Carmen Johnson
95-02 6/6/12

Watauga County Fourth Assessment Monitoring Event

Watauga County Landfill
NC DEHNR Permit No. 95-02

Prepared for:

Watauga County, North Carolina

Volume II of II Book 2 of 3

DAA JN: 6520-20
September 25, 1995

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702318

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR002318B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 7.1

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW10

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702318

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR002318B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 7.1

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702322

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002322B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702322

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002322B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

1E

EPA SAMPLE NO.

MW11

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702322

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002322B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.90	1800	J
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW13

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702324

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002324B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW13

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702324

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002324B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW13

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702324

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002324B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.87	1500	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW17

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702327

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002327B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	4	J
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	1	J
75-34-3	1,1-Dichloroethane	130	
540-59-0	1,2-Dichloroethene (total)	70	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	19	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	41	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW17

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702327

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002327B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	3	J

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW17

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702327

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002327B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.87	1900	J
2.					
3.					
4.					
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW3

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702300

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002300B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	6	J
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	3	J
75-34-3	1,1-Dichloroethane	130	
540-59-0	1,2-Dichloroethene (total)	44	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	21	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	12	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	33	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702300

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002300B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW3

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702300

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002300B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.87	1700	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW5

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002303B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW5

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002303B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

MW5

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002303B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.86	1500	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
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28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002307B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	25	U
74-83-9	Bromomethane	25	U
75-01-4	Vinyl Chloride	10	J
75-00-3	Chloroethane	8	J
75-09-2	Methylene Chloride	4	JB
67-64-1	Acetone	25	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	94	
540-59-0	1,2-Dichloroethene (total)	330	
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	53	
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	10	J
10061-02-6	trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	25	U
591-78-6	2-Hexanone	25	U
127-18-4	Tetrachloroethene	13	J
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Xylene (Total)	25	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002307B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW6

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002307B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 2

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.88	4000	J
2.		UNKNOWN	5.82	30	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW7

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702311

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002311A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	16	
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	15	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	9	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	1	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	3	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW7

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702311

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002311A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW7

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702311

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002311A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.85	1700	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702315

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002315A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	6	J
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	3	J
75-34-3	1,1-Dichloroethane	58	
540-59-0	1,2-Dichloroethene (total)	100	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	13	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	6	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	33	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702315

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002315A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	7	J

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW8

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702315

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002315A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.90	1800	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702282

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002282B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702282

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002282B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702283

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002283B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	40	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	41	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	47	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	41	
108-90-7	Chlorobenzene	40	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702283

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002283B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

C. Form II

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

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKJM	99	92	91		0
02	MW1	95	92	92		0
03	MW3	97	91	92		0
04	MW5	94	92	91		0
05	MW6	94	90	91		0
06	MW7	96	92	92		0
07	MW8	100	99	95		0
08	MW11	98	97	91		0
09	MW13	100	95	92		0
10	MW17	104	99	94		0
11	MW1MS	96	93	92		0
12	MW1MSD	101	95	95		0
13	MW10	98	91	84		0
14						
15						
16						
17						
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26						
27						
28						
29						
30						

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

D. **Form III**

Matrix Spike / Matrix Spike Duplicate Results

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix Spike - EPA Sample No.: MW1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	40.60	81	61-145
Trichloroethene	50.00	0.000	41.87	84	71-120
Benzene	50.00	0.000	45.82	92	76-127
Toluene	50.00	0.000	41.52	83	76-125
Chlorobenzene	50.00	0.000	41.18	82	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	40.26	80	1	14	61-145
Trichloroethene	50.00	40.92	82	2	14	71-120
Benzene	50.00	46.97	94	2	11	76-127
Toluene	50.00	40.98	82	1	13	76-125
Chlorobenzene	50.00	39.95	80	2	13	75-130

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

* Values outside of QC limits

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

COMMENTS: _____

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

Method Blank Summary, OADS, and TICs

EPA SAMPLE NO.

VBLKJM

VOLATILE METHOD BLANK SUMMARY

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Lab File ID: CB950424B54.D Lab Sample ID: VBLKJM

Date Analyzed: 04/24/95 Time Analyzed: 1825

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

Instrument ID: F50054

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW1	702287	CN002287B54.D	2001
02	MW3	702300	CN002300B54.D	2046
03	MW5	702303	CN002303B54.D	2142
04	MW6	702307	CN002307B54.D	2238
05	MW7	702311	CN002311A54.D	2315
06	MW8	702315	CN002315A54.D	2349
07	MW11	702322	CN002322B54.D	0110
08	MW13	702324	CN002324B54.D	0156
09	MW17	702327	CN002327B54.D	0234
10	MW1MS	702282	CN002282B54.D	0310
11	MW1MSD	702283	CN002283B54.D	0356
12	MW10	702318	CR002318B54.D	0435
13				
14				
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28				
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30				

COMMENTS:

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLKJM

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950424B54.D

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

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJM

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950424B54.D

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

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKJM

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950424B54.D

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

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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F. Form VIII

Internal Standard Area Data

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Lab File ID (Standard): CS950424B54.D Date Analyzed: 04/24/95

Instrument ID: F50054 Time Analyzed: 1741

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

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	57150	10.14	195088	12.01	202186	17.37
	UPPER LIMIT	114300	10.64	390176	12.51	404372	17.87
	LOWER LIMIT	28575	9.64	97544	11.51	101093	16.87
	EPA SAMPLE No.						
01	VBLKJM	61083	10.13	202762	12.00	183666	17.35
02	MW1	60522	10.14	194613	12.01	185078	17.37
03	MW3	56828	10.10	184193	11.97	176152	17.33
04	MW5	58862	10.11	184977	11.99	177692	17.34
05	MW6	57079	10.13	186661	12.01	182009	17.35
06	MW7	57418	10.09	177925	11.96	173814	17.32
07	MW8	57549	10.14	184137	12.01	177641	17.37
08	MW11	55610	10.13	174280	12.00	167432	17.34
09	MW13	56055	10.09	174420	11.97	169064	17.32
10	MW17	53656	10.09	171906	11.96	165523	17.32
11	MW1MS	55879	10.10	177907	11.97	180181	17.32
12	MW1MSD	52930	10.10	169705	11.97	172697	17.32
13	MW10	53984	10.07	179233	11.96	172017	17.30
14							
15							
16							
17							
18							
19							
20							
21							
22							

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

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

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

CompuChem Environmental Corporation

II SAMPLE DATA PACKAGE

3/90 STATEMENT OF WORK

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

A. SDG Narrative

B. Traffic Reports

C. Volatile Data

D. Semivolatile Data

E. Pesticide / PCB Data

THIS PACKAGE CONTAINS :

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

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

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30458

SDG # : 00001

A. SDG NARRATIVE

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

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

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

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SDG NARRATIVE
CASE # 30458
SDG # 00001
CONTRACT # (3-90)-REVS

Sample Identifications: MW1, MW10, MW11, MW13, MW17, MW3, MW5, MW6, MW7, MW8

The ten (10) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on April 13, 1995. The samples were scheduled for the requested analysis of the volatile fraction. These samples were analyzed following 3/90 Statement of Work (SOW) Document No. OLM01.9 protocol with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30458, SDG 00001, are included in the sample data sections.

Volatiles

All samples were analyzed within holding time requirements. There were some chlorinated alkane, chlorinated alkene, and ketone Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in these samples. Tentatively Identified Compounds (TICs) were found in these samples. These TICs could be characterized as laboratory artifacts and unknowns. The pH values of these samples are summarized on the attached batch sheet.

Based on the results of the GC/MS screen, MW6 and MW10 were initially analyzed using less than the method specified volume of raw sample.

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

The associated method blank met all quality control criteria. The common laboratory solvent methylene chloride was found in the method blank at a concentration within acceptance criteria limits. No TICs were found in the method blank.

MW1 was used as the original to prepare the duplicate matrix spikes. The associated duplicate matrix spikes met all advisory accuracy and precision criteria.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data

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contained in the hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jean M. Zimmerman
Final Technical Reviewer
May 9, 1995

CompuChem Environmental Corporation

WATER BATCH SHEET

+ Dichloro Difluoro methane.

Date Batched 4/18/95
Case 30458 · 00001
Instrument Code 42E

LINKER [redacted] TAT 28 SOW

	CCN	CLIENT ID	QC SAMPLE TYPE	QC SAMPLE ORIGINAL	pH	TIME	DATE RUN	INST. #	OPERATOR	H/T	VOLUME/ INSTRUCTIONS	SCREEN BOTTLE #	ANALY BOTTI
1)	702282	mw1 ms	SS	702287						4/25	SS	~~of~~	of
2)	702283	mw1 msd	SS	↓							SS	~~of~~	of
3)	702284		B								BS	~~of~~	of
4)	702287	mw1			1	18:37	4.23.95	3	2187		4V RN	1 of 4	2 of
5)	702301	mw3			1	19:09	↓	↓	↓		2V	1 of 2	2 of
6)	702303	mw5			1	19:40					2V	1 of 2	2 of
7)	702307	mw6			1	20:15					2V	1 of 2	2 of
8)	702311	mw7			1	11:55	4.24.95	3	2141		2V	1 of 2	2 of
9)	702315	mw8			1	12:47	↓	↓	↓	4/26	2V 2ml	1 of 2	2 of
10)	702318	mw10			1		↓	↓	2181	4/25	2V RN	1 of 2	2 of
11)	702322	mw11			1	13:21	4.24.95	3	2141	↓	2V	1 of 2	2 of
12)	702324	mw13			1	13:51	↓	↓	↓	4/26	2V	1 of 2	2 of
13)	702327	mw17			1	14:33	↓	↓	2181			of	of
14)	702287R1				1	21:27	4.23.95	3	2181			of	of
15)	702300R1					15:04	4.24.95	3	2181		2ml	of	of
16)	702307R1											of	of
17)	702287R2					15:35	4.24.95	3	2181		RN	of	of
18)	702322R											of	of
19)	702300R2											of	of
20)	702287R3											of	of
21)												of	of
22)												of	of
23)												of	of

Relinquished By M. Murchison Date 4-18-95 Received By Temp Storage Date 4-18-95
Relinquished By J.S. Date 4/23/95 Received By [redacted] Date 4/23/95
Relinquished By [redacted] Date 4/23/95 Received By J.S. Date 4.23.95

Log Page Updated

#7560

30458 00001 SAMPLE DATA PACKAGE

NO. 0115

CompuChem Laboratories, Inc.

Fill out COMPLETELY

PROJECT PROFILE SHEET

REVISION# : ____

Revision Date : ____

DATE : 6-22-94

ACCOUNT NUMBER : 500672

ORDER NUMBER : 28899

PROJECT NAME : WATAGA County

Project Start Date : 6-22-94

Project End Date : 7-22-94

QUOTE # : 94-5500

PO # : 6520-14

COMPANY NAME : Draper Aden Associates

Mailing ADDRESS #1 : 2206 S. Main St

COPIES : 1

Attn: Janet Cleary

Blacksburg, VA 24060

Mailing ADDRESS #2 :

COPIES : ____

Address for INVOICES #1 : Same As Above

COPIES : 1

Address for INVOICES #2 :

COPIES : ____

Address for SAMPLESAVERS : Same As Above

PROJECT TEAM

SALES : D. Tomec Ext. 1662

CUST. SERV. : C. Dover Ext. 1627

PROJ MGR : ____ Ext.

CLIENT CONTACTS

PROJ MGR : Janet Cleary

PHONE# : (703) 552-0444

FIELD/OTHER : Same

PHONE# : ( )

BILLING : Same

PHONE# : ( )

****

VERBAL TAT : N/A

HARDCOPY TAT : 28

****

SUBCONTRACT WORK TO : None

SAMPLE DISPOSITION : Normal

EXTRACT DISPOSITION : Normal

DATA RETENTION (If other than 5 yrs.): ____

ANALYZE TRIP BLANK : (YES) NO

BILL FOR SAMPLESAVERS : YES (NO) $____

BILLABLE QC : (YES) NO

BILLABLE REPEATS : (YES) NO

ADDITIONAL COMMENTS : ____

DISKETTE REQUIRED : YES (NO)

STYLE : ____ FORMAT A (CLP-like disk) # COPIES : ____

____ CONVERTED disk (Note conversion program name on line below) # COPIES : ____

**

SPECIAL INST.: ____

MONTHLY PROGRESS REPORT

REQUIRED : ___Yes X No Level : ____

____ HAZWRAP ____ OTHER :

____ NEESA ____

HAZWRAP GENERAL ORDER #: ____

SPEC. INST. : ____

NO. 0115

CompuChem Laboratories, Inc.
PROJECT PROFILE SHEET

DATE: 6-22-94
CLIENT: DAA
PROJECT: WATAGA County

REVISION#: ____
Revision Date: ____

ALL:

___ PENALTIES if late: ___% @ ___ days; ___% @ ___ days; ___% @ ___ days	Other:
___ PREMIUMS if early! ___% @ ___days; ___% @ ___ days; ___% @ ___ days	
___ Internal Chain-of-Custody procedures required: ___NJDEP ___Other( )	Holding Times from: X VTSR (for: All Par.)
	from: ___ VTOS (for:)

CUSTOMER SERVICE:

Enter in lab instructions (Max. 25 spaces):
✓ See PPS# 115 ___ Diskettes Required
✓ Use for QC( ) ___ F Blank/T Blank
Other:

Other: VOA = TCL + DichloroDifluoromethane
METALS = Report only Cd, Fe, Hg, Ba
Client will Designate QC at a Frequency of 1 in 10 NOT 1 in 20

___ Weekly QUIZ report required
___ Holding Time priority

RECEIVING: Other:

___ Screen VOA / RAD / ___ samples	
___ Return client cooler(s) to this address:	
	___ Truncate IDs as follows: ___
	Create SDGs: ___Weekly ___Bi-Weekly ___Other:
___ Potentially radioactive samples	___ Schedule unique SDG for Trip/Field/etc. Blanks

PP&C: Other:

___ Blank Spikes Required	Batch size is 1 in 10
___ Possible high / low concentration samples	Client will Designate QC
___ Total/Dissolved Metals	CLP VOAs include DichloroDifluoromethane

LABORATORY: Other:

___ Possible high / low concentration samples	
___ Analyze/Report blank spike	
___ All notices require the following in header:	
___ Analyze/Report special analytes (see attached)	
X Metals: Report/Run ONLY Cd, Fe, Hg, Ba	

REPORT PREPARATION: Other:

___ Must mail via ___	
___ Special compound list required (see attached)	
___ Do NOT report TICs	

TECHNICAL REVIEW: Other:

___ Submit ALL Narratives and Notices to the Report Preparation Manager	
___ All Notices require the following header:	

ACCOUNTING: Other:

Invoice: X Weekly ___ Monthly	
___ Other:	___ Duplicate required

CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

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

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

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

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

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

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

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

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

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

(con't.)

DATA REPORTING QUALIFIERS

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

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

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

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

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

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

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

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

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

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

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

   Left Side Flags

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

   Right Side Flags

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

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

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

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

Robert E. Mercer

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ENVIRONMENTAL
CORPORATION

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

Quality Assurance Notice

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

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

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

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

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

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

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

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

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

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

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

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

Robert E. Meiner

Revision 1 (2/20/95)

B. TRAFFIC REPORTS

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

CHAIN OF CUSTODY RECORD 30458

SDG-1

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 486-1600 FAX (919) 486-1666

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

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

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 4th Assessment Monitoring
JN: 6520-20 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? _X_ Yes ___ No (See Not
Carrier: Federal Express
Tracking No.: HYKA-107

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

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

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

Box 4: Sample Type
C. Composite
G. Grab

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

Sample I.D.	Date 1995	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
MW 1	4/11	1320	GW	**	U	G	<2		3	2	1	SEE ATTACHED PARAMETER LISTS
MW1 MS	4/11	1320	GW	**	U	G	<2	X	1	1		** TOTAL METALS - PRESERVATIVE: NITRIC ACID
MW1 MSD	4/11	1320	GW	**	U	G	<2	X	1	1		VOLATILES - PRESERVATIVE: HCl
MW1 MS/SD	4/11	1320	GW	**	U	G	<2	X	1		1	Note to Kathy Dover: hold analyses for receipt of SDG-2 being shipped on 4-13-95
MW6	4/11	1445	GW	**	U	G	<2		3	2	1	
MW3	4/11	1600	GW	**	U	G	<2		3	2	1	
MW13	4/11	1710	GW	**	U	G	<2		3	2	1	
MW11	4/11	1750	GW	**	U	G	<2		3	2	1	
MW5	4/11	1900	GW	**	U	G	<2		3	2	1	

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

Lab: Received in Good Condition? ✓ Yes ___ No Custody Seal Intact? ___ Yes ___ No Temp. on arrival 6 Received on Ice ___ Describe problems, if any: bagice all melted

Sampler Name (print): JEFFS. PACK	Date: 4-12-95	#1 Relinquished By (Sig.):	Date: 4-12-95	#2 Relinquished By (Sig.):	Date:	Sample Storage Requested:
Sampler Signature:	Time: 1400	Company Name: Draper Aden Associates	Time: 1400	Company Name:	Time:	
Sampler Name (print): ERIK RUDIN	Date: 4-12-95	#1 Received By (Sig.):	Date: 4/12/95	#2 Received By (Sig.):	Date: 4.13.95	60 (No
Sampler Signature:	Time: 1400	Company Name: Watauga County	Time: 1400	Company Name: CompuChem	Time: 0900	

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

244

30458 00001 SAMPLE DATA PACKAGE

CompuChem Environmental Corporation

C. VOLATILE DATA

1. QC Summary
2. Sample Data
3. Standards. Data
4. Raw QC Data

LAB CODE : COMPU

CONTRACT # : (3-90)-REVS

SAS# (if applicable) : _____

CASE # : 30458

SDG # : 00001

1. Q C Summary

a. Form II VOA
System Monitoring Compound Summary

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

c. Form IV VOA
Method Blank Summary

d. Form V VOA
GC/MS Instrument Performance Check

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

a. Form II VOA

System Monitoring Compound Summary

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKJM	99	92	91		0
02	MW1	95	92	92		0
03	MW3	97	91	92		0
04	MW5	94	92	91		0
05	MW6	94	90	91		0
06	MW7	96	92	92		0
07	MW8	100	99	95		0
08	MW11	98	97	91		0
09	MW13	100	95	92		0
10	MW17	104	99	94		0
11	MW1MS	96	93	92		0
12	MW1MSD	101	95	95		0
13	MW10	98	91	84		0
14						
15						
16						
17						
18						
19						
20						
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22						
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25						
26						
27						
28						
29						
30						

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

b. Form III VOA

Matrix Spike / Matrix Spike Duplicate Summary

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix Spike - EPA Sample No.: MW1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.00	0.000	40.60	81	61-145
Trichloroethene	50.00	0.000	41.87	84	71-120
Benzene	50.00	0.000	45.82	92	76-127
Toluene	50.00	0.000	41.52	83	76-125
Chlorobenzene	50.00	0.000	41.18	82	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	40.26	80	1	14	61-145
Trichloroethene	50.00	40.92	82	2	14	71-120
Benzene	50.00	46.97	94	2	11	76-127
Toluene	50.00	40.98	82	1	13	76-125
Chlorobenzene	50.00	39.95	80	2	13	75-130

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

* Values outside of QC limits

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

COMMENTS: _____

c. Form IV VOA

Method Blank Summary

If more than a single form is necessary, forms must be arranged in chronological order by date of analysis of the blank.

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJM

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Lab File ID: CB950424B54.D Lab Sample ID: VBLKJM

Date Analyzed: 04/24/95 Time Analyzed: 1825

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

Instrument ID: F50054

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW1	702287	CN002287B54.D	2001
02	MW3	702300	CN002300B54.D	2046
03	MW5	702303	CN002303B54.D	2142
04	MW6	702307	CN002307B54.D	2238
05	MW7	702311	CN002311A54.D	2315
06	MW8	702315	CN002315A54.D	2349
07	MW11	702322	CN002322B54.D	0110
08	MW13	702324	CN002324B54.D	0156
09	MW17	702327	CN002327B54.D	0234
10	MW1MS	702282	CN002282B54.D	0310
11	MW1MSD	702283	CN002283B54.D	0356
12	MW10	702318	CR002318B54.D	0435
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
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29				
30				

COMMENTS:

d. Form V VOA

GC/MS Instrument Performance Check

BFB in chronoiogical order by instrument.

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Lab File ID: BF950424C54.D BFB Injection Date: 04/23/95

Instrument ID: F50054 BFB Injection Time: 2358

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	13.8
75	30.0 - 66.0% of mass 95	39.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	50.0 - 120.0% of mass 95	80.1
175	4.0 - 9.0% of mass 174	5.7 (7.1)1
176	93.0 - 101.0% of mass 174	77.8 (97.2)1
177	5.0 - 9.0% of mass 176	5.1 (6.6)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	CS950424C54.D	04/24/95	0019
02	VSTD200	VSTD200	CT950424C54.D	04/24/95	0130
03	VSTD050	VSTD050	CV950424C54.D	04/24/95	0249
04	VSTD020	VSTD020	CW950424C54.D	04/24/95	0340
05	VSTD100	VSTD100	CX950424C54.D	04/24/95	0447
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Lab File ID: BF950424B54.D BFB Injection Date: 04/24/95

Instrument ID: F50054 BFB Injection Time: 1726

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	13.3
75	30.0 - 66.0% of mass 95	38.7
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 120.0% of mass 95	83.5
175	4.0 - 9.0% of mass 174	5.9 (7.0)1
176	93.0 - 101.0% of mass 174	80.9 (97.0)1
177	5.0 - 9.0% of mass 176	5.5 (6.8)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	CS950424B54.D	04/24/95	1741
02	VBLKJM	VBLKJM	CB950424B54.D	04/24/95	1825
03	MW1	702287	CN002287B54.D	04/24/95	2001
04	MW3	702300	CN002300B54.D	04/24/95	2046
05	MW5	702303	CN002303B54.D	04/24/95	2142
06	MW6	702307	CN002307B54.D	04/24/95	2238
07	MW7	702311	CN002311A54.D	04/24/95	2315
08	MW8	702315	CN002315A54.D	04/24/95	2349
09	MW11	702322	CN002322B54.D	04/25/95	0110
10	MW13	702324	CN002324B54.D	04/25/95	0156
11	MW17	702327	CN002327B54.D	04/25/95	0234
12	MW1MS	702282	CN002282B54.D	04/25/95	0310
13	MW1MSD	702283	CN002283B54.D	04/25/95	0356
14	MW10	702318	CR002318B54.D	04/25/95	0435
15					
16					
17					
18					
19					
20					
21					
22					

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Lab File ID (Standard): CS950424B54.D Date Analyzed: 04/24/95

Instrument ID: F50054 Time Analyzed: 1741

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

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	57150		10.14		195088		12.01		202186		17.37	
	UPPER LIMIT	114300		10.64		390176		12.51		404372		17.87	
	LOWER LIMIT	28575		9.64		97544		11.51		101093		16.87	
	EPA SAMPLE No.												
01	VBLKJM	61083		10.13		202762		12.00		183666		17.35	
02	MW1	60522		10.14		194613		12.01		185078		17.37	
03	MW3	56828		10.10		184193		11.97		176152		17.33	
04	MW5	58862		10.11		184977		11.99		177692		17.34	
05	MW6	57079		10.13		186661		12.01		182009		17.35	
06	MW7	57418		10.09		177925		11.96		173814		17.32	
07	MW8	57549		10.14		184137		12.01		177641		17.37	
08	MW11	55610		10.13		174280		12.00		167432		17.34	
09	MW13	56055		10.09		174420		11.97		169064		17.32	
10	MW17	53656		10.09		171906		11.96		165523		17.32	
11	MW1MS	55879		10.10		177907		11.97		180181		17.32	
12	MW1MSD	52930		10.10		169705		11.97		172697		17.32	
13	MW10	53984		10.07		179233		11.96		172017		17.30	
14													
15													
16													
17													
18													
19													
20													
21													
22													

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

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

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

e. Form VIII VOA

Internal Standard Area and Retention Time Summary

In chronological order by instrument.

2. Sample Data

Sample data shall be arranged in packets with the Organic Analysis Data Sheet (Form I VOA, including Form I VOA-TIC), followed by the raw data for volatile samples. These sample packets should then be placed in increasing EPA number order, considering both letters and numbers in ordering samples.

. TCL Results - Organic Analysis Data Sheet (Form I VOA).
Tabulated results (identification and quantitation) of the specified target compounds.

. Tentatively Identified Compounds (Form I VOA-TIC).
This form must be included even if no compounds are found.

. Reconstructed total ion chromatogram (RIC) for each sample, sample extract, standard, blank and spike sample.

. For each sample, by each compound identified :

Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (TCL) that are identified in the sample and corresponding background-subtracted TCL standard mass spectra. Compound names must be clearly marked on all spectra.

Copies of mass spectra of nonsurrogate organic compounds (tentatively identified compounds) with associated best-match spectra (three best matches).

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702287

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002287B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW1

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702287

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002287B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

MW1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702287

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002287B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.91	1500	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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12.					
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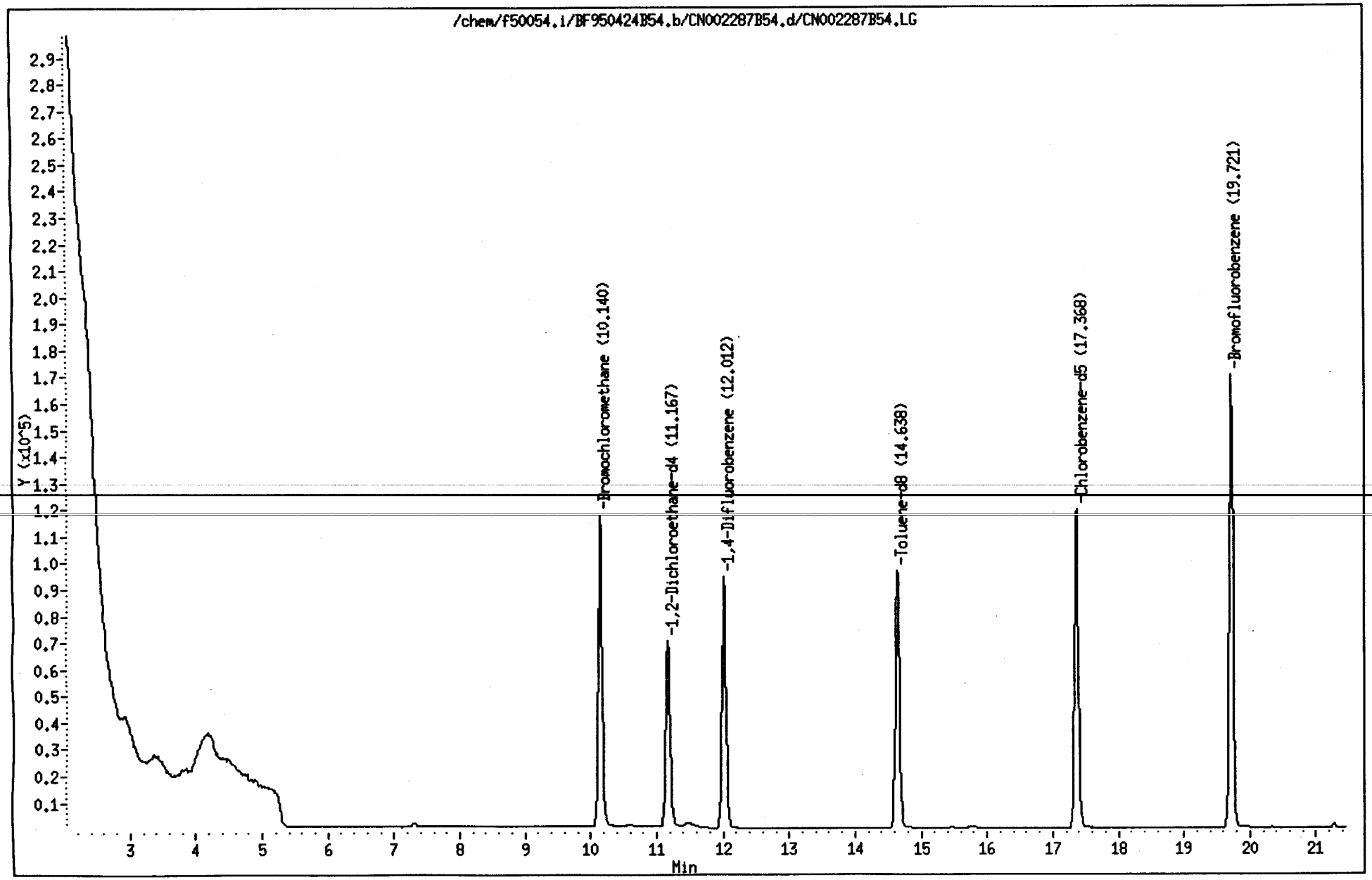
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50054.i/BF950424B54.b/CN002287B54.d
Date : 24-APR-1995 20:01
Client ID: MW1
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i
Operator: 1948
Column diameter: 0.53



226
30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CN002287B54.d
Report Date: 28-Apr-1995 10:12

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002287B54.d
Lab Smp Id: 702287 Client Smp ID: MW1
Inj Date : 24-APR-1995 20:01
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	10.140	10.140	(1.000)	60522	250.0	
* 2	1,4-Difluorobenzene	114.00	12.012	12.012	(1.000)	194613	250.0	
* 3	Chlorobenzene-d5	117.00	17.368	17.368	(1.000)	185078	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	11.167	11.167	(1.101)	117354	230.1	46.03
$ 5	Toluene-d8	98.00	14.638	14.651	(0.843)	162673	237.9	47.59
$ 6	Bromofluorobenzene	95.00	19.721	19.734	(1.135)	142093	231.4	46.28
7	Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
8	Chloromethane	50.00		2.873	Compound Not Detected.			
9	Vinyl Chloride	62.00		3.185	Compound Not Detected.			
10	Bromomethane	94.00		4.004	Compound Not Detected.			
11	Chloroethane	64.00		4.290	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		6.175	Compound Not Detected.			
13	Acetone	43.00		6.422	Compound Not Detected.			
14	Carbon Disulfide	76.00		6.474	Compound Not Detected.			
15	Methylene Chloride	84.00	7.306	7.293	(0.721)	1666	4.99	0.998 (aM)
16	trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		8.658	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		9.737	Compound Not Detected.			
19	2-Butanone	43.00		9.854	Compound Not Detected.			
20	Chloroform	83.00		10.348	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		10.595	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
23	Benzene	78.00		11.245	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002287B54.d
Report Date: 28-Apr-1995 10:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		11.297		Compound Not Detected.		
25	Trichloroethene	130.00		12.428		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00		15.795		Compound Not Detected.		
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

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

Data File: /chem/f50054.i/BF950424B54.b/CN002287B54.d

Date : 24-APR-1995 20:01

Client ID: MW1

Instrument: f50054.i

Sample Info:

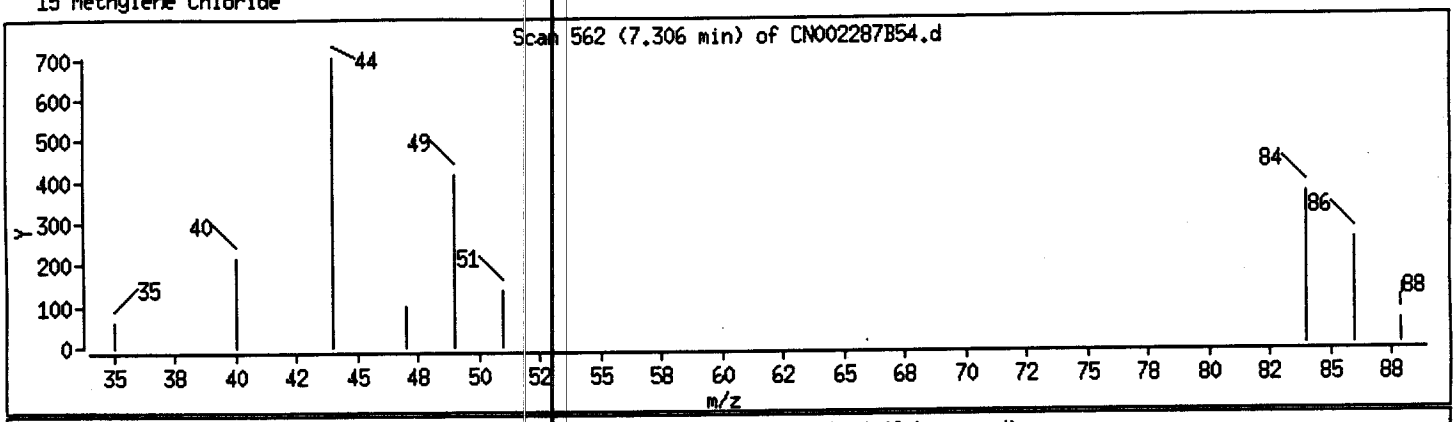
Purge Volume: 5.0

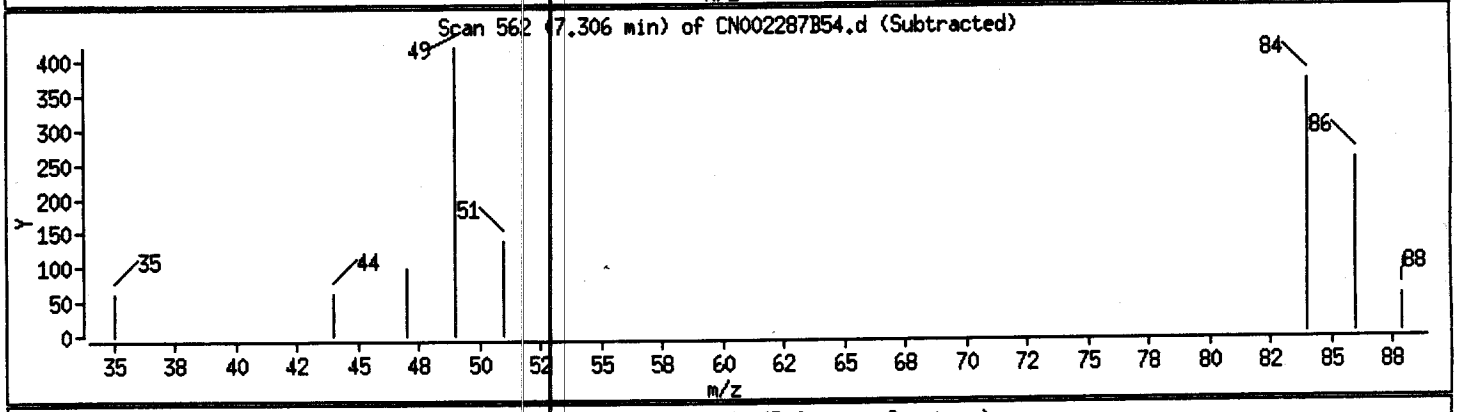
Operator: 1948

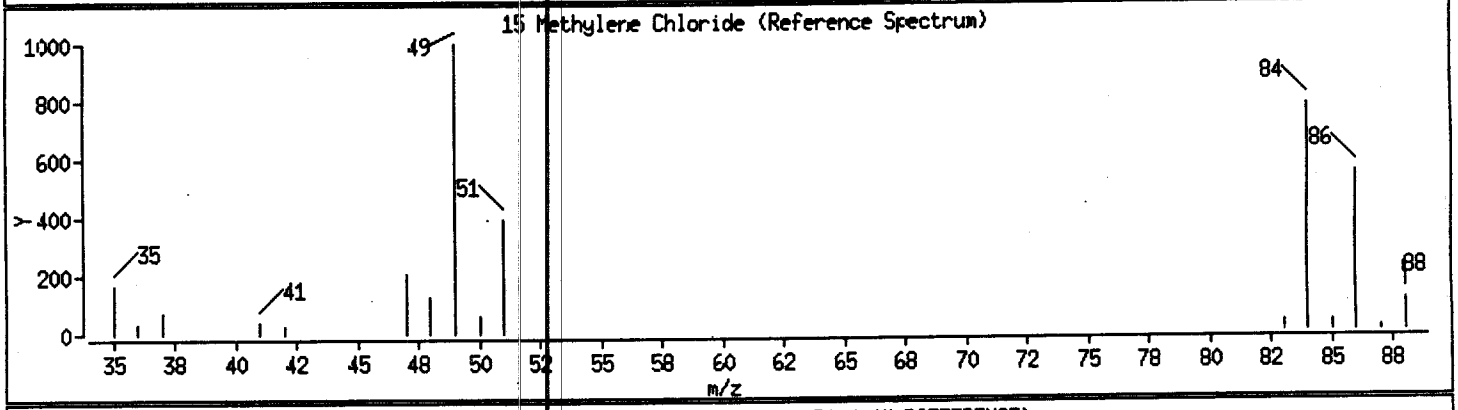
Column phase: DB624

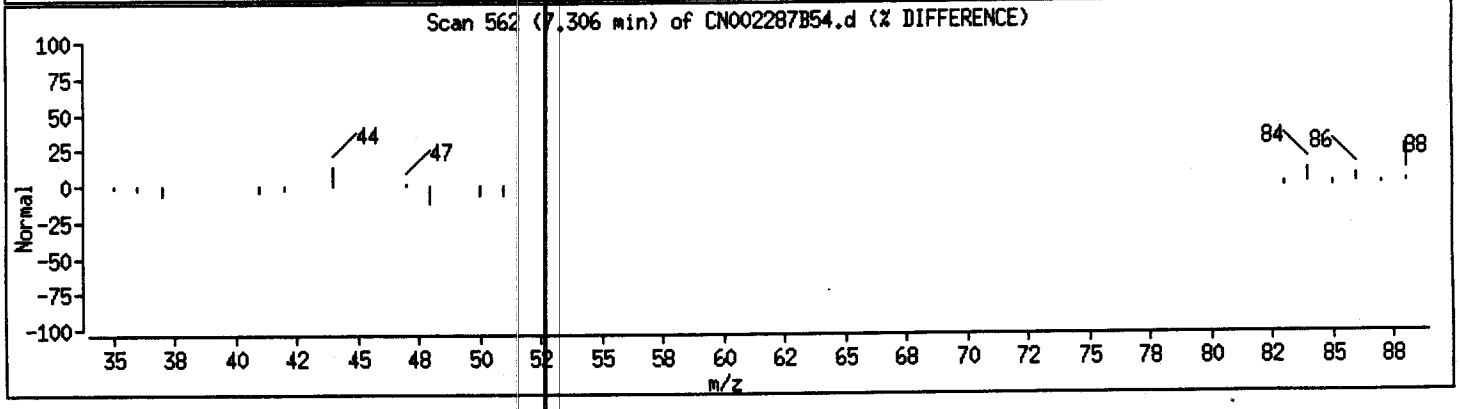
Column diameter: 0.53

15 Methylene Chloride









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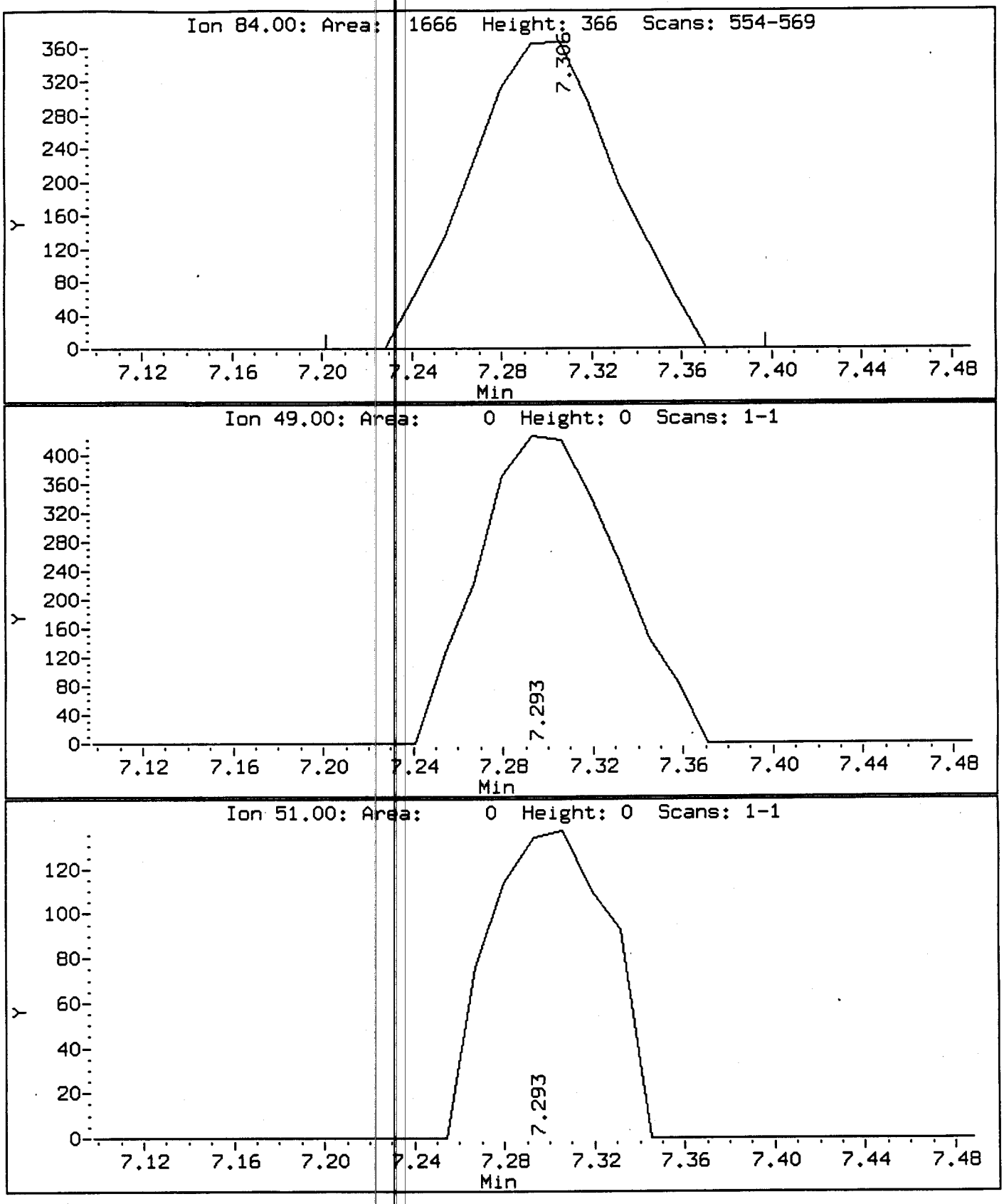
Injection Date: 24-APR-95 20:01
Instrument: f50054.i
Client Sample ID: MW1

Compound: Methylene Chloride
CAS Number: 75-09-2



Data File: /chem/f50054.i/BF950424B54.b/CN002287B54.d

Date : 24-APR-1995 20:01

Client ID: MW1

Instrument: f50054.i

Sample Info:

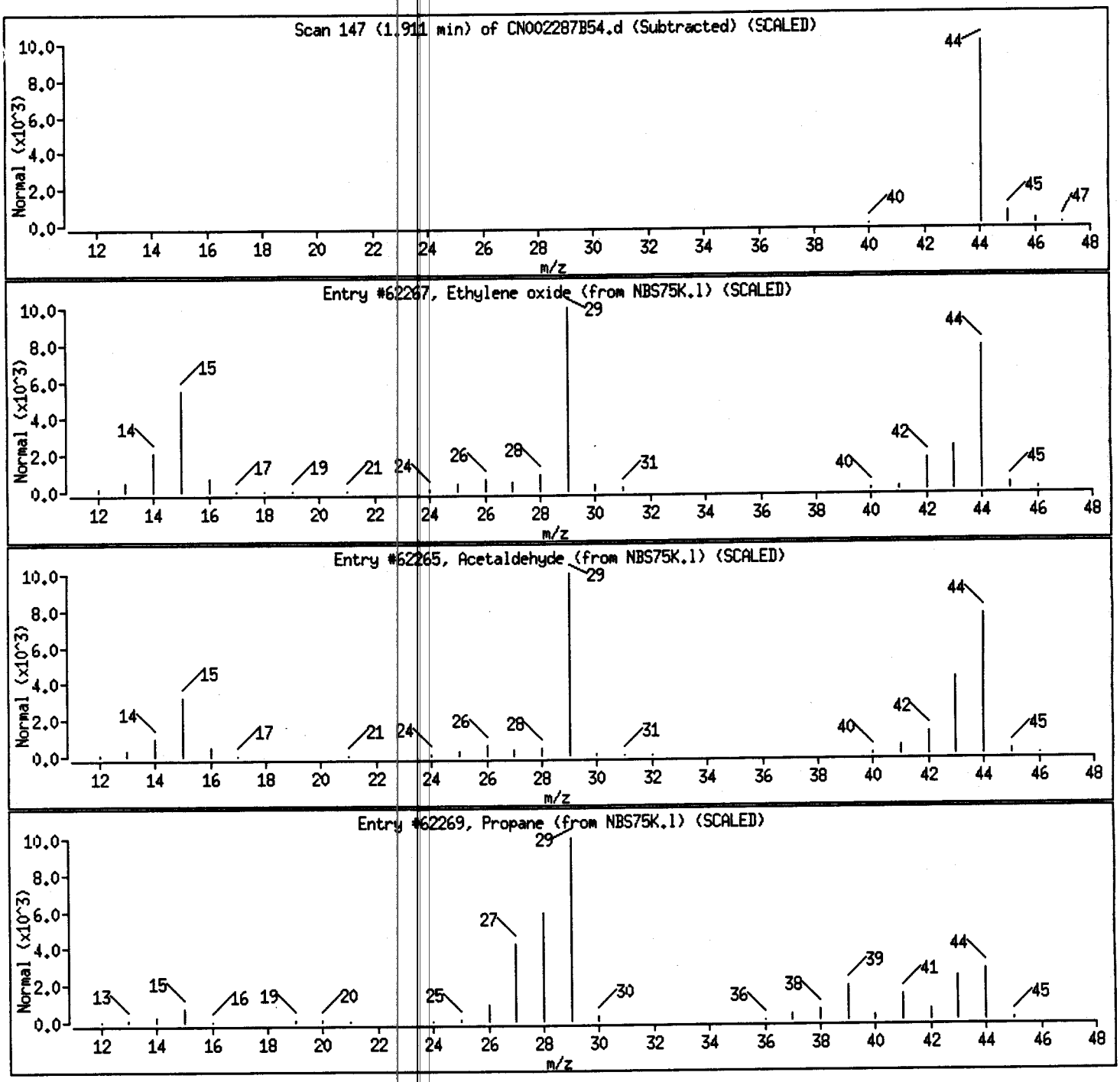
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.1	62265	3	C2H4O	44
Propane	74-98-6	NBS75K.1	62269	2	C3H8	44



LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

==========

GC/MS ANALYSIS
AMOUNT PURGED: ~~0. UL~~ 5ml JK 4/24/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002287B54

ANALYST(S): INJECTION 2011 WORKUP JKudel

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [/] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 1 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SL DATE 4/28/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702287
Client ID# MW1
Instrument Blank ID 1BLKJM
Case # 30458

he early-eluting peak on the RIC of the volatile fraction at scan # 147 is a aboratory artifact believed to be a mixture of water and various atmospheric ases. This peak is usually present at a height less than 10% that of the nternal standard nearest in elution time order, although it may exceed this eight under certain instrument conditions.

eriodically, a number of maintenance procedures are performed in an effort to educe the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
901001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702318

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR002318B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 7.1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	71	U
74-83-9	Bromomethane	71	U
75-01-4	Vinyl Chloride	71	U
75-00-3	Chloroethane	71	U
75-09-2	Methylene Chloride	18	JB
67-64-1	Acetone	71	U
75-15-0	Carbon Disulfide	71	U
75-35-4	1,1-Dichloroethene	120	
75-34-3	1,1-Dichloroethane	67	J
540-59-0	1,2-Dichloroethene (total)	71	U
67-66-3	Chloroform	71	U
107-06-2	1,2-Dichloroethane	71	U
78-93-3	2-Butanone	71	U
71-55-6	1,1,1-Trichloroethane	1300	
56-23-5	Carbon Tetrachloride	71	U
75-27-4	Bromodichloromethane	71	U
78-87-5	1,2-Dichloropropane	71	U
10061-01-5	cis-1,3-Dichloropropene	71	U
79-01-6	Trichloroethene	71	U
124-48-1	Dibromochloromethane	71	U
79-00-5	1,1,2-Trichloroethane	71	U
71-43-2	Benzene	71	U
10061-02-6	trans-1,3-Dichloropropene	71	U
75-25-2	Bromoform	71	U
108-10-1	4-Methyl-2-Pentanone	71	U
591-78-6	2-Hexanone	71	U
127-18-4	Tetrachloroethene	10	J
79-34-5	1,1,2,2-Tetrachloroethane	71	U
108-88-3	Toluene	71	U
108-90-7	Chlorobenzene	71	U
100-41-4	Ethylbenzene	71	U
100-42-5	Styrene	71	U
1330-20-7	Xylene (Total)	71	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702318

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR002318B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 7.1

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW10

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702318

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR002318B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 7.1

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

Number TICs found: 0

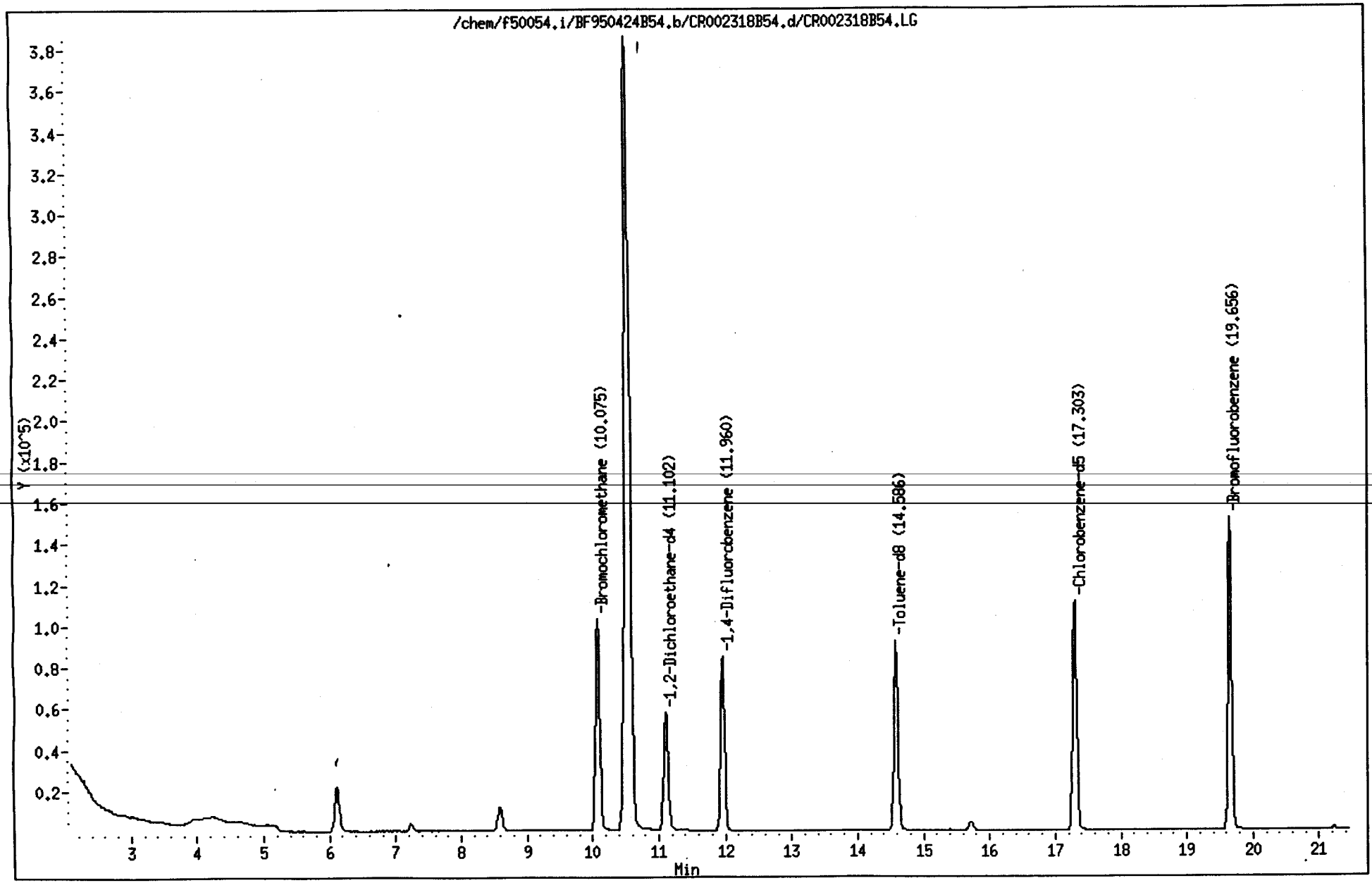
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d
Date : 25-APR-1995 04:35
Client ID: MW10
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

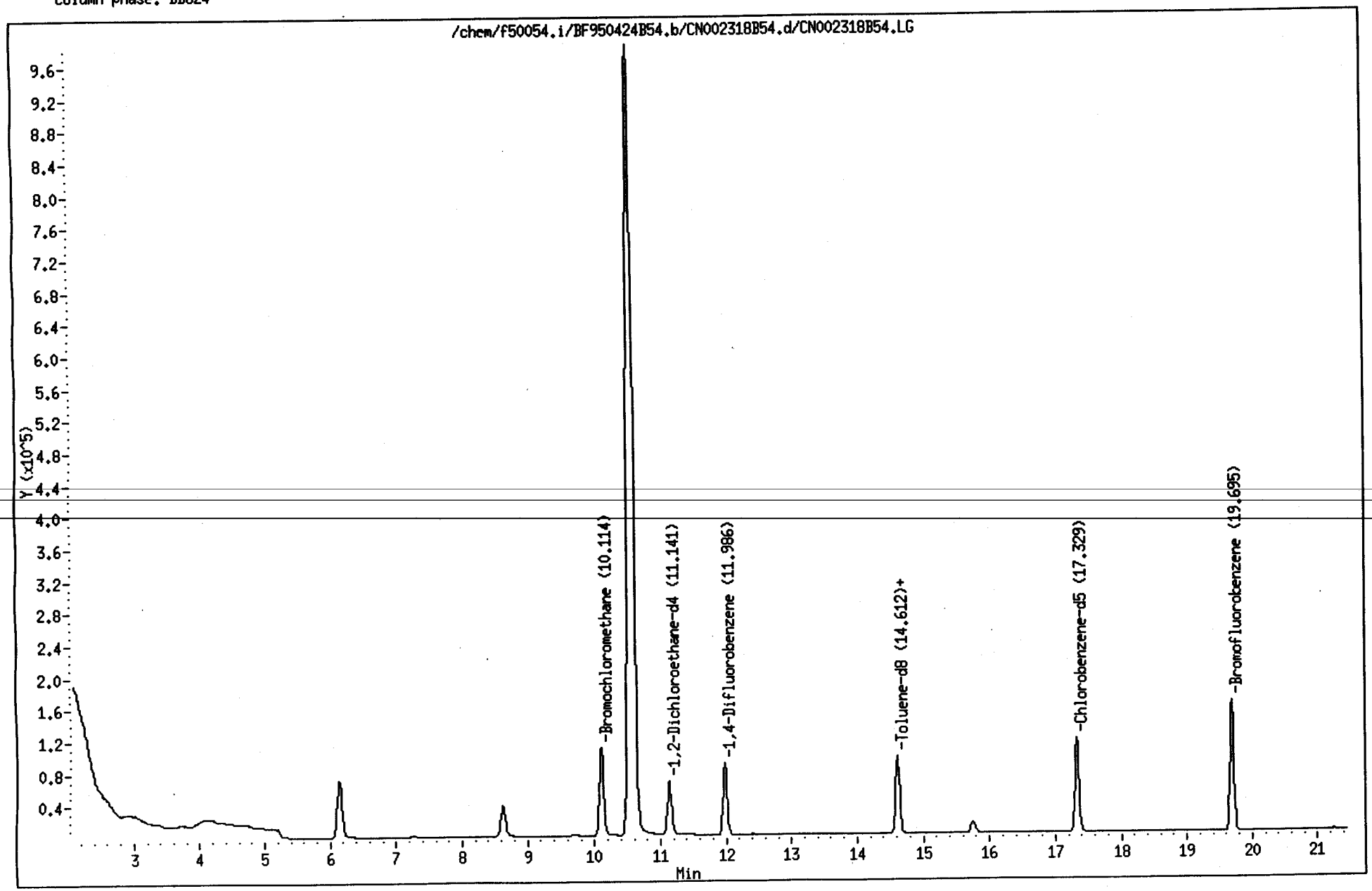
Operator: 1948
Column diameter: 0.53



Data File: /chem/f50054.i/BF950424B54.b/CN002318B54.d
Date : 25-APR-1995 00:22
Client ID: MW10
Sample Info: SCREEN
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 2011
Column diameter: 0.53



214

30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d
Report Date: 28-Apr-1995 10:34

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CR002318B54.d
Lab Smp Id: 702318 Client Smp ID: MW10
Inj Date : 25-APR-1995 04:35
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 7.143
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	10.075	10.140	(1.000)	53984	250.0	
* 2 1,4-Difluorobenzene	114.00	11.960	12.012	(1.000)	179233	250.0	
* 3 Chlorobenzene-d5	117.00	17.303	17.368	(1.000)	172017	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	11.102	11.167	(1.102)	95349	209.6	299.5
$ 5 Toluene-d8	98.00	14.586	14.651	(0.843)	155582	244.8	349.8
$ 6 Bromofluorobenzene	95.00	19.656	19.734	(1.136)	130442	228.6	326.5
7 Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
8 Chloromethane	50.00		2.873	Compound Not Detected.			
9 Vinyl Chloride	62.00		3.185	Compound Not Detected.			
10 Bromomethane	94.00		4.004	Compound Not Detected.			
11 Chloroethane	64.00		4.290	Compound Not Detected.			
12 1,1-Dichloroethene	96.00	6.110	6.175	(0.606)	25698	86.72	123.9
13 Acetone	43.00		6.422	Compound Not Detected.			
14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
15 Methylene Chloride	84.00	7.228	7.293	(0.717)	3812	12.80	18.29(a)
16 trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
17 1,1-Dichloroethane	63.00	8.593	8.658	(0.853)	28786	46.78	66.83(a)
18 cis-1,2-Dichloroethene	96.00		9.737	Compound Not Detected.			
19 2-Butanone	43.00		9.854	Compound Not Detected.			
20 Chloroform	83.00		10.348	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00	10.530	10.595	(0.880)	685723	903.4	1291
22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
23 Benzene	78.00		11.245	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d
Report Date: 28-Apr-1995 10:34

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 1,2-Dichloroethane	62.00		11.297	Compound Not Detected.			
	25 Trichloroethene	130.00		12.428	Compound Not Detected.			
	26 1,2-Dichloropropane	63.00		12.818	Compound Not Detected.			
	27 Bromodichloromethane	83.00		13.351	Compound Not Detected.			
	28 cis-1,3-Dichloropropene	75.00		14.170	Compound Not Detected.			
	29 4-Methyl-2-Pentanone	43.00		14.521	Compound Not Detected.			
	30 Toluene	91.00		14.768	Compound Not Detected.			
	31 trans-1,3-Dichloropropene	75.00		15.223	Compound Not Detected.			
	32 1,1,2-Trichloroethane	97.00		15.548	Compound Not Detected.			
	33 Tetrachloroethene	164.00	15.717	15.795	(0.908)	2737	7.34	10.49(a)
	34 2-Hexanone	43.00		16.094	Compound Not Detected.			
	35 Dibromochloromethane	129.00		16.263	Compound Not Detected.			
	36 Chlorobenzene	112.00		17.420	Compound Not Detected.			
	37 Ethylbenzene	106.00		17.680	Compound Not Detected.			
	38 m,p-Xylene	106.00		17.927	Compound Not Detected.			
	39 o-Xylene	106.00		18.707	Compound Not Detected.			
	40 Styrene	104.00		18.733	Compound Not Detected.			
	41 Bromoform	173.00		19.032	Compound Not Detected.			
	42 1,1,2,2-Tetrachloroethane	83.00		20.007	Compound Not Detected.			
M	43 1,2-Dichloroethene (total)	96.00		1.000	Compound Not Detected.			
M	44 Xylene (Total)	106.00		18.707	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d

Date : 25-APR-1995 04:35

Client ID: MW10

Instrument: f50054.i

Sample Info:

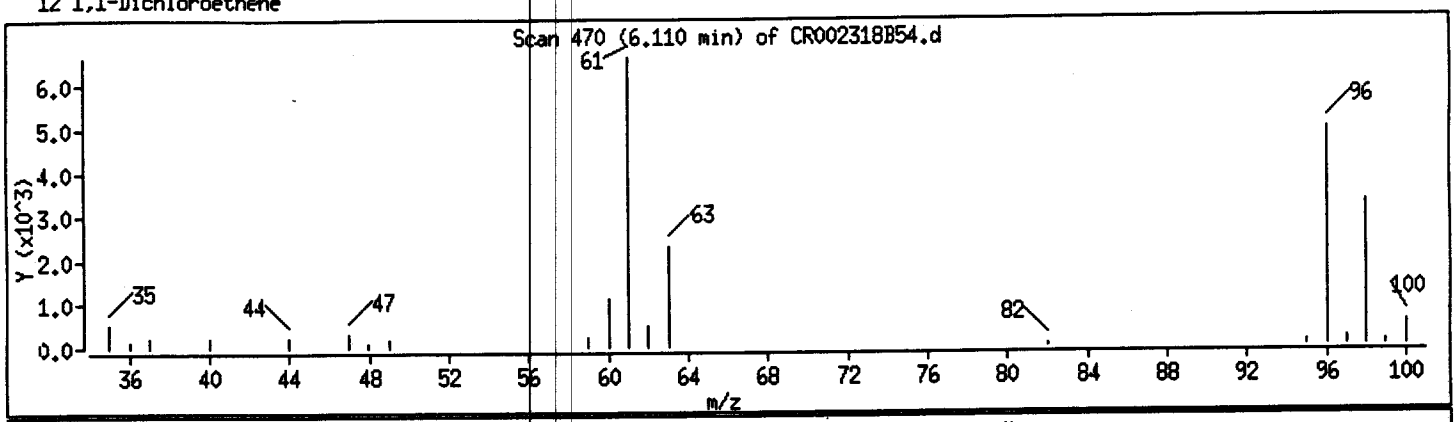
Purge Volume: 5.0

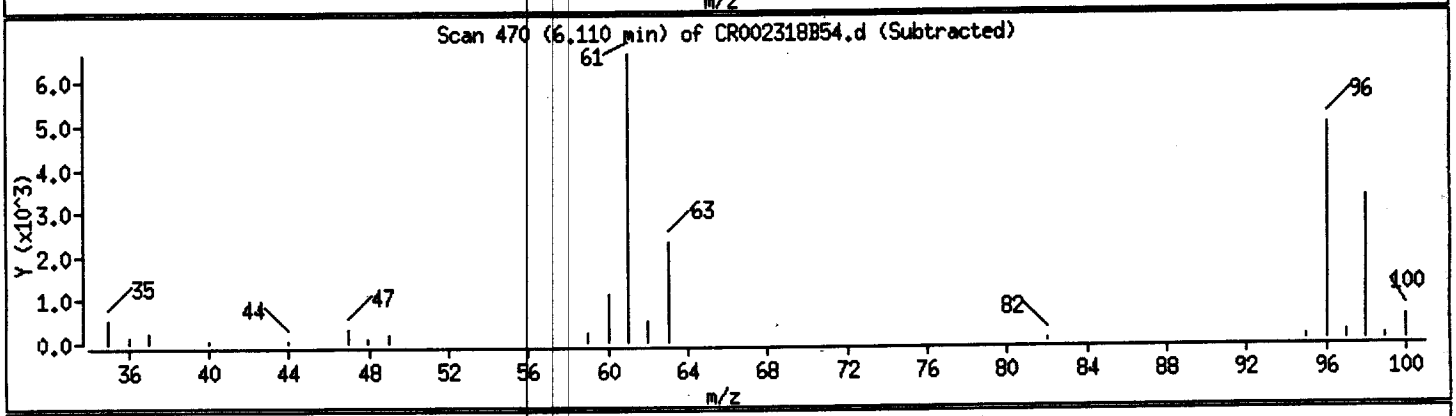
Operator: 1948

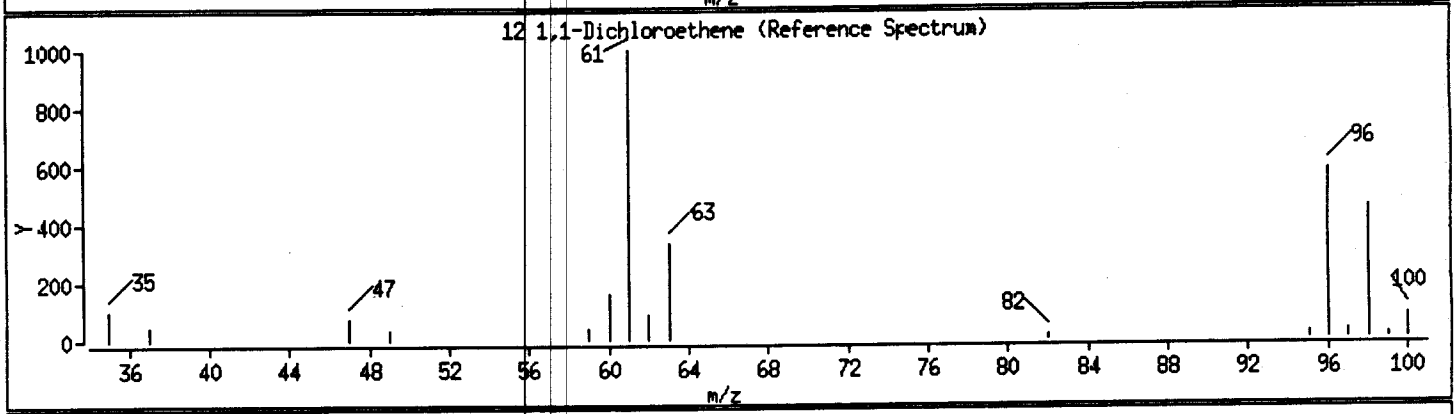
Column phase: DB624

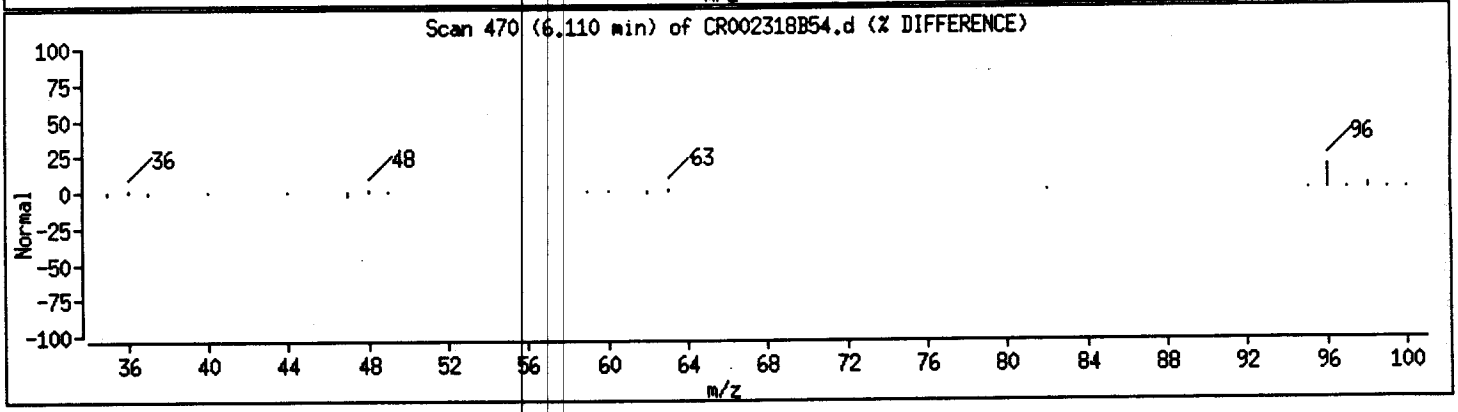
Column diameter: 0.53

12 1,1-Dichloroethene









Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d

Date : 25-APR-1995 04:35

Client ID: MW10

Instrument: f50054.i

Sample Info:

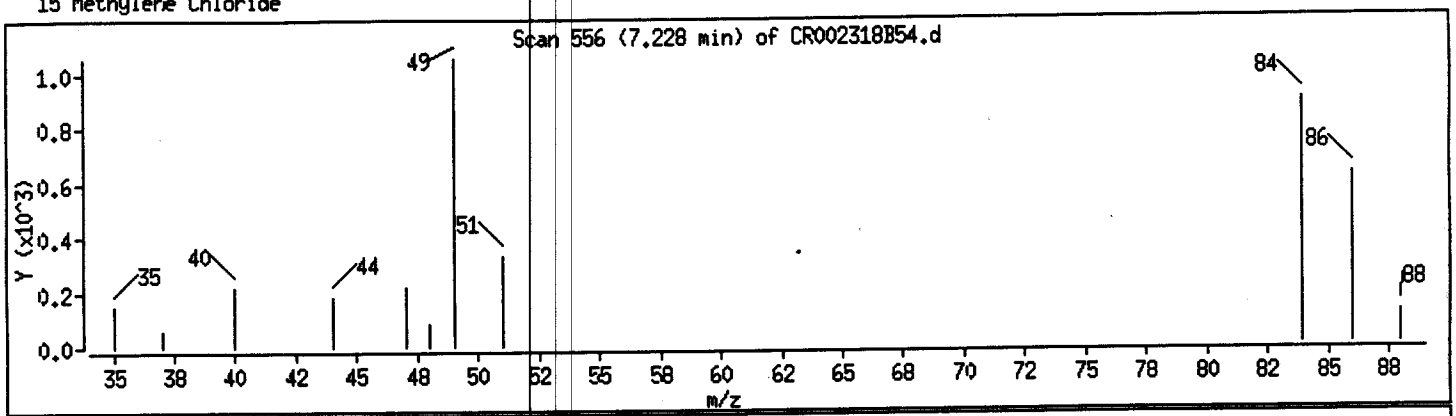
Purge Volume: 5.0

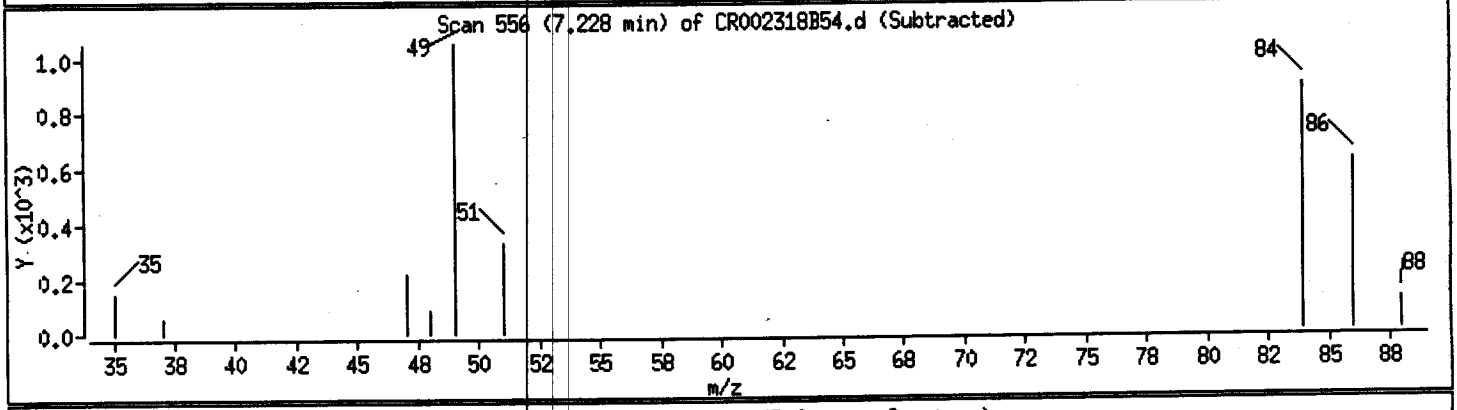
Operator: 1948

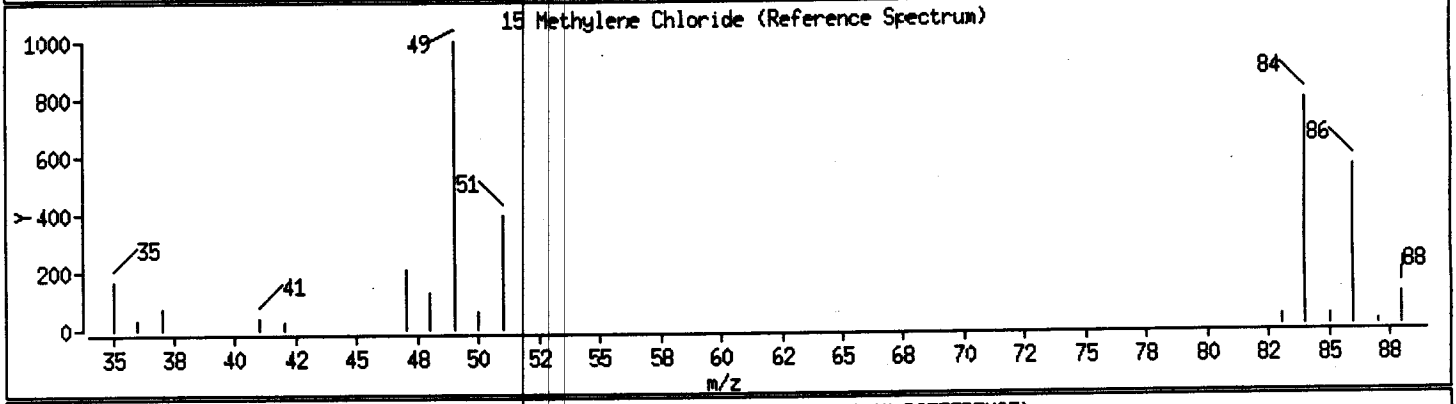
Column phase: DB624

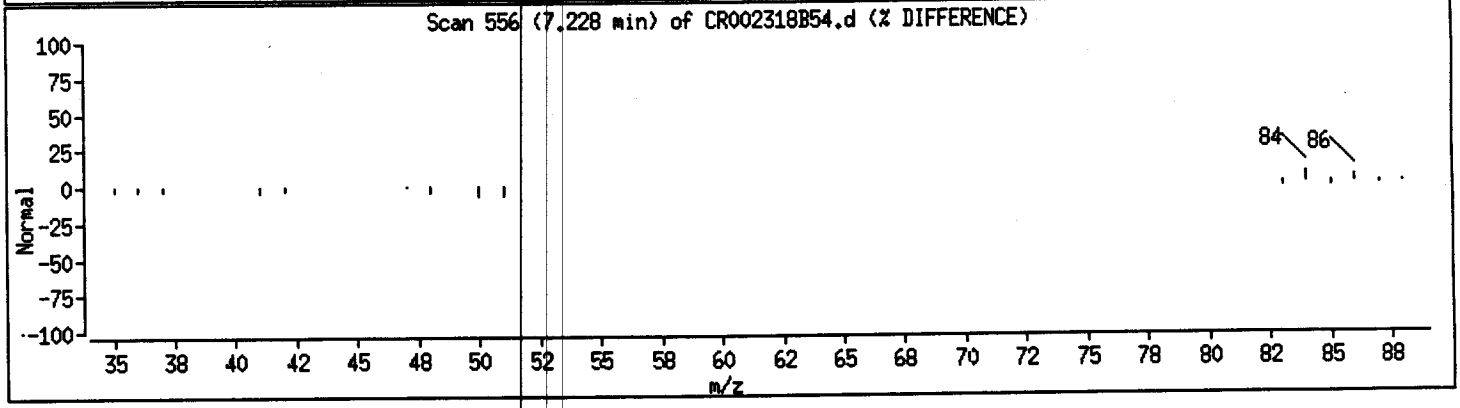
Column diameter: 0.53

15 Methylene Chloride









Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d

Date : 25-APR-1995 04:35

Client ID: MW10

Instrument: f50054.i

Sample Info:

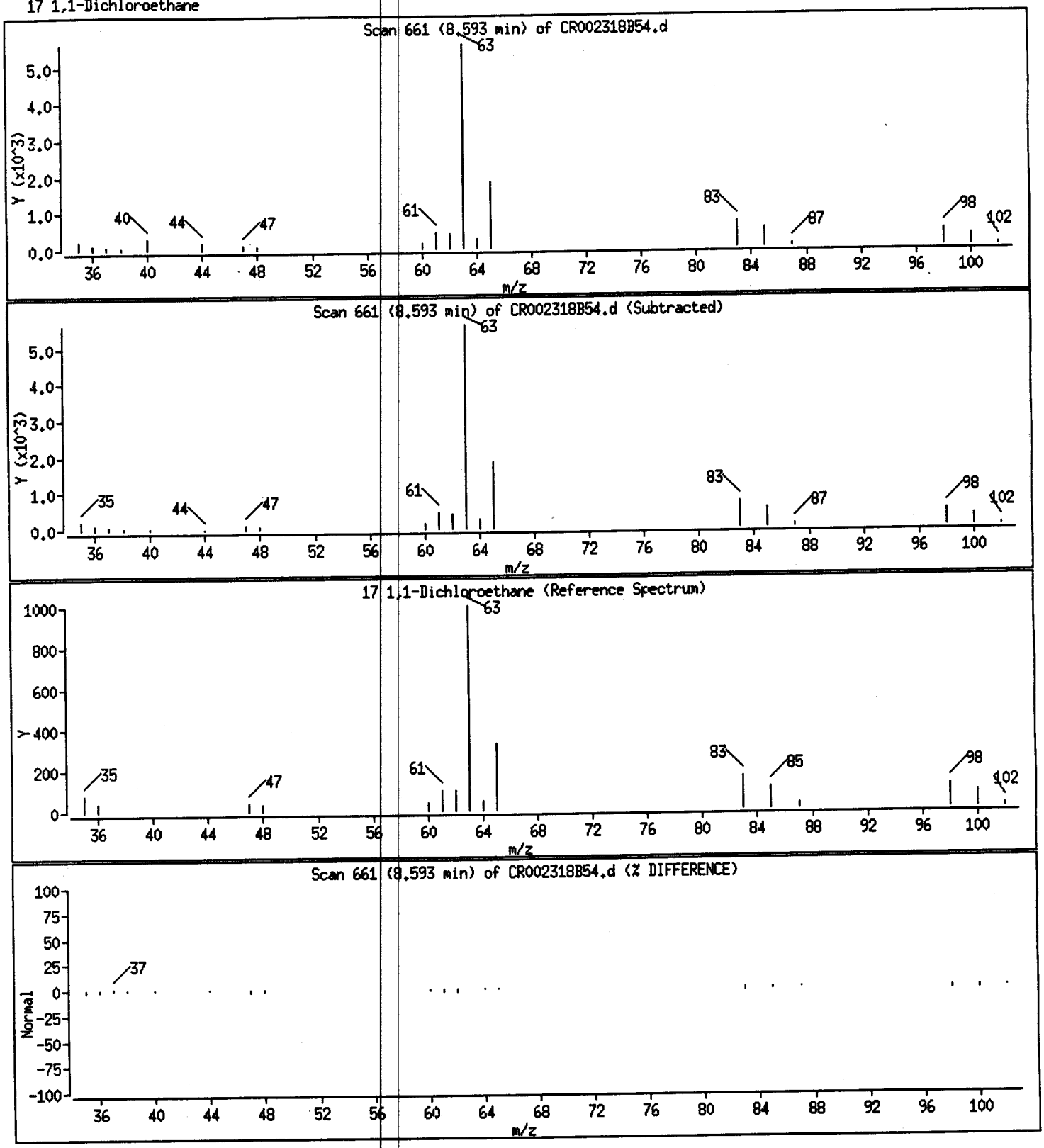
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d

Date : 25-APR-1995 04:35

Client ID: MW10

Instrument: f50054.i

Sample Info:

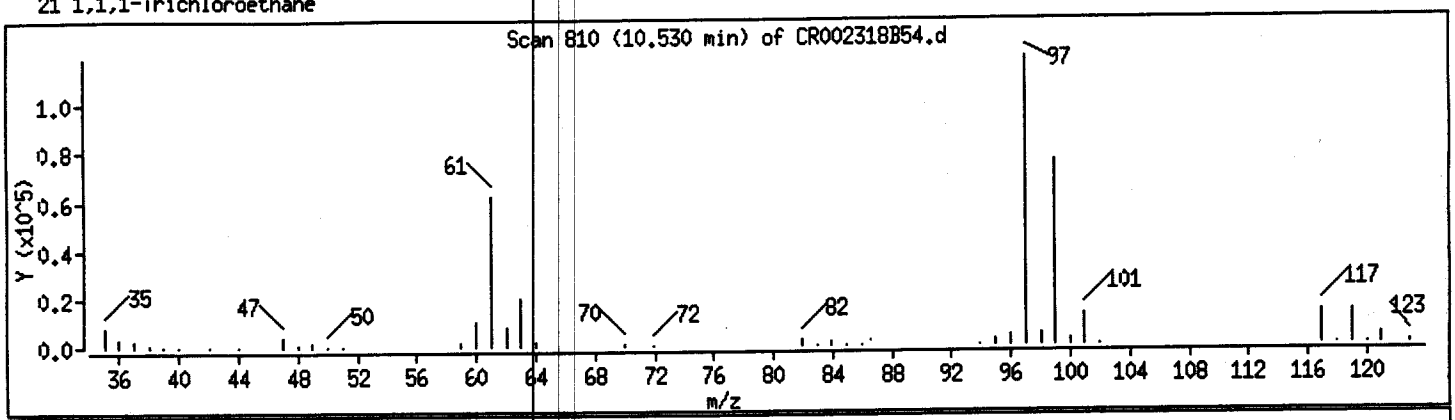
Purge Volume: 5.0

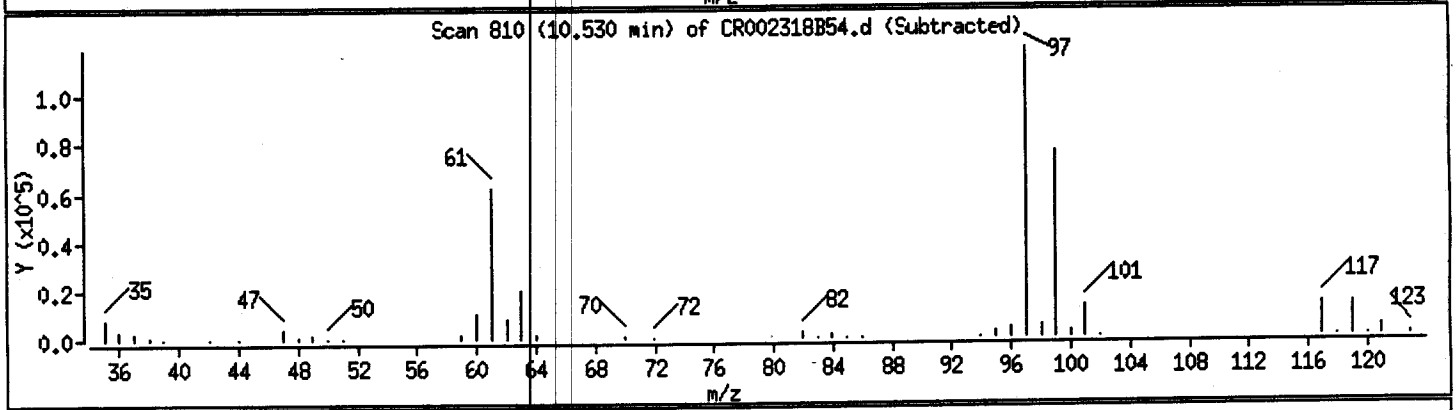
Operator: 1948

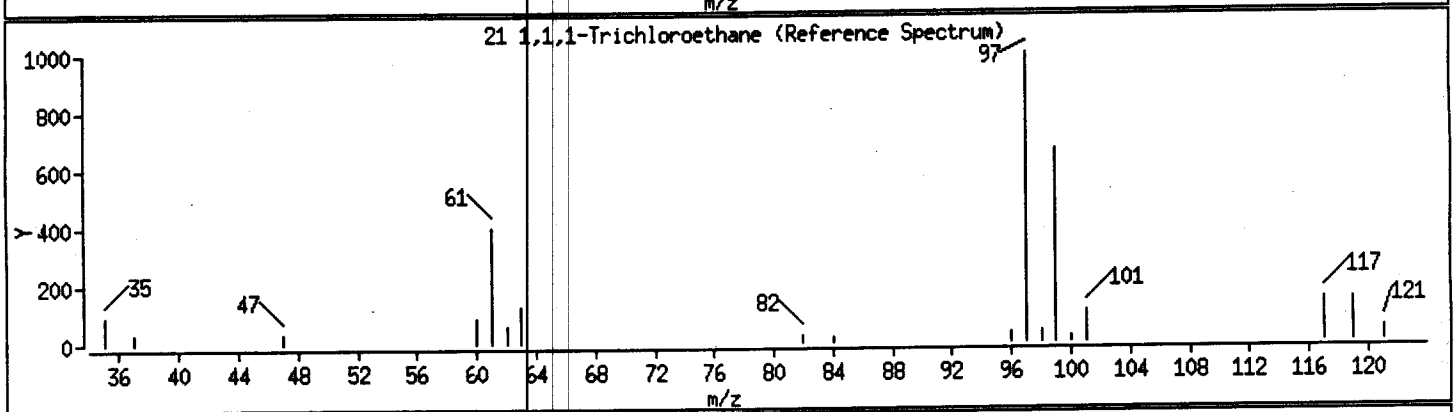
Column phase: DB624

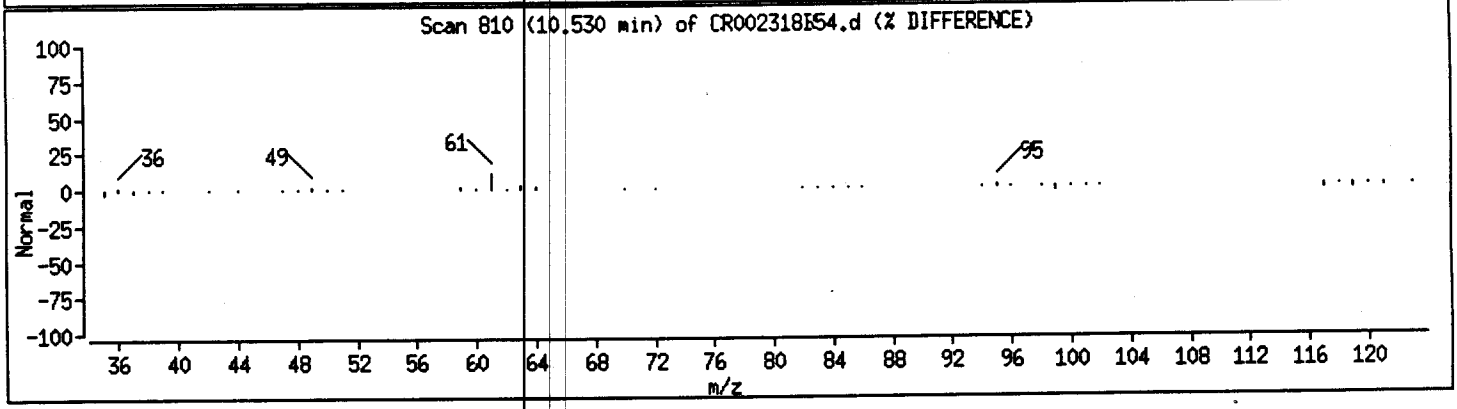
Column diameter: 0.53

21 1,1,1-Trichloroethane









Data File: /chem/f50054.i/BF950424B54.b/CR002318B54.d

Date : 25-APR-1995 04:35

Client ID: MW10

Instrument: f50054.i

Sample Info:

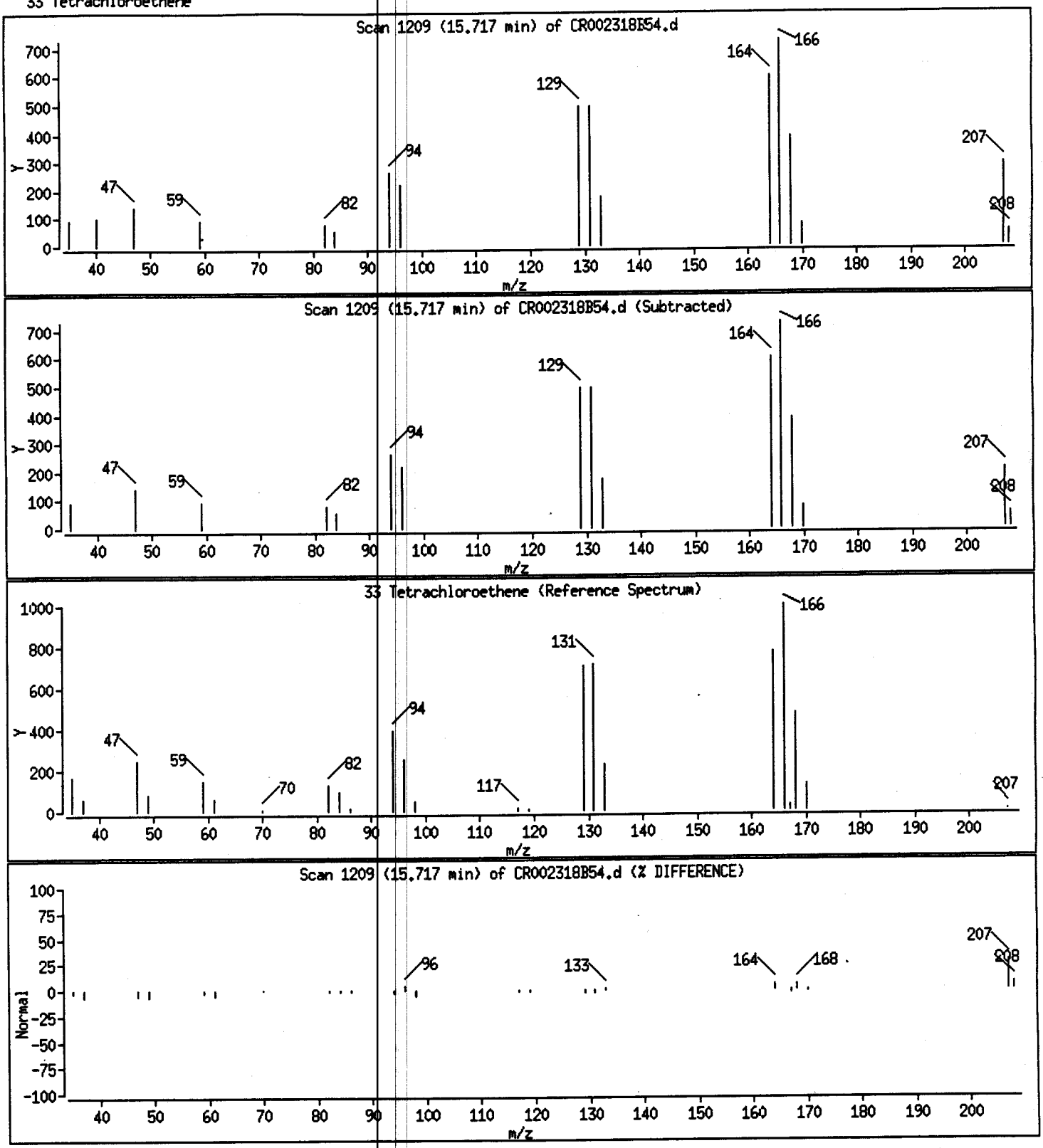
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

33 Tetrachloroethene



LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

==========

702318: 1948: 1:

==========

GC/MS ANALYSIS 700ul v 4/25/95
AMOUNT PURGED: ~~0. 0~~
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CR002318B54

ANALYST(S): INJECTION 1948 V A Smith WORKUP 1948 V A Smith

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE DA ~~JA~~ SWB 4/25/95

DISPOSITION: [✓] COMPLETE
[ ] REINJECT NEAT
[ ] DILUTE ( )

INTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 1

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SL DATE 4/26/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702322

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002322B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702322

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002322B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW11

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702322

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002322B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.90	1800	J
2.					
3.					
4.					
5.					
6.					
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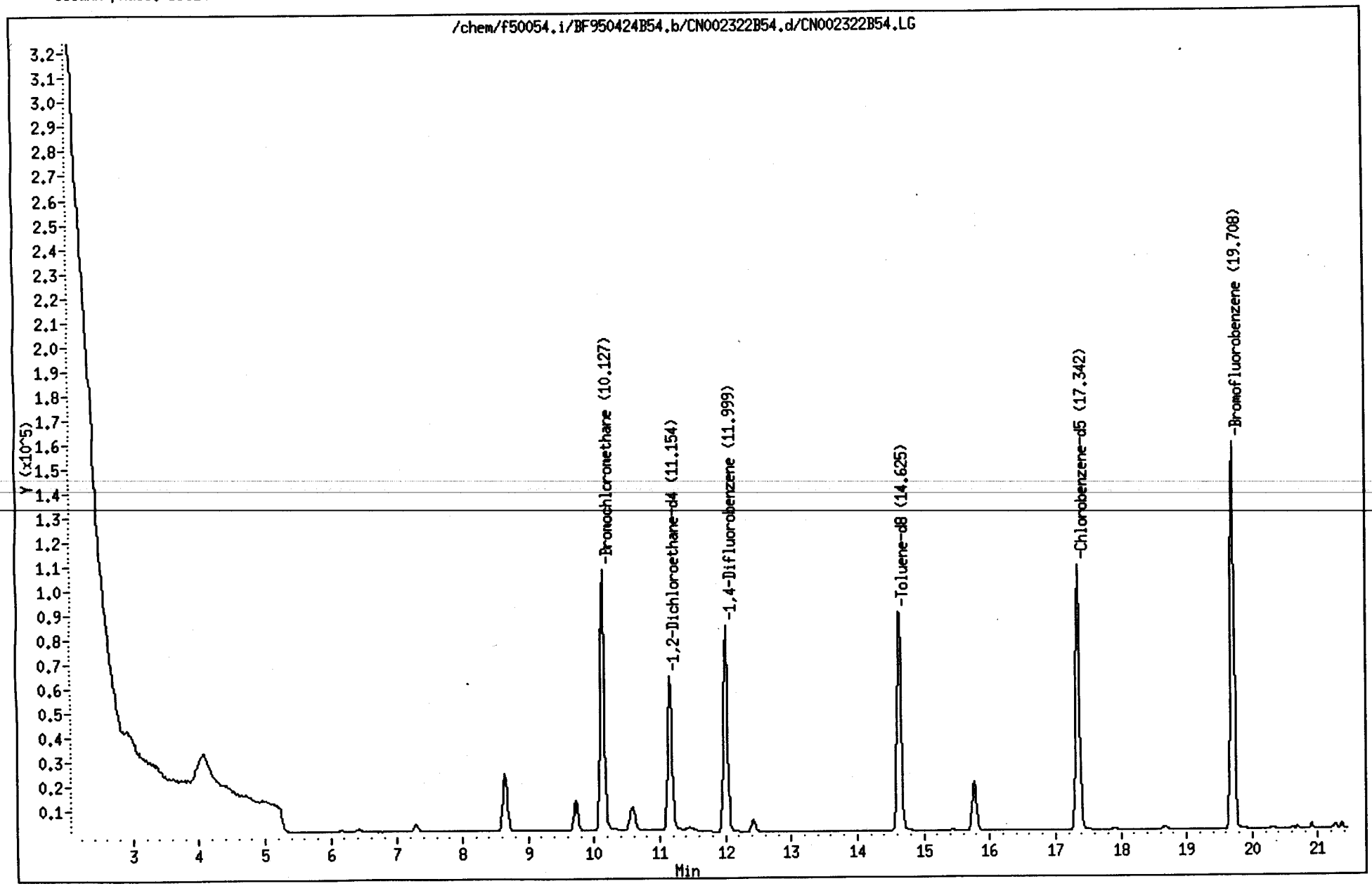
28.					
29.					
30.					

Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d
Date : 25-APR-1995 01:10
Client ID: MW11
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d
Report Date: 28-Apr-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002322B54.d
Lab Smp Id: 702322 Client Smp ID: MW11
Inj Date : 25-APR-1995 01:10
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	10.127	10.140	(1.000)	55610	250.0	
* 2 1,4-Difluorobenzene	114.00	11.999	12.012	(1.000)	174280	250.0	
* 3 Chlorobenzene-d5	117.00	17.342	17.368	(1.000)	167432	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	11.154	11.167	(1.101)	106235	226.7	45.35
$ 5 Toluene-d8	98.00	14.625	14.651	(0.843)	152348	246.3	49.27
$ 6 Bromofluorobenzene	95.00	19.708	19.734	(1.136)	135032	243.1	48.62
7 Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
8 Chloromethane	50.00		2.873	Compound Not Detected.			
9 Vinyl Chloride	62.00		3.185	Compound Not Detected.			
10 Bromomethane	94.00		4.004	Compound Not Detected.			
11 Chloroethane	64.00		4.290	Compound Not Detected.			
12 1,1-Dichloroethene	96.00		6.175	Compound Not Detected.			
13 Acetone	43.00		6.422	Compound Not Detected.			
14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
15 Methylene Chloride	84.00	7.280	7.293	(0.719)	3276	10.68	2.14(a)
16 trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
17 1,1-Dichloroethane	63.00	8.645	8.658	(0.854)	56893	89.75	17.95
18 cis-1,2-Dichloroethene	96.00	9.724	9.737	(0.960)	11508	29.47	5.89(a)
19 2-Butanone	43.00		9.854	Compound Not Detected.			
20 Chloroform	83.00		10.348	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00	10.582	10.595	(0.882)	16805	22.77	4.55(a)
22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
23 Benzene	78.00		11.245	Compound Not Detected.			

TABLE OF CONTENTS

VOLUME II

SECTION I	-	**CLP METALS**
Section 1.1	-	CLP Metals Reporting Qualifiers
Section 1.2	-	DAA Metals Validation Forms
Section 1.3	-	Revisions to Original Data Set
Section 1.4	-	CLP Metals Analytical Data
SECTION II	-	**CLP VOLATILES**
Section 2.1	-	CLP Volatiles Reporting Qualifiers
Section 2.2	-	DAA CLP Volatiles Data Validation Forms
Section 2.3	-	Revisions to Original Data Set
Section 2.4	-	CLP Volatiles Analytical Data

CA original

April 17, 1995

Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060

ATTN: Janet Cleary

RE: IMPORTANT NOTICE - SAMPLE ANALYSIS ACKNOWLEDGMENT
LETTER OF RECEIPT

Thank you for selecting CompuChem Environmental Corporation for your analytical service needs. Would you please take a few moments to review the important documentation attached?

Enclosed is information pertaining to sample(s) just received from your firm. The attached listing provides a cross-reference between your sample I.D. and CompuChem's laboratory number. The listing also indicates the analysis that has been scheduled to be performed on your sample(s).

Please! If the attached listing does not completely or accurately reflect the analyses you want CompuChem to perform, it is essential that you contact one of the Project Management representatives immediately so we may correct your order.

Any discrepancy noted should be made known to CompuChem by FAX'ed transmission without delay! This will allow your order to be reviewed and corrected, thereby ensuring timely receipt of the analytical reports you require. Your original Chain-of-Custody document(s) will be mailed under a separate cover within a week of the date of this correspondence.

Your time and assistance in helping us to ensure the accuracy and completeness of your order is much appreciated!

FAX number for Inquiries or Corrective Actions

(919) 406-1686

Sincerely,

Marlene Swift (919) 406-1626
Cathy Dover (919) 406-1627
Mickey Cartagena (919) 406-1628

Project Management Representatives
CompuChem Environmental Corporation
(800) 833-5097

Draper Aden Associates
ATTN: Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

RECEIVE DATE: 4/11/95
QUOTE NUMBER: 94-00055000000500672
ORDER NUMBER: 30458

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
TBLANK2	28	Metals CLP 3-90 (No CN) Water	703396

** Please note that turnaround time and sample due dates will be, whenever applicable, calculated and determined by the last sample received in a Sample Delivery Group.

Draper Aden Associates
ATTN: Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

RECEIVE DATE: 4/14/95
QUOTE NUMBER: 94-00055000000500672
ORDER NUMBER: 30458

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
MW12	28	Voa CLP 3-90 Water	703381
		Metals CLP 3-90 (No CN) Water	703393
MW14	28	Voa CLP 3-90 Water	703380
		Metals CLP 3-90 (No CN) Water	703392
MW15	28	Voa CLP 3-90 Water	703382
		Metals CLP 3-90 (No CN) Water	703394
MW16	28	Voa CLP 3-90 Water	703377
		Metals CLP 3-90 (No CN) Water	703386
MW18	28	Voa CLP 3-90 Water	703383
		Metals CLP 3-90 (No CN) Water	703395
MW2	28	Voa CLP 3-90 Water	703379
		Metals CLP 3-90 (No CN) Water	703391
MW4	28	Voa CLP 3-90 Water	703378
		Metals CLP 3-90 (No CN) Water	703390
MW9	28	Voa CLP 3-90 Water	703373
		Metals CLP 3-90 (No CN) Water	703385
TBLANK2	28	Voa CLP 3-90 Water	703384

** Please note that turnaround time and sample due dates will be, whenever applicable, calculated and determined by the last sample received in a Sample Delivery Group.

Jeff ASAP — Wesday AM

Please review ~~check it~~ this check in form. for Watauga. Also see me before you start for some special instructions

Janet
4/17/95

April 17, 1995

Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060

ATTN: Janet Cleary

RE: IMPORTANT NOTICE - SAMPLE ANALYSIS ACKNOWLEDGMENT
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Thank you for selecting CompuChem Environmental Corporation for your analytical service needs. Would you please take a few moments to review the important documentation attached?

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Project Management Representatives
CompuChem Environmental Corporation
(800) 833-5097

Draper Aden Associates
ATTN: Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

RECEIVE DATE: 4/11/95
QUOTE NUMBER: 94-00055000000500672
ORDER NUMBER: 30458

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
TBLANK2	28	Metals CLP 3-90 (No CN) Water	703396

** Please note that turnaround time and sample due dates will be, whenever applicable, calculated and determined by the last sample received in a Sample Delivery Group.

Draper Aden Associates
ATTN: Janet Cleary
2206 South Main Street
Blacksburg, VA 24060

RECEIVE DATE: 4/14/95
QUOTE NUMBER: 94-00055000000500672
ORDER NUMBER: 30458

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
MW12	28	Voa CLP 3-90 Water	703381
		Metals CLP 3-90 (No CN) Water	703393
MW14	28	Voa CLP 3-90 Water	703380
		Metals CLP 3-90 (No CN) Water	703392
MW15	28	Voa CLP 3-90 Water	703382
		Metals CLP 3-90 (No CN) Water	703394
MW16	28	Voa CLP 3-90 Water	703377
		Metals CLP 3-90 (No CN) Water	703386
MW18	28	Voa CLP 3-90 Water	703383
		Metals CLP 3-90 (No CN) Water	703395
MW2	28	Voa CLP 3-90 Water	703379
		Metals CLP 3-90 (No CN) Water	703391
MW4	28	Voa CLP 3-90 Water	703378
		Metals CLP 3-90 (No CN) Water	703390
MW9	28	Voa CLP 3-90 Water	703373
		Metals CLP 3-90 (No CN) Water	703385
TBLANK2	28	Voa CLP 3-90 Water	703384

** Please note that turnaround time and sample due dates will be, whenever applicable, calculated and determined by the last sample received in a Sample Delivery Group.

COMPUCHEM
ENVIRONMENTAL
CORPORATION

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

29/APR/95

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

ACCOUNT #: 500672

CC#	SAMPLE-ID	RECEIPT DATE
703385	MW9	4/14/95
703386	MW16	4/14/95
703390	MW4	4/14/95
703391	MW2	4/14/95
703392	MW14	4/14/95
703393	MW12	4/14/95
703394	MW15	4/14/95
703395	MW18	4/14/95
703396	TBLANK2	4/11/95

TOTAL NUMBER OF SAMPLES = 9

COMPUCHEM
ENVIRONMENTAL
CORPORATION

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

ORIGINAL

29/APR/95

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

Subject: Report of Data - Account Number# 500672 Order# 30458

Attn: Ms. Janet Cleary

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

This report covers 9 sample(s) appearing on the attached listing.

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

Sincerely,

Report Preparation
CompuChem Laboratories, Inc.

Attachment

COMPUCHEM
ENVIRONMENTAL
CORPORATION

ORIGINAL

INORGANIC CASE SUMMARY NARRATIVE
CASE # 50067 SDG # 04582M
CONTRACT # ILM03.0

The indicated Sample Delivery Group (SDG) consisting of nine water samples was received into the laboratory management system (LMS) on April 14, 1995 intact and in good condition with Chain of Custody (COC) Records in order. The samples were analyzed, in accordance with EPA CLP Statement of Work (SOW) ILM03.0 for barium, cadmium, iron, and mercury.

This SDG package was processed using the Ward Scientific software. This software package has a seven character limitation on the Form 13, and an eight character limitation on the Form 14 -- any sample ID's which exceed the character limitations are truncated from left to right on these forms.

SAMPLE IDs:

The following customer IDs are associated with this SDG:

MW12, MW14, MW15, MW16, MW18, MW2, MW4, MW9, TBLANK2

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, CCB) and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within EPA CLP allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCS & PB) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spike, MW9S, was found to be outside CLP control limits for barium, cadmium, iron, and mercury. The reported concentrations for these analytes are flagged with an "N" on all associated Form 1 and on Form 5a.

An "N" indicates a matrix-related interference in the sample preparation procedure &/or analysis for the flagged analyte. This is normally the consequence of a relatively high anionic content in the sample or (for some sediments) an inconsistent sample matrix relative to that analyte.

CLP control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more; in this case affected analytes are not flagged even if recoveries fall outside percentage recovery control limits.

Post-digestion spikes are mandatory for analytes demonstrating unsatisfactory matrix spike recoveries during ICP analysis (excluding silver). The results of such spikes are presented on Form 5b.

Unsatisfactory recovery of post-digestion spikes of this type do not have bearing upon the aforementioned "N" flags, but may indicate interference during analysis &/or a solution matrix which is hostile to the analyte in question.

Satisfactory recovery of an analyte in a post-preparation spike of this type implies interference by the required preparation procedure or in the sample matrix itself. Lack of uniformity for an analyte in sediments will also result in satisfactory recovery of post-digestion spikes after failure in the related matrix spike.

The sample matrix duplicate, MW9D, was within CLP control limits for all requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, MW9L, was performed in accordance with CLP requirements for ICP analysis. The adjusted sample concentrations were

outside of CLP control limits for barium, resulting in the application of an "E" flag on all associated Form 1, the Cover Page and Form 9.

An "E" indicates that a chemical or physical interference effect was encountered during the analysis of the flagged analyte. As a result of this interference, all values for the analyte in the same matrix must be considered to be estimated quantities.

CLP control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution-adjusted concentrations from the original values for all analyte concentrations with values greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

Release of the data contained in this hard copy data package has been authorized by the laboratory Manager or his designee, as verified by the following signature.

Jeanne Alston
Final Technical Reviewer
April 29, 1995

Note: This report is paginated for reference and accountability.

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067 SAS No.: _____ SDG No.:04582M

SOW No.: ILM03.0

EPA Sample No.	Lab Sample ID
_MW12_____	__703393_____
_MW14_____	__703392_____
_MW15_____	__703394_____
_MW16_____	__703386_____
_MW18_____	__703395_____
_MW2_____	__703391_____
_MW4_____	__703390_____
_MW9_____	__703385_____
_MW9D_____	__703388_____
_MW9S_____	__703387_____
_TBLANK2_____	__703396_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

_____

_____

_____

_____

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

Signature: Joanne C. Alston for Name: Mark Ross

Date: Apr. 28, 1995 Title: Inorganic Div. Manager

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW12

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703393

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	97.7	B	E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	54.4	B		P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW14

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703392

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	16.4	B	E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	40.8	B		P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW15

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703394

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	78.4	B	E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	490			P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW16

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703386

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	70.3	B	E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	331			P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW18

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703395

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	83.0	B	E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	40.8	B		P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW2

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703391

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	212		E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	245			P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW4

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703390

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	23.2	B	E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	54.4	B		P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW9

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703385

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	628		E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	81.7	B		P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

Duplicate_(MW9D)

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TBLANK2

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Lab Sample ID: 703396

Level (low/med): LOW__ Date Received: 04/14/95

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	0.80	U	E	P
7440-43-9	Cadmium	4.4	U	N	P
7439-89-6	Iron	27.2	B		P
7439-97-6	Mercury	0.20	U		CV

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Barium	2009.0	1976.30	98.4	5000.0	4948.30	99.0	4900.40	98.0	P
Cadmium	510.0	477.72	93.7	5000.0	4692.70	93.9	4673.40	93.5	P
Iron	1985.0	1928.30	97.1	5000.0	4818.50	96.4	4841.20	96.8	P
Mercury	4.9	5.43	110.8	3.0	3.10	103.3	2.99	99.7	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Barium				5000.0	4880.30	97.6			P
Cadmium				5000.0	4668.80	93.4			P
Iron				5000.0	4791.30	95.8			P
Mercury				3.0	2.91	97.0	2.94	98.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Barium									NR
Cadmium									NR
Iron									NR
Mercury				3.0	2.98	99.3	3.06	102.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Barium									NR
Cadmium									NR
Iron									NR
Mercury				3.0	3.11	103.7			CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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2B
CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

AA CRDL Standard Source: SPEX_____

ICP CRDL Standard Source: SPEX_____

Concentration Units: ug/L

	CRDL Standard for AA			CRDL Standard for ICP				
					Initial			Final
Analyte	True	Found	%R	True	Found	%R	Found	%R
Barium								
Cadmium				10.0	8.88	88.8	7.15	71.5
Iron								
Mercury	0.2	0.16	80.0					

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3
BLANKS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Barium	0.8	U	0.8	U	0.9	B	0.9	B	0.859	B	P
Cadmium	4.4	U	4.4	U	4.4	U	4.4	U	4.400	U	P
Iron	5.9	U	5.9	U	5.9	U	5.9	U	31.760	B	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.200	U	CV

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3
BLANKS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Barium											NR
Cadmium											NR
Iron											NR
Mercury			0.2	U	0.2	U	0.2	U			CV

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3
BLANKS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Barium											NR
Cadmium											NR
Iron											NR
Mercury			0.2	U							CV

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No: _____ SDG No.: 04582M

ICP ID Number: ICP2_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Barium	0	485	3	468.5	96.6	3	469.7	96.8
Cadmium	0	899	0	907.2	100.9	4	889.7	99.0
Iron	190704	191319	176010	176200.0	92.1	175770	175390.0	91.7
Mercury								

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MW9S

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER_ Level (low/med): LOW___

% Solids for Sample: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Barium	75-125	2545.4000		628.3400		2000.00	95.9		P
Cadmium	75-125	36.1090		4.4000	U	50.00	72.2	N	P
Iron	75-125	1025.4000		81.6700	B	1000.00	94.4		P
Mercury	75-125	0.9560		0.2000	U	1.00	95.6		CV

Comments:

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5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MW9A

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water) : WATER_ Level (low/med): LOW___

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Barium									NR
Cadmium									NR
Iron									NR
Mercury									NR

Comments:

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6
DUPLICATES

EPA SAMPLE NO.

MW9D

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Level (low/med): _LOW__

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Barium	200.0	628.3400		619.6200		1.4		P
Cadmium		4.4000	U	4.4000	U			P
Iron		81.6700	B	54.4460	B	40.0		P
Mercury		0.2000	U	0.2000	U			CV

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7

LABORATORY CONTROL SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Solid LCS Source: _____

Aqueous LCS Source: PELMER_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Barium	20000.0	18852.00	94.3						
Cadmium	500.0	444.56	88.9						
Iron	10000.0	9147.00	91.5						
Mercury									

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8

STANDARD ADDITION RESULTS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract:ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.:______ SDG No.:04582M

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD		2 ADD		3 ADD		Final Conc.	r	Q
			CON	ABS	CON	ABS	CON	ABS			

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9

ICP SERIAL DILUTION

EPA SAMPLE NO.

MW9L

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

Matrix (soil/water): WATER Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Barium	628.34		959.80	B	52.8	E	P
Cadmium	4.40	U	22.00	U			P
Iron	81.67	B	204.18	B	150.0		P
Mercury							NR

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10
Instrument Detection Limits (Quarterly)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

ICP ID Number: ICP2_____ Date: 04/15/95

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Barium	493.40		200	0.8	P
Cadmium	228.80		5	4.4	P
Iron	259.90		100	5.9	P
Mercury			0.2		NR

Comments:

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10

Instrument Detection Limits (Quarterly)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

ICP ID Number: _____ Date: 04/15/95

Flame AA ID Number : V2_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Barium			200		NR
Cadmium			5		NR
Iron			100		NR
Mercury	253.70		0.2	0.2	CV

Comments:

U.S. EPA - CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

ICP ID Number: ICP2_____ Date: 01/15/95

Analyte	Wavelength (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	AS_
Barium	493.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0090650
Iron	259.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury						

Comments:

U.S. EPA - CLP

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

ICP ID Number: ICP2_____ Date: 01/15/95

Analyte	Wavelength (nm)	Interelement Correction Factors for : BE_	CO_	CR_	CU_	MN_
Barium	493.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0060060	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury						

Comments:

U.S. EPA - CLP

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

ICP ID Number: ICP2_____ Date: 01/15/95

Analyte	Wavelength (nm)	Interelement Correction Factors for : NI_	V__	___	___	___
Barium	493.40	0.0000000	0.0000000			
Cadmium	228.80	-0.0008090	0.0000000			
Iron	259.90	0.0000000	0.0000000			
Mercury						

Comments:

U.S. EPA - CLP

12
ICP LINEAR RANGES (QUARTERLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.: 04582M

ICP ID Number: ICP2_____ Date: 04/15/95

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Barium	7.00	75000.0	P
Cadmium	7.00	100000.0	P
Iron	7.00	250000.0	P
Mercury			NR

Comments:

U.S. EPA - CLP

13
PREPARATION LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.:04582M

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW	04/21/95		100
MW12	04/21/95		100
MW14	04/21/95		100
MW15	04/21/95		100
MW16	04/21/95		100
MW18	04/21/95		100
MW2	04/21/95		100
MW4	04/21/95		100
MW9	04/21/95		100
MW9D	04/21/95		100
MW9S	04/21/95		100
PBW	04/21/95		100
TBLANK2	04/21/95		100

U.S. EPA - CLP

13
PREPARATION LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.:_50067_ SAS No.: _____ SDG No.:04582M

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW	04/21/95		100
MW12	04/21/95		100
MW14	04/21/95		100
MW15	04/21/95		100
MW16	04/21/95		100
MW18	04/21/95		100
MW2	04/21/95		100
MW4	04/21/95		100
MW9	04/21/95		100
MW9D	04/21/95		100
MW9S	04/21/95		100
PBW	04/21/95		100
TBLANK2	04/21/95		100

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.:04582M

Instrument ID Number: ICP2_____ Method: P_

Start Date: 04/27/95 End Date: 04/27/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				B A	C D	F E	H G																				
S0	1.00	0151		X	X	X																					
S	1.00	0154			X																						
S	1.00	0158																									
S	1.00	0205		X		X																					
S	1.00	0208																									
ICV	1.00	0209		X	X	X																					
ICV	1.00	0212																									
ICV	1.00	0215																									
ICB	1.00	0219		X	X	X																					
ICSA	1.00	0222		X	X	X																					
ICSAB	1.00	0226		X	X	X																					
CRI	1.00	0229			X																						
CCV	1.00	0232		X	X	X																					
CCB	1.00	0236		X	X	X																					
PBW	1.00	0239		X	X	X																					
LCSW	1.00	0242		X	X	X																					
MW9	1.00	0246		X	X	X																					
MW9D	1.00	0249		X	X	X																					
MW9S	1.00	0253		X	X	X																					
MW9L	4.00	0256		X	X	X																					
MW16	1.00	0300		X	X	X																					
MW4	1.00	0303		X	X	X																					
CCV	1.00	0306		X	X	X																					
CCB	1.00	0310		X	X	X																					
MW2	1.00	0313		X	X	X																					
MW14	1.00	0316		X	X	X																					
MW12	1.00	0320		X	X	X																					
MW15	1.00	0323		X	X	X																					
MW18	1.00	0327		X	X	X																					
TBLANK2	1.00	0330		X	X	X																					
MW9A	1.00	0333			X																						
CRI	1.00	0337			X																						

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.:04582M

Instrument ID Number: ICP2_____ Method: P_

Start Date: 04/27/95 End Date: 04/27/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				BA	CD	FE	HG																				
ICSA	1.00	0340		X	X	X																					
ICSAB	1.00	0344		X	X	X																					
CCV	1.00	0347		X	X	X																					
CCB	1.00	0350		X	X	X																					

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.:04582M

Instrument ID Number: V2_____ Method: CV

Start Date: 04/21/95 End Date: 04/21/95

EPA Sample No.	D/F	Time	% R	Analytes																									
				BA	CD	FE	HG																						
S0	1.00	1510					X																						
S0.5	1.00	1513					X																						
S1	1.00	1515					X																						
S3	1.00	1517					X																						
S5	1.00	1520					X																						
S10	1.00	1522					X																						
ICV	1.00	1525					X																						
ICB	1.00	1527					X																						
CRA	1.00	1530					X																						
CCV	1.00	1532					X																						
CCB	1.00	1534					X																						
ZZZZZZ	1.00	1537																											
ZZZZZZ	1.00	1539																											
PBW	1.00	1541					X																						
ZZZZZZ	1.00	1544																											
MW9	1.00	1546					X																						
MW9D	1.00	1548					X																						
MW9S	1.00	1551					X																						
MW16	1.00	1553					X																						
MW4	1.00	1555					X																						
MW2	1.00	1558					X																						
CCV	1.00	1600					X																						
CCB	1.00	1602					X																						
MW14	1.00	1605					X																						
MW12	1.00	1607					X																						
MW15	1.00	1609					X																						
MW18	1.00	1612					X																						
TBLANK2	1.00	1614					X																						
ZZZZZZ	1.00	1616																											
ZZZZZZ	1.00	1619																											
ZZZZZZ	1.00	1621																											
ZZZZZZ	1.00	1623																											

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.:04582M

Instrument ID Number: V2_____ Method: CV

Start Date: 04/21/95 End Date: 04/21/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				BA	CD	FE	HG																				
ZZZZZZ	1.00	1626																									
CCV	1.00	1628					X																				
CCB	1.00	1630					X																				
ZZZZZZ	1.00	1633																									
ZZZZZZ	1.00	1635																									
ZZZZZZ	1.00	1637																									
ZZZZZZ	1.00	1640																									
ZZZZZZ	1.00	1642																									
ZZZZZZ	1.00	1644																									
ZZZZZZ	1.00	1646																									
ZZZZZZ	1.00	1649																									
ZZZZZZ	1.00	1651																									
ZZZZZZ	1.00	1653																									
CCV	1.00	1656					X																				
CCB	1.00	1658					X																				
ZZZZZZ	1.00	1700																									
ZZZZZZ	1.00	1703																									
ZZZZZZ	1.00	1705																									
ZZZZZZ	1.00	1707																									
ZZZZZZ	1.00	1710																									
ZZZZZZ	1.00	1712																									
ZZZZZZ	1.00	1714																									
ZZZZZZ	1.00	1716																									
ZZZZZZ	1.00	1719																									
ZZZZZZ	1.00	1721																									
CCV	1.00	1723					X																				
CCB	1.00	1726					X																				
ZZZZZZ	1.00	1728																									
ZZZZZZ	1.00	1730																									
ZZZZZZ	1.00	1733																									
ZZZZZZ	1.00	1735																									
ZZZZZZ	1.00	1737																									

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: ILM03.0___

Lab Code: COMPU_ Case No.: 50067_ SAS No.: _____ SDG No.:04582M

Instrument ID Number: V2_____ Method: CV

Start Date: 04/21/95 End Date: 04/21/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				BA	CD	FE	HG																				
ZZZZZZ	1.00	1740																									
ZZZZZZ	1.00	1742																									
ZZZZZZ	1.00	1744																									
ZZZZZZ	1.00	1747																									
ZZZZZZ	1.00	1749																									
CCV	1.00	1751					X																				
CCB	1.00	1754					X																				
CCV	1.00	1756					X																				
CCB	1.00	1758					X																				

ICAP Runlog

Page 1 of 1
Date 4-27-95

Method (circle one):

CLP 200.7
SW-846 6010

Operator Brian Johnson
Case Name: 04582M
File Name: ~~BJ042701~~ BJ 4-27-95 P242705.WSL ~~BJ042602~~ BJ042602

#	Sample ID	Comments	Time	#	Sample ID	Comments	Time
	ICV			1	703391		
	ICB			2	703392		
1	ICSA			3	703393		
2	ICSAB			4	703394		
3	CRI			5	703395		
4				6	703396		
5				7	703385	PDS Cd@10ppb	
6				8	CRI		
7		BJ 4-27-95		9	ICSA		
8				10	ICSAB		
9					CCV		
10					CCB		
	CCV						
	CCB			1			
	705056	PBLS		2			
1	703389	LCSW		3			
2	703385			4			
3	703388	Dup		5		BJ 4-27-95	
4	703387	Spk	Cd PDS 2x CRI	6			
5	703385	Ser Dil 5X		7			
6	703386			8			
7	703390			9			
8				10			
9		BJ 4-27-95			CCV		
10					CCB		
	CCV						
	CCB						

#Samples
#Dilutions BJ 4-27-95

Instrument Hrs.
~~QC Samples~~ 7

Judy Chow 4/28/95 JCD

INORGANIC SDG 04582M

Standardization Rpt. Thu 04-27-95 01:51:21 AM page 1

Method: MRG Standard: BLANK

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Avge	.00700	.00010	.00205	.00011	.00162	.00014	.02043
SDev	.00450	.00030	.00095	.00022	.00008	.00025	.00316
%RSD	64.310	312.25	46.453	195.66	5.0943	173.21	15.464
#1	.00686	.00000	.00100	.00006	.00157	.00029	.01929
#2	.00257	-.00014	.00229	-.00008	.00157	.00029	.01800
#3	.01157	.00043	.00286	.00035	.00171	-.00014	.02400

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Avge	.00052	-.00014	.00029	.00000	.00000	.00200	.00000
SDev	.00044	.00038	.00000	.00000	.00057	.00080	.00087
%RSD	83.320	-264.58	.00000	.00000	.00000	39.770	4479e6
#1	.00043	.00014	.00029	.00000	.00057	.00129	-.00043
#2	.00014	-.00057	.00029	.00000	-.00057	.00186	-.00057
#3	.00100	.00000	.00029	.00000	.00000	.00286	.00100

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Avge	-.00013	-.01795	-.00057	.00105	.11405	.00038	.00005
SDev	.00124	.00429	.00000	.00084	.00157	.00008	.00022
%RSD	-930.83	-23.904	.00000	79.902	1.3741	21.651	458.26
#1	-.00129	-.02057	-.00057	.00071	.11229	.00029	-.00014
#2	-.00029	-.02029	-.00057	.00043	.11457	.00043	.00000
#3	.00117	-.01300	-.00057	.00200	.11529	.00043	.00029

Elem	Mo2020	Sn1899
Avge	.00000	.01929
SDev	.00043	.00029
%RSD	.00000	1.4815
#1	.00000	.01900
#2	-.00043	.01957
#3	.00043	.01929

INORGANIC SDG 04582M

Standardization Rpt. Thu 04-27-95 01:54:47 AM page 1

Method: MRG Standard: XCL11

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Avge	1.9778	.00176	.00667	.00048	.00162	1.2725	.01543
SDev	.0078	.00030	.00192	.00039	.00008	.0036	.00322
%RSD	.39379	16.878	28.776	81.764	5.0943	.28185	20.849
#1	1.9857	.00200	.00529	.00008	.00157	1.2691	.01171
#2	1.9701	.00186	.00886	.00086	.00171	1.2763	.01729
#3	1.9776	.00143	.00586	.00049	.00157	1.2721	.01729

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Avge	3.9261	.00114	2.1468	.00000	.72057	.00095	.00062
SDev	.0048	.00000	.0109	.00000	.00470	.00533	.00064
%RSD	.12194	.00000	.50614	.00000	.65244	559.71	104.06
#1	3.9309	.00114	2.1590	.00000	.72329	-.00500	.00000
#2	3.9213	.00114	2.1381	.00000	.71514	.00257	.00057
#3	3.9263	.00114	2.1433	.00000	.72329	.00529	.00129

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Avge	2.6218	-.02600	.13600	.23000	.12186	.00119	1.8317
SDev	.0032	.01201	.00178	.00071	.00645	.00073	.0051
%RSD	.12068	-46.177	1.3120	.31056	5.2911	61.579	.27728
#1	2.6181	-.03871	.13800	.23071	.11443	.00057	1.8357
#2	2.6237	-.02443	.13457	.23000	.12600	.00100	1.8260
#3	2.6236	-.01486	.13543	.22929	.12514	.00200	1.8334

Elem	Mo2020	Sn1899
Avge	-.00167	.02152
SDev	.00022	.00072
%RSD	-13.093	3.3406
#1	-.00186	.02086
#2	-.00143	.02229
#3	-.00171	.02143

INORGANIC SDG 04582M

Standardization Rpt. Thu 04-27-95 01:58:13 AM page 1

Method: MRG Standard: PLSB2

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Avge	.00843	.14586	.00105	.00028	.00171	.00000	.02210
SDev	.00268	.00141	.00151	.00019	.00014	.00014	.00369
%RSD	31.754	.96463	144.53	68.347	8.3333	.00000	16.677
#1	.00629	.14429	.00243	.00006	.00157	.00000	.01800
#2	.01143	.14700	-.00057	.00035	.00171	.00014	.02314
#3	.00757	.14629	.00129	.00043	.00186	-.00014	.02514

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Avge	.00086	.00033	.00014	.00000	-.00071	.00043	.00048
SDev	.00080	.00030	.00029	.00000	.00295	.00094	.00044
%RSD	92.796	89.214	200.00	.00000	-413.28	218.58	91.652
#1	.00000	.00057	.00014	.00000	.00200	.00029	.00000
#2	.00100	.00043	-.00014	.00000	-.00386	-.00043	.00086
#3	.00157	.00000	.00043	.00000	-.00029	.00143	.00057

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Avge	.00004	-.02181	-.00014	.00110	.11933	.00014	.00019
SDev	.00085	.00467	.00038	.00060	.00405	.00038	.00017
%RSD	2344.5	-21.390	-264.58	54.304	3.3951	264.58	86.603
#1	.00082	-.02429	-.00029	.00043	.11471	.00029	.00029
#2	-.00087	-.02471	-.00043	.00157	.12229	-.00029	.00000
#3	.00015	-.01643	.00029	.00129	.12100	.00043	.00029

Elem	Mo2020	Sn1899
Avge	-.00010	.01867
SDev	.00036	.00044
%RSD	-377.49	2.3380
#1	-.00043	.01914
#2	-.00014	.01857
#3	.00029	.01829

INORGANIC SDG 04582M

Standardization Rpt. Thu 04-27-95 02:05:27 AM page 1

Method: MRG Standard: XCL2

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Avge	.07324	.00157	.44167	7.4386	16.071	.01514	.04014
SDev	.00227	.00038	.00429	.1051	.181	.00000	.00125
%RSD	3.0985	24.052	.97053	1.4131	1.1288	.00000	3.1024
#1	.07200	.00171	.43743	7.3225	15.883	.01514	.04071
#2	.07586	.00186	.44600	7.4660	16.087	.01514	.04100
#3	.07186	.00114	.44157	7.5273	16.245	.01514	.03871

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Avge	-.00476	1.1463	.00148	.10495	-.00005	-.02438	15.543
SDev	.00064	.0107	.00058	.00125	.00272	.00431	.165
%RSD	-13.528	.93270	39.111	1.1892	-5710.5	-17.679	1.0626
#1	-.00414	1.1341	.00214	.10357	.00257	-.01943	15.357
#2	-.00471	1.1504	.00114	.10529	.00014	-.02729	15.601
#3	-.00543	1.1543	.00114	.10600	-.00286	-.02643	15.672

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Avge	-.00110	-.02100	-.00143	-.00038	.12276	2.3659	-.00200
SDev	.00084	.01082	.00076	.00044	.00216	.0238	.00000
%RSD	-76.762	-51.508	-52.915	-114.56	1.7623	1.0040	.00000
#1	-.00123	-.00857	-.00171	-.00029	.12429	2.3396	-.00200
#2	-.00020	-.02614	-.00057	.00000	.12371	2.3724	-.00200
#3	-.00187	-.02829	-.00200	-.00086	.12029	2.3857	-.00200

Elem	Mo2020	Sn1899
Avge	.42352	.02752
SDev	.00838	.00036
%RSD	1.9796	1.3062
#1	.41414	.02714
#2	.42614	.02757
#3	.43029	.02786

INORGANIC SDG 04582M

Standardization Rpt. Thu 04-27-95 02:08:55 AM page 1

Method: MRG Standard: XCL3A

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Avge	.00733	-.00014	-.00348	.00414	.00224	.00024	36.291
SDev	.00293	.00038	.00215	.00008	.00030	.00054	.246
%RSD	39.939	-264.58	-61.826	1.8965	13.287	227.16	.67748
#1	.00571	-.00057	-.00571	.00405	.00257	.00086	36.083
#2	.00557	.00000	-.00143	.00418	.00200	.00000	36.228
#3	.01071	.00014	-.00329	.00419	.00214	-.00014	36.563

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Avge	.00033	.00038	.00024	.00000	.00057	12.513	.00629
SDev	.00041	.00033	.00008	.00000	.00131	.064	.00029
%RSD	123.72	86.603	34.641	.00000	229.13	.51310	4.5455
#1	-.00014	.00057	.00029	.00000	.00171	12.470	.00600
#2	.00057	.00057	.00029	.00000	-.00086	12.482	.00629
#3	.00057	.00000	.00014	.00000	.00086	12.586	.00657

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Avge	-.00096	1.2974	-.00143	.00081	27.381	.00024	.00052
SDev	.00095	.0055	.00114	.00050	.107	.00030	.00017
%RSD	-98.801	.42659	-80.000	61.974	.39107	124.90	31.492
#1	-.00143	1.3016	-.00029	.00086	27.295	.00057	.00043
#2	-.00158	1.2911	-.00143	.00029	27.347	.00000	.00043
#3	.00013	1.2996	-.00257	.00129	27.501	.00014	.00071

Elem	Mo2020	Sn1899
Avge	.00190	.06490
SDev	.00122	.00122
%RSD	63.787	1.8719
#1	.00329	.06371
#2	.00143	.06614
#3	.00100	.06486

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:12:23 AM page 1

Method: MRG Sample Name: ICV1 Operator:
Run Time: 04/27/95 02:09:04
Comment: ICV ICV1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1891.7	-20.952	-86.438	1976.3	470.65	477.72	50543.
SDev	12.6	42.712	18.300	6.9	1.26	2.47	105.
%RSD	.66347	-203.85	-21.171	.34781	.26801	.51699	.20717
#1	1901.7	28.037	-66.757	1971.5	469.53	474.93	50424.
#2	1877.6	-50.385	-89.617	1984.2	472.02	479.62	50618.
#3	1895.8	-40.509	-102.94	1973.2	470.42	478.62	50589.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	457.54	514.89	461.65	1928.3	4689.2	24855.	483.03
SDev	1.38	10.60	.38	7.9	32.3	24.	.42
%RSD	.30111	2.0579	.08323	.40754	.68799	.09750	.08619
#1	458.51	504.51	461.21	1919.2	4714.3	24875.	482.60
#2	458.15	525.69	461.88	1932.8	4652.8	24862.	483.43
#3	455.97	514.48	461.88	1932.8	4700.4	24828.	483.07

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	450.03	49929.	-27.894	468.80	50196.	481.83	2880.3
SDev	6.84	284.	77.104	4.06	180.	1.83	11.8
%RSD	1.5199	.56902	-276.42	.86598	.35831	.37885	.41094
#1	445.78	49629.	31.381	469.01	50037.	479.83	2869.3
#2	457.92	49966.	-115.06	464.64	50391.	482.28	2892.8
#3	446.38	50194.	.00000	472.75	50159.	483.39	2878.7

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-5.6218	78947.
SDev	5.1524	2089.
%RSD	-91.652	2.6458
#1	-6.7461	79737.
#2	.00000	80526.
#3	-10.119	76579.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:15:46 AM page 1

Method: MRG Sample Name: ICV3 Operator:
Run Time: 04/27/95 02:12:29
Comment: ICV ICV3
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.986	1019.3	-3.4137	.52056	.05927	-1.0831	5.6454
SDev	12.737	48.3	9.9756	.23632	.00000	1.1838	8.3210
%RSD	106.27	4.7405	-292.22	45.397	.00000	-109.29	147.39
#1	25.226	963.74	5.2007	.76989	.05927	-1.1641	13.391
#2	10.913	1042.2	-14.343	.29987	.05927	.13907	6.6957
#3	-.18153	1051.8	-1.0985	.49192	.05927	-2.2243	-3.1509

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.72780	2.9038	1.5529	.00000	16.531	20.173	.30538
SDev	2.9414	1.9026	1.0166	.00000	43.149	21.066	.13941
%RSD	404.15	65.522	65.465	.00000	261.02	104.42	45.650
#1	-.97044	1.2437	2.6621	.00000	-.03032	43.392	.45749
#2	-.97044	4.9801	1.3311	.00000	65.508	14.845	.27495
#3	4.1243	2.4877	.66553	.00000	-15.884	2.2838	.18371

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.068	792.82	31.381	2.0799	39.294	1.8342	1.5319
SDev	3.099	548.47	63.627	2.0057	9.508	2.7584	.4482
%RSD	30.778	69.179	202.76	96.437	24.197	150.39	29.258
#1	6.4988	1419.1	-41.841	3.5358	48.026	5.0183	1.2833
#2	11.628	398.22	73.222	2.9118	29.165	.17142	1.2630
#3	12.075	561.13	62.761	-.20799	40.691	.31278	2.0493

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	4.4974	1052.6
SDev	8.4887	3730.9
%RSD	188.75	354.44
#1	3.3731	2368.4
#2	-3.3731	-3157.9
#3	13.492	3947.4

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:19:09 AM page 1

Method: MRG Sample Name: SPEXASSE Operator:
Run Time: 04/27/95 02:15:52
Comment: ICV SPEXASSE
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.1619	-3.2486	4949.1	-.07918	.00000	-25.045	-14.573
SDev	6.6363	20.4395	47.3	.20159	.05133	2.986	3.365
%RSD	-571.14	-629.18	.95514	-254.60	115e6	-11.921	-23.092
#1	5.8879	13.099	4895.4	-.23585	-.02963	-26.429	-11.028
#2	-2.0858	3.3202	4984.2	-.14994	-.02963	-21.618	-17.724
#3	-7.2880	-26.165	4967.8	.14825	.05927	-27.087	-14.967

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.12130	-2.0768	-.22184	.00000	4889.8	-6.0901	-.33670
SDev	1.47071	2.8786	2.68970	.00000	22.3	32.5454	.13945
%RSD	-1212.4	-138.60	-1212.4	.00000	.45648	-534.40	-41.416
#1	-.97042	1.2471	-.66553	.00000	4870.6	-38.824	-.45830
#2	-.97042	-3.7406	-2.6621	.00000	4914.3	-5.7094	-.36733
#3	1.5769	-3.7369	2.6621	.00000	4884.5	26.263	-.18449

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.09363	50.682	4857.0	-1.0399	-2.4449	-.81737	.00001
SDev	5.38754	849.83	87.1	1.4410	11.2896	2.43470	1.2016
%RSD	-5754.3	1676.8	1.7933	-138.56	-461.75	-297.87	16e6
#1	-2.5773	-579.23	4884.9	-.20799	-6.4617	-2.2229	-1.0386
#2	6.0878	-285.99	4926.8	-2.7038	-11.177	-2.2231	-.27748
#3	-3.7913	1017.3	4759.4	-.20799	10.304	1.9940	1.3161

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-2.2487	1842.1
SDev	1.9474	2772.5
%RSD	-86.603	150.51
#1	-3.3731	-789.48
#2	-3.3731	4736.8
#3	.00000	1578.9

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:22:32 AM page 1

Method: MRG Sample Name: S0 Operator:
Run Time: 04/27/95 02:19:14
Comment: ICB
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	17.585	-26.150	-35.230	.14320	.02963	-1.5476	12.472
SDev	5.561	.046	11.560	.04492	.05133	1.2001	1.137
%RSD	31.624	-.17484	-32.813	31.370	173.20	-77.547	9.1161
#1	11.525	-26.131	-24.231	.19374	.05927	-.89852	11.816
#2	18.778	-26.202	-47.279	.10782	-.02963	-2.9325	11.816
#3	22.454	-26.117	-34.179	.12803	.05927	-.81182	13.785

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.12131	1.2448	2.2184	.00000	22.477	7.9932	.30567
SDev	2.10105	4.9852	2.1394	.00000	34.987	20.072	.19099
%RSD	-1731.9	400.50	96.437	.00000	155.65	251.12	62.483
#1	-1.3344	-3.7402	4.6587	.00000	61.538	30.831	.36630
#2	2.3048	1.2441	1.3311	.00000	-5.9864	-6.8513	.09172
#3	-1.3344	6.2303	.66553	.00000	11.881	.00000	.45897

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.6455	285.99	31.381	1.6639	25.672	.42854	.76537
SDev	2.5787	422.91	73.222	1.2479	10.000	1.2266	.44962
%RSD	70.737	147.87	233.33	75.000	38.954	286.23	58.746
#1	4.9837	767.48	-20.920	.41597	21.830	1.4268	.49184
#2	5.2801	115.85	Q115.06	1.6639	18.163	-.94070	1.2843
#3	.67278	-25.341	.00000	2.9118	37.024	.79950	.51997

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	3.3731	-2631.6
SDev	3.3731	4758.7
%RSD	100.00	-180.83
#1	3.3731	-3157.9
#2	6.7461	2368.4
#3	.00000	-7105.3

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:25:54 AM page 1

Method: MRG Sample Name: ICSA Operator:
Run Time: 04/27/95 02:22:37
Comment: ICSA ICSA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	475820.	45.818	-711.25	2.6685	.44449	-.28672	491050.
SDev	3460.	15.084	56.23	.2257	.05133	2.38871	3734.
%RSD	.72708	32.922	-7.9056	8.4579	11.547	-833.13	.76050
#1	471840.	42.430	-653.46	2.4327	.41486	-1.9290	486790.
#2	477560.	32.716	-765.77	2.8825	.41486	2.4536	492600.
#3	478070.	62.308	-714.51	2.6904	.50375	-1.3847	493760.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	23.654	10.800	5.7679	176010.	157.77	519160.	-21.982
SDev	1.515	1.441	.7685	1401.	67.24	3117.	.221
%RSD	6.4051	13.343	13.323	.79571	42.616	.60046	-1.0042
#1	21.956	9.9676	5.3242	174410.	235.30	515590.	-22.236
#2	24.867	9.9681	5.3242	176650.	115.43	520530.	-21.869
#3	24.139	12.464	6.6553	176980.	122.59	521350.	-21.840

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.51685	-412.70	-474.20	-8.9434	174.46	20.718	4.4601
SDev	5.79572	673.38	118.96	.6240	12.58	3.631	4.1461
%RSD	-1121.3	-163.16	-25.086	-6.9767	7.2093	17.526	92.961
#1	3.4939	-405.46	-376.57	-8.9434	160.67	24.572	9.1645
#2	2.1174	-1089.7	-606.69	-8.3195	177.43	17.361	2.8770
#3	-7.1618	257.03	-439.33	-9.5674	185.29	20.220	1.3387

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-50.596	991320.
SDev	22.119	14041.
%RSD	-43.716	1.4164
#1	-30.358	981320.
#2	-47.223	985260.
#3	-74.207	1007400.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:29:17 AM page 1

Method: MRG Sample Name: ICSAB Operator:
Run Time: 04/27/95 02:26:00
Comment: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	475790.	19.637	-606.50	468.52	466.06	907.19	489600.
SDev	4184.	19.711	62.76	4.95	3.53	4.64	2386.
%RSD	.87935	100.38	-10.347	1.0567	.75651	.51139	.48733
#1	474350.	-.06179	-673.85	468.44	465.08	909.30	487360.
#2	480500.	19.613	-549.66	473.52	469.97	910.40	492110.
#3	472520.	39.361	-596.00	463.61	463.13	901.87	489330.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	449.18	464.91	472.52	176200.	4451.3	518160.	427.76
SDev	2.94	5.04	3.71	1090.	41.7	2847.	3.81
%RSD	.65480	1.0831	.78419	.61871	.93635	.54940	.89127
#1	445.78	469.48	473.19	175510.	4489.9	516530.	425.13
#2	450.87	465.74	475.85	177450.	4407.1	521450.	432.14
#3	450.87	459.51	468.53	175630.	4456.9	516510.	426.02

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	813.82	-966.59	-132.50	880.41	165.21	470.58	896.40
SDev	13.56	282.65	81.25	5.93	20.89	4.15	4.02
%RSD	1.6659	-29.242	-61.322	.67359	12.647	.88242	.44811
#1	805.29	-981.07	-156.90	880.20	168.53	471.70	899.83
#2	829.45	-1241.7	-41.841	886.44	142.86	474.06	897.38
#3	806.72	-676.97	-198.74	874.58	184.24	465.98	891.98

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-52.845	993680.
SDev	19.180	13028.
%RSD	-36.295	1.3111
#1	-37.104	1006600.
#2	-47.223	980530.
#3	-74.207	993950.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:32:41 AM page 1

Method: MRG Sample Name: CRI Operator:
Run Time: 04/27/95 02:29:23
Comment: CRI
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	13.157	120.88	340.56	-.25607	10.164	8.8820	-.52515
SDev	16.026	19.61	12.40	.16906	.051	3.5022	18.1960
%RSD	121.80	16.224	3.6404	-66.023	.50496	39.430	-3464.9
#1	31.246	101.23	345.86	-.12972	10.194	11.455	20.481
#2	7.4928	120.95	326.39	-.44812	10.194	Q4.8938	-11.422
#3	.73347	140.45	349.42	-.19037	10.105	10.297	-10.634

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	16.980	100.49	49.915	13.612	161.01	-14.083	31.215
SDev	2.731	5.04	1.331	23.576	10.52	10.235	.345
%RSD	16.086	5.0113	2.6667	173.21	6.5345	-72.672	1.1060
#1	20.133	99.657	51.246	40.835	157.01	-2.2838	30.974
#2	15.403	95.922	48.584	.00000	153.07	-19.412	31.610
#3	15.403	105.89	49.915	.00000	172.94	-20.554	31.059

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	78.966	-340.30	700.84	16.015	17.988	101.73	40.260
SDev	4.462	709.93	20.92	.624	7.341	1.57	1.557
%RSD	5.6505	-208.62	2.9851	3.8961	40.811	1.5398	3.8671
#1	83.890	409.08	679.92	15.391	17.639	101.95	41.809
#2	75.190	-1002.8	721.76	16.015	10.828	100.06	40.276
#3	77.819	-427.18	700.84	16.639	25.497	103.17	38.695

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-2.2487	-.00136
SDev	7.0216	3947.36
%RSD	-312.25	-291e6
#1	.00000	-.00138
#2	-10.119	3947.4
#3	3.3731	-3947.4

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:36:05 AM page 1

Method: MRG Sample Name: CCV Operator:
Run Time: 04/27/95 02:32:47
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4716.0	5005.9	4837.6	4948.3	4832.0	4692.7	49559.
SDev	62.5	108.3	50.3	59.2	46.3	29.8	322.
%RSD	1.3243	2.1639	1.0393	1.1962	.95874	.63565	.65009
#1	4668.0	4908.6	4784.6	4904.7	4798.3	4683.6	49336.
#2	4786.6	5122.6	4884.7	5015.6	4884.8	4726.0	49928.
#3	4693.3	4986.5	4843.5	4924.4	4812.8	4668.4	49412.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4635.5	4776.3	4656.3	4818.5	4683.0	49008.	4831.0
SDev	34.4	34.4	51.6	47.2	82.0	338.	41.1
%RSD	.74143	.72108	1.1087	.97856	1.7520	.69040	.85038
#1	4607.7	4752.2	4619.4	4791.3	4727.4	48849.	4804.8
#2	4673.9	4815.7	4715.3	4873.0	4733.4	49397.	4878.3
#3	4624.8	4760.9	4634.1	4791.3	4588.4	48779.	4809.8

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4564.9	49821.	4780.3	466.93	50054.	4895.4	4707.0
SDev	26.7	342.	58.2	4.38	587.	41.4	32.2
%RSD	.58435	.68670	1.2183	.93859	1.1720	.84594	.68478
#1	4540.8	50161.	4728.0	462.77	49626.	4867.8	4687.2
#2	4593.5	49824.	4769.9	471.51	50722.	4943.0	4744.2
#3	4560.4	49477.	4843.1	466.51	49813.	4875.4	4689.5

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	4861.7	167110.
SDev	59.4	5076.
%RSD	1.2222	3.0374
#1	4806.6	165000.
#2	4924.7	172890.
#3	4853.8	163420.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 02:39:29 AM page 1

Method: MRG Sample Name: CCB Operator:
Run Time: 04/27/95 02:36:11
Comment: CCB
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.276	19.457	-54.907	.46328	.23706	-.62132	13.916
SDev	11.902	34.266	23.918	.54495	.17780	1.32064	8.302
%RSD	96.948	176.11	-43.561	117.63	75.000	-212.55	59.658
#1	22.591	51.961	-67.078	.98216	.41486	-.51037	20.875
#2	14.985	22.744	-70.292	.51214	.23706	.64035	16.148
#3	-.74599	-16.334	-27.352	-.10445	.05927	-1.9939	4.7264

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.97049	2.4903	.22184	.00000	-3.3278	-1.9031	.21421
SDev	2.27258	3.2966	2.3373	.00000	18.0197	16.4024	.29477
%RSD	-234.17	132.38	1053.6	.00000	-541.48	-861.86	137.60
#1	-.24272	1.2434	2.6621	.00000	-19.886	10.277	.55052
#2	.84906	6.2284	.00000	.00000	15.863	4.5675	.09142
#3	-3.5178	-.00100	-1.9966	.00000	-5.9603	-20.554	.00069

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.2120	-79.644	-6.9735	.20799	20.084	-.20472	1.8128
SDev	2.3386	923.910	12.0785	2.1913	31.472	2.73960	1.1950
%RSD	44.869	-1160.1	-173.21	1053.6	156.70	-1338.2	65.916
#1	7.3018	821.78	.00000	2.2879	50.646	1.7744	2.8469
#2	5.6482	-36.202	-20.920	.41597	21.830	.94290	.50461
#3	2.6860	-1024.5	.00000	-2.0799	-12.225	-3.3315	2.0871

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	22.487	-3421.1
SDev	19.180	2279.0
%RSD	85.294	-66.617
#1	43.850	-789.48
#2	16.865	-4736.8
#3	6.7461	-4736.8

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 02:42:53 AM page 1

Method: MRG Sample Name: 705056 #15 Operator:
Run Time: 04/27/95 02:39:35
Comment: SDG:04582M ClientID:PBW 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	117.62	3.2359	-40.476	.85918	.02963	-1.4999	158.20
SDev	13.57	9.7920	18.081	.19835	.05133	2.8295	10.01
%RSD	11.534	302.61	-44.671	23.086	173.20	-188.65	6.3245
#1	108.78	-6.5450	-28.313	1.0226	.05927	-4.2312	152.43
#2	110.84	3.2137	-61.254	.91646	.05927	-1.6868	152.43
#3	133.25	13.039	-31.862	.63849	-.02963	1.4185	169.75

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.2130	4.5676	1.3311	31.760	20.340	33.115	.33994
SDev	1.3121	2.8764	.6655	7.859	38.824	12.085	.19021
%RSD	108.17	62.975	50.000	24.744	190.88	36.493	55.953
#1	.84911	1.2462	1.3311	40.835	-20.024	23.980	.28105
#2	2.6687	6.2296	1.9966	27.223	57.415	28.547	.18615
#3	.12131	6.2270	.66553	27.223	23.628	46.817	.55264

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.8718	528.55	76.708	1.4559	461.05	.03919	3.9085
SDev	4.9517	426.06	79.204	2.8819	13.02	2.5181	1.1887
%RSD	127.89	80.610	103.25	197.95	2.8234	6425.8	30.412
#1	-.18280	39.822	167.36	-.20799	453.02	-2.7807	3.6575
#2	2.4077	821.78	20.920	-.20799	476.07	.83495	2.8654
#3	9.3905	724.03	41.841	4.7837	454.06	2.0633	5.2026

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	3.3731	-2894.7
SDev	3.3731	2411.9
%RSD	100.00	-83.319
#1	.00000	-5526.3
#2	3.3731	-2368.4
#3	6.7461	-789.48

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 02:46:16 AM page 1

Method: MRG Sample Name: PLCSW703389 #17 Operator:
Run Time: 04/27/95 02:42:59
Comment: SDG:04582M ClientID:LCSW 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	18337.	5806.2	904.49	18852.	488.94	444.56	47567.
SDev	116.	65.3	43.57	72.	2.62	5.82	364.
%RSD	.63530	1.1240	4.8173	.38337	.53639	1.3081	.76490
#1	18213.	5763.7	854.44	18792.	486.33	438.65	47159.
#2	18356.	5773.5	925.12	18832.	488.91	444.75	47685.
#3	18444.	5881.3	933.93	18932.	491.58	450.28	47858.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	896.54	4518.7	2218.0	9147.0	296.06	47098.	1387.4
SDev	4.19	28.8	9.7	49.1	24.10	213.	9.2
%RSD	.46686	.63725	.43929	.53654	8.1395	.45160	.66568
#1	892.29	4488.4	2207.6	9092.6	304.80	46918.	1377.3
#2	896.66	4522.1	2219.5	9160.6	314.58	47042.	1389.5
#3	900.66	4545.7	2226.9	9187.8	268.82	47332.	1395.4

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3514.7	47960.	470.71	913.06	47534.	4586.9	1808.3
SDev	23.3	267.	99.78	3.08	198.	27.4	12.6
%RSD	.66301	.55577	21.199	.33710	.41577	.59746	.69806
#1	3490.2	47978.	481.17	909.53	47372.	4558.0	1793.7
#2	3517.1	48217.	L366.11	914.52	47477.	4590.3	1815.6
#3	3536.7	47685.	564.85	915.14	47754.	4612.5	1815.5

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-10.119	153950.
SDev	.000	9474.
%RSD	.00000	6.1538
#1	-10.119	153950.
#2	-10.119	144470.
#3	-10.119	163420.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 02:49:40 AM page 1

Method: MRG Sample Name: 703385 #19 Operator:
Run Time: 04/27/95 02:46:22
Comment: SDG:04582M ClientID:MW9 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	182.69	-9.7934	-50.663	628.34	.02963	-1.0339	43165.
SDev	12.45	14.9276	79.287	6.62	.13579	.6214	507.
%RSD	6.8124	-152.43	-156.50	1.0535	458.26	-60.105	1.1735
#1	168.56	-6.5733	40.397	621.01	.14816	-1.4856	42590.
#2	187.53	3.2614	-87.983	630.14	.05927	-.32519	43356.
#3	192.00	-26.068	-104.40	633.88	-.11853	-1.2910	43548.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.4556	4.9831	1.5529	81.670	-6.0626	13271.	104.97
SDev	1.1698	3.2978	3.0010	.000	47.7976	104.	.99
%RSD	80.362	66.179	193.25	.00000	-788.40	.78417	.94333
#1	1.9408	7.4751	4.6587	81.670	39.629	13157.	103.88
#2	2.3047	6.2308	1.3311	81.670	-2.0972	13297.	105.25
#3	.12134	1.2435	-1.3311	81.670	-55.719	13360.	105.80

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.4699	8456.7	27.894	-1.8719	8842.7	.60376	4.6953
SDev	3.8520	744.6	12.079	.9531	84.7	3.1112	.4453
%RSD	111.01	8.8053	43.301	-50.918	.95734	515.30	9.4836
#1	4.1845	9314.7	41.841	-2.7038	8746.6	3.2452	5.2093
#2	-.68936	8076.6	20.920	-2.0799	8875.0	1.3917	4.4502
#3	6.9147	7978.9	20.920	-.83195	8906.4	-2.8257	4.4264

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-2.2487	43684.
SDev	5.1524	2538.
%RSD	-229.13	5.8094
#1	3.3731	41842.
#2	-3.3731	46579.
#3	-6.7461	42632.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 02:53:02 AM page 1

Method: MRG Sample Name: 703388 #20 Operator:
Run Time: 04/27/95 02:49:45
Comment: SDG:04582M ClientID:MW9D 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	116.22	-13.086	-28.152	619.62	.05927	1.0070	42751.
SDev	1.03	11.329	74.311	6.30	.08890	2.9776	363.
%RSD	.88651	-86.574	-263.96	1.0162	150.00	295.68	.84873
#1	116.46	-26.167	8.0370	613.24	.05927	-1.1892	42337.
#2	115.09	-6.5087	-113.63	625.83	-.02963	4.3961	43013.
#3	117.10	-6.5815	21.132	619.79	.14816	-.18579	42904.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.8195	4.5671	1.3311	54.446	-21.848	13130.	104.39
SDev	1.6409	2.8784	1.3311	.000	12.400	85.	1.20
%RSD	90.184	63.024	100.00	.00000	-56.757	.64872	1.1462
#1	1.9408	1.2434	.00000	54.446	-25.824	13043.	103.05
#2	.12131	6.2304	1.3311	54.446	-7.9473	13213.	105.34
#3	3.3965	6.2275	2.6621	54.446	-31.773	13135.	104.79

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.3152	8083.8	38.354	-.62396	8836.1	.02533	5.9976
SDev	4.2248	432.6	57.611	1.29888	61.0	2.2783	1.5570
%RSD	79.485	5.3509	150.21	-208.17	.69081	8994.2	25.960
#1	7.2301	7609.6	.00000	.41597	8775.5	-1.5516	5.9932
#2	.47203	8185.2	10.460	-.20799	8897.5	-1.0098	4.4429
#3	8.2434	8456.7	104.60	-2.0799	8835.2	2.6374	7.5568

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	1.1244	40526.
SDev	3.8949	3191.
%RSD	346.41	7.8729
#1	3.3731	41053.
#2	-3.3731	37105.
#3	3.3731	43421.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 02:56:25 AM page 1

Method: MRG Sample Name: 703387 #21 Operator:
Run Time: 04/27/95 02:53:08
Comment: SDG:04582M ClientID:MW9S 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082✓	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2076.7	518.26	1882.8	2545.4	50.109	36.109	42830.
SDev	5.5	44.25	41.2	35.5	.583	.973	320.
%RSD	.26713	8.5387	2.1865	1.3964	1.1633	2.6944	.74653
#1	2073.2	560.80	1840.1	2544.2	50.020	35.000	42642.
#2	2073.7	521.50	1922.3	2510.5	49.575	36.507	42648.
#3	2083.1	472.47	1885.9	2581.5	50.731	36.820	43199.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	186.43	479.16	232.93	1025.4	488.93	13164.	587.21
SDev	2.27	4.38	2.66	7.9	8.66	141.	5.19
%RSD	1.2190	.91347	1.1429	.76639	1.7709	1.0676	.88425
#1	184.61	474.59	230.27	1020.9	492.90	13193.	585.44
#2	185.70	479.58	232.93	1020.9	479.00	13011.	583.14
#3	188.98	483.32	235.60	1034.5	494.90	13287.	593.06

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	465.41	8713.8	1834.0	46.797	8904.9	484.43	474.90
SDev	5.84	938.1	79.2	1.570	115.8	5.18	4.05
%RSD	1.2555	10.766	4.3186	3.3555	1.3004	1.0696	.85272
#1	465.11	7729.1	1799.2	46.589	8907.0	479.78	473.86
#2	471.40	9597.1	1778.2	48.461	8788.0	483.49	471.48
#3	459.72	8815.1	1924.7	45.341	9019.6	490.01	479.37

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	.00000	47632.
SDev	6.7461	5137.
%RSD	.00000	10.784
#1	-6.7461	52895.
#2	6.7461	47368.
#3	.00000	42632.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 02:59:57 AM page 1

Method: MRG Sample Name: SDI703385 #22 Operator:
Run Time: 04/27/95 02:56:31
Comment: SDG:04582M ClientID:MW9L 1:4
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	136.72	-3.2499	-50.404	191.96	-.11853	-1.0396	13137.
SDev	5.44	5.5802	47.678	10.56	.08890	1.0468	675.
%RSD	3.9796	-171.70	-94.592	5.5029	-75.000	-100.69	5.1359
#1	142.86	-6.4508	-51.539	198.90	-.11853	-.65352	13657.
#2	134.81	-6.4925	-97.504	197.17	-.20743	-.24073	13379.
#3	132.49	3.1935	-2.1679	179.80	-.02963	-2.2246	12374.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.6982	1.6621	-1.9966	40.835	-32.588	4027.8	32.280
SDev	2.9787	5.0367	2.3996	.000	27.900	239.6	1.647
%RSD	-175.40	303.02	-120.19	.00000	-85.613	5.9484	5.1024
#1	-2.4260	2.4920	-3.9932	40.835	-61.718	4228.4	33.406
#2	-4.2456	6.2324	-2.6621	40.835	-29.938	4092.5	33.043
#3	1.5770	-3.7380	.66553	40.835	-6.1080	3762.5	30.389

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.7986	1944.0	-3.4867	-.83195	3131.3	-1.5812	1.8436
SDev	2.8229	571.0	15.9783	2.49584	170.7	1.6259	.4618
%RSD	-156.94	29.373	-458.26	-300.00	5.4524	-102.83	25.049
#1	.50426	1592.9	10.460	-.83195	3263.3	-2.2372	2.1031
#2	-4.9478	1636.3	-20.920	-3.3278	3192.1	-2.7767	2.1174
#3	-.95235	2602.9	.00000	1.6639	2938.5	.27018	1.3104

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	.00000	11579.
SDev	6.7461	1206.
%RSD	.00000	10.415
#1	-6.7461	10263.
#2	.00000	12632.
#3	6.7461	11842.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:03:20 AM page 1

Method: MRG Sample Name: 703386 #23 Operator:
Run Time: 04/27/95 03:00:03
Comment: SDG:04582M ClientID:MW16 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	177.17	-.00084	-57.612	70.269	.02963	-2.0930	11593.
SDev	8.43	24.7187	60.824	.848	.05133	1.2222	133.
%RSD	4.7561	-2936e3	-105.57	1.2070	173.20	-58.397	1.1469
#1	186.26	3.2140	-25.933	69.307	.05927	-.88515	11445.
#2	169.61	-26.170	-19.167	70.591	.05927	-2.0646	11632.
#3	175.64	22.953	-127.74	70.909	-.02963	-3.3291	11702.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.7308	8.3062	-.22184	331.22	-2.2267	5415.6	17.530
SDev	1.7198	3.5974	2.51965	7.86	67.0610	33.1	.184
%RSD	36.352	43.311	-1135.8	2.3727	-3011.7	.61196	1.0509
#1	6.6717	12.460	2.6621	326.68	35.489	5381.7	17.346
#2	4.1243	6.2279	-1.3311	326.68	-79.653	5417.1	17.529
#3	3.3965	6.2305	-1.9966	340.29	37.485	5447.9	17.715

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.2135	644.39	101.12	.41597	14500.	-.56924	5.4861
SDev	3.5003	910.75	71.20	2.8593	179.	2.29934	1.2011
%RSD	108.93	141.34	70.416	687.39	1.2317	-403.93	21.894
#1	2.4305	1690.6	125.52	2.9118	14294.	2.0513	6.7915
#2	7.0390	28.961	20.920	-2.7038	14586.	-1.5098	4.4277
#3	.17094	213.59	156.90	1.0399	14619.	-2.2492	5.2389

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-6.7461	18684.
SDev	8.9243	3974.
%RSD	-132.29	21.267
#1	-3.3731	15000.
#2	.00000	18158.
#3	-16.865	22895.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:06:43 AM page 1

Method: MRG Sample Name: 703390 #24 Operator:
Run Time: 04/27/95 03:03:25
Comment: SDG:04582M ClientID:MW4 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	135.49	-16.368	-43.917	23.196	-.08890	-1.8467	3923.4
SDev	23.05	9.833	26.606	.388	.05133	.2428	22.9
%RSD	17.011	-60.070	-60.581	1.6736	-57.735	-13.148	.58452
#1	141.22	-16.432	-15.476	23.644	-.02963	-2.1063	3897.3
#2	155.14	-6.5045	-68.196	22.982	-.11853	-1.6252	3940.2
#3	110.12	-26.169	-48.081	22.962	-.11853	-1.8086	3932.7

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.0917	-2.4914	.22184	54.446	-18.075	1871.2	1.4785
SDev	1.7198	2.1589	.38424	.000	33.778	15.1	.4625
%RSD	-157.53	-86.652	173.21	.00000	-186.88	.80575	31.282
#1	.84913	.00143	.00000	54.446	-51.838	1868.1	1.0497
#2	-2.4260	-3.7381	.66553	54.446	-18.104	1857.9	1.9686
#3	-1.6982	-3.7377	.00000	54.446	15.718	1887.5	1.4173

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.0624	94.125	-20.920	-.41597	2786.7	-.93120	6.5501
SDev	1.6629	279.22	73.222	2.19128	19.5	.61392	1.6301
%RSD	-80.633	296.65	-350.00	-526.78	.70102	-65.928	24.887
#1	-3.8522	311.33	52.301	-.20799	2778.2	-.29513	6.0345
#2	-.56522	191.87	-20.920	1.6639	2772.9	-.97819	8.3757
#3	-1.7696	-220.83	-94.142	-2.7038	2809.1	-1.5203	5.2401

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	5.6218	2631.6
SDev	5.1524	2279.0
%RSD	91.652	86.603
#1	10.119	3947.4
#2	.00000	-.00138
#3	6.7461	3947.4

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 03:10:07 AM page 1

Method: MRG Sample Name: CCV Operator:
Run Time: 04/27/95 03:06:49
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4732.5	5005.9	4860.7	4900.4	4831.7	4673.4	49644.
SDev	15.4	44.4	30.7	31.4	22.6	18.7	250.
%RSD	.32630	.88751	.63178	.64079	.46831	.40095	.50284
#1	4727.1	4967.2	4849.8	4923.8	4832.2	4659.3	49405.
#2	4720.4	4996.0	4836.8	4864.7	4808.9	4666.3	49626.
#3	4749.9	5054.4	4895.3	4912.7	4854.1	4694.7	49903.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4626.0	4756.3	4627.6	4841.2	4666.4	49098.	4815.8
SDev	15.7	24.6	23.8	47.8	50.3	228.	15.9
%RSD	.33893	.51681	.51500	.98741	1.0780	.46536	.32936
#1	4613.9	4739.7	4640.7	4791.3	4612.1	49137.	4807.6
#2	4620.4	4744.7	4600.1	4845.7	4675.7	48853.	4805.8
#3	4643.7	4784.6	4642.1	4886.6	4711.5	49306.	4834.1

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4582.7	49781.	4738.5	464.02	49778.	4879.6	4701.5
SDev	21.7	565.	110.2	.62	326.	18.7	19.4
%RSD	.47411	1.1345	2.3258	.13447	.65476	.38306	.41327
#1	4558.3	49129.	4853.6	463.39	49976.	4873.9	4685.5
#2	4589.8	50129.	4633.9	464.02	49402.	4864.5	4695.8
#3	4599.9	50085.	4728.0	464.64	49957.	4900.5	4723.1

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	4883.1	169470.
SDev	52.3	7668.
%RSD	1.0709	4.5245
#1	4823.5	161050.
#2	4904.4	176050.
#3	4921.3	171320.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 03:13:31 AM page 1

Method: MRG Sample Name: CCB Operator:
Run Time: 04/27/95 03:10:13
Comment: CCB
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.023	16.153	-39.555	.88950	.71118	-.01916	25.076
SDev	3.358	20.361	32.976	.28814	.13579	.87522	7.414
%RSD	27.931	126.05	-83.366	32.393	19.094	-4567.6	29.566
#1	12.555	32.382	-27.515	.89624	.85935	.24407	28.752
#2	8.4307	-6.6935	-14.292	.59805	.68155	-.99578	16.542
#3	15.084	22.771	-76.859	1.1742	.59265	.69423	29.934

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.36371	2.4920	.88737	.00000	-3.3270	23.599	.67283
SDev	1.6410	4.3167	2.3373	.00000	50.7872	22.847	.10540
%RSD	451.18	173.22	263.39	.00000	-1526.5	96.815	15.666
#1	.48497	4.9845	.66553	.00000	-7.9594	22.838	.73410
#2	-1.3345	-2.4925	-1.3311	.00000	-51.639	1.1419	.55112
#3	1.9407	4.9839	3.3276	.00000	49.618	46.817	.73326

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.60463	-325.82	76.708	-.20799	32.658	-.39547	3.1358
SDev	.77580	680.78	75.671	1.08073	6.206	1.38631	.4578
%RSD	128.31	-208.95	98.648	-519.61	19.005	-350.55	14.598
#1	-.22935	-144.81	Q125.52	.41597	35.976	.51858	3.6643
#2	.73839	-1078.8	Q115.06	-1.4559	25.497	-1.9906	2.8789
#3	1.3048	246.17	-10.460	.41597	36.500	.28559	2.8641

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	23.611	1842.1
SDev	13.492	1643.4
%RSD	57.143	89.214
#1	37.104	-.00138
#2	23.611	3157.9
#3	10.119	2368.4

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:16:54 AM page 1

Method: MRG Sample Name: 703391 #27 Operator:
Run Time: 04/27/95 03:13:37
Comment: SDG:04582M ClientID:MW2 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	249.77	-13.092	-61.440	211.95	.02963	-1.3107	35057.
SDev	4.34	24.686	68.167	.70	.05133	.7544	115.
%RSD	1.7391	-188.56	-110.95	.33042	173.20	-57.559	.32834
#1	245.00	-35.948	-134.81	212.58	.05927	-2.1428	34930.
#2	253.51	-16.413	-49.429	212.07	.05927	-.67128	35154.
#3	250.79	13.087	-.07722	211.19	-.02963	-1.1181	35086.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.0917	4.1527	-1.3311	245.01	5.6101	6720.0	19.979
SDev	.2101	3.5974	1.3311	.00	51.735	17.1	.191
%RSD	19.246	86.630	-100.00	.00000	922.17	.25489	.95713
#1	1.2130	6.2301	-2.6621	245.01	-44.024	6737.1	20.132
#2	.84911	6.2292	-1.3311	245.01	59.216	6720.0	19.765
#3	1.2130	-.00131	.00000	245.01	1.6388	6702.9	20.041

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.7442	4228.4	24.407	-.83195	5556.5	-.11122	8.1100
SDev	1.3345	694.6	15.978	1.65084	17.0	1.74578	.4471
%RSD	48.629	16.427	65.465	-198.43	.30510	-1569.6	5.5125
#1	1.2033	3428.3	41.841	-2.7038	5575.9	-2.1260	7.5938
#2	3.5118	4677.3	20.920	.41597	5549.2	.95432	8.3704
#3	3.5177	4579.5	10.460	-.20799	5544.5	.83797	8.3657

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	2.2487	25000.
SDev	7.0216	1987.
%RSD	312.25	7.9472
#1	.00000	22895.
#2	10.119	26842.
#3	-3.3731	25263.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:20:17 AM page 1

Method: MRG Sample Name: 703392 #28 Operator:
Run Time: 04/27/95 03:16:59
Comment: SDG:04582M ClientID:MW14 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	112.96	9.7009	-53.609	16.367	.00000	.11093	6060.8
SDev	8.34	14.980	33.587	.428	.05133	2.0324	56.1
%RSD	7.3857	154.42	-62.653	2.6142	115e6	1832.1	.92574
#1	113.68	22.777	-15.257	16.068	-.02963	2.3815	5996.2
#2	104.28	12.970	-67.787	16.857	.05927	-.51035	6088.7
#3	120.91	-6.6440	-77.782	16.174	-.02963	-1.5384	6097.4

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.9113	6.2310	.00000	40.835	-8.1109	2668.2	.86808
SDev	.2101	.0006	1.1527	.000	43.8105	15.8	.43415
%RSD	7.2166	.01029	.00000	.00000	-540.14	.59042	50.012
#1	3.0326	6.2308	.66553	40.835	33.586	2650.3	1.0218
#2	3.0326	6.2317	-1.3311	40.835	-53.766	2674.3	.37799
#3	2.6687	6.2305	.66553	40.835	-4.1522	2680.0	1.2045

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.3346	380.12	129.01	2.2879	3122.2	.87707	6.0271
SDev	1.7223	485.01	81.25	1.6508	12.6	.58392	.0101
%RSD	-129.05	127.59	62.979	72.157	.40494	66.576	.16806
#1	-.81841	506.82	62.761	2.9118	3108.2	1.4659	6.0237
#2	-3.2559	-155.67	104.60	.41597	3132.9	.86712	6.0384
#3	.07058	789.20	219.67	3.5358	3125.5	.29819	6.0190

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	7.8705	10000.0
SDev	1.9474	1643.42
%RSD	24.744	16.434
#1	6.7461	8684.2
#2	6.7461	9473.7
#3	10.119	11842.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:23:40 AM page 1

Method: MRG Sample Name: 703393 #29 Operator:
Run Time: 04/27/95 03:20:22
Comment: SDG:04582M ClientID:MW12 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	155.85	-26.117	-28.759	97.655	-.02963	-1.2283	15818.
SDev	6.45	9.799	34.205	.716	.08890	2.0357	166.
%RSD	4.1395	-37.520	-118.93	.73271	-300.00	-165.73	1.0498
#1	150.80	-16.305	-48.455	96.836	.05927	-1.7970	15629.
#2	163.12	-35.902	-48.559	97.968	-.02963	-2.9192	15886.
#3	153.64	-26.143	10.737	98.160	-.11853	1.0312	15939.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.84913	2.9046	.44369	54.446	-15.457	7091.9	1.1231
SDev	.72779	1.9036	1.3854	.000	21.965	38.0	.0518
%RSD	85.710	65.537	312.25	.00000	-142.11	.53604	4.6097
#1	1.5769	2.4886	1.9966	54.446	7.7163	7050.0	1.0633
#2	.84913	1.2434	.00000	54.446	-18.115	7101.4	1.1533
#3	.12134	4.9817	-.66553	54.446	-35.973	7124.2	1.1527

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.1557	1636.3	10.460	.83195	5116.2	.20708	8.8704
SDev	1.2959	595.5	36.235	.72049	37.5	1.0029	.4493
%RSD	15.889	36.396	346.41	86.603	.73390	484.30	5.0647
#1	9.6521	2190.2	-10.460	.41597	5080.3	.78569	9.1223
#2	7.4022	1712.3	52.301	.41597	5113.3	.78647	9.1371
#3	7.4130	1006.4	-10.460	1.6639	5155.2	-.95093	8.3517

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-1.1244	21842.
SDev	3.8949	3287.
%RSD	-346.41	15.048
#1	-3.3731	24474.
#2	-3.3731	18158.
#3	3.3731	22895.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:27:03 AM page 1

Method: MRG Sample Name: 703394 #30 Operator:
Run Time: 04/27/95 03:23:45
Comment: SDG:04582M ClientID:MW15 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	396.58	-.15933	-46.518	78.435	.05927	-1.8138	17150.
SDev	8.83	20.3322	16.915	.816	.08890	2.3943	170.
%RSD	2.2257	-12761.	-36.363	1.0398	150.00	-132.01	.98890
#1	386.91	-6.6848	-27.816	77.545	.05927	-4.2295	16975.
#2	398.62	-16.428	-60.749	79.147	-.02963	.55845	17314.
#3	404.20	22.634	-50.988	78.611	.14816	-1.7703	17160.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.009	4.5651	3.5495	490.02	8.0257	4496.8	10.605
SDev	3.137	5.7541	2.6897	.00	38.824	25.4	.367
%RSD	26.126	126.05	75.777	.00000	483.75	.56554	3.4593
#1	11.402	1.2433	3.9932	490.02	11.350	4469.3	10.238
#2	9.2191	1.2426	.66553	490.02	-32.354	4519.6	10.604
#3	15.405	11.209	5.9898	490.02	45.081	4501.3	10.972

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.625	2939.6	-31.381	1.2479	3844.7	4.1580	9.3798
SDev	3.869	686.8	103.022	1.4410	48.3	2.3015	1.2139
%RSD	36.415	23.364	-328.30	115.47	1.2553	55.350	12.942
#1	7.5312	2755.0	-115.06	.41597	3795.1	5.1462	10.700
#2	9.3808	2364.0	83.682	.41597	3891.5	1.5275	9.1288
#3	14.963	3699.8	-62.761	2.9118	3847.5	5.8004	8.3110

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	4.4974	12632.
SDev	5.1524	2368.
%RSD	114.56	18.750
#1	3.3731	15000.
#2	.00000	10263.
#3	10.119	12632.

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:30:26 AM page 1

Method: MRG Sample Name: 703395 #31 Operator:
Run Time: 04/27/95 03:27:09
Comment: SDG:04582M ClientID:MW18 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	132.49	-26.112	-52.630	82.995	-.05927	-.26858	7282.3
SDev	28.33	25.893	13.862	.087	.05133	.77156	45.2
%RSD	21.386	-99.159	-26.338	.10447	-86.603	-287.27	.62039
#1	103.09	-35.901	-47.955	82.902	-.11853	-.68882	7234.5
#2	134.76	3.2478	-41.711	83.074	-.02963	-.73879	7288.0
#3	159.62	-45.684	-68.225	83.008	-.02963	.62187	7324.3

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.00002	-.83160	-.88737	40.835	-17.413	2562.8	.22791
SDev	2.3111	2.59411	1.67488	.000	26.439	29.1	.27926
%RSD	14e6	-311.94	-188.75	.00000	-151.84	1.1354	122.53
#1	-1.3343	.00110	-2.6621	40.835	-4.1360	2529.3	-.07667
#2	-1.3343	1.2439	-.66553	40.835	-47.859	2581.8	.28850
#3	2.6687	-3.7398	.66553	40.835	-.24292	2577.2	.47190

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.3093	571.99	6.9735	-2.0799	3935.5	-2.5994	6.5360
SDev	4.6641	630.19	36.735	3.7954	2.6	2.7738	.8990
%RSD	201.98	110.18	526.78	-182.48	.06656	-106.71	13.754
#1	-2.9632	-155.67	41.841	-6.4476	3938.1	-5.8012	6.0331
#2	5.8966	930.38	-31.381	-.20799	3935.5	-.92493	6.0011
#3	3.9944	941.24	10.460	.41597	3932.9	-1.0721	7.5739

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-2.2487	6052.6
SDev	8.4887	1823.2
%RSD	-377.49	30.123
#1	-3.3731	3947.4
#2	6.7461	7105.3
#3	-10.119	7105.3

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:33:50 AM page 1

Method: MRG Sample Name: 703396 #32 Operator:
Run Time: 04/27/95 03:30:32
Comment: SDG:04582M ClientID:TBLANK2 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	89.607	-16.347	-41.336	.49866	-.02963	-2.2394	79.298
SDev	12.114	9.785	14.985	.51959	.08890	.7754	5.766
%RSD	13.519	-59.858	-36.252	104.20	-300.00	-34.624	7.2716
#1	102.25	-26.086	-25.022	1.0883	.05927	-3.1332	85.468
#2	88.461	-6.5164	-54.488	.10782	-.02963	-1.7473	78.379
#3	78.107	-16.439	-44.497	.29987	-.11853	-1.8377	74.046

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.48522	-.41691	2.6621	27.223	25.015	16.367	.37077
SDev	1.5862	2.87717	1.7608	.000	23.254	26.147	.33032
%RSD	326.91	-690.11	66.144	.00000	92.958	159.76	89.089
#1	1.5769	1.2434	4.6587	27.223	51.473	45.675	.73710
#2	1.2130	1.2450	1.3311	27.223	15.752	-4.5675	.27959
#3	-1.3343	-3.7392	1.9966	27.223	7.8210	7.9932	.09562

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.1537	488.72	83.682	.41597	340.90	.22770	3.1179
SDev	2.7157	667.84	73.222	1.6508	10.44	2.0488	1.1875
%RSD	65.379	136.65	87.500	396.86	3.0622	899.79	38.087
#1	7.2731	1256.2	156.90	2.2879	352.95	1.9456	4.4112
#2	2.8713	170.15	83.682	-.83195	335.13	.77740	2.8659
#3	2.3168	39.822	10.460	-.20799	334.61	-2.0399	2.0766

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	2.2487	-263.16
SDev	12.770	3286.84
%RSD	567.89	-1249.0
#1	-6.7461	-3947.4
#2	-3.3731	2368.4
#3	16.865	789.47

INORGANIC SDG 04582M

Analysis Report Thu 04-27-95 03:37:14 AM page 1

Method: MRG Sample Name: PDS703385 #40 Operator:
Run Time: 04/27/95 03:33:56
Comment: SDG:04582M ClientID:MW9A 1:1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	222.48	120.86	-84.167	635.10	11.646	9.7380	43306.
SDev	19.58	35.37	26.610	3.43	.051	.9399	269.
%RSD	8.8008	29.270	-31.615	.53981	.44073	9.6515	.62082
#1	214.95	91.407	-96.165	633.75	11.616	8.7268	43002.
#2	207.79	111.07	-102.67	639.00	11.616	9.9026	43510.
#3	244.71	160.10	-53.671	632.55	11.705	10.585	43407.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.467	111.29	52.577	22.686	63.589	13371.	140.92
SDev	1.378	4.38	.666	7.859	27.776	36.	1.70
%RSD	6.4179	3.9314	1.2658	34.641	43.680	.27126	1.2039
#1	23.044	110.87	52.577	27.223	75.510	13362.	138.96
#2	20.861	107.13	51.911	27.223	31.842	13411.	141.90
#3	20.497	115.85	53.242	13.612	83.414	13341.	141.90

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	86.828	7946.3	-10.460	17.055	9064.8	111.29	48.612
SDev	3.544	586.6	54.353	2.362	49.9	1.24	1.625
%RSD	4.0816	7.3817	-519.62	13.851	.55063	1.1106	3.3438
#1	88.840	7816.0	52.301	16.015	9051.0	110.93	48.081
#2	82.736	7435.8	-41.841	15.391	9120.2	110.27	47.319
#3	88.907	8587.0	-41.841	19.759	9023.3	112.67	50.437

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-4.4974	41316.
SDev	3.8949	3560.
%RSD	-86.603	8.6164
#1	.00000	45000.
#2	-6.7461	37895.
#3	-6.7461	41053.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 03:40:38 AM page 1

Method: MRG Sample Name: CRI Operator:
Run Time: 04/27/95 03:37:20
Comment: CRI
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.909	97.977	284.61	.05728	10.194	7.1478	15.755
SDev	4.791	14.922	34.20	.39663	.089	2.5032	4.840
%RSD	24.065	15.230	12.018	692.48	.87209	35.021	30.721
#1	24.008	101.25	322.95	-.36220	10.194	Q4.9306	19.299
#2	21.077	110.99	257.21	.42622	10.283	6.6504	17.724
#3	14.642	81.689	273.68	.10782	10.105	9.8624	10.240

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	18.799	102.57	48.805	9.0744	154.38	20.554	31.151
SDev	2.827	2.88	.768	15.717	32.29	22.493	.241
%RSD	15.036	2.8058	1.5746	173.21	20.915	109.43	.77311
#1	17.950	105.89	49.249	.00000	129.22	27.405	31.425
#2	21.953	100.90	49.249	.00000	143.12	-4.5675	31.058
#3	16.494	100.91	47.918	27.223	190.79	38.824	30.971

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	82.042	-434.42	662.48	15.599	25.323	100.95	40.252
SDev	3.269	194.38	105.82	1.299	5.795	.34	2.068
%RSD	3.9849	-44.745	15.973	8.3267	22.884	.34168	5.1377
#1	82.077	-600.95	606.69	16.015	19.210	101.35	38.680
#2	85.294	-220.83	784.52	16.639	30.737	100.77	42.594
#3	78.756	-481.48	596.23	14.143	26.021	100.73	39.481

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	.00000	526.32
SDev	3.3731	1643.4
%RSD	.00000	312.25
#1	.00000	-.00138
#2	3.3731	2368.4
#3	-3.3731	-789.48

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 03:44:00 AM page 1

Method: MRG Sample Name: ICSA Operator:
Run Time: 04/27/95 03:40:43
Comment: ICSA ICSA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	476810.	29.451	-785.08	2.9027	.44449	4.4835	489900.
SDev	3514.	14.822	64.69	.2231	.05133	1.8918	3391.
%RSD	.73701	50.328	-8.2394	7.6848	11.547	42.195	.69227
#1	473230.	32.728	-760.59	2.9229	.50375	3.5197	486800.
#2	480260.	42.361	-736.20	3.1149	.41486	6.6631	493530.
#3	476930.	13.265	-858.43	2.6702	.41486	3.2676	489380.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	22.441	9.5594	6.8771	175770.	179.45	518740.	-22.070
SDev	3.645	2.8797	1.0166	1280.	43.45	3059.	.990
%RSD	16.243	30.124	14.783	.72807	24.213	.58962	-4.4865
#1	25.959	11.218	6.6553	174470.	229.21	515900.	-22.905
#2	22.684	6.2342	5.9898	177030.	149.06	521980.	-20.976
#3	18.681	11.226	7.9863	175790.	160.07	518340.	-22.329

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-15.953	-333.06	-247.56	-9.7754	182.15	20.088	5.2961
SDev	12.095	345.04	57.61	1.8012	9.13	2.721	3.4070
%RSD	-75.814	-103.60	-23.271	-18.426	5.0150	13.543	64.330
#1	-8.0066	-144.81	-303.35	-7.6955	186.34	23.219	9.1993
#2	-9.9806	-731.27	-188.28	-10.815	171.67	18.297	2.9192
#3	-29.873	-123.09	-251.05	-10.815	188.44	18.749	3.7696

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-49.472	998420.
SDev	20.610	5819.
%RSD	-41.660	.58285
#1	-53.969	996320.
#2	-26.984	1005000.
#3	-67.461	993950.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 03:47:23 AM page 1

Method: MRG Sample Name: ICSAB Operator:
Run Time: 04/27/95 03:44:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	476330.	35.965	-735.38	469.72	463.07	889.68	485930.
SDev	3614.	48.439	131.24	2.94	3.17	4.00	2051.
%RSD	.75866	134.68	-17.846	.62576	.68423	.44929	.42206
#1	473160.	-19.677	-745.22	467.95	460.46	885.28	483940.
#2	480260.	58.858	-599.50	473.11	466.60	890.67	488040.
#3	475570.	68.715	-861.42	468.10	462.15	893.08	485810.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	446.02	464.50	473.19	175390.	4399.5	515680.	427.45
SDev	2.34	4.49	2.90	1041.	63.6	2777.	2.77
%RSD	.52437	.96563	.61307	.59381	1.4454	.53847	.64917
#1	445.05	459.52	471.86	174460.	4459.9	513140.	424.87
#2	448.69	465.74	476.52	176520.	4405.5	518640.	430.39
#3	444.32	468.23	471.19	175200.	4333.2	515270.	427.11

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	808.92	-586.47	-170.85	882.07	161.54	471.62	894.84
SDev	20.42	158.26	49.43	3.47	18.17	1.73	6.31
%RSD	2.5243	-26.985	-28.934	.39385	11.246	.36759	.70469
#1	786.10	-438.04	-115.06	878.95	166.96	471.97	894.41
#2	815.20	-753.00	-209.21	885.82	141.28	473.15	901.36
#3	825.46	-568.37	-188.28	881.45	176.39	469.74	888.77

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	-48.347	996580.
SDev	7.022	14586.
%RSD	-14.523	1.4636
#1	-40.477	979740.
#2	-53.969	1005000.
#3	-50.596	1005000.

Analysis Report QC Standard Thu 04-27-95 03:50:47 AM page 1

Method: MRG Sample Name: CCV Operator:
Run Time: 04/27/95 03:47:29
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4730.4	4957.4	4817.1	4880.3	4783.6	4668.8	49359.
SDev	34.9	97.2	68.0	75.5	56.1	58.0	428.
%RSD	.73876	1.9602	1.4121	1.5479	1.1728	1.2423	.86791
#1	4697.7	4860.5	4808.2	4793.2	4718.8	4601.9	48868.
#2	4726.2	4956.9	4889.1	4920.2	4815.6	4705.0	49554.
#3	4767.2	5054.8	4753.9	4927.5	4816.5	4699.5	49656.

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4609.7	4748.5	4604.8	4791.3	4698.2	48672.	4799.5
SDev	47.3	50.9	66.3	.0	59.8	446.	53.9
%RSD	1.0251	1.0716	1.4409	.00000	1.2736	.91708	1.1232
#1	4555.3	4689.9	4528.3	4791.3	4629.8	48158.	4737.3
#2	4633.9	4773.4	4640.1	4791.3	4741.3	48899.	4827.7
#3	4640.1	4782.1	4646.0	4791.3	4723.3	48960.	4833.4

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4548.3	49962.	4518.8	465.89	49576.	4861.6	4678.1
SDev	66.8	543.	10.5	4.95	680.	55.1	46.0
%RSD	1.4690	1.0874	.23149	1.0630	1.3708	1.1341	.98225
#1	Q4474.5	49379.	4529.3	460.27	48793.	4798.0	4625.6
#2	4565.6	50454.	4518.8	467.76	49932.	4892.8	4697.3
#3	4604.7	50052.	4508.4	469.63	50004.	4894.1	4711.3

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	4831.3	168950.
SDev	65.8	6462.
%RSD	1.3616	3.8249
#1	4756.0	167370.
#2	4860.6	176050.
#3	4877.4	163420.

INORGANIC SDG 04582M

Analysis Report QC Standard Thu 04-27-95 03:54:12 AM page 1

Method: MRG Sample Name: CCB Operator:
Run Time: 04/27/95 03:50:54
Comment: CCB
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2288	Ca3158
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	22.824	9.7115	-37.446	.88782	1.0371	1.0832	35.973
SDev	10.539	24.636	21.505	.31426	.0889	1.5308	1.203
%RSD	46.175	253.68	-57.431	35.397	8.5714	141.32	3.3450
#1	11.261	32.523	-57.081	.53235	1.1260	-.60990	34.660
#2	25.319	-16.414	-14.463	1.1287	1.0371	2.3696	37.023
#3	31.891	13.025	-40.792	1.0024	.94824	1.4899	36.235

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.84883	4.9835	1.5529	.00000	6.5846	14.845	1.1936
SDev	4.5453	3.2964	1.0166	.00000	5.7167	16.898	.1836
%RSD	535.47	66.148	65.465	.00000	86.820	113.84	15.384
#1	-4.2459	1.2455	.66553	.00000	-.01654	6.8513	1.0103
#2	4.4879	6.2301	1.3311	.00000	9.8917	34.257	1.1929
#3	2.3045	7.4748	2.6621	.00000	9.8786	3.4257	1.3776

Elem	Ni2316	K_7664	Se1960	Ag3280	Na5889	V_2924	Zn2138
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.5857	-119.47	73.222	2.2879	15.892	-.90095	2.6022
SDev	2.0231	375.64	31.381	2.2497	18.994	1.20232	1.6382
%RSD	78.241	-314.44	42.857	98.333	119.52	-133.45	62.954
#1	1.5665	-546.65	73.222	-.20799	-5.9377	-.76242	4.4415
#2	1.2750	159.29	41.841	2.9118	28.641	.22610	1.3002
#3	4.9157	28.961	Q104.60	4.1597	24.973	-2.1665	2.0648

Elem	Mo2020	Sn1899
Units	ug/liter	ug/liter
Avge	11.244	-789.48
SDev	13.632	1367.41
%RSD	121.24	-173.20
#1	26.984	-.00138
#2	3.3731	-.00138
#3	3.3731	-2368.4

Standards/QC Preparation for ICAP

Item to be prepared	Preparation instructions	Prepared by	Date
Standard blank (S0, ICB, CCB)	Place in a 200-ml volumetric flask: 150 ml of deionized water 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Bring up to volume with deionized water. Prepare daily.	BJ	4-26-95
~~Standard XCL-11 (S)~~	~~Place in a 100-ml volumetric flask:~~ 90 ml of deionized water 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 1.0 ml XCL-11 (Ref#: 7M2-183-16) into flask. Bring up to volume with deionized water. Prepare daily.	BJ	4-26-95
Standard XCL-2 (S)	Place in a 100-ml volumetric flask: 90 ml of deionized water 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 1.0 ml XCL-2 (Ref#: 7M2-183-17) into flask. Bring up to volume with deionized water. Prepare daily.	BJ	4-26-95
Standard XCL-3A	Place in a 100-ml volumetric flask: 90 ml of deionized water 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 1.0 ml XCL-3A (Ref#: 7M2-190-14) into flask. Bring up to volume with deionized water. Prepare daily.	BJ	4-26-95
Standard PLSB2-2X (S)	Place in a 100-ml volumetric flask: 90 ml of deionized water 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 1.0 ml of PLSB2-2X (Ref#: 7M2 189-3) into flask. Bring up to volume with deionized water. Prepare daily.	BJ	4-26-95
CCV solution (CVS1)	Place in a 200-ml volumetric flask: 150 ml of deionized water 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 1.0 ml XCL-2 (Ref#: 7M2-183-17) into flask. Pipet 1.0 ml XCL-11 (Ref#: 7M2-183-16) into flask. Pipet 1.0 ml XCL-3A (Ref#: 7M2-190-14) into flask. Pipet 1.0 ml PLSB2-2X (Ref#: 7M2-189-3) into flask. Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle. Prepare as needed. ~~1.0 ml of 7M2-183-17 1.0 ml of 7M2-189-15~~ BJ 4-26-95	BJ	4-26-95

Reviewed by: Judy C Daw Date: 4/26/95

INORGANIC SDG 04582M
COMPUCHEM ENVI. CORP. LOGBOOK 1000 11
Page 1033

Standards/QC Preparation for ICAP

Item to be prepared	Preparation instructions	Prepared by	Date
ICV1 solution	Place in a 200-ml volumetric flask: 150 ml of deionized water 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-~~186-19~~ 189-4) Pipet 20.0 ml ICV1 (Ref#: 7M2-~~18~~ 191-3) into flask. BJ 4-26-95 Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle. Prepare as needed.	BJ	4-26-95
ICV3 solution	Place in a 200-ml volumetric flask: 150 ml of deionized water 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 20.0 ml ICV3 (Ref# 7M2-184-9) into flask. Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle. Prepare as needed.	BJ	4-24-95
SPEXAS solution	Place in a 200-ml volumetric flask: 150 ml of deionized water 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 1.0 ml PLAS2-2X (Ref#: 7M2-185-12) into flask. Pipet 1.0 ml PLTL2-2X (Ref#: 7M2-185-13) Pipet 1.0 ml PLPB2-2X (Ref#: 7M2-182-8) into flask. Pipet 1.0 ml PLSE2-2X (Ref#: 7M2-182-9) into flask. Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle. Prepare as needed.	BJ	4-24-95
Intercheck solution A (ICSA)	Place in a 200-ml volumetric flask: 150 ml of deionized water 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Pipet 20.0 ml ICSA (Ref#: 7M2-188-2) into flask. Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle.	BJ	4-26-95

Reviewed by: Judy C Daw Date: 4/26/95

Standards/QC Preparation for ICAP

Item to be prepared	Preparation instructions	Prepared by	Date
Intercheck solution AB (ICSAB)	Place in a 200-ml volumetric flask: 20.0 ml of ICSA (Ref#: 7M2-188-2) 20.0 ml of ICSAB stock solution (Ref#: 7M2-188-6) 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-189-4) Bring up to volume with deionized water. Place in a Teflon bottle. Prepare as needed.	BJ	4-26-95
CRI stock solution A for P1	Place in a 100-ml volumetric flask: 80 ml of deionized water 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-181-11) Pipet 2X the IDL for As, Se, Pb, and Tl into flask. Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle. Prepare as needed.	CJY	10-17-94
CRI stock solution A for P2	Place in a 100-ml volumetric flask: 80 ml of deionized water 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-181-11) Pipet 2X the IDL for As, Se, Pb, and Tl into flask. Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle. Prepare as needed.	CJY	10-17-94
CRI solution	Place in a 200-ml volumetric flask: 150 ml of deionized water 4.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-186-17) Pipet CRI stock solution A P(1 or 2) into flask.(Please see ICP solutions log) Pipet 0.20 CRDL-1 Ref#: 7M2-187-14 into flask. Bring up to volume with deionized water. Place solution in an acid washed Teflon bottle. Prepare as needed.	DS	4-20-95
Dissolved Metals Only:			
LCS	Add 1.0 ml of LCSW solution (Ref#: 7M2-NA) to 9.0 ml of deionized water (2% HNO_3, Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-NA).	NA	NA
Prep Blank	Use acidified water (2% HNO_3, Baker Instra-analyzed Trace Metals grade, Ref#: 7M2-NA)	↓	↓
Sample Spike	Add 0.1 ml of XCL-19 (Ref#: 7M2-NA) to 10.0 ml of sample.	↓	↓

Reviewed by: Judy C Dow Date: 4/26/95

COMPUCHEM
ENVIRONMENTAL
CORPORATION

Mercury Analysis

Cold Vapor by Leeman PS200

Analyst Sandy Yee Date 4-21-95

Start Time: 15:10

SDG: 409418, 04582M, 04581M, 304089

Method: (CLP / SW-846)

QC: ICV-5 (0791)

gas flow: 0.3 LPM
pump rate: 5.0 ml/M

ICV: True value = 4.90ppb

CCV: True value = 3.00ppb

units: ug/L

correlation coefficient: 0.9998

standard concentrations (ug/L)
0.00
0.50
1.00
3.00
5.00
10.0

pages 1-7

Filename: V24216I .WSL

INORGANIC SDG 04582M

15:10:43 21 Apr 1995 Folder: SY421B Protocol: HG2 HG2 Page 1

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0		15:10:43 21 Apr 1995 HG		
Hg	.0000	ppb		24				
			Ave. Int. =	24	S. D. =	0		
*** Standard: 2 Rep: 1				Seq: 1		15:13:07 21 Apr 1995 HG		
Hg	.5000	ppb		4076				
			Ave. Int. =	4076	S. D. =	0		
*** Standard: 3 Rep: 1				Seq: 2		15:15:32 21 Apr 1995 HG		
Hg	1.000	ppb		8184				
			Ave. Int. =	8184	S. D. =	0		
*** Standard: 4 Rep: 1				Seq: 3		15:17:57 21 Apr 1995 HG		
Hg	3.000	ppb		24453				
			Ave. Int. =	24453	S. D. =	0		
*** Standard: 5 Rep: 1				Seq: 4		15:20:22 21 Apr 1995 HG		
Hg	5.000	ppb		41040				
			Ave. Int. =	41040	S. D. =	0		
*** Standard: 6 Rep: 1				Seq: 5		15:22:47 21 Apr 1995 HG		
Hg	10.00	ppb		79143				
			Ave. Int. =	79143	S. D. =	0		

INORGANIC SDG 04582M

Protocol: HG2 HG2
Rev: 2.005 Time: 15:22:58 21 Apr 1995
Folder: SY421B Seq: 6 Print: On
User: SYEE Batch: Id: Std6Rep1 Cup: Gas: 0.30 LPM
State: Idle Macro AUTOCRA 81 : F3 Print Xmit: Off Autosampler: On

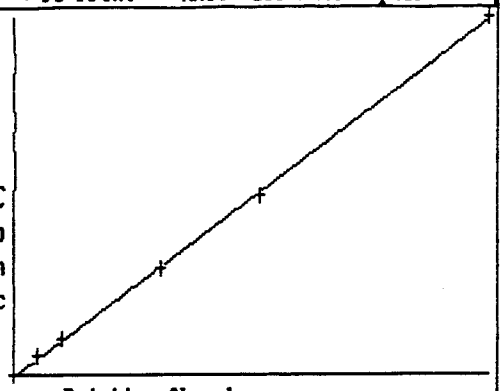
CALIBRATION: Line Calibration

Line: Hg

	Conc.	Calc.	Dev.
S1	.0000	-.0424	-.0424
S2	.5000	.4682	-.0318
S3	1.000	.9858	-.0142
S4	3.000	3.036	.0358
S5	5.000	5.126	.1258
S6	10.00	9.927	-.0731

A .0000000 r .999823
B 1.26003e-4 C -4.53980e-2

Accepted
LiNear
Quadratic
WtdLinear
Accept
StdAdd



	Mean	%RSD	
S1	24	0	24
S2	4076	0	4076
S3	8184	0	8184
S4	24453	0	24453
S5	41040	0	41040
S6	79143	0	79143

New cal coefficients stored

INORGANIC SDG 04582M

Folder: SY421B Page 2
15:25:14 21 Apr 1995 Protocol: HG2 HG2

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 3 Ck3ICV Seq: 6 15:25:14 21 Apr 1995 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		110.8	5.432	4.900	ppb	.0000

*** Check Standard: 1 Ck1ICB\CCB Seq: 7 15:27:41 21 Apr 1995 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0909	.2000	ppb	.0000

*** Check Standard: 4 Ck4CRA Seq: 8 15:30:03 21 Apr 1995 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		82.32	.1646	.2000	ppb	.0000

*** Check Standard: 2 Ck2CCV Seq: 9 15:32:25 21 Apr 1995 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		103.3	3.099	3.000	ppb	.0000

*** Check Standard: 1 Ck1ICB\CCB Seq: 10 15:34:48 21 Apr 1995 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0671	.2000	ppb	.0000

*** Sample ID: 701306 Seq: 11 15:37:09 21 Apr 1995 HG

12-05SS-1 1:1

Hg	-.0368	ppb	.0000	-.0368

*** Sample ID: 701309 Seq: 12 15:39:29 21 Apr 1995 HG

12-02SS-1 1:1

Hg	.6050	ppb	.0000	.6050

*** Sample ID: 705056 Seq: 13 15:41:49 21 Apr 1995 HG

PBW 1:1

Hg	-.0462	ppb	.0000	-.0462

*** Sample ID: LCSW703389 Seq: 14 15:44:09 21 Apr 1995 HG

LCSW 1:1

Hg	2.882	ppb	.0000	2.882

*** Sample ID: 703385 Seq: 15 15:46:29 21 Apr 1995 HG

MW9 1:1

Hg	-.0725	ppb	.0000	-.0725

*** Sample ID: 703388 Seq: 16 15:48:49 21 Apr 1995 HG

MW9D 1:1

Hg	-.0455	ppb	.0000	-.0455

*** Sample ID: 703387 Seq: 17 15:51:09 21 Apr 1995 HG

MW9S 1:1

Hg	.9559	ppb	.0000	.9560

Folder: SY421B Page 3

15:53:29 21 Apr 1995 Protocol: HG2 HG2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 703386				Seq: 18	15:53:29 21 Apr 1995 HG			
				MW16	1:1			
Hg	-.0566	ppb	.0000	-.0566				
*** Sample ID: 703390				Seq: 19	15:55:50 21 Apr 1995 HG			
				MW4	1:1			
Hg	-.0537	ppb	.0000	-.0537				
*** Sample ID: 703391				Seq: 20	15:58:11 21 Apr 1995 HG			
				MW2	1:1			
Hg	-.0450	ppb	.0000	-.0450				
*** Check Standard: 2			CK2CCV	Seq: 21	16:00:33 21 Apr 1995 HG			
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		99.73	2.992	3.000	ppb	.0000		
*** Check Standard: 1			CK1ICB\CCB	Seq: 22	16:02:55 21 Apr 1995 HG			
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.0720	.3020	ppb	.0000			
*** Sample ID: 703392				Seq: 23	16:05:16 21 Apr 1995 HG			
				MW14	1:1			
Hg	-.0532	ppb	.0000	-.0532				
*** Sample ID: 703393				Seq: 24	16:07:36 21 Apr 1995 HG			
				MW12	1:1			
Hg	-.0296	ppb	.0000	-.0297				
*** Sample ID: 703394				Seq: 25	16:09:54 21 Apr 1995 HG			
				MW15	1:1			
Hg	-.0366	ppb	.0000	-.0366				
*** Sample ID: 703395				Seq: 26	16:12:12 21 Apr 1995 HG			
				MW18	1:1			
Hg	-.0513	ppb	.0000	-.0513				
*** Sample ID: 703396				Seq: 27	16:14:30 21 Apr 1995 HG			
				TBLANK2	1:1			
Hg	-.0444	ppb	.0000	-.0444				
*** Sample ID: 705055				Seq: 28	16:16:48 21 Apr 1995 HG			
				PBW	1:1			
Hg	-.0182	ppb	.0000	-.0182				
*** Sample ID: LCSW702291				Seq: 29	16:19:07 21 Apr 1995 HG			
				LCSW	1:1			
Hg	2.855	ppb	.0000	2.855				

Folder: SY421B Page 4
16:21:27 21 Apr 1995 Protocol: HG2 HG2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 702297				Seq: 30	16:21:27 21 Apr 1995 HG			
				MW1	1:1			
Hg	-.0863	ppb	.0000	-.0864				
*** Sample ID: 702290				Seq: 31	16:23:46 21 Apr 1995 HG			
				MW1D	1:1			
Hg	-.0174	ppb	.0000	-.0174				
*** Sample ID: 702289				Seq: 32	16:26:05 21 Apr 1995 HG			
				MW1S	1:1			
Hg	.9205	ppb	.0000	.9205				
*** Check Standard: 2			Ck2CCV	Seq: 33	16:28:26 21 Apr 1995 HG			
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		96.88	2.906	3.000	ppb	.0000		
*** Check Standard: 1			Ck1ICB\CCB	Seq: 34	16:30:48 21 Apr 1995 HG			
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.0782	.2000	ppb	.0000			
*** Sample ID: 702281				Seq: 35	16:33:08 21 Apr 1995 HG			
				TRIPBLANK	1:1			
Hg	-.0230	ppb	.0000	-.0230				
*** Sample ID: 702301				Seq: 36	16:35:27 21 Apr 1995 HG			
				MW3	1:1			
Hg	-.0275	ppb	.0000	-.0275				
*** Sample ID: 702305				Seq: 37	16:37:45 21 Apr 1995 HG			
				MW5	1:1			
Hg	-.0368	ppb	.0000	-.0368				
*** Sample ID: 702310				Seq: 38	16:40:01 21 Apr 1995 HG			
				MW6	1:1			
Hg	.0059	ppb	.0000	.0059				
*** Sample ID: 702313				Seq: 39	16:42:17 21 Apr 1995 HG			
				MW7	1:1			
Hg	.0015	ppb	.0000	.0015				
*** Sample ID: 702317				Seq: 40	16:44:34 21 Apr 1995 HG			
				MW8	1:1			
Hg	-.0329	ppb	.0000	-.0329				
*** Sample ID: 702319				Seq: 41	16:46:52 21 Apr 1995 HG			
				MW10	1:1			
Hg	-.0066	ppb	.0000	-.0066				

INORGANIC SDG 04582M

16:49:10 21 Apr 1995 Folder: SY421B Page 5
Protocol: HG2 HG2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 702323				Seq: 42		16:49:10 21 Apr 1995 HG		
				MW11	1:1			
Hg	-.0302	ppb	.0000	-.0302				
*** Sample ID: 702326				Seq: 43		16:51:28 21 Apr 1995 HG		
				MW13	1:1			
Hg	-.0136	ppb	.0000	-.0137				
*** Sample ID: 702329				Seq: 44		16:53:46 21 Apr 1995 HG		
				MW17	1:1			
Hg	-.0254	ppb	.0000	-.0254				
*** Check Standard: 2			Ck2CCV	Seq: 45		16:56:06 21 Apr 1995 HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		97.93	2.938	3.000	ppb	.0000		
*** Check Standard: 1			Ck1ICB\CCB	Seq: 46		16:58:29 21 Apr 1995 HG		
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.0639	.2000	ppb	.0000			
*** Sample ID: 705054				Seq: 47		17:00:49 21 Apr 1995 HG		
				PBW	1:1			
Hg	-.0044	ppb	.0000	-.0045				
*** Sample ID: LCSW700981				Seq: 48		17:03:07 21 Apr 1995 HG		
				LCSW	1:1			
Hg	3.065	ppb	.0000	3.065				
*** Sample ID: 701544				Seq: 49		17:05:25 21 Apr 1995 HG		
				MW-309R	1:1			
Hg	-.0778	ppb	.0000	-.0778				
*** Sample ID: 700980				Seq: 50		17:07:43 21 Apr 1995 HG		
				MW-309RD	1:1			
Hg	-.0363	ppb	.0000	-.0363				
*** Sample ID: 700979				Seq: 51		17:10:01 21 Apr 1995 HG		
				MW-309RS	1:1			
Hg	.9747	ppb	.0000	.9747				
*** Sample ID: 700977				Seq: 52		17:12:19 21 Apr 1995 HG		
				MW-B5C	1:1			
Hg	-.0482	ppb	.0000	-.0482				
*** Sample ID: 700989				Seq: 53		17:14:37 21 Apr 1995 HG		
				MW-B9	1:1			
Hg	-.0223	ppb	.0000	-.0223				

INORGANIC SDG 04582M

17:16:55 21 Apr 1995 Folder: SY421B Page 6
Protocol: HG2 HG2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 700990				Seq: 54	17:16:55 21 Apr 1995 HG			
				MW-B12	1:1			
Hg	-.0303	ppb	.0000	-.0303				
*** Sample ID: 701546				Seq: 55	17:19:13 21 Apr 1995 HG			
				MW-B2B	1:1			
Hg	-.0123	ppb	.0000	-.0123				
*** Sample ID: 701550				Seq: 56	17:21:31 21 Apr 1995 HG			
				MW-B4B	1:1			
Hg	-.0231	ppb	.0000	-.0231				
*** Check Standard: 2			CK2CCV	Seq: 57	17:23:51 21 Apr 1995 HG			
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		99.16	2.975	3.000	ppb	.0000		
*** Check Standard: 1			CK1ICB\CCB	Seq: 58	17:26:13 21 Apr 1995 HG			
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.0865	.2000	ppb	.0000			
*** Sample ID: 701552				Seq: 59	17:28:33 21 Apr 1995 HG			
				MW-B10B	1:1			
Hg	-.0246	ppb	.0000	-.0246				
*** Sample ID: 701554				Seq: 60	17:30:51 21 Apr 1995 HG			
				MWB10BDUP	1:1			
Hg	-.0434	ppb	.0000	-.0434				
*** Sample ID: 701556				Seq: 61	17:33:09 21 Apr 1995 HG			
				RINSEBLNK	1:1			
Hg	-.0118	ppb	.0000	-.0118				
*** Sample ID: 701558				Seq: 62	17:35:27 21 Apr 1995 HG			
				MW-302	1:1			
Hg	-.0237	ppb	.0000	-.0237				
*** Sample ID: 701560				Seq: 63	17:37:45 21 Apr 1995 HG			
				MW-310	1:1			
Hg	-.0300	ppb	.0000	-.0300				
*** Sample ID: 701563				Seq: 64	17:40:03 21 Apr 1995 HG			
				FILTERBLK	1:1			
Hg	-.0431	ppb	.0000	-.0431				
*** Sample ID: 123123				Seq: 65	17:42:22 21 Apr 1995 HG			
				INSERT	1:1			
Hg	-.0528	ppb	.0000	-.0528				

INORGANIC SDG 04582M

Folder: SY421B Page 7
17:44:41 21 Apr 1995 Protocol: HG2 HG2

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 123123 Seq: 66 17:44:41 21 Apr 1995 HG
INSERT 1:1

Hg	-.0516	ppb	.0000	-.0516				

*** Sample ID: 123123 Seq: 67 17:47:00 21 Apr 1995 HG
INSERT 1:1

Hg	-.0388	ppb	.0000	-.0389				

*** Sample ID: 123123 Seq: 68 17:49:19 21 Apr 1995 HG
INSERT 1:1

Hg	-.0482	ppb	.0000	-.0482				

*** Check Standard: 2 Ck2CCV Seq: 69 17:51:40 21 Apr 1995 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.1	3.063	3.000	ppb	.0000

*** Check Standard: 1 Ck1ICB\CCB Seq: 70 17:54:04 21 Apr 1995 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0743	.2000	ppb	.0000

*** Check Standard: 2 Ck2CCV Seq: 71 17:56:26 21 Apr 1995 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		103.7	3.110	3.000	ppb	.0000

*** Check Standard: 1 Ck1ICB\CCB Seq: 72 17:58:49 21 Apr 1995 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0761	.2000	ppb	.0000

INORGANIC SDG 04582M

COMPUCHEM ENVI. LOGBOOK 1 BBB 13

Automated Mercury Runlog

Page 1 of 2

Date: 4-21-95

Method (Circle one.):
CLP
SW-846

Operator Sandy Yee
Case Name: 404418, 04582M, 04581M
304089
File Name:

No.	Sample ID	Comments	Time	#	Sample ID	Comments	Time
	ICV			1	703392		
	ICB			2	703393		
1	CRA			3	703394		
2				4	703395		
3				5	703396		
4				6	705055	PBW	
5				7	702291	LCSW	
6				8	702297		
7				9	702290	Dup	
8				10	702289	spk	
9					CCV		
10		[illegible] 4-22-95			CCB		
	CCV			1	702281		
	CCB			2	702301		
1	701306			3	702305		
2	701309			4	702310		
3	705056	PBW		5	702313		
4	703389	LCSW		6	702317		
5	703385			7	702319		
6	703388	Dup		8	702323		
7	703387	spk		9	702326		
8	703386			10	702329		
9	703390				CCV		
10	703391				CCB		
	CCV						
	CCB						

Reviewed By: [signature]
Date: 4/22/95

Automated Mercury Runlog

Page 2 of 2

Date: 4-21-95

Method (Circle one.):
CLP
SW-846

Operator Sandy Yee
Case Name: Same
File Name: ↓

No.	Sample ID	Comments	Time	#	Sample ID	Comments	Time
	~~ICV~~			1			
	~~ICB~~	Jan 4-22-95		2			
1	705054	PBW		3			
2	700981	LCSW		4			
3	701544			5			
4	700980	Dup		6			
5	700979	spK		7			
6	700977			8			
7	700989			9			
8	700990			10		Jan 4-22-95	
9	701546				CCV		
10	701550				CCB		
	CCV			1			
	CCB			2			
1	701552			3			
2	701554			4			
3	701556			5			
4	701558			6		Jan 4-22-95	
5	701560			7			
6	701563			8			
7	123123			9			
8	123123			10			
9	123123				CCV		
10	123123				CCB		
	CCV						
	CCB						

Reviewed By: [signature]
Date: 4/22/95

Standards / QC Preparation Log for Cold Vapor Mercury

Item to be prepared	Preparation instructions	Prepared by	Date
Hg Stock Solution (10 ppm)	Place the following in a 100-ml volumetric flask: • 1.0 ml of Hg *PLHG4-2X (Ref. #: 7M2-180-5) • 5.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade Ref., #: 7M2-189-4) Dilute to 100 ml with deionized water. Prepare as needed.	MWC	4-5-95
Hg standard solution (100 ppb)	Place the following in a 100-ml volumetric flask: • 1.0 ml of 10 ppm Hg stock solution • 5.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade Ref., #: 7M2-[illegible]) 189-4 SY4-21-95 Dilute to 100 ml with deionized water. Prepare as needed.	PK	4-21-95
5% Potassium permanganate solution	Place into a 1000-ml Erlenmeyer flask: • 50.0 g of $KMnO_4$ (Baker Analyzed, Ref#: 7M2171-4) Dilute to 1000 ml with deionized water. Transfer to a 2500-ml amber bottle. Prepare as needed.	PK	4-21-95
5% Potassium persulfate solution	Place into a 1000-ml Erlenmeyer flask: • 50.0 g of $K_2S_2O_8$ (Baker Analyzed, Ref#: 7M2-171-10 Dilute to 1000-ml with deionized water. Transfer to 1250-ml amber bottle. Prepare as needed.	LL	4-18-95
Hydroxylamine hydrochloride	Place into a 1000-ml volumetric flask: • 240.0 g of NH_2OH-HCl (Baker Analyzed, Ref#: 7M2-190-05 Dilute to 1000 ml with deionized water. Place solution in a bottle. Prepare as needed. (This can be prepared at 500 ml using 120.0 g of NH_2OH-HCl.)	SY	4-21-95

*SPEX concentration: 1000 ppm

Reviewed by: [signature] Date: 4/21/95

Standards / QC Preparation Log for Cold Vapor Mercury (Page 2 of 4)

Item to be prepared	Preparation instructions	Prepared by	Date
Stannous chloride	**Automated** Place in a 250-ml fleaker: • 25.0 g of $SnCl_2$-$2H_2O$ (Baker Analyzed, Ref#: 7M2-159-8) • 62.5 ml of HCl (Baker Analyzed, Ref#: 7M2-189-7) Dilute to 250 ml with deionized water. Prepare as needed. **Manual** Place in a 250-ml fleaker: 5Y 4-21-95 • 50.0 g of $SnCl_2$-$2H_2O$ (Baker Analyzed, Ref#: _____) • 50.0 ml of HCl (Baker Analyzed, Ref#: _____) Dilute to 500 ml with deionized water. Prepare as needed.	SY	4-21-95
Standard (0, 0.5, 1.0, 3.0, 5.0, 10.0)	Pipet into 250-ml fleakers: • 0, 0.5, 1.0, 3.0, 5.0, 10.0 ml of Hg standard solution. Dilute each fleaker to 100 ml with deionized water. Add: • 5.0 ml of H_2SO_4 (Baker Analyzed, Ref#: 7M2-190-6). • 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: 7M2-189-4). • 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution. All standards are digested with samples and recorded on the appropriate logs submitted with this data. Prepare with each batch of samples.	DK	4-20-95
LCS (water)	Place in a 250-ml fleaker: • 3.0 ml of 100-ppb Hg standard solution • 100 ml of deionized water • 5.0 ml of H_2SO_4 7M2-190-6 • 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: 7M2-189-4). • 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution Prepare with each batch of samples.	See preparation worksheet.	Page: 3729 3736-3731 3741 3740 3739

Reviewed by: _____ Date: 4/21/95

INORGANIC SDG 04582M

COMPUCHEM ENVI. LOGBOOK 1 NNN 10

Page 1500

Standards / QC Preparation Log for Cold Vapor Mercury (Page 3 of 4)

Item to be prepared	Preparation instructions	Prepared by	Date
LCS (soil)	Place in a 250-ml fleaker: • 0.2 g of EPA Reference Material Solid LCS (0827) (Ref#: 7M2-184-8) • 5.0 ml of H_2SO_4 7M2-190-6 • 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: 7M2-189-4). • 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution Add 50 ml of deionized water. Prepare with each batch of samples.	See preparation worksheet.	Page: 3734 3736-3738
Sample Spike (water)	Place in a 250-ml fleaker: • 1.0 ml of 100-ppb Hg standard solution • 100 ml of sample • 5.0 ml of H_2SO_4 7M2-190-6 • 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: 7M2-189-4). • 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution Prepare with each batch of samples.	See preparation worksheet.	Page: 3729-3731 3739-3741
Sample spike (soil)	Place in a 250-ml fleaker: • 1.0 ml of 100-ppb Hg standard solution • 0.2 g of sample • 5.0 ml of H_2SO_4 7M2-190-6 • 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: 7M2-189-4). • 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution Add 50 ml of deionized water. Prepare with each batch of samples.	See preparation worksheet.	Page: 3734 3736-3738
ICV-5 Solution	Place in a 100-ml volumetric flask: • 50 ml of deionized water • 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: 7M2-187-16). Add to flask: • 1.0 ml of ICV-5 (Ref#: 7M2-182-17) Bring up to volume with deionized water.	MWC	4-13-95

Reviewed by: _____ Date: 4/21/95

INORGANIC SDG 04582M
COMPUCHEM ENVI. LOGBOOK 1 NNN 10
Page 1501
Page 95

Standards / QC Preparation Log for Cold Vapor Mercury (Page 4 of 4)

Item to be prepared	Preparation instructions	Prepared by	Date
CRA Solution	Place in a 100-ml volumetric flask: • 50 ml of deionized water • 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: 7M2 - 189-4). Add to flask: ~~• 0.2 ml of 100-ppb Hg standard solution~~ Bring up to volume with deionized water.	SV	4-21-95
Dissolved standard (0, 0.5, 1.0, 3.0, 5.0, 10.0)	Pipet into 100-ml volumetric flask: • 0, 0.5, 1.0, 3.0, 5.0, 10.0 of Hg standard solution Dilute each flask to 100 ml with deionized Add: • 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: NA).	NA	NA
Dissolved LCS (water)	Pipet into 100-ml volumetric flask: • 3.0 ml of 100-ppb Hg standard solution Add deionized water to volume. Add sample to volume • 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: NA).	NA	NA
Dissolved Sample Spike (water)	Pipet into 100-ml volumetric flask: • 1.0 ml of 100-ppb Hg standard solution Add deionized water to volume. Add sample to volume • 2.0 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade, Ref#: NA).	NA	NA

Reviewed by: _____ **Date:** 4/21/95

COMPUCHEM ENVI. CORP LOGBOOK 1 D 29

Metals Preparation Log

Method (circle one): CLP SW-846: 3005 (dissolved) 3050 Case type: RAT SDG ID: 04582M Procedure code: -62 Prepared by: Lynn Leathers Date: 4.21.95

#	CCN (Lab ID)	Date Rec'd	Customer ID	Initial Plasma (wt/vol)	Final Plasma (vol)	Initial Furnace (wt/vol)	Final Furnace (vol)	Description Before	Description After	pH	Dilution Factor
1	703385	4.14.95	MW9	100ml	100ml	N/A	N/A	Colorless Clear	Colorless Clear	12	N/A
2	703386		MW16								
3	703390		MW4								
4	703391		MW2								
5	703392		MW14								
6	703393		MW12								
7	703394		MW15								
8	703395	14	MW18								
9	703396	4.14.95	TBLANK2								
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21	Sample spike: 703387	QC F Ref#: N/A		100ml	100ml	N/A	N/A	Ref CCN: (703385)	QC SS P 1.00ml XCL-19 → 100ml Ref#: 7M2-181-4		
22	Duplicate sample: 703388							Ref CCN: (703385)			
23	Lab ctrl. sample: 703389	QC F Ref#:						Reviewed by/date: 4-21-95	QC LCS P 10.00ml PEPLICE → 100ml Ref#: 7M2-190-13		
24	Prep. blank: 705056										

Lynn Leathers 4.21.95

Mercury Preparation Log

Method (circle one) CLP 245.1/.5 SW-846: 7470/7471 Case type: RLAT SDG ID: 04582M Procedure code: -74 Prepared by: Lynn Leathers Date: 4.21.95

#	CCN (Lab ID)	Date Rec'd	Customer ID	Initial Wt./Vol.	Final Vol.	Description Before	Description After	pH	Dilution Factor	Standard Curve
1	703385	4.14.95	MW9	100ml	100ml	colorless	violet	12	N/A	0 ml 100 ppb Hg to 100 ml
2	703386	"	MW16	"	"	"	"	"	"	0.5 ml 100 ppb Hg to 100 ml
3	703390	"	MW4	"	"	"	"	"	"	1.0 ml 100 ppb Hg to 100 ml
4	703391	"	MW2	"	"	"	"	"	"	3.0 ml 100 ppb Hg to 100 ml
5	703392	"	MW14	"	"	"	"	"	"	5.0 ml 100 ppb Hg to 100 ml
6	703393	"	MW12	"	"	"	"	"	"	10.0 ml 100 ppb Hg to 100 ml
7	703394	"	MW15	"	"	"	"	"	"	The standards listed above were prepared in the same manner and at the same time as the associated samples.
8	703395	"	MW16	"	"	"	"	"	"	
9	703396	4.14.95	TBLANK2	"	"	"	"	"	"	
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21	703387		Sample spike	100ml	100ml	Ref CCN: (703385)				
22	703388	"	Duplicate spike			Ref CCN: (703385)				
23	703389	4.21.95	Lab ctrl. sample			Reviewed by/date: Sandy Lee 4-21-95				
24	705056		Prep. blank							

Lynn Leathers 4.21.95

QC (SS): 1.00ml 100ppbHg→100ml
Reff: 7M2-180-5

QC (LCS): 3.00ml 100ppbHg→100ml
Reff: 7M2-180-5

INORGANIC SDG 04582M

CHAIN OF CUSTODY RECORD

O # 30458

SDG - 2

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 406-1686

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

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

Sample Site: Watauga County Landfill
Location: Watauga County, NC
Event: 4th Assessment Monitoring
JN: 6520-20 Lab JN:

Project Specific (PS) or Batch (B) QC: PS
Sampling for Project Complete? X Yes ___ No (See Note 1)
Carrier: Federal Express
Tracking No.: HKY4-170

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

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

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

Box 4: Sample Type
C. Composite; G. Grab

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

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment): CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
MW9	4/12	1200	GW	**	U	G	<2		3	2	1	SEE ATTACHED PARAMETER LISTS ** TOTAL METALS - PRESERVATIVE: NITRIC ACID VOLATILES - PRESERVATIVE: HCl
MW 9 MS	4/12	1200	GW	**	U	G	<2	X	1	1		
MW 9 MSD	4/12	1200	GW	**	U	G	<2	X	1	1		
MW 9 MS/SD	4/12	1200	GW	**	U	G	<2	X	1		1	
MW16	4/12	1520	GW	**	U	G	<2		3	2	1	
MW 4	4/12	1605	GW	**	U	G	<2		3	2	1	
MW 2	4/12	1710	GW	**	U	G	<2		3	2	1	
MW 14	4/12	1805	GW	**	U	G	<2		3	2	1	
MW 12	4/12	1855	GW	**	U	G	<2		3	2	1	

SAMPLES RECEIVED IN GOOD CONDITION
NO LEAKAGE OR BREAKAGE

4/14/95

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

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

Sampler Name (print): JEFF S. PACK	Date: 4/13/95	#1 Relinquished By (Sig.):	Date: 4/13/95	#2 Relinquished By (Sig.):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 1400	Company Name: Draper Aden Assoc.	Time: 1500	Company Name:	Time:	
Sampler Name (print): ERIK RUDIN	Date: 4/13/95	#1 Received By (Sig.):	Date: 4/13/95	#2 Received By (Sig.):	Date: 4/14/95	60 (No. Days)
Sampler Signature:	Time: 1400	Company Name	Time: 1500	Company Name	Time: 0845	

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

Page 100

INORGANIC SDG 04582M

Of 30458

SDG-2

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp. 3308 Chapel Hill / Nelson Hwy. Research Triangle Park, NC 27709-4998 (919) 406-1600 FAX (919) 406-1686

Client: Watauga County, NC Attn: Mr. Jim Ratchford Address: P.O. Box 143 Boone, NC 28607 Phone: (704) 265-8003 Fax:(704) 265-8003	**Consultant:** Draper Aden Assoc. Attn: Janet M. Cleary 2206 South Main Street Blacksburg, Virginia 24060 Phone: (703) 552-0444 Fax: (703) 552-0291	**Sample Site:** Watauga County Landfill Location: Watauga County, NC Event: 4th Assessment Monitoring JN: 6520-20 Lab JN:	Project Specific (PS) or Batch (B) QC: PS Sampling for Project Complete? _X_ Yes ___ No (See Note 1) Carrier: Federal Express Tracking No.: HKYA -170

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

Sample I.D.	Date 19 95	Time	Box 1 Matrix	Box 2 Preservative	Box 3 Filtered/Unfiltered	Box 4 Sample Type	pH	Use as Lab QC (MS/MSD/SD)	Total No. of Bottles	Analytical Method (Assessment) CLP VOLATILES	CLP TOTAL METALS	Special Instructions/Comments
MW 15	4/13	0930	GW	**	U	G	<2		3	2	1	
MW 18	4/13	1025	GW	**	U	G	<2		3	2	1	
TRIP BLANK 2	4/11	0800	T	**	U	G	<2		2	2		~~ph = 6~~ OK 4/12/95 ID used TBLANK2
TRIP BLANK 2	4/11	0800	T	**	U	G	<2		1		1	ph = 6 ✓ OK 4/14/95
				**	U	G	<2					
				**	U	G	<2					
				**	U	G	<2					
				**	U	G	<2					
				**	U	G	<2					

SEE ATTACHED PARAMETER LISTS

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

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

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

Sampler Name (print): JEFF S. PACK	Date: 4/13/95	**#1 Relinquished By (Sig.):**	Date: 4-13-95	**#2 Relinquished By (Sig.):**	Date:	Sample Storage Time Requested:		
Sampler Signature:	Time: 1400	Company Name: Draper Aden Assoc.	Time: 1500	Company Name:	Time:			
Sampler Name (print): ERIN RUDIN	Date: 4-13-95	**#1 Received By (Sig.):**	Date: 4/13/95	**#2 Received By (Sig.):**	Date: 4/14/95	60 (No. Days)		
Sampler Signature:	Time: 1400	Company Name: Watauga County	Time: 15:00	Company Name: CompuChem	Time: 0845			

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

END OF REPORT

SECTION II

CLP VOLATILES

SECTION 2.1

CLP VOLATILES REPORTING QUALIFIERS

CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION 2.2

DAA CLP VOLATILES DATA VALIDATION FORMS

CLP VOLATILE ORGANIC ANALYSIS (VOA) DATA VALIDATION SUMMARY

Samples were collected during the April 11-13, 1995 sampling event from monitoring wells MW1, MW3, MW5, MW6, MW7, MW8, MW10, MW11, MW13, and MW17 at Watauga County Landfill.

Samples were analyzed by CompuChem Environmental Corporation of Research Triangle Park, N.C. according to 3/90 Statement of Work (SOW)(document 0LM01.9) protocol on April 24-25, 1995. Dilution's were required for samples MW6 (1/2.5) and MW10 (1/7.1) in order to quantitate parameters within the linear range of the calibration curve. Samples which were diluted have elevated contract required quantitation levels (CRQL) for all parameters. Specifically, MW6 CRQL's were increased to 25 μg/L and MW10 CRQL's were increased to 71 μg/L.

Draper Aden Associates data validation included but was not limited to the following items: technical holding times, sample preservation, instrument tuning and calibration requirements, blank analyses, surrogate spike recoveries, matrix spike/matrix spike duplicate recoveries and relative percent difference values, confirmation of mass spectral match for identified parameters was also performed.

The overall degree of adherence to technical and reporting protocol was excellent. Analytical data displayed a few minor concerns and required minimal qualification. The Analytical data for the Trip Blank was missing from the report. A phone call to CompuChem revealed that the Trip Blank was lost during storage and analysis. %Deviation of Acetone, 2-Butanone, and 2-Hexanone exceeded CLP performance criteria therefore all results for these parameters were qualified as estimated (J). Acetone was detected in MW7, otherwise none of these parameters were detected. Negative effect to data is minimal.

There was minimal Methylene chloride contamination in the method blank analyzed prior to samples at 1 μg/L. CompuChem reported Methylene chloride at low levels, less than 10 μg/L, in several samples which was validated as laboratory contamination and was qualified accordingly.

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

CLP VOA Volatile Data Review

Wells: MW1, MW10, MW11, MW13, MW17,MW3, MW5, MW6, MW7, MW8

QC Samples: Method blanks, Trip Blank, MW1MS, MW1 MSD

Laboratory: Compu Chem - Environmental

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

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

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

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

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

Comments: All technical holding times and preservation criteria met.

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

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

Comments: All samples were analyzed within twelve hours of meeting ion abundance criteria when BFB was injected.

X **C. Initial Calibration Requirements:**

1. CLP Performance Criteria:

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

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

2. CLP Contractual Requirements:

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

The following compounds do not have to meet %RSD criteria:

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

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

Comments: One initial calibration (ICAL) is associated with this SDG. This ICAL, analyzed on April 24, 1995, met all CLP performance and CLP contractual requirements met.

X **D. Continuing Calibration Requirements:**

1. CLP Performance Criteria:

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

CCAL CS950424B54
Acetone - %D = 62.9
2-Butanone - %D = 41.2
2 - Hexanone - %D = 38.7

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

2. CLP Contractual Requirements:

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

Comments: One continuing calibration (CCAL) is associated with this SDG. This CCAL, analyzed on April 24, 1995 - file id CS950424B54, met all CLP contractual requirements met. Three parameters exceeded CLP performance criteria: Acetone %D=62.9, 2-Butanone %D=41.2 and 2-Hexanone %D=38.7. As per CLP validation guidelines all results for these parameters will be qualified as estimated (J).

X **E. Blanks Criteria:**

- A Method blank must be performed after the calibration standards, at 12 hr. intervals during analysis, on every GCMS system, and after a highly contaminated sample.

- All blanks should be interference free
- Trip Blank, Equipment Blank, Method Blank

Comments: One method blank, analyzed on April 24, 1995 - file id CB950424B54, is associated with this SDG. This method blank contained Methylene chloride at 1 μg/L. Therefore, all concentrations less than 10 times (1 x 10 = 10 μg/L) 1 μg/L of Methylene chloride detected in these samples will be qualified as (U) denoting not detected above contamination level.

Trip Blank is noted on the cover page of the report but no analytical data is provided. A phone call to CompuChem revealed that the Trip Blank samples were broken during analysis. Documentation is provided in the Revisions section of the GC/MS data.

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

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

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

Comments: Surrogate recovery criteria met.

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

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

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

Comments: MS/MSD performed on MW1, all percent recovery (%R) and relative percent difference (%RPD) requirements were met. No indication of matrix interference was detected.

X **H. Internal Standards Criteria:**

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

Comments: Internal standard area and retention time requirements met.

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

Comments: No TIC's were identified in the method blank analyzed prior to sample analysis. However, a laboratory artifact does appear in several samples and is included in the report along with a quality assurance notice of explanation. One TIC was detected in sample MW6 at approximately 30 µg/L and has been labeled as unknown.

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

Validated by: Sandra J. Flint

Date: 7/14/95

CLPVOA.SE/rh

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Methylene chloride	MW1	1JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	Chloroethane	MW3	6J	6J	Result is <CRQL. No action taken.
CLP VOA 3/90	Methylene chloride	MW3	2JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	1,1-Dichloroethene	MW3	3J	3J	Result is <CRQL. No action taken.
OA 3/90	1,1-Dichloroethane	MW3	130	130	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	MW3	44	44	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW3	21	21	No action taken.
CLP VOA 3/90	Trichloroethene	MW3	12	12	No action taken.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Benzene	MW3	1J	1J	Result is <CRQL. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW3	33	33	No Action Taken.
CLP VOA 3/90	----------	MW5	U	U	No target parameters reported. No action required.
CLP VOA 3/90	Vinyl chloride	MW6	10J	10J	Result is <CRQL. A 1/2.5 dilution was performed on this sample effectively raising the CRQL to 25 µg/L for all parameters. No action taken.
VOA 3/90	Chloroethane	MW6	8J	8J	Result is <CRQL. A 1/2.5 dilution was performed on this sample effectively raising the CRQL to 25 µg/L for all parameters. No action taken.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Methylene chloride	MW6	4JB	25U	Raw result is <10 times the contamination level in the associated method blank. A 1/2.5 dilution was performed on this sample, therefore any final result less than 25 would be considered both <CRQL and blank contamination. Qualified as undetected (U).
CLP VOA 3/90	1,1-Dichloroethane	MW6	94	94	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	MW6	330	330	No action taken.
CLP VOA 3/90	Trichloroethene	MW6	53	53	No action taken.

See definition seciton (Section IV.A of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Benzene	MW6	10J	10J	Result is <CRQL. A 1/2.5 dilution was performed on this sample effectively raising the CRQL to 25 µg/L for all parameters. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW6	13J	13J	Result is <CRQL. A 1/2.5 dilution was performed on this sample effectively raising the CRQL to 25 µg/L for all parameters. No action taken.
CLP VOA 3/90	Vinyl chloride	MW7	2J	2J	Result is <CRQL. No action taken.
CLP VOA 3/90	Chloroethane	MW7	16	16	No action taken.
CLP VOA 3/90	Methylene chloride	MW7	1JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	Acetone	MW7	15	15J	% Deviation of Acetone in the associated CCAL exceeds CLP performance criteria therefore all Acetone results qualified as estimated (J).
CLP VOA 3/90	1,1-Dichloroethane	MW7	4J	4J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	MW7	9J	9J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,2-Dichloropropane	MW7	1J	1J	Result is <CRQL. No action taken.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Trichloroethene	MW7	1J	1J	Result is <CRQL. No action taken.
CLP VOA 3/90	Benzene	MW7	3J	3J	Result is <CRQL. No action taken.
CLP VOA 3/90	Vinyl chloride	MW8	6J	6J	Result is <CRQL. No action taken.
CLP VOA 3/90	Chloroethane	MW8	7J	7J	Result is <CRQL. No action taken.
CLP VOA 3/90	Methylene chloride	MW8	2JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	1,1-Dichloroethene	MW8	3J	3J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW8	58	58	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	MW8	100	100	No action taken.

See definition seciton (Section IV.A of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	1,1,1-Trichloroethane	MW8	5J	5J	Result is <CRQL. No action taken.
CLP VOA 3/90	Trichloroethene	MW8	13	13	No action taken.
CLP VOA 3/90	Benzene	MW8	6J	6J	Result is <CRQL. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW8	33	33	No action taken.
CLP VOA 3/90	Dichlorodifluoromethane	MW8	7J	7J	Result is <CRQL. No action taken.
CLP VOA 3/90	Methylene chloride	MW10	18JB	71U	Raw result is <10 times the contamination level in the associated method blank. A 1/7.1 dilution was performed on this sample, therefore any final result less than 71 would be considered both <CRQL and blank contamination. Qualified as undetected (U).
CLP VOA 3/90	1,1-Dichloroethene	MW10	120	120	No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW10	67J	67J	Result is <CRQL. A 1/7.1 dilution was performed on this sampled effectively raising the CRQL to 71 µg/L for all parameters. No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW10	1300	1300	No action taken.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Tetrachloroethene	MW10	10J	10J	Result is <CRQL. A 1/7.1 dilution was performed on this sample effectively raising the CRQL to 71 µg/L for all parameters. No action taken.
CLP VOA 3/90	Methylene chloride	MW11	2JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
OA 3/90	1,1-Dichloroethane	MW11	18	18	No action taken.
VOA 3/90	1,2-Dichloroethene (total)	MW11	6J	6J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW11	5J	5J	Result is <CRQL. No action taken.
CLP VOA 3/90	Trichloroethene	MW11	2J	2J	Result is <CRQL. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW11	7J	7J	Result is <CRQL. No action taken.
CLP VOA 3/90	----------	MW13	U	U	No target parameters reported. No action required.

See definition seciton (Section IV.A of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Chloroethane	MW17	4J	4J	Result is <CRQL. No action taken.
CLP VOA 3/90	Methylene chloride	MW17	2JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	1,1-Dichloroethene	MW17	1J	1J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW17	130	130	No action taken.
CLP VOA 3/90	1,2-Dichloroethene (total)	MW17	70	70	No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW17	10	10	No action taken.
CLP VOA 3/90	Trichloroethene	MW17	19	19	No action taken.
CLP VOA 3/90	Tetrachloroethene	MW17	41	41	No action taken.
VOA 3/90	Dichlorodifluoromethane	MW17	3J	3J	Result is <CRQL. No action taken.
CLP VOA 3/90	Acetone	All wells except MW7	U	UJ	% Deviation of Acetone in the associated CCAL exceeds CLP performance criteria therefore all Acetone results qualified as estimated (J).
CLP VOA 3/90	2-Butanone	All wells	U	UJ	% Deviation of 2-Butanone in the associated CCAL exceeds CLP performance criteria therefore all 2-Butanone results qualified as estimated (J).
CLP VOA 3/90	2-Hexanone	All wells	U	UJ	% Deviation of 2-Hexanone in the associated CCAL exceeds CLP performance criteria therefore all 2-Hexanone results qualified as estimated (J).

See definition seciton (Section IV.A of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP 3/90	Unknown	MW6	30J	30J	No action taken.

See definition seciton (Section IV.A of report [Volume 1]) for additional information on Data Validation and Reporting Qualifiers.

CLP VOLATILE ORGANIC ANALYSIS (VOA) DATA VALIDATION SUMMARY

Samples were collected during the April 11-13, 1995 sampling event from monitoring wells MW2, MW4, MW9, MW12, MW14, MW15, MW16, and MW18 at Watauga County Landfill.

Samples were analyzed by CompuChem Environmental Corporation of Research Triangle Park, N.C. according to 3/90 Statement of Work (SOW)(document 0LM01.9) protocol on April 24, 1995. A dilution was required for sample MW2 (1/20) in order to quantitate parameters within the linear range of the calibration curve. This dilution resulted in elevated contract required quantitation levels (CRQL) in MW2 of 200 μg/L for all parameters

Draper Aden Associates data validation included but was of not limited to the following items: technical holding times, sample preservation, instrument tuning and calibration requirements, blank analyses, surrogate spike recoveries, matrix spike/matrix spike duplicate recoveries and relative percent difference values, confirmation of spectral match for identified parameters was also checked.

The overall degree of adherence to technical and reporting protocol was excellent. Analytical data displayed a few minor concerns and required minimal qualification. Several parameters exceeded CLP performance criteria in the CCAL (continuing calibration) CY950424C54: Chloromethane %D=34.0, Vinyl chloride %D=28.8 and Dichlorodifluoromethane %D=38.7. Several parameters exceeded CLP performance criteria in CCAL CS950424B54: Acetone %D=62.9, 2-Butanone %D=41.2 and 2-Hexanone %D=38.7. As per CLP validation guidelines all results for these parameters will be qualified as estimated (J) in the associated samples. Dichlorodifluoromethane is already qualified as estimated in MW9 and MW12 due to detection below CRQL and no further qualification is required. Negative effect to data is minimal.

There was minimal Methylene chloride contamination in the method blanks analyzed prior to samples at 1-2 μg/L. Methylene chloride was also detected at 2 μg/L in Tripblank2. CompuChem reported Methylene chloride at low levels, less than 10 μg/L, in several samples which was validated as laboratory contamination and was qualified accordingly.

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

CLP VOA Volatile Data Review

Wells: MW2, MW4, MW9, MW12, MW14, MW15, MW16, MW18

QC Samples: Trip Blank2, MW9MS, MW9MSD, Lab blanks

Laboratory: Compu Chem

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

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

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

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

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

Comments: All technical holding times and preservation criteria met.

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

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

Comments: All samples were analyzed within twelve hours of meeting ion abundance criteria when BFB was injected.

X **C. Initial Calibration Requirements:**

1. CLP Performance Criteria:

- All target analytes and system monitoring compounds (surrogates) must

have RRF's $\geq$ 0.05 and %RSD's $\leq$ 30.0%

* Does ICAL meet this Criteria? Yes X No __

\- If "No" list compounds which exceed criteria

\- See page 12 (VOA) of CLP for validation procedures

\- Recalculate 10% of analytes

2. CLP Contractual Requirements:

\- All target analytes and system monitoring compounds (surrogates) SMC (SURR) must have %RSD ±20.5%

\- 2 compounds may fail to meet minimum RRF's or maximum %RSD as long as they have RRF's $\geq$0.010 and %RSD $\leq$ 40.0%
The following compounds do not have to meet %RSD criteria:

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

* Does ICAL meet this criteria? Yes X No__

\- If "No", explain

Comments: One initial calibration (ICAL) is associated with this SDG. This ICAL, analyzed on April 24, 1995, met all CLP performance and CLP contractual requirements.

X **D. Continuing Calibration Requirements:**

1. CLP Performance Criteria:

\- All target analytes and system monitoring CMPDS (surrogates) must have RRF's $\geq$0.05 and %D $\pm$ 25.0%.

* Does CCAL meet this criteria? Yes __ No X

\- If "No", list compounds which exceed criteria.

CCAL	CCAL
CY950424C54	C5950424C54
Chloromethane %D=34.0	Acetone %D =62.9
Vinyl chloride %D=28.8	2-Butanone %D=41.2
Dichloiodifluoro methane %D=38.7	2-Hexanone %D=38.7

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

2. CLP Contractual Requirements:

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

Comments: Two continuing calibrations (CCAL) are associated with this SDG and were each analyzed on April 24, 1995 as part of two separate 12 hour sequences. The CCAL - file id CY950424C54 is associated with analyses for TRPBLANK2, MW4, MW9, MW9MS, MW9MSD, MW12, MW14, MW15, MW16, and MW18. The CCAL -file ID CS950424B54 is associated with MW2 analysis. Both CCAL's met all CLP contractual requirements. Several parameters exceeded CLP performance criteria in the CCAL CY950424C54: Chloromethane %D=34.0, Vinyl chloride %D=28.8 and Dichlorodifluoromethane %D=38.7. Several parameters exceeded CLP performance criteria in CCAL CS950424B54: Acetone %D=62.9, 2-Butanone %D=41.2 and 2-Hexanone %D=38.7. As per CLP validation guidelines all results for these parameters will be qualified as estimated (J) in the associated samples. Dichlorodifluoromethane is already qualified as estimated in MW9 and MW12 due to detection below CRQL and no further qualification is required.

X **E. Blanks Criteria:**

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

Comments: Two method blanks are associated with this SDG and were both analyzed on April 24, 1995 as part of two separate 12 hour sequences. The blank, VBLKVY, is associated with analyses for TRPBLANK2, MW4, MW9, MW9MS, MW9MSD, MW12, MW14, MW15, MW16, and MW18. The blank, VBLKJM, is associated with MW2 analysis. Blank VBLKVY contained Methylene chloride at 2 μg/L. VBLKJM contained Methylene chloride at 1 μg/L. Trip Blank2 contained Methylene chloride at 2 μg/L and is associated with all sample analyses. Therefore, parameters detected at less than 10 times the highest level of Methylene chloride detected in an associated blank will be qualified as (U) denoting not detected above contamination level.

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

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

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

Comments: Surrogate recovery criteria met.

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

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

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

Comments: MS/MSD performed on MW9, all percent recovery (%R) and relative percent difference (%RPD) requirements were met. No indication of matrix interference was detected.

X **H. Internal Standards Criteria:**

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

Comments: Internal standard area and retention time requirements met.

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

Comments: No TIC's were identified in the method blank analyzed prior to sample analysis. However, a laboratory artifact does appear in several samples and is included in the report along with a quality assurance notice of explanation. One TIC was detected in sample MW9 at an estimated concentration of 120 µg/L and has been tentatively identified as Dichlorofluoromethane.

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

Validated by: Jeanie Flint

Date: 7/13/95

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Methylene chloride	MW2	28JB	200U	Raw result is <10 times the contamination level in the associated Trip blank. A 1/20 dilution was performed on this sample, therefore any final result less than 200 would be considered both <CRQL and blank contamination. Qualified as undetected (U).
CLP VOA 3/90	1,1-Dichloroethene	MW2	150J	150J	Result is <CRQL. A 1/20 dilution was performed on this sample effectively raising the CRQL to 200 µg/L for all parameters. No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW2	98J	98J	Result is <CRQL. A 1/20 dilution was performed on this sample effectively raising the CRQL to 200 µg/L for all parameters. No action taken. CLP VOA 3/90
CLP VOA 3/90	1,1,1-Trichloroethane	MW2	2000	2000	No action taken.
CLP VOA 3/90	Methylene chloride	MW4	3JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	Chloroethane	MW9	15	15	No action taken.
CLP VOA 3/90	Methylene chloride	MW9	120B	120	Result is >10 times the contamination level in the associated method blank. "B" qualification is unnecessary.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	1,1-Dichloroethane	MW9	35	35	No Action Taken.
CLP VOA 3/90	1,2-Dichloroethene	MW9	4J	4J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW9	16	16	No Action Taken.
CLP VOA 3/90	Trichloroethene	MW9	6J	6J	Result is <CRQL. No action taken.
CLP VOA 3/90	Benzene	MW9	3J	3J	Result is <CRQL. No action taken.
CLP VOA 3/90	Tetrachloroethene	MW9	5J	5J	Result is <CRQL. No action taken.
CLP VOA 3/90	Xylene (Total)	MW9	3J	3J	Result is <CRQL. No action taken.
CLP VOA 3/90	Dichlorodifluoromethane	MW9	9J	9J	Result is <CRQL. No action taken. % Deviation of Dichlorodifluoromethane in the associated CCAL exceeds CLP performance criteria. Since results are qualified as estimated (J) due to detection below the CRQL no further qualification is required.
CLP VOA 3/90	Chloroethane	MW12	2J	2J	Result is <CRQL. No action taken.
CLP VOA 3/90	Methylene chloride	MW12	4JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).

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

7/13/

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	1,1-Dichloroethene	MW12	2J	2J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,1-Dichloroethane	MW12	77	77	No Action Taken.
CLP VOA 3/90	1,1-Dichloroethene Total	MW12	30	30	No Action Taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW12	17	17	No Action Taken.
CLP VOA 3/90	Trichloroethene	MW12	10	10	No Action Taken.
CLP VOA 3/90	Tetrachloroethene	MW12	28	28	No action taken.
CLP VOA 3/90	Dichlorodifluoromethane	MW12	4J	4J	Result is <CRQL. No action taken. % Deviation of Dichlorodifluoromethane in the associated CCAL exceeds CLP performance criteria. Since results are qualified as estimated (J) due to detection below the CRQL no further qualification is required.
CLP VOA 3/90	Methylene chloride	MW14	2JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	1,1,1-Trichloroethane	MW14	1J	1J	Result is <CRQL. No action taken.
CLP VOA 3/90	1,1,1-Trichloroethane	MW15	3J	3J	Result is <CRQL. No action taken.

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Methylene chloride	MW16	4JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	Methylene chloride	MW18	5JB	10U	Result is <10 times the contamination level in the associated method blank. Qualified as undetected (U).
CLP VOA 3/90	Acetone, 2-Butanone, and 2-Hexanone	MW2	U	UJ	% Deviation of Acetone, 2-Butanone, and 2-Hexanone in the associated CCAL exceeds CLP performance criteria therefore results are qualified as estimated (J).
CLP VOA 3/90	Vinyl chloride and Chloromethane	All wells except MW2	U	UJ	% Deviation of Vinyl chloride and Chloromethane in the associated CCAL exceeds CLP performance criteria therefore results are qualified as estimated (J).
CLP VOA 3/90	Dichlorodifluoromethane	MW4 MW14 MW15 MW16 and MW18	U	UJ	% Deviation of Dichlorodifluoromethane in the associated CCAL exceeds CLP performance criteria therefore results are qualified as estimated (J).

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

7/13/95

Analytical Data Set Notes

METHOD	PARAMETER	WELLS	LAB RESULT (PPB)	VALIDATED RESULT (PPB)	NOTES
CLP VOA 3/90	Dichlorofluoromethane	MW9	120NJ	120NJ	Tentatively identified through library search. No action taken.

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

7/13/95

SECTION 2.3

REVISIONS TO ORIGINAL DATA SET

NO REVISIONS TO DATA

Draper Aden Associates
CONSULTING ENGINEERS

SECTION 2.4

CLP VOLATILES ANALYTICAL DATA

COMPUCHEM
ENVIRONMENTAL
CORPORATION

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

ORIGINAL

5/11/95

10/MAY/95

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

Subject: Report of Data - Account Number 500672

Attn: Ms. Janet Cleary

Enclosed are the results of analytical work and associated Quality Control data for the samples received by CompuChem under the referenced account number.

As you know, CLP service is performed in accordance with EPA methodologies as defined for the National Contract Laboratory Program; 'SOW For Organic Analysis; Multi-Media, Multi-Concentration'. Your original data has been stored and is available for future reference.

Thank you for selecting CompuChem Environmental for your sample analysis. We would like to continue providing you analytical support and services in the future. If you should have questions or require additional analytical services, please contact your representative at 1-919-406-1600.

Sincerely,

Report Preparation

Attachment

COMPUCHEM
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CORPORATION

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Research Triangle Park, NC 27709-4998
(919) 406-1600

10/MAY/95

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

ACCOUNT #: 500672

CC#	SAMPLE-ID	RECEIPT DATE
702287	MW1	4/13/95
702318	MW10	4/13/95
702322	MW11	4/13/95
702324	MW13	4/13/95
702327	MW17	4/13/95
702300	MW3	4/13/95
702303	MW5	4/13/95
702307	MW6	4/13/95
702311	MW7	4/13/95
702315	MW8	4/13/95
702279	TRIPBLANK	4/13/95

TOTAL NUMBER OF SAMPLES = 11

CompuChem Environmental Corporation

I. SAMPLE DATA SUMMARY PACKAGE

3/90 STATEMENT OF WORK

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

A. **SDG Narrative**

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

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

D. **Form III**
Matrix Spike / Matrix Spike Duplicate Results

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

F. **Form VIII**
Internal Standard Area Data

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

LAB CODE : COMPU

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

CASE # : 30458 SDG # : 00001

A. SDG Narrative

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Research Triangle Park, NC 27709-4998
(919) 406-1600

SDG NARRATIVE
CASE # 30458
SDG # 00001
CONTRACT # (3-90)-REVS

Sample Identifications: MW1, MW10, MW11, MW13, MW17, MW3, MW5, MW6, MW7, MW8

The ten (10) water samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on April 13, 1995. The samples were scheduled for the requested analysis of the volatile fraction. These samples were analyzed following 3/90 Statement of Work (SOW) Document No. OLM01.9 protocol with the exceptions and/or additions described in the attached Project Profile Sheet (PPS) #115.

All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for Case 30458, SDG 00001, are included in the sample data sections.

Volatiles

All samples were analyzed within holding time requirements. There were some chlorinated alkane, chlorinated alkene, and ketone Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in these samples. Tentatively Identified Compounds (TICs) were found in these samples. These TICs could be characterized as laboratory artifacts and unknowns. The pH values of these samples are summarized on the attached batch sheet.

Based on the results of the GC/MS screen, MW6 and MW10 were initially analyzed using less than the method specified volume of raw sample.

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

The associated method blank met all quality control criteria. The common laboratory solvent methylene chloride was found in the method blank at a concentration within acceptance criteria limits. No TICs were found in the method blank.

MW1 was used as the original to prepare the duplicate matrix spikes. The associated duplicate matrix spikes met all advisory accuracy and precision criteria.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data

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contained in the hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jean M. Zimmerman
Final Technical Reviewer
May 9, 1995

CompuChem Environmental Corporation

DATA REPORTING QUALIFIERS

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

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

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

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

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

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

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

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

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

(con't.)

DATA REPORTING QUALIFIERS

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

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

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

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

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

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

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

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

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

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

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

   Left Side Flags

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

   Right Side Flags

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

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

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

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

Robert E. Wiener

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CORPORATION

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(919) 406-1600

Quality Assurance Notice

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

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

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

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

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

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

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

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

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

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

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

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

Robert E. Meierer

Revision 1 (2/20/95)

B. **Form I and Form I – TIC**

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702287

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002287B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702287

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002287B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

MW1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702287

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002287B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.91	1500	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702318

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR002318B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 7.1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	71	U
74-83-9	Bromomethane	71	U
75-01-4	Vinyl Chloride	71	U
75-00-3	Chloroethane	71	U
75-09-2	Methylene Chloride	18	JB
67-64-1	Acetone	71	U
75-15-0	Carbon Disulfide	71	U
75-35-4	1,1-Dichloroethene	120	
75-34-3	1,1-Dichloroethane	67	J
540-59-0	1,2-Dichloroethene (total)	71	U
67-66-3	Chloroform	71	U
107-06-2	1,2-Dichloroethane	71	U
78-93-3	2-Butanone	71	U
71-55-6	1,1,1-Trichloroethane	1300	
56-23-5	Carbon Tetrachloride	71	U
75-27-4	Bromodichloromethane	71	U
78-87-5	1,2-Dichloropropane	71	U
10061-01-5	cis-1,3-Dichloropropene	71	U
79-01-6	Trichloroethene	71	U
124-48-1	Dibromochloromethane	71	U
79-00-5	1,1,2-Trichloroethane	71	U
71-43-2	Benzene	71	U
10061-02-6	trans-1,3-Dichloropropene	71	U
75-25-2	Bromoform	71	U
108-10-1	4-Methyl-2-Pentanone	71	U
591-78-6	2-Hexanone	71	U
127-18-4	Tetrachloroethene	10	J
79-34-5	1,1,2,2-Tetrachloroethane	71	U
108-88-3	Toluene	71	U
108-90-7	Chlorobenzene	71	U
100-41-4	Ethylbenzene	71	U
100-42-5	Styrene	71	U
1330-20-7	Xylene (Total)	71	U

Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d
Report Date: 28-Apr-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 1,2-Dichloroethane	62.00		11.297		Compound Not Detected.		
	25 Trichloroethene	130.00	12.428	12.428	(1.036)	4424	11.56	2.31(a)
	26 1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
	27 Bromodichloromethane	83.00		13.351		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
	30 Toluene	91.00		14.768		Compound Not Detected.		
	31 trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
	33 Tetrachloroethene	164.00	15.769	15.795	(0.909)	12760	35.16	7.03(a)
	34 2-Hexanone	43.00		16.094		Compound Not Detected.		
	35 Dibromochloromethane	129.00		16.263		Compound Not Detected.		
	36 Chlorobenzene	112.00		17.420		Compound Not Detected.		
	37 Ethylbenzene	106.00		17.680		Compound Not Detected.		
	38 m,p-Xylene	106.00		17.927		Compound Not Detected.		
	39 o-Xylene	106.00		18.707		Compound Not Detected.		
	40 Styrene	104.00		18.733		Compound Not Detected.		
	41 Bromoform	173.00		19.032		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00				11508	31.06	6.21(a)
M	44 Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d

Date : 25-APR-1995 01:10

Client ID: MW11

Instrument: f50054.i

Sample Info:

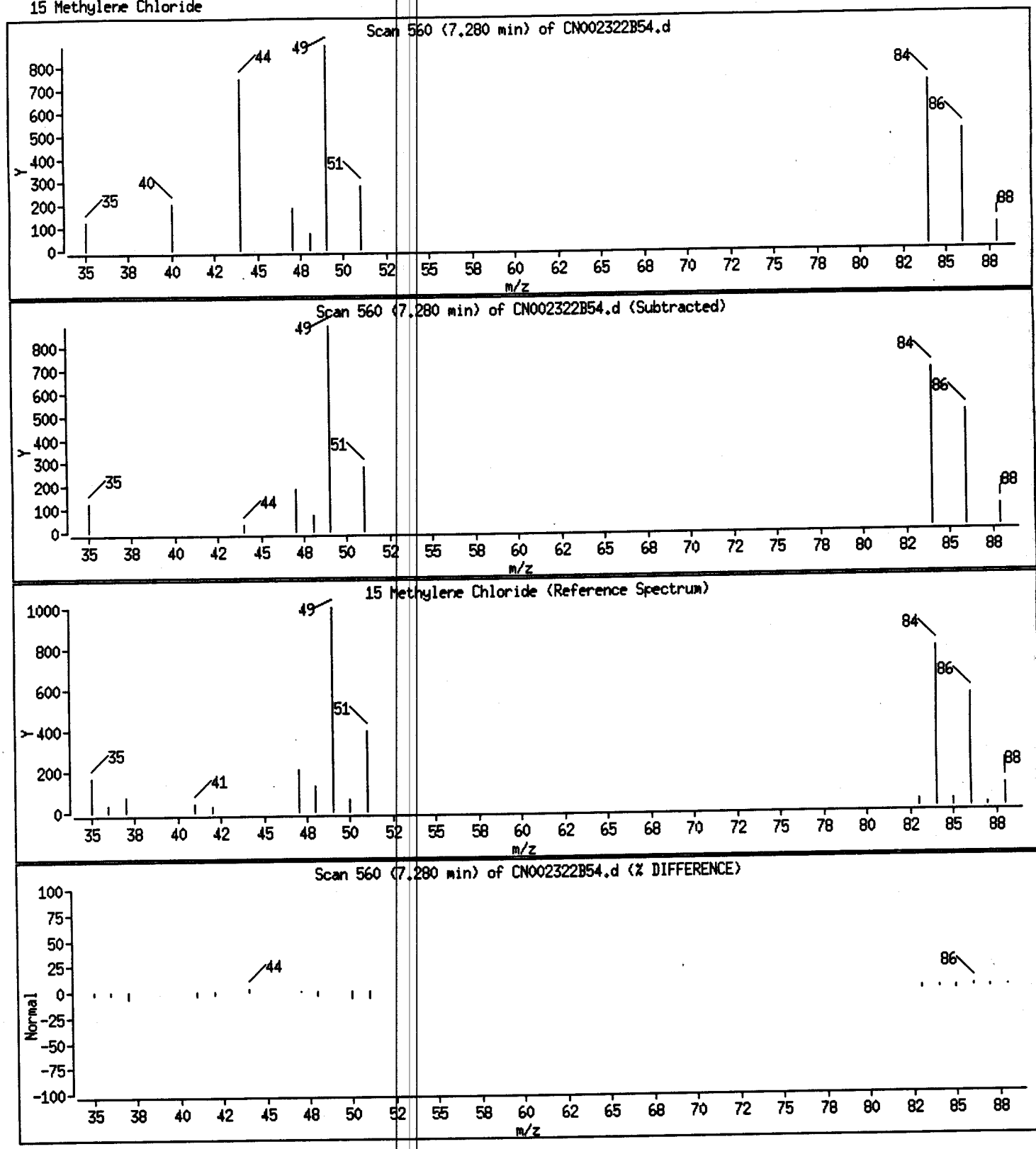
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d

Date : 25-APR-1995 01:10

Client ID: MW11

Instrument: f50054.i

Sample Info:

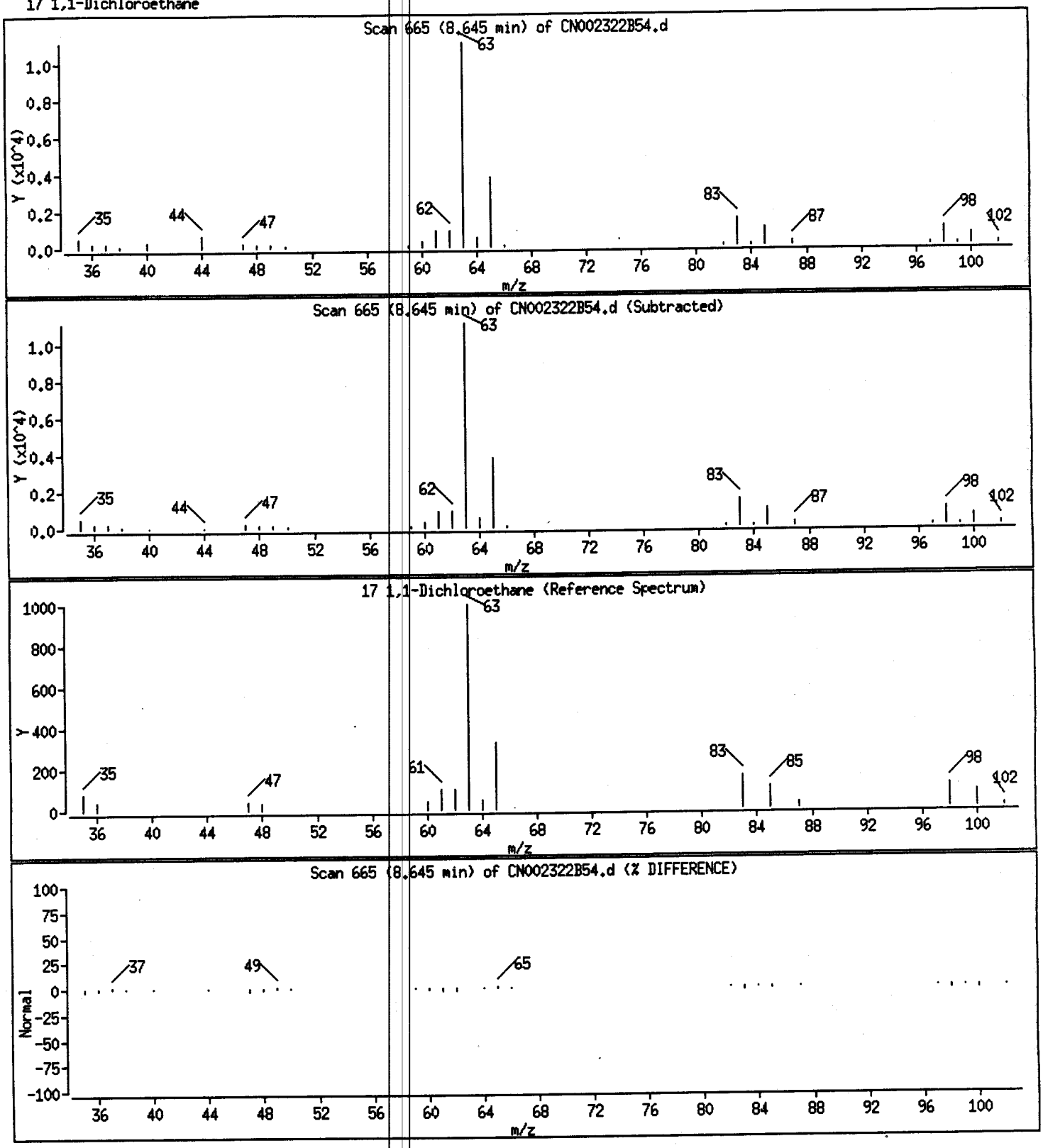
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d

Date : 25-APR-1995 01:10

Client ID: MW11

Instrument: f50054.i

Sample Info:

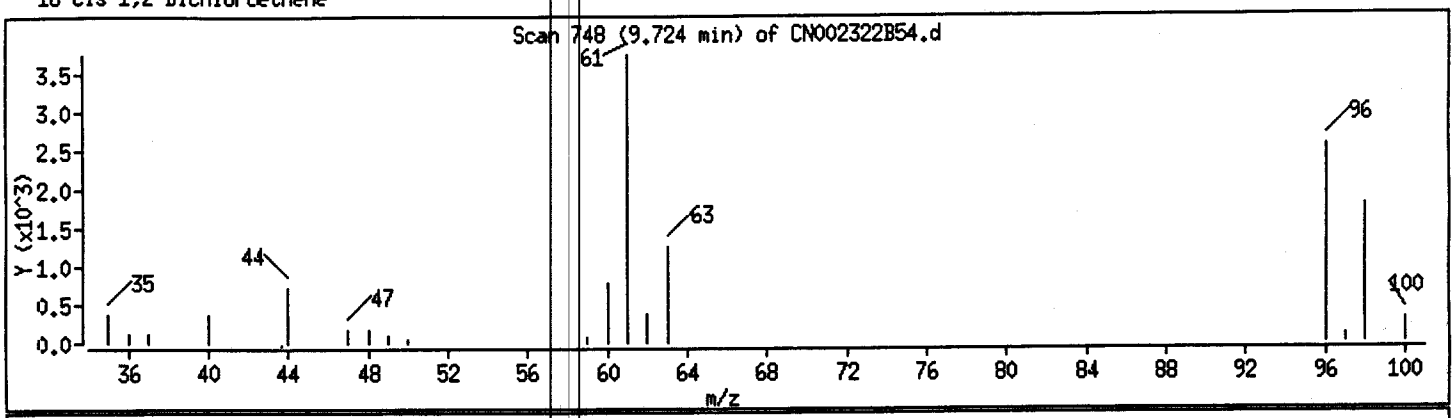
Purge Volume: 5.0

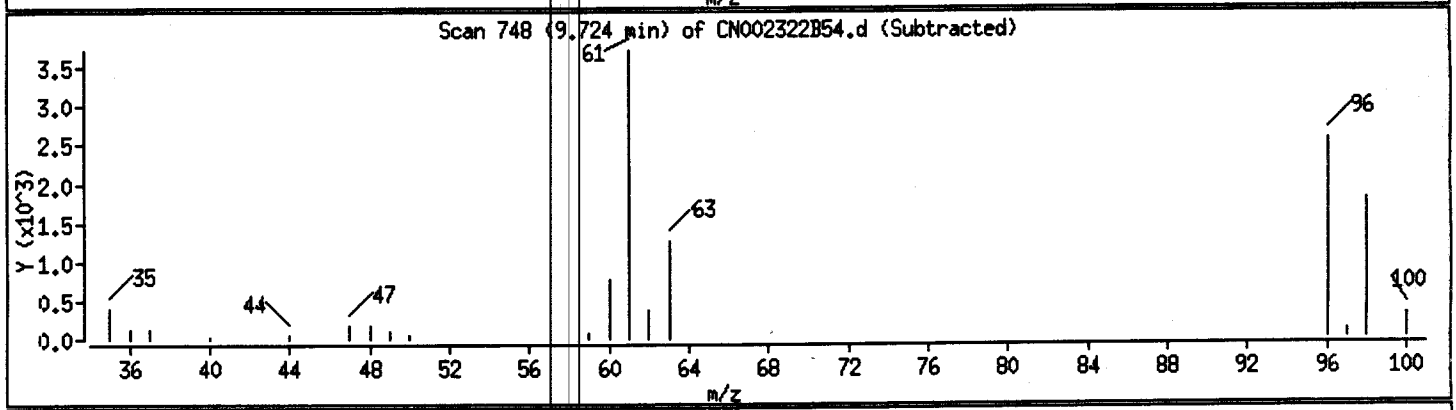
Operator: 1948

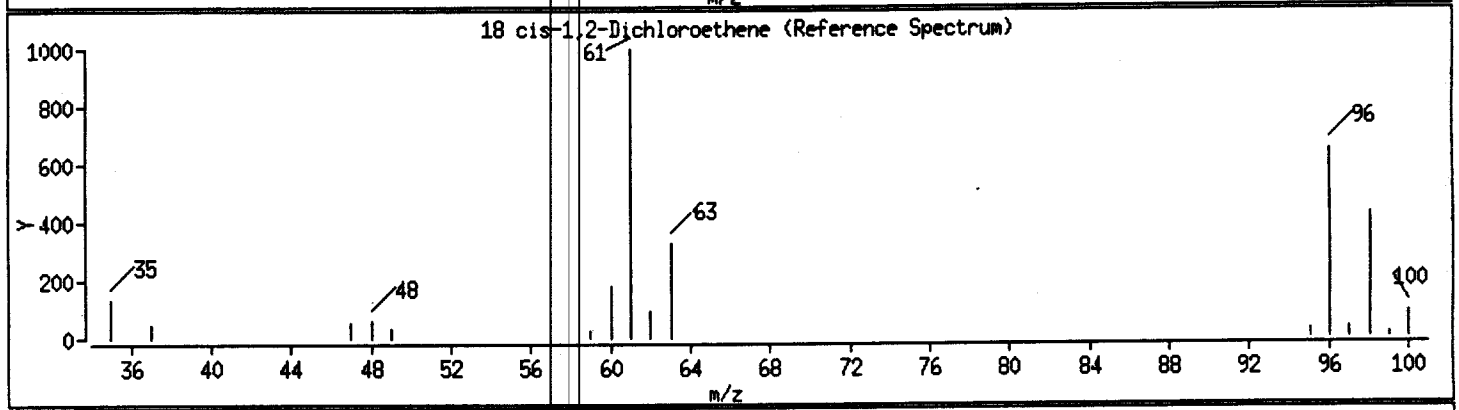
Column phase: DB624

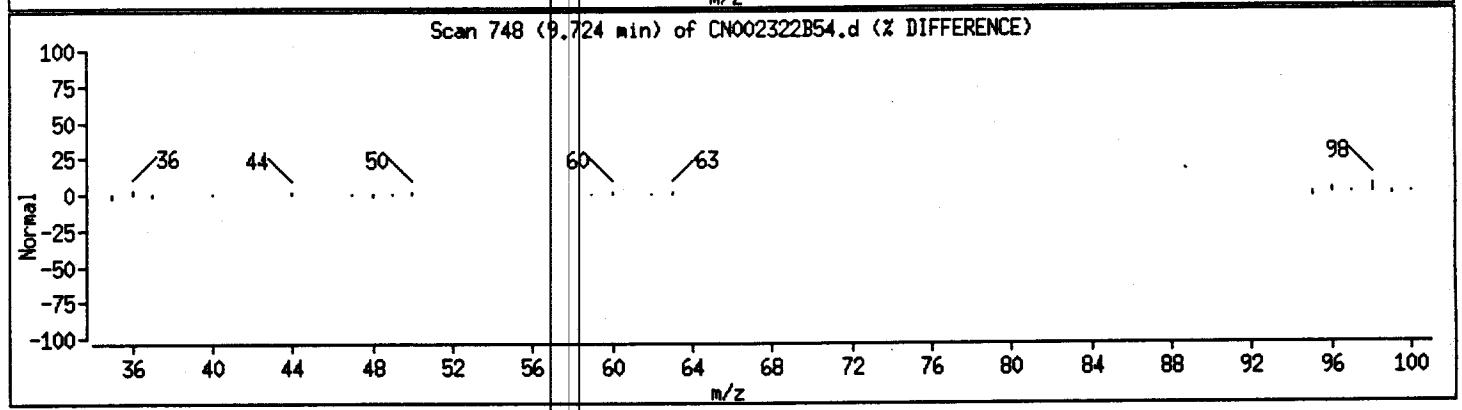
Column diameter: 0.53

18 cis-1,2-Dichlorcethene









Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d

Date : 25-APR-1995 01:10

Client ID: MW11

Instrument: f50054.i

Sample Info:

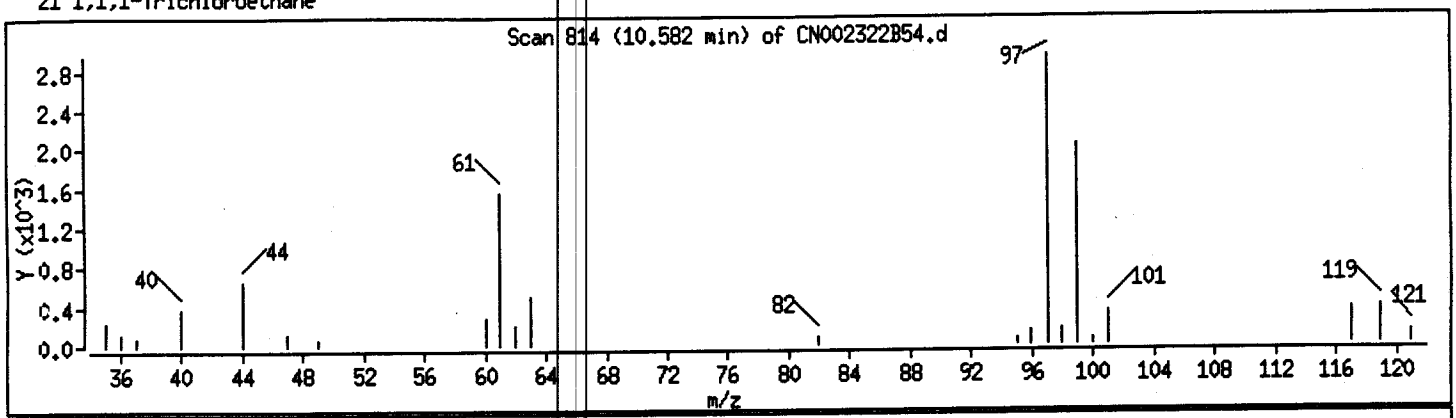
Purge Volume: 5.0

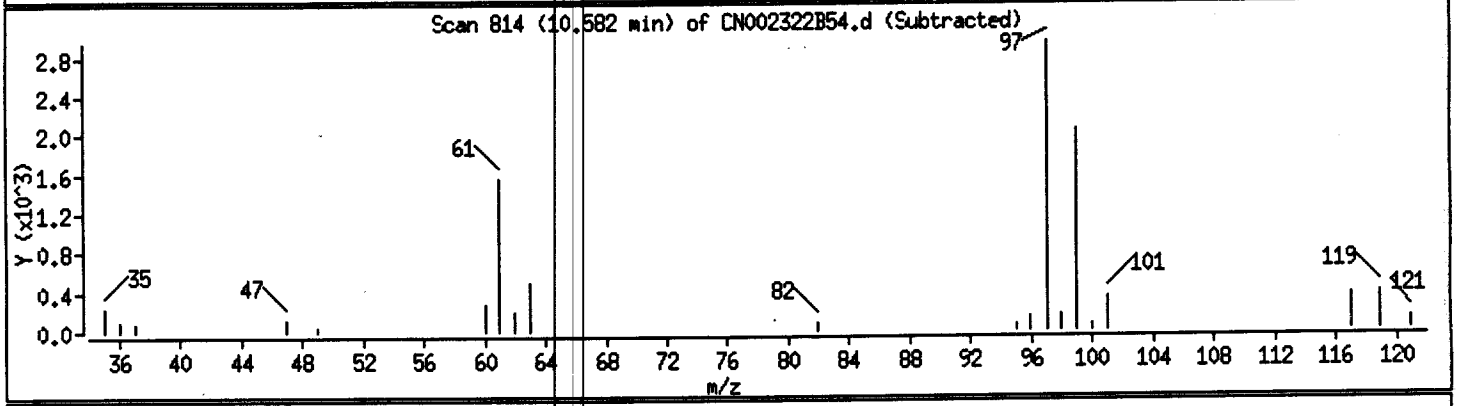
Operator: 1948

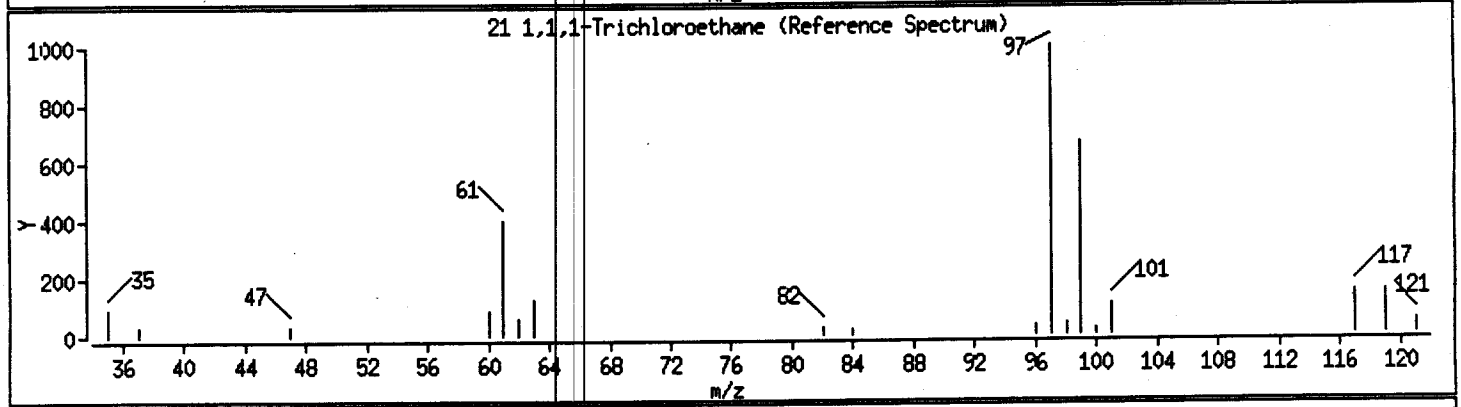
Column phase: DB624

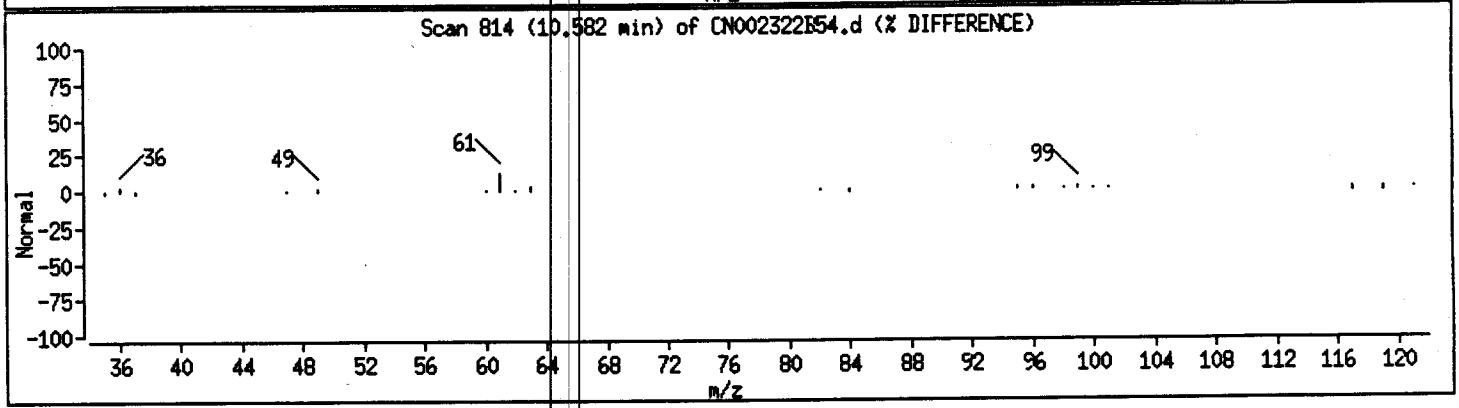
Column diameter: 0.53

21 1,1,1-Trichloroethane









Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d

Date : 25-APR-1995 01:10

Client ID: MW11

Instrument: f50054.i

Sample Info:

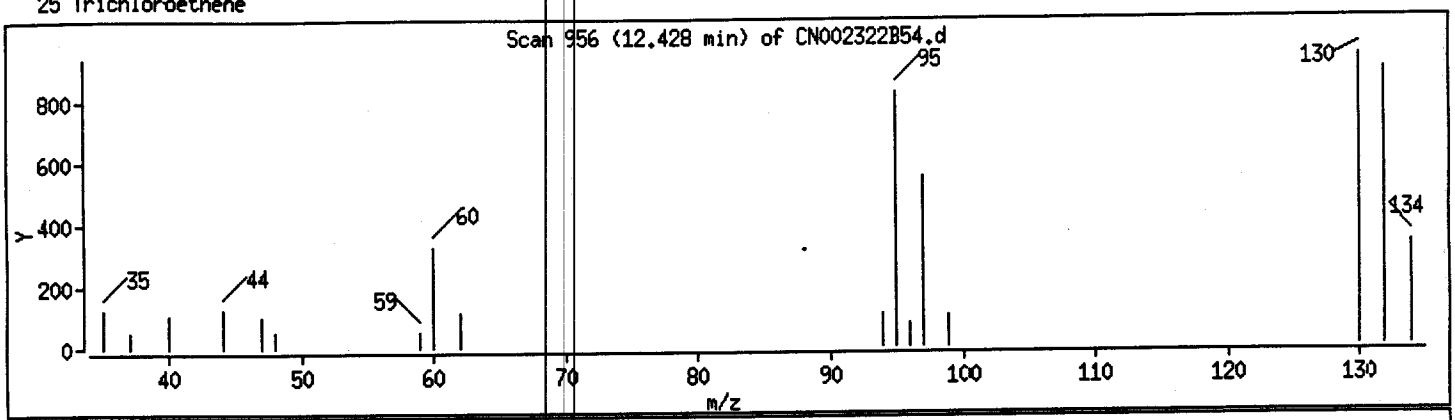
Purge Volume: 5.0

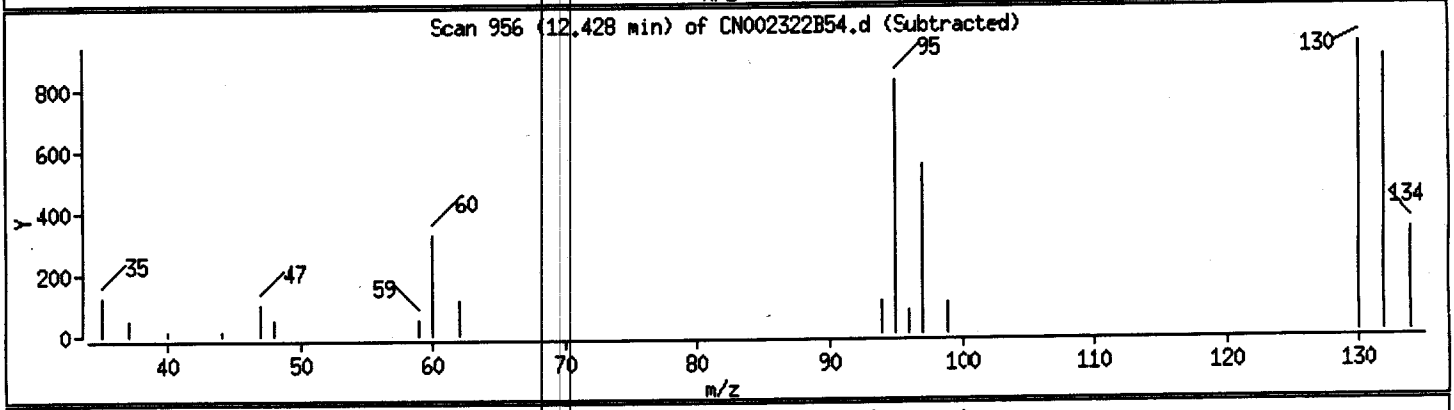
Operator: 1948

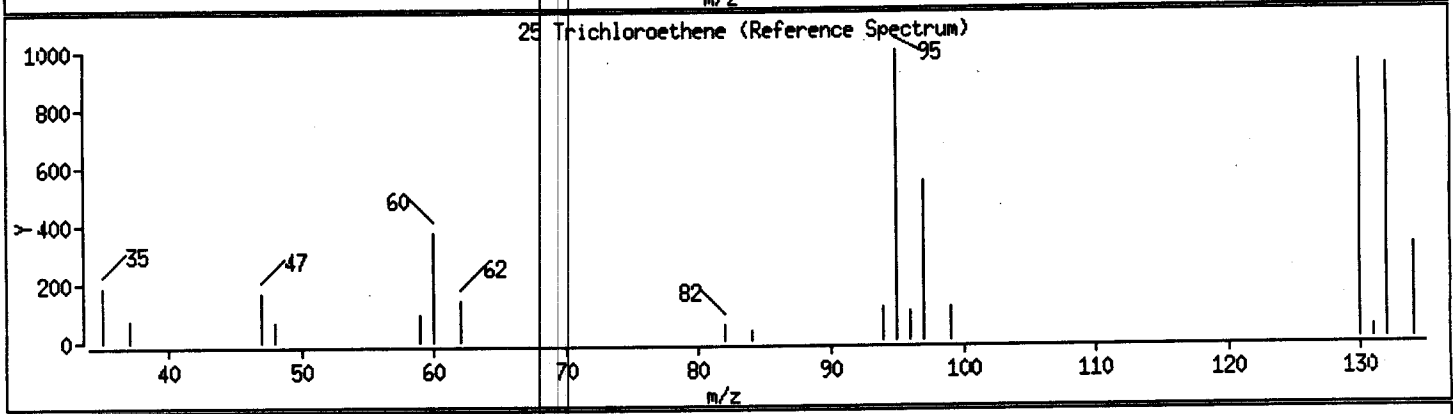
Column phase: DB624

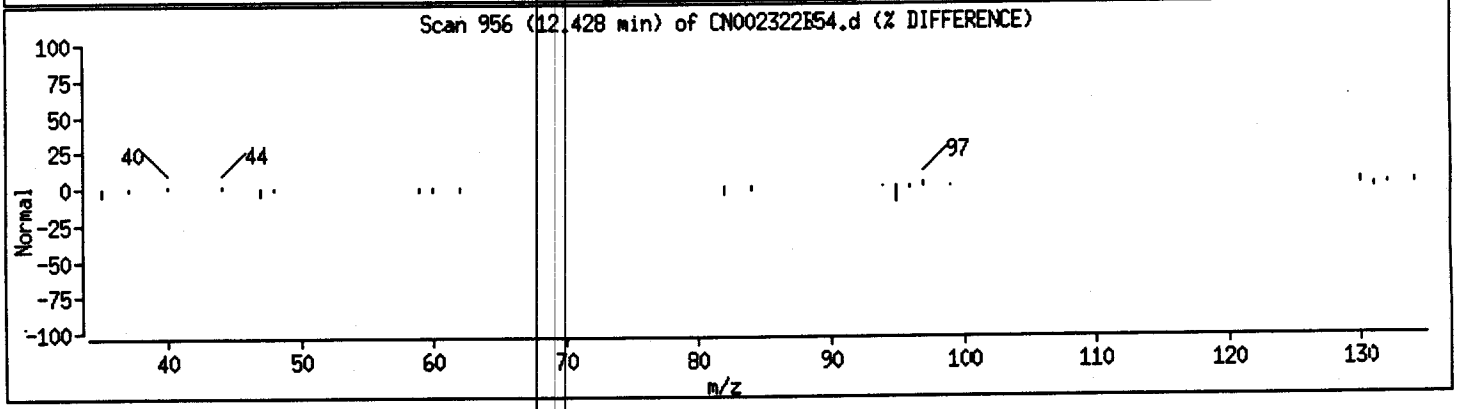
Column diameter: 0.53

25 Trichloroethene









Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d

Date : 25-APR-1995 01:10

Client ID: MW11

Instrument: f50054.i

Sample Info:

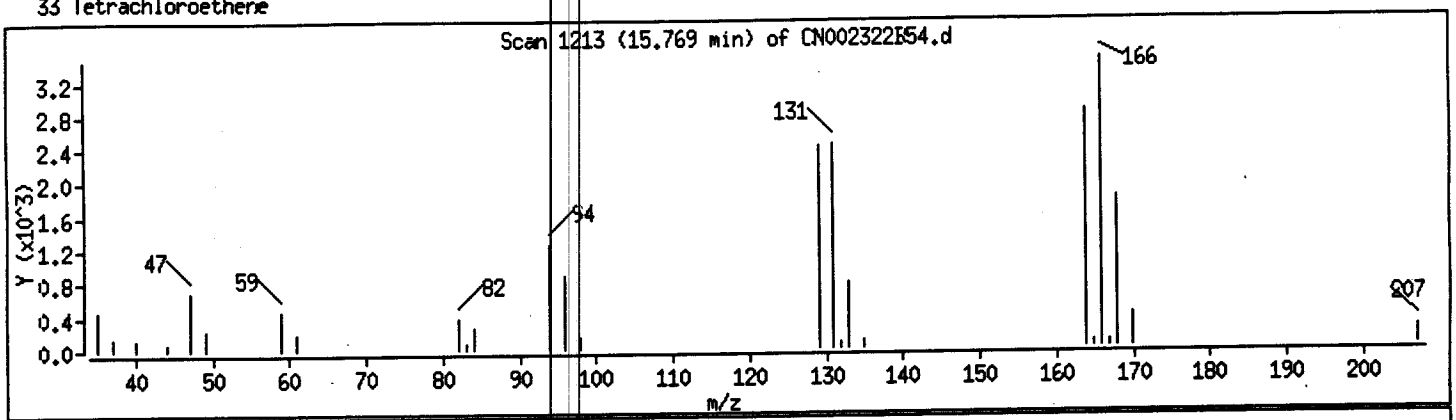
Purge Volume: 5.0

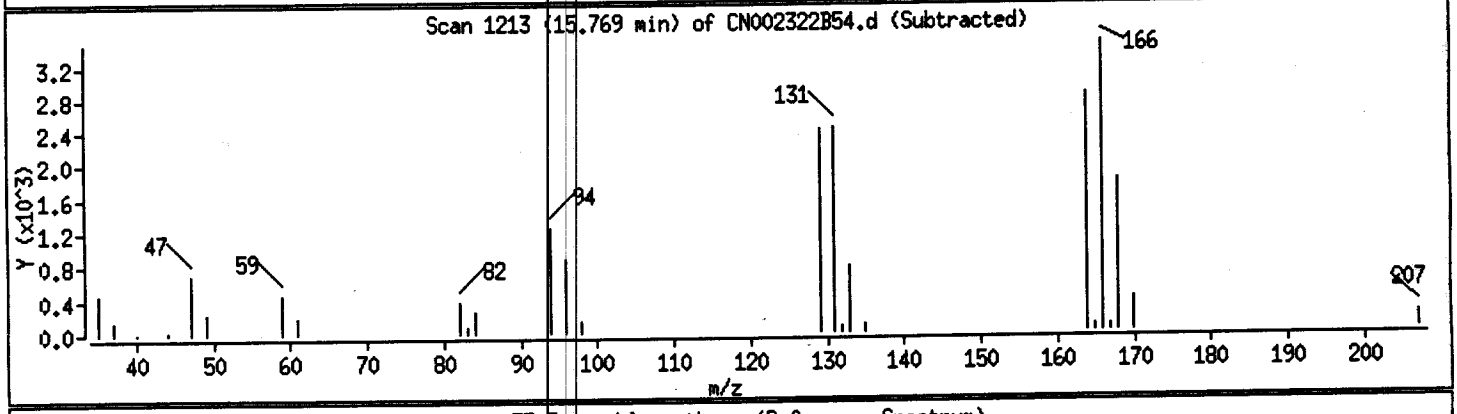
Operator: 1948

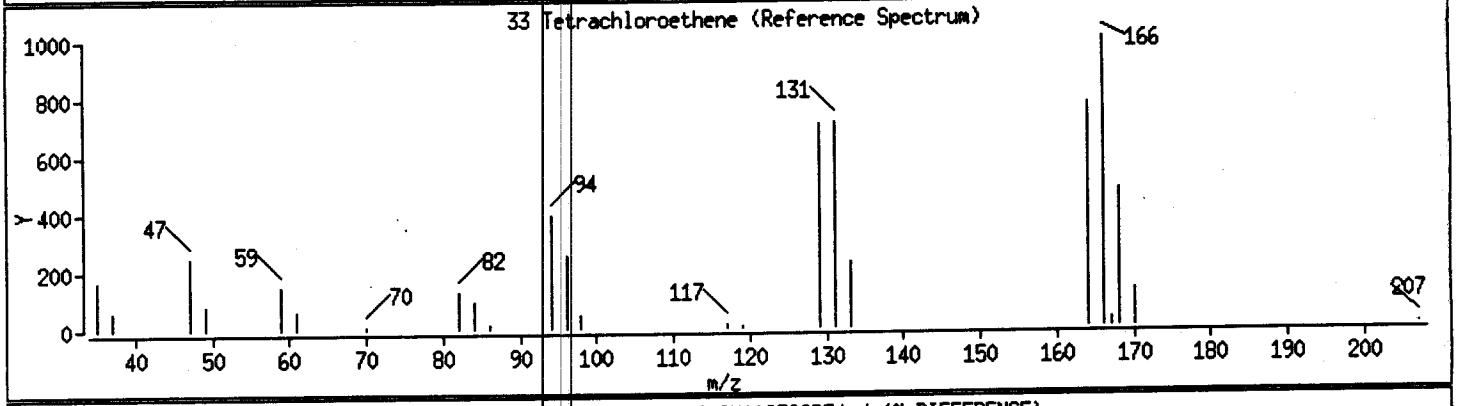
Column phase: DB624

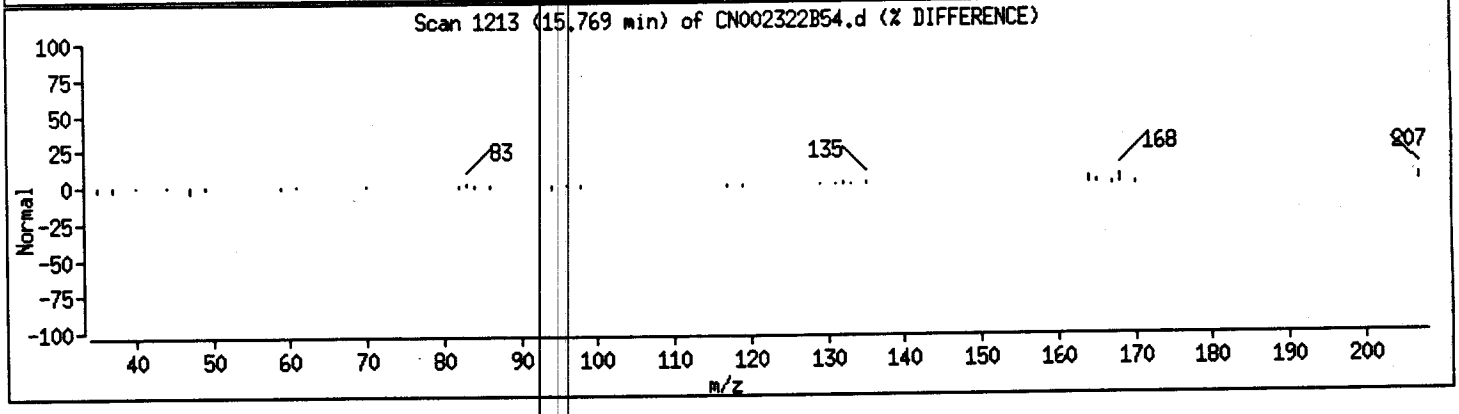
Column diameter: 0.53

33 Tetrachloroethene









Data File: /chem/f50054.i/BF950424B54.b/CN002322B54.d

Date : 25-APR-1995 01:10

Client ID: MW11

Instrument: f50054.i

Sample Info:

Purge Volume: 5.0

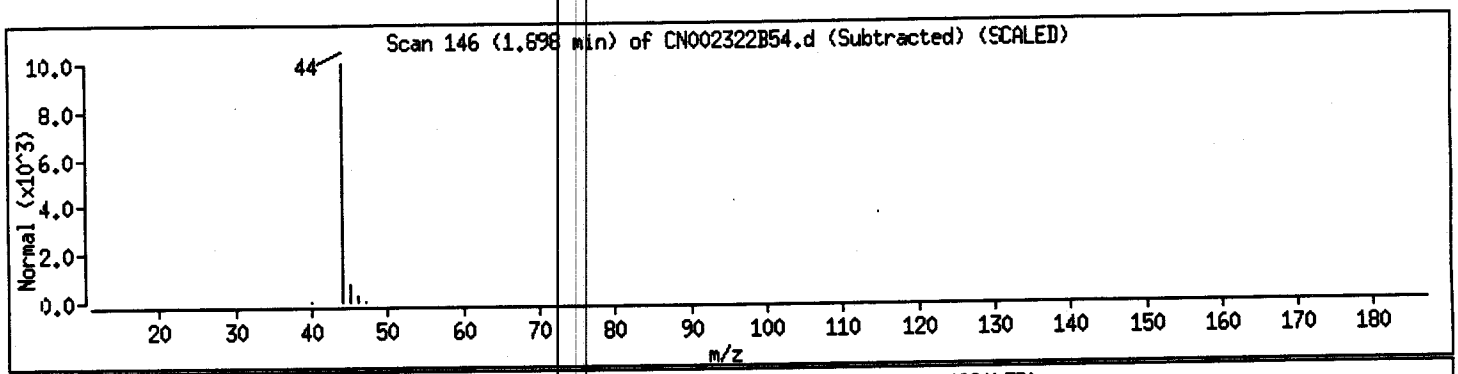
Operator: 1948

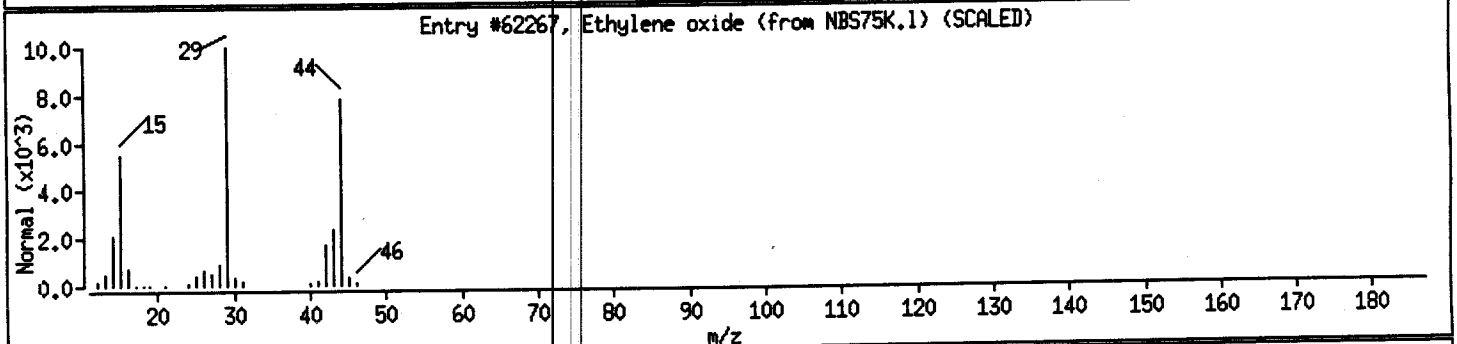
Column phase: DB624

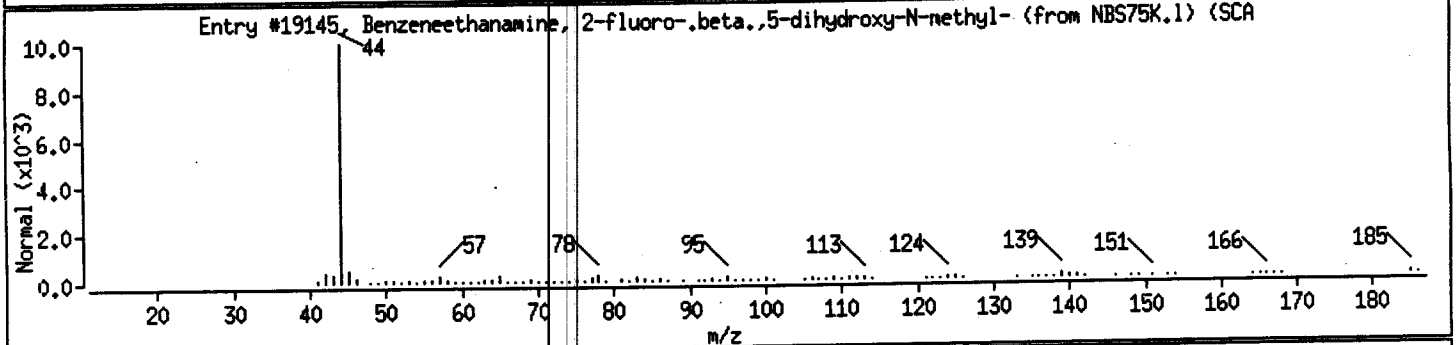
Column diameter: 0.53

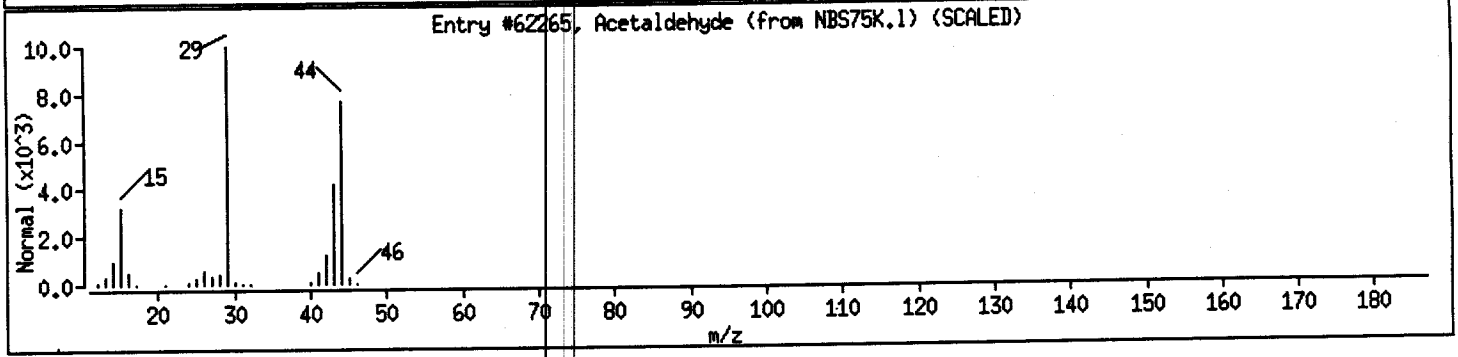
Library Search Compound Match
laboratory artifact
Ethylene oxide
Benzeneethanamine, 2-fluoro-.beta.,5-dih
Acetaldehyde

CAS Number	Library	Entry	Quality	Formula	Weight
75-21-8	NBS75K.1	62267	3	C2H4O	44
0-00-0	NBS75K.1	19145	2	C9H12FNO2	185
75-07-0	NBS75K.1	62265	2	C2H4O	44









LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

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702322: 2011: 1:

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GC/MS ANALYSIS
AMOUNT PURGED: 5000. ~~G~~ ul VS 4/26/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002322B54

ANALYST(S): INJECTION 1948 V.A.Smith WORKUP 1948 V.A.Smith

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GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [✓] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 1

[ ] REINJECT NEAT
[ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SL DATE 4/28/95 AUDITOR _____ DATE ___/___/___

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REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

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QA COMMENTS:

INITIALS _____ DATE ___/___/___

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FINAL REVIEW

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702322
Client ID# mw11
Instrument Blank ID VBLKJM
Case # 30458

The early-eluting peak on the RIC of the volatile fraction at scan # 146 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
901001

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: MW13

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702324

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002324B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW13

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702324

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002324B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

EPA SAMPLE NO.

MW13

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702324

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002324B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

Number TICs found: 1

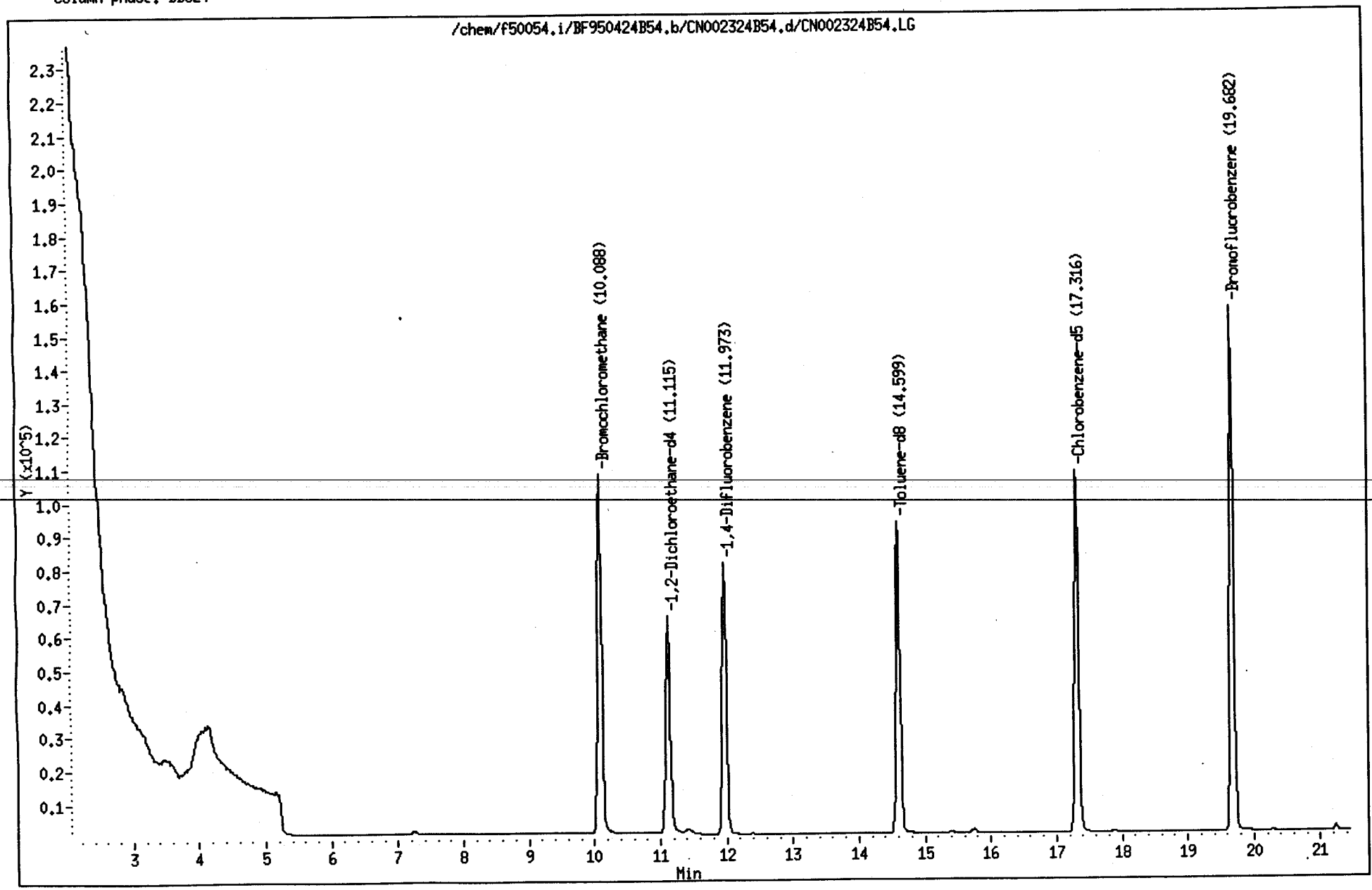
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.87	1500	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50054.i/BF950424B54.b/CN002324B54.d
Date : 25-APR-1995 01:56
Client ID: MW13
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



Data File: /chem/f50054.i/BF950424B54.b/CN002324B54.d
Report Date: 28-Apr-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002324B54.d
Lab Smp Id: 702324 Client Smp ID: MW13
Inj Date : 25-APR-1995 01:56
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	10.088	10.140	(1.000)	56055	250.0	
*	2 1,4-Difluorobenzene	114.00	11.973	12.012	(1.000)	174420	250.0	
*	3 Chlorobenzene-d5	117.00	17.316	17.368	(1.000)	169064	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.115	11.167	(1.102)	108812	230.4	46.08
$	5 Toluene-d8	98.00	14.599	14.651	(0.843)	156788	251.1	50.21
$	6 Bromofluorobenzene	95.00	19.682	19.734	(1.137)	132849	236.9	47.37
	7 Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
	8 Chloromethane	50.00		2.873	Compound Not Detected.			
	9 Vinyl Chloride	62.00		3.185	Compound Not Detected.			
	10 Bromomethane	94.00		4.004	Compound Not Detected.			
	11 Chloroethane	64.00		4.290	Compound Not Detected.			
	12 1,1-Dichloroethene	96.00		6.175	Compound Not Detected.			
	13 Acetone	43.00		6.422	Compound Not Detected.			
	14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
	15 Methylene Chloride	84.00		7.293	Compound Not Detected.			
	16 trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00		8.658	Compound Not Detected.			
	18 cis-1,2-Dichloroethene	96.00		9.737	Compound Not Detected.			
	19 2-Butanone	43.00		9.854	Compound Not Detected.			
	20 Chloroform	83.00		10.348	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		10.595	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
	23 Benzene	78.00		11.245	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002324B54.d
Report Date: 28-Apr-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		11.297		Compound Not Detected.		
25	Trichloroethene	130.00		12.428		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00		15.795		Compound Not Detected.		
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

Data File: /chem/f50054.i/BF950424B54.b/CN002324B54.d

Date : 25-APR-1995 01:56

Client ID: MW13

Instrument: f50054.i

Sample Info:

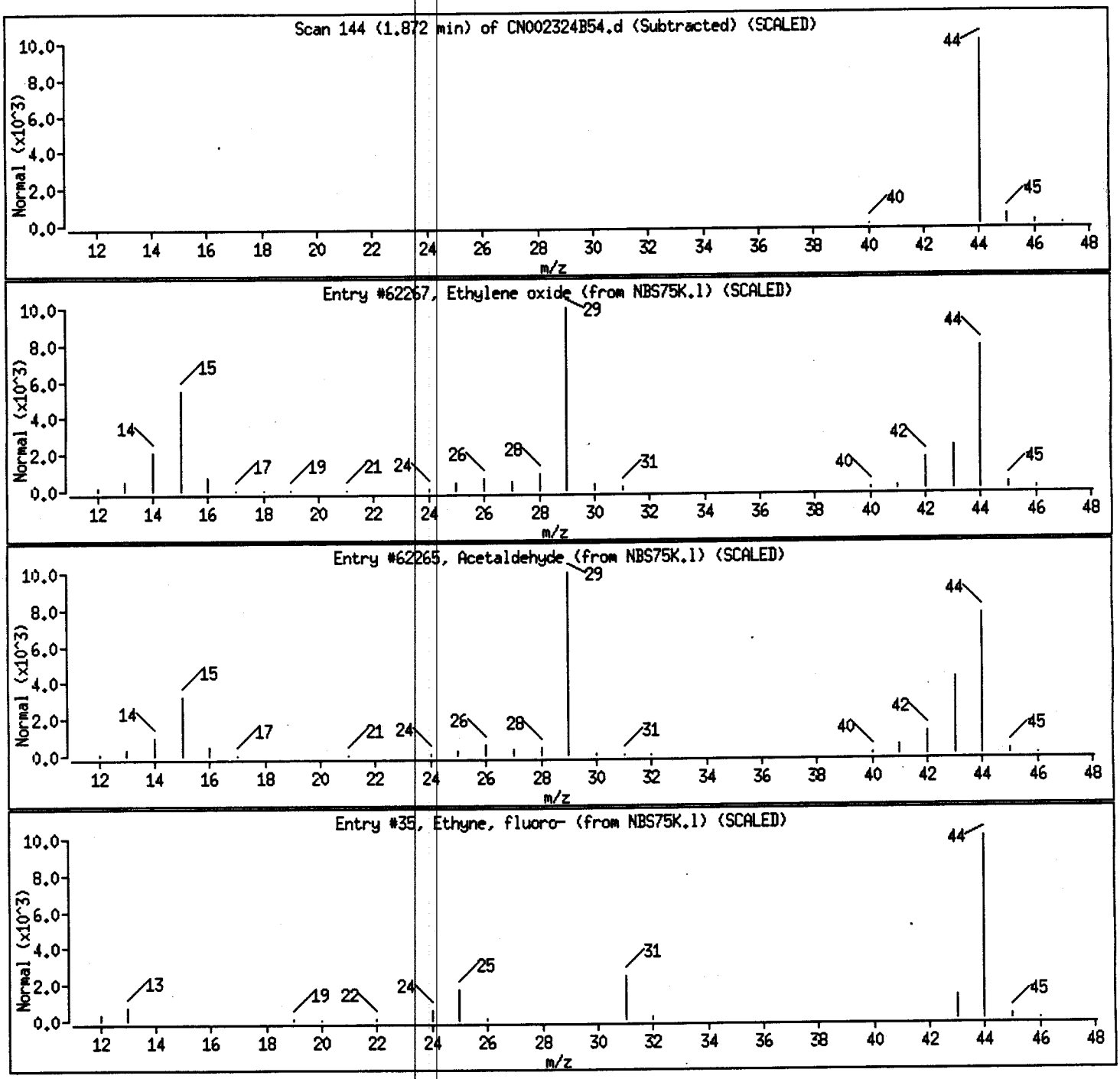
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.1	62265	3	C2H4O	44
Ethyne, fluoro-	2713-09-9	NBS75K.1	35	3	C2HF	44



LAB INSTRUCTIONS PPS#_____

VOA J( ) J3( ) D( ) (:1)
GC/MS WORKSHEET J2( ) J4( ) D2( ) (:1)

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702324: 2011: 1:

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GC/MS ANALYSIS
AMOUNT PURGED: 5000. ~~G~~ ml 5/1/95/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002324B54

ANALYST(S): INJECTION 1948 VA Small WORKUP 1948 VA Small

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GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [✓] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS: [ ] REINJECT NEAT
OF PEAKS FOUND : 1 [ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SL DATE 4/28/95 AUDITOR _____ DATE ____/____/____

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REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

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QA COMMENTS:

INITIALS _____ DATE ____/____/____

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COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702324
Client ID# MW13
Instrument Blank ID MBLKJM
Case # 30458

The early-eluting peak on the RIC of the volatile fraction at scan # 144 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
[illegible]1001

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: MW17

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702327

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002327B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	4	J
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	1	J
75-34-3	1,1-Dichloroethane	130	
540-59-0	1,2-Dichloroethene (total)	70	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	19	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	41	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW17

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702327

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002327B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	3	J

1E

EPA SAMPLE NO.

MW17

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702327

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002327B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.87	1900	J
2.					
3.					
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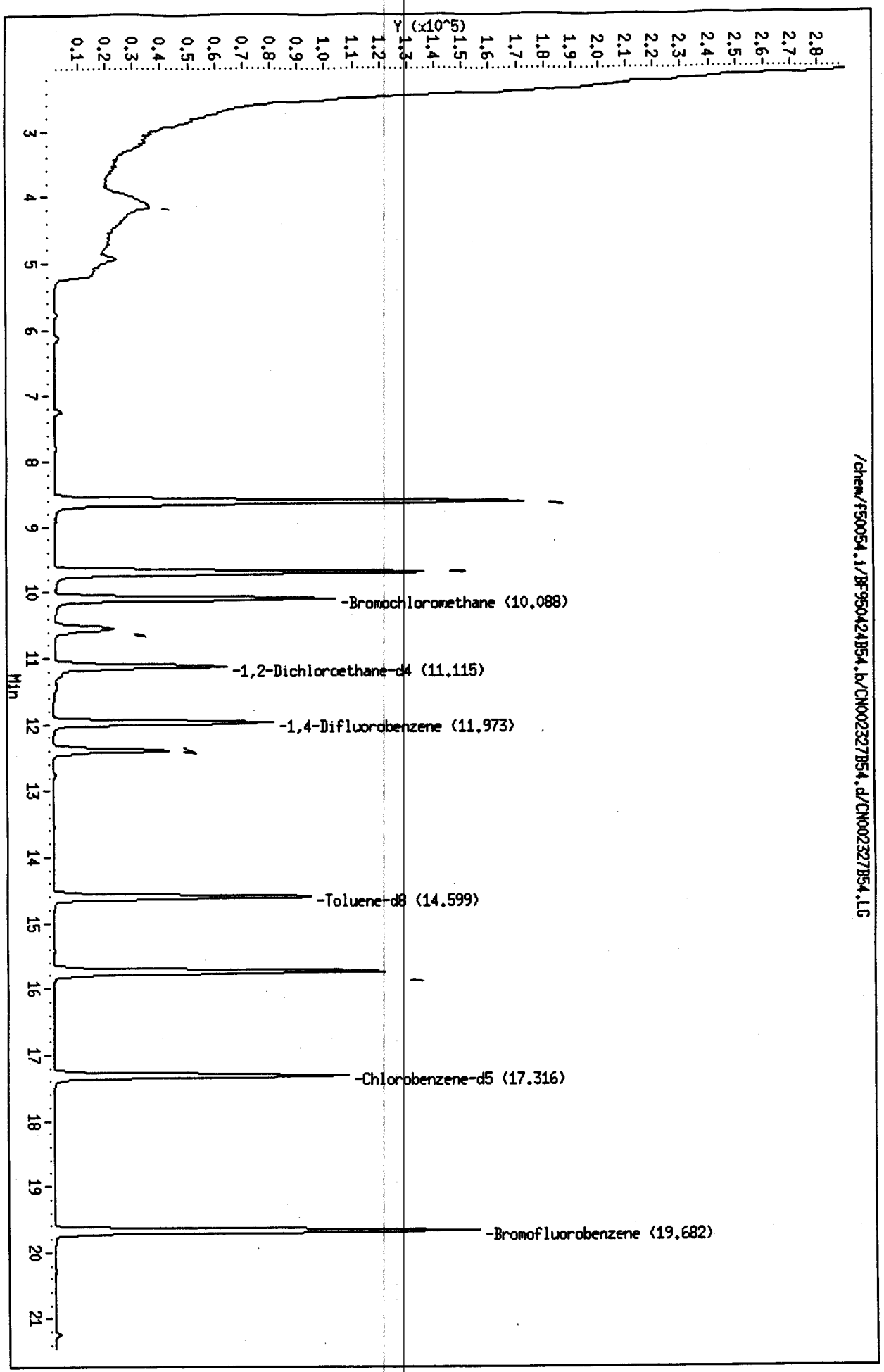
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Date : 25-APR-1995 02:34
Client ID: MW17
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50054.i
Operator: 1948
Column diameter: 0.53
/chem/f50054.i/BF950424B54.b/CN002327B54.d/CN002327B54.LG
(x10^5)
Min
-Bromochloromethane (10.088)
-1,2-Dichloroethane-d4 (11.115)
-1,4-Difluorobenzene (11.973)
-Toluene-d8 (14.599)
-Chlorobenzene-d5 (17.316)
-Bromofluorobenzene (19.682)

Data File: /chem/f50054.i/BF950424B54.b/CN002327B54.d
Report Date: 28-Apr-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002327B54.d
Lab Smp Id: 702327 Client Smp ID: MW17
Inj Date : 25-APR-1995 02:34
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	10.088	10.140	(1.000)	53656	250.0	
*	2 1,4-Difluorobenzene	114.00	11.960	12.012	(1.000)	171906	250.0	
*	3 Chlorobenzene-d5	117.00	17.316	17.368	(1.000)	165523	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.115	11.167	(1.102)	106769	236.2	47.23
$	5 Toluene-d8	98.00	14.599	14.651	(0.843)	159644	261.1	52.22
$	6 Bromofluorobenzene	95.00	19.682	19.734	(1.137)	135436	246.6	49.33
	7 Dichlorodiflouromethane	85.00	2.327	2.379	(0.231)	2864	15.82	3.16(aM)
	8 Chloromethane	50.00		2.873		Compound Not Detected.		
	9 Vinyl Chloride	62.00		3.185		Compound Not Detected.		
	10 Bromomethane	94.00		4.004		Compound Not Detected.		
	11 Chloroethane	64.00	4.238	4.290	(0.420)	3003	18.55	3.71(a)
	12 1,1-Dichloroethene	96.00	6.136	6.175	(0.608)	2033	6.90	1.38(a)
	13 Acetone	43.00		6.422		Compound Not Detected.		
	14 Carbon Disulfide	76.00		6.474		Compound Not Detected.		
	15 Methylene Chloride	84.00	7.241	7.293	(0.718)	2832	9.57	1.91(a)
	16 trans-1,2-Dichloroethene	96.00		7.852		Compound Not Detected.		
	17 1,1-Dichloroethane	63.00	8.606	8.658	(0.853)	408098	667.2	133.4
	18 cis-1,2-Dichloroethene	96.00	9.685	9.737	(0.960)	125133	332.1	66.43
	19 2-Butanone	43.00		9.854		Compound Not Detected.		
	20 Chloroform	83.00		10.348		Compound Not Detected.		
	21 1,1,1-Trichloroethane	97.00	10.543	10.595	(0.882)	37449	51.44	10.29
	22 Carbon Tetrachloride	117.00		10.881		Compound Not Detected.		
	23 Benzene	78.00		11.245		Compound Not Detected.		

Data File: /chem/f50054.i/BF950424B54.b/CN002327B54.d
Report Date: 28-Apr-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 1,2-Dichloroethane	62.00		11.297		Compound Not Detected.		
	25 Trichloroethene	130.00	12.389	12.428	(1.036)	35692	94.58	18.92
	26 1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
	27 Bromodichloromethane	83.00		13.351		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
	30 Toluene	91.00		14.768		Compound Not Detected.		
	31 trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
	33 Tetrachloroethene	164.00	15.743	15.795	(0.909)	73198	204.0	40.80
	34 2-Hexanone	43.00		16.094		Compound Not Detected.		
	35 Dibromochloromethane	129.00		16.263		Compound Not Detected.		
	36 Chlorobenzene	112.00		17.420		Compound Not Detected.		
	37 Ethylbenzene	106.00		17.680		Compound Not Detected.		
	38 m,p-Xylene	106.00		17.927		Compound Not Detected.		
	39 o-Xylene	106.00		18.707		Compound Not Detected.		
	40 Styrene	104.00		18.733		Compound Not Detected.		
	41 Bromoform	173.00		19.032		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00				125133	350.1	70.01
M	44 Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

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

Data File: /chem/f50054.i/BF950424B54.b/CN002327B54.d

Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

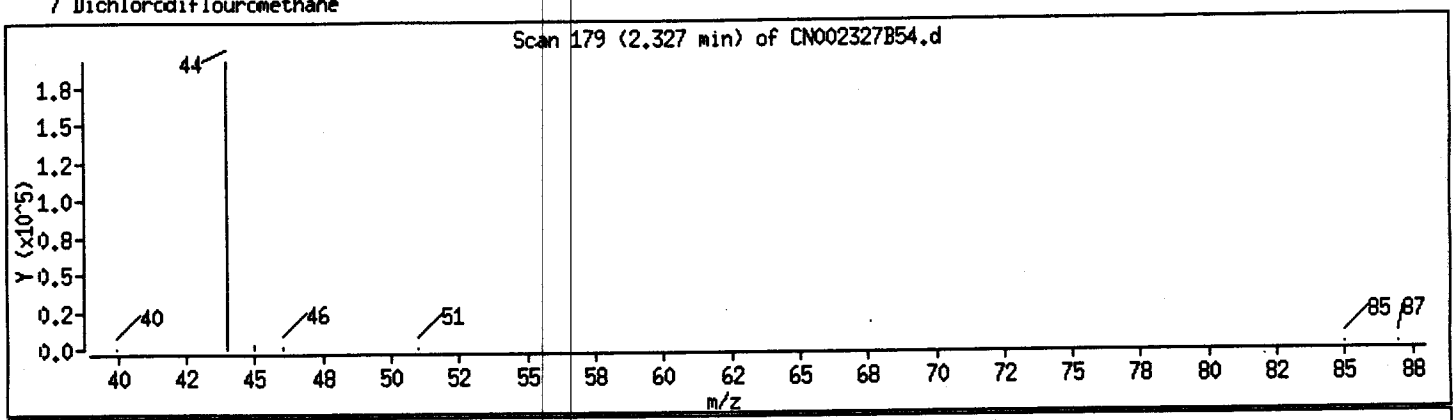
Purge Volume: 5.0

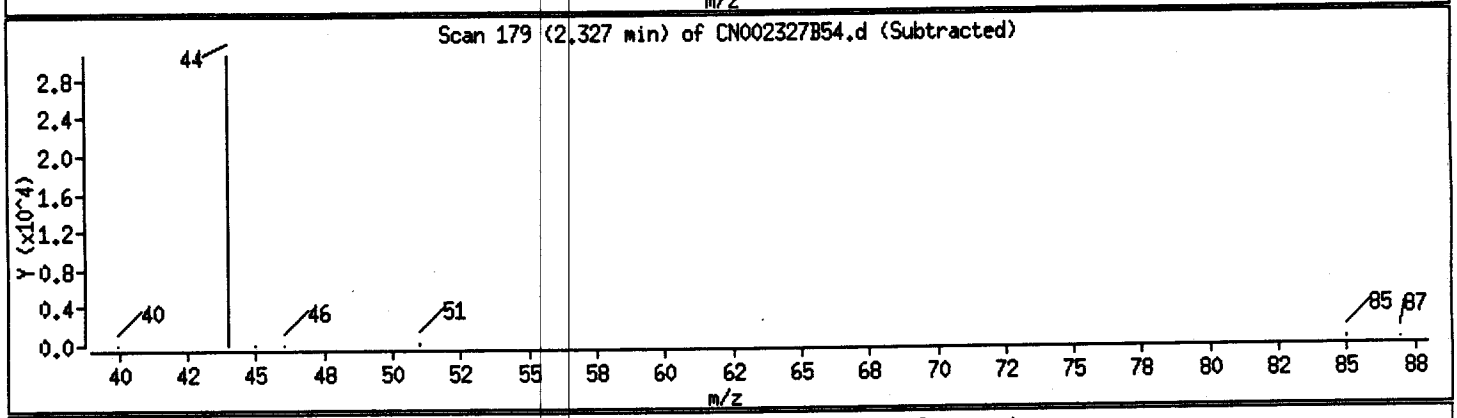
Operator: 1948

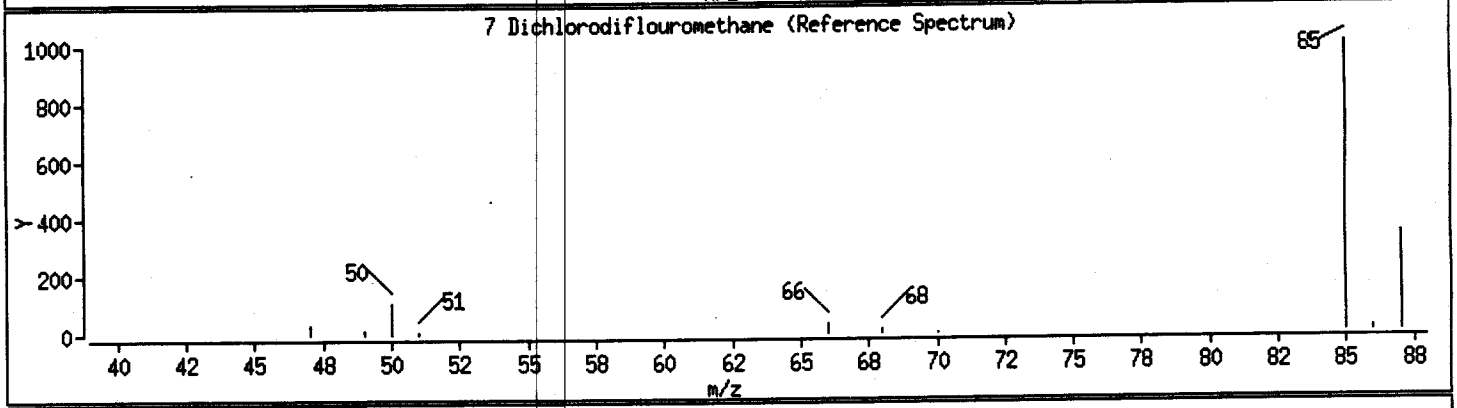
Column phase: DB624

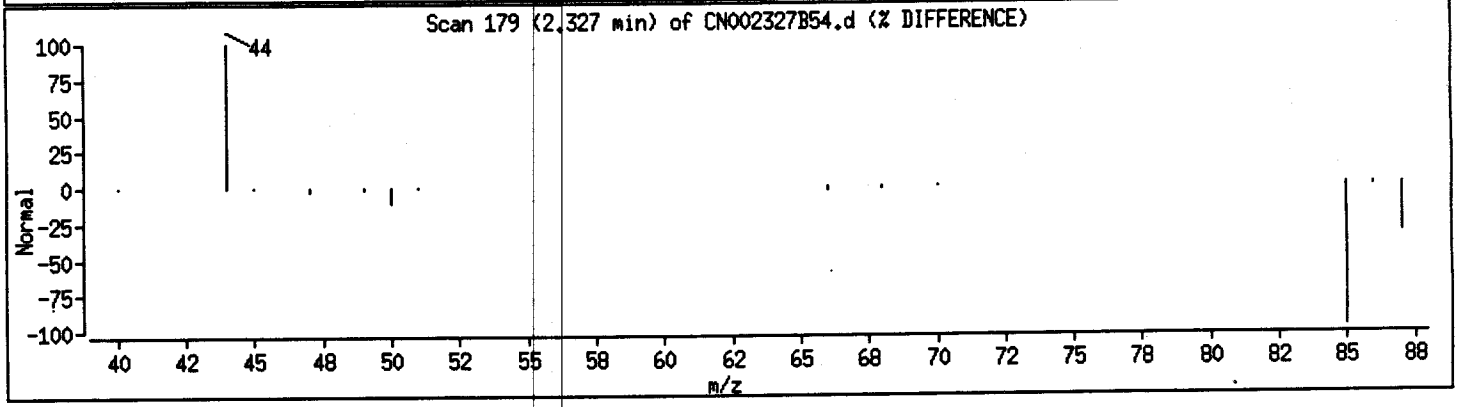
Column diameter: 0.53

7 Dichlorodifluoromethane









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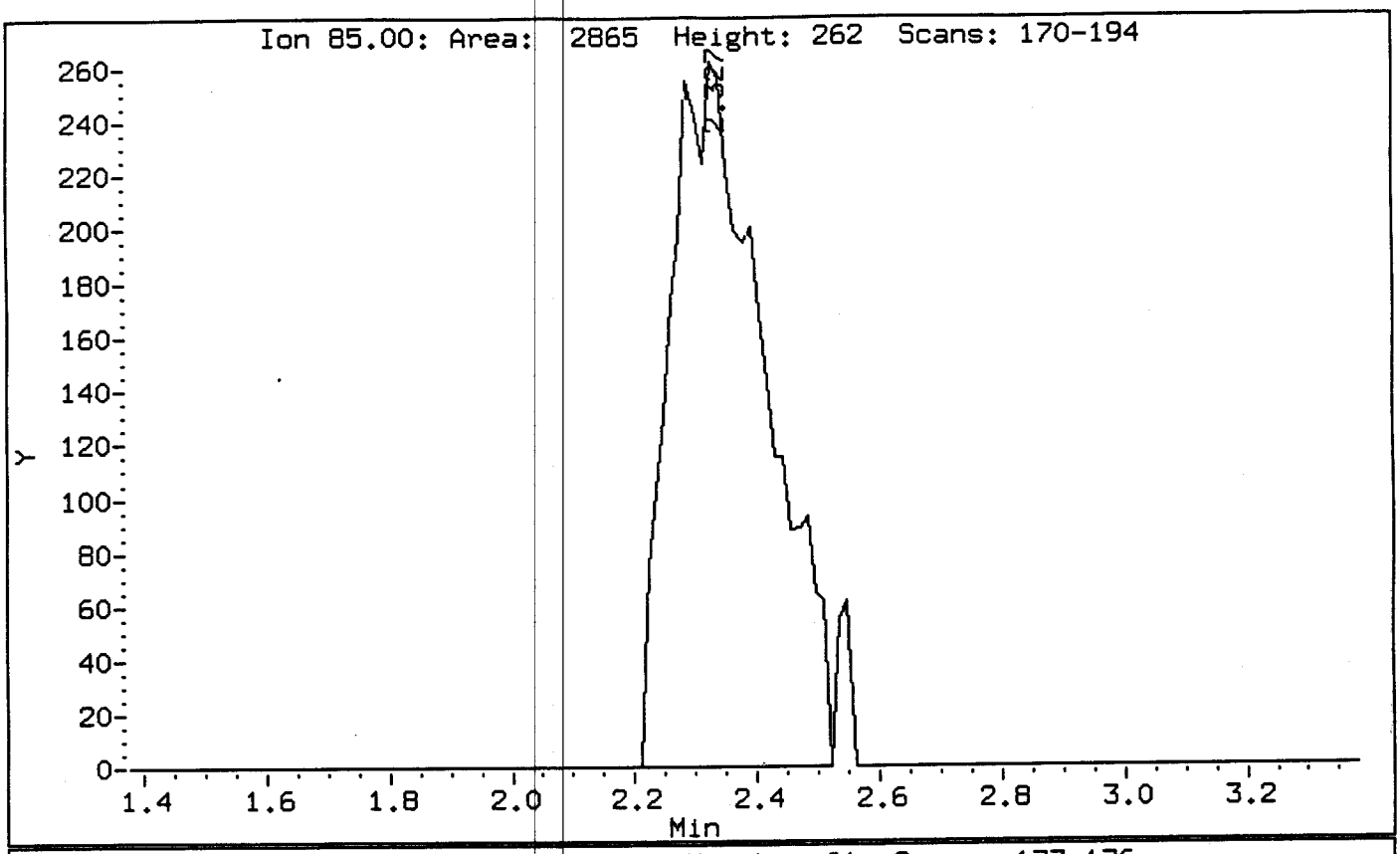
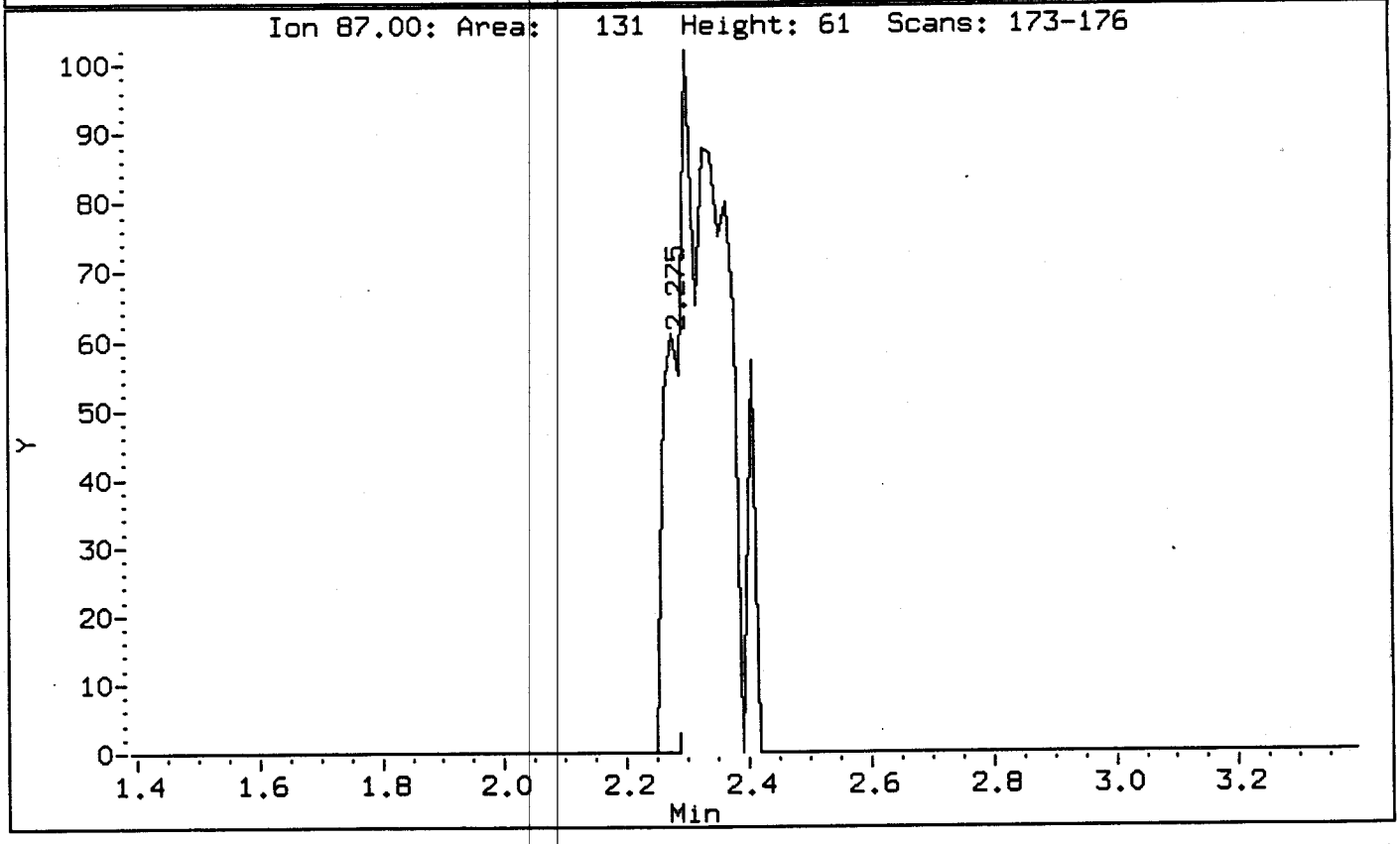
Injection Date: 25-APR-95 02:34
Instrument: f50054.i
Client Sample ID: MW17

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





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Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

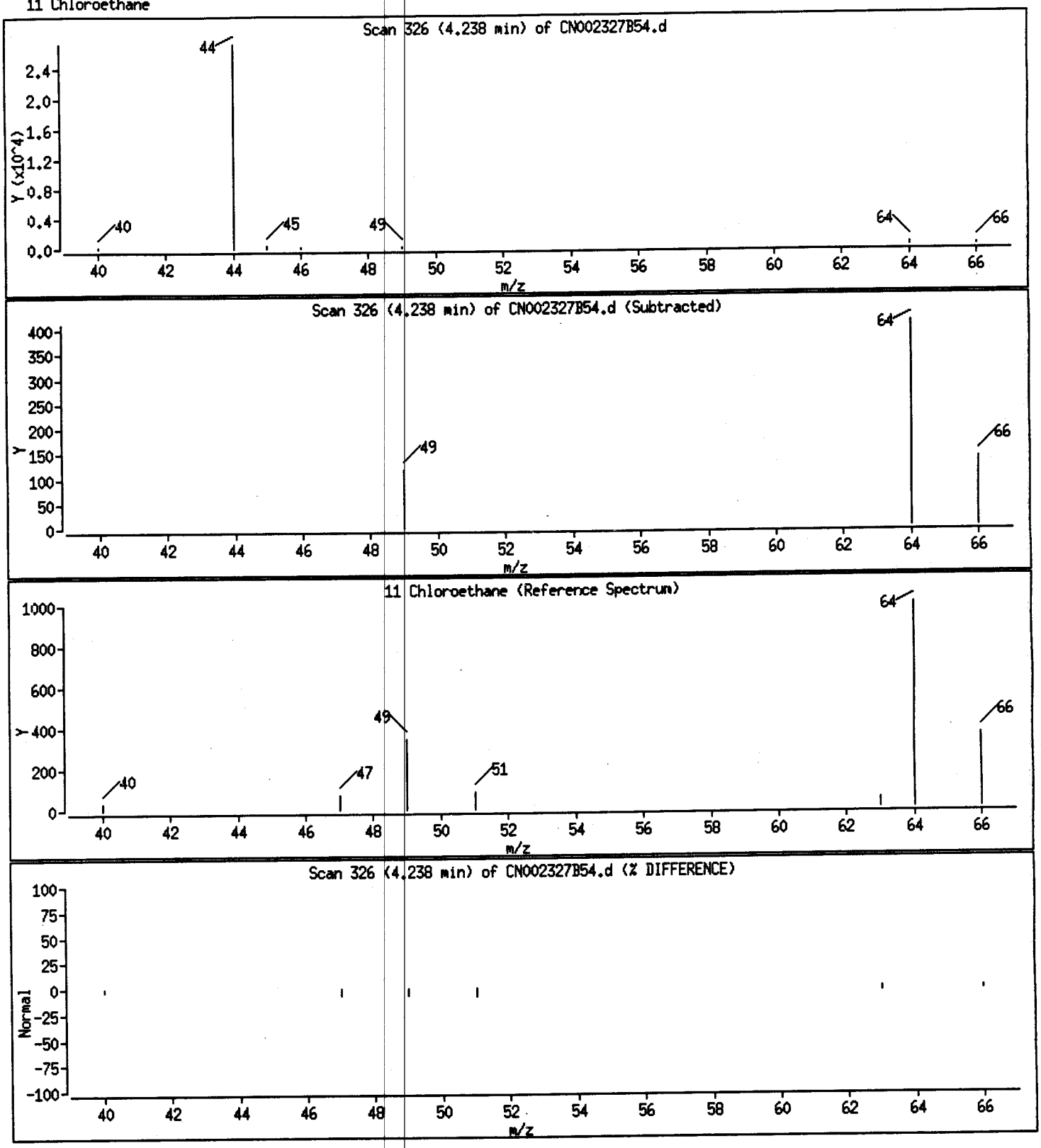
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

11 Chloroethane



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Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

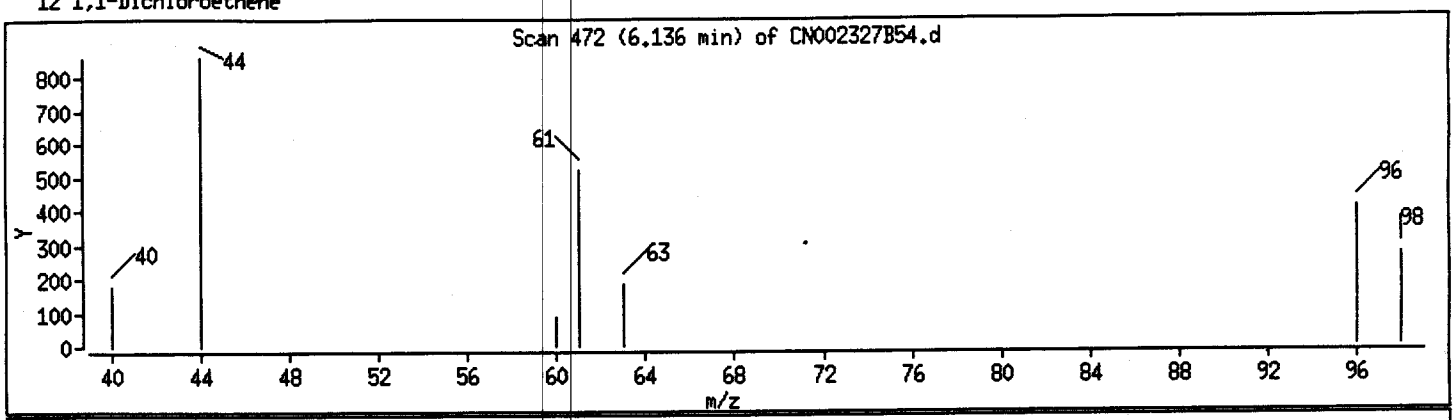
Purge Volume: 5.0

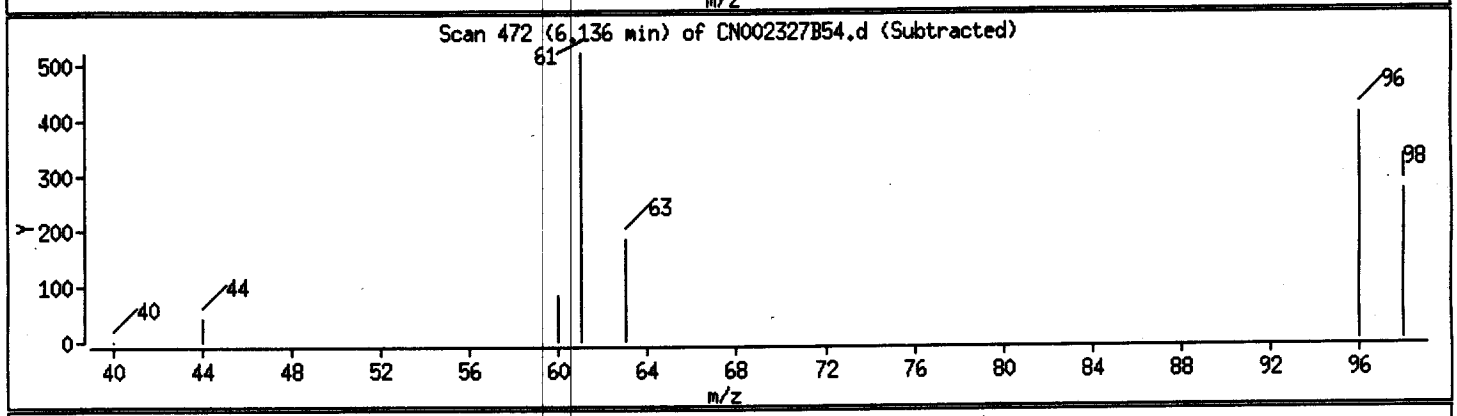
Operator: 1948

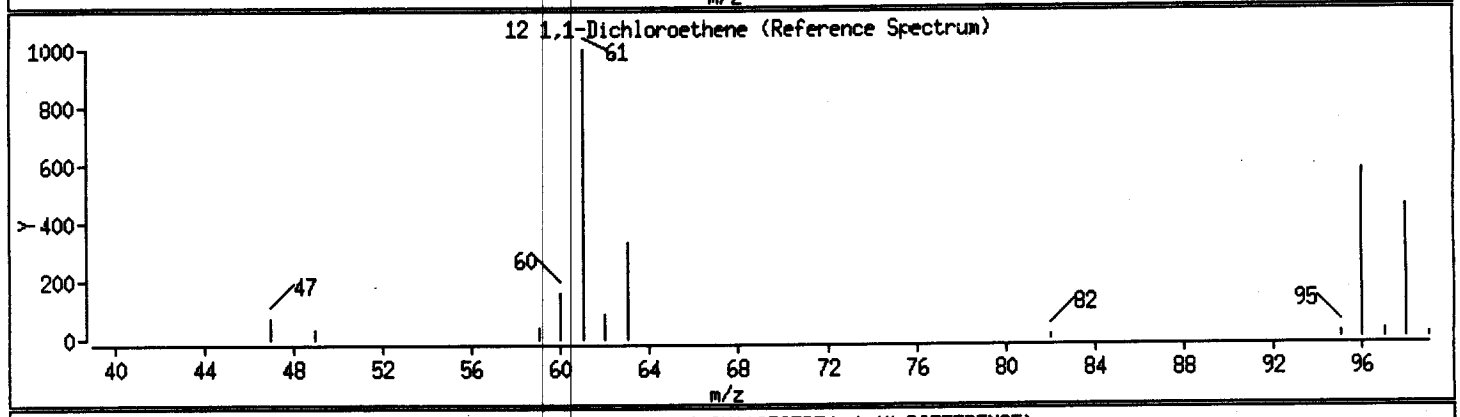
Column phase: DB624

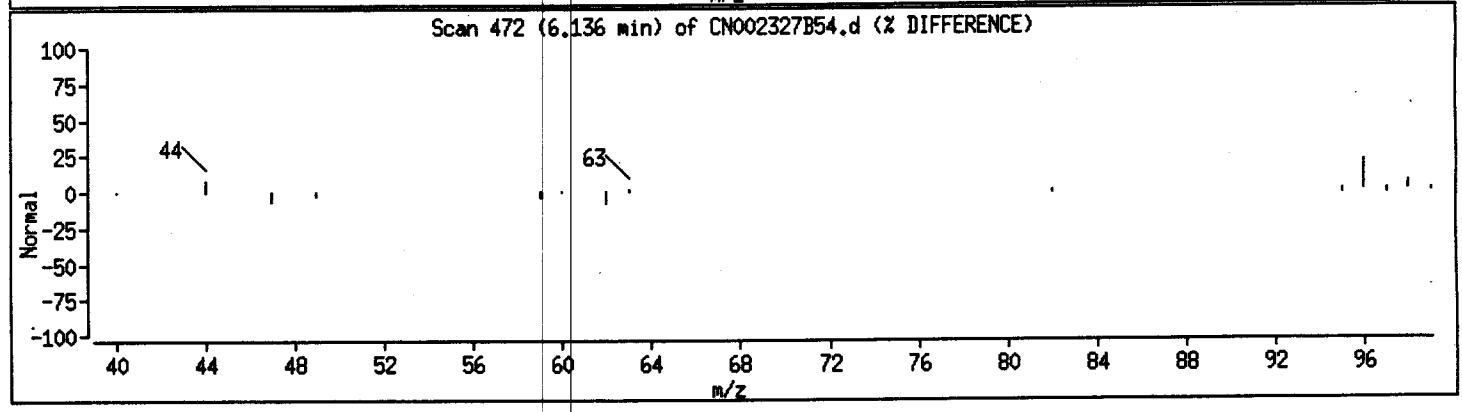
Column diameter: 0.53

12 1,1-Dichloroethene









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Date : 25-APR-1995 02:34

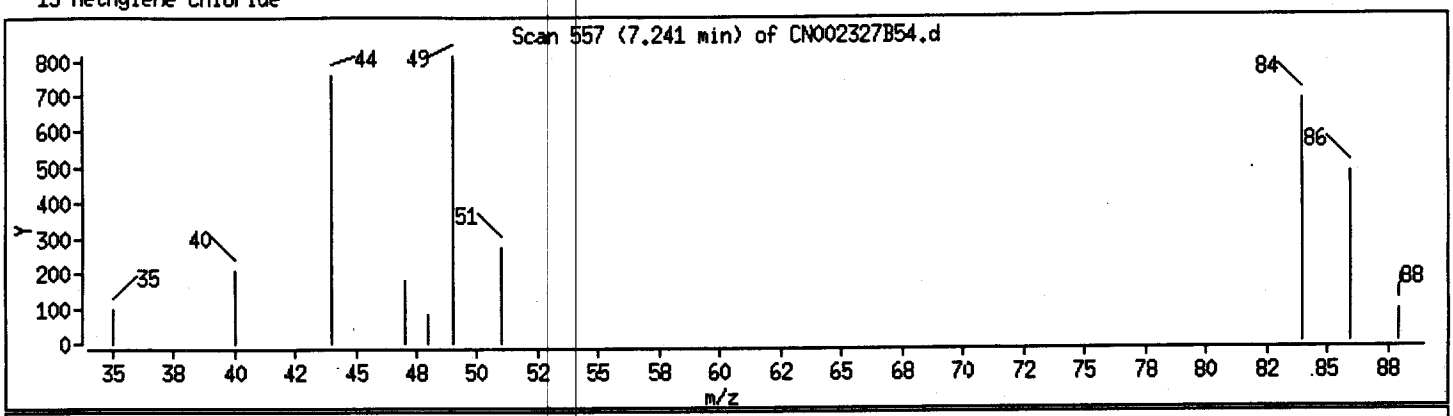
Client ID: MW17 Instrument: f50054.i

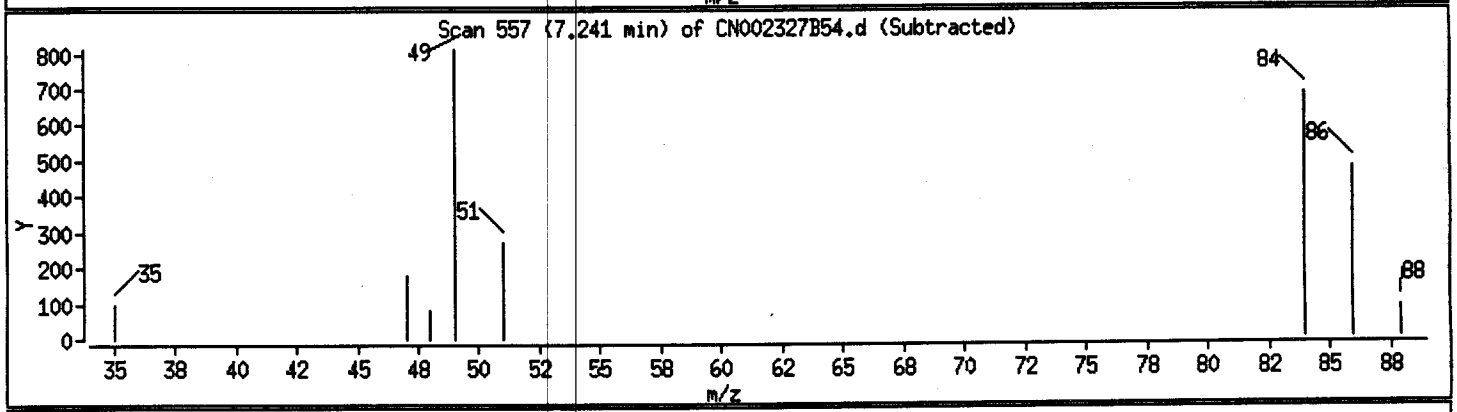
Sample Info:

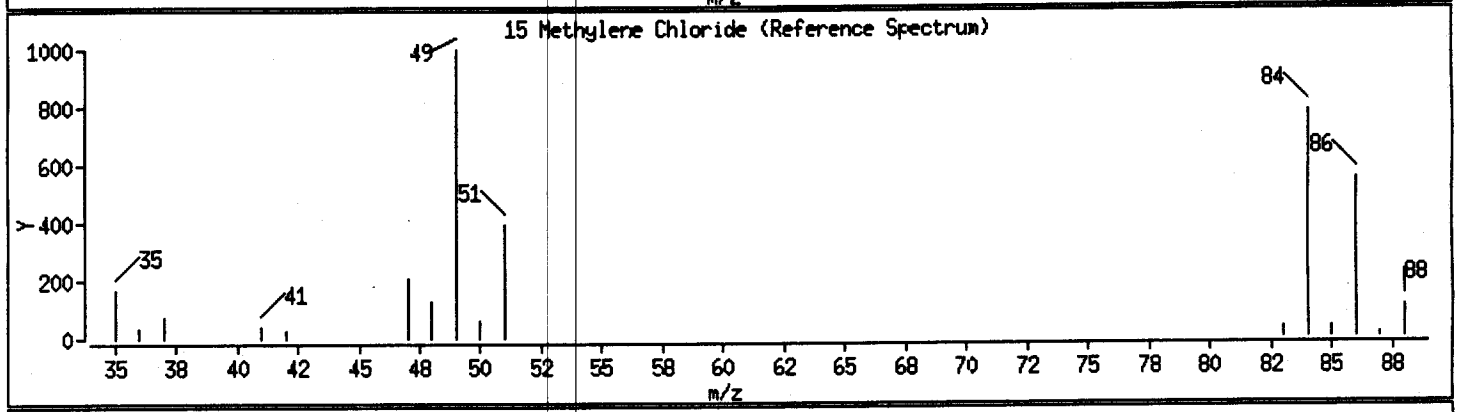
Purge Volume: 5.0 Operator: 1948

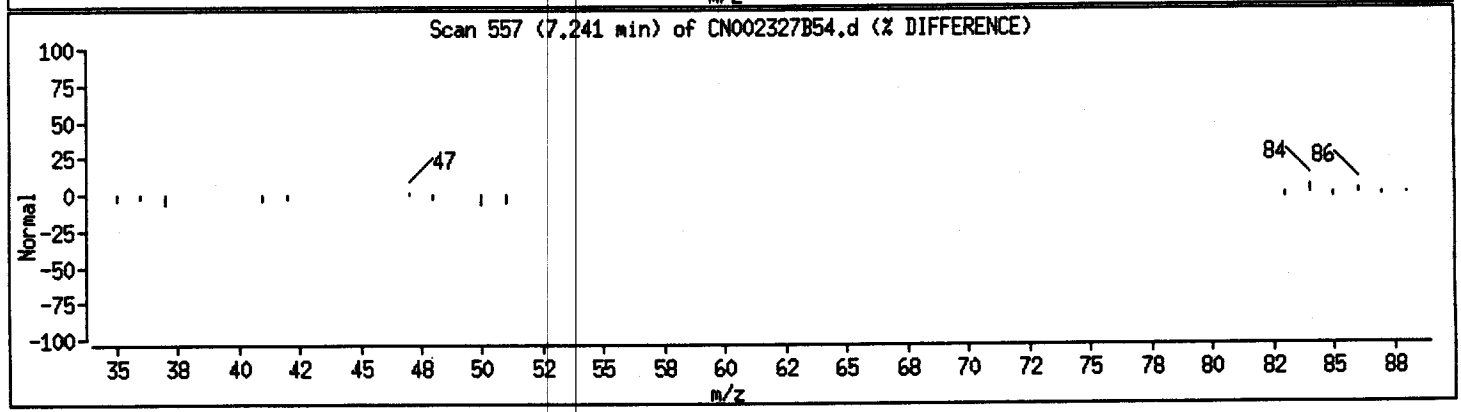
Column phase: DB624 Column diameter: 0.53

15 Methylene Chloride









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Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

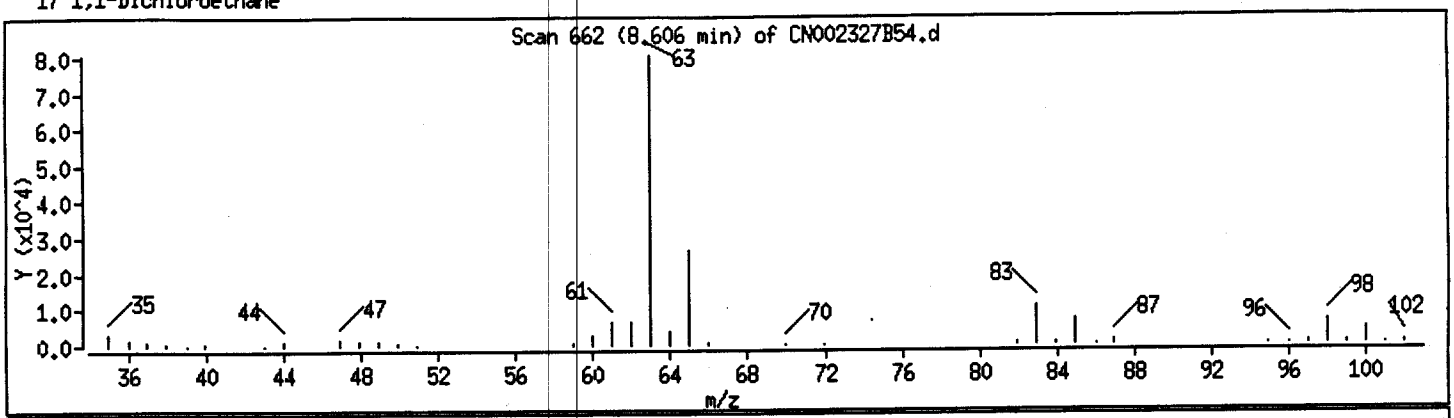
Purge Volume: 5.0

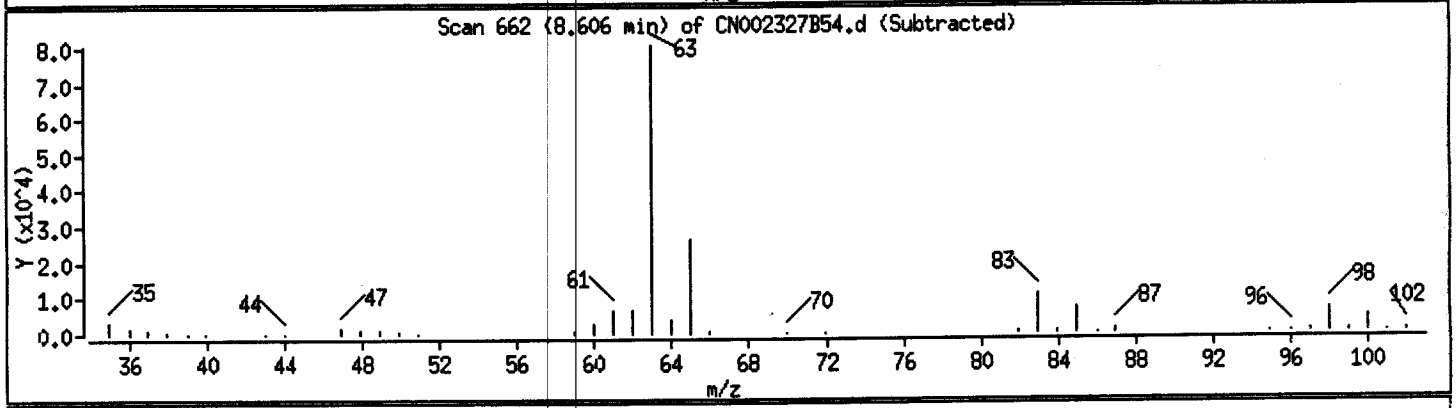
Operator: 1948

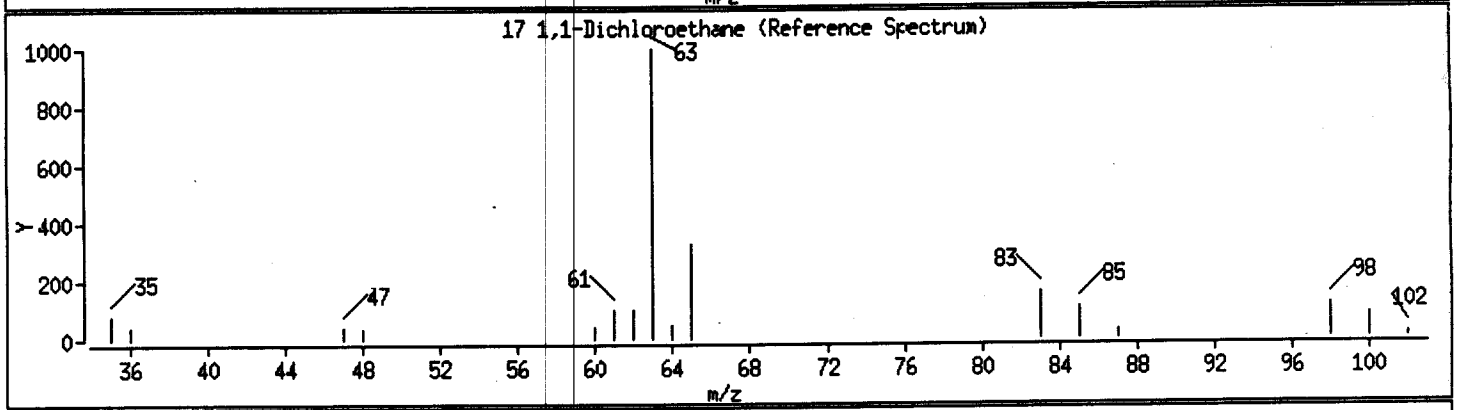
Column phase: DB624

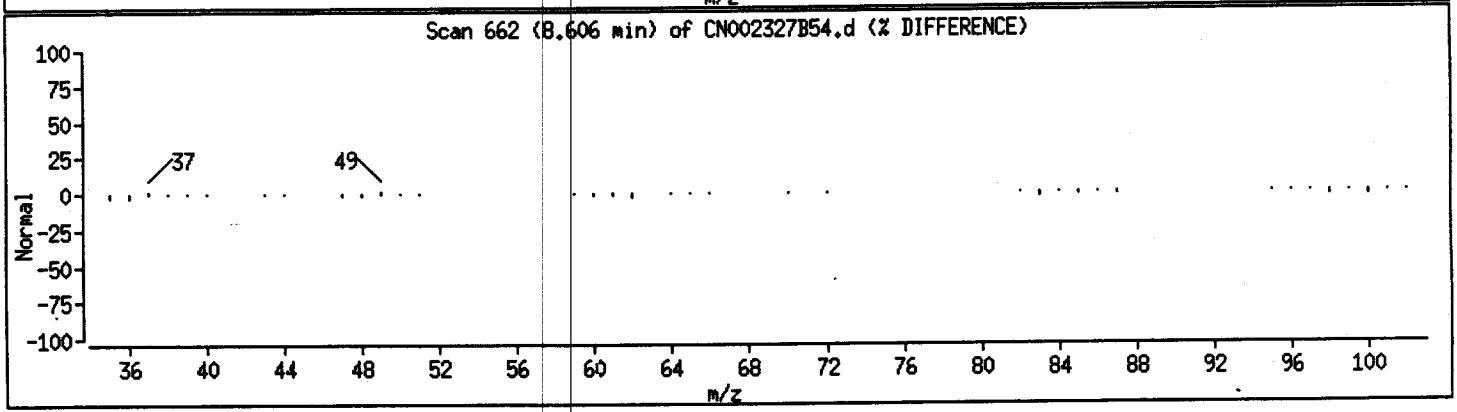
Column diameter: 0.53

17 1,1-Dichloroethane









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Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

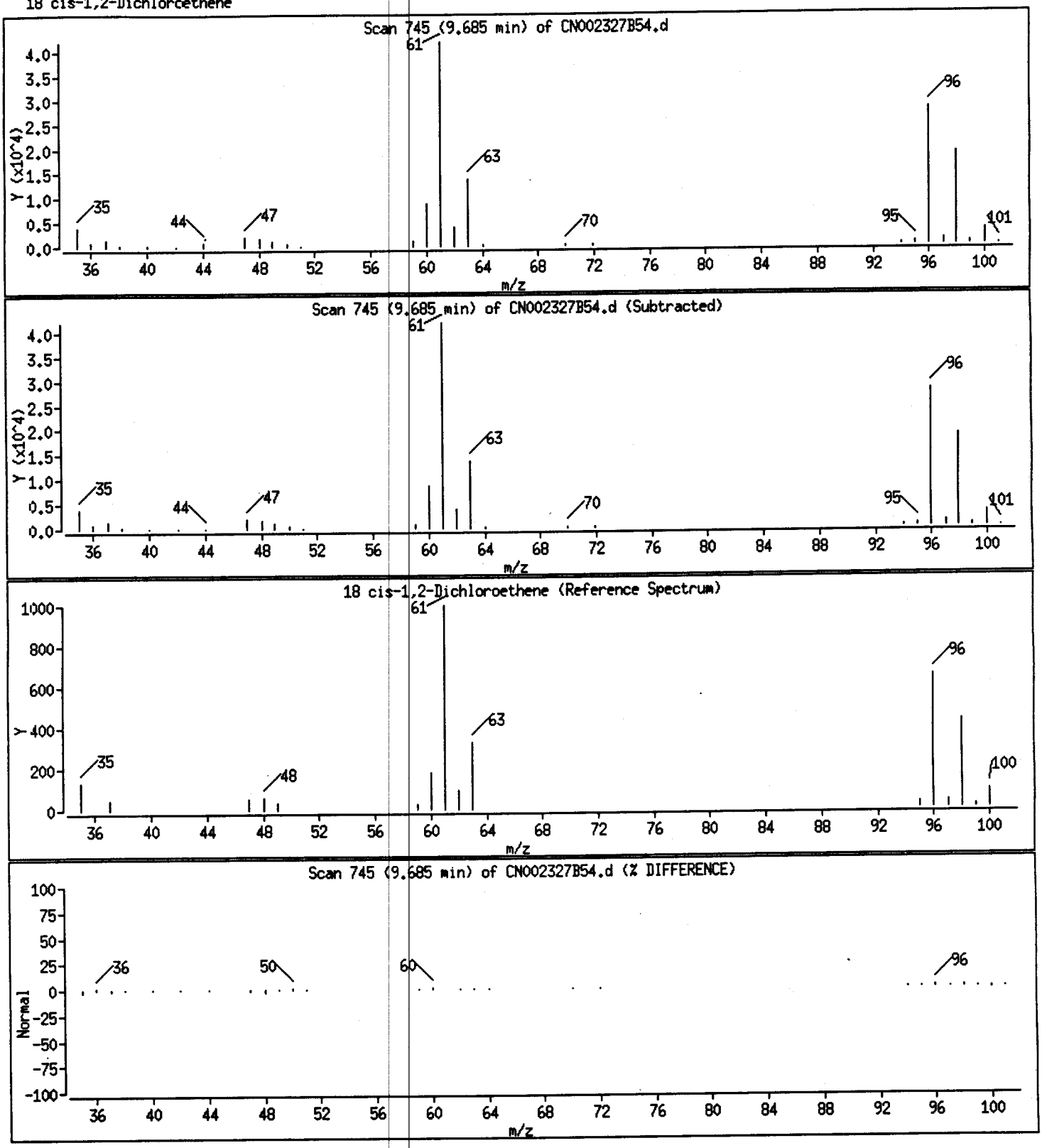
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

18 cis-1,2-Dichlorcethene



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Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

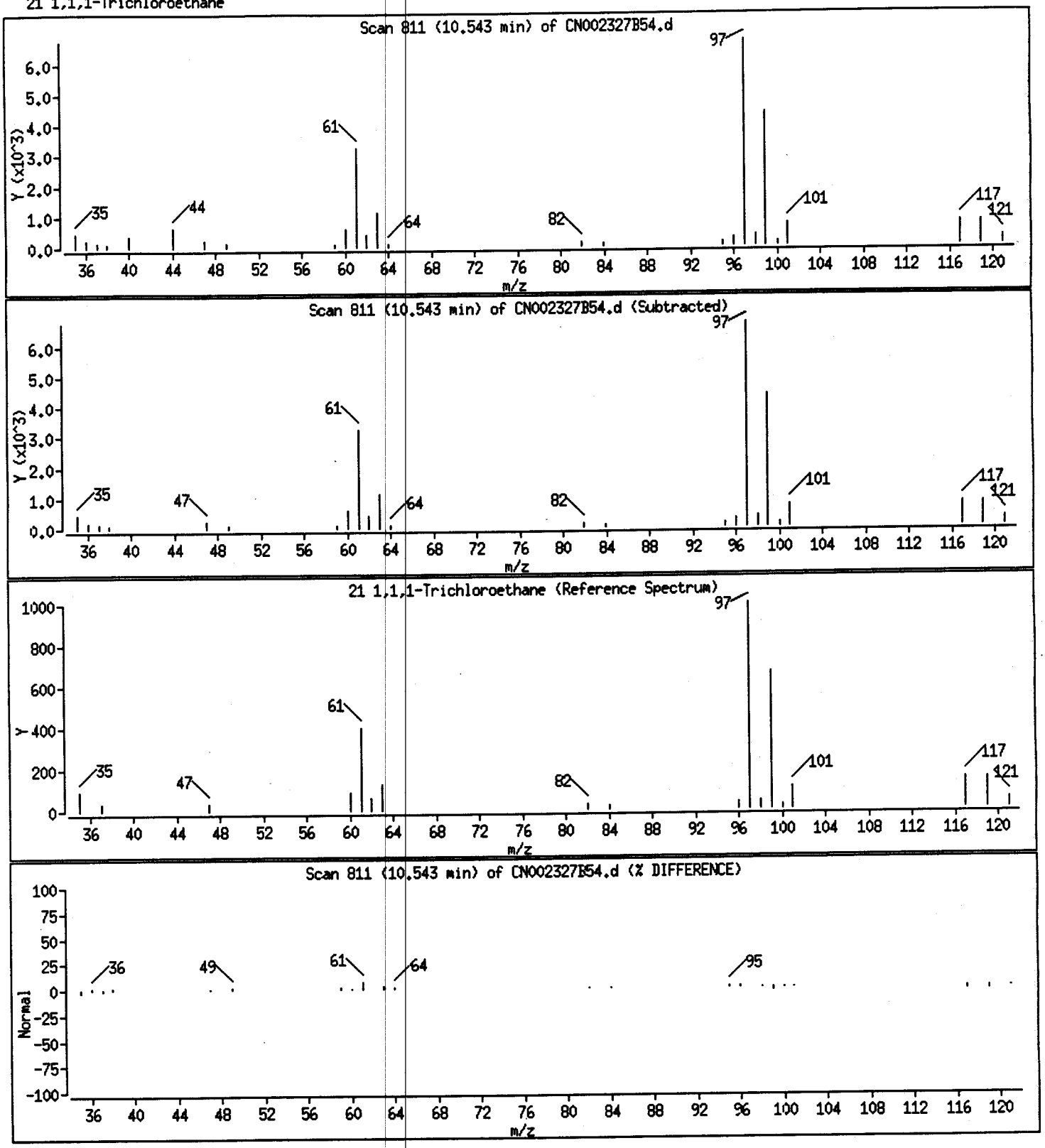
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

21 1,1,1-Trichloroethane



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Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

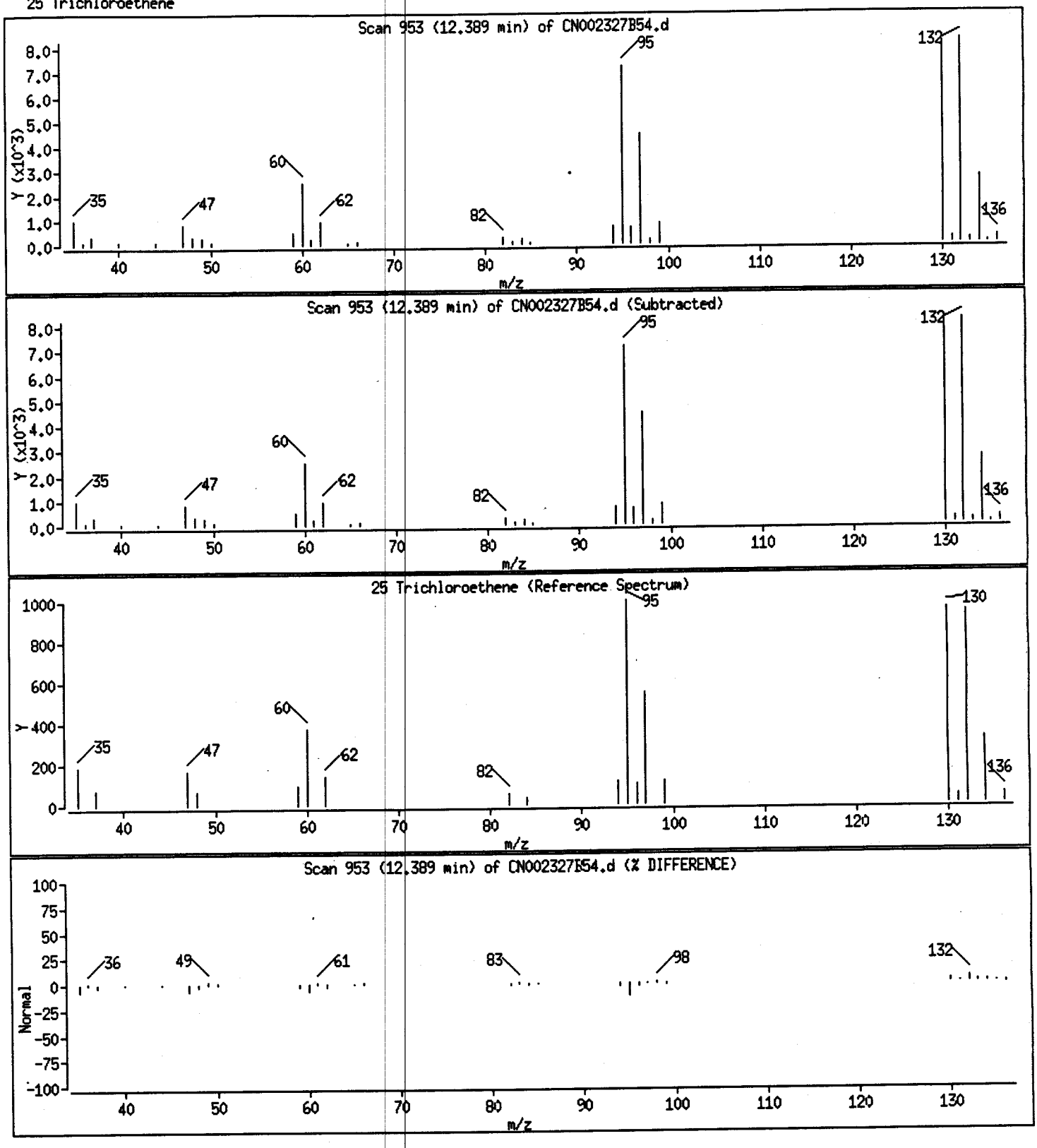
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



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Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

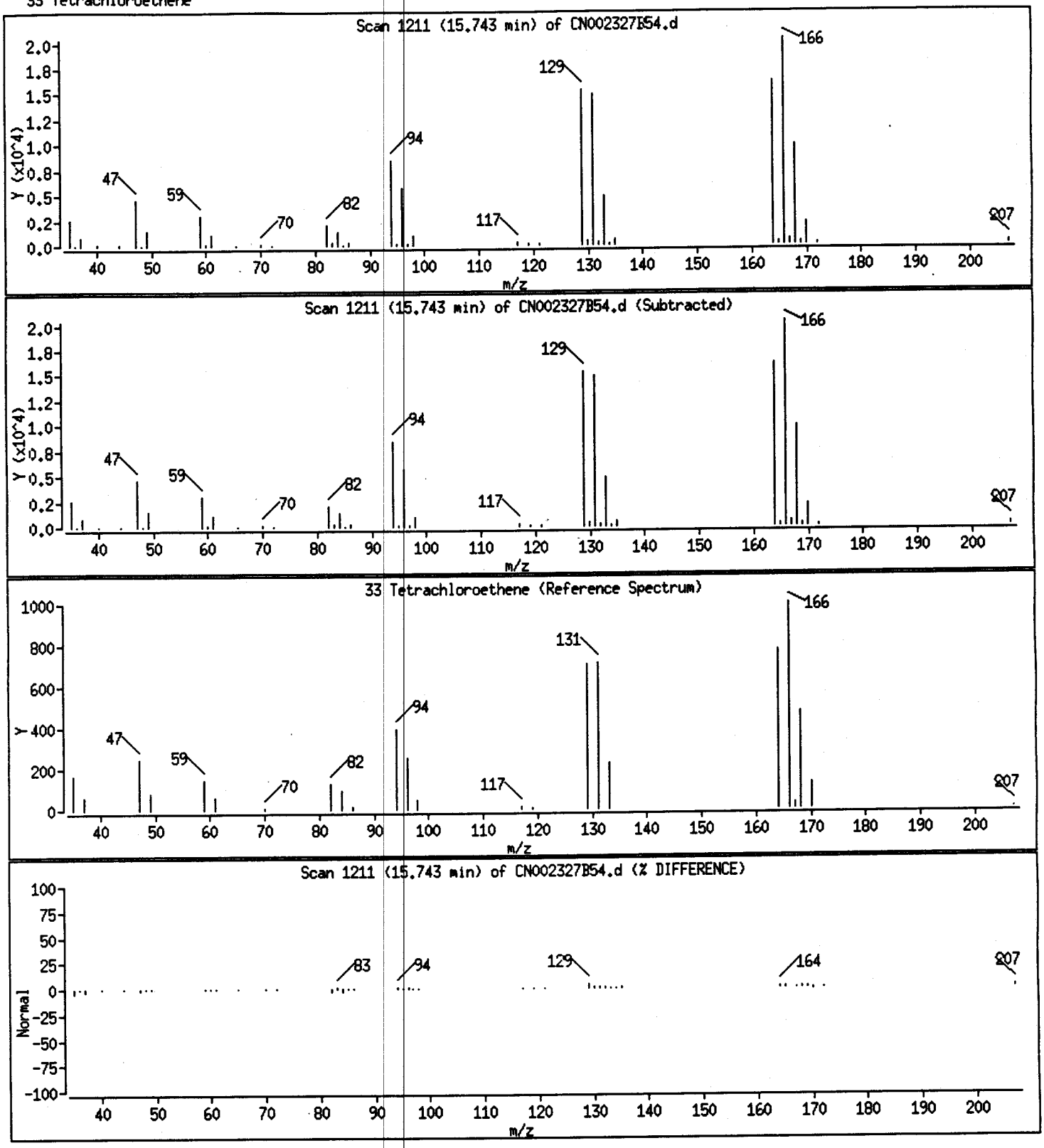
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50054.i/BF950424B54.b/CN002327B54.d

Date : 25-APR-1995 02:34

Client ID: MW17

Instrument: f50054.i

Sample Info:

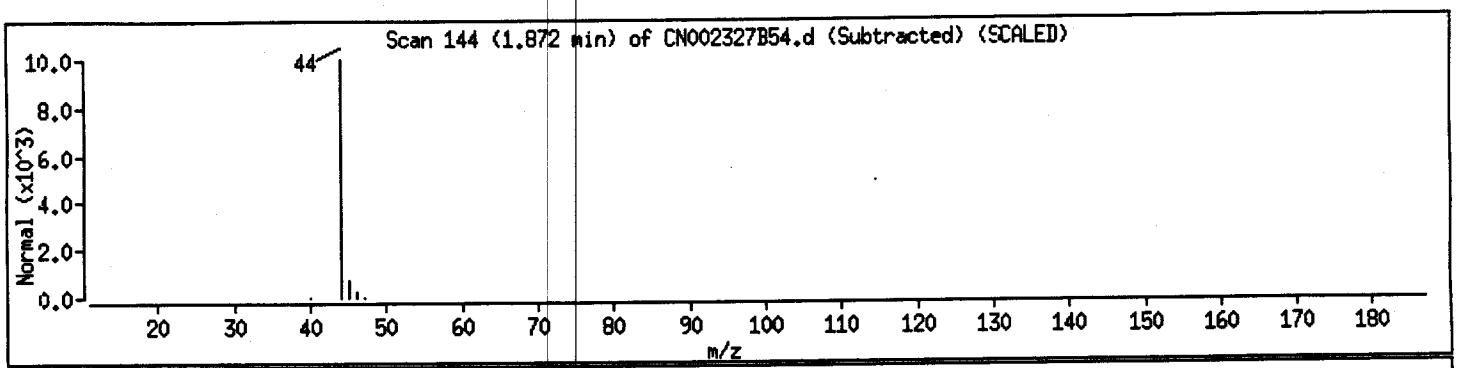
Purge Volume: 5.0

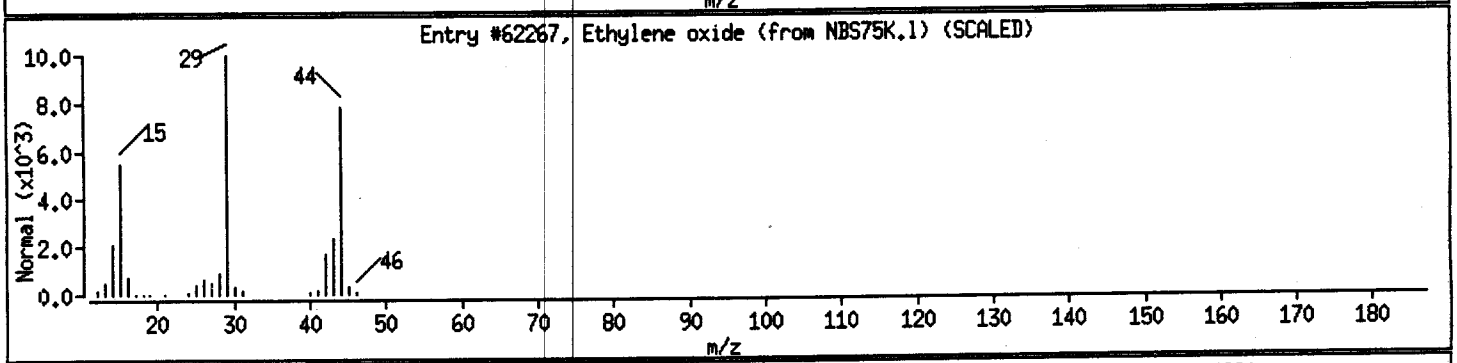
Operator: 1948

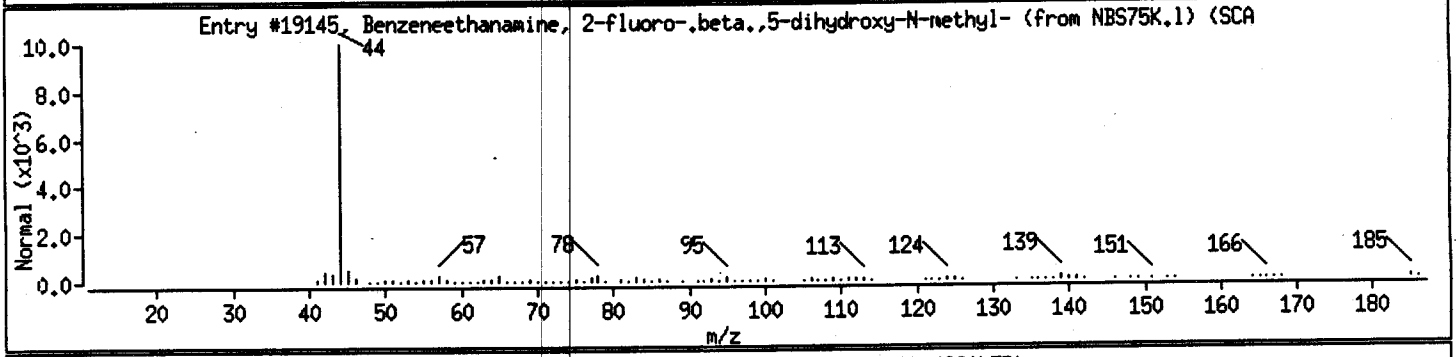
Column phase: DB624

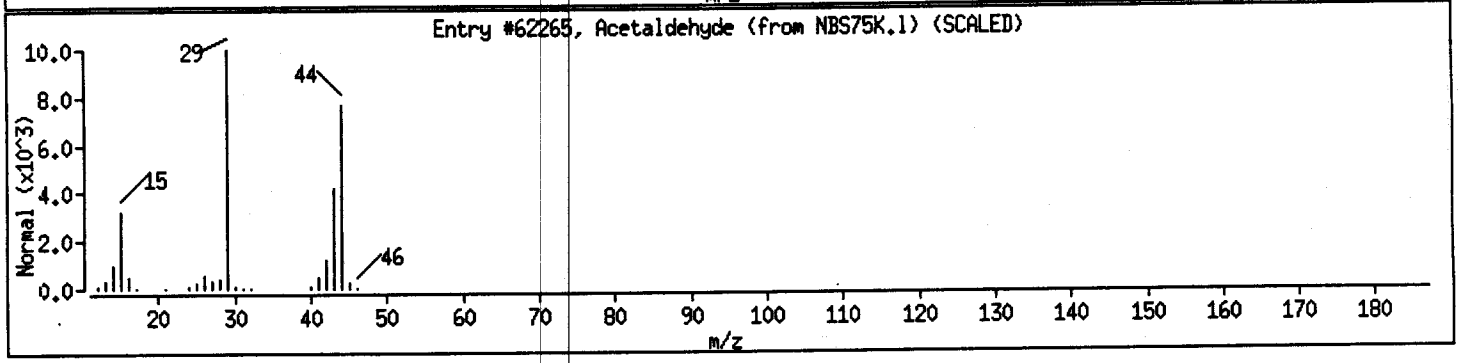
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.1	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.1	62265	2	C2H4O	44









LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

==========

702327: 2011: 1:

==========

GC/MS ANALYSIS
AMOUNT PURGED: 5000. ~~0~~
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002327B54

ANALYST(S): INJECTION RVAsmith WORKUP RVAsmith

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE 01

DISPOSITION: [X] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 1

[ ] REINJECT NEAT
[ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SC DATE 4/28/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702327
Client ID# MW17
Instrument Blank ID VBLKJM
Case # 30458

The early-eluting peak on the RIC of the volatile fraction at scan # 144 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
1001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702300

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002300B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	6	J
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	3	J
75-34-3	1,1-Dichloroethane	130	
540-59-0	1,2-Dichloroethene (total)	44	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	21	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	12	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	33	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702300

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002300B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

MW3

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702300

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002300B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.87	1700	J
2.					
3.					
4.					
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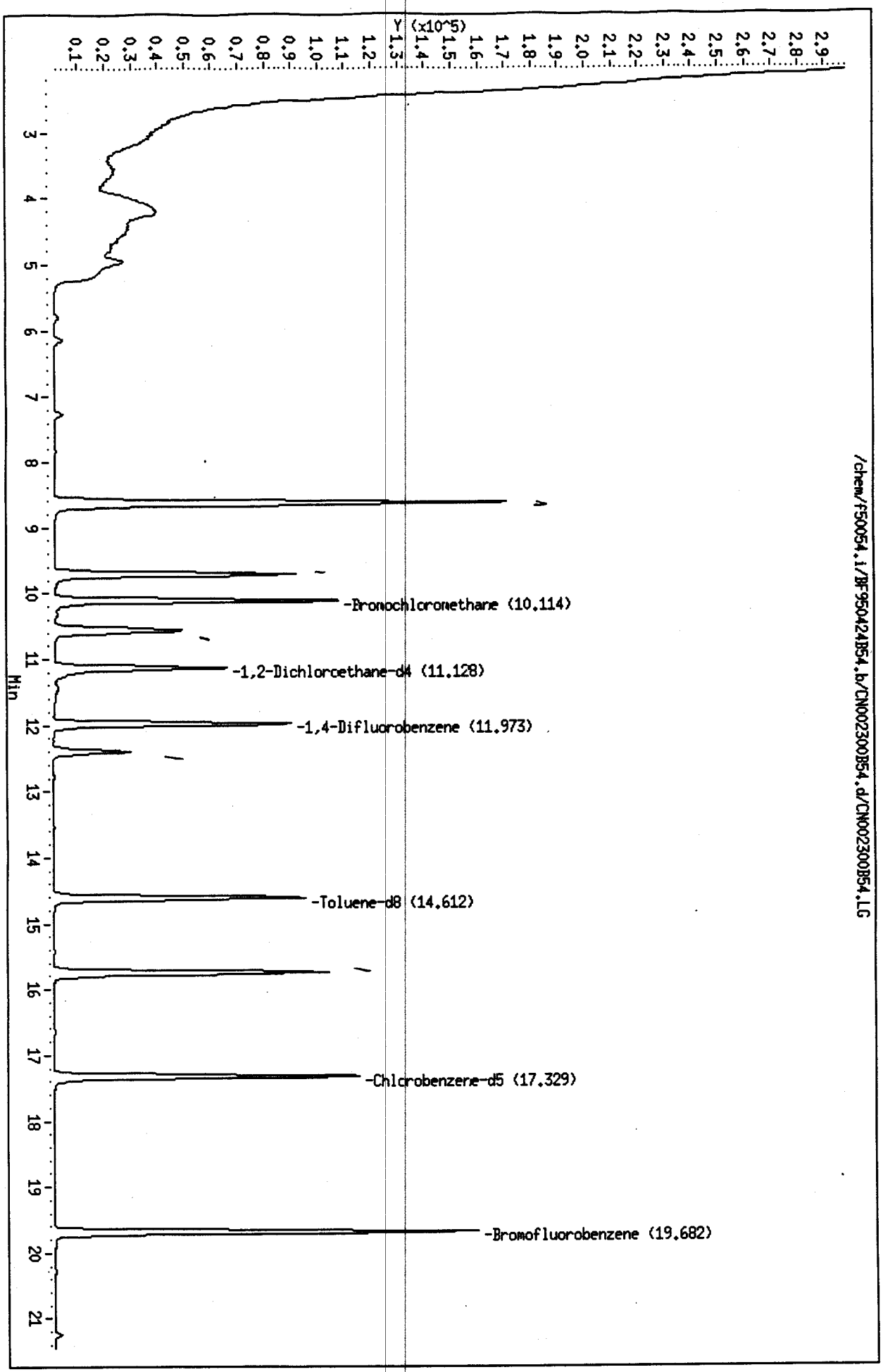

Data File: /chem/f50054.i/BF950424B54.b/CN002300B54.d
Date : 24-APR-1995 20:46
Client ID: MW3
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50054.i
Operator: 1948
Column diameter: 0.53
/chem/f50054.i/BF950424B54.b/CN002300B54.d/CN002300B54.LG
Y (x10^5)
Min
-Bromochloromethane (10.114)
-1,2-Dichlorcethane-d4 (11.128)
-1,4-Difluorobenzene (11.973)
-Toluene-d8 (14.612)
-Chlorobenzene-d5 (17.329)
-Bromofluorobenzene (19.682)

Data File: /chem/f50054.i/BF950424B54.b/CN002300B54.d
Report Date: 28-Apr-1995 10:12

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002300B54.d
Lab Smp Id: 702300 Client Smp ID: MW3
Inj Date : 24-APR-1995 20:46
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
*	1 Bromochloromethane	128.00	10.101	10.140	(1.000)	56828	250.0	
*	2 1,4-Difluorobenzene	114.00	11.973	12.012	(1.000)	184193	250.0	
*	3 Chlorobenzene-d5	117.00	17.329	17.368	(1.000)	176152	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.128	11.167	(1.102)	109767	229.2	45.85
$	5 Toluene-d8	98.00	14.612	14.651	(0.843)	157334	241.8	48.36
$	6 Bromofluorobenzene	95.00	19.682	19.734	(1.136)	133300	228.1	45.62
	7 Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
	8 Chloromethane	50.00		2.873	Compound Not Detected.			
	9 Vinyl Chloride	62.00		3.185	Compound Not Detected.			
	10 Bromomethane	94.00		4.004	Compound Not Detected.			
	11 Chloroethane	64.00	4.264	4.290	(0.422)	4966	28.96	5.79(a)
	12 1,1-Dichloroethene	96.00	6.136	6.175	(0.607)	3974	12.74	2.55(a)
	13 Acetone	43.00		6.422	Compound Not Detected.			
	14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
	15 Methylene Chloride	84.00	7.254	7.293	(0.718)	3398	10.84	2.17(a)
	16 trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
	17 1,1-Dichloroethane	63.00	8.619	8.658	(0.853)	410197	633.2	126.6
	18 cis-1,2-Dichloroethene	96.00	9.711	9.737	(0.961)	83527	209.3	41.87
	19 2-Butanone	43.00		9.854	Compound Not Detected.			
	20 Chloroform	83.00		10.348	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00	10.556	10.595	(0.882)	83766	107.4	21.48
	22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
	23 Benzene	78.00	11.219	11.245	(0.937)	6613	7.06	1.41(a)
	24 1,2-Dichloroethane	62.00		11.297	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002300B54.d
Report Date: 28-Apr-1995 10:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	12.402	12.428	(1.036)	25198	62.32	12.46
26	1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00	15.743	15.795	(0.908)	63043	165.1	33.02
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00				83527	220.6	44.13
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50054.i/BF950424B54.b/CN002300B54.d

Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

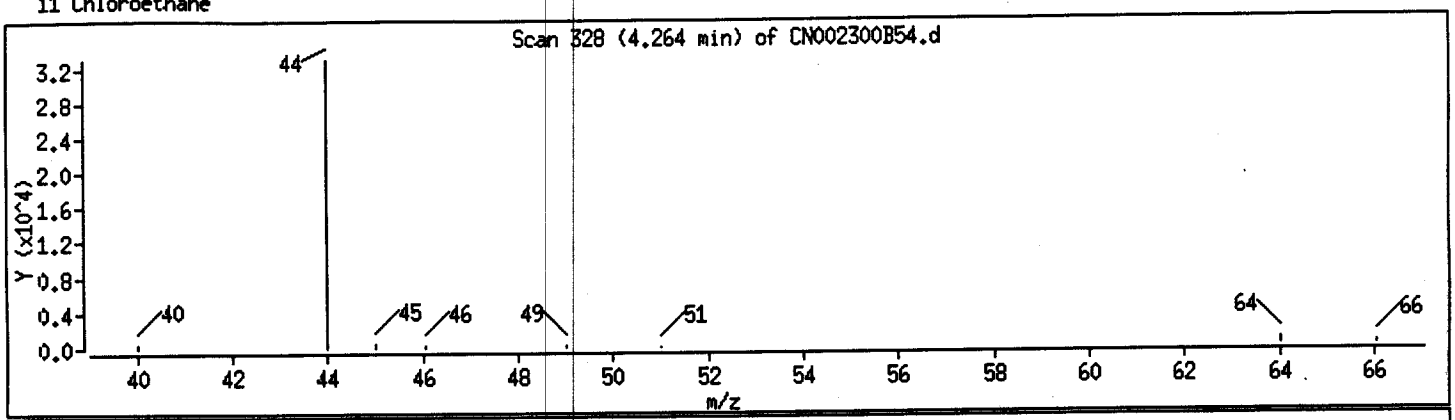
Purge Volume: 5.0

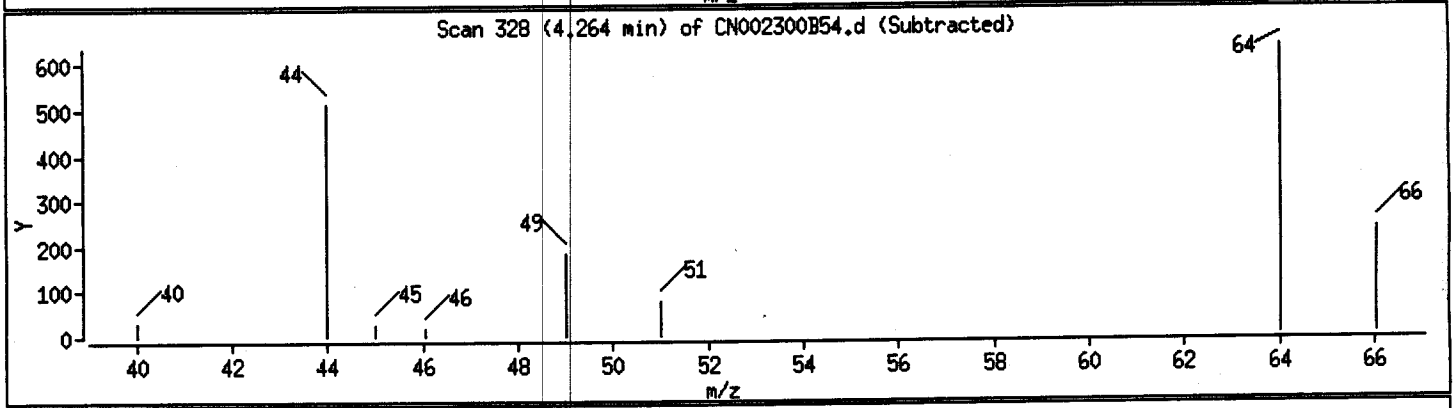
Operator: 1948

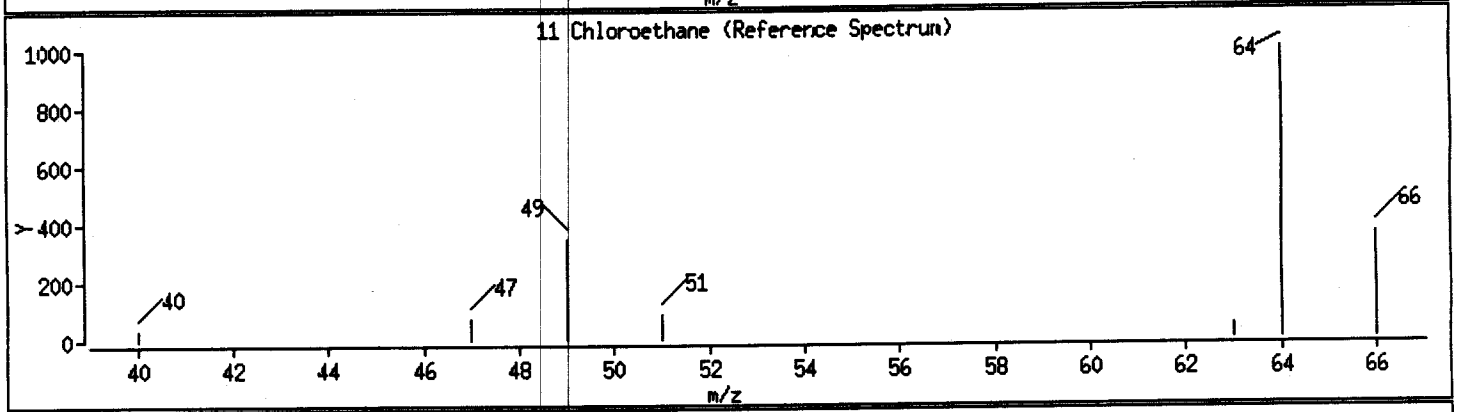
Column phase: DB624

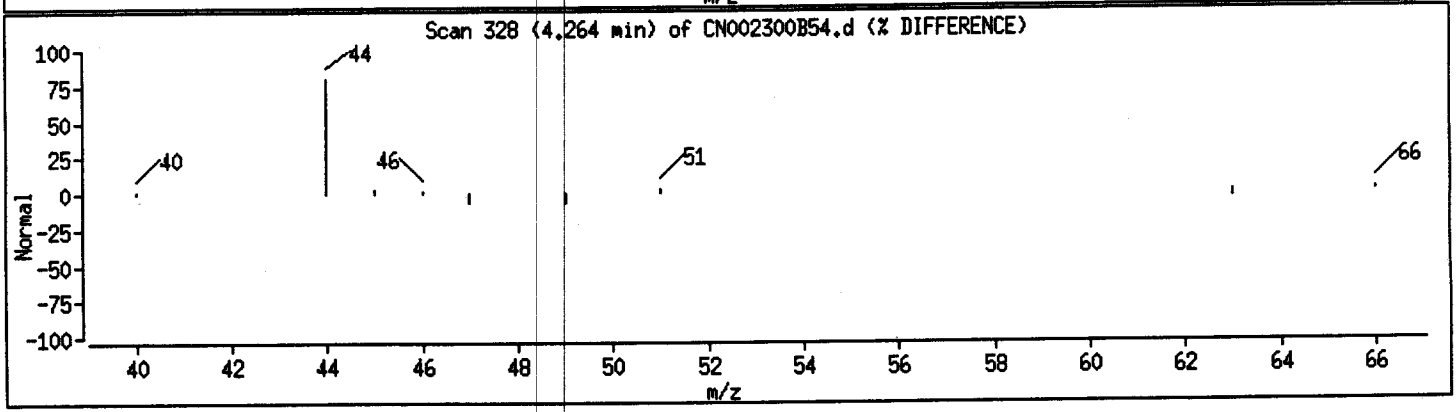
Column diameter: 0.53

11 Chloroethane









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Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

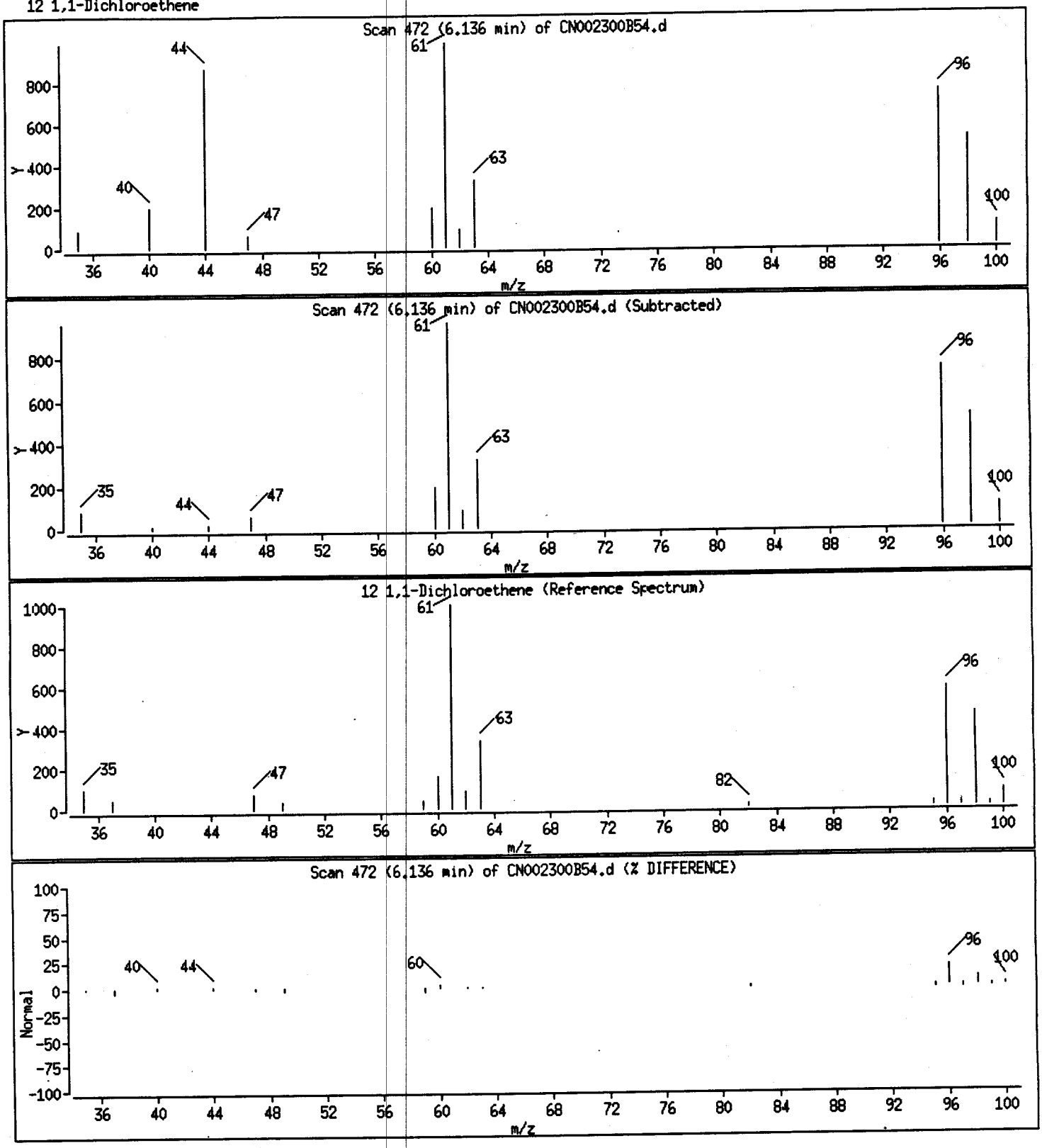
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

12 1,1-Dichloroethene



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Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

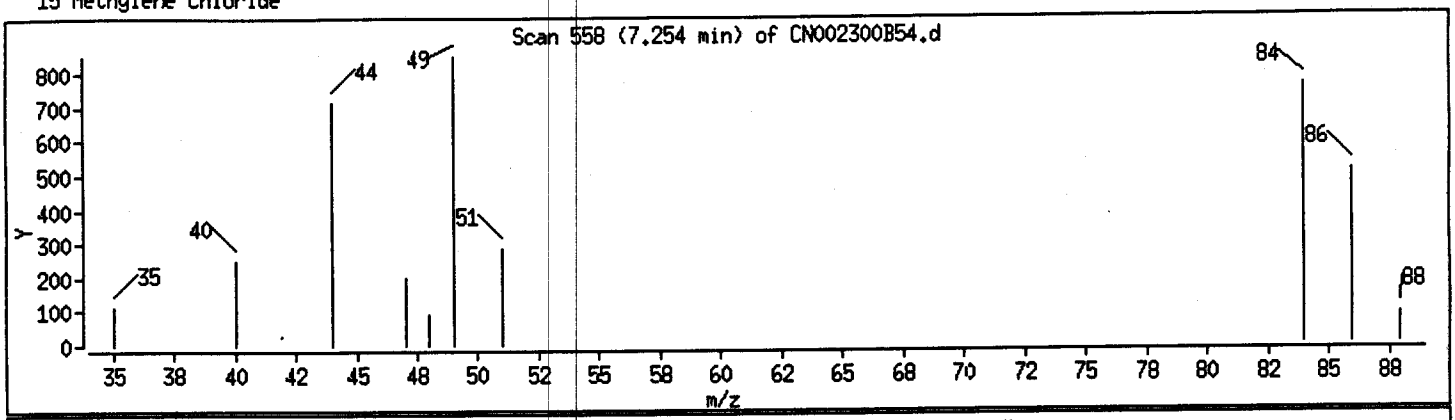
Purge Volume: 5.0

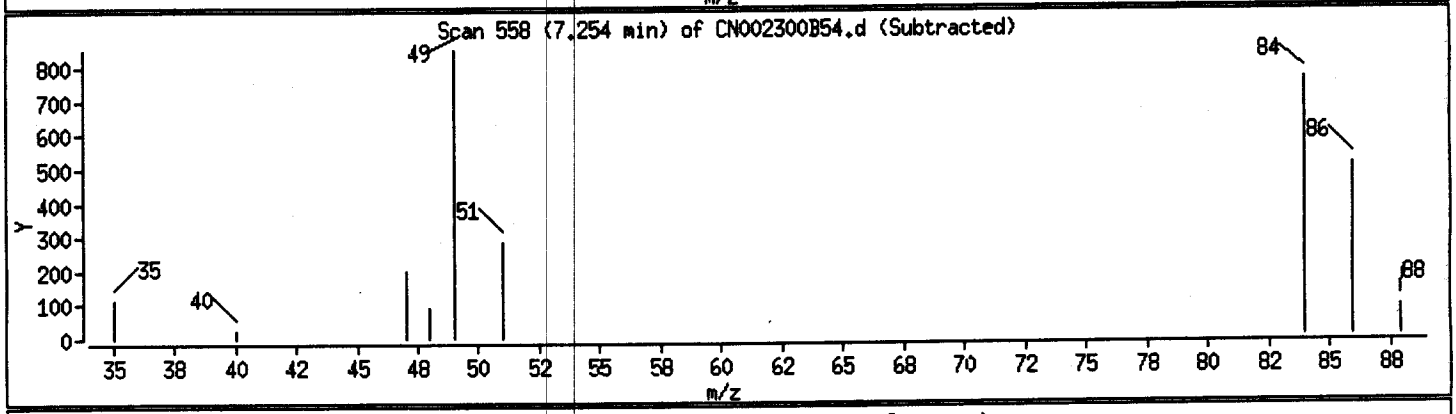
Operator: 1948

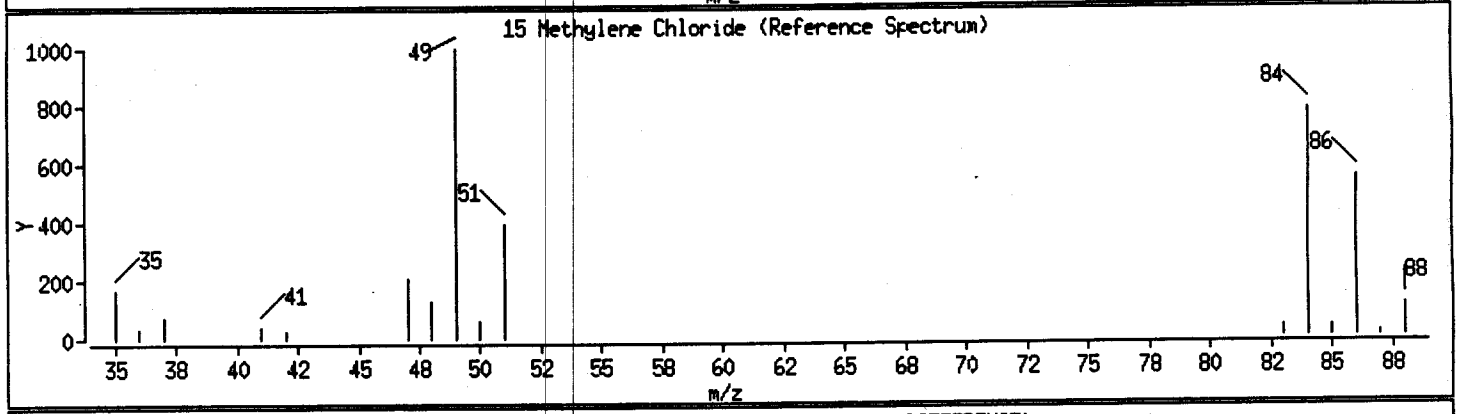
Column phase: DB624

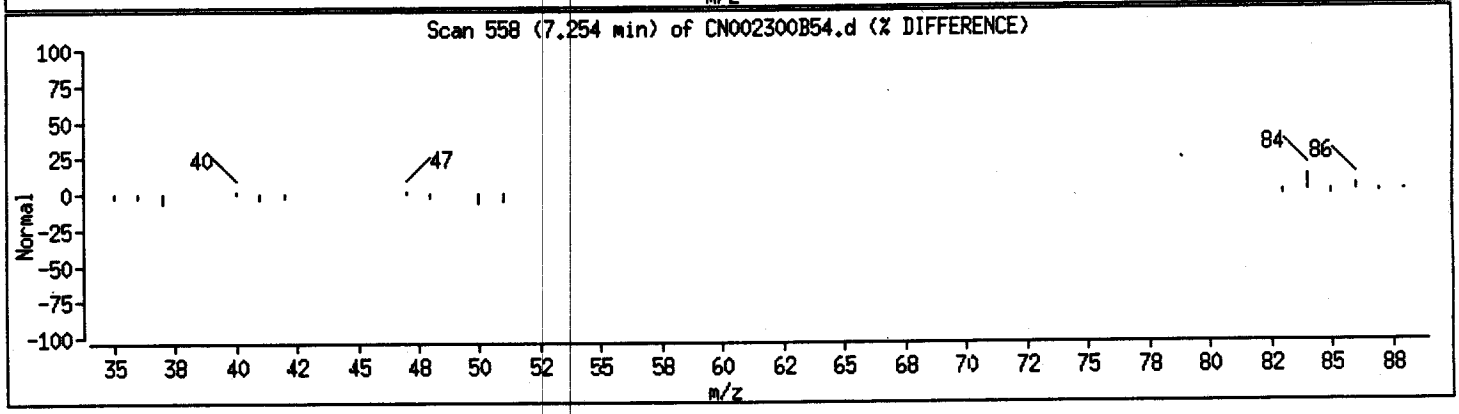
Column diameter: 0.53

15 Methylene Chloride









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Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

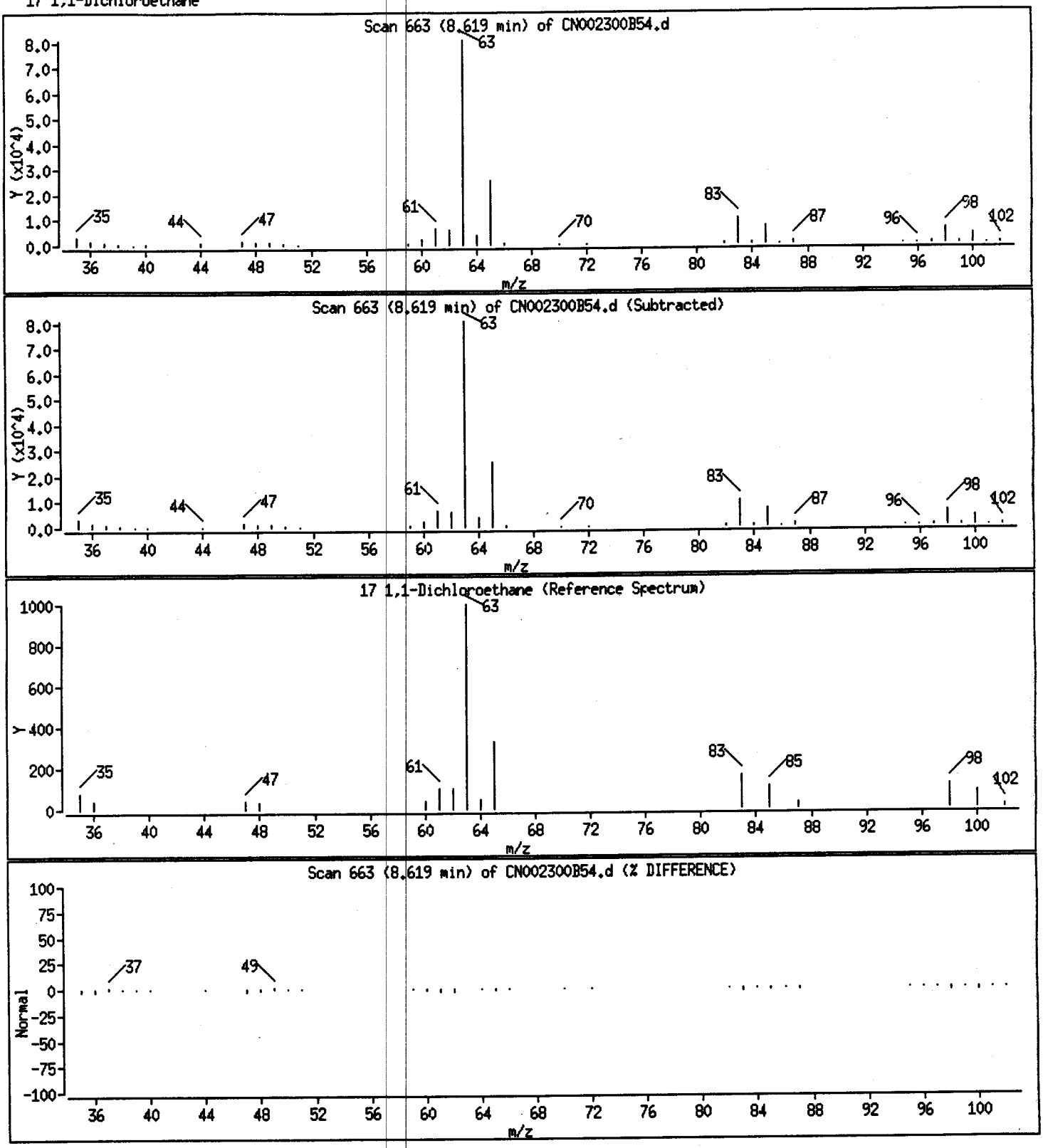
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



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Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

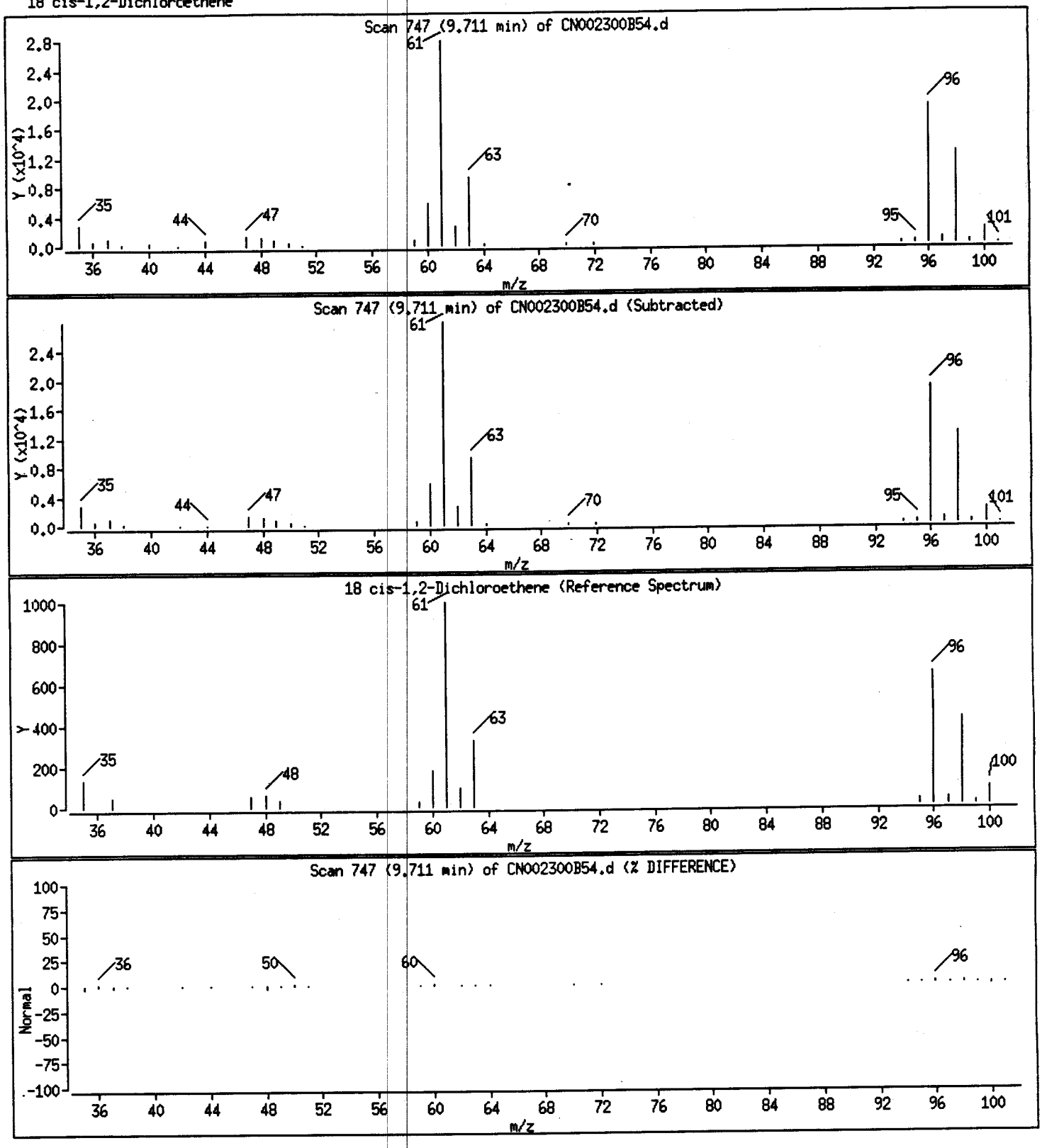
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

18 cis-1,2-Dichlorcethene



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Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

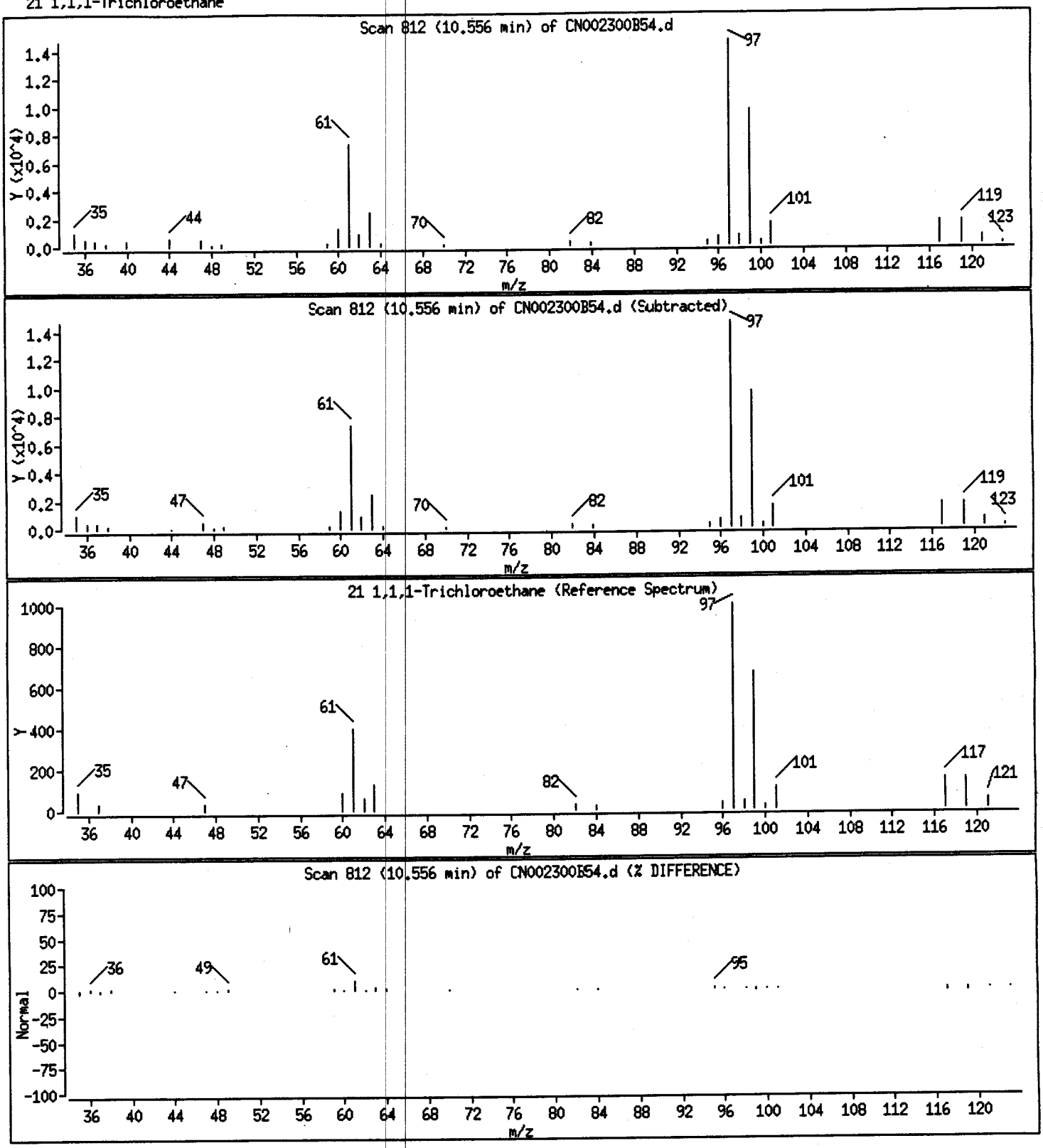
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

21 1,1,1-Trichloroethane



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Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

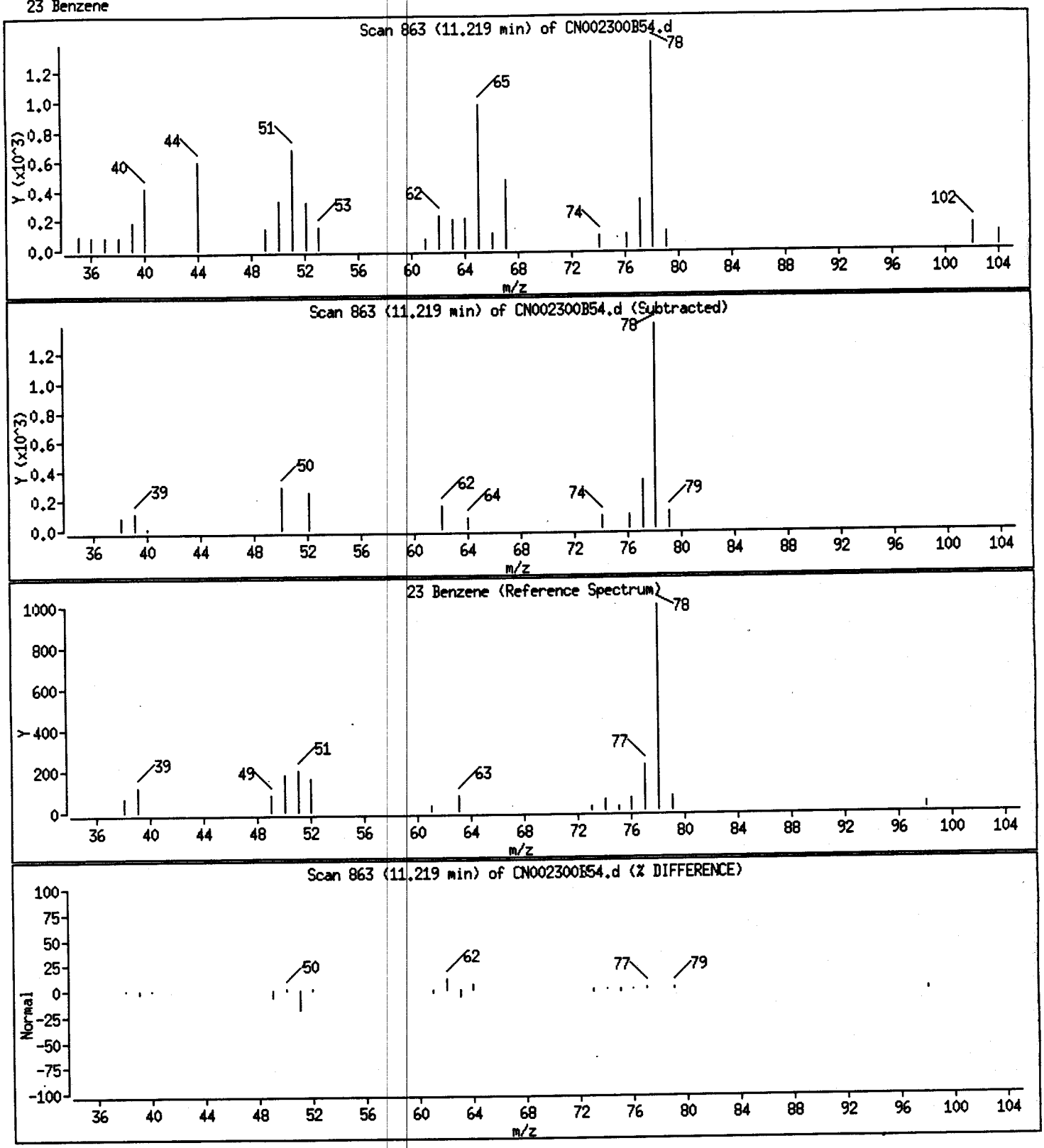
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

23 Benzene



Data File: /chem/f50054.i/BF950424B54.b/CN002300B54.d

Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

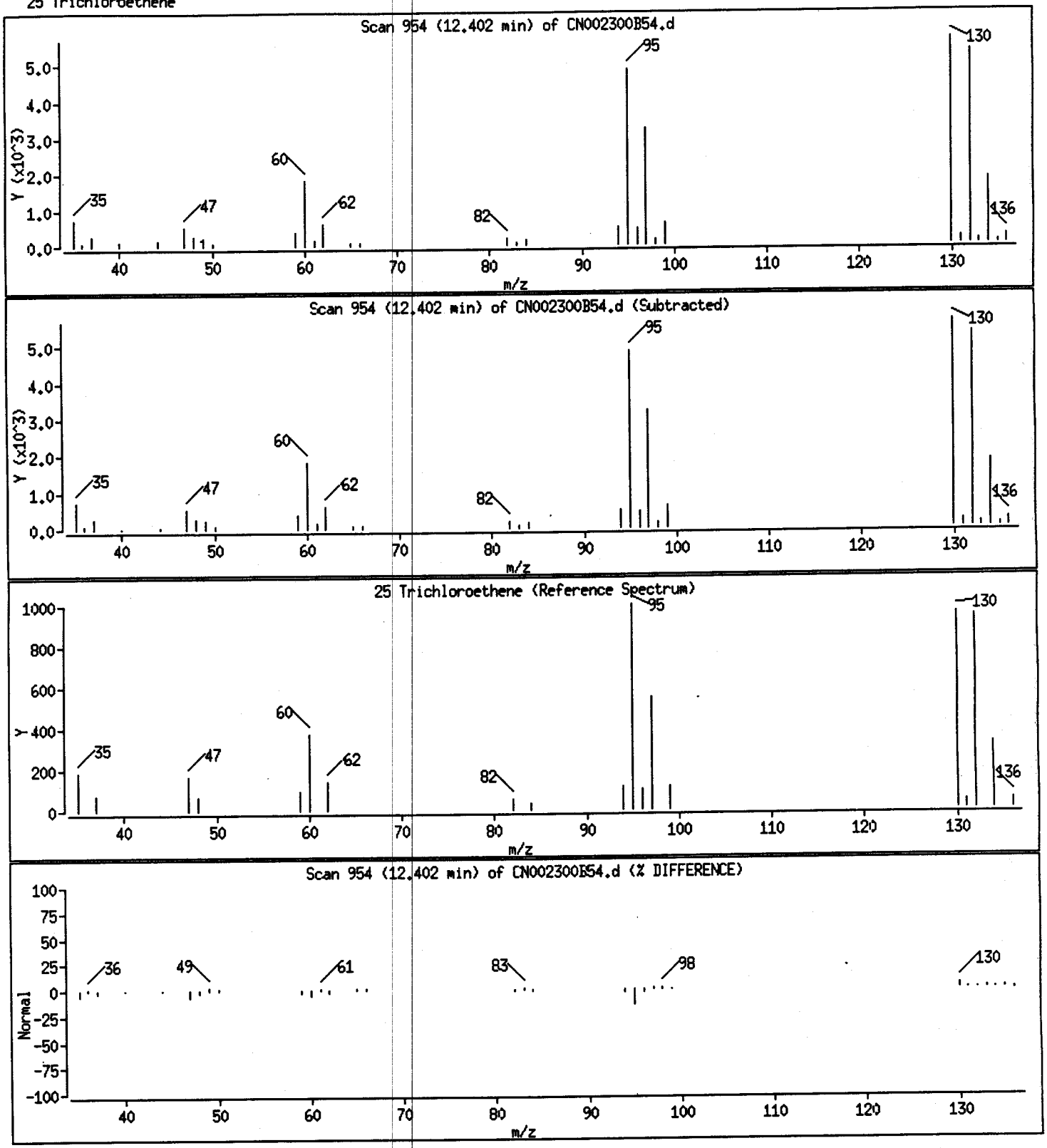
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



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Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

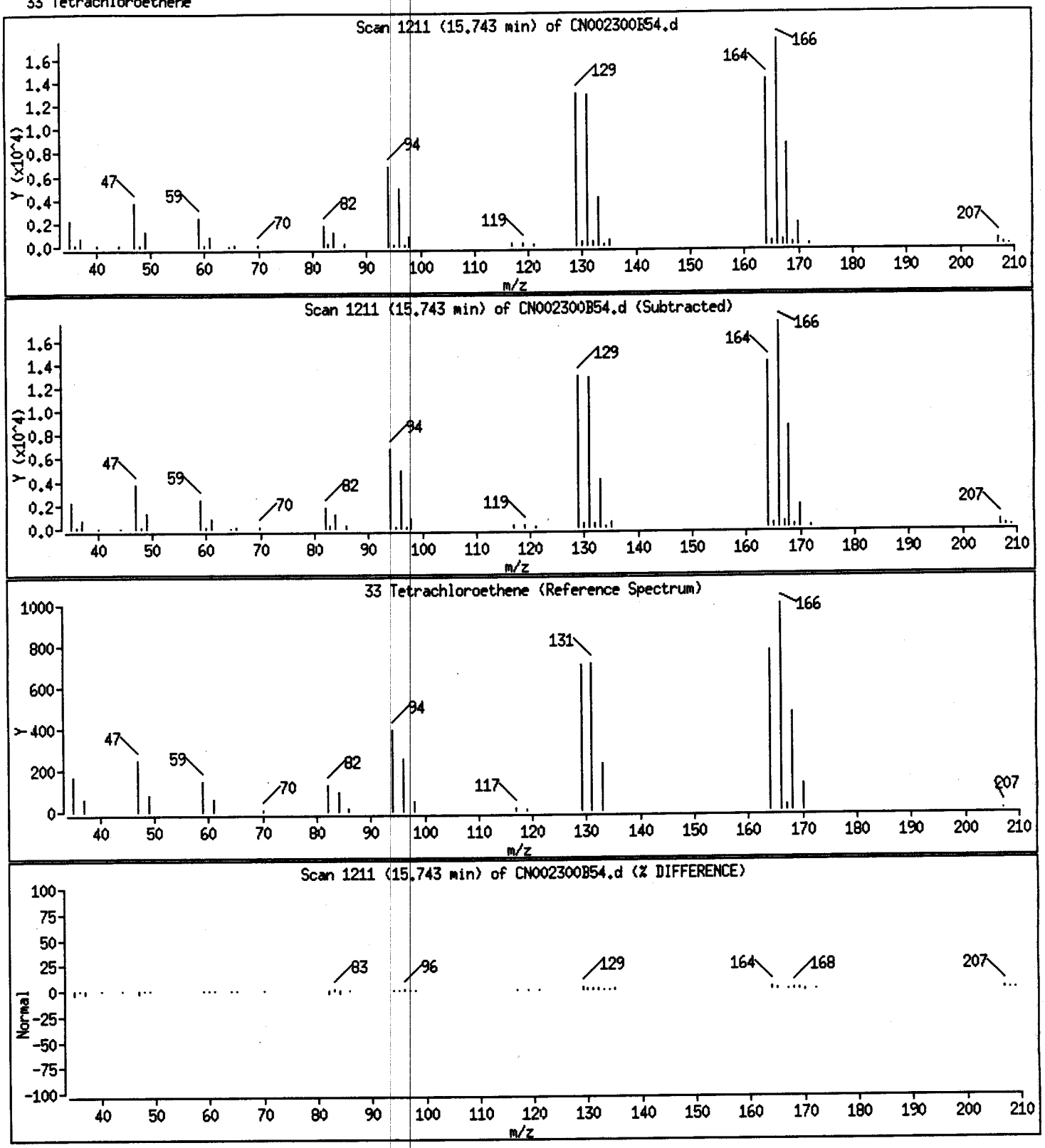
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

33 Tetrachloroethene



Data File: /chem/f50054.i/BF950424B54.b/CN002300B54.d

Date : 24-APR-1995 20:46

Client ID: MW3

Instrument: f50054.i

Sample Info:

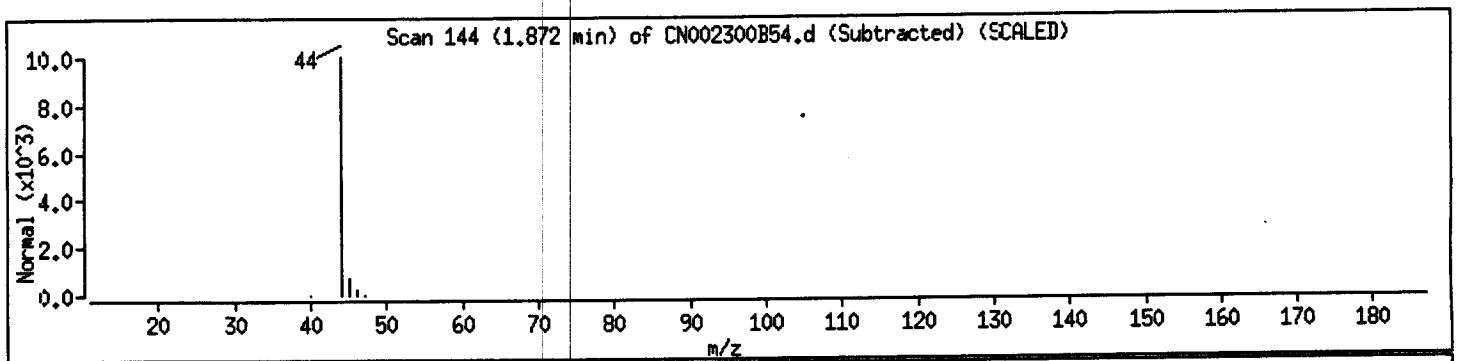
Purge Volume: 5.0

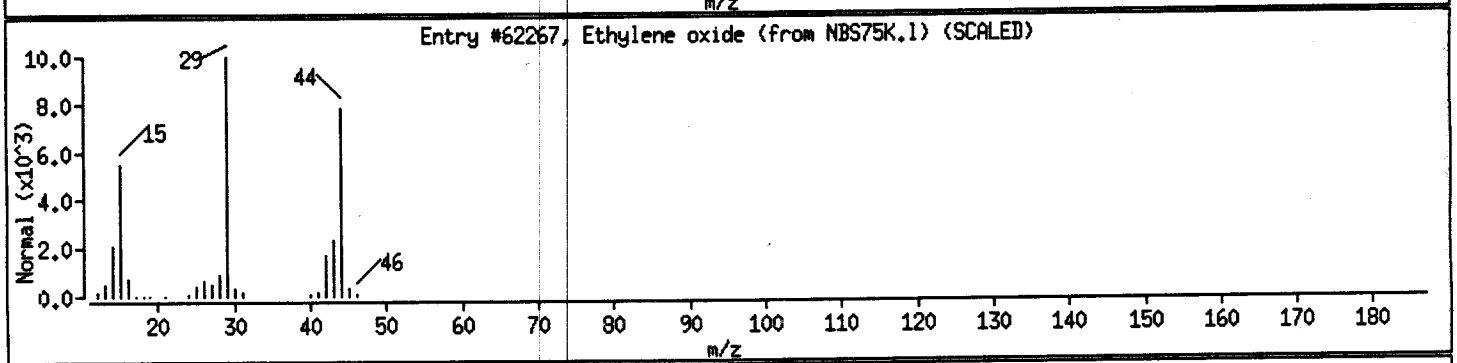
Operator: 1948

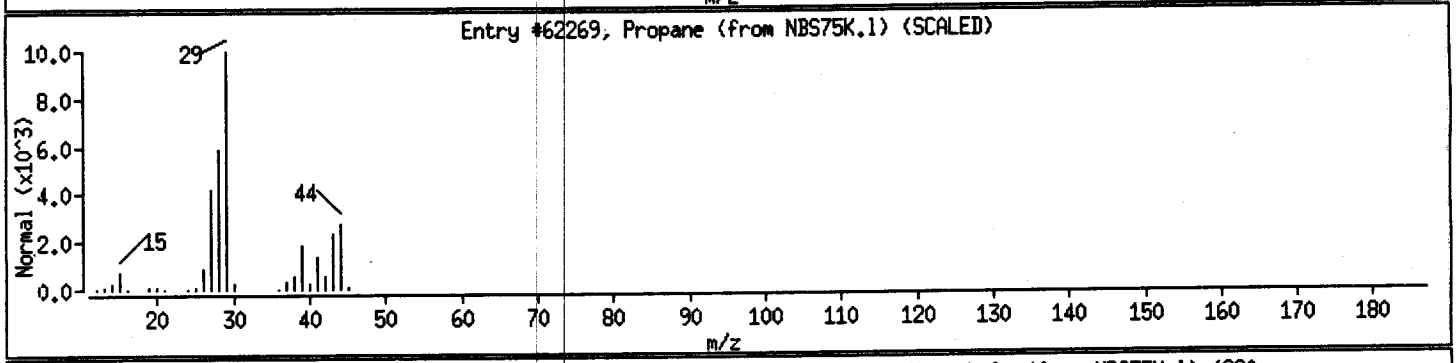
Column phase: DB624

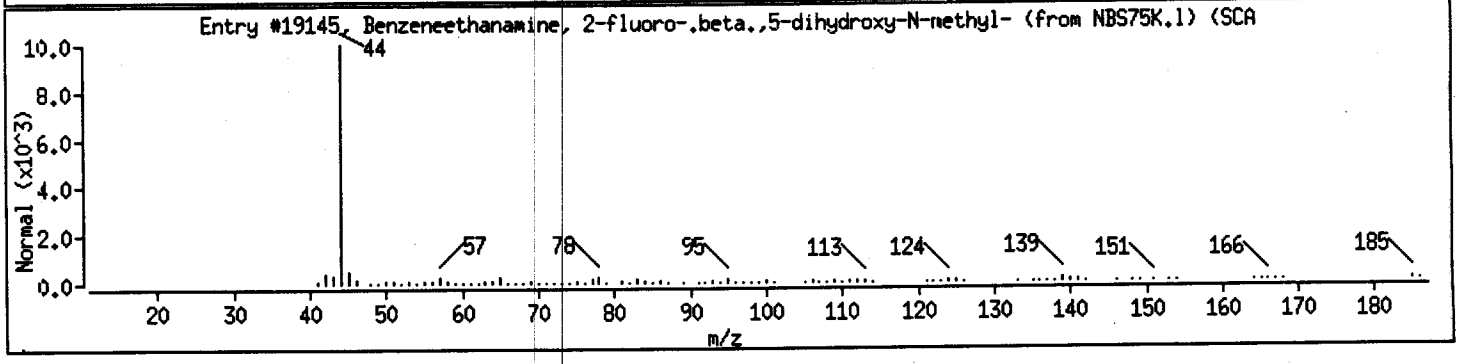
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Propane	74-98-6	NBS75K.l	62269	2	C3H8	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185









LAB INSTRUCTIONS

PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)

J2( ) J4( ) D2( ) (:1)

==========

702300: 2011: 1:

==========

GC/MS ANALYSIS

AMOUNT PURGED: 5000. UL 4/24/95

INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL

BFB FILENAME: BF950424B54

BLANK FILENAME: CB950424B54

STANDARD FILENAME: CS950424B54

SAMPLE FILENAME: CN002300B54

ANALYST(S): INJECTION 2011 WORKUP [signature]

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [/] COMPLETE

[ ] REINJECT NEAT
[ ] DILUTE ( )

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 1

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW [signature] DATE 4/25/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702300
Client ID# MW3
Instrument Blank ID VBLKJM
Case # 30458

The early-eluting peak on the RIC of the volatile fraction at scan # 144 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
091001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW5

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002303B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: MW5

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002303B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW5

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002303B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.86	1500	J
2.					
3.					
4.					
5.					
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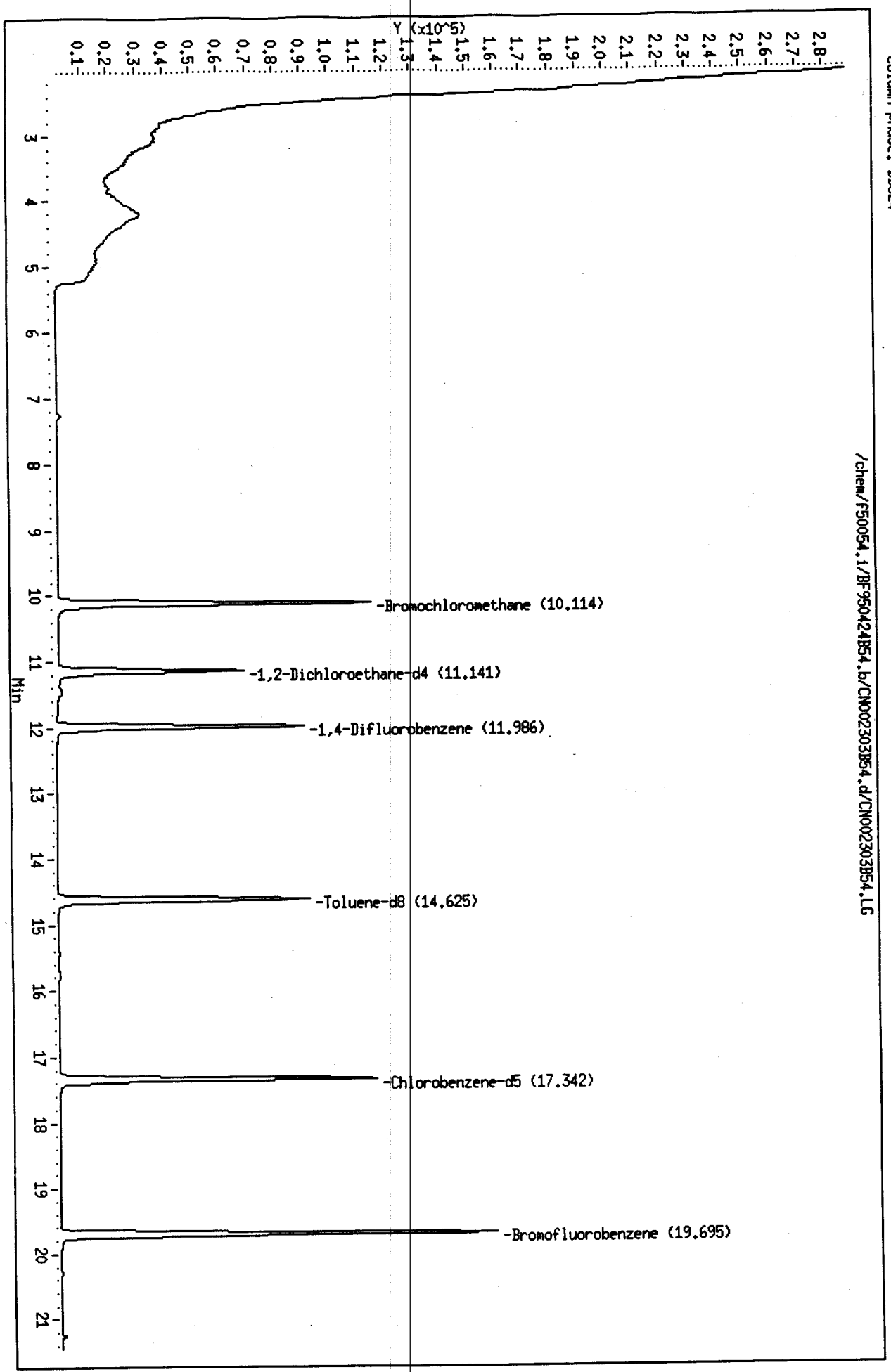
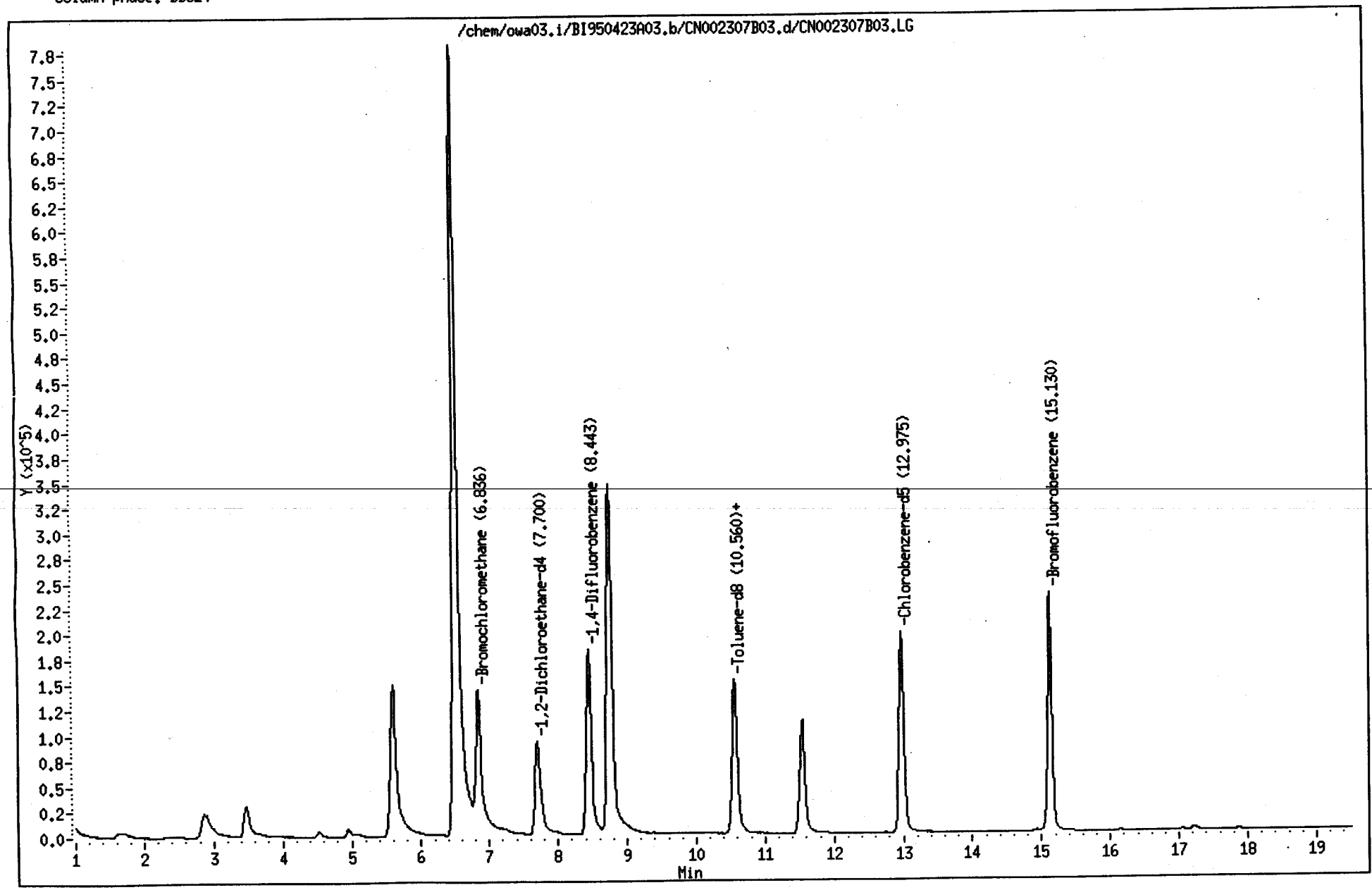
29.					
30.					


Data File: /chem/f50054.i/BF950424B54.b/CN002303B54.d
Date : 24-APR-1995 21:42
Client ID: MW5
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50054.i
Operator: 1948
Column diameter: 0.53
/chem/f50054.i/BF950424B54.b/CN002303B54.d/CN002303B54.LG
Y (x10^5)
Min
-Bromochloromethane (10.114)
-1,2-Dichloroethane-d4 (11.141)
-1,4-Difluorobenzene (11.986)
-Toluene-d8 (14.625)
-Chlorobenzene-d5 (17.342)
-Bromofluorobenzene (19.695)

Data File: /chem/owa03.i/BI950423A03.b/CN002307B03.d
Date : 23-APR-1995 20:15
Client ID: MW6
Sample Info: SCREEN
Purge Volume: 5.0
Column phase: DB624

Instrument: owa03.i

Operator: 2181
Column diameter: 0.53



Data File: /chem/f50054.i/BF950424B54.b/CN002303B54.d
Report Date: 28-Apr-1995 10:12

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002303B54.d
Lab Smp Id: 702303 Client Smp ID: MW5
Inj Date : 24-APR-1995 21:42
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	10.114	10.140	(1.000)	58862	250.0	
* 2	1,4-Difluorobenzene	114.00	11.986	12.012	(1.000)	184977	250.0	
* 3	Chlorobenzene-d5	117.00	17.342	17.368	(1.000)	177692	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	11.141	11.167	(1.102)	113011	227.9	45.57
$ 5	Toluene-d8	98.00	14.612	14.651	(0.843)	154649	235.6	47.12
$ 6	Bromofluorobenzene	95.00	19.695	19.734	(1.136)	134892	228.8	45.76
7	Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
8	Chloromethane	50.00		2.873	Compound Not Detected.			
9	Vinyl Chloride	62.00		3.185	Compound Not Detected.			
10	Bromomethane	94.00		4.004	Compound Not Detected.			
11	Chloroethane	64.00		4.290	Compound Not Detected.			
12	1,1-Dichloroethene	96.00		6.175	Compound Not Detected.			
13	Acetone	43.00		6.422	Compound Not Detected.			
14	Carbon Disulfide	76.00		6.474	Compound Not Detected.			
15	Methylene Chloride	84.00		7.293	Compound Not Detected.			
16	trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		8.658	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		9.737	Compound Not Detected.			
19	2-Butanone	43.00		9.854	Compound Not Detected.			
20	Chloroform	83.00		10.348	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		10.595	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
23	Benzene	78.00		11.245	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002303B54.d
Report Date: 28-Apr-1995 10:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		11.297		Compound Not Detected.		
25	Trichloroethene	130.00		12.428		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00		15.795		Compound Not Detected.		
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

Data File: /chem/f50054.i/BF950424B54.b/CN002303B54.d

Date : 24-APR-1995 21:42

Client ID: MW5

Instrument: f50054.i

Sample Info:

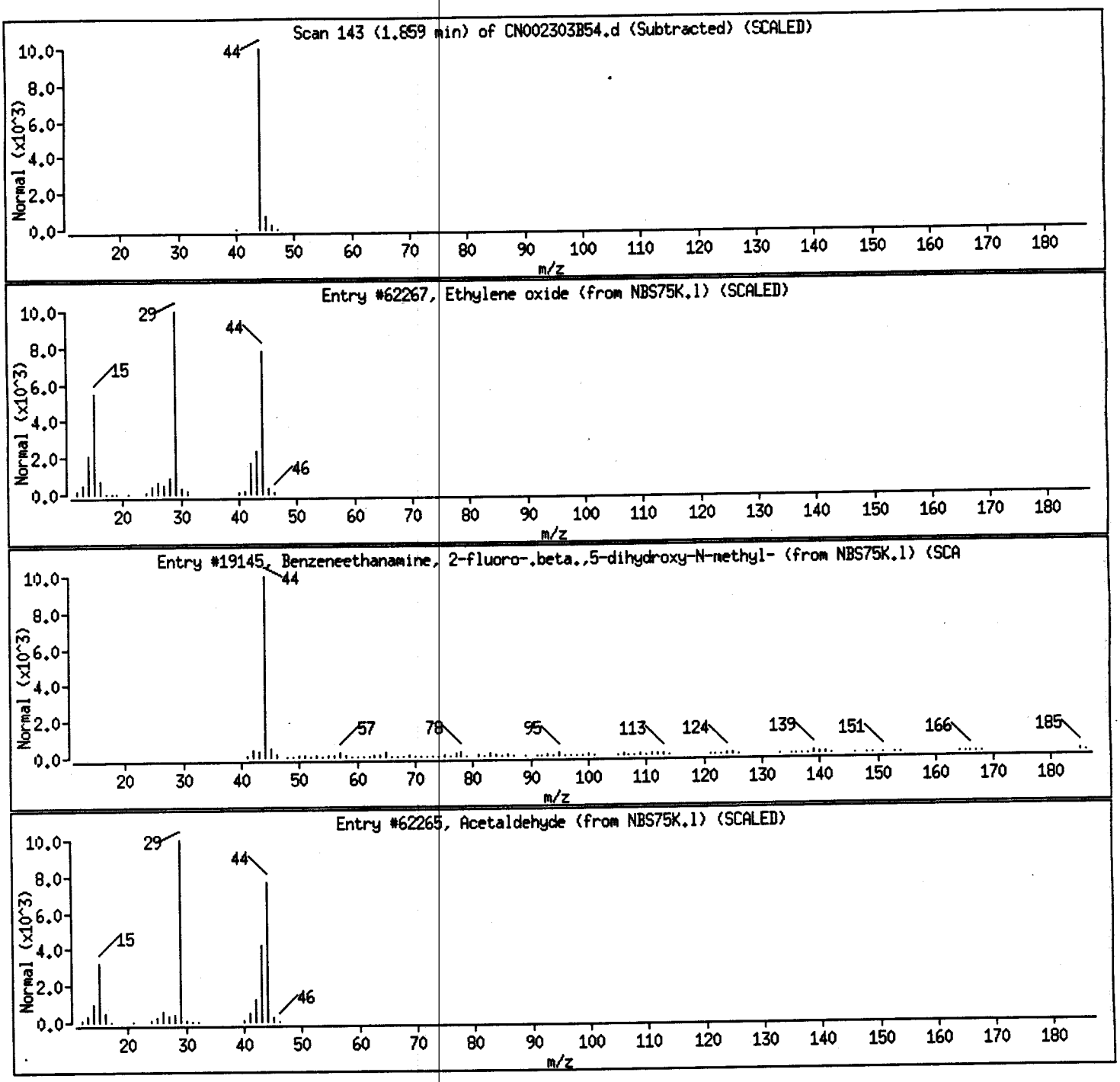
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44



B INSTRUCTIONS: PPS#: _____

CEIPT DATE: CASE#: 30458 00001 DUE DATE:

VOA J[ ] J3[ ] D[ ] (:1)

/MS WORKSHEET COMPUCHEM#: 702 3035 2J[ ] J4[ ] D2[ ] (:1)

GC/MS; TCL VOA; ~~ML S/S;~~ WATER 3/90 SOW

Sample Prep Code--- -156
Instrument Code---- 430
Compound List------ 649
Surrogate Std------ 424
Internal Std------- 36

ample date: Report type: 0

SAMPLE ID#: MW5 Dry Weight Factor _____

GC/MS ANALYSIS 5ml 4/24/95
ount Purged: [ ] 10mls/Xg or [ ] Dilution _____ ul/10000ul/Xg SOIL
ternal Standard Volume Added _____ ul
rrogate Standard Volume Added _____ ul
B Filename BF950424B54 Disk ( )
ank Filename ~~701~~ CB950424B54 4/24/95 Disk ( )
andard Filename CS950424B54 Disk ( )
mple Filename CN002303B54 Disk ( )

ANALYST(S): Injection 2011 Work-up [signature]

/MS REVIEW

CONDITION CODE | JA |

Disposition: [✓] Complete

Extraneous Peak Search Results:
# of Peaks Found Ø

[ ] Reinject Neat

Quality Assurance Notice(s):
Notices Required _____

[ ] Dilute (:1)

COMMENTS:

#GC/MS Review [signature] Date 4/28/95 Auditor _____ Date ___/___/___

REPORT INTEGRATION Total # of Injections: _____
Final Reportable Package(s): _____/_____

QA COMMENTS:

Initials _____ Date ___/___/___

FINAL REVIEW: Initials _____ Date ___/___/___

AC1171

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702303
Client ID# MW5
Instrument Blank ID VBLKJM
Case # 30458

The early-eluting peak on the RIC of the volatile fraction at scan # 143 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
901001

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002307B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	25	U
74-83-9	Bromomethane	25	U
75-01-4	Vinyl Chloride	10	J
75-00-3	Chloroethane	8	J
75-09-2	Methylene Chloride	4	JB
67-64-1	Acetone	25	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	94	
540-59-0	1,2-Dichloroethene (total)	330	
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	53	
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	10	J
10061-02-6	trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	25	U
591-78-6	2-Hexanone	25	U
127-18-4	Tetrachloroethene	13	J
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Xylene (Total)	25	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002307B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW6

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002307B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 2

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.88	4000	J
2.		UNKNOWN	5.82	30	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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27.					
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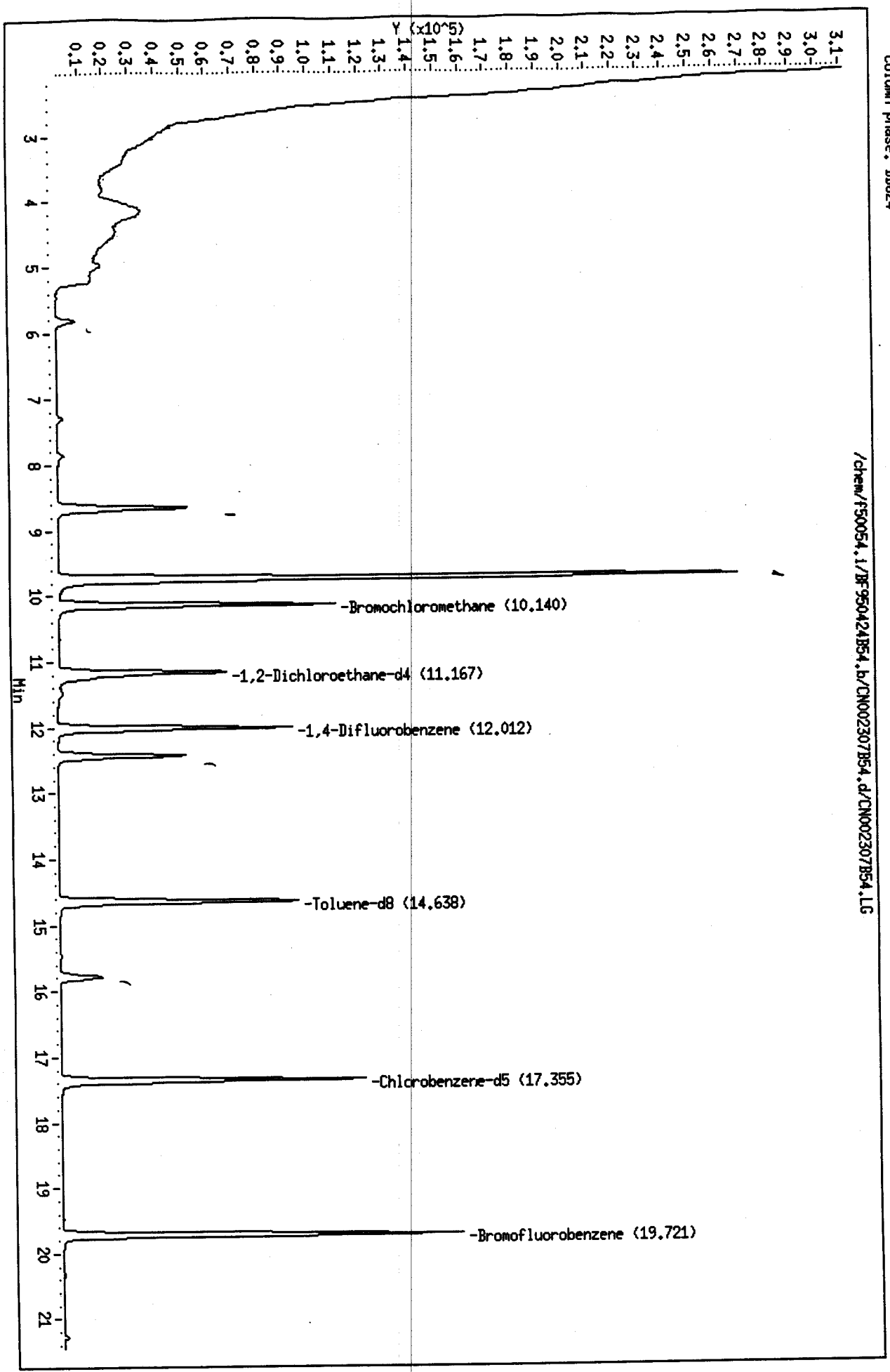
29.					
30.					


Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d
Date : 24-APR-1995 22:38
Client ID: MW6
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50054.i
Operator: 1948
Column diameter: 0.53
/chem/f50054.i/BF950424B54.b/CN002307B54.d/CN002307B54.LG
Y (x10^5)
Min
-Bromochloromethane (10.140)
-1,2-Dichloroethane-d4 (11.167)
-1,4-Difluorobenzene (12.012)
-Toluene-d8 (14.638)
-Chlorobenzene-d5 (17.355)
-Bromofluorobenzene (19.721)

Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d
Report Date: 28-Apr-1995 10:26

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002307B54.d
Lab Smp Id: 702307 Client Smp ID: MW6
Inj Date : 24-APR-1995 22:38
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 2.500
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
*	1 Bromochloromethane	128.00	10.127	10.140	(1.000)	57079	250.0	
*	2 1,4-Difluorobenzene	114.00	12.012	12.012	(1.000)	186661	250.0	
*	3 Chlorobenzene-d5	117.00	17.355	17.368	(1.000)	182009	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.167	11.167	(1.103)	109767	228.2	114.1
$	5 Toluene-d8	98.00	14.638	14.651	(0.843)	158766	236.2	118.1
$	6 Bromofluorobenzene	95.00	19.721	19.734	(1.136)	135327	224.1	112.1
	7 Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
	8 Chloromethane	50.00		2.873	Compound Not Detected.			
	9 Vinyl Chloride	62.00	3.120	3.185	(0.308)	3247	20.63	10.32(a)
	10 Bromomethane	94.00		4.004	Compound Not Detected.			
	11 Chloroethane	64.00	4.277	4.290	(0.422)	2907	16.88	8.44(a)
	12 1,1-Dichloroethene	96.00		6.175	Compound Not Detected.			
	13 Acetone	43.00		6.422	Compound Not Detected.			
	14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
	15 Methylene Chloride	84.00	7.293	7.293	(0.720)	2473	7.86	3.93(a)
	16 trans-1,2-Dichloroethene	96.00	7.839	7.852	(0.774)	2623	7.29	3.64(a)
	17 1,1-Dichloroethane	63.00	8.658	8.658	(0.855)	122747	188.6	94.32
	18 cis-1,2-Dichloroethene	96.00	9.737	9.737	(0.961)	251004	626.3	313.1
	19 2-Butanone	43.00		9.854	Compound Not Detected.			
	20 Chloroform	83.00		10.348	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00		10.595	Compound Not Detected.			
	22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
	23 Benzene	78.00	11.245	11.245	(0.936)	19473	20.50	10.25(a)
	24 1,2-Dichloroethane	62.00		11.297	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d
Report Date: 28-Apr-1995 10:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	12.428	12.428	(1.035)	43139	105.3	52.64
26	1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00	15.769	15.795	(0.909)	10560	26.76	13.38(a)
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00				253627	667.0	333.5
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

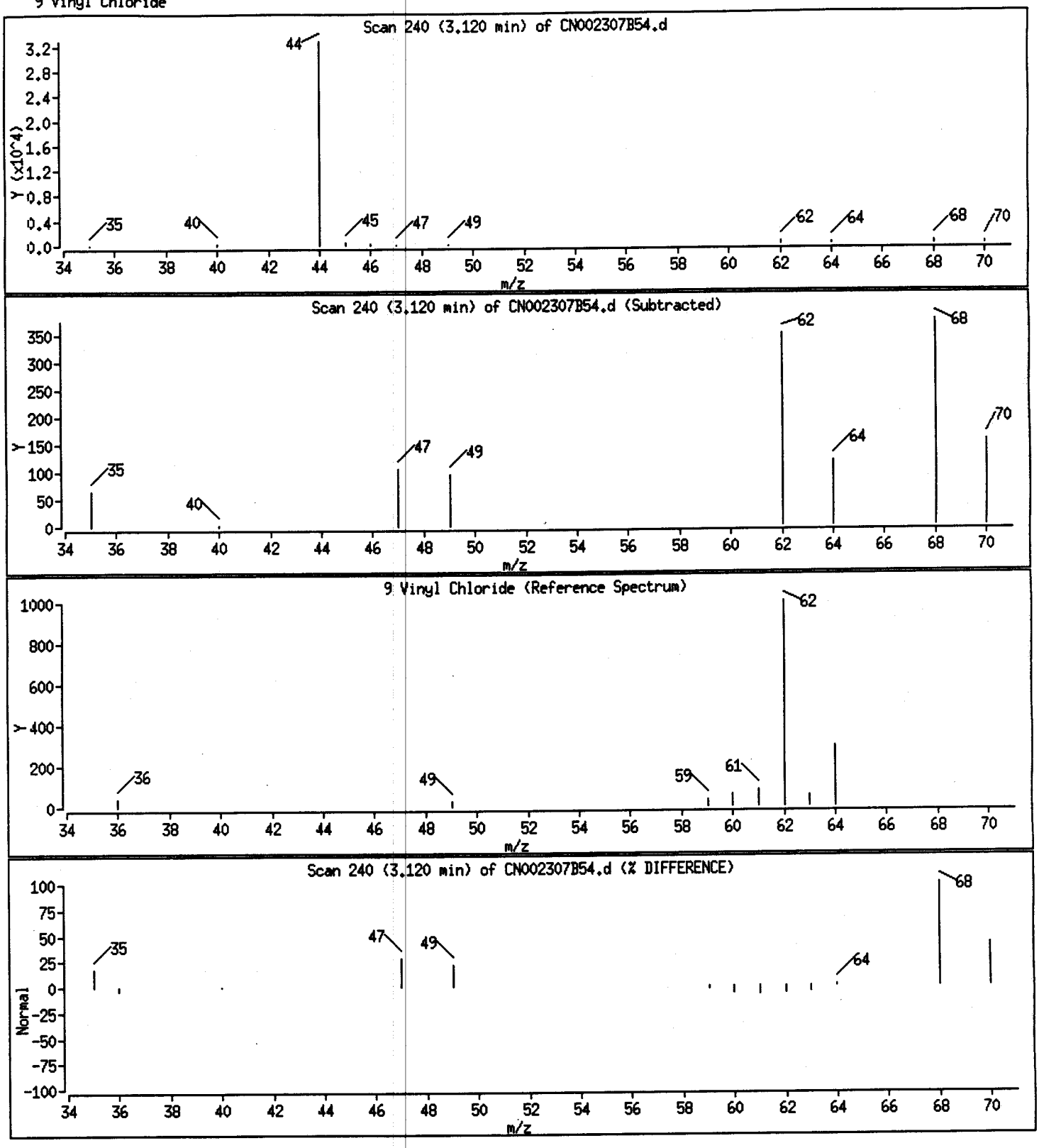
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

9 Vinyl Chloride



Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

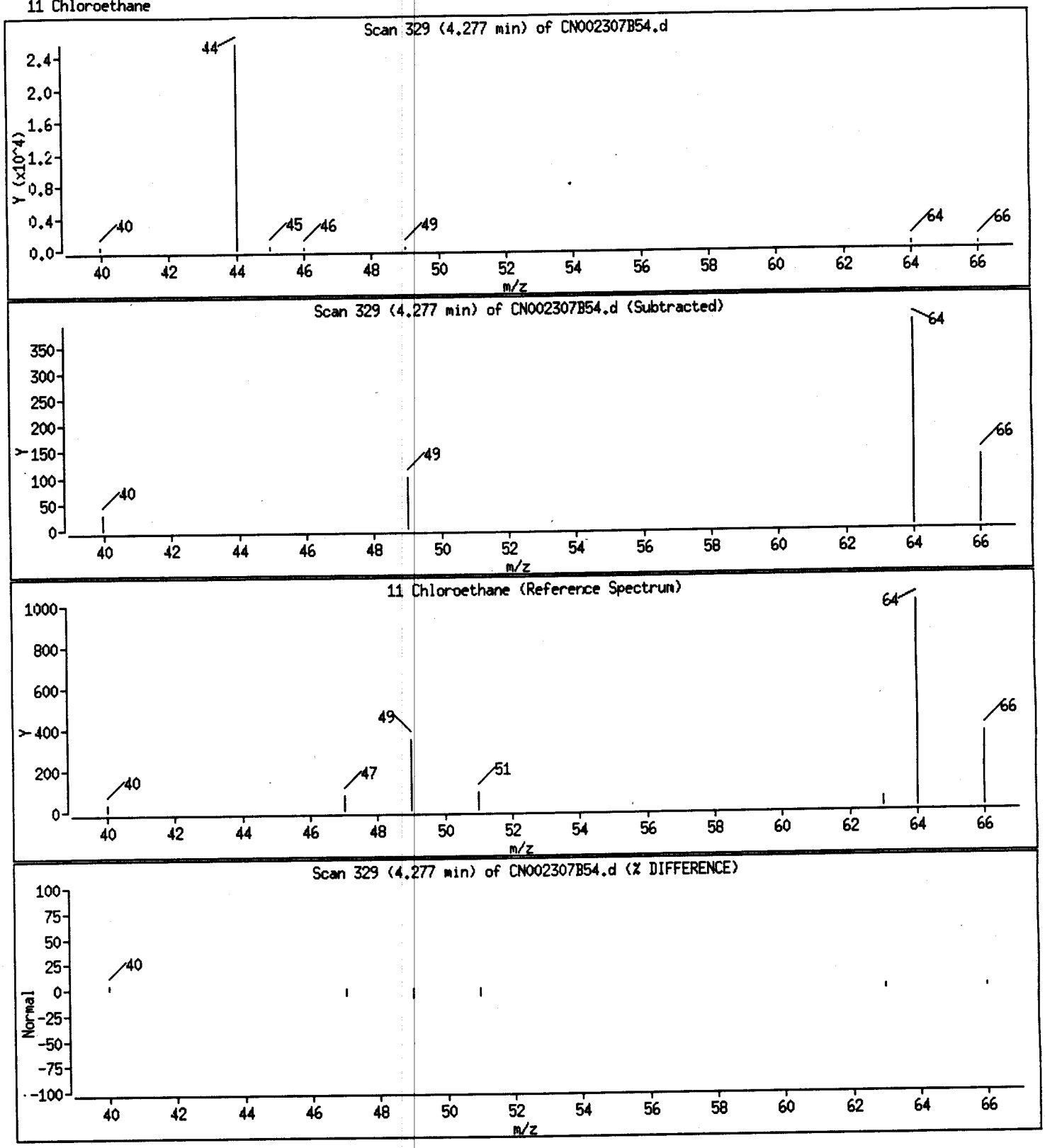
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

11 Chloroethane



Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

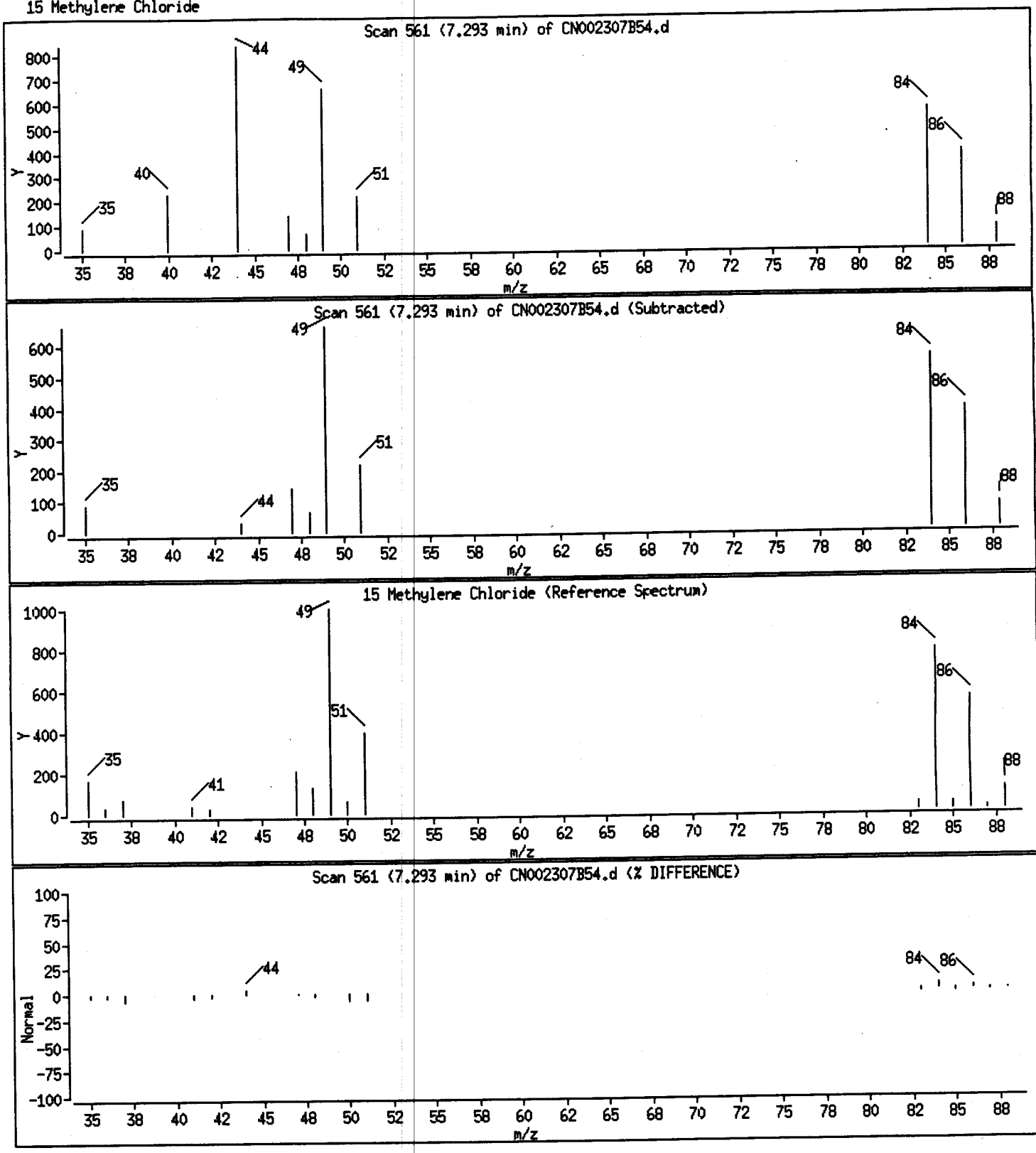
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

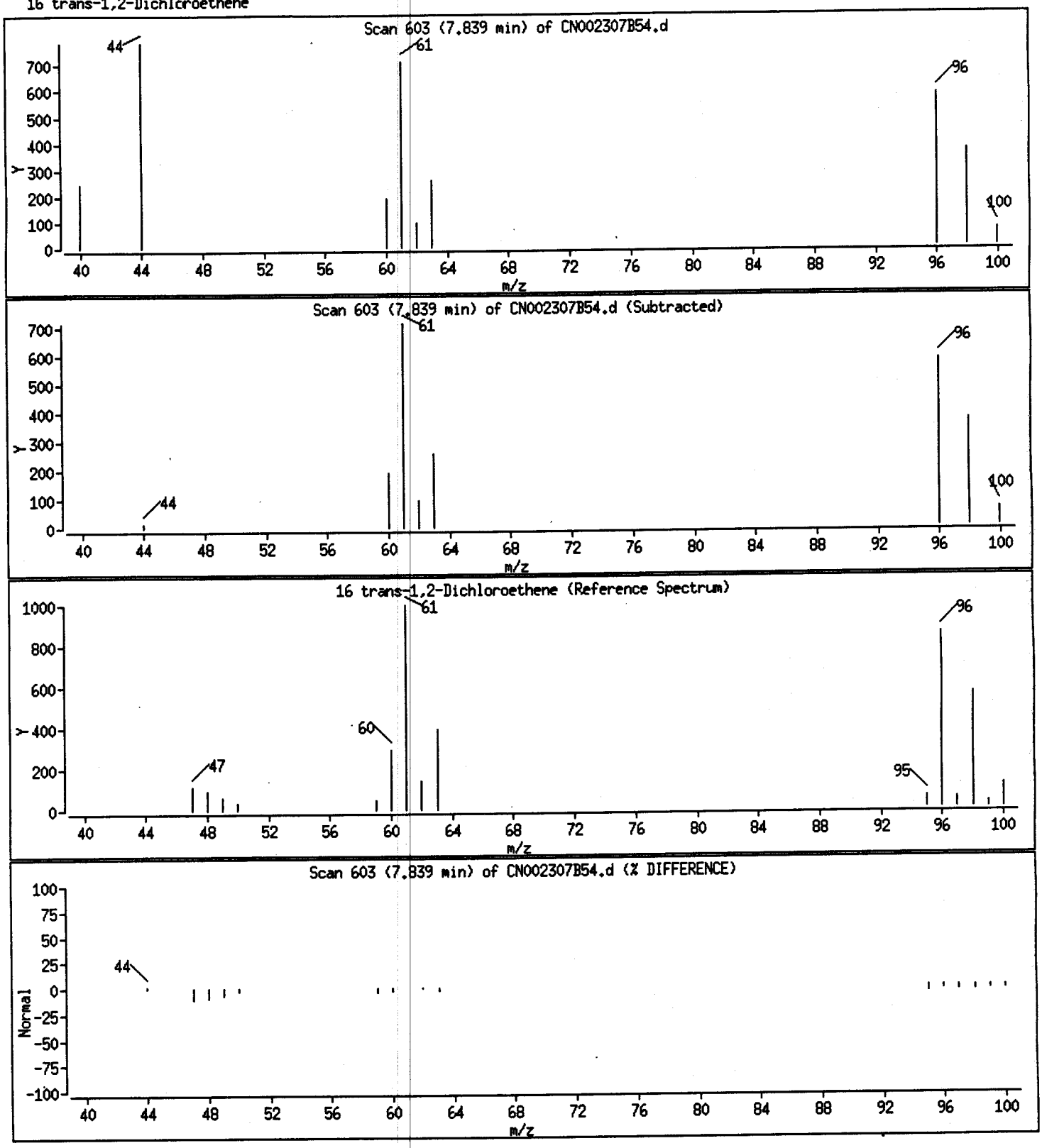
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

16 trans-1,2-Dichlcroethene



Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

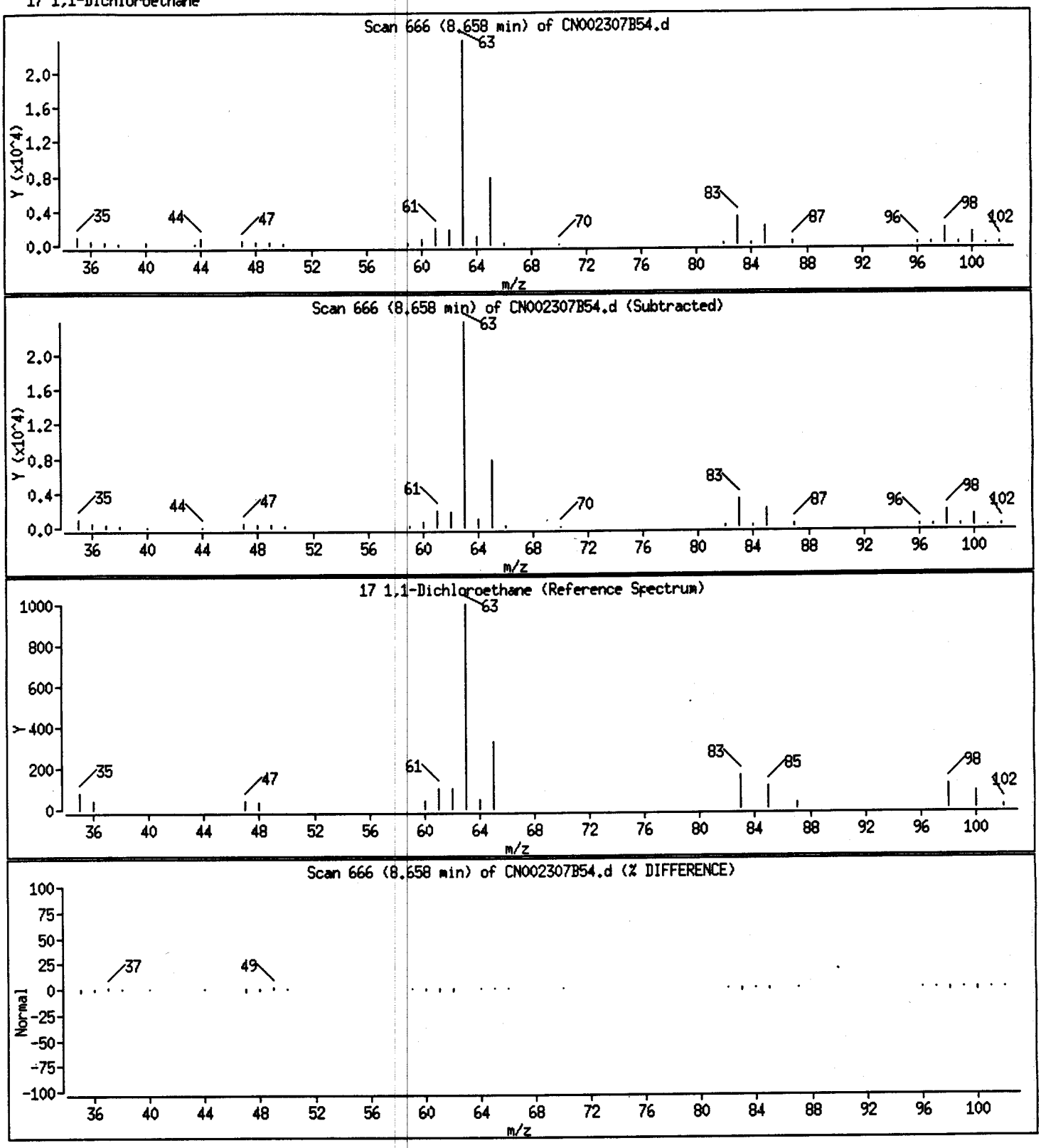
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

17 1,1-Dichloroethane



Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

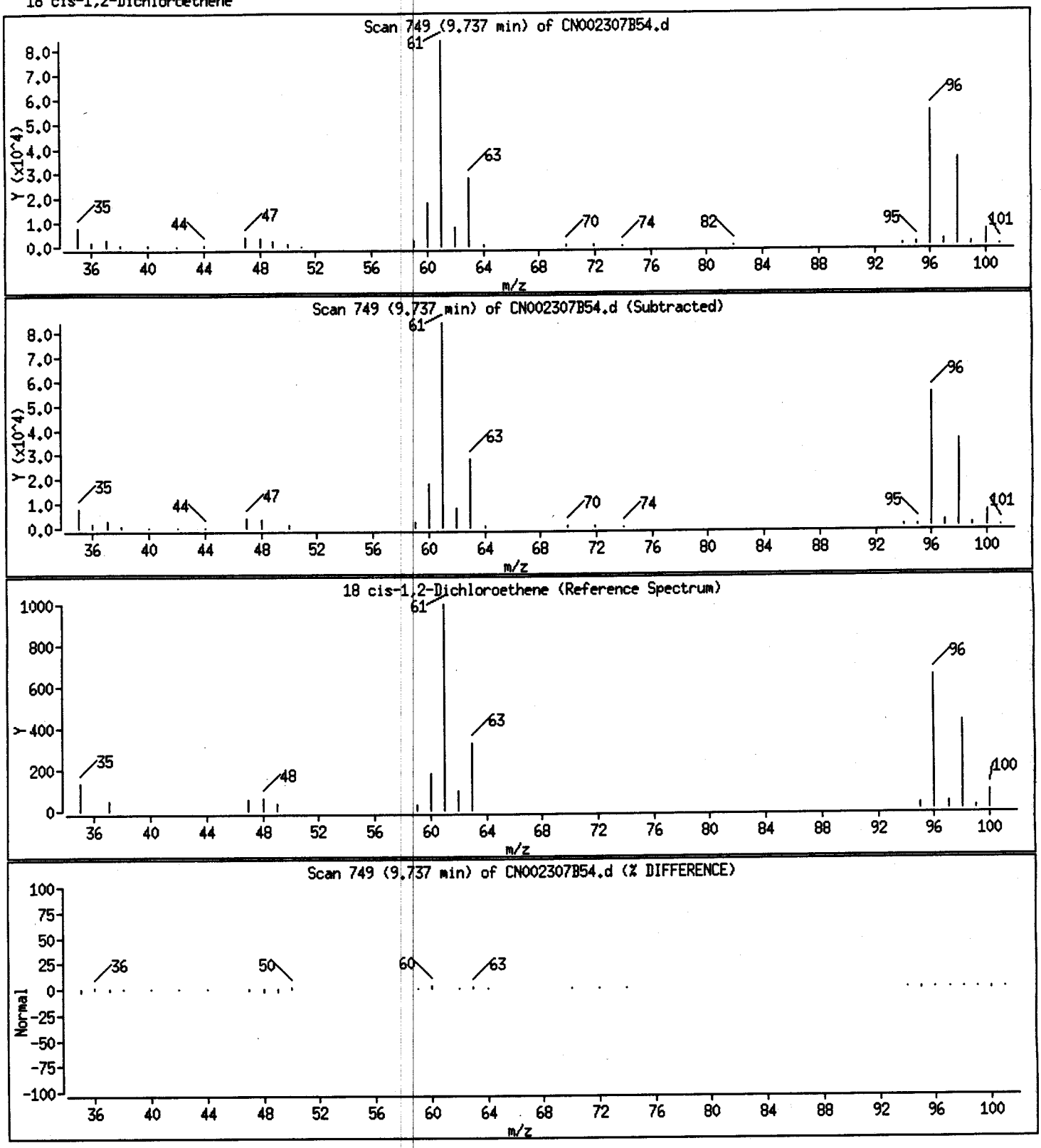
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

18 cis-1,2-Dichloroethene



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Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

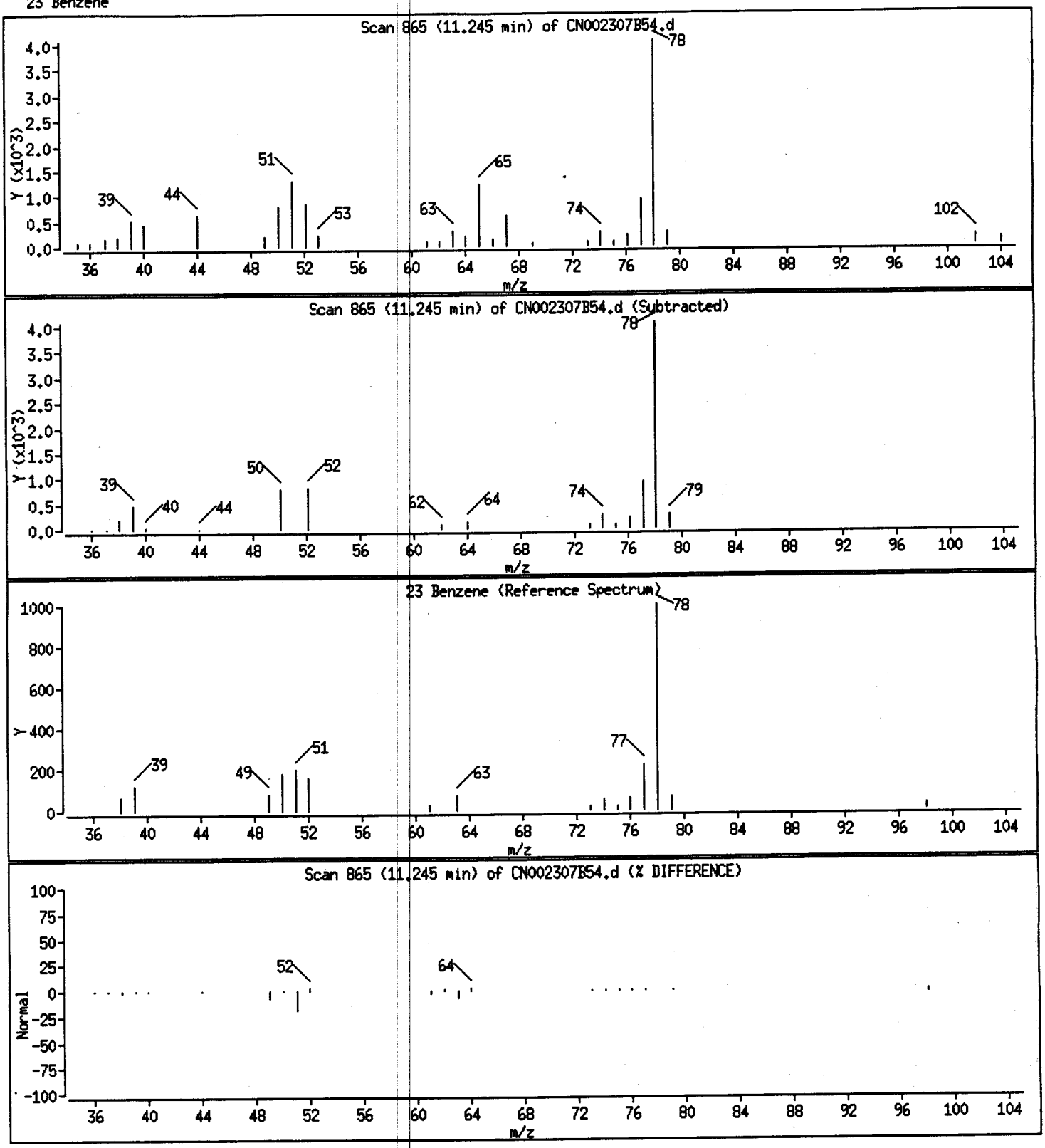
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

23 Benzene



Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

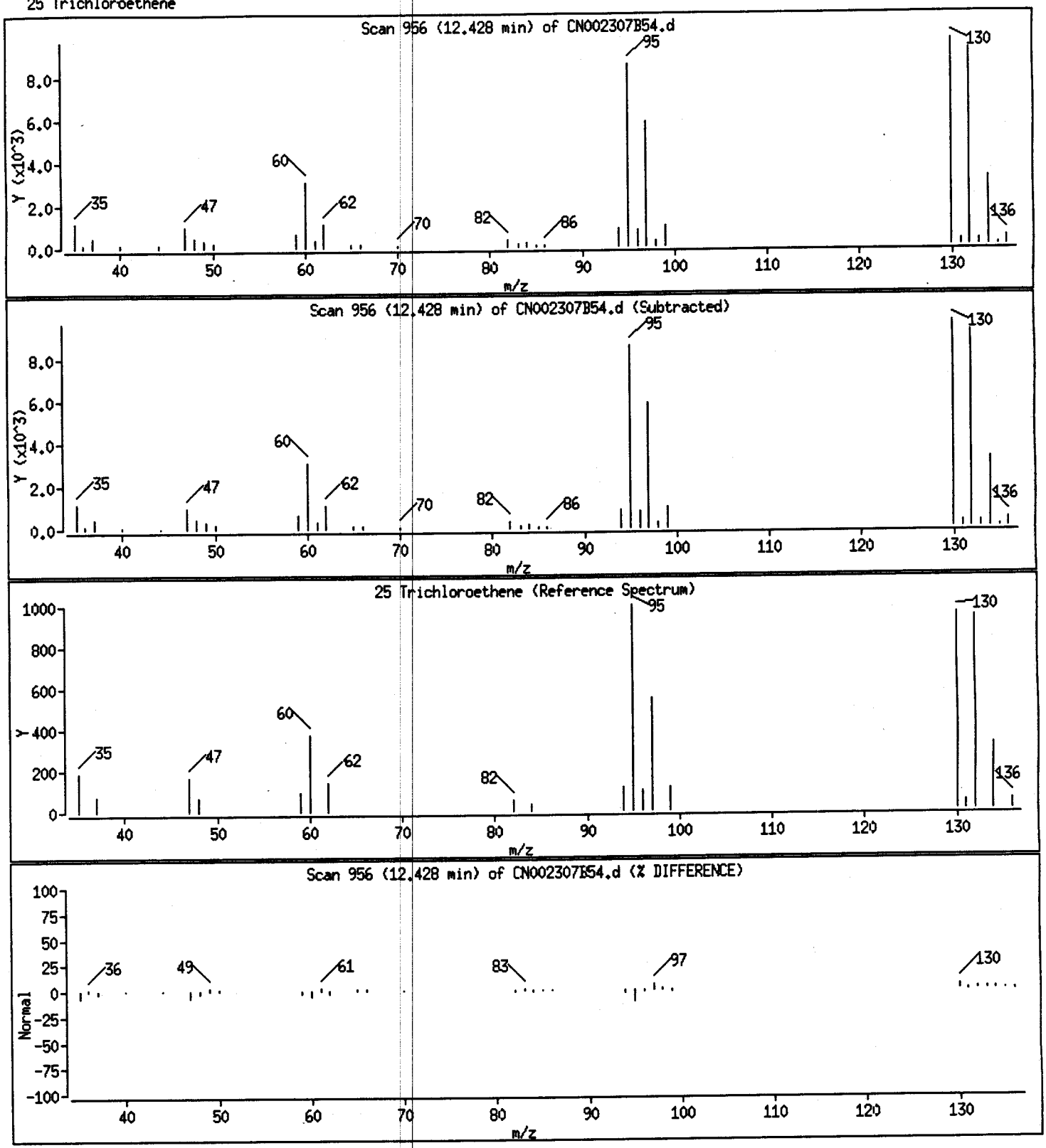
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

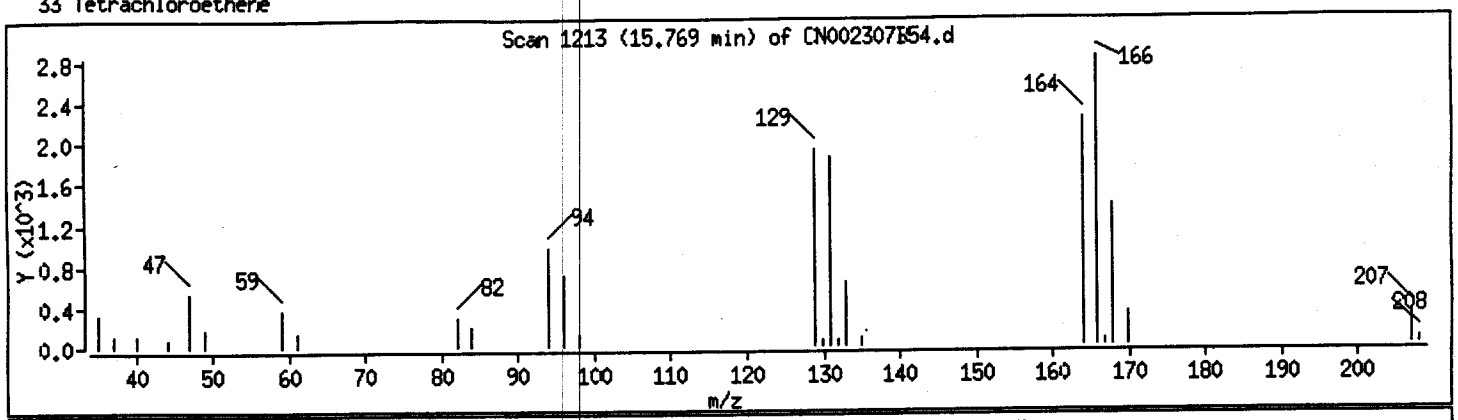
Purge Volume: 5.0

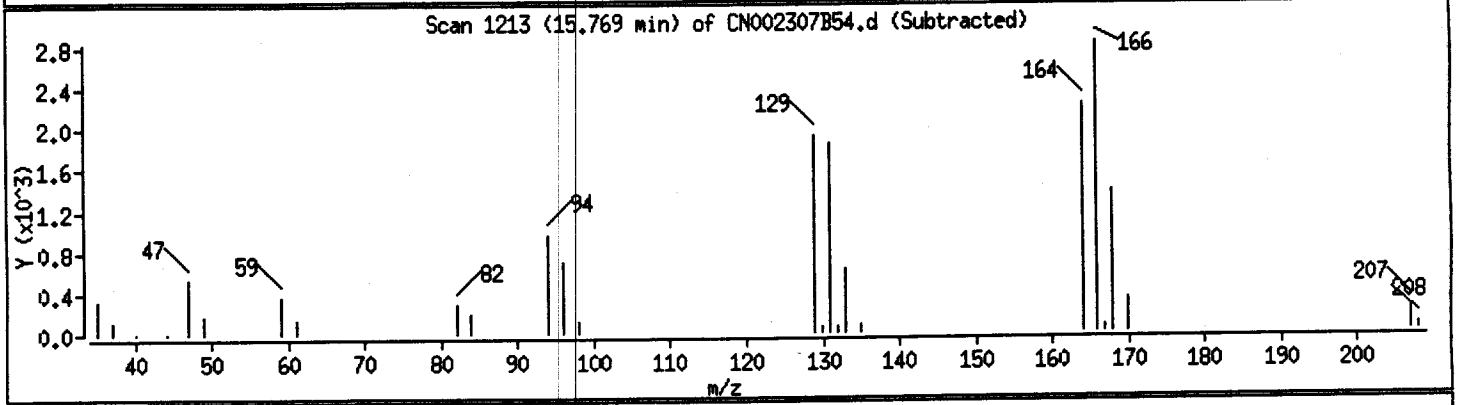
Operator: 1948

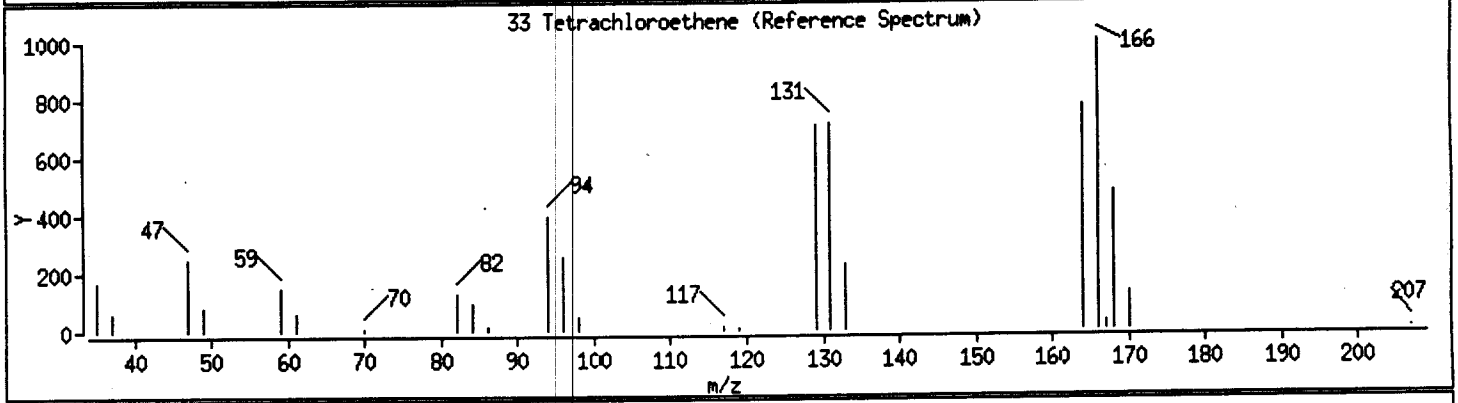
Column phase: DB624

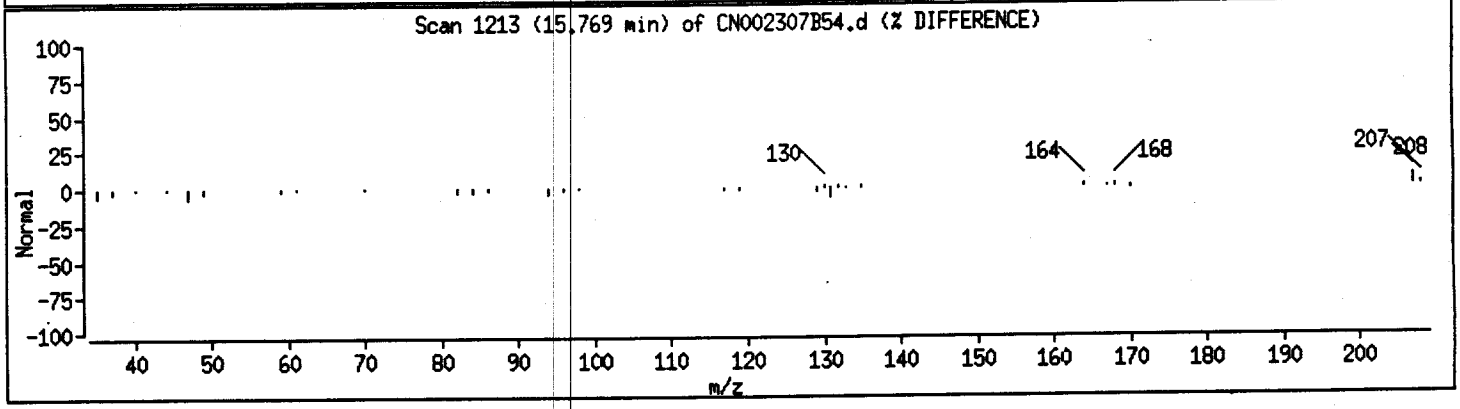
Column diameter: 0.53

33 Tetrachloroethene









Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

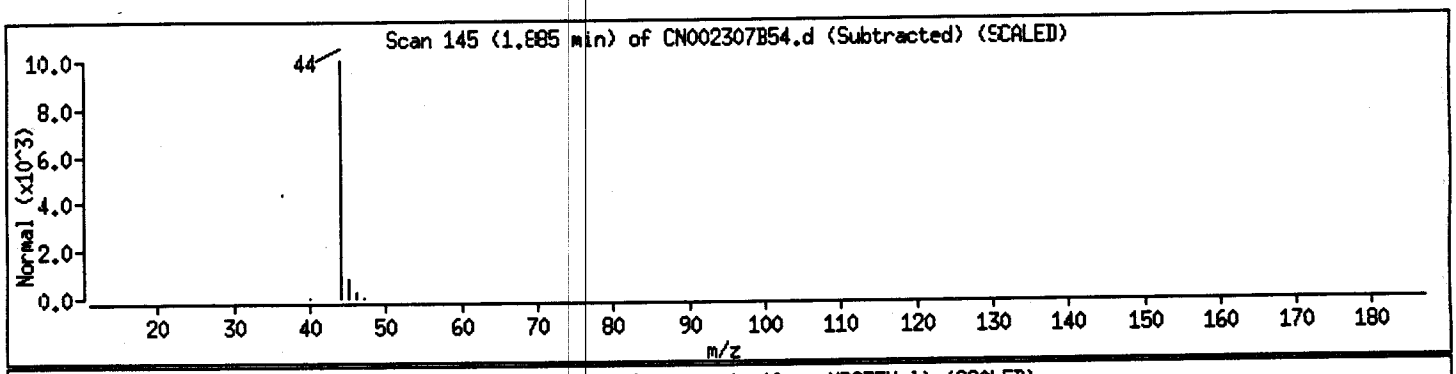
Purge Volume: 5.0

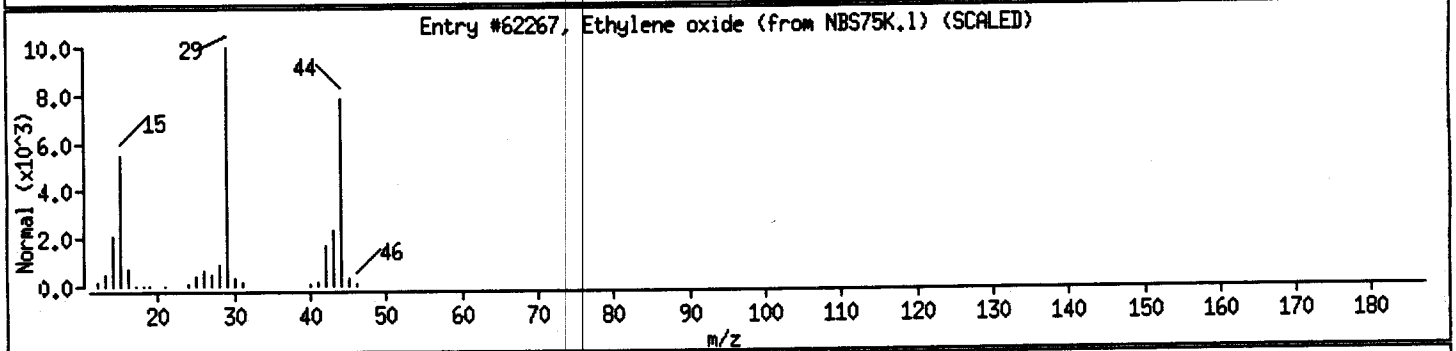
Operator: 1948

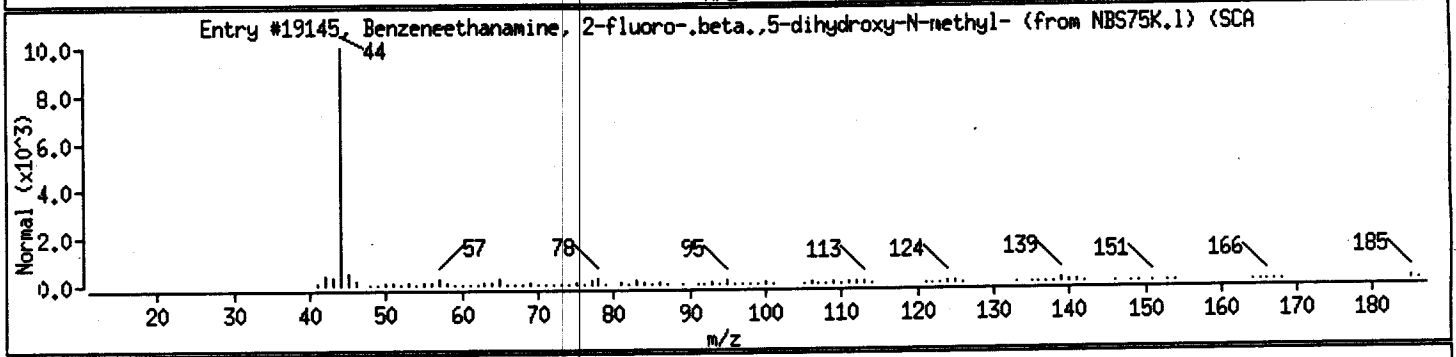
Column phase: DB624

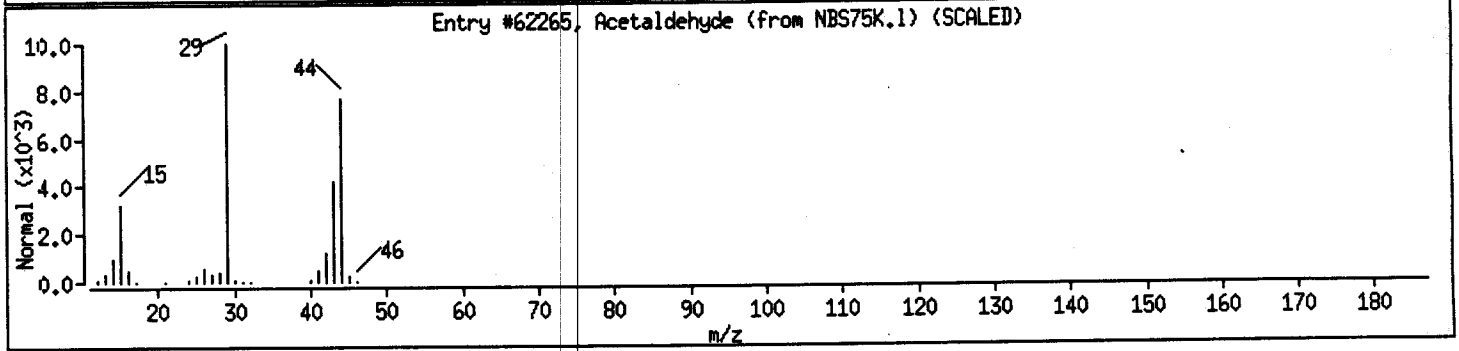
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.1	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.1	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.1	62265	2	C2H4O	44









Data File: /chem/f50054.i/BF950424B54.b/CN002307B54.d

Date : 24-APR-1995 22:38

Client ID: MW6

Instrument: f50054.i

Sample Info:

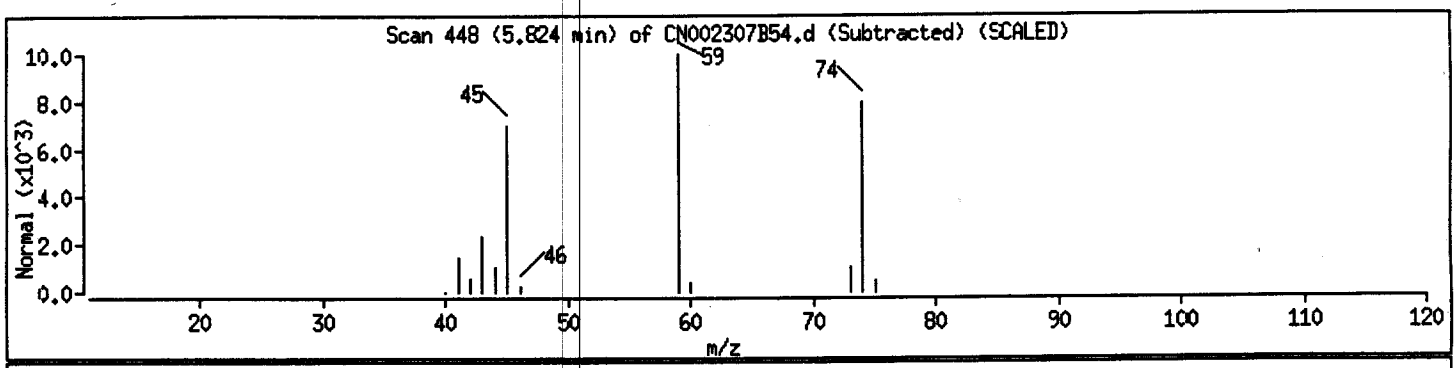
Purge Volume: 5.0

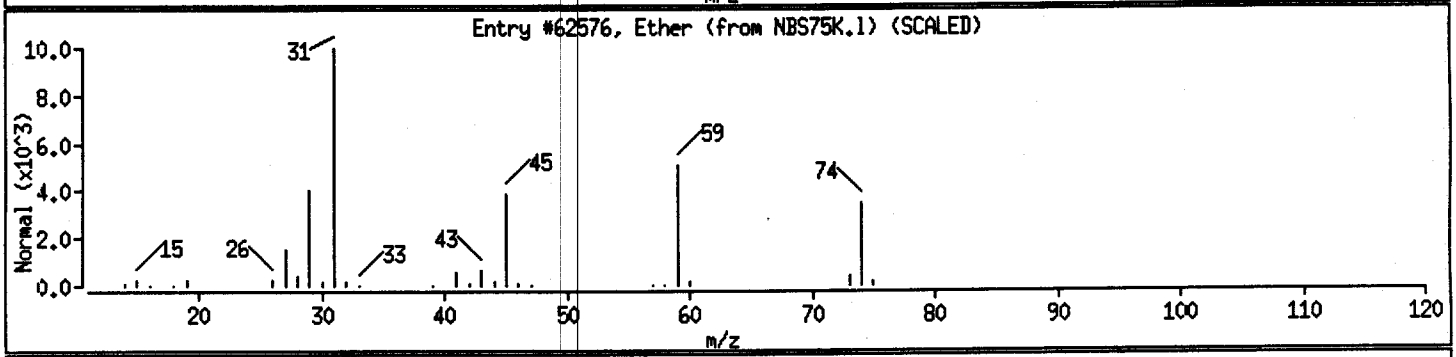
Operator: 1948

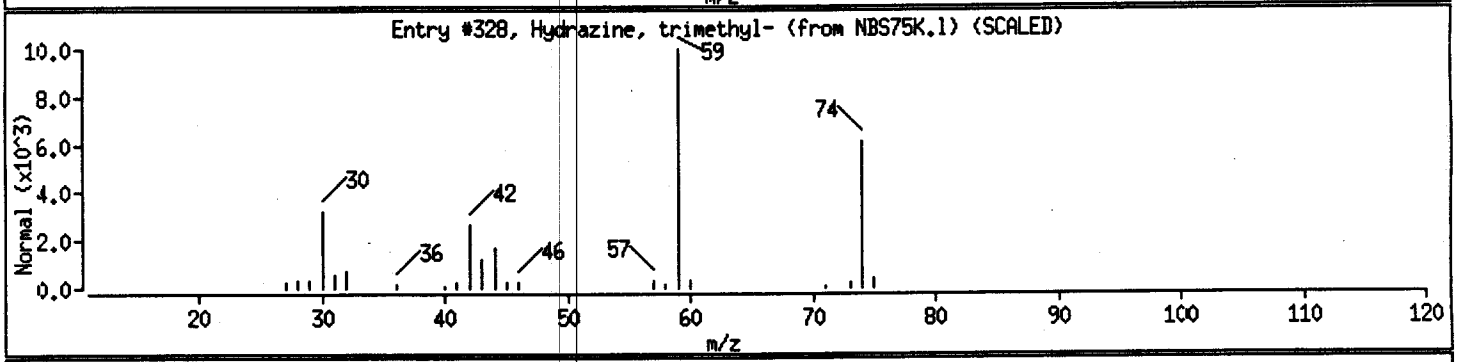
Column phase: DB624

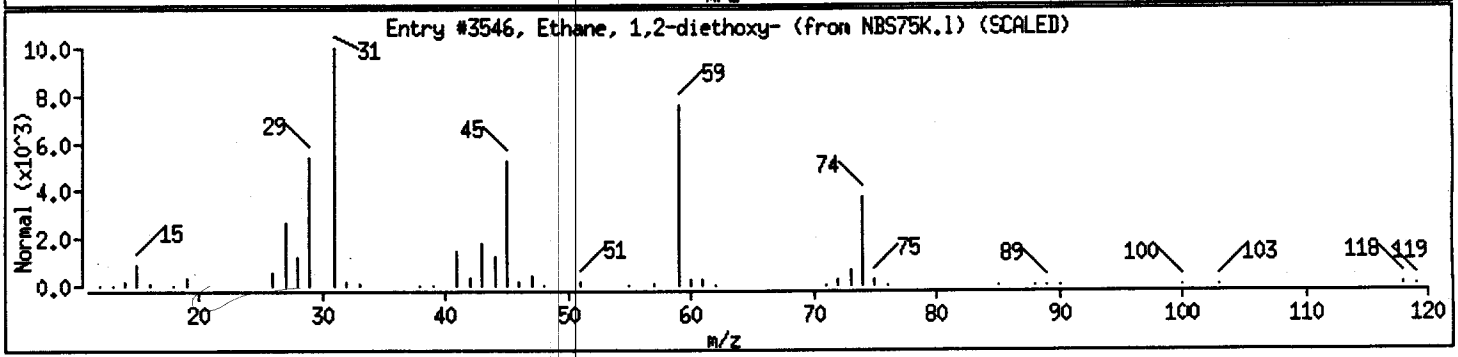
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
unknown						
Ether	60-29-7	NBS75K.l	62576	90	C4H10O	74
Hydrazine, trimethyl-	1741-01-1	NBS75K.l	328	59	C3H10N2	74
Ethane, 1,2-diethoxy-	629-14-1	NBS75K.l	3546	42	C6H14O2	118









LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

==========

702307

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GC/MS ANALYSIS
AMOUNT PURGED: ~~0. UL~~ 5ml QK 4/24/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002307B54

ANALYST(S): INJECTION 2011 WORKUP [illegible]

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE DA

DISPOSITION: [✓] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 2

[ ] REINJECT NEAT
[ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SC DATE 4/28/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702307
Client ID# MW6
Instrument Blank ID VBLKJM
Case # 30458

The early-eluting peak on the RIC of the volatile fraction at scan # 145 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
901001

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW7

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702311

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002311A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	16	
75-09-2	Methylene Chloride	1	JB
67-64-1	Acetone	15	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	9	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	1	J
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	3	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW7

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702311

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002311A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW7

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702311

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002311A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.85	1700	J
2.					
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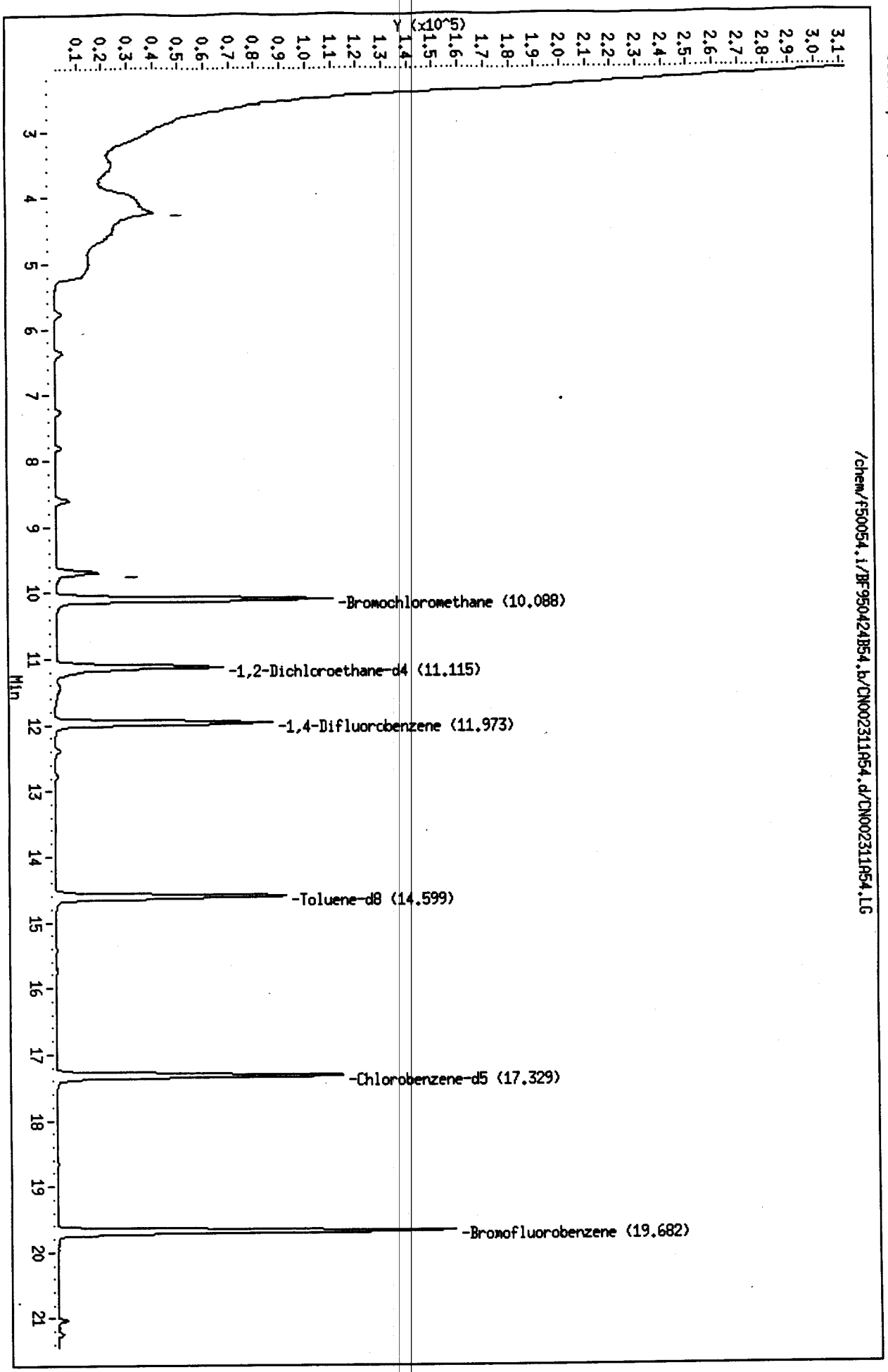

Data File: /chem/f50054.i/BF950424B54.b/CN002311A54.d
Date : 24-APR-1995 23:15
Client ID: MW7
Sample Info:
Purge Volume: 5.0
Column phase: DB624
Instrument: f50054.i
Operator: 1948
Column diameter: 0.53
/chem/f50054.i/BF950424B54.b/CN002311A54.d/CN002311A54.LG
Y (x10^5)
Min
-Bromochloromethane (10.088)
-1,2-Dichloroethane-d4 (11.115)
-1,4-Difluorobenzene (11.973)
-Toluene-d8 (14.599)
-Chlorobenzene-d5 (17.329)
-Bromofluorobenzene (19.682)

Data File: /chem/f50054.i/BF950424B54.b/CN002311A54.d
Report Date: 28-Apr-1995 10:12

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002311A54.d
Lab Smp Id: 702311 Client Smp ID: MW7
Inj Date : 24-APR-1995 23:15
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Bromochloromethane	128.00	10.088	10.140	(1.000)	57418	250.0	
* 2 1,4-Difluorobenzene	114.00	11.960	12.012	(1.000)	177925	250.0	
* 3 Chlorobenzene-d5	117.00	17.316	17.368	(1.000)	173814	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	11.128	11.167	(1.103)	111555	230.6	46.12
$ 5 Toluene-d8	98.00	14.599	14.651	(0.843)	154649	240.9	48.17
$ 6 Bromofluorobenzene	95.00	19.682	19.734	(1.137)	132874	230.4	46.09
7 Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
8 Chloromethane	50.00		2.873	Compound Not Detected.			
9 Vinyl Chloride	62.00	3.120	3.185	(0.309)	1396	8.82	1.76(a)
10 Bromomethane	94.00		4.004	Compound Not Detected.			
11 Chloroethane	64.00	4.238	4.290	(0.420)	14274	82.38	16.48
12 1,1-Dichloroethene	96.00		6.175	Compound Not Detected.			
13 Acetone	43.00	6.383	6.422	(0.633)	1426	72.83	14.57
14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
15 Methylene Chloride	84.00	7.241	7.293	(0.718)	1902	6.01	1.20(a)
16 trans-1,2-Dichloroethene	96.00	7.800	7.852	(0.773)	2365	6.54	1.31(a)
17 1,1-Dichloroethane	63.00	8.606	8.658	(0.853)	12932	19.76	3.95(a)
18 cis-1,2-Dichloroethene	96.00	9.698	9.737	(0.961)	15478	38.39	7.68(a)
19 2-Butanone	43.00		9.854	Compound Not Detected.			
20 Chloroform	83.00		10.348	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00		10.595	Compound Not Detected.			
22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
23 Benzene	78.00	11.206	11.245	(0.937)	12508	13.81	2.76(a)
24 1,2-Dichloroethane	62.00		11.297	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002311A54.d
Report Date: 28-Apr-1995 10:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	12.389	12.428	(1.036)	2013	5.15	1.03(a)
26	1,2-Dichloropropane	63.00	12.766	12.818	(1.067)	1092	5.60	1.12(a)
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00		15.795		Compound Not Detected.		
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00				17843	46.65	9.33(a)
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50054.i/BF950424B54.b/CN002311A54.d

Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

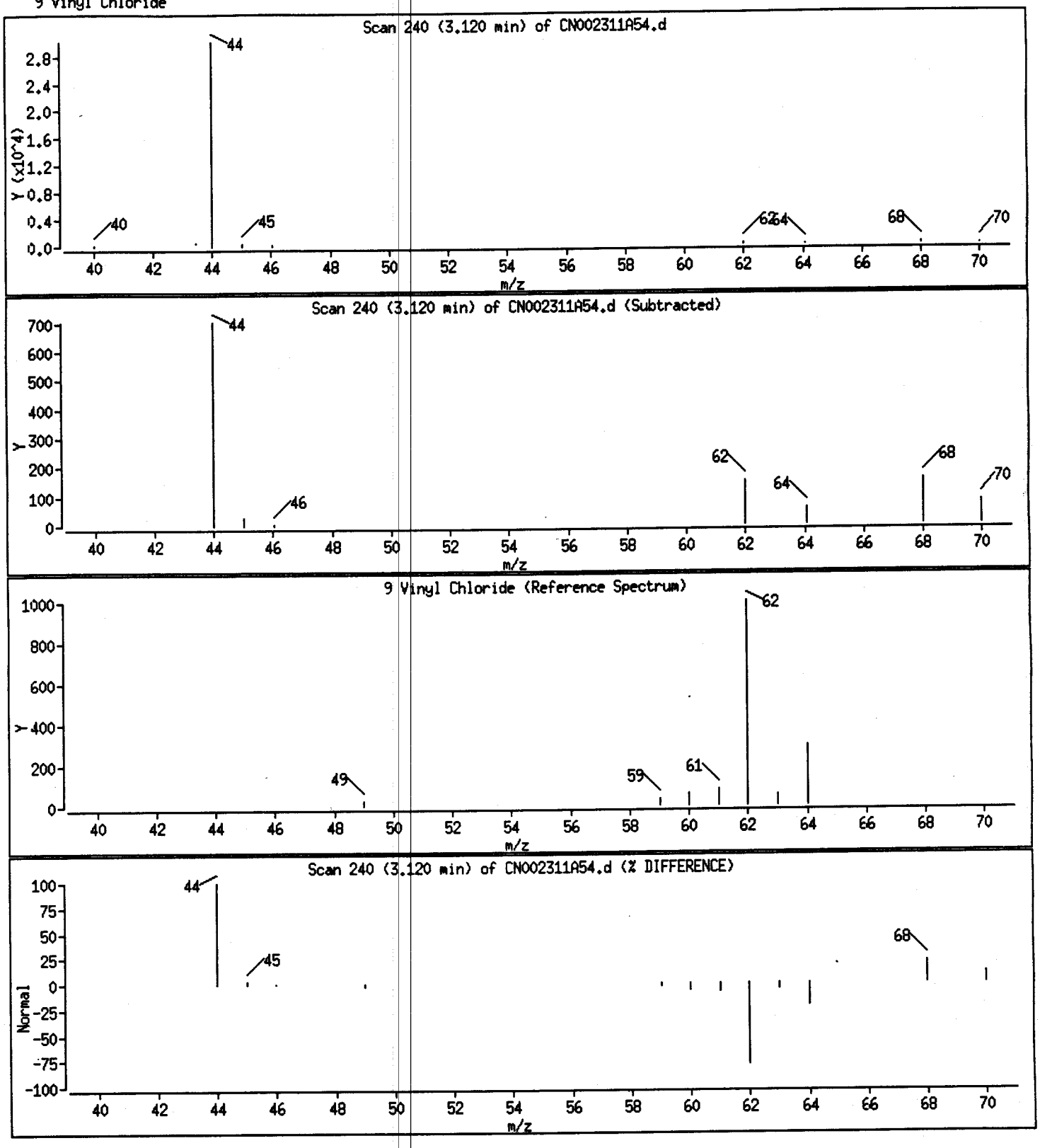
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

9 Vinyl Chloride



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Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

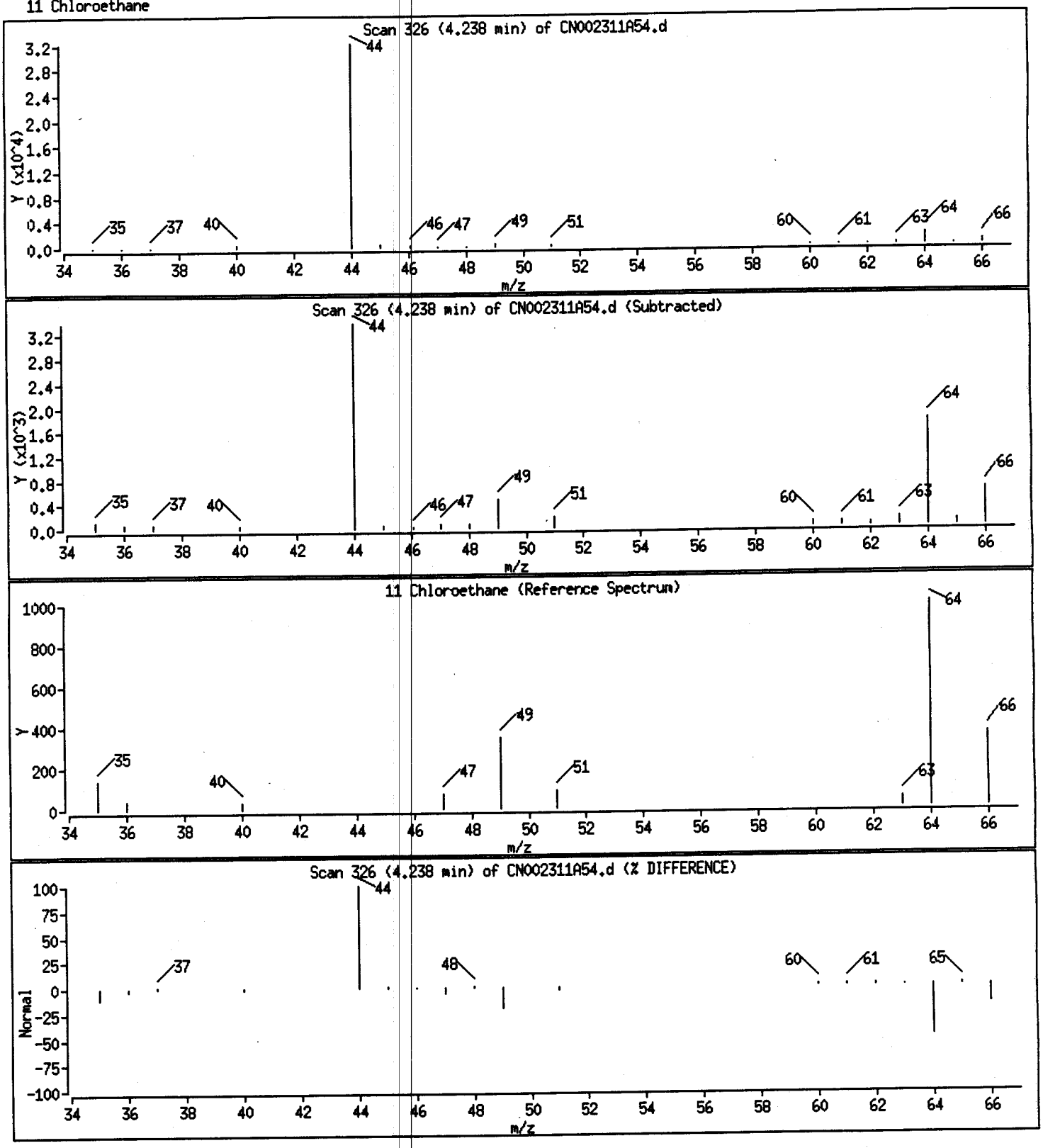
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

11 Chloroethane



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Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

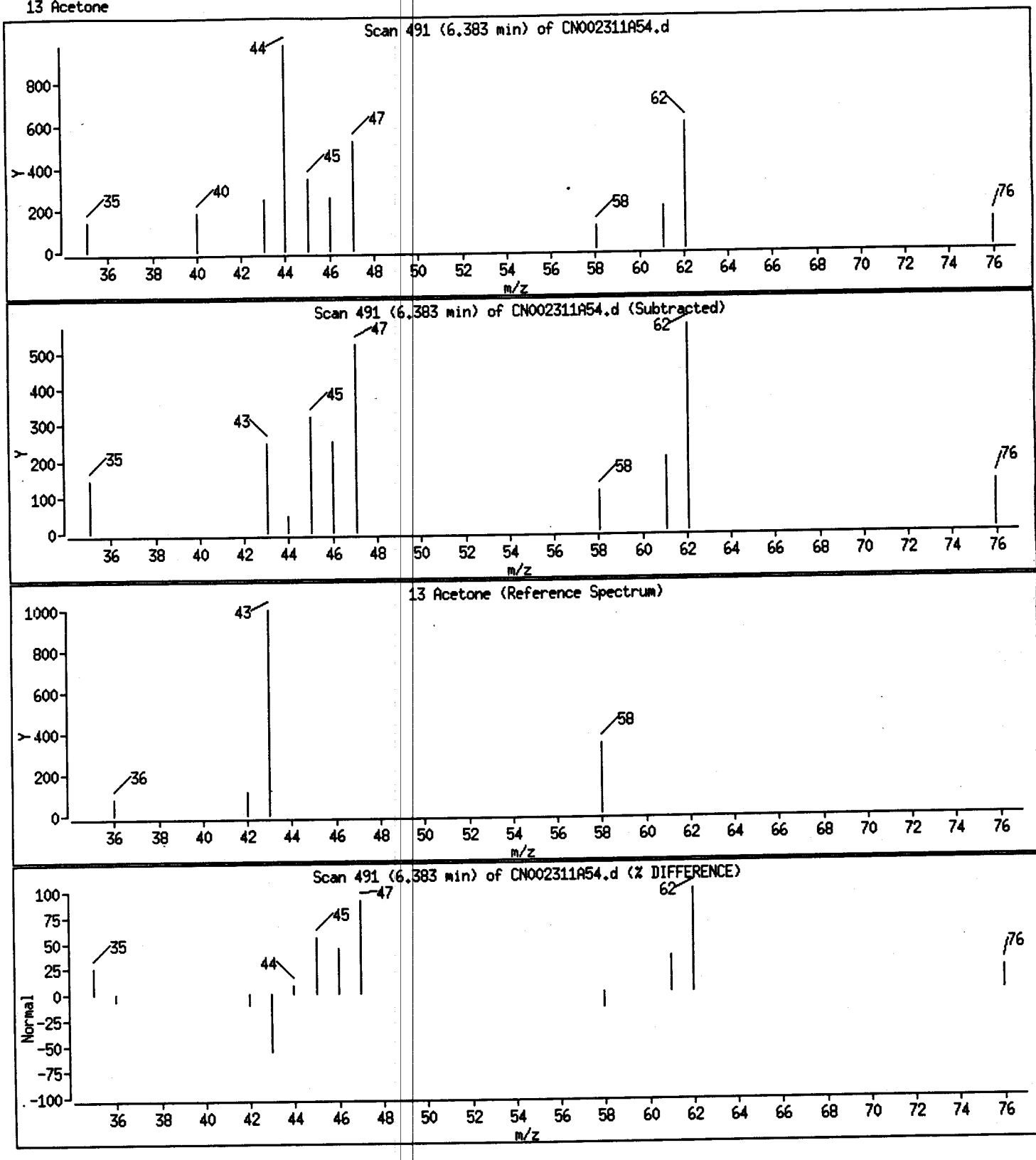
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

13 Acetone



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Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

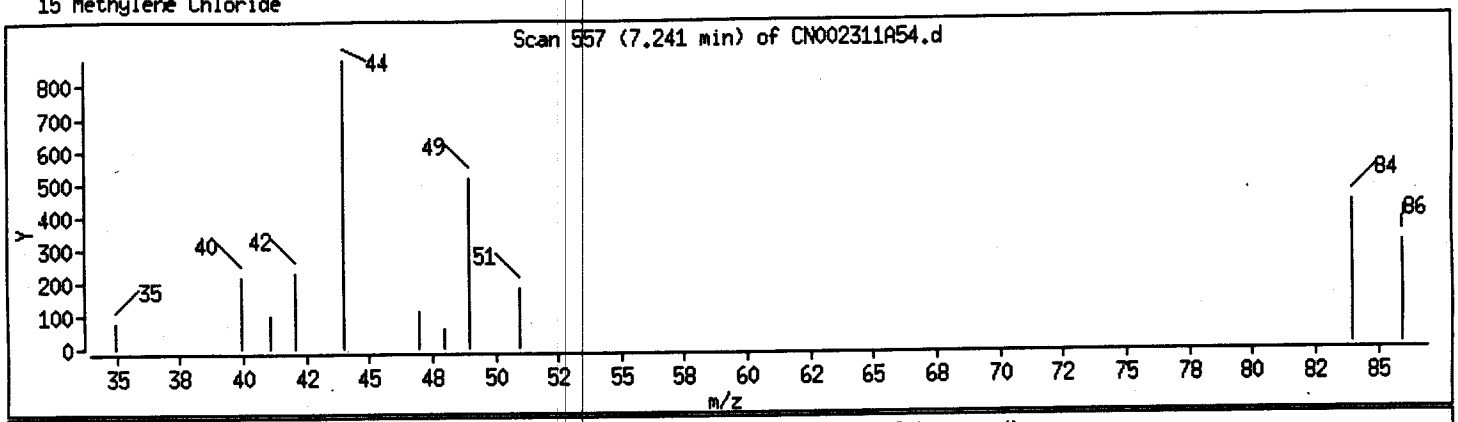
Purge Volume: 5.0

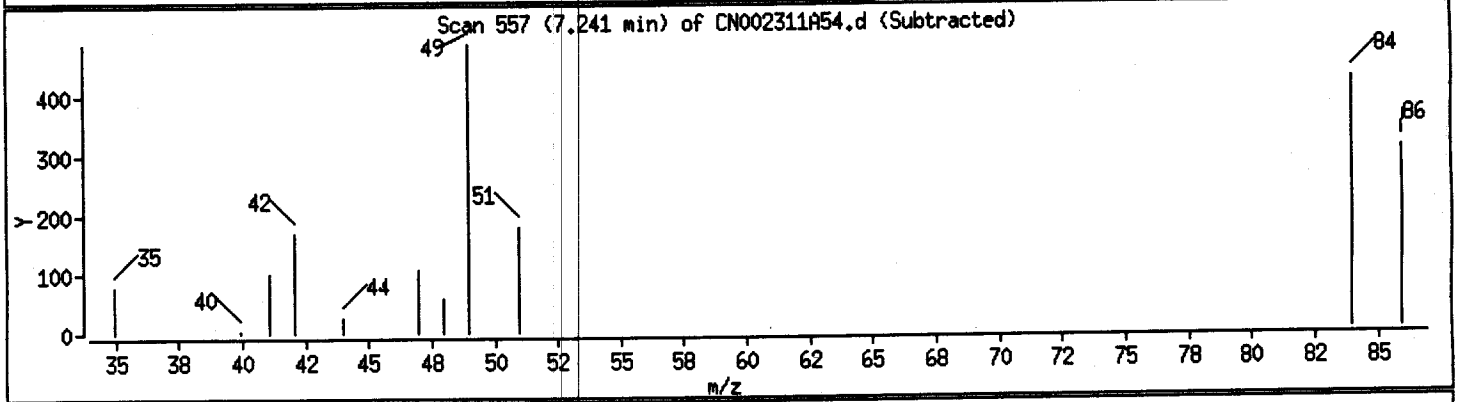
Operator: 1948

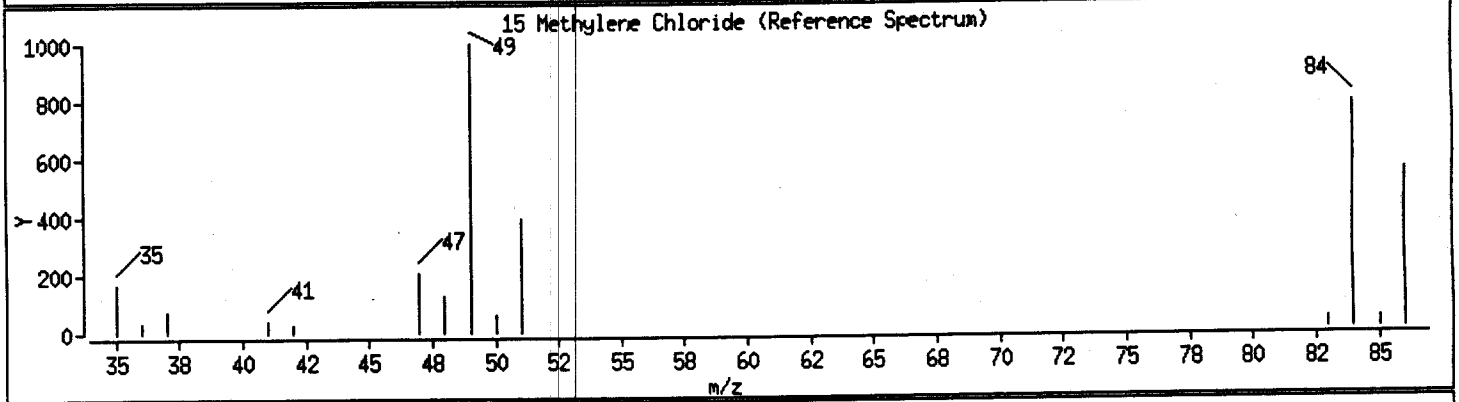
Column phase: DB624

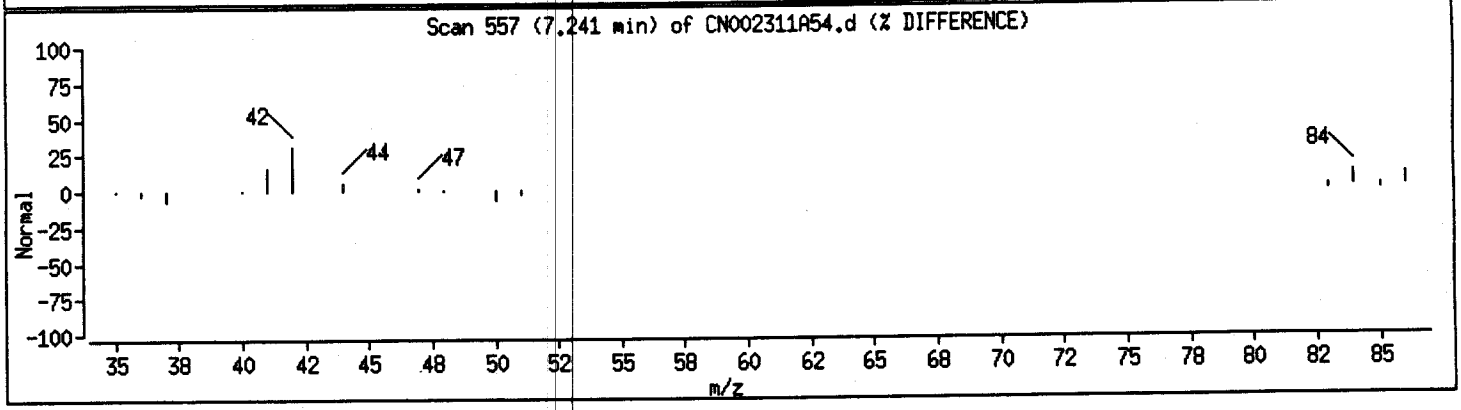
Column diameter: 0.53

15 Methylene Chloride









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Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

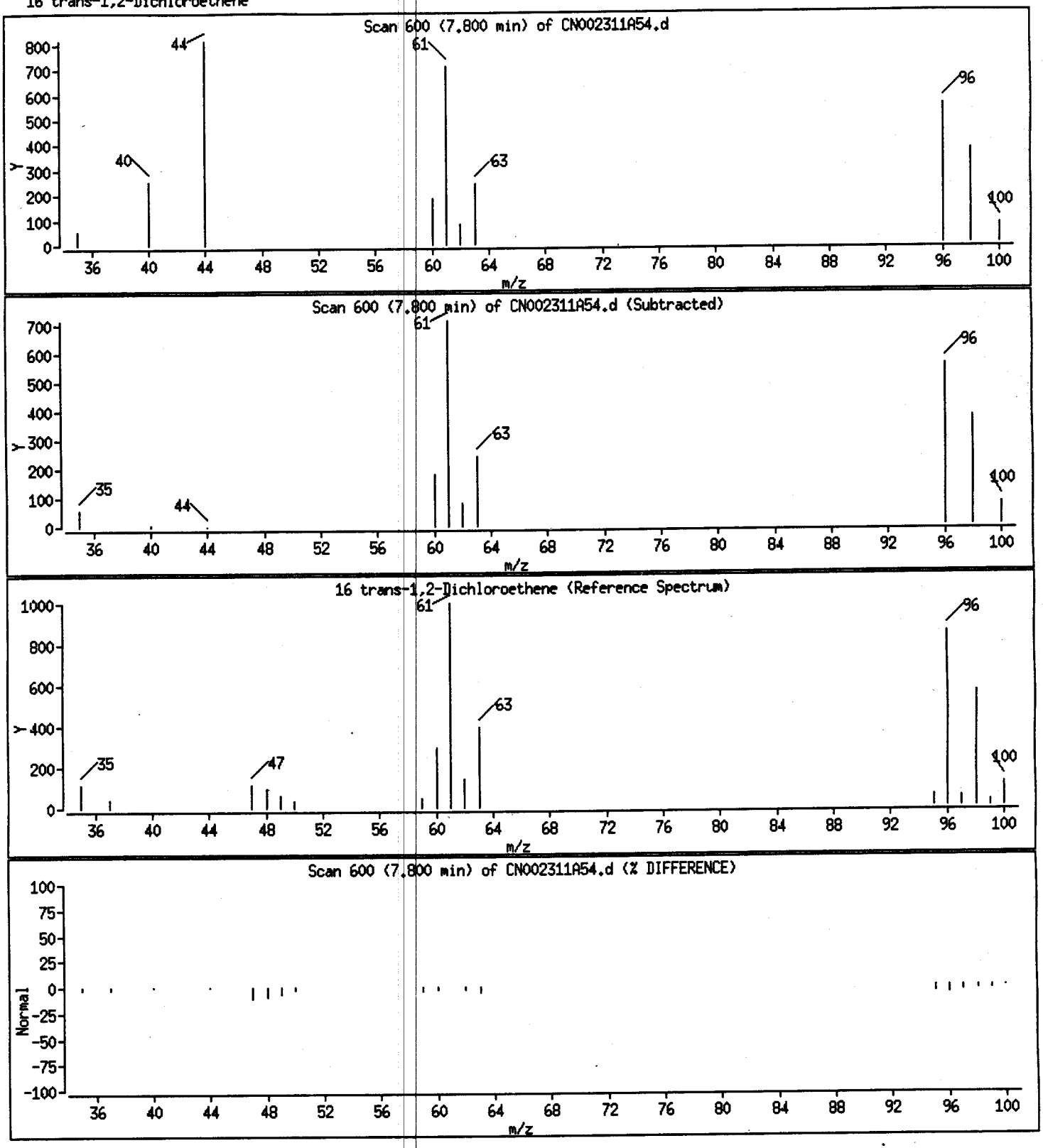
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

16 trans-1,2-Dichloroethene



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Date : 24-APR-1995 23:15

Client ID: MW7

Sample Info:

Purge Volume: 5.0

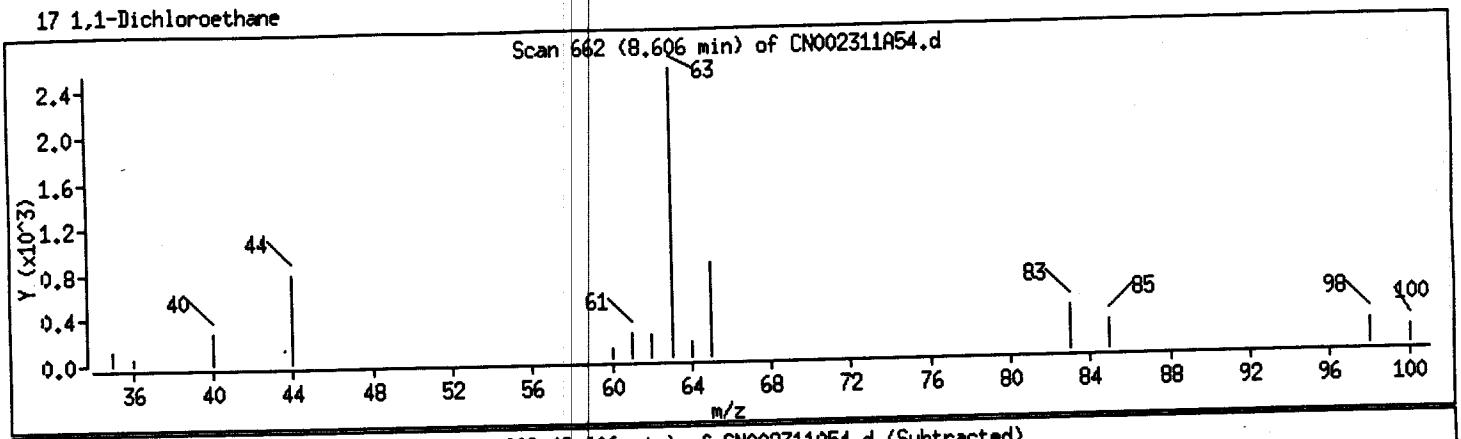
Column phase: DB624

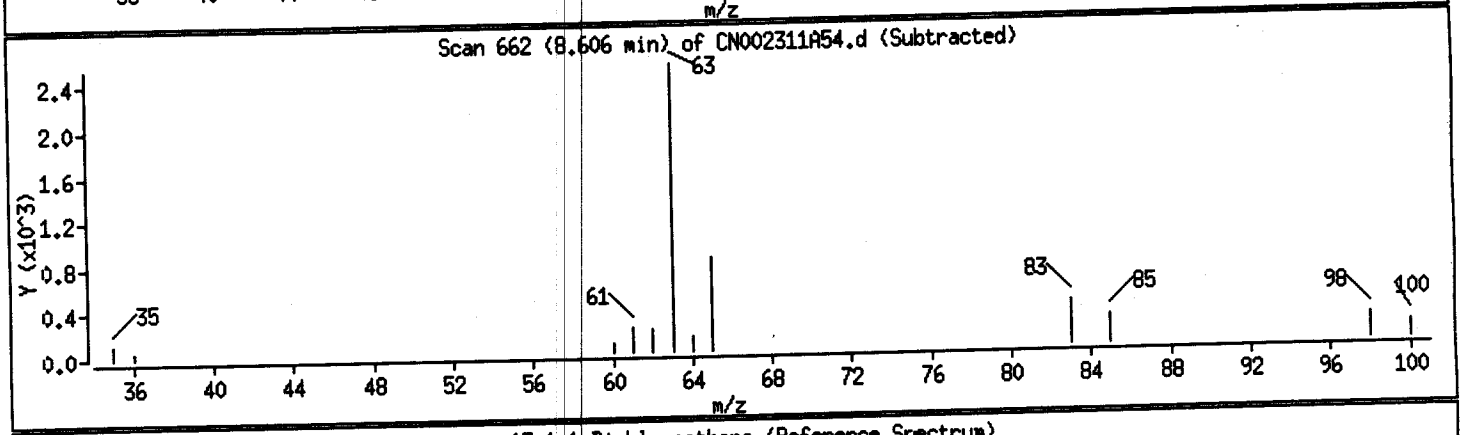
Instrument: f50054.i

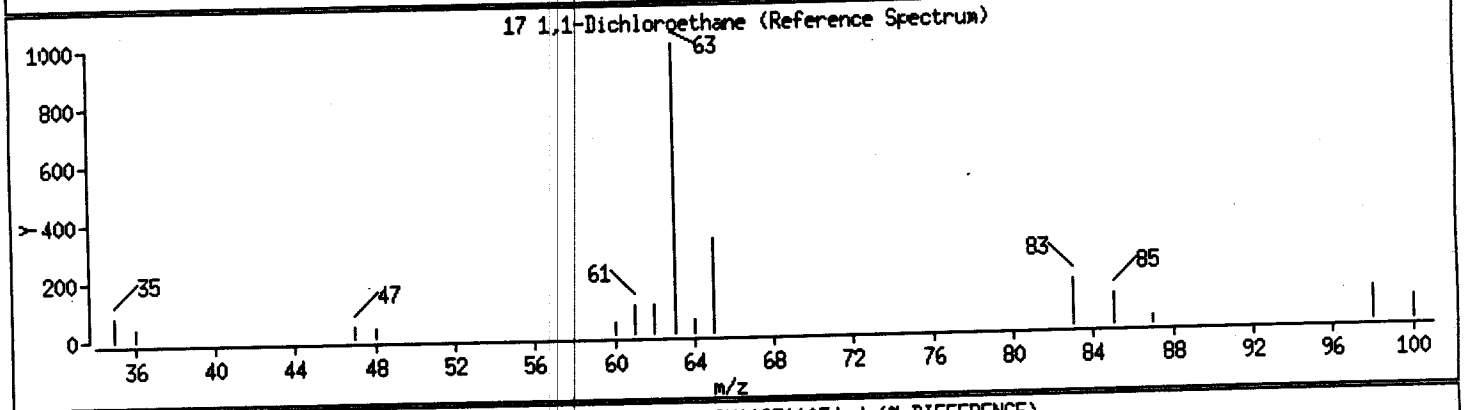
Operator: 1948

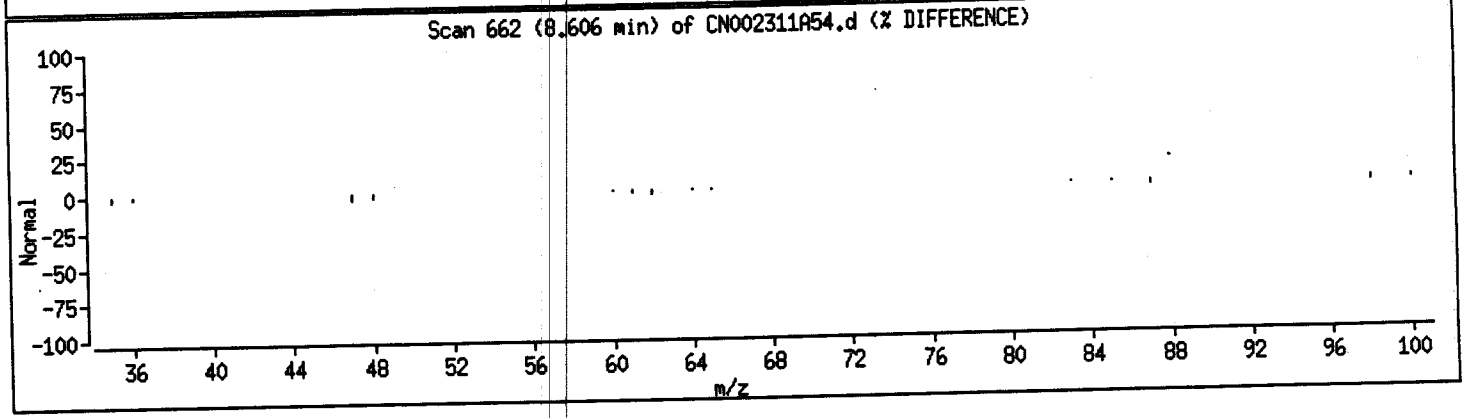
Column diameter: 0.53

17 1,1-Dichloroethane









Data File: /chem/f50054.i/BF950424B54.b/CN002311A54.d

Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

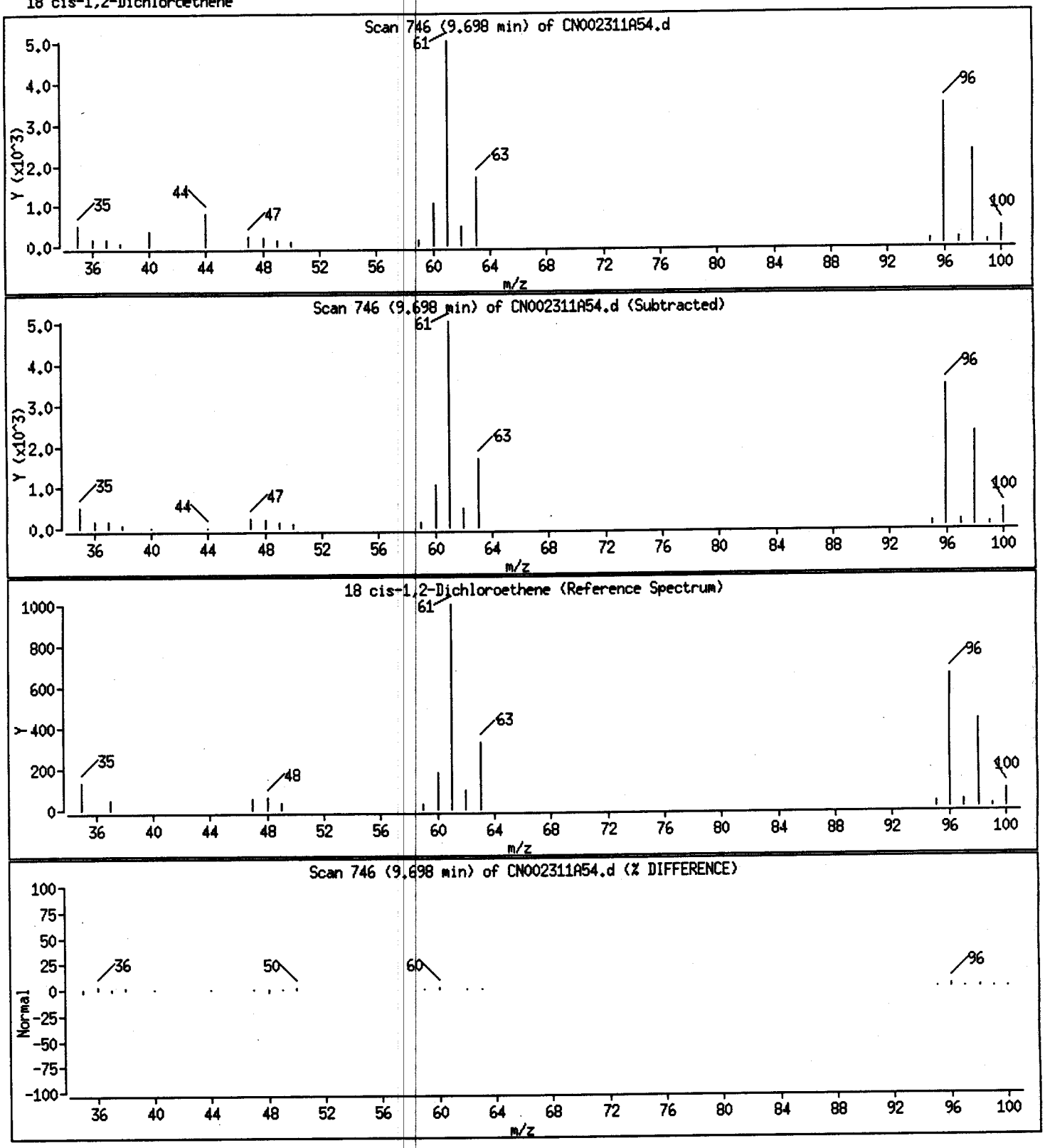
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

18 cis-1,2-Dichloroethene



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Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

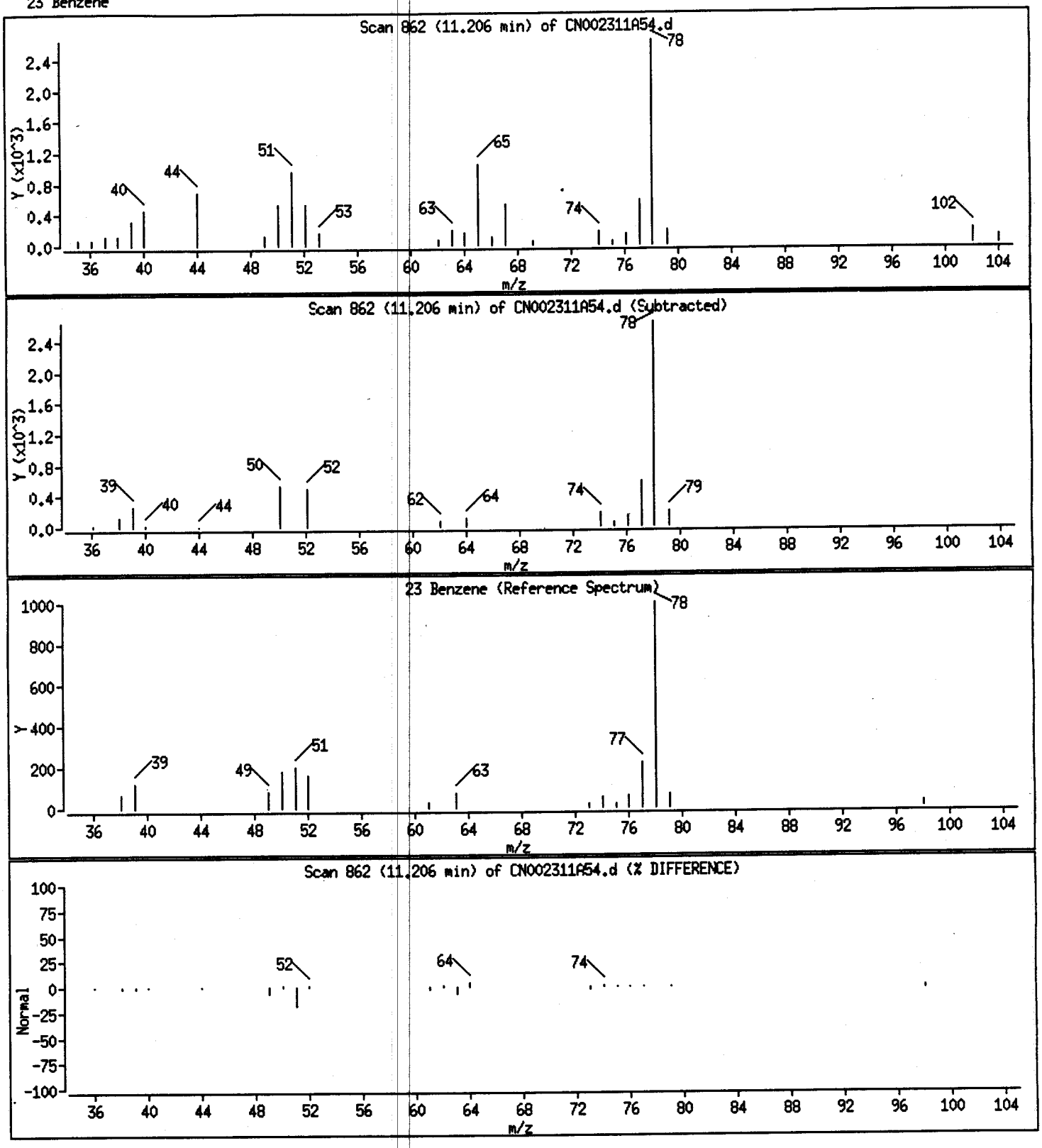
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

23 Benzene



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Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

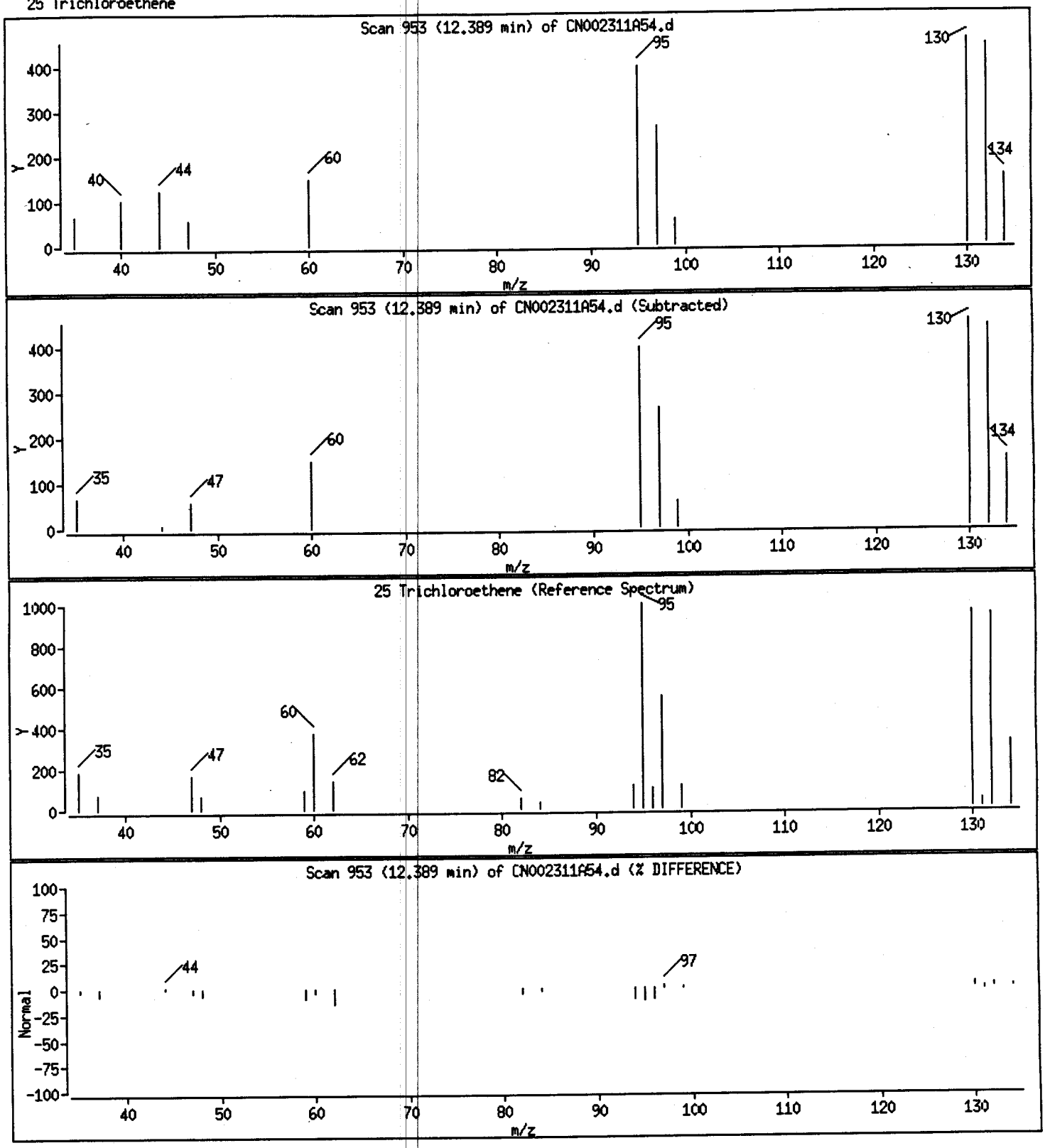
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



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Date : 24-APR-1995 23:15

Client ID: MW7

Instrument: f50054.i

Sample Info:

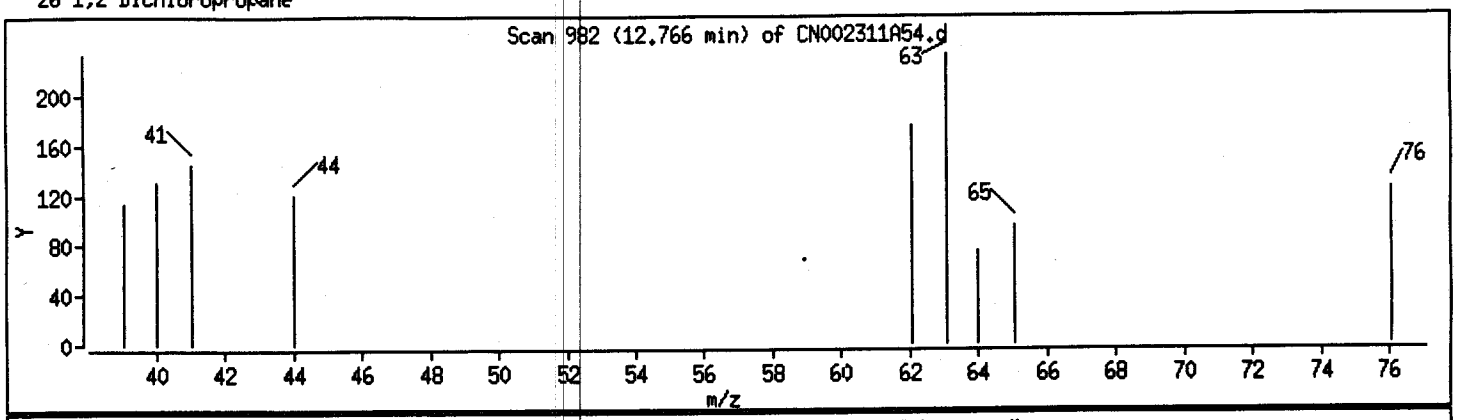
Purge Volume: 5.0

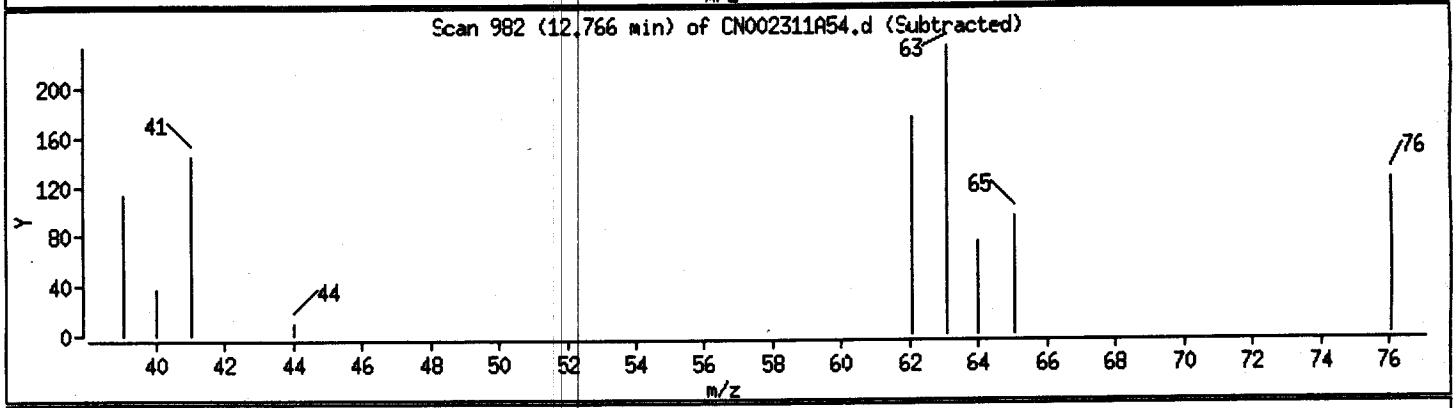
Operator: 1948

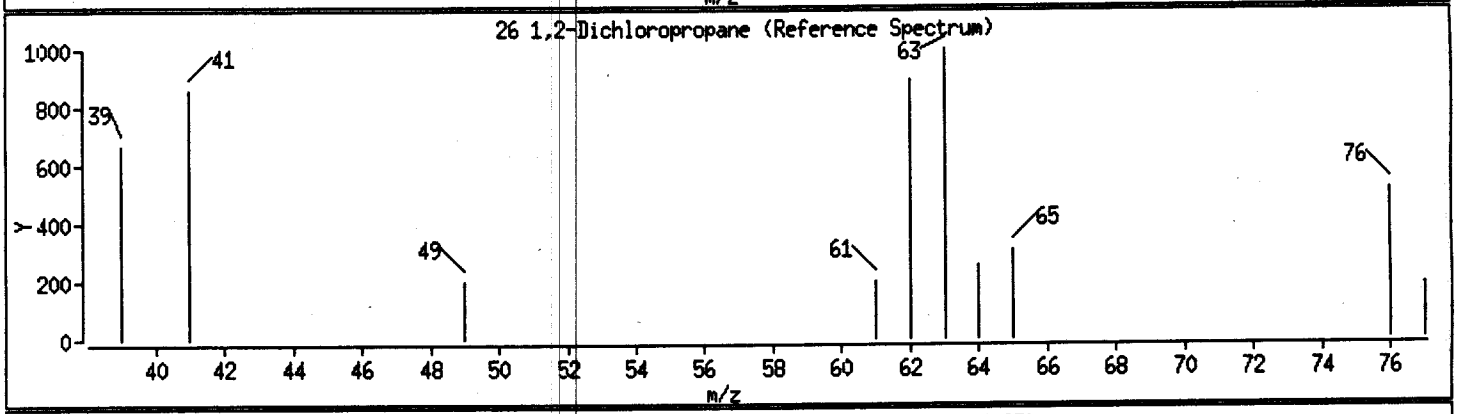
Column phase: DB624

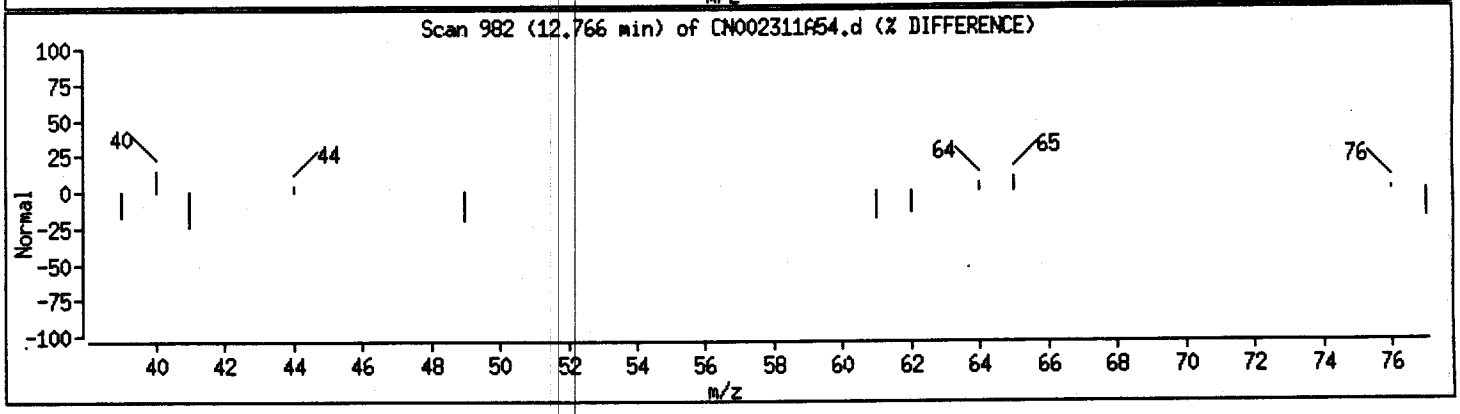
Column diameter: 0.53

26 1,2-Dichloropropane









Data File: /chem/f50054.i/BF950424B54.b/CN002311A54.d

Date : 24-APR-1995 23:15

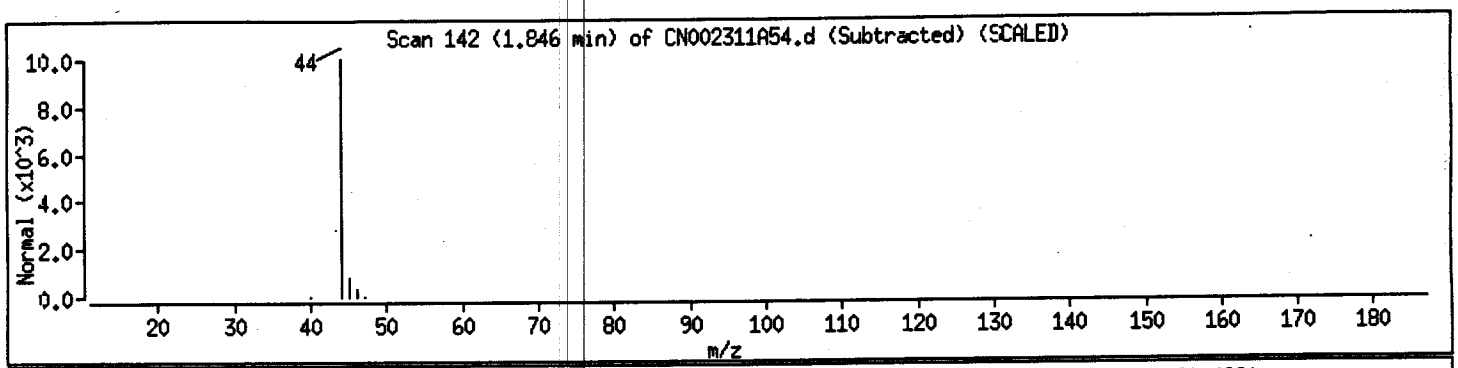
Client ID: MW7 Instrument: f50054.i

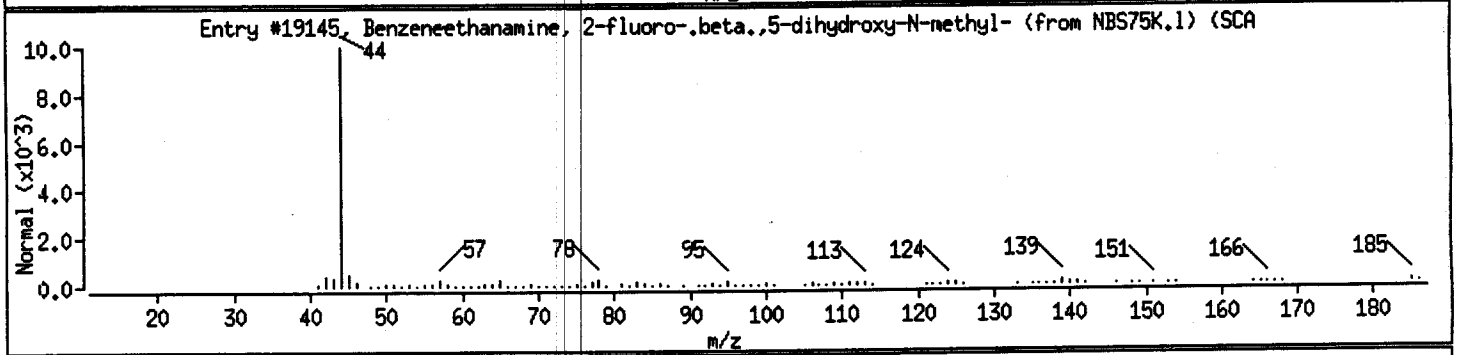
Sample Info:

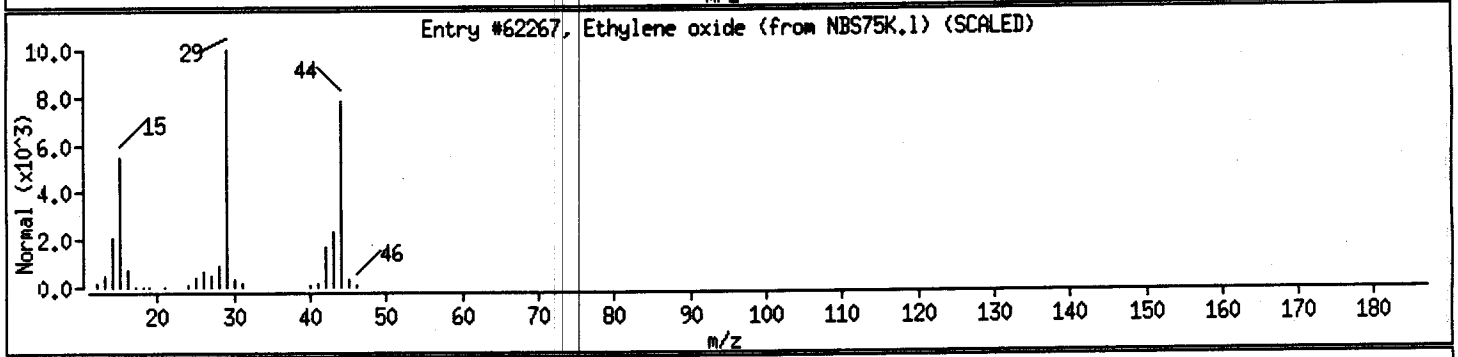
Purge Volume: 5.0 Operator: 1948

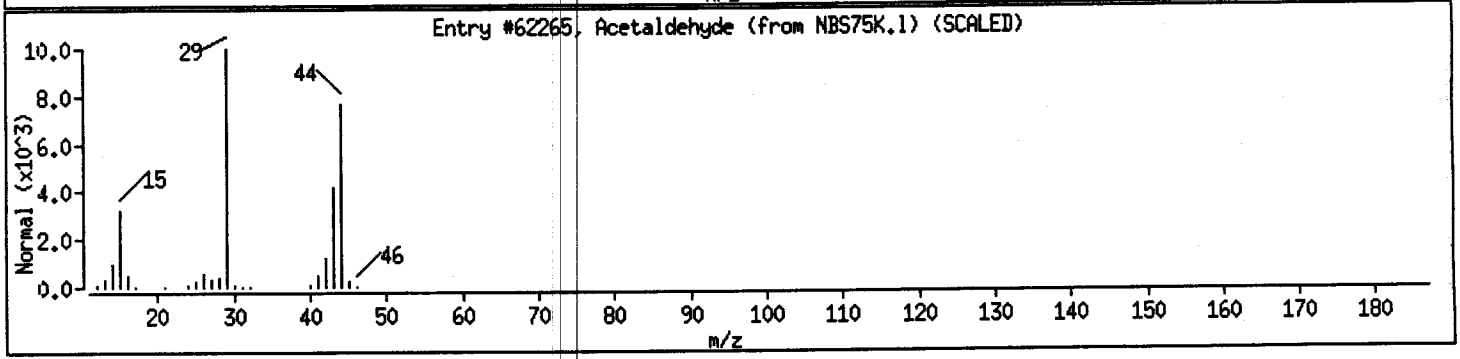
Column phase: DB624 Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.1	19145	2	C9H12FNO2	185
Ethylene oxide	75-21-8	NBS75K.1	62267	2	C2H4O	44
Acetaldehyde	75-07-0	NBS75K.1	62265	2	C2H4O	44









LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

==========

702311: 2011: 1:

==========

GC/MS ANALYSIS
AMOUNT PURGED: 5000. UL 4/24/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002311A54

ANALYST(S): INJECTION 2011 WORKUP Kad

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [✓] COMPLETE

[ ] REINJECT NEAT
[ ] DILUTE ( )

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 1

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SC DATE 4/28/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

FINAL REVIEW

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702311
Client ID# MW7
Instrument Blank ID VBLKJM
Case # 30458

The early-eluting peak on the RIC of the volatile fraction at scan # 142 is a laboratory artifact believed to be a mixture of water and various atmospheric gases. This peak is usually present at a height less than 10% that of the internal standard nearest in elution time order, although it may exceed this height under certain instrument conditions.

Periodically, a number of maintenance procedures are performed in an effort to reduce the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

In many cases, even after maintenance, the artifact peak remains at a height greater than 10% of the nearest internal standard. Since the analytical quality of these data have not been compromised and the identification of target compounds has not been impaired, we are reporting this analysis with reference to this qualifying notice. The artifact is not included as part of the Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
01001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702315

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002315A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	6	J
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	3	J
75-34-3	1,1-Dichloroethane	58	
540-59-0	1,2-Dichloroethene (total)	100	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	13	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	6	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	33	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW8

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702315

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002315A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodiflouromethane	7	J

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW8

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702315

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002315A54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 1

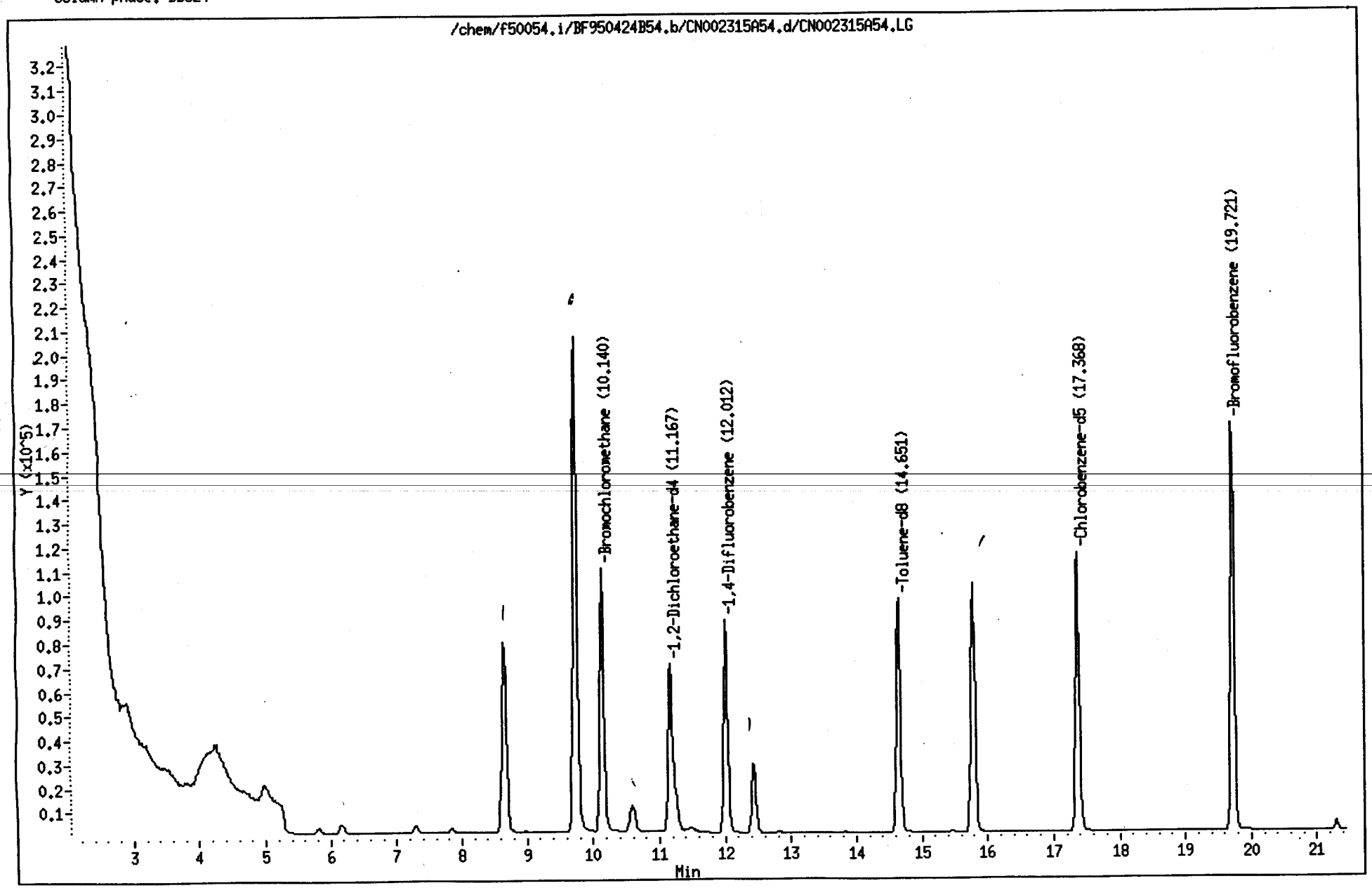
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		LABORATORY ARTIFACT	1.90	1800	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50054.i/BF950424B54.b/CN002315A54.d
Date : 24-APR-1995 23:49
Client ID: MW8
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 2011
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CN002315A54.d
Report Date: 28-Apr-1995 10:13

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002315A54.d
Lab Smp Id: 702315 Client Smp ID: MW8
Inj Date : 24-APR-1995 23:49
Operator : 2011 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Bromochloromethane	128.00	10.140	10.140	(1.000)	57549	250.0	
*	2 1,4-Difluorobenzene	114.00	12.012	12.012	(1.000)	184137	250.0	
*	3 Chlorobenzene-d5	117.00	17.368	17.368	(1.000)	177641	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.167	11.167	(1.101)	115733	238.7	47.74
$	5 Toluene-d8	98.00	14.638	14.651	(0.843)	163732	249.5	49.90
$	6 Bromofluorobenzene	95.00	19.721	19.734	(1.135)	145445	246.8	49.36
	7 Dichlorodiflouromethane	85.00	2.366	2.379	(0.233)	6949	35.78	7.16(a)
	8 Chloromethane	50.00		2.873	Compound Not Detected.			
	9 Vinyl Chloride	62.00	3.159	3.185	(0.312)	4978	31.38	6.28(a)
	10 Bromomethane	94.00		4.004	Compound Not Detected.			
	11 Chloroethane	64.00	4.277	4.290	(0.422)	5896	33.95	6.79(a)
	12 1,1-Dichloroethene	96.00	6.162	6.175	(0.608)	4605	14.58	2.92(a)
	13 Acetone	43.00		6.422	Compound Not Detected.			
	14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
	15 Methylene Chloride	84.00	7.280	7.293	(0.718)	3537	11.14	2.23(a)
	16 trans-1,2-Dichloroethene	96.00	7.839	7.852	(0.773)	2084	5.74	1.15(a)
	17 1,1-Dichloroethane	63.00	8.645	8.658	(0.853)	189416	288.7	57.75
	18 cis-1,2-Dichloroethene	96.00	9.737	9.737	(0.960)	189313	468.5	93.70
	19 2-Butanone	43.00		9.854	Compound Not Detected.			
	20 Chloroform	83.00		10.348	Compound Not Detected.			
	21 1,1,1-Trichloroethane	97.00	10.595	10.595	(0.882)	18031	23.12	4.62(a)
	22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
	23 Benzene	78.00	11.245	11.245	(0.936)	26068	27.82	5.56(a)
	24 1,2-Dichloroethane	62.00		11.297	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002315A54.d
Report Date: 28-Apr-1995 10:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	12.428	12.428	(1.035)	25433	62.92	12.58
26	1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00	15.782	15.795	(0.909)	63462	164.8	32.96
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00				191397	499.2	99.85
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50054.i/BF950424B54.b/CN002315A54.d

Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

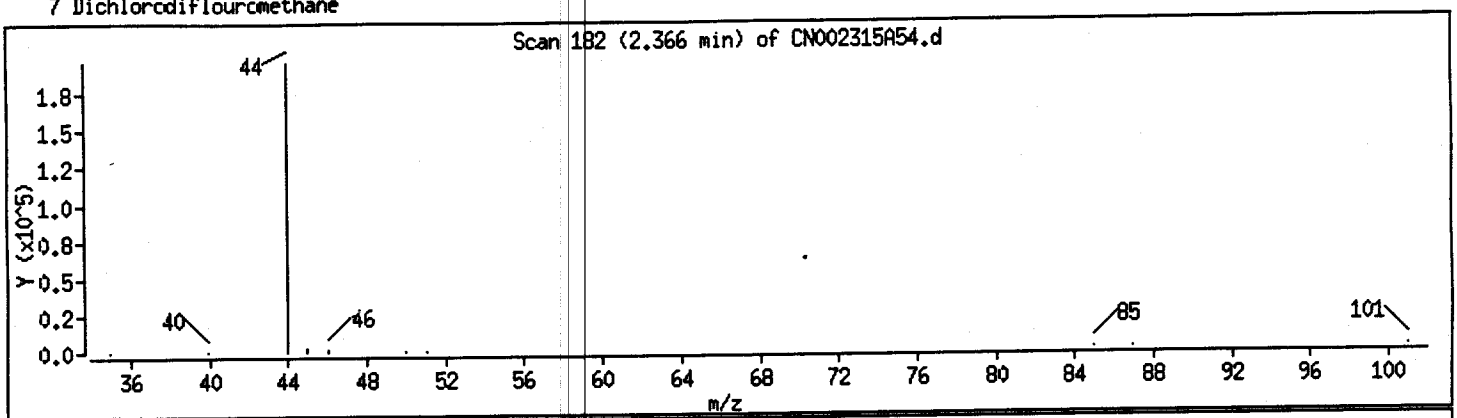
Purge Volume: 5.0

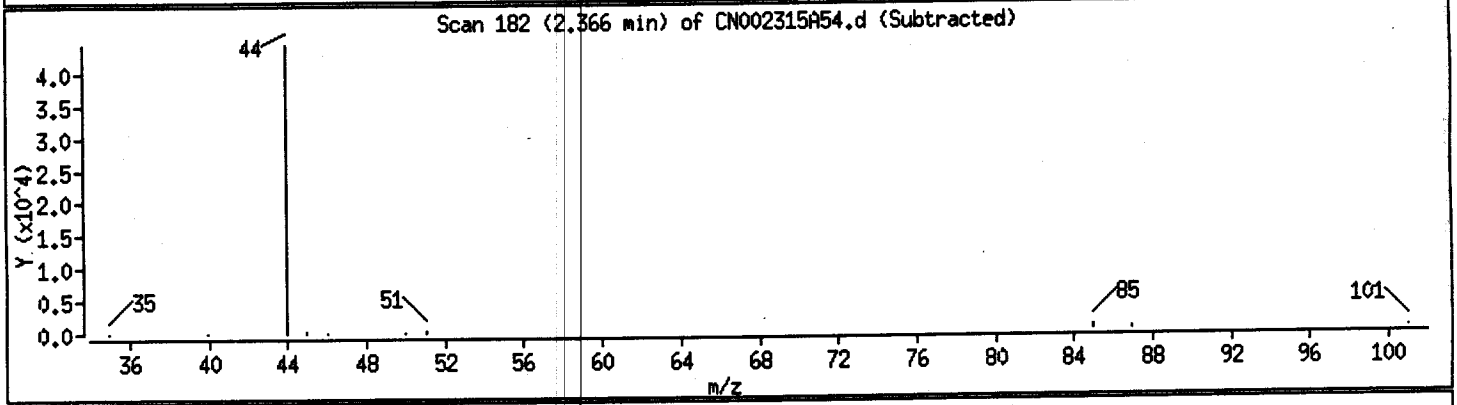
Operator: 2011

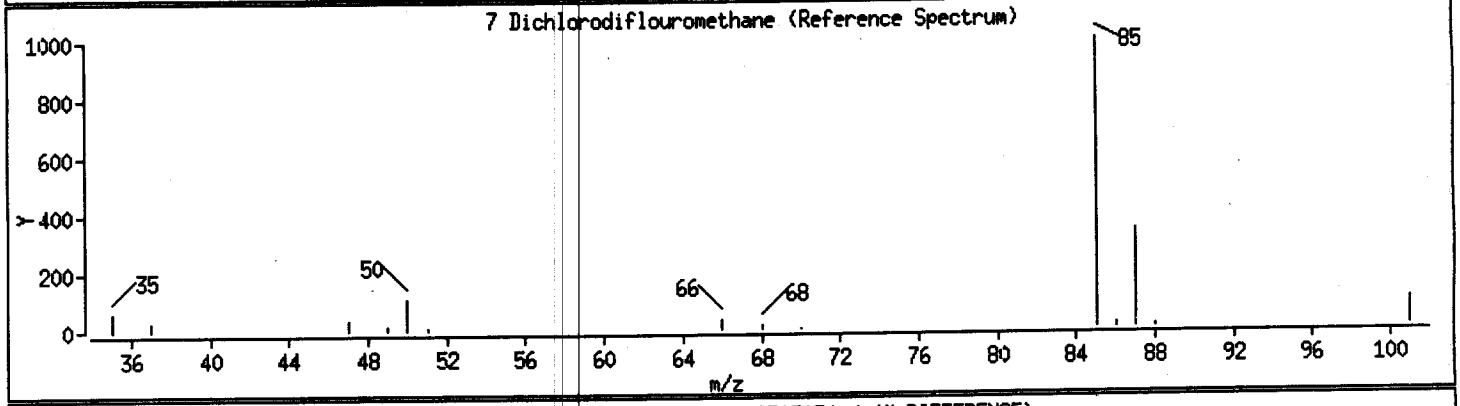
Column phase: DB624

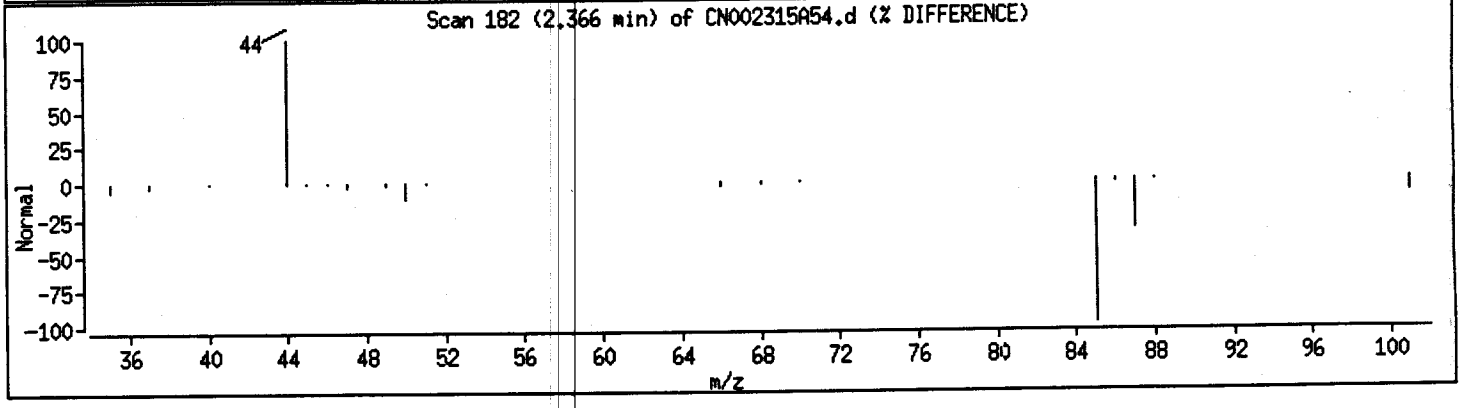
Column diameter: 0.53

7 Dichlorodiflourcmethane









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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

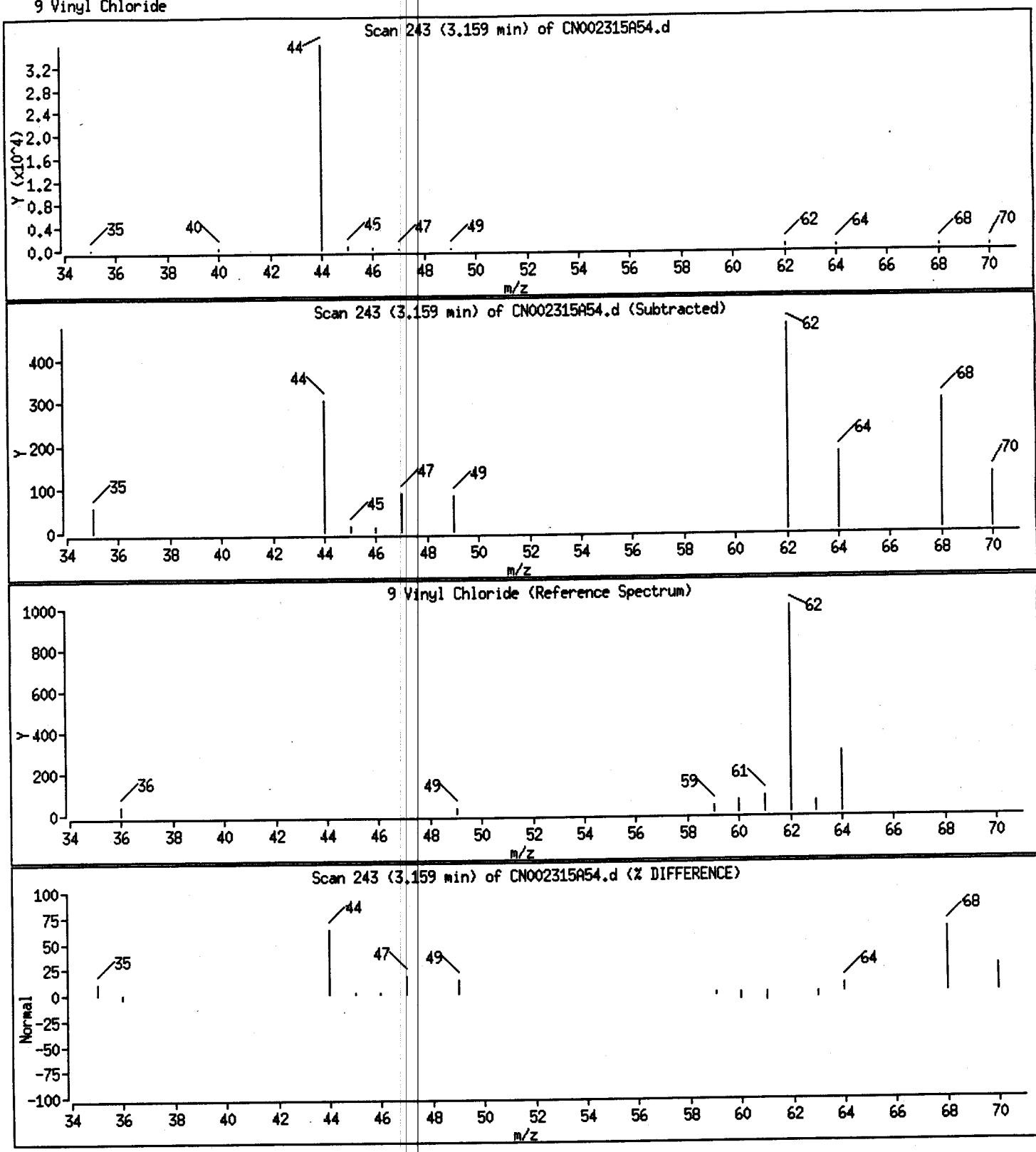
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column dianeter: 0.53

9 Vinyl Chloride



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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

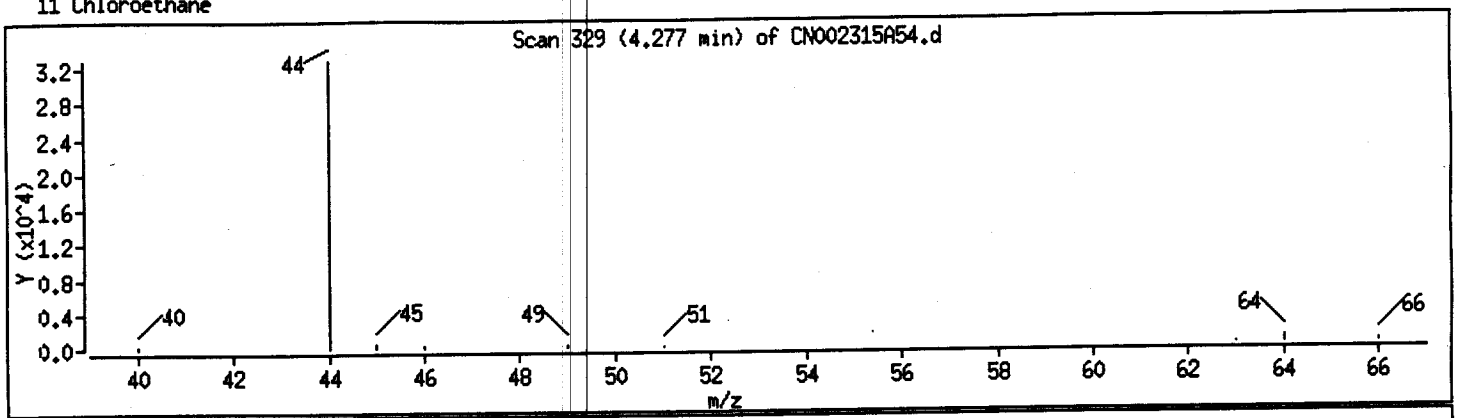
Purge Volume: 5.0

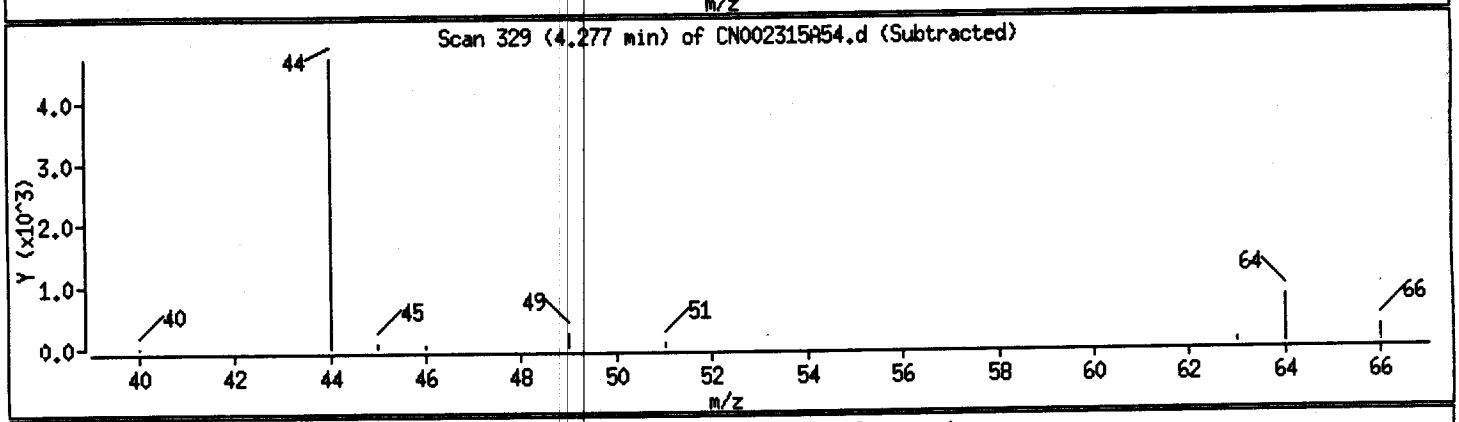
Operator: 2011

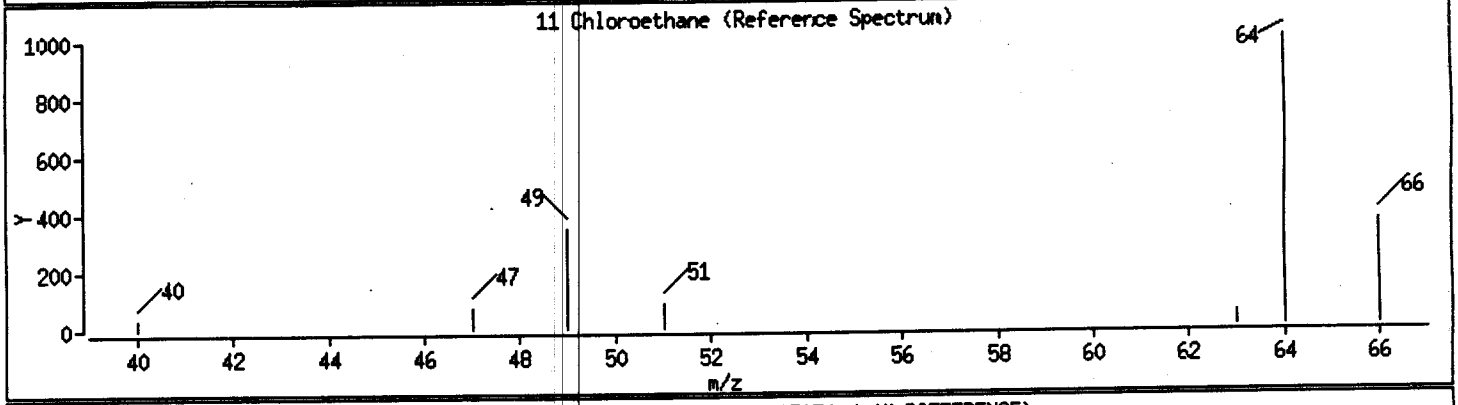
Column phase: DB624

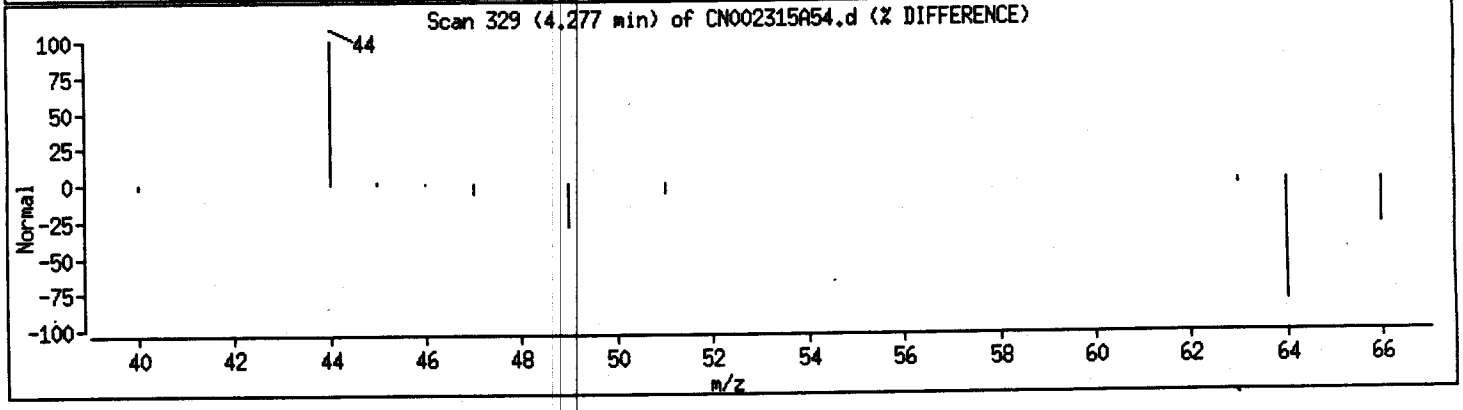
Column diameter: 0.53

11 Chloroethane









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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

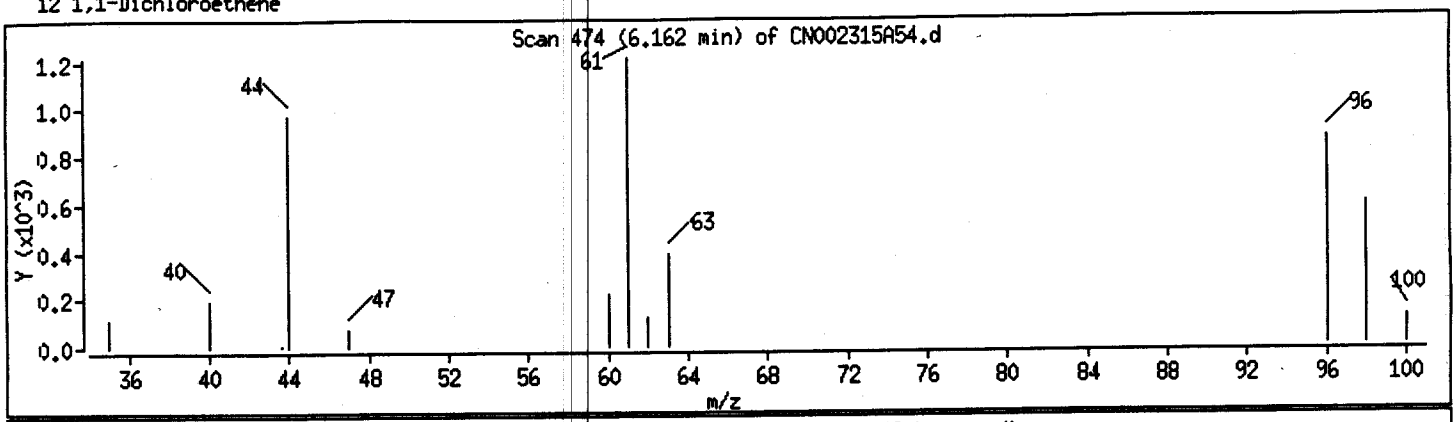
Purge Volume: 5.0

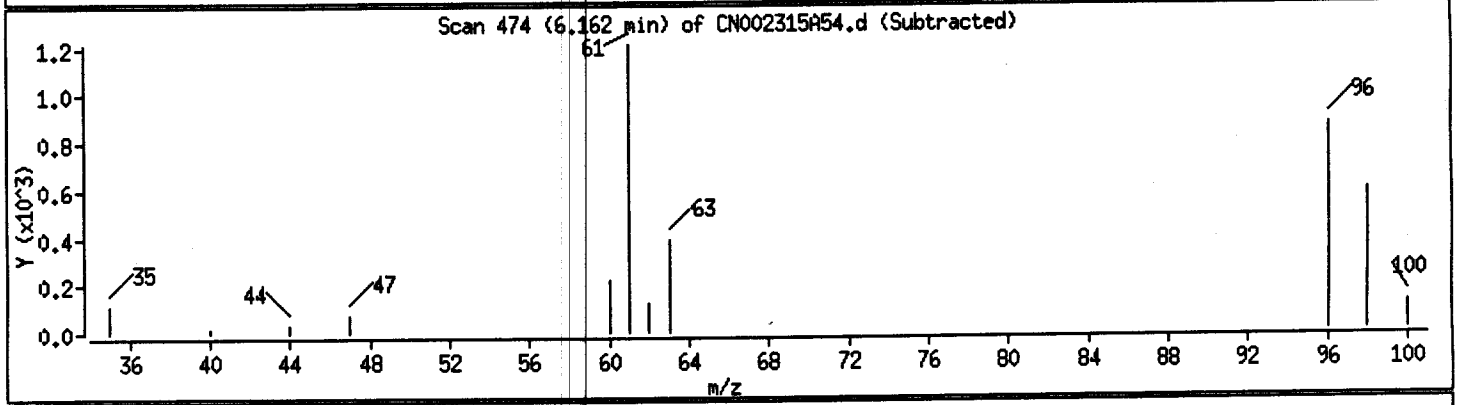
Operator: 2011

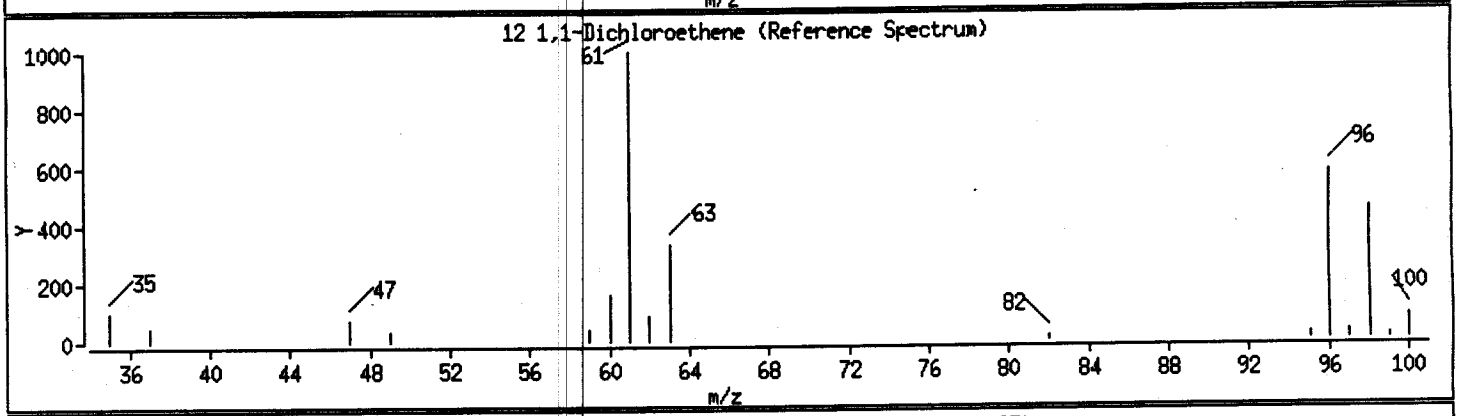
Column phase: DB624

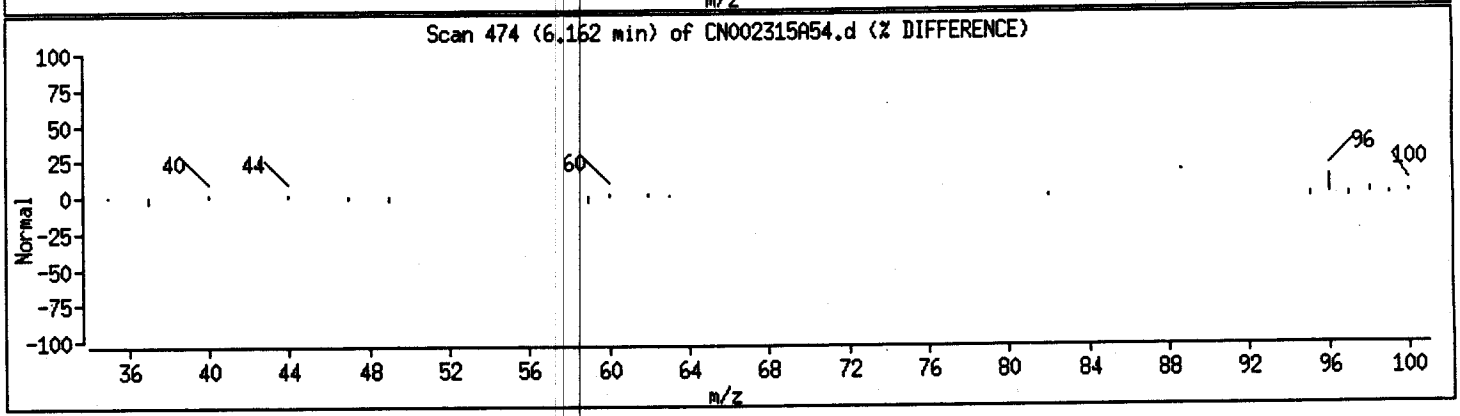
Column diameter: 0.53

12 1,1-Dichloroethene









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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

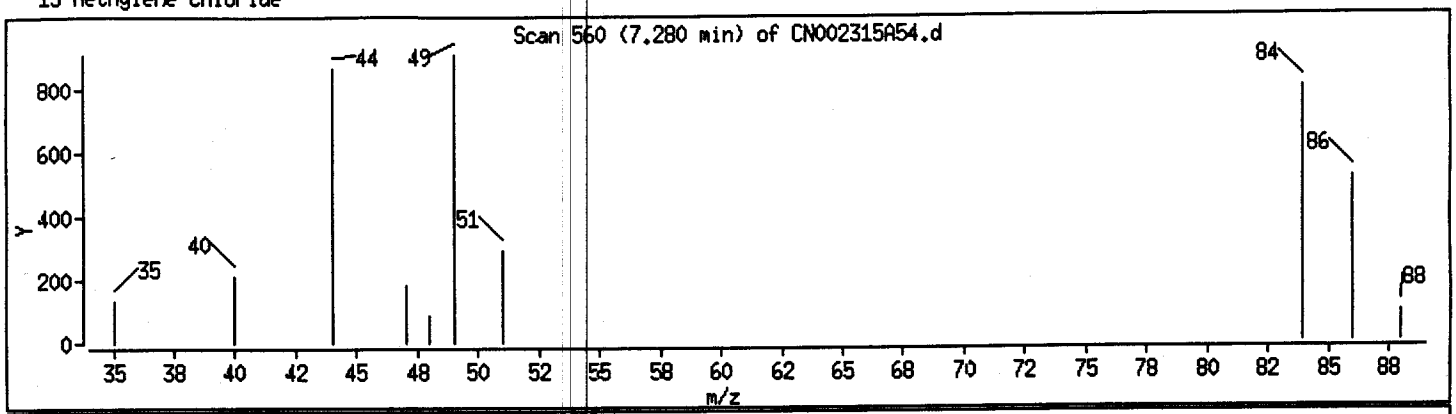
Purge Volume: 5.0

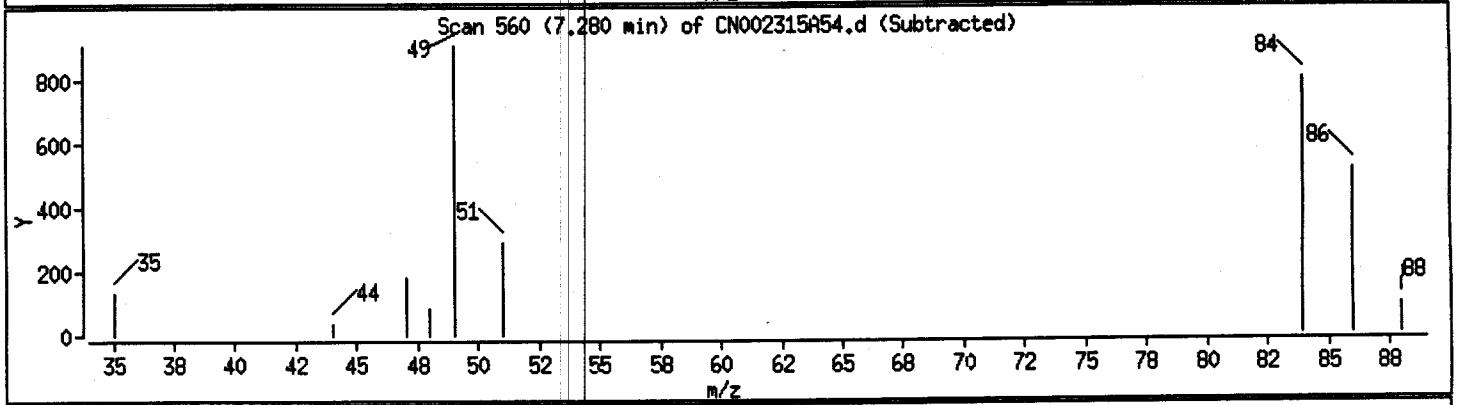
Operator: 2011

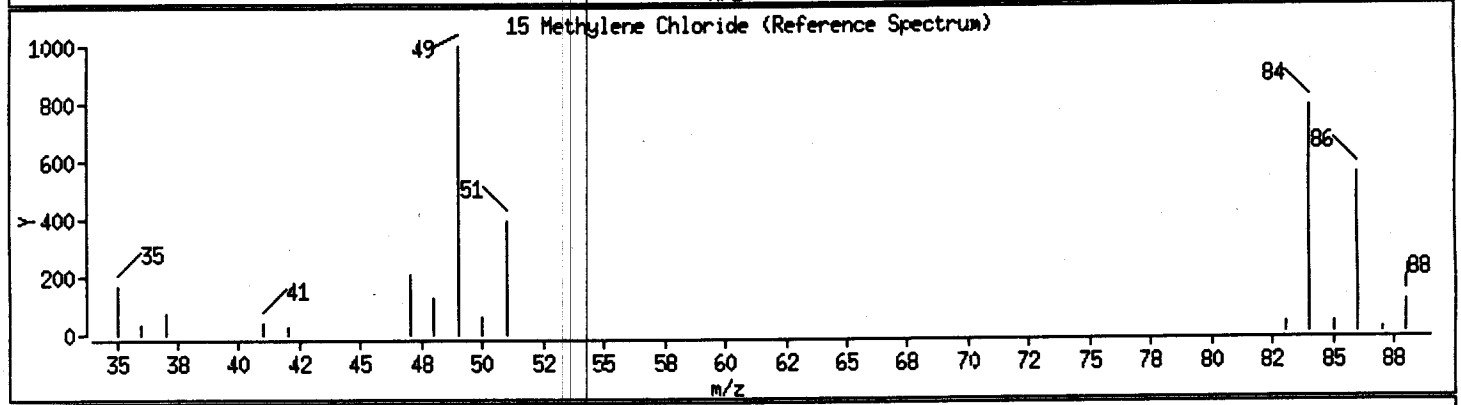
Column phase: DB624

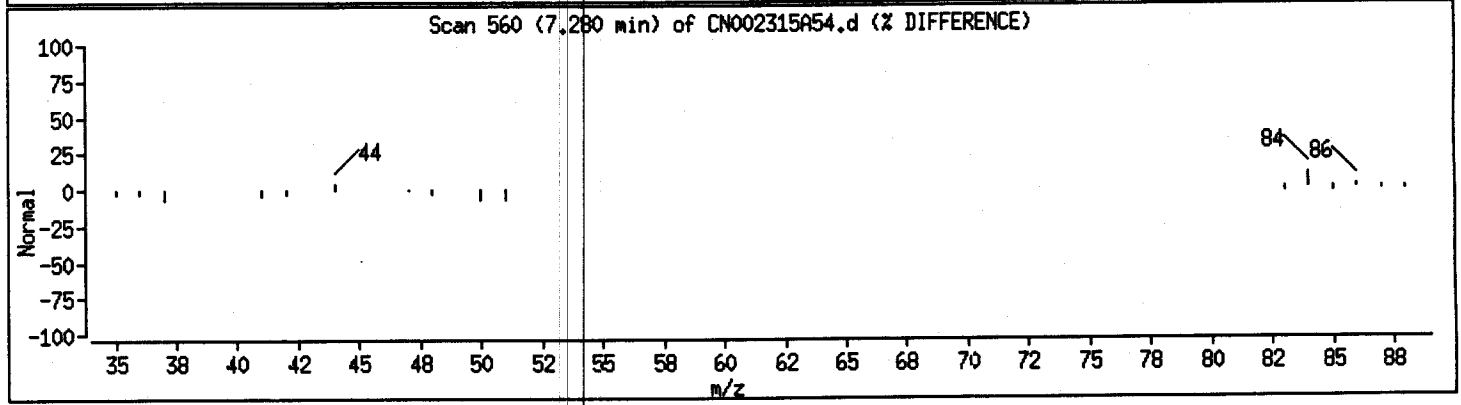
Column diameter: 0.53

15 Methylene Chloride









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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

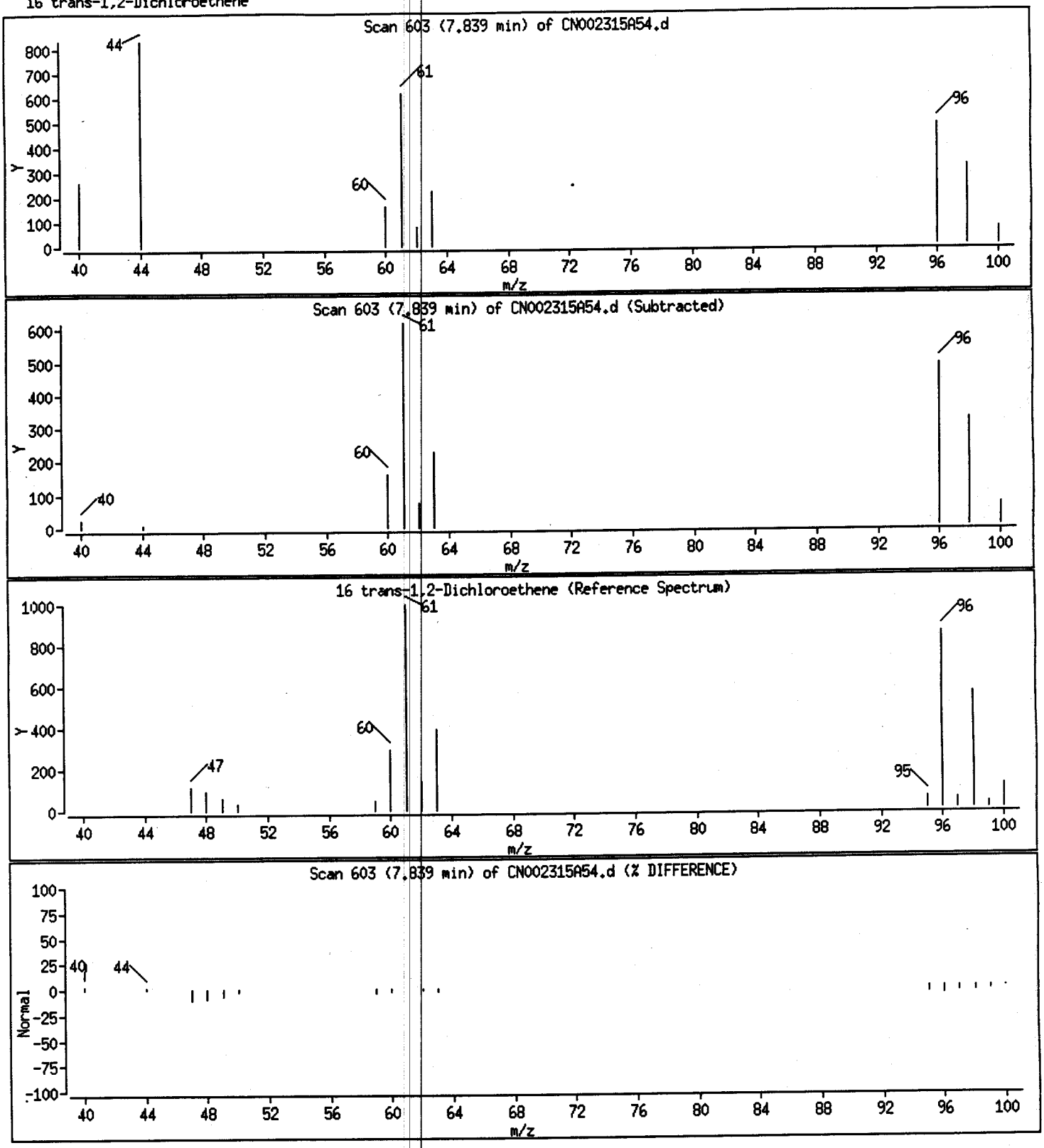
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

16 trans-1,2-Dichloroethene



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Client ID: MW8

Instrument: f50054.i

Sample Info:

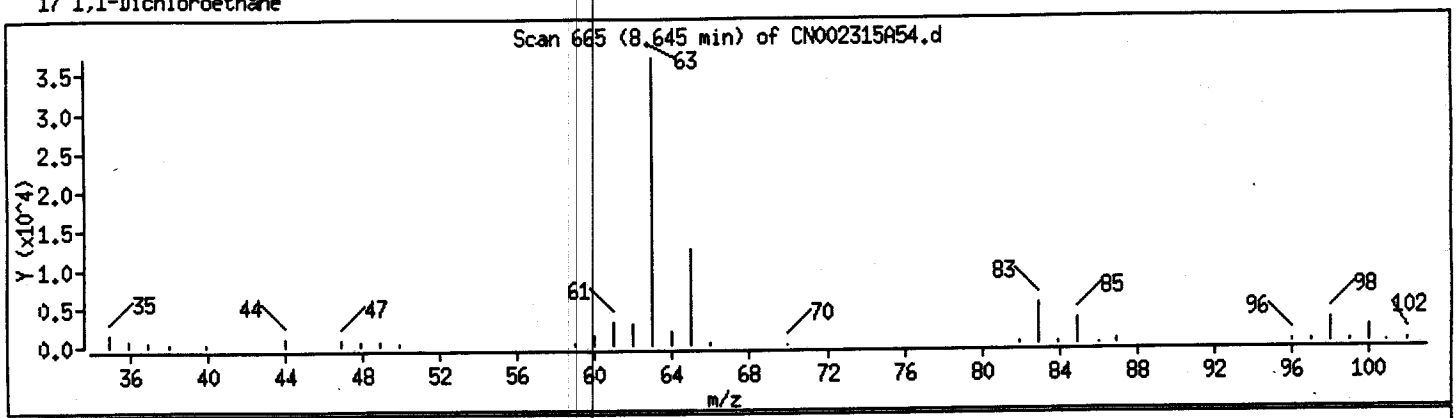
Purge Volume: 5.0

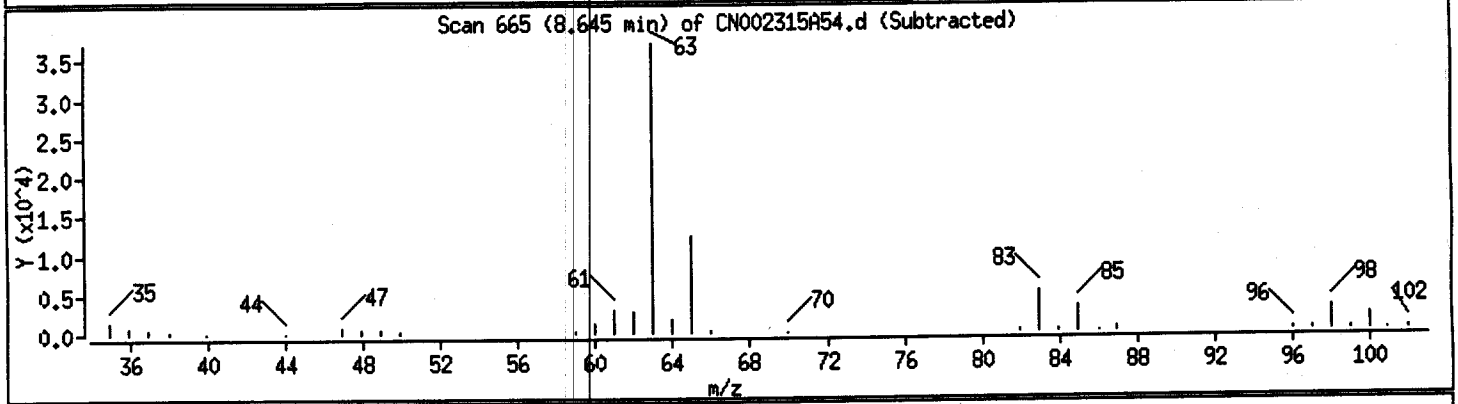
Operator: 2011

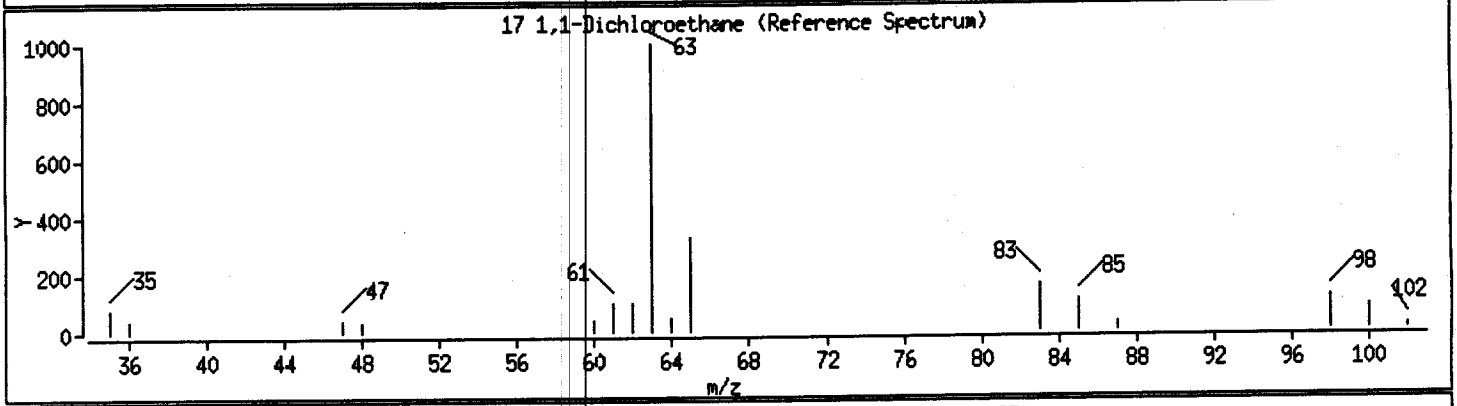
Column phase: DB624

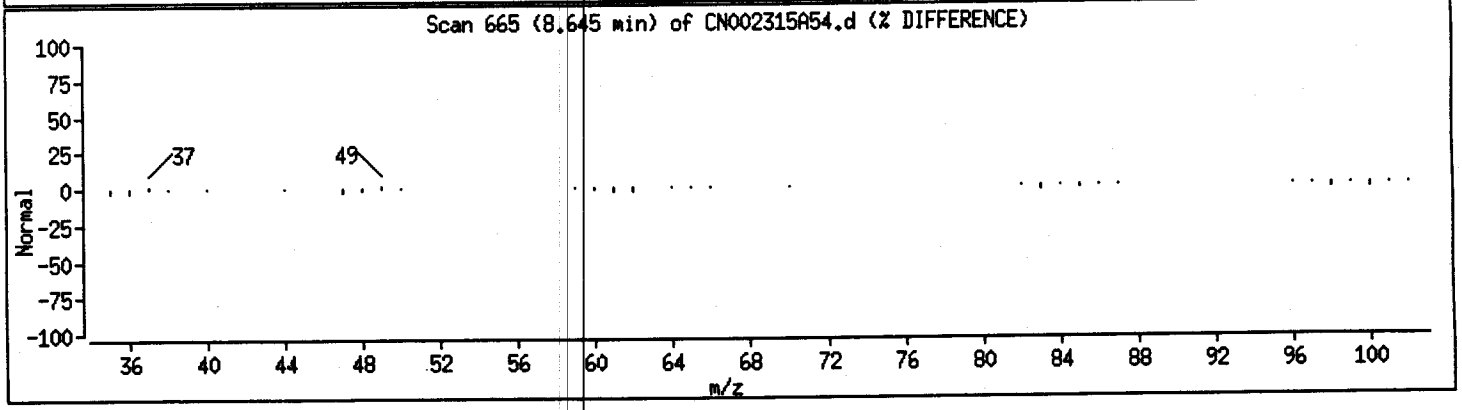
Column diameter: 0.53

17 1,1-Dichloroethane









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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

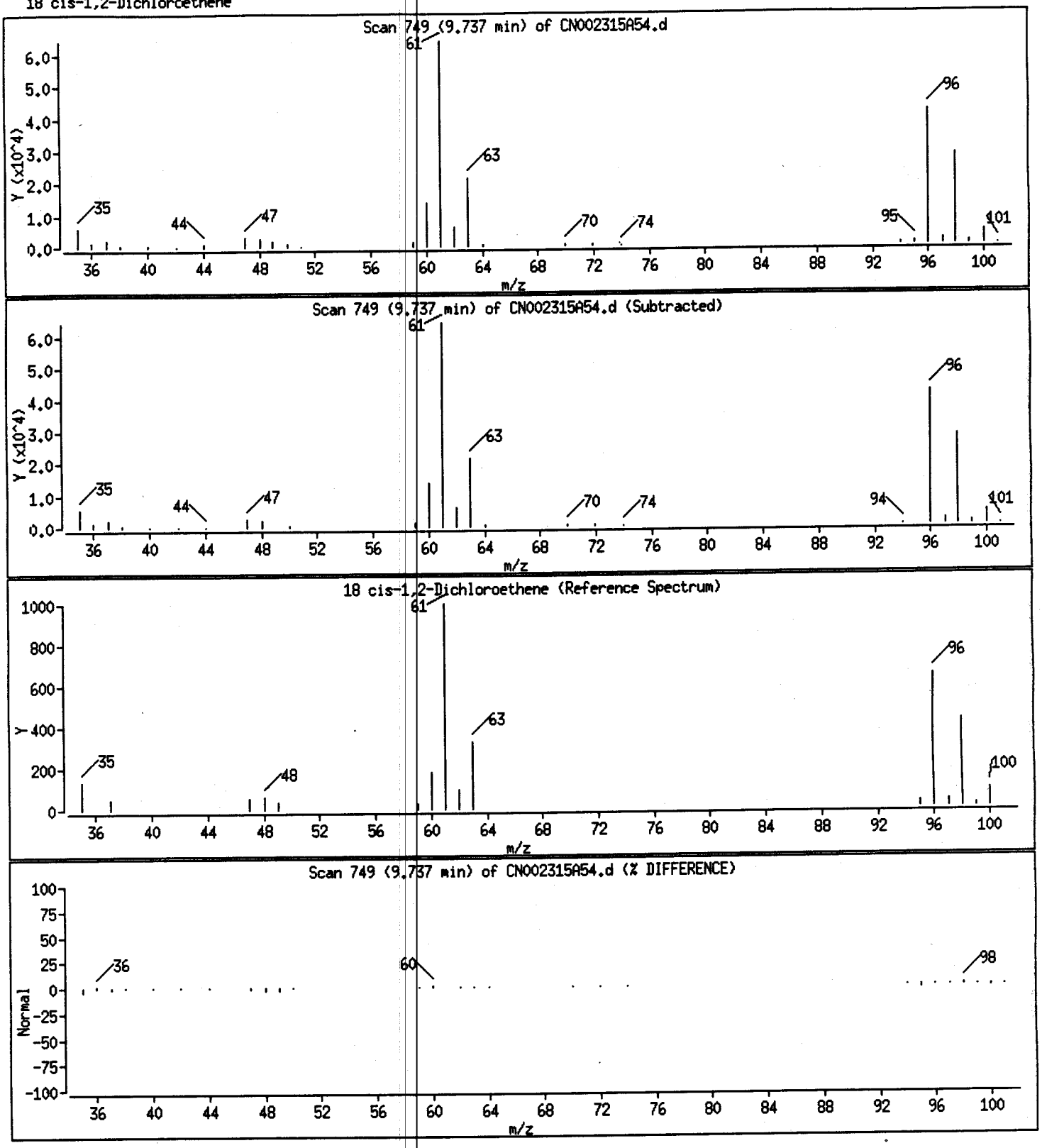
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

18 cis-1,2-Dichlorcethene



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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

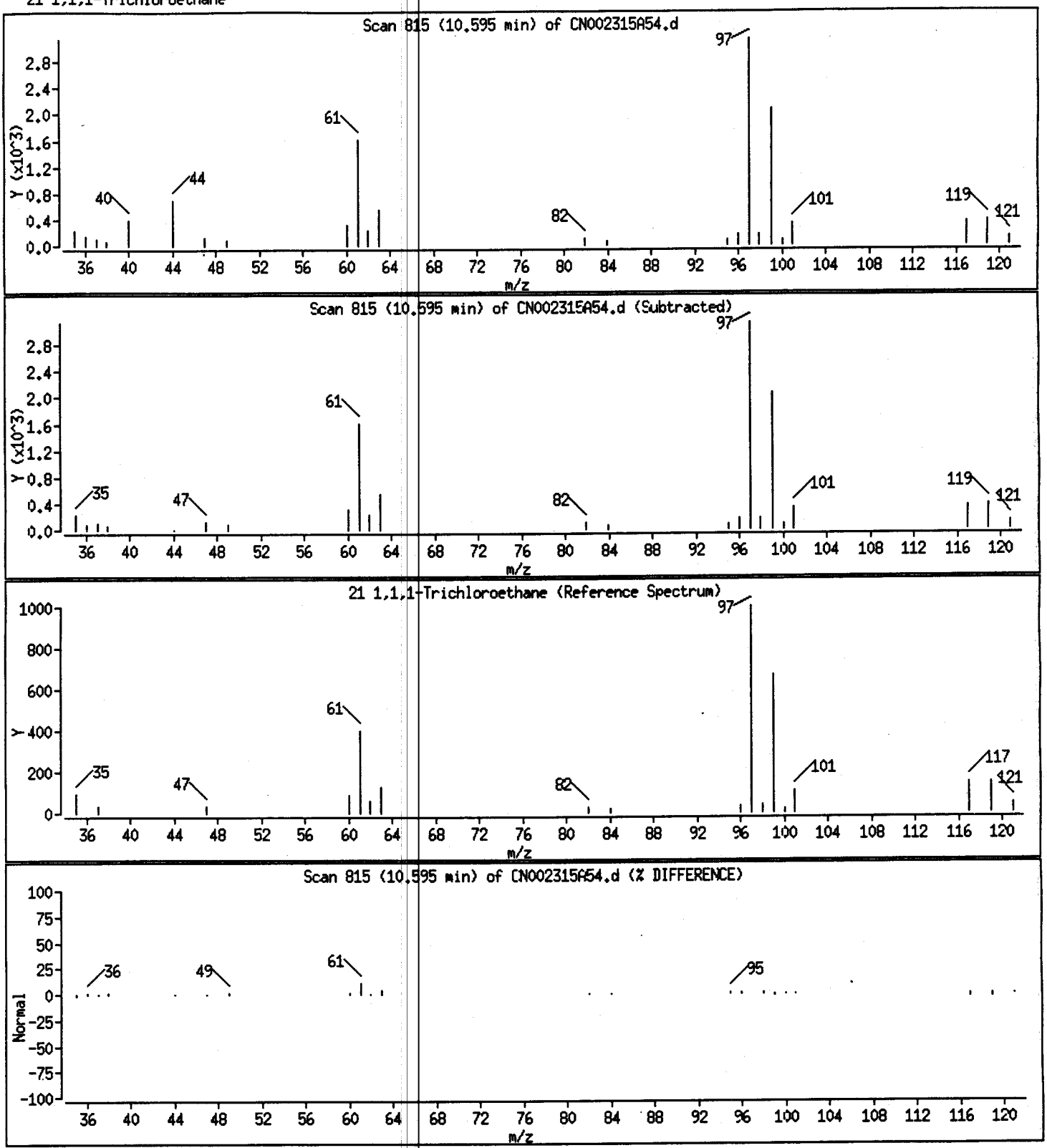
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

21 1,1,1-Trichloroethane



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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

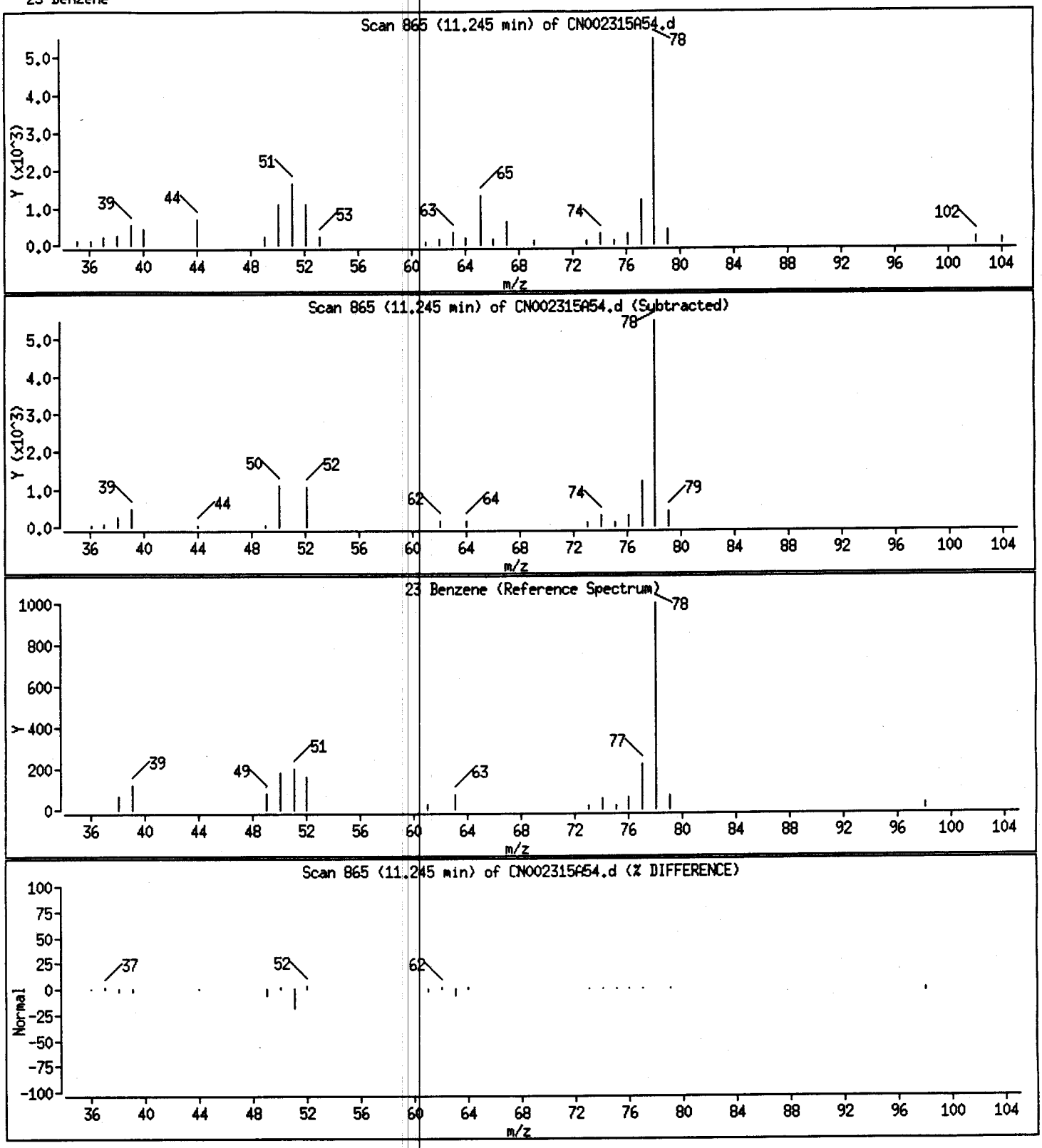
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

23 Benzene



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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

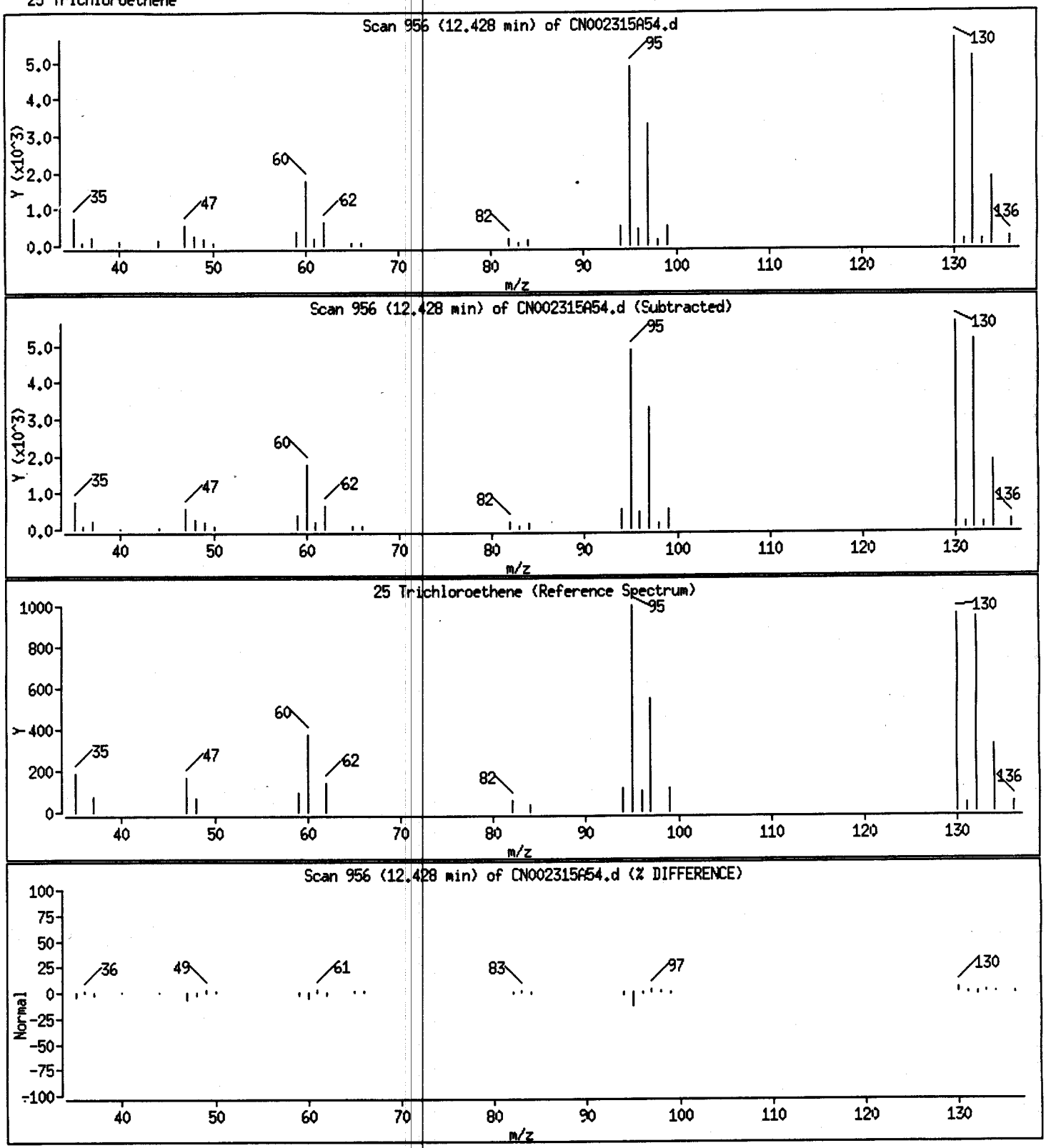
Purge Volume: 5.0

Operator: 2011

Column phase: DB624

Column diameter: 0.53

25 Trichloroethene



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Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

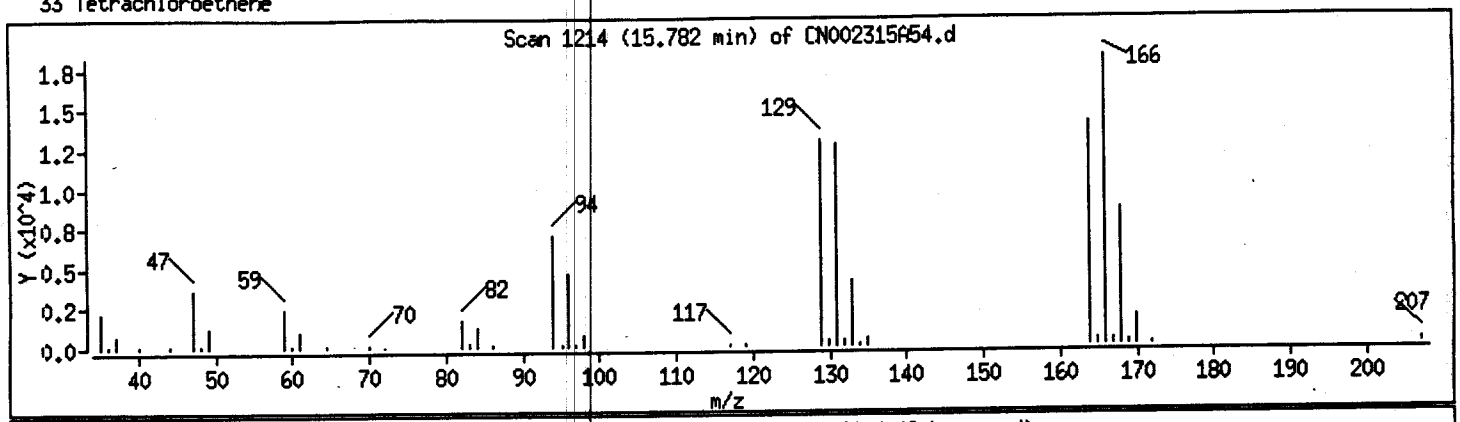
Purge Volume: 5.0

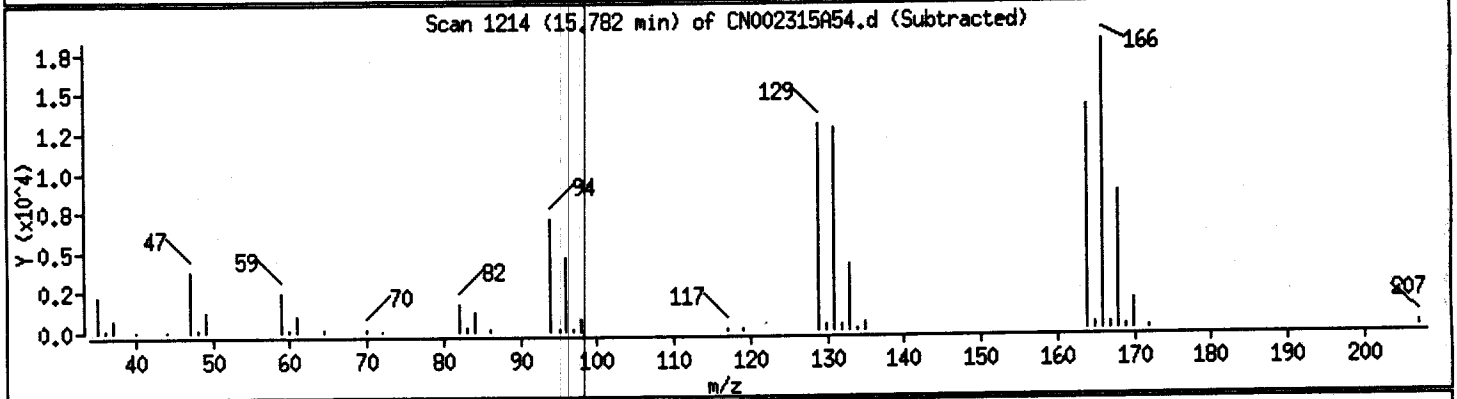
Operator: 2011

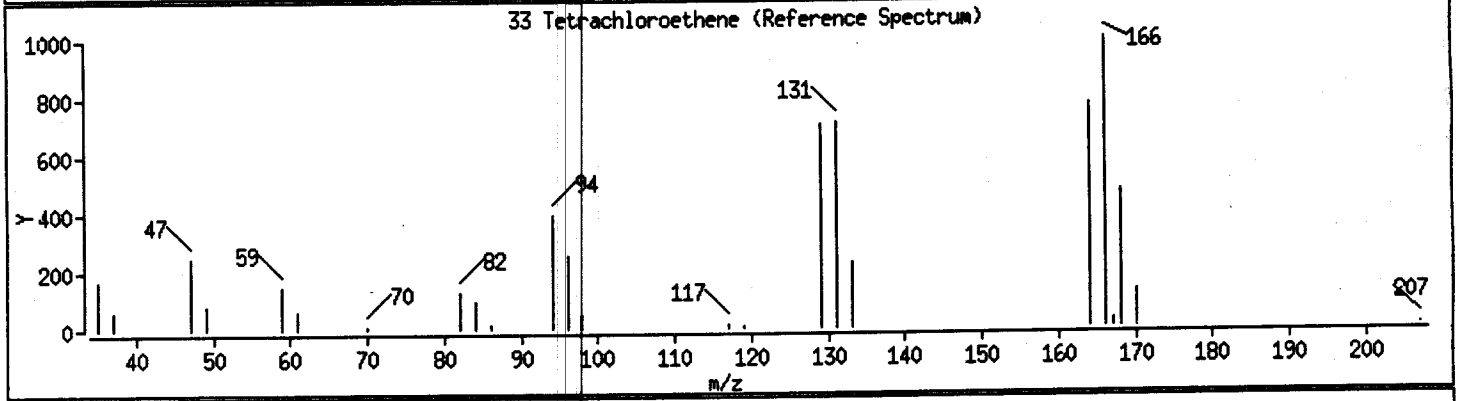
Column phase: DB624

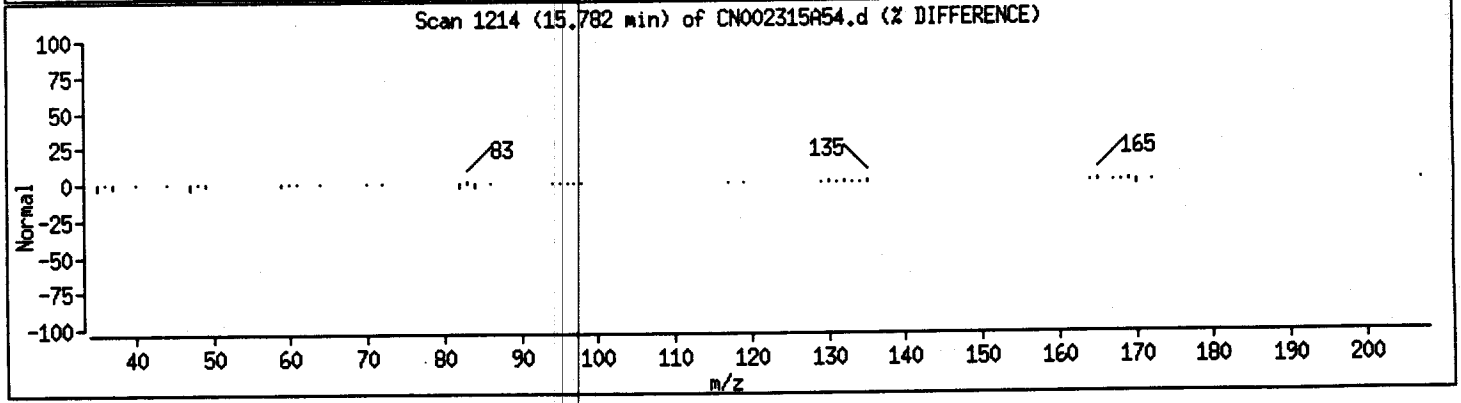
Column diameter: 0.53

33 Tetrachloroethene









Data File: /chem/f50054.i/BF950424B54.b/CN002315A54.d

Date : 24-APR-1995 23:49

Client ID: MW8

Instrument: f50054.i

Sample Info:

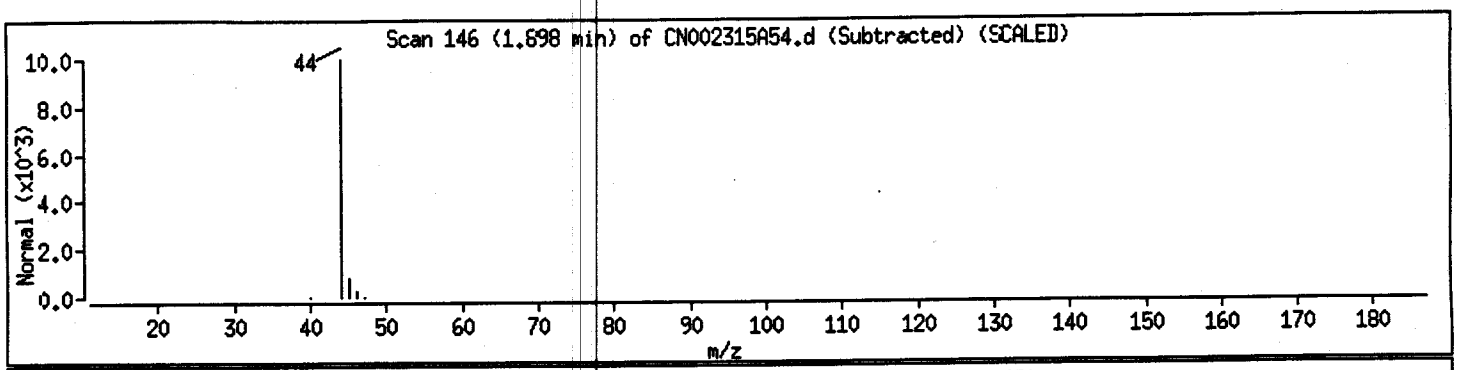
Purge Volume: 5.0

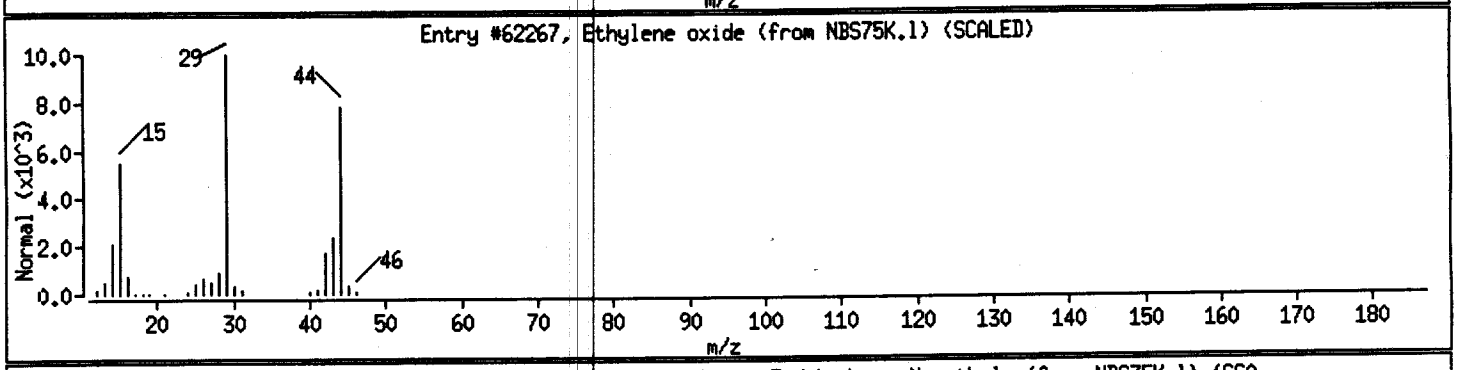
Operator: 2011

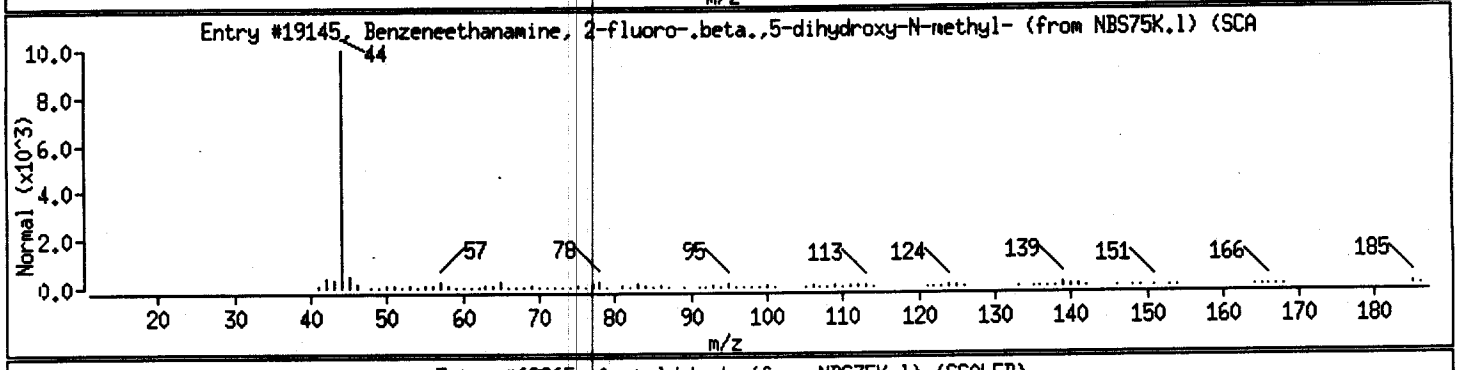
Column phase: DB624

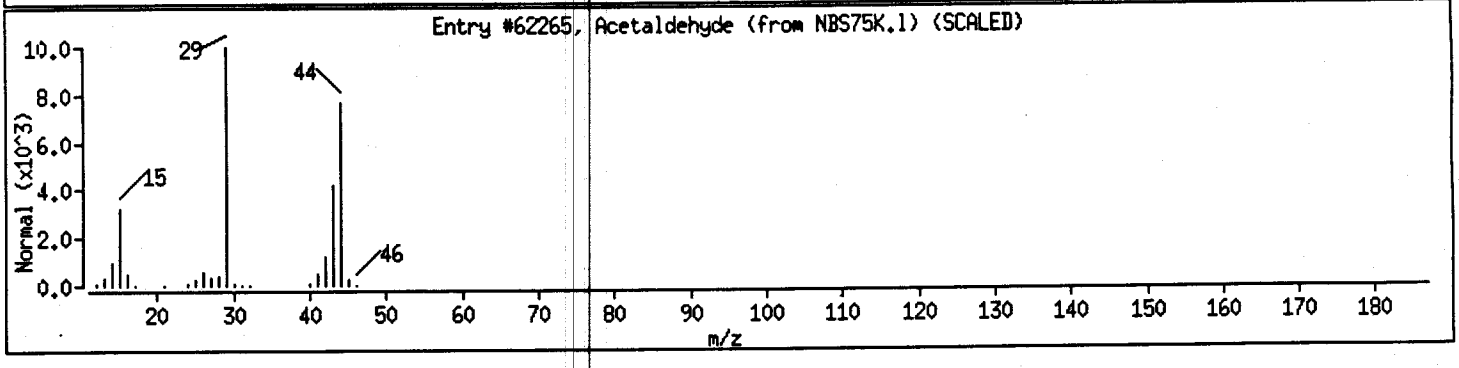
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
laboratory artifact						
Ethylene oxide	75-21-8	NBS75K.l	62267	3	C2H4O	44
Benzeneethanamine, 2-fluoro-.beta.,5-dih	0-00-0	NBS75K.l	19145	2	C9H12FNO2	185
Acetaldehyde	75-07-0	NBS75K.l	62265	2	C2H4O	44









LAB INSTRUCTIONS

PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)

J2( ) J4( ) D2( ) (:1)

==========

702315: 2011: 1:

==========

GC/MS ANALYSIS

AMOUNT PURGED: 5000. UL V54/5195

INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL

BFB FILENAME: BF950424B54

BLANK FILENAME: CB950424B54

STANDARD FILENAME: CS950424B54

SAMPLE FILENAME: CN002315A54

ANALYST(S): INJECTION 2011 WORKUP 1948 + Smith

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [✓] COMPLETE

[ ] REINJECT NEAT
[ ] DILUTE ( )

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : 1

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED 1

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW SL DATE 4/28/95 AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ___

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

==========

COMPUCHEM LABORATORIES

QUALITY ASSURANCE NOTICE

CompuChem ID# 702315
Client ID# mw8
Instrument Blank ID VBLKJM
Case # 30458

he early-eluting peak on the RIC of the volatile fraction at scan # 141 is a aboratory artifact believed to be a mixture of water and various atmospheric ases. This peak is usually present at a height less than 10% that of the nternal standard nearest in elution time order, although it may exceed this eight under certain instrument conditions.

eriodically, a number of maintenance procedures are performed in an effort to educe the intensity of this artifact. These procedures may include:

-trap replacement
-reconditioning and/or replacing column
-replacing six-port valve in Tekmar
-cleaning of the separator
-cleaning or replacing source
-replacing lines in Tekmar

n many cases, even after maintenance, the artifact peak remains at a height reater than 10% of the nearest internal standard. Since the analytical uality of these data have not been compromised and the identification of arget compounds has not been impaired, we are reporting this analysis with eference to this qualifying notice. The artifact is not included as part of he Library Search requirements for the associated samples.

Reviewer's initials/ID SWB / 633
date 4/28/95

QAN-V-14
901001

3. Standards Data

a. Form VI VOA
Initial Calibration Data

b. Form VII VOA
Continuing Calibration Data

a. Form VI VOA
Initial Calibration Data

In order by instrument.

(1) VOA standards reconstructed ion chromatograms and quantitation reports for the initial (five point) calibration. Spectra not required.

(2) All initial calibration data must be included, regardless of when it was performed and for which case. When more than one initial calibration is performed, the data must be put in chronological order, by instrument.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Instrument ID: F50054 Calibration Date(s): 04/24/95 04/24/95

Heated Purge: (Y/N) N Calibration Times: 0019 0447

GC Column:DB624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =CS950424C54.D RRF20 =CW950424C54.D
RRF50 =CV950424C54.D RRF100=CX950424C54.D RRF200=CT950424C54.D

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Chloromethane	0.412	0.414	0.450	0.389	0.380	0.409	6.6
Bromomethane *	1.303	1.376	1.433	1.318	1.266	1.339	4.9*
Vinyl Chloride *	0.603	0.619	0.657	0.612	0.600	0.618	3.7*
Chloroethane	0.592	0.820	0.866	0.768	0.758	0.761	13.6
Methylene Chloride	1.576	1.491	1.502	1.331	1.286	1.437	8.6
Acetone	0.250	0.227	0.254	0.199	0.219	0.230	10.0
Carbon Disulfide	3.444	3.560	3.856	3.515	3.417	3.558	4.9
1,1-Dichloroethene *	1.319	1.385	1.514	1.354	1.325	1.379	5.8*
1,1-Dichloroethane *	2.912	2.897	2.974	2.836	2.724	2.869	3.3*
1,2-Dichloroethene (total)	1.684	1.677	1.706	1.611	1.529	1.641	4.4
Chloroform *	4.495	4.406	4.334	4.144	3.882	4.252	5.7*
1,2-Dichloroethane *	2.284	2.433	2.372	2.286	2.233	2.322	3.4*
2-Butanone	0.546	0.497	0.521	0.436	0.448	0.490	9.6
1,1,1-Trichloroethane *	1.139	1.108	1.050	1.040	0.947	1.057	7.0*
Carbon Tetrachloride *	1.049	1.067	1.015	1.004	0.913	1.010	5.9*
Bromodichloromethane *	0.569	0.587	0.626	0.675	0.735	0.638	10.6*
1,2-Dichloropropane	0.239	0.249	0.270	0.298	0.342	0.280	14.8
cis-1,3-Dichloropropene *	0.338	0.363	0.413	0.459	0.523	0.419	17.8*
Trichloroethene *	0.480	0.495	0.534	0.561	0.544	0.523	6.5*
Dibromochloromethane *	0.666	0.679	0.758	0.778	0.754	0.727	7.0*
1,1,2-Trichloroethane *	0.301	0.302	0.330	0.352	0.377	0.332	9.8*
Benzene *	1.341	1.333	1.269	1.237	1.157	1.267	6.0*
trans-1,3-Dichloropropene *	0.256	0.289	0.333	0.371	0.434	0.337	20.7*
Bromoform *	0.492	0.498	0.522	0.533	0.513	0.511	3.3*
4-Methyl-2-Pentanone	0.089	0.091	0.099	0.091	0.105	0.095	7.2
2-Hexanone	0.088	0.089	0.100	0.088	0.106	0.094	9.0
Tetrachloroethene *	0.523	0.520	0.521	0.479	0.452	0.499	6.5*
1,1,2,2-Tetrachloroethane *	0.391	0.373	0.391	0.396	0.463	0.403	8.6*
Toluene *	0.896	0.918	0.990	1.000	1.044	0.970	6.3*
Chlorobenzene *	1.011	1.007	1.062	1.013	0.980	1.015	2.9*
Ethylbenzene *	0.413	0.429	0.464	0.459	0.455	0.444	4.9*
Styrene *	0.851	0.891	0.966	0.937	0.875	0.904	5.2*
Xylene (Total) *	0.517	0.553	0.616	0.587	0.550	0.565	6.7*
Dichlorodiflouromethane	0.789	0.834	0.890	0.790	0.753	0.811	6.4
Toluene-d8	0.819	0.817	0.921	0.934	0.969	0.892	7.8
Bromofluorobenzene *	0.699	0.683	0.806	0.827	0.853	0.774	10.0*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Instrument ID: F50054 Calibration Date(s): 04/24/95 04/24/95

Heated Purge: (Y/N) N Calibration Times: 0019 0447

GC Column:DB624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =CS950424C54.D RRF20 =CW950424C54.D
RRF50 =CV950424C54.D RRF100=CX950424C54.D RRF200=CT950424C54.D

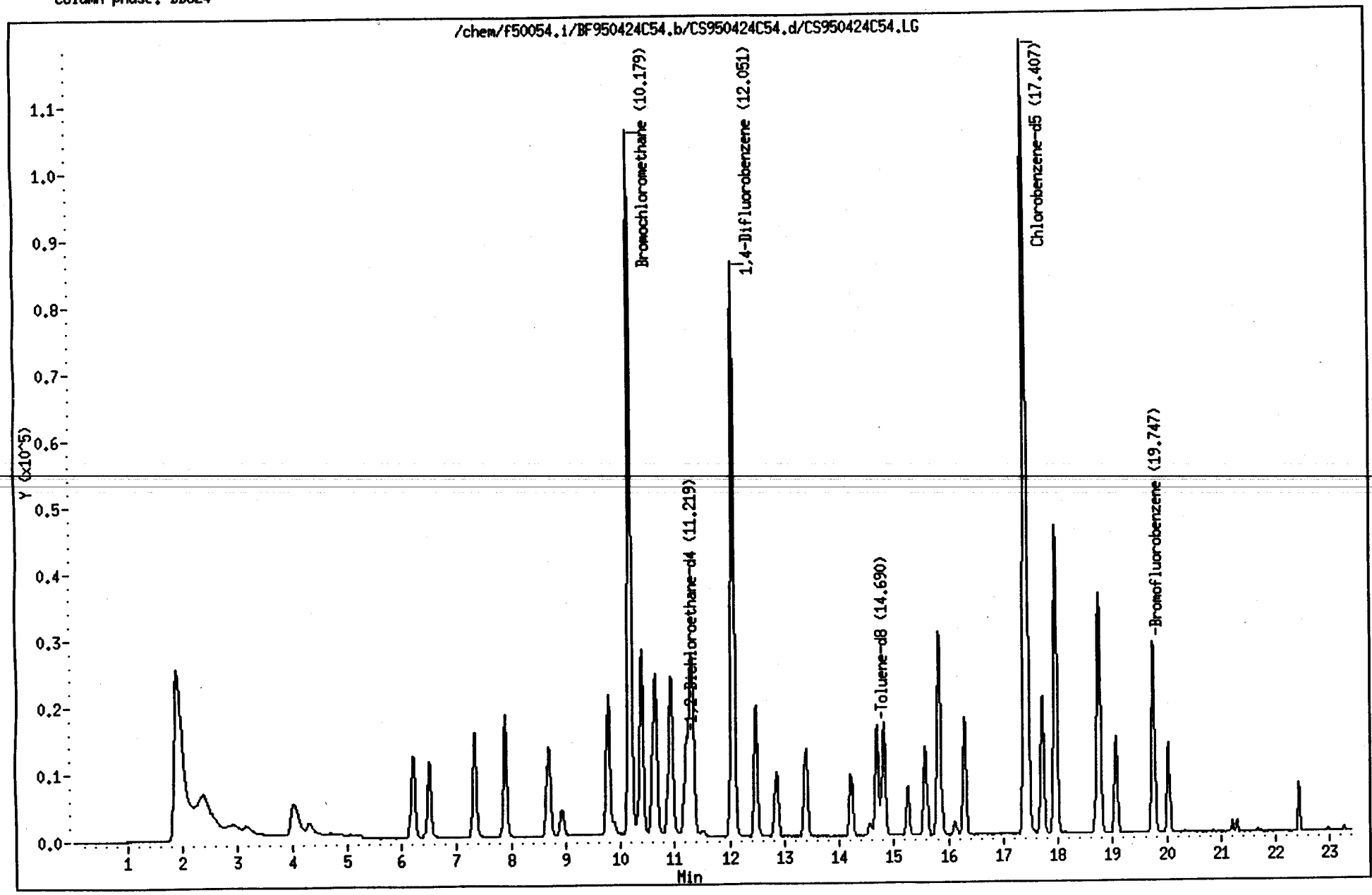
COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
1,2-Dichloroethane-d4	2.025	1.890	1.895	1.904	1.821	1.907	3.9

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50054.i/BF950424C54.b/CS950424C54.d
Date : 24-APR-1995 00:19
Client ID: VSTD010
Sample Info: VSTD010: 1948: 1:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424C54.b/CS950424C54.d
Report Date: 24-Apr-1995 16:52

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424C54.b/CS950424C54.d
Lab Smp Id: VSTD010 Client Smp ID: VSTD010
Inj Date : 24-APR-1995 00:19
Operator : 1948 Inst ID: f50054.i
Smp Info : VSTD010: 1948: 1:
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424C54.b/W390CLPDCDFM.m
Meth Date : 24-Apr-1995 16:51 bevan Quant Type: ISTD
Cal Date : 24-APR-1995 00:19 Cal File: CS950424C54.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	10.166	10.166	(1.000)	55235	250.0	
*	2 1,4-Difluorobenzene	114.00	12.051	12.051	(1.000)	179885	250.0	
*	3 Chlorobenzene-d5	117.00	17.394	17.394	(1.000)	177010	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.206	11.206	(1.102)	22374	50.00	53.10
$	5 Toluene-d8	98.00	14.690	14.690	(0.845)	28994	50.00	45.91(a)
$	6 Bromofluorobenzene	95.00	19.760	19.760	(1.136)	24750	50.00	45.17(a)
	7 Dichlorodiflouromethane	85.00	2.418	2.418	(0.238)	8713	50.00	48.78(aM)
	8 Chloromethane	50.00	2.886	2.886	(0.284)	4550	50.00	50.49
	9 Vinyl Chloride	62.00	3.172	3.172	(0.312)	6664	50.00	48.78(a)
	10 Bromomethane	94.00	4.017	4.017	(0.395)	14391	50.00	48.64(a)
	11 Chloroethane	64.00	4.329	4.329	(0.426)	6544	50.00	38.92(a)
	12 1,1-Dichloroethene	96.00	6.201	6.201	(0.610)	14575	50.00	47.82(a)
	13 Acetone	43.00	6.461	6.461	(0.636)	2766	50.00	54.45
	14 Carbon Disulfide	76.00	6.500	6.500	(0.639)	38046	50.00	48.39(a)
	15 Methylene Chloride	84.00	7.319	7.319	(0.720)	17412	50.00	54.83
	16 trans-1,2-Dichloroethene	96.00	7.878	7.878	(0.775)	17612	50.00	51.02
	17 1,1-Dichloroethane	63.00	8.684	8.684	(0.854)	32174	50.00	50.76
	18 cis-1,2-Dichloroethene	96.00	9.776	9.776	(0.962)	19604	50.00	51.57
	19 2-Butanone	43.00	9.880	9.880	(0.972)	6032	50.00	55.77(M)
	20 Chloroform	83.00	10.387	10.387	(1.022)	49653	50.00	52.85
	21 1,1,1-Trichloroethane	97.00	10.634	10.634	(0.882)	40969	50.00	53.89
	22 Carbon Tetrachloride	117.00	10.920	10.920	(0.906)	37753	50.00	51.96
	23 Benzene	78.00	11.284	11.284	(0.936)	48232	50.00	52.89

Data File: /chem/f50054.i/BF950424C54.b/CS950424C54.d
Report Date: 24-Apr-1995 16:52

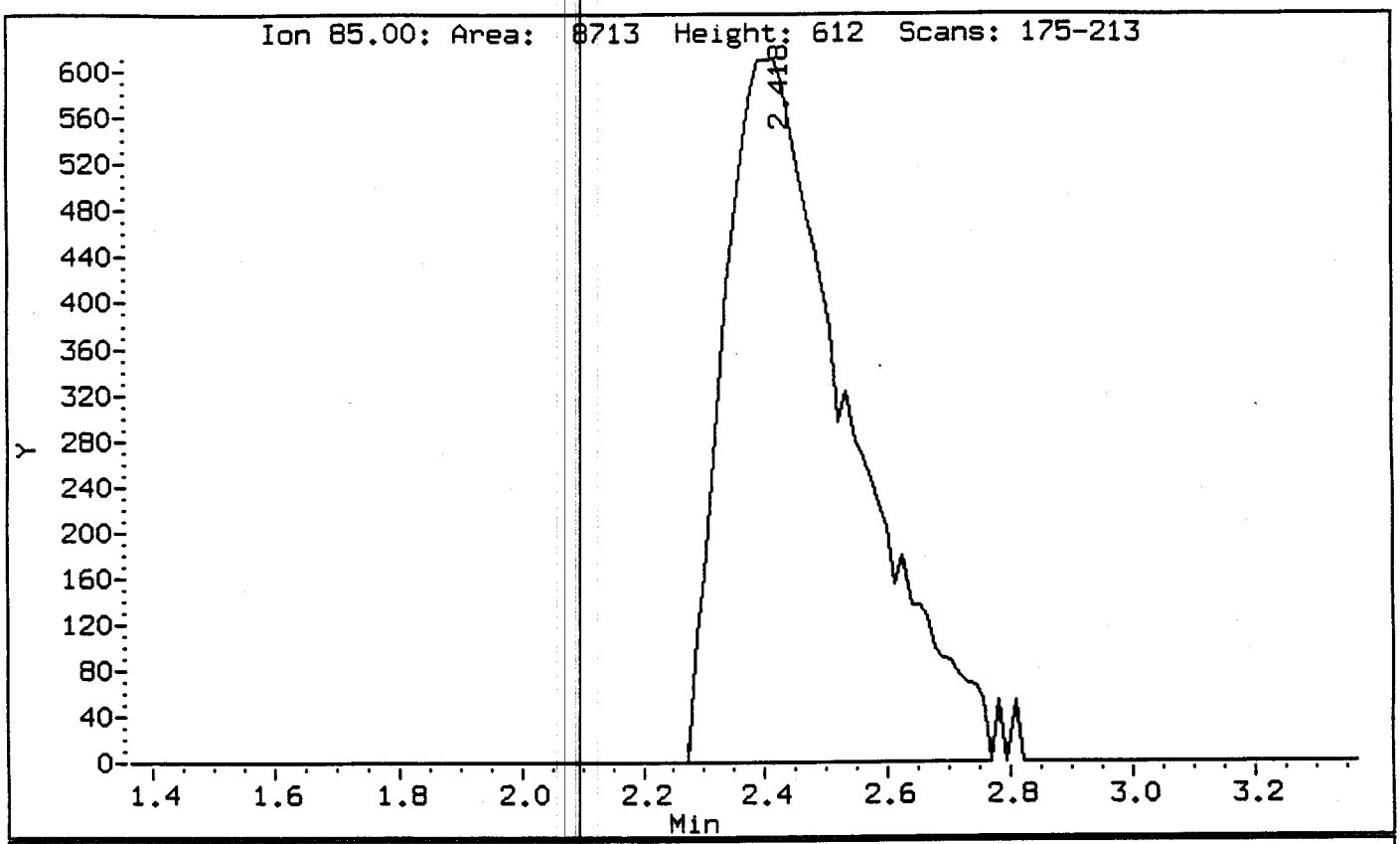
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	11.336	11.336	(1.115)	25229	50.00	49.18(a)
25	Trichloroethene	130.00	12.480	12.480	(1.036)	17262	50.00	45.87(a)
26	1,2-Dichloropropane	63.00	12.857	12.857	(1.067)	8611	50.00	42.79(a)
27	Bromodichloromethane	83.00	13.390	13.390	(1.111)	20471	50.00	44.57(a)
28	cis-1,3-Dichloropropene	75.00	14.222	14.222	(1.180)	12147	50.00	40.28(a)
29	4-Methyl-2-Pentanone	43.00	14.560	14.560	(0.837)	3151	50.00	46.89(a)
30	Toluene	91.00	14.807	14.807	(0.851)	31714	50.00	46.20(a)
31	trans-1,3-Dichloropropene	75.00	15.262	15.262	(1.266)	9227	50.00	38.10(a)
32	1,1,2-Trichloroethane	97.00	15.574	15.574	(1.292)	10831	50.00	45.28(a)
33	Tetrachloroethene	164.00	15.821	15.821	(0.910)	18531	50.00	52.43
34	2-Hexanone	43.00	16.120	16.120	(0.927)	3115	50.00	46.72(a)
35	Dibromochloromethane	129.00	16.289	16.289	(1.352)	23962	50.00	45.81(a)
36	Chlorobenzene	112.00	17.446	17.446	(1.003)	35800	50.00	49.84(a)
37	Ethylbenzene	106.00	17.706	17.706	(1.018)	14636	50.00	46.56(a)
38	m,p-Xylene	106.00	17.953	17.953	(1.032)	39335	100.0	97.47
39	o-Xylene	106.00	18.720	18.720	(1.076)	18307	50.00	45.80(a)
40	Styrene	104.00	18.759	18.759	(1.078)	30111	50.00	47.04(a)
41	Bromoform	173.00	19.058	19.058	(1.581)	17702	50.00	48.10(a)
42	1,1,2,2-Tetrachloroethane	83.00	20.033	20.033	(1.152)	13855	50.00	48.56(a)
M 43	1,2-Dichloroethene (total)	96.00				37216	100.0	102.6
M 44	Xylene (Total)	106.00				57642	50.00	144.2

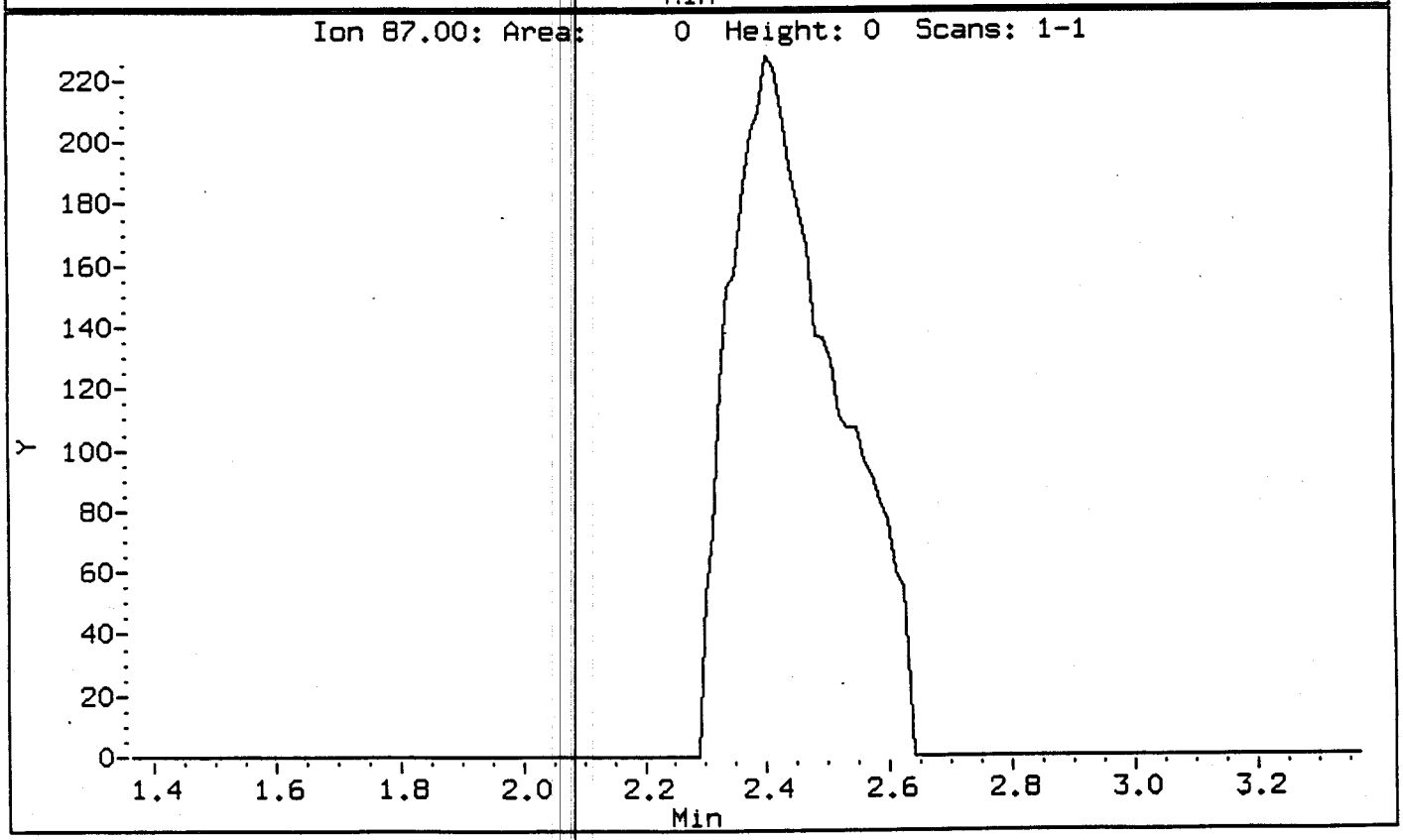
QC Flag Legend

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

Data File: /chem/f50054.i/BF950424C54.b/CS950424C54.d/CS950424C54.LG
Injection Date: 24-APR-95 00:19
Instrument: f50054.i
Client Sample ID: VSTD010

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





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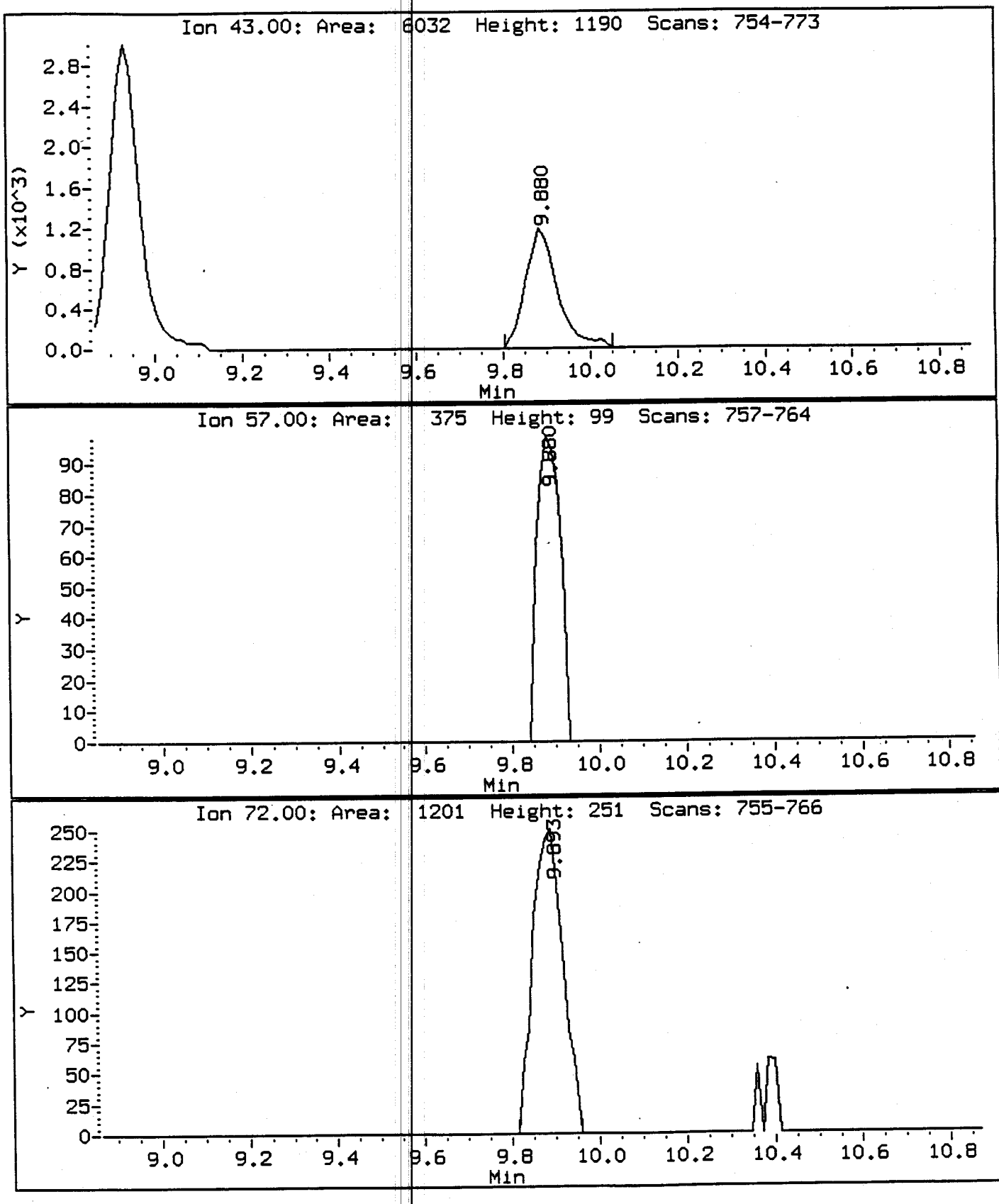
Injection Date: 24-APR-95 00:19
Instrument: f50054.i
Client Sample ID: VSTD010

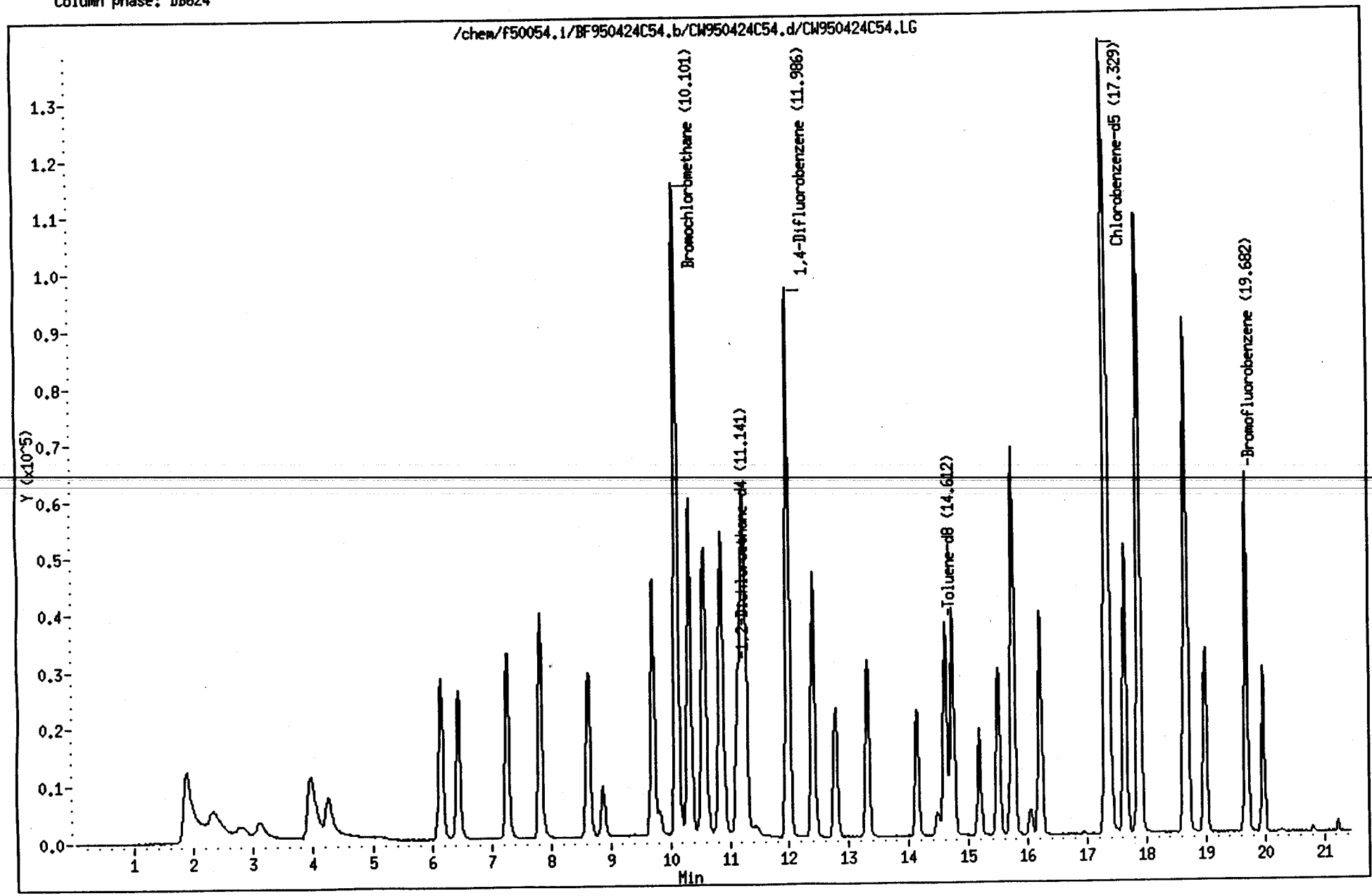
Compound: 2-Butanone
CAS Number: 78-93-3



Data File: /chem/f50054.i/BF950424C54.b/CW950424C54.d
Date : 24-APR-1995 03:40
Client ID: VSTD020
Sample Info: VSTD020: 1948: 1:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424C54.b/CW950424C54.d
Report Date: 24-Apr-1995 16:55

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424C54.b/CW950424C54.d
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 24-APR-1995 03:40
Operator : 1948 Inst ID: f50054.i
Smp Info : VSTD020: 1948: 1:
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424C54.b/W390CLPDCDFM.m
Meth Date : 24-Apr-1995 16:51 bevan Quant Type: ISTD
Cal Date : 24-APR-1995 02:49 Cal File: CV950424C54.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Bromochloromethane	128.00	10.101	10.101	(1.000)	60269	250.0	
* 2 1,4-Difluorobenzene	114.00	11.986	11.986	(1.000)	198495	250.0	
* 3 Chlorobenzene-d5	117.00	17.329	17.329	(1.000)	199235	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	11.141	11.141	(1.103)	45569	100.0	99.12
$ 5 Toluene-d8	98.00	14.612	14.612	(0.843)	65142	100.0	91.64
$ 6 Bromofluorobenzene	95.00	19.682	19.682	(1.136)	54429	100.0	88.26
7 Dichlorodiflouromethane	85.00	2.327	2.327	(0.230)	20110	100.0	103.2(M)
8 Chloromethane	50.00	2.795	2.795	(0.277)	9975	100.0	101.2
9 Vinyl Chloride	62.00	3.107	3.107	(0.308)	14921	100.0	100.1
10 Bromomethane	94.00	3.965	3.965	(0.393)	33170	100.0	102.8
11 Chloroethane	64.00	4.264	4.264	(0.422)	19770	100.0	107.8
12 1,1-Dichloroethene	96.00	6.136	6.136	(0.607)	33393	100.0	100.4
13 Acetone	43.00	6.396	6.396	(0.633)	5479	100.0	98.85
14 Carbon Disulfide	76.00	6.435	6.435	(0.637)	85820	100.0	100.0
15 Methylene Chloride	84.00	7.254	7.254	(0.718)	35953	100.0	103.8
16 trans-1,2-Dichloroethene	96.00	7.813	7.813	(0.773)	38365	100.0	101.8
17 1,1-Dichloroethane	63.00	8.619	8.619	(0.853)	69850	100.0	101.0
18 cis-1,2-Dichloroethene	96.00	9.698	9.698	(0.960)	42490	100.0	102.4
19 2-Butanone	43.00	9.815	9.815	(0.972)	11983	100.0	101.5
20 Chloroform	83.00	10.322	10.322	(1.022)	106224	100.0	103.6
21 1,1,1-Trichloroethane	97.00	10.569	10.569	(0.882)	87942	100.0	104.8
22 Carbon Tetrachloride	117.00	10.855	10.855	(0.906)	84686	100.0	105.6
23 Benzene	78.00	11.219	11.219	(0.936)	105870	100.0	105.2

Data File: /chem/f50054.i/BF950424C54.b/CW950424C54.d
Report Date: 24-Apr-1995 16:55

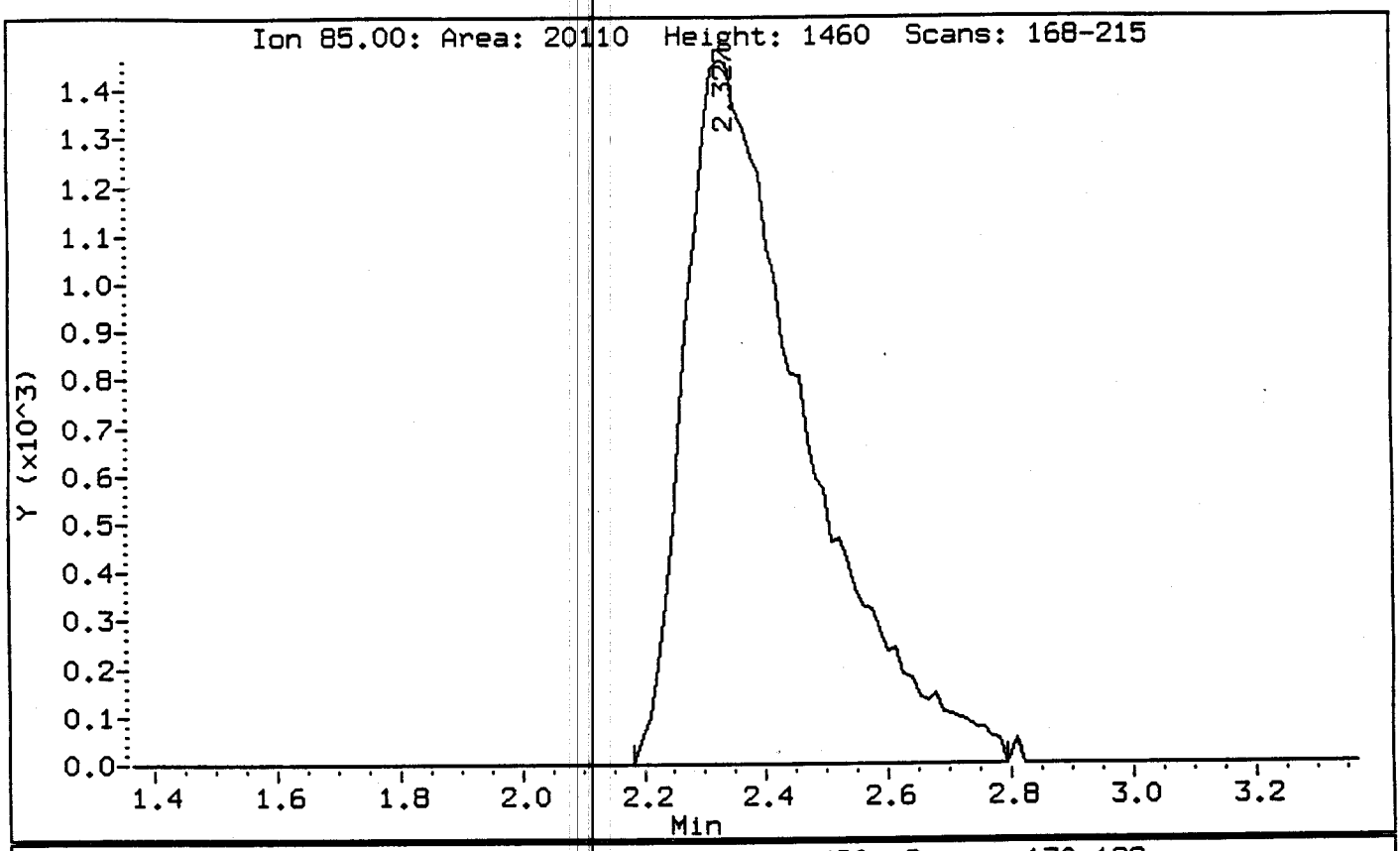
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	11.271	11.271	(1.116)	58663	100.0	104.8
25	Trichloroethene	130.00	12.402	12.402	(1.035)	39320	100.0	94.70
26	1,2-Dichloropropane	63.00	12.779	12.779	(1.066)	19770	100.0	89.04
27	Bromodichloromethane	83.00	13.312	13.312	(1.111)	46625	100.0	91.99
28	cis-1,3-Dichloropropene	75.00	14.131	14.131	(1.179)	28845	100.0	86.68
29	4-Methyl-2-Pentanone	43.00	14.482	14.482	(0.836)	7222	100.0	95.49
30	Toluene	91.00	14.729	14.729	(0.850)	73186	100.0	94.72
31	trans-1,3-Dichloropropene	75.00	15.184	15.184	(1.267)	22931	100.0	85.80
32	1,1,2-Trichloroethane	97.00	15.496	15.496	(1.293)	23995	100.0	90.91
33	Tetrachloroethene	164.00	15.743	15.743	(0.908)	41446	100.0	104.2
34	2-Hexanone	43.00	16.055	16.055	(0.926)	7092	100.0	94.50
35	Dibromochloromethane	129.00	16.211	16.211	(1.352)	53880	100.0	93.35
36	Chlorobenzene	112.00	17.368	17.368	(1.002)	80257	100.0	99.26
37	Ethylbenzene	106.00	17.641	17.641	(1.018)	34194	100.0	96.65
38	m,p-Xylene	106.00	17.875	17.875	(1.032)	92905	200.0	204.5
39	o-Xylene	106.00	18.655	18.655	(1.077)	44105	100.0	98.03
40	Styrene	104.00	18.681	18.681	(1.078)	71027	100.0	98.58
41	Bromoform	173.00	18.993	18.993	(1.585)	39523	100.0	97.32
42	1,1,2,2-Tetrachloroethane	83.00	19.968	19.968	(1.152)	29711	100.0	92.52
M 43	1,2-Dichloroethene (total)	96.00				80855	200.0	204.3
M 44	Xylene (Total)	106.00				137010	100.0	304.5

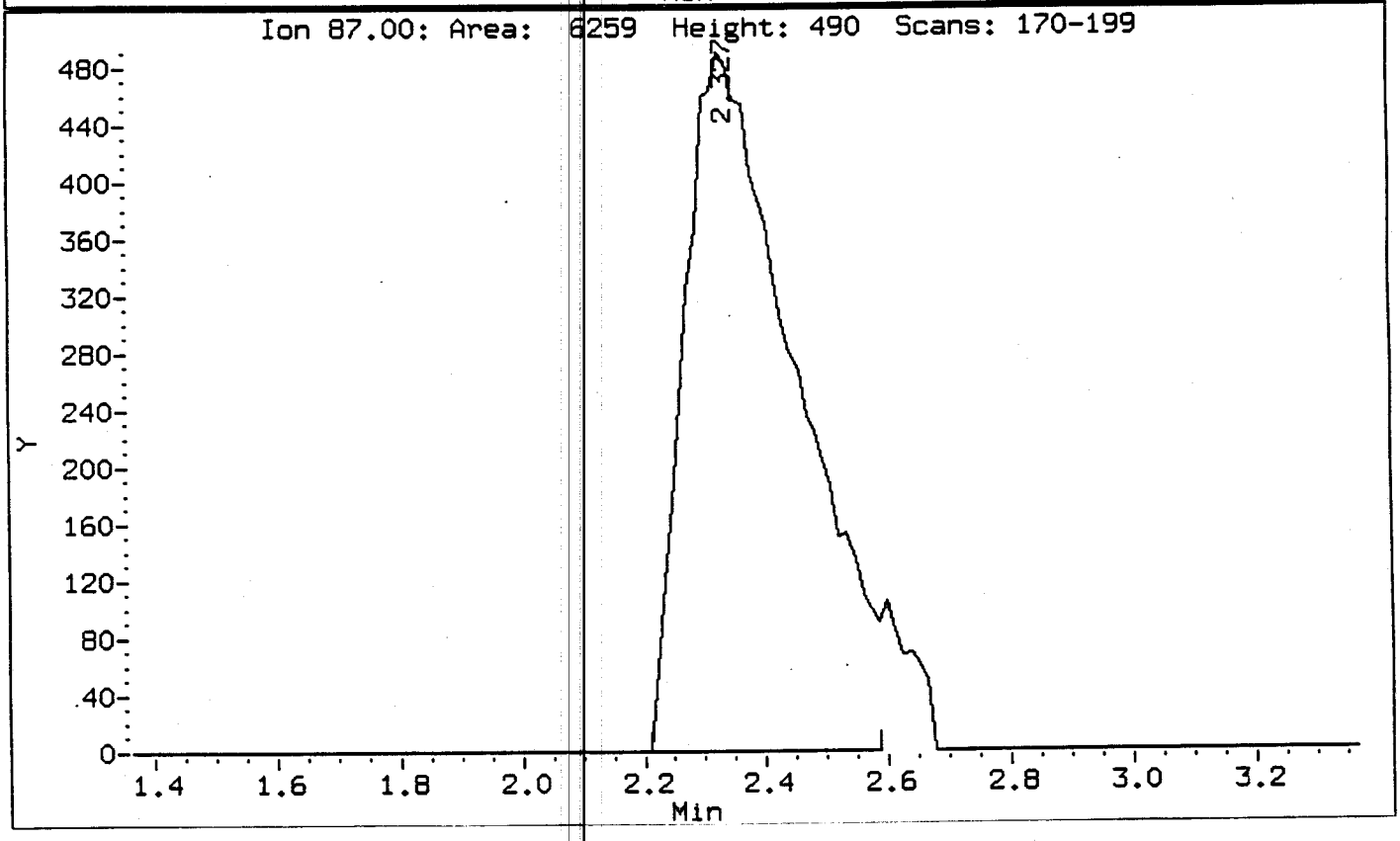
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50054.i/BF950424C54.b/CW950424C54.d/CW950424C54.LG
Injection Date: 24-APR-95 03:40
Instrument: f50054.i
Client Sample ID: VSTD020

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8

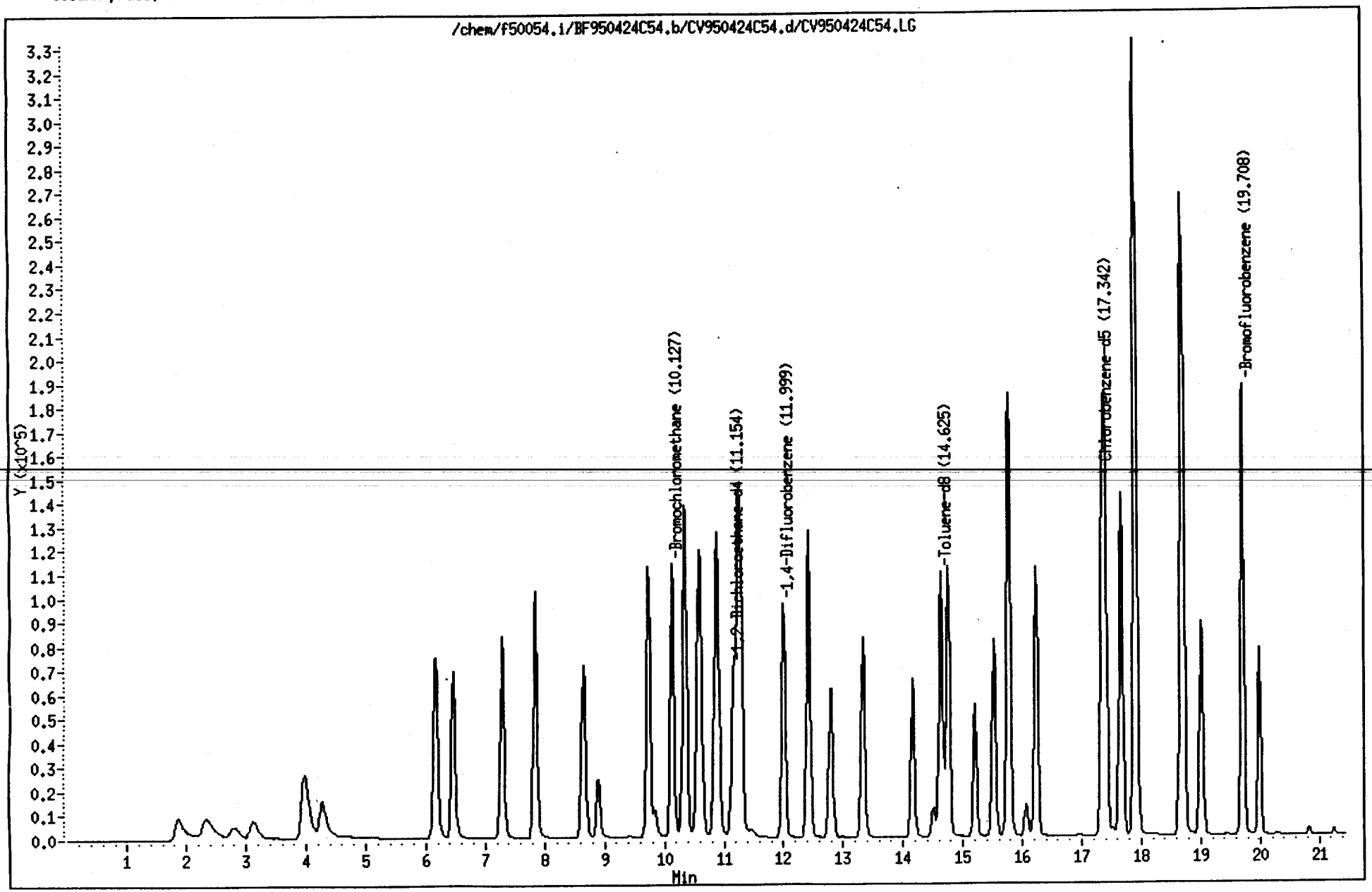




Data File: /chem/f50054.i/BF950424C54.b/CV950424C54.d
Date : 24-APR-1995 02:49
Client ID: VSTD050
Sample Info: VSTD050: 1948: 1:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424C54.b/CV950424C54.d
Report Date: 24-Apr-1995 16:55

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424C54.b/CV950424C54.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 24-APR-1995 02:49
Operator : 1948 Inst ID: f50054.i
Smp Info : VSTD050: 1948: 1:
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424C54.b/W390CLPDCDFM.m
Meth Date : 24-Apr-1995 16:51 bevan Quant Type: ISTD
Cal Date : 24-APR-1995 02:49 Cal File: CV950424C54.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	10.127	10.127	(1.000)	58544	250.0	
*	2 1,4-Difluorobenzene	114.00	11.999	11.999	(1.000)	200532	250.0	
*	3 Chlorobenzene-d5	117.00	17.342	17.342	(1.000)	207039	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.154	11.154	(1.101)	110924	250.0	248.4
$	5 Toluene-d8	98.00	14.625	14.625	(0.843)	190639	250.0	258.1
$	6 Bromofluorobenzene	95.00	19.708	19.708	(1.136)	166955	250.0	260.5
	7 Dichlorodiflouromethane	85.00	2.353	2.353	(0.232)	52086	250.0	275.1
	8 Chloromethane	50.00	2.782	2.782	(0.275)	26333	250.0	275.2
	9 Vinyl Chloride	62.00	3.120	3.120	(0.308)	38475	250.0	265.7
	10 Bromomethane	94.00	3.965	3.965	(0.392)	83869	250.0	267.5(M)
	11 Chloroethane	64.00	4.264	4.264	(0.421)	50709	250.0	284.6
	12 1,1-Dichloroethene	96.00	6.149	6.149	(0.607)	88620	250.0	274.3
	13 Acetone	43.00	6.422	6.422	(0.634)	14891	250.0	276.6
	14 Carbon Disulfide	76.00	6.448	6.448	(0.637)	225735	250.0	270.9
	15 Methylene Chloride	84.00	7.280	7.280	(0.719)	87919	250.0	261.2
	16 trans-1,2-Dichloroethene	96.00	7.839	7.839	(0.774)	96897	250.0	264.8
	17 1,1-Dichloroethane	63.00	8.645	8.645	(0.854)	174085	250.0	259.2
	18 cis-1,2-Dichloroethene	96.00	9.724	9.724	(0.960)	102870	250.0	255.3
	19 2-Butanone	43.00	9.841	9.841	(0.972)	30505	250.0	266.1
	20 Chloroform	83.00	10.335	10.335	(1.021)	253704	250.0	254.8
	21 1,1,1-Trichloroethane	97.00	10.582	10.582	(0.882)	210584	250.0	248.5
	22 Carbon Tetrachloride	117.00	10.868	10.868	(0.906)	203622	250.0	251.4
	23 Benzene	78.00	11.232	11.232	(0.936)	254391	250.0	250.2

Data File: /chem/f50054.i/BF950424C54.b/CV950424C54.d
Report Date: 24-Apr-1995 16:55

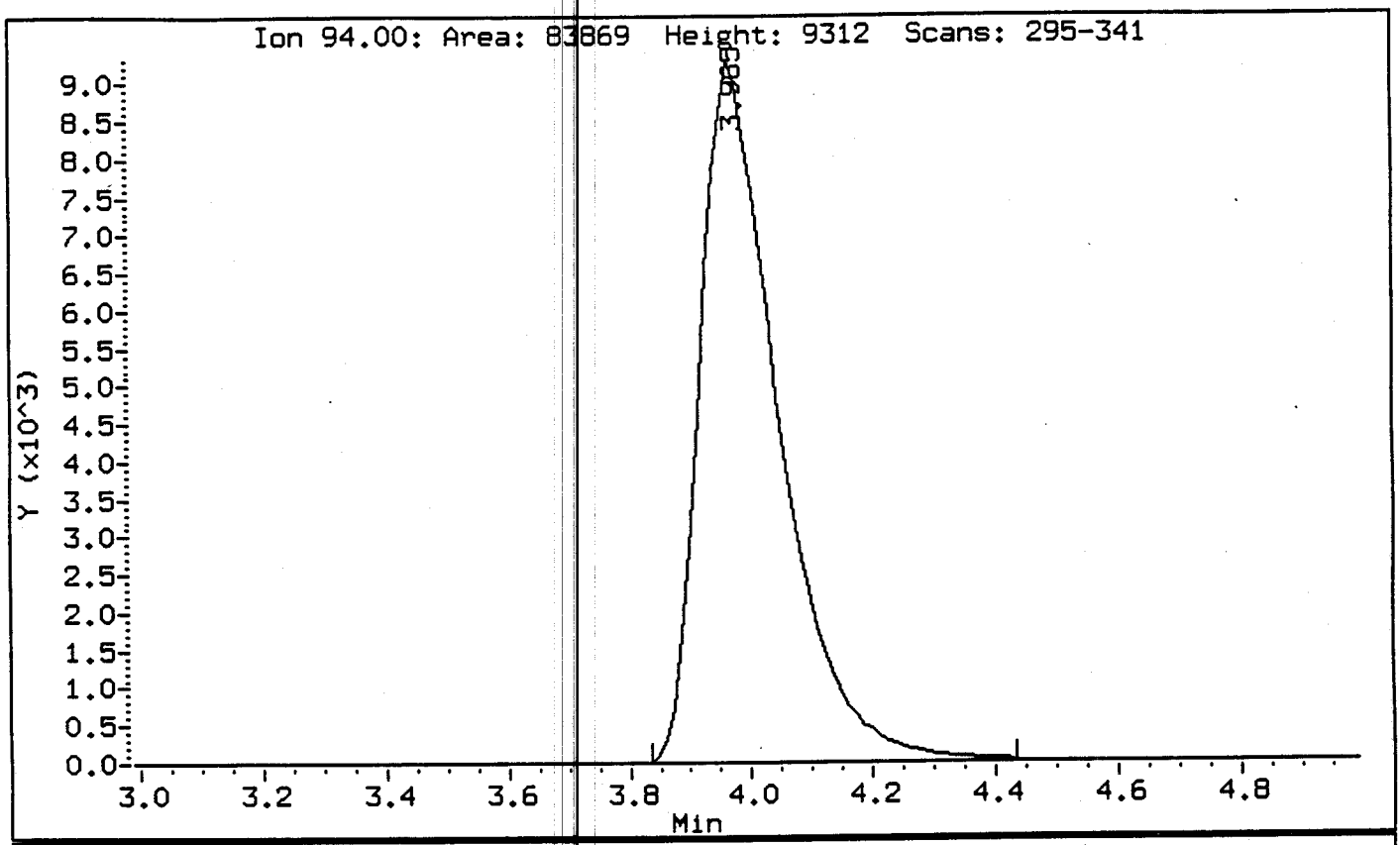
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	11.284	11.284	(1.114)	138847	250.0	255.4
	25 Trichloroethene	130.00	12.415	12.415	(1.035)	107132	250.0	255.4
	26 1,2-Dichloropropane	63.00	12.792	12.792	(1.066)	54142	250.0	241.4
	27 Bromodichloromethane	83.00	13.338	13.338	(1.112)	125568	250.0	245.2
	28 cis-1,3-Dichloropropene	75.00	14.157	14.157	(1.180)	82721	250.0	246.1
	29 4-Methyl-2-Pentanone	43.00	14.508	14.508	(0.837)	20481	250.0	260.6
	30 Toluene	91.00	14.755	14.755	(0.851)	204882	250.0	255.2
	31 trans-1,3-Dichloropropene	75.00	15.197	15.197	(1.267)	66694	250.0	247.0
	32 1,1,2-Trichloroethane	97.00	15.522	15.522	(1.294)	66126	250.0	248.0
	33 Tetrachloroethene	164.00	15.769	15.769	(0.909)	107950	250.0	261.1
	34 2-Hexanone	43.00	16.068	16.068	(0.927)	20659	250.0	264.9
	35 Dibromochloromethane	129.00	16.237	16.237	(1.353)	152005	250.0	260.7
	36 Chlorobenzene	112.00	17.394	17.394	(1.003)	219778	250.0	261.6
	37 Ethylbenzene	106.00	17.667	17.667	(1.019)	96061	250.0	261.3
	38 m,p-Xylene	106.00	17.901	17.901	(1.032)	257017	500.0	544.3
	39 o-Xylene	106.00	18.668	18.668	(1.076)	127505	250.0	272.7
	40 Styrene	104.00	18.707	18.707	(1.079)	200016	250.0	267.2
	41 Bromoform	173.00	19.006	19.006	(1.584)	104648	250.0	255.1
	42 1,1,2,2-Tetrachloroethane	83.00	19.981	19.981	(1.152)	81040	250.0	242.9
M	43 1,2-Dichloroethene (total)	96.00				199767	500.0	519.7
M	44 Xylene (Total)	106.00				384522	250.0	822.4

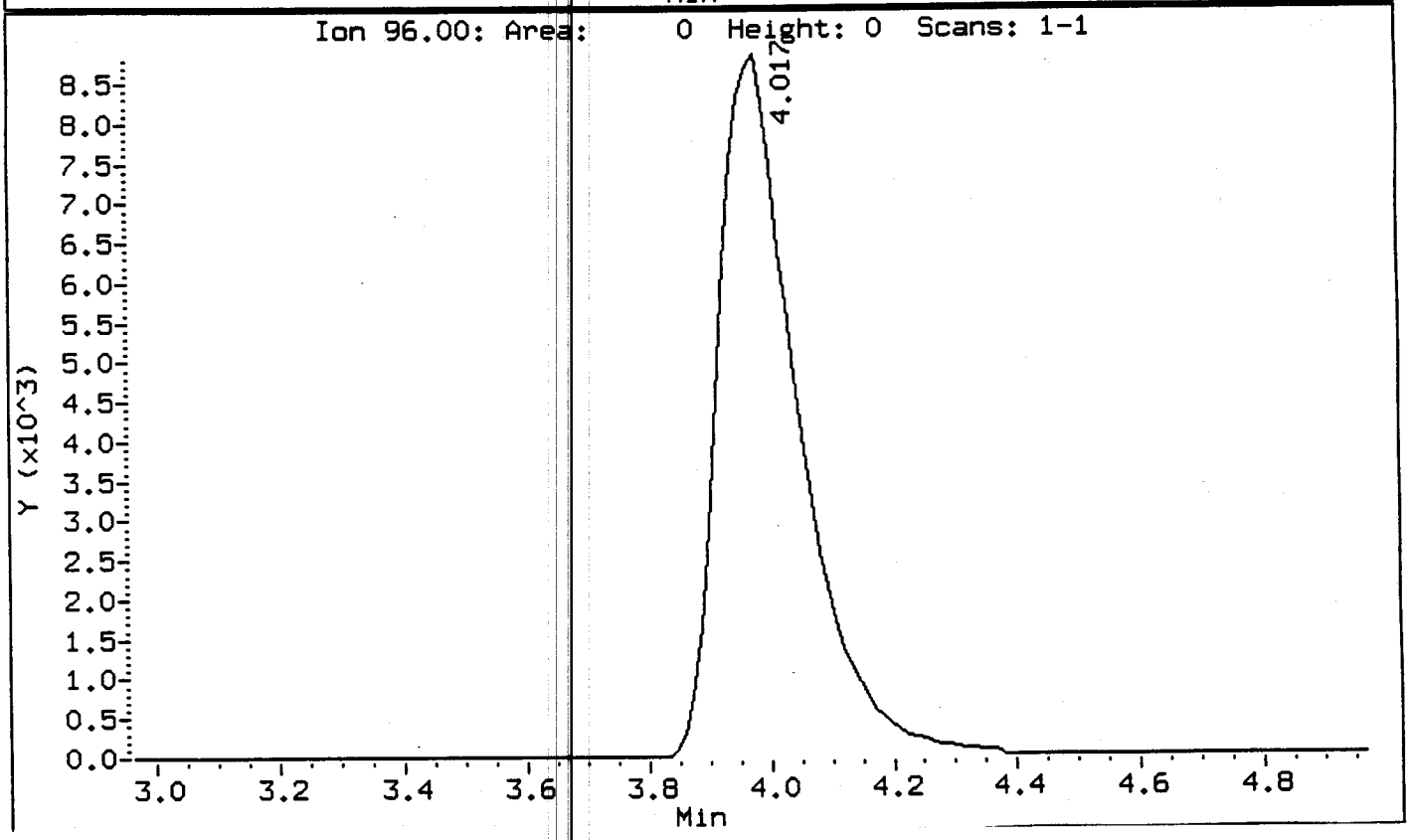
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50054.i/BF950424C54.b/CV950424C54.d/CV950424C54.LG
Injection Date: 24-APR-95 02:49
Instrument: f50054.i
Client Sample ID: VSTD050

Compound: Bromomethane
CAS Number: 74-83-9

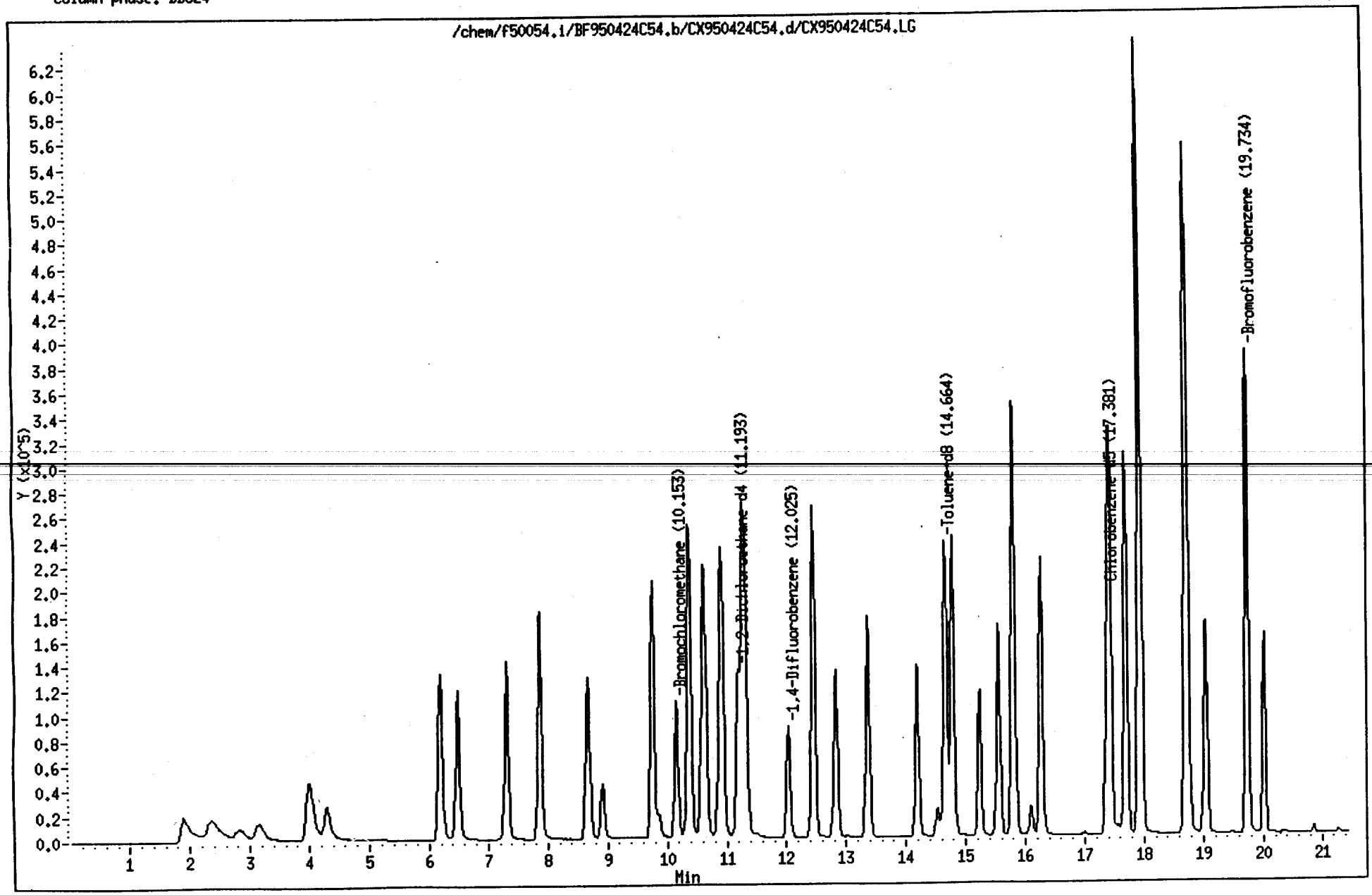




Data File: /chem/f50054.i/BF950424C54.b/CX950424C54.d
Date : 24-APR-1995 04:47
Client ID: VSTD100
Sample Info: VSTD100: 1948: 1:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



Data File: /chem/f50054.i/BF950424C54.b/CX950424C54.d
Report Date: 24-Apr-1995 16:57

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424C54.b/CX950424C54.d
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 24-APR-1995 04:47
Operator : 1948 Inst ID: f50054.i
Smp Info : VSTD100: 1948: 1:
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424C54.b/W390CLPDCDFM.m
Meth Date : 24-Apr-1995 16:51 bevan Quant Type: ISTD
Cal Date : 24-APR-1995 02:49 Cal File: CV950424C54.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Bromochloromethane	128.00	10.153	10.153	(1.000)	55495	250.0	
* 2 1,4-Difluorobenzene	114.00	12.025	12.025	(1.000)	188491	250.0	
* 3 Chlorobenzene-d5	117.00	17.381	17.381	(1.000)	208377	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	11.193	11.193	(1.102)	211346	500.0	499.2
$ 5 Toluene-d8	98.00	14.664	14.664	(0.844)	389248	500.0	523.5
$ 6 Bromofluorobenzene	95.00	19.734	19.734	(1.135)	344791	500.0	534.6
7 Dichlorodiflouromethane	85.00	2.366	2.366	(0.233)	87735	500.0	487.2 (M)
8 Chloromethane	50.00	2.821	2.821	(0.278)	43179	500.0	475.6 (M)
9 Vinyl Chloride	62.00	3.146	3.146	(0.310)	67917	500.0	494.8 (M)
10 Bromomethane	94.00	3.991	3.991	(0.393)	146271	500.0	492.1 (M)
11 Chloroethane	64.00	4.290	4.290	(0.423)	85239	500.0	504.6 (M)
12 1,1-Dichloroethene	96.00	6.188	6.188	(0.609)	150242	500.0	490.6
13 Acetone	43.00	6.435	6.435	(0.634)	22059	500.0	432.2
14 Carbon Disulfide	76.00	6.474	6.474	(0.638)	390183	500.0	494.0
15 Methylene Chloride	84.00	7.306	7.306	(0.720)	147732	500.0	463.0
16 trans-1,2-Dichloroethene	96.00	7.852	7.852	(0.773)	169623	500.0	489.1
17 1,1-Dichloroethane	63.00	8.671	8.671	(0.854)	314730	500.0	494.3
18 cis-1,2-Dichloroethene	96.00	9.750	9.750	(0.960)	187942	500.0	492.1
19 2-Butanone	43.00	9.867	9.867	(0.972)	48364	500.0	445.0
20 Chloroform	83.00	10.361	10.361	(1.020)	459907	500.0	487.3
21 1,1,1-Trichloroethane	97.00	10.608	10.608	(0.882)	391959	500.0	492.0
22 Carbon Tetrachloride	117.00	10.907	10.907	(0.907)	378530	500.0	497.2
23 Benzene	78.00	11.258	11.258	(0.936)	466322	500.0	488.0

Data File: /chem/f50054.i/BF950424C54.b/CX950424C54.d
Report Date: 24-Apr-1995 16:57

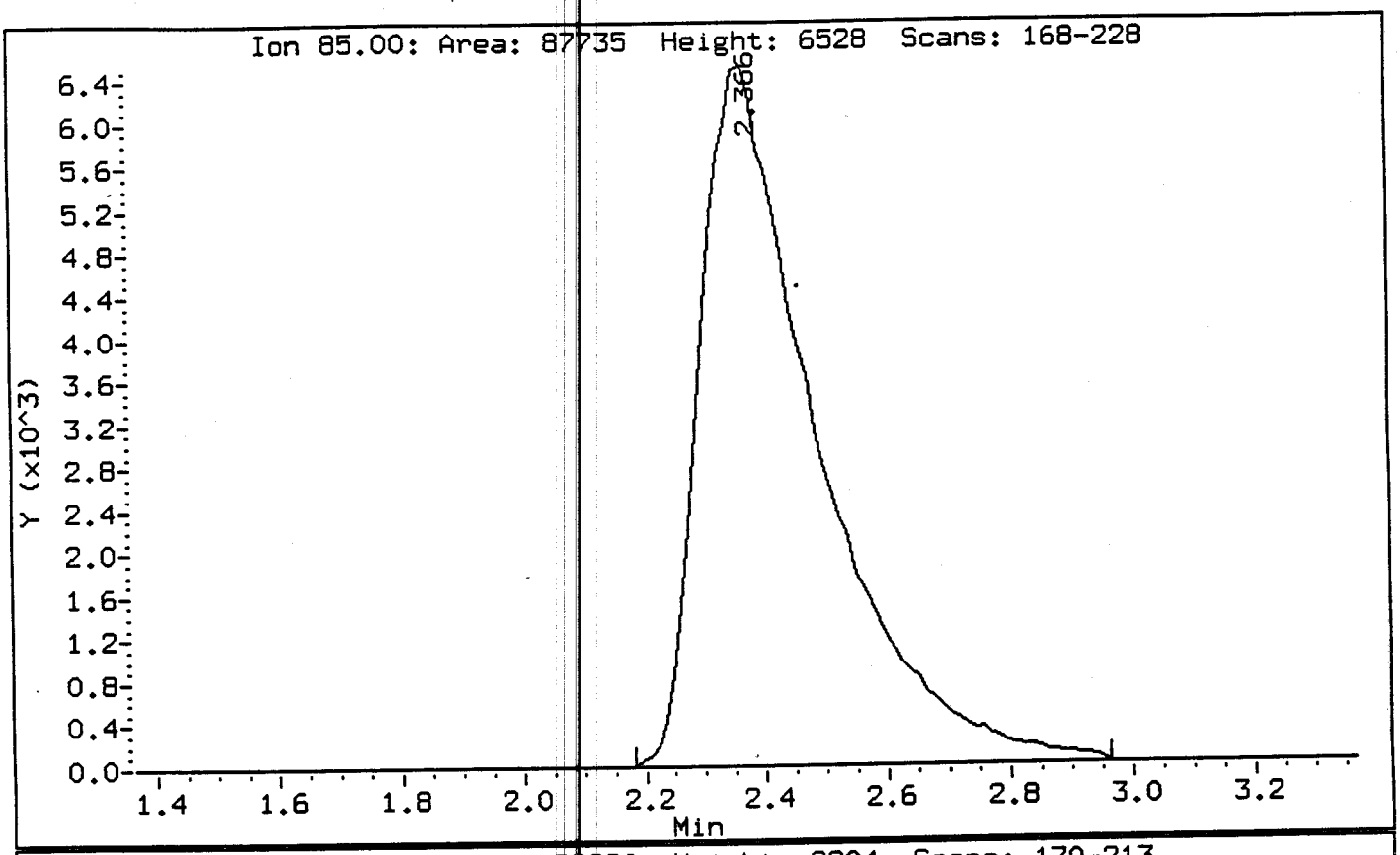
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	1,2-Dichloroethane	62.00	11.323	11.323	(1.115)	253716	500.0	492.3
25	Trichloroethene	130.00	12.454	12.454	(1.036)	211518	500.0	536.4
26	1,2-Dichloropropane	63.00	12.831	12.831	(1.067)	112419	500.0	533.2
27	Bromodichloromethane	83.00	13.364	13.364	(1.111)	254353	500.0	528.5
28	cis-1,3-Dichloropropene	75.00	14.183	14.183	(1.179)	172911	500.0	547.2
29	4-Methyl-2-Pentanone	43.00	14.534	14.534	(0.836)	37865	500.0	478.7
30	Toluene	91.00	14.781	14.781	(0.850)	416921	500.0	515.9
31	trans-1,3-Dichloropropene	75.00	15.236	15.236	(1.267)	139941	500.0	551.4
32	1,1,2-Trichloroethane	97.00	15.548	15.548	(1.293)	132602	500.0	529.1
33	Tetrachloroethene	164.00	15.795	15.795	(0.909)	199581	500.0	479.7
34	2-Hexanone	43.00	16.094	16.094	(0.926)	36561	500.0	465.8
35	Dibromochloromethane	129.00	16.263	16.263	(1.352)	293418	500.0	535.3
36	Chlorobenzene	112.00	17.433	17.433	(1.003)	422214	500.0	499.3
37	Ethylbenzene	106.00	17.693	17.693	(1.018)	191104	500.0	516.4
38	m,p-Xylene	106.00	17.940	17.940	(1.032)	479768	1000	1010
39	o-Xylene	106.00	18.707	18.707	(1.076)	244447	500.0	519.5
40	Styrene	104.00	18.733	18.733	(1.078)	390670	500.0	518.5
41	Bromoform	173.00	19.045	19.045	(1.584)	200867	500.0	520.8
42	1,1,2,2-Tetrachloroethane	83.00	20.020	20.020	(1.152)	164980	500.0	491.2
M 43	1,2-Dichloroethene (total)	96.00				357565	1000	981.4
M 44	Xylene (Total)	106.00				724215	500.0	1539

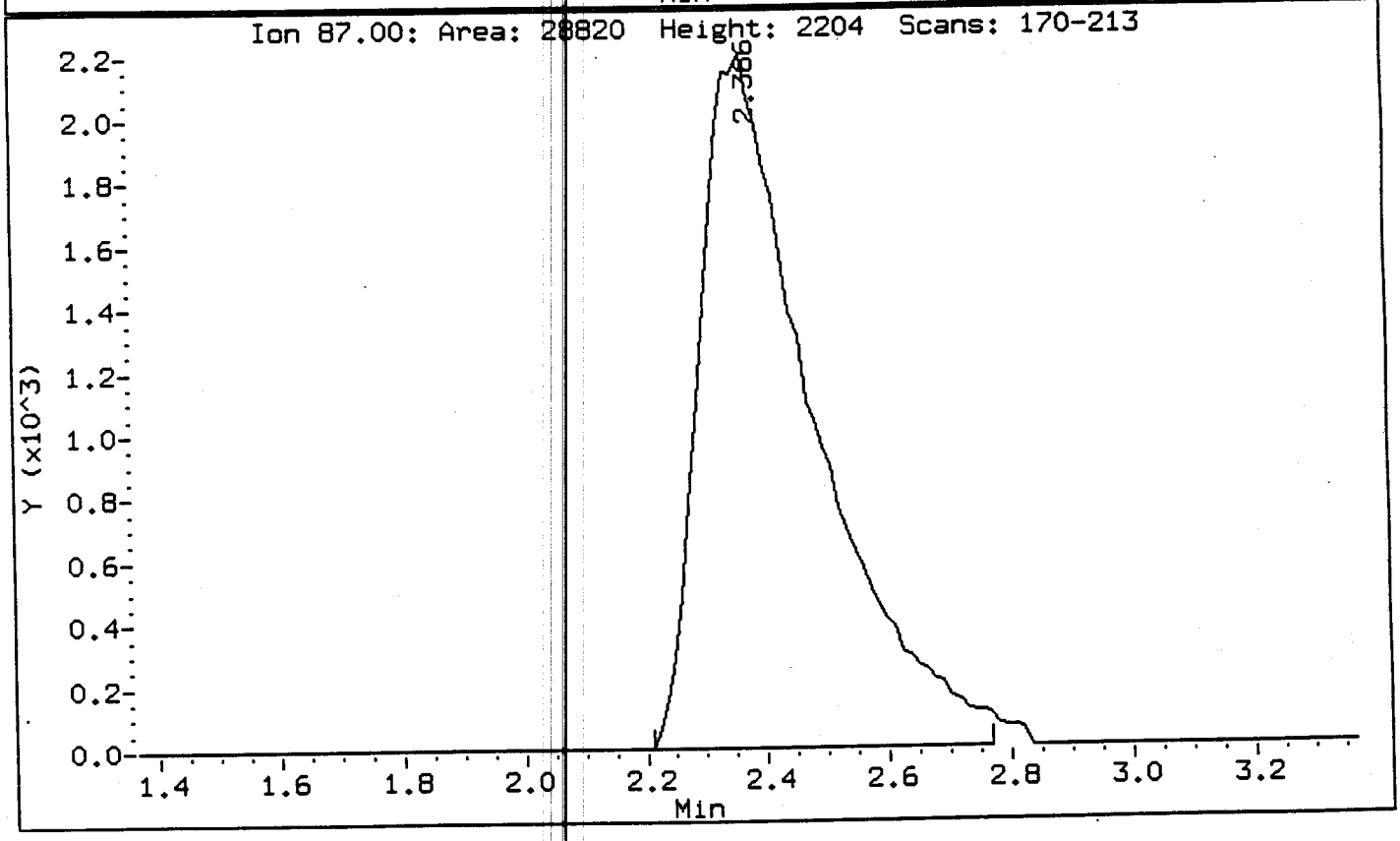
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/f50054.i/BF950424C54.b/CX950424C54.d/CX950424C54.LG
Injection Date: 24-APR-95 04:47
Instrument: f50054.i
Client Sample ID: VSTD100

Compound: Dichlorodiflouromethane
CAS Number: 75-71-8





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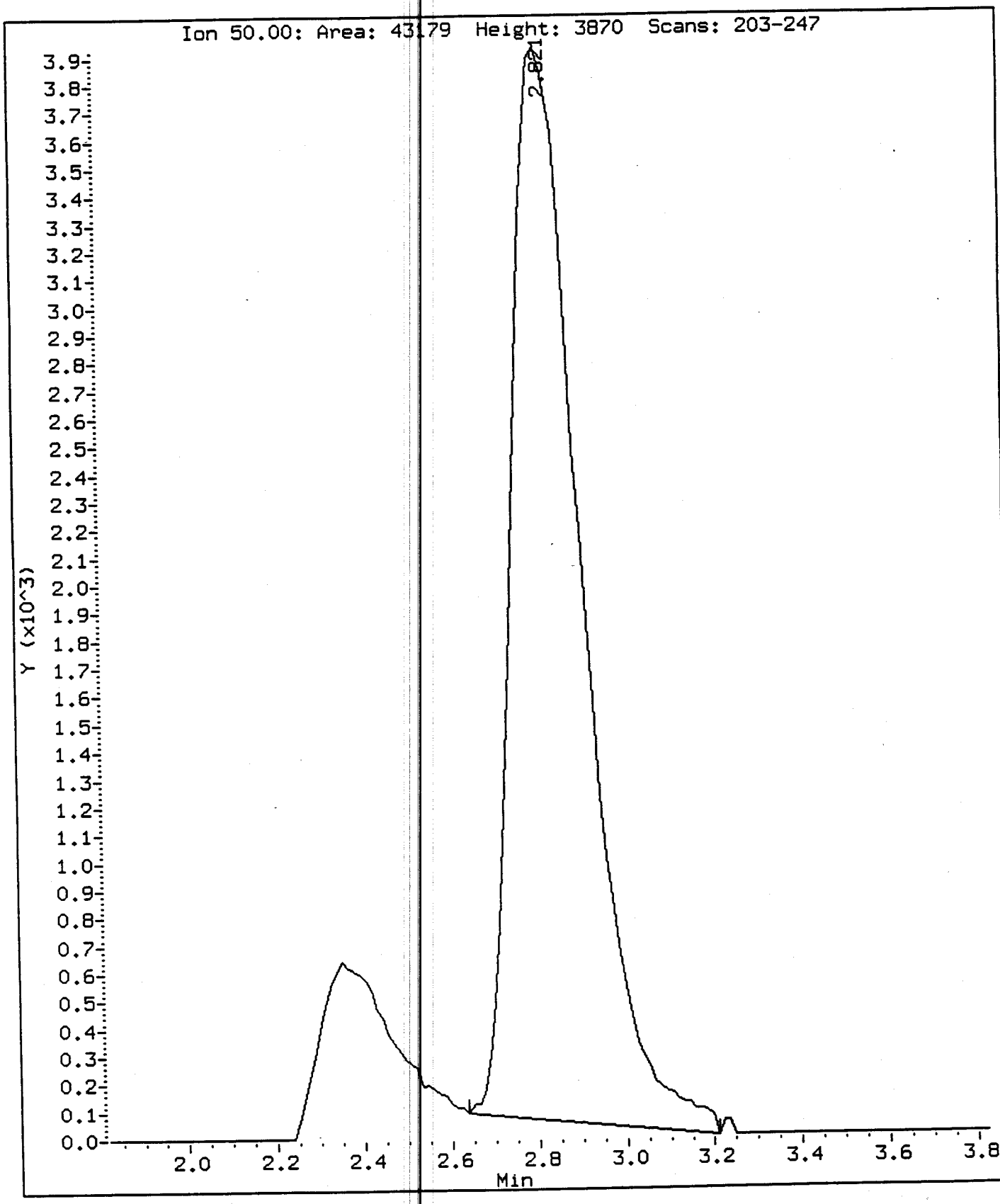
Injection Date: 24-APR-95 04:47
Instrument: f50054.i
Client Sample ID: VSTD100

Compound: Chloromethane
CAS Number: 74-87-3



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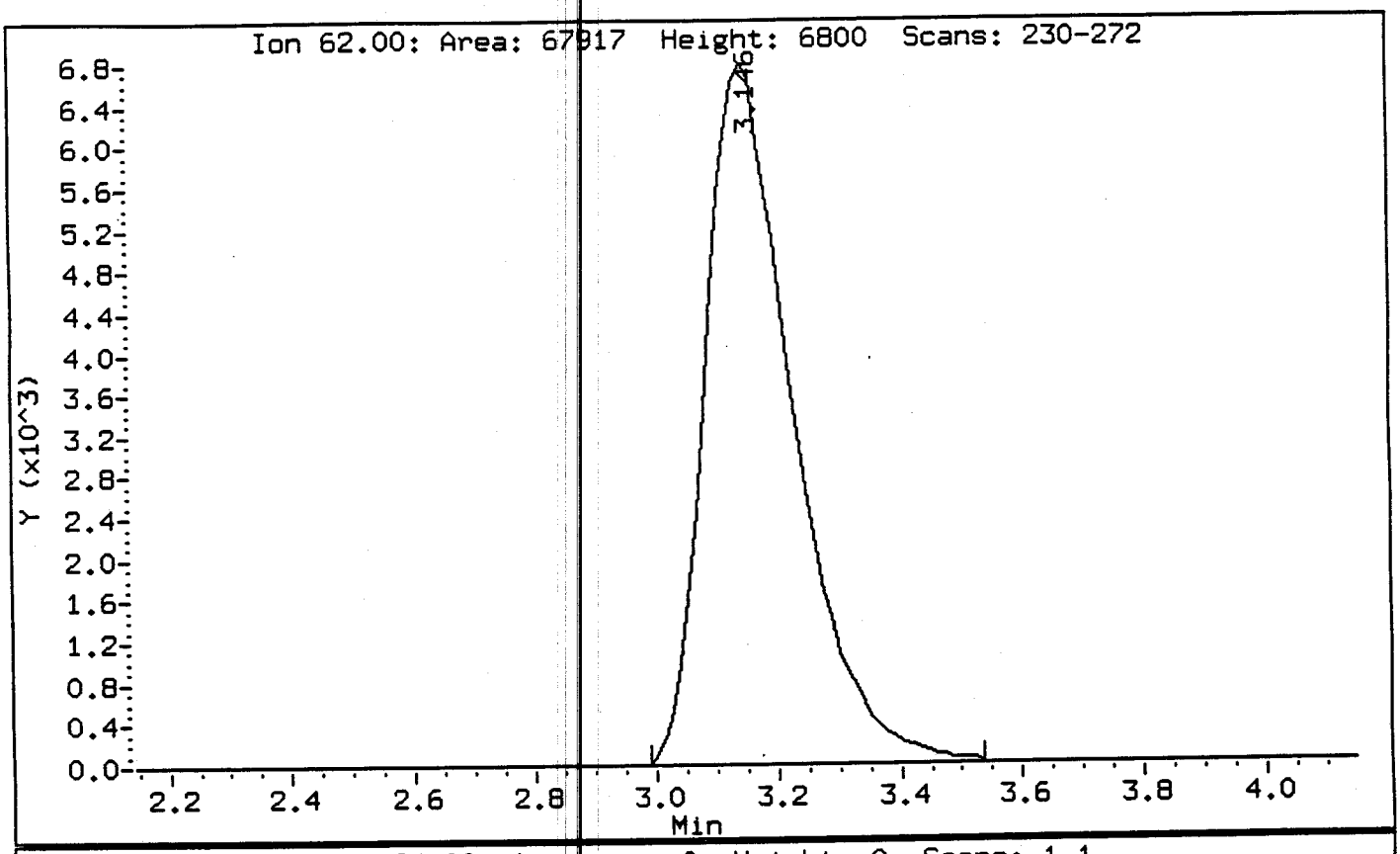
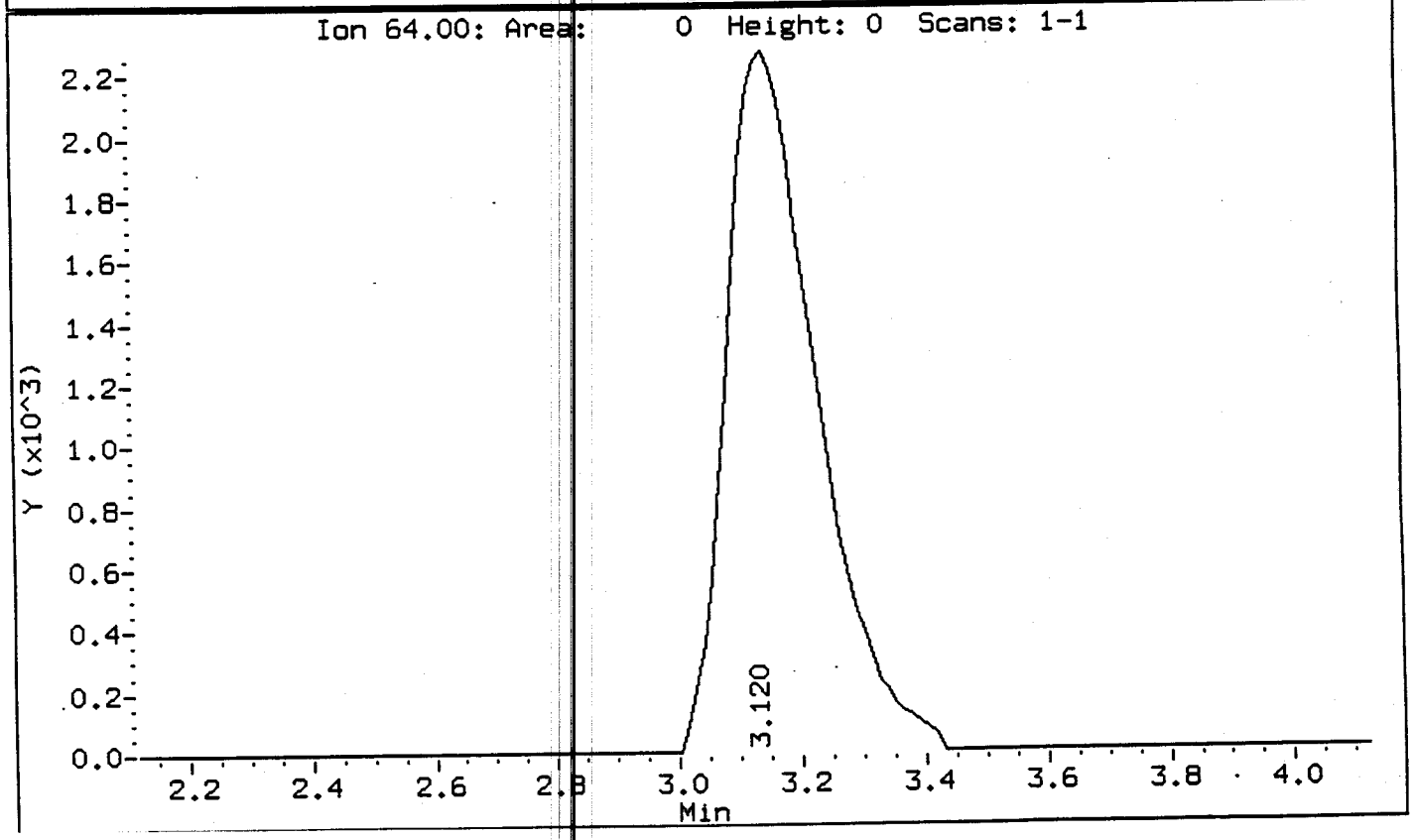
Injection Date: 24-APR-95 04:47
Instrument: f50054.i
Client Sample ID: VSTD100

Compound: Vinyl Chloride
CAS Number: 75-01-4





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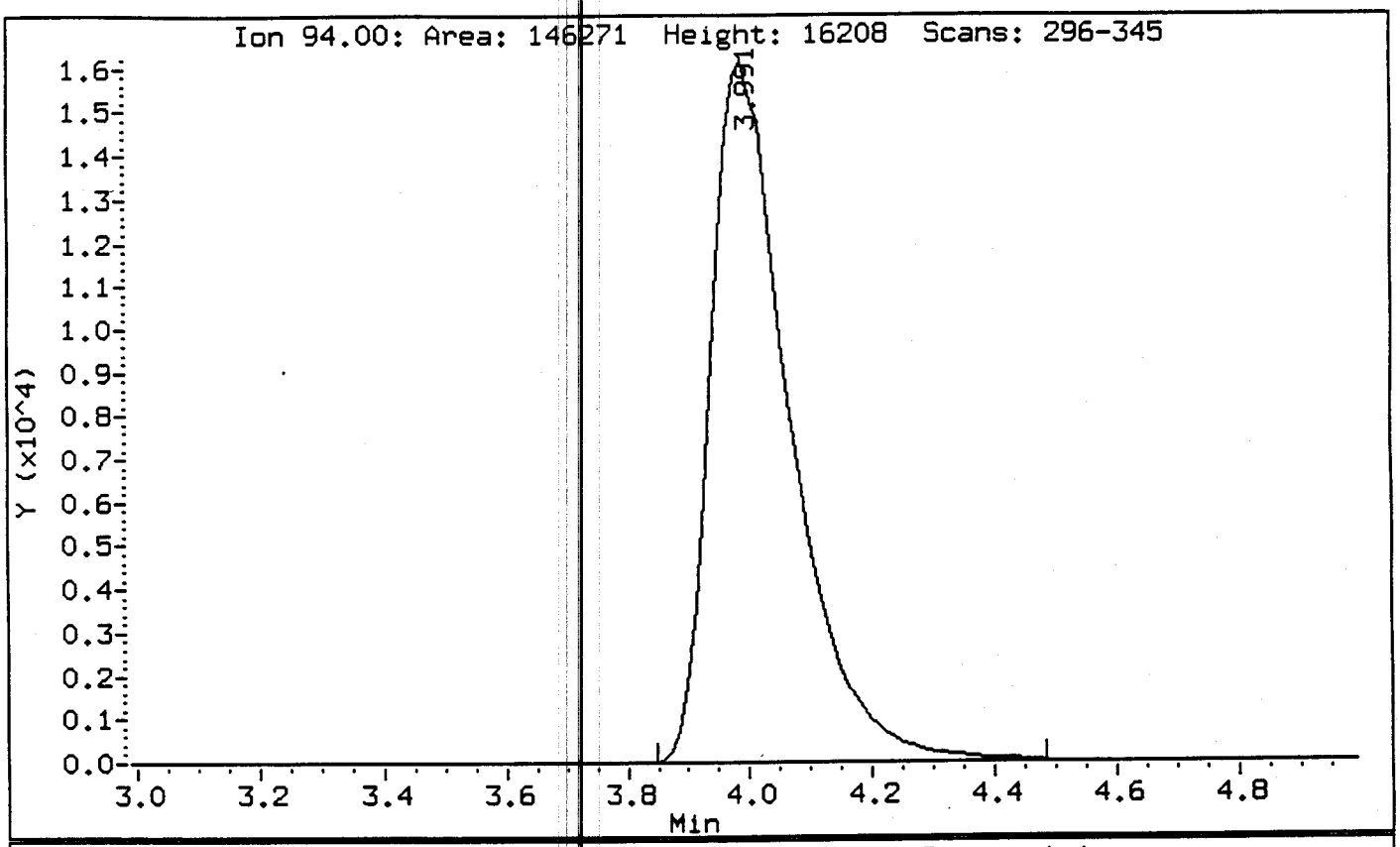
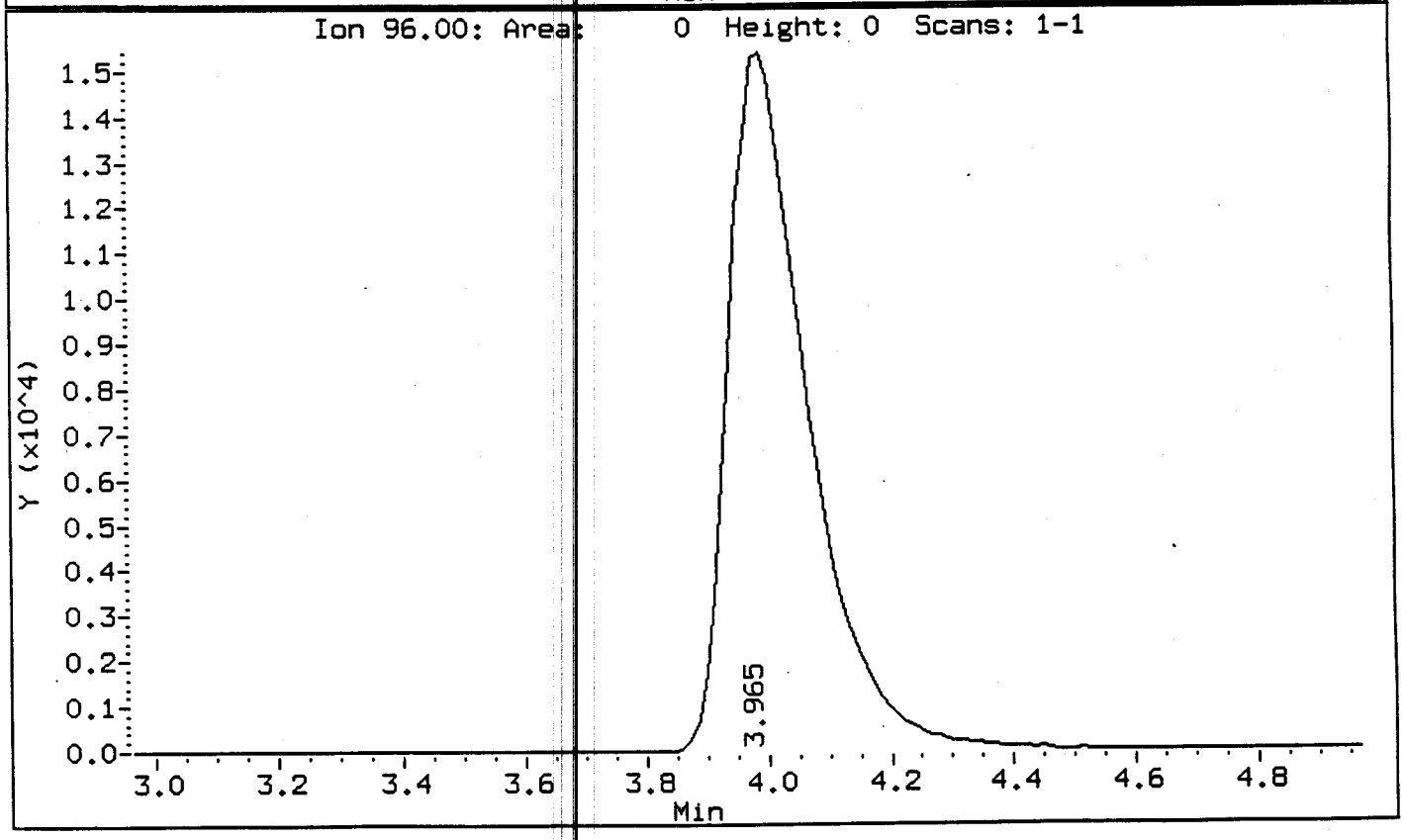
Injection Date: 24-APR-95 04:47
Instrument: f50054.i
Client Sample ID: VSTD100

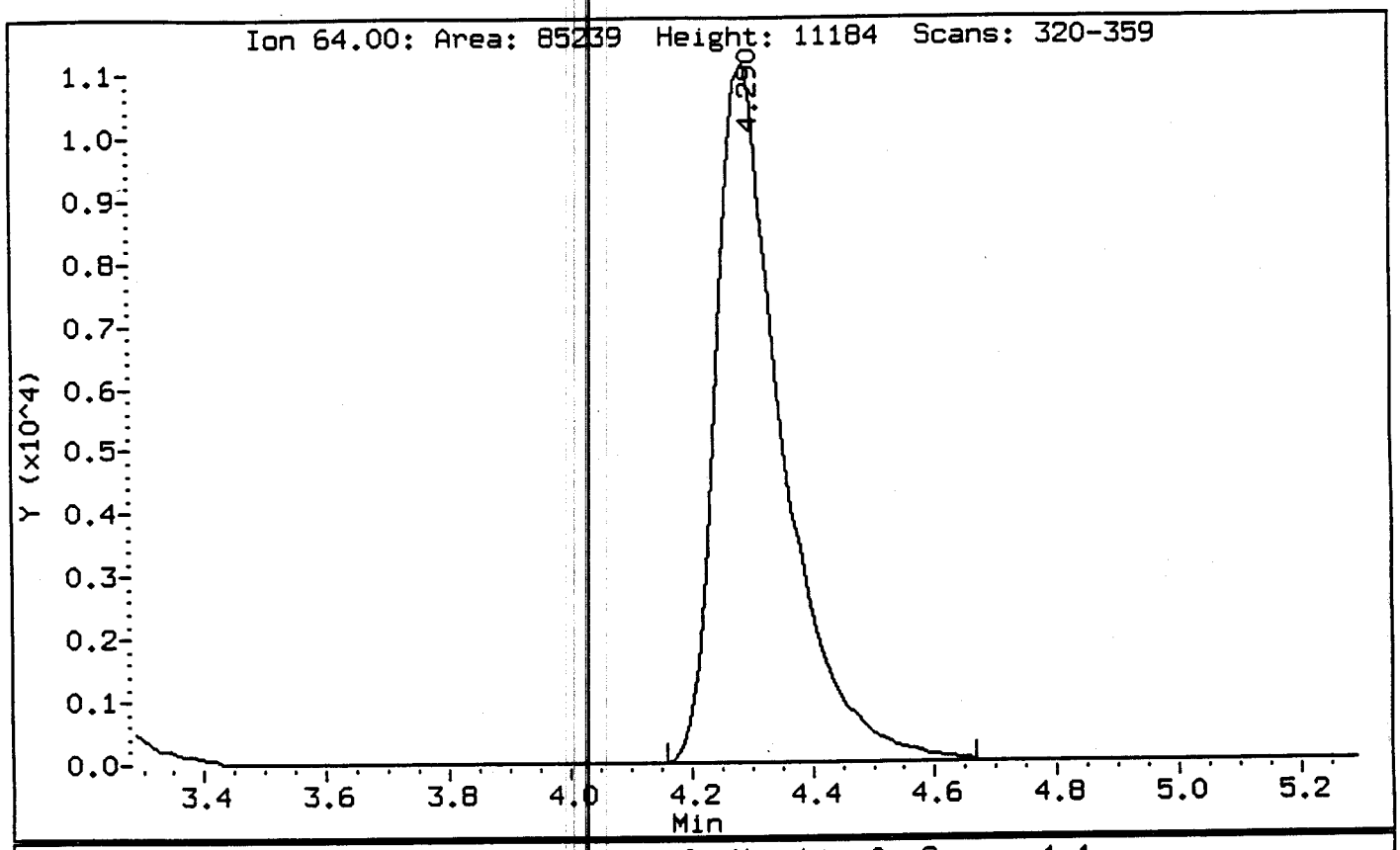
Compound: Bromomethane
CAS Number: 74-83-9

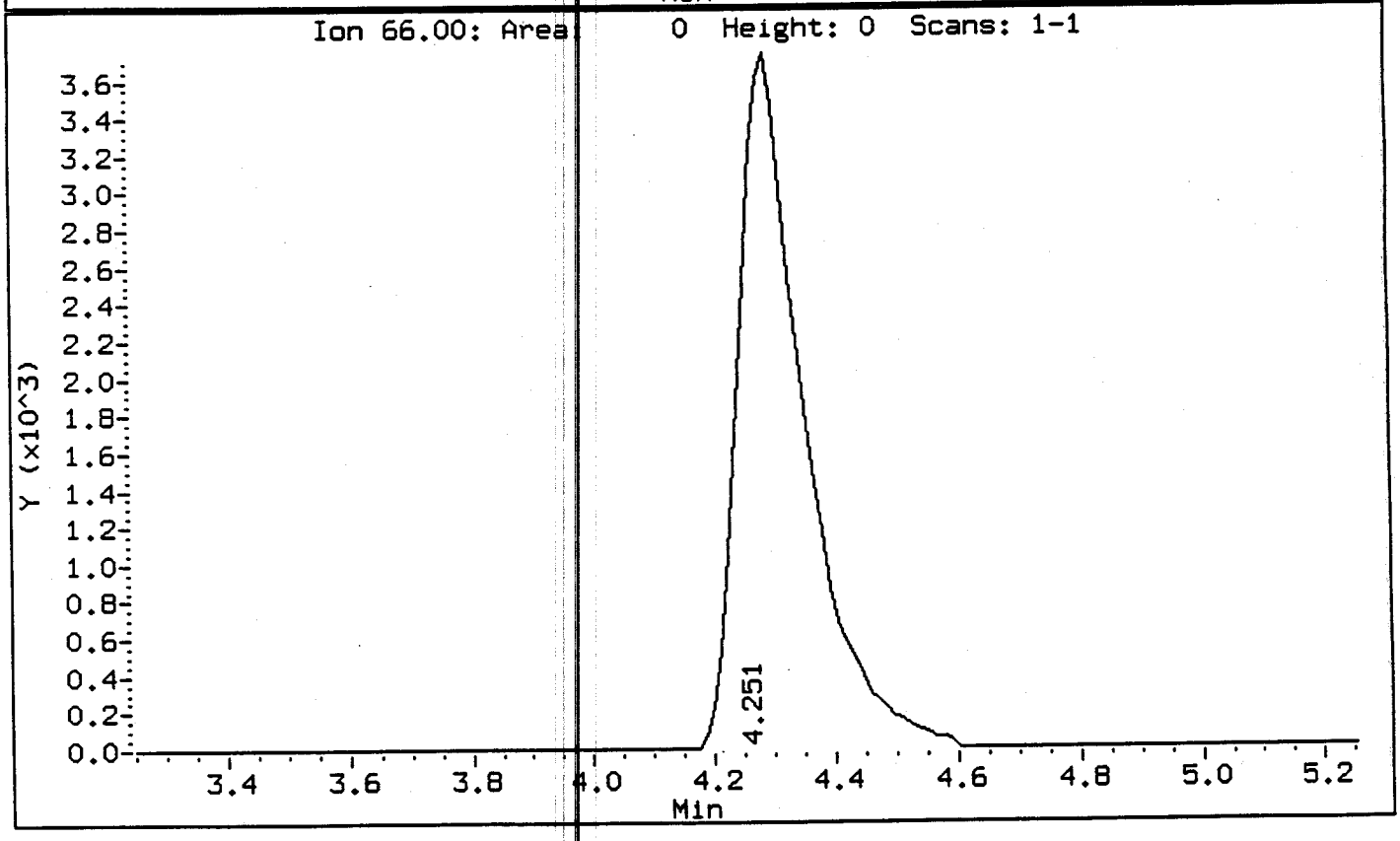




Data File: /chem/f50054.i/BF950424C54.b/CX950424C54.d/CX950424C54.LG
Injection Date: 24-APR-95 04:47
Instrument: f50054.i
Client Sample ID: VSTD100

Compound: Chloroethane
CAS Number: 75-00-3

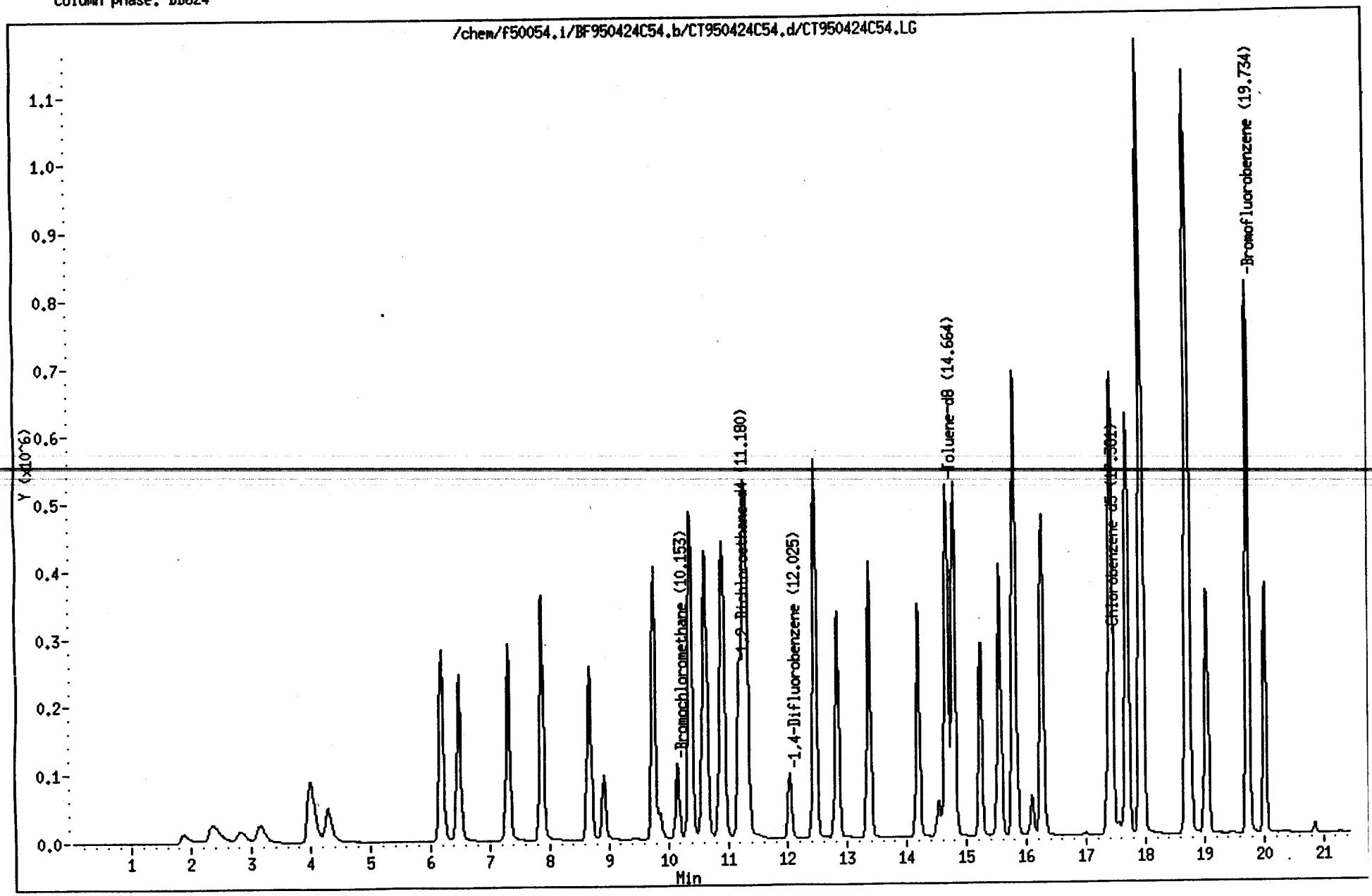




Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d
Date : 24-APR-1995 01:30
Client ID: VSTD200
Sample Info: VSTD200: 1948: 1:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d
Report Date: 24-Apr-1995 16:54

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424C54.b/CT950424C54.d
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 24-APR-1995 01:30
Operator : 1948 Inst ID: f50054.i
Smp Info : VSTD200: 1948: 1:
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424C54.b/W390CLPDCDFM.m
Meth Date : 24-Apr-1995 16:51 bevan Quant Type: ISTD
Cal Date : 24-APR-1995 01:30 Cal File: CT950424C54.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
*	1 Bromochloromethane	128.00	10.153	10.153	(1.000)	57191	250.0	
*	2 1,4-Difluorobenzene	114.00	12.025	12.025	(1.000)	198568	250.0	
*	3 Chlorobenzene-d5	117.00	17.381	17.381	(1.000)	215666	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.180	11.180	(1.101)	416501	1000	954.7
$	5 Toluene-d8	98.00	14.664	14.664	(0.844)	835787	1000	1086(A)
$	6 Bromofluorobenzene	95.00	19.734	19.734	(1.135)	736025	1000	1103(A)
	7 Dichlorodiflouromethane	85.00	2.366	2.366	(0.233)	172319	1000	931.7
	8 Chloromethane	50.00	2.808	2.808	(0.277)	87034	1000	931.0(M)
	9 Vinyl Chloride	62.00	3.146	3.146	(0.310)	137313	1000	970.8(M)
	10 Bromomethane	94.00	3.978	3.978	(0.392)	289576	1000	945.4(M)
	11 Chloroethane	64.00	4.290	4.290	(0.423)	173451	1000	996.4(M)
	12 1,1-Dichloroethene	96.00	6.175	6.175	(0.608)	303194	1000	960.8
	13 Acetone	43.00	6.435	6.435	(0.634)	50068	1000	951.9
	14 Carbon Disulfide	76.00	6.474	6.474	(0.638)	781747	1000	960.3
	15 Methylene Chloride	84.00	7.306	7.306	(0.720)	294211	1000	894.8
	16 trans-1,2-Dichloroethene	96.00	7.865	7.865	(0.775)	330034	1000	923.4
	17 1,1-Dichloroethane	63.00	8.671	8.671	(0.854)	623060	1000	949.5
	18 cis-1,2-Dichloroethene	96.00	9.750	9.750	(0.960)	369349	1000	938.4
	19 2-Butanone	43.00	9.867	9.867	(0.972)	102494	1000	915.1
	20 Chloroform	83.00	10.361	10.361	(1.020)	887964	1000	912.9
	21 1,1,1-Trichloroethane	97.00	10.608	10.608	(0.882)	751914	1000	896.0
	22 Carbon Tetrachloride	117.00	10.894	10.894	(0.906)	725124	1000	904.2
	23 Benzene	78.00	11.271	11.271	(0.937)	919251	1000	913.2

Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d
Report Date: 24-Apr-1995 16:54

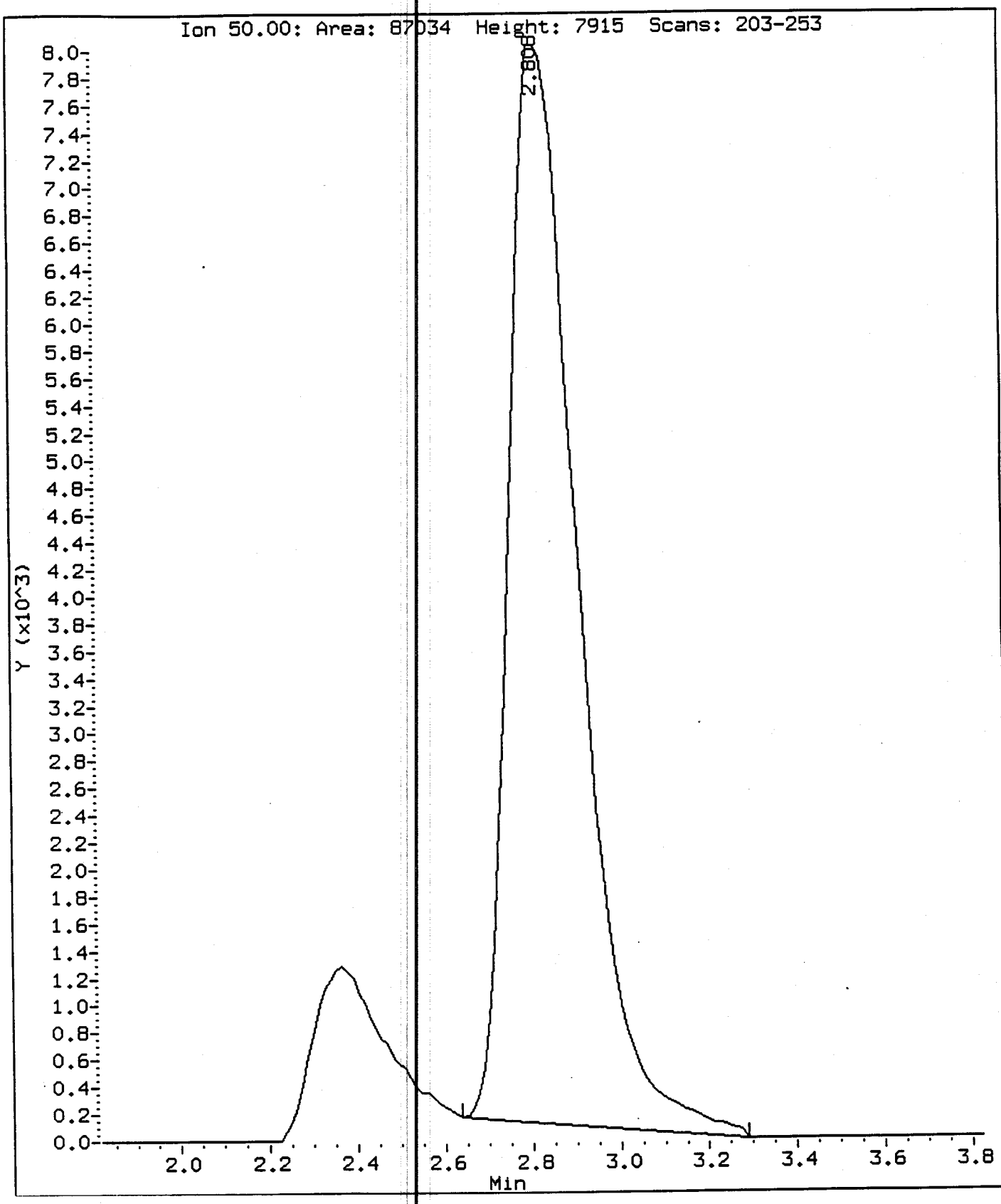
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	11.323	11.323	(1.115)	510881	1000	961.9
	25 Trichloroethene	130.00	12.441	12.441	(1.035)	432434	1000	1041 (A)
	26 1,2-Dichloropropane	63.00	12.831	12.831	(1.067)	271420	1000	1222 (A)
	27 Bromodichloromethane	83.00	13.364	13.364	(1.111)	583543	1000	1151 (A)
	28 cis-1,3-Dichloropropene	75.00	14.183	14.183	(1.179)	415705	1000	1249 (A)
	29 4-Methyl-2-Pentanone	43.00	14.534	14.534	(0.836)	90674	1000	1108 (A)
	30 Toluene	91.00	14.781	14.781	(0.850)	900208	1000	1076 (A)
	31 trans-1,3-Dichloropropene	75.00	15.223	15.223	(1.266)	344710	1000	1289 (A)
	32 1,1,2-Trichloroethane	97.00	15.548	15.548	(1.293)	299720	1000	1135 (A)
	33 Tetrachloroethene	164.00	15.795	15.795	(0.909)	389849	1000	905.4
	34 2-Hexanone	43.00	16.094	16.094	(0.926)	91764	1000	1130 (A)
	35 Dibromochloromethane	129.00	16.263	16.263	(1.352)	598717	1000	1037 (A)
	36 Chlorobenzene	112.00	17.433	17.433	(1.003)	845342	1000	965.8
	37 Ethylbenzene	106.00	17.693	17.693	(1.018)	392240	1000	1024 (A)
	38 m,p-Xylene	106.00	17.940	17.940	(1.032)	890394	2000	1810 (M)
	39 o-Xylene	106.00	18.707	18.707	(1.076)	474332	1000	973.9
	40 Styrene	104.00	18.746	18.746	(1.079)	754731	1000	967.8
	41 Bromoform	173.00	19.032	19.032	(1.583)	407444	1000	1003 (A)
	42 1,1,2,2-Tetrachloroethane	83.00	20.020	20.020	(1.152)	399572	1000	1150 (A)
M	43 1,2-Dichloroethene (total)	96.00				699383	2000	1862
M	44 Xylene (Total)	106.00				1364726	1000	2802

QC Flag Legend

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

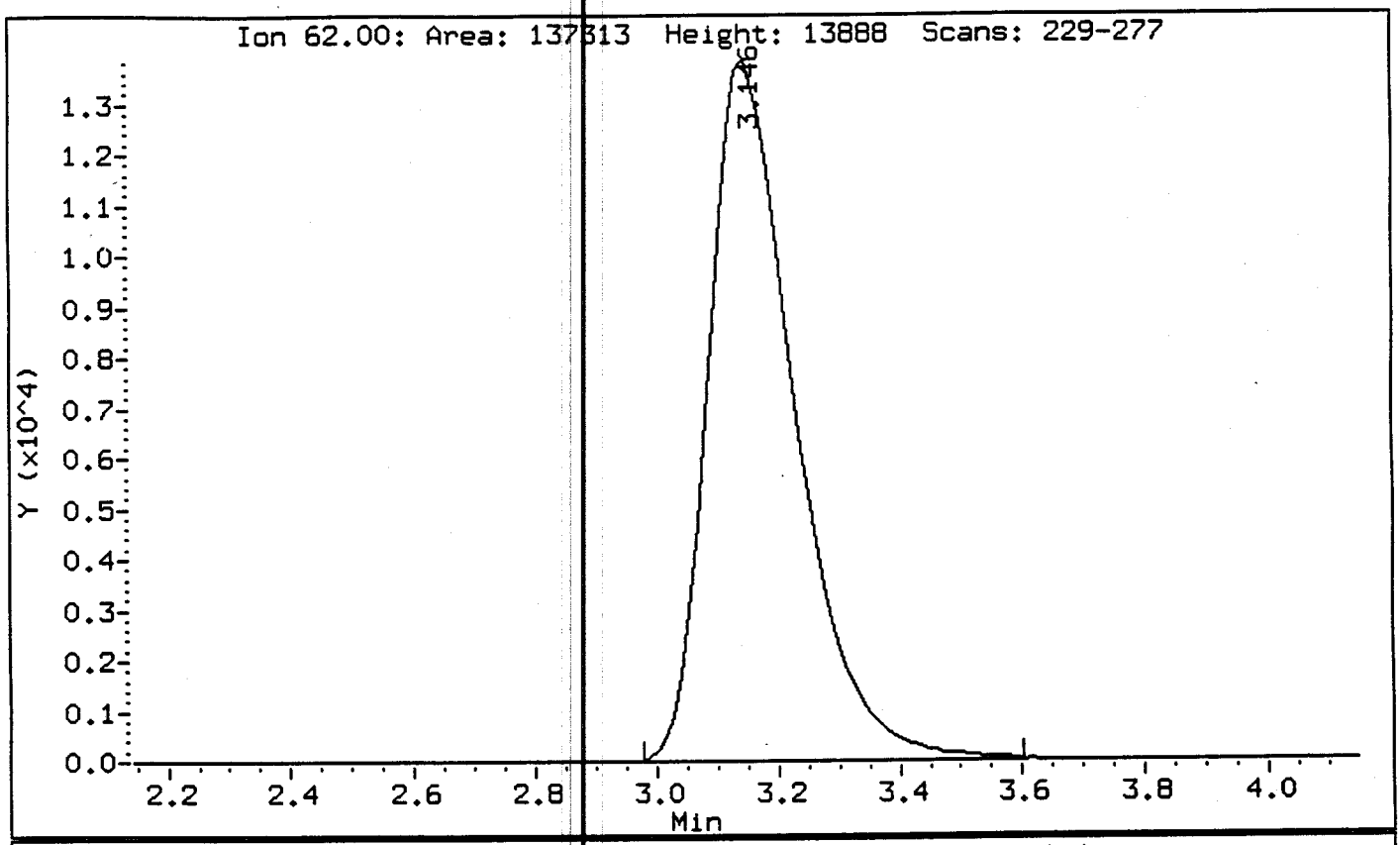
Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d/CT950424C54.LG
Injection Date: 24-APR-95 01:30
Instrument: f50054.i
Client Sample ID: VSTD200

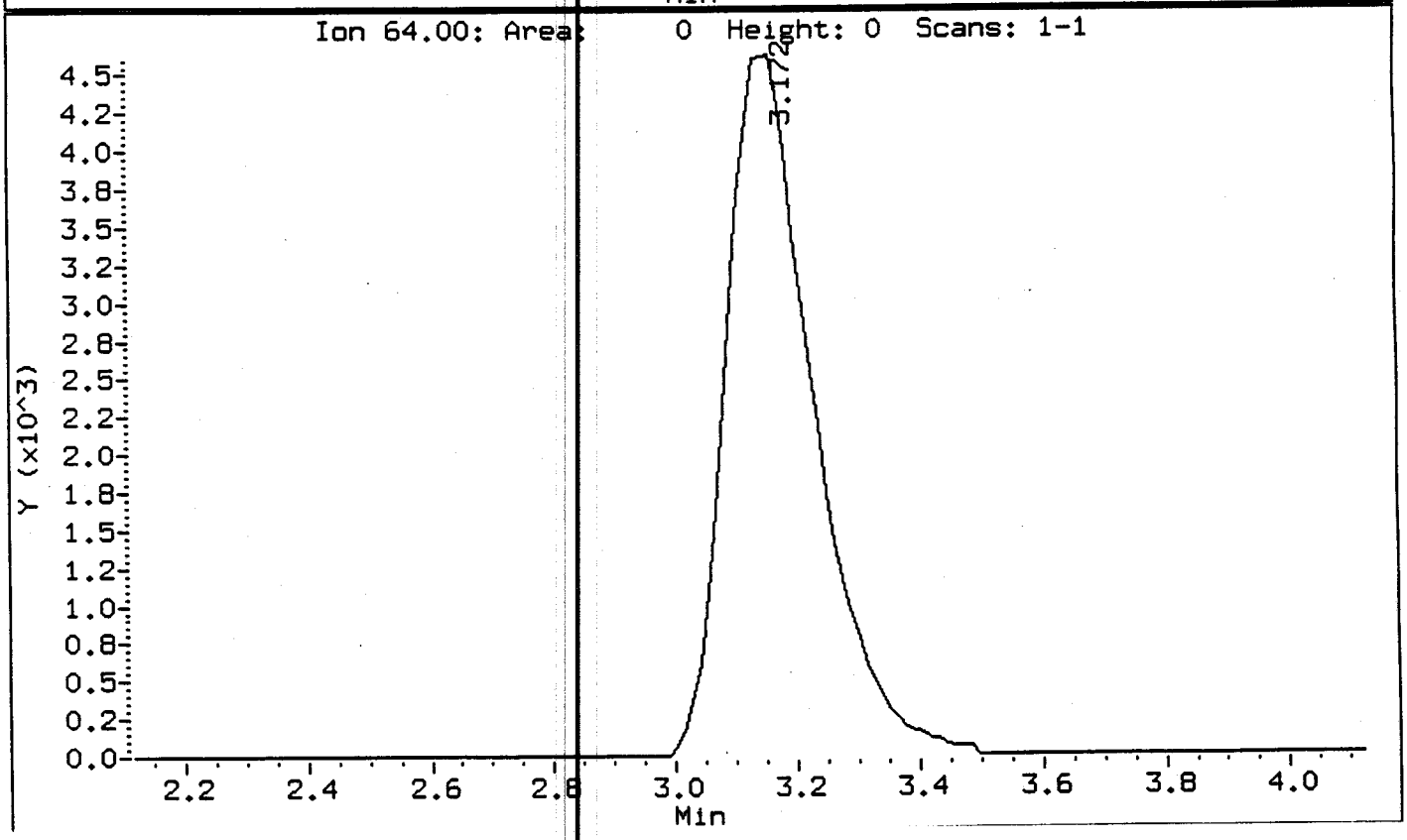
Compound: Chloromethane
CAS Number: 74-87-3



Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d/CT950424C54.LG
Injection Date: 24-APR-95 01:30
Instrument: f50054.i
Client Sample ID: VSTD200

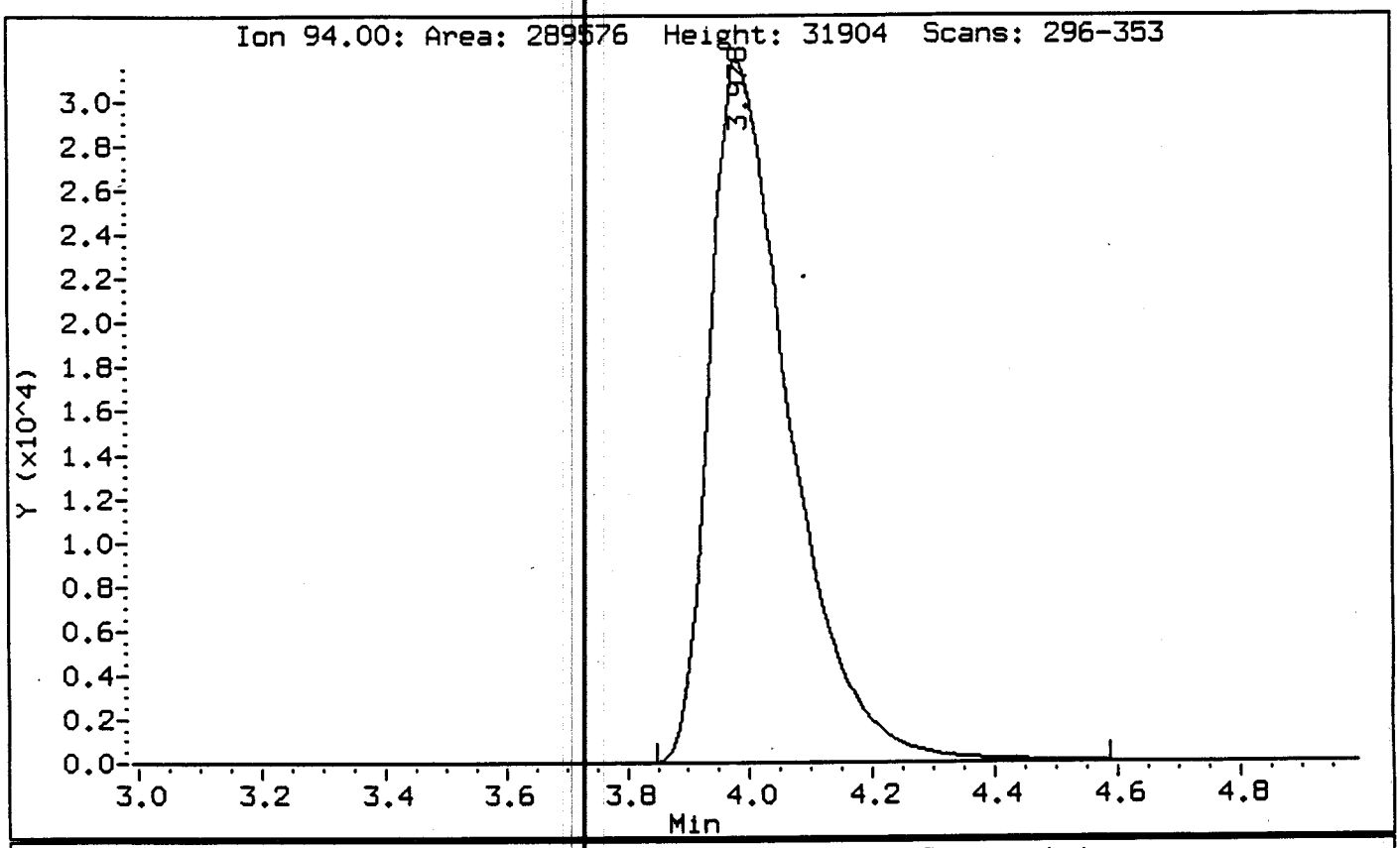
Compound: Vinyl Chloride
CAS Number: 75-01-4

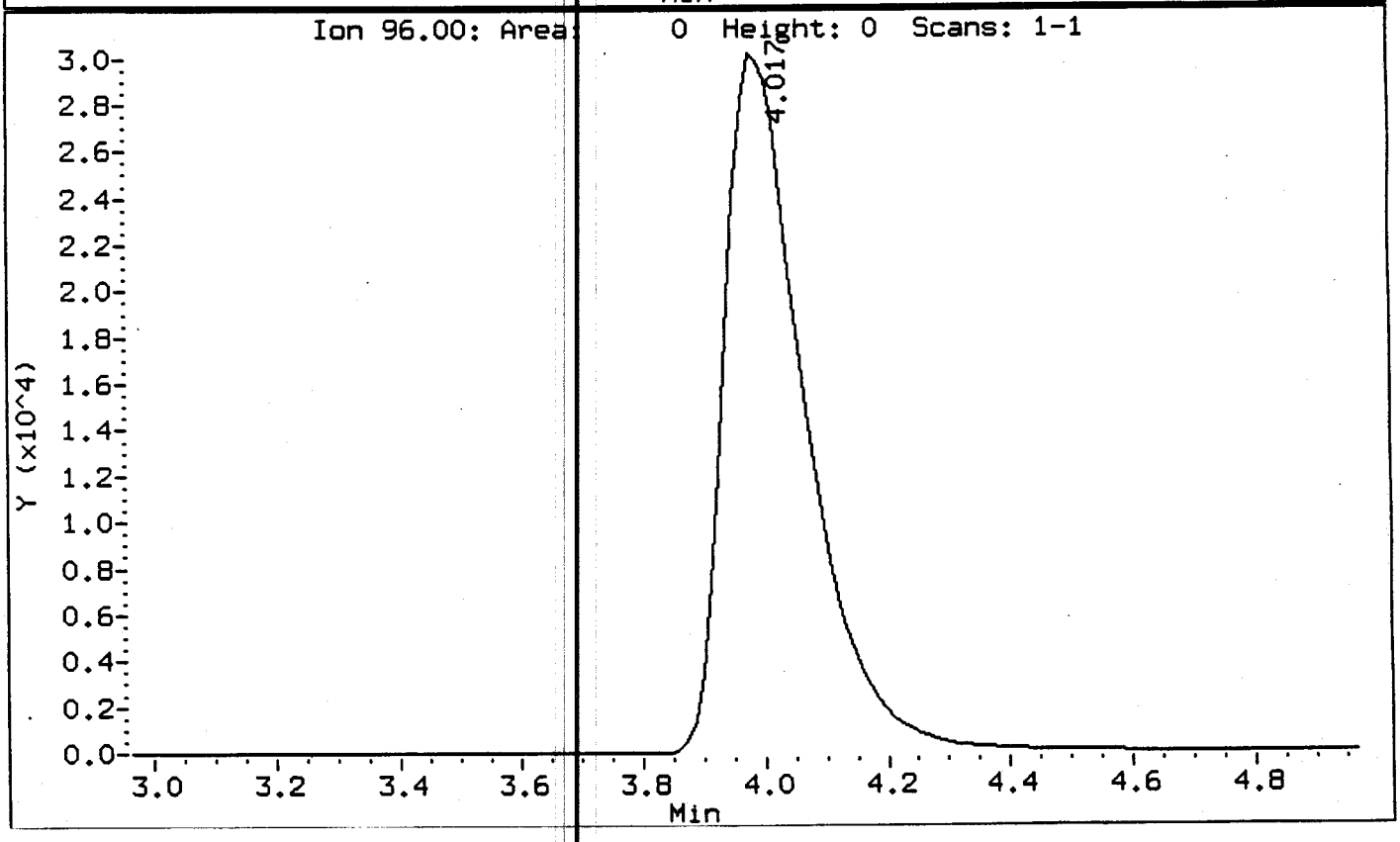




Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d/CT950424C54.LG
Injection Date: 24-APR-95 01:30
Instrument: f50054.i
Client Sample ID: VSTD200

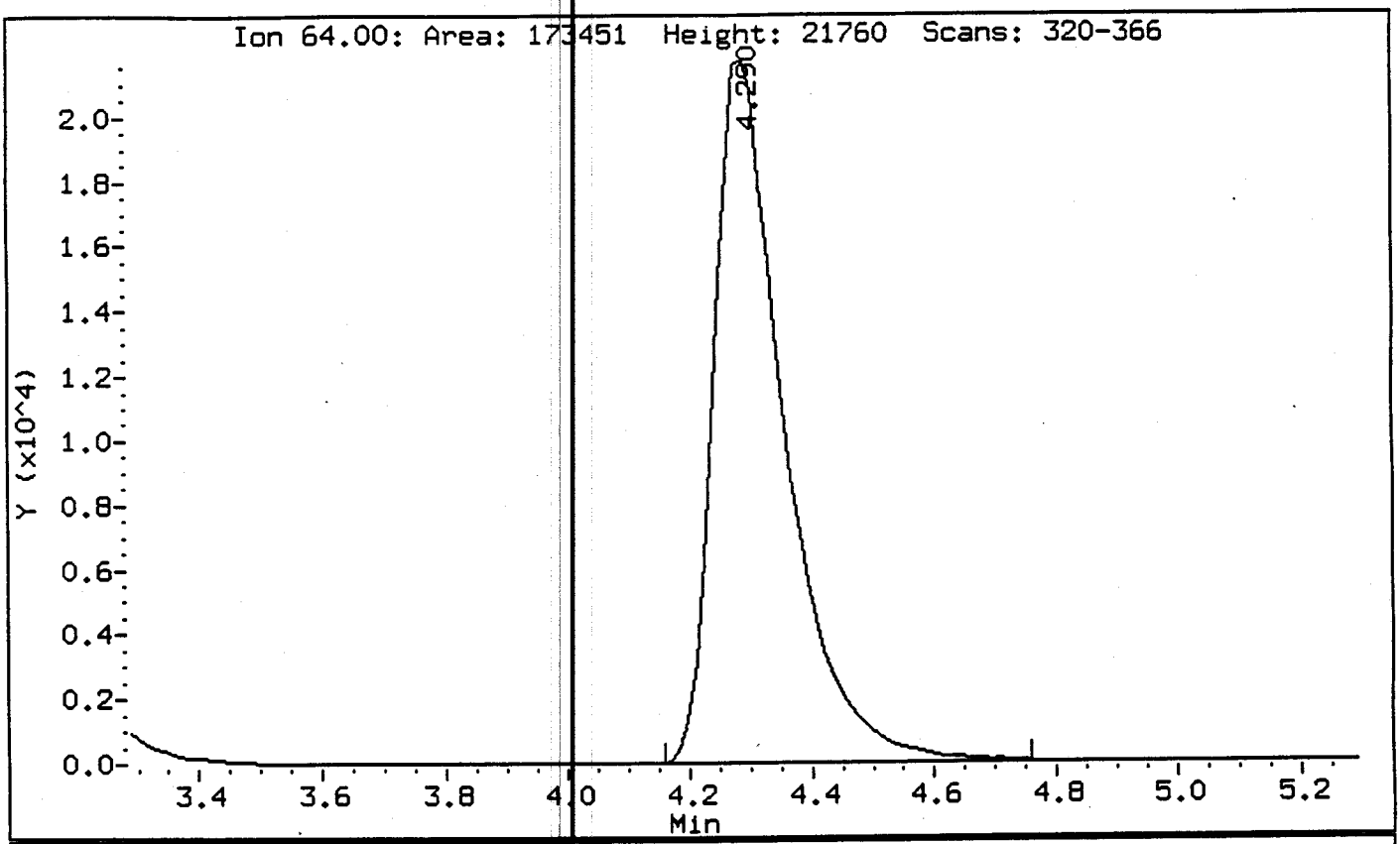
Compound: Bromomethane
CAS Number: 74-83-9

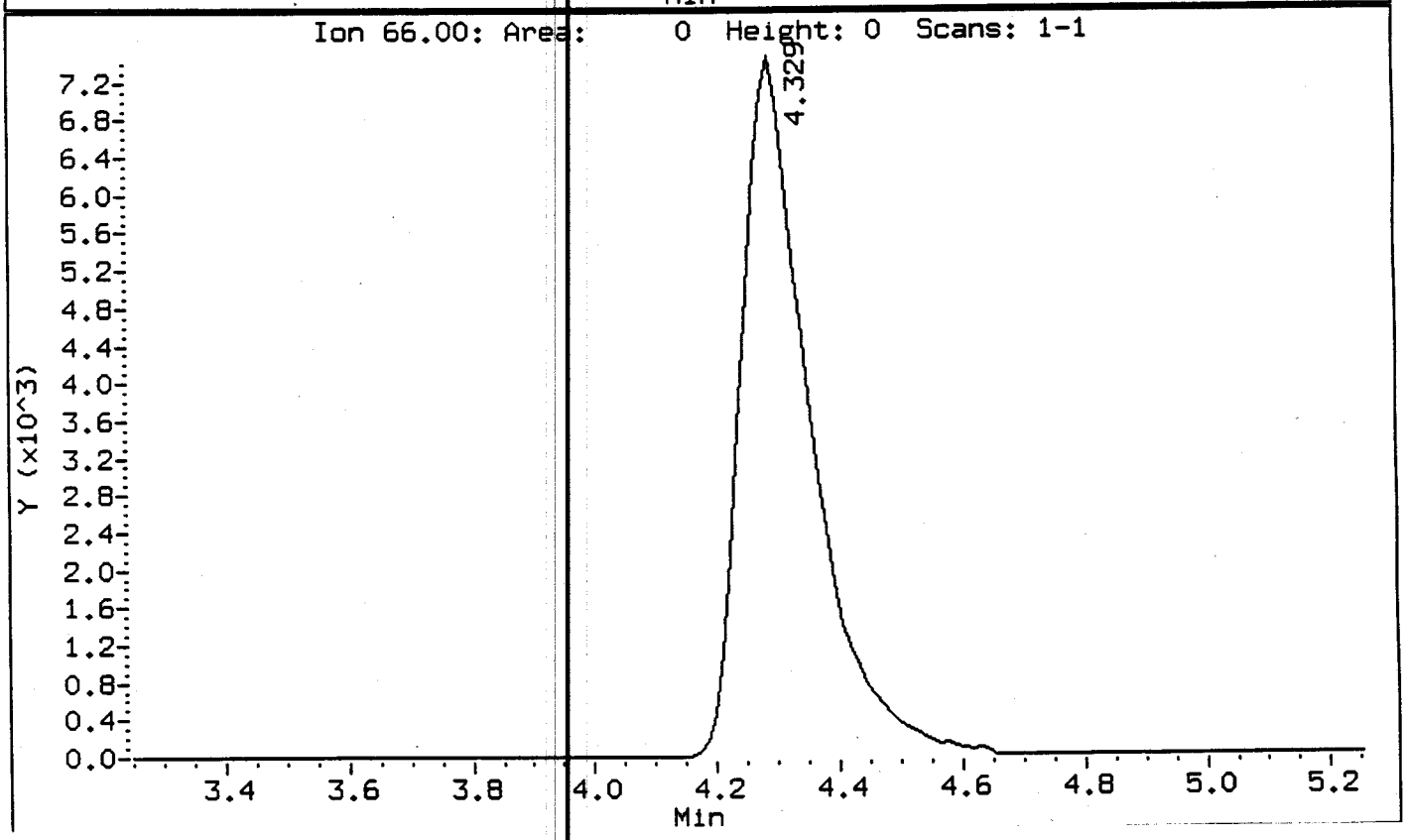




Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d/CT950424C54.LG
Injection Date: 24-APR-95 01:30
Instrument: f50054.i
Client Sample ID: VSTD200

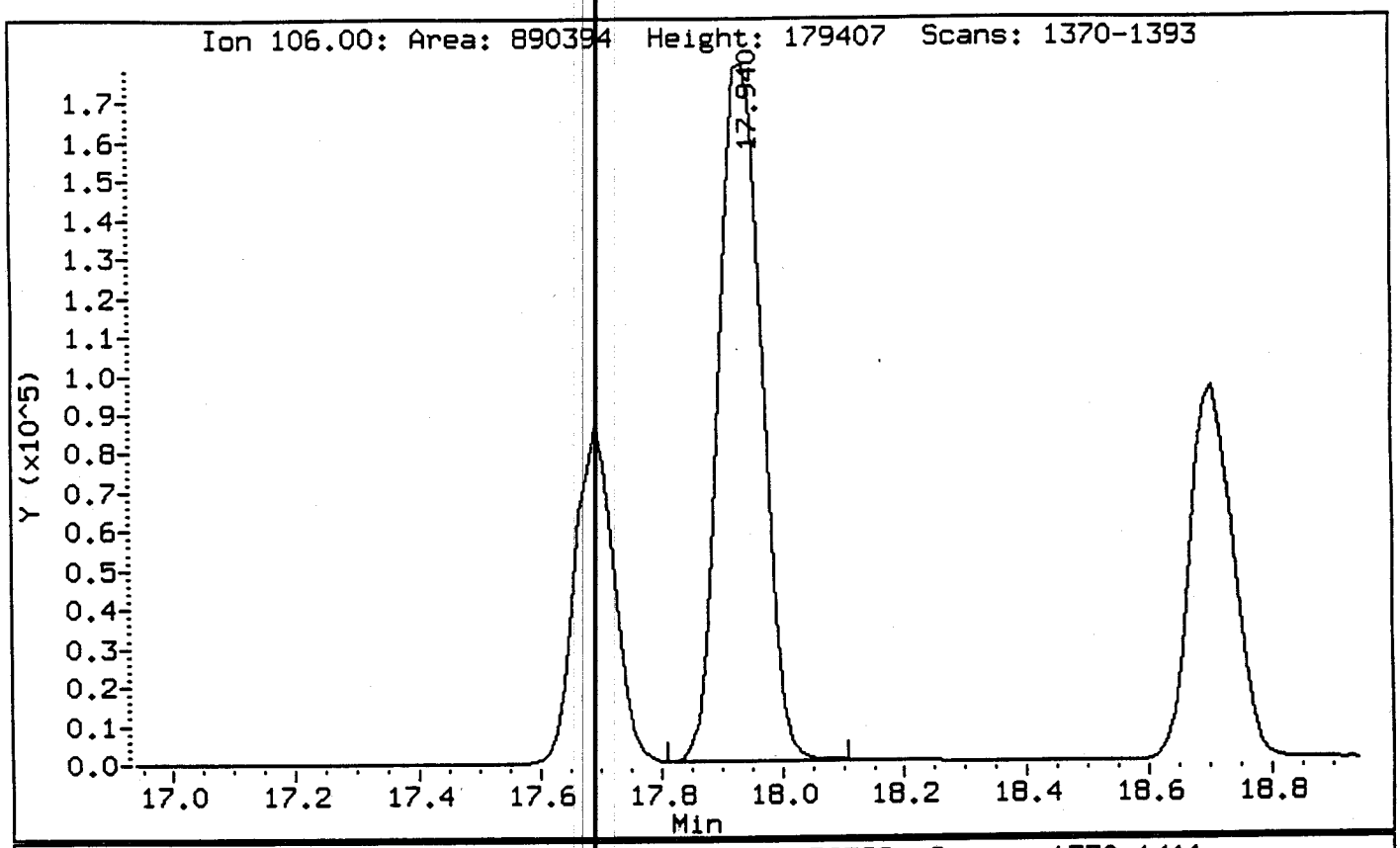
Compound: Chloroethane
CAS Number: 75-00-3

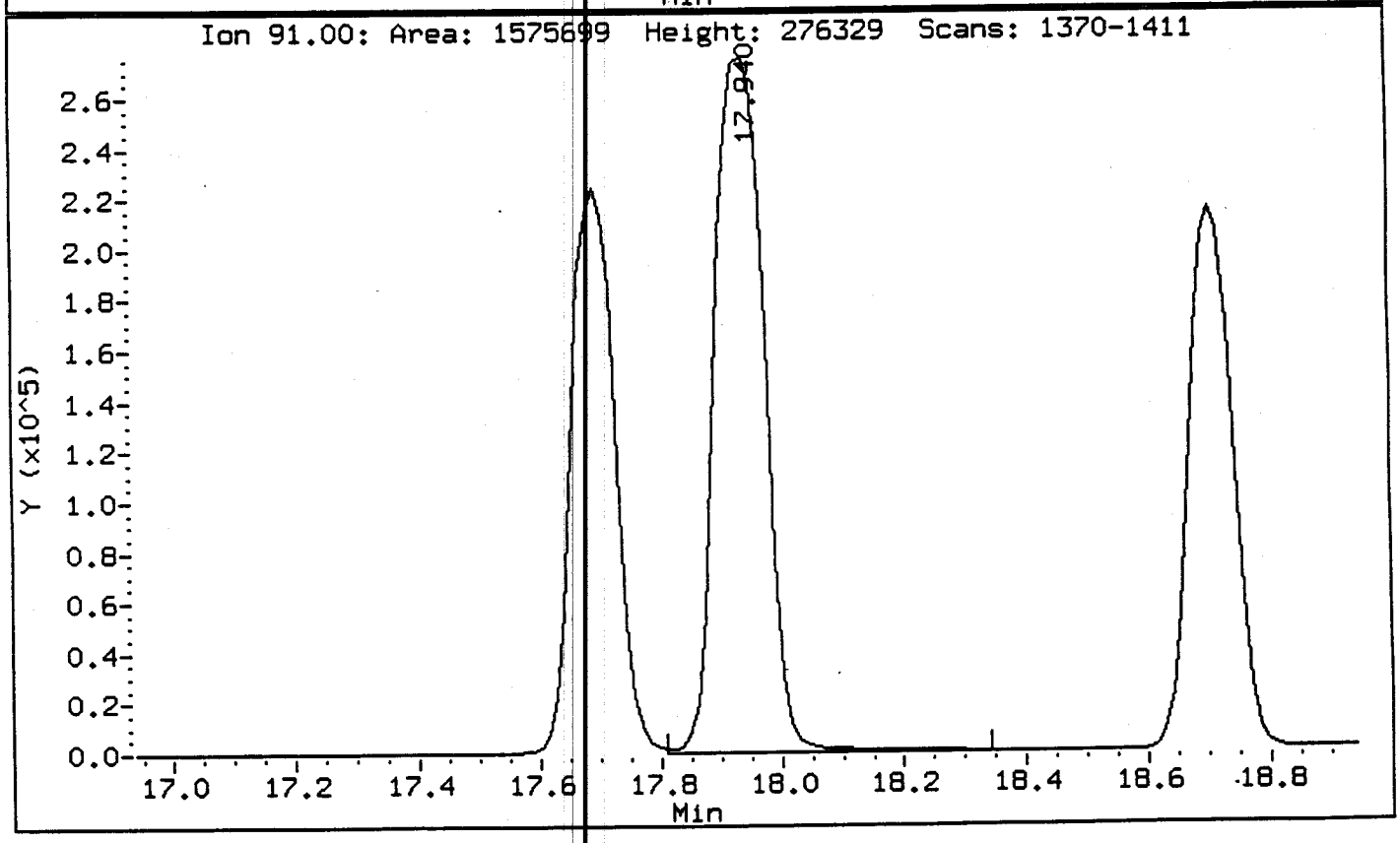




Data File: /chem/f50054.i/BF950424C54.b/CT950424C54.d/CT950424C54.LG
Injection Date: 24-APR-95 01:30
Instrument: f50054.i
Client Sample ID: VSTD200

Compound: m,p-Xylene
CAS Number: 1330-20-7





COMPUCHEM ENVIROMENTAL CORPORATION
GC/MS ANALYSIS LOG

VOLATILE

INITIAL TIME OF TUNE 23:58 SHIFT(S) (A) 1 (B) 1 (C) 1
TIME TUNE EXPIRES 11:58 DATE 4.23.95
LINKER/METHOD NWSW+ DCDFM
PREVENTIVE MAINTENANCE A TEKMAR FROM SOIL TO WATER Changed trap to Charcoal

	REJECTED	RUN LOG FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Disposition
1		CB950423B54	OK	4/23/95	—	CVB	—	—	5ml	2181	
2		BF950424C54	/	4/23/95	23:58	BFB	—	7008	2ul	2141	43131 LC=5E
3		CS950424C54	/	4/24/95	0:19	VSTD010	—	—	5ml	1948	
4		CT950424C54	/	4/24/95	1:36	VSTD200	—	—	5ml	1948	
5	/	CU950424C54		4/24/95	2:09	VSTD100	—	—	5ml	1948	
6		CV950424C54	/	4/24/95	2:49	VSTD050	—	—	5ml	1948	
7		CW950424C54	/	4/24/95	3:40	VSTD020	—	—	5ml	1948	
8		CX950424C54	/	4/24/95	4:17	VSTD100	—	—	5ml		GOOD ICAL
9				/ /	:						
10				/ /	:						
11				/ /	:						
12				/ /	:						
13				/ /	:						
14				/ /	:						
15				/ /	:						
16				/ /	:						
17				/ /	:						
18				/ /	:						
19				/ /	:						
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						4/24/95

VERIFIED
SUPERVISOR APPROVAL Mark D. B 4/
ENVELOPE NAME

№ 011

30458 00001 SAMPLE DATA PACKAGE

42

b. Form VII VOA

Continuing Calibration Data

In order by instrument.

(1) VOA standard reconstructed ion chromatograms and quantitation reports for the continuing calibration. Spectra not required.

(2) When more than one continuing calibration is performed, forms must be in chronological order, within fraction and instrument.

VOLATILE CONTINUING CALIBRATION CHECK

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Instrument ID: F50054 Calibration Date: 04/24/95 Time: 1741

Lab File ID: CS950424B54.D Init. Calibration Date(s): 04/24/95 04/24/95

Heated Purge: (Y/N) N Init. Calibration Times: 0019 0447

GC Column:DB624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.409	0.451		-10.3	
Bromomethane	1.339	1.451	0.100	-8.4	25.0
Vinyl Chloride	0.618	0.689	0.100	-11.5	25.0
Chloroethane	0.761	0.754		0.9	
Methylene Chloride	1.437	1.379		4.1	
Acetone	0.230	0.085		62.9	
Carbon Disulfide	3.558	3.460		2.8	
1,1-Dichloroethene	1.379	1.372	0.100	0.5	25.0
1,1-Dichloroethane	2.869	2.850	0.200	0.7	25.0
1,2-Dichloroethene (total)	1.641	1.665		-1.5	
Chloroform	4.252	4.408	0.200	-3.7	25.0
1,2-Dichloroethane	2.322	2.464	0.100	-6.1	25.0
2-Butanone	0.490	0.288		41.2	
1,1,1-Trichloroethane	1.057	1.059	0.100	-0.2	25.0
Carbon Tetrachloride	1.010	1.028	0.100	-1.8	25.0
Bromodichloromethane	0.638	0.642	0.200	-0.6	25.0
1,2-Dichloropropane	0.280	0.274		2.1	
cis-1,3-Dichloropropene	0.419	0.415	0.200	1.0	25.0
Trichloroethene	0.523	0.549	0.300	-4.9	25.0
Dibromochloromethane	0.727	0.791	0.100	-8.8	25.0
1,1,2-Trichloroethane	0.332	0.350	0.100	-5.2	25.0
Benzene	1.267	1.272	0.500	-0.4	25.0
trans-1,3-Dichloropropene	0.337	0.340	0.100	-1.1	25.0
Bromoform	0.511	0.577	0.100	-12.8	25.0
4-Methyl-2-Pentanone	0.095	0.096		-1.5	
2-Hexanone	0.094	0.058		38.7	
Tetrachloroethene	0.499	0.542	0.200	-8.6	25.0
1,1,2,2-Tetrachloroethane	0.403	0.430	0.500	-6.8	25.0
Toluene	0.970	0.991	0.400	-2.3	25.0
Chlorobenzene	1.015	1.090	0.500	-7.4	25.0
Ethylbenzene	0.444	0.464	0.100	-4.5	25.0
Styrene	0.904	1.014	0.300	-12.2	25.0
Xylene (Total)	0.565	0.629	0.300	-11.4	25.0
Dichlorodiflouromethane	0.811	0.844		-4.0	
Toluene-d8	0.892	0.923		-3.5	
Bromofluorobenzene	0.774	0.829	0.200	-7.2	25.0

All other compounds must meet a minimum RRF of 0.010.

VOLATILE CONTINUING CALIBRATION CHECK

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Instrument ID: F50054 Calibration Date: 04/24/95 Time: 1741

Lab File ID: CS950424B54.D Init. Calibration Date(s): 04/24/95 04/24/95

Heated Purge: (Y/N) N Init. Calibration Times: 0019 0447

GC Column:DB624 ID: 0.53 (mm)

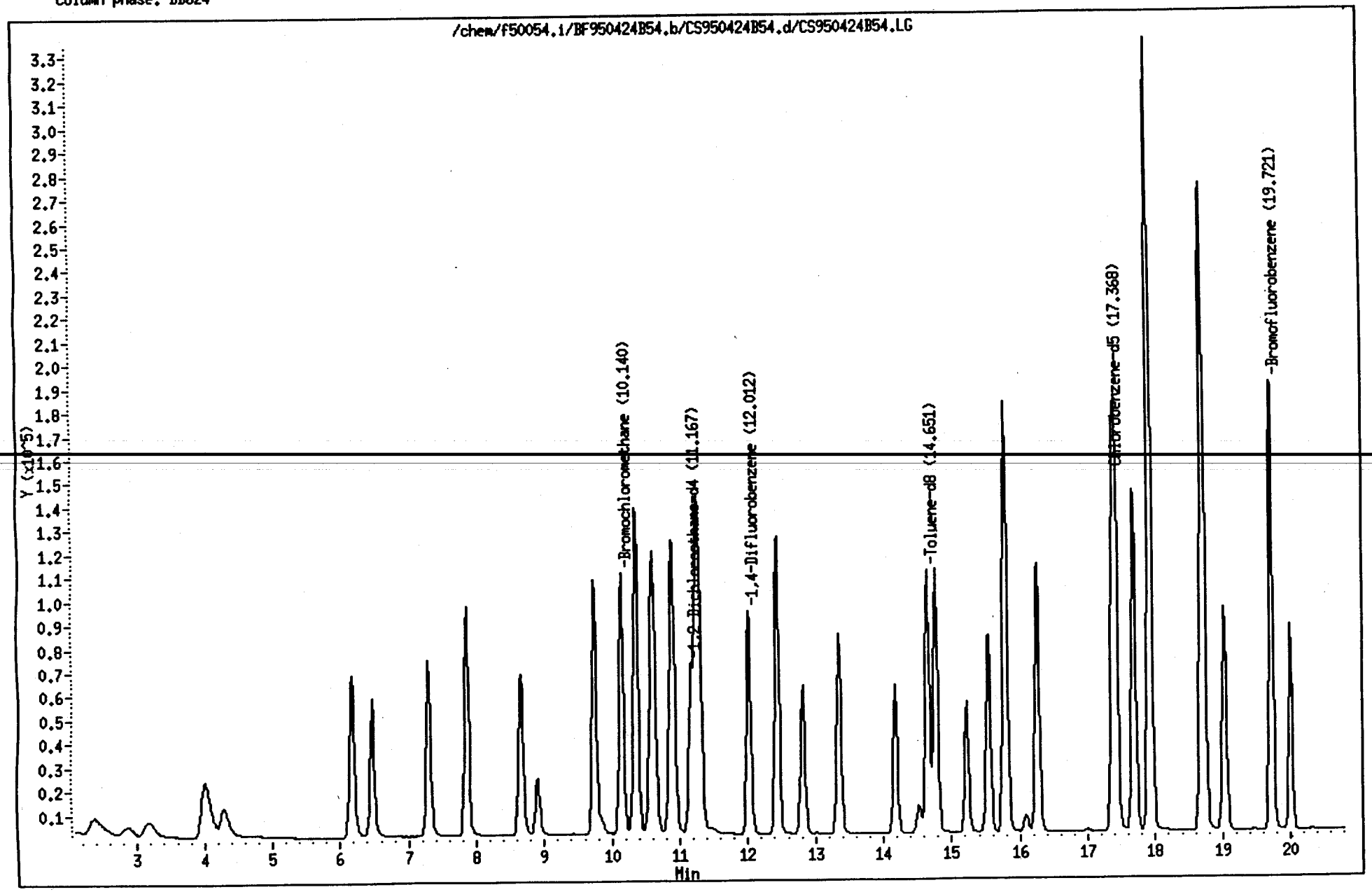
COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
1,2-Dichloroethane-d4	1.907	2.106		-10.5	

All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/f50054.i/BF950424B54.b/CS950424B54.d
Date : 24-APR-1995 17:41
Client ID: VSTD050
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CS950424B54.d
Report Date: 28-Apr-1995 09:45

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CS950424B54.d
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 24-APR-1995 17:41
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1	Bromochloromethane	128.00	10.140	10.140	(1.000)	57150	250.0	
* 2	1,4-Difluorobenzene	114.00	12.012	12.012	(1.000)	195088	250.0	
* 3	Chlorobenzene-d5	117.00	17.368	17.368	(1.000)	202186	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	11.167	11.167	(1.101)	120382	250.0	276.1
$ 5	Toluene-d8	98.00	14.651	14.651	(0.844)	186710	250.0	258.8
$ 6	Bromofluorobenzene	95.00	19.734	19.734	(1.136)	167687	250.0	268.0
7	Dichlorodiflouromethane	85.00	2.379	2.379	(0.235)	48209	250.0	259.9
8	Chloromethane	50.00	2.873	2.873	(0.283)	25785	250.0	275.8(M)
9	Vinyl Chloride	62.00	3.185	3.185	(0.314)	39390	250.0	278.7(M)
10	Bromomethane	94.00	4.004	4.004	(0.395)	82933	250.0	270.9(M)
11	Chloroethane	64.00	4.290	4.290	(0.423)	43116	250.0	247.8
12	1,1-Dichloroethene	96.00	6.175	6.175	(0.609)	78426	250.0	248.7
13	Acetone	43.00	6.422	6.422	(0.633)	4872	250.0	92.69
14	Carbon Disulfide	76.00	6.474	6.474	(0.638)	197729	250.0	243.1
15	Methylene Chloride	84.00	7.293	7.293	(0.719)	78801	250.0	239.8
16	trans-1,2-Dichloroethene	96.00	7.852	7.852	(0.774)	90044	250.0	252.1
17	1,1-Dichloroethane	63.00	8.658	8.658	(0.854)	162867	250.0	248.4
18	cis-1,2-Dichloroethene	96.00	9.737	9.737	(0.960)	100318	250.0	255.1
19	2-Butanone	43.00	9.854	9.854	(0.972)	16465	250.0	147.1
20	Chloroform	83.00	10.348	10.348	(1.020)	251910	250.0	259.2
21	1,1,1-Trichloroethane	97.00	10.595	10.595	(0.882)	206536	250.0	250.5
22	Carbon Tetrachloride	117.00	10.881	10.881	(0.906)	200612	250.0	254.6
23	Benzene	78.00	11.245	11.245	(0.936)	248187	250.0	250.9

Data File: /chem/f50054.i/BF950424E54.b/CS950424B54.d
Report Date: 28-Apr-1995 09:45

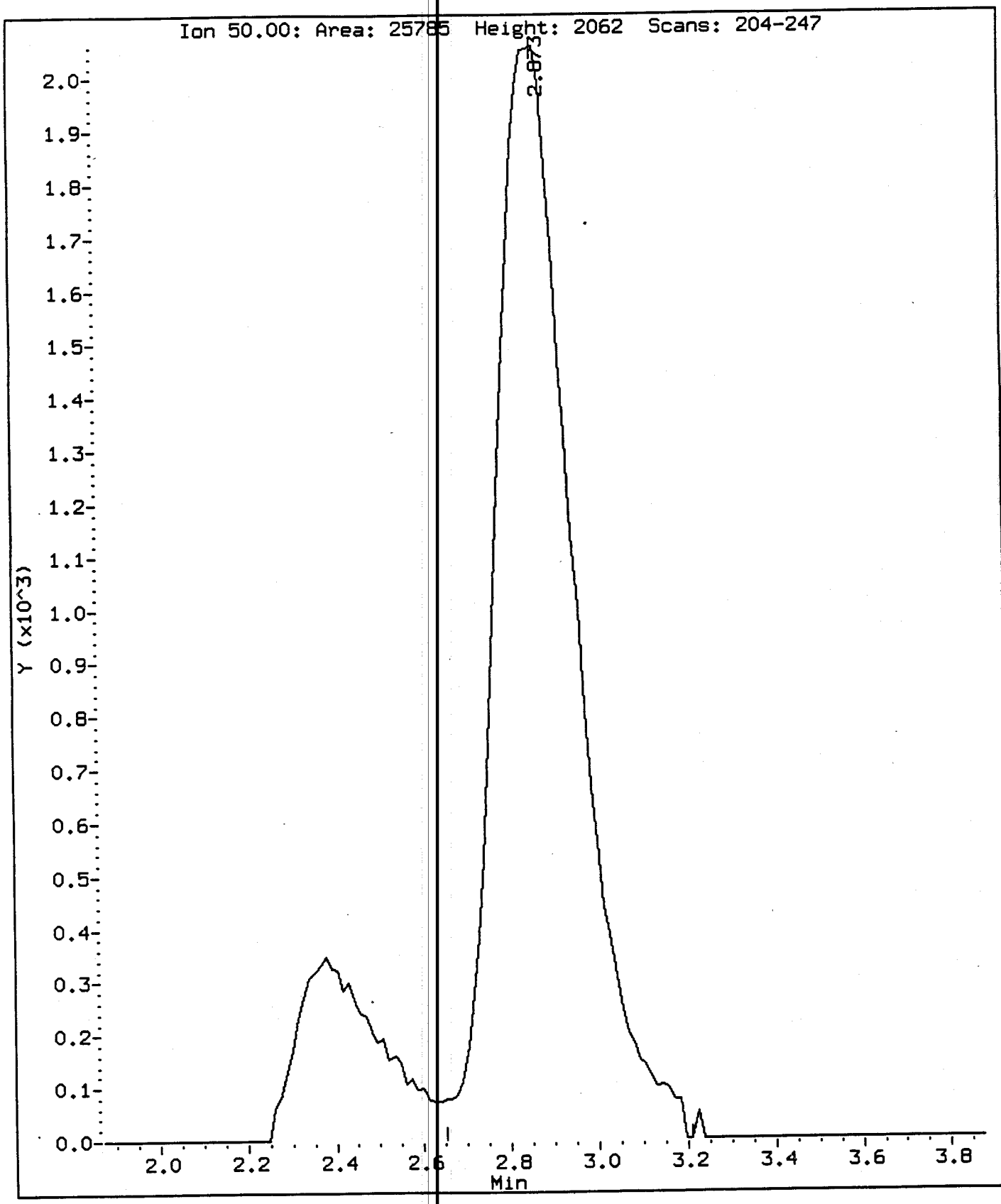
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 1,2-Dichloroethane	62.00	11.297	11.297	(1.114)	140825	250.0	265.3
	25 Trichloroethene	130.00	12.428	12.428	(1.035)	107066	250.0	262.4
	26 1,2-Dichloropropane	63.00	12.818	12.818	(1.067)	53427	250.0	244.8
	27 Bromodichloromethane	83.00	13.351	13.351	(1.111)	125319	250.0	251.6
	28 cis-1,3-Dichloropropene	75.00	14.170	14.170	(1.180)	80920	250.0	247.4
	29 4-Methyl-2-Pentanone	43.00	14.521	14.521	(0.836)	19480	250.0	253.8
	30 Toluene	91.00	14.768	14.768	(0.850)	200438	250.0	255.6
	31 trans-1,3-Dichloropropene	75.00	15.223	15.223	(1.267)	66392	250.0	252.8
	32 1,1,2-Trichloroethane	97.00	15.548	15.548	(1.294)	68250	250.0	263.1
	33 Tetrachloroethene	164.00	15.795	15.795	(0.909)	109567	250.0	271.4
	34 2-Hexanone	43.00	16.094	16.094	(0.927)	11671	250.0	153.2
	35 Dibromochloromethane	129.00	16.263	16.263	(1.354)	154294	250.0	272.0
	36 Chlorobenzene	112.00	17.420	17.420	(1.003)	220300	250.0	268.5
	37 Ethylbenzene	106.00	17.680	17.680	(1.018)	93755	250.0	261.1
	38 m,p-Xylene	106.00	17.927	17.927	(1.032)	256928	500.0	557.2
	39 o-Xylene	106.00	18.707	18.707	(1.077)	127123	250.0	278.4
	40 Styrene	104.00	18.733	18.733	(1.079)	205009	250.0	280.4
	41 Bromoform	173.00	19.032	19.032	(1.584)	112513	250.0	281.9
	42 1,1,2,2-Tetrachloroethane	83.00	20.007	20.007	(1.152)	87021	250.0	267.0
M	43 1,2-Dichloroethene (total)	96.00				190362	500.0	507.3
M	44 Xylene (Total)	106.00				384051	250.0	841.1

QC Flag Legend

M - Compound response manually integrated.

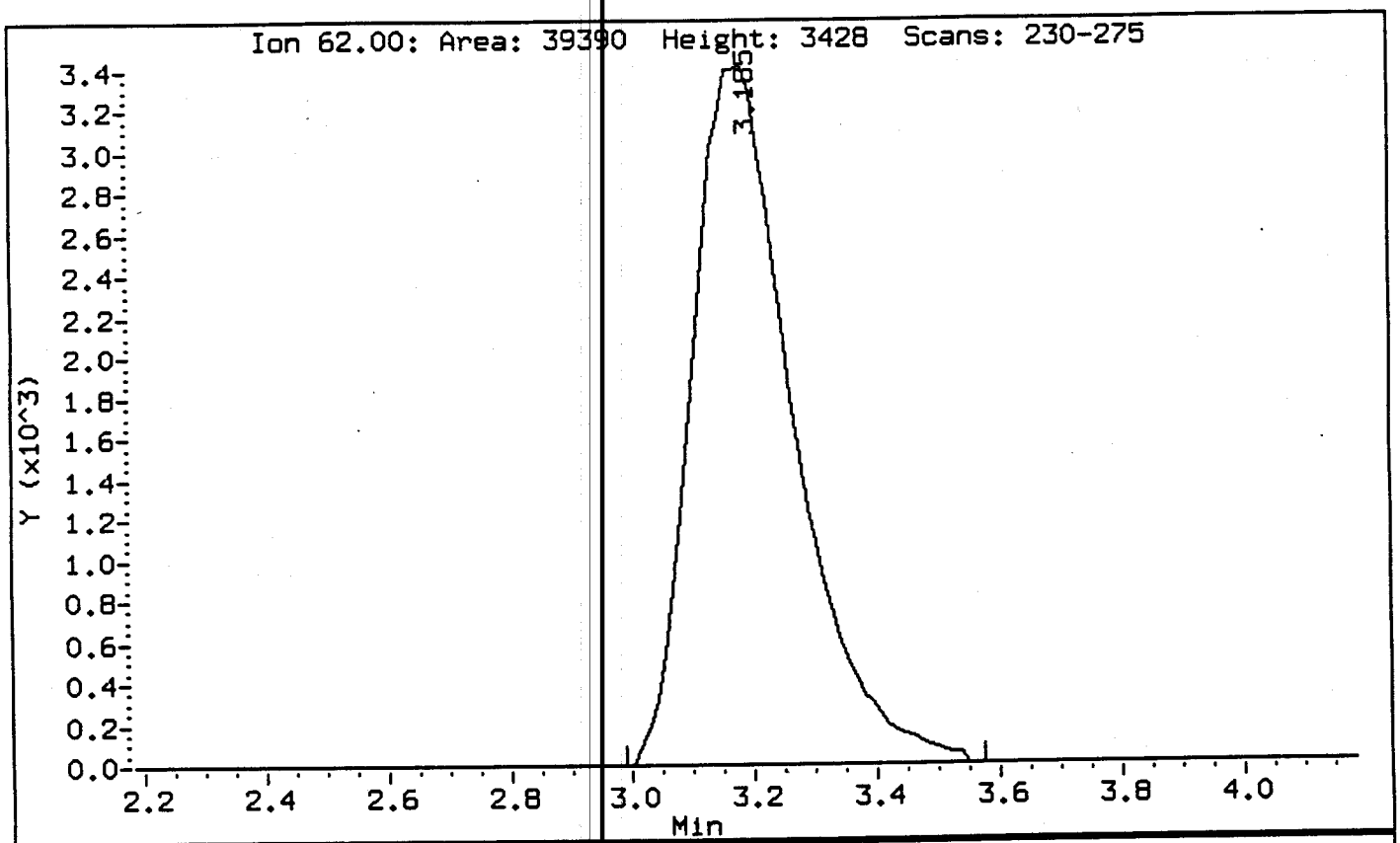
Data File: /chem/f50054.i/BF950424B54.b/CS950424B54.d/CS950424B54.LG
Injection Date: 24-APR-95 17:41
Instrument: f50054.i
Client Sample ID: VSTD050

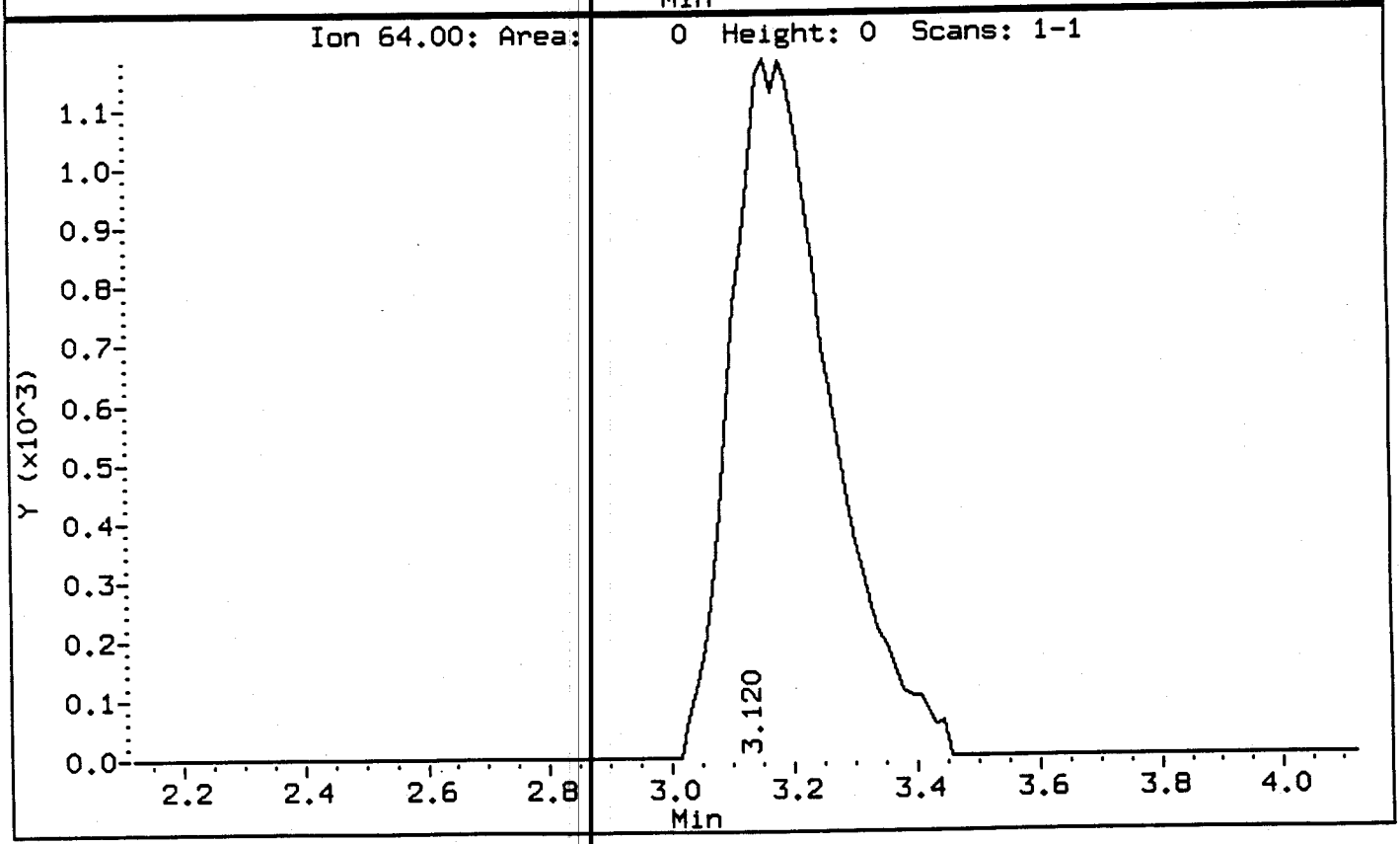
Compound: Chloromethane
CAS Number: 74-87-3



Data File: /chem/f50054.i/BF950424B54.b/CS950424B54.d/CS950424B54.LG
Injection Date: 24-APR-95 17:41
Instrument: f50054.i
Client Sample ID: VSTD050

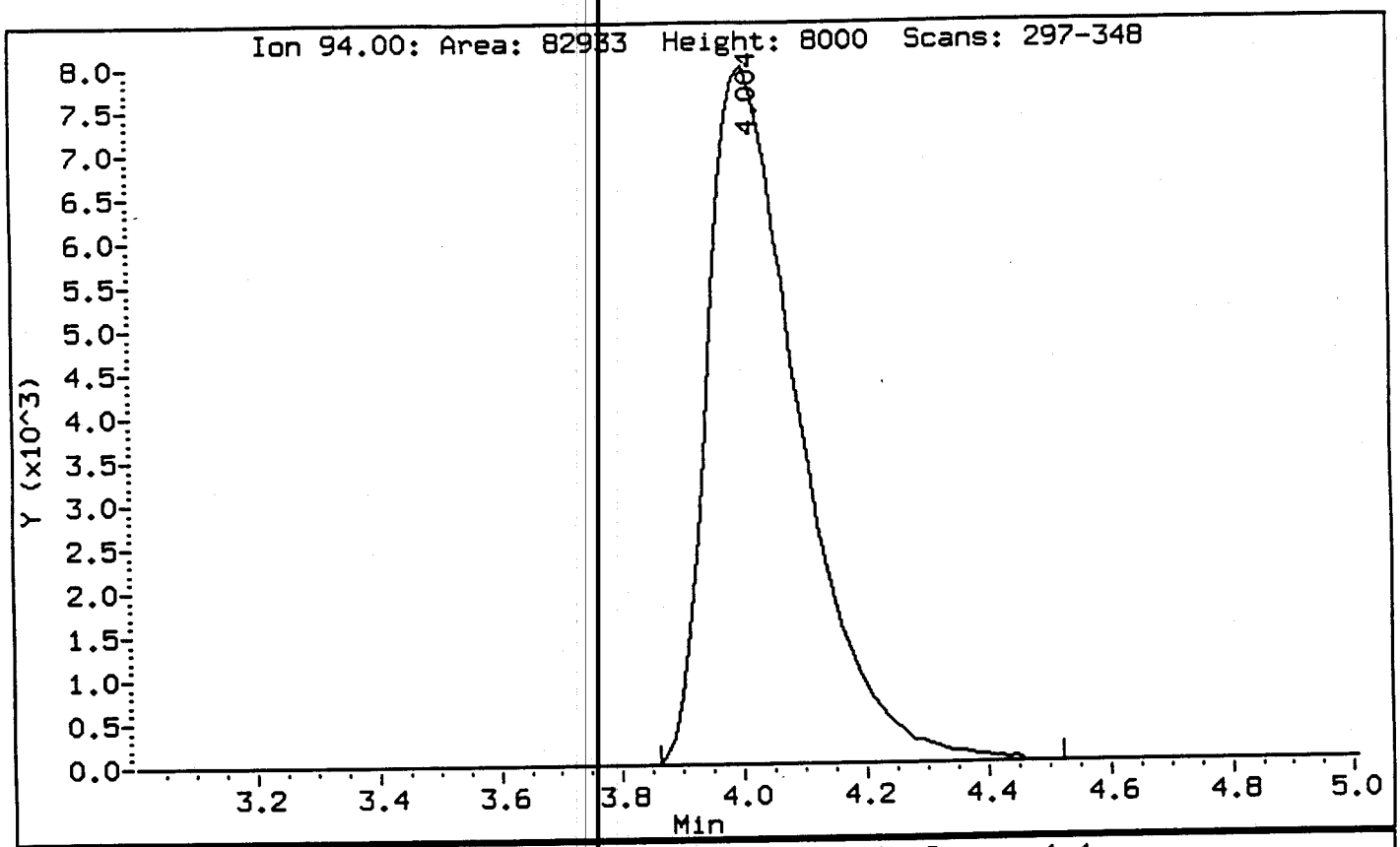
Compound: Vinyl Chloride
CAS Number: 75-01-4

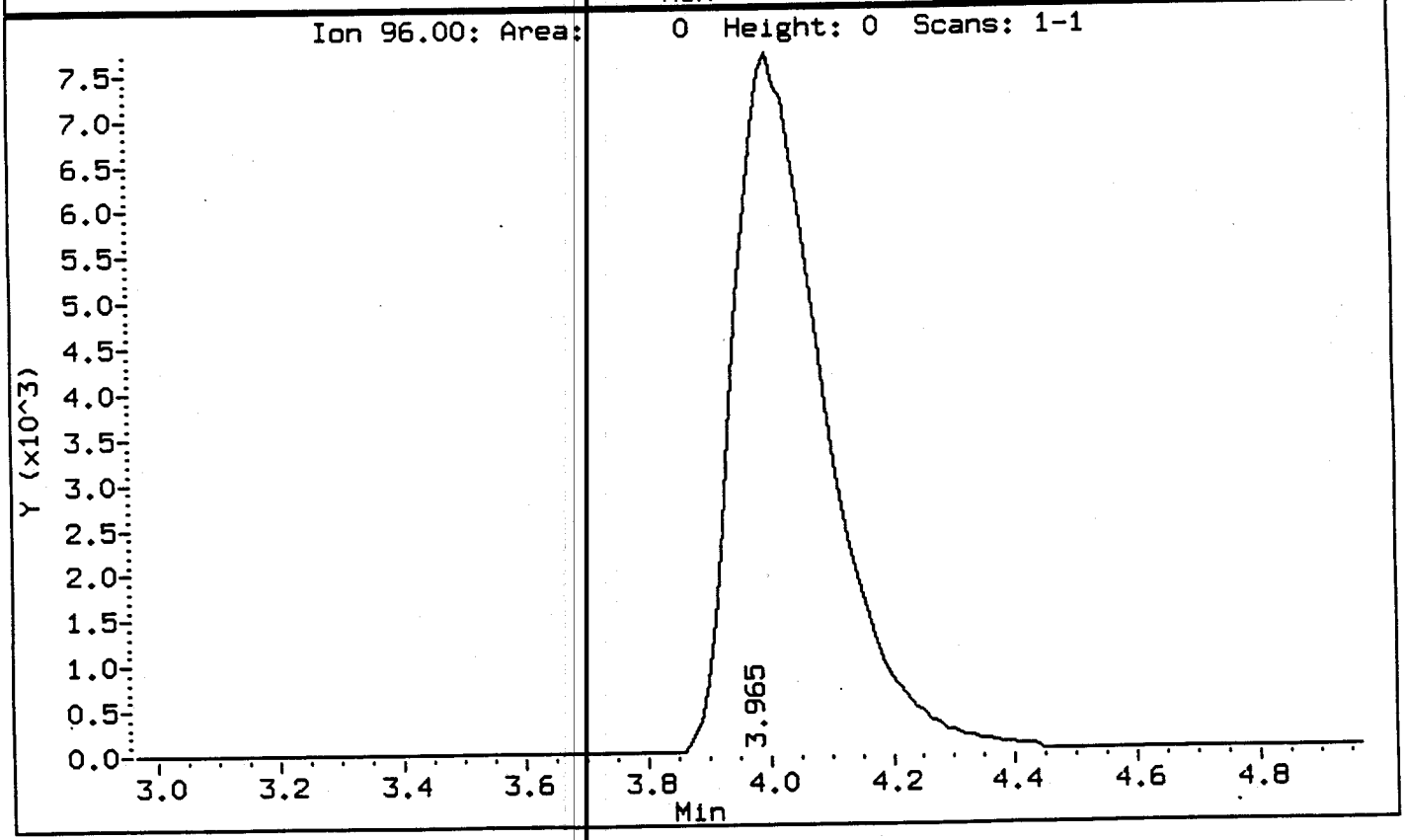




Data File: /chem/f50054.i/BF950424B54.b/CS950424B54.d/CS950424B54.LG
Injection Date: 24-APR-95 17:41
Instrument: f50054.i
Client Sample ID: VSTD050

Compound: Bromomethane
CAS Number: 74-83-9





COMPUCHEM ENVIROMENTAL CORPORATION **VOLATILE**
GC/MS ANALYSIS LOG

INITIAL TIME OF TUNE 17:26
TIME TUNE EXPIRES 5:26
SHIFT(S) (A) ____ (B) 1 (C) 1
DATE 4/24/95
LINKER/METHOD [illegible]

PREVENTIVE MAINTENANCE None

RUN LOG

	REJECTED	FILE NAME	REPORTED	DATE	TIME	EPA ID	CASE NO.	STD ID #	AMOUNT INJECTED	CHEMIST	COMMENTS (Lot #'s, Dispositio
1		BF950424B54	/	4/24/95	17:26	BFB	—	7008	2ul	2011	43131 [illegible]
2		CS950424B54	/	/ /	17:41	Vstd050	↓	—	5ml	↓	TN14 (43080, 43046)
3		CB950424B54	/	/ /	18:25	Vblk JM	↓		↓	↓	↓
4		C2C33[illegible]B54	/	/ /	19:20	MW2	30458		250ul	↓	↓
5		CN002287B54	/	/ /	20:01	MW1	↓		5ml	↓	↓
6		CN002300B54	/	/ /	20:46	MW3	↓		↓	↓	↓
7		CN002303B54	/	/ /	21:42	MW5	↓		↓	↓	↓
8		CN002307B54	/	/ /	22:38	MW6	↓		2ml	↓	↓
9		CN002311B54	/	/ /	23:15	MW7	↓		5ml	↓	↓
10		CN002313B54	/	/ /	23:49	MW8	↓		↓	↓	↓
11		CN002318B54	1 DP	~~X~~ VS4/25/95 4/25/95	0:22	MW10	↓		2ml	↓	↓
12		CN002322B54	1	~~DP~~ VS4/25/95 4/25/95	1:10	MW11	30458	—	5ml	1948	↓
13		CN002324B54	/	4/25/95	1:56	MW13	30458	—	5ml	1948	↓
14		CN002327B54	/	4/25/95	2:34	MW17	30458	—	5ml	1948	↓
15		CN002282B54	/	4/25/95	3:12	MW1MS	30458		5ml	1948	↓
16		CN002283B54		4/25/95	3:56	MW1MSD	30458		5ml	1948	↓
17		CN002318B54		4/25/95	4:35	MW10	30458	—	700ul	1948	↓
18		CN002331B54		4/25/95	5:14	BS	30458	—	5ml	1948	↓
19				/ /	:						
20				/ /	:						
21				/ /	:						
22				/ /	:						
23				/ /	:						
24				/ /	:						VS4/25/95

VERIFIED ____
SUPERVISOR APPROVAL SWBass 4/25/95
ENVELOPE NAME ____

№ 013

30458 00001 SAMPLE DATA PACKAGE

32

4. Raw Q C Data

a. B F B Data

b. Blank Data

c. Matrix Spike Data

d. Matrix Spike Duplicate Data

a. B F B Data

For each 12 hour period, for each GC/MS system utilized.

(1) Bar graph spectrum

(2) Mass listing

(3) Reconstructed total ion chromatogram (RIC)

Data File: /chem/f50054.i/BF950424C54.b/BF950424C54.d

Date : 23-APR-1995 23:58

Client ID: BFB

Instrument: f50054.i

Sample Info: BFB

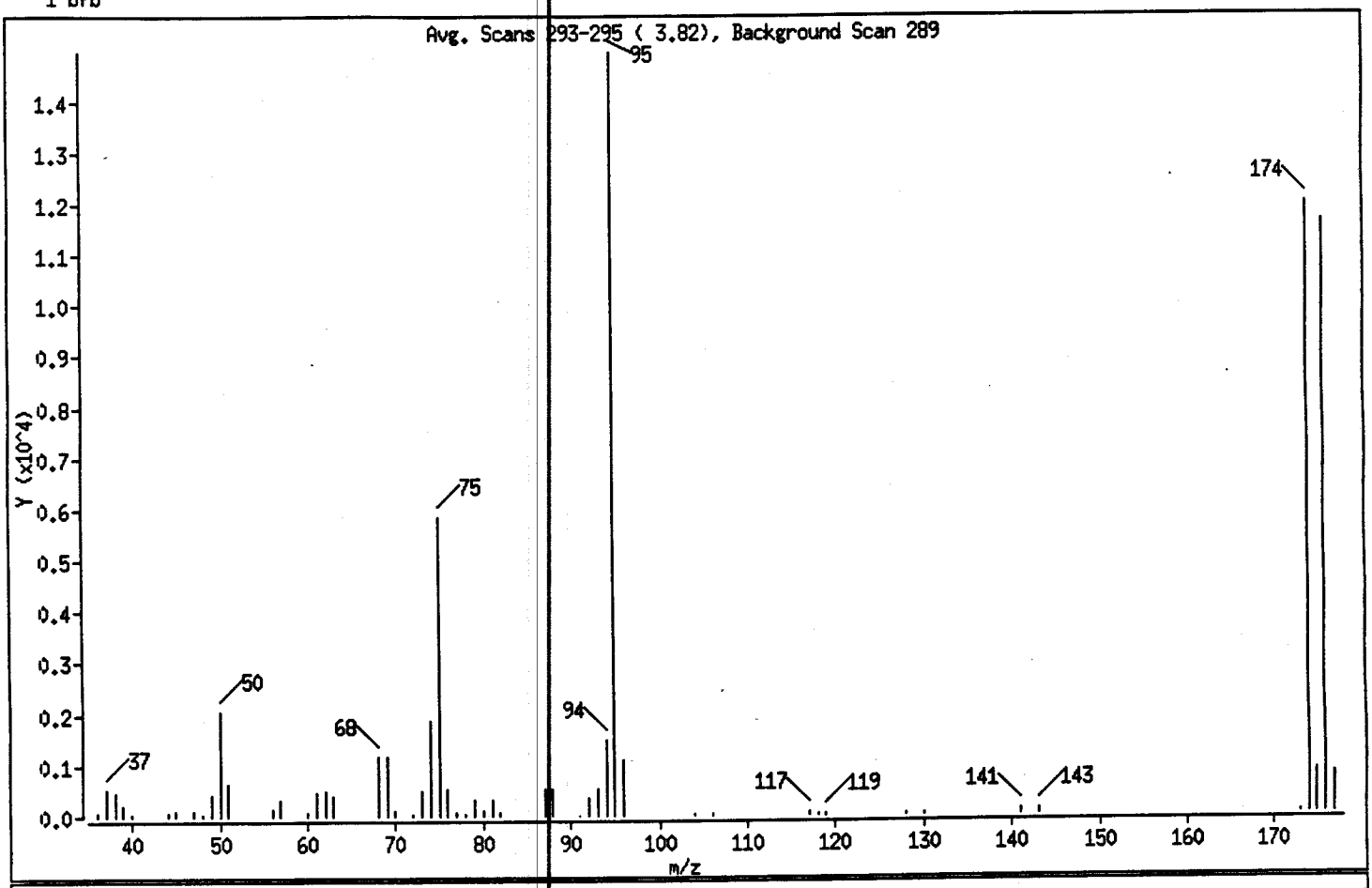
Volume Injected (uL): 2.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	13.81
75	30.00 - 66.00% of mass 95	39.20
96	5.00 - 9.00% of mass 95	7.28
173	Less than 2.00% of mass 174	0.28 (0.35)
174	50.00 - 120.00% of mass 95	80.08
175	4.00 - 9.00% of mass 174	5.68 (7.09)
176	93.00 - 101.00% of mass 174	77.81 (97.16)
177	5.00 - 9.00% of mass 176	5.15 (6.61)

Data File: /chem/f50054.i/BF950424C54.b/BF950424C54.d

Date : 23-APR-1995 23:58

Client ID: BFB

Instrument: f50054.i

Sample Info: BFB

Volume Injected (uL): 2.0

Operator: 2141

Column phase: DB624

Column diameter: 0.53

Data File: BF950424C54.d

Spectrum : Avg. Scans 293-295 (3.82), Background Scan 289

Largest m/z: 95.00

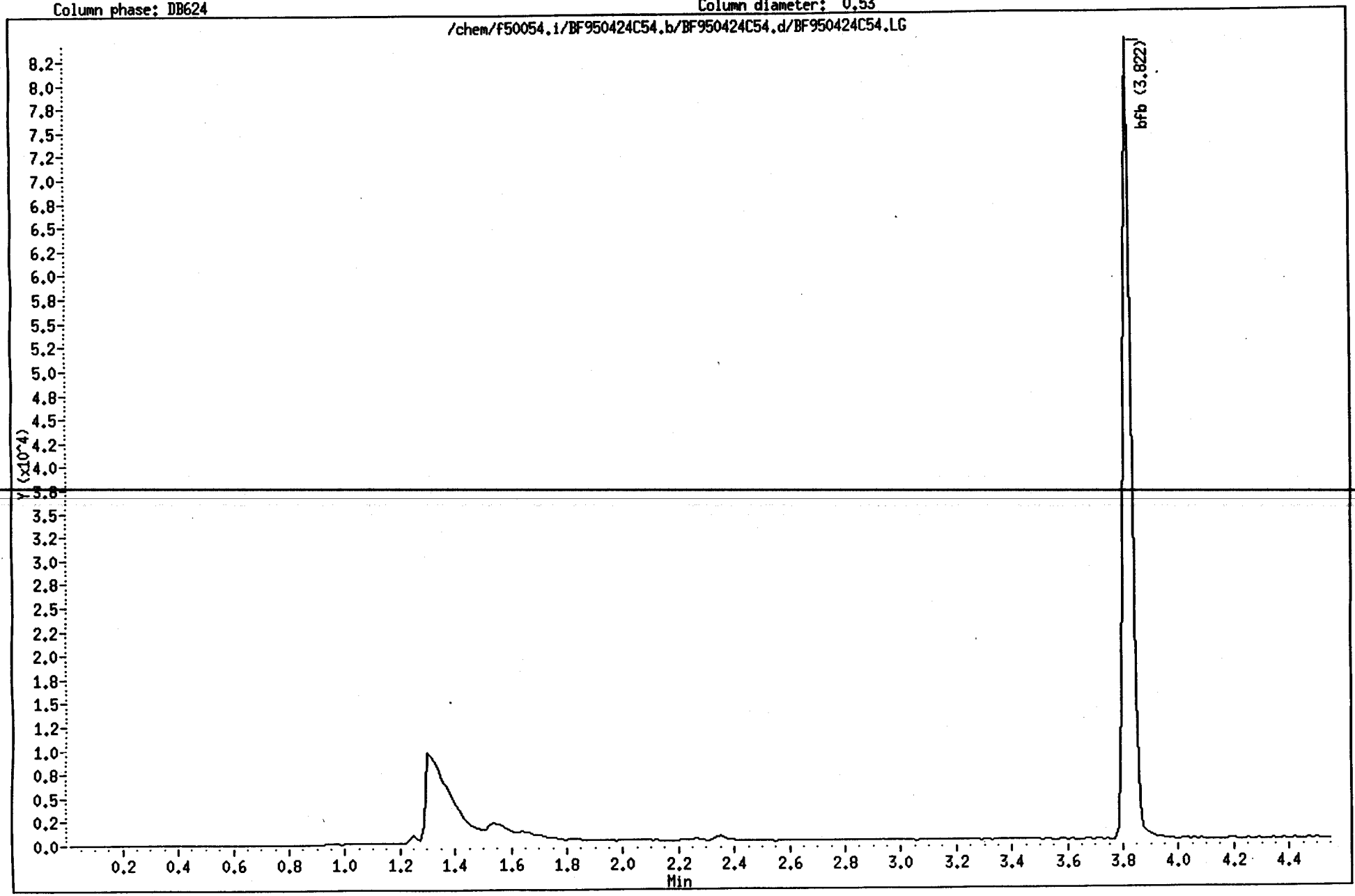
Number of peaks: 54

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	80	60.00	61	79.00	323	117.00	75
37.00	522	61.00	470	80.00	98	118.00	19
38.00	456	62.00	485	81.00	334	119.00	44
39.00	199	63.00	374	82.00	65	128.00	22
40.00	39	68.00	1168	87.00	546	130.00	22
44.00	73	69.00	1154	88.00	531	141.00	100
45.00	97	70.00	104	91.00	16	143.00	110
47.00	110	72.00	19	92.00	340	173.00	42
48.00	26	73.00	482	93.00	526	174.00	11997
49.00	415	74.00	1892	94.00	1494	175.00	851
50.00	2069	75.00	5872	95.00	14981	176.00	11656
51.00	651	76.00	518	96.00	1091	177.00	771
56.00	159	77.00	80	104.00	20		
57.00	308	78.00	25	106.00	25		

Data File: /chem/f50054.i/BF950424C54.b/BF950424C54.d
Date : 23-APR-1995 23:58
Client ID: BFB
Sample Info: BFB
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50054.i

Operator: 2141
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/BF950424B54.d

Date : 24-APR-95 17:26

Client ID: BFB

Instrument: f50054.i

Sample Info: BFB

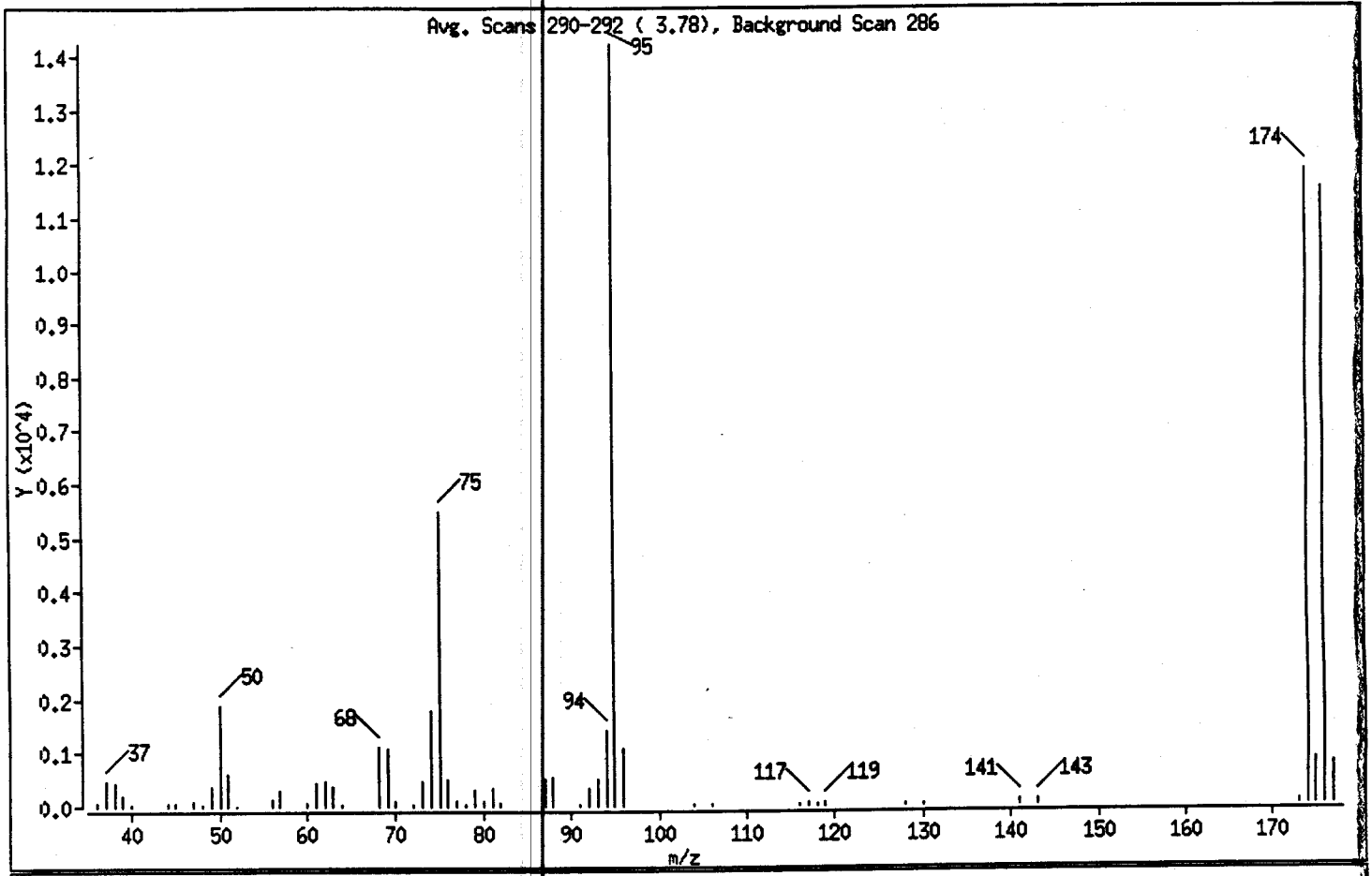
Volume Injected (uL): 2.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	13.29
75	30.00 - 66.00% of mass 95	38.67
96	5.00 - 9.00% of mass 95	7.49
173	Less than 2.00% of mass 174	0.38 (0.45)
174	50.00 - 120.00% of mass 95	83.48
175	4.00 - 9.00% of mass 174	5.85 (7.01)
176	93.00 - 101.00% of mass 174	80.95 (96.97)
177	5.00 - 9.00% of mass 176	5.51 (6.81)

Data File: /chem/f50054.i/BF950424B54.b/BF950424B54.d

Date : 24-APR-95 17:26

Client ID: BFB

Instrument: f50054.i

Sample Info: BFB

Volume Injected (uL): 2.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

Data File: BF950424B54.d

Spectrum : Avg. Scans 290-292 (3.78), Background Scan 286

Largest m/z: 95.00

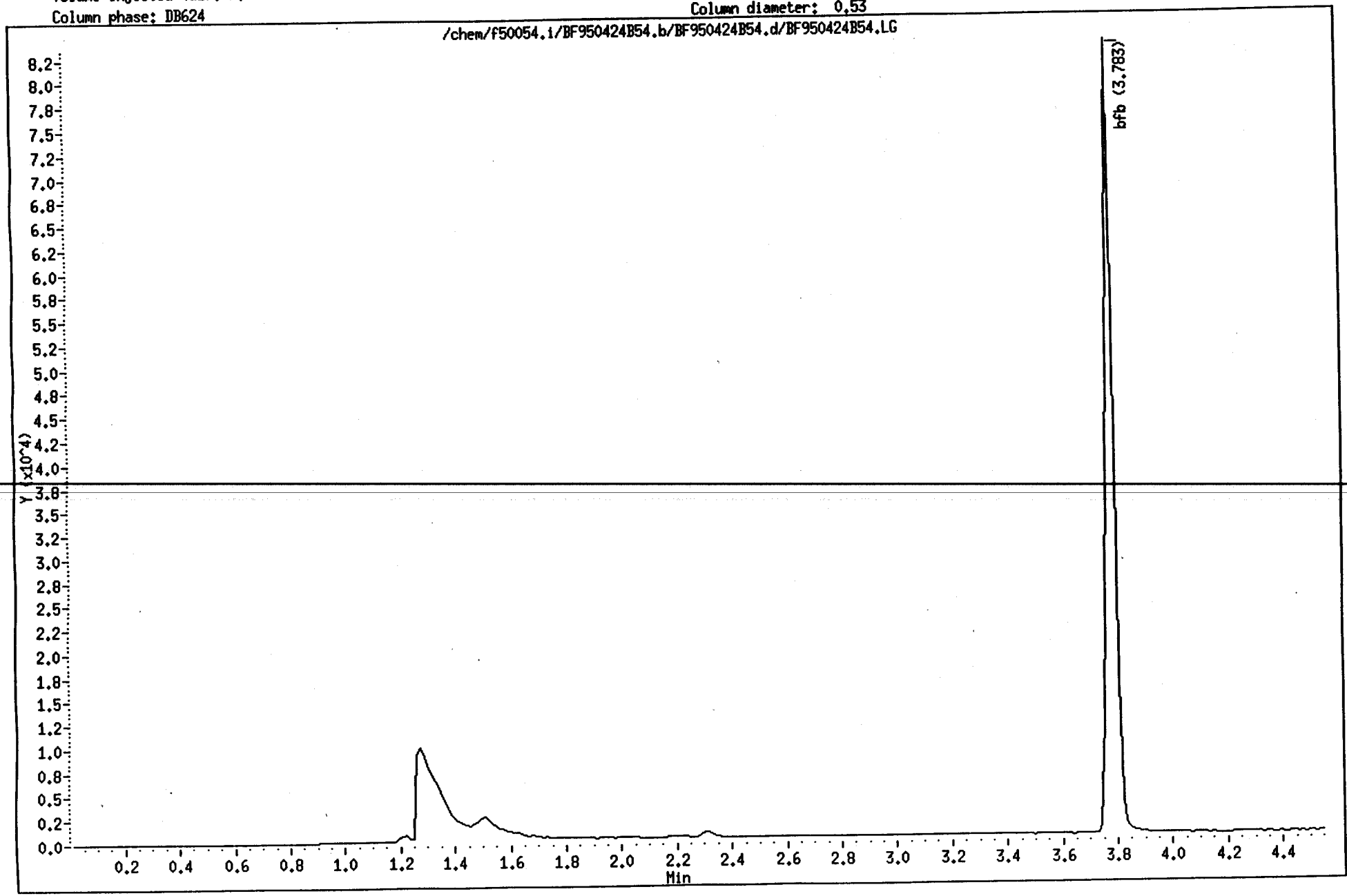
Number of peaks: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	60	60.00	81	79.00	314	117.00	83
37.00	486	61.00	436	80.00	110	118.00	18
38.00	433	62.00	473	81.00	333	119.00	70
39.00	192	63.00	364	82.00	75	128.00	23
40.00	38	64.00	18	87.00	506	130.00	23
44.00	77	68.00	1111	88.00	535	141.00	104
45.00	78	69.00	1079	91.00	22	143.00	105
47.00	112	70.00	106	92.00	329	173.00	54
48.00	48	72.00	44	93.00	497	174.00	11882
49.00	387	73.00	469	94.00	1400	175.00	833
50.00	1892	74.00	1781	95.00	14234	176.00	11522
51.00	601	75.00	5504	96.00	1066	177.00	785
52.00	16	76.00	497	104.00	25		
56.00	142	77.00	86	106.00	41		
57.00	296	78.00	20	116.00	20		

Data File: /chem/f50054.i/BF950424B54.b/BF950424B54.d
Date : 24-APR-95 17:26
Client ID: BFB
Sample Info: BFB
Volume Injected (uL): 2.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 000001 SAMPLE DATA PACKAGE

b. Blank Data

In chronological order.

(1) Form I VOA
Blank's Organic Analysis Data Sheet (OADS)

(2) Form I VOA-TIC
Blank's Tentatively Identified Compounds; even if none found.

(3) RIC and quantitation report

(4) TCL spectra with lab generated standard.

(5) GC/MS library search spectra for TICs

(6) Quantitation / calculation of TICs

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJM

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950424B54.D

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

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJM

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950424B54.D

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

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJM

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CB950424B54.D

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

% Moisture: not dec. _____ Date Analyzed: 04/24/95

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

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

Number TICs found: 0

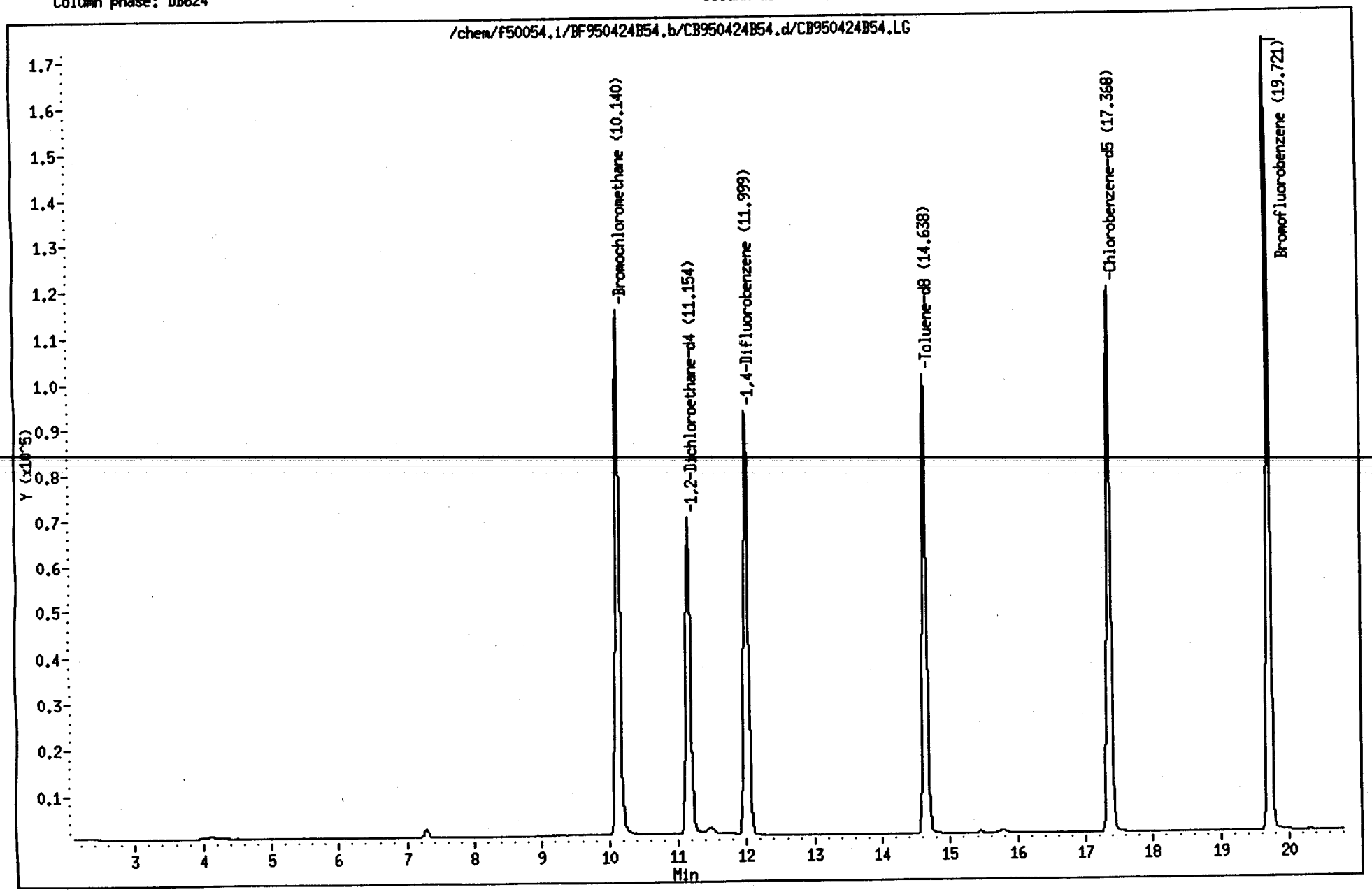
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Data File: /chem/f50054.i/BF950424B54.b/CB950424B54.d
Date : 24-APR-1995 18:25
Client ID: VBLKJM
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CB950424B54.d
Report Date: 28-Apr-1995 10:12

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CB950424B54.d
Lab Smp Id: VBLKJM Client Smp ID: VBLKJM
Inj Date : 24-APR-1995 18:25
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
*	1 Bromochloromethane	128.00	10.127	10.140	(1.000)	61083	250.0	
*	2 1,4-Difluorobenzene	114.00	11.999	12.012	(1.000)	202762	250.0	
*	3 Chlorobenzene-d5	117.00	17.355	17.368	(1.000)	183666	250.0	
$	4 1,2-Dichloroethane-d4	65.00	11.154	11.167	(1.101)	117620	228.5	45.71
$	5 Toluene-d8	98.00	14.638	14.651	(0.843)	167801	247.3	49.47
$	6 Bromofluorobenzene	95.00	19.721	19.734	(1.136)	140982	231.4	46.28
	7 Dichlorodiflouromethane	85.00		2.379		Compound Not Detected.		
	8 Chloromethane	50.00		2.873		Compound Not Detected.		
	9 Vinyl Chloride	62.00		3.185		Compound Not Detected.		
	10 Bromomethane	94.00		4.004		Compound Not Detected.		
	11 Chloroethane	64.00		4.290		Compound Not Detected.		
	12 1,1-Dichloroethene	96.00		6.175		Compound Not Detected.		
	13 Acetone	43.00		6.422		Compound Not Detected.		
	14 Carbon Disulfide	76.00		6.474		Compound Not Detected.		
	15 Methylene Chloride	84.00	7.280	7.293	(0.719)	1915	5.68	1.14(a)
	16 trans-1,2-Dichloroethene	96.00		7.852		Compound Not Detected.		
	17 1,1-Dichloroethane	63.00		8.658		Compound Not Detected.		
	18 cis-1,2-Dichloroethene	96.00		9.737		Compound Not Detected.		
	19 2-Butanone	43.00		9.854		Compound Not Detected.		
	20 Chloroform	83.00		10.348		Compound Not Detected.		
	21 1,1,1-Trichloroethane	97.00		10.595		Compound Not Detected.		
	22 Carbon Tetrachloride	117.00		10.881		Compound Not Detected.		
	23 Benzene	78.00		11.245		Compound Not Detected.		

Data File: /chem/f50054.i/BF950424B54.b/CB950424B54.d
Report Date: 28-Apr-1995 10:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24	1,2-Dichloroethane	62.00		11.297		Compound Not Detected.		
25	Trichloroethene	130.00		12.428		Compound Not Detected.		
26	1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
27	Bromodichloromethane	83.00		13.351		Compound Not Detected.		
28	cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
29	4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
30	Toluene	91.00		14.768		Compound Not Detected.		
31	trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
32	1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
33	Tetrachloroethene	164.00		15.795		Compound Not Detected.		
34	2-Hexanone	43.00		16.094		Compound Not Detected.		
35	Dibromochloromethane	129.00		16.263		Compound Not Detected.		
36	Chlorobenzene	112.00		17.420		Compound Not Detected.		
37	Ethylbenzene	106.00		17.680		Compound Not Detected.		
38	m,p-Xylene	106.00		17.927		Compound Not Detected.		
39	o-Xylene	106.00		18.707		Compound Not Detected.		
40	Styrene	104.00		18.733		Compound Not Detected.		
41	Bromoform	173.00		19.032		Compound Not Detected.		
42	1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M 43	1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M 44	Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/f50054.i/BF950424B54.b/CB950424B54.d

Date : 24-APR-1995 18:25

Client ID: VBLKJM

Instrument: f50054.i

Sample Info:

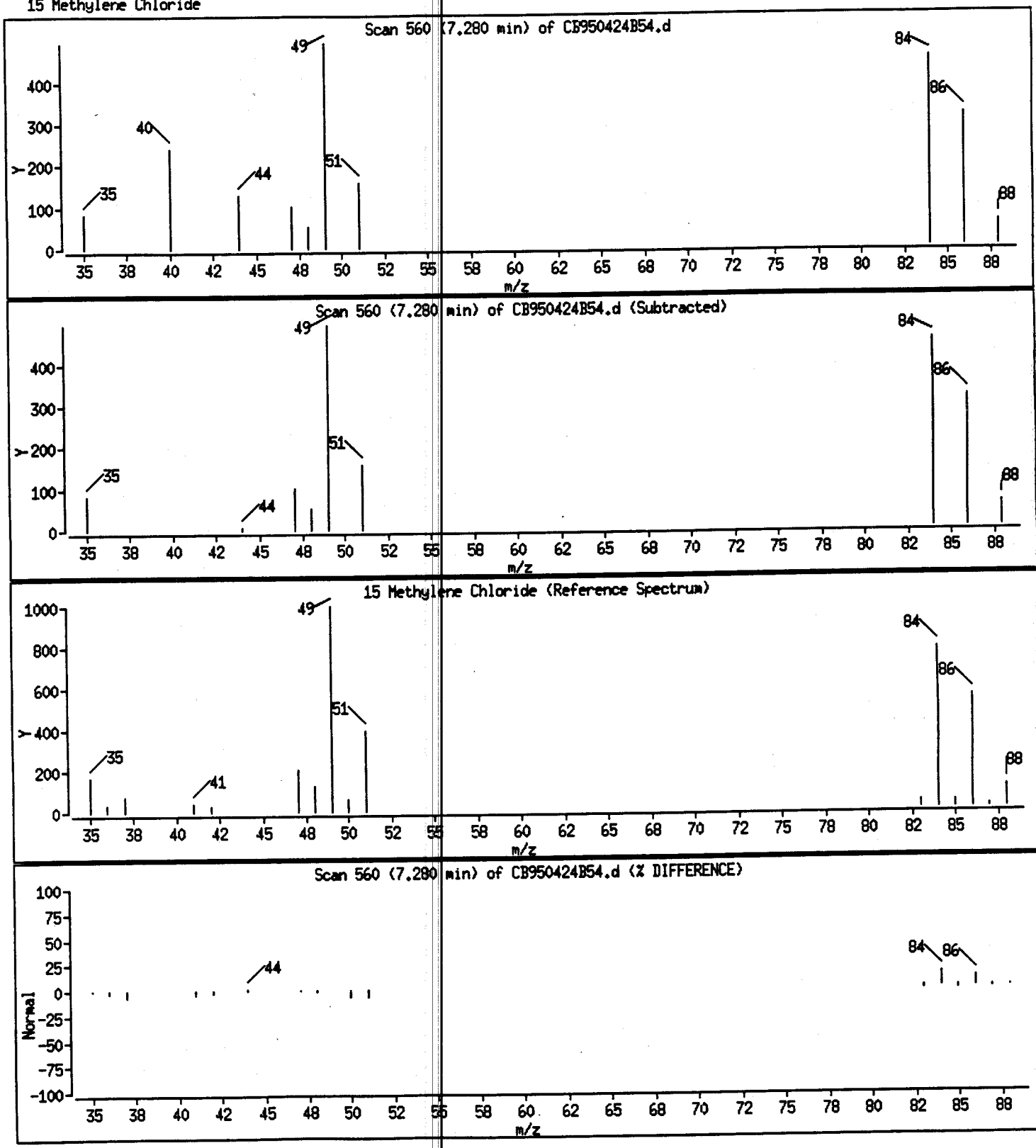
Purge Volume: 5.0

Operator: 1948

Column phase: DB624

Column diameter: 0.53

15 Methylene Chloride



c. Matrix Spike Data

(1) Form I VOA

Matrix Spike's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702282

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002282B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MS

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702282

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002282B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

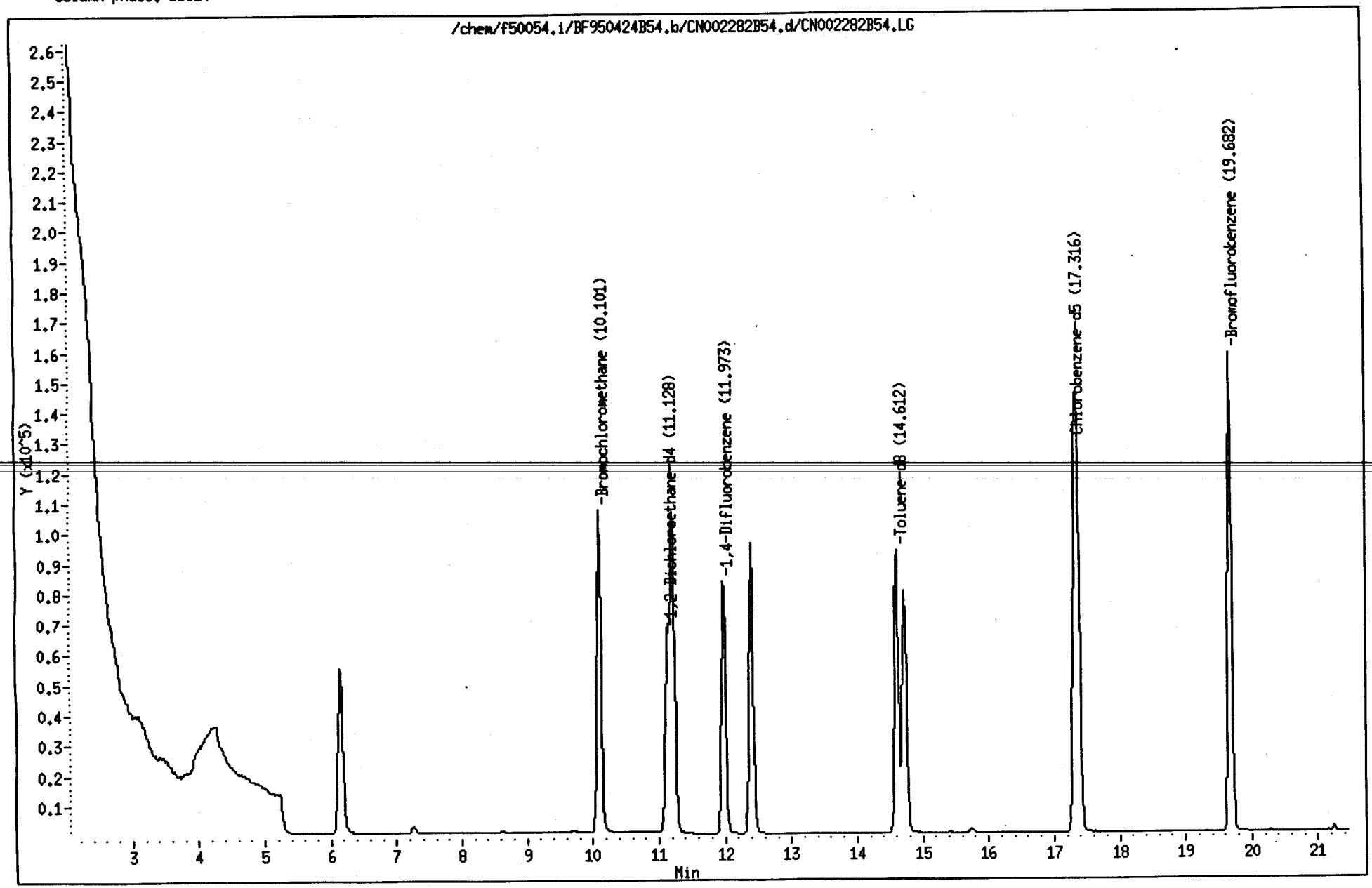
Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

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

Data File: /chem/f50054.i/BF950424B54.b/CN002282B54.d
Date : 25-APR-1995 03:10
Client ID: MW1MS
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CN002282B54.d
Report Date: 28-Apr-1995 10:12

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002282B54.d
Lab Smp Id: 702282 Client Smp ID: MW1MS
Inj Date : 25-APR-1995 03:10
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Bromochloromethane	128.00	10.101	10.140	(1.000)	55879	250.0	
* 2	1,4-Difluorobenzene	114.00	11.973	12.012	(1.000)	177907	250.0	
* 3	Chlorobenzene-d5	117.00	17.316	17.368	(1.000)	180181	250.0	
$ 4	1,2-Dichloroethane-d4	65.00	11.128	11.167	(1.102)	108012	229.4	45.88
$ 5	Toluene-d8	98.00	14.612	14.651	(0.844)	159736	240.0	48.00
$ 6	Bromofluorobenzene	95.00	19.682	19.734	(1.137)	138493	231.7	46.34
7	Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
8	Chloromethane	50.00		2.873	Compound Not Detected.			
9	Vinyl Chloride	62.00		3.185	Compound Not Detected.			
10	Bromomethane	94.00		4.004	Compound Not Detected.			
11	Chloroethane	64.00		4.290	Compound Not Detected.			
12	1,1-Dichloroethene	96.00	6.136	6.175	(0.607)	62266	203.0	40.60
13	Acetone	43.00		6.422	Compound Not Detected.			
14	Carbon Disulfide	76.00		6.474	Compound Not Detected.			
15	Methylene Chloride	84.00	7.254	7.293	(0.718)	2625	8.52	1.70(a)
16	trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
17	1,1-Dichloroethane	63.00		8.658	Compound Not Detected.			
18	cis-1,2-Dichloroethene	96.00		9.737	Compound Not Detected.			
19	2-Butanone	43.00		9.854	Compound Not Detected.			
20	Chloroform	83.00		10.348	Compound Not Detected.			
21	1,1,1-Trichloroethane	97.00		10.595	Compound Not Detected.			
22	Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
23	Benzene	78.00	11.206	11.245	(0.936)	207416	229.1	45.82
24	1,2-Dichloroethane	62.00		11.297	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002282B54.d
Report Date: 28-Apr-1995 10:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	25 Trichloroethene	130.00	12.389	12.428	(1.035)	81762	209.4	41.87
	26 1,2-Dichloropropane	63.00		12.818		Compound Not Detected.		
	27 Bromodichloromethane	83.00		13.351		Compound Not Detected.		
	28 cis-1,3-Dichloropropene	75.00		14.170		Compound Not Detected.		
	29 4-Methyl-2-Pentanone	43.00		14.521		Compound Not Detected.		
	30 Toluene	91.00	14.716	14.768	(0.850)	148315	207.6	41.52
	31 trans-1,3-Dichloropropene	75.00		15.223		Compound Not Detected.		
	32 1,1,2-Trichloroethane	97.00		15.548		Compound Not Detected.		
	33 Tetrachloroethene	164.00		15.795		Compound Not Detected.		
	34 2-Hexanone	43.00		16.094		Compound Not Detected.		
	35 Dibromochloromethane	129.00		16.263		Compound Not Detected.		
	36 Chlorobenzene	112.00	17.368	17.420	(1.003)	161695	205.9	41.18
	37 Ethylbenzene	106.00		17.680		Compound Not Detected.		
	38 m,p-Xylene	106.00		17.927		Compound Not Detected.		
	39 o-Xylene	106.00		18.707		Compound Not Detected.		
	40 Styrene	104.00		18.733		Compound Not Detected.		
	41 Bromoform	173.00		19.032		Compound Not Detected.		
	42 1,1,2,2-Tetrachloroethane	83.00		20.007		Compound Not Detected.		
M	43 1,2-Dichloroethene (total)	96.00		1.000		Compound Not Detected.		
M	44 Xylene (Total)	106.00		18.707		Compound Not Detected.		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

LAB INSTRUCTIONS PPS#_____

VOA J( ) J3( ) D( ) (:1)
GC/MS WORKSHEET J2( ) J4( ) D2( ) (:1)

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702282: 2011: 1:

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GC/MS ANALYSIS
AMOUNT PURGED: 5000. ~~G~~ uL JS4/25/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002282B54

ANALYST(S): INJECTION 1948VA Smith WORKUP 1948VA Smith

==========

GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [/] COMPLETE
[ ] REINJECT NEAT
[ ] DILUTE ( )

INTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : N/A

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED _____

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW _____ DATE ___/___/___ AUDITOR _____ DATE ___/___/___

==========

REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

==========

QA COMMENTS:

INITIALS _____ DATE ___/___/___

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d. Matrix Spike Duplicate Data

(1) Form I VOA

Matrix Spike Duplicate's Organic Analysis Data Sheet (OADS); TICs not required.

(2) RIC and quantitation report

Spectra not required.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702283

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002283B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	40	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	41	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	47	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	41	
108-90-7	Chlorobenzene	40	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1MSD

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

Lab Code: COMPU Case No.: 30458 SAS No.: SDG No.: 00001

Matrix: (soil/water) WATER Lab Sample ID: 702283

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN002283B54.D

Level: (low/med) LOW Date Received: 04/13/95

% Moisture: not dec. _____ Date Analyzed: 04/25/95

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

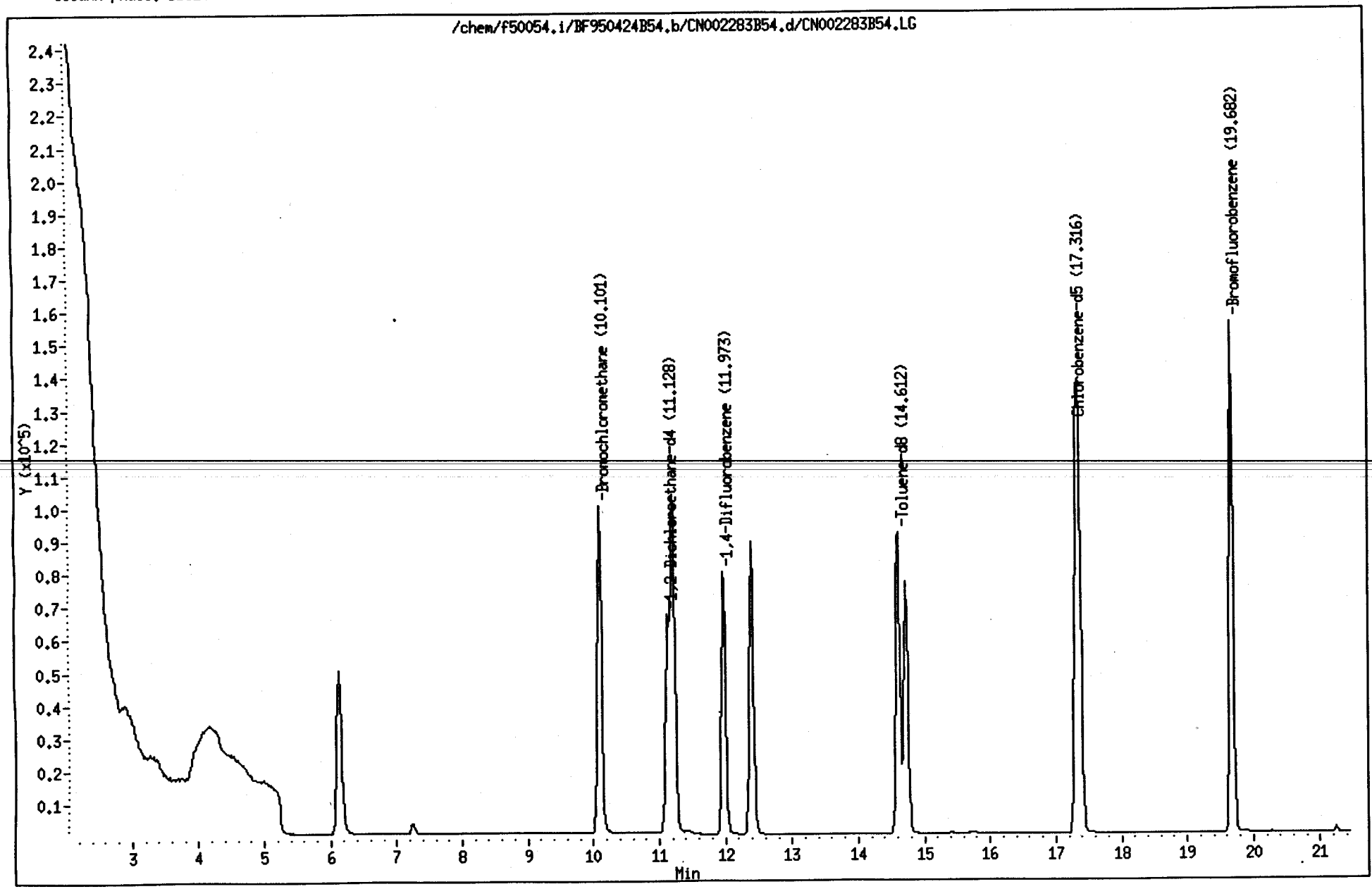
Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

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

Data File: /chem/f50054.i/BF950424B54.b/CN002283B54.d
Date : 25-APR-1995 03:56
Client ID: MW1MSD
Sample Info:
Purge Volume: 5.0
Column phase: DB624

Instrument: f50054.i

Operator: 1948
Column diameter: 0.53



30458 00001 SAMPLE DATA PACKAGE

Data File: /chem/f50054.i/BF950424B54.b/CN002283B54.d
Report Date: 28-Apr-1995 10:12

CompuChem Environmental Corporation

Data file : /chem/f50054.i/BF950424B54.b/CN002283B54.d
Lab Smp Id: 702283 Client Smp ID: MW1MSD
Inj Date : 25-APR-1995 03:56
Operator : 1948 Inst ID: f50054.i
Smp Info :
Misc Info :
Comment :
Method : /chem/f50054.i/BF950424B54.b/W390CLPDCDFM.m
Meth Date : 28-Apr-1995 09:44 bass Quant Type: ISTD
Cal Date : 24-APR-1995 17:41 Cal File: CS950424B54.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.12
Concentration Formula: 1/(Vo)

Name	Value	Description
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1 Bromochloromethane	128.00	10.101	10.140	(1.000)	52930	250.0	
* 2 1,4-Difluorobenzene	114.00	11.973	12.012	(1.000)	169705	250.0	
* 3 Chlorobenzene-d5	117.00	17.316	17.368	(1.000)	172697	250.0	
$ 4 1,2-Dichloroethane-d4	65.00	11.128	11.167	(1.102)	105644	236.9	47.38
$ 5 Toluene-d8	98.00	14.599	14.651	(0.843)	160817	252.1	50.42
$ 6 Bromofluorobenzene	95.00	19.682	19.734	(1.137)	135834	237.1	47.42
7 Dichlorodiflouromethane	85.00		2.379	Compound Not Detected.			
8 Chloromethane	50.00		2.873	Compound Not Detected.			
9 Vinyl Chloride	62.00		3.185	Compound Not Detected.			
10 Bromomethane	94.00		4.004	Compound Not Detected.			
11 Chloroethane	64.00		4.290	Compound Not Detected.			
12 1,1-Dichloroethene	96.00	6.123	6.175	(0.606)	58489	201.3	40.26
13 Acetone	43.00		6.422	Compound Not Detected.			
14 Carbon Disulfide	76.00		6.474	Compound Not Detected.			
15 Methylene Chloride	84.00	7.254	7.293	(0.718)	3563	12.20	2.44(a)
16 trans-1,2-Dichloroethene	96.00		7.852	Compound Not Detected.			
17 1,1-Dichloroethane	63.00		8.658	Compound Not Detected.			
18 cis-1,2-Dichloroethene	96.00		9.737	Compound Not Detected.			
19 2-Butanone	43.00		9.854	Compound Not Detected.			
20 Chloroform	83.00		10.348	Compound Not Detected.			
21 1,1,1-Trichloroethane	97.00		10.595	Compound Not Detected.			
22 Carbon Tetrachloride	117.00		10.881	Compound Not Detected.			
23 Benzene	78.00	11.206	11.245	(0.936)	202800	234.8	46.97
24 1,2-Dichloroethane	62.00		11.297	Compound Not Detected.			

Data File: /chem/f50054.i/BF950424B54.b/CN002283B54.d
Report Date: 28-Apr-1995 10:12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25	Trichloroethene	130.00	12.402	12.428	(1.036)	76220	204.6	40.92
26	1,2-Dichloropropane	63.00		12.818	Compound Not Detected.			
27	Bromodichloromethane	83.00		13.351	Compound Not Detected.			
28	cis-1,3-Dichloropropene	75.00		14.170	Compound Not Detected.			
29	4-Methyl-2-Pentanone	43.00		14.521	Compound Not Detected.			
30	Toluene	91.00	14.729	14.768	(0.851)	140315	204.9	40.98
31	trans-1,3-Dichloropropene	75.00		15.223	Compound Not Detected.			
32	1,1,2-Trichloroethane	97.00		15.548	Compound Not Detected.			
33	Tetrachloroethene	164.00		15.795	Compound Not Detected.			
34	2-Hexanone	43.00		16.094	Compound Not Detected.			
35	Dibromochloromethane	129.00		16.263	Compound Not Detected.			
36	Chlorobenzene	112.00	17.368	17.420	(1.003)	150348	199.8	39.95
37	Ethylbenzene	106.00		17.680	Compound Not Detected.			
38	m,p-Xylene	106.00		17.927	Compound Not Detected.			
39	o-Xylene	106.00		18.707	Compound Not Detected.			
40	Styrene	104.00		18.733	Compound Not Detected.			
41	Bromoform	173.00		19.032	Compound Not Detected.			
42	1,1,2,2-Tetrachloroethane	83.00		20.007	Compound Not Detected.			
M 43	1,2-Dichloroethene (total)	96.00		1.000	Compound Not Detected.			
M 44	Xylene (Total)	106.00		18.707	Compound Not Detected.			

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

LAB INSTRUCTIONS PPS#_____

VOA
GC/MS WORKSHEET

J( ) J3( ) D( ) (:1)
J2( ) J4( ) D2( ) (:1)

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702283: 2011: 1:

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GC/MS ANALYSIS
AMOUNT PURGED: 5000. UL VS 4/25/95
INTERNAL STANDARD/SURROGATE MIX VOLUME ADDED 5UL OR ___ UL
BFB FILENAME: BF950424B54
BLANK FILENAME: CB950424B54
STANDARD FILENAME: CS950424B54
SAMPLE FILENAME: CN002283B54

ANALYST(S): INJECTION 1948 VASmith WORKUP 1948 VASmith

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GC/MS REVIEW

OK JA DI SH SL
IH IL DA DW OT*

CONDITION CODE OK

DISPOSITION: [/] COMPLETE

EXTRANEOUS PEAKS SEARCH RESULTS:
OF PEAKS FOUND : N/A

[ ] REINJECT NEAT
[ ] DILUTE ( )

QUALITY ASSURANCE NOTICE(S):
NOTICES REQUIRED _____

COMMENTS: NOTE: IF CONDITION CODE IS "OT" EXPLAIN FULLY HERE.

GC/MS REVIEW JC DATE 4/28/95 AUDITOR _____ DATE ____/____/____

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REPORT INTEGRATION: TOTAL # OF INJECTIONS: ____

FINAL REPORTABLE PACKAGE(S): _____/_____

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QA COMMENTS:

INITIALS _____ DATE ____/____/____

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END OF REPORT