U.S. Environmental Protection Agency Region V

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Lab Data Reference Sheet

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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: NOV 30 1990

Review of Region 5 data for ALCO

ts, Director

egion 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF-7465

Sample Numbers: 91FH30585 91FH30586 91FH30587 91FH30D85 91FH03R85 (5)

Parameter(s): VOA / WATER

Laboratory: CRL / ESAT (WESTON)

Results Status:

(✓) DATA ACCEPTABLE FOR USE* except for Chloroethyl vinylether and Bromoform.

( ) DATA QUALIFIED AS TO USE

( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to ~~Steve Parker,~~ James H. Adams, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

NOV 30 1990
U.S. EPA CENTRAL REGIONAL LAB

RECEIVED BY/DATE: _____

DATA SET	SITE	OU/ACT.
SF-7465	ALCO	TFA302

SAMPLES	PARAMETER(S)
91FH30585 91FH30587 91FH02R85 91FH30586 91FH30D85	VOA /WATER

SAMPLED	RECEIVED	DUE	LAB
11-5-90	11-6-90	11-27-90	CRL/ESAT(WESTON)

SHIPPED	DATA RECEIVED	CONTRACT

TEAM LEADER	SECTION CHIEF	QC COORD	DATA COORD
[illegible]			

Comments By Reviewer:

- SINCE 2-CHLOROETHYL VINYLETHER AND BROMOFORM FAILED THE STANDARD CALIBRATION CURVE QUALITY CONTROL REQUIREMENTS ON 11/10/90, THE SAMPLES ANALYZED ON THAT DAY WERE FLAGGED AS ESTIMATED FOR THESE TWO PARAMETERS.
- EXCEPT FOR THE ABOVE TWO PARAMETERS, THE DATA ARE ACCEPTABLE FOR USE.

DATA MANAGEMENT COORDINATOR

RECEIVED	TRANSMITTED		CLERICAL SUPPORT RECEIVED	COMPLETED
(✓) REVIEWED	( ) UNREVIEWED	TEAM LEADER/DATE Babu Patwchuri 11/27/90		
(✓) REVIEWED	( ) UNREVIEWED	SECTION CHIEF/DATE Chi Gang 11/30/90		
( ) REVIEWED	( ) UNREVIEWED	QC COORDINATOR/DATE		

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD BLANK

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC216
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	1.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	1.	J
95-47-6	O-&/or P-Xylene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES NO

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD BLK

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC254
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/07/90
Date Analyzed: 11/10/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q	
74-87-3	Chloromethane	3.	U	
74-83-9	Bromomethane	3.	U	
75-01-4	Vinyl Chloride	3.	U	
75-00-3	Chloroethane	3.	U	
75-09-2	Methylene Chloride	1.	U	
107-02-8	Acrolein	75.	U	
67-64-1	Acetone	50.	U	
107-13-1	Acrylonitrile	50.	U	
75-15-0	Carbon Disulfide	2.	U	
75-35-4	1,1-Dichloroethene	1.	U	
75-34-3	1,1-Dichloroethane	1.	U	
156-60-5	1,2-Dichloroethene (total)	1.	U	
67-66-3	Chloroform	1.	U	
107-02-2	1,2-Dichloroethane	1.	U	
78-93-3	2-Butanone	20.	U	
71-55-6	1,1,1-Trichloroethane	1.	U	
56-23-5	Carbon Tetrachloride	1.	U	
108-05-4	Vinyl Acetate	10.	U	
75-27-4	Bromodichloromethane	1.	U	
78-87-5	1,2-Dichloropropane	1.	U	
10061-01-5	cis-1,3-Dichloropropene	1.	U	
79-01-6	Trichloroethene	1.	U	
71-43-2	Benzene	1.	U	
124-48-1	Dibromochloromethane	1.	U	
10061-02-6	trans-1,3-Dichloropropene	1.	U	
79-00-5	1,1,2-Trichloroethane	1.	U	
110-75-8	2-Chloroethyl Vinylether	1.	UJ	KDH
75-25-2	Bromoform	1.	UJ	11-16-90
108-10-1	4-Methyl-2-pentanone	4.	U	
591-78-6	2-Hexanone	4.	U	
127-18-4	Tetrachloroethene	1.	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.	U	
108-88-3	Toluene	1.	U	
108-90-7	Chlorobenzene	1.	U	
100-41-4	Ethylbenzene	1.	U	
100-42-5	Styrene	2.	U	
108-38-3	Meta Xylene	2.	U	
95-47-6	O-&/or P-Xylene	2.	U	

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91FH30S85

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC221
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES NO

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91FH30D85

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC222
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES NO

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91FH30S86

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC223
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES NO

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91FH30S87

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC224
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level: (low/med) LOW

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	25.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	1.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91FH03R85

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC225
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	1.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES NO

ESAT CONTRACT TID NO: 11-10
TASK NO: 3918

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on NOV 15, 1990 for:

DATASET NO: SF-7465 SITE NAME: ALCO

PARAMETER : VOA

MATRIX : WATER SF DU/ACT NO: TFA302 Y____ /C____

SAMPLE NUMBERS: 91FH30585, ~~915~~ 91FH30D85, 91FH30586 91FH30587 11/16/90 AM
91FH03R85 NUMBER OF SAMPLES: 4 5

ESAT APPROVALS:

(ANALYST	11/16/90 DATE)	(TEAM LEADER	11/19/90 DATE)
(QC COORDINATOR	11-16-90 DATE)	(ESAT TEAM MANAGER	11-19-90 DATE)

COMMENTS:

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

(DELIVERED BY	11/19/90 DATE)	(RECEIVED BY	11/19/90 DATE) 2:50 pm

EPA APPROVALS:

(EPA TASK MONITOR 11/27/90 DATE)

[ ] Reviewed
[ ] Unreviewed
[ ] Accepted
[ ] Rejected
[X] Returned/ 11/27/90 (Date) 8:35 AM

COMMENTS: Ratings: Tech. Quality: 2.5; Compliance w Schedule: 2.5 Back 11/27/90 12:30 pm
ESAT SHOULD IMPROVE THEIR DATA VALIDATION PRACTICES.

(SECTION CHIEF 11/30/90 DATE) [✓] Reviewed [ ] Unreviewed

(ESAT DPO	11-30-90 DATE)	(DATA COORD'R REC'D	11-30-90 TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

PETER:

I THINK THE QC DATA FOR 91FH03R85 ARE INACCURATE IN FORM II-A (Surrogate Recovery Data). PLEASE REQUEST ONE OF YOUR CHEMISTS TO VERIFY THE QC DATA AND CORRECT THE ORIGINAL FORM. PLEASE DO NOT DISCARD ANY DOCUMENTS FROM THIS PACKAGE. Thanks Bob

11/27/90 8:35 AM

Date: November 16,1990

To: Babu Paruchuri

From: Carsten Falkenberg

Re: Dataset SF-7465
Alco

Five (5) low level water samples from dataset SF-7465 were submitted for volatile organic analysis (VOA) by GC/MS utilizing EPA method 624NS. All samples were preserved at pH 2. All samples were analyzed within 7 days of sampling.

The tunings were acceptable with BFB meeting all QC requirements (Forms 5A).The initial calibration of 11/08/90 was acceptable with all compounds reporting %RSDs less than 35%. There were two (2) continuing calibrations on 11/08/90, and 11/10/90. All compounds met the QC criteria of 35%D, except 2-chloroethylvinylether (36.0%) and Bromoform (37.2%) on 11/10/90. Extreme room temperature fluctuations are causing many problems with calibrations, especially with the gases requiring additional calibrations. The results from the appropriate samples are required to be estimated for these compounds. The Form Is are flagged.

All internal standard areas and retention times were within QC limits (Forms 8A).

All surrogates were within QC limits for all samples (Form 2A).

Sample 91FH30S86 was used for the matrix spike (MS) and matrix spike duplicate (MSD) analyses (Form 3A). All % recoveries and % RPD's met their respective QC criteria upon reanalysis. The initial analysis indicated a problem with the spike solution. A new solution was prepared and eliminated the problem of low recovery and contamination.

There were two (2) method blanks associated with the samples. The method blanks did not report any TCL compounds, except the blank of 11/08/90 which reported a small amount of meta Xylene. The blanks as well as all samples reported one "system" TIC at approximately 20.5 minutes. In addition a peak was detected at approximately 5 minutes (CO2), which has been experimentally shown to be related to a valve change. These peaks were not reported as TICs in any of the samples.

There was one (1) Field Blank (91FH03R85) associated with the samples. The Field Blank did not report any TCL compounds.

Samples 91FH30S85 and the duplicate 91FH30D85 correlated very well. Neither sample reported any TCL compounds.

Samples 91FH30S86 and 91FH30S87 did not report any TCL compounds.

There were no TIC's reported in any of the samples.

TFA302

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH FIT SUPERFUND SAMPLE DATE 11/5/90 LAB ARRIVAL DATE 11/6/90 DUE DATE 11/~~26~~ 27/90

DU NUMBER TFA-~~102~~ DATA SET NUMBER 7465 STUDY A/CO PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17504			WATER ABN ORGANICS SCAN UG/L TOX 17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 218622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 218722
		~~Acids~~	pH				
91FH30S85	RW1 5-042829-31	X	3	2			
86	MSD/RW2 5-085710-12 5-085718-22	X	8	2			
87	RW3 5-042838-40	X	3	2	Samples	were preserved	
D85	DUP 5-042847-9	X	3	2		11/8/90 um	
91FH03R85	BLANK 5-042850 857-58	X	3	2			
91FH30S85	RW1 5-042826		11/8/90 um		X		
91FH30D85	DUPLICATE 5-042844				X		
91FH30S86	RW2/MSD 5-085707 5-085713-14				X		
91FH30S87	RW3 5-042835				X		
91FH03R85	BLANK 5-042853				X		

11/6/90 [illegible] Water Mechanic

Shipment is ~~is not~~ not complete.

ROY F. WESTON, INC.
L, J ESAT Project
Room 962
536 South Clark Street
Chicago IL 60605
(312)-353-2895

RAW DATA ARCHIVING AND DATASET RECONSTRUCTION FORM

DISK OR TAPE NUMBERS: H.P.#4 Tape 7

RUN DATE(S): 11/8, 10/90
INST.NO.: H.P.#3
ANALYST(S): CRF WM

SAMPLE SUMMARY MATRIX

DATASET NUMBER:	SF-7465				
TASK NUMBER:	3918				
DU/ACTIVITY NO:	TFA302				
PARAMETER:	VOA				
MATRIX:	WATER				
NUMBER SAMPLES:	5				
DATE RECEIVED:	11-6-90				
DATE EXTRACTED:	—				
NOTBK NO/PG NO:	—				
DATE ASSAYED:	11/8, 10/90				

FILE IDENTIFICATION SUMMARY

TUNING FILE: MTBFB3
BLANK FILE: ΣFC216; 254
RUN SEQUENCE FILE: Varied

PRIMARY COLUMN

INITIAL CALIBRATION FILE: ΣFC209-213
CONTINUING CALIBRATION FILES: ΣFC215, 253
STANDARDS FILES:
SAMPLE FILES: ΣFC 221 — 228 ΣFC252, 258
ID/METHOD FILES: IDCF3A CBCF3A

CONFIRMATORY COLUMN

INITIAL CALIBRATION FILE:
CONTINUING CALIBRATION FILES:
STANDARDS FILES:
SAMPLE FILES:
ID/METHOD FILES:

DOC.NO.: ESAT-05-15-FORM
REVISION NO.: NEW
CENTRAL FILE NO.: 5.5.1

ANALYTICAL LABORATOTY
TIME TRACKING RECORD

Task Number: 3918
TID Number: 11-10
SF Number: SF-7465
Site Name: ALCO
Assigned To: CRF

Date Assigned: 11-6-90
Date Due: 11-19-90
Estimated Hours: ~~38.5~~ 17.5

VOA ✓ **BNA** ____ **Pest/PCBs** ____ **Other** ____

Extraction Record

Person:	Date:	Hours:
Person:	Date:	Hours:
Person:	Date:	Hours:
Person:	Date:	Hours:

Analysis Record

Person:	Date:	Hours:
CRF	11/16/90	4
CRF	11/7-9/90	7
WM	11/16/90	4
WM	11/14/90	4
Person:	Date:	Hours:
Person:	Date:	Hours:

QA/QC Record

Person:	Date:	Hours:
KDH	11-16-90	1
DPL	11/19	2 (Including LIMS)
Person:	Date:	Hours:

LIMS Data Entry

Person:	Date:	Hours:
Person:	Date:	Hours:

Comments

Total Hours: 22 **BTM:** ____

```
Sequence File: BAWM3D::XX
-----------------------------------------

Tune File: MTBFB3

CR List: A8
CR Cut-off:   500 blocks.
                                                   Report Data Archive
                                                  Quant | | ID Archive
Number of samples:   2                  Sample Size | | | | Output Archive
                                           Bottle | | | | | | |
Samp Data File     Sample Name                   | | | | | | |    Quant ID
 No. Method File   Misc Data                     | | | | | | |    Quant Output
---- ------------ ------------------------ ----------------  ------------
001) >FC215        15 ppb STD                 00 3 Y M N N N    IDCF3A::XX
     VOA#3         CON'T CAL 11/8/90             Dil=1.00000    ^FC215::L2
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
002) >FC216        METHOD BLK                 00 3 Y M N N N    IDCF3A::XX
     VOA#3         11/8/90                       Dil=1.00000    ^FC216::L2
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS

End of sequence file.
```

```
Sequence File: BAWM3B::XX
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Tune File: MTBFB3

CR List: A8
CR Cut-off:   500 blocks.
                                                   Report Data Archive
                                                  Quant | | ID Archive
Number of samples:   4                  Sample Size | | | | Output Archive
                                           Bottle | | | | | | |
Samp Data File     Sample Name                  | | | | | | |    Quant ID
 No. Method File   Misc Data                    | | | | | | |    Quant Output
---- ------------ ------------------------ ----------------  ------------
001) >FC210        5  ppb STD                 00 3 Y M N N N    IDCF3A::XX
     VOA#3         INITIAL CAL 11/8/90          Dil=1.00000    ^FC210::L2
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
002) >FC211        10 ppb STD                 00 3 Y M N N N    IDCF3A::XX
     VOA#3         INITIAL CAL 11/8/90          Dil=1.00000    ^FC211::L2
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
003) >FC212        20 ppb STD                 00 3 Y M N N N    IDCF3A::XX
     VOA#3         INITIAL CAL 11/8/90          Dil=1.00000    ^FC212::L2
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
004) >FC213        25 ppb STD                 00 3 Y M N N N    IDCF3A::XX
     VOA#3         INITIAL CAL 11/8/90          Dil=1.00000    ^FC213::L2
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS

End of sequence file.
```

```
Sequence File: BAWM3E::XX
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Tune File: MTBFB3

CR List: A8,A9,A4,A5,L2,S1
CR Cut-off:   800 blocks.
                                                   Report Data Archive
                                                  Quant | | ID Archive
Number of samples:  12                  Sample Size | | | | Output Archive
                                           Bottle | | | | | | |
Samp Data File     Sample Name                   | | | | | | |     Quant ID
 No. Method File   Misc Data                     | | | | | | |     Quant Output
---- ------------ ------------------------ ----------------  ------------
001) >FC217       91FF31S02                 00 3 Y F N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7464          Dil=1.00000    ^FC217::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
002) >FC218       91FF03R90                 00 3 Y F N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7464          Dil=1.00000    ^FC218::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
003) >FC219       91FF31S01MS               00 3 Y M N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7464          Dil=1.00000    ^FC219::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
004) >FC220       91FF31S01MSD              00 3 Y M N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7464          Dil=1.00000    ^FC220::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
005) >FC221       91FH30S85                 00 3 Y F N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC221::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
006) >FC222       91FH30D85                 00 3 Y F N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC222::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
007) >FC223       91FH30S86                 00 3 Y F N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC223::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
008) >FC224       91FH30S87                 00 3 Y F N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC224::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
009) >FC225       91FH03R85                 00 3 Y M N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC225::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
010) >FC226       91FH30S86MS               00 3 Y M N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC226::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
011) >FC227       91FH30S86MSD              00 3 Y F N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC227::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
012) >FC228       MDL STD                   00 3 Y M N N N    IDCF3A::XX
     VOA#3        11/8/90 WM  SF-7465          Dil=1.00000    ^FC228::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS

End of sequence file.
```

```
Sequence File: BAWM3J::XX
-----------------------------------------

Tune File: MTBFB3

CR List: A8,A7,A6
CR Cut-off:   800 blocks.
                                                  Report Data Archive
                                                 Quant | | ID Archive
Number of samples:  12                  Sample Size | | | | Output Archive
                                           Bottle | | | | | | |
Samp Data File     Sample Name                  | | | | | | |     Quant ID
 No. Method File   Misc Data                    | | | | | | |     Quant Output
---- ------------ ------------------------ ---------------- ------------
001) >FC254       METHOD BLK                 00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90                      Dil=1.00000     ^FC254::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
002) >FC255       91FF31S01MS                00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7464              Dil=1.00000     ^FC255:L2:QT
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
003) >FC256       91FF31S01MSD               00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7464              Dil=1.00000     ^FC256::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
004) >FC257       91FH30S86MS                00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7465              Dil=1.00000     ^FC257::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
005) >FC258       91FH30S86MSD               00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7465              Dil=1.00000     ^FC258::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
006) >FC259       91FL30S89MS                00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7471              Dil=1.00000     ^FC259::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
007) >FC260       91FL30S89MSD               00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7471              Dil=1.00000     ^FC260::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
008) >FC261       91FY30S92MS                00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7472              Dil=1.00000     ^FC261::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
009) >FC262       91FY30S92MSD               00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7472              Dil=1.00000     ^FC262::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
010) >FC263       91FB31S11MS                00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7473              Dil=1.00000     ^FC263::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
011) >FC264       91FB31S11MSD               00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90 SF-7473              Dil=1.00000     ^FC264::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
012) >FC265       MDL STD                    00 3 Y M N N N     IDCF3A::XX
     VOA#3        11/10/90                      Dil=1.00000     ^FC265::L2
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 2.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS

End of sequence file.
```

2A
U.S. EPA - REGION V
WATER VOLATILE SURROGATE RECOVERY

Study Name: ALCO Data Set:SF-7465

Lab File ID: >FC228::A8 SAS No.: NA SDG No.:

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BEN)#	S3 (DCE)#	OTHER	TOT OUT
01	METHOD BLA	99	99	86		0
02	91FH30S85	99	101	89		0
03	91FH30D85	102	101	87		0
04	91FH30S86	99	98	87		0
05	91FH30S87	102	102	87		0
06	91FH03R85	~~97~~ 105	10~~2~~0	88		0
~~07~~	91FH30S86MS	10~~5~~0	~~100~~98	8~~8~~7		0
~~08~~	91FH30S86MSD	~~100~~97	~~98~~102	8~~7~~8		0
09	MDL STD	103	99	90		0
10						
11						
12						
13						
14						
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28						
29						
30						

SB100106 ZCB25 ? → 11/27/90

11/27/90

	QC LIMITS
S1 (TOL) = Toluene-d8	(78-134)
S2 (BEN) = Benzene-d6	(88-112)
S3 (DCE) = 1,2-Dichloroethane-d4	(75-111)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II VOA-1 1/87 Rev.

2A
U.S. EPA - REGION V
WATER VOLATILE SURROGATE RECOVERY

Study Name: ALCO Data Set:SF-7465

Lab File ID: >FC265::A8 SAS No.: NA SDG No.:

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BEN)#	S3 (DCE)#	OTHER	TOT OUT
01	METHOD BLK	98	101	93		0
02	91FH30S86MSRE	83	92	94		0
03	91FH30S86MSDRE	80	92	96		0
04	MDL STD	80	89	93		0
05						
06						
07						
08						
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12						
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28						
29						
30						

	QC LIMITS
S1 (TOL) = Toluene-d8	(78-134)
S2 (BEN) = Benzene-d6	(88-112)
S3 (DCE) = 1,2-Dichloroethane-d4	(75-111)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II VOA-1 1/87 Rev.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALCO Contract:EPA-5SCRL

Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Matrix Spike - EPA Sample No.: 91FH30S86

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	10.00	0.00	6.90	69	61-145
Trichloroethene	10.00	0.00	9.20	92	71-120
Benzene	10.00	0.00	9.00	90	76-127
Toluene	10.00	0.00	8.40	83	76-125
Chlorobenzene	10.00	0.00	9.30	93	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	10.00	6.20	61	12	14	61-145
Trichloroethene	10.00	8.70	86	6	14	71-120
Benzene	10.00	8.70	87	3	11	76-127
Toluene	10.00	7.90	79	4	13	76-125
Chlorobenzene	10.00	9.00	90	3	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: _____

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: ALCO Contract: EPA-SSCRL

Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Lab File ID: >FC216 Lab Sample ID: METHOD BLANK

Date Analyzed: 11/08/90 Time Analyzed: 1 14:00

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

Instrument ID: 87 3

THIS METHOD BLANK APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	91FH30S85	91FH30S85	>FC221	18:01
02	91FH30D85	91FH30D85	>FC222	18:48
03	91FH30S86	91FH30S86	>FC223	19:36
04	91FH30S87	91FH30S87	>FC224	20:23
05	91FH03R85	91FH03R85	>FC225	21:11
06	91FH30S86MS	91FH30S86MS	>FC226	21:58
07	91FH30S86MSD	91FH30S86MSD	>FC227	22:46
08	MDL STD	MDL STD	>FC228	23:33
09				
10				
11				
12				
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COMMENTS: _____

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: ALCO Contract: EPA-5SCRL

Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Lab File ID: >FC254 Lab Sample ID: METHOD BLK

Date Analyzed: 11/10/90 Time Analyzed: 1 10:37

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

Instrument ID: 87 3

THIS METHOD BLANK APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	91FH30S86MSRE	91FH30S86MS	>FC257	~~1~~ 11/6/90 12:59
02	91FH30S86MSDRE	91FH30S86MSD	>FC258	~~1~~ 13:47
03				
04				
05				
06				
07				
08				
09				
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COMMENTS: _____

FORM IV VOA 1/87 Rev.

5A

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

Lab Name: ALCO Contract:EPA-5SCRL

Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Lab File ID: >FC208 BFB Injection Date: 11/08/90

Instrument ID: 87 3 BFB Injection Time: 7:46

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	19.3
75	30.0 - 60.0% OF MASS 95	44.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	61.1
175	5.0 - 9.0% of mass 174	4.6(7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	60.8(99.5)1
177	5.0 - 9.0% of mass 176	4.2(6.9)2

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

THIS TUNE APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	15 PPB STD	15 PPB STD	>FC209	11/08/90	8:27
02	5 PPB STD	5 PPB STD	>FC210	11/08/90	9:33
03	10 PPB STD	10 PPB STD	>FC211	11/08/90	10:20
04	20 PPB STD	20 PPB STD	>FC212	11/08/90	11:07
05	25 PPB STD	25 PPB STD	>FC213	11/08/90	11:55
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5A

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

Lab Name: ALCO Contract:EPA-5SCRL

Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Lab File ID: >FC214 BFB Injection Date: 11/08/90

Instrument ID: 87 3 BFB Injection Time: 12:40

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	18.3
75	30.0 - 60.0% OF MASS 95	44.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	.2(.3)1
174	Greater than 50.0% of mass 95	60.8
175	5.0 - 9.0% of mass 174	4.1(6.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	60.4(99.3)1
177	5.0 - 9.0% of mass 176	3.6(6.0)2

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

THIS TUNE APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	15 PPB STD	15 PPB STD	>FC215	11/08/90	13:13
02	METHOD BLANK	METHOD BLANK	>FC216	11/08/90	14:00
03	91FH30S85	91FH30S85	>FC221	11/08/90	18:01
04	91FH30D85	91FH30D85	>FC222	11/08/90	18:48
05	91FH30S86	91FH30S86	>FC223	11/08/90	19:36
06	91FH30S87	91FH30S87	>FC224	11/08/90	20:23
07	91FH03R85	91FH03R85	>FC225	11/08/90	21:11
~~08~~	91FH30S86MS	91FH30S86MS	>FC226	11/08/90	21:58
~~09~~	91FH30S86MSD	91FH30S86MSD	>FC227	11/08/90	22:46
10	MDL STD	MDL STD	>FC228	11/08/90	23:33
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OK

NOT USED 11/27/90

FORM V VOA 1/87 Rev.

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

Lab Name: ALCO Contract:EPA-5SCRL

Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Lab File ID: >FC252 BFB Injection Date: 11/10/90

Instrument ID: 87 3 BFB Injection Time: 8:56

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	19.3
75	30.0 - 60.0% OF MASS 95	45.3
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	64.0
175	5.0 - 9.0% of mass 174	4.5(7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	62.8(98.1)1
177	5.0 - 9.0% of mass 176	4.0(6.4)2

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

THIS TUNE APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	15 ppb STD	15 ppb STD	>FC253	11/10/90	09:32
02	METHOD BLK	METHOD BLK	>FC254	11/10/90	10:37
03	91FH30S86MSRE	91FH30S86MSRE	>FC257	11/10/90	12:59
04	91FH30S86MSDRE	91FH30S86MSDRE	>FC258	11/10/90	13:47
05	MDL STD	MDL STD	>FC265	11/10/90	19:18
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FORM V VOA 1/87 Rev.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:ALCO Contract:EPA-5SCRL
Lab Code: CHICAGOIL Case No.: SF7465 SAS No.: NA SDG No.:
Instrument ID: 87 3 Calibration Date(s):11/08/90
Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Max %RSD for CCC(*) = 35.0%

LAB FILE ID: RRF5.0=>FC210 RRF10.0=>FC211
RRF15.0=>FC209 RRF20.0=>FC212 RRF25.0=>FC213

COMPOUND	RRF5	RRF10	RRF15	RRF20	RRF25	RRF	% RSD
Chloromethane #	1.018	.638	.856	.584	.581	.735	26.4#
Bromomethane	2.643	1.614	2.206	1.500	1.470	1.887	27.4
Vinyl_Chloride *	1.579	.906	1.391	.771	.765	1.082	34.9*
Chloroethane	6.910	3.878	5.599	3.638	3.536	4.712	31.6
Methylene_Chloride	4.733	3.521	3.227	3.257	3.260	3.600	17.9
Acrolein	.089	.094	.079	.097	.097	.091	8.3
Acetone	.118	.127	.123	.131	.132	.126	4.7
Acrylonitrile	.219	.230	.232	.246	.252	.236	5.5
Carbon_Disulfide	16.055	13.646	16.505	13.603	13.578	14.677	10.0
1,1-Dichloroethene *	11.630	8.239	8.507	7.386	7.235	8.599	20.7*
1,1-Dichloroethane #	16.769	12.207	11.604	11.017	10.761	12.471	19.8#
1,2-Dichloroethene_(total)	10.042	7.177	7.121	6.545	6.445	7.466	19.8
Chloroform *	10.369	7.538	6.991	6.854	6.736	7.698	19.8*
1,2-Dichloroethane	2.292	1.763	1.544	1.670	1.631	1.780	16.7
2-Butanone	.015	.017	.016	.018	.018	.017	8.0
1,1,1-Trichloroethane	3.754	2.758	2.753	2.435	2.327	2.805	20.1
Carbon_Tetrachloride	3.167	2.323	2.349	2.048	1.943	2.366	20.3
Vinyl_Acetate	.613	.660	.293	.645	.616	.565	27.2
Bromodichloromethane	1.430	1.140	1.012	1.057	1.042	1.136	15.0
1,2-Dichloropropane *	1.765	1.394	1.279	1.295	1.283	1.403	14.8*
cis-1,3-Dichloropropene	1.675	1.343	1.220	1.271	1.251	1.352	13.8
Trichloroethene	2.452	1.897	1.856	1.752	1.728	1.937	15.3
Dibromochloromethane	.630	.525	.459	.505	.500	.524	12.3
1,1,2-Trichloroethane	.437	.366	.332	.357	.351	.369	11.0
Benzene	7.096	5.423	5.114	4.952	4.885	5.494	16.7
trans-1,3-Dichloropropene	.740	.602	.555	.585	.584	.613	11.9
2-Chloroethyl_vinylether	.270	.235	.194	.213	.209	.224	13.1
Bromoform #	.289	.247	.211	.239	.236	.244	11.6#
4-Methyl-2-pentanone	.471	.478	.485	.493	.493	.484	1.9
2-Hexanone	.323	.334	.347	.353	.332	.338	3.5
Tetrachloroethene	4.994	3.556	3.790	3.230	3.175	3.749	19.7
1,1,2,2-Tetrachloroethane	1.393	1.128	1.046	1.075	1.049	1.138	12.9
Toluene *	9.267	6.602	6.617	5.869	5.775	6.826	20.8*
Chlorobenzene #	6.931	5.044	4.908	4.571	4.499	5.191	19.2#
Ethylbenzene *	5.865	4.223	4.228	3.719	3.622	4.331	20.8*
Styrene	4.865	4.429	5.102	4.611	4.799	4.761	5.4
Meta Xylene	4.589	3.647	4.443	3.647	3.755	4.016	11.5
O-&/or_P-Xylene	2.049	3.242	3.920	3.238	3.379	3.166	21.6
1,2-Dichloroethane-d4	1.098	1.176	1.156	1.283	1.338	1.210	8.1
Benzene-d6	3.243	3.293	3.391	3.120	3.165	3.242	3.3
Toluene-d8	7.631	7.029	7.688	6.558	6.493	7.080	8.0

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:ALCO Contract:EPA-5SCRL
Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Instrument ID: 87 3 Calibration Date: 11/08/90 Time: 13:13

Lab File ID: >FC215 Init. Calib. Date(s):11/08/90 11/08/90

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

Max %D for CCC(*) = 35.0%

COMPOUND	RRF	RRF15	%D
Chloromethane #	.735	.600	18.4 #
Bromomethane	1.887	1.652	12.5
Vinyl Chloride *	1.082	.841	22.3 *
Chloroethane	4.712	4.242	10.0
Methylene_Chloride	3.600	3.848	6.9
Acrolein	.091	.097	5.8
Acetone	.126	.131	3.4
Acrylonitrile	.236	.240	1.6
Carbon_Disulfide	14.677	13.693	6.7
1,1-Dichloroethene *	8.599	8.559	.5 *
1,1-Dichloroethane #	12.471	12.863	3.1 #
1,2-Dichloroethene_(total)	7.466	7.630	2.2
Chloroform *	7.698	8.038	4.4 *
1,2-Dichloroethane	1.780	1.942	9.1
2-Butanone	.017	.018	8.5
1,1,1-Trichloroethane	2.805	2.917	4.0
Carbon_Tetrachloride	2.366	2.417	2.2
Vinyl Acetate	.565	.733	29.7
Bromodichloromethane	1.136	1.280	12.7
1,2-Dichloropropane *	1.403	1.559	11.1 *
cis-1,3-Dichloropropene	1.352	1.525	12.8
Trichloroethene	1.937	2.061	6.4
Dibromochloromethane	.524	.605	15.5
1,1,2-Trichloroethane	.369	.427	15.9
Benzene	5.494	5.913	7.6
trans-1,3-Dichloropropene	.613	.705	14.9
2-Chloroethyl_vinylether	.224	.264	17.9
Bromoform #	.244	.286	16.9 #
4-Methyl-2-pentanone	.484	.515	6.4
2-Hexanone	.338	.372	10.2
Tetrachloroethene	3.749	3.869	3.2
1,1,2,2-Tetrachloroethane	1.138	1.301	14.3
Toluene *	6.826	7.243	6.1 *
Chlorobenzene #	5.191	5.617	8.2 #
Ethylbenzene *	4.331	4.542	4.9 *
Styrene	4.761	4.841	1.7
Meta Xylene	4.016	3.935	2.0
O-&/or_P-Xylene	3.166	3.513	11.0
1,2-Dichloroethane-d4	1.210	1.222	1.0
Benzene-d6	3.242	3.156	2.7
Toluene-d8	7.080	6.767	4.4

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALCO Contract:EPA-5SCRL
Lab Code: CHICAGOIL Case No.: SF-7465 SAS No.: NA SDG No.:

Instrument ID: 87 3 Calibration Date: 11/10/90 Time: 9:32

Lab File ID: >FC253 Init. Calib. Date(s):11/08/90 11/10/90

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

Max %D for CCC(*) = 35.0%

COMPOUND	RRF	RRF15	%D
Chloromethane #	.735	.777	5.7 #
Bromomethane	1.887	2.030	7.6
Vinyl Chloride *	1.082	1.285	18.7 *
Chloroethane	4.712	5.432	15.3
Methylene_Chloride	3.600	2.544	29.3
Acrolein	.091	.085	7.0
Acetone	.126	.120	4.9
Acrylonitrile	.236	.226	4.2
Carbon_Disulfide	14.677	17.341	18.2
1,1-Dichloroethene *	8.599	6.687	22.2 *
1,1-Dichloroethane #	12.471	9.181	26.4 #
1,2-Dichloroethene_(total)	7.466	5.591	25.1
Chloroform *	7.698	5.524	28.2 *
1,2-Dichloroethane	1.780	1.214	31.8
2-Butanone	.017	.015	8.4
1,1,1-Trichloroethane	2.805	2.183	22.2
Carbon_Tetrachloride	2.366	1.871	20.9
Vinyl Acetate	.565	.402	28.8
Bromodichloromethane	1.136	.785	30.9
1,2-Dichloropropane *	1.403	.982	30.0 *
cis-1,3-Dichloropropene	1.352	.924	31.7
Trichloroethene	1.937	1.416	26.9
Dibromochloromethane	.524	.345	34.1
1,1,2-Trichloroethane	.369	.243	34.1
Benzene	5.494	3.994	27.3
trans-1,3-Dichloropropene	.613	.434	29.2
2-Chloroethyl_vinylether	.224	.143	36.0
Bromoform #	.244	.154	37.2 #
4-Methyl-2-pentanone	.484	.484	.1
2-Hexanone	.338	.329	2.5
Tetrachloroethene	3.749	2.953	21.2
1,1,2,2-Tetrachloroethane	1.138	.776	31.9
Toluene *	6.826	5.189	24.0 *
Chlorobenzene #	5.191	3.823	26.3 #
Ethylbenzene *	4.331	3.334	23.0 *
Styrene	4.761	5.357	12.5
Meta Xylene	4.016	4.214	4.9
O-&/or_P-Xylene	3.166	3.755	18.6
1,2-Dichloroethane-d4	1.210	1.159	4.2
Benzene-d6	3.242	3.398	4.8
Toluene-d8	7.080	7.951	12.3

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Study Name: ALCO Data Set:SF-7465

SAS No.: NA SDG No.: Contract: EPA-5SCRL

Lab File ID (Standard): >FC215 Date Analyzed:11/08/90

Instrument ID: 87 3 Time Analyzed: 13:13

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/wcap) PACK

		IS1(BCM) AREA #	RT	IS2(BCP) AREA #	RT	IS3(DCB) AREA #	RT
	12 HOUR STD	58714.	10.59	217760.	19.55	103472.	23.47
	UPPER LIMIT	117428.	11.09	435520.	20.05	206944.	23.97
	LOWER LIMIT	29357.	10.09	108880.	19.05	51736.	22.97
	EPA SAMPLE NO.						
01	METHOD BLANK	65499.	10.57	251290.	19.55	118837.	23.47
02	91FH30S85	62175.	10.58	238509.	19.56	114566.	23.48
03	91FH30D85	58618.	10.58	227649.	19.56	106659.	23.51
04	91FH30S86	64990.	10.57	254622.	19.55	118623.	23.50
05	91FH30S87	63405.	10.57	245940.	19.58	116398.	23.50
→ 06	91FH03R85	64476.	10.56	258594.	19.57	116057.	23.49
07	91FH30S86MS	66832.	10.59	260186.	19.54	119975.	23.49
08	91FH30S86MSD	62315.	10.58	236128.	19.56	114957.	23.49
09	MDL STD	64496.	10.57	253121.	19.55	115126.	23.47
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IS1 (BCM) = Bromochloromethane
IS2 (BCP) = 2-Bromo-1-chloropropane
IS3 (DCB) = 1,4-Dichlorobutane

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

* Value outside QC limit.
\# Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Study Name: ALCO | Data Set:SF-7465

SAS No.: NA | SDG No.: | Contract: EPA-5SCRL

Lab File ID (Standard): >FC253 | Date Analyzed:11/10/90

Instrument ID: 87 3 | Time Analyzed: 9:32

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/wcap) PACK

	IS1(BCM) AREA #	RT	IS2(BCP) AREA #	RT	IS3(DCB) AREA #	RT
	12 HOUR STD	45955.	10.58	178957.	19.56	78333.	23.48
	UPPER LIMIT	91910.	11.08	357914.	20.06	156666.	24.98
	LOWER LIMIT	22978.	10.08	89478.	19.06	39166.	23.98
	EPA SAMPLE NO.						
01	METHOD BLK	46079.	10.59	183454.	19.57	81637.	23.49
02	91FH30S86MSRE	60806.	10.58	232875.	19.57	112586.	23.52
03	91FH30S86MSDRE	65445.	10.58	250388.	19.57	125046.	23.49
04	MDL STD	64725.	10.59	249823.	19.57	121104.	23.49
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22							

IS1 (BCM) = Bromochloromethane
IS2 (BCP) = 2-Bromo-1-chloropropane
IS3 (DCB) = 1,4-Dichlorobutane

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

* Value outside QC limit.
\# Column used to flag internal standard area values with an asterisk

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91FH30S86MSR E

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC257
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/07/90
Date Analyzed: 11/10/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	7.	
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	9.	
71-43-2	Benzene	9.	
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	UJ
75-25-2	Bromoform	1.	UJ
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	8.	
108-90-7	Chlorobenzene	9.	
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

NA

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
91FH30S83MSDRE

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC258
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/07/90
Date Analyzed: 11/10/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	6.	
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	9.	
71-43-2	Benzene	9.	
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	UJ
75-25-2	Bromoform	1.	UJ
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	8.	
108-90-7	Chlorobenzene	9.	
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

NA.

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MDL STD

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC228
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	2.	U
74-83-9	Bromomethane	2.	U
75-01-4	Vinyl Chloride	2.	U
75-00-3	Chloroethane	2.	U
75-09-2	Methylene Chloride	.7	U
107-02-8	Acrolein	39.	U
67-64-1	Acetone	57.	
107-13-1	Acrylonitrile	56.	
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	.6	U
75-34-3	1,1-Dichloroethane	.7	U
156-60-5	1,2-Dichloroethene (total)	.6	U
67-66-3	Chloroform	.7	U
107-02-2	1,2-Dichloroethane	.7	U
78-93-3	2-Butanone	17.	U
71-55-6	1,1,1-Trichloroethane	.6	U
56-23-5	Carbon Tetrachloride	.6	U
108-05-4	Vinyl Acetate	2.	U
75-27-4	Bromodichloromethane	.6	U
78-87-5	1,2-Dichloropropane	.6	U
10061-01-5	cis-1,3-Dichloropropene	.7	U
79-01-6	Trichloroethene	.6	U
71-43-2	Benzene	.7	U
124-48-1	Dibromochloromethane	.6	U
10061-02-6	trans-1,3-Dichloropropene	.5	U
79-00-5	1,1,2-Trichloroethane	.6	U
110-75-8	2-Chloroethyl Vinylether	.8	U
75-25-2	Bromoform	.5	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	
127-18-4	Tetrachloroethene	.6	U
79-34-5	1,1,2,2-Tetrachloroethane	.6	U
108-88-3	Toluene	.7	U
108-90-7	Chlorobenzene	.6	U
100-41-4	Ethylbenzene	.6	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

NA

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MDL STD

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC265
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/07/90
Date Analyzed: 11/10/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	1.	J
74-83-9	Bromomethane	1.	J
75-01-4	Vinyl Chloride	.8	J
75-00-3	Chloroethane	.7	J
75-09-2	Methylene_Chloride	1.	
107-02-8	Acrolein	24.	J
67-64-1	Acetone	38.	J
107-13-1	Acrylonitrile	38.	J
75-15-0	Carbon Disulfide	.7	J
75-35-4	1,1-Dichloroethene	.7	J
75-34-3	1,1-Dichloroethane	1.	
156-60-5	1,2-Dichloroethene_(total)	.9	J
67-66-3	Chloroform	1.	
107-02-2	1,2-Dichloroethane	1.	
78-93-3	2-Butanone	16.	J
71-55-6	1,1,1-Trichloroethane	1.	J
56-23-5	Carbon Tetrachloride	.9	J
108-05-4	Vinyl Acetate	5.	J
75-27-4	Bromodichloromethane	1.	
78-87-5	1,2-Dichloropropane	1.	
10061-01-5	cis-1,3-Dichloropropene	1.	
79-01-6	Trichloroethene	1.	J
71-43-2	Benzene	1.	
124-48-1	Dibromochloromethane	1.	
10061-02-6	trans-1,3-Dichloropropene	1.	
79-00-5	1,1,2-Trichloroethane	1.	
110-75-8	2-Chloroethyl_Vinylether	2.	
75-25-2	Bromoform	1.	
108-10-1	4-Methyl-2-pentanone	3.	J
591-78-6	2-Hexanone	4.	J
127-18-4	Tetrachloroethene	.8	J
79-34-5	1,1,2,2-Tetrachloroethane	1.	
108-88-3	Toluene	1.	J
108-90-7	Chlorobenzene	1.	
100-41-4	Ethylbenzene	.9	J
100-42-5	Styrene	1.	J
108-38-3	Meta Xylene	2.	J
95-47-6	O-&/or P-Xylene	2.	

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

N.A.

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

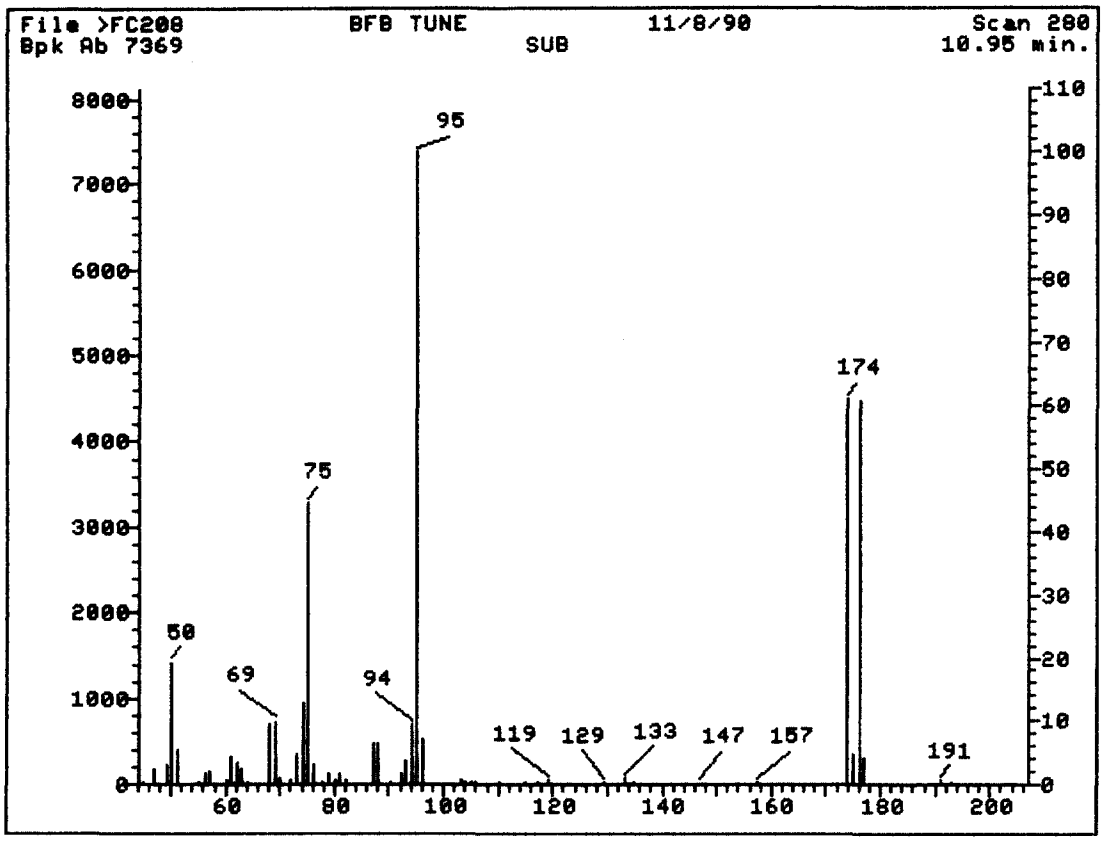
m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	19.27	19.27	Ok
75	30-60% of mass 95	44.65	44.65	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.02	7.02	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	61.12	61.12	Ok
175	5-9% of mass 174	4.57	7.48	Ok
176	95-101% of mass 174	60.84	99.53	Ok
177	5-9% of mass 176	4.18	6.87	Ok

Injection Date: 11/08/90
Injection Time: 07:46
Data File: >FC208
Scan: 280

MS data file header from : >FC208

Sample: BFB TUNE Operator: CARSTEN MS 11/08/90 7:46
Misc : 11/8/90
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0



MS data file header from : >FC208

Sample: BFB TUNE Operator: CARSTEN MS 11/08/90 7:46
Misc : 11/8/90
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC208 BFB TUNE 11/8/90
280 SUB

File: >FC208 Scan #: 280 Retn. time: 10.95

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
43.95	32.00	63.90	33.00	81.90	61.00	103.45	25.00	131.95	6.00
45.05	17.00	68.00	698.00	86.00	14.00	103.70	28.00	132.95	76.00
47.05	187.00	69.00	724.00	87.00	470.00	104.95	27.00	134.80	17.00
49.05	222.00	70.00	73.00	88.00	480.00	105.95	27.00	138.80	8.00
50.05	1420.00	72.00	54.00	89.00	13.00	106.80	6.00	146.90	13.00
51.05	406.00	73.00	345.00	90.15	16.00	110.05	21.00	157.15	16.00
54.05	14.00	74.00	941.00	92.00	137.00	114.80	28.00	173.90	4504.00
55.05	31.00	75.00	3290.00	93.00	265.00	116.95	31.00	174.90	337.00
56.05	118.00	76.00	235.00	94.00	685.00	118.95	46.00	175.90	4483.00
57.05	150.00	77.00	4.00	95.00	7369.00	121.70	4.00	177.00	308.00
60.05	46.00	77.90	33.00	96.00	517.00	123.95	7.00	190.95	40.00
61.00	323.00	78.90	137.00	97.40	6.00	125.45	4.00	192.95	33.00
62.00	259.00	80.00	54.00	101.05	10.00	126.20	13.00	206.95	31.00
63.00	184.00	81.00	128.00	102.95	48.00	129.05	21.00		

MS data file header from : >FC208

Sample: BFB TUNE Operator: CARSTEN MS 11/08/90 7:46
Misc : 11/8/90
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

Calibration Report

Title: VOLATILES CRL624NS 05\23\90
Calibrated: 901108 12:56

Compound	>FC210 RF 5.00	>FC211 RF 10.00	>FC209 RF 15.00	>FC212 RF 20.00	>FC213 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
CHLOROMETHANE	1.01818	.63819	.85608	.58396	.58059	.205	.73540	26.409	(Conc=10.0,15.0,20.0,25.0,30.0)
BROMOMETHANE	2.64339	1.61363	2.20595	1.49963	1.47024	.321	1.88657	27.445	(Conc=10.0,15.0,20.0,25.0,30.0)
VINYL CHLORIDE	1.57940	.90603	1.39065	.77094	.76464	.396	1.08233	34.912	(Conc=10.0,15.0,20.0,25.0,30.0)
CHLOROETHANE	6.90990	3.87830	5.59950	3.63836	3.53569	.486	4.71235	31.565	(Conc=10.0,15.0,20.0,25.0,30.0)
METHYLENE CHLORIDE	4.73325	3.52134	3.22648	3.25673	3.26031	.687	3.59962	17.914	(Conc=5.0,10.0,15.0,20.0,25.0)
ACROLEIN	.08933	.09414	.07905	.09714	.09699	.737	.09133	8.275	(Conc=225.0,300.0,375.0,450.0,52
ACETONE	.11831	.12708	.12277	.13129	.13246	.732	.12638	4.677	(Conc=225.0,300.0,375.0,450.0,52
ACRYLONITRILE	.21914	.22995	.23243	.24600	.25153	.800	.23581	5.507	(Conc=225.0,300.0,375.0,450.0,52
CARBON DISULFIDE	16.0551	13.6458	16.5047	13.6032	13.5776	.831	14.6773	10.028	(Conc=7.5,10.0,12.5,15.0,17.5)
1,1-DICHLOROETHENE	11.6298	8.23858	8.50679	7.38560	7.23492	.951	8.59913	20.686	(Conc=5.0,10.0,15.0,20.0,25.0)
1,1-DICHLOROETHANE	16.7688	12.2066	11.6043	11.0168	10.7609	1.071	12.4715	19.776	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROETHENE (TOTAL)	10.0419	7.17752	7.12134	6.54485	6.44502	1.139	7.46613	19.785	(Conc=5.0,10.0,15.0,20.0,25.0)
CHLOROFORM	10.3692	7.53848	6.99046	6.85404	6.73567	1.197	7.69757	19.809	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROETHANE-D4	1.09754	1.17573	1.15628	1.28347	1.33765	1.255	1.21014	8.096	(Conc=10.0,10.0,10.0,10.0,10.0)
1,2-DICHLOROETHANE	2.29152	1.76355	1.54379	1.67026	1.63131	1.265	1.78009	16.662	(Conc=5.0,10.0,15.0,20.0,25.0)
2-BUTANONE	.01464	.01685	.01650	.01786	.01795	.675	.01676	7.999	(Conc=75.0,100.0,125.0,150.0,175
1,1,1-TRICHLOROETHANE	3.75446	2.75813	2.75247	2.43499	2.32720	.747	2.80545	20.098	(Conc=5.0,10.0,15.0,20.0,25.0)
CARBON TETRACHLORIDE	3.16702	2.32323	2.34891	2.04789	1.94282	.766	2.36597	20.315	(Conc=5.0,10.0,15.0,20.0,25.0)
VINYL ACETATE	.61303	.66029	.29259	.64525	.61602	.773	.56543	27.203	(Conc=22.5,30.0,37.5,45.0,52.5)
BROMODICHLOROMETHANE	1.42970	1.14011	1.01170	1.05727	1.04200	.796	1.13616	15.038	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROPROPANE	1.76479	1.39429	1.27906	1.29536	1.28308	.861	1.40332	14.789	(Conc=5.0,10.0,15.0,20.0,25.0)
CIS-1,3-DICHLOROPROPENE	1.67498	1.34321	1.21985	1.27078	1.25150	.875	1.35207	13.765	(Conc=6.0,12.0,18.0,24.0,30.0)
TRICHLOROETHENE	2.45163	1.89663	1.85594	1.75185	1.72815	.902	1.93684	15.293	(Conc=5.0,10.0,15.0,20.0,25.0)
BENZENE-D6	3.24308	3.29345	3.39073	3.12013	3.16495	.918	3.24247	3.291	(Conc=10.0,10.0,10.0,10.0,10.0)
BENZENE	7.09606	5.42333	5.11421	4.95172	4.88543	.926	5.49415	16.732	(Conc=5.0,10.0,15.0,20.0,25.0)
DIBROMOCHLOROMETHANE	.63051	.52533	.45848	.50535	.50044	.936	.52402	12.272	(Conc=5.0,10.0,15.0,20.0,25.0)
TRANS-1,3-DICHLOROPROPENE	.74028	.60217	.55513	.58490	.58379	.939	.61325	11.902	(Conc=4.0,8.0,12.0,16.0,20.0)
1,1,2-TRICHLOROETHANE	.43742	.36627	.33176	.35678	.35082	.940	.36861	10.982	(Conc=5.0,10.0,15.0,20.0,25.0)
2-CHLOROETHYL VINYLETHER	.26957	.23482	.19418	.21283	.20869	.992	.22402	13.095	(Conc=5.0,10.0,15.0,20.0,25.0)
BROMOFORM	.28901	.24675	.21137	.23881	.23588	1.072	.24437	11.557	(Conc=5.0,10.0,15.0,20.0,25.0)
4-METHYL-2-PENTANONE	.47154	.47785	.48513	.49334	.49250	.908	.48407	1.943	(Conc=15.0,20.0,25.0,30.0,35.0)
2-HEXANONE	.32321	.33408	.34675	.35298	.33216	.974	.33783	3.530	(Conc=15.0,20.0,25.0,30.0,35.0)
TETRACHLOROETHENE	4.99377	3.55570	3.79025	3.23037	3.17512	.988	3.74904	19.722	(Conc=5.0,10.0,15.0,20.0,25.0)
1,1,2,2-TETRACHLOROETHANE	1.39341	1.12793	1.04591	1.07503	1.04870	.989	1.13820	12.864	(Conc=5.0,10.0,15.0,20.0,25.0)
TOLUENE-D8	7.63111	7.02900	7.68767	6.55762	6.49345	1.033	7.07977	8.029	(Conc=10.0,10.0,10.0,10.0,10.0)
TOLUENE	9.26670	6.60218	6.61706	5.86930	5.77514	1.041	6.82608	20.809	(Conc=5.0,10.0,15.0,20.0,25.0)
CHLOROBENZENE	6.93050	5.04421	4.90750	4.57149	4.49890	1.089	5.19052	19.243	(Conc=5.0,10.0,15.0,20.0,25.0)
ETHYLBENZENE	5.86473	4.22269	4.22774	3.71868	3.62173	1.175	4.33111	20.821	(Conc=5.0,10.0,15.0,20.0,25.0)
STYRENE	4.86482	4.42903	5.10165	4.61128	4.79882	1.350	4.76112	5.364	(Conc=7.5,10.0,12.5,15.0,17.5)

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

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: VOLATILES CRL624NS 05\23\90
Calibrated: 901108 12:56

Compound	Files: >FC210 RF 5.00	>FC211 RF 10.00	>FC209 RF 15.00	>FC212 RF 20.00	>FC213 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
META XYLENE	4.58925	3.64673	4.44247	3.64710	3.75550	1.363	4.01621	11.483	(Conc=10.0,20.0,30.0,40.0,50.0)
O-&/OR P-XYLENE	2.04897	3.24206	3.92027	3.23750	3.37855	1.408	3.16547	21.616	(Conc=12.5,25.1,37.6,50.1,62.7)

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

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 10:13
Output File: ^FC210::L2 Injected at: 901108 09:33
Data File: >FC210::A8 Dilution Factor: 1.00000
Name: 5 ppb STD
Misc: INITIAL CAL 11/8/90

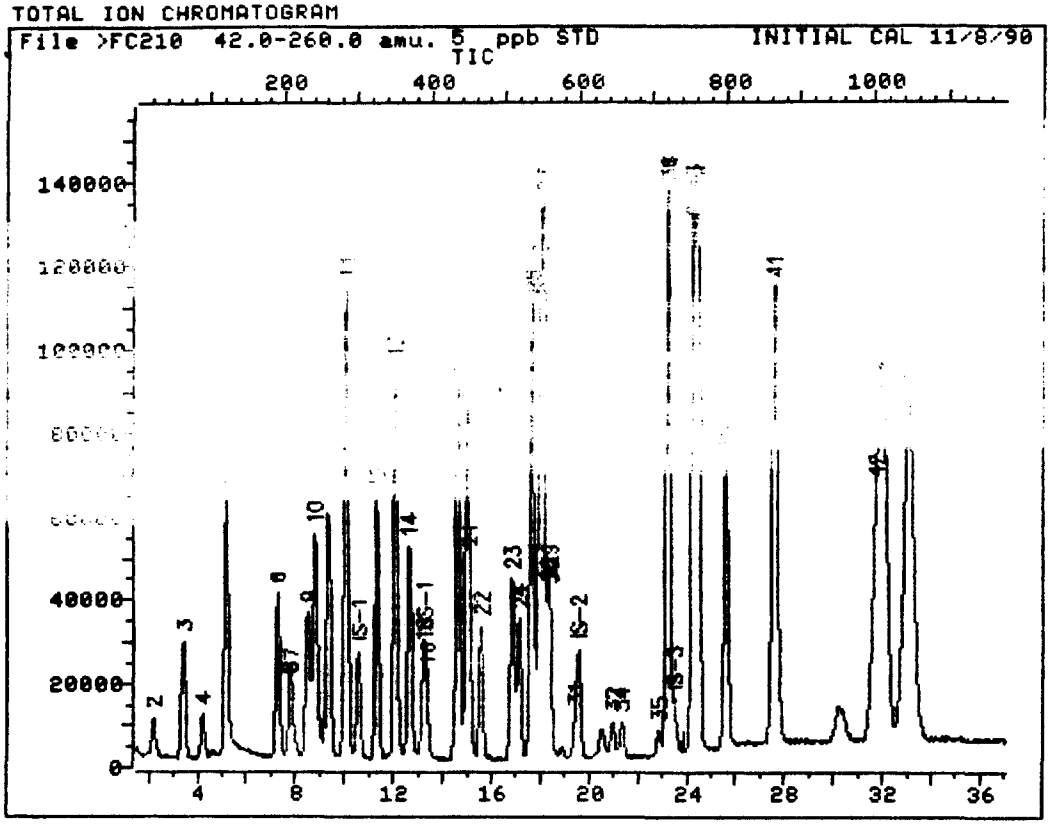
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.56	130.0	45005	10.00	UG/L	96
2)	CHLOROMETHANE	2.18	50.0	45823	11.89	UG/L	100
3)	BROMOMETHANE	3.41	94.0	118966	11.98	UG/L	96
4)	VINYL CHLORIDE	4.19	62.0	71081M	11.36	UG/L	94
5)	CHLOROETHANE	5.13	64.0	310980	12.34	UG/L	98
6)	METHYLENE CHLORIDE	7.24	84.0	106510	7.34	UG/L	89
7)	ACROLEIN	7.78	56.0	90456	254.26	UG/L	99
8)	ACETONE	7.72	43.0	119801	216.83	UG/L	96
9)	ACRYLONITRILE	8.48	53.0	221902	212.13	UG/L	98
10)	CARBON DISULFIDE	8.78	76.0	541920	7.30	UG/L	100
11)	1,1-DICHLOROETHENE	10.05	96.0	261699	6.84	UG/L	85
12)	1,1-DICHLOROETHANE	11.31	63.0	377340	7.23	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.04	96.0	225968	7.05	UG/L	85
14)	CHLOROFORM	12.64	83.0	233333	7.42	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.24	65.0	49395	9.49	UG/L	85
16)	1,2-DICHLOROETHANE	13.36	62.0	51565	7.42	UG/L	95
17)	*2-Bromo-1-chloropropane	19.55	77.0	181225	10.00	UG/L	99
18)	2-BUTANONE	13.21	72.0	19903	66.56	UG/L	97
19)	1,1,1-TRICHLOROETHANE	14.60	97.0	340201	6.82	UG/L	98
20)	CARBON TETRACHLORIDE	14.99	117.0	286972	6.74	UG/L	98
21)	VINYL ACETATE	15.11	43.0	249966	47.14	UG/L	99
22)	BROMODICHLOROMETHANE	15.56	83.0	129549	7.07	UG/L	96
23)	1,2-DICHLOROPROPANE	16.83	63.0	159912	6.90	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.10	75.0	182129	8.24	UG/L	96
25)	TRICHLOROETHENE	17.64	130.0	222148	6.60	UG/L	99
26)	BENZENE-D6	17.95	84.0	587727	9.56	UG/L	99
27)	BENZENE	18.10	78.0	642992	6.94	UG/L	97
28)	DIBROMOCHLOROMETHANE	18.31	129.0	57132	6.88	UG/L	97
29)	TRANS-1,3-DICHLOROPROPENE	18.37	75.0	53663	5.33	UG/L	96
30)	1,1,2-TRICHLOROETHANE	18.40	97.0	39636	6.59	UG/L	97
31)	2-CHLOROETHYL VINYLETHER	19.39	63.0	24426	6.94	UG/L	95
32)	BROMOFORM	20.96	173.0	26188	6.84	UG/L	96
33)	*1,4-Dichlorobutane	23.50	55.0	78936	10.00	UG/L	93
34)	4-METHYL-2-PENTANONE	21.33	43.0	55832	14.58	UG/L	95
35)	2-HEXANONE	22.86	43.0	38269	13.98	UG/L	94
36)	TETRACHLOROETHENE	23.20	164.0	197094	6.59	UG/L	97
37)	1,1,2,2-TETRACHLOROETHANE	23.23	83.0	54995	6.66	UG/L	91
38)	TOLUENE-D8	24.25	98.0	602369	9.93	UG/L	98
39)	TOLUENE	24.43	92.0	365738	7.00	UG/L	98
40)	CHLOROBENZENE	25.58	112.0	273533	7.06	UG/L	97
41)	ETHYLBENZENE	27.57	106.0	231469	6.94	UG/L	99
42)	STYRENE	31.74	104.0	288007	7.15	UG/L	98
43)	META XYLENE	32.04	106.0	362257	10.33	UG/L	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	33.03	106.0	202172	6.53	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC210::A8 Quant Output File: ^FC210::L2
Name: 5 ppb STD
Misc: INITIAL CAL 11/8/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

Operator ID: CARSTEN
Quant Time: 901108 10:13
Injected at: 901108 09:33

QUANT REPORT

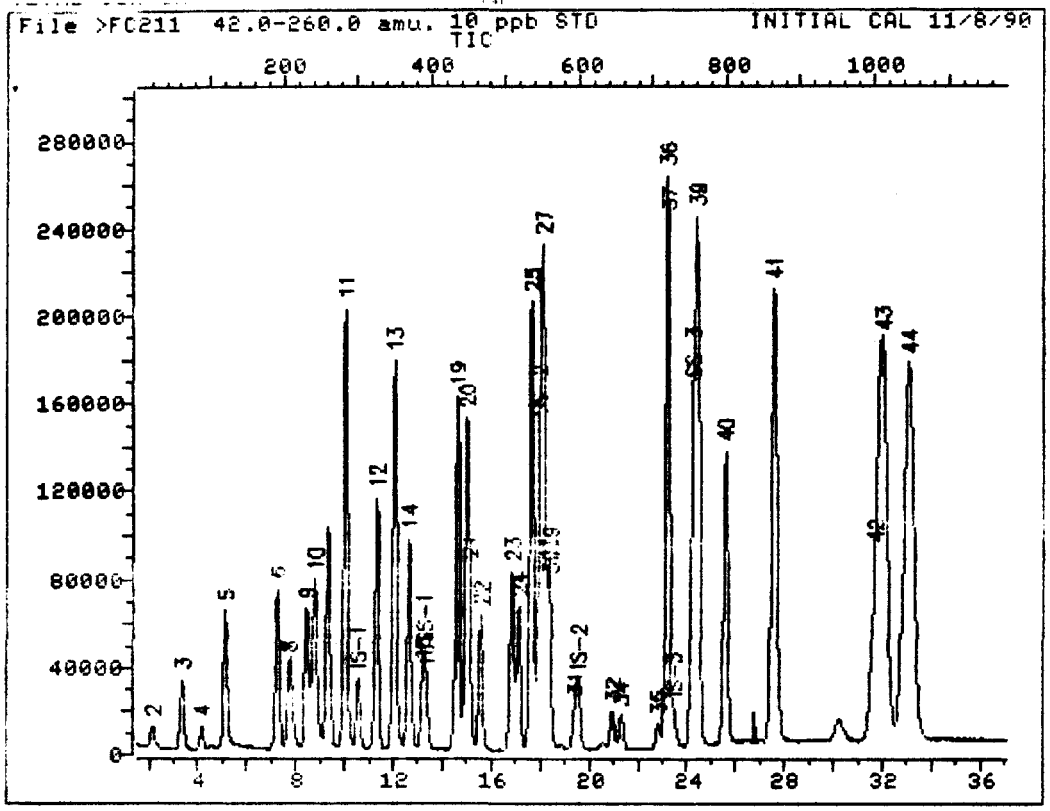
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 11:01
Output File: ^FC211::L2 Injected at: 901108 10:20
Data File: >FC211::A8 Dilution Factor: 1.00000
Name: 10 ppb STD
Misc: INITIAL CAL 11/8/90

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.56	130.0	57707	10.00	UG/L	92
2)	CHLOROMETHANE	2.15	50.0	55242	11.18	UG/L	100
3)	BROMOMETHANE	3.39	94.0	139677	10.97	UG/L	92
4)	VINYL CHLORIDE	4.17	62.0	78426	9.77	UG/L	94
5)	CHLOROETHANE	5.14	64.0	335708	10.39	UG/L	99
6)	METHYLENE CHLORIDE	7.25	84.0	203206	10.91	UG/L	91
7)	ACROLEIN	7.79	56.0	162974	357.26	UG/L	97
8)	ACETONE	7.73	43.0	220010	310.55	UG/L	96
9)	ACRYLONITRILE	8.45	53.0	398093	296.79	UG/L	99
10)	CARBON DISULFIDE	8.79	76.0	787458	8.27	UG/L	100
11)	1,1-DICHLOROETHENE	10.05	96.0	475424	9.68	UG/L	86
12)	1,1-DICHLOROETHANE	11.32	63.0	704404	10.52	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.04	96.0	414193	10.08	UG/L	83
14)	CHLOROFORM	12.65	83.0	435023	10.78	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.25	65.0	67848	10.17	UG/L	87
16)	1,2-DICHLOROETHANE	13.37	62.0	101769	11.42	UG/L	95
17)	*2-Bromo-1-chloropropane	19.56	77.0	219922	10.00	UG/L	99
18)	2-BUTANONE	13.19	72.0	37056	102.12	UG/L	96
19)	1,1,1-TRICHLOROETHANE	14.61	97.0	606573	10.02	UG/L	98
20)	CARBON TETRACHLORIDE	15.00	117.0	510930	9.89	UG/L	99
21)	VINYL ACETATE	15.12	43.0	435635	67.70	UG/L	97
22)	BROMODICHLOROMETHANE	15.57	83.0	250736	11.27	UG/L	97
23)	1,2-DICHLOROPROPANE	16.84	63.0	306636	10.90	UG/L	97
24)	CIS-1,3-DICHLOROPROPENE	17.11	75.0	354483	13.21	UG/L	98
25)	TRICHLOROETHENE	17.65	130.0	417110	10.22	UG/L	98
26)	BENZENE-D6	17.96	84.0	724303	9.71	UG/L	97
27)	BENZENE	18.11	78.0	1192709	10.60	UG/L	96
28)	DIBROMOCHLOROMETHANE	18.32	129.0	115531	11.46	UG/L	97
29)	TRANS-1,3-DICHLOROPROPENE	18.38	75.0	105944	8.68	UG/L	99
30)	1,1,2-TRICHLOROETHANE	18.41	97.0	80550	11.04	UG/L	95
31)	2-CHLOROETHYL VINYLETHER	19.40	63.0	51642	12.09	UG/L	99
32)	BROMOFORM	20.97	173.0	54266	11.67	UG/L	99
33)	*1,4-Dichlorobutane	23.48	55.0	103956	10.00	UG/L	95
34)	4-METHYL-2-PENTANONE	21.34	43.0	99351	19.70	UG/L	96
35)	2-HEXANONE	22.84	43.0	69459	19.27	UG/L	97
36)	TETRACHLOROETHENE	23.21	164.0	369636	9.38	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.24	83.0	117255	10.78	UG/L	92
38)	TOLUENE-D8	24.26	98.0	730707	9.14	UG/L	96
39)	TOLUENE	24.44	92.0	686336	9.98	UG/L	99
40)	CHLOROBENZENE	25.59	112.0	524376	10.28	UG/L	99
41)	ETHYLBENZENE	27.58	106.0	438974	9.99	UG/L	98
42)	STYRENE	31.69	104.0	460424	8.68	UG/L	96
43)	META XYLENE	32.02	106.0	758198	16.42	UG/L	96

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	33.07	106.0	845950	20.76	UG/L	97

* Compound is ISTD



Data File: >FC211::A8 Quant Output File: ^FC211::L2
Name: 10 ppb STD
Misc: INITIAL CAL 11/8/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

Operator ID: CARSTEN
Quant Time: 901108 11:01
Injected at: 901108 10:20

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 13:53
Output File: ^FC215::L2 Injected at: 901108 13:13
Data File: >FC215::A8 Dilution Factor: 1.00000
Name: 15 ppb STD
Misc: CON'T CAL 11/8/90

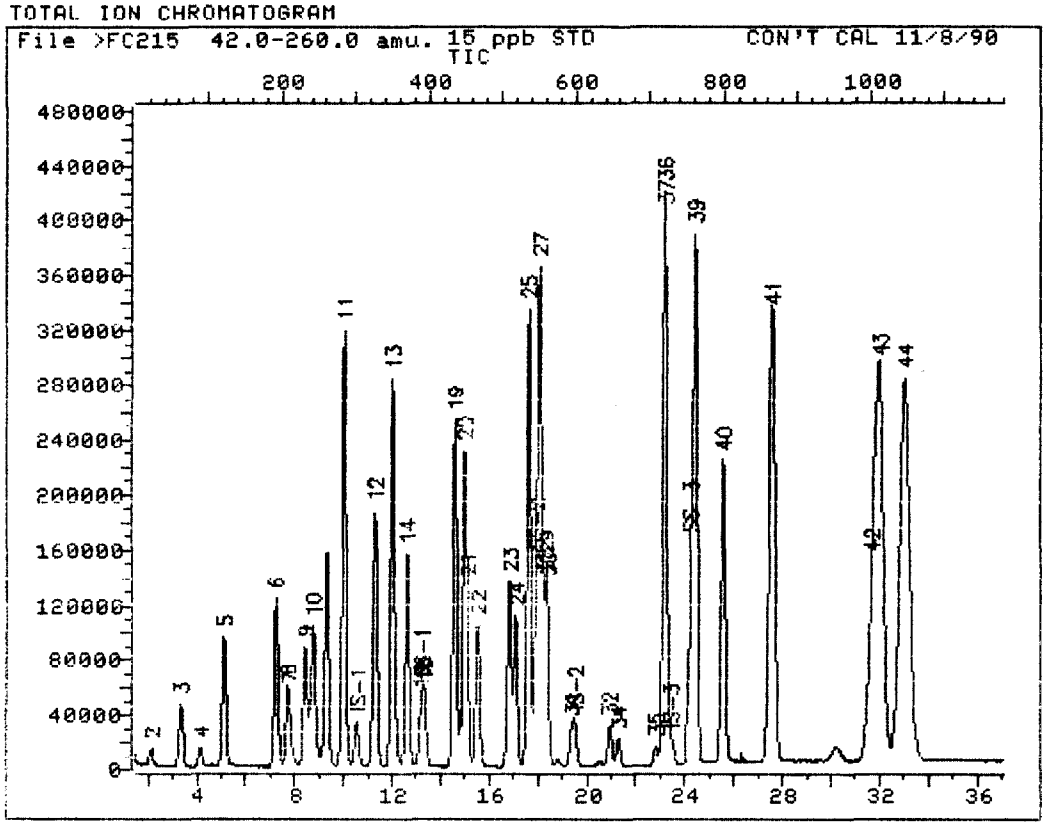
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 12:59

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.59	130.0	58714	10.00	UG/L	93
2)	CHLOROMETHANE	2.18	50.0	70466	16.32	UG/L	100
3)	BROMOMETHANE	3.38	94.0	193945	17.51	UG/L	96
4)	VINYL CHLORIDE	4.19	62.0	98731	15.54	UG/L	96
5)	CHLOROETHANE	5.13	64.0	498133	18.00	UG/L	99
6)	METHYLENE CHLORIDE	7.24	84.0	338909	16.04	UG/L	91
7)	ACROLEIN	7.78	56.0	212584	396.44	UG/L	93
8)	ACETONE	7.75	43.0	287631	387.63	UG/L	94
9)	ACRYLONITRILE	8.45	53.0	527553	381.03	UG/L	97
10)	CARBON DISULFIDE	8.78	76.0	1004998	11.66	UG/L	100
11)	1,1-DICHLOROETHENE	10.04	96.0	753818	14.93	UG/L	87
12)	1,1-DICHLOROETHANE	11.31	63.0	1132833	15.47	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.03	96.0	672013	15.33	UG/L	83
14)	CHLOROFORM	12.64	83.0	707884	15.66	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	71746	10.10	UG/L	88
16)	1,2-DICHLOROETHANE	13.36	62.0	171057	16.37	UG/L	96
17)	*2-Bromo-1-chloropropane	19.55	77.0	217760	10.00	UG/L	99
18)	2-BUTANONE	13.21	72.0	49635	135.99	UG/L	98
19)	1,1,1-TRICHLOROETHANE	14.60	97.0	952938	15.60	UG/L	99
20)	CARBON TETRACHLORIDE	14.99	117.0	789443	15.32	UG/L	98
21)	VINYL ACETATE	15.11	43.0	598865	48.64	UG/L	98
22)	BROMODICHLOROMETHANE	15.56	83.0	418234	16.90	UG/L	97
23)	1,2-DICHLOROPROPANE	16.86	63.0	509302	16.67	UG/L	98
24)	CIS-1,3-DICHLOROPROPENE	17.10	75.0	597601	20.30	UG/L	98
25)	TRICHLOROETHENE	17.64	130.0	673076	15.96	UG/L	99
26)	BENZENE-D6	17.95	84.0	687256	9.73	UG/L	97
27)	BENZENE	18.10	78.0	1931372	16.14	UG/L	97
28)	DIBROMOCHLOROMETHANE	18.31	129.0	197644	17.32	UG/L	97
29)	TRANS-1,3-DICHLOROPROPENE	18.37	75.0	184109	13.79	UG/L	99
30)	1,1,2-TRICHLOROETHANE	18.40	97.0	139593	17.39	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	19.40	63.0	86253	17.68	UG/L	97
32)	BROMOFORM	20.96	173.0	93300	17.53	UG/L	99
33)	*1,4-Dichlorobutane	23.47	55.0	103472	10.00	UG/L	94
34)	4-METHYL-2-PENTANONE	21.33	43.0	133216	26.60	UG/L	95
35)	2-HEXANONE	22.86	43.0	96326	27.56	UG/L	98
36)	TETRACHLOROETHENE	23.20	164.0	600447	15.48	UG/L	97
37)	1,1,2,2-TETRACHLOROETHANE	23.23	83.0	201977	17.15	UG/L	94
38)	TOLUENE-D8	24.25	98.0	700191	9.56	UG/L	98
39)	TOLUENE	24.43	92.0	1124218	15.92	UG/L	99
40)	CHLOROBENZENE	25.58	112.0	871831	16.23	UG/L	98
41)	ETHYLBENZENE	27.60	106.0	704950	15.73	UG/L	99
42)	STYRENE	31.71	104.0	626149	12.71	UG/L	97
43)	META XYLENE	32.01	106.0	1221405	29.39	UG/L	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	33.04	106.0	1366787	41.73	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC215::A8 Quant Output File: ^FC215::L2
Name: 15 ppb STD
Misc: CON'T CAL 11/8/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #5 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 12:59

Operator ID: CARSTEN
Quant Time: 901108 13:53
Injected at: 901108 13:13

QUANT REPORT

Operator ID: LARSTEN Quant Rev: 6 Quant Time: 901108 11:48
Output File: ^FC212::L2 Injected at: 901108 11:07
Data File: >FC212::A8 Dilution Factor: 1.00000
Name: 20 ppb STD
Misc: INITIAL CAL 11/8/90

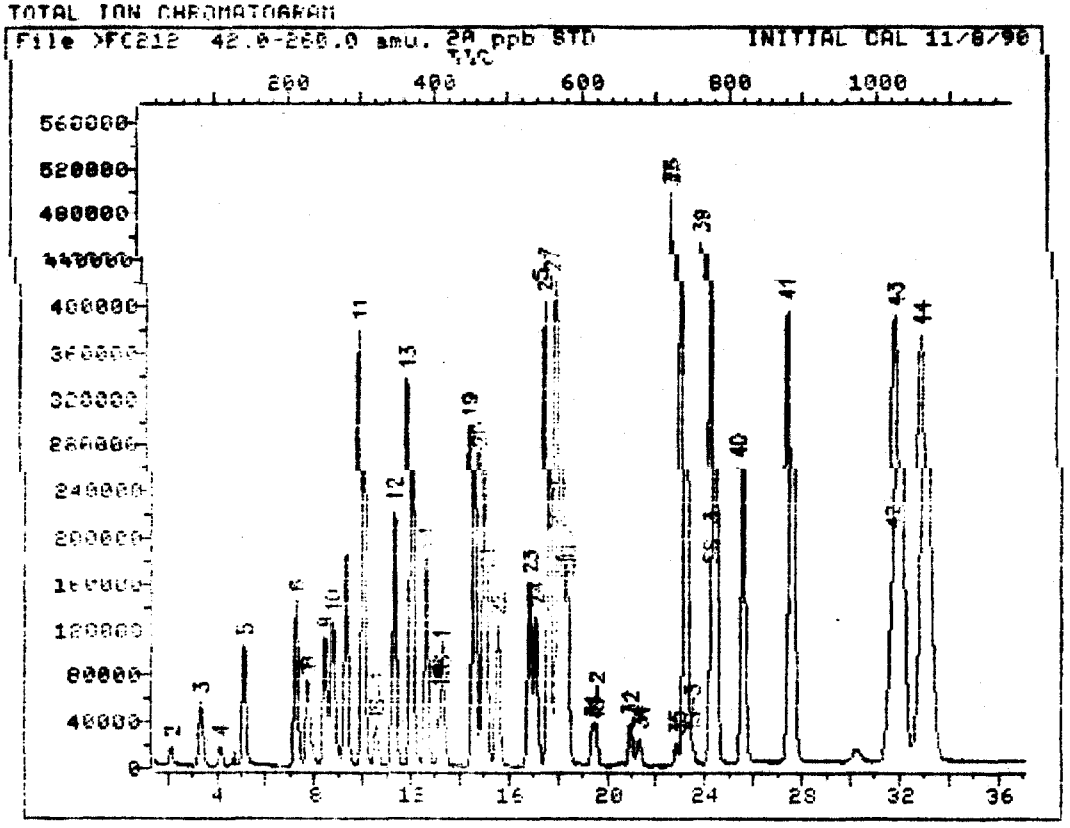
ID File: IDLF3A::XX
Title: ID FOR 624MS HP #: CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.59	130.0	60592	10.00	UG/L	98
2)	CHLOROMETHANE	2.18	50.0	88458	17.05	UG/L	100
3)	BROMOMETHANE	3.38	94.0	227164	17.00	UG/L	99
4)	VINYL CHLORIDE	4.16	62.0	116782	13.86	UG/L	99
5)	CHLOROETHANE	5.13	64.0	551139	16.24	UG/L	99
6)	METHYLENE CHLORIDE	7.27	84.0	394663	20.19	UG/L	90
7)	ACROLEIN	7.78	56.0	264875	553.00	UG/L	96
8)	ACETONE	7.75	43.0	357979	481.25	UG/L	94
9)	ACRYLONITRILE	8.45	53.0	670760	476.22	UG/L	97
10)	CARBON DISULFIDE	8.78	76.0	1236366	12.36	UG/L	100
11)	1,1-DICHLOROETHENE	10.05	96.0	895017	17.36	UG/L	87
12)	1,1-DICHLOROETHANE	11.31	63.0	1335058	18.99	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.04	96.0	793131	18.38	UG/L	85
14)	CHLOROFORM	12.64	83.0	830600	19.61	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	77768	11.10	UG/L	88
16)	1,2-DICHLOROETHANE	13.36	62.0	202409	21.64	UG/L	96
17)	*2-Bromo-1-chloropropane	19.58	77.0	230576	10.00	UG/L	99
18)	2-BUTANONE	13.21	72.0	61786	162.41	UG/L	95
19)	1,1,1-TRICHLOROETHANE	14.60	97.0	1122900	17.69	UG/L	98
20)	CARBON TETRACHLORIDE	14.99	117.0	944387	17.44	UG/L	97
21)	VINYL ACETATE	15.11	43.0	669506	99.24	UG/L	99
22)	BROMODICHLOROMETHANE	15.57	83.0	487561	20.90	UG/L	95
23)	1,2-DICHLOROPROPANE	16.86	63.0	597357	20.25	UG/L	98
24)	CIS-1,3-DICHLOROPROPENE	17.10	75.0	703226	25.00	UG/L	97
25)	TRICHLOROETHENE	17.65	130.0	807867	18.88	UG/L	99
26)	BENZENE-D6	17.98	84.0	719427	9.20	UG/L	98
27)	BENZENE	18.13	78.0	2283495	19.36	UG/L	98
28)	DIBROMOCHLOROMETHANE	18.31	129.0	233041	22.04	UG/L	96
29)	TRANS-1,3-DICHLOROPROPENE	18.37	75.0	215782	16.86	UG/L	99
30)	1,1,2-TRICHLOROETHANE	18.40	97.0	164532	21.51	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	19.40	63.0	98145	21.92	UG/L	98
32)	BROMOFORM	20.97	173.0	110130	22.60	UG/L	97
33)	*1,4-Dichlorobutane	23.47	55.0	112071	10.00	UG/L	96
34)	4-METHYL-2-PENTANONE	21.36	43.0	165866	30.51	UG/L	93
35)	2-HEXANONE	22.87	43.0	118675	30.54	UG/L	99
36)	TETRACHLOROETHENE	23.20	164.0	724062	17.05	UG/L	97
37)	1,1,2,2-TETRACHLOROETHANE	23.23	83.0	240959	20.56	UG/L	94
38)	TOLUENE-D8	24.26	98.0	734919	8.53	UG/L	98
39)	TOLUENE	24.44	92.0	1315557	17.74	UG/L	99
40)	CHLOROBENZENE	25.58	112.0	1024662	18.63	UG/L	98
41)	ETHYLBENZENE	27.61	106.0	833512	17.59	UG/L	99
42)	STYRENE	31.74	104.0	775187	13.56	UG/L	96
43)	META XYLENE	32.01	106.0	1634938	32.84	UG/L	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	33.07	106.0	1813776	41.37	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: [illegible]212::HP
Name: 20 [illegible] STD
Misc: INITIAL CAL 11/8/90

Quant Output File: ^FC212::L2

Id File: IDCF3A::MX
[illegible]e: ID FOR 624NS HP #[illegible] CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

Operator ID: LARSIEN
Quant time: 901108 11:48
Injected at: 901108 11:07

QUANT RESULTS

Operator ID: [illegible] Quant Rev: 6 Quant Time: 901108 12:36
Output File: [illegible] Injected at: 901108 11:55
Data File: [illegible] Dilution Factor: 1.00000
Name: 25 ppb STD
Misc: INITIAL CAL 11/8/90

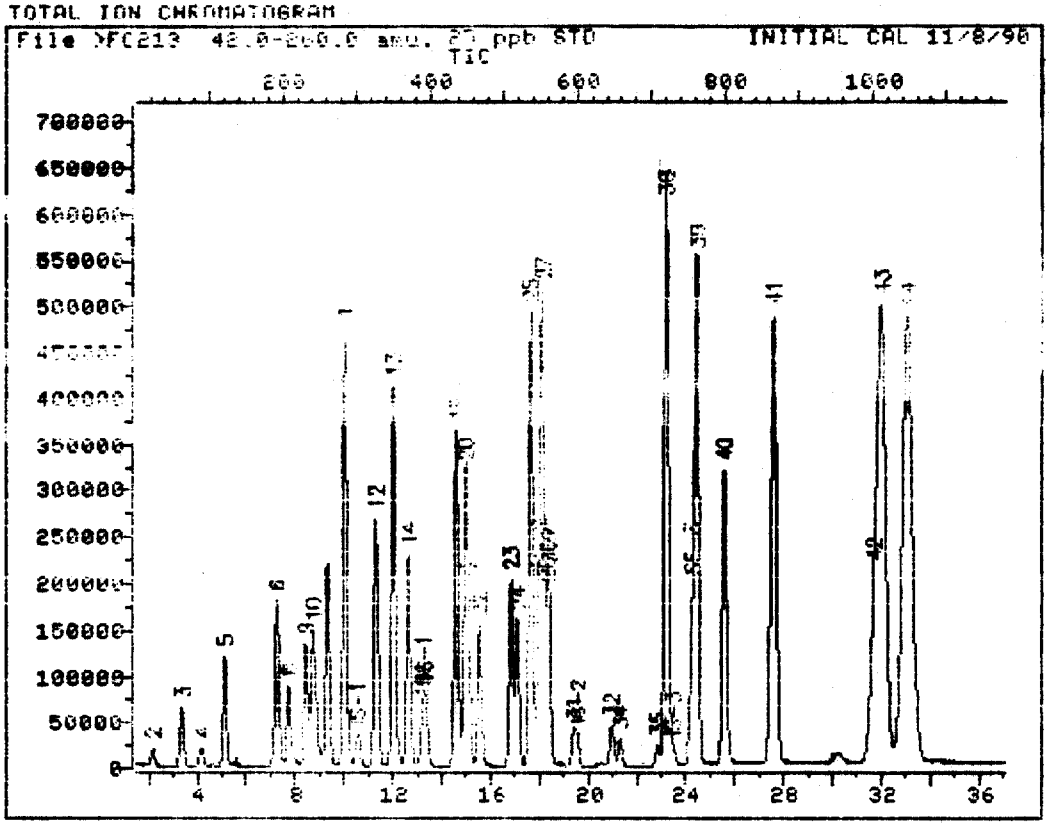
ID File: 1DCF5A::XX
Title: ID FOR 624NS HP #: CF 09\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.55	130.0	60660	10.00	UG/L	95
2)	CHLOROMETHANE	2.17	50.0	105655	20.35	UG/L	100
3)	BROMOMETHANE	3.37	94.0	267555	19.99	UG/L	97
4)	VINYL CHLORIDE	4.19	62.0	139149	16.50	UG/L	96
5)	CHLOROETHANE	5.12	64.0	643424	18.94	UG/L	98
6)	METHYLENE CHLORIDE	7.26	84.0	494426	25.26	UG/L	90
7)	ACROLEIN	7.78	56.0	308869	644.13	UG/L	97
8)	ACETONE	7.75	43.0	421825	566.44	UG/L	93
9)	ACRYLONITRILE	8.44	53.0	801032	568.13	UG/L	97
10)	CARBON DISULFIDE	8.27	76.0	1441331	14.40	UG/L	100
11)	1,1-DICHLOROETHENE	10.04	96.0	1097176	21.26	UG/L	88
12)	1,1-DICHLOROETHANE	11.30	63.0	1631894	23.18	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.03	96.0	977388	22.63	UG/L	87
14)	CHLOROFORM	12.66	83.0	1021464	24.09	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	81142	11.57	UG/L	88
16)	1,2-DICHLOROETHANE	13.36	62.0	247388	26.42	UG/L	96
17)	*2-Bromo-1-chloropropane	19.57	77.0	231859	10.00	UG/L	99
18)	2-BUTANONE	13.20	72.0	72830	190.38	UG/L	99
19)	1,1,1-TRICHLOROETHANE	14.62	97.0	1348953	21.14	UG/L	99
20)	CARBON TETRACHLORIDE	14.98	117.0	1126148	20.68	UG/L	99
21)	VINYL ACETATE	15.11	43.0	749859	110.54	UG/L	98
22)	BROMODICHLOROMETHANE	15.56	83.0	603992	25.75	UG/L	96
23)	1,2-DICHLOROPROPANE	16.85	63.0	743735	25.08	UG/L	97
24)	CIS-1,3-DICHLOROPROPENE	17.13	75.0	870515	30.78	UG/L	98
25)	TRICHLOROETHENE	17.64	130.0	1001719	23.28	UG/L	99
26)	BENZENE-D6	17.97	84.0	733823	9.33	UG/L	96
27)	BENZENE	18.12	78.0	2831826	23.88	UG/L	98
28)	DIBROMOCHLOROMETHANE	18.30	129.0	290076	27.29	UG/L	94
29)	TRANS-1,3-DICHLOROPROPENE	18.36	75.0	270716	21.03	UG/L	99
30)	1,1,2-TRICHLOROETHANE	18.39	97.0	203350	26.44	UG/L	97
31)	2-CHLOROETHYL VINYLETHER	19.39	63.0	120966	26.87	UG/L	98
32)	BROMOFORM	20.96	173.0	136728	27.90	UG/L	98
33)	*1,4-Dichlorobutane	23.49	55.0	113208	10.00	UG/L	94
34)	4-METHYL-2-PENTANONE	21.32	43.0	195144	35.53	UG/L	96
35)	2-HEXANONE	22.86	43.0	131612	33.53	UG/L	92
36)	TETRACHLOROETHENE	23.19	164.0	898623	20.94	UG/L	97
37)	1,1,2,2-TETRACHLOROETHANE	23.22	83.0	296804	25.07	UG/L	94
38)	TOLUENE-D8	24.28	98.0	735111	8.45	UG/L	98
39)	TOLUENE	24.46	92.0	1634480	21.82	UG/L	99
40)	CHLOROBENZENE	25.57	112.0	1273280	22.92	UG/L	98
41)	ETHYLBENZENE	27.60	106.0	1025022	21.42	UG/L	99
42)	STYRENE	31.70	104.0	950713	16.46	UG/L	97
43)	META XYLENE	32.00	106.0	2225765	42.27	UG/L	98

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	U-B/UR P-XYLENE	33.06	106.0	2398143	54.04	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC213::A8 Quant Output File: ^FC213::L2
Name: 25 ppb STD
Misc: INITIAL CAL 11/8/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 09:13

Operator ID: CARSIEN
Quant Time: 901108 12:36
Injected at: 901108 11:55

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

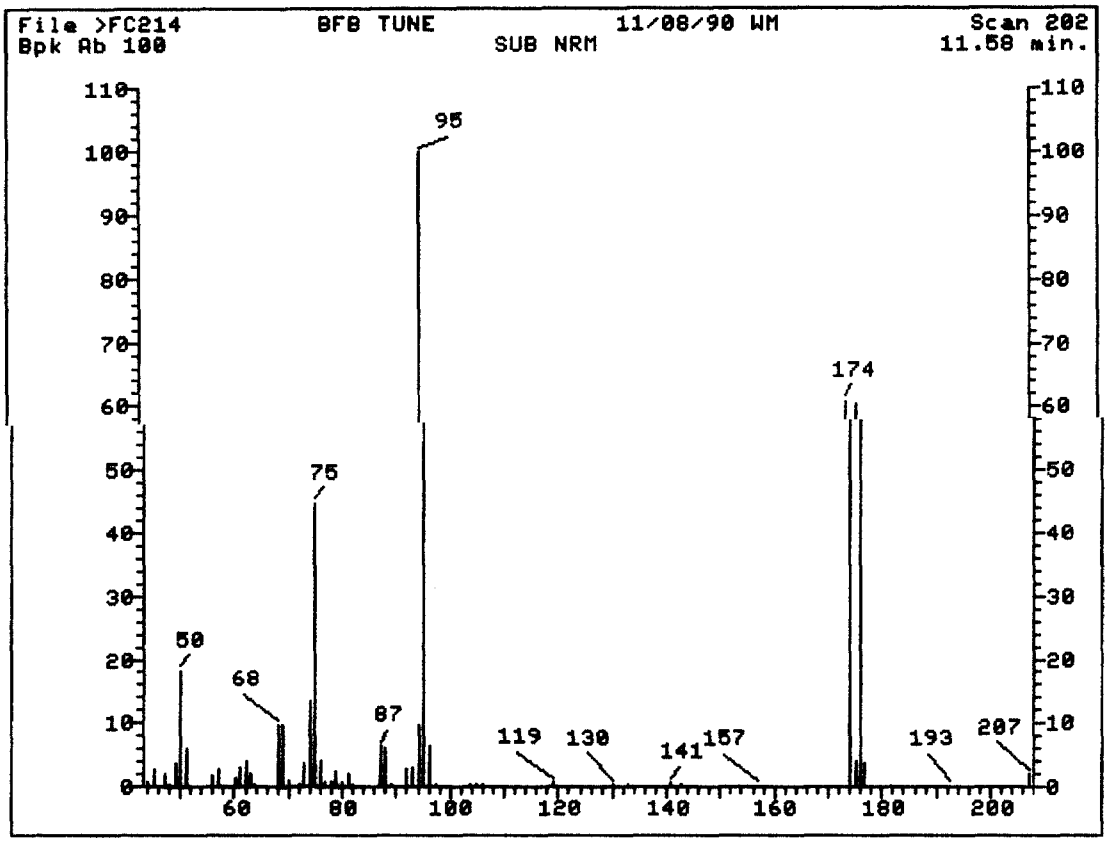
m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	18.31	18.31	Ok
75	30-60% of mass 95	44.79	44.79	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.49	6.49	Ok
173	Less than 2% of mass 174	.18	.30	Ok
174	Greater than 50% of mass 95	60.85	60.85	Ok
175	5-9% of mass 174	4.12	6.78	Ok
176	95-101% of mass 174	60.44	99.33	Ok
177	5-9% of mass 176	3.62	5.99	Ok

Injection Date: 11/08/90
Injection Time: 12:40
Data File: >FC214
Scan: 202

MS data file header from : >FC214

Sample: BFB TUNE Operator: CARSTEN MS 11/08/90 12:40
Misc : 11/08/90 WM
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0



MS data file header from : >FC214

Sample: BFB TUNE Operator: CARSTEN MS 11/08/90 12:40
Misc : 11/08/90 WM
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC214 BFB TUNE 11/08/90 WM
202 SUB NRM

File: >FC214 Scan #: 202 Retn. time: 11.58

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
43.05	.529	63.90	.349	81.90	.505	103.80	.517	130.95	.180
43.95	.842	68.00	9.620	83.75	.168	104.95	.349	133.05	.469
45.05	2.802	69.00	9.812	84.15	.192	106.05	.349	140.95	.637
47.05	2.201	70.00	.914	87.00	6.349	106.80	.180	142.90	.529
47.95	.265	72.00	.457	88.00	6.241	108.95	.060	154.75	.144
49.05	3.632	73.00	3.668	89.00	.349	109.70	.120	157.15	.156
50.05	18.314	74.00	13.576	91.00	.132	110.95	.192	173.00	.180
51.05	5.940	75.00	44.793	92.00	2.874	111.95	.036	173.90	60.847
55.05	.108	76.00	4.052	93.00	3.054	114.95	.048	175.00	4.125
56.05	1.551	77.00	.637	94.00	9.644	118.95	.553	175.90	60.438
57.05	2.706	77.90	.637	95.00	100.000	125.80	.060	176.90	3.620
60.05	1.311	78.90	2.285	96.00	6.494	126.80	.108	192.70	.180
61.00	3.223	79.90	.770	97.15	.337	128.05	.120	207.05	2.008
62.00	4.197	81.00	2.044	99.15	.048	129.95	.241	207.95	.361
63.00	2.177								

MS data file header from : >FC214

Sample: BFB TUNE Operator: CARSTEN MS 11/08/90 12:40
Misc : 11/08/90 WM
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 13:53
Output File: ^FC215::L2 Injected at: 901108 13:13
Data File: >FC215::A8 Dilution Factor: 1.00000
Name: 15 ppb STD
Misc: CON'T CAL 11/8/90

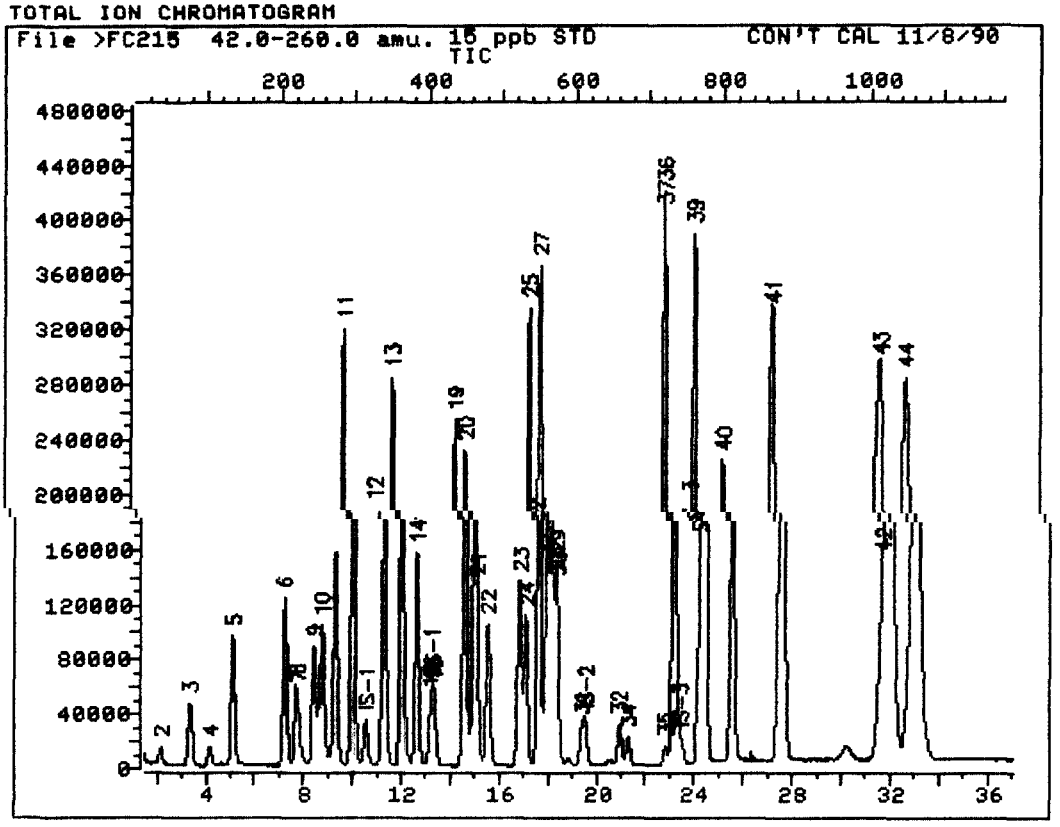
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 12:59

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.59	130.0	58714	10.00	UG/L	93
2)	CHLOROMETHANE	2.18	50.0	70466	16.32	UG/L	100
3)	BROMOMETHANE	3.38	94.0	193945	17.51	UG/L	96
4)	VINYL CHLORIDE	4.19	62.0	98731	15.54	UG/L	96
5)	CHLOROETHANE	5.13	64.0	498133	18.00	UG/L	99
6)	METHYLENE CHLORIDE	7.24	84.0	338909	16.04	UG/L	91
7)	ACROLEIN	7.78	56.0	212584	396.44	UG/L	93
8)	ACETONE	7.75	43.0	287631	387.63	UG/L	94
9)	ACRYLONITRILE	8.45	53.0	527553	381.03	UG/L	97
10)	CARBON DISULFIDE	8.78	76.0	1004998	11.66	UG/L	100
11)	1,1-DICHLOROETHENE	10.04	96.0	753818	14.93	UG/L	87
12)	1,1-DICHLOROETHANE	11.31	63.0	1132833	15.47	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.03	96.0	672013	15.33	UG/L	83
14)	CHLOROFORM	12.64	83.0	707884	15.66	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	71746	10.10	UG/L	88
16)	1,2-DICHLOROETHANE	13.36	62.0	171057	16.37	UG/L	96
17)	*2-Bromo-1-chloropropane	19.55	77.0	217760	10.00	UG/L	99
18)	2-BUTANONE	13.21	72.0	49635	135.99	UG/L	98
19)	1,1,1-TRICHLOROETHANE	14.60	97.0	952938	15.60	UG/L	99
20)	CARBON TETRACHLORIDE	14.99	117.0	789443	15.32	UG/L	98
21)	VINYL ACETATE	15.11	43.0	598865	48.64	UG/L	98
22)	BROMODICHLOROMETHANE	15.56	83.0	418234	16.90	UG/L	97
23)	1,2-DICHLOROPROPANE	16.86	63.0	509302	16.67	UG/L	98
24)	CIS-1,3-DICHLOROPROPENE	17.10	75.0	597601	20.30	UG/L	98
25)	TRICHLOROETHENE	17.64	130.0	673076	15.96	UG/L	99
26)	BENZENE-D6	17.95	84.0	687256	9.73	UG/L	97
27)	BENZENE	18.10	78.0	1931372	16.14	UG/L	97
28)	DIBROMOCHLOROMETHANE	18.31	129.0	197644	17.32	UG/L	97
29)	TRANS-1,3-DICHLOROPROPENE	18.37	75.0	184109	13.79	UG/L	99
30)	1,1,2-TRICHLOROETHANE	18.40	97.0	139593	17.39	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	19.40	63.0	86253	17.68	UG/L	97
32)	BROMOFORM	20.96	173.0	93300	17.53	UG/L	99
33)	*1,4-Dichlorobutane	23.47	55.0	103472	10.00	UG/L	94
34)	4-METHYL-2-PENTANONE	21.33	43.0	133216	26.60	UG/L	95
35)	2-HEXANONE	22.86	43.0	96326	27.56	UG/L	98
36)	TETRACHLOROETHENE	23.20	164.0	600447	15.48	UG/L	97
37)	1,1,2,2-TETRACHLOROETHANE	23.23	83.0	201977	17.15	UG/L	94
38)	TOLUENE-D8	24.25	98.0	700191	9.56	UG/L	98
39)	TOLUENE	24.43	92.0	1124218	15.92	UG/L	99
40)	CHLOROBENZENE	25.58	112.0	871831	16.23	UG/L	98
41)	ETHYLBENZENE	27.60	106.0	704950	15.73	UG/L	99
42)	STYRENE	31.71	104.0	626149	12.71	UG/L	97
43)	META XYLENE	32.01	106.0	1221405	29.39	UG/L	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	33.04	106.0	1366787	41.73	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC215::A8 Quant Output File: ^FC215::L2
Name: 15 ppb STD
Misc: CON'T CAL 11/8/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 12:59

Operator ID: CARSTEN
Quant Time: 901108 13:53
Injected at: 901108 13:13

Calibration Check Report

Title: VOLATILES CRL624NS 05\23\90
Calibrated: 901108 12:56

Check Standard Data File: >FC215
Injection Time: 901108 13:13

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
CHLOROMETHANE	.73540	.60008	18.40	Average	(Conc=20.00)
BROMOMETHANE	1.88657	1.65161	12.45	Average	(Conc=20.00)
VINYL CHLORIDE	1.08233	.84078	22.32	Average	(Conc=20.00)
CHLOROETHANE	4.71235	4.24203	9.98	Average	(Conc=20.00)
METHYLENE CHLORIDE	3.59962	3.84813	6.90	Average	(Conc=15.00)
ACROLEIN	.09133	.09655	5.72	Average	(Conc=375.00)
ACETONE	.12638	.13064	3.37	Average	(Conc=375.00)
ACRYLONITRILE	.23581	.23960	1.61	Average	(Conc=375.00)
CARBON DISULFIDE	14.6773	13.6935	6.70	Average	(Conc=12.50)
1,1-DICHLOROETHENE	8.59913	8.55921	.46	Average	(Conc=15.00)
1,1-DICHLOROETHANE	12.4715	12.8627	3.14	Average	(Conc=15.00)
1,2-DICHLOROETHENE (TOTAL)	7.46613	7.63035	2.20	Average	(Conc=15.00)
CHLOROFORM	7.69757	8.03765	4.42	Average	(Conc=15.00)
1,2-DICHLOROETHANE-D4	1.21014	1.22196	.98	Average	(Conc=10.00)
1,2-DICHLOROETHANE	1.78009	1.94226	9.11	Average	(Conc=15.00)
2-BUTANONE	.01676	.01823	8.79	Average	(Conc=125.00)
1,1,1-TRICHLOROETHANE	2.80545	2.91740	3.99	Average	(Conc=15.00)
CARBON TETRACHLORIDE	2.36597	2.41686	2.15	Average	(Conc=15.00)
VINYL ACETATE	.56543	.73336	29.70	Average	(Conc=37.50)
BROMODICHLOROMETHANE	1.13616	1.28041	12.70	Average	(Conc=15.00)
1,2-DICHLOROPROPANE	1.40332	1.55921	11.11	Average	(Conc=15.00)
CIS-1,3-DICHLOROPROPENE	1.35207	1.52462	12.76	Average	(Conc=18.00)
TRICHLOROETHENE	1.93684	2.06061	6.39	Average	(Conc=15.00)
BENZENE-D6	3.24247	3.15602	2.67	Average	(Conc=10.00)
BENZENE	5.49415	5.91285	7.62	Average	(Conc=15.00)
DIBROMOCHLOROMETHANE	.52402	.60508	15.47	Average	(Conc=15.00)
TRANS-1,3-DICHLOROPROPENE	.61325	.70456	14.89	Average	(Conc=12.00)
1,1,2-TRICHLOROETHANE	.36861	.42736	15.94	Average	(Conc=15.00)
2-CHLOROETHYL VINYLETHER	.22402	.26406	17.88	Average	(Conc=15.00)
BROMOFORM	.24437	.28564	16.89	Average	(Conc=15.00)
4-METHYL-2-PENTANONE	.48407	.51498	6.39	Average	(Conc=25.00)
2-HEXANONE	.33783	.37238	10.22	Average	(Conc=25.00)
TETRACHLOROETHENE	3.74904	3.86866	3.19	Average	(Conc=15.00)
1,1,2,2-TETRACHLOROETHANE	1.13820	1.30133	14.33	Average	(Conc=15.00)
TOLUENE-D8	7.07977	6.76696	4.42	Average	(Conc=10.00)
TOLUENE	6.82608	7.24330	6.11	Average	(Conc=15.00)
CHLOROBENZENE	5.19052	5.61718	8.22	Average	(Conc=15.00)
ETHYLBENZENE	4.33111	4.54197	4.87	Average	(Conc=15.00)
STYRENE	4.76112	4.84111	1.68	Average	(Conc=12.50)
META XYLENE	4.01621	3.93474	2.03	Average	(Conc=30.00)

RF - Response Factor from daily standard file at 15.00 UG/L

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

%Diff - % Difference from original average or curve

Calibration Check Report

Title: VOLATILES CRL624NS 05\23\90
Calibrated: 901108 12:56

Check Standard Data File: >FC215
Injection Time: 901108 13:13

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
O-&/OR P-XYLENE	3.16547	3.51310	10.98	Average	(Conc=37.60)

RF - Response Factor from daily standard file at 15.00 UG/L

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

%Diff - % Difference from original average or curve

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

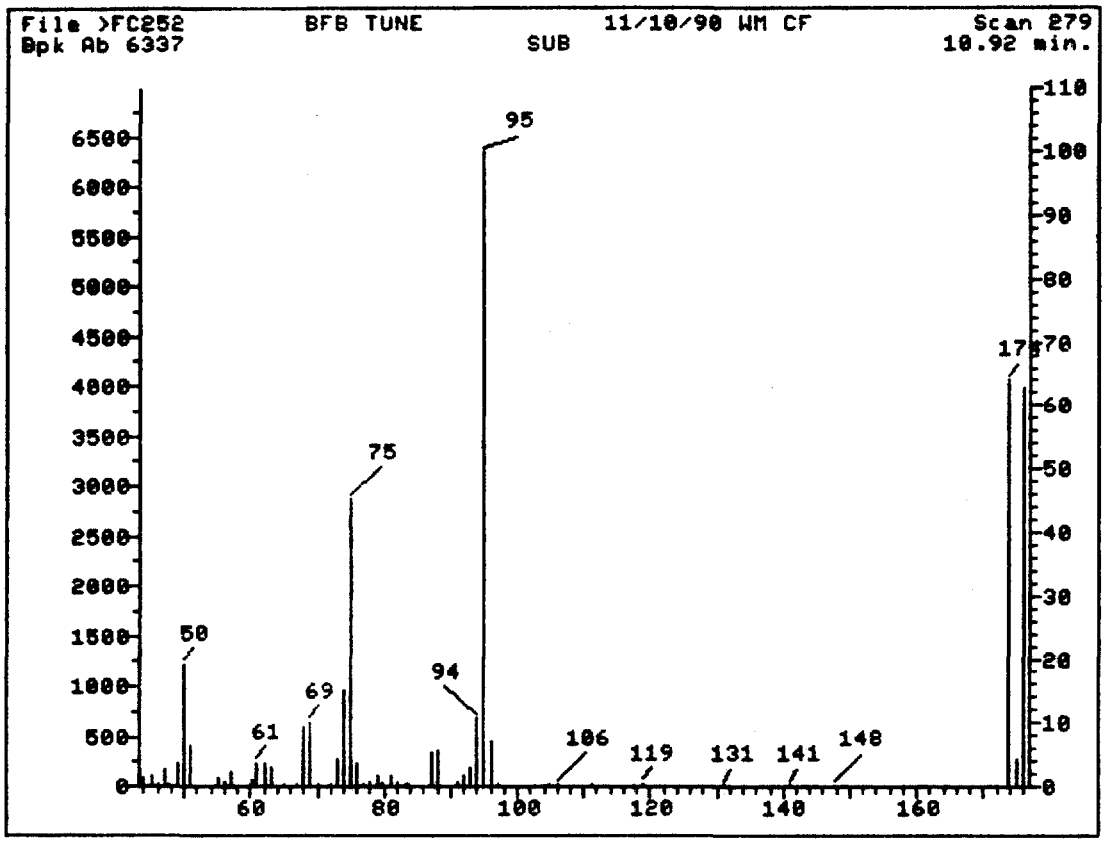
m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	19.30	19.30	Ok
75	30-60% of mass 95	45.26	45.26	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.07	7.07	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	64.02	64.02	Ok
175	5-9% of mass 174	4.54	7.10	Ok
176	95-101% of mass 174	62.77	98.05	Ok
177	5-9% of mass 176	3.99	6.36	Ok

Injection Date: 11/10/90
Injection Time: 08:56
Data File: >FC252
Scan: 279

MS data file header from : >FC252

Sample: BFB TUNE Operator: CARSTEN MS 11/10/90 8:56
Misc : 11/10/90 WM CF
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0



MS data file header from : >FC252

Sample: BFB TUNE Operator: CARSTEN MS 11/10/90 8:56
Misc : 11/10/90 WM CF
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC252 BFB TUNE 11/10/90 WM CF
279 SUB NRM

File: >FC252 Scan #: 279 Retn. time: 10.92

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
43.05	.426	61.00	3.756	75.00	45.258	88.00	5.807	117.95	.205
43.95	1.262	62.00	3.677	76.00	3.661	91.00	.757	118.95	.395
45.05	1.846	63.00	2.998	77.00	.521	92.00	1.846	122.70	.032
46.05	.379	64.00	.063	77.90	.836	93.00	3.077	128.95	.063
47.05	2.651	65.00	.489	79.00	1.720	94.00	10.699	130.95	.237
47.80	.426	65.90	.142	79.90	.584	95.00	100.000	140.95	.347
49.05	3.882	66.90	.489	81.00	1.641	96.00	7.070	147.90	.174
50.05	19.299	68.00	9.563	82.00	.773	97.15	.331	148.90	.110
51.05	6.391	69.00	10.241	83.15	.237	102.95	.079	173.90	64.021
55.05	1.262	70.00	.426	83.40	.252	104.95	.284	175.00	4.545
56.05	.789	72.15	.442	83.75	.237	105.95	.300	175.90	62.774
57.05	2.367	73.00	4.513	87.00	5.507	111.05	.221	177.00	3.992
60.05	1.199	74.00	15.102						

MS data file header from : >FC252

Sample: BFB TUNE Operator: CARSTEN MS 11/10/90 8:56
Misc : 11/10/90 WM CF
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: BFB#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901110 10:13
Output File: ^FC253::L2 Injected at: 901110 09:32
Data File: >FC253::A8 Dilution Factor: 1.00000
Name: 15 ppb STD
Misc: 11/10/90 WM

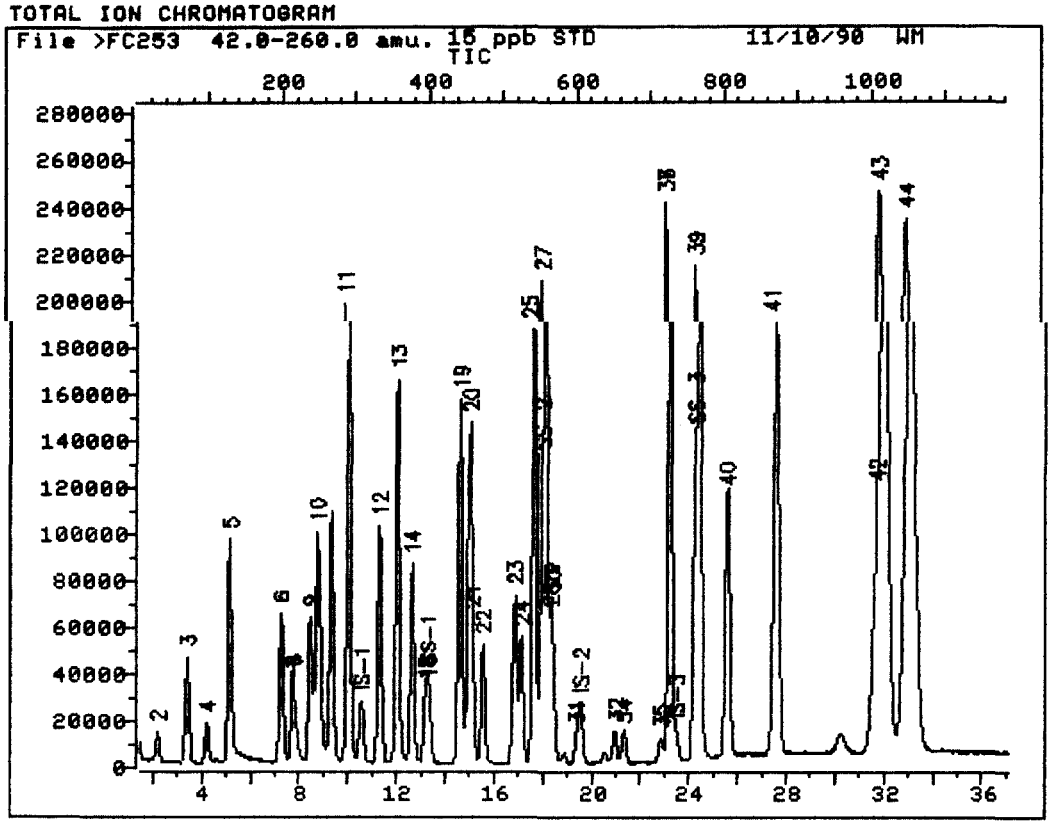
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901109 16:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.58	130.0	45955	10.00	UG/L	97
2)	CHLOROMETHANE	2.20	50.0	71419	151.16	UG/L	100
3)	BROMOMETHANE	3.43	94.0	186608	46.73	UG/L	95
4)	VINYL CHLORIDE	4.25	62.0	118105	82.43	UG/L	95
5)	CHLOROETHANE	5.18	64.0	499247	44.16	UG/L	99
6)	METHYLENE CHLORIDE	7.26	84.0	175359	11.07	UG/L	90
7)	ACROLEIN	7.80	56.0	146295	433.38	UG/L	96
8)	ACETONE	7.74	43.0	207155	420.67	UG/L	92
9)	ACRYLONITRILE	8.47	53.0	389130	439.89	UG/L	98
10)	CARBON DISULFIDE	8.77	76.0	996131	14.34	UG/L	100
11)	1,1-DICHLOROETHENE	10.06	96.0	460951	10.71	UG/L	85
12)	1,1-DICHLOROETHANE	11.33	63.0	632856	10.99	UG/L	97
13)	1,2-DICHLOROETHENE (TOTAL)	12.05	96.0	385413	10.86	UG/L	82
14)	CHLOROFORM	12.66	83.0	380813	10.88	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.29	65.0	53252	9.58	UG/L	90
16)	1,2-DICHLOROETHANE	13.35	62.0	83665	10.96	UG/L	95
17)	*2-Bromo-1-chloropropane	19.56	77.0	178957	10.00	UG/L	98
18)	2-BUTANONE	13.20	72.0	34435	142.25	UG/L	98
19)	1,1,1-TRICHLOROETHANE	14.62	97.0	585902	11.08	UG/L	98
20)	CARBON TETRACHLORIDE	15.01	117.0	502314	10.96	UG/L	99
21)	VINYL ACETATE	15.13	43.0	269991	48.70	UG/L	99
22)	BROMODICHLOROMETHANE	15.55	83.0	210675	11.18	UG/L	95
23)	1,2-DICHLOROPROPANE	16.85	63.0	263569	11.40	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.12	75.0	297599	13.53	UG/L	99
25)	TRICHLOROETHENE	17.63	130.0	380083	10.98	UG/L	98
26)	BENZENE-D6	17.96	84.0	608177	9.81	UG/L	97
27)	BENZENE	18.12	78.0	1072245	11.34	UG/L	96
28)	DIBROMOCHLOROMETHANE	18.30	129.0	92676	11.22	UG/L	94
29)	TRANS-1,3-DICHLOROPROPENE	18.36	75.0	93216M	8.85	UG/L	48
30)	1,1,2-TRICHLOROETHANE	18.39	97.0	65248	11.01	UG/L	98
31)	2-CHLOROETHYL VINYLETHER	19.38	63.0	38484	12.18	UG/L	97
32)	BROMOFORM	20.98	173.0	41219	11.12	UG/L	99
33)	*1,4-Dichlorobutane	23.48	55.0	78333	10.00	UG/L	96
34)	4-METHYL-2-PENTANONE	21.34	43.0	94731	27.92	UG/L	96
35)	2-HEXANONE	22.85	43.0	64515	26.19	UG/L	96
36)	TETRACHLOROETHENE	23.21	164.0	346943	10.63	UG/L	97
37)	1,1,2,2-TETRACHLOROETHANE	23.21	83.0	91124	10.92	UG/L	94
38)	TOLUENE-D8	24.27	98.0	622799	9.90	UG/L	96
39)	TOLUENE	24.45	92.0	609643	11.05	UG/L	98
40)	CHLOROBENZENE	25.57	112.0	449251	11.14	UG/L	98
41)	ETHYLBENZENE	27.59	106.0	391692	11.15	UG/L	98
42)	STYRENE	31.69	104.0	524555	14.91	UG/L	98
43)	META XYLENE	31.96	106.0	990247	33.01	UG/L	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	33.05	106.0	1105845	41.81	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC253::A8 Quant Output File: ^FC253::L2
Name: 15 ppb STD
Misc: 11/10/90 WM

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901109 16:28

Operator ID: CARSTEN
Quant Time: 901110 10:13
Injected at: 901110 09:32

Calibration Check Report

Title: VOLATILES CRL624NS 05\23\90
Calibrated: 901108 12:56

Check Standard Data File: >FC253
Injection Time: 901110 09:32

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
CHLOROMETHANE	.73540	.77705	5.66	Average	(Conc=20.00)
BROMOMETHANE	1.88657	2.03033	7.62	Average	(Conc=20.00)
VINYL CHLORIDE	1.08233	1.28501	18.73	Average	(Conc=20.00)
CHLOROETHANE	4.71235	5.43191	15.27	Average	(Conc=20.00)
METHYLENE CHLORIDE	3.59962	2.54392	29.33	Average	(Conc=15.00)
ACROLEIN	.09133	.08489	7.05	Average	(Conc=375.00)
ACETONE	.12638	.12021	4.88	Average	(Conc=375.00)
ACRYLONITRILE	.23581	.22580	4.24	Average	(Conc=375.00)
CARBON DISULFIDE	14.6773	17.3410	18.15	Average	(Conc=12.50)
1,1-DICHLOROETHENE	8.59913	6.68699	22.24	Average	(Conc=15.00)
1,1-DICHLOROETHANE	12.4715	9.18081	26.39	Average	(Conc=15.00)
1,2-DICHLOROETHENE (TOTAL)	7.46613	5.59116	25.11	Average	(Conc=15.00)
CHLOROFORM	7.69757	5.52443	28.23	Average	(Conc=15.00)
1,2-DICHLOROETHANE-D4	1.21014	1.15879	4.24	Average	(Conc=10.00)
1,2-DICHLOROETHANE	1.78009	1.21372	31.82	Average	(Conc=15.00)
2-BUTANONE	.01676	.01539	8.16	Average	(Conc=125.00)
1,1,1-TRICHLOROETHANE	2.80545	2.18265	22.20	Average	(Conc=15.00)
CARBON TETRACHLORIDE	2.36597	1.87126	20.91	Average	(Conc=15.00)
VINYL ACETATE	.56543	.40232	28.85	Average	(Conc=37.50)
BROMODICHLOROMETHANE	1.13616	.78483	30.92	Average	(Conc=15.00)
1,2-DICHLOROPROPANE	1.40332	.98187	30.03	Average	(Conc=15.00)
CIS-1,3-DICHLOROPROPENE	1.35207	.92387	31.67	Average	(Conc=18.00)
TRICHLOROETHENE	1.93684	1.41592	26.90	Average	(Conc=15.00)
BENZENE-D6	3.24247	3.39845	4.81	Average	(Conc=10.00)
BENZENE	5.49415	3.99442	27.30	Average	(Conc=15.00)
DIBROMOCHLOROMETHANE	.52402	.34524	34.12	Average	(Conc=15.00)
TRANS-1,3-DICHLOROPROPENE	.61325	.43407	29.22	Average	(Conc=12.00)
1,1,2-TRICHLOROETHANE	.36861	.24307	34.06	Average	(Conc=15.00)
2-CHLOROETHYL VINYLETHER	.22402	.14336	36.00	Average	(Conc=15.00)
BROMOFORM	.24437	.15355	37.16	Average	(Conc=15.00)
4-METHYL-2-PENTANONE	.48407	.48373	.07	Average	(Conc=25.00)
2-HEXANONE	.33783	.32944	2.48	Average	(Conc=25.00)
TETRACHLOROETHENE	3.74904	2.95272	21.24	Average	(Conc=15.00)
1,1,2,2-TETRACHLOROETHANE	1.13820	.77553	31.86	Average	(Conc=15.00)
TOLUENE-D8	7.07977	7.95066	12.30	Average	(Conc=10.00)
TOLUENE	6.82608	5.18847	23.99	Average	(Conc=15.00)
CHLOROBENZENE	5.19052	3.82343	26.34	Average	(Conc=15.00)
ETHYLBENZENE	4.33111	3.33356	23.03	Average	(Conc=15.00)
STYRENE	4.76112	5.35718	12.52	Average	(Conc=12.50)
META XYLENE	4.01621	4.21383	4.92	Average	(Conc=30.00)

RF - Response Factor from daily standard file at 15.00 UG/L

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

%Diff - % Difference from original average or curve

Calibration Check Report

Title: VOLATILES CRL624NS 05\23\90
Calibrated: 901108 12:56

Check Standard Data File: >FC253
Injection Time: 901110 09:32

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
D-&/OR P-XYLENE	3.16547	3.75458	18.61	Average	(Conc=37.60)

RF - Response Factor from daily standard file at 15.00 UG/L

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

%Diff - % Difference from original average or curve

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 14:41
Output File: ^FC216::L2 Injected at: 901108 14:00
Data File: >FC216::A8 Dilution Factor: 1.00000
Name: METHOD BLK
Misc: 11/8/90

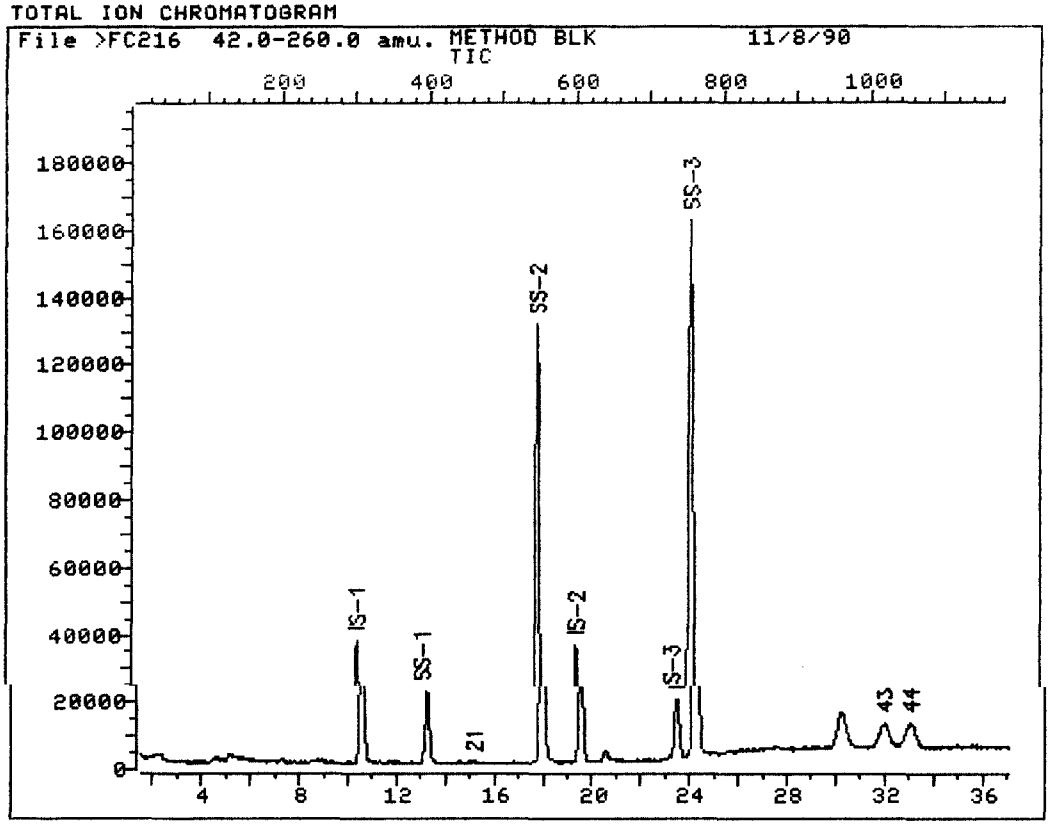
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.57	130.0	65499	10.00	UG/L	95
15)	1,2-DICHLOROETHANE-D4	13.25	65.0	68803	8.60	UG/L	86
17)	*2-Bromo-1-chloropropane	19.55	77.0	251290	10.00	UG/L	97
21)	VINYL ACETATE	15.15	43.0	3674	~~.20~~	UG/L	90
26)	BENZENE-D6	17.95	84.0	784352	9.89	UG/L	98
33)	*1,4-Dichlorobutane	23.47	55.0	118837	10.00	UG/L	94
38)	TOLUENE-D8	24.25	98.0	798830	9.93	UG/L	96
43)	META XYLENE	32.01	106.0	31854	.68	UG/L	98
44)	O-&/OR P-XYLENE	33.06	106.0	19318	~~.46~~	UG/L	99

* Compound is ISTD

11/15/90
WM

TOTAL ION CHROMATOGRAM



Data File: >FC216::A8 Quant Output File: ^FC216::L2
Name: METHOD BLK
Misc: 11/8/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901108 14:41
Injected at: 901108 14:00

MS data file header from : >FC216

Sample: METHOD BLK Operator: CARSTEN MS 11/08/90 14:00
Misc : 11/8/90
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: VOA#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC216 METHOD BLK 11/8/90
42.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 20860. Max Peaks: 3 Bunching: 1
Dnslope: 0.00 Results File IFC216 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	~~28.57~~ NOTIC	625	633	644	2749	80837	41859	14.88	10.865
2	~~30.23~~ BFB	939	953	968	10761	517250	281352	100.00	73.031
3	~~33.15~~ NOTIC	1048	1050	1055	6446	128951	62041	22.05	16.104

11/15/90 um

Sum of corrected areas: 385252.

Summary of Unknowns PBM Library Search and Quantitation

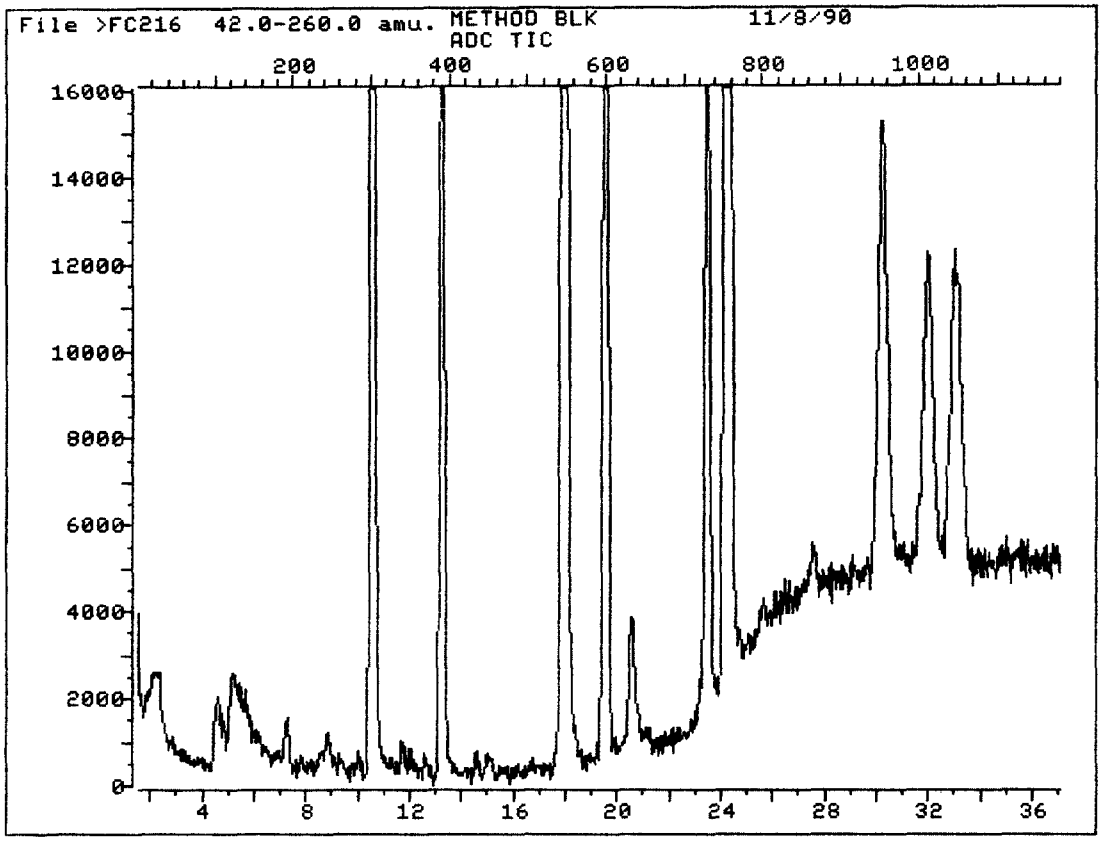
Standard	Concentration	Area	Retention Time	Unknown Window
1	10.0	428951.	10.57	1.53 - 15.06
2	10.0	419064.	19.55	15.06 - 21.51
3	10.0	208602.	23.47	21.51 - 37.08

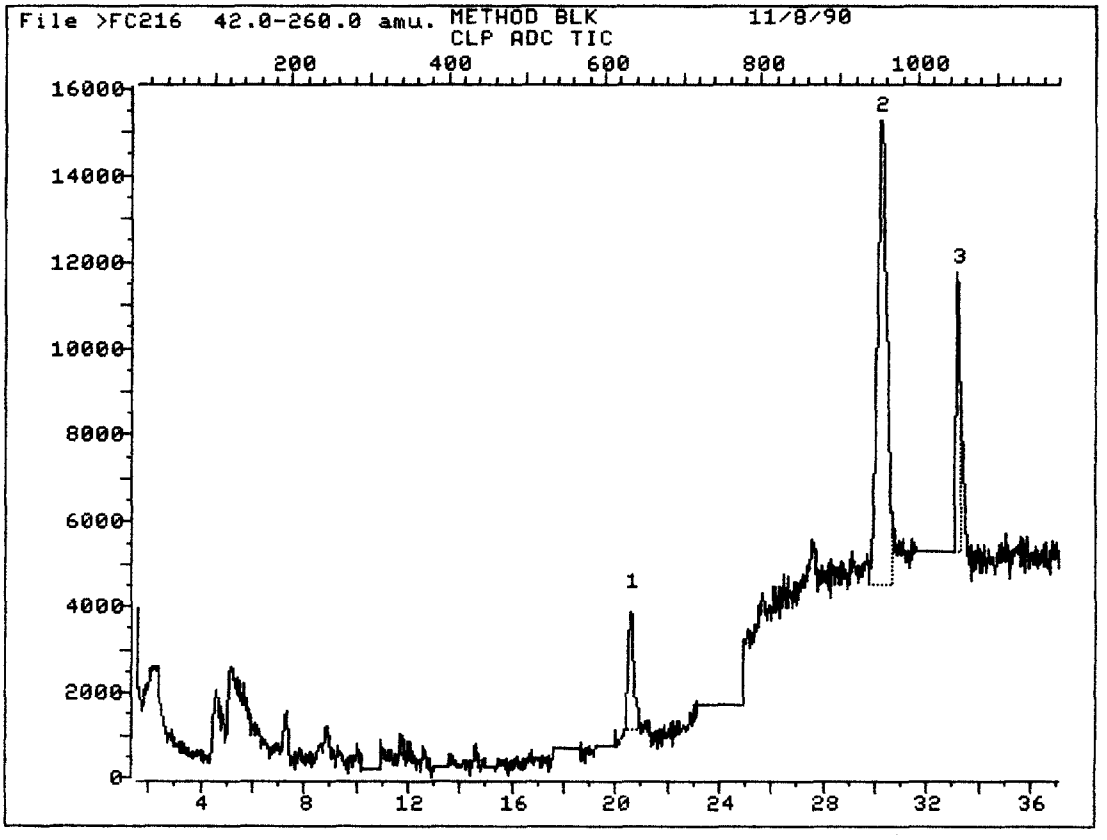
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 20.00 Amount Used (AU) = 20.00

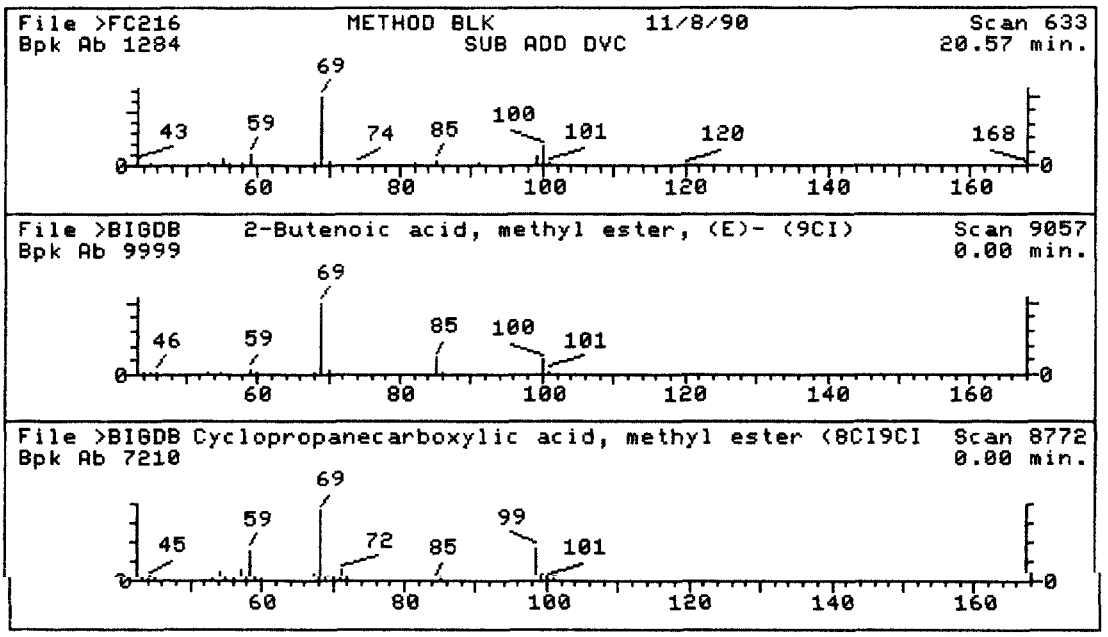
Correction Factor = 1.00 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

1:36 PM THU., 15 NOV., 1990


File >FC216 42.0-260.0 amu. METHOD BLK
ADC TIC
11/8/90
200
400
600
800
1000
16000
14000
12000
10000
8000
6000
4000
2000
0
4
8
12
16
20
24
28
32
36


File >FC216 42.0-260.0 amu. METHOD BLK
CLP ADC TIC
11/8/90
200
400
600
800
1000
16000
14000
12000
10000
8000
6000
4000
2000
0
1
2
3
4
8
12
16
20
24
28
32
36



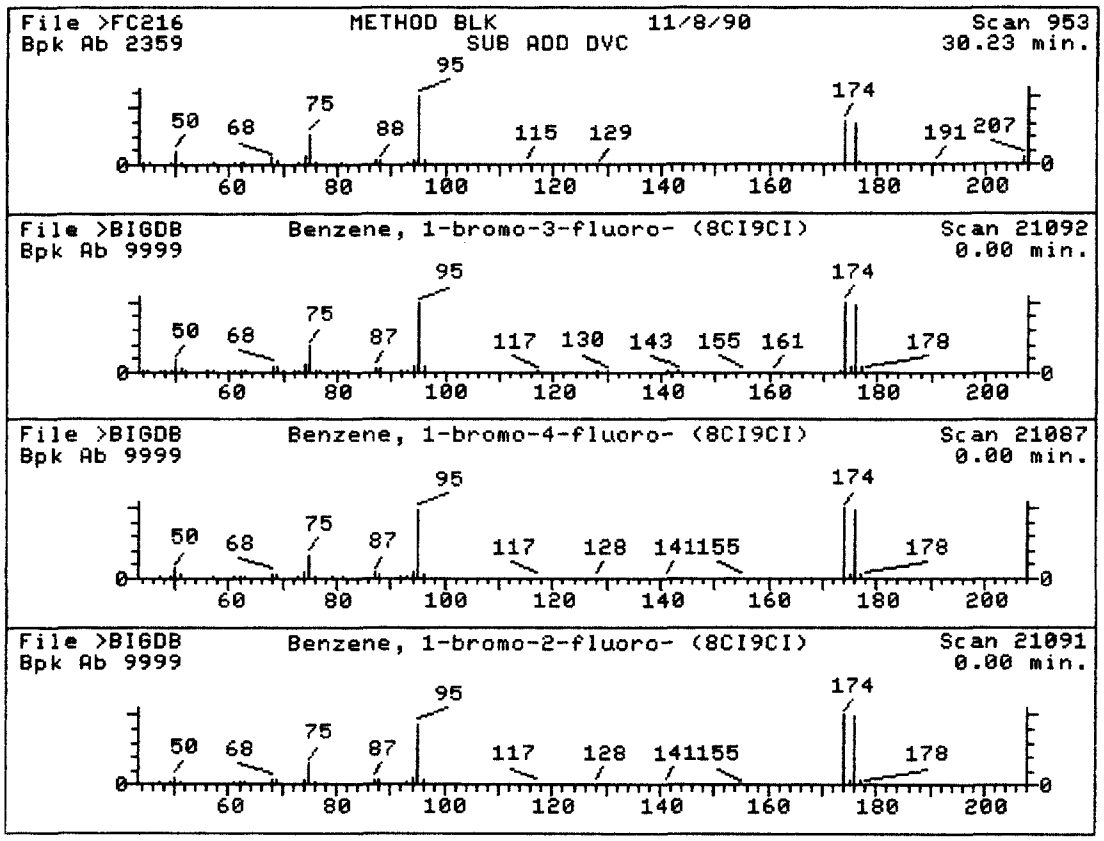
NOTIC
11/15/90
um

. Unknown #,1
Area = 41859.00 Tentative Concentration is 1.000

1. 2-Butenoic acid, methyl ester, (E)- (9CI) 100 C5H8O2
2. Cyclopropanecarboxylic acid, methyl ester (8CI9CI) 100 C5H8O2

Sample file: >FC216 Spectrum #: 633
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	52*	623438	9057	"BIGDB	30	58	2	0	100	17	20	15
2.	11*	2868373	8772	"BIGDB	22	63	1	0	43	64	2	14



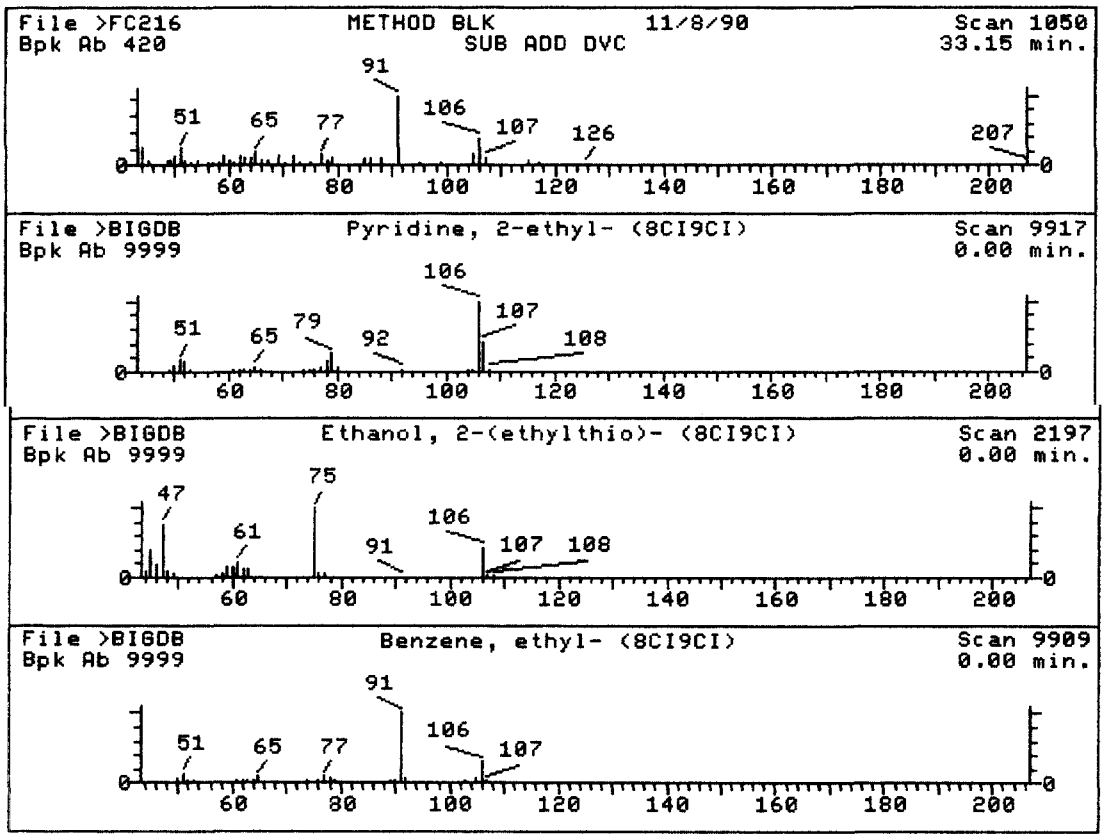
BFB
11/15/90
um

. Unknown #,2
Area = 281352.0 Tentative Concentration is 13.00

1. Benzene, 1-bromo-3-fluoro- (8CI9CI) 174 C6H4BrF
2. Benzene, 1-bromo-4-fluoro- (8CI9CI) 174 C6H4BrF
3. Benzene, 1-bromo-2-fluoro- (8CI9CI) 174 C6H4BrF

Sample file: >FC216 Spectrum #: 953
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	83*	1073069	21092	"BIGDB	89	24	2	1	81	8	54	59
2.	83*	460004	21087	"BIGDB	80	30	2	1	81	8	54	53
3.	66*	1072851	21091	"BIGDB	77	30	2	1	81	16	31	49



~~NO TIC~~ ~~found in TCL list~~ NO TIC (Found in TCL list) 11/15/90 um

. Unknown #,3
Area = 62041.00 Tentative Concentration is 3.00

1.	Pyridine, 2-ethyl- (8CI9CI)	107 C7H9N
2.	Ethanol, 2-(ethylthio)- (8CI9CI)	106 C4H10OS
3.	Benzene, ethyl- (8CI9CI)	106 C8H10
4.	1,3-Cyclopentadiene, 5-(1-methylethylidene)- (9CI)	106 C8H10
5.	Benzene, 1,4-dimethyl- (9CI)	106 C8H10
6.	Phenethyl alcohol, p-methyl-.alpha.-phenyl- (8CI)	212 C15H16O
7.	Benzene, 1,2-dimethyl- (9CI)	106 C8H10

Sample file: >FC216 Spectrum #: 1050
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	30*	100710	9917	"BIGDB	32	47	0	0	28	46	10	27
2.	26*	110770	2197	"BIGDB	24	107	3	0	91	36	10	12
3.	20*	100414	9909	"BIGDB	29	55	2	0	100	53	5	14
4.	20*	2175919	9920	"BIGDB	28	60	2	0	47	53	5	14
5.	20*	106423	9918	"BIGDB	22	56	1	0	47	53	5	14
6.	20	20498684	9944	"BIGDB	27	69	0	0	31	51	5	14
7.	18*	95476	9908	"BIGDB	45	47	2	0	88	58	4	24

QUANT REPORT

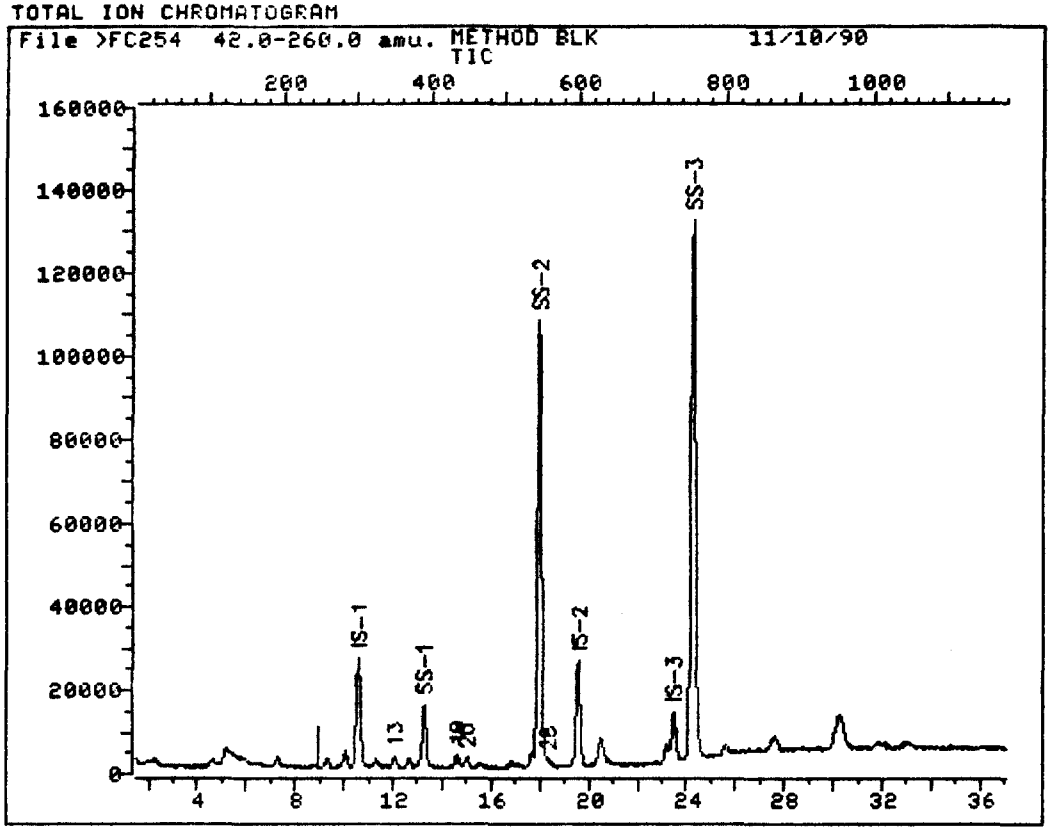
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901110 11:18
Output File: ^FC254::L2 Injected at: 901110 10:37
Data File: >FC254::A8 Dilution Factor: 1.00000
Name: METHOD BLK
Misc: 11/10/90

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.59	130.0	46079	10.00	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	49521	9.27	UG/L	81
17)	*2-Bromo-1-chloropropane	19.57	77.0	183454	10.00	UG/L	94
26)	BENZENE-D6	17.97	84.0	630320	10.11	UG/L	99
33)	*1,4-Dichlorobutane	23.49	55.0	81637	10.00	UG/L	93
38)	TOLUENE-D8	24.27	98.0	636116	9.80	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC254::A8 Quant Output File: *FC254::L2
Name: METHOD BLK
Misc: 11/10/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

Operator ID: CARSTEN
Quant Time: 901110 11:18
Injected at: 901110 10:37

MS data file header from : >FC254

Sample: METHOD BLK Operator: CARSTEN MS 11/10/90 10:37
Misc : 11/10/90
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: VOA#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC254 METHOD BLK 11/10/90
42.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 14931. Max Peaks: 10 Bunching: 1
Dnslope: 0.00 Results File IFC254 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	~~5.19~~ CO_2	117	123	127	3659	67870	50212	29.95	9.311
2	~~7.27~~ NOTIC	184	192	201	2006	36063	24781	14.78	4.595
3	~~9.35~~ NOTIC	252	261	265	2127	26541	24731	14.75	4.586
4	~~10.07~~ NOTIC	277	285	291	3761	43990	39459	23.54	7.317
5	1~~2.06~~ NOTIC	345	351	361	2609	34837	30324	18.09	5.623
6	~~14.59~~ NOTIC	427	435	442	2838	37281	34270	20.44	6.355
7	~~15.02~~ NOTIC	442	449	456	2516	31552	26729	15.94	4.957
8	~~20.47~~ NOTIC	623	630	640	6126	131668	96578	57.61	17.909
9	~~27.59~~ NOTIC	860	866	874	3289	162322	44538	26.57	8.259
10	~~30.24~~ BFB	944	954	968	7622	403299	167648	100.00	31.088

wm 11/15/90

Sum of corrected areas: 539270.

Summary of Unknowns PBM Library Search and Quantitation

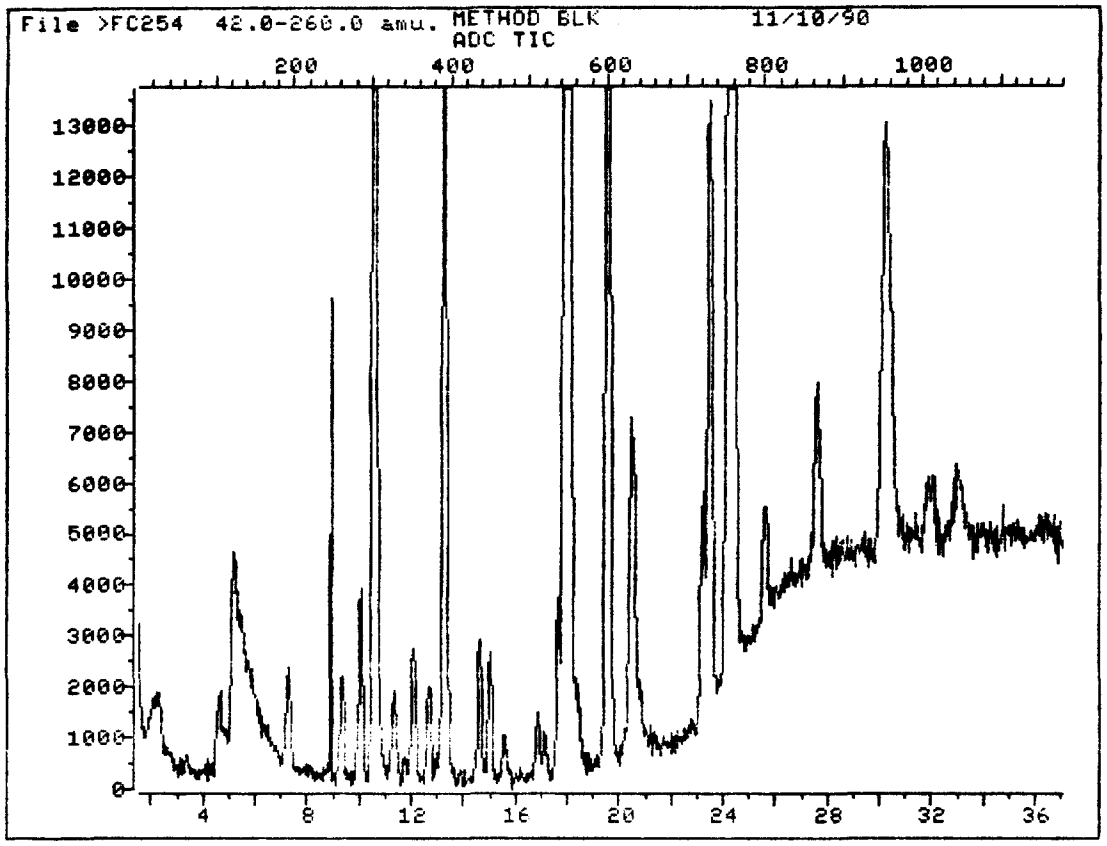
Standard	Concentration	Area	Retention Time	Unknown Window
1	10.0	303709.	10.59	1.52 - 15.08
2	10.0	306619.	19.57	15.08 - 21.53
3	10.0	149314.	23.49	21.53 - 37.06

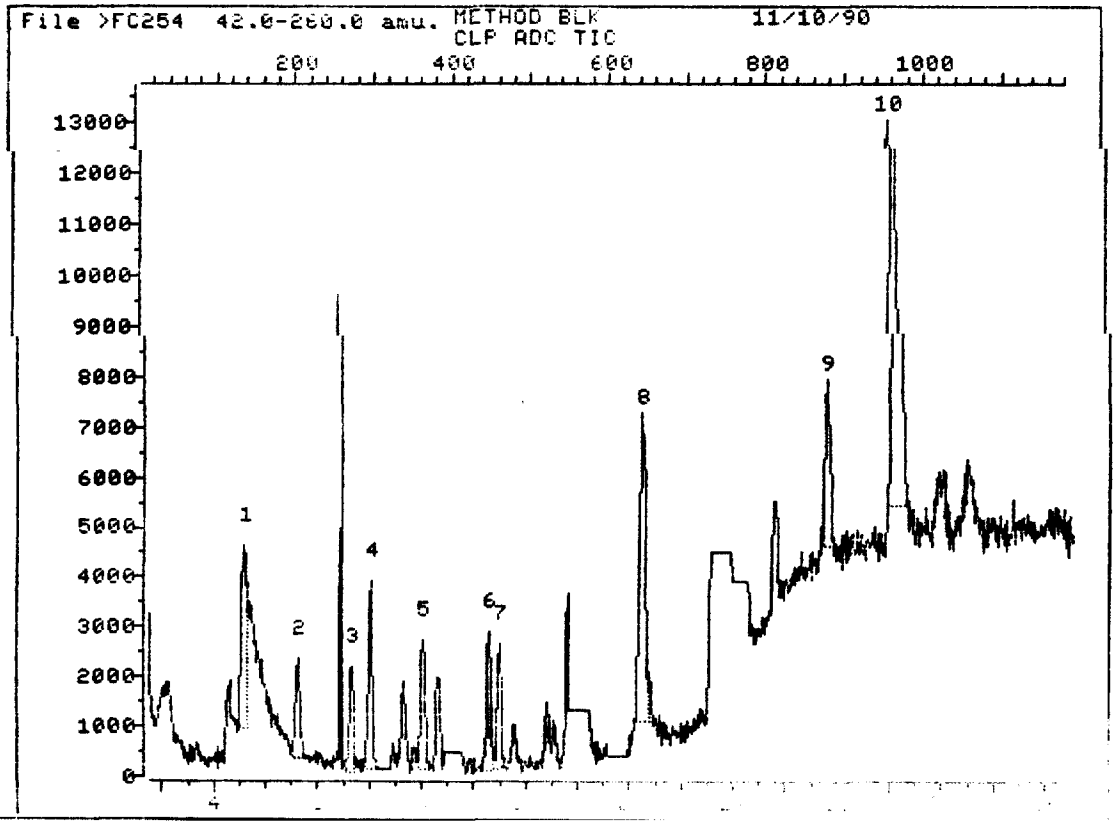
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 20.00 Amount Used (AU) = 20.00

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

1:52 PM THU., 15 NOV., 1990


File >FC254 42.0-260.0 amu. METHOD BLK 11/10/90
ADC TIC
200
400
600
800
1000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
4
8
12
16
20
24
28
32
36


File >FC254 42.0-260.0 amu. METHOD BLK 11/10/90
CLP ADC TIC
200
400
600
800
1000
13000
12000
11000
10000
9000
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7000
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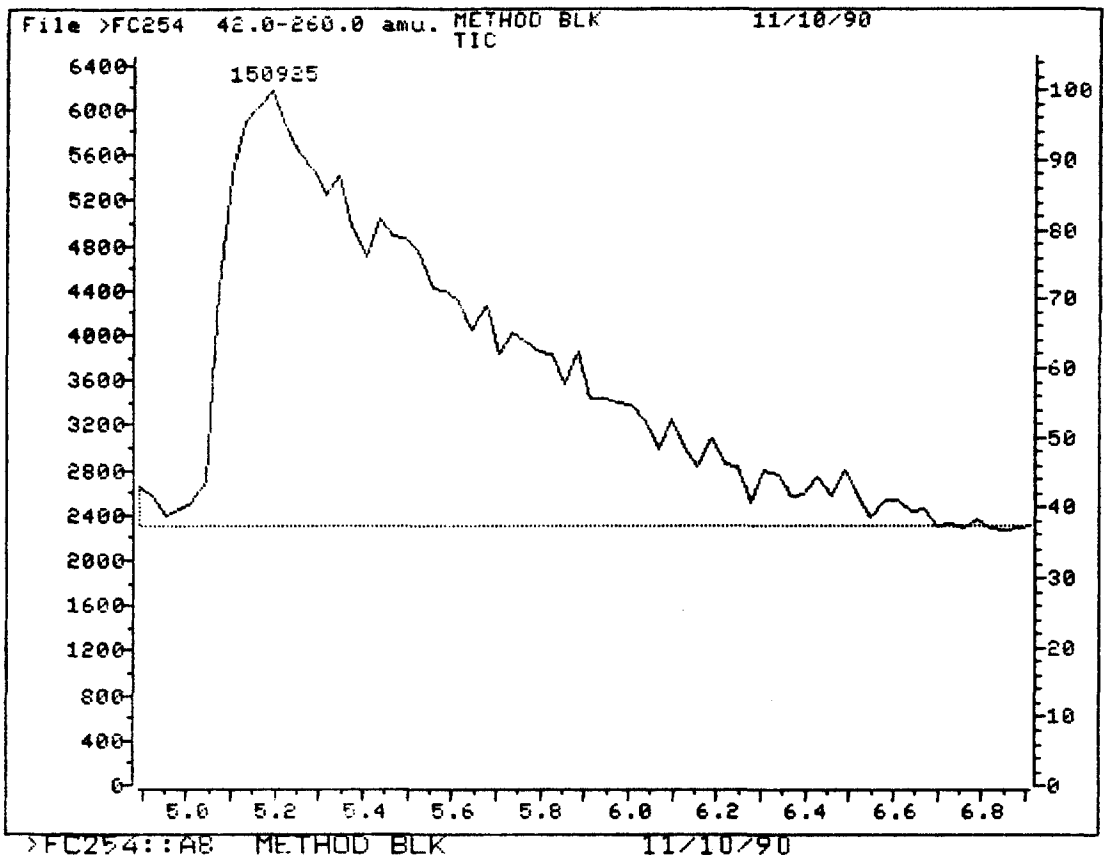
5000
4000
3000
2000
1000
0
1
2
3
4
5
6
7
8
9
10



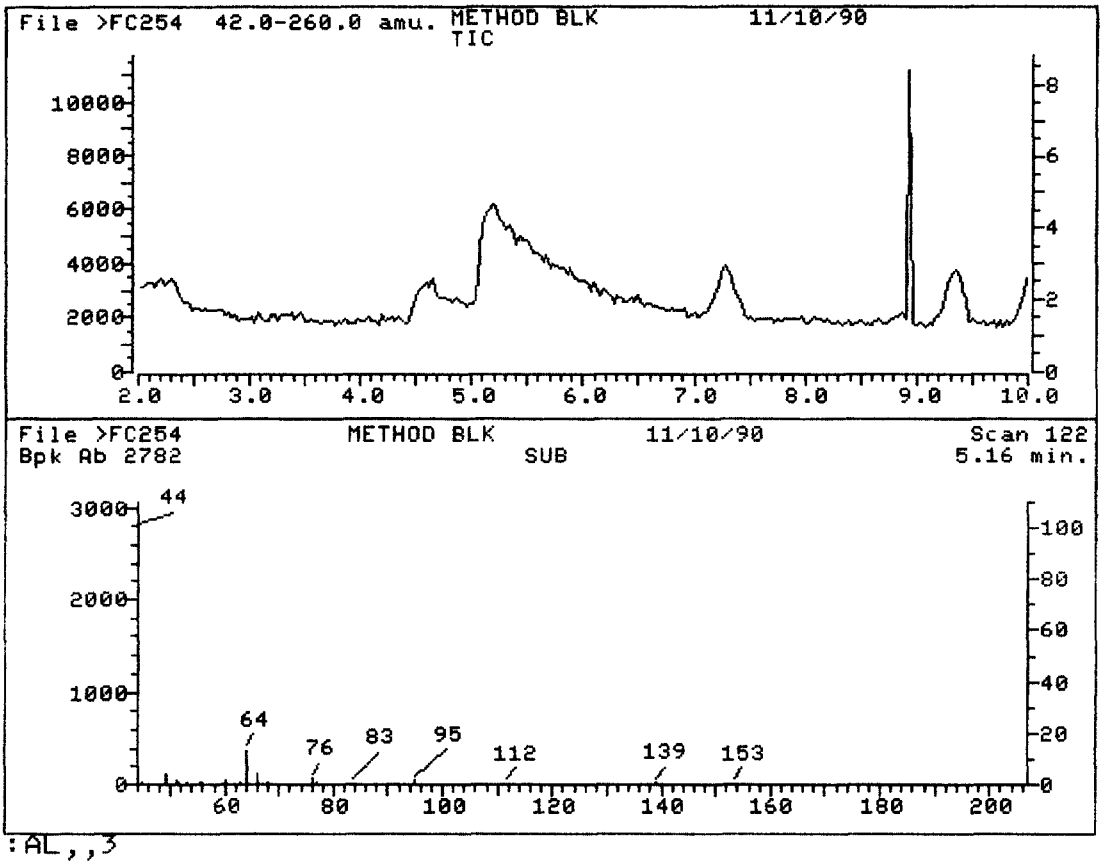
>FC254::AB METHOD BLK 11/10/90

X-low: 0.00 Y-left: 2305. Y-right: 2305.

X-high: 0.00 Results File VDIR92 Sorted by Time/Area MI

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.19	113	123	180	3858	430220	150925	100.00	100.000

CDL
11/15/90

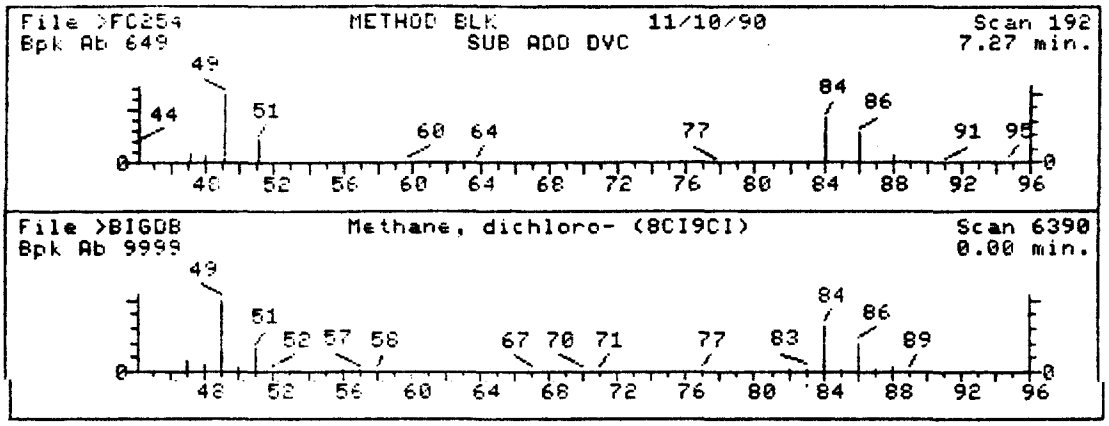


:AL,,3

Sample file: >FC254 Spectrum #: 122

No data base entries were retrieved.

CO_2 - value change
NOTIC
WM 11/19/90



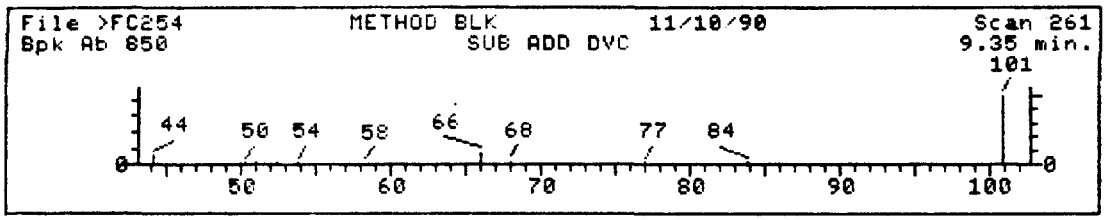
NO TIC
TCL hit
11/19/00
JMM

. Unknown #,2
Area = 24781.00 Tentative Concentration is .800

1. Methane, dichloro- (8CI9CI) 84 CH2Cl2

Sample file: >FC254 Spectrum #: 192
Search speed: 1 Tilting option: S No. of ion ranges searched: 48

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	81*	75092	6390	"BIGDB	66	33	2	0	90	9	53	45

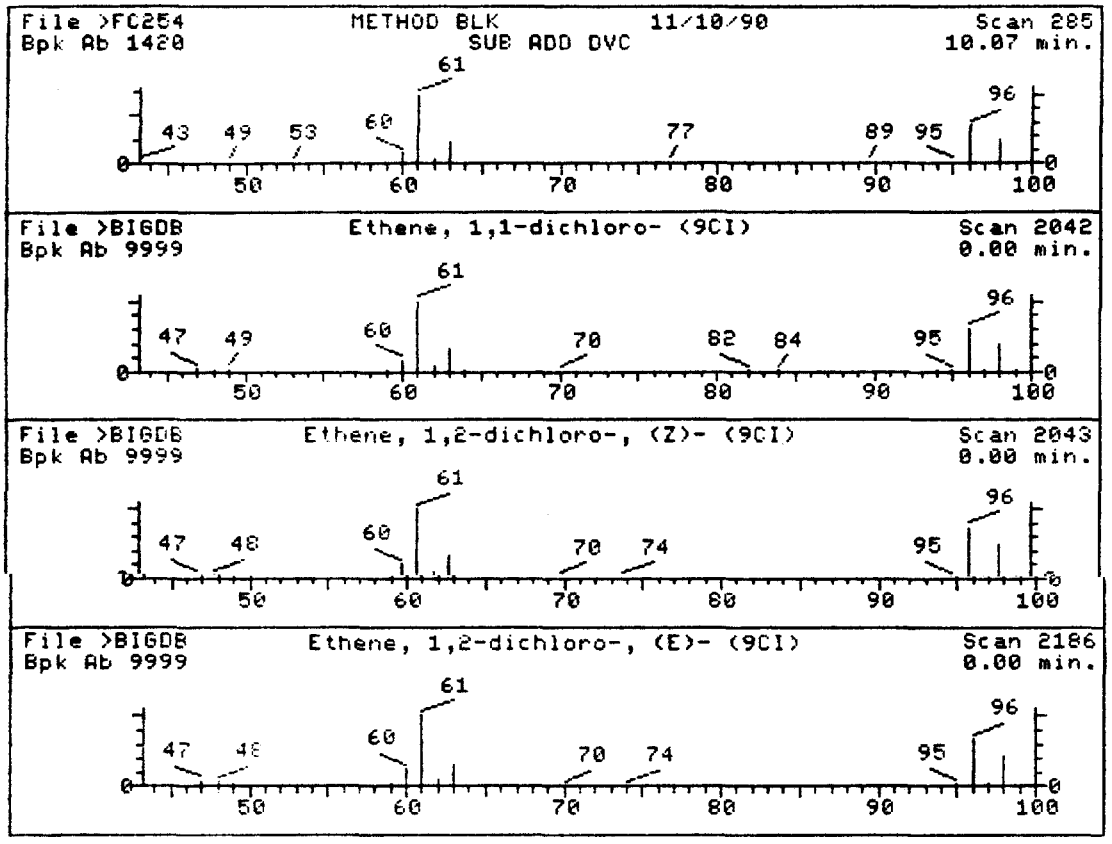


No TIC
11/15/90
wm

. Unknown #,3
Area = 24731.00 Tentative Concentration is .800

Sample file: >FC254 Spectrum #: 261

No data base entries were retrieved.



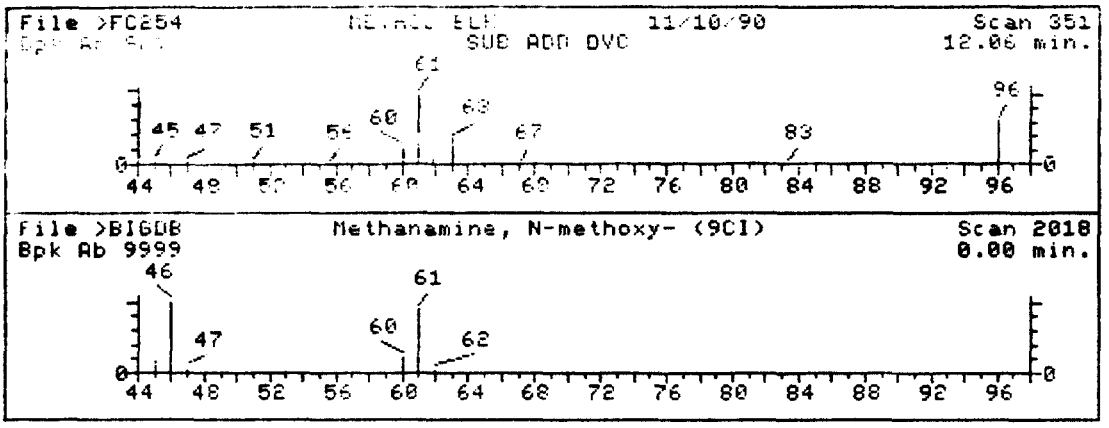
NO TIC
TCL-BDL
11/15/90
um

Unknown #,4
Area = 39459.00 Tentative Concentration is 1.000

1. Ethene, 1,1-dichloro- (9CI) 96 C2H2Cl2
2. Ethene, 1,2-dichloro-, (Z)- (9CI) 96 C2H2Cl2
3. Ethene, 1,2-dichloro-, (E)- (9CI) 96 C2H2Cl2

Sample file: >FC254 Spectrum #: 285
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_I
1.	86*	75354	2042	"BIGDB	55	51	2	0	89	2	[illegible]	[illegible]
2.	83*	156592	2043	"BIGDB	52	64	2	0	73	2	57	27
3.	43*	156605	2186	"BIGDB	72	94	2	0	63	24	17	14



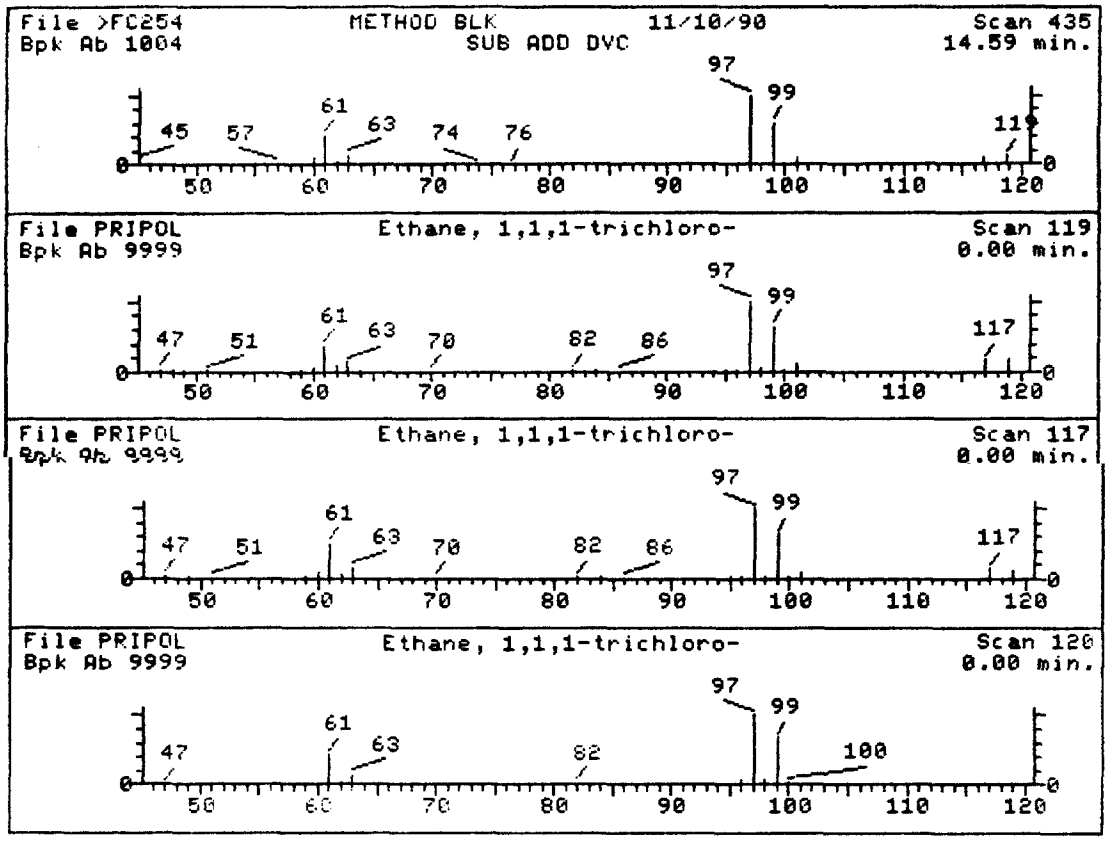
NO TIC
TCL LIST BDL
11/15/90
[illegible]

Unknown #,5
Area = 30324.00 Tentative Concentration is 1.000

1. Methanamine, N-methoxy- (9CI) 61 C2H7NO

Sample file: >FC254 Spectrum #: 351
Search speed: 1 Tilting option: S No. of ion ranges searched: 48

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	1117971	2018	"BIGDB	23	38	2	0	108	46	7	13



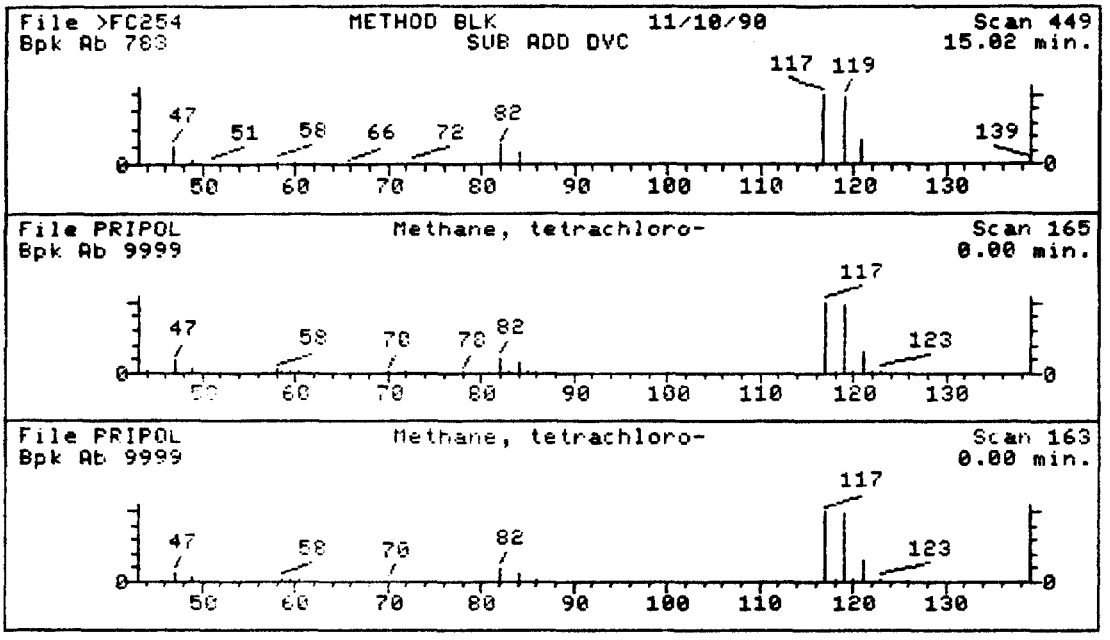
NO TIC
TCL list BDL
11/15/90
uw

. Unknown #,6
Area = 34270.00 Tentative Concentration is 1.000

1. Ethane, 1,1,1-trichloro- 132 C2H3Cl3
2. Ethane, 1,1,1-trichloro- 132 C2H3Cl3
3. Ethane, 1,1,1-trichloro- 132 C2H3Cl3

Sample file: >FC254 Spectrum #: 435
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	78	119	150	PRIPOL	69	37	2	3	75	0	55	17
2.	78	117	148	PRIPOL	70	39	2	0	79	0	55	19
3.	52	120	151	PRIPOL	41	47	2	0	89	18	20	13



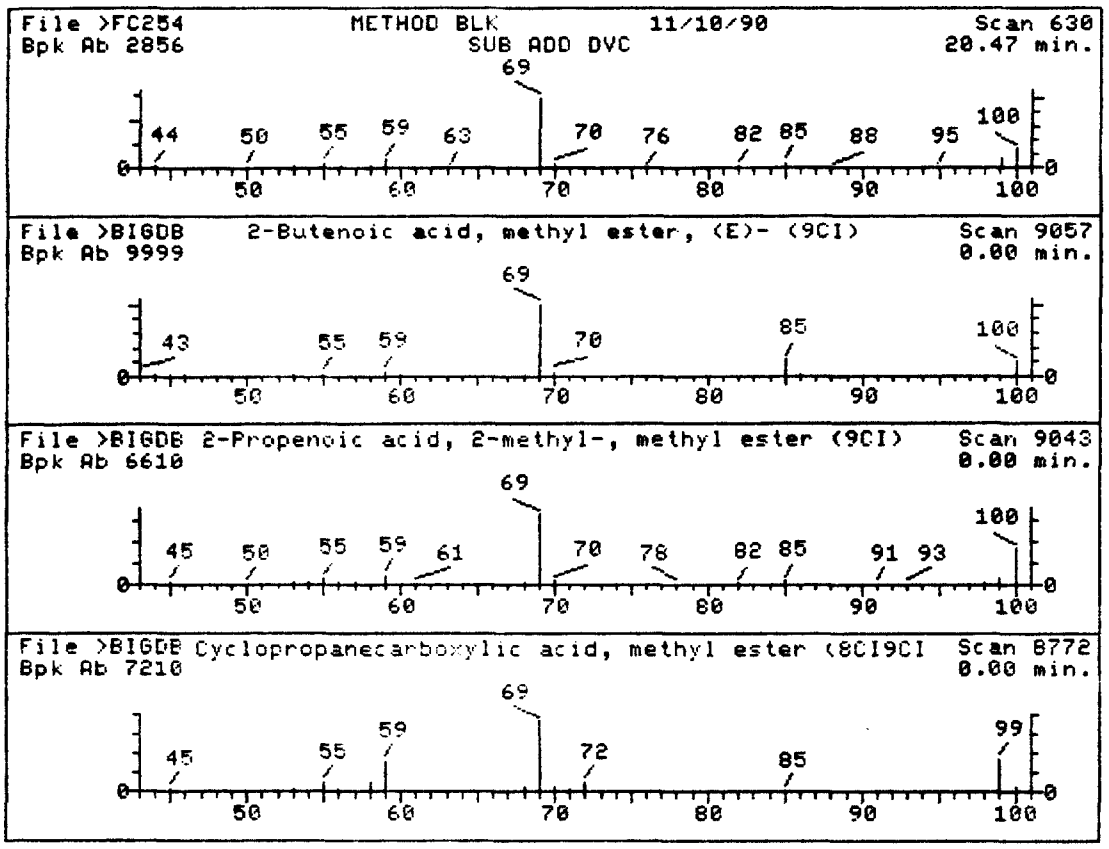
NOTIC
11/15/90
um

. Unknown #,7
Area = 26729.00 Tentative Concentration is .900

1. Methane, tetrachloro- 152 CCl4
2. Methane, tetrachloro- 152 CCl4

Sample file: >FC254 Spectrum #: 449
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_1	R_1V
1.	70	165	182	PRIPOL	54	49	2	0	100	6	42	12
2.	70	163	180	PRIPOL	54	49	2	0	99	6	42	12



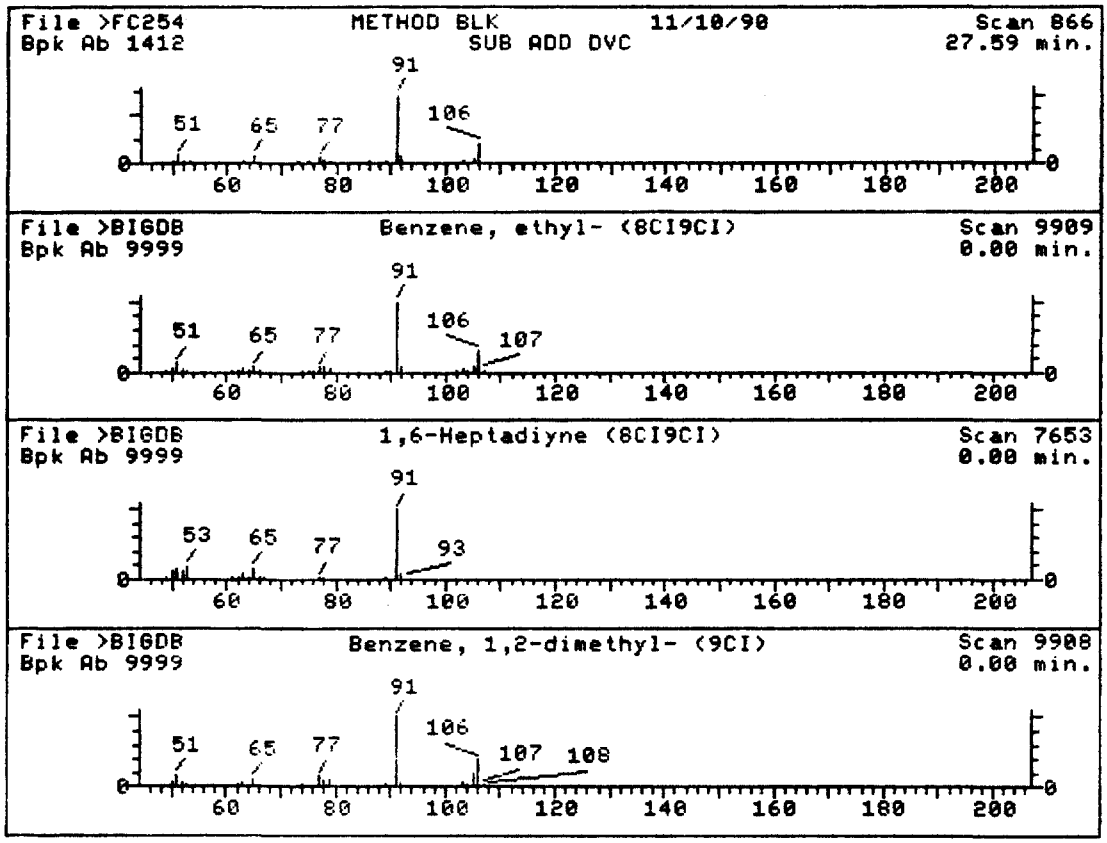
NO T IC
11/15/90
WM

Unknown #,8
Area = 96578.00 Tentative Concentration is 3.00

1. 2-Butenoic acid, methyl ester, (E)- (9CI) 100 C5H8O2
2. 2-Propenoic acid, 2-methyl-, methyl ester (9CI) 100 C5H8O2
3. Cyclopropanecarboxylic acid, methyl ester (8CI9CI) 100 C5H8O2

Sample file: >FC254 Spectrum #: 630
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IU
1.	52*	623438	9057	"BIGDB	21	67	2	0	100	17	20	13
2.	26*	80626	9043	"BIGDB	22	67	1	0	82	42	8	14
3.	11*	2868373	8772	"BIGDB	21	64	1	0	28	64	2	14



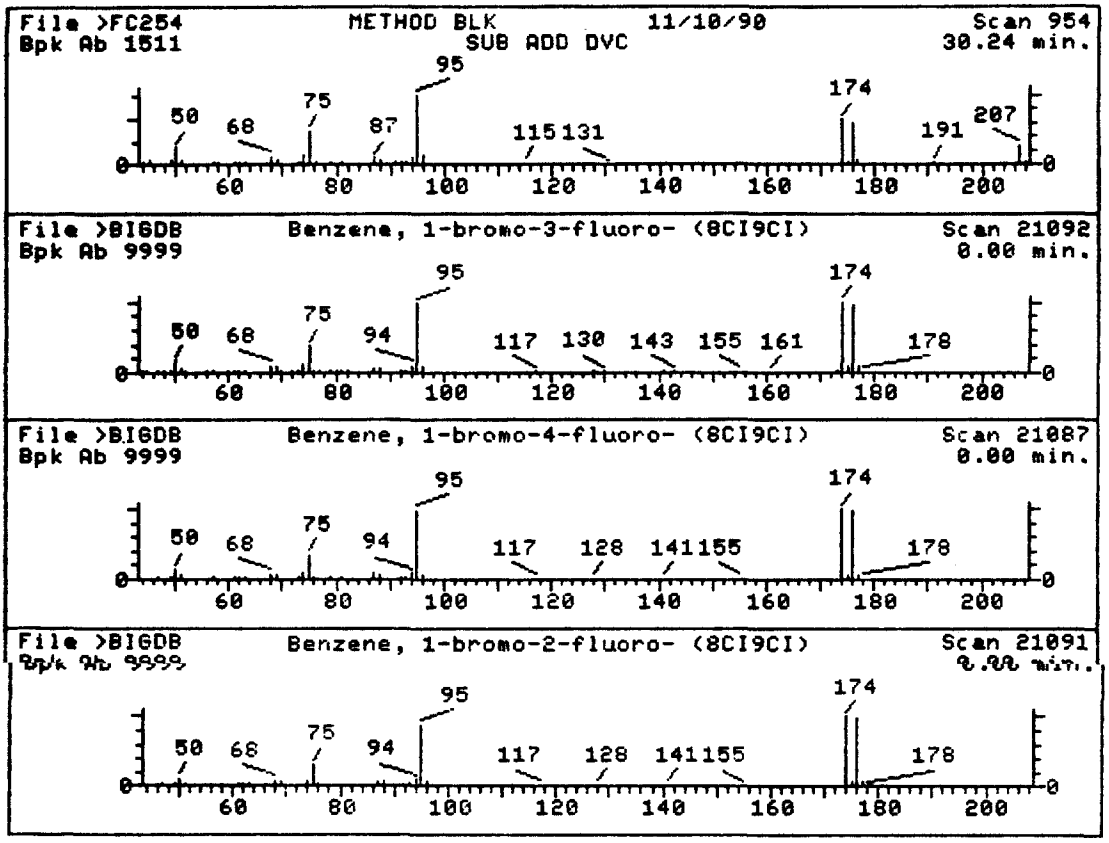
NO TIC
TCL LIST
11/19/90

Unknown #,9
Area = 44538.00 Tentative Concentration is 3.00

1.	Benzene, ethyl- (8CI9CI)	106	C8H10
2.	1,6-Heptadiyne (8CI9CI)	92	C7H8
3.	Benzene, 1,2-dimethyl- (9CI)	106	C8H10
4.	1,3-Cyclopentadiene, 5-(1-methylethylidene)- (9CI)	106	C8H10
5.	Benzene, 1,3-dimethyl- (9CI)	106	C8H10
6.	Cyclopentene, 1-ethenyl-3-methylene- (9CI)	106	C8H10

Sample file: >FC254 Spectrum #: 866
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	79*	100414	9909	"BIGDB	53	31	2	1	77	7	48	30
2.	31*	2396636	7653	"BIGDB	26	70	2	0	69	31	12	14
3.	25*	95476	9908	"BIGDB	33	59	2	0	66	46	7	15
4.	25*	2175919	9920	"BIGDB	28	60	2	0	42	48	7	14
5.	25*	108383	9919	"BIGDB	21	56	2	0	45	42	8	13
6.	11*	61142072	9924	"BIGDB	38	52	2	0	36	61	2	19



BFB
11/15/90
WM

. Unknown #,10
Area = 167648.0 Tentative Concentration is 11.00

1. Benzene, 1-bromo-3-fluoro- (8CI9CI) 174 C6H4BrF
2. Benzene, 1-bromo-4-fluoro- (8CI9CI) 174 C6H4BrF
3. Benzene, 1-bromo-2-fluoro- (8CI9CI) 174 C6H4BrF

Sample file: >FC254 Spectrum #: 954
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	70*	1073069	21092	"BIGDB	83	30	2	2	90	20	32	55
2.	70*	460004	21087	"BIGDB	81	29	2	2	90	20	32	53
3.	63*	1072851	21091	"BIGDB	67	40	2	3	78	20	30	39

QUANT REPORT

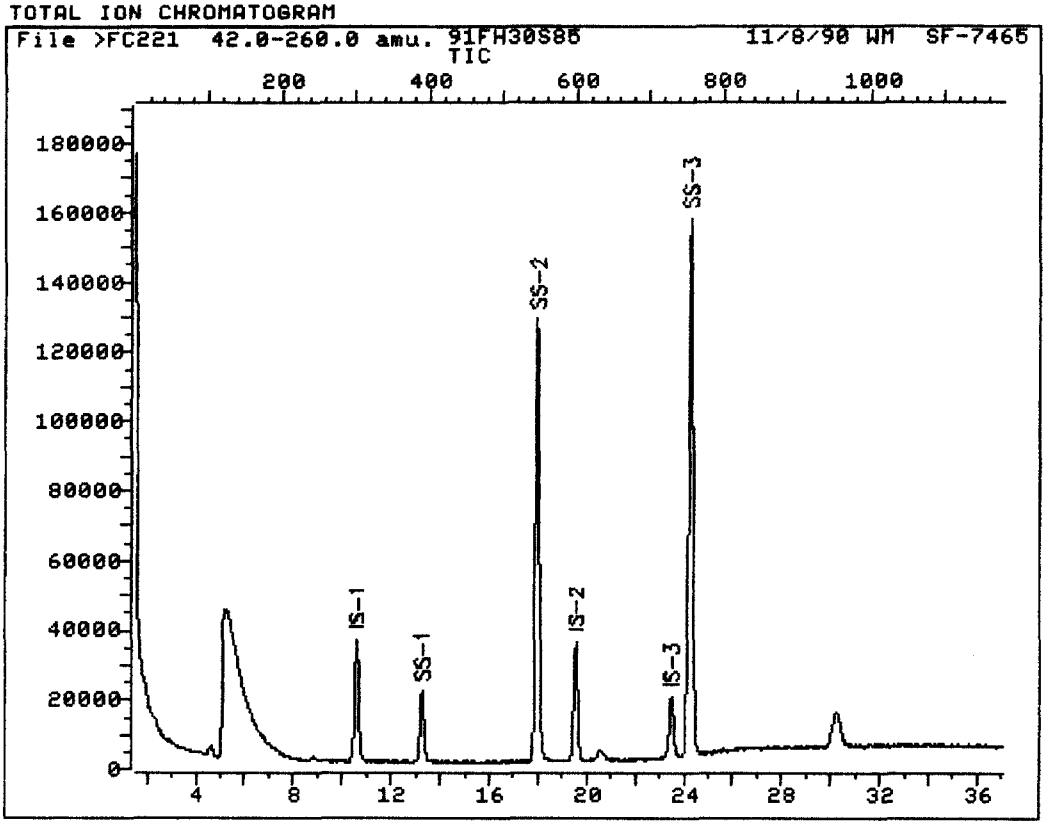
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 18:42
Output File: ^FC221::L2 Injected at: 901108 18:01
Data File: >FC221::A8 Dilution Factor: 1.00000
Name: 91FH30S85
Misc: 11/8/90 WM SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.58	130.0	62175	10.00	UG/L	93
15)	1,2-DICHLOROETHANE-D4	13.26	65.0	67568	8.89	UG/L	83
17)	*2-Bromo-1-chloropropane	19.56	77.0	238509	10.00	UG/L	97
26)	BENZENE-D6	17.96	84.0	756656	10.05	UG/L	98
33)	*1,4-Dichlorobutane	23.48	55.0	114566	10.00	UG/L	95
38)	TOLUENE-D8	24.26	98.0	769559	9.93	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC221::A8 Quant Output File: ^FC221::L2
Name: 91FH30S85
Misc: 11/8/90 WM SF-7465

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901108 18:42
Injected at: 901108 18:01

MS data file header from : >FC221

Sample: 91FH30S85 Operator: CARSTEN MS 11/08/90 18:01
Misc : 11/8/90 WM SF-7465
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: VOA#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC221 91FH30S85 11/8/90 WM SF-7465
42.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 22092. Max Peaks: 3 Bunching: 1
Dnslope: 0.00 Results File IFC221 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	~~5.21~~ CO_2	117	124	161	42359	2201144	2055024	100.00	86.348
2	~~28.59~~ NO TIC	623	634	645	3202	84508	54299	2.64	2.282
3	~~30.24~~ BFB	939	954	969	10689	488711	270620	13.17	11.371

11/15/90 WM

Sum of corrected areas: 2379943.

Summary of Unknowns PBM Library Search and Quantitation

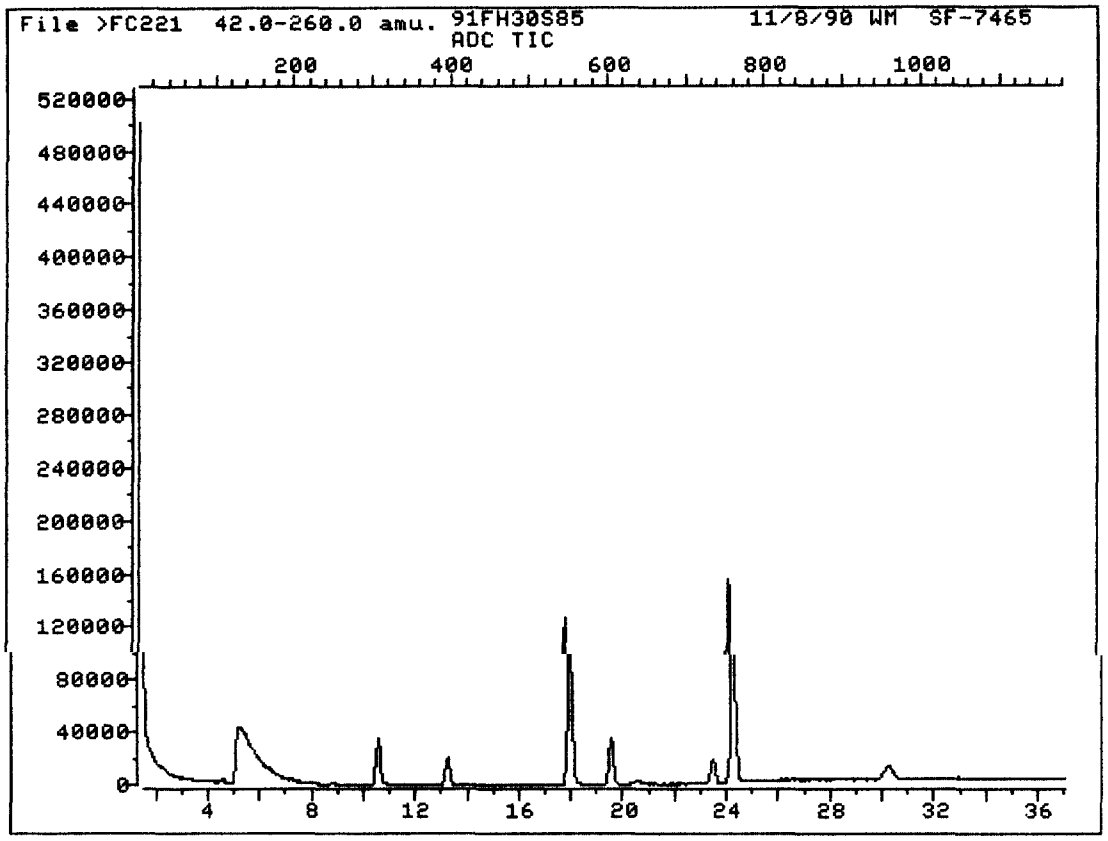
Standard	Concentration	Area	Retention Time	Unknown Window
1	10.0	407122.	10.58	1.51 - 15.07
2	10.0	404301.	19.56	15.07 - 21.52
3	10.0	220918.	23.48	21.52 - 37.05

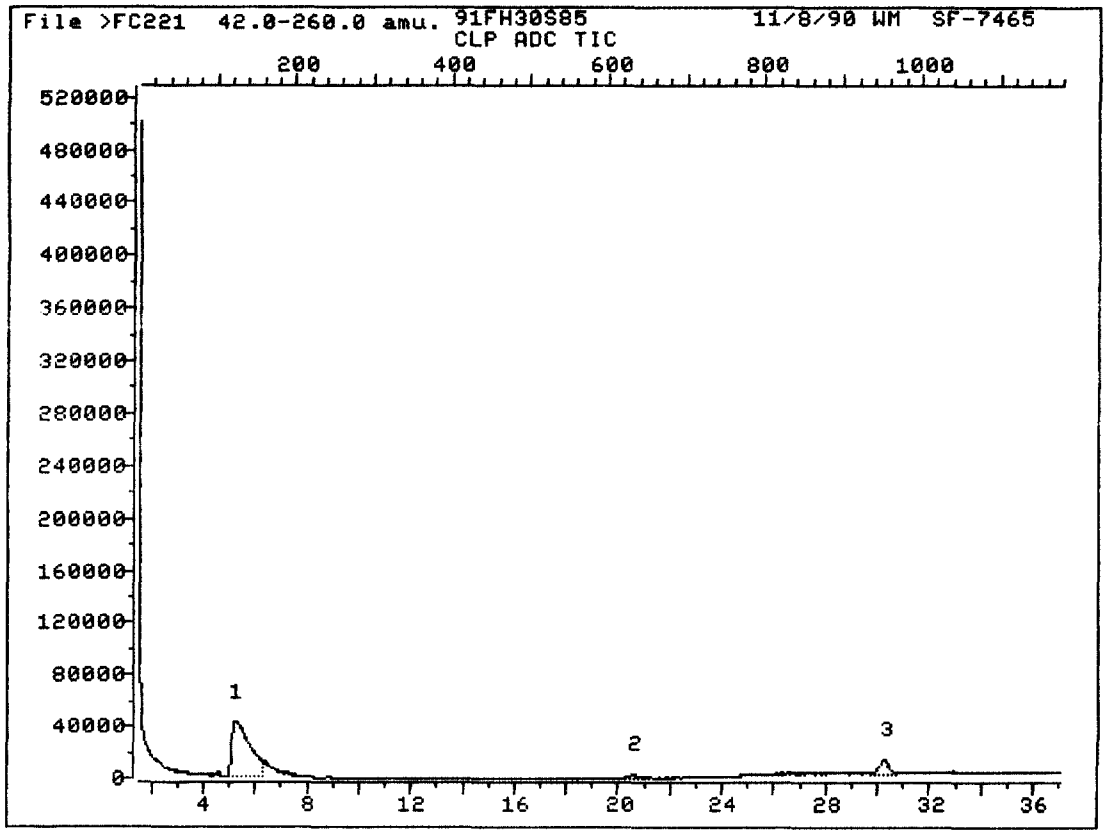
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 20.00 Amount Used (AU) = 20.00

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

4:51 PM TUE., 13 NOV., 1990


File >FC221 42.0-260.0 amu. 91FH30S85 11/8/90 WM SF-7465
ADC TIC
200 400 600 800 1000
520000 480000 440000 400000 360000 320000 280000 240000 200000 160000 120000 80000 40000 0
4 8 12 16 20 24 28 32 36


File >FC221 42.0-260.0 amu. 91FH30S85 11/8/90 WM SF-7465
CLP ADC TIC
200 400 600 800 1000
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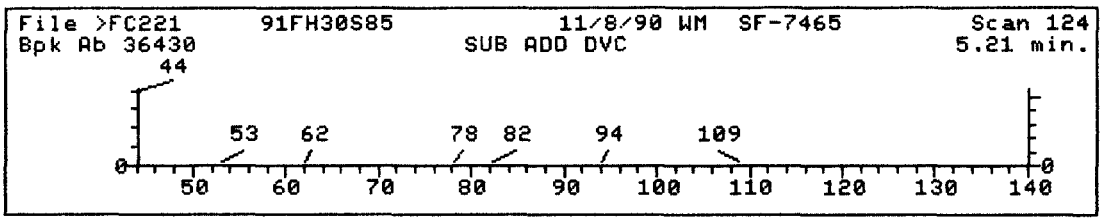
1
2
3
4 8 12 16 20 24 28 32 36

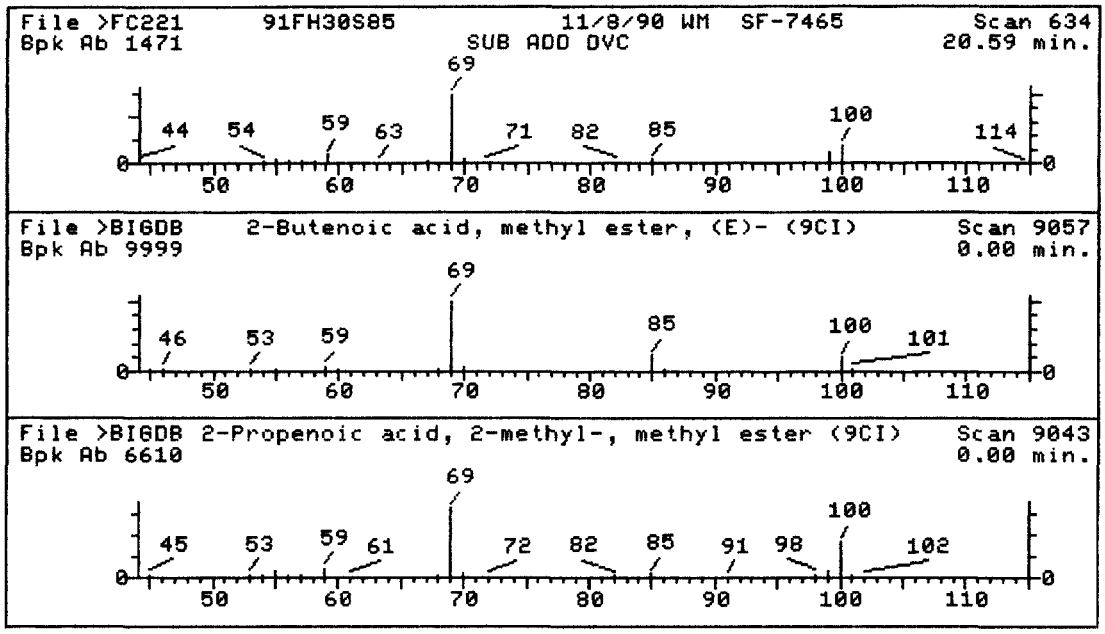


CO_2 - valve change
11/15/90
um

. Unknown #,1
Area = 2055024. Tentative Concentration is 50.00

Sample file: >FC221 Spectrum #: 124

No data base entries were retrieved.



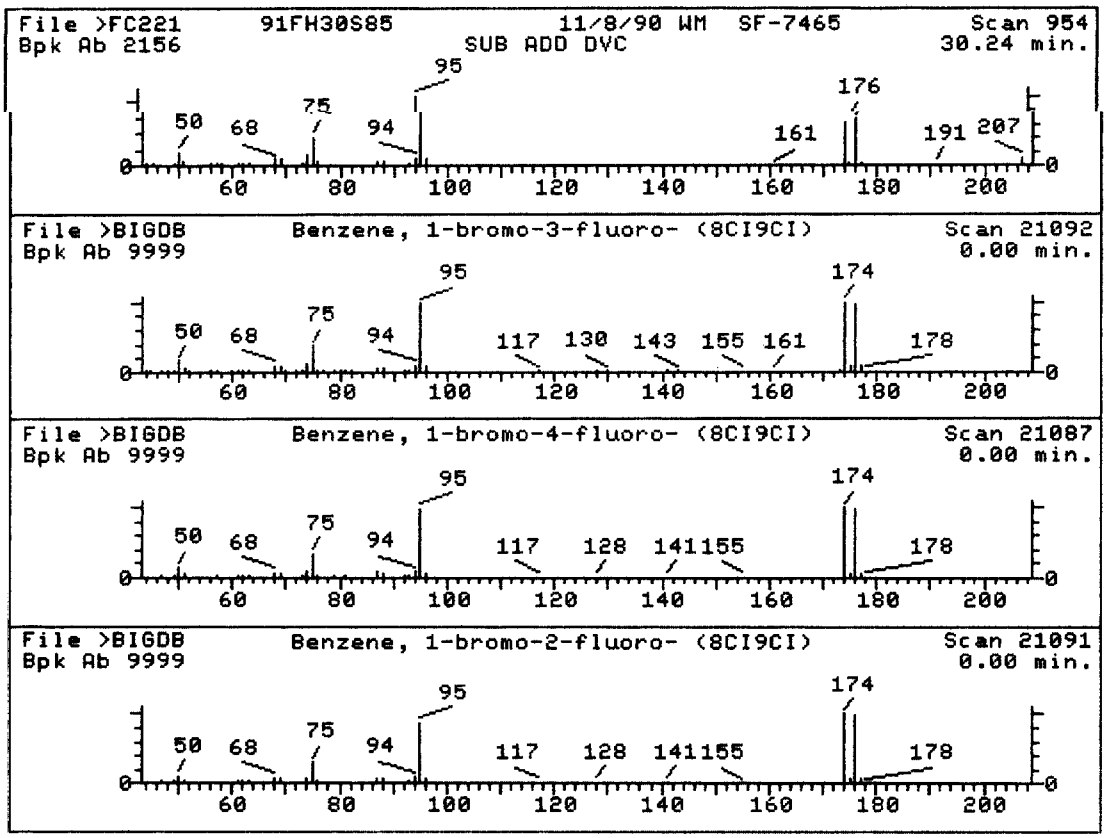
Unknown #,2 NO TIC 11/15/90

Area = 54299.00 Tentative Concentration is 1.000

1. 2-Butenoic acid, methyl ester, (E)- (9CI) 100 C5H8O2
2. 2-Propenoic acid, 2-methyl-, methyl ester (9CI) 100 C5H8O2

Sample file: >FC221 Spectrum #: 634
Search speed: 1 Tilting option: S No. of ion ranges searched: 48

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	60*	623438	9057	"BIGDB	26	62	2	0	100	14	30	14
2.	25*	80626	9043	"BIGDB	21	68	2	0	79	44	8	13



BFB
11/15/90 WM

Unknown #,3
Area = 270620.0 Tentative Concentration is 12.00

1. Benzene, 1-bromo-3-fluoro- (8CI9CI) 174 C6H4BrF
2. Benzene, 1-bromo-4-fluoro- (8CI9CI) 174 C6H4BrF
3. Benzene, 1-bromo-2-fluoro- (8CI9CI) 174 C6H4BrF

Sample file: >FC221 Spectrum #: 954
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	83*	1073069	21092	"BIGDB	89	24	2	1	81	7	54	59
2.	81*	460004	21087	"BIGDB	75	35	2	2	85	7	53	49
3.	61*	1072851	21091	"BIGDB	54	53	0	0	50	42	18	66

QUANT REPORT

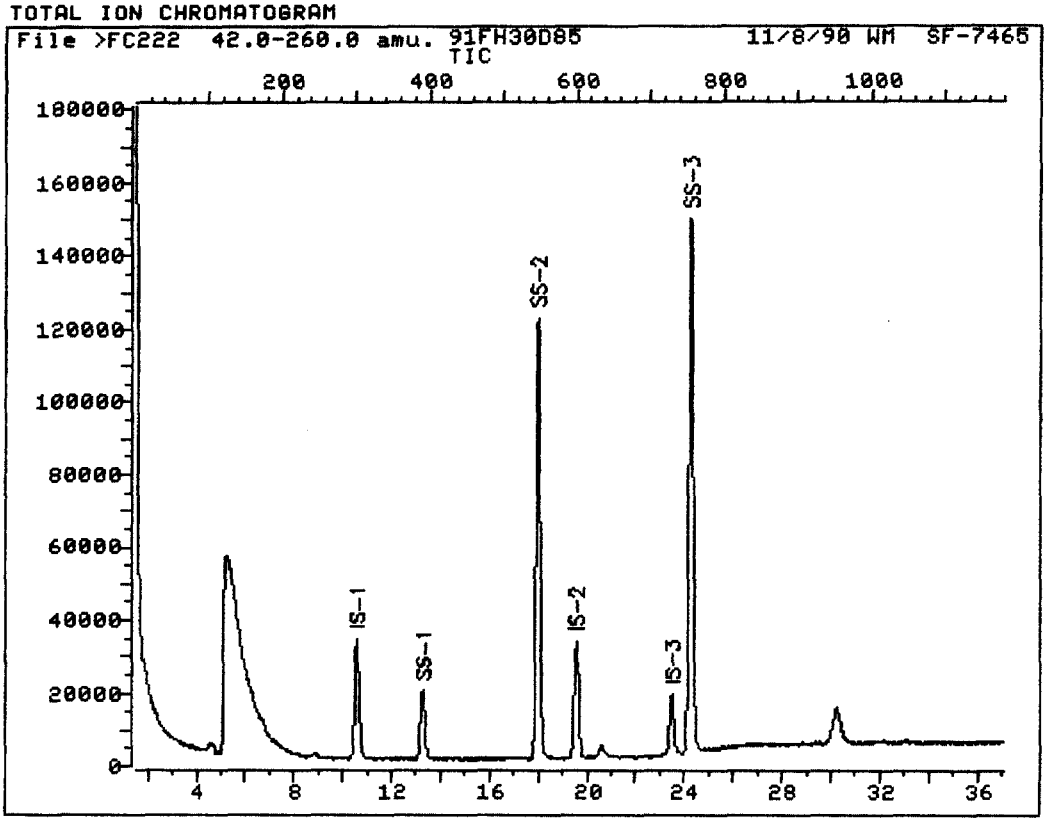
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 19:29
Output File: ^FC222::L2 Injected at: 901108 18:48
Data File: >FC222::A8 Dilution Factor: 1.00000
Name: 91FH30D85
Misc: 11/8/90 WM SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.58	130.0	58618	10.00	UG/L	94
15)	1,2-DICHLOROETHANE-D4	13.29	65.0	62598	8.74	UG/L	83
17)	*2-Bromo-1-chloropropane	19.56	77.0	227649	10.00	UG/L	96
26)	BENZENE-D6	17.99	84.0	724256	10.08	UG/L	99
33)	*1,4-Dichlorobutane	23.51	55.0	106659	10.00	UG/L	91
38)	TOLUENE-D8	24.26	98.0	739385	10.24	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC222::A8 Quant Output File: ^FC222::L2
Name: 91FH30D85
Misc: 11/8/90 WM SF-7465

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901108 19:29
Injected at: 901108 18:48

MS data file header from : >FC222

Sample: 91FH30D85 Operator: CARSTEN MS 11/08/90 18:48
Misc : 11/8/90 WM SF-7465
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: VOA#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC222 91FH30D85 11/8/90 WM SF-7465
42.0| 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 19571. Max Peaks: 3 Bunching: 1
Dnslope: 0.00 Results File IFC222 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	~~5.24~~ CLO2	117	125	173	53776	3017422	2828310	100.00	91.943
2	~~20.62~~ NOTIC	628	635	647	3086	77549	49468	1.75	1.608
3	~~30.27~~ BTB	943	955	971	9236	456773	198370	7.01	6.449

11/15/90 vm

Sum of corrected areas: 3076148.

Summary of Unknowns PBM Library Search and Quantitation

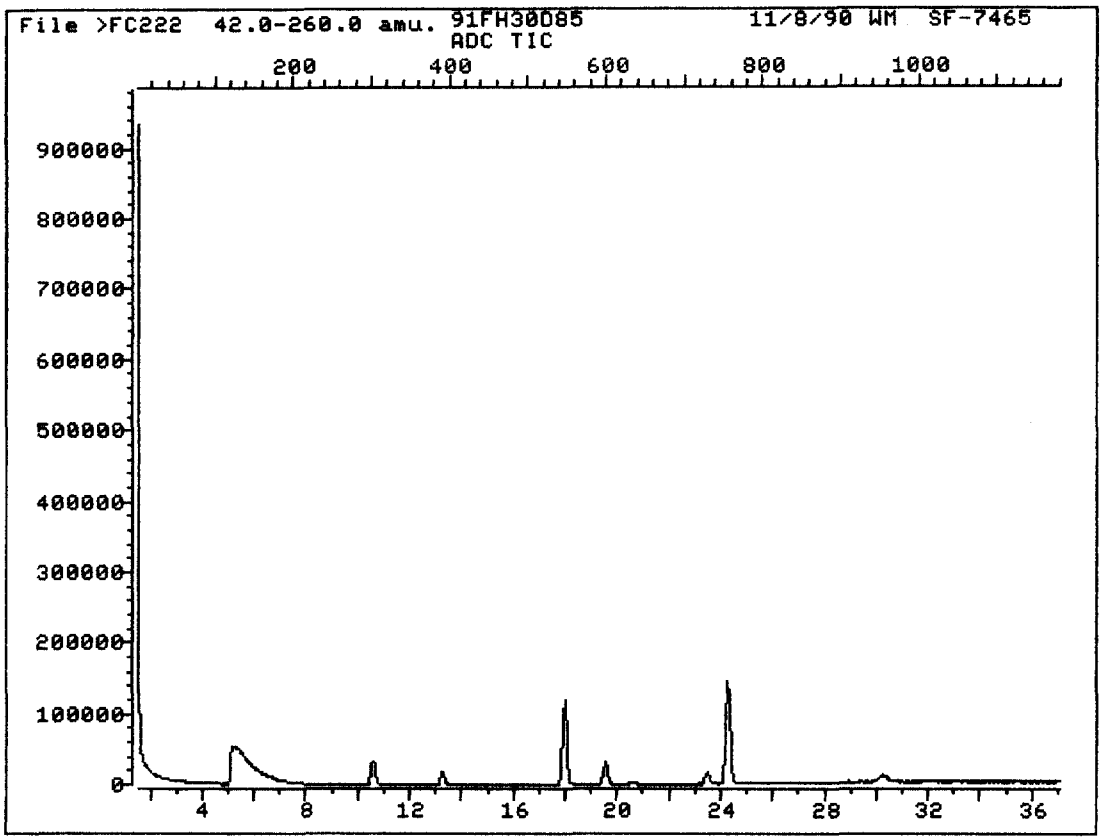
Standard	Concentration	Area	Retention Time	Unknown Window
1	10.0	386366.	10.58	1.51 - 15.07
2	10.0	383779.	19.56	15.07 - 21.54
3	10.0	195714.	23.51	21.54 - 37.08

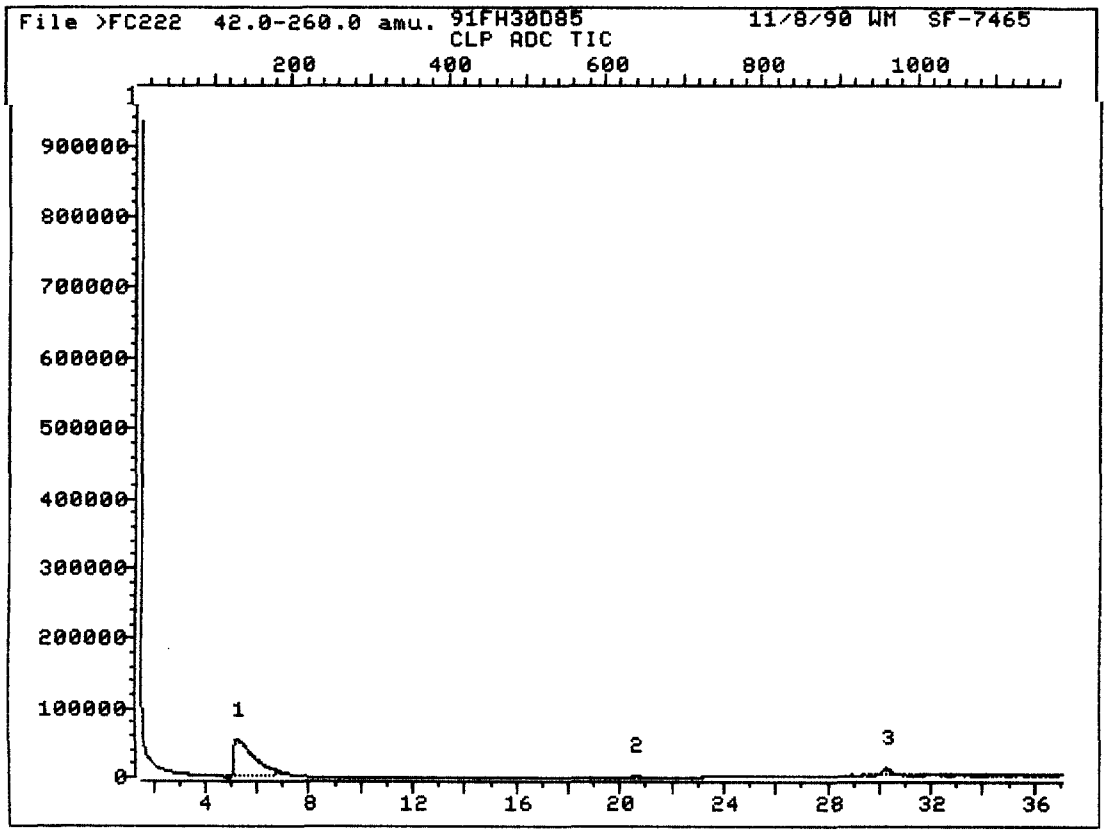
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 20.00 Amount Used (AU) = 20.00

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

5:03 PM TUE., 13 NOV., 1990


File >FC222 42.0-260.0 amu. 91FH30D85
ADC TIC
11/8/90 WM SF-7465
200
400
600
800
1000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
4
8
12
16
20
24
28
32
36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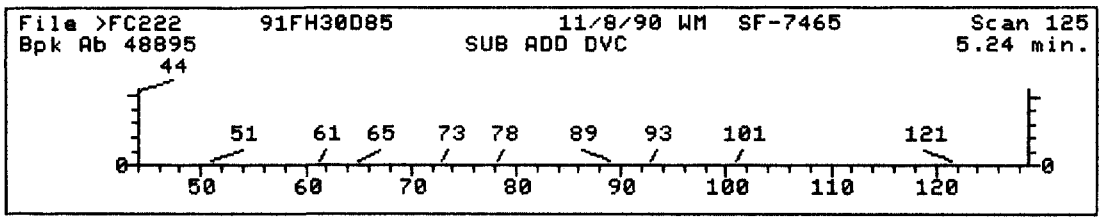
CLP ADC TIC
11/8/90 WM SF-7465
200
400
600
800
1000
1
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
1
2
3
4
8
12
16
20
24
28
32
36

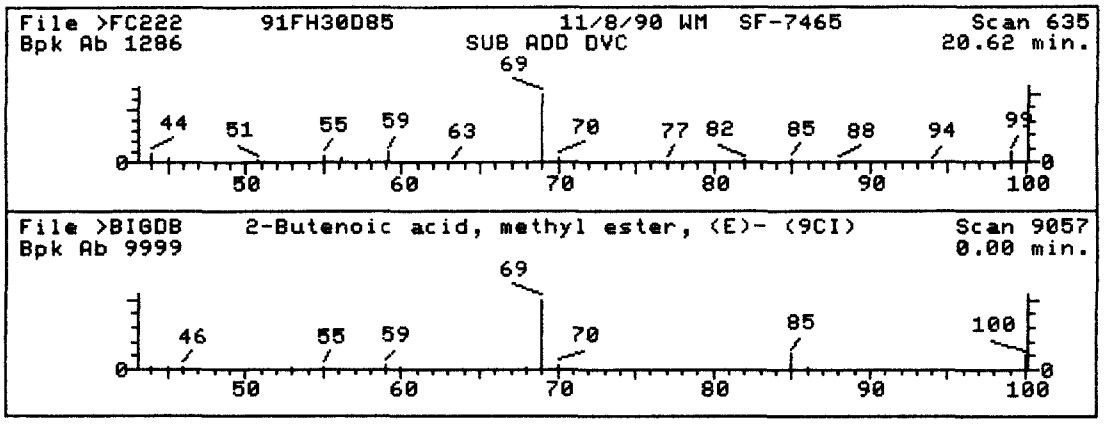


CO_2 - valve change
11/15/90
WM

. Unknown #,1
Area = 2828310. Tentative Concentration is 73.00

Sample file: >FC222 Spectrum #: 125

No data base entries were retrieved.



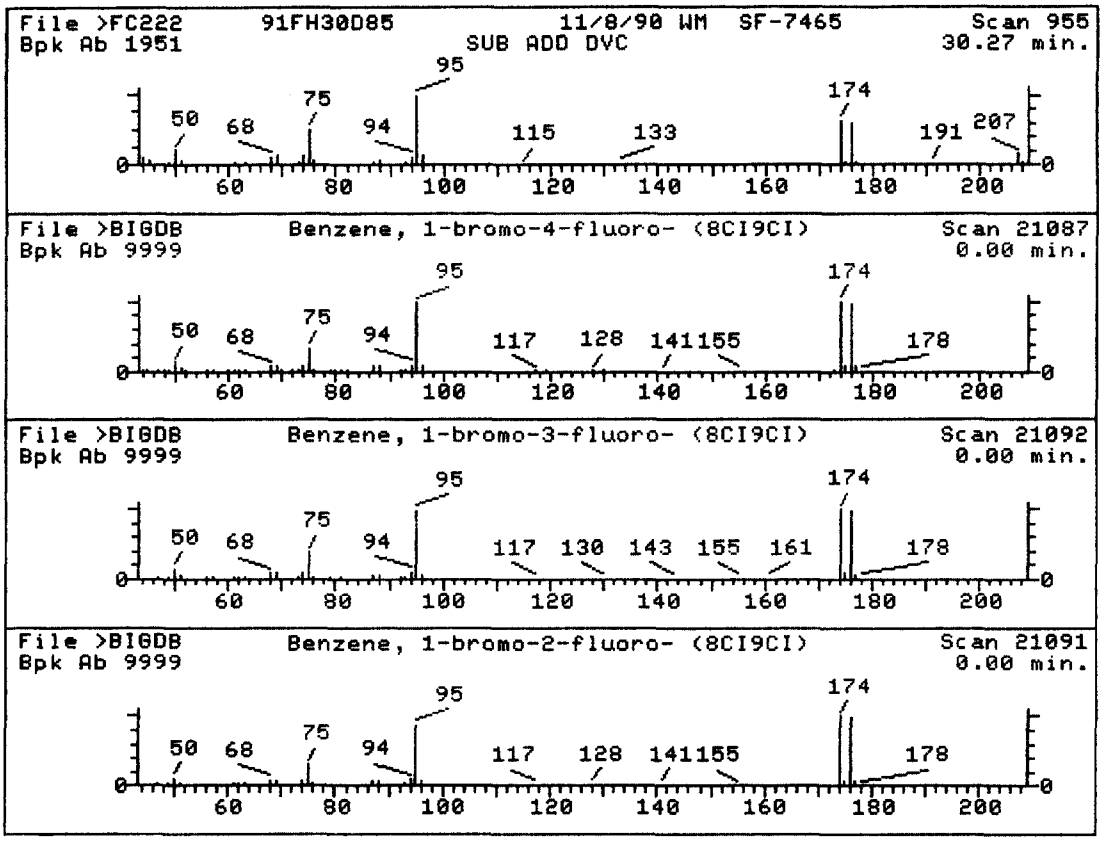
NO TIC
11/15/90 WM

. Unknown #,2
Area = 49468.00 Tentative Concentration is 1.000

1. 2-Butenoic acid, methyl ester, (E)- (9CI) 100 C5H8O2

Sample file: >FC222 Spectrum #: 635
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	42*	623438	9057	"BIGDB	21	67	2	0	100	22	17	13



BFB
11/15/90 WM

. Unknown #,3
Area = 198370.0 Tentative Concentration is 10.00

1. Benzene, 1-bromo-4-fluoro- (8CI9CI) 174 C6H4BrF
2. Benzene, 1-bromo-3-fluoro- (8CI9CI) 174 C6H4BrF
3. Benzene, 1-bromo-2-fluoro- (8CI9CI) 174 C6H4BrF

Sample file: >FC222 Spectrum #: 955
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	76*	460004	21087	"BIGDB	81	29	2	3	69	11	40	53
2.	70*	1073069	21092	"BIGDB	62	51	0	0	60	36	28	74
3.	61*	1072851	21091	"BIGDB	55	52	0	0	60	42	18	66

QUANT REPORT

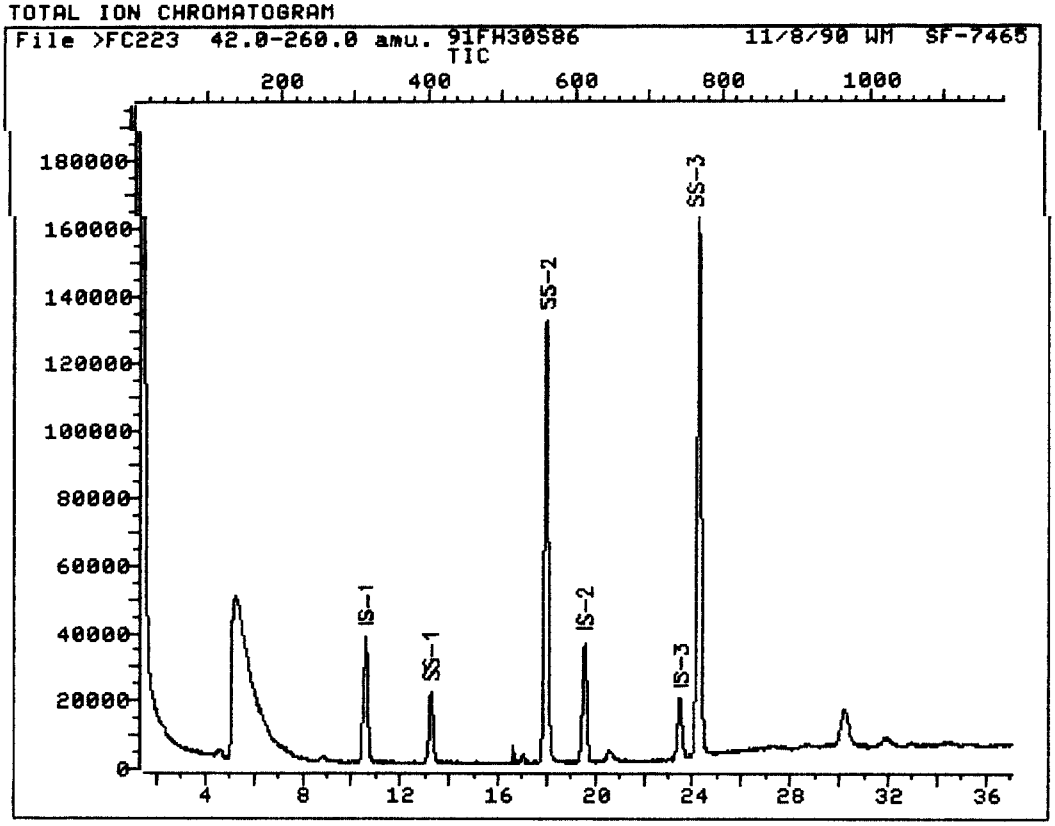
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901108 20:17
Output File: ^FC223::L2 Injected at: 901108 19:36
Data File: >FC223::A8 Dilution Factor: 1.00000
Name: 91FH30S86
Misc: 11/8/90 WM SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.57	130.0	64990	10.00	UG/L	95
15)	1,2-DICHLOROETHANE-D4	13.25	65.0	69106	8.70	UG/L	84
17)	*2-Bromo-1-chloropropane	19.55	77.0	254622	10.00	UG/L	99
26)	BENZENE-D6	17.98	84.0	787704	9.80	UG/L	98
33)	*1,4-Dichlorobutane	23.50	55.0	118623	10.00	UG/L	94
38)	TOLUENE-D8	24.25	98.0	796409	9.92	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC223::A8 Quant Output File: ^FC223::L2
Name: 91FH30S86
Misc: 11/8/90 WM SF-7465

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901108 20:17
Injected at: 901108 19:36

MS data file header from : >FC223

Sample: 91FH30S86 Operator: CARSTEN MS 11/08/90 19:36
Misc : 11/8/90 WM SF-7465
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: VOA#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC223 91FH30S86 11/8/90 WM SF-7465
42.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 23264. Max Peaks: 4 Bunching: 1
Dnslope: 0.00 Results File IFC223 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	~~5.28~~ CO2	117	124	177	47966	2698954	2546474	100.00	89.008
2	~~17.85~~ NOTIC	511	517	525	2339	28301	25161	.99	.879
3	~~20.54~~ NOTIC	624	633	646	3193	84336	52457	2.06	1.834
4	~~30.25~~ BFB	941	955	967	10519	487936	236865	9.30	8.279

μm 11/15/90

Sum of corrected areas: 2860957.

Summary of Unknowns PBM Library Search and Quantitation

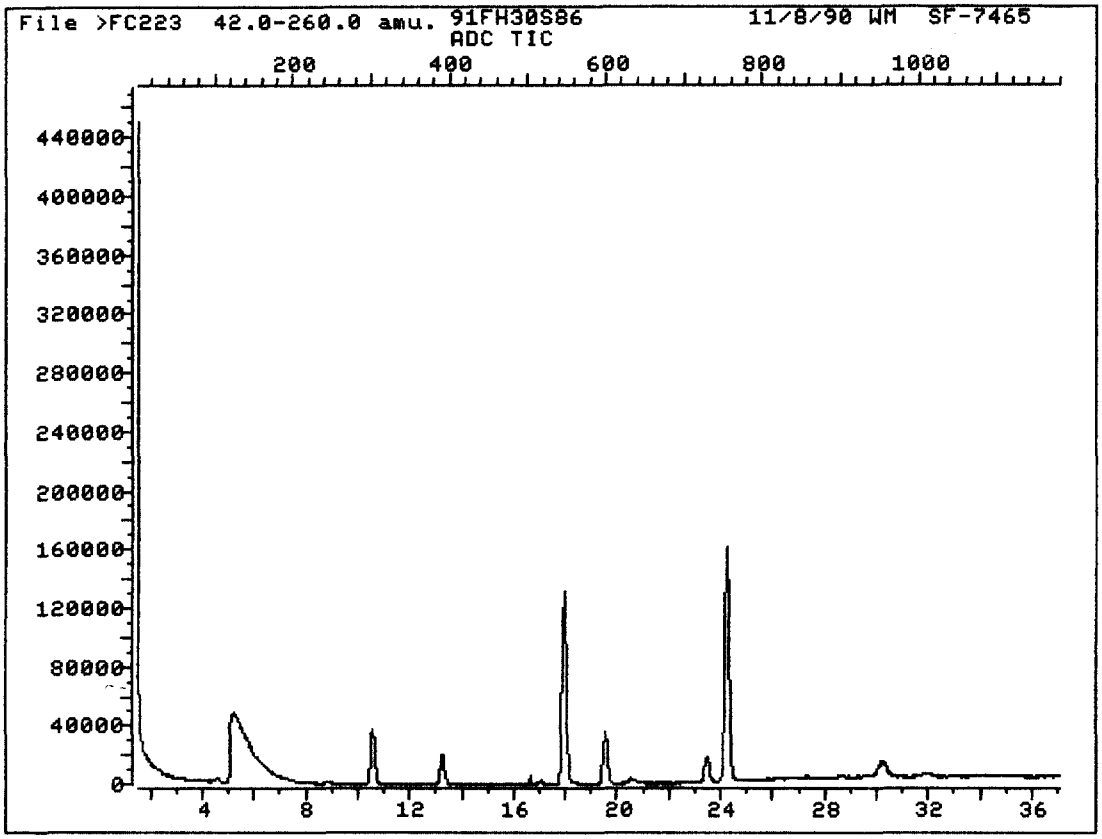
Standard	Concentration	Area	Retention Time	Unknown Window
1	10.0	426203.	10.57	1.49 - 15.06
2	10.0	427757.	19.55	15.06 - 21.52
3	10.0	232645.	23.50	21.52 - 37.07

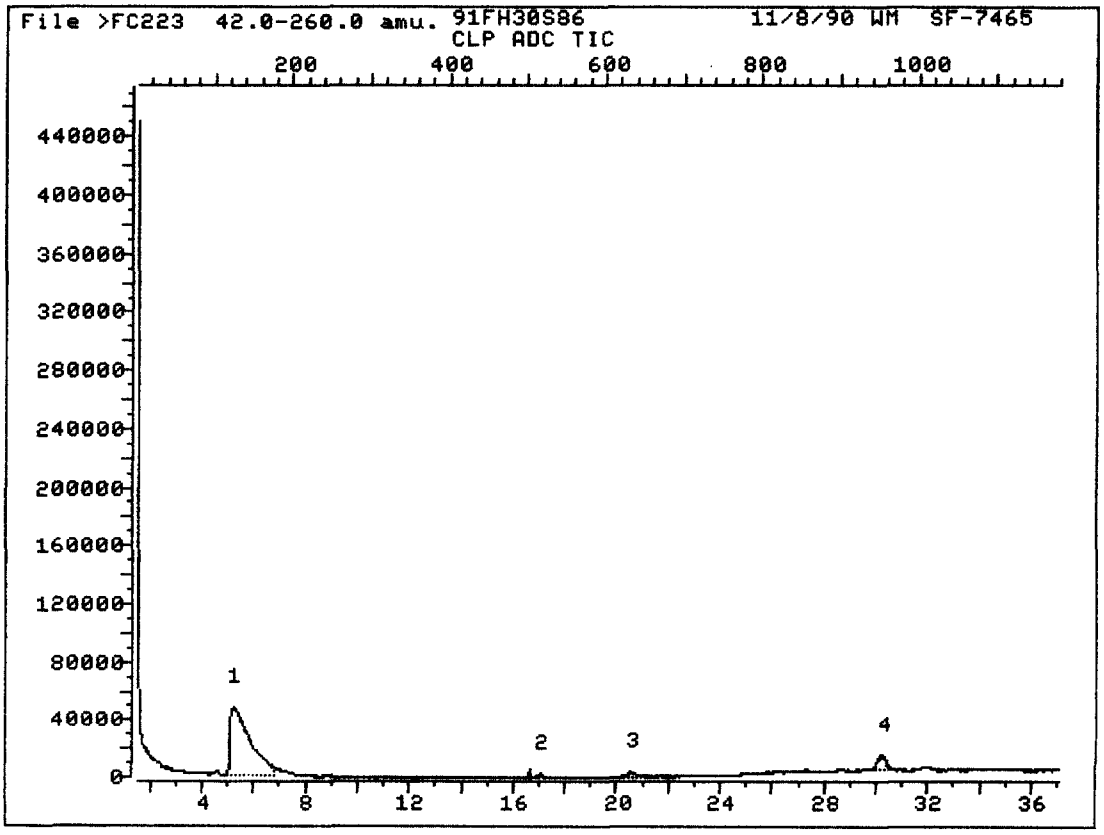
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 20.00 Amount Used (AU) = 20.00

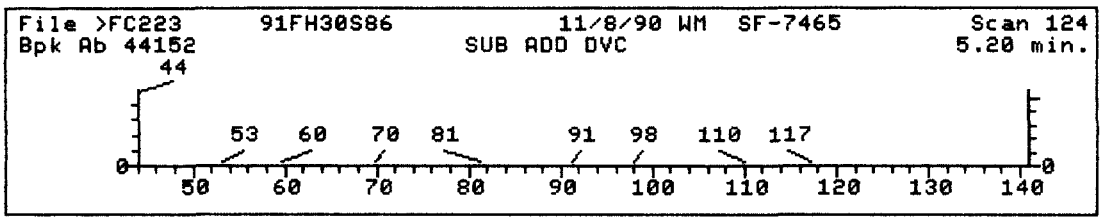
Correction Factor = 1.00 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

5:15 PM TUE., 13 NOV., 1990


File >FC223 42.0-260.0 amu. 91FH30S86 11/8/90 WM SF-7465
ADC TIC
200 400 600 800 1000
440000
400000
360000
320000
280000
240000
200000
160000
120000
80000
40000
0
4 8 12 16 20 24 28 32 36


File >FC223 42.0-260.0 amu. 91FH30S86 11/8/90 WM SF-7465
CLP ADC TIC
200 400 600 800 1000
440000
400000
360000
320000
280000
240000
200000
160000
120000
80000
40000
0
1
2
3
4
4 8 12 16 20 24 28 32 36

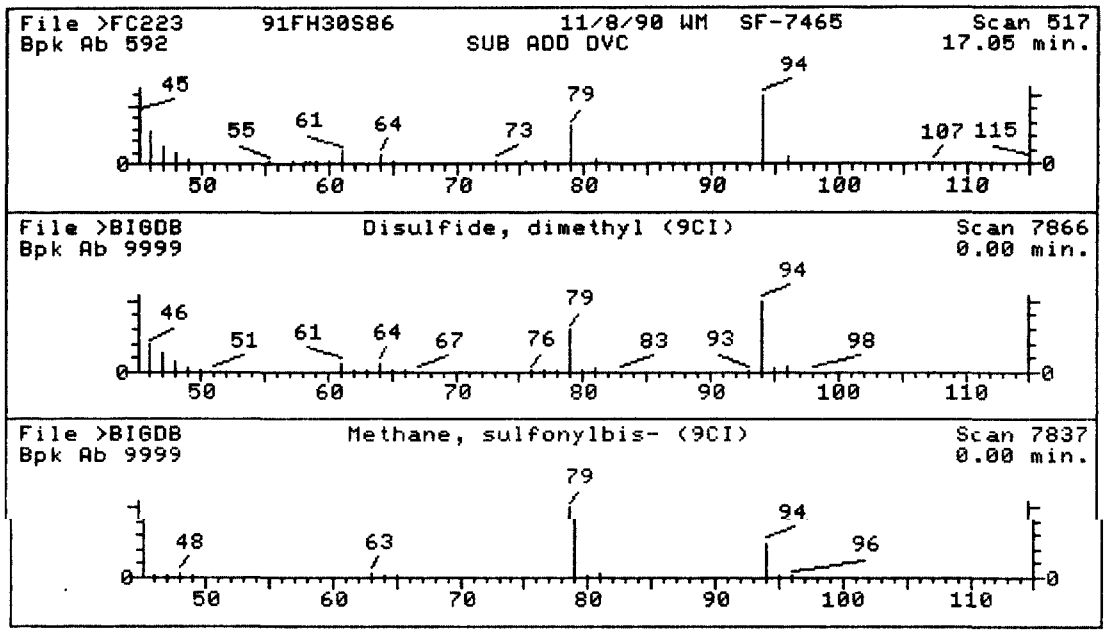


CO_2 valve change
11/15/90
wm

. Unknown #,1
Area = 2546474. Tentative Concentration is 60.00

Sample file: >FC223 Spectrum #: 124

No data base entries were retrieved.



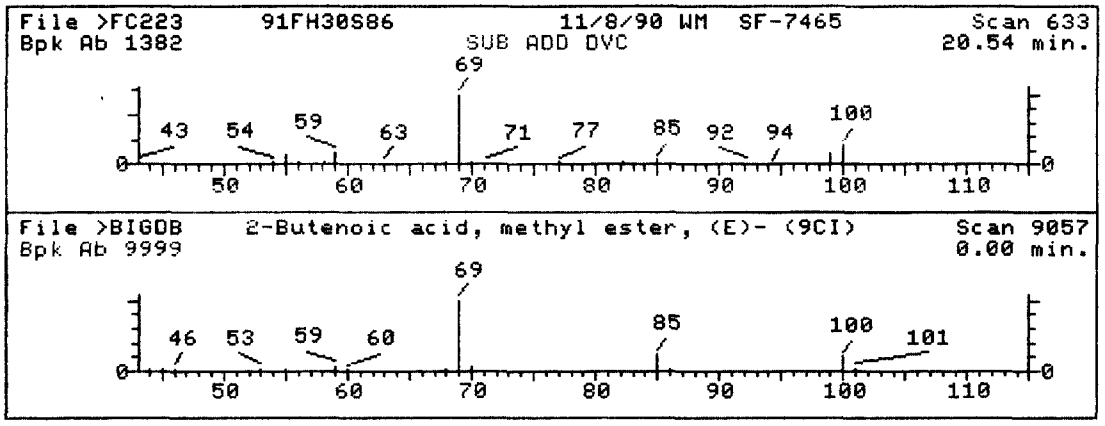
NO TIC - <10%
11/15/90 WM

. Unknown #,2
Area = 25161.00 Tentative Concentration is .600

1. Disulfide, dimethyl (9CI) 94 C2H6S2
2. Methane, sulfonylbis- (9CI) 94 C2H6O2S

Sample file: >FC223 Spectrum #: 517
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	89*	624920	7866	"BIGDB	77	41	1	0	92	0	66	74
2.	25*	67710	7837	"BIGDB	27	68	3	0	199	49	7	13



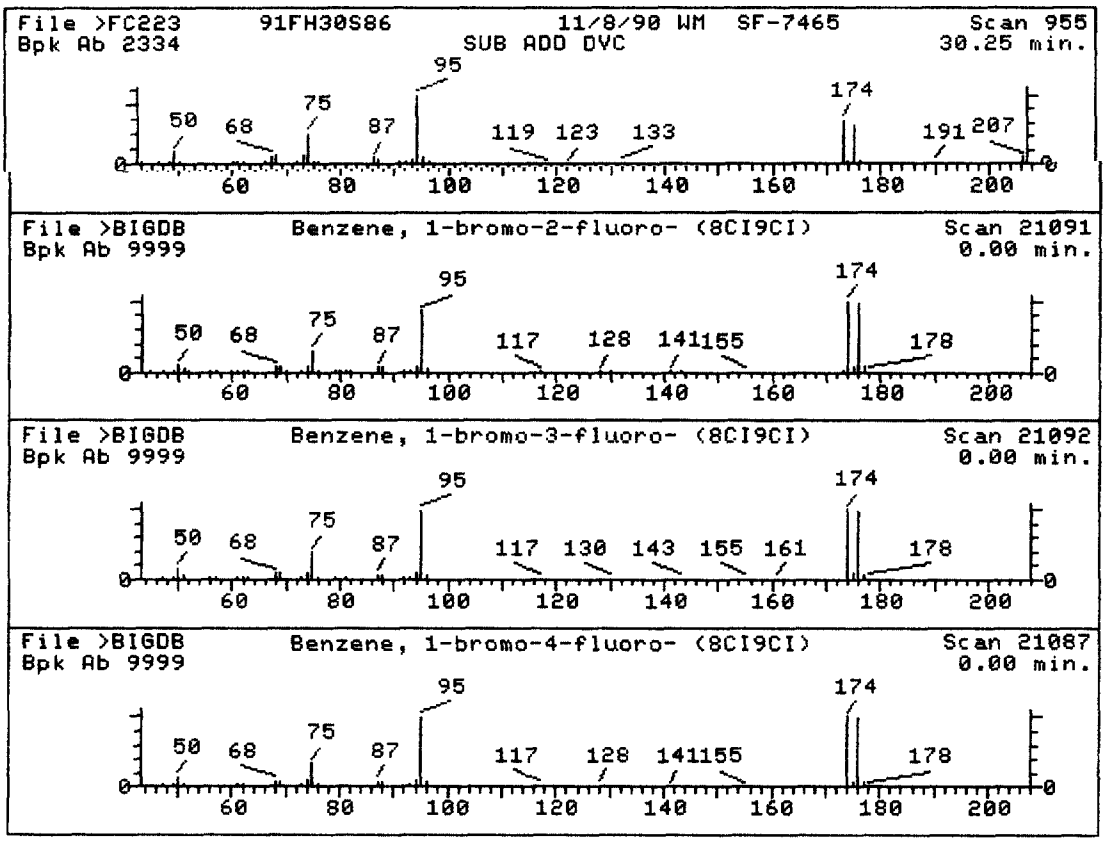
NO TIC
11/15/90

Unknown #,3
Area = 52457.00 Tentative Concentration is 1.000

1. 2-Butenoic acid, methyl ester, (E)- (9CI) 100 C5H8O2

Sample file: >FC223 Spectrum #: 633
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	52*	623438	9057	"BIGDB	25	63	2	0	100	19	20	14



BFB
11/15/90
um

. Unknown #,4
Area = 236865.0 Tentative Concentration is 10.00

1.	Benzene, 1-bromo-2-fluoro- (8CI9CI)	174 C6H4BrF
2.	Benzene, 1-bromo-3-fluoro- (8CI9CI)	174 C6H4BrF
3.	Benzene, 1-bromo-4-fluoro- (8CI9CI)	174 C6H4BrF
4.	3-Pyridinol (8CI9CI)	95 C5H5NO

Sample file: >FC223 Spectrum #: 955
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	94*	1072851	21091	"BIGDB	103	4	1	2	86	6	68	93
2.	84*	1073069	21092	"BIGDB	95	18	2	2	79	6	55	65
3.	83*	460004	21087	"BIGDB	81	29	2	2	92	6	54	53
4.	11*	109002	7969	"BIGDB	21	62	2	0	100	64	2	13

QUANT REPORT

Operator ID: CARSTEN
Output File: ^FC224::L2
Data File: >FC224::A8
Name: 91FH30S87
Misc: 11/8/90 WM SF-7465

Quant Rev: 6
Quant Time: 901108 21:04
Injected at: 901108 20:23
Dilution Factor: 1.00000

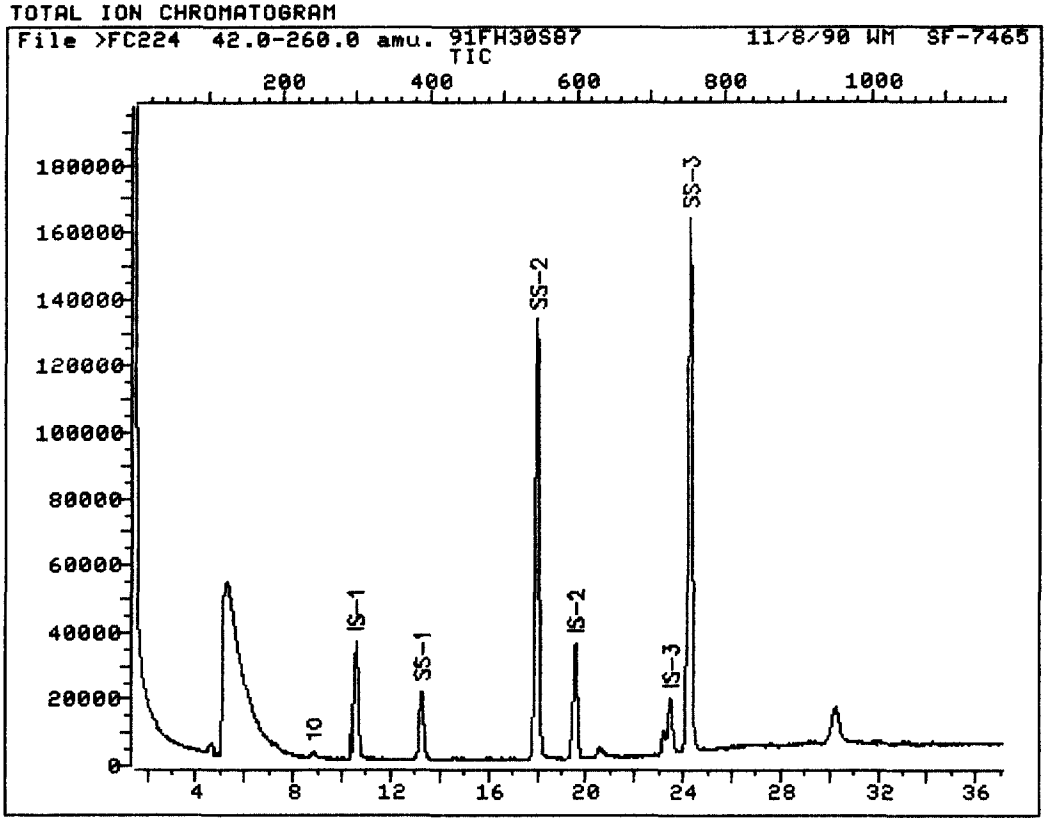
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

11/9/90 WM

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.57	130.0	63405	10.00	UG/L	95
10)	CARBON DISULFIDE	8.85	76.0	21913	~~25~~	UG/L	100
15)	1,2-DICHLOROETHANE-D4	13.28	65.0	67211	8.67	UG/L	83
17)	*2-Bromo-1-chloropropane	19.58	77.0	245940	10.00	UG/L	99
26)	BENZENE-D6	17.98	84.0	792731	10.21	UG/L	98
33)	*1,4-Dichlorobutane	23.50	55.0	116398	10.00	UG/L	93
38)	TOLUENE-D8	24.25	98.0	801542	10.18	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM

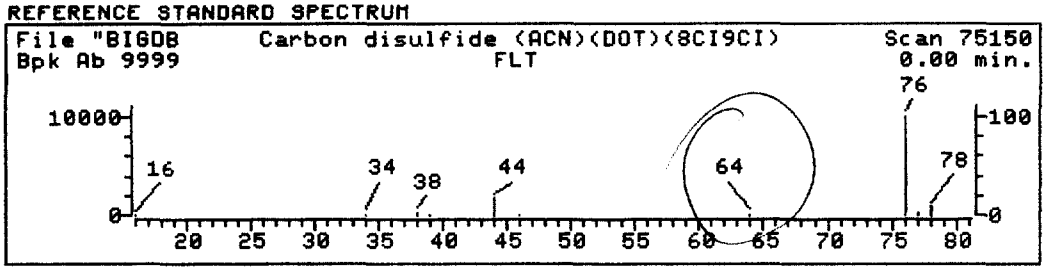


Data File: >FC224::A8 Quant Output File: ^FC224::L2
Name: 91FH30S87
Misc: 11/8/90 WM SF-7465

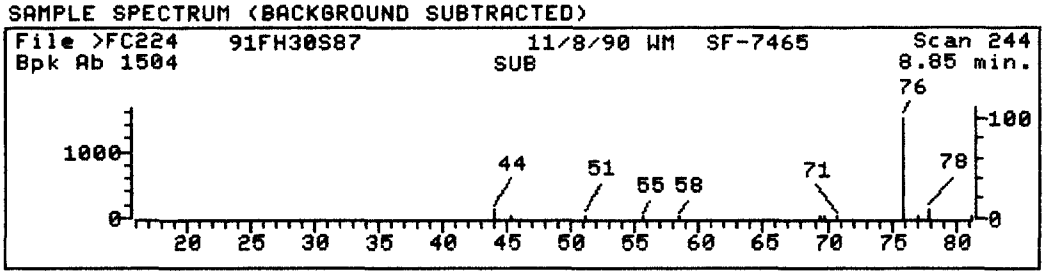
Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901108 21:04
Injected at: 901108 20:23

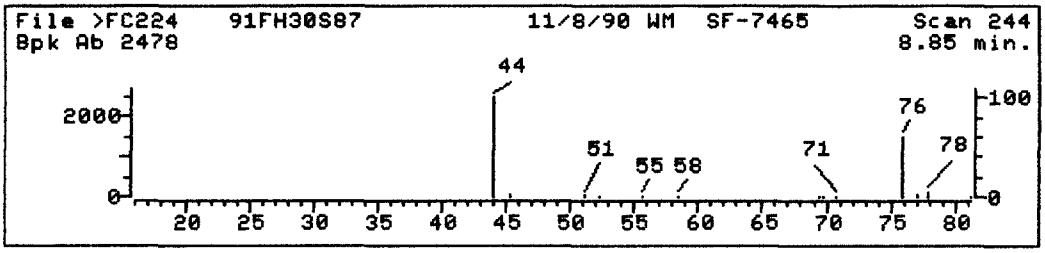
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >FC224::A8
Name: 91FH30S87
Misc: 11/8/90 WM SF-7465
Quant Time: 901108 21:04
Injected at: 901108 20:23

Quant Output File: ^FC224::L2

Quant ID File: IDCF3A::XX
Last Calibration: 901108 14:04

Compound No: 10
Compound Name: CARBON DISULFIDE
Scan Number: 244
Retention Time: 8.85 min.
Quant Ion: 76.0
Area: 21913
Concentration: .25 UG/L
q-value: 100

MS data file header from : >FC224

Sample: 91FH30S87 Operator: CARSTEN MS 11/08/90 20:23
Misc : 11/8/90 WM SF-7465
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: VOA#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC224 91FH30S87 11/8/90 WM SF-7465
42.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 21879. Max Peaks: 3 Bunching: 1
Dnslope: 0.00 Results File IFC224 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	~~5.26~~ CO_2	116	125	189	52006	3063145	2875002	100.00	91.133
2	~~20.60~~ ISOTIC	623	634	641	3377	77598	60373	2.10	1.914
3	~~30.25~~ BFB 11/15/90 WM	943	954	971	10029	508137	219355	7.63	6.953

Sum of corrected areas: 3154730.

Summary of Unknowns PBM Library Search and Quantitation

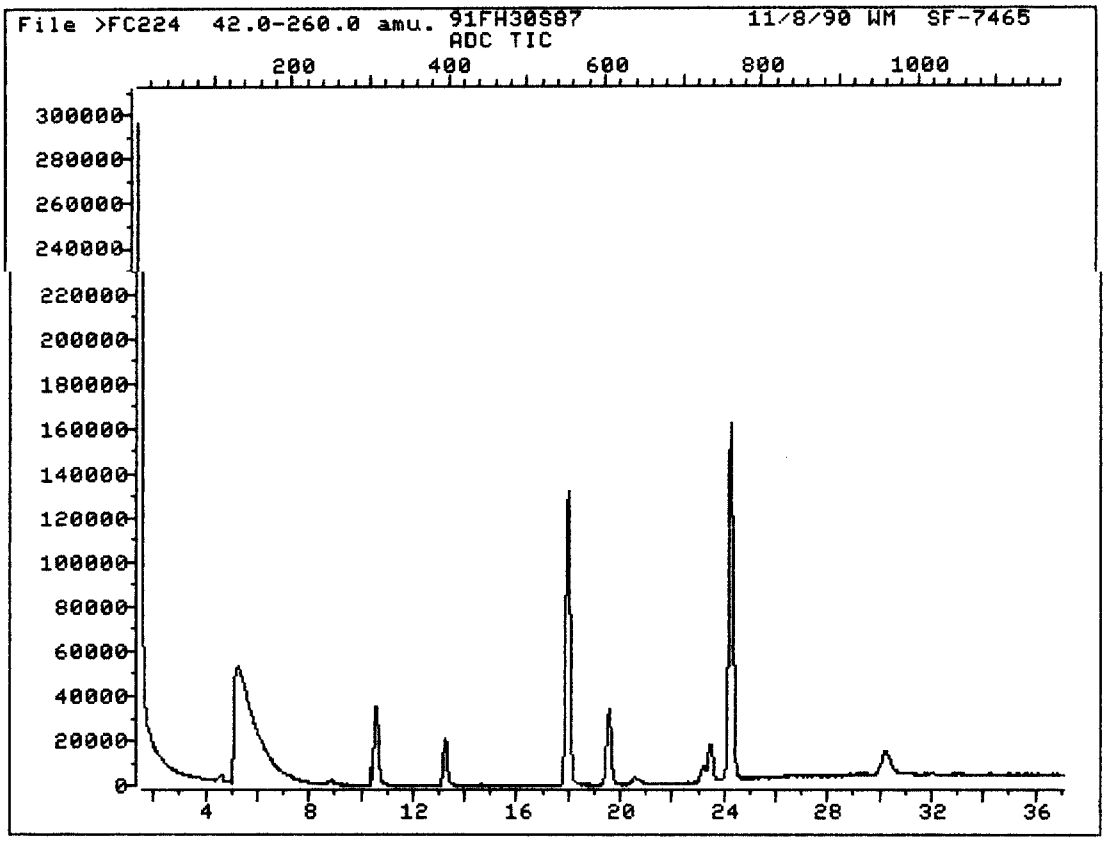
Standard	Concentration	Area	Retention Time	Unknown Window
1	10.0	402403.	10.57	1.52 - 15.07
2	10.0	400596.	19.58	15.07 - 21.54
3	10.0	218795.	23.50	21.54 - 37.10

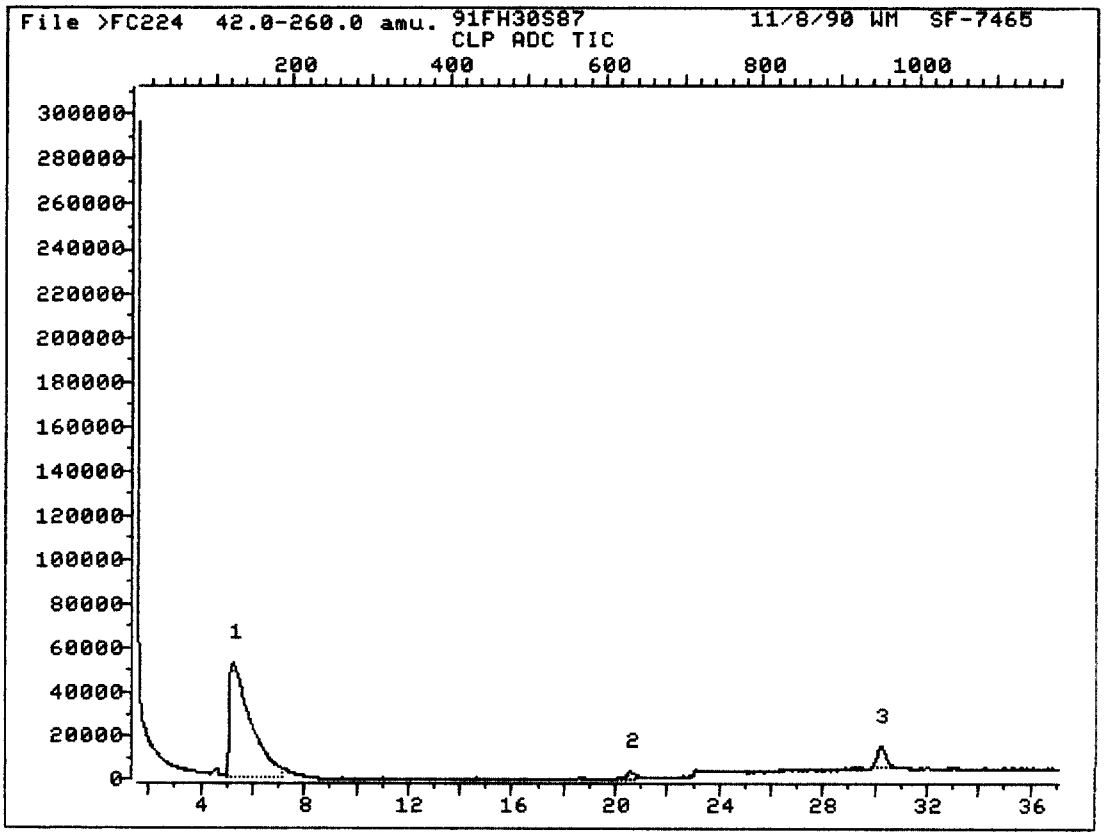
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 20.00 Amount Used (AU) = 20.00

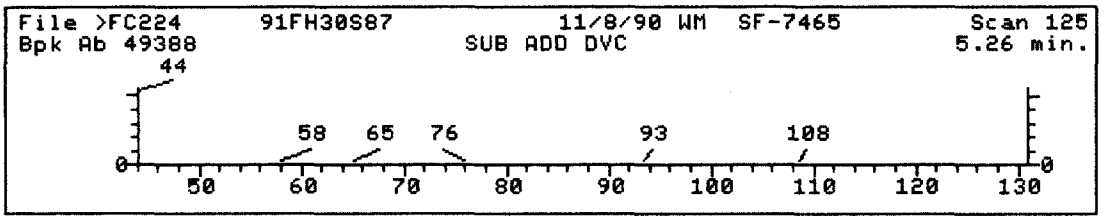
Correction Factor = 1.00 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

5:32 PM TUE., 13 NOV., 1990


File >FC224 42.0-260.0 amu. 91FH30S87 11/8/90 WM SF-7465
ADC TIC
200 400 600 800 1000
300000 280000 260000 240000 220000 200000 180000 160000 140000 120000 100000 80000 60000 40000 20000 0
4 8 12 16 20 24 28 32 36


File >FC224 42.0-260.0 amu. 91FH30S87 11/8/90 WM SF-7465
CLP ADC TIC
200 400 600 800 1000
300000 280000 260000 240000 220000 200000 180000 160000 140000 120000 100000 80000 60000 40000 20000 0
1
2
3
4 8 12 16 20 24 28 32 36

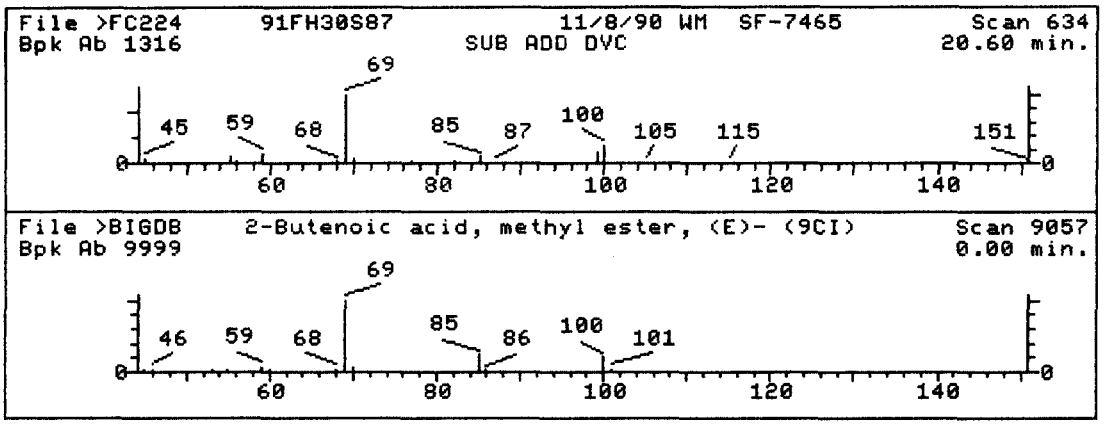


CO_2 - valve change 11/15/90 WM

. Unknown #,1
Area = 2875002. Tentative Concentration is 71.00

Sample file: >FC224 Spectrum #: 125

No data base entries were retrieved.

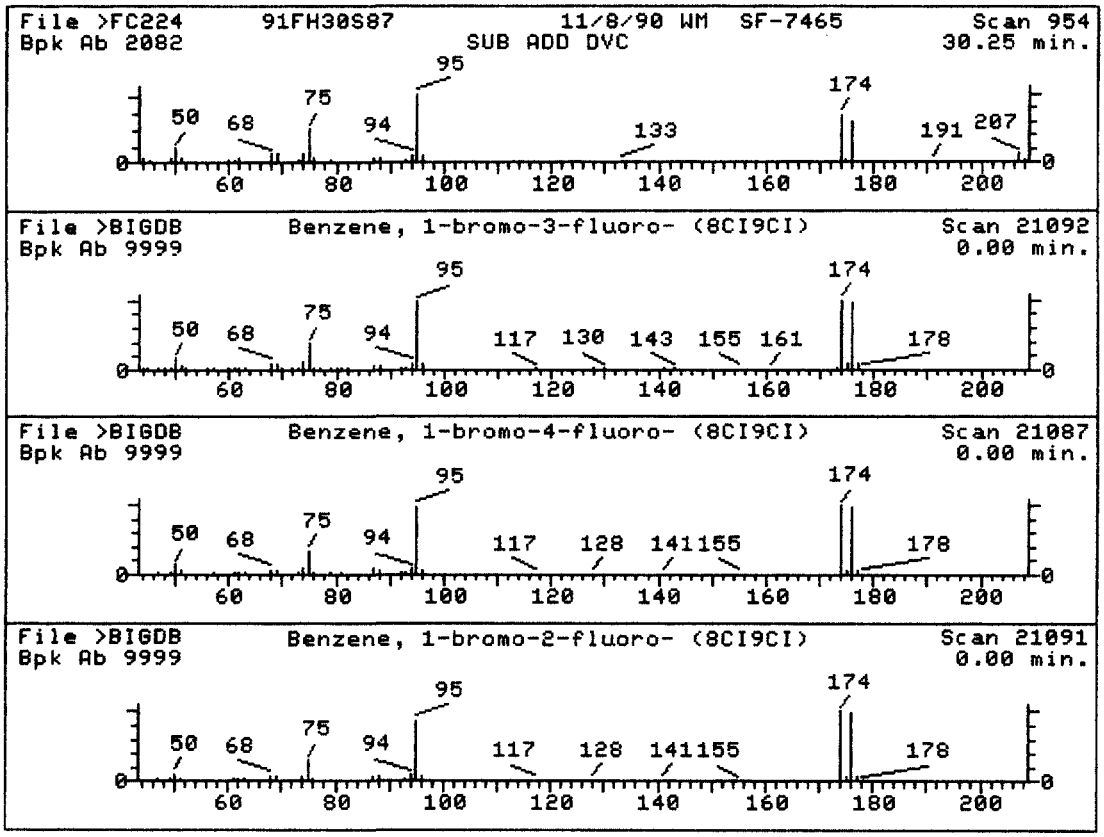


Unknown #,2

Area = 60373.00 Tentative Concentration is 2.00

NO TIC 11/15/90 WM

1. 2-Butenoic acid, methyl ester, (E)- (9CI) 100 C5H8O2



BFB
11/15/90
wm

Unknown #,3
Area = 219355.0 Tentative Concentration is 10.00

1. Benzene, 1-bromo-3-fluoro- (8CI9CI) 174 C6H4BrF
2. Benzene, 1-bromo-4-fluoro- (8CI9CI) 174 C6H4BrF
3. Benzene, 1-bromo-2-fluoro- (8CI9CI) 174 C6H4BrF

Sample file: >FC224 Spectrum #: 954
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	88*	1073069	21092	"BIGDB	89	24	2	2	83	5	65	59
2.	87*	460004	21087	"BIGDB	75	35	2	2	84	5	63	49
3.	47*	1072851	21091	"BIGDB	54	53	1	0	59	42	16	40

: ,R
:SV,4

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901109 08:21
Output File: ^FC225::L2 Injected at: 901108 21:11
Data File: >FC225::L2 Dilution Factor: 1.00000
Name: 91FH03R85 S
Misc: 11/8/90 WM SF-7465

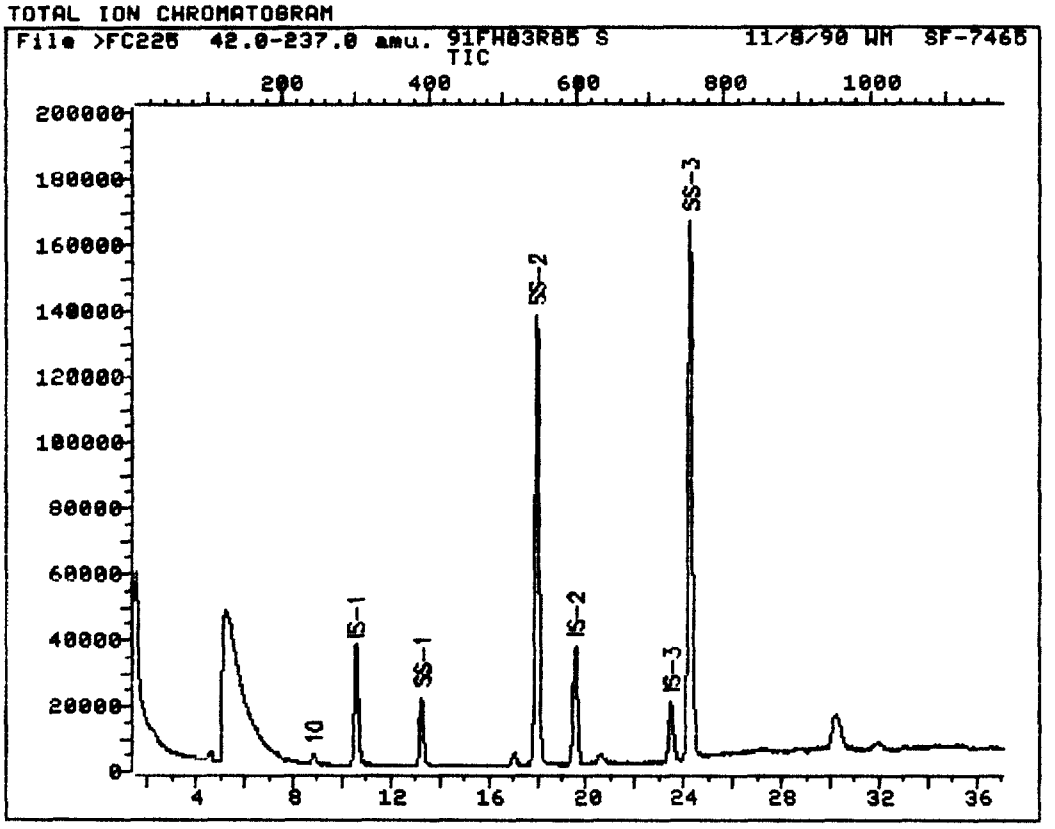
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

11/9/90 WM

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.56	130.0	64476	10.00	UG/L	95
10)	CARBON DISULFIDE	8.84	76.0	32992	~~.37~~	UG/L	100
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	69166	8.78	UG/L	80
17)	*2-Bromo-1-chloropropane	19.57	77.0	258594	10.00	UG/L	99
26)	BENZENE-D6	17.97	84.0	817425	10.02	UG/L	99
33)	*1,4-Dichlorobutane	23.49	55.0	116057	10.00	UG/L	96
38)	TOLUENE-D8	24.27	98.0	827593	10.54	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM

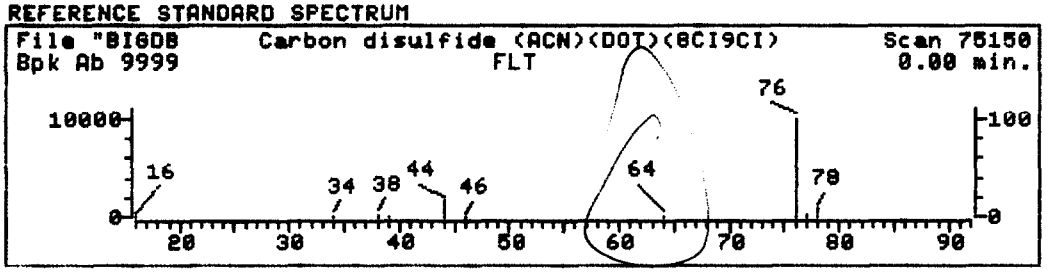


Data File: >FC225::L2 Quant Output File: ^FC225::L2
Name: 91FH03R85 S
Misc: 11/8/90 WM SF-7465

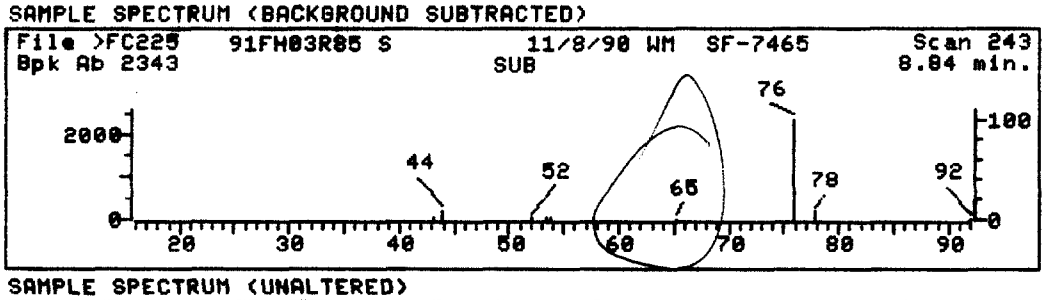
Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901109 08:21
Injected at: 901108 21:11

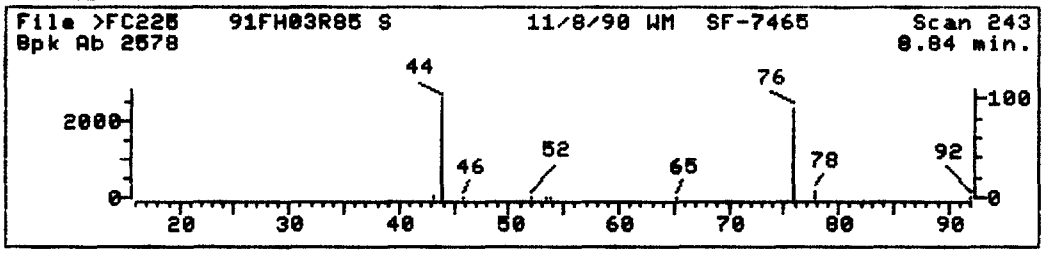
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >FC225::L2
Name: 91FH03R85 S
Misc: 11/8/90 WM SF-7465
Quant Time: 901109 08:21
Injected at: 901108 21:11

Quant Output File: ^FC225::L2

Quant ID File: IDCF3A::XX
Last Calibration: 901108 14:04

Compound No: 10
Compound Name: CARBON DISULFIDE
Scan Number: 243
Retention Time: 8.84 min.
Quant Ion: 76.0
Area: 32992
Concentration: .37 UG/L
q-value: 100

MS data file header from : >FC225

Sample: 91FH03R85 S Operator: CARSTEN MS 11/08/90 21:11
Misc : 11/8/90 WM SF-7465
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: VOA#3 Tuning file: MTBFB3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>FC225 91FH03R85 S 11/8/90 WM SF-7465
42.01 237.0 CLP ADC TIC
Upslope: .20 Area Reject: 23446. Max Peaks: 4 Bunching: 1
Dnslope: 0.00 Results File IFC225 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	~~5.22~~ CO_2	116	123	177	45666	2629949	2476163	100.00	88.337
2	~~17.84~~ NOTIC	508	515	522	3524	46176	39491	1.59	1.409
3	~~20.57~~ NOTIC	625	632	645	2908	82507	51647	2.09	1.842
4	~~30.25~~ BFB 11/15/90 WM	941	953	969	9957	512274	235795	9.52	8.412

Sum of corrected areas: 2803096.

Summary of Unknowns PBM Library Search and Quantitation

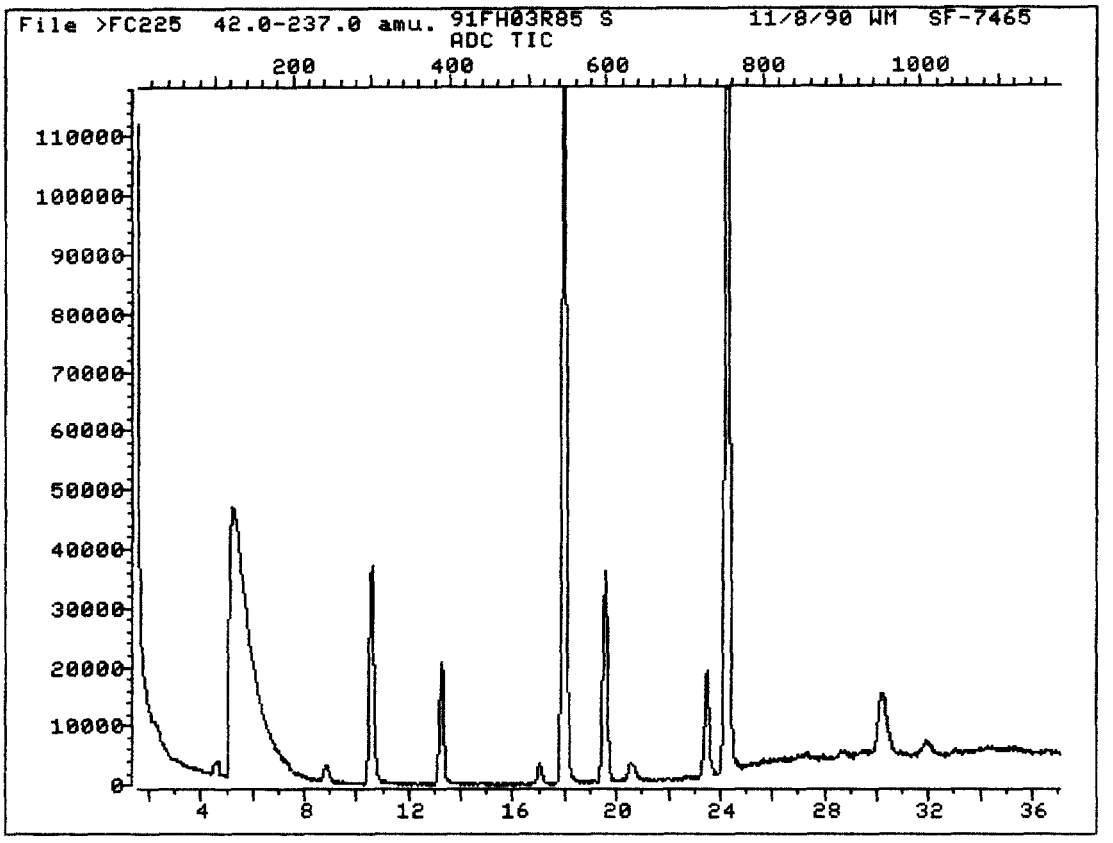
Standard	Concentration	Area	Retention Time	Unknown Window
1	10.0	432379.	10.56	1.55 - 15.06
2	10.0	426812.	19.57	15.06 - 21.53
3	10.0	234456.	23.49	21.53 - 37.06

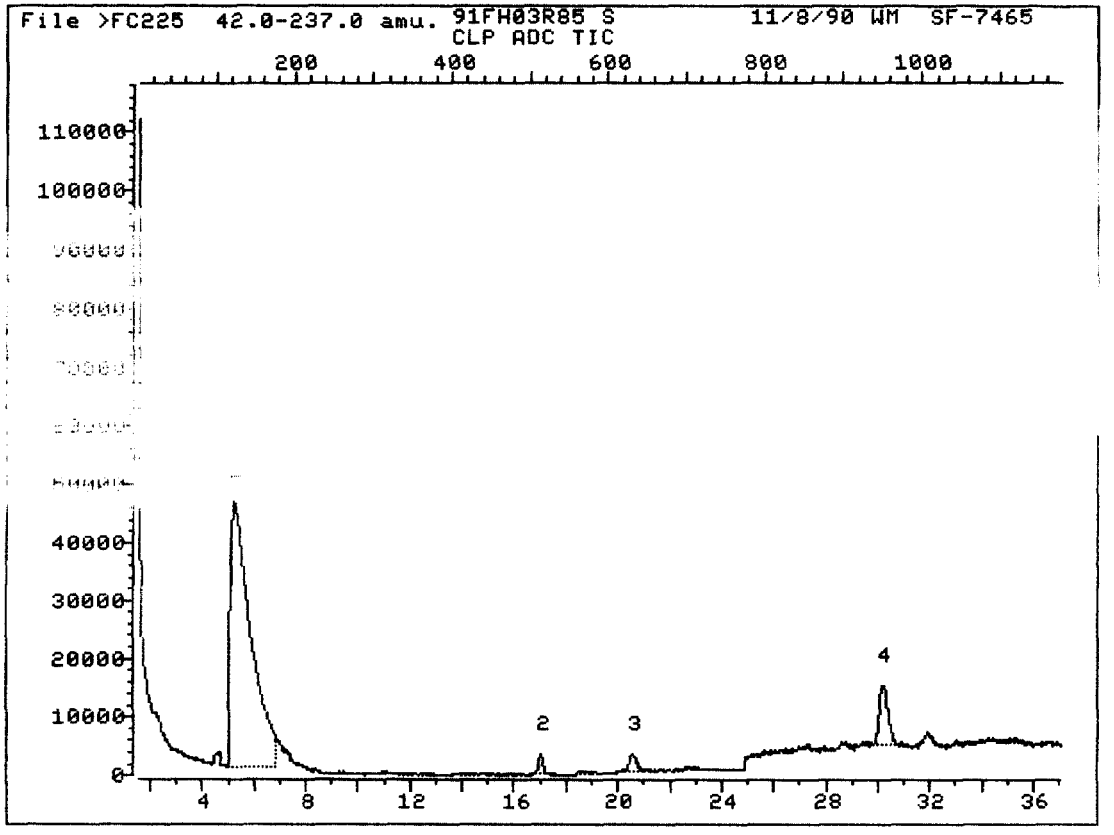
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 20.00 Amount Used (AU) = 20.00

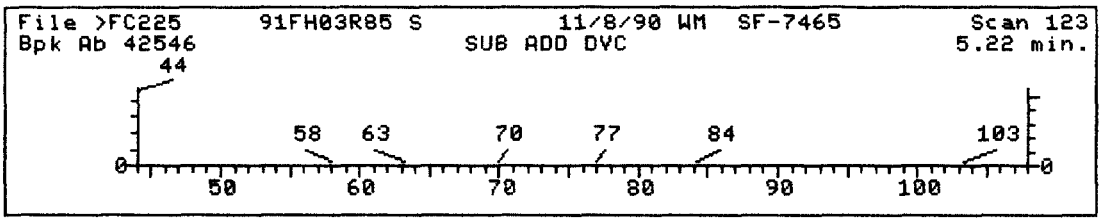
Correction Factor = 1.00 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

5:44 PM TUE., 13 NOV., 1990


File >FC225 42.0-237.0 amu. 91FH03R85 S
ADC TIC
11/8/90 WM SF-7465
200
400
600
800
1000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
4
8
12
16
20
24
28
32
36


File >FC225 42.0-237.0 amu. 91FH03R85 S
CLP ADC TIC
11/8/90 WM SF-7465
200
400
600
800
1000
110000
100000
40000
30000
20000
10000
0
2
3
4
4
8
12
16
20
24
28
32
36

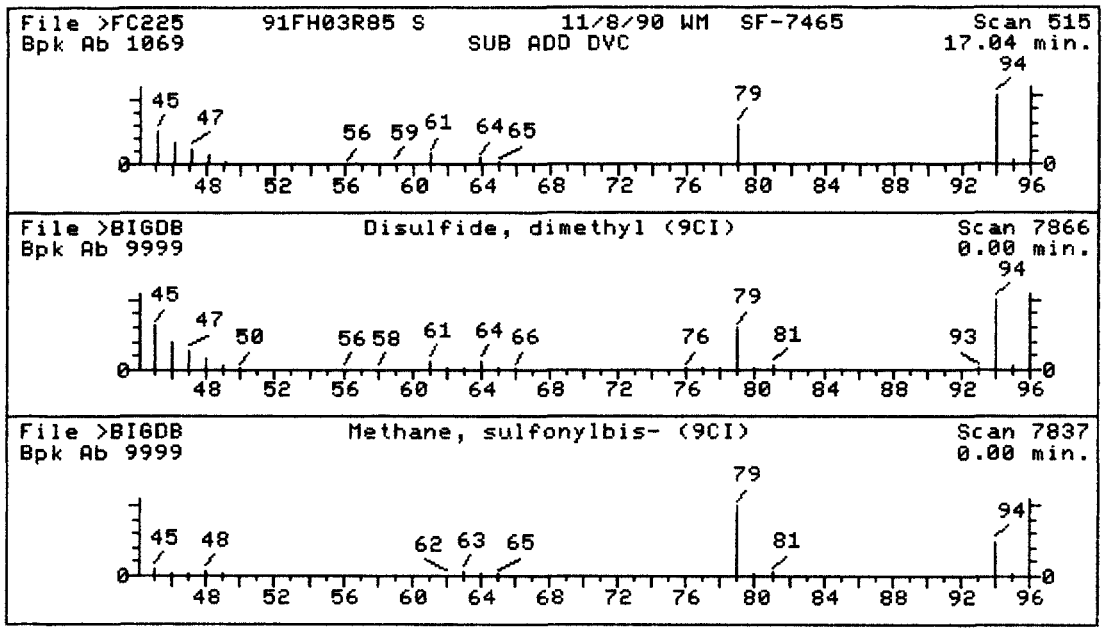


CO_2-valve change
11/15/90 WM

. Unknown #,1
Area = 2476163. Tentative Concentration is 57.00

Sample file: >FC225 Spectrum #: 123

No data base entries were retrieved.



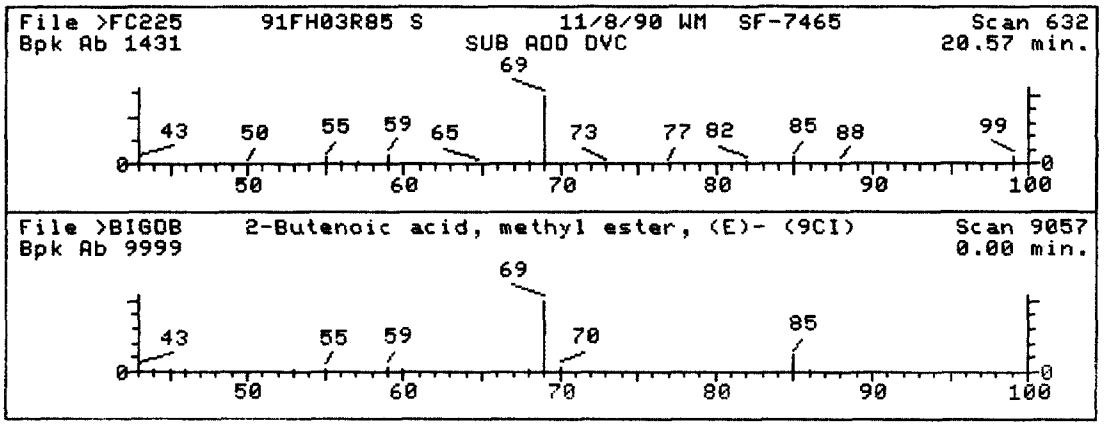
. Unknown #,2
Area = 39491.00 Tentative Concentration is .900

NO TIC 11/15/90 WM

1. Disulfide, dimethyl (9CI) 94 C2H6S2
2. Methane, sulfonylbis- (9CI) 94 C2H6O2S

Sample file: >FC225 Spectrum #: 515
Search speed: 1 Tilting option: S No. of ion ranges searched: 48

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	95*	624920	7866	"BIGDB	83	35	0	0	67	0	72	95
2.	25*	67710	7837	"BIGDB	26	69	3	0	199	43	8	13



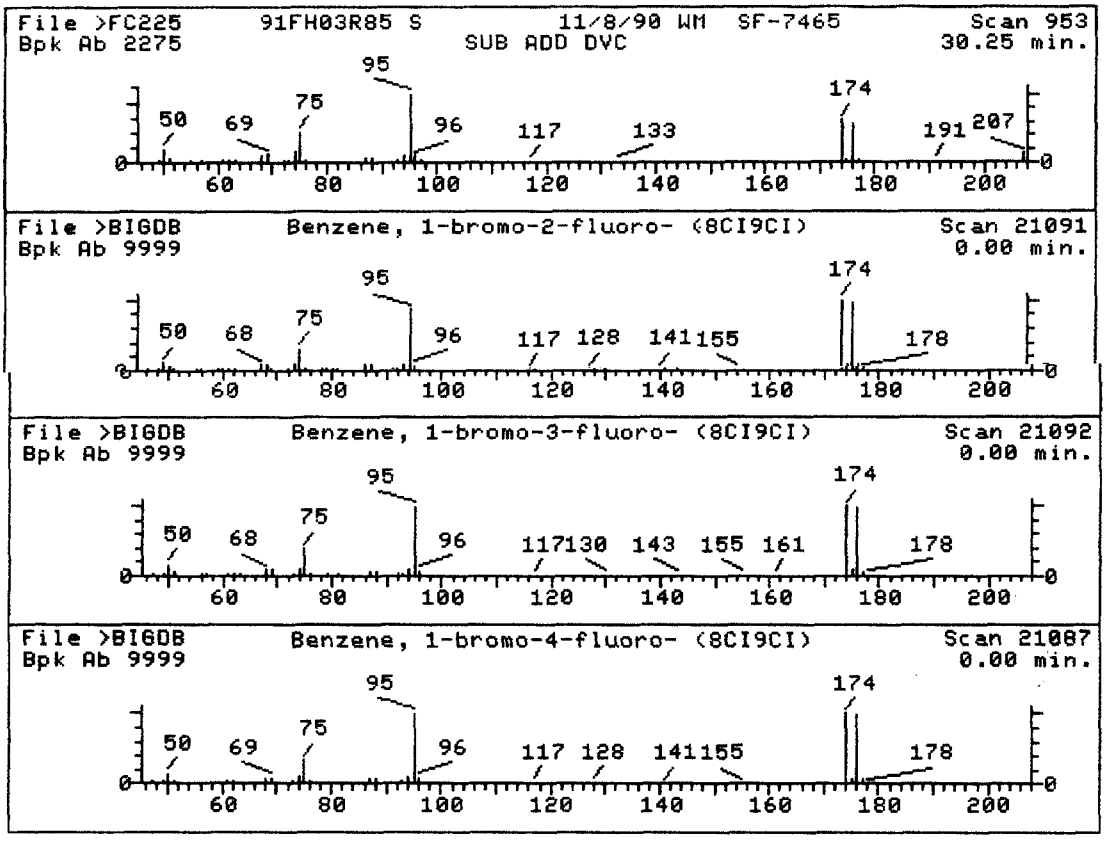
NOT IC
11/15/90
WM

. Unknown #,3
Area = 51647.00 Tentative Concentration is 1.000

1. 2-Butenoic acid, methyl ester, (E)- (9CI) 100 C5H8O2

Sample file: >FC225 Spectrum #: 632
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	42*	623438	9057	"BIGDB	25	63	3	0	100	23	17	13



. Unknown #,4
Area = 235795.0 Tentative Concentration is 10.00

BFB 11/15/90 WM

1. Benzene, 1-bromo-2-fluoro- (8CI9CI) 174 C6H4BrF
2. Benzene, 1-bromo-3-fluoro- (8CI9CI) 174 C6H4BrF
3. Benzene, 1-bromo-4-fluoro- (8CI9CI) 174 C6H4BrF

Sample file: >FC225 Spectrum #: 953
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	86*	1072851	21091	"BIGDB	94	13	1	1	76	16	50	86
2.	84*	1073069	21092	"BIGDB	95	18	2	1	77	8	55	65
3.	76*	460004	21087	"BIGDB	87	23	2	2	94	12	40	57

QUANT REPORT

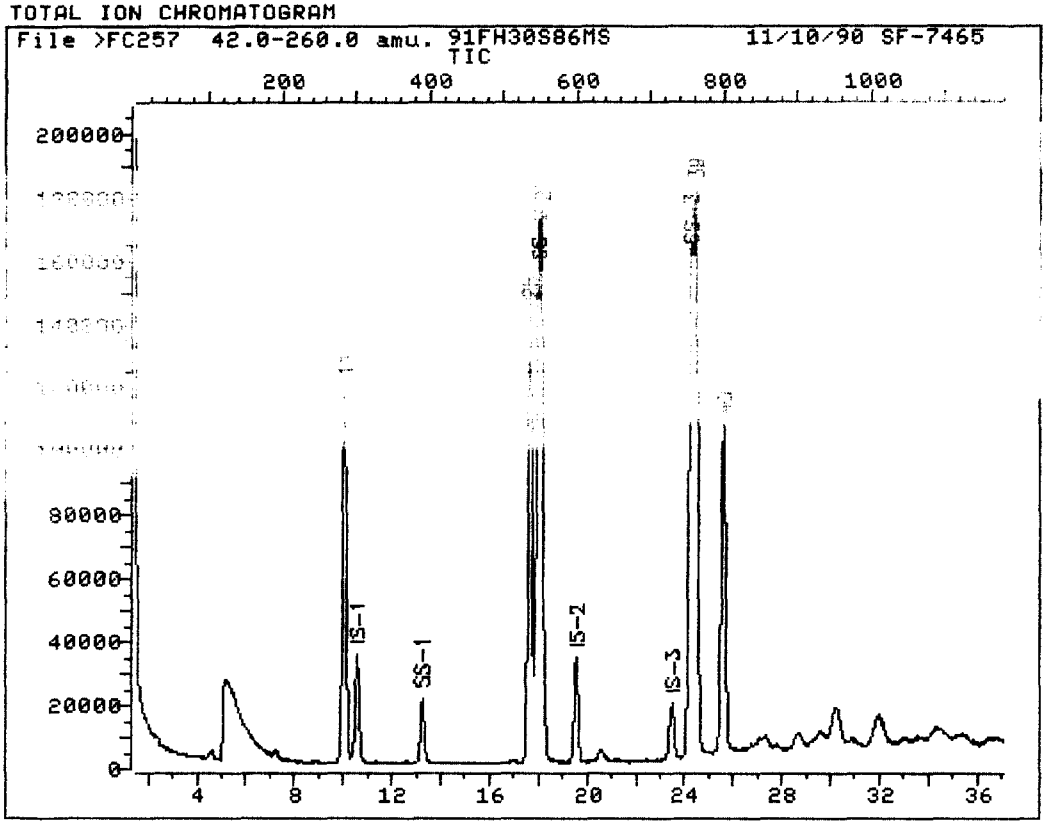
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901110 13:40
Output File: ^FC257::L2 Injected at: 901110 12:59
Data File: >FC257::A8 Dilution Factor: 1.00000
Name: 91FH30S86MS RE
Misc: 11/10/90 SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.58	130.0	60806	10.00	UG/L	96
11)	1,1-DICHLOROETHENE	10.07	96.0	281305	6.92	UG/L	83
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	66059	9.38	UG/L	85
17)	*2-Bromo-1-chloropropane	19.57	77.0	232875	10.00	UG/L	99
25)	TRICHLOROETHENE	17.64	130.0	303416	9.20	UG/L	95
26)	BENZENE-D6	18.00	84.0	730551	9.23	UG/L	99
27)	BENZENE	18.12	78.0	841469	9.05	UG/L	96
33)	*1,4-Dichlorobutane	23.52	55.0	112586	10.00	UG/L	91
38)	TOLUENE-D8	24.27	98.0	740965	8.28	UG/L	97
39)	TOLUENE	24.45	92.0	489176	8.37	UG/L	98
40)	CHLOROBENZENE	25.60	112.0	401535	9.33	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC257::A8 Quant Output File: ^FC257::L2
Name: 91FH30S86MS
Misc: 11/10/90 SF-7465

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

Operator ID: CARSTEN
Quant Time: 901110 13:40
Injected at: 901110 12:59

QUANT REPORT

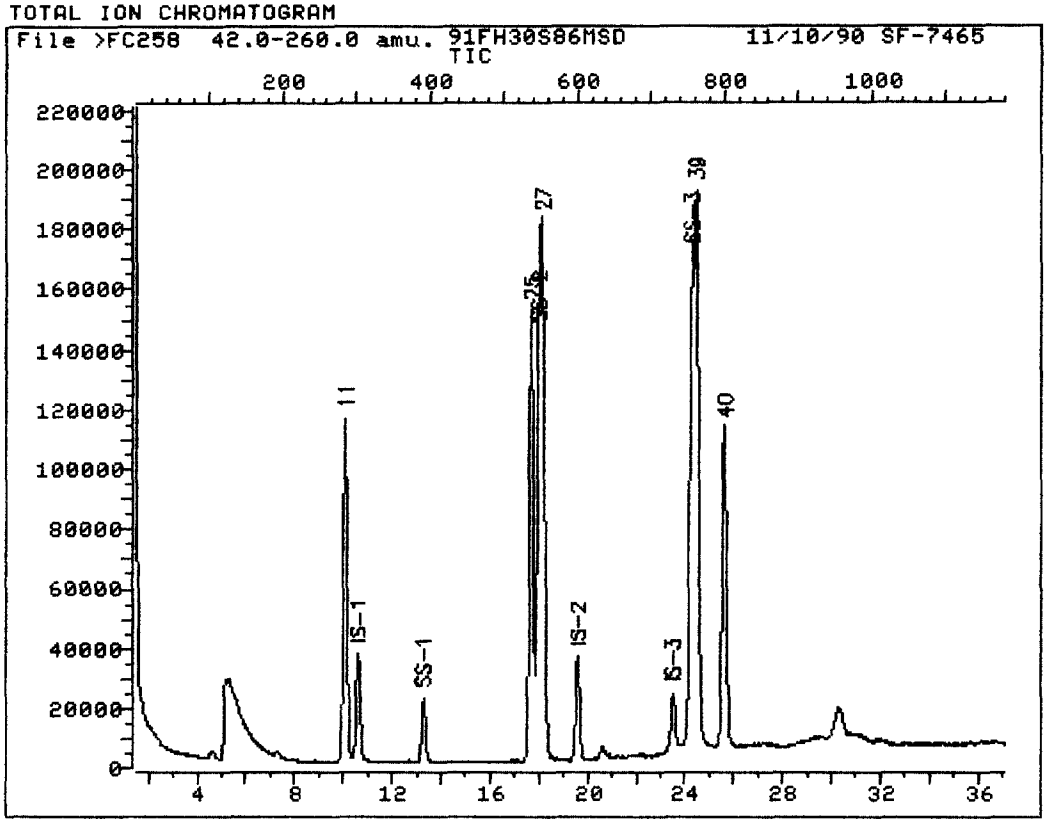
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901110 14:27
Output File: ^FC258::L2 Injected at: 901110 13:47
Data File: >FC258::A8 Dilution Factor: 1.00000
Name: 91FH30S86MSDRE 11-14-90
Misc: 11/10/90 SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.58	130.0	65445	10.00	UG/L	98
11)	1,1-DICHLOROETHENE	10.07	96.0	270554	6.18	UG/L	83
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	72500	9.56	UG/L	81
17)	*2-Bromo-1-chloropropane	19.57	77.0	250388	10.00	UG/L	99
25)	TRICHLOROETHENE	17.67	130.0	307128	8.66	UG/L	98
26)	BENZENE-D6	17.97	84.0	783618	9.21	UG/L	98
27)	BENZENE	18.12	78.0	872341	8.72	UG/L	97
33)	*1,4-Dichlorobutane	23.49	55.0	125046	10.00	UG/L	93
38)	TOLUENE-D8	24.27	98.0	791948	7.97	UG/L	97
39)	TOLUENE	24.46	92.0	514395	7.93	UG/L	98
40)	CHLOROBENZENE	25.63	112.0	432217	9.04	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC258::A8 Quant Output File: ^FC258::L2
Name: 91FH30S86MSD
Misc: 11/10/90 SF-7465

Id File: LOCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

Operator ID: CARSTEN
Quant Time: 901110 14:27
Injected at: 901110 13:47

QUANT REPORT

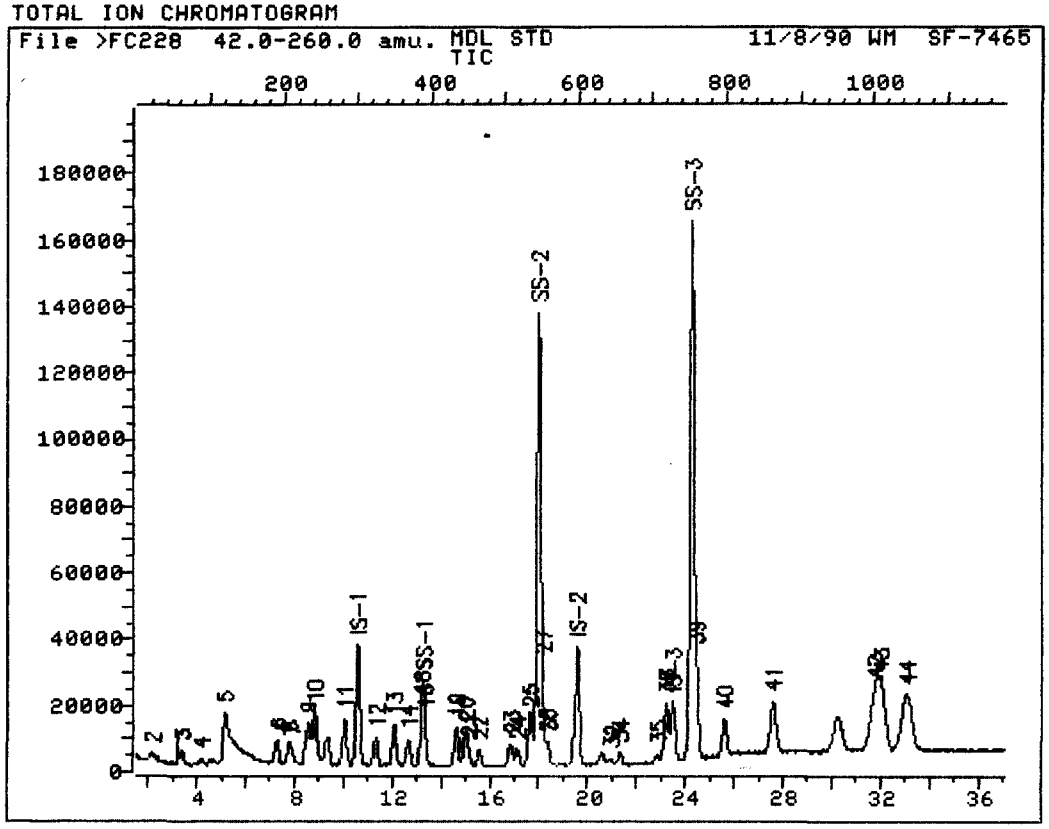
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901109 00:14
Output File: ^FC228::L2 Injected at: 901108 23:33
Data File: >FC228::A8 Dilution Factor: 1.00000
Name: MDL STD
Misc: 11/8/90 WM SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.56	130.0	64496	10.00	UG/L	98
2)	CHLOROMETHANE	2.16	50.0	6865	1.77	UG/L	100
3)	BROMOMETHANE	3.39	94.0	18010	1.69	UG/L	95
4)	VINYL CHLORIDE	4.17	62.0	11938	2.20	UG/L	92
5)	CHLOROETHANE	5.14	64.0	43461	1.59	UG/L	97
6)	METHYLENE CHLORIDE	7.28	84.0	18429	.74	UG/L	81
7)	ACROLEIN	7.85	56.0	24593	39.49	UG/L	90
8)	ACETONE	7.76	43.0	47896	56.85	UG/L	96
9)	ACRYLONITRILE	8.51	53.0	87165	56.40	UG/L	96
10)	CARBON DISULFIDE	8.82	76.0	162308	1.84	UG/L	100
11)	1,1-DICHLOROETHENE	10.05	96.0	33754	.61	UG/L	84
12)	1,1-DICHLOROETHANE	11.32	63.0	55961	.67	UG/L	95
13)	1,2-DICHLOROETHENE (TOTAL)	12.07	96.0	29620	.60	UG/L	82
14)	CHLOROFORM	12.64	83.0	35982	.69	UG/L	93
15)	1,2-DICHLOROETHANE-D4	13.25	65.0	70595	8.96	UG/L	80
16)	1,2-DICHLOROETHANE	13.34	62.0	8503	.68	UG/L	89
17)	*2-Bromo-1-chloropropane	19.55	77.0	253121	10.00	UG/L	99
18)	2-BUTANONE	13.19	72.0	8033	17.40	UG/L	98
19)	1,1,1-TRICHLOROETHANE	14.60	97.0	46017	.62	UG/L	97
20)	CARBON TETRACHLORIDE	15.00	117.0	36963	.60	UG/L	91
21)	VINYL ACETATE	15.12	43.0	28341	1.53	UG/L	99
22)	BROMODICHLOROMETHANE	15.57	83.0	20434	.63	UG/L	99
23)	1,2-DICHLOROPROPANE	16.86	63.0	25097	.64	UG/L	95
24)	CIS-1,3-DICHLOROPROPENE	17.11	75.0	27812	.72	UG/L	95
25)	TRICHLOROETHENE	17.62	130.0	31789	.61	UG/L	93
26)	BENZENE-D6	17.98	84.0	794169	9.94	UG/L	98
27)	BENZENE	18.13	78.0	98937	.66	UG/L	98
28)	DIBROMOCHLOROMETHANE	18.31	129.0	9116	.60	UG/L	99
30)	1,1,2-TRICHLOROETHANE	18.40	97.0	6168	.57	UG/L	94
32)	BROMOFORM	20.97	173.0	3710	.51	UG/L	93
33)	*1,4-Dichlorobutane	23.47	55.0	115126	10.00	UG/L	98
34)	4-METHYL-2-PENTANONE	21.33	43.0	22598	3.81	UG/L	94
35)	2-HEXANONE	22.86	43.0	17484	4.08	UG/L	91
36)	TETRACHLOROETHENE	23.20	164.0	25890	.58	UG/L	95
37)	1,1,2,2-TETRACHLOROETHANE	23.20	83.0	8250	.55	UG/L	74
38)	TOLUENE-D8	24.25	98.0	798930	10.26	UG/L	98
39)	TOLUENE	24.43	92.0	55190	.66	UG/L	95
40)	CHLOROBENZENE	25.58	112.0	41988	.65	UG/L	97
41)	ETHYLBENZENE	27.57	106.0	32517	.62	UG/L	98
42)	STYRENE	31.73	104.0	101801	1.83	UG/L	94
43)	META XYLENE	32.00	106.0	73588	1.62	UG/L	93
44)	O-&/OR P-XYLENE	33.06	106.0	47237	1.17	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC228::A8 Quant Output File: ^FC228::L2
Name: MDL STD
Misc: 11/8/90 WM SF-7465

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901109 00:14
Injected at: 901108 23:33

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901110 19:59
Output File: ^FC265::L2 Injected at: 901110 19:18
Data File: >FC265::A8 Dilution Factor: 1.00000
Name: MDL STD
Misc: 11/10/90

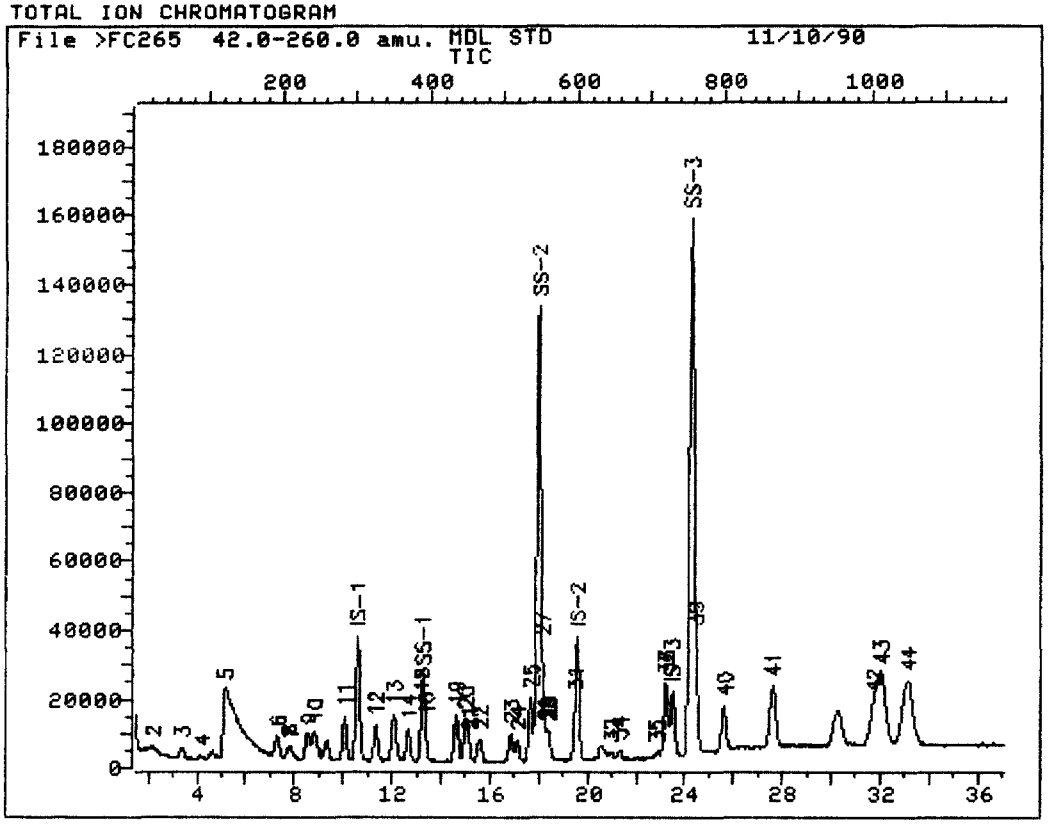
ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.59	130.0	64725	10.00	UG/L	99
2)	CHLOROMETHANE	2.18	50.0	5762	1.15	UG/L	100
3)	BROMOMETHANE	3.38	94.0	13542	1.03	UG/L	98
4)	VINYL CHLORIDE	4.20	62.0	6770	.81	UG/L	90
5)	CHLOROETHANE	5.13	64.0	25093	.71	UG/L	96
6)	METHYLENE CHLORIDE	7.30	84.0	17602	1.07	UG/L	89
7)	ACROLEIN	7.87	56.0	13298	24.20	UG/L	94
8)	ACETONE	7.78	43.0	29793	38.29	UG/L	86
9)	ACRYLONITRILE	8.57	53.0	55780	38.17	UG/L	99
10)	CARBON DISULFIDE	8.84	76.0	81368	.72	UG/L	100
11)	1,1-DICHLOROETHENE	10.07	96.0	28931	.67	UG/L	82
12)	1,1-DICHLOROETHANE	11.34	63.0	64646	1.09	UG/L	95
13)	1,2-DICHLOROETHENE (TOTAL)	12.09	96.0	32301	.89	UG/L	82
14)	CHLOROFORM	12.67	83.0	43458	1.22	UG/L	97
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	70087	9.34	UG/L	80
16)	1,2-DICHLOROETHANE	13.39	62.0	10151	1.29	UG/L	92
17)	*2-Bromo-1-chloropropane	19.57	77.0	249823	10.00	UG/L	96
18)	2-BUTANONE	13.21	72.0	6018	15.65	UG/L	97
19)	1,1,1-TRICHLOROETHANE	14.63	97.0	52368	.96	UG/L	99
20)	CARBON TETRACHLORIDE	15.02	117.0	42262	.90	UG/L	99
21)	VINYL ACETATE	15.17	43.0	45805	4.56	UG/L	95
22)	BROMODICHLOROMETHANE	15.59	83.0	25723	1.31	UG/L	93
23)	1,2-DICHLOROPROPANE	16.86	63.0	30644	1.25	UG/L	96
24)	CIS-1,3-DICHLOROPROPENE	17.13	75.0	34355	1.49	UG/L	99
25)	TRICHLOROETHENE	17.67	130.0	35242	1.00	UG/L	97
26)	BENZENE-D6	18.00	84.0	758855	8.94	UG/L	97
27)	BENZENE	18.15	78.0	114708	1.15	UG/L	94
28)	DIBROMOCHLOROMETHANE	18.33	129.0	11746	1.36	UG/L	95
29)	TRANS-1,3-DICHLOROPROPENE	18.39	75.0	11635	1.07	UG/L	94
30)	1,1,2-TRICHLOROETHANE	18.42	97.0	8287	1.36	UG/L	88
31)	2-CHLOROETHYL VINYLETHER	19.48	63.0	6202	1.73	UG/L	85
32)	BROMOFORM	20.99	173.0	5124	1.34	UG/L	95
33)	*1,4-Dichlorobutane	23.49	55.0	121104	10.00	UG/L	94
34)	4-METHYL-2-PENTANONE	21.35	43.0	18426	3.15	UG/L	97
35)	2-HEXANONE	22.86	43.0	14644	3.67	UG/L	83
36)	TETRACHLOROETHENE	23.22	164.0	29859	.84	UG/L	96
37)	1,1,2,2-TETRACHLOROETHANE	23.22	83.0	11134	1.19	UG/L	87
38)	TOLUENE-D8	24.27	98.0	770013	8.00	UG/L	99
39)	TOLUENE	24.46	92.0	62472	.99	UG/L	98
40)	CHLOROBENZENE	25.63	112.0	50862	1.10	UG/L	99
41)	ETHYLBENZENE	27.59	106.0	37830	.94	UG/L	99
42)	STYRENE	31.73	104.0	74734	1.15	UG/L	92
43)	META XYLENE	32.03	106.0	79253	1.55	UG/L	99

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	33.12	106.0	91715	2.02	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC265::A8 Quant Output File: ^FC265::L2
Name: MDL STD
Misc: 11/10/90

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901110 10:30

Operator ID: CARSTEN
Quant Time: 901110 19:59
Injected at: 901110 19:18

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901109 08:25
Output File: ^FC226::L2 Injected at: 901108 21:58
Data File: >FC226::L2 Dilution Factor: 1.00000
Name: 91FH30S86MS
Misc: 11/8/90 WM SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

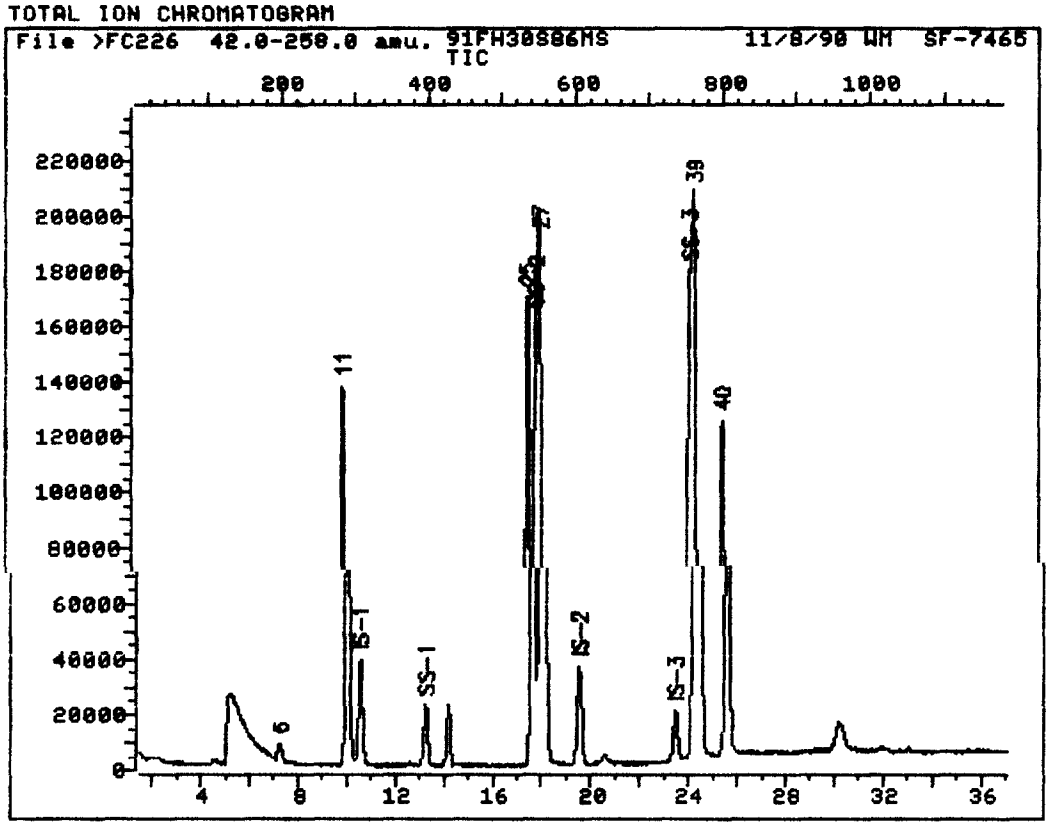
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.59	130.0	66832	10.00	UG/L	99
6)	METHYLENE CHLORIDE	7.27	84.0	15991	.62	UG/L	87
11)	1,1-DICHLOROETHENE	10.05	96.0	322050	5.63	UG/L	84
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	70820	8.67	UG/L	84
17)	*2-Bromo-1-chloropropane	19.54	77.0	260186	10.00	UG/L	98
25)	TRICHLOROETHENE	17.64	130.0	345489	6.44	UG/L	96
26)	BENZENE-D6	17.97	84.0	808547	9.85	UG/L	99
27)	BENZENE	18.12	78.0	976574	6.35	UG/L	96
33)	*1,4-Dichlorobutane	23.49	55.0	119975	10.00	UG/L	95
38)	TOLUENE-D8	24.28	98.0	809331	9.97	UG/L	95
39)	TOLUENE	24.46	92.0	584534	6.73	UG/L	98
40)	CHLOROBENZENE	25.60	112.0	479769	7.12	UG/L	99

* Compound is ISTD

original
ms/msd's

— poor recovery

TOTAL ION CHROMATOGRAM



Data File: >FC226::L2 Quant Output File: ^FC226::L2
Name: 91FH30S86MS
Misc: 11/8/90 WM SF-7465

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901109 08:25
Injected at: 901108 21:58

QUANT REPORT

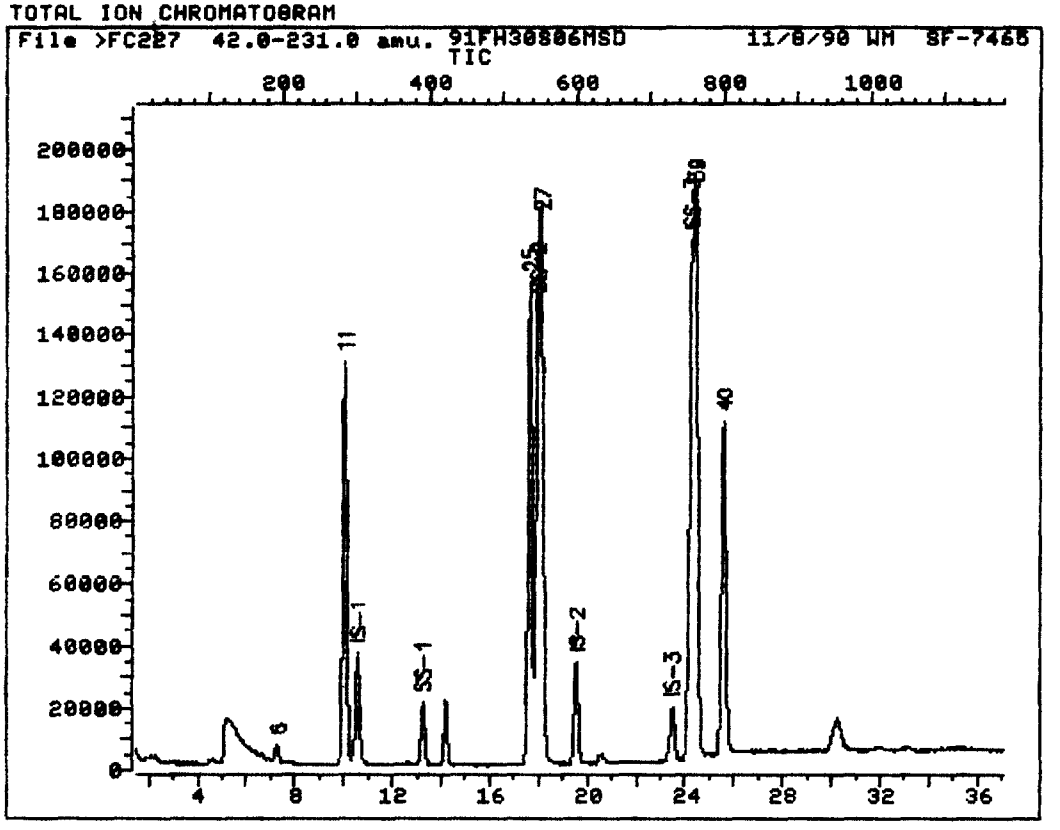
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 901109 08:30
Output File: ^FC227::L2 Injected at: 901108 22:46
Data File: >FC227::L2 Dilution Factor: 1.00000
Name: 91FH30S6MSD
Misc: 11/8/90 WM SF-7465

ID File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	10.58	130.0	62315	10.00	UG/L	99
6)	METHYLENE CHLORIDE	7.30	84.0	14301	.60	UG/L	94
11)	1,1-DICHLOROETHENE	10.07	96.0	306698	5.75	UG/L	84
15)	1,2-DICHLOROETHANE-D4	13.27	65.0	66691	8.76	UG/L	83
17)	*2-Bromo-1-chloropropane	19.57	77.0	236128	10.00	UG/L	98
25)	TRICHLOROETHENE	17.64	130.0	317100	6.52	UG/L	96
26)	BENZENE-D6	17.97	84.0	759607	10.19	UG/L	98
27)	BENZENE	18.12	78.0	879516	6.30	UG/L	97
33)	*1,4-Dichlorobutane	23.48	55.0	114957	10.00	UG/L	95
38)	TOLUENE-D8	24.27	98.0	756005	9.72	UG/L	99
39)	TOLUENE	24.45	92.0	525847	6.32	UG/L	99
40)	CHLOROBENZENE	25.60	112.0	424854	6.58	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >FC227::L2 Quant Output File: ^FC227::L2
Name: 91FH30S06MSD
Misc: 11/8/90 WM SF-7465

Id File: IDCF3A::XX
Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP
Last Calibration: 901108 14:04

Operator ID: CARSTEN
Quant Time: 901109 08:30
Injected at: 901108 22:46

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

91FH30S86MS

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC226
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	J
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	6.	
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	6.	
71-43-2	Benzene	6.	
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	7.	
108-90-7	Chlorobenzene	7.	
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
91FH30S86MSD

Study Name: ALCO
Data Set: SF-7465
Lab File ID: >FC227
Matrix: (soil/water) WATER
Sample wt/vol: 20 mL

Date Received: 11/05/90
Date Analyzed: 11/08/90
Dilution Factor: 1.0
Level:(low/med) LOW

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	J
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	6.	
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	7.	
71-43-2	Benzene	6.	
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	6.	
108-90-7	Chlorobenzene	7.	
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank; ARE THERE TICs ? (Circle) YES/NO

Quant ID File: IDCF3A::XX

Title: ID FOR 624NS HP #3 CF 08\22\90 2 COMPONENT TRAP

Last EDIT Date: 901109 15:07 Last Calib Date: 901110 10:30

RT Window (+/- min): 1.00
Max Hits/Compound: 1
Minimum Area: 1000
Peak/Base Peak Ratio: 35.00 %
Slope Sensitivity: .200
Subtraction Method: 2
Ignore max check: NO
Auto Qdel Method: 5
Units of Conc: UG/L

KDH
11-16-90

use only for reference of RTs not RFs. See form 6+7s for RFs.

Number of Compounds: 44

Comp No.	Compound Name	(Type)	Retention Time Min.	(Rel)	R.F.	Conc.	
1)	*Bromochloromethane	(I)	10.58(	1.000)	1.00000	10.00	**
2)	CHLOROMETHANE	(T)	2.20(	.208)	.77705	20.00	**
3)	BROMOMETHANE	(T)	3.43(	.324)	2.03033	20.00	**
4)	VINYL CHLORIDE	(T)	4.25(	.401)	1.28501	20.00	**
5)	CHLOROETHANE	(T)	5.18(	.490)	5.43191	20.00	**
6)	METHYLENE CHLORIDE	(T)	7.26(	.686)	2.54392	15.00	**
7)	ACROLEIN	(T)	7.80(	.738)	.08489	375.00	
8)	ACETONE	(T)	7.74(	.732)	.12021	375.00	**
9)	ACRYLONITRILE	(T)	8.47(	.800)	.22580	375.00	**
10)	CARBON DISULFIDE	(T)	8.77(	.829)	17.34098	12.50	**
11)	1,1-DICHLOROETHENE	(M)	10.06(	.952)	6.68699	15.00	**
12)	1,1-DICHLOROETHANE	(T)	11.33(	1.071)	9.18081	15.00	**
13)	1,2-DICHLOROETHENE (TOTAL)	(T)	12.05(	1.140)	5.59117	15.00	
14)	CHLOROFORM	(T)	12.66(	1.197)	5.52443	15.00	**
15)	1,2-DICHLOROETHANE-D4	(S)	13.29(	1.257)	1.15879	10.00	
16)	1,2-DICHLOROETHANE	(T)	13.35(	1.262)	1.21372	15.00	**
17)	*2-Bromo-1-chloropropane	(I)	19.56(	1.000)	1.00000	10.00	**
18)	2-BUTANONE	(T)	13.20(	.675)	.01539	125.00	**
19)	1,1,1-TRICHLOROETHANE	(T)	14.62(	.747)	2.18265	15.00	**
20)	CARBON TETRACHLORIDE	(T)	15.01(	.767)	1.87127	15.00	**
21)	VINYL ACETATE	(T)	15.13(	.773)	.40232	37.50	**
22)	BROMODICHLOROMETHANE	(T)	15.55(	.795)	.78483	15.00	**
23)	1,2-DICHLOROPROPANE	(T)	16.85(	.861)	.98187	15.00	**
24)	CIS-1,3-DICHLOROPROPENE	(T)	17.12(	.875)	.92387	18.00	**
25)	TRICHLOROETHENE	(M)	17.63(	.901)	1.41592	15.00	**
26)	BENZENE-D6	(S)	17.96(	.918)	3.39845	10.00	
27)	BENZENE	(M)	18.12(	.926)	3.99442	15.00	**
28)	DIBROMOCHLOROMETHANE	(T)	18.30(	.935)	.34524	15.00	
29)	TRANS-1,3-DICHLOROPROPENE	(T)	18.36(	.938)	.43407	12.00	**
30)	1,1,2-TRICHLOROETHANE	(T)	18.39(	.940)	.24307	15.00	**
31)	2-CHLOROETHYL VINYLETHER	(T)	19.38(	.991)	.14336	15.00	**
32)	BROMOFORM	(T)	20.98(	1.072)	.15355	15.00	**
33)	*1,4-Dichlorobutane	(I)	23.48(	1.000)	1.00000	10.00	**
34)	4-METHYL-2-PENTANONE	(T)	21.34(	.909)	.48373	25.00	**
35)	2-HEXANONE	(T)	22.85(	.973)	.32944	25.00	**
36)	TETRACHLOROETHENE	(T)	23.21(	.988)	2.95272	15.00	**
37)	1,1,2,2-TETRACHLOROETHANE	(T)	23.21(	.988)	.77553	15.00	**
38)	TOLUENE-D8	(S)	24.27(	1.033)	7.95066	10.00	
39)	TOLUENE	(M)	24.45(	1.041)	5.18847	15.00	**

40)	CHLOROBENZENE	(M)	25.57(	1.089)	3.82343	15.00 **
41)	ETHYLBENZENE	(T)	27.59(	1.175)	3.33356	15.00 **
** 42)	STYRENE	(T)	31.69(	1.349)	5.35718	12.50 **
43)	META XYLENE	(T)	31.96(	1.361)	4.21383	30.00 **
44)	O-&/OR P-XYLENE	(T)	33.05(	1.407)	3.75458	37.60 **

* Compound is ISTD
** Compound uses different Quant parameters