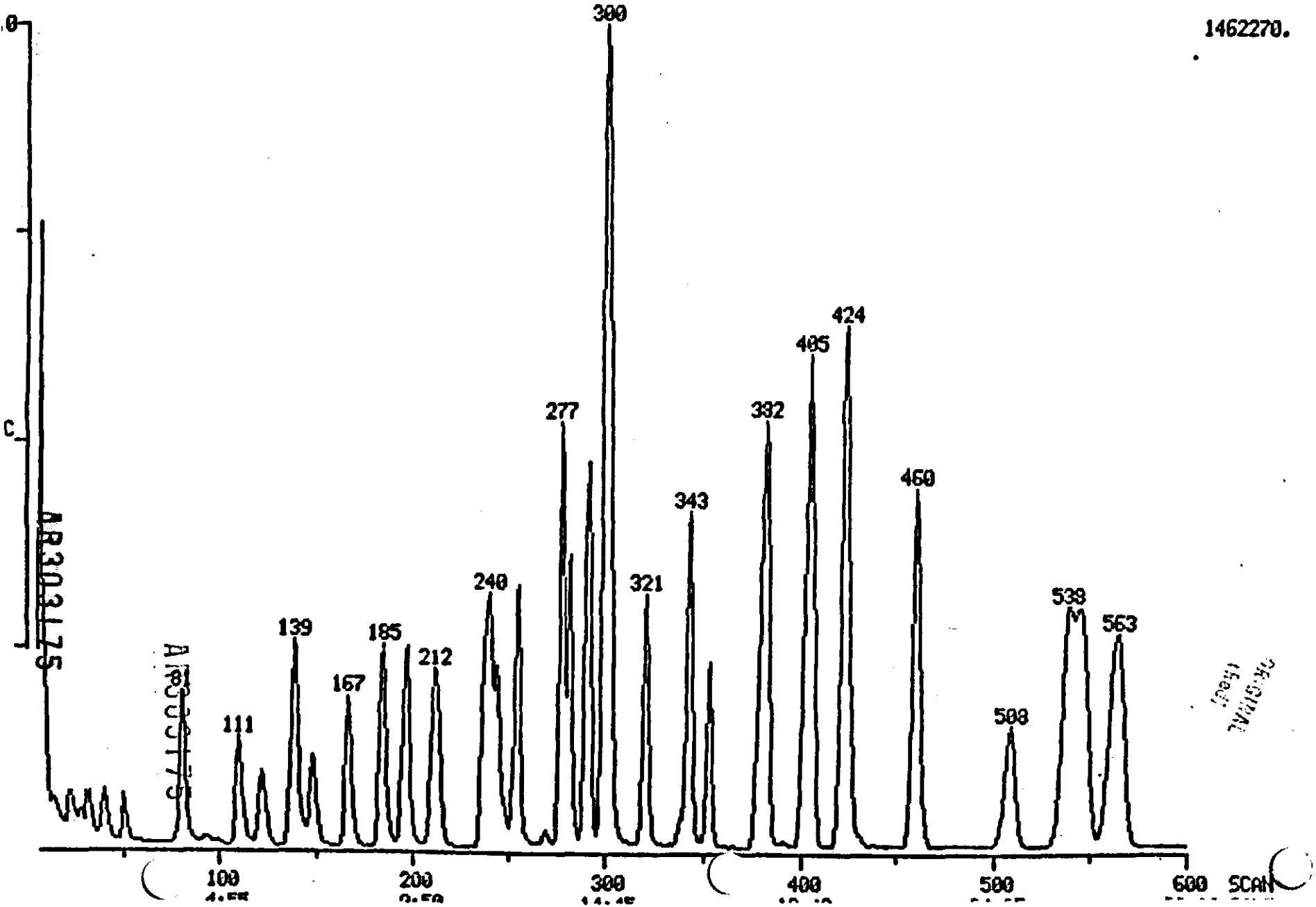
ORIGINAL (red)

RIC
03/19/87 11:49:00
SAMPLE:

A15 6, Voastd, CAR 100ppb std. 5mls
Flangan ows

DATA: VOASTD1069

SCANS 1 TO 600



AR303175

INNIGAN ORGANICS IN WATER ANALYZER
UANTITATION REPORT FILE: VOASTD1069

ATA: VOASTD1069.TI
9/19/87 11:49:00
AMPLE:
BMITTED BY: ANALYST:

ORIGINAL (Red)

MOUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
ESP. FAC. FROM LIBRARY ENTRY

ND	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
21	1,2-DICHLOROPROPANE
22	CIS-1,3-DICHLOROPROPENE
23	TRICHLOROETHYLENE
24	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

AR303176

ND	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	30	149	7:20	1	1.000	A BB	103632.	50.000 UG/L	1.72

AR303176

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	23	1:08	1	0.154	A BB	193730.	88.177	UG/L	2.23
3	94	33	1:37	1	0.221	A BB	124807.	100.405	UG/L	2.54
4	62	41	2:01	1	0.275	A BV	195121.	91.161	UG/L	2.30
5	64	51	2:30	1	0.342	A VB	127971.	97.808	UG/L	2.47
6	84	81	3:59	1	0.544	A BB	188917.	96.971	UG/L	2.45
	NOT	FOUND								
	76	111	5:27	1	0.745	A BB	649307.	98.654	UG/L	2.49
9	96	139	6:50	1	0.933	A BB	280137.	92.003	UG/L	2.33
10	63	167	8:13	1	1.121	A BB	625581.	92.092	UG/L	2.33
11	96	185	9:06	1	1.242	A BB	272017.	99.109	UG/L	2.50
12	83	196	9:38	1	1.315	A BB	557535.	94.159	UG/L	2.38
13	62	213	10:28	1	1.430	A BB	404551.	93.656	UG/L	2.37
14	65	211	10:22	1	1.416	A BV	169999.	93.523	PRCNT	2.36
15	114	342	16:49	15	1.000	A BB	484155.	50.000	UG/L	1.26
16	72	213	10:28	15	0.623	A BB	16182.	112.416	UG/L	2.84
17	97	237	11:39	15	0.693	A BB	337941.	93.820	UG/L	2.37
18	117	244	12:00	15	0.713	A VB	268985.	97.969	UG/L	2.48
19	43	248	12:12	15	0.725	A BB	65164.	91.240	UG/L	2.31
20	83	255	12:32	15	0.746	A BB	524067.	110.931	UG/L	2.80
21	63	277	13:37	15	0.810	A BV	460914.	94.647	UG/L	2.39
22	75	302	14:51	15	0.883	A BB	400495.	121.033	UG/L	3.06
23	130	291	14:18	15	0.851	A BV	356020.	94.199	UG/L	2.38
24	129	299	14:42	15	0.874	A BB	356019.	121.851	UG/L	3.08
25	97	301	14:48	15	0.880	A VB	333402.	104.338	UG/L	2.64
26	78	300	14:45	15	0.877	A BB	1181510.	83.997	UG/L	2.12
27	75	281	13:49	15	0.822	A BV	417444.	114.450	UG/L	2.89
28	63	321	15:47	15	0.939	A BB	321376.	112.626	UG/L	2.85
29	173	343	16:52	15	1.003	A BB	212779.	131.483	UG/L	3.32
30	98	402	19:46	15	1.175	A BB	471160.	20.898	PRCNT	0.53
31	117	422	20:45	31	1.000	A BB	435193.	50.000	UG/L	1.26
32	43	353	17:21	31	0.836	A BB	522781.	94.748	UG/L	2.39
33	43	377	18:32	31	0.893	A BB	309335.	97.920	UG/L	2.47
34	164	382	18:47	31	0.905	A BB	292839.	83.991	UG/L	2.12
35	83	380	18:41	31	0.900	A BB	574401.	106.279	UG/L	2.69
36	92	405	19:55	31	0.960	A BB	619429.	92.821	UG/L	2.35
37	112	424	20:51	31	1.005	A BB	772020.	94.457	UG/L	2.39
38	106	460	22:37	31	1.090	A BB	433656.	97.769	UG/L	2.47
39	104	537	26:24	31	1.273	A BB	780230.	97.277	UG/L	2.46
40	106	544	26:45	31	1.289	A BB	486876.	96.656	UG/L	2.44
41	106	562	27:38	31	1.332	A BB	513389.	98.805	UG/L	2.50
42	70	402	19:46	31	0.953	A BB	471160.	102.283	PRCNT	2.59
43	95	508	24:59	31	1.204	A BB	373799.	100.077	PRCNT	2.53

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
1	7.17	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:05	1.05	0.149	1.04	88.18	100.00	0.935	1.060	0.88
3	1:34	1.03	0.216	1.02	100.40	100.00	0.602	0.600	1.00
4	1:58	1.02	0.270	1.02	91.16	100.00	0.941	1.033	0.91
5	2:30	1.00	0.345	0.99	97.81	100.00	0.617	0.631	0.98
6	3:59	1.00	0.547	0.99	96.97	100.00	0.911	0.940	0.97
7	4:46		0.655			20.00		0.252	
8	5:24	1.01	0.743	1.00	98.65	100.00	3.133	3.176	0.99
9	6:47	1.01	0.932	1.00	92.00	100.00	1.352	1.469	0.92
10	8:07	1.01	1.115	1.01	92.09	100.00	3.018	3.277	0.92
11	8:57	1.02	1.230	1.01	99.11	100.00	1.312	1.324	0.99
12	9:32	1.01	1.311	1.00	94.16	100.00	2.690	2.85	

ORIGINAL

AR303477

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
13	10:25	1.00	1.423	1.00	93.66	100.00	1.952	2.084	0.94
14	10:14	1.01	1.405	1.01	93.52	100.00	0.820	0.877	0.94
15	16:46	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
[illegible]	10:25	1.00	0.618	1.01	112.42	100.00	0.017	0.015	1.13
[illegible]	11:33	1.01	0.689	1.01	93.82	100.00	0.349	0.372	0.94
16	11:54	1.01	0.710	1.01	97.97	100.00	0.278	0.284	0.98
19	12:20	0.99	0.732	0.99	91.24	100.00	0.067	0.074	0.91
20	12:23	1.01	0.739	1.01	110.93	100.00	0.541	0.488	1.11
21	13:31	1.01	0.806	1.00	94.65	100.00	0.476	0.503	0.95
22	14:45	1.01	0.880	1.00	121.03	100.00	0.414	0.342	1.21
23	14:13	1.01	0.848	1.00	94.20	100.00	0.368	0.390	0.94
24	14:39	1.00	0.874	1.00	121.85	100.00	0.368	0.302	1.22
25	14:45	1.00	0.880	1.00	104.34	100.00	0.344	0.330	1.04
26	14:39	1.01	0.874	1.00	84.00	100.00	1.220	1.453	0.84
27	13:46	1.00	0.821	1.00	114.45	100.00	0.431	0.377	1.14
28	15:41	1.01	0.935	1.00	112.63	100.00	0.332	0.295	1.13
29	16:49	1.00	1.003	1.00	131.48	100.00	0.220	0.167	1.31
30	19:43	1.00	1.176	1.00	20.90	100.00	0.487	2.328	0.21
31	20:42	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	17:15	1.01	0.834	1.00	94.75	100.00	0.601	0.634	0.95
33	18:32	1.00	0.895	1.00	97.92	100.00	0.355	0.363	0.98
34	18:47	1.00	0.907	1.00	83.99	100.00	0.336	0.401	0.84
35	18:38	1.00	0.900	1.00	106.28	100.00	0.660	0.621	1.06
36	19:52	1.00	0.960	1.00	92.82	100.00	0.712	0.767	0.93
37	20:48	1.00	1.005	1.00	94.46	100.00	0.887	0.939	0.94
38	22:37	1.00	1.093	1.00	97.77	100.00	0.498	0.510	0.98
39	26:24	1.00	1.276	1.00	97.28	100.00	0.896	0.922	0.97
40	26:45	1.00	1.292	1.00	96.66	100.00	0.559	0.579	0.97
41	27:38	1.00	1.335	1.00	98.81	100.00	0.590	0.597	0.99
[illegible]	19:43	1.00	0.952	1.00	102.28	100.00	0.541	0.529	1.02
[illegible]	24:56	1.00	1.204	1.00	100.08	100.00	0.429	0.429	1.00

ORIGINAL (Red)

AR303178

AR303178

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 64 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUA

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	149	149	926	825	1	1	1	0
2	23	24	857	820	2	1	1	0
3	33	33	886	843	3	1	1	0
4	41	41	891	836	4	1	1	0
5	51	51	920	892	5	1	1	0
6	82	81	944	843	6	1	1	0
8	112	111	997	764	8	1	1	0
9	139	139	936	769	9	1	1	0
10	167	167	885	850	10	1	1	0
11	185	185	859	751	11	1	1	0
12	197	197	970	923	12	1	1	0
13	213	212	833	712	13	1	1	0
14	211	211	897	551	14	1	1	0

ORIGINAL (Red)

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 32 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUB

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
15	342	342	965	585	1	1	1	0
16	211	212	943	111	2	1	1	0
17	236	237	921	816	3	1	1	0
	243	244	906	794	4	** 2	1	0
	251	249	779	266	5	1	1	0
20	254	255	961	906	6	1	1	0
21	277	277	908	865	7	1	1	0
22	302	302	869	412	8	1	1	0
23	290	291	979	909	9	1	1	0
24	299	299	878	340	10	1	1	0
25	301	301	905	411	11	1	1	0
26	299	299	931	579	12	1	1	0
27	281	282	787	685	13	1	1	0
28	321	321	783	725	14	1	1	0
29	343	343	877	412	15	1	1	0
30	402	402	911	802	16	1	1	0

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 8333 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUC

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
31	422	422	962	607	1	1	1	0
32	352	353	950	911	2	1	1	0
33	377	378	824	552	3	1	1	0
34	382	383	967	890	4	1	1	0
35	380	380	963	800	5	1	1	0
[illegible]	405	405	919	825	6	1	1	0
[illegible]	424	424	957	759	7	1	1	0
38	460	460	963	894	8	1	1	0
39	537	538	978	889	9	1	1	0
40	544	563	989	899	10	** 2	1	0

AR303179
AR303179

						**		
41	562	563	982	893	11	2	1	0
42	402	402	911	802	12	1	1	0
43	507	508	974	840	13	1	1	0

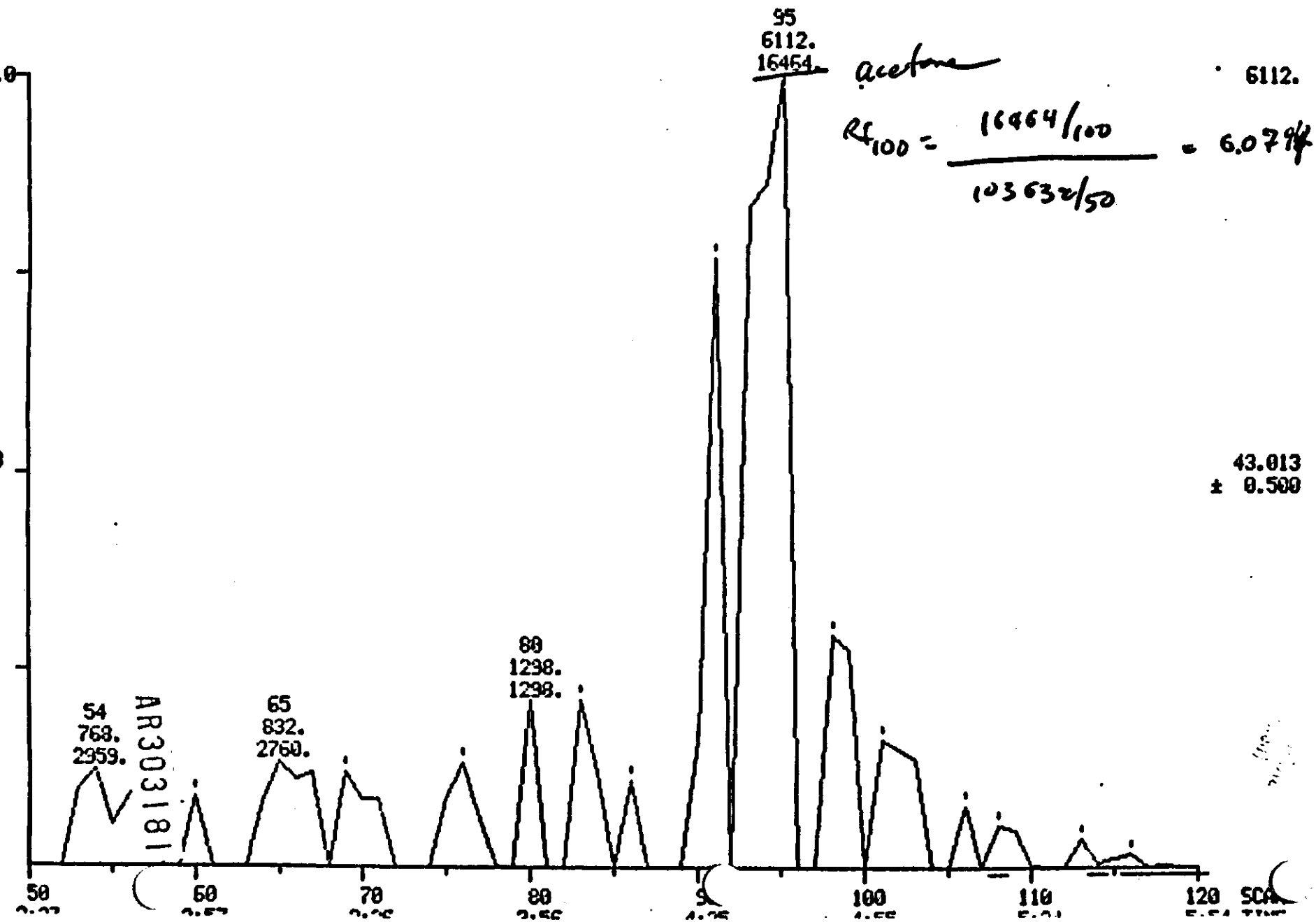
NUMBER OF COMPOUNDS IDENTIFIED 42
PROCESSING OF VOASTD1069 COMPLETED ON 9/19/87 13:15:53

ORIGINAL (pe...ed)

AR303180

MASS CHROMATOGRAM
09/19/87 11:49:00
SAMPLE:

DATA: VOASTD1069 SCANS 50 TO 120



$$RF_{100} = \frac{16464/100}{103632/50} = 6.07\%$$

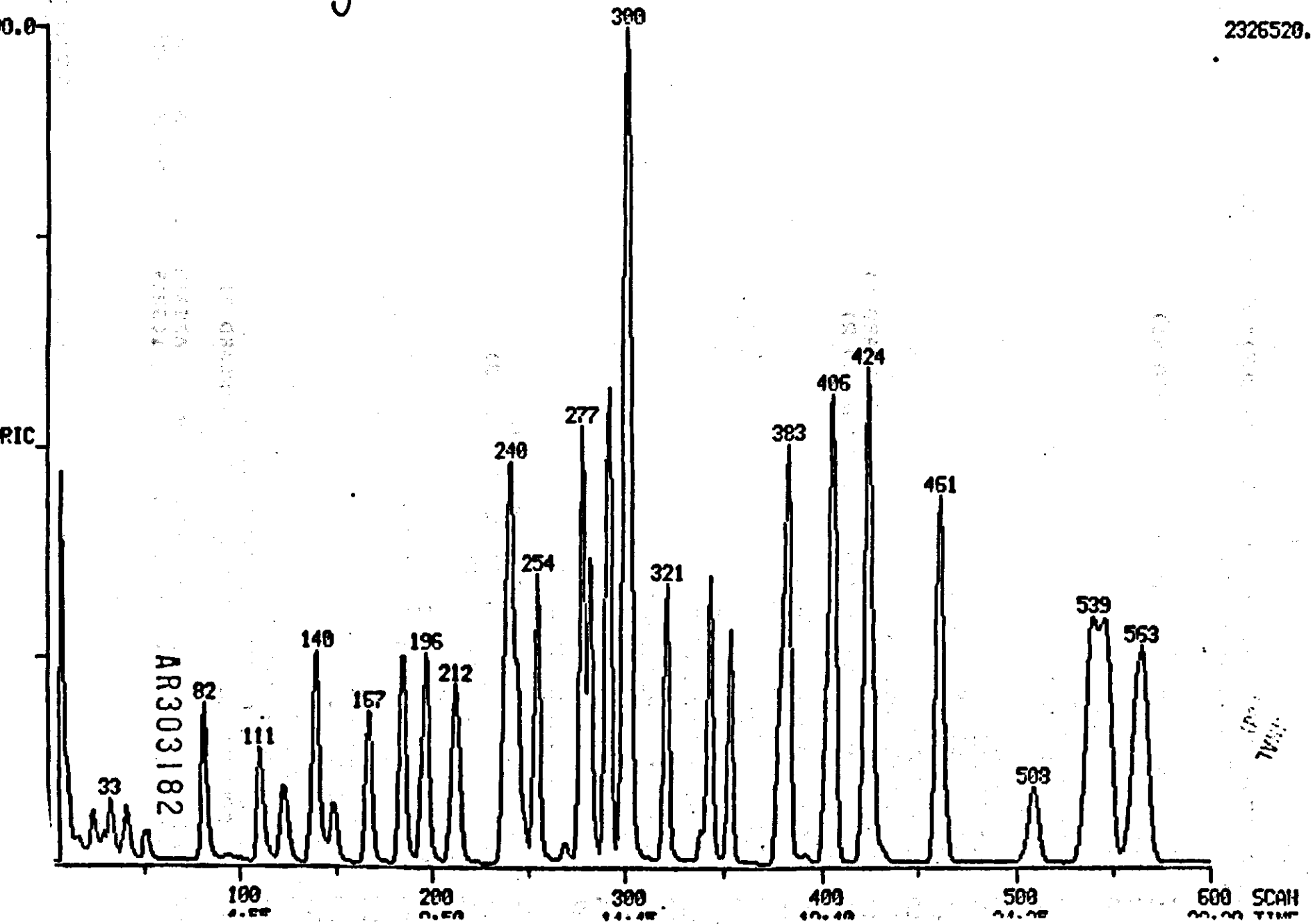
AR303181

RIC
09/19/87 12:40:00
SAMPLE: Kanayan ovsa

A/S 7, Voastd CAA 150 ppb std 5mls

DATA: VOASTD1070

SCANS 1 TO 600



AR303182

QUANTITATION REPORT FILE: VOASTD1070

DATA: VOASTD1070.TI
09/19/87 12:40:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
[illegible]	1,2-DICHLOROPROPANE
[illegible]	CIS-1,3-DICHLOROPROPENE
23	TRICHLOROETHYLENE
24	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
[illegible]	130	149	7:20	1	1.000	A BB	103319.	50.000 UG/L	1.14

AR303183

AR303183

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	24	1:11	1	0.161	A BB	282371.	83.112	UG/L	1.90
3	94	33	1:37	1	0.221	A BB	185718.	93.801	UG/L	2.14
4	62	41	2:01	1	0.275	A BV	300623.	98.937	UG/L	2.26
5	64	52	2:33	1	0.349	A VB	196890.	98.367	UG/L	2.25
6	84	82	4:02	1	0.550	A BB	280029.	87.808	UG/L	2.01
7	43	95	4:40	1	0.638	A BB	62734.	167.982	UG/L	3.84
8	76	111	5:27	1	0.745	A BB	1041720.	113.470	UG/L	2.59
9	96	140	6:53	1	0.940	A BB	440392.	108.153	UG/L	2.47
10	63	167	8:13	1	1.121	A BB	975496.	104.747	UG/L	2.40
11	96	184	9:03	1	1.235	A BB	429753.	112.937	UG/L	2.58
12	83	196	9:38	1	1.315	A BB	875390.	103.301	UG/L	2.36
13	62	213	10:28	1	1.430	A BB	635818.	98.458	UG/L	2.25
14	65	210	10:19	1	1.409	A BV	176267.	97.705	PRCNT	2.23
15	114	342	16:49	15	1.000	A BB	483140.	50.000	UG/L	1.14
16	72	213	10:28	15	0.623	A BB	29557.	136.575	UG/L	3.12
17	97	237	11:39	15	0.693	A BB	535851.	112.799	UG/L	2.58
18	117	244	12:00	15	0.713	A VB	425066.	116.798	UG/L	2.67
19	NOT	FOUND								
20	83	254	12:29	15	0.743	A BB	833444.	108.857	UG/L	2.49
21	63	277	13:37	15	0.810	A BB	773258.	106.181	UG/L	2.43
22	75	302	14:51	15	0.883	A BB	629335.	107.845	UG/L	2.47
23	130	291	14:18	15	0.851	A BV	690236.	127.935	UG/L	2.93
24	129	299	14:42	15	0.874	A BB	576565.	107.412	UG/L	2.46
25	97	301	14:48	15	0.880	A VB	526665.	92.868	UG/L	2.12
26	78	299	14:42	15	0.874	A BB	1740170.	98.632	UG/L	2.26
27	75	281	13:49	15	0.822	A BB	688366.	116.196	UG/L	2.66
28	63	321	15:47	15	0.939	A BB	569645.	104.210	UG/L	2.38
29	173	343	16:52	15	1.003	A BB	355701.	109.426	UG/L	2.50
30	98	402	19:46	15	1.175	A BB	470285.	100.047	PRCNT	2.29
31	117	422	20:45	31	1.000	A BB	429836.	50.000	UG/L	1.14
32	43	353	17:21	31	0.836	A VB	956744.	127.758	UG/L	2.92
33	43	378	18:35	31	0.896	A BB	600781.	137.723	UG/L	3.15
34	164	383	18:50	31	0.908	A BB	464042.	112.765	UG/L	2.58
35	83	381	18:44	31	0.903	A BB	674308.	78.126	UG/L	1.79
36	92	406	19:58	31	0.962	A BB	959989.	107.371	UG/L	2.46
37	112	424	20:51	31	1.005	A BB	1209290.	105.379	UG/L	2.41
38	106	461	22:40	31	1.092	A BB	689252.	113.318	UG/L	2.59
39	104	538	26:27	31	1.275	A BB	1229140.	106.533	UG/L	2.44
40	106	545	26:48	31	1.291	A BB	764823.	107.283	UG/L	2.45
41	106	563	27:41	31	1.334	A BB	809959.	105.618	UG/L	2.41
42	98	402	19:46	31	0.953	A BB	470285.	108.306	PRCNT	2.48
43	95	508	24:59	31	1.204	A BB	377178.	98.708	PRCNT	2.26

ORIGINAL (Red)

AR303184

AR303184

UNKNOWN SAMPLE QUANTITATION — GWA REVERSE SEARCH STATUS REPORT

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 63 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUA

EPORT NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	149	149	928	797	1	1	1	0
2	23	24	907	872	2	1	1	0
3	33	33	923	862	3	1	1	0
4	41	41	882	815	4	1	1	0
5	51	52	940	907	5	1	1	0
6	82	82	935	849	6	1	1	0
7	93	95	859	744	7	1	1	0
8	112	111	977	760	8	1	1	0
9	139	140	949	801	9	1	1	0
10	167	167	898	863	10	1	1	0
11	185	185	951	830	11	1	1	0
12	197	196	959	914	12	1	1	0
13	213	212	895	808	13	1	1	0
14	211	210	911	579	14	1	1	0

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 32 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUB

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
15	342	342	956	515	1	1	1	0
16	211	213	955	140	2	1	1	0
17	236	237	953	734	3	1	1	0
	243	244	899	771	4	1	1	0
	COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTITAT							
19	251	247	755	202	5	1	0	0
20	254	254	971	920	6	1	1	0
21	277	277	909	863	7	1	1	0
22	302	302	872	422	8	1	1	0
23	290	291	942	880	9	1	1	0
24	299	299	877	337	10	1	1	0
25	301	301	916	407	11	1	1	0
26	299	300	915	531	12	1	1	0
27	281	282	734	657	13	1	1	0
28	321	321	780	726	14	1	1	0
29	343	343	875	482	15	1	1	0
30	402	403	854	662	16	1	1	0

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 8230 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUC

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
31	422	422	976	620	1	1	1	0
32	352	353	950	916	2	1	1	0
33	377	378	864	730	3	1	1	0
34	382	383	968	889	4	1	1	0
	380	381	903	688	5	1	1	0
	405	406	968	887	6	1	1	0
37	424	425	957	807	7	1	1	
38	460	461	995	925	8	1	1	
39	537	538	987	901	9	1	1	0

**

AR303185

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10	2	1	0
						**		
41	562	544	979	891	11	2	1	0
42	402	403	854	662	12	1	1	0
43	507	508	976	836	13	1	1	0

[illegible]BER OF COMPOUNDS IDENTIFIED 43

PROCESSING OF VOASTD1070 COMPLETED ON 9/19/87 14:06:22

AR303186

Initial Calibration Data
Volatile HSL Compounds

Detection limits 'H' instrument

Case No: _____ Region: _____ Instrument I.D: HP5970H

Contractor: Cambridge Analytical Associates Calibration Date: 10/07/89

Contract No: 68-01-7278

(Red)

(H)

Minimum RF for SPCC is 0.300 (0.25 for Bromoform) Maximum % RSD for CCC is 30%

Laboratory ID	7H0121	7H0122	7H0123					
Compound	Conc 20	Conc 20	Conc 20	Conc Ave	S...	LOD	% RSD	CCC* SPCC**
Chloromethane	16.5	18.1	18.7	17.8	1.139	3.4		**
Bromomethane	12.9	15.9	17.6	15.5	2.380	7.1		
Vinyl Chloride	16.8	16.3	17.8	16.9	0.774	2.4		*
Chloroethane	16.2	17.5	19.5	17.7	1.662	4.9		
Methylene Chloride	19.5	20.0	19.6	19.7	0.265	0.8		
Acetone	19.2	17.9	18.1	18.4	0.700	2.1		
Carbon Disulfide	18.2	17.8	16.8	17.6	0.721	2.2		
1,1-Dichloroethene	16.9	18.8	18.8	18.2	1.097	5.3		*
1,1-Dichloroethane	18.5	20.1	20.4	19.7	1.021	5.1		**
Trans-1,2-Dichloroethene	17.9	17.9	10.4	15.4	4.330	12.9		
Chloroform	18.6	20.4	19.8	19.6	0.917	2.7		*
1,2-Dichloroethane	19.9	21.9	21.1	20.9	1.007	3.0		
2-Butanone	33.0	29.8	28.2	30.3	2.944	7.3		
1,1,1-Trichloroethane	17.9	19.3	18.2	18.5	0.737	2.2		
Carbon Tetrachloride	17.0	17.9	17.3	17.4	0.458	1.4		
Vinyl Acetate	51.2	43.0	48.0	47.4	4.13	12.4		
Bromodichloromethane	18.6	19.8	18.4	18.8	0.473	1.4		
1,2-Dichloropropane	19.2	19.7	19.1	19.3	0.322	1.8		*
Trans-1,3-Dichloropropene	18.0	19.5	18.1	18.5	0.839	2.5		
Trichloroethene	19.4	19.7	18.3	18.8	0.781	2.5		
Dibromochloromethane	17.5	18.9	17.4	17.9	0.839	2.5		
1,1,2-Trichloroethane	18.5	21.2	18.8	19.5	1.480	4.4		*
Benzene	19.2	20.9	19.4	19.8	0.979	2.8		
cis-1,3-Dichloropropene	17.7	19.4	18.0	18.2	1.114	3.3		
2-Chloroethylvinylether	15.1	15.0	18.0	16.0	1.704	5.1		
Bromoform	16.1	17.8	15.7	16.5	1.115	5.3		**
4-Methyl-2-Pentanone	22.1	23.9	21.0	22.3	1.464	4.4		
2-Hexanone	19.4	23.3	18.9	20.5	2.409	7.2		
Tetrachloroethene	17.1	19.4	18.1	18.2	1.153	3.5		
1,1,2,2-Tetrachloroethane	18.9	20.2	18.6	19.1	0.987	2.9		**
Toluene	19.1	19.7	18.9	19.3	0.416	1.2		*
Chlorobenzene	17.9	19.8	17.7	18.5	1.159	3.5		**
Ethylbenzene	19.0	20.2	18.6	19.3	0.833	2.5		*
Styrene	19.1	20.1	19.9	19.7	0.493	1.5		
Total Xylenes (o,p)	18.6	21.2	19.1	19.6	1.380	4.1		
(m)	20.1	20.0	18.8	19.6	0.723	2.2		

RF -Response Factor (subscript is the amount of ug/L)
RF -Average Response Factor
%RSD -Percent Relative Standard Deviation

CCC -Calibration Check Compounds (*)
SPCC -System Performance Check Compounds (**)

AR303187

Form VI

DATA: VOASTD1070.TI
09/19/87 12:40:00
SAMPLE:
SUBMITTED BY: ANALYST:

NT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
21	1,2-DICHLOROPROPANE
[illegible]	CIS-1,3-DICHLOROPROPENE
[illegible]	TRICHLOROETHYLENE
24	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	149	7:20	1	1.000	A BB	103319.	50.000 UG/L	0.81

AR303188

ND	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	24	1:11	1	0.161	A BB	282371.	146.196	UG/L	2.38
3	94	33	1:37	1	0.221	A BB	185718.	149.254	UG/L	2.43
4	62	41	2:01	1	0.275	A BV	300623.	154.536	UG/L	2.51
5	64	52	2:33	1	0.349	A VB	196890.	154.321	UG/L	2.51
	84	82	4:02	1	0.550	A BB	280029.	148.677	UG/L	2.42
	43	95	4:40	1	0.638	A BB	62734.	120.360	UG/L	1.96
8	76	111	5:27	1	0.745	A BB	1041720.	160.922	UG/L	2.62
9	96	140	6:53	1	0.940	A BB	440392.	157.681	UG/L	2.56
10	63	167	8:13	1	1.121	A BB	975496.	156.406	UG/L	2.54
11	96	184	9:03	1	1.235	A BB	429753.	158.466	UG/L	2.58
12	83	196	9:38	1	1.315	A BB	875390.	157.486	UG/L	2.56
13	62	213	10:28	1	1.430	A BB	635818.	157.642	UG/L	2.56
14	65	210	10:19	1	1.409	A BV	176267.	104.001	PRCNT	1.69
15	114	342	16:49	15	1.000	A BB	463140.	50.000	UG/L	0.81
16	72	213	10:28	15	0.623	A BB	29557.	183.040	UG/L	2.97
17	97	237	11:39	15	0.693	A BB	535851.	158.897	UG/L	2.58
18	117	244	12:00	15	0.713	A VB	425066.	158.358	UG/L	2.57
19	NOT	FOUND								
20	83	254	12:29	15	0.743	A BB	833444.	159.368	UG/L	2.59
21	63	277	13:37	15	0.810	A BB	773258.	168.119	UG/L	2.73
22	75	302	14:51	15	0.883	A BB	629335.	157.470	UG/L	2.56
23	130	291	14:18	15	0.851	A BV	690236.	194.283	UG/L	3.16
24	129	299	14:42	15	0.874	A BB	576565.	162.288	UG/L	2.64
25	97	301	14:48	15	0.880	A VB	526665.	158.299	UG/L	2.57
26	78	299	14:42	15	0.874	A BB	1740170.	147.593	UG/L	2.40
27	75	281	13:49	15	0.822	A BB	688366.	165.247	UG/L	2.69
28	63	321	15:47	15	0.939	A BB	569645.	177.624	UG/L	2.89
29	173	343	16:52	15	1.003	A BB	355701.	167.520	UG/L	2.72
30	98	402	19:46	15	1.175	A BB	470285.	100.024	PRCNT	1.63
31	117	422	20:45	31	1.000	A BB	429836.	50.000	UG/L	0.81
[illegible]	43	353	17:21	31	0.836	A VB	956744.	185.292	UG/L	3.01
33	43	378	18:35	31	0.896	A BB	600781.	196.638	UG/L	3.20
34	164	383	18:50	31	0.908	A BB	464042.	160.438	UG/L	2.61
35	83	381	18:44	31	0.903	A BB	674308.	118.856	UG/L	1.93
36	92	406	19:58	31	0.962	A BB	959989.	156.911	UG/L	2.55
37	112	424	20:51	31	1.005	A BB	1209290.	158.593	UG/L	2.58
38	106	461	22:40	31	1.092	A BB	689252.	160.921	UG/L	2.62
39	104	538	26:27	31	1.275	A BB	1229140.	159.500	UG/L	2.59
40	106	545	26:48	31	1.291	A BB	764823.	159.046	UG/L	2.58
41	106	563	27:41	31	1.334	A BB	809959.	159.733	UG/L	2.60
42	98	402	19:46	31	0.953	A BB	470285.	101.058	PRCNT	1.64
43	95	508	24:59	31	1.204	A BB	377178.	102.162	PRCNT	1.66

ND	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
1	7:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:08	1.04	0.154	1.04	146.20	150.00	0.911	0.935	0.97
3	1:37	1.00	0.221	1.00	149.25	150.00	0.599	0.602	1.00
4	2:01	1.00	0.275	1.00	154.54	150.00	0.970	0.941	1.03
5	2:30	1.02	0.342	1.02	154.32	150.00	0.635	0.617	1.03
6	3:59	1.01	0.544	1.01	148.68	150.00	0.903	0.911	0.99
7	4:46	0.98	0.655	0.97	120.36	150.00	0.202	0.252	0.80
8	5:27	1.00	0.745	1.00	160.92	150.00	3.361	3.133	1.07
9	6:50	1.01	0.933	1.01	157.68	150.00	1.421	1.352	1.05
10	8:13	1.00	1.121	1.00	156.41	150.00	3.147	3.018	1.04
11	9:06	0.99	1.242	0.99	158.47	150.00	1.386	1.3[illegible]	[illegible]
1[illegible]	9:38	1.00	1.315	1.00	157.49	150.00	2.824	2.690	1.05

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
13	10:28	1.00	1.430	1.00	157.64	150.00	2.051	1.952	1.05
14	10:22	1.00	1.416	1.00	104.00	1009.00	0.085	0.820	0.10
15	16:49	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
16	10:28	1.00	0.623	1.00	183.04	150.00	0.020	0.017	1.22
17	11:39	1.00	0.693	1.00	158.90	150.00	0.370	0.349	1.06
[illegible]	12:00	1.00	0.713	1.00	158.36	150.00	0.293	0.278	1.06
[illegible]	12:12		0.725			100.00		0.067	
20	12:32	1.00	0.746	1.00	159.37	150.00	0.575	0.541	1.06
21	13:37	1.00	0.810	1.00	168.12	150.00	0.533	0.476	1.12
22	14:51	1.00	0.883	1.00	157.47	150.00	0.434	0.414	1.05
23	14:18	1.00	0.851	1.00	194.28	150.00	0.476	0.368	1.30
24	14:42	1.00	0.874	1.00	162.29	150.00	0.398	0.368	1.08
25	14:48	1.00	0.880	1.00	158.30	150.00	0.363	0.344	1.06
26	14:45	1.00	0.877	1.00	147.59	150.00	1.201	1.220	0.98
27	13:49	1.00	0.822	1.00	165.25	150.00	0.475	0.431	1.10
28	15:47	1.00	0.939	1.00	177.62	150.00	0.393	0.332	1.18
29	16:52	1.00	1.003	1.00	167.52	150.00	0.245	0.220	1.12
30	19:46	1.00	1.175	1.00	100.02	150.00	0.324	0.487	0.67
31	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	17:21	1.00	0.836	1.00	185.29	150.00	0.742	0.601	1.24
33	18:32	1.00	0.893	1.00	196.64	150.00	0.466	0.355	1.31
34	18:47	1.00	0.905	1.00	160.44	150.00	0.360	0.336	1.07
35	18:41	1.00	0.900	1.00	118.86	150.00	0.523	0.660	0.79
36	19:55	1.00	0.960	1.00	156.91	150.00	0.744	0.712	1.05
37	20:51	1.00	1.005	1.00	158.59	150.00	0.938	0.887	1.06
38	22:37	1.00	1.090	1.00	160.92	150.00	0.535	0.498	1.07
39	26:24	1.00	1.273	1.00	159.50	150.00	0.953	0.896	1.06
40	26:45	1.00	1.289	1.00	159.05	150.00	0.593	0.559	1.06
41	27:38	1.00	1.332	1.00	159.73	150.00	0.628	0.590	1.06
42	19:46	1.00	0.953	1.00	101.06	100.00	0.547	0.541	1.01
[illegible]	24:59	1.00	1.204	1.00	102.16	100.00	0.439	0.429	1.02

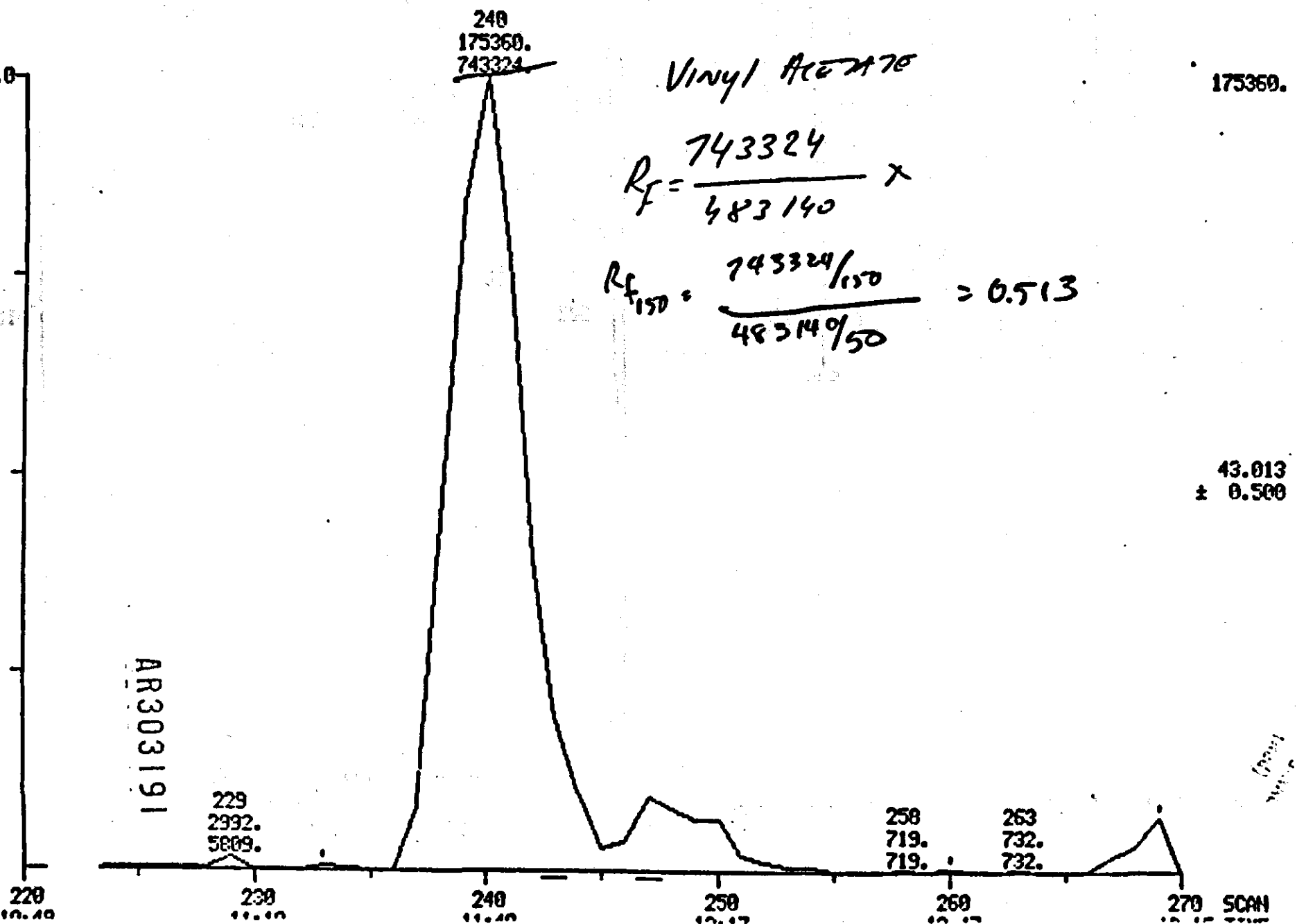
ORIGINAL (Red)

AR303190

MASS CHROMATOGRAM
09/19/87 12:40:00
SAMPLE:

DATA: VOASTD1070

SCANS 220 TO 270



Vinyl Acetate

$$R_f = \frac{743324}{483140} \times$$

$$R_{f_{150}} = \frac{743324/150}{483140/50} = 0.513$$

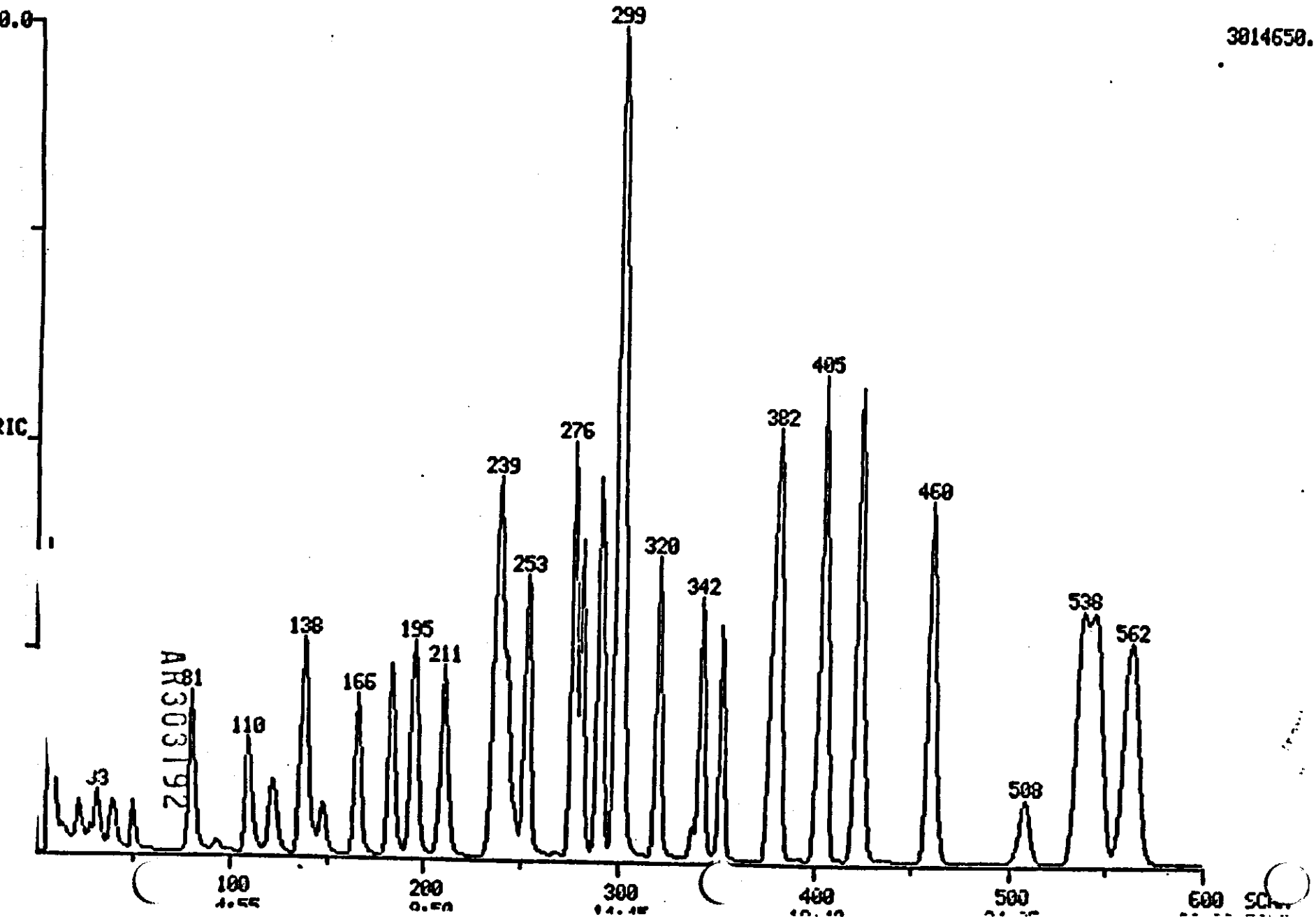
175360.

43.013
± 0.500

AR303191

RIC
09/19/87 13:30:00
SAMPLE: Als 8, Voastd CAR 200ppb Std 5mls Finnigan OA1

DATA: VOASTD1071 SCANS 1 TO 600



AR303192

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: VOASTD1071

DATA: VOASTD1071.TI
09/19/87 13:30:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
[illegible]	BROMODICHLOROMETHANE
[illegible]	1,2-DICHLOROPROPANE
[illegible]	CIS-1,3-DICHLOROPROPENE
23	TRICHLOROETHYLENE
24	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	x TOT
130	148	7:17	1	1.000	A BV	111901.	50.000 UG/L	0.88

AR303193

AR303193

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	23	1:08	1	0.155	A BB	363119.	98.683	UG/L	1.74
3	94	33	1:37	1	0.223	A BB	244522.	114.030	UG/L	2.01
4	62	40	1:58	1	0.270	A BV	387200.	117.657	UG/L	2.08
5	64	51	2:30	1	0.345	A VB	263043.	121.338	UG/L	2.14
	84	81	3:59	1	0.547	A BB	371339.	107.509	UG/L	1.90
	43	94	4:37	1	0.635	A BB	126044.	311.622	UG/L	5.50
8	76	110	5:24	1	0.743	A BB	1384160.	139.208	UG/L	2.46
9	96	138	6:47	1	0.932	A BB	574692.	130.311	UG/L	2.30
10	63	166	8:10	1	1.122	A BB	1313700.	130.244	UG/L	2.30
11	96	183	9:00	1	1.236	A BB	548389.	133.062	UG/L	2.35
12	83	195	9:35	1	1.318	A BB	1171270.	127.617	UG/L	2.25
13	62	211	10:22	1	1.426	A BB	850163.	121.553	UG/L	2.15
14	65	209	10:17	1	1.412	A BB	187485.	95.953	PRCNT	1.69
15	114	342	16:49	15	1.000	A BB	511269.	50.000	UG/L	0.88
16	72	211	10:22	15	0.617	A BB	54776.	239.175	UG/L	4.22
17	97	236	11:36	15	0.690	A BB	688464.	136.952	UG/L	2.42
18	117	243	11:57	15	0.711	A VB	557318.	144.712	UG/L	2.55
19	43	249	12:15	15	0.728	A VB	132016.	182.126	UG/L	3.21
20	83	253	12:26	15	0.740	A BB	1126790.	139.075	UG/L	2.45
21	63	276	13:34	15	0.807	A BB	1009330.	130.973	UG/L	2.31
22	75	301	14:48	15	0.880	A BB	864082.	139.926	UG/L	2.47
23	130	290	14:15	15	0.848	A BV	717649.	125.698	UG/L	2.22
24	129	298	14:39	15	0.871	A BB	779396.	137.211	UG/L	2.42
25	97	301	14:48	15	0.880	A VB	689954.	114.968	UG/L	2.03
26	78	298	14:39	15	0.871	A BB	2327540.	124.665	UG/L	2.20
27	75	281	13:49	15	0.822	A BB	917775.	146.396	UG/L	2.58
28	63	320	15:44	15	0.936	A BB	718479.	124.206	UG/L	2.19
29	173	343	16:52	15	1.003	A BB	493563.	143.483	UG/L	2.53
30	98	402	19:46	15	1.175	A BB	498539.	100.223	PRCNT	1.77
31	117	422	20:45	31	1.000	A BB	461538.	50.000	UG/L	0.88
[illegible]	43	352	17:18	31	0.834	A BB	1320610.	164.235	UG/L	2.90
33	43	377	18:32	31	0.893	A BB	948080.	202.409	UG/L	3.57
34	164	382	18:47	31	0.905	A BB	598339.	135.413	UG/L	2.39
35	83	380	18:41	31	0.900	A BB	1261350.	136.105	UG/L	2.40
36	92	405	19:55	31	0.960	A BB	1239410.	129.102	UG/L	2.28
37	112	424	20:51	31	1.005	A BB	1593600.	129.329	UG/L	2.28
38	106	460	22:37	31	1.090	A BB	885239.	135.542	UG/L	2.39
39	104	537	26:24	31	1.273	A BB	1632510.	131.774	UG/L	2.33
40	106	544	26:45	31	1.289	A BB	1022380.	133.561	UG/L	2.36
41	106	562	27:38	31	1.332	A BB	1093580.	132.808	UG/L	2.34
42	98	402	19:46	31	0.953	A BB	498539.	106.926	PRCNT	1.89
43	95	508	24:59	31	1.204	A BB	409874.	99.897	PRCNT	1.76

ORIGINAL (Red)

AR303194

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 77 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUA

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	148	148	913	779	1	1	1	0
2	23	23	892	856	2	1	1	0
3	33	33	944	883	3	1	1	0
4	41	40	884	817	4	1	1	0
5	51	51	936	908	5	1	1	0
6	81	81	942	860	6	1	1	0
7	92	93	942	824	7	1	1	0
8	111	110	999	781	8	1	1	0
9	138	138	898	726	9	1	1	0
10	166	166	922	883	10	1	1	0
11	184	183	935	882	11	1	1	0
12	196	195	941	901	12	1	1	0
13	212	211	822	747	13	1	1	0
14	210	210	705	297	14	1	1	0

ORIGINAL PAGE IS

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 39 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUB

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
15	342	342	939	396	1	1	1	0
16	211	211	953	178	2	1	1	0
17	236	236	927	746	3	1	1	0
18	243	243	892	785	4	1	1	0
19	251	248	728	260	5	1	1	0
20	254	253	971	919	6	1	1	0
21	277	276	910	868	7	1	1	0
22	302	301	866	395	8	1	1	0
23	290	290	959	899	9	1	1	0
24	299	299	819	309	10	1	1	0
25	301	301	905	472	11	1	1	0
26	299	299	877	516	12	1	1	0
27	281	281	733	665	13	1	1	0
28	321	320	792	725	14	1	1	0
29	343	343	864	588	15	1	1	0
30	402	402	908	737	16	1	1	0

HE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 6844 % OF THE LAST STANDARD RUN
OMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUC

EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
31	422	422	923	431	1	1	1	0
32	352	353	945	904	2	1	1	0
33	377	377	865	768	3	1	1	0
34	382	382	917	799	4	1	1	0
35	380	380	961	794	5	1	1	0
36	405	405	964	891	6	1	1	0
[illegible]	424	424	959	834	7	1	1	0
[illegible]	460	460	967	896	8	1	1	0
39	537	537	984	920	9	1	[illegible]	[illegible]
40	544	563	990	907	10	2 **		

AR393195

						**		
41	562	563	985	902	11	2	1	0
42	402	402	908	737	12	1	1	0
43	507	508	975	818	13	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 43

PROCESSING OF VOASTD1071 COMPLETED ON 9/19/87 14:55:45

ORIGINAL (Red)

AR303196

QUANTITATION REPORT FILE: VOASTD1071

DATA: VOASTD1071.TI
09/19/87 13:30:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

ORIGINAL (Red)

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD #1)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	ACETONE
8	CARBON DISULFIDE
9	1,1-DICHLOROETHYLENE
10	1,1-DICHLOROETHANE
11	TRANS-1,2-DICHLOROETHYLENE
12	CHLOROFORM
13	1,2-DICHLOROETHANE
14	D4-1,2-DICHLOROETHANE (SURROGATE STANDARD 1)
15	1,4-DIFLUOROBENZENE (INTERNAL STANDARD 2)
16	2-BUTANONE (MEK)
17	1,1,1-TRICHLOROETHANE
18	CARBON TETRACHLORIDE
19	VINYL ACETATE
20	BROMODICHLOROMETHANE
21	1,2-DICHLOROPROPANE
22	CIS-1,3-DICHLOROPROPENE
23	TRICHLOROETHYLENE
24	DIBROMOCHLOROMETHANE
25	1,1,2-TRICHLOROETHANE
26	BENZENE
27	TRANS-1,3-DICHLOROPROPENE
28	2-CHLOROETHYL VINYL ETHER
29	BROMOFORM
30	D8-TOLUENE (SURROGATE STANDARD 2)
31	D5-CHLOROBENZENE (INTERNAL STANDARD 3)
32	4-METHYL-2-PENTANONE (MIBK)
33	2-HEXANONE (NPK)
34	TETRACHLOROETHYLENE
35	1,1,2,2-TETRACHLOROETHANE
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	STYRENE
40	META-XYLENE
41	ORTHO,PARA-XYLENES
42	D8-TOLUENE (SURROGATE STANDARD 2)
43	4-BROMOFLUOROBENZENE (SURROGATE STANDARD 3)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	XTOT
1	130	148	7:17	1	1.000	A BV	111901.	50.000 UG/L	0.59

AR303197

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
2	50	23	1:08	1	0.155	A BB	363119.	178.101	UG/L	2.12
3	94	33	1:37	1	0.223	A BB	244522.	182.348	UG/L	2.17
4	62	40	1:58	1	0.270	A BV	387200.	178.382	UG/L	2.12
5	64	51	2:30	1	0.345	A VB	263043.	185.029	UG/L	2.20
6	84	81	3:59	1	0.547	A BB	371339.	183.656	UG/L	2.18
	43	94	4:37	1	0.635	A BB	126044.	278.264	UG/L	3.31
8	76	110	5:24	1	0.743	A BB	1384160.	184.023	UG/L	2.19
9	96	138	6:47	1	0.932	A BB	574692.	180.732	UG/L	2.15
10	63	166	8:10	1	1.122	A BB	1313700.	186.513	UG/L	2.22
11	96	183	9:00	1	1.236	A BB	548389.	176.729	UG/L	2.10
12	83	195	9:35	1	1.318	A BB	1171270.	185.308	UG/L	2.20
13	62	211	10:22	1	1.426	A BB	850163.	185.186	UG/L	2.20
14	65	209	10:17	1	1.412	A BB	187485.	990.907	PRCNT	11.79
15	114	342	16:49	15	1.000	A BB	511269.	50.000	UG/L	0.59
16	72	211	10:22	15	0.617	A BB	54776.	262.686	UG/L	3.12
17	97	236	11:36	15	0.690	A BB	688464.	182.118	UG/L	2.17
18	117	243	11:57	15	0.711	A VB	557318.	185.849	UG/L	2.21
19	43	249	12:15	15	0.728	A VB	132016.	191.847	UG/L	2.28
20	83	253	12:26	15	0.740	A BB	1126790.	191.638	UG/L	2.28
21	63	276	13:34	15	0.807	A BB	1009330.	185.023	UG/L	2.20
22	75	301	14:48	15	0.880	A BB	864082.	194.620	UG/L	2.31
23	130	290	14:15	15	0.848	A BV	717649.	147.377	UG/L	1.75
24	129	298	14:39	15	0.871	A BB	779396.	191.613	UG/L	2.28
25	97	301	14:48	15	0.880	A VB	689954.	185.695	UG/L	2.21
26	78	298	14:39	15	0.871	A BB	2327540.	189.592	UG/L	2.26
27	75	281	13:49	15	0.822	A BB	917775.	188.987	UG/L	2.25
28	63	320	15:44	15	0.936	A BB	718479.	178.782	UG/L	2.13
29	173	343	16:52	15	1.003	A BB	493563.	196.686	UG/L	2.34
30	98	402	19:46	15	1.175	A BB	498539.	150.263	PRCNT	1.79
31	117	422	20:45	31	1.000	A BB	461538.	50.000	UG/L	0.59
32	43	352	17:18	31	0.834	A BB	1320610.	192.827	UG/L	2.29
33	43	377	18:32	31	0.893	A BB	948080.	220.453	UG/L	2.62
34	164	382	18:47	31	0.905	A BB	598339.	180.126	UG/L	2.14
35	83	380	18:41	31	0.900	A BB	1261350.	261.317	UG/L	3.11
36	92	405	19:55	31	0.960	A BB	1239410.	180.359	UG/L	2.15
37	112	424	20:51	31	1.005	A BB	1593600.	184.092	UG/L	2.19
38	106	460	22:37	31	1.090	A BB	885239.	179.419	UG/L	2.13
39	104	537	26:24	31	1.273	A BB	1632510.	185.540	UG/L	2.21
40	106	544	26:45	31	1.289	A BB	1022380.	186.742	UG/L	2.22
41	106	562	27:38	31	1.332	A BB	1093580.	188.616	UG/L	2.24
42	98	402	19:46	31	0.953	A BB	498539.	98.726	PRCNT	1.17
43	95	508	24:59	31	1.204	A BB	409874.	101.204	PRCNT	1.20

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
1	7:20	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:11	0.96	0.161	0.96	178.10	200.00	0.811	0.911	0.89
3	1:37	1.00	0.221	1.01	182.35	200.00	0.546	0.599	0.91
4	2:01	0.98	0.275	0.98	178.38	200.00	0.865	0.970	0.89
5	2:33	0.98	0.349	0.99	185.03	200.00	0.588	0.635	0.93
6	4:02	0.99	0.550	0.99	183.66	200.00	0.830	0.903	0.92
7	4:40	0.99	0.638	1.00	278.26	200.00	0.282	0.202	1.39
8	5:27	0.99	0.745	1.00	184.02	200.00	3.092	3.361	0.92
9	6:53	0.99	0.940	0.99	180.73	200.00	1.284	1.421	0.90
10	8:13	0.99	1.121	1.00	186.51	200.00	2.935	3.147	0.93
11	9:03	0.99	1.235	1.00	176.73	200.00	1.225	1.386	0.88
12	9:38	0.99	1.315	1.00	185.31	200.00	2.617	2.824	0.93

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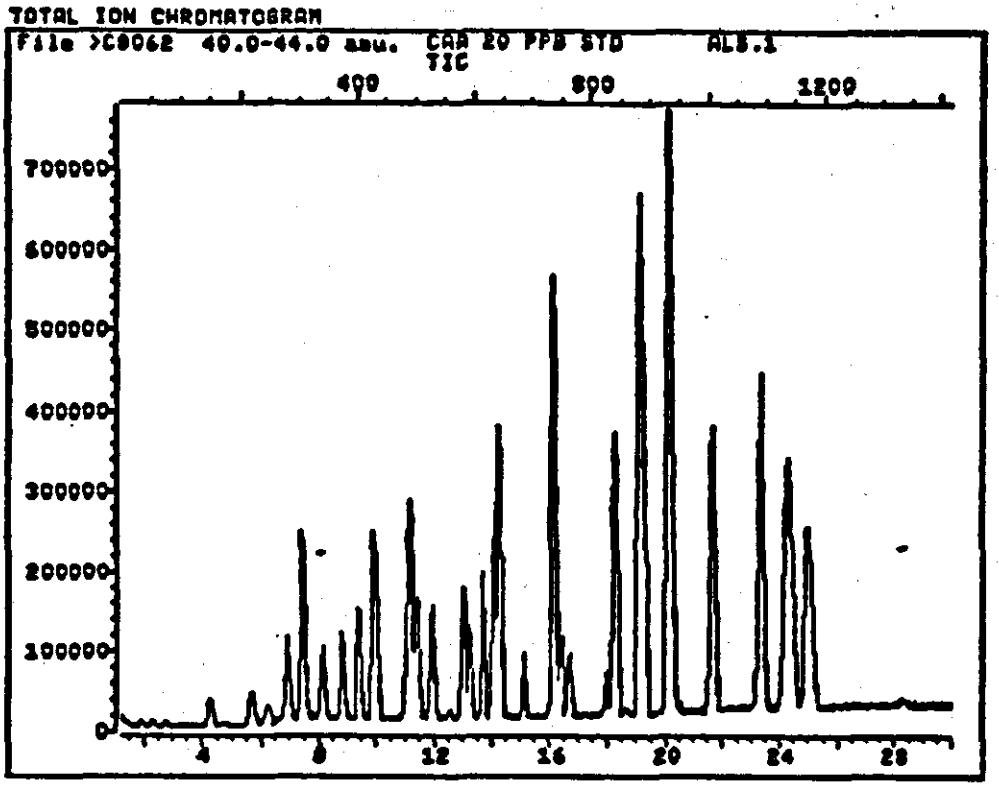
ND	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
13	10:28	0.99	1.430	1.00	185.19	200.00	1.899	2.051	0.93
14	10:19	1.00	1.409	1.00	990.91	100.00	0.838	0.085	9.91
15	16:49	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
16	10:28	0.99	0.623	0.99	262.69	200.00	0.027	0.020	1.31
17	11:39	1.00	0.693	1.00	182.12	200.00	0.337	0.370	0.91
[illegible]	12:00	1.00	0.713	1.00	185.85	200.00	0.273	0.293	0.93
19	12:12	1.00	0.725	1.00	191.85	200.00	0.065	0.067	0.96
20	12:29	1.00	0.743	1.00	191.64	200.00	0.551	0.575	0.96
21	13:37	1.00	0.810	1.00	185.02	200.00	0.494	0.533	0.93
22	14:51	1.00	0.883	1.00	194.62	200.00	0.423	0.434	0.97
23	14:18	1.00	0.851	1.00	147.38	200.00	0.351	0.476	0.74
24	14:42	1.00	0.874	1.00	191.61	200.00	0.381	0.398	0.96
25	14:48	1.00	0.880	1.00	185.69	200.00	0.337	0.363	0.93
26	14:42	1.00	0.874	1.00	189.59	200.00	1.138	1.201	0.95
27	13:49	1.00	0.822	1.00	188.99	200.00	0.449	0.475	0.94
28	15:47	1.00	0.939	1.00	178.78	200.00	0.351	0.393	0.89
29	16:52	1.00	1.003	1.00	196.69	200.00	0.241	0.245	0.98
30	19:46	1.00	1.175	1.00	150.26	100.00	0.488	0.324	1.50
31	20:45	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
32	17:21	1.00	0.836	1.00	192.83	200.00	0.715	0.742	0.96
33	18:35	1.00	0.896	1.00	220.45	200.00	0.514	0.466	1.10
34	18:50	1.00	0.908	1.00	180.13	200.00	0.324	0.360	0.90
35	18:44	1.00	0.903	1.00	261.32	200.00	0.683	0.523	1.31
36	19:58	1.00	0.962	1.00	180.36	200.00	0.671	0.744	0.90
37	20:51	1.00	1.005	1.00	184.09	200.00	0.863	0.938	0.92
38	22:40	1.00	1.092	1.00	179.42	200.00	0.480	0.535	0.90
39	26:27	1.00	1.275	1.00	185.54	200.00	0.884	0.953	0.93
40	26:48	1.00	1.291	1.00	186.74	200.00	0.551	0.593	0.93
41	27:41	1.00	1.334	1.00	188.62	200.00	0.592	0.628	0.94
42	19:46	1.00	0.953	1.00	98.73	100.00	0.540	0.547	0.99
4[illegible]	24:59	1.00	1.204	1.00	101.20	100.00	0.444	0.439	1.01

ORIGINAL (Red)

TOTAL ION CHROMATOGRAM



Data File: >C8062::UP
Name: CAA 20 PPB STD
Misc: ALS.1

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 09:22

Operator ID:
Quant Time: 871001 09:27
Injected at: 870930 14:32

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 871001 09:27
Output File: ^C8062::P1 Injected at: 870930 14:32
Data File: >C8062::UP Dilution Factor: 1.00
Name: CAA 20 PPB STD
Misc: AL5.1

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 09:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	7.42	306	470023	50.00	UG/L	100
2)	CHLOROMETHANE	1.41	10	40287	15.36	UG/L	100
2)	CHLOROMETHANE	1.62	20	1416	.54	UG/L	100
3)	BROMOMETHANE	1.80	34	34634	11.75	UG/L	98
4)	VINYL CHLORIDE	2.26	52	54055	12.56	UG/L	100
5)	CHLOROETHANE	2.24	51	4132	1.42	UG/L	100
5)	CHLOROETHANE	2.30	54	8295	2.85	UG/L	100
5)	CHLOROETHANE	2.75	76	34328	11.81	UG/L	100
6)	METHYLENE CHLORIDE	4.23	149	78231	12.26	UG/L	100
7)	ACETONE	6.78	275	97278	18.94	UG/L	100
8)	CARBON DISULFIDE	5.65	219	373075	17.31	UG/L	98
9)	1,1-DICHLOROETHENE	5.91	281	200468	10.91	UG/L	93
10)	1,1-DICHLOROETHANE	8.11	340	425957	10.95	UG/L	98
11)	TRANS-1,2,DICHOROETHENE	8.82	375	189258	10.87	UG/L	74
12)	CHLOROFORM	9.36	402	497047	11.25	UG/L	97
13)	1,2-DICHLOROETHANE	9.98	432	334081	11.31	UG/L	89
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.90	428	620325	80.96	UG/L	90
15)	*1,4-DIFLUOROBENZENE IS-2	16.14	735	2114467	50.00	UG/L	100
17)	1,1,1-TRICHLOROETHANE	11.05	485	404456	11.98	UG/L	77
18)	CARBON TETRACHLORIDE	11.36	500	441237	11.76	UG/L	84
19)	VINYL ACETATE	11.15	490	300541	19.65	UG/L	100
19)	VINYL ACETATE	11.44	504	16037	1.05	UG/L	100
20)	BROMODICHLOROMETHANE	11.89	526	423657	12.28	UG/L	87
21)	1,2-DICHLORO PROPANE	12.94	578	258576	12.11	UG/L	88
22)	CIS-1,3-DICHLOROPROPENE	12.98	580	7040	.27	UG/L	34
22)	CIS-1,3-DICHLOROPROPENE	13.21	591	305007	11.70	UG/L	85
23)	TRICHLOROETHENE	13.68	614	300289	11.72	UG/L	86
24)	DIBROMOCHLOROMETHANE	14.20	640	389899	11.74	UG/L	89
25)	1,1,2-TRICHLOROETHANE	14.27	643	197427	12.41	UG/L	95
26)	BENZENE	14.04	632	839133	12.08	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	14.27	643	286944	11.52	UG/L	92
28)	2-CHLOROETHYLVINYLETHER	15.18	684	138128	11.78	UG/L	84
29)	BROMOFORM	15.40	748	228922	11.77	UG/L	[illegible]
30)	*D5-CHLOROBENZENE IS-3	20.10	830	2055432	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	16.70	763	300850	13.60	UG/L	90
32)	2-HEXANONE	17.95	825	232121	13.18	UG	--
33)	TETRACHLOROETHYLENE	18.27	840	238264	13.49	UG	
34)	1,1,2,2-TETRACHLOROETHANE	18.25	839	389603	14.38	UG	--
35)	D-8 TOLUENE (SS-2)	19.11	881	2006585	107.33	UG/L	
36)	TOLUENE	19.27	889	678642	13.83	UG/L	--
37)	CHLOROBENZENE	20.21	935	890986	13.44	UG/L	87

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41)	M-XYLENE	24.42	1142	560327	12.97 UG/L	98
42)	O-XYLENE	24.42	1142	560327	11.91 UG/L	90

	Compound	R.T.	Scan#	Area	Conc	Units	Q
42)	O-XYLENE	24.99	1170	503419	12.83	UG/L	94

* Compound is ISTD

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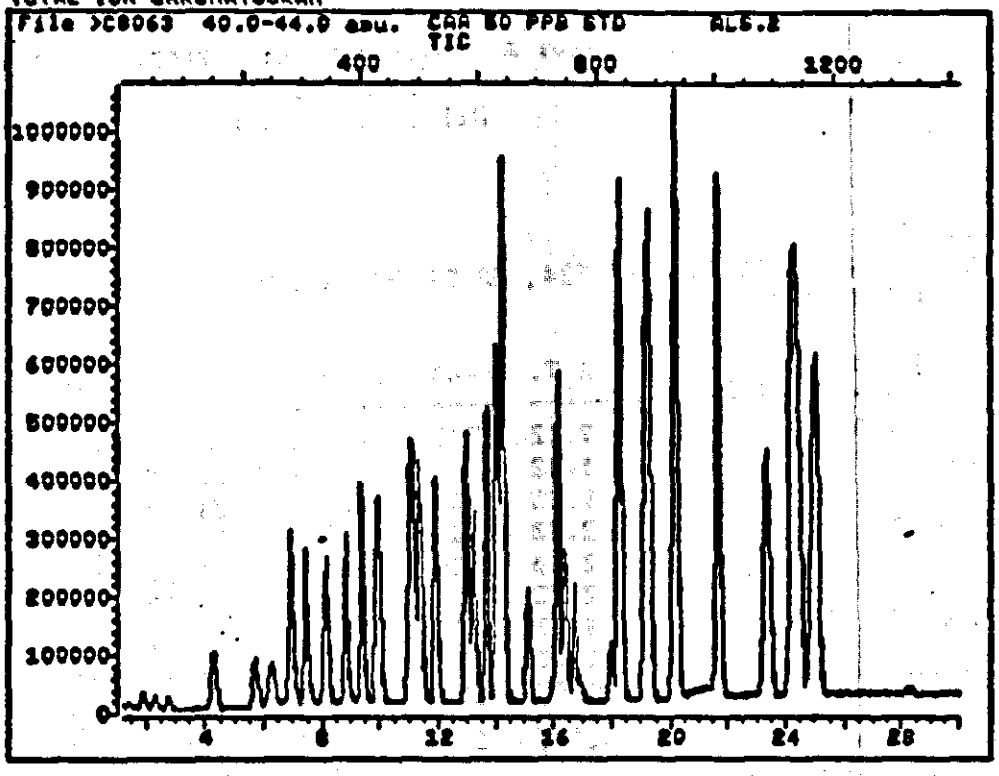
TOTAL ION CHROMATOGRAM



Data File: >C8063::UP
Name: CAA 50 PPB STD
Misc: ALS.2

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 09:22

Operator ID:
Quant.Time: 871001 09:28
Injected at: 870930 15:15

AR303203

QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 871001 09:29
Output File: ^CB063::P1 Injected at: 870930 15:15
Data File: >CB063::UP Dilution Factor: 1.00
Name: CAA 50 PPB STD
Misc: ALS.2

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 09:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE IS-1	7.42	305	507844	50.00	UG/L	100
2)	CHLOROMETHANE	1.42	10	93653	33.06	UG/L	100
3)	BROMOMETHANE	1.90	34	100880	31.67	UG/L	98
4)	VINYL CHLORIDE	2.30	54	153620	33.04	UG/L	100
5)	CHLOROETHANE	2.30	54	44957	14.31	UG/L	100
5)	CHLOROETHANE	2.75	76	99461	31.67	UG/L	100
6)	METHYLENE CHLORIDE	4.27	151	205632	29.83	UG/L	100
7)	ACETONE	6.83	277	262438	27.31	UG/L	100
8)	CARBON DISULFIDE	5.67	220	719172	30.88	UG/L	97
9)	1,1-DICHLOROETHENE	6.93	282	559605	28.18	UG/L	89
10)	1,1-DICHLOROETHANE	8.11	340	1205181	28.67	UG/L	97
11)	TRANS-1,2,DICHOROETHENE	8.80	374	552247	27.88	UG/L	79
12)	CHLOROFORM	9.37	402	1353719	28.36	UG/L	98
13)	1,2-DICHLOROETHANE	9.96	431	905301	28.36	UG/L	93
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.88	427	692587	54.00	UG/L	87
15)	*1,4-DIFLUOROBENZENE IS-2	16.13	734	2174181	50.00	UG/L	100
16)	2-BUTANONE (MEK)	9.88	427	24380	17.67	UG/L	98
17)	1,1,1-TRICHLOROETHANE	11.04	484	1078010	31.04	UG/L	78
18)	CARBON TETRACHLORIDE	11.04	484	155782	4.04	UG/L	95
18)	CARBON TETRACHLORIDE	11.37	500	1188523	30.79	UG/L	95
19)	VINYL ACETATE	11.14	489	341342	21.70	UG/L	100
19)	VINYL ACETATE	11.43	503	103535	6.58	UG/L	100
20)	BROMODICHLOROMETHANE	11.90	526	1145869	32.31	UG/L	95
21)	1,2-DICHLORO PROPANE	12.95	578	717062	32.67	UG/L	87
22)	CIS-1,3-DICHLOROPROPENE	13.20	590	835814	31.09	UG/L	97
23)	TRICHLOROETHENE	13.67	613	816273	30.97	UG/L	84
23)	TRICHLOROETHENE	14.26	642	1799	.07	UG/L	77
24)	DIBROMOCHLOROMETHANE	14.20	639	1038506	30.42	UG/L	97
25)	1,1,2-TRICHLOROETHANE	14.26	642	520957	31.85	UG/L	94
26)	BENZENE	14.01	630	2269302	31.78	UG/L	100
27)	TRANS-1,3-DICHLOROPROPENE	14.26	642	770527	30.10	UG/L	97
28)	2-CHLOROETHYLVINYLETHER	15.09	683	335863	29.38	UG/L	85
29)	BROMOFORM	15.40	747	580862	29.03	UG/L	88
30)	*D5-CHLOROBENZENE IS-3	20.11	929	2084567	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	16.11	733	5180	.23	UG/L	30
31)	4-METHYL-2-PENTANONE	16.15	735	3845	.17	UG	
31)	4-METHYL-2-PENTANONE	16.71	762	780716	34.81	UG	
32)	2-HEXANONE	17.97	824	408387	22.73	UG/L	96
33)	TETRACHLOROETHYLENE	18.27	839	596748	33.32	UG/L	97
34)	1,1,2,2-TETRACHLOROETHANE	18.25	838	964429	34.23	UG/L	98
35)	D-8 TOLUENE (SS-2)	19.11	880	2060614	108.68	UG/L	
36)	TOLUENE	[illegible]	[illegible]	[illegible]	[illegible]		

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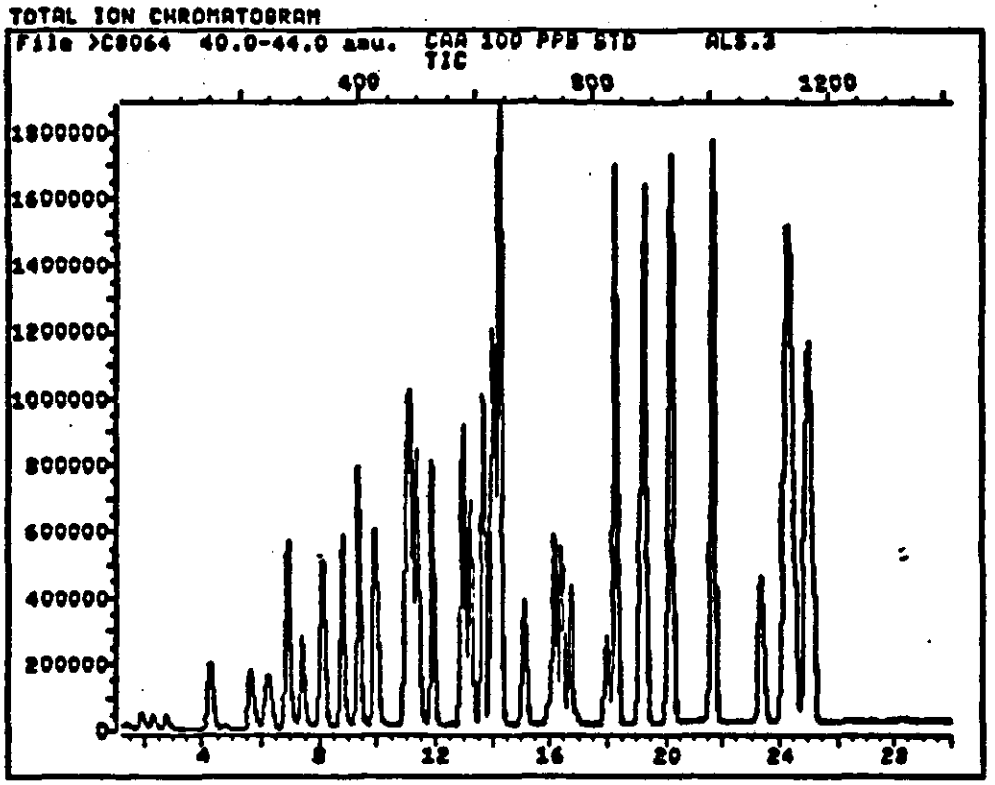
39)	BROMOFLUOROBENZENE (SS-3)	23.33	1087	1157451	95.77	UG/L	87
40)	STYRENE	24.21	1130	2628745	32.56	UG/L	93

	Compound	R.T.	Scan#	Area	Conc	Units	Q
41)	M-XYLENE	24.39	1139	1408055	32.15	UG/L	99
42)	O-XYLENE	24.39	1139	1408055	28.51	UG/L	92
42)	O-XYLENE	24.99	1168	1542323	32.33	UG/L	98

* Compound is ISTD

AR303205

TOTAL ION CHROMATOGRAM



Data File: >C8064::UP
Name: CAA 100 PPB STD
Misc: ALS.3

Id File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 09:22

Operator ID:
Quant Time: 871001 09:32
Injected at: 870930 15:00

AR303206

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QUANT REPORT

Operator ID: Quant Rev: 4 Quant Time: 871001 09:32
Output File: *C8054::P1 Injected at: 870930 16:00
Data File: >C8054::UP Dilution Factor: 1.00
Name: CAA 100 PPB STD
Misc: ALS.3

ID File: CV624::P1
Title: VOLATILE ORGANIC ANALYSIS EPA 624, HP 5993-QS (INSTR. C)
Last Calibration: 871001 09:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	•BROMOCHLOROMETHANE IS-1	7.40	305	525492	50.00	UG/L	100
2)	CHLOROMETHANE	1.42	10	127551	43.51	UG/L	100
2)	CHLOROMETHANE	1.68	23	2021	.69	UG/L	100
3)	BROMOMETHANE	1.90	34	162181	49.20	UG/L	97
4)	VINYL CHLORIDE	2.28	53	270982	56.33	UG/L	100
5)	CHLOROETHANE	2.30	54	84543	26.02	UG/L	100
5)	CHLOROETHANE	2.77	77	200981	61.85	UG/L	100
6)	METHYLENE CHLORIDE	4.27	151	403978	56.64	UG/L	100
7)	ACETONE	5.81	276	456099	45.87	UG/L	100
8)	CARBON DISULFIDE	5.64	218	1453378	50.32	UG/L	98
9)	1,1-DICHLOROETHENE	6.90	280	1033044	50.27	UG/L	95
10)	1,1-DICHLOROETHANE	8.11	340	2410490	55.41	UG/L	99
11)	TRANS-1,2,DICHOROETHENE	8.81	374	1104154	53.88	UG/L	80
12)	CHLOROFORM	9.36	401	2732999	55.32	UG/L	98
13)	1,2-DICHLOROETHANE	9.97	431	1838881	55.68	UG/L	96
14)	D4-1,2-DICHLOROETHANE (SS-1)	9.88	427	752921	98.75	UG/L	85
15)	•1,4-DIFLUOROBENZENE IS-2	16.15	734	2201075	50.00	UG/L	100
16)	2-BUTANONE (MEK)	9.88	427	74681	53.46	UG/L	95
17)	1,1,1-TRICHLOROETHANE	11.05	484	2138112	60.82	UG/L	78
18)	CARBON TETRACHLORIDE	11.05	484	301898	7.73	UG/L	94
18)	CARBON TETRACHLORIDE	11.37	500	2397270	61.35	UG/L	94
19)	VINYL ACETATE	10.46	455	1690	.11	UG/L	100
19)	VINYL ACETATE	10.50	457	3498	.22	UG/L	100
19)	VINYL ACETATE	11.15	489	997597	62.65	UG/L	100
19)	VINYL ACETATE	11.48	505	195983	12.31	UG/L	100
19)	VINYL ACETATE	11.72	517	3094	.19	UG/L	100
20)	BROMODICHLOROMETHANE	11.89	525	2305109	64.23	UG/L	95
21)	1,2-DICHLORO PROPANE	12.96	578	1440389	64.82	UG/L	91
22)	CIS-1,3-DICHLOROPROPENE	13.21	590	1700010	62.46	UG/L	96
23)	TRICHLOROETHENE	13.66	612	1644484	61.63	UG/L	95
24)	DIBROMOCHLOROMETHANE	14.22	639	2102583	60.03	UG/L	97
25)	1,1,2-TRICHLOROETHANE	14.28	642	1009739	60.89	UG/L	96
26)	BENZENE	14.03	630	4459597	61.70	UG/L	[illegible]
27)	TRANS-1,3-DICHLOROPROPENE	14.26	641	1531475	59.09	UG/L	[illegible]
28)	2-CHLOROETHYLVINYLETHER	15.11	683	639868	55.29	UG/L	82
29)	BROMOFORM	16.40	746	1213340	59.91	UG/L	85
30)	•D5-CHLOROBENZENE IS-3	20.11	928	2020767	50.00	UG/L	100
31)	4-METHYL-2-PENTANONE	16.72	762	1781263	81.93	UG/L	88
32)	2-HEXANONE	17.88	824	1073244	61.63	UG/L	98
33)	TETRACHLOROETHYLENE	18.29	839	1183051	68.15	UG/L	[illegible]
34)	1,1,2,2-TETRACHLOROETHANE	18.27	838	1818423	66.58	UG/L	[illegible]

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38)	ETHYL BENZENE	21.68	1005	2295141	67.57	UG/L	98
• 39)	BROMOFLUOROBENZENE (SS-3)	23.35	1087	1184560	101.11	UG/L	89

ORIGINAL (Red)

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	STYRENE	24.23	1130	5179514	66.17	UG/L	94
41)	M-XYLENE	24.42	1139	2771080	65.27	UG/L	99
42)	O-XYLENE	24.42	1139	2771080	59.91	UG/L	93
42)	P-XYLENE	25.04	1169	3025026	65.40	UG/L	96

• Compound is ISTD

AR303208