SDMS US EPA REGION V -1

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141526

000002

ENSECO AIR TOXICS RAW DATA PACKAGE SOP SEPT. 92
EPA CLP SOW FORMAT

ANALYSIS I.D.: A- 105871

I. SUMMARY REPORT	Completed
1. YELLOW COVER PAGE	MC 6/20
2. REPORT COVERLETTER	✓
3. REPORT NARRATIVE (separate page)	✓
4. SAMPLE RESULTS SUMMARY PAGES	✓
5. QC RESULTS SUMMARY PAGES	✓
6. BLANK RESULTS SUMMARY PAGES	✓
7. CANISTER COC FORMS	✓
8. CANISTER QC CERT. FORMS + QUANT/CHRO	✓
9. SAMPLE CHAIN OF CUSTODY (ORIGINAL)	✓

II. RAW DATA PACKAGE	
1. SPACER PAGE - SAMPLE ANALYSIS	✓
2. INJECTION LOG BENCHSHEETS FOR SHIFTS(Chronol. order by isntr.)	✓
{For all samples in package in ascending order}:	
3. FORM I SAMPLE RESULTS PAGE + TIC RESULTS SUMMARY IF APPLIC.	✓
4. CHROMATOGRAM (peaks labled with I.S. names and target cpd. RTs)	✓
5. QUANTITATION REPORT (Must have R.T.s and Quant ions) (All manual integrations and edits must be initialed and dated)	✓
6. SAMPLE SPECTRA FOR ALL REPORTED COMPOUND RESULTS	✓
7. TIC SPECTRA FOR ALL REPORTED TICS IF APPLIC.(WITH 3 BEST MATCHES)	✓
{Initial Calibrations in chronol. order by instrument}:	
8. SPACER PAGE	✓
9. INITIAL CALIBRATION SUMMARY PAGES	✓
10. CHROMATOGRAM AND QUANT. REPORT FOR EACH STD IN 5 POINT	✓
{Continuing Calibrations in chronol. order by instrument}:	
11. CONTINUING CALIBRATION SUMMARY FORM	✓
12. CHROMATOGRAM AND QUANT REPORT FOR EACH (spectra not required)	✓
{QA/QC in chronol. order by instrument}	
13. SPACER PAGE	✓
14. BFB TUNE SUMMARIES	✓
15. METHOD BLANK SUMMARY FORMS + CHRO/QUANT FOR EACH	✓
16. LCS/LCSD SUMMARY FORMS + CHRO/QUANT FOR EACH	✓
17 Internal Std Summary	—

Assembled by: 6-13 (init/date)

Reviewed by: MC 6/20 (init/date)

SUMMARY REPORT

Enseco - Air Toxics Laboratory
18501 East Gale Avenue, Suite 130
City of Industry, CA 91748-1321
(818) 965-1006 • FAX (818) 965-1003

Enseco
A Corning Company

June 15, 1994

ECOLOGY & ENVIRONMENT, INC.
111 West Jackson Blvd., 12th Floor
Chicago, IL 60604
ATTN: MS. MARY JANE RIPP

ANALYSIS NO.: 105871-0001/0007-SA
ANALYSES: Volatile Organics by GCMS - EPA TO14
DATE SAMPLED: 06/06/94
DATE SAMPLE REC'D: 06/08/94

PROJECT NO.: SAUGET

Enclosed with this letter is the report on the chemical and physical analyses for the samples from ANALYSIS NO.: 105871-0001/0007-SA as shown above.

The samples were received by Enseco-Air Toxics Laboratory, intact and with the chain-of-custody record attached.

Please note that ND means not detected at the reporting limits expressed.

The preliminary results were faxed to Ms. Mary Jane Ripp at 1:45 p.m. on June 13, 1994.

APPROVED

6/16/94
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
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SAMPLE DESCRIPTION INFORMATION
for
Ecology & Environment, Inc

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
105871-0001-SA	AS-1	AIR	06 JUN 94		08 JUN 94
105871-0002-SA	AS-2	AIR	06 JUN 94		08 JUN 94
105871-0003-SA	AS-3	AIR	06 JUN 94		08 JUN 94
105871-0004-SA	AS-4	AIR	06 JUN 94		08 JUN 94
105871-0005-SA	AS-5	AIR	06 JUN 94		08 JUN 94
105871-0006-SA	BKND	AIR	06 JUN 94		08 JUN 94
105871-0007-SA	TRIP BLANK	AIR	06 JUN 94		08 JUN 94

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-1
Lab ID: 105871-0001-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	87	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	30	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	130	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	2.1	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	3.0	ppb (v/v)	2.0
Xylenes (total)	14	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: AS-1
Lab ID: 105871-0001-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	35	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-2
Lab ID: 105871-0002-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	13	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: AS-2
Lab ID: 105871-0002-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-3
Lab ID: 105871-0003-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	22	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	8.1	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: AS-3
Lab ID: 105871-0003-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	10	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-4
Lab ID: 105871-0004-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit	
Dichlorodifluoromethane	ND	ppb (v/v)	2.3	1
Chloromethane	ND	ppb (v/v)	4.6	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.3	
Vinyl chloride	ND	ppb (v/v)	2.3	
Bromomethane	ND	ppb (v/v)	2.3	
Chloroethane	ND	ppb (v/v)	4.6	
Trichlorofluoromethane	ND	ppb (v/v)	2.3	
1,1-Dichloroethene	ND	ppb (v/v)	2.3	
Carbon disulfide	ND	ppb (v/v)	12	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.3	
Acetone	12	ppb (v/v)	12	
Methylene chloride	ND	ppb (v/v)	2.3	
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.3	
1,1-Dichloroethane	ND	ppb (v/v)	2.3	
Vinyl acetate	ND	ppb (v/v)	12	
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.3	
2-Butanone	ND	ppb (v/v)	12	
Chloroform	ND	ppb (v/v)	2.3	
1,1,1-Trichloroethane	ND	ppb (v/v)	2.3	
Carbon tetrachloride	ND	ppb (v/v)	2.3	
Benzene	ND	ppb (v/v)	2.3	
1,2-Dichloroethane	ND	ppb (v/v)	2.3	
Trichloroethene	ND	ppb (v/v)	2.3	
1,2-Dichloropropane	ND	ppb (v/v)	2.3	
Bromodichloromethane	ND	ppb (v/v)	2.3	
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.3	
4-Methyl-2-pentanone	ND	ppb (v/v)	4.6	
Toluene	ND	ppb (v/v)	2.3	
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.3	
1,1,2-Trichloroethane	ND	ppb (v/v)	2.3	
Tetrachloroethene	ND	ppb (v/v)	2.3	
2-Hexanone	ND	ppb (v/v)	4.6	
Dibromochloromethane	ND	ppb (v/v)	2.3	
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.3	
Chlorobenzene	ND	ppb (v/v)	2.3	
Ethylbenzene	ND	ppb (v/v)	2.3	
Xylenes (total)	ND	ppb (v/v)	2.3	
Styrene	ND	ppb (v/v)	2.3	
Bromoform	ND	ppb (v/v)	2.3	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: AS-4
Lab ID: 105871-0004-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.3
Benzyl chloride	ND	ppb (v/v)	2.3
4-Ethyl toluene	ND	ppb (v/v)	2.3
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.3
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.3
1,3-Dichlorobenzene	ND	ppb (v/v)	2.3
1,4-Dichlorobenzene	ND	ppb (v/v)	2.3
1,2-Dichlorobenzene	ND	ppb (v/v)	2.3
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.6
Hexachlorobutadiene	ND	ppb (v/v)	4.6

Note 1 : All reporting limits elevated due to high level of moisture/carbon dioxide.

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-5
Lab ID: 105871-0005-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	22	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	2.1	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: AS-5
Lab ID: 105871-0005-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	4.3	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: BKND
Lab ID: 105871-0006-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	20	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: BKND
Lab ID: 105871-0006-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: TRIP BLANK
Lab ID: 105871-0007-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	ND	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: TRIP BLANK
Lab ID: 105871-0007-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

QC LOT ASSIGNMENT REPORT - MS QC
Air Toxics

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run Number (SA,MS,SD,DU)
105871-0001-SA	AIR	TO-14	10 JUN 94-A1	10 JUN 94-A1	
105871-0002-SA	AIR	TO-14	10 JUN 94-A1	10 JUN 94-A1	
105871-0003-SA	AIR	TO-14	10 JUN 94-A1	10 JUN 94-A1	
105871-0004-SA	AIR	TO-14	10 JUN 94-A1	10 JUN 94-A1	
105871-0005-SA	AIR	TO-14	10 JUN 94-A1	10 JUN 94-A1	
105871-0006-SA	AIR	TO-14	10 JUN 94-A1	10 JUN 94-A1	
105871-0007-SA	AIR	TO-14	10 JUN 94-A1	10 JUN 94-A1	

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DUPLICATE CONTROL SAMPLE REPORT
Air Toxics
Project: 105871

Category: TO-14 Method TO-14 - Volatile Organics
Matrix: AIR
QC Lot: 10 JUN 94-A1 Date Analyzed: 01 JUN 9
Concentration Units: ppb (v/v)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precisio (RPD) DCS	Precisio (RPD) Limi
Methylene chloride	48.4	45.0	45.2	45.1	93	86-116	0.44	1
1,1-Dichloroethene	48.4	46.2	47.3	46.8	97	90-115	2.4	1
Trichloroethene	36.7	35.6	34.9	35.2	96	85-114	2.0	1
Toluene	48.4	49.7	49.0	49.4	102	92-114	1.4	1
1,1,2,2-Tetrachloroethane	55.5	49.3	46.8	48.0	87	76-124	5.2	1

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Air Toxics
Project: 105871

Test: TO-14-G Volatile Organics by GCMS - EPA TO-14
Matrix: AIR
QC Run: 10 JUN 94-A1 Date Analyzed: 10 JUN 94

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	ND	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0

ND = Not Detected

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METHOD BLANK REPORT
Air Toxics (cont.)
Project: 105871

Test: TO-14-G Volatile Organics by GCMS - EPA TO-14
Matrix: AIR
QC Run: 10 JUN 94-A1 Date Analyzed: 10 JUN 94

Analyte	Result	Units	Reporting Limit
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not Detected

CANISTER FIELD DATA RECORD

CLIENT: Ecology & Environment Inc.

CANISTER SERIAL #: A-128 (92993)

DATE CLEANED: 6/2/94

	VAC. (inches Hg) or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	30	6/3/94	da
INITIAL FIELD VACUUM	30	6/6	RB
FINAL FIELD READING	20	6/6	RB
LABORATORY READING	19	6-10-94	MT

COMMENTS: VFR = HT-49 (6.99/6.96)

CANISTER FIELD DATA RECORD

CLIENT: Ecology & Environment Inc.

CANISTER SERIAL #: A-201 (96/98)

DATE CLEANED: 6/2/94

	VAC. increase mm or PRESS. loss	DATE	INITIALS
INITIAL VACUUM CHECK	30	6/3/94	da
INITIAL FIELD VACUUM	30	6/6	DB
FINAL FIELD READING	20	6/6	DB
LABORATORY READING	20	6-10-94	MT

COMMENTS: VFR = LF-11 (6.96/6.94)

CANISTER FIELD DATA RECORD

CLIENT: Ecology & Environment Inc.

CANISTER SERIAL #: A-140 (93118)

DATE CLEANED: 6/2/94

	VAC. (inches Hg) or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	30	6/3/94	da
INITIAL FIELD VACUUM	30	6/6/94	RB
FINAL FIELD READING	20 19.5	6/6/94	BB
LABORATORY READING	19	6-10-94	MT

COMMENTS: VFR = LF-09 (6.98/6.94)

CANISTER FIELD DATA RECORD

CLIENT: Ecology & Environment Inc.

CANISTER SERIAL #: A-129 (9300B)

DATE CLEANED: 6/2/94

	VAC. (inches Hg) or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	30	6/3/94	da
INITIAL FIELD VACUUM	30	6/6/94	RB
FINAL FIELD READING	1	6/6/94	RB
LABORATORY READING	0	6-10-94	MT

COMMENTS: VFR = LF-08 (6.96/6.95)

CANISTER FIELD DATA RECORD

CLIENT: Ecology & Environment Inc.

CANISTER SERIAL #: A-152 (9323B)

DATE CLEANED: 6/2/94

	VAC. (inches Hg) or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	30	6/3/94	da
INITIAL FIELD VACUUM	30	6/6	RB
FINAL FIELD READING	30	6/6	RB
LABORATORY READING	19	6-10-94	MT

COMMENTS: VFR = LF-10 (6.97/6.94)

TRIP

CANISTER FIELD DATA RECORD

CLIENT: Ecology & Environment Inc.

CANISTER SERIAL #: A-229 (9715B)

DATE CLEANED: 6/2/94

	VAC. (inches Hg) or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	30	6/3/94	da
INITIAL FIELD VACUUM	30	6/6	RWB
FINAL FIELD READING	22	6/6	RWB
LABORATORY READING	22	6-10-94	MT

COMMENTS: VFR = LF-13 (6.97/6.96)

CANISTER FIELD DATA RECORD

CLIENT: Ecology & Environment Inc.

CANISTER SERIAL #: 9356B

DATE CLEANED: 6/2/94

	VAC. (inches Hg) or PRESS. (psia)	DATE	INITIALS
INITIAL VACUUM CHECK	30	6/3/94	da
INITIAL FIELD VACUUM			
FINAL FIELD READING	C		
LABORATORY READING 30	30 psi	6-10-94	MT

COMMENTS: VFR = LF-15 (6.76/6.95)

CANNISTER CLEANING LOG

DATE CLEANED	CAN I.D.	PROJ. NO.	CLIENT	VOL. (ml)	DATE SCREENED	DATA FILE	ANLYST	COMMENTS
6/2 c	*9350 B	105680-3	Dup.	0.15	6/3/94	A5758	Mark	-
	9727B	105637-4	USPCI	4 ml				
	9619B	105637-7	USPCI	5 ml				
	9356B	105680-1	Dup	50 ml				
	A-323	105680-4	Dup	10 ml				
	9299BB	105637-5	USPCI	3 ml				
	9715B	105637-8	USPCI	3 ml				
	9311B	105637-2	USPCI	5 ml				
	9323B	105637-6	USPCI	5 ml				
	9300B	105637-1	USPCI	5 ml				
	9320B	105637-3	USPCI	5 ml				
	9242B	105637-4	USPCI	5 ml				
6/3/94	9707B*	Rentals	Nutech	500?				
6/3/94	9307BB							
	9317BB							
	9705B							
	9695B							
	9303BB							
	9123B							
	9697B							
	9300BB							
	9309BB							
	9138B							
	9296BB							
6/3/94	809 *	Rentals	Nutech	500	6/3/94	A5774	Mark	
	9135B							
	9139B							
	9315B							
	9295BB							
	9120B							
	9322BB							
	9153BB							

The above canisters were cleaned as batches. After the cleaning cycle, the canister of each batch which contained the highest level of contaminants was analyzed and certified to contain no target analyte concentration detected greater than the method criteria of 0.2 ppbv.

* Indicates the can which was screened.

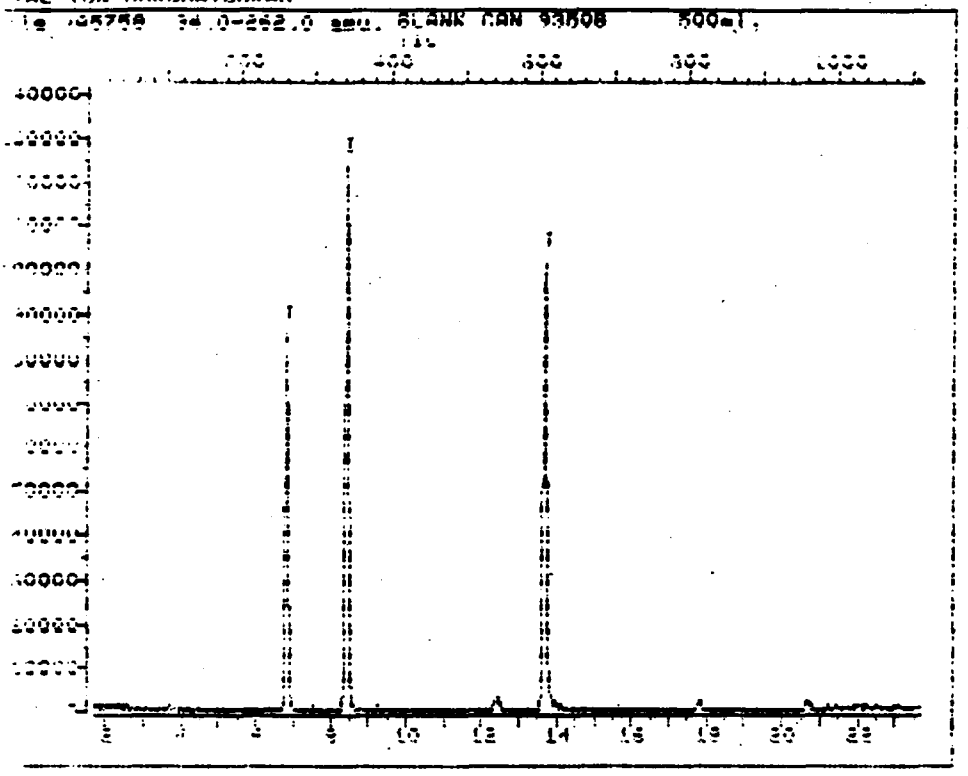
Operator ID: LUPE Quant Rev: 2 Quant Time: 940603 10:50
Output File: :A6798::SC Injected at: 940603 10:27
Data File: :A6798::D1 Dilution Factor: 1.00000
Name: BLANK CAN 93508 Instrument ID: SYSTEM 1
Misc: 900ml,

ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qual Time: 940603 07:40

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.80	49.0	106972	38.50	ppbv	99
*22)	*1,4-Difluorobenzene	8.40	114.0	296316	39.00	ppbv	97
31)	*Chlorobenzene-d5	13.66	117.0	202820	34.00	ppbv	99

* Compound is ISTD

TAL ION CHROMATOGRAM



Data File: :A9798::01 Quant Output File: ^A9798::SC
Name: BLANK CAN 93508 Instrument ID: SYSTEM 1
Misc: 500ml,

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qual Time: 940603 07:40

Operator ID: LU72
Quant Time : 940603 10:92
Injected at: 940603 10:27

Enseco
A Corning Company

CHAIN OF CUSTODY RECORD ENS-1145-A

☐ 2544 Industrial Ave., West Sacramento, 95691-3435 (916) 372-1393
☐ 7440 Lincoln Way, Garden Grove, CA. 92641-1432 (714) 895-5494
☒ 16891 East Gale Ave., City of Industry, CA. 91748-1221 (818) 965-1666
☐ Mobile Labs, 1 (800) ENSECO-8

DATE	CHAIN OF CUSTODY NUMBER
	18269
LAB NUMBER 105871	Page ____ of ____

CLIENT: E & E
ADDRESS: 111 W. Jackson Blvd
CITY: Chicago | STATE: IL | ZIP CODE: 60604
PROJECT NAME: Sunset
CONTRACT/PURCHASE ORDER/QUOTE NO.:
PROJECT MANAGER:
TELEPHONE NUMBER (AREA CODE): 312 663-9415
SITE CONTACT:
TELEPHONE NUMBER (AREA CODE):

ANALYSES: TO-14

QA/QC Level II

SAMPLE NO./IDENTIFICATION	DATE	TIME	LAB/SAMPLE NUMBER	SAMPLE TYPE LIQ.	AIR	SOLID	NO. OF CONTAINERS	TO-14							Sample Condition/ REMARKS
AS-1	6/6		A-152		✓		1	✓							519 min sample
AS-2	"		A-129		✓		1	✓							511 min sample
AS-3	"		A-140		✓		1	✓							511 min sample
AS-4	"		A-128		✓		1	✓							~~498~~ 501 "
AS-6	"		A-201		✓		1	✓							498 "
BKND	"		A-229		✓		1	✓							453 min sample
Trip Blank	"		9356 B		✓		1	✓							
															5 turnaround hrs
															2wk Hard Copy

DO THE SAMPLE(S) POSE ANY POTENTIAL HAZARD(S)? IF YES, PLEASE EXPLAIN

SAMPLERS (SIGNATURE)	RELINQUISHED BY (SIGNATURE)		RELINQUISHED BY (SIGNATURE)		DATE	TIME
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)		DATE	TIME
RECEIVED FOR LABORATORY BY: Julie Alusson	RECEIVED	DATE 6/8	TIME 1420	ACCEPTED	DATE	TIME
METHOD OF SHIPMENT: Fed Ex						
SPECIAL INSTRUCTIONS						

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is sited above.

SAMPLE DESPOSITION:
1. Storage time requested: _____ days (Samples will be stored for thirty (30) days without additional charge; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: ☐ Yes ☐ No (Enseco will dispose of unreturned samples for a charge of $15.00. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: WHITE - With Report; CANARY - To ENSECO; PINK - To Courier; GOLDENROD - To Sample Control

SAMPLE ANALYSIS

DATE 6-10-94 GC/MS INJECTION LOG GC/MS #A

Data File#	Enseco Sample ID	Client Sample ID	Standard Ref ID	Smp ml	Dil	AN In	Stat In	Inj Tim	Comments
A5864	BFB		BFB021294	200		MJ	OK		
A5865	CHR		ES060894A STD00594	500		↓	OK		
A5866	LCS		LCS060894	250		↓	OK		
A5867	LCM		↓	250		↓	OK		
A5868	MB			500		↓	OK		slight Benzene from Ø Air
A5869	105889-1	BTR		2		↓	NO		5 ml
A5870	Blank Can	A-296		500		↓	OK		
A5871	Blank Can	A-303		500		↓	OK		
A5872	105889-1	Brown & Root Y970-Effluent		5		MJ	OK		ES
A5873	105871-1	Ecol & Env AS-1		2300		↓	OK		ES
A5874	-2	↓ AS-2 (A54)		200		↓	OK		Trap Frozen used to quench (Escaped overflow)
A5875	-3	↓ AS-3		2300		↓	OK		ES
A5876	-4	↓ AS-4		1000		↓	OK		Trap Frozen quenched ES
A5877	-5	↓ AS-5		3360		↓	OK		E
A5878	-6	↓ BLKD		3360		↓	OK		ES
A5879	-7	↓ Trip Blank		500		↓	OK		ES
A5880	-2	↓ AS-2 Trip Blank		850		↓	OK		ES
A5881	105858-3	Valdez 060694 4	1:25	24.6/8.76	24.6/8.76	↓	OK		ES

#BILLABLE=____ #QC=____ #NON-BILLABLE=____ HRS INSTRUMENT USAGE=____ COMMENTS:

100001

	105851-1	A-487	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	-2	8-087	24" Hg	0" Hg	13.6 psia 4/08/94	24.6 PSIA	He	[illegible]		
	105854-1	9614B	—	0" Hg	14.6 PSIA	24.6 PSIA	He	[illegible]	leaks	
	-2	A-280	—	0" Hg	14.6 PSIA	24.6 PSIA	He	[illegible]		
	(a-263) -3	~~[illegible]~~	—	12" Hg	8.76 PSIA	↓	↓	↓		
	-4	A-164	—	10" Hg	9.73 PSIA	24.6 PSIA	He	[illegible]		
	-5	9631B	—	10" Hg	9.73 PSIA	24.6 PSIA	↓	↓		
	-6	9617B	—	↓		24.6 PSIA				
	-7	9297B	—	12" Hg	8.76 PSIA	↓				
	-8	9714B	—	12" Hg	8.76 PSIA	24.6 PSIA	He	↓		
	105857-1	A-184	—	0" Hg	14.6 PSIA	24.6 PSIA	He	[illegible]		
	-2	9423BB	—	[illegible] Hg	7.79 PSIA	24.6 PSIA				
	-3	A-257	—	8" Hg	5.84 PSIA	24.6 PSIA	↓	↓		
	105858-1	A270	—	25" Hg	2.13	24.6 PSIA				
	-2	A293	—	18" Hg	5.84 PSIA	24.6 PSIA	He	[illegible]		
	-3	A173	—	12" Hg	8.76 PSIA	24.6 PSIA	↓	↓		
	105870	[illegible] 00007	—	10" Hg		24.6 psia	He	[illegible]		
6-10-94	105871-1	A-152	—	19"	5.35	24.6 psia	He	[illegible]		
	2	A-171	—	0	14.6	24.6 psia	He	[illegible]		
	-3	A-140	—	19"	5.35	24.6 psia	He	[illegible]	Cap on, valve leak	
	-4	A-178	—	19"	5.35	24.6 psia	He	[illegible]		
	-5	A-201	—	10"	4.87	24.6 psia	He	[illegible]		
	-6	A-229	—	22"	3.89	25.6 psia	He	[illegible]		
	-7	6356B	—	30"	0	24.6 psia	He	[illegible]		

000102

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-1
Lab ID: 105871-0001-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	87	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	30	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	130	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	2.1	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	3.0	ppb (v/v)	2.0
Xylenes (total)	14	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

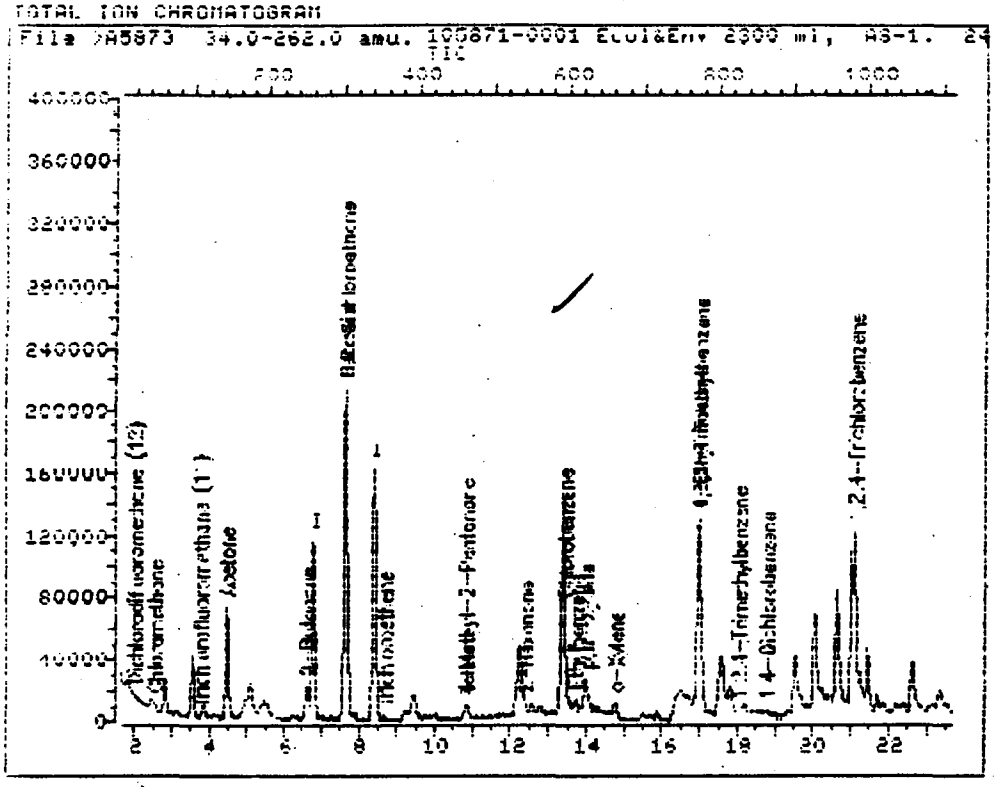
Client Name: Ecology & Environment, Inc
Client ID: AS-1
Lab ID: 105871-0001-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	35	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

TOTAL ION CHROMATOGRAM



Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152

Id File: IDNFW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:42 Last Qcal Time: 940610 07:29

Operator ID: LMI
Quant Time : 940610 12:00
Injected at: 940610 11:39

Operator ID: 111 Quant Rev: 2 Quant Time: 940610 12:00
Output File: ^A5873::SC Injected at: 940610 11:35
Data File: >A5873::01 Dilution Factor: 1.00000
Name: 105871-0001 Fool&Fov Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1, 24.6/5.35 A-152

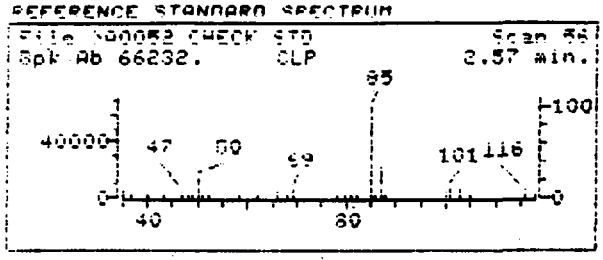
ID File: IDNFW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qual Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units
1)	*Bromochloromethane	6.76	49.0	137366	38.50	ppbv
2)	Dichlorodifluoromethane (12)	2.01	85.0	6257	.646	ppbv
3)	Chloromethane	2.55	50.0	501	.198	ppbv
8)	Trichlorofluoromethane (11)	3.75	101.0	2831	.280	ppbv
12)	Acetone	4.47	43.0	253332	87.40	ppbv
13)	2-Butanone	6.60	72.0	19899	30.19	ppbv
22)	*1,4-Difluorobenzene	8.39	114.0	368768	39.00	ppbv
23)	Benzene	7.63	78.0	519835	128.28	ppbv
24)	1,2-Dichloroethane	7.63	62.0	5952	1.40	ppbv
25)	Trichloroethene	8.68	130.0	1407	.411	ppbv
29)	4-Methyl-2-Pentanone	10.82	43.0	17938	3.66	ppbv
30)	Toluene	10.84	91.0	11372	2.09	ppbv
31)	*Chlorobenzene-d5	13.35	117.0	229901	34.00	ppbv
35)	2-Hexanone	12.38	58.0	3410	2.58	ppbv
38)	Chlorobenzene	13.41	112.0	2402	.586	ppbv
39)	Ethylbenzene	13.71	91.0	17203	3.04	ppbv
40)	p,m-Xylene	13.99	91.0	48445	9.37	ppbv
41)	o-Xylene	14.76	91.0	25998	4.94	ppbv
46)	4-Ethyl Toluene	16.98	105.0	9763	1.36	ppbv
47)	1,3,5-Trimethylbenzene	16.98	105.0	9763	1.51	ppbv
48)	1,2,4-Trimethylbenzene	18.03	105.0	10713	1.75	ppbv
50)	1,4-Dichlorobenzene	18.78	146.0	3274	.623	ppbv
52)	1,2,4-Trichlorobenzene	21.10	180.0	53825	34.54	ppbv

* Compound is ISTD

Mu 6/13

REFERENCE STANDARD SPECTRUM



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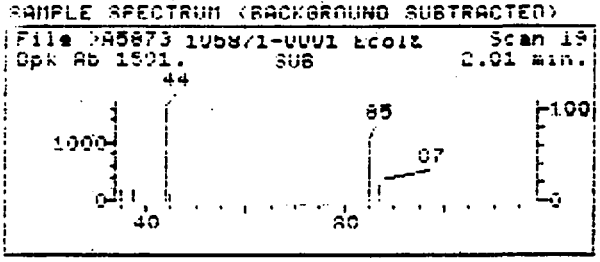

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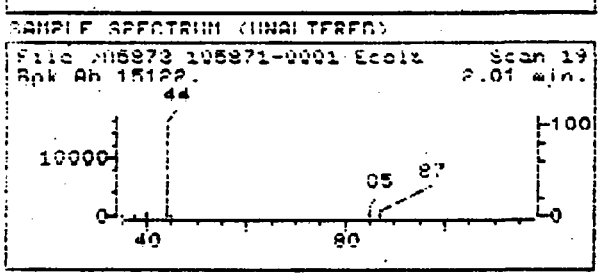
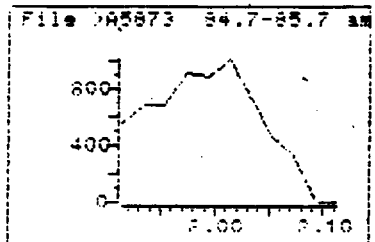
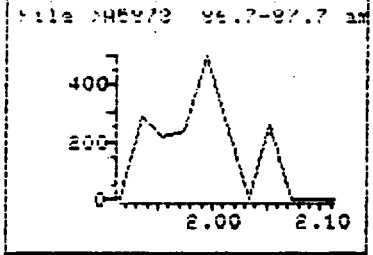
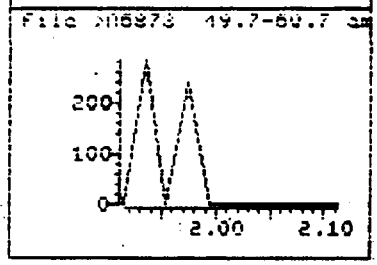




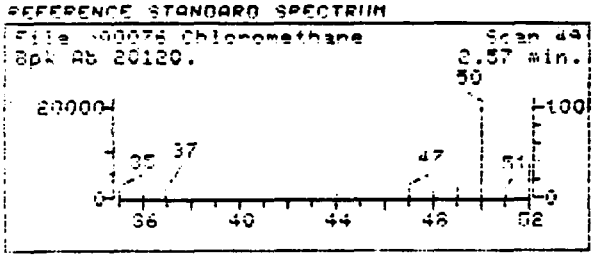




Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 2
Compound Name : Dichlorodifluoromethane (12)
Scan Number : 19
Retention Time: 2.01 min.
Quant Ion : 85.0
Area : 6757
Concentration : .646 ppbv
q-value : 76

REFERENCE STANDARD SPECTRUM



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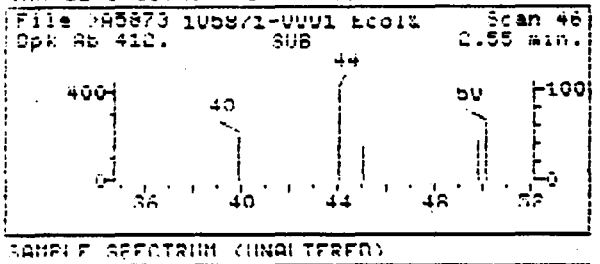

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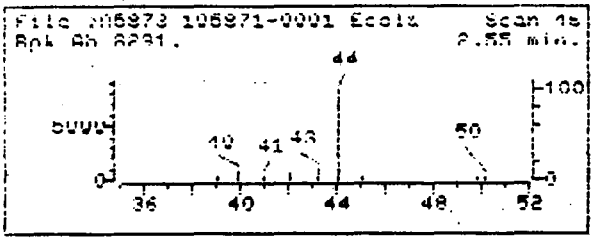
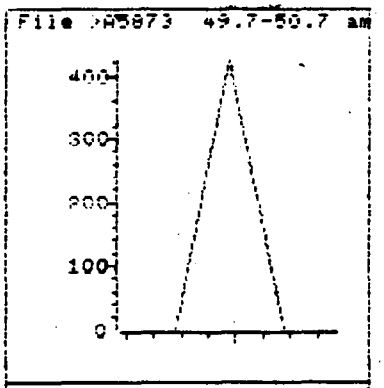
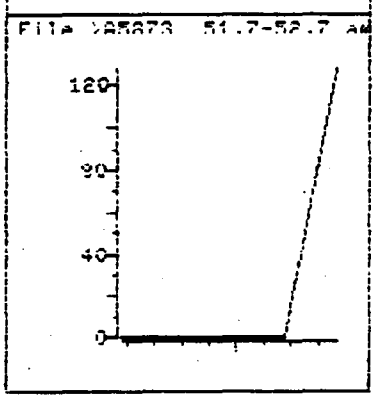


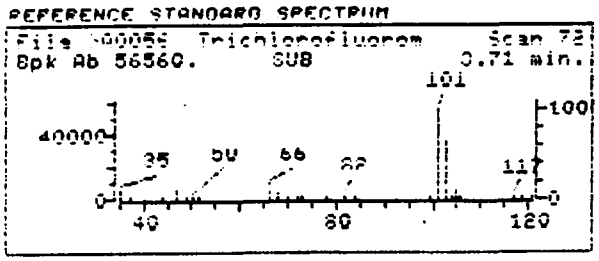


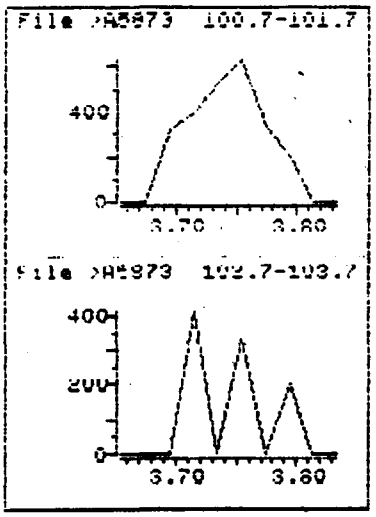


Data File: >A5873::01 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 3
Compound Name : Chloromethane
Scan Number : 46
Retention Time: 2.55 min.
Quant Ion : 50.0
Area : 501
Concentration : .198 ppbv
q-value : 100

REFERENCE STANDARD SPECTRUM





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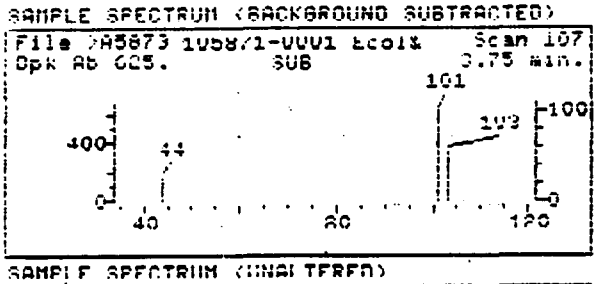

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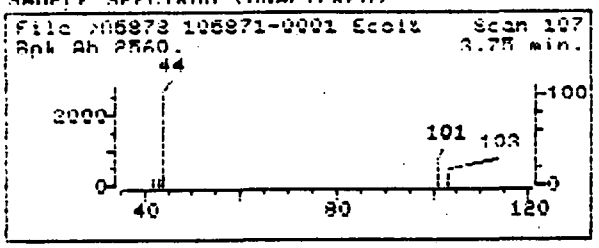
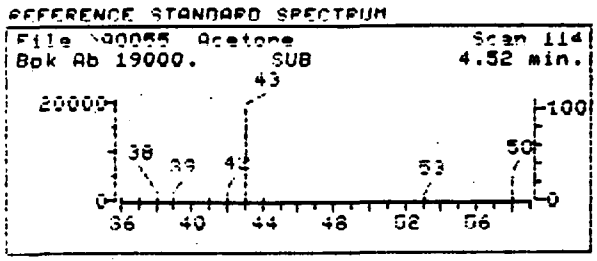
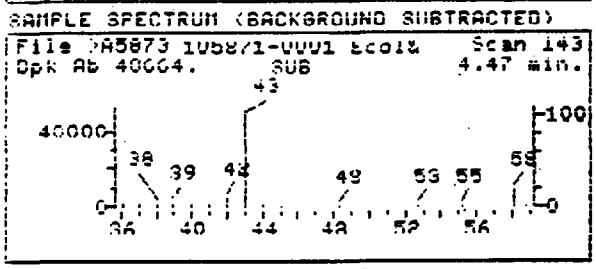
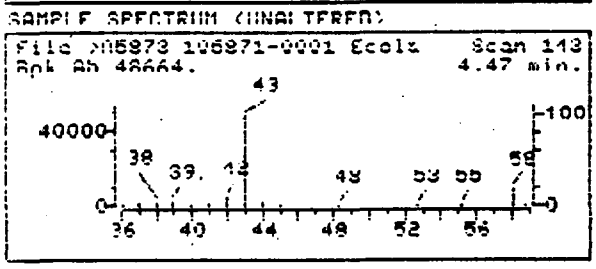


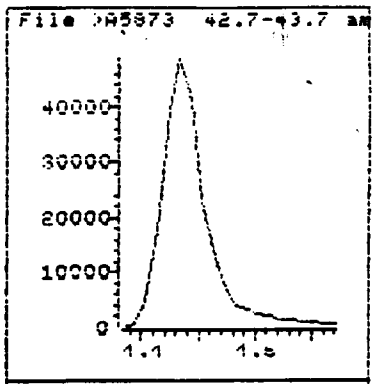
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

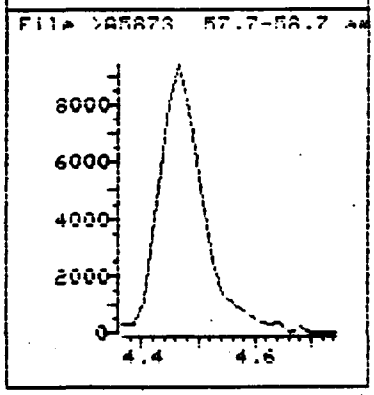
Compound No : 8
Compound Name : Trichlorofluoromethane (11)
Scan Number : 107
Retention Time: 3.75 min.
Quant Ion : 101.0
Area : 2831
Concentration : .280 ppbv
q-value : 85







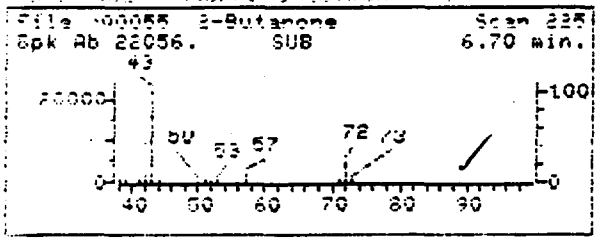




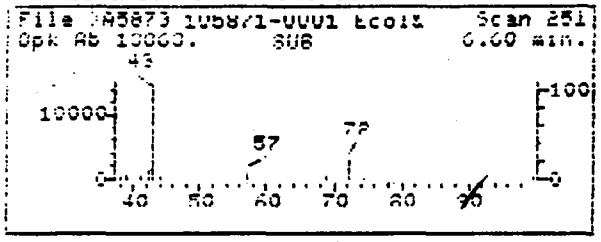
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 12
Compound Name : Acetone
Scan Number : 143
Retention Time: 4.47 min.
Quant Ion : 43.0
Area : 253332
Concentration : 87.40 ppbv
q-value : 85

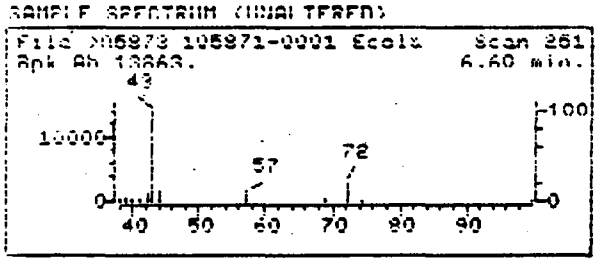
REFERENCE STANDARD SPECTRUM

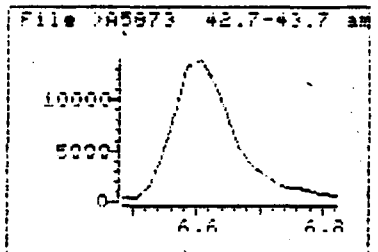


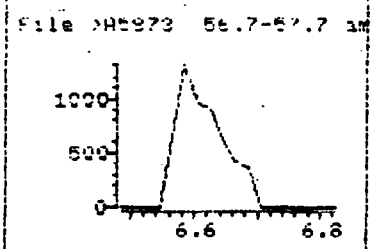
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

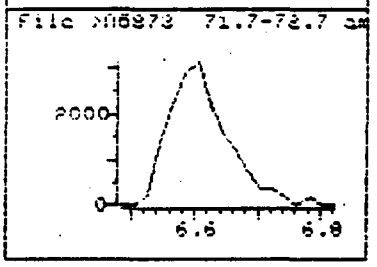


SAMPLE SPECTRUM (UNALTERED)





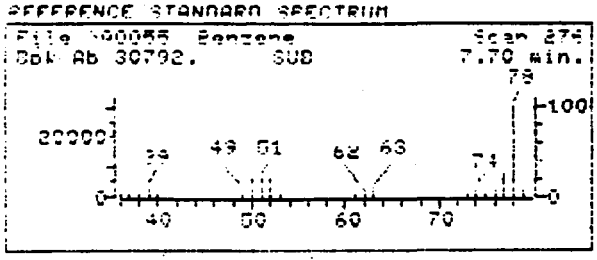




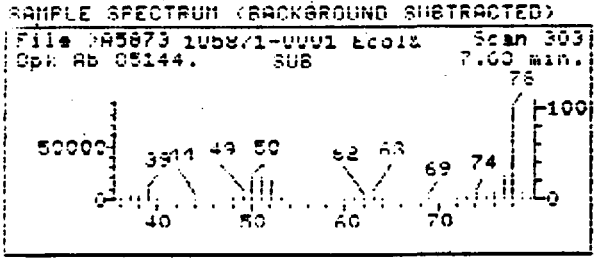
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 18
Compound Name : 2-Butanone
Scan Number : 251
Retention Time: 6.60 min.
Quant Ion : 72.0
Area : 19899
Concentration : 30.19 ppbv
q-value : .94

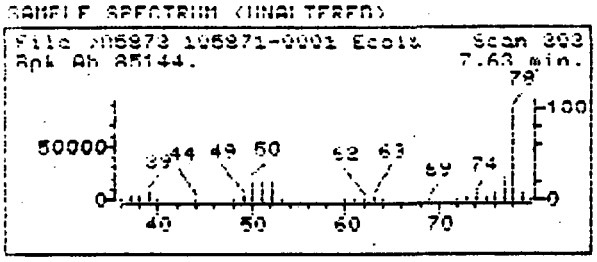
REFERENCE STANDARD SPECTRUM

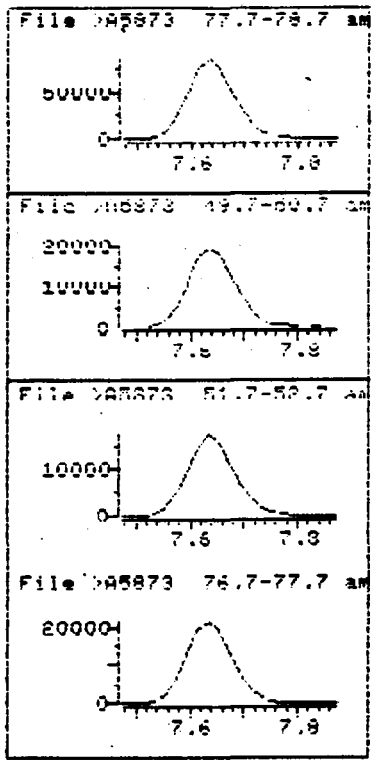


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

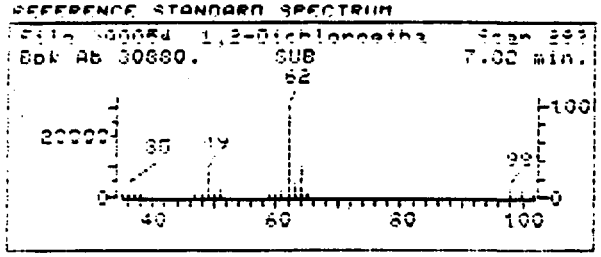




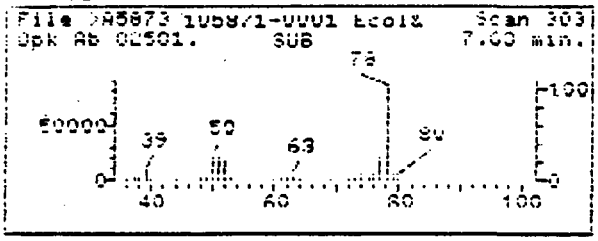
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 23
Compound Name : Benzene
Scan Number : 303
Retention Time: 7.63 min.
Quant Ion : 78.0
Area : 519035
Concentration : 128.28 ppbv
q-value : 100

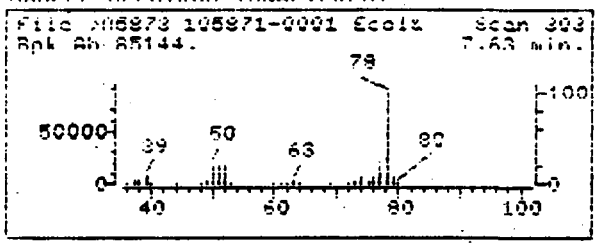
REFERENCE STANDARD SPECTRUM

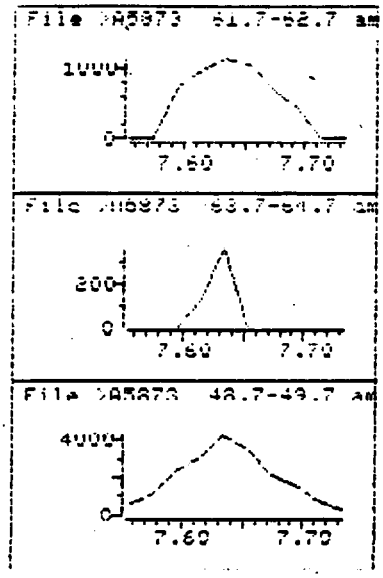


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

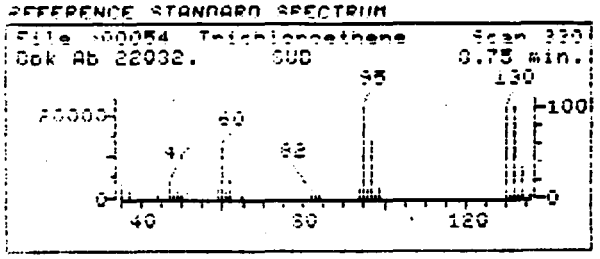




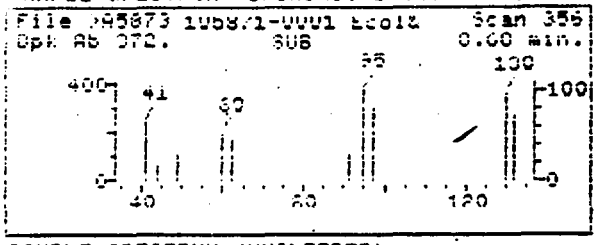
Data File: >A5873::D1 Quant Output File: >A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 24
Compound Name : 1,2-Dichloroethane
Scan Number : 303
Retention Time: 7.63 min.
Quant Ion : 62.0
Area : 5952
Concentration : 1.41 ppbv
q-value : 95

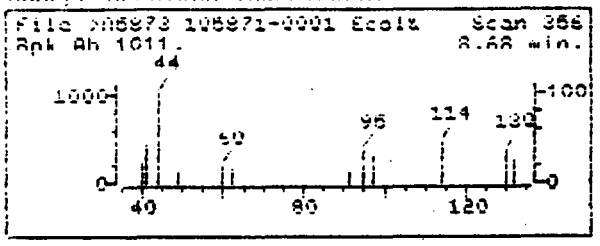
REFERENCE STANDARD SPECTRUM

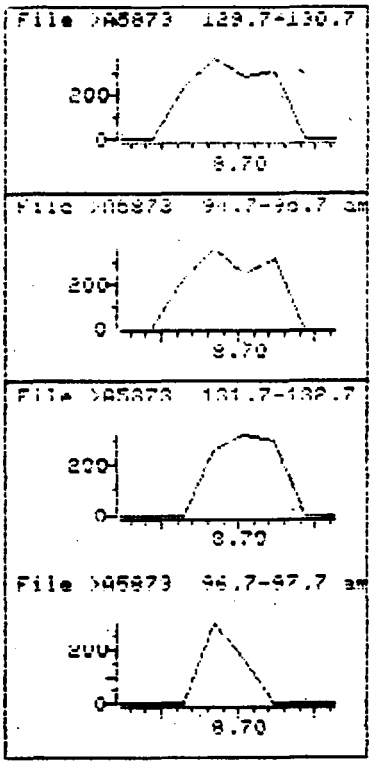


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



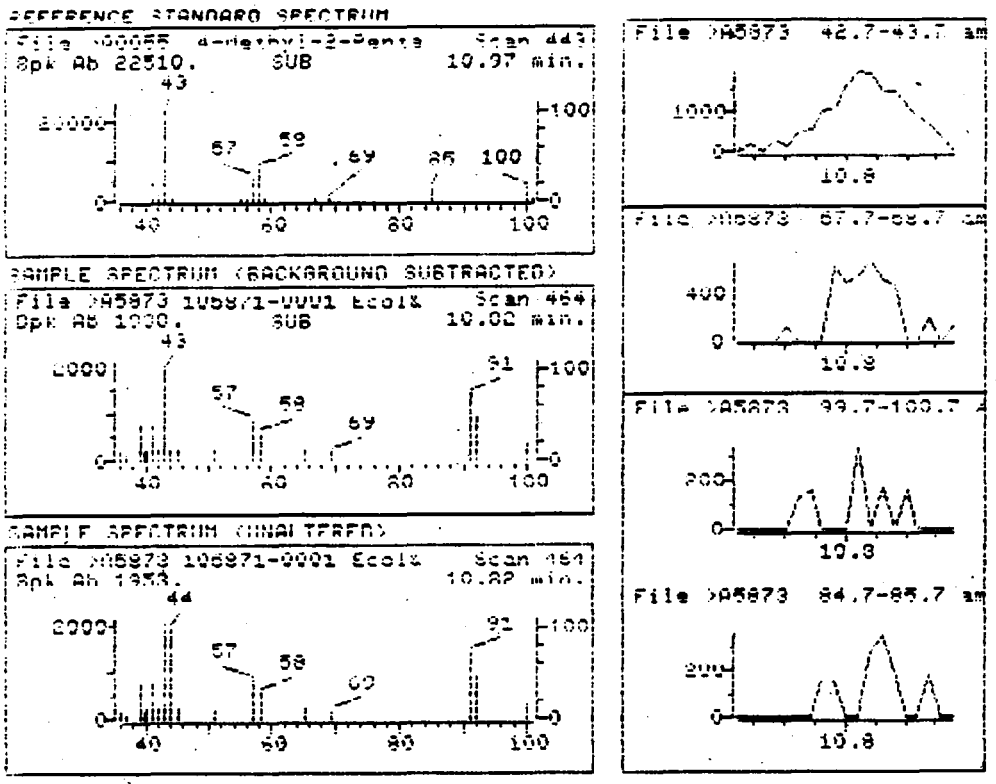
SAMPLE SPECTRUM (UNALTERED)





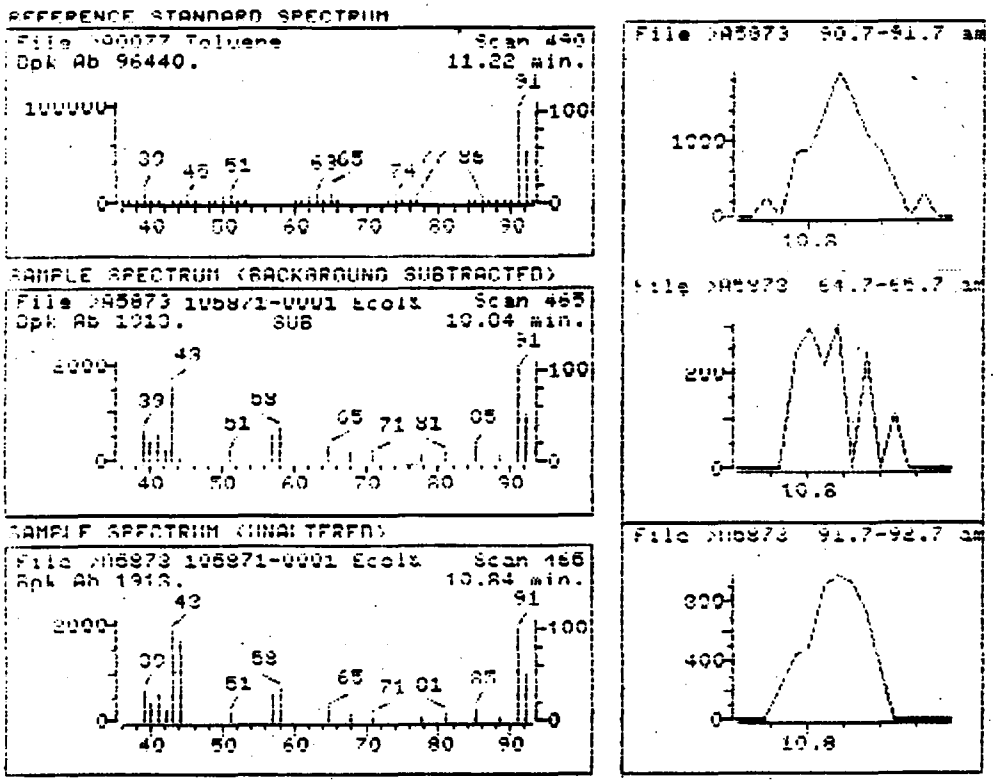
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 25
Compound Name : Trichloroethene
Scan Number : 356
Retention Time: 8.68 min.
Quant Ion : 130.0
Area : 1407
Concentration : .411 ppbv
q-value : 86



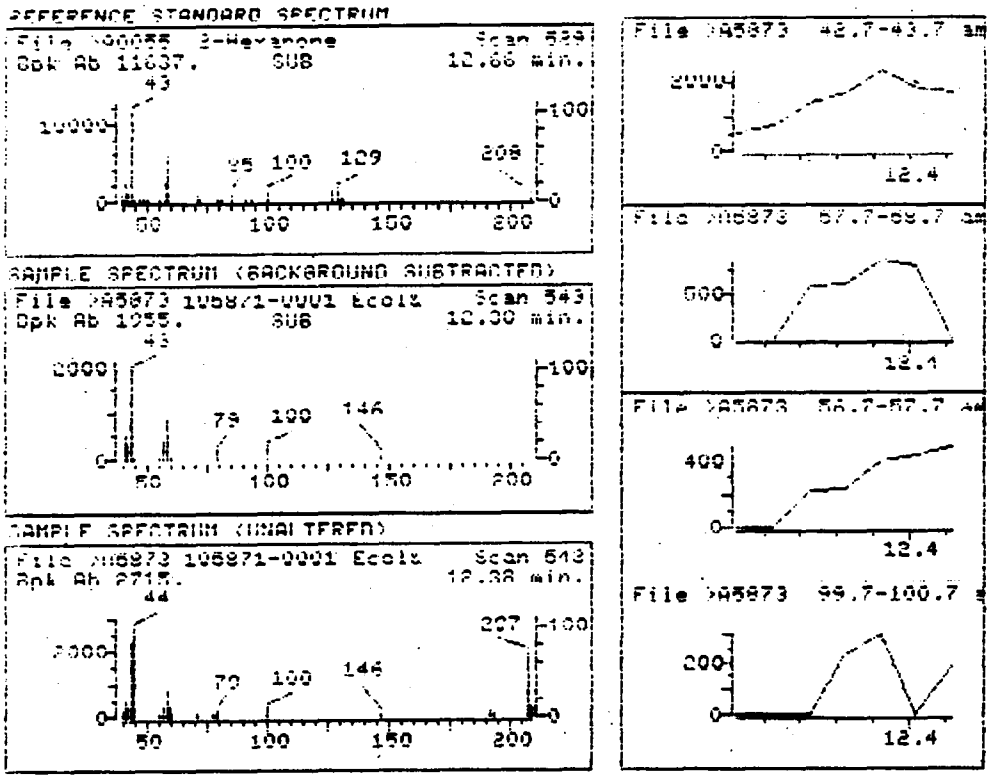
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 29
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 464
Retention Time: 10.82 min.
Quant Ion : 43.0
Area : 17938
Concentration : 3.66 ppbv
q-value : 89



Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

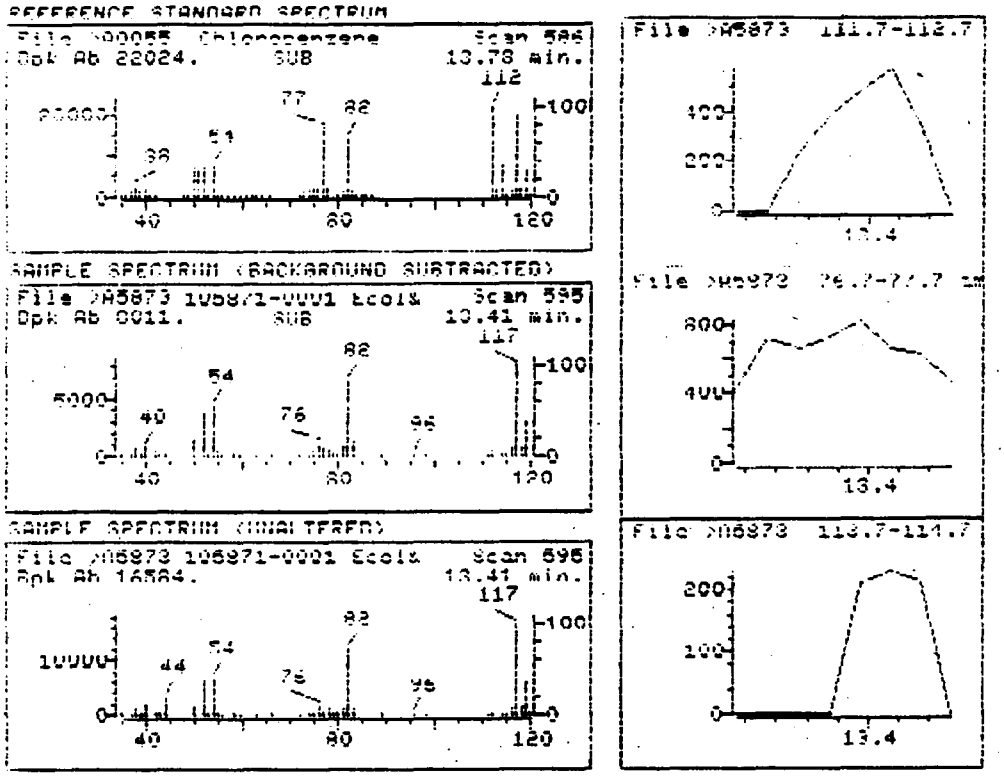
Compound No : 30
Compound Name : Toluene
Scan Number : 465
Retention Time: 10.84 min.
Quant Ion : 91.0
Area : 11372
Concentration : 2.09 ppbv
q-value : 95



Data File: >A5873::D1
Name: 105871-0001 Ecol&Env
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00
Injected at: 940610 11:35
Last Qcal Time: 940610 07:29

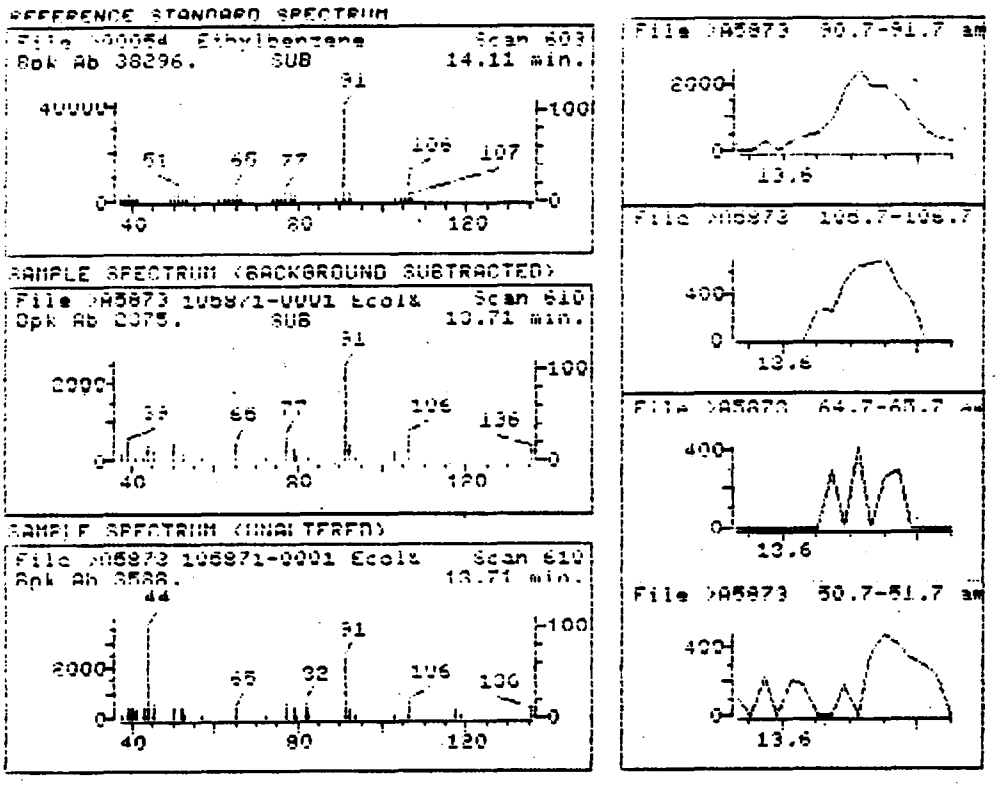
Quant Output File: ^A5873::SC
Instrument ID: SYSTEM 1
Quant ID File: IDNEW1::QT
Last Calibration: 930324 08:47

Compound No : 35
Compound Name : 2-Hexanone
Scan Number : 543
Retention Time: 12.38 min.
Quant Ion : 58.0
Area : 3410
Concentration : 2.58 ppbv
q-value : 82



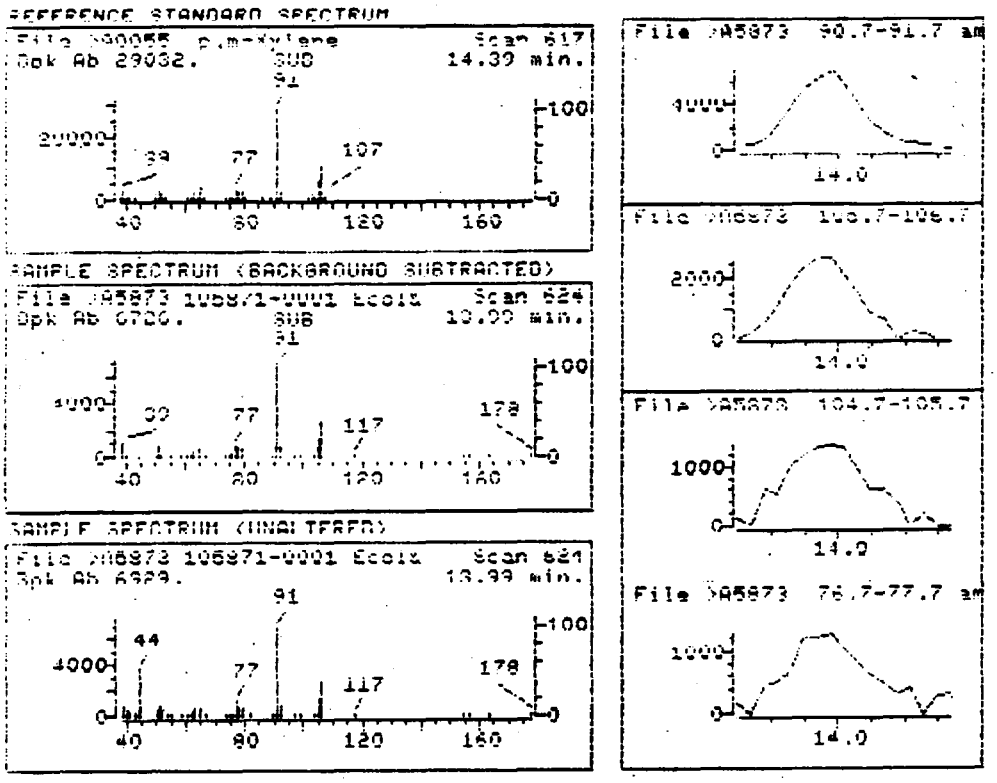
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IONFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 38
Compound Name : Chlorobenzene
Scan Number : 595
Retention Time: 13.41 min.
Quant Ion : 112.0
Area : 2402
Concentration : .586 ppbv
q-value : 59



Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

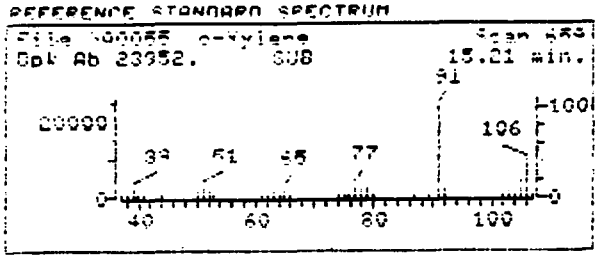
Compound No : 39
Compound Name : Ethylbenzene
Scan Number : 610
Retention Time: 13.71 min.
Quant Ion : 91.0
Area : 17203
Concentration : 3.04 ppbv
q-value : 95



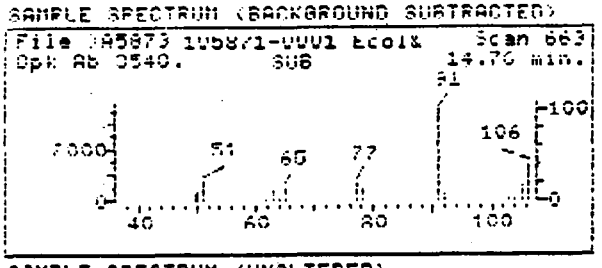
Data File: >A5873::D1 Quant Output File: >A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 40
Compound Name : p,m-Xylene
Scan Number : 624
Retention Time: 13.99 min.
Quant Ion : 91.0
Area : 48445
Concentration : 9.32 ppbv
q-value : 91

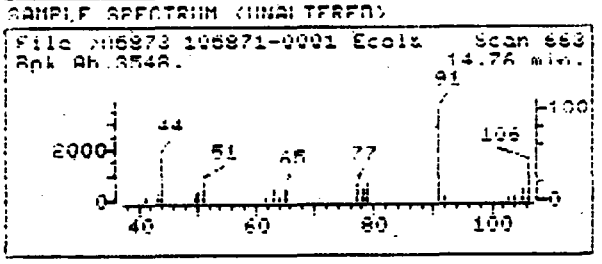
REFERENCE STANDARD SPECTRUM

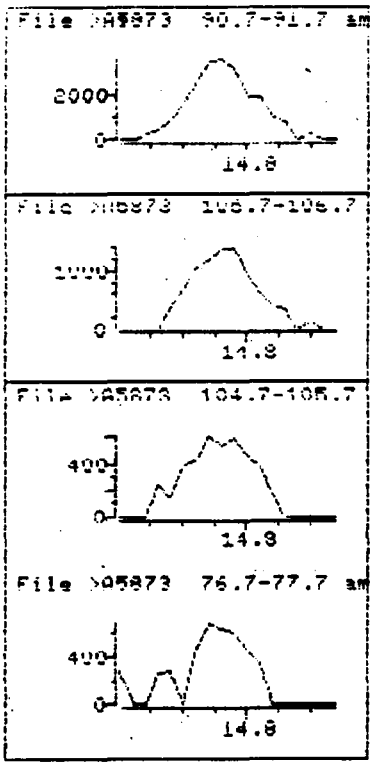


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNAL TERED)

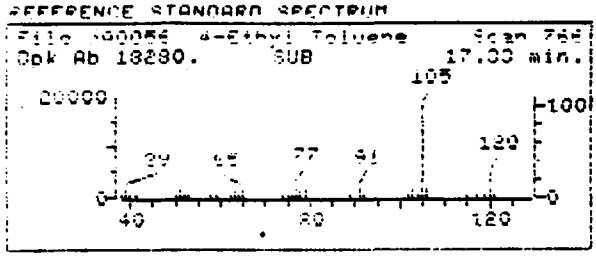




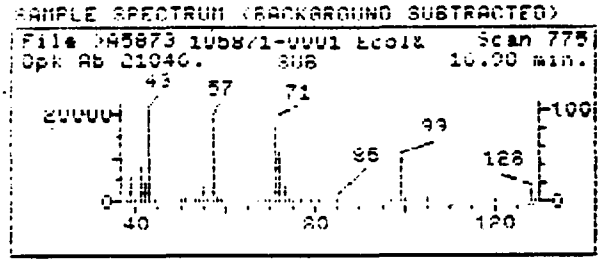
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 41
Compound Name : o-Xylene
Scan Number : 663
Retention Time: 14.76 min.
Quant Ion : 91.0
Area : 25998
Concentration : 4.94 ppbv
q-value : 91

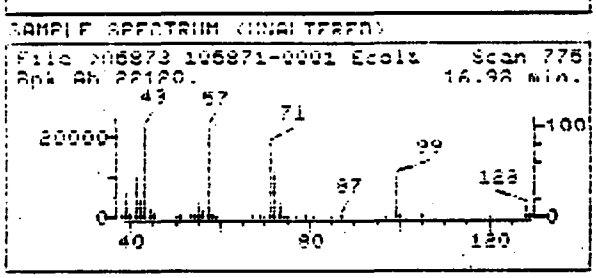
REFERENCE STANDARD SPECTRUM

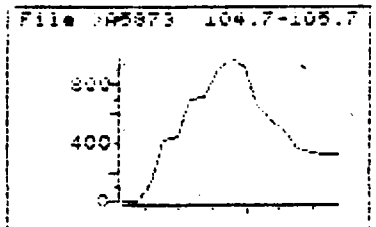


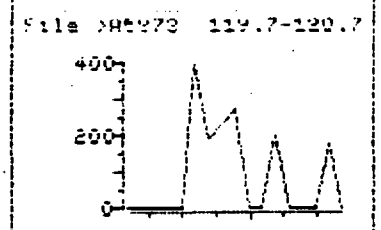
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

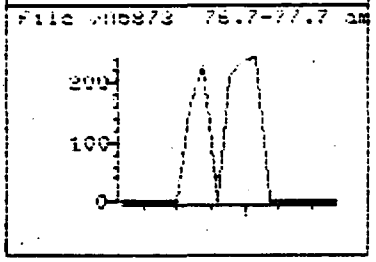


SAMPLE SPECTRUM (NORMALIZED)





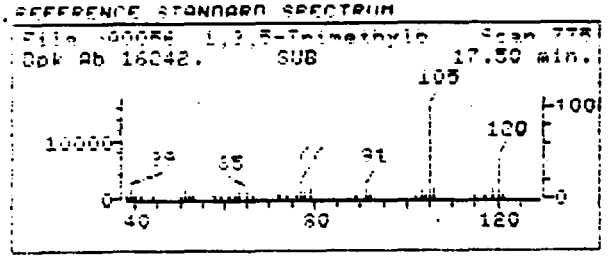


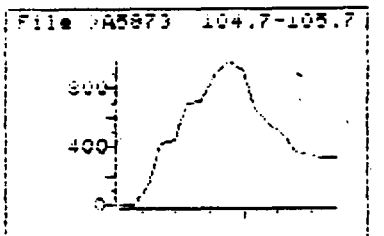


Data File: >A5873::D1 Quant Output File: >A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

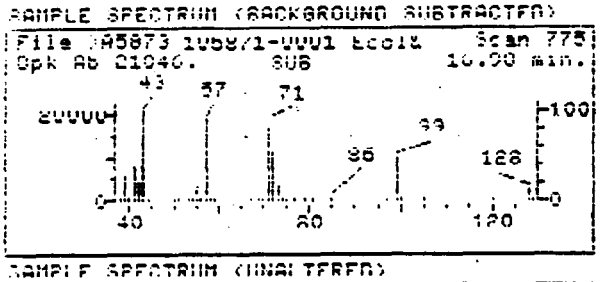
Compound No : 46
Compound Name : 4-Ethyl Toluene
Scan Number : 775
Retention Time: 16.98 min.
Quant Ion : 105.0
Area : 9763
Concentration : 1.36 ppbv
q-value : 93

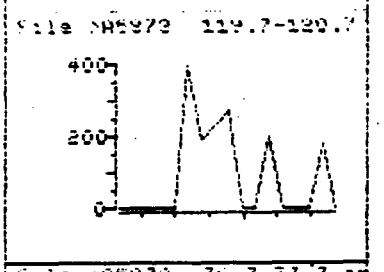
REFERENCE STANDARD SPECTRUM



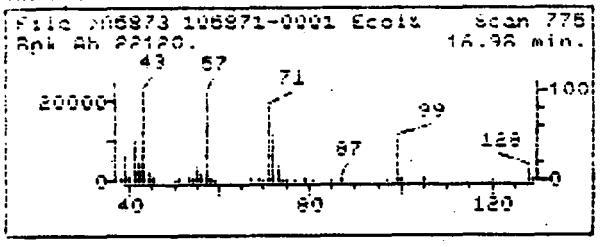


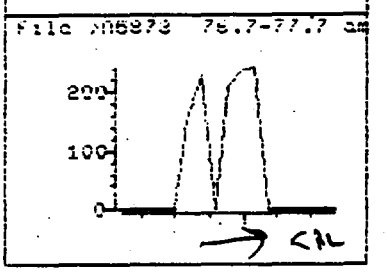
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNAUTTERED)

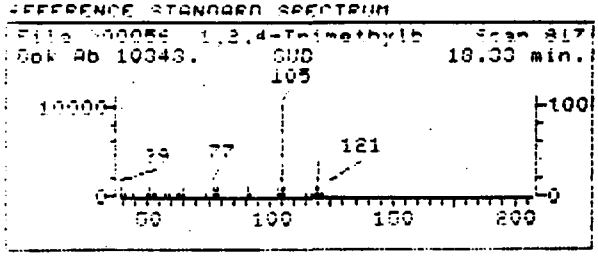




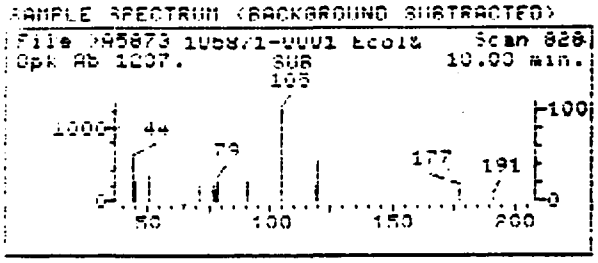
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 47
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 775
Retention Time: 16.98 min.
Quant Ion : 105.0
Area : 9763
Concentration : 1.51 ppbv
q-value : 74

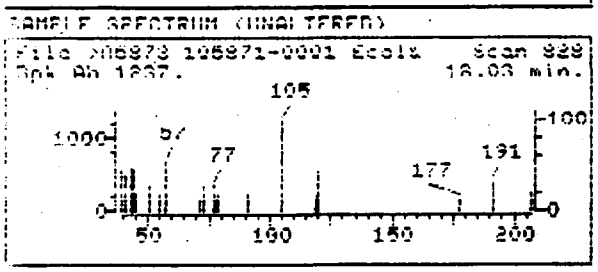
REFERENCE STANDARD SPECTRUM

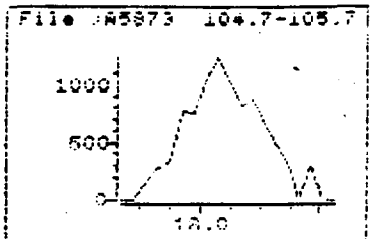


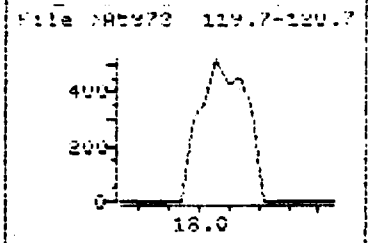
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

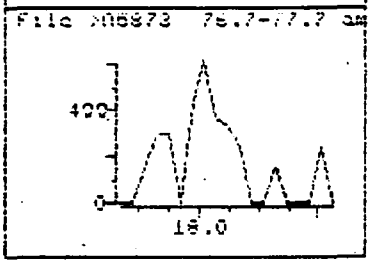


SAMPLE SPECTRUM (UNAUTERED)



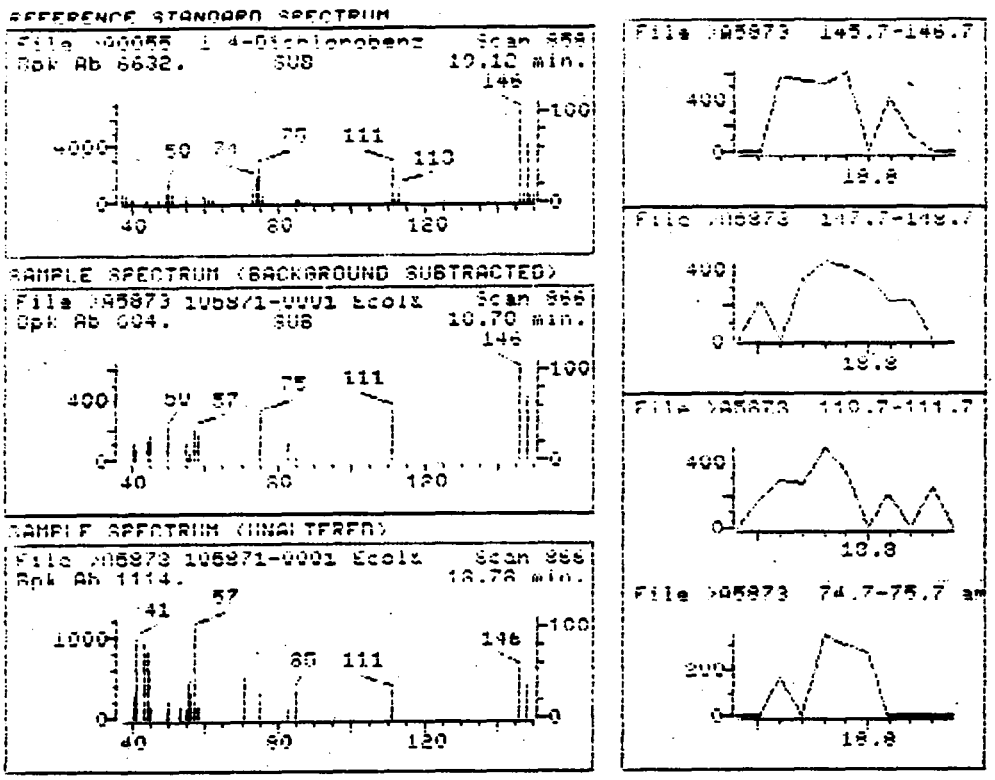






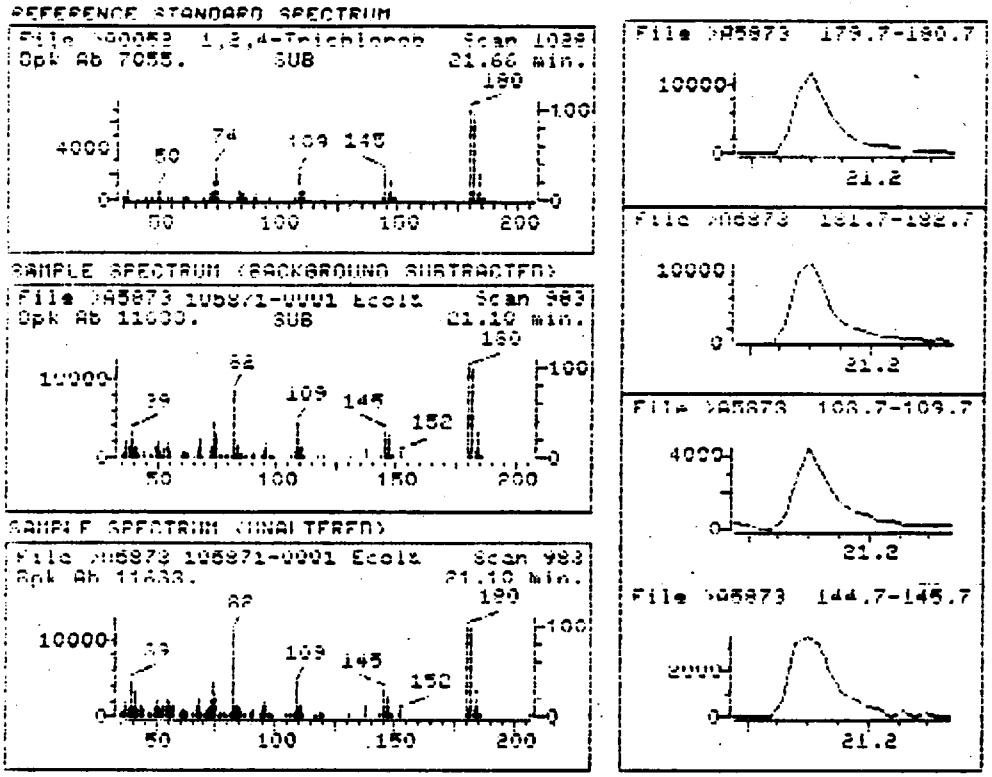
Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1, 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 48
Compound Name : 1,2,4-Trimethylbenzene
Scan Number : 828
Retention Time: 18.03 min.
Quant Ion : 105.0
Area : 10713
Concentration : 1.75 ppbv
q-value : 96



Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNFW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 50
Compound Name : 1,4-Dichlorobenzene
Scan Number : 866
Retention Time: 18.78 min.
Quant Ion : 146.0
Area : 3274
Concentration : .623 ppbv
q-value : 90



Data File: >A5873::D1 Quant Output File: ^A5873::SC
Name: 105871-0001 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-1. 24.6/5.35 A-152
Quant Time: 940610 12:00 Quant ID File: IDNEW1::QT
Injected at: 940610 11:35 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 52
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 983
Retention Time: 21.10 min.
Quant Ion : 180.0
Area : 53825
Concentration : 34.54 ppbv
q-value : 97

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Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-2
Lab ID: 105871-0002-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	13	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

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Volatile Organics by GCMS - EPA TO14 (CONT.)

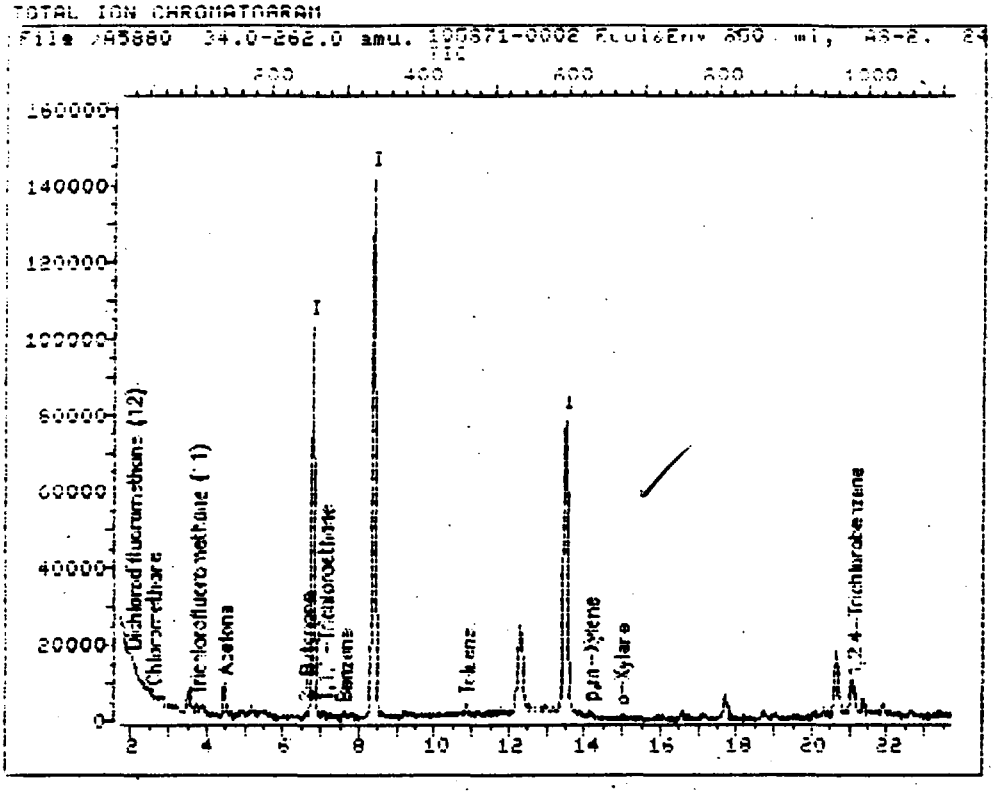
Client Name: Ecology & Environment, Inc
Client ID: AS-2
Lab ID: 105871-0002-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

TOTAL ION CHROMATOGRAM



Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Fcol&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qcal Time: 940610 07:29

Operator ID: LLL
Quant Time : 940610 16:14
Injected at: 940610 15:50

Operator ID: 111 Quant Rev: 2 Quant Time: 940610 16:14
Output File: 085880::SC Injected at: 940610 15:50
Data File: >A5888::03 Dilution Factor: 1.00000
Name: 105871-0002 Fool&Fnv Instrument ID: SYSTEM 1
Misc: .850 ml, 85-2. 24.6/14.6 A-199

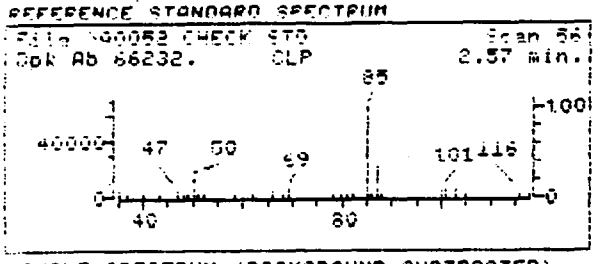
ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qual Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units	
1)	*Bromochloromethane	6.78	49.0	117286	38.50	ppbv	
2)	Dichlorodifluoromethane (12)	2.85	85.0	8832	.988	ppbv	
3)	Chloromethane	2.59	50.0	782	.325	ppbv	1
8)	Trichlorofluoromethane (11)	3.75	101.0	5562	.643	ppbv	
12)	Acetone	4.47	43.0	32391	13.09	ppbv	
18)	2-Butanone	6.68	72.0	889	1.58	ppbv	
20)	1,1,1-Trichloroethane	7.11	97.0	4855	.769	ppbv	
22)	*1,4-Difluorobenzene	8.36	114.0	312332	39.00	ppbv	
23)	Benzene	7.61	78.0	3625	1.06	ppbv	1
30)	Toluene	10.85	91.0	8228	1.80	ppbv	
31)	*Chlorobenzene-d5	13.48	117.0	162500	34.00	ppbv	
40)	p,m-Xylene	14.16	91.0	6466	1.77	ppbv	
41)	o-Xylene	14.97	91.0	1074	.289	ppbv	
52)	1,2,4-Trichlorobenzene	21.12	180.0	1912	1.74	ppbv	

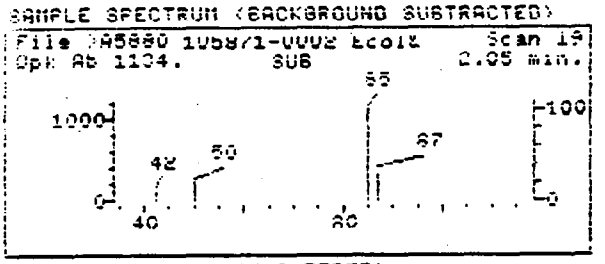
* Compound is ISTD

MS 6/13

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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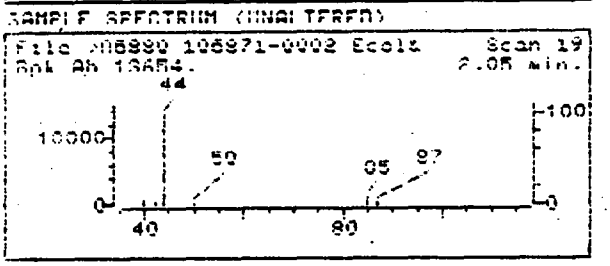
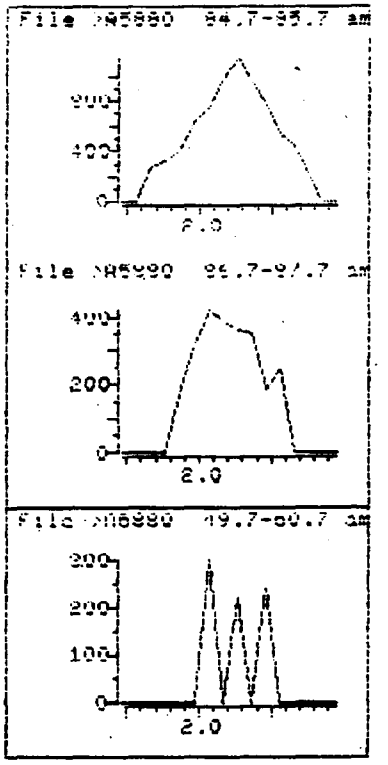
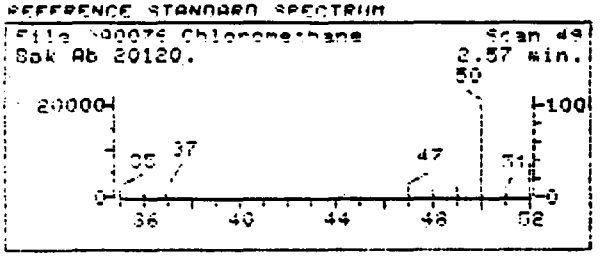




Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecol&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNEW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 2
Compound Name : Dichlorodifluoromethane (12)
Scan Number : 19
Retention Time: 2.05 min.
Quant Ion : 85.0
Area : 8832
Concentration : .988 ppbv
q-value : 86

REFERENCE STANDARD SPECTRUM



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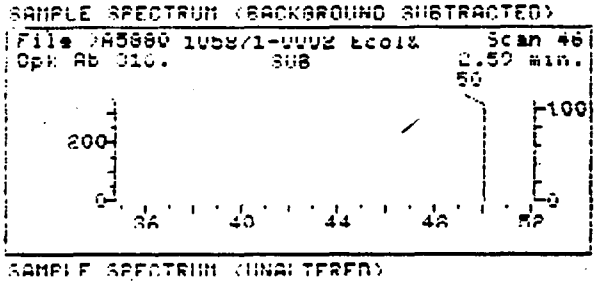

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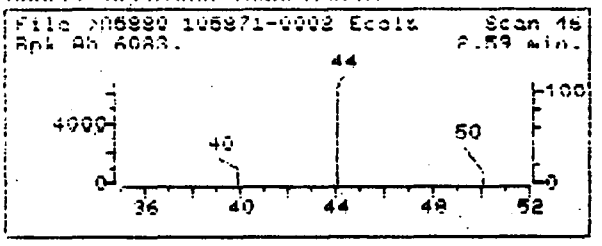
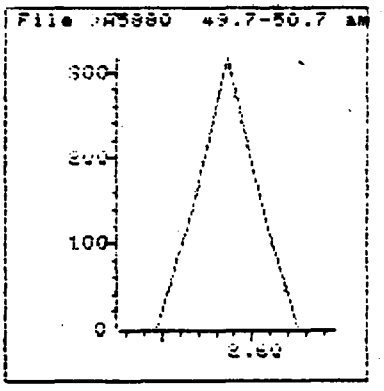
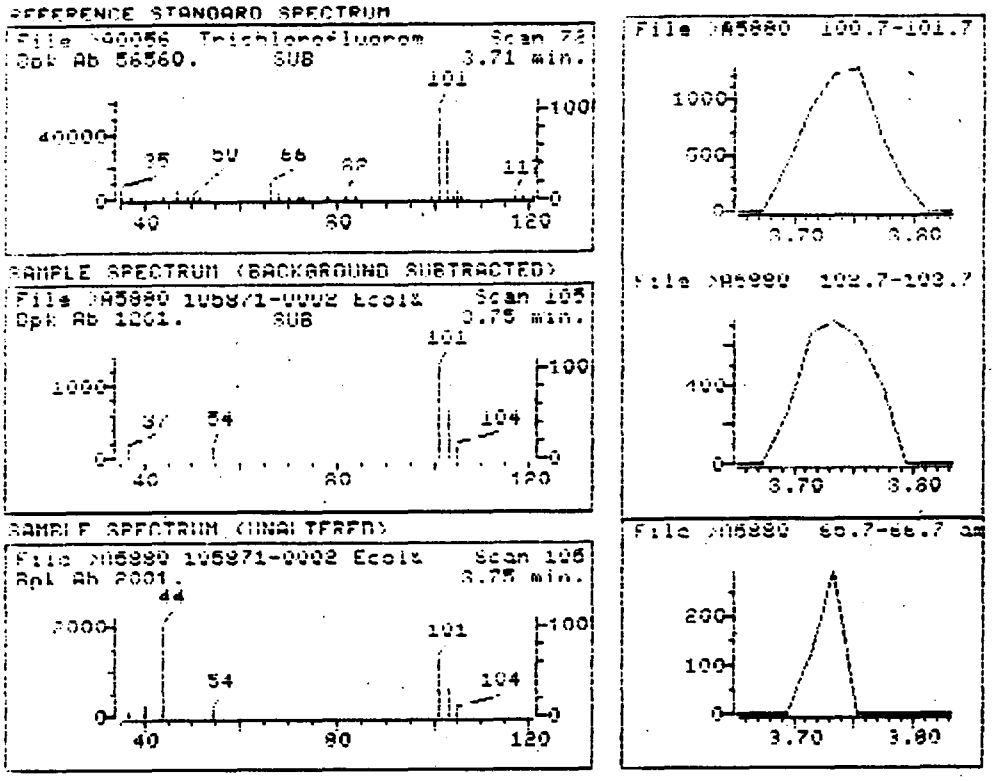




Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecol&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNEW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

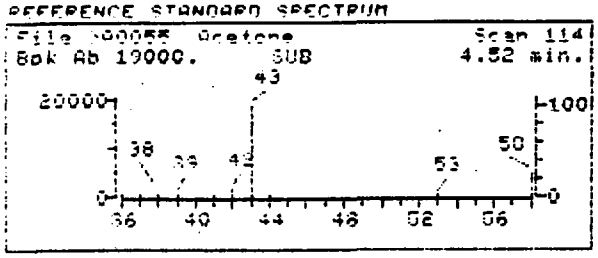
Compound No : 3
Compound Name : Chloromethane
Scan Number : 46
Retention Time: 2.59 min.
Quant Ion : 50.0
Area : 702
Concentration : .325 ppbv
q-value : 100



Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecol&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNEW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 8
Compound Name : Trichlorofluoromethane (11)
Scan Number : 105
Retention Time: 3.75 min.
Quant Ion : 101.0
Area : 5552
Concentration : .643 ppbv
q-value : 82

REFERENCE STANDARD SPECTRUM



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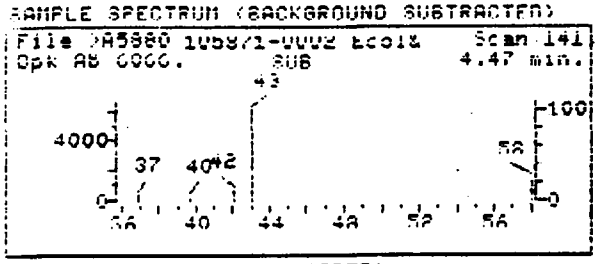
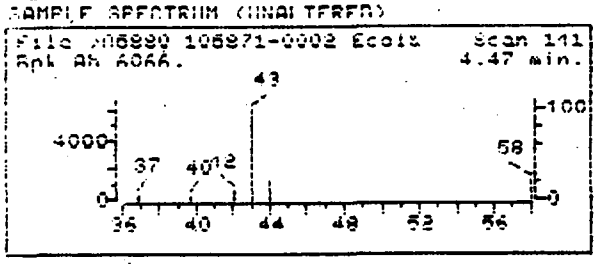
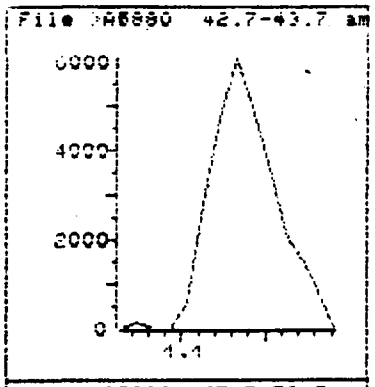
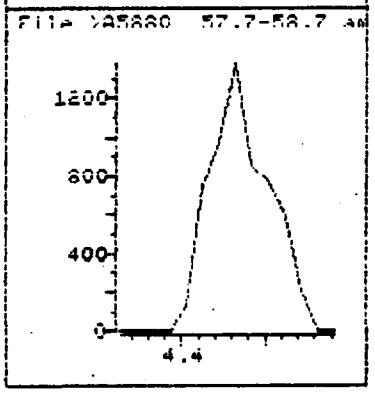


SAMPLE SPECTRUM (UNALTERED)







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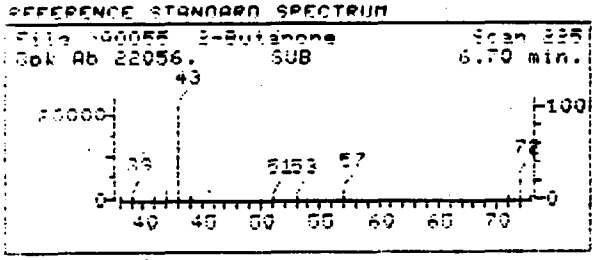
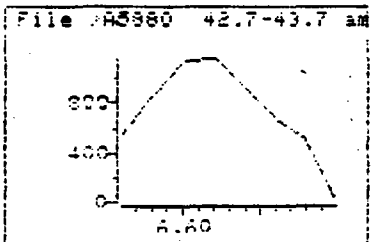
Name: 105871-0002 Ecol&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2, 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNEW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

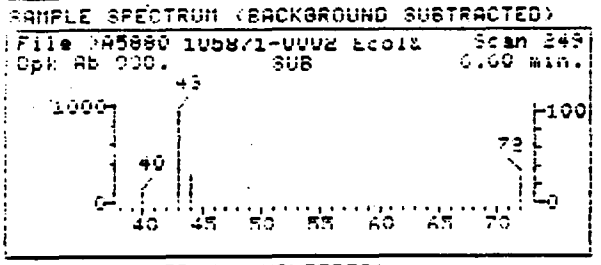
Compound No : 12
Compound Name : Acetone
Scan Number : 141
Retention Time: 4.47 min.
Quant Ion : 43.0
Area : 32391
Concentration : 13.09 ppbv
q-value : 91

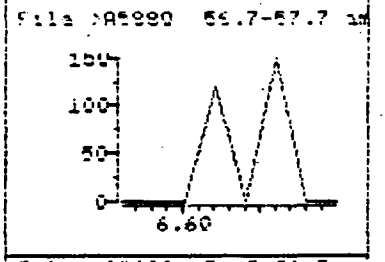
REFERENCE STANDARD SPECTRUM



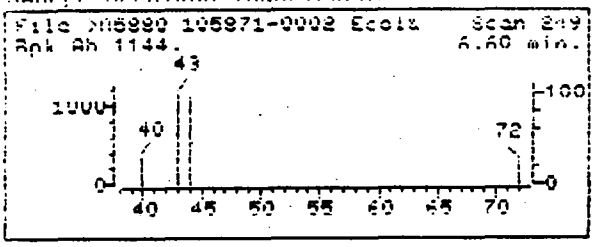


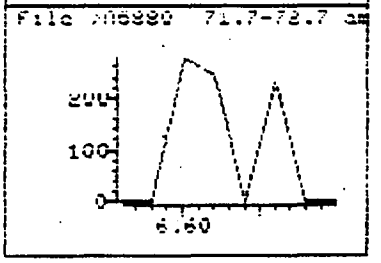
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





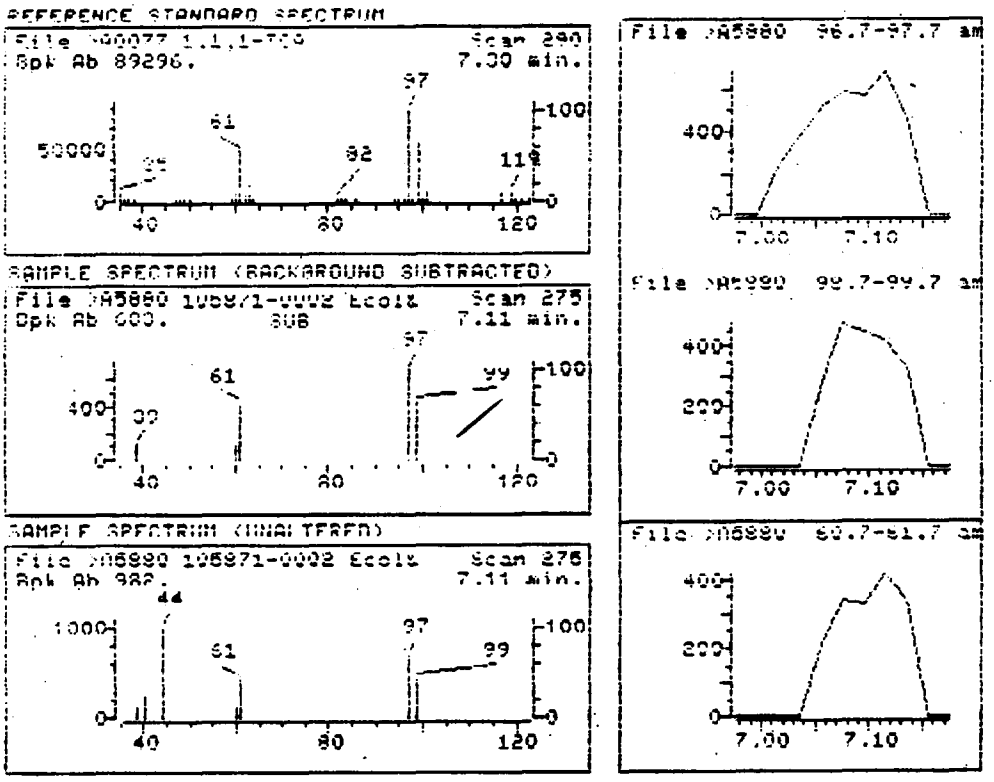
SAMPLE SPECTRUM (UNAUTOFED)





Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNFW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

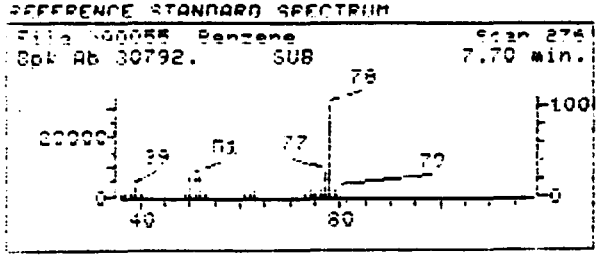
Compound No : 18
Compound Name : 2-Butanone
Scan Number : 249
Retention Time: 6.60 min.
Quant Ion : 72.0
Area : 889
Concentration : 1.58 ppbv
q-value : 91

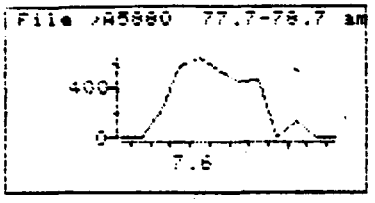


Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNFW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

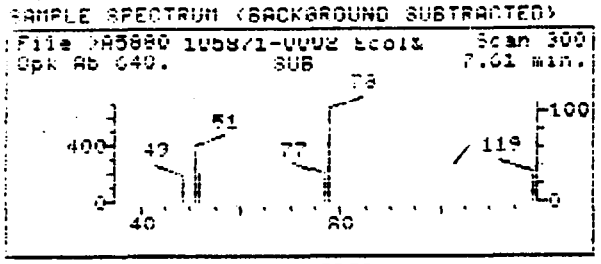
Compound No : 20
Compound Name : 1,1,1-Trichloroethane
Scan Number : 275
Retention Time: 7.11 min.
Quant Ion : 97.0
Area : 4055
Concentration : .769 ppbv
q-value : 98

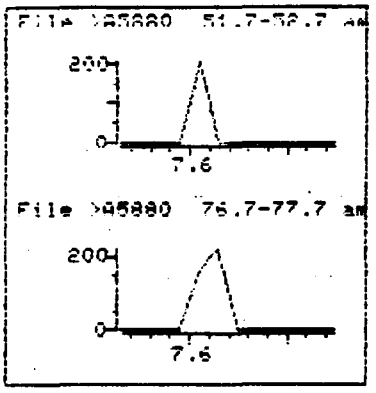
REFERENCE STANDARD SPECTRUM



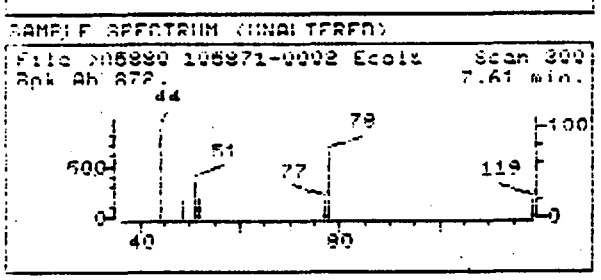


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



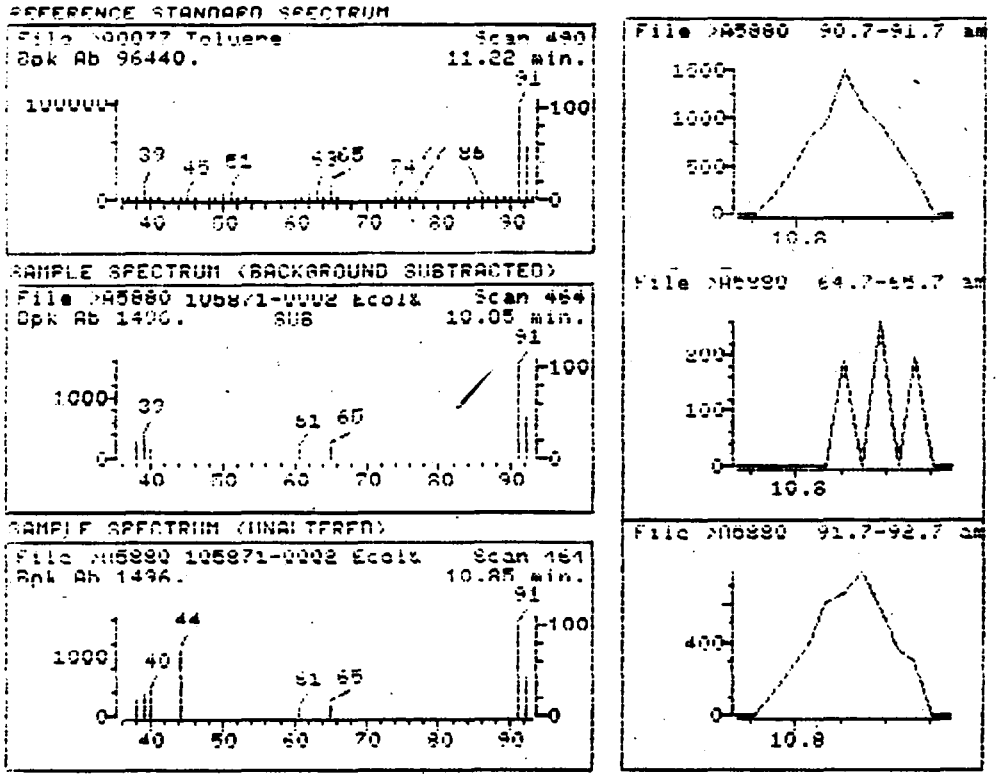


SAMPLE SPECTRUM (UNAUTERED)



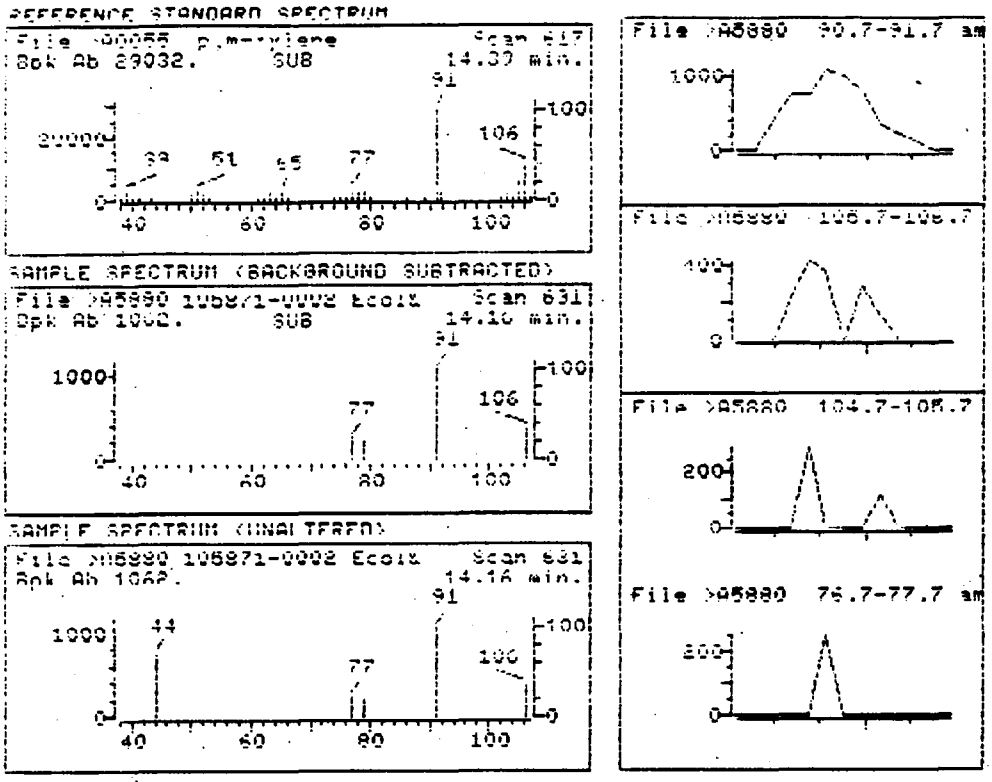
Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNEW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 23
Compound Name : Benzene
Scan Number : 300
Retention Time: 7.61 min.
Quant Ion : 78.0
Area : 3625
Concentration : 1.06 ppbv
q-value : 100



Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNEW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

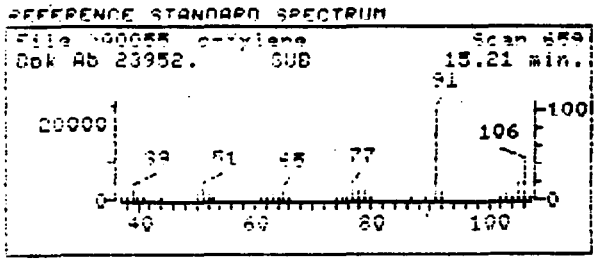
Compound No : 30
Compound Name : Toluene
Scan Number : 464
Retention Time: 10.85 min.
Quant Ion : 91.0
Area : 8278
Concentration : 1.80 ppbv
q-value : 84

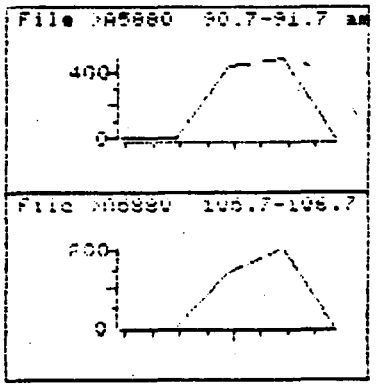


Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecol&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNFW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

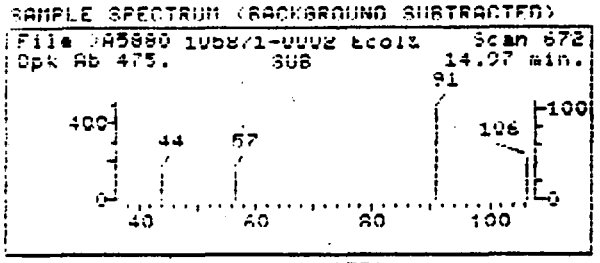
Compound No : 40
Compound Name : p,m-Xylene
Scan Number : 631
Retention Time: 14.16 min.
Quant Ion : 91.0
Area : 6466
Concentration : 1.77 ppbv
q-value : 83

REFERENCE STANDARD SPECTRUM

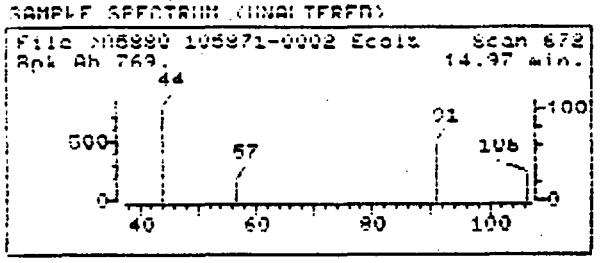




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



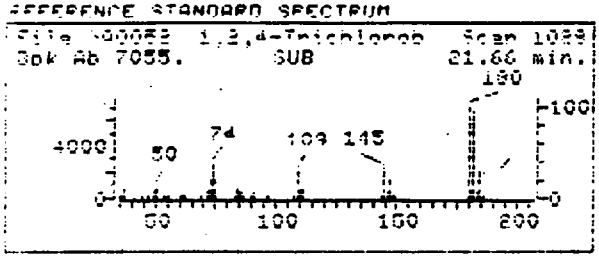
SAMPLE SPECTRUM (UNALTERED)



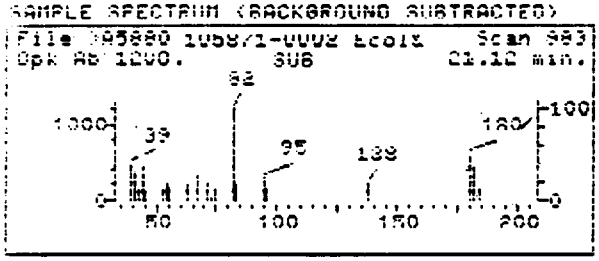
Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecol&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNFW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 41
Compound Name : o-Xylene
Scan Number : 672
Retention Time: 14.97 min.
Quant Ion : 91.0
Area : 1074
Concentration : .289 ppbv
q-value : 97

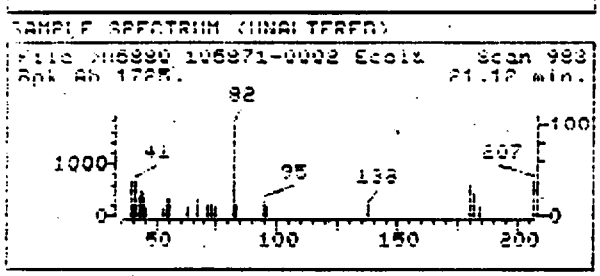
REFERENCE STANDARD SPECTRUM

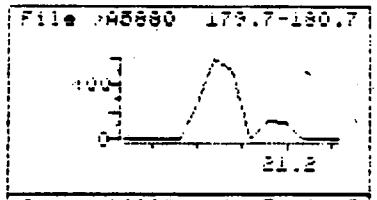


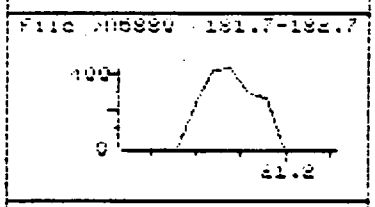
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

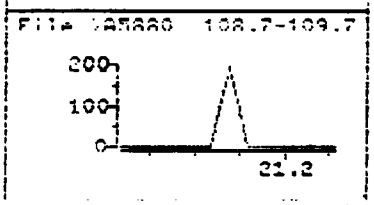


SAMPLE SPECTRUM (UNALTERED)









Data File: >A5880::D3 Quant Output File: ^A5880::SC
Name: 105871-0002 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 850 ml, AS-2. 24.6/14.6 A-129
Quant Time: 940610 16:14 Quant ID File: IDNEW1::QT
Injected at: 940610 15:50 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 52
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 983
Retention Time: 21.12 min.
Quant Ion : 180.0
Area : 1912
Concentration : 1.74 ppbv
q-value : 75

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Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-3
Lab ID: 105871-0003-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	22	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	8.1	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

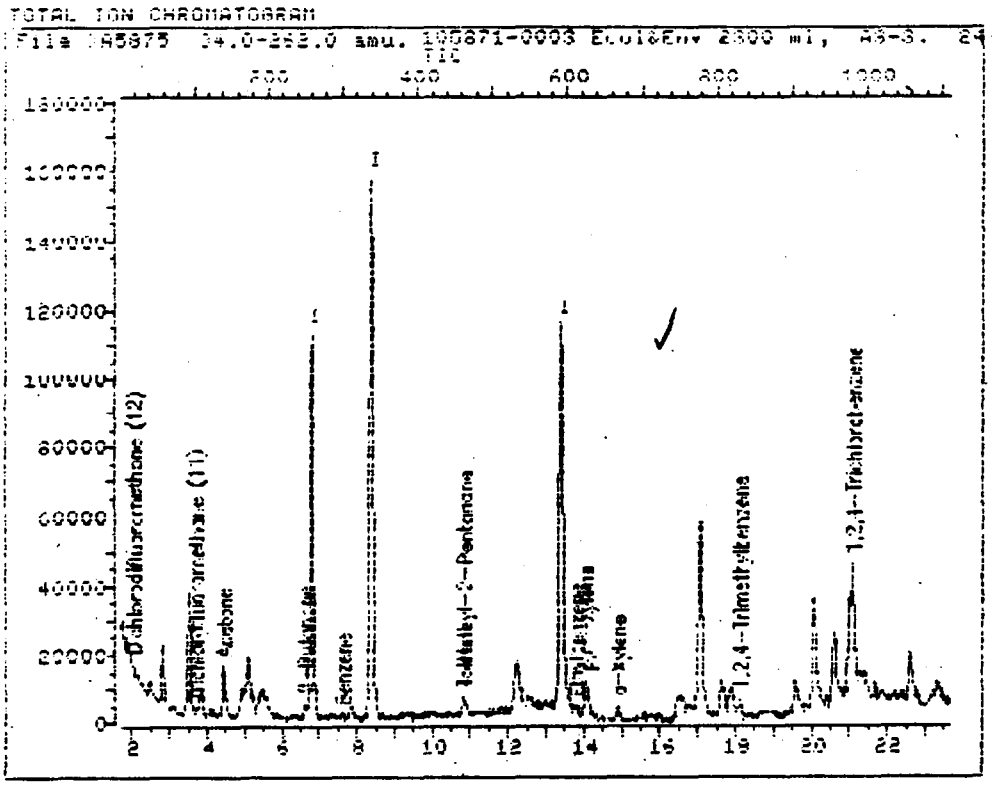
Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: AS-3
Lab ID: 105871-0003-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	10	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari



Data File: >A5875::D1 Quant Output File: CA5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:42 Last Qcal Time: 940610 07:29

Operator ID: 1:01
Quant Time : 940610 14:01
Injected at: 940610 12:41

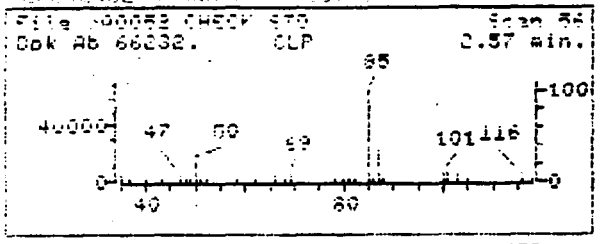
Operator ID: 101 Quant Rev: 2 Quant Time: 940610 14:01
Output File: >95829::SC Injected at: 940610 12:41
Data File: >A5829::D1 Dilution Factor: 1.00000
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3, 24.6/5.95 A-140

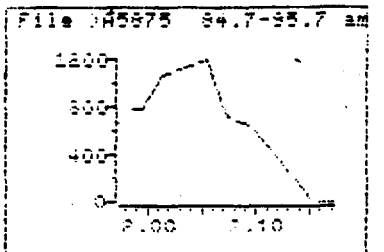
ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:42 Last Qual Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units
1)	*Bromochloromethane	6.80	49.0	130528	38.50	pphv
2)	Dichlorodifluoromethane (12)	2.05	85.0	7411	.745	pphv
8)	Trichlorofluoromethane (11)	3.20	101.0	2526	.263	pphv
12)	Acetone	4.45	43.0	60082	21.81	pphv
18)	2-Butanone	6.63	72.0	2609	4.17	pphv
22)	*1,4-Difluorobenzene	8.39	114.0	460274	39.00	pphv
23)	Benzene	7.63	78.0	2632	.667	pphv
29)	4-Methyl-2-Pentanone	10.84	43.0	5466	1.14	pphv
30)	Toluene	10.84	91.0	10083	1.90	pphv
31)	*Chlorobenzene-d5	13.37	117.0	219353	34.00	pphv
39)	Ethylbenzene	13.79	91.0	7368	1.36	pphv
40)	p,m-Xylene	14.05	91.0	29293	5.94	pphv
41)	o-Xylene	14.90	91.0	10766	2.14	pphv
48)	1,2,4-Trimethylbenzene	18.13	105.0	7814	1.20	pphv
52)	1,2,4-Trichlorobenzene	21.89	180.0	15503	10.43	pphv

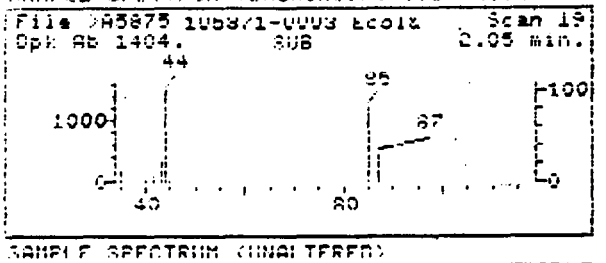
* Compound is ISTD

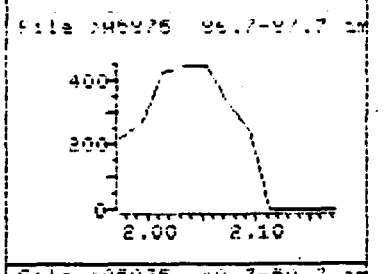
REFERENCE STANDARD SPECTRUM



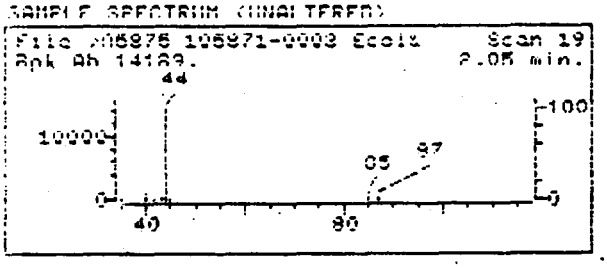


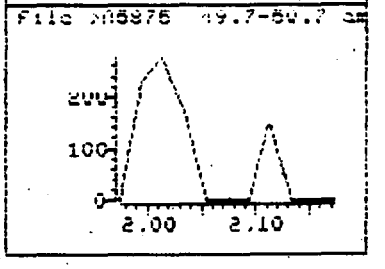
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)

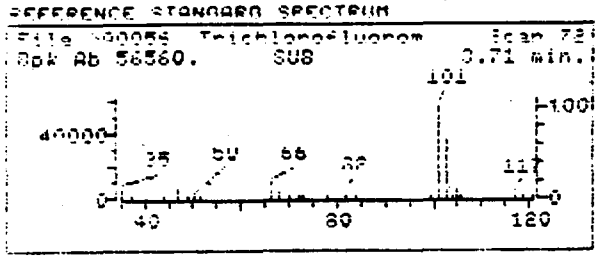


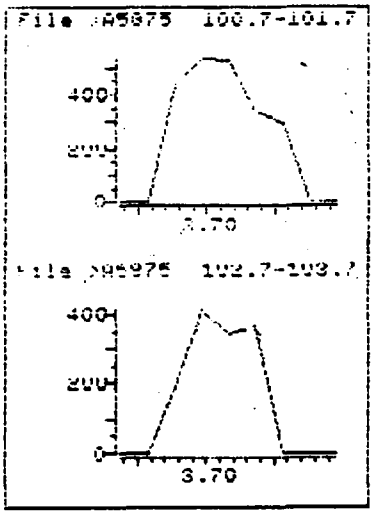


Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-1411
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

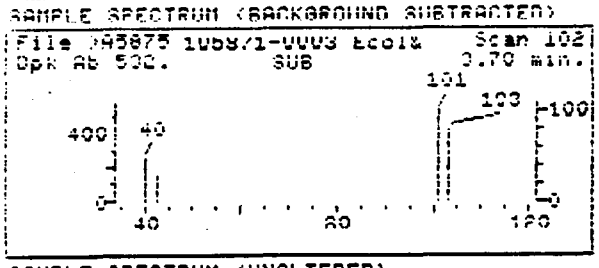
Compound No : 2
Compound Name : Dichlorodifluoromethane (12)
Scan Number : 19
Retention Time: 2.05 min.
Quant Ion : 85.0
Area : 7411
Concentration : .745 ppbv
q-value : 95

REFERENCE STANDARD SPECTRUM

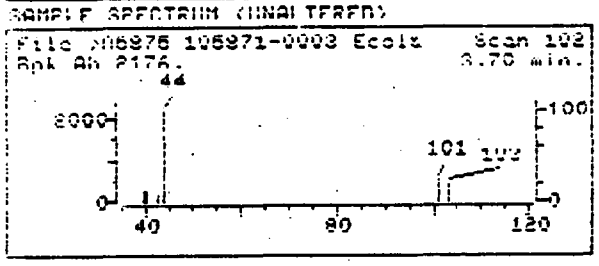




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

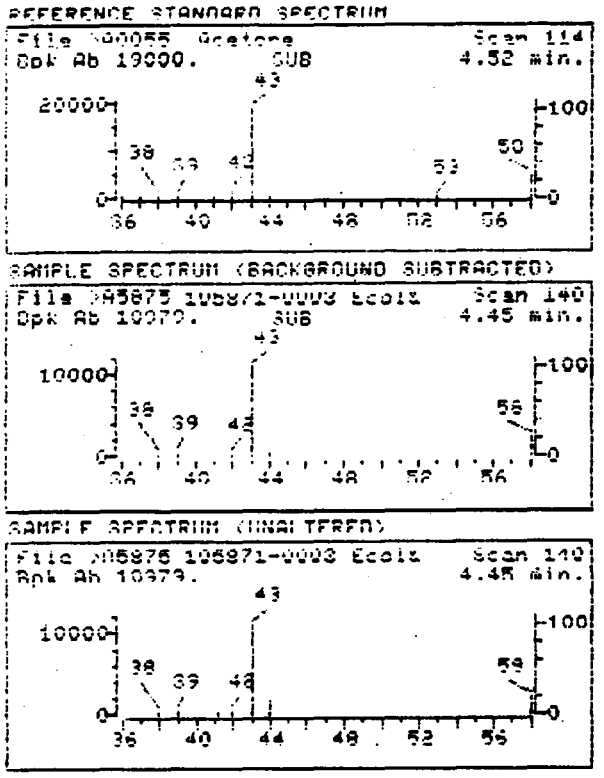


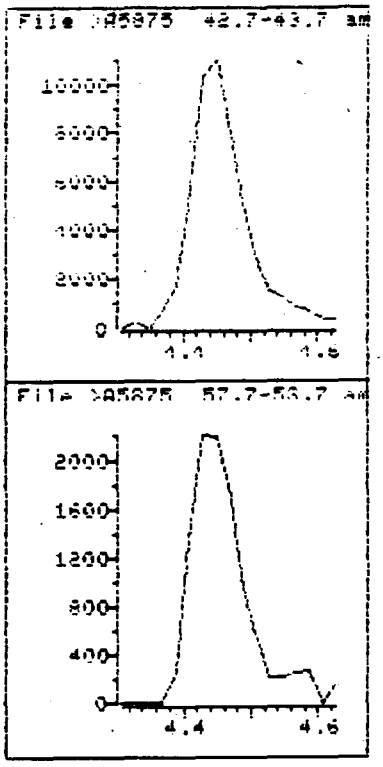
SAMPLE SPECTRUM (UNALTERED)



Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

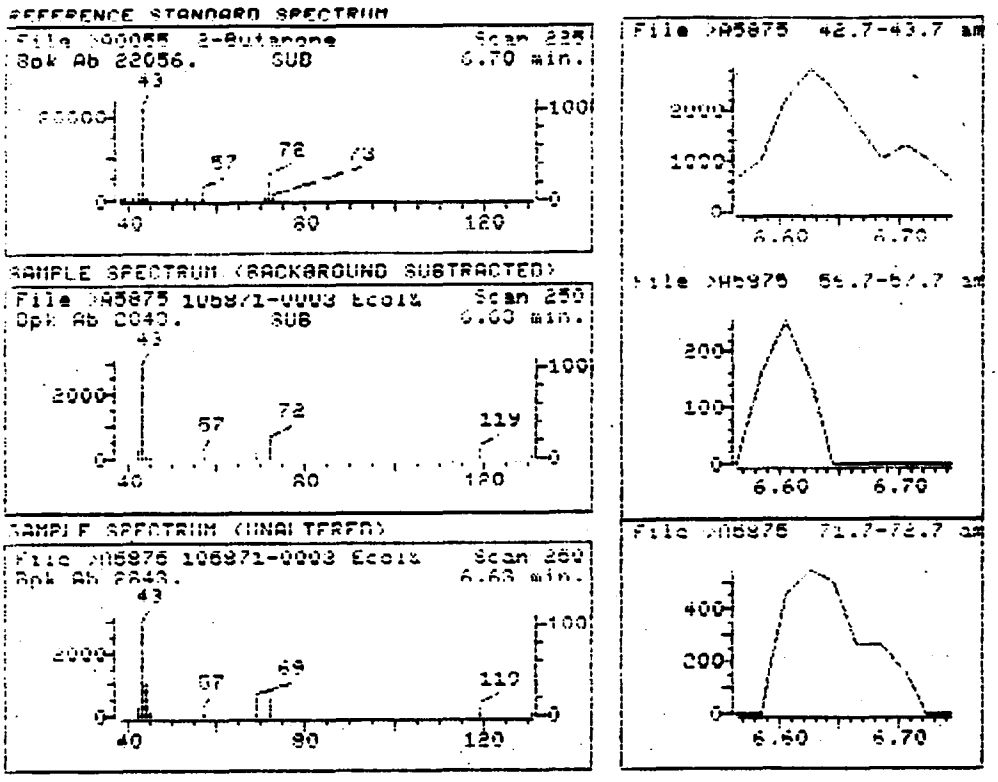
Compound No : 8
Compound Name : Trichlorofluoromethane (11)
Scan Number : 102
Retention Time: 3.70 min.
Quant Ion : 101.0
Area : 2526
Concentration : .263 ppbv
q-value : 83





Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-1411
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

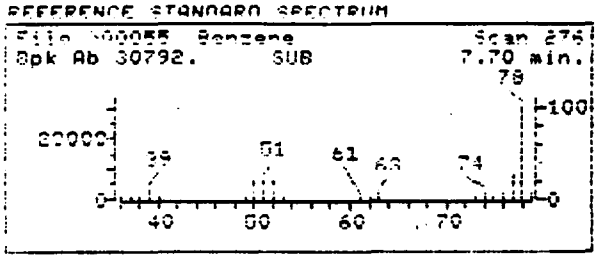
Compound No : 12
Compound Name : Acetone
Scan Number : 140
Retention Time: 4.45 min.
Quant Ion : 43.0
Area : 60082
Concentration : 21.81 ppbv
q-value : 86



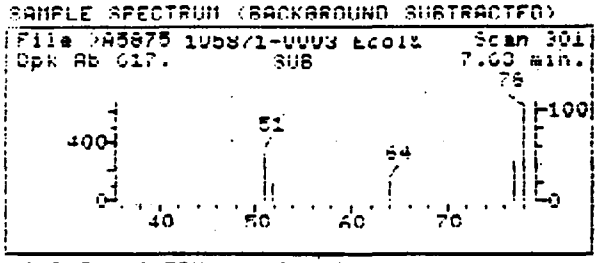
Data File: >A5875::D1 Quant Output File: >A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNFW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 18
Compound Name : 2-Butanone
Scan Number : 250
Retention Time: 6.63 min.
Quant Ion : 72.0
Area : 2609
Concentration : 4.17 ppbv
q-value : 98

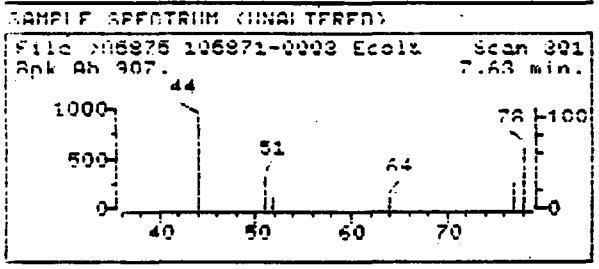
REFERENCE STANDARD SPECTRUM

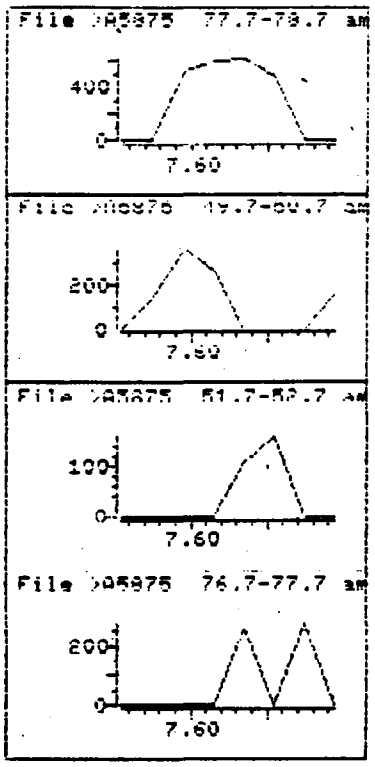


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

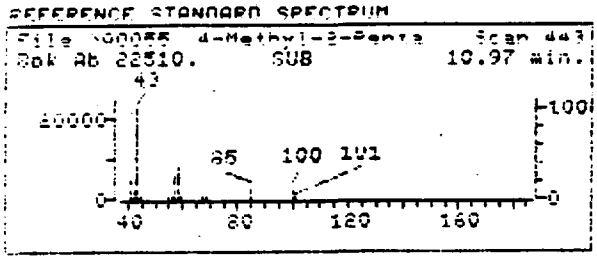


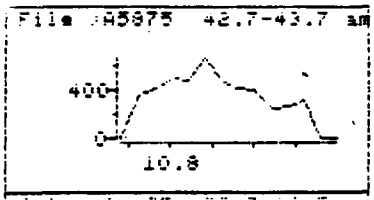


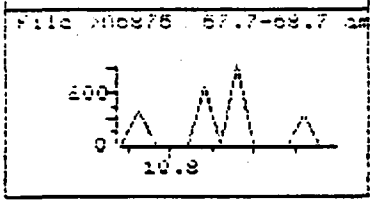
Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 23
Compound Name : Benzene
Scan Number : 301
Retention Time: 7.63 min.
Quant Ion : 78.0
Area : 2637
Concentration : .667 ppbv
q-value : 100

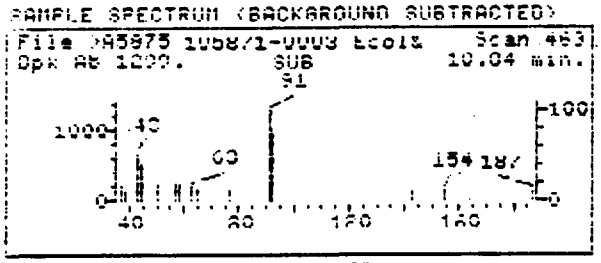
REFERENCE STANDARD SPECTRUM



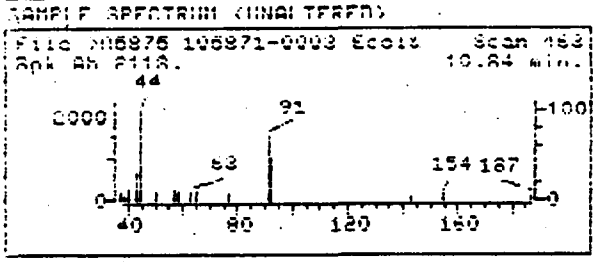




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



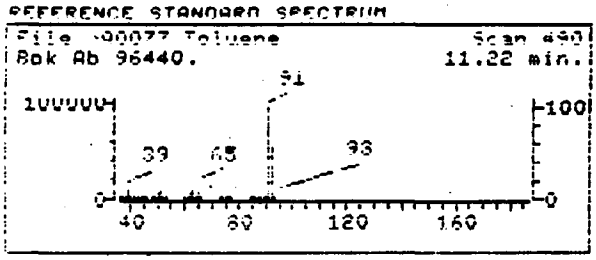
SAMPLE SPECTRUM (UNWEIGHTED)



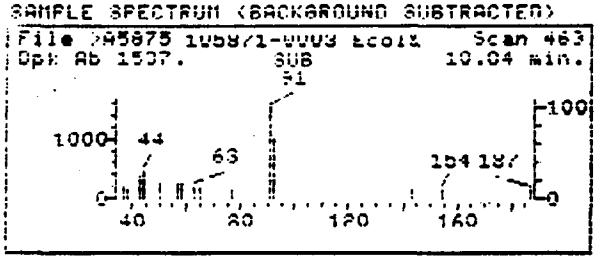
Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3, 24.6/5.35 A-1411
Quant Time: 940610 14:01 Quant ID File: IDNFW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 29
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 463
Retention Time: 10.84 min.
Quant Ion : 43.0
Area : 5466
Concentration : 1.14 ppbv
q-value : 97

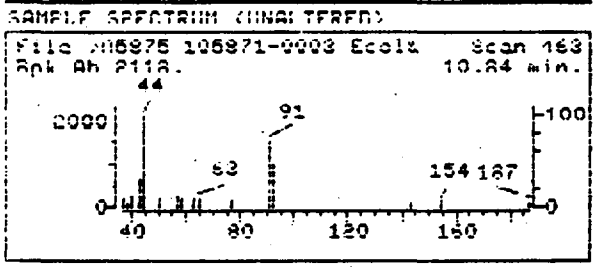
REFERENCE STANDARD SPECTRUM

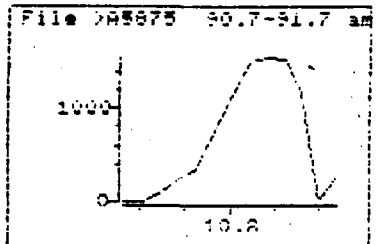


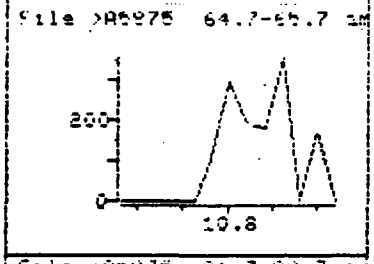
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

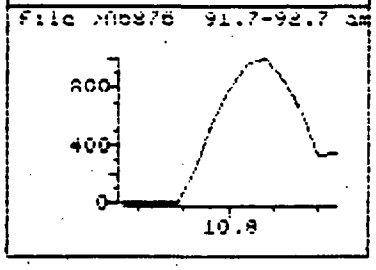


SAMPLE SPECTRUM (UNALTERED)





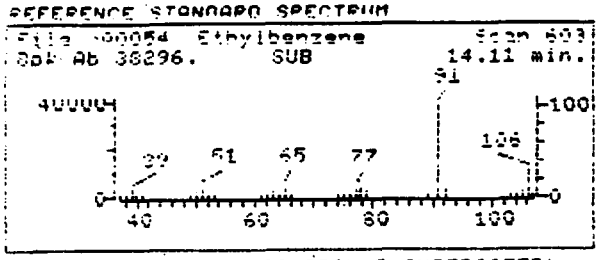




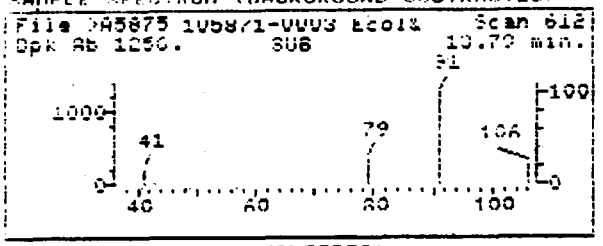
Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 30
Compound Name : Toluene
Scan Number : 463
Retention Time: 10.84 min.
Quant Ion : 91.0
Area : 10083
Concentration : 1.90 ppbv
q-value : 86

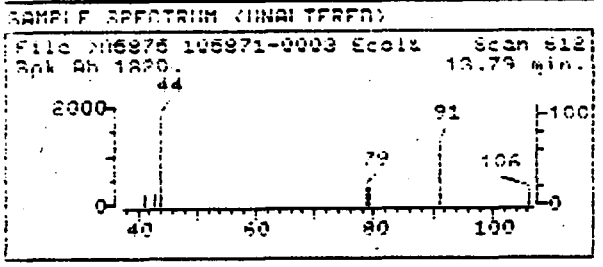
REFERENCE STANDARD SPECTRUM

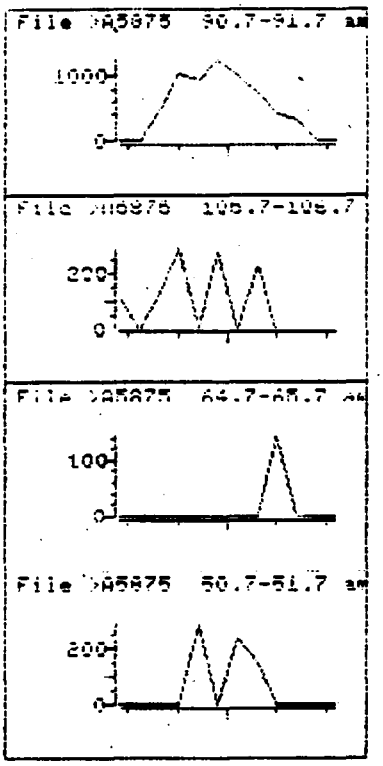


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



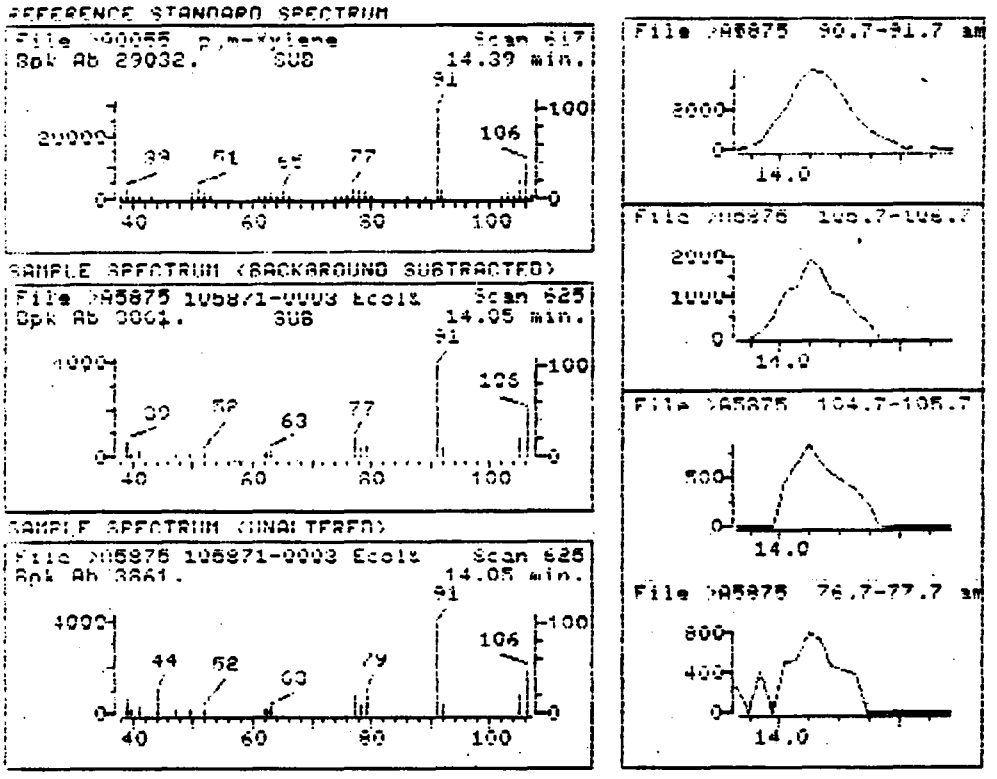
SAMPLE SPECTRUM (UNAUTERED)





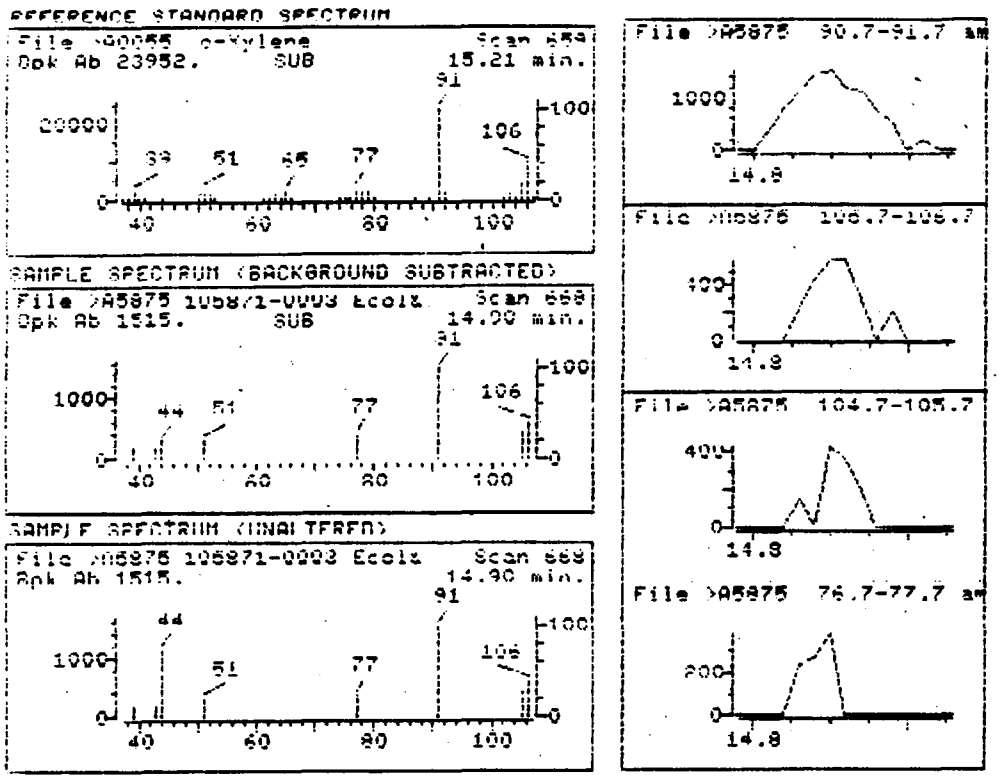
Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNFW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 39
Compound Name : Ethylbenzene
Scan Number : 612
Retention Time: 13.79 min.
Quant Ion : 91.0
Area : 2368
Concentration : 1.36 ppbv
q-value : 85



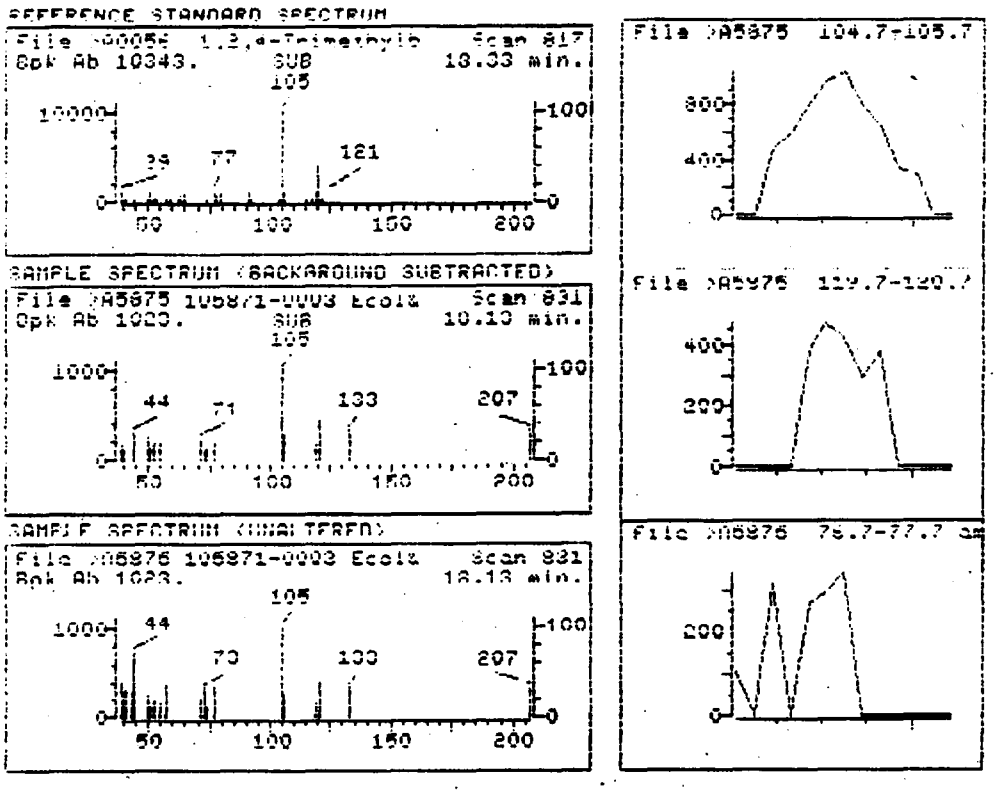
Data File: >A5875::D1 Quant Output File: >A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNFW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 40
Compound Name : p,m-Xylene
Scan Number : 625
Retention Time: 14.05 min.
Quant Ion : 91.0
Area : 99293
Concentration : 5.94 ppbv
q-value : 91



Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

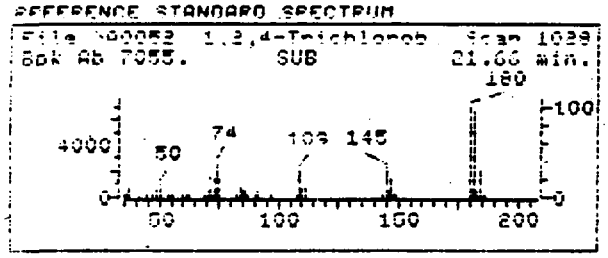
Compound No : 41
Compound Name : o-Xylene
Scan Number : 668
Retention Time: 14.90 min.
Quant Ion : 91.0
Area : 10766
Concentration : 2.14 ppbv
q-value : 90



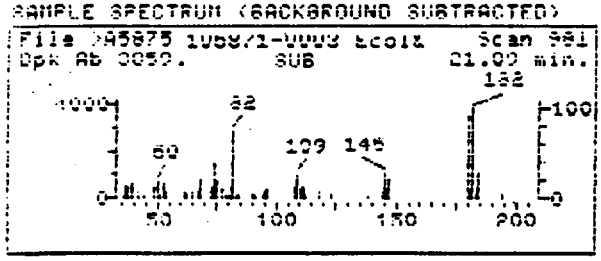
Data File: >A5875::D1 Quant Output File: >A5875::SC
Name: 105871-0003 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 48
Compound Name : 1,2,4-Trimethylbenzene
Scan Number : 831
Retention Time: 18.13 min.
Quant Ion : 105.0
Area : 7014
Concentration : 1.20 ppbv
q-value : 97

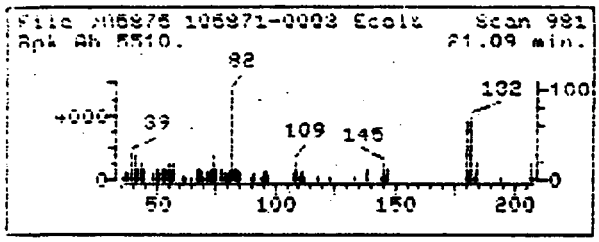
REFERENCE STANDARD SPECTRUM

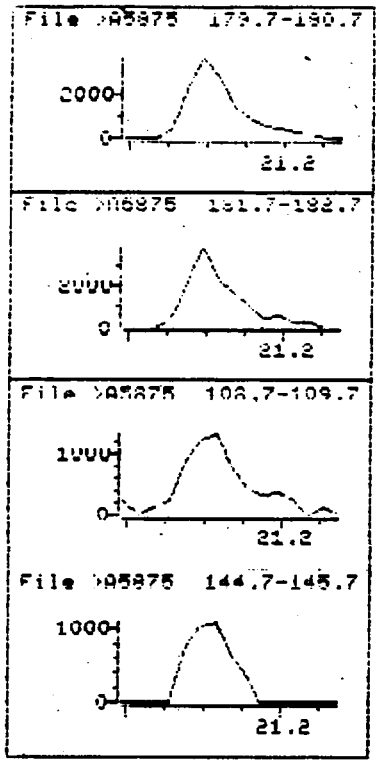


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNAUTERED)





Data File: >A5875::D1 Quant Output File: ^A5875::SC
Name: 105871-0003 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2300 ml, AS-3. 24.6/5.35 A-140
Quant Time: 940610 14:01 Quant ID File: IDNEW1::QT
Injected at: 940610 12:41 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 52
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 981
Retention Time: 21.09 min.
Quant Ion : 180.0
Area : 15503
Concentration : 10.43 ppbv
q-value : 85

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-4
Lab ID: 105871-0004-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit	
Dichlorodifluoromethane	ND	ppb (v/v)	2.3	1
Chloromethane	ND	ppb (v/v)	4.6	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.3	
Vinyl chloride	ND	ppb (v/v)	2.3	
Bromomethane	ND	ppb (v/v)	2.3	
Chloroethane	ND	ppb (v/v)	4.6	
Trichlorofluoromethane	ND	ppb (v/v)	2.3	
1,1-Dichloroethene	ND	ppb (v/v)	2.3	
Carbon disulfide	ND	ppb (v/v)	12	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.3	
Acetone	12	ppb (v/v)	12	
Methylene chloride	ND	ppb (v/v)	2.3	
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.3	
1,1-Dichloroethane	ND	ppb (v/v)	2.3	
Vinyl acetate	ND	ppb (v/v)	12	
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.3	
2-Butanone	ND	ppb (v/v)	12	
Chloroform	ND	ppb (v/v)	2.3	
1,1,1-Trichloroethane	ND	ppb (v/v)	2.3	
Carbon tetrachloride	ND	ppb (v/v)	2.3	
Benzene	ND	ppb (v/v)	2.3	
1,2-Dichloroethane	ND	ppb (v/v)	2.3	
Trichloroethene	ND	ppb (v/v)	2.3	
1,2-Dichloropropane	ND	ppb (v/v)	2.3	
Bromodichloromethane	ND	ppb (v/v)	2.3	
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.3	
4-Methyl-2-pentanone	ND	ppb (v/v)	4.6	
Toluene	ND	ppb (v/v)	2.3	
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.3	
1,1,2-Trichloroethane	ND	ppb (v/v)	2.3	
Tetrachloroethene	ND	ppb (v/v)	2.3	
2-Hexanone	ND	ppb (v/v)	4.6	
Dibromochloromethane	ND	ppb (v/v)	2.3	
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.3	
Chlorobenzene	ND	ppb (v/v)	2.3	
Ethylbenzene	ND	ppb (v/v)	2.3	
Xylenes (total)	ND	ppb (v/v)	2.3	
Styrene	ND	ppb (v/v)	2.3	
Bromoform	ND	ppb (v/v)	2.3	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

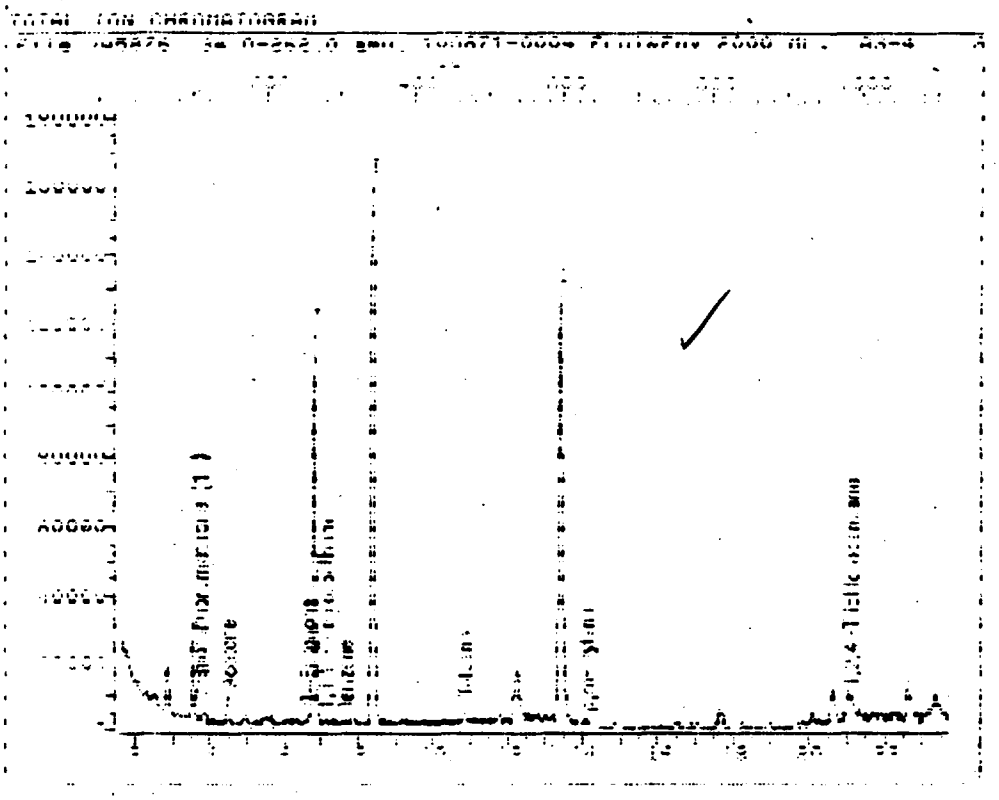
Client Name: Ecology & Environment, Inc
Client ID: AS-4
Lab ID: 105871-0004-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.3
Benzyl chloride	ND	ppb (v/v)	2.3
4-Ethyl toluene	ND	ppb (v/v)	2.3
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.3
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.3
1,3-Dichlorobenzene	ND	ppb (v/v)	2.3
1,4-Dichlorobenzene	ND	ppb (v/v)	2.3
1,2-Dichlorobenzene	ND	ppb (v/v)	2.3
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.6
Hexachlorobutadiene	ND	ppb (v/v)	4.6

Note 1 : All reporting limits elevated due to high level of moisture/carbon dioxide.

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari



Data File: [illegible] Quant Output File: [illegible]
Name: [illegible] Benzene Instrument Id: System 1
Mode: 2000 ML, MS-4 24.6/9.5V A-128 TRAP PRIME

Id File: [illegible]
Title: SYSTEM 1 VOLATILE ORGANICS ID 14
Last Calibration: [illegible] Last Qual Time: [illegible]

Operator [illegible]
Quant Time: [illegible]
Injection at: [illegible]

QUANT REPORT

Page 1

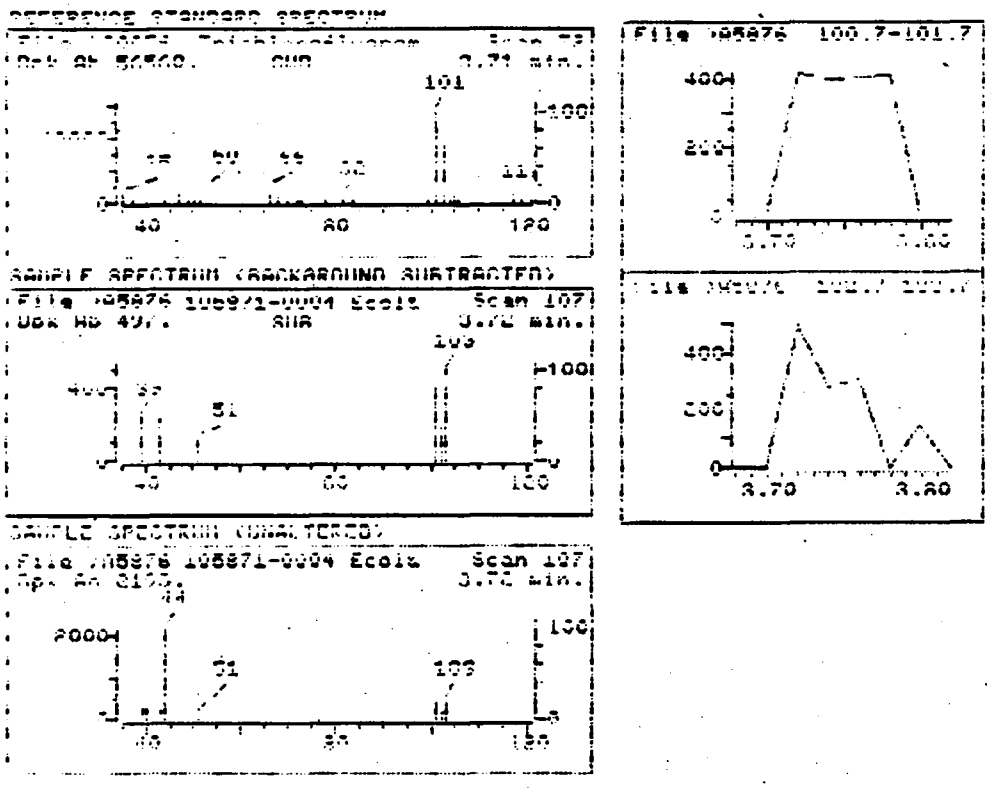
Operator ID: LDI Quant Rev: [illegible] Quant Time: 940610 [illegible]
Output File: [illegible] Injected at: 940610 [illegible]
Data File: [illegible] Dilution Factor: 1.00000
Name: 1048.[illegible]0004 Ebb16Env Instrument ID: SYSTEM 1
Mode: 7000 ML, DS 4 24.6/7.0V H 128 TRAP PRIME

ID File: [illegible]
Title: SYSTEM 1 VOLATILE ORGANICS [illegible]
Last Calibration: 930324 08:47 Last Qual Time: 940610 [illegible]

	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	*Bromochloromethane	6.80	49.0	136894	18.50	ppbv	[illegible]
8)	Trichlorofluoromethane (11)	3.72	101.0	1939	.192	ppbv	[illegible]
12)	Acetone	4.47	43.0	10150	10.44	ppbv	[illegible]
18)	2-Butanone	6.63	72.0	1473	2.24	ppbv	[illegible]
20)	1,1,1 Trichloroethane	7.12	97.0	1950	.252	ppbv	[illegible]
22)	*1,4-D.Fluorobenzene	8.37	114.0	361237	39.00	ppbv	[illegible]
23)	Benzene	7.63	78.0	1878	.474	ppbv	[illegible]
28)	Toluene	10.82	91.0	7911	1.49	ppbv	[illegible]
31)	*Chlorobenzene-d5	13.39	117.0	239142	34.00	ppbv	[illegible]
40)	p,m-Xylene	14.09	91.0	4428	.822	ppbv	[illegible]
42)	1,2,4-Trichlorobenzene	21.09	180.0	1146	.707	ppbv	[illegible]

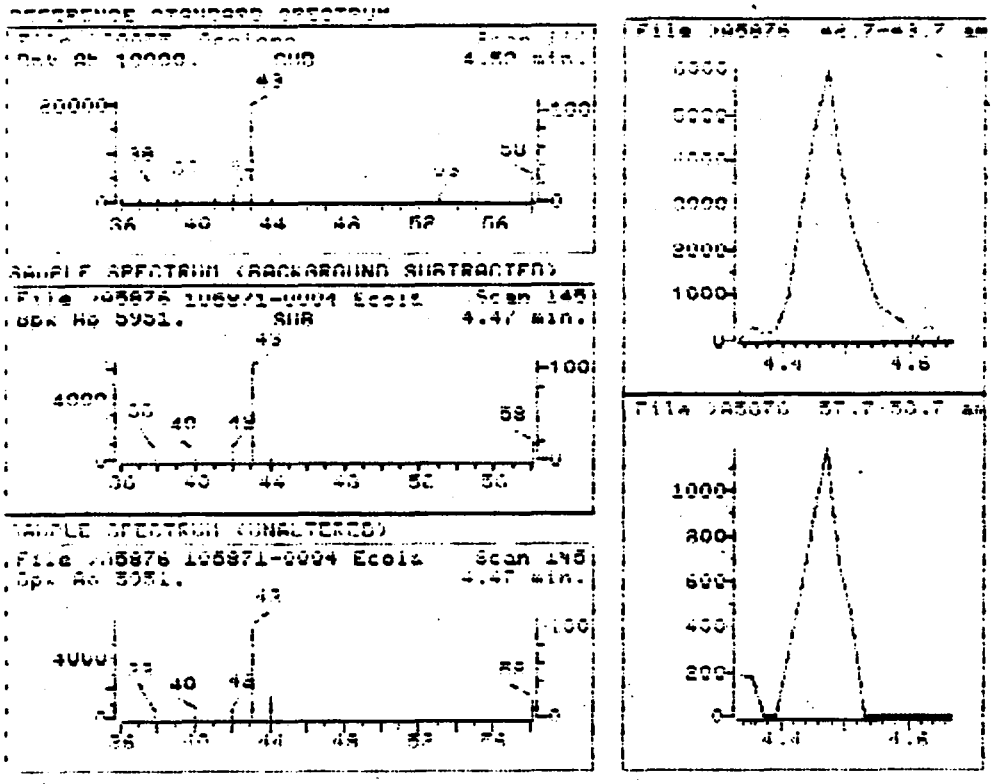
* Compound is ISTD

[illegible] 6/13



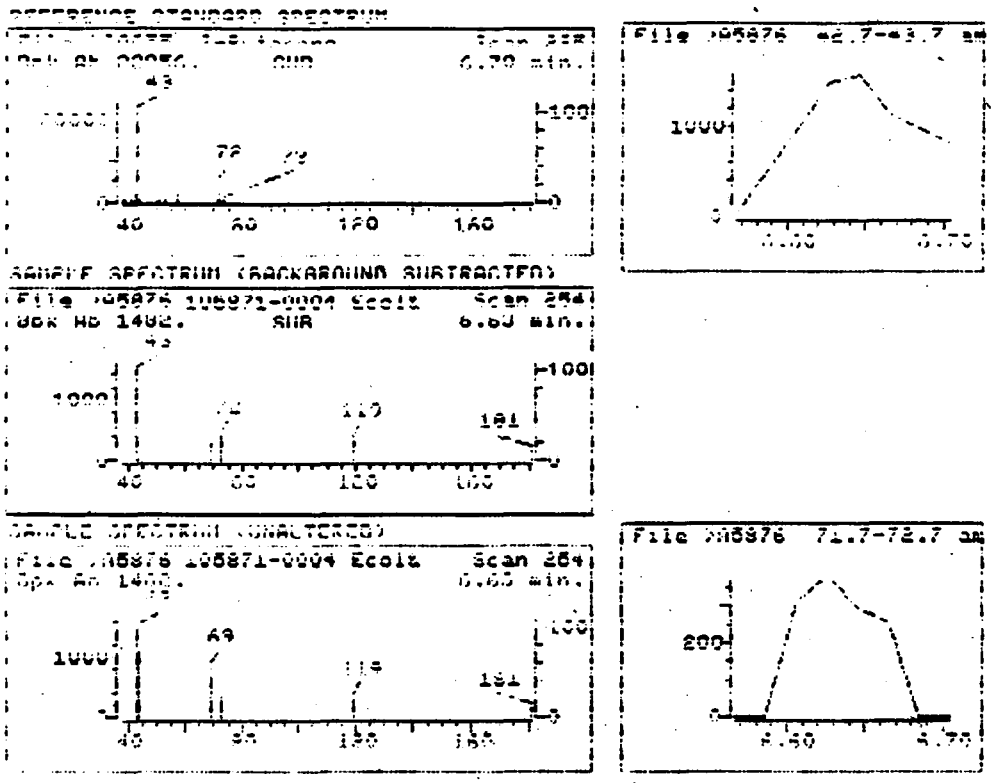
Data File: 105876::D1 Quant Output File: 105876::SC
Name: 105871-0004 Ecoli&Eno Instrument ID: SYSTEM 1
Misc: 2000 ML, AS-4 24.6/5.35 A-128 TRAP FROZE
Quant Time: 940610 17:07 Quant ID File: TUNEW1::QT
Injected at: 940610 15:11 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 8
Compound Name : trichlorofluoromethane (11)
Scan Number : 107
Retention Time: 3.72 min.
Quant Ion : 101.0
Area : 1939
Concentration : .192 ppbv
q-value : 30



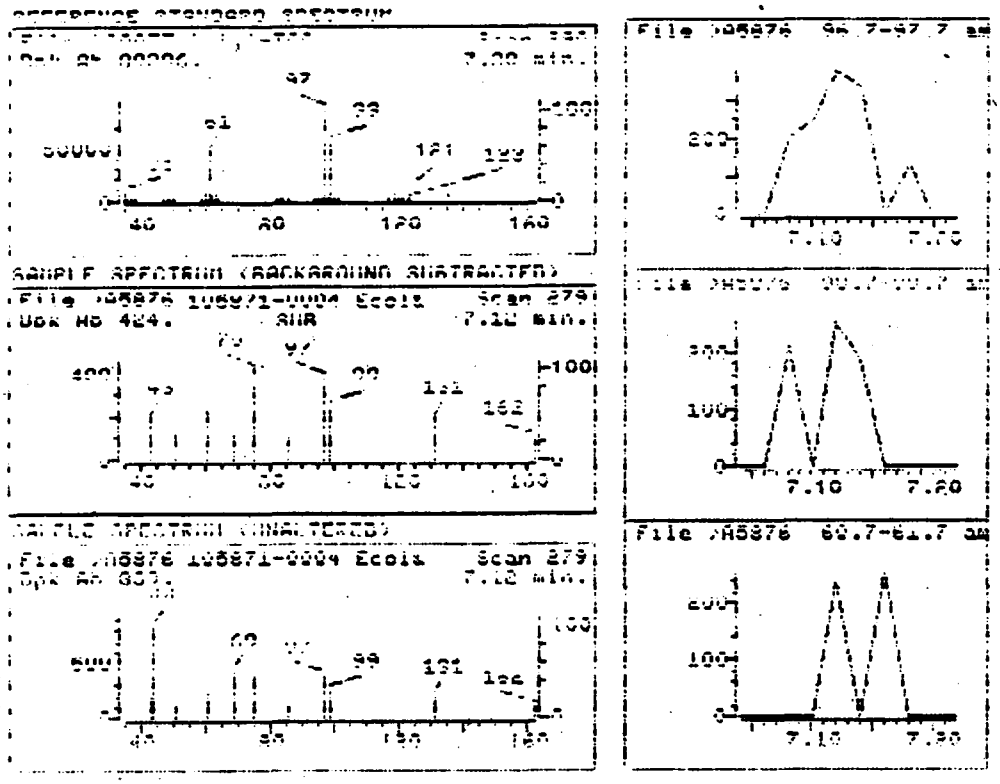
Data File: >A9876::D1 Quant Output File: ^A9876::SC
Name: 105871-0004 Ecol&Env Instrument ID: SYSTEM 1
Misc: 2000 ML, AS-4 24.6/5.39 A-128 TRAP FROZE
Quant Time: 940610 17:07 Quant ID File: IONEW1::QT
Injected at: 940610 13:11 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 12
Compound Name : Acetone
Scan Number : 149
Retention Time: 4.47 min.
Quant Ion : 43.0
Area : 30150
Concentration : 10.44 ppbv
q-value : 86



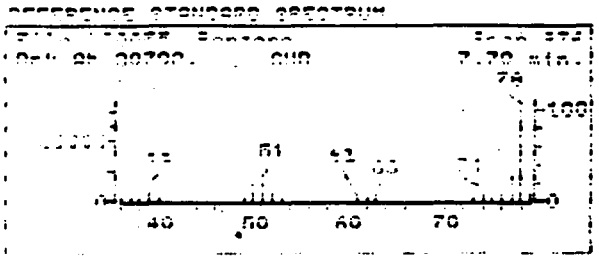
Data File: >A5876::D1 Quant Output File: ^A5876::SC
Name: 105871-0004 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2000 ML, AS-4 24.6/5.39 A-128 TRAP FROZE
Quant Time: 940610 17:07 Quant ID File: IDNEW1::QT
Injected at: 940610 17:11 Last Calibration: 940324 08:47
Last Qual Time: 940610 07:29

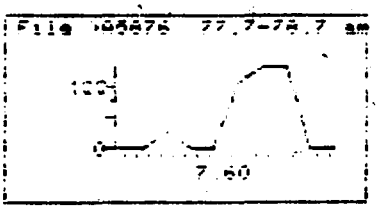
Compound No : 18
Compound Name : 2-Butanone
Scan Number : 254
Retention Time: 6.63 min.
Quant Ion : 72.0
Area : 1473
Concentration : 2.24 ppbv
q-value : 87

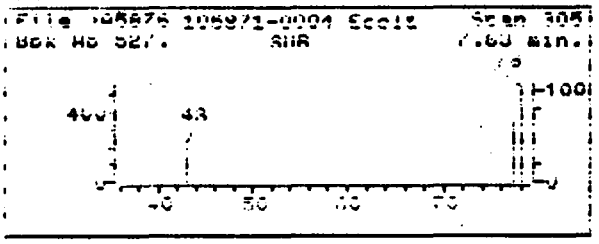


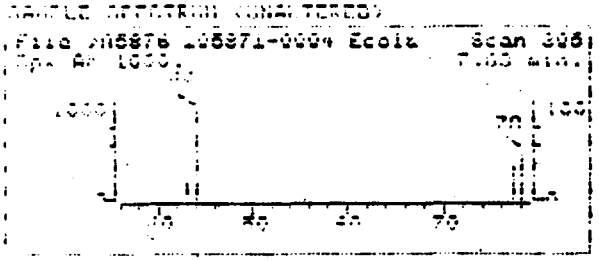
Data File: 105876:01 Quant Output File: 105876:SC
Name: 105871-0004 Ecoli&Enc Instrument ID: SYSTEM 1
Misc: 2000 ML, AS 4 24.6/5.35 n-128 TRAP FROZE
Quant Time: 940610 17:07 Quant ID File: TUNEW1::WT
Injected at: 940610 13:11 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

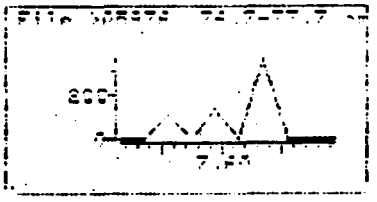
Compound No : 28
Compound Name : 1,1,1 trichloroethane
Scan Number : 279
Retention Time: 7.12 min.
Quant Ion : 97.0
Area : 1560
Concentration : .252 ppbv
q-value : 93





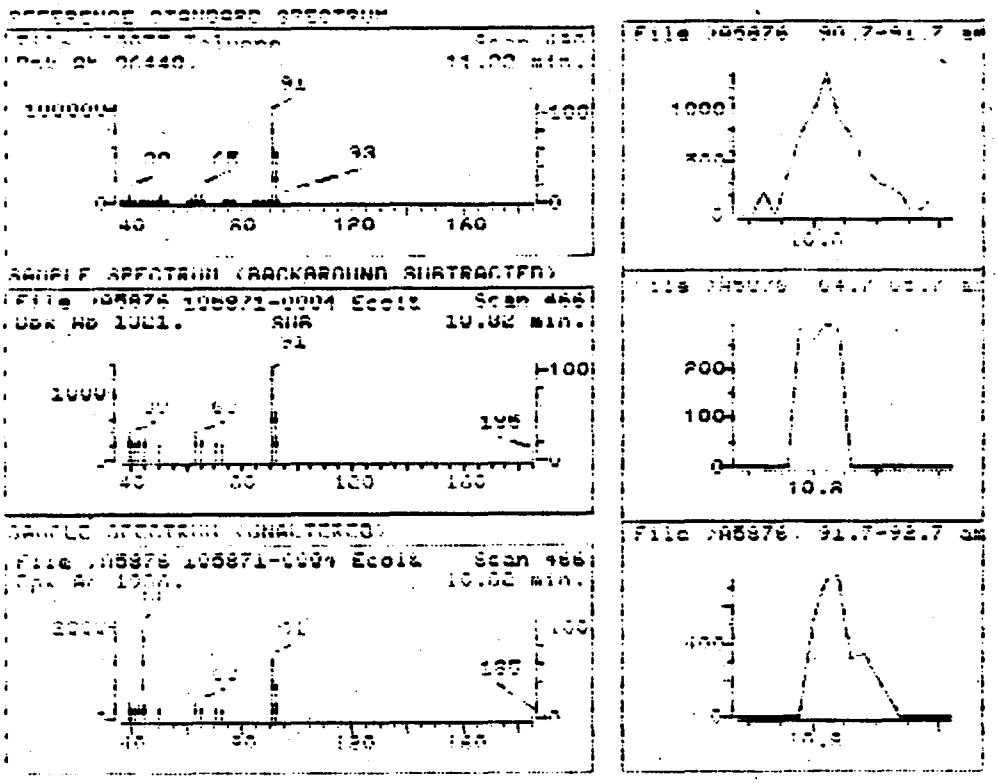






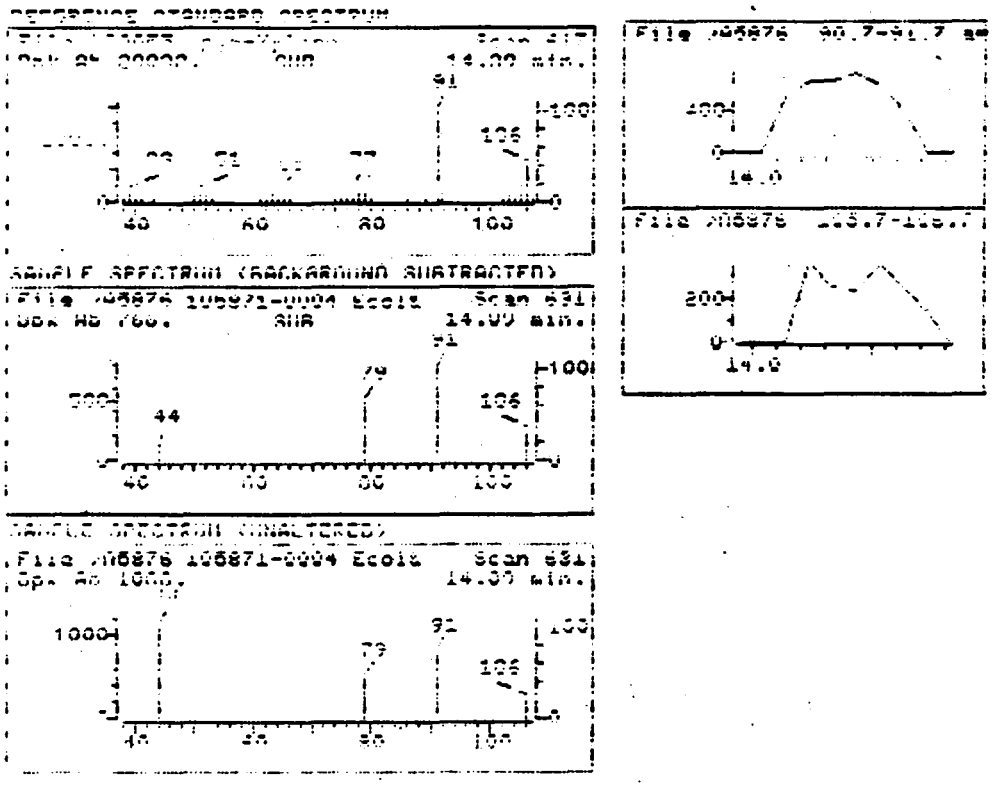
Data File:)A5876::D1 Quant Output File: 105876::SC
Name: 105871 0004 Ecoli&Env Instrument ID: SYSTEM 1
Mass: 2000 ML, AS-4 24.6/9.35 A'128 IRAP FRUZE
Quant Time: 940610 17:07 Quant ID File: 10NEW1::QT
Injected at: 940610 13:11 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 23
Compound Name : Benzene
Scan Number : 305
Retention Time: 7.63 min.
Quant Ion : 78.0
Area : 1878
Concentration : .474 ppbv
Quality : 100



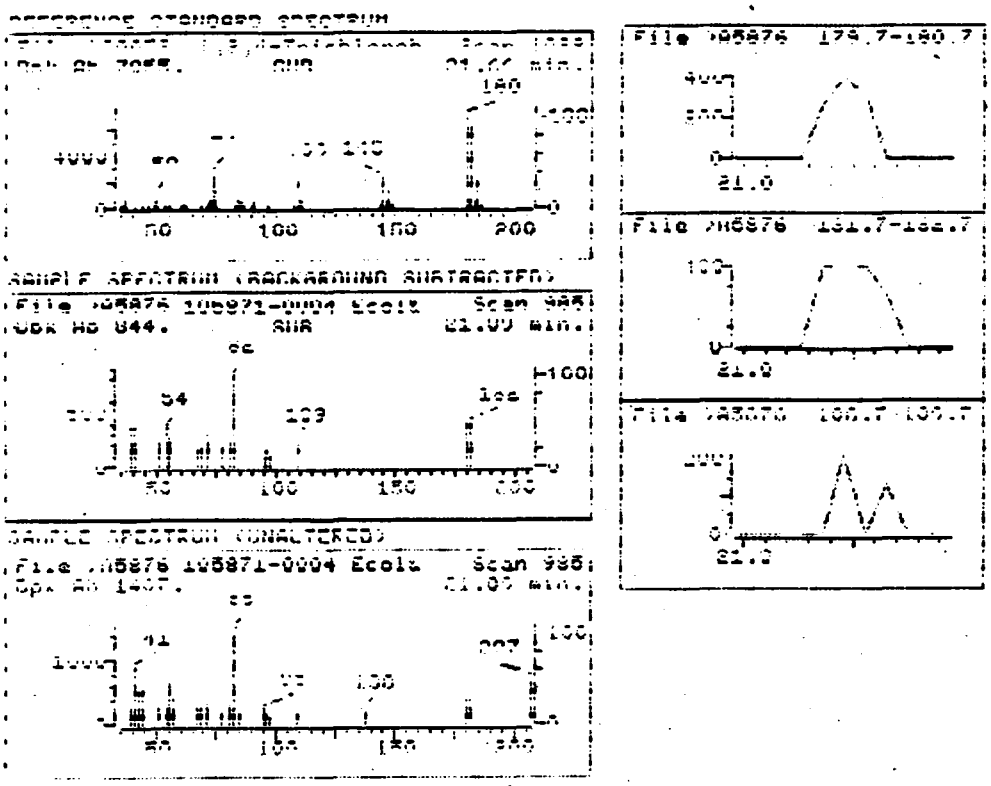
Data File: >A6876::01 Quant Output File: ^A6876::SC
Name: 105871 0004 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2000 ML, AS 4. 24.6/5.35 0.125 TRAP FROZE
Quant Time: 940610 12:07 Quant ID File: IDNEW1::QT
Injected at: 940610 12:11 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 30
Compound Name : Toluene
Scan Number : 466
Retention Time: 10.82 min.
Quant Ion : 91.0
Area : 7911
Concentration : 1.49 ppbv
q value : 98



Data File: A05876::D1 Quant Output File: A05876::SC
Name: 105871 0004 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 2000 ML, AS-4 24.6/9.39 A-128 IRAP PROJE
Quant Time: 940610 17:07 Quant ID File: TONEW1::QT
Injected at: 940610 13:11 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:09

Compound No : 40
Compound Name : p,m Xylene
Scan Number : 631
Retention Time: 14.00 min.
Quant Ion : 91.0
Area : 4420
Concentration : .822 ppbv
q-value : 79



Data File: >A5876::D1 Quant Output File: ^A5876::SC
Name: 105871 0004 Ecoli.Benv Instrument ID: SYSTEM 1
Misc: 2000 ML, AS 4 24.6/9.39 A-128 TRAP PROJE
Quant Time: 940610 17:07 Quant ID File: IONEW1::WI
Injected at: 940610 13:11 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:09

Compound No : 92
Compound Name : 1,2,4-trichlorobenzene
Scan Number : 985
Retention Time: 21.09 min.
Quant Ion : 180.0
Area : 1146
Concentration : .787 ppbv
q value : 94

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Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: AS-5
Lab ID: 105871-0005-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	22	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	2.1	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: AS-5
Lab ID: 105871-0005-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

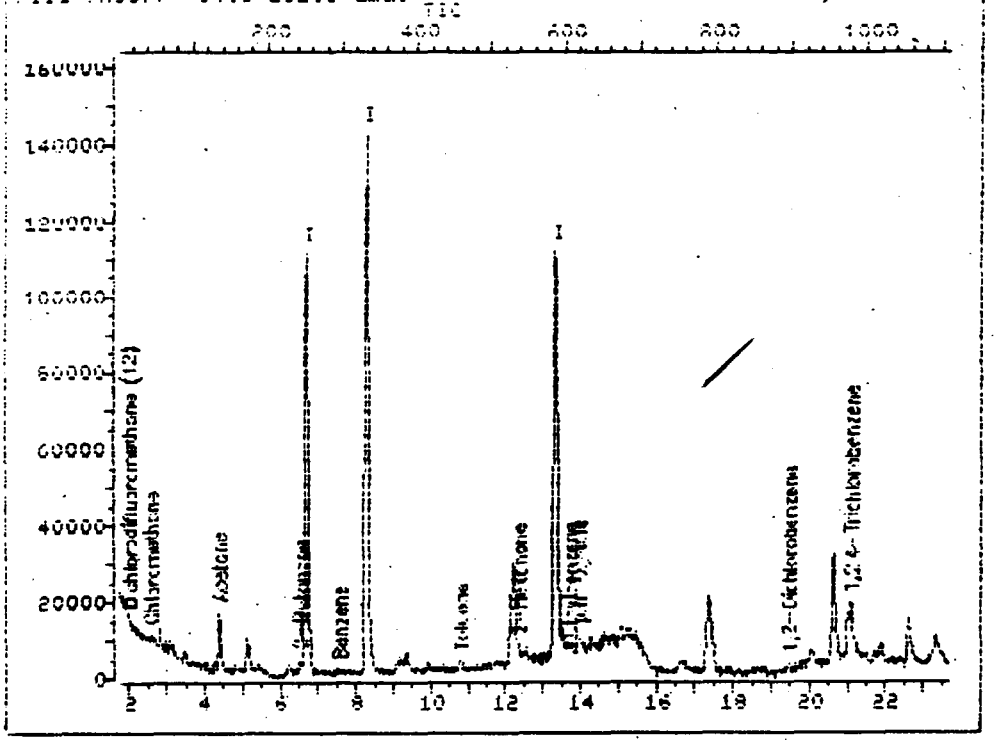
Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	4.3	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

TOTAL ION CHROMATOGRAM

File >A5877 34.0-262.0 amu. 105871-0005 Ecol&Env 3250 ml, AS-5.



Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qcal Time: 940610 07:29

Operator ID: LUZ2
Quant Time : 940610 14:27
Injected at: 940610 14:02

Operator ID: 1122 Quant Rev: 2 Quant Time: 940610 14:27
Output File: 085877::SD Injected at: 940610 14:02
Data File: 085877::D3 Dilution Factor: 1.00000
Name: 105871-0005 Fool&Fev Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5, 31.6/4.87 A-201

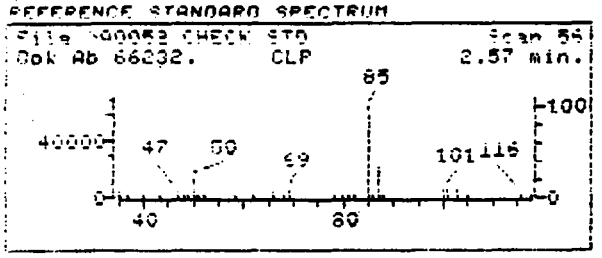
ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qual Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units	
1)	*Bromochloromethane	6.71	49.0	126797	38.50	ppbv	
2)	Dichlorodifluoromethane (12)	2.02	85.0	10001	1.04	ppbv	
3)	Chloromethane	2.59	50.0	596	.225	ppbv	1
12)	Acetone	4.39	43.0	58594	21.87	ppbv	
18)	2-Butanone	6.53	72.0	4260	7.00	ppbv	
22)	*1,4-Difluorobenzene	8.29	114.0	332874	39.00	ppbv	
23)	Benzene	7.58	78.0	2943	.806	ppbv	1
30)	Toluene	10.80	91.0	6204	1.26	ppbv	
31)	*Chlorobenzene-d5	13.34	117.0	200594	34.00	ppbv	
35)	2-Hexanone	12.37	58.0	1896	.950	ppbv	
39)	Ethylbenzene	13.71	91.0	1669	.338	ppbv	
40)	p,m-Xylene	13.95	91.0	9312	2.06	ppbv	
51)	1,2-Dichlorobenzene	19.47	146.0	3589	1.07	ppbv	
52)	1,2,4-Trichlorobenzene	21.09	180.0	5818	4.28	ppbv	

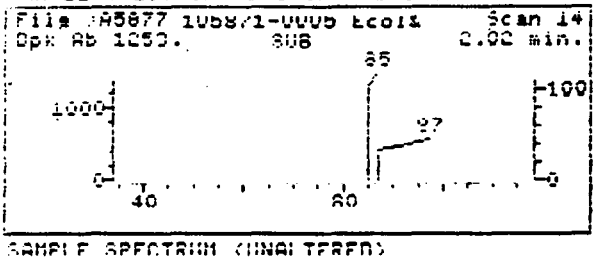
* Compound is ISTD

pm 6/13

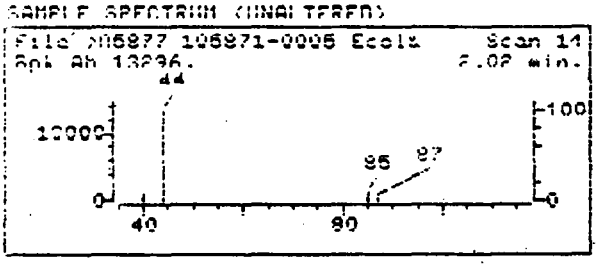
REFERENCE STANDARD SPECTRUM

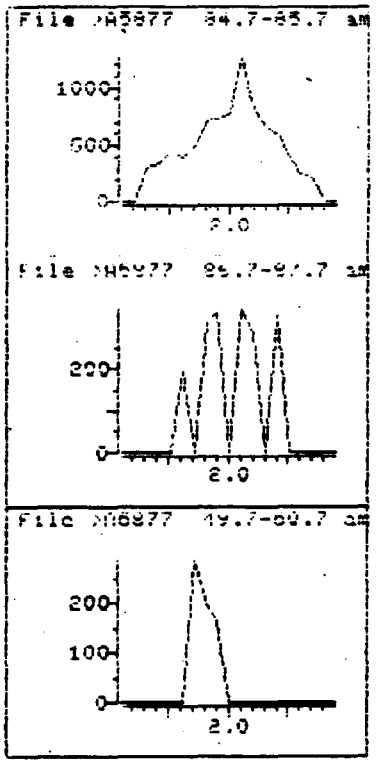


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

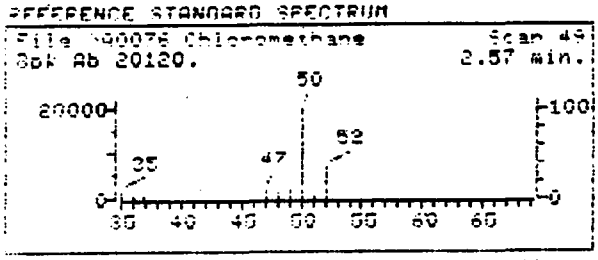


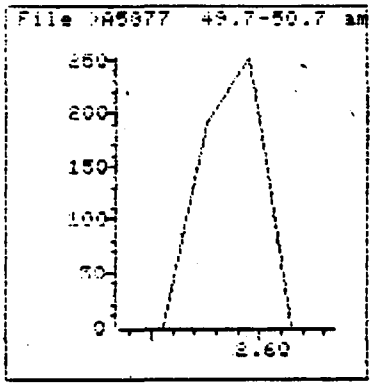


Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNFW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

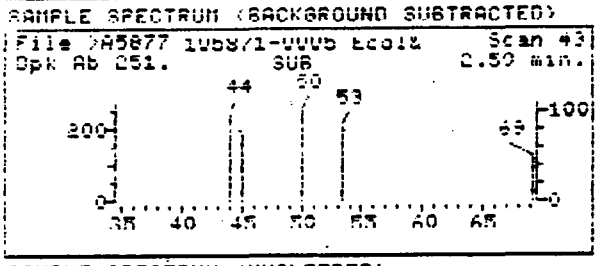
Compound No : 2
Compound Name : Dichlorodifluoromethane (12)
Scan Number : 14
Retention Time: 2.02 min.
Quant Ion : 85.0
Area : 10001
Concentration : 1.04 ppbv
q-value : 79

REFERENCE STANDARD SPECTRUM

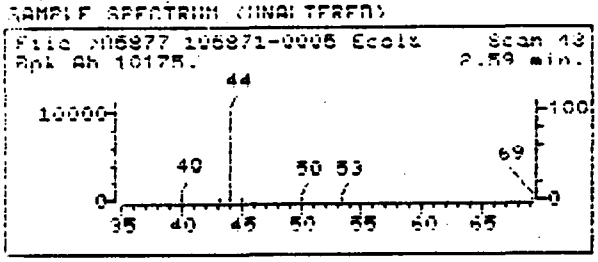




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



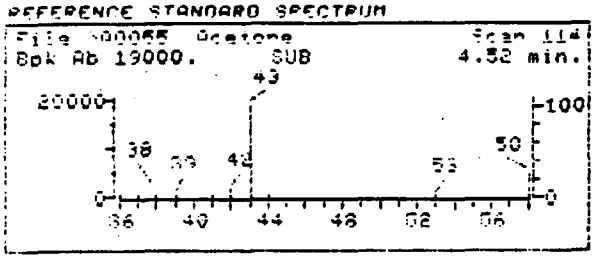
SAMPLE SPECTRUM (FINAL TFRFD)



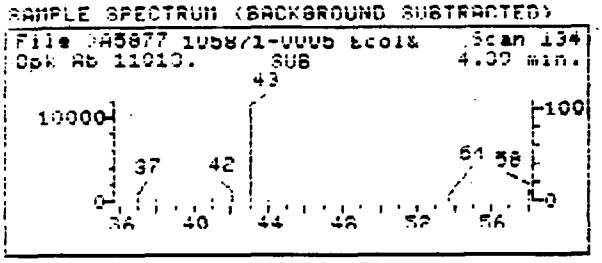
Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNFW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 3
Compound Name : Chloromethane
Scan Number : 43
Retention Time: 2.59 min.
Quant Ion : 50.0
Area : 526
Concentration : .225 ppbv
q-value : 100

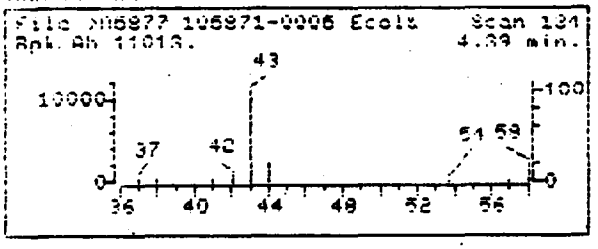
REFERENCE STANDARD SPECTRUM

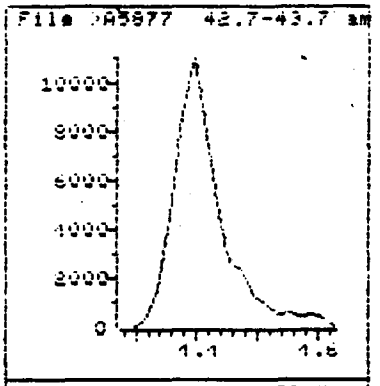


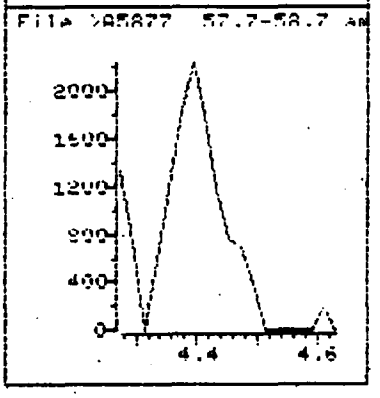
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



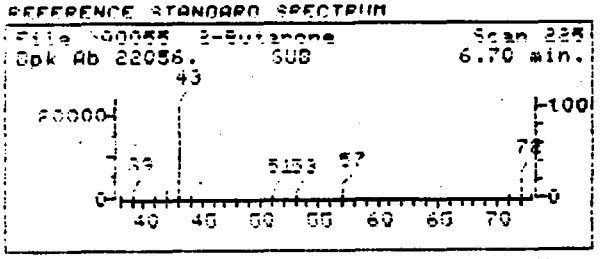




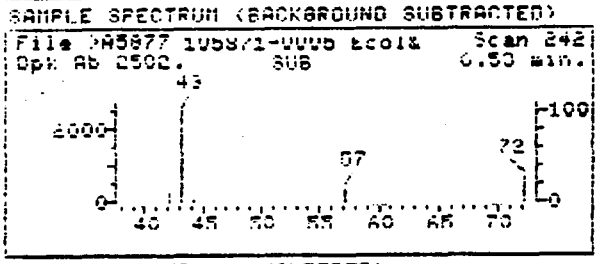
Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0006 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNEW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 12
Compound Name : Acetone
Scan Number : 134
Retention Time: 4.39 min.
Quant Ion : 43.0
Area : 58524
Concentration : 21.87 ppbv
q-value : 87

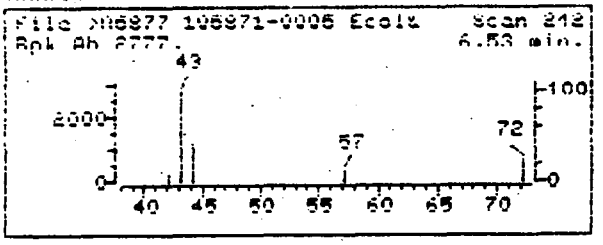
REFERENCE STANDARD SPECTRUM

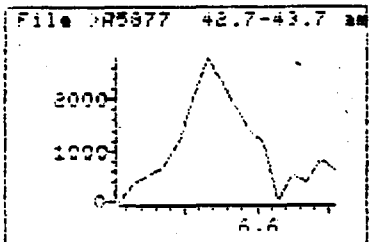


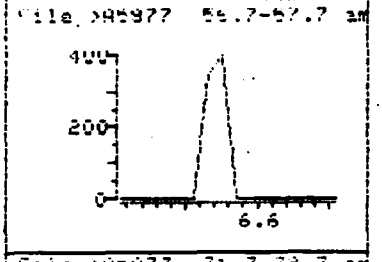
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

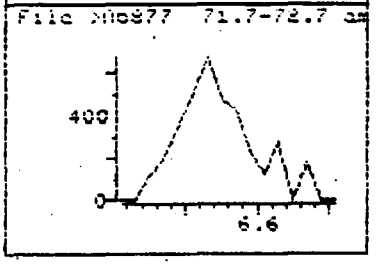


SAMPLE SPECTRUM (UNAUTERED)





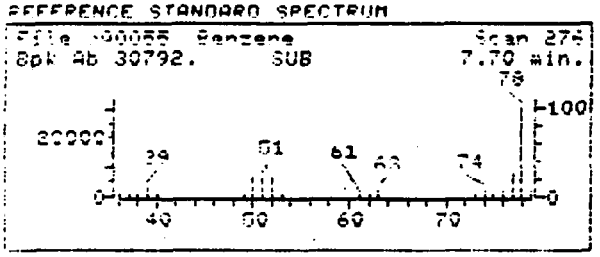


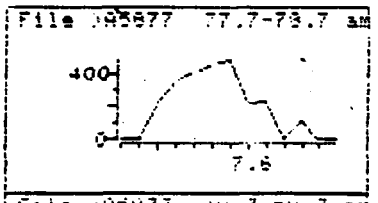


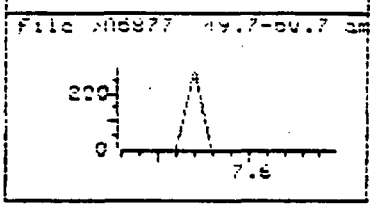
Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNEW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 18
Compound Name : 2-Butanone
Scan Number : 242
Retention Time: 6.53 min.
Quant Ion : 72.0
Area : 4260
Concentration : 7.00 ppbv
q-value : 90

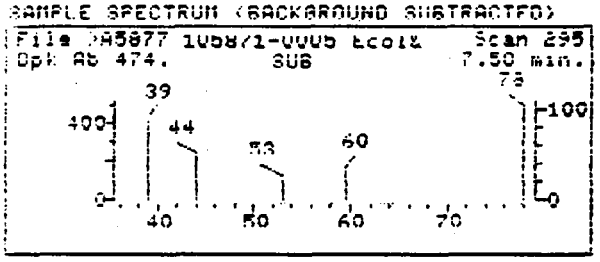
REFERENCE STANDARD SPECTRUM



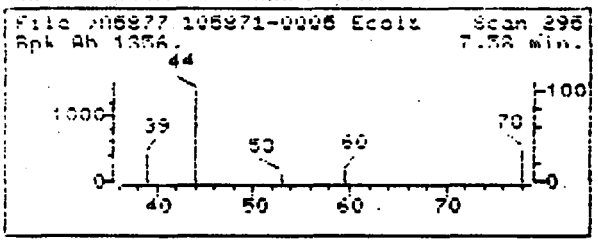


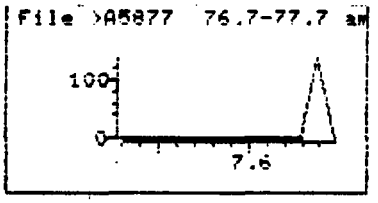


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



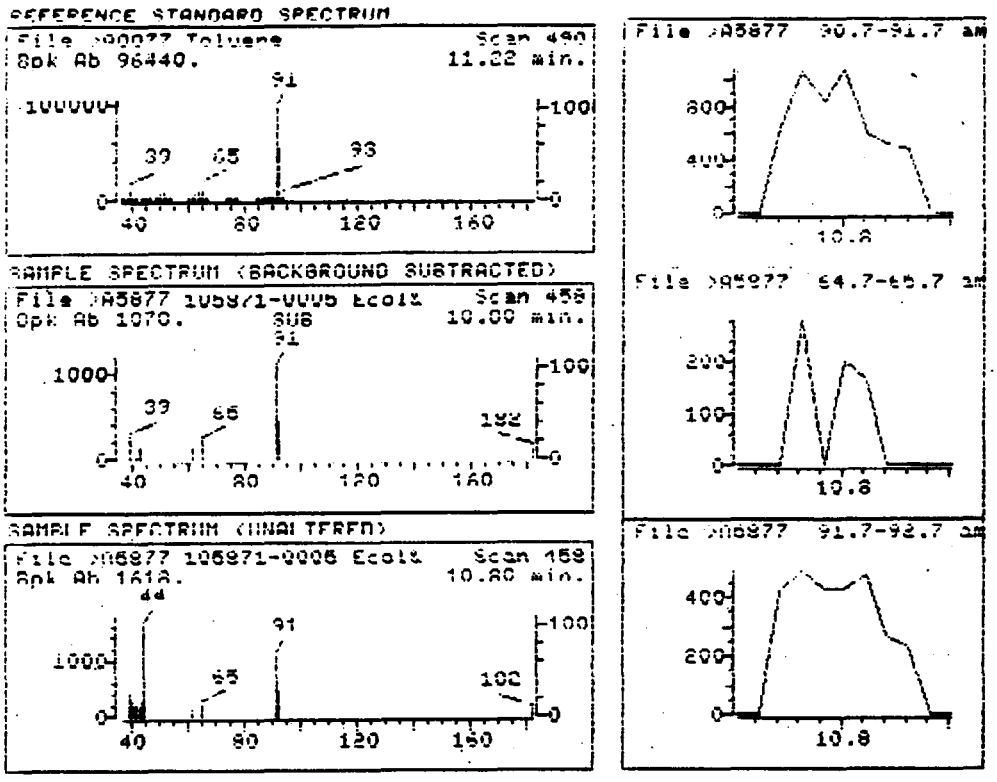
SAMPLE SPECTRUM (UNAUTREED)





Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNEW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

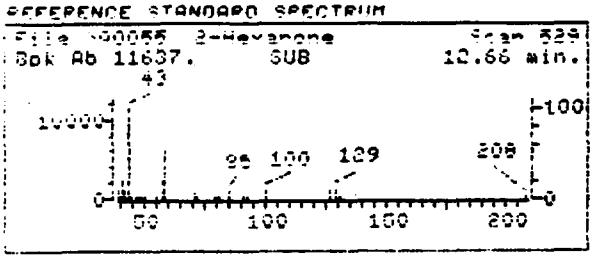
Compound No : 23
Compound Name : Benzene
Scan Number : 295
Retention Time: 7.58 min.
Quant Ion : 78.0
Area : 2943
Concentration : .806 ppbv
q-value : 100



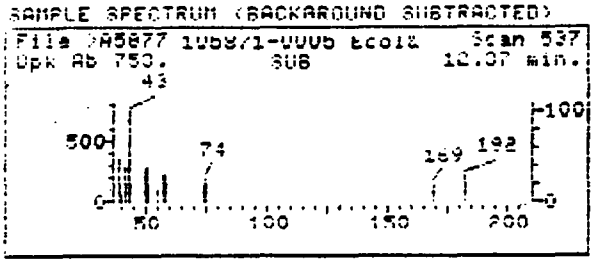
Data File: >A5877::D3 Quant Output File: >A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNFW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 30
Compound Name : Toluene
Scan Number : 458
Retention Time: 10.80 min.
Quant Ion : 91.0
Area : 6204
Concentration : 1.26 ppbv
q-value : 78

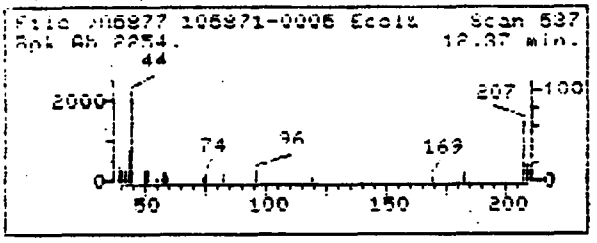
REFERENCE STANDARD SPECTRUM

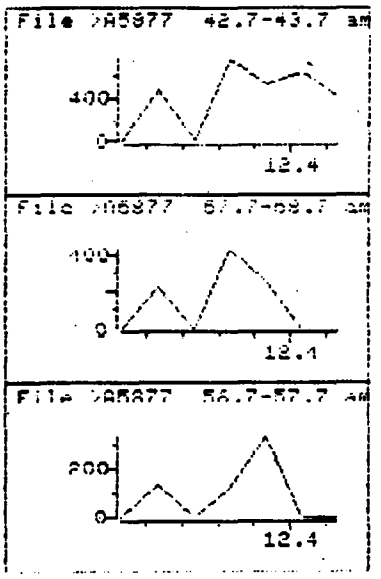


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

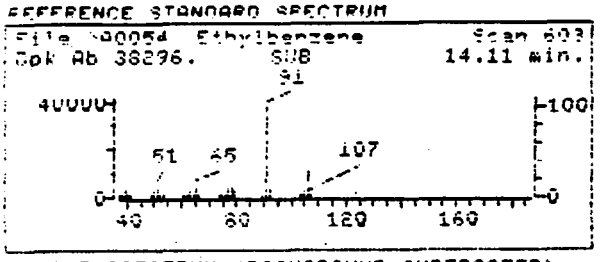




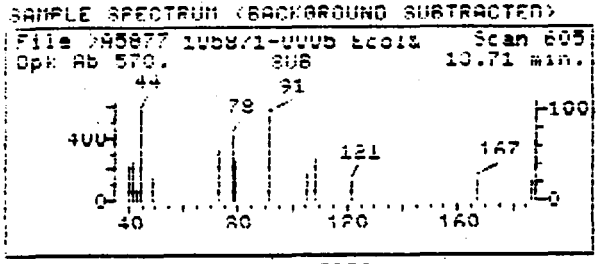
Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNFW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 35
Compound Name : 2-Hexanone
Scan Number : 537
Retention Time: 12.37 min.
Quant Ion : 58.0
Area : 1096
Concentration : .950 ppbv
q-value : 88

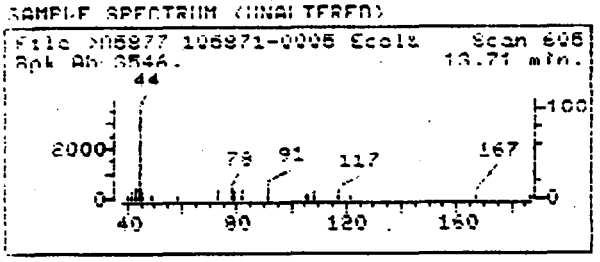
REFERENCE STANDARD SPECTRUM

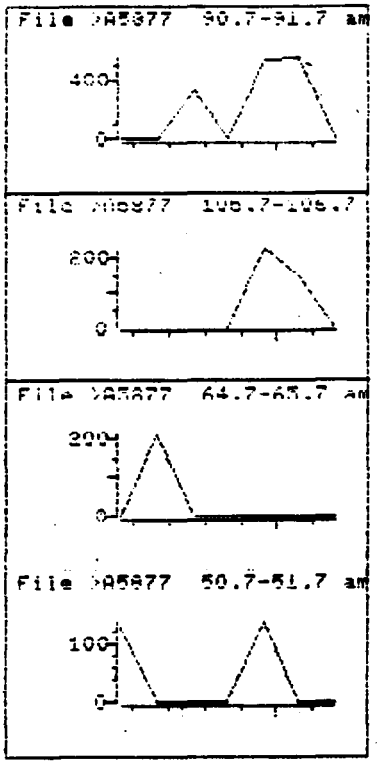


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

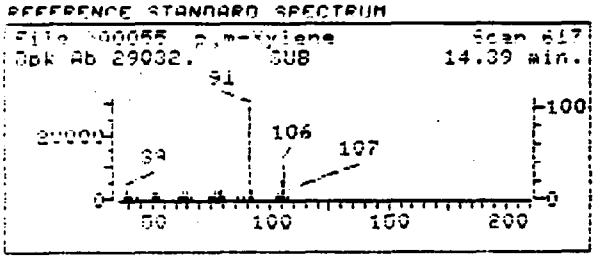




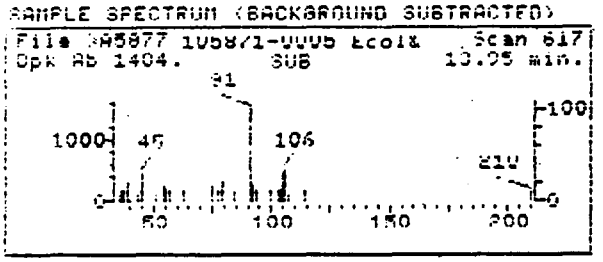
Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Eno Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNEW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 39
Compound Name : Ethylbenzene
Scan Number : 605
Retention Time: 13.71 min.
Quant Ion : 91.0
Area : 1669
Concentration : .338 ppbv
q-value : 95

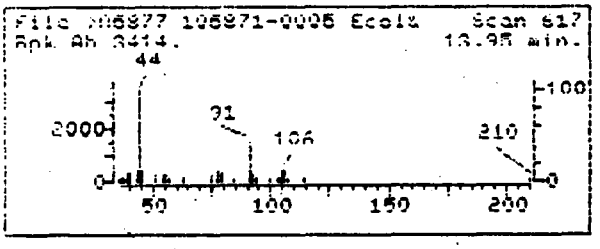
REFERENCE STANDARD SPECTRUM

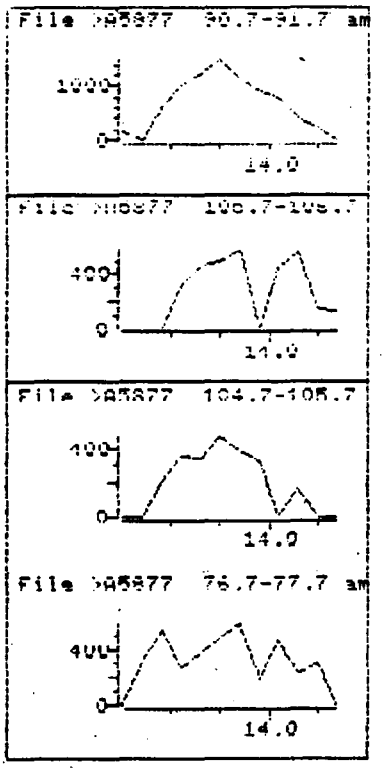


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNAFTERED)

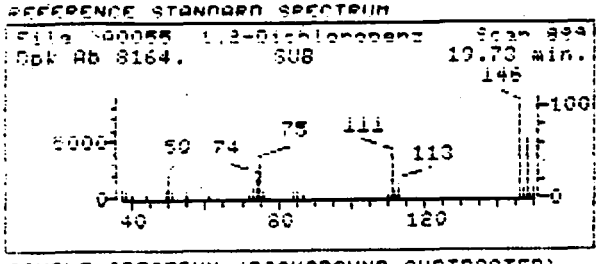




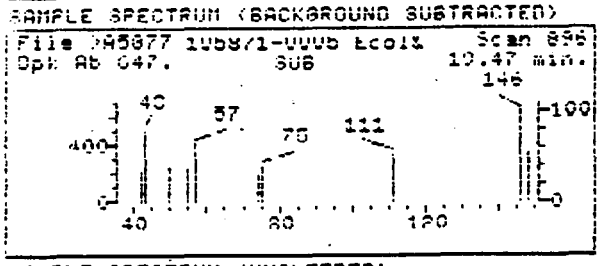
Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:22 Quant ID File: IDNEW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 40
Compound Name : p,m-Xylene
Scan Number : 617
Retention Time: 13.95 min.
Quant Ion : 91.0
Area : 9312
Concentration : 2.06 ppbv
q-value : 82

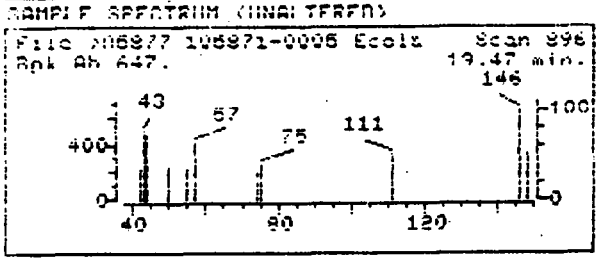
REFERENCE STANDARD SPECTRUM

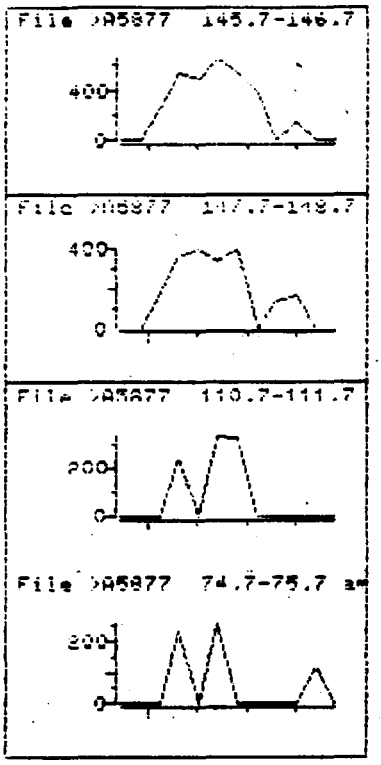


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



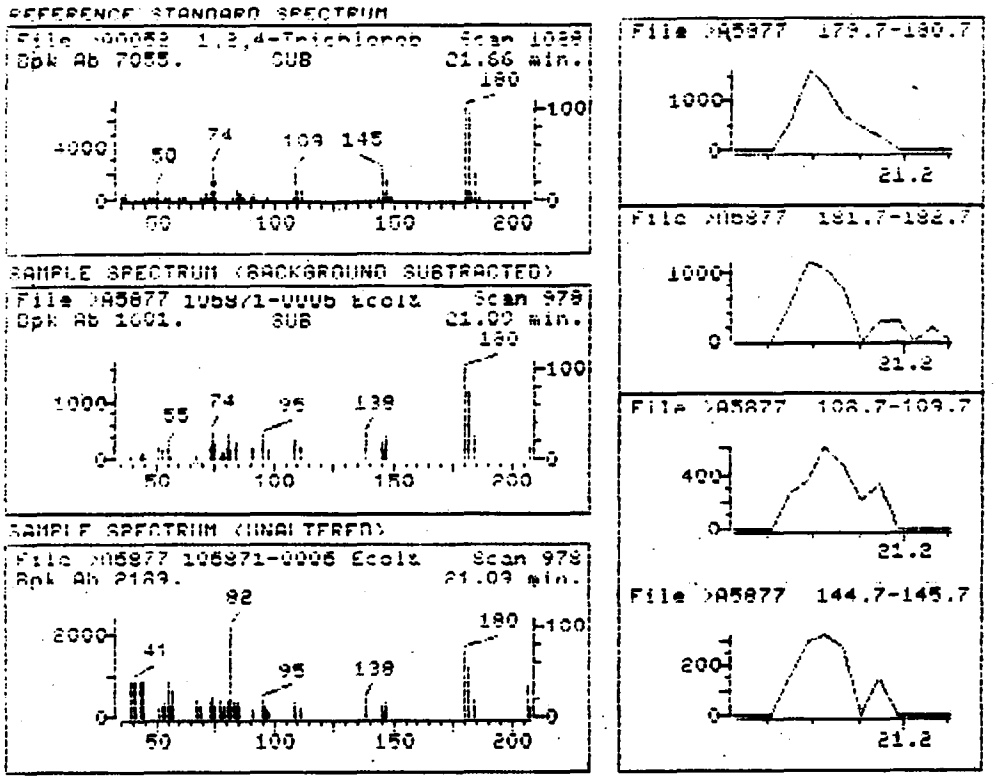
SAMPLE SPECTRUM (UNAUTERED)





Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNEW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 51
Compound Name : 1,2-Dichlorobenzene
Scan Number : 896
Retention Time: 19.47 min.
Quant Ion : 146.0
Area : 3589
Concentration : 1.07 ppbv
q-value : 86



Data File: >A5877::D3 Quant Output File: ^A5877::SC
Name: 105871-0005 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3250 ml, AS-5. 31.6/4.87 A-201
Quant Time: 940610 14:27 Quant ID File: IDNEW1::QT
Injected at: 940610 14:02 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 52
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 978
Retention Time: 21.09 min.
Quant Ion : 180.0
Area : 5818
Concentration : 4.28 ppbv
q-value : 77

Enseco
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Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: BKND
Lab ID: 105871-0006-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	20	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14 (CONT.)

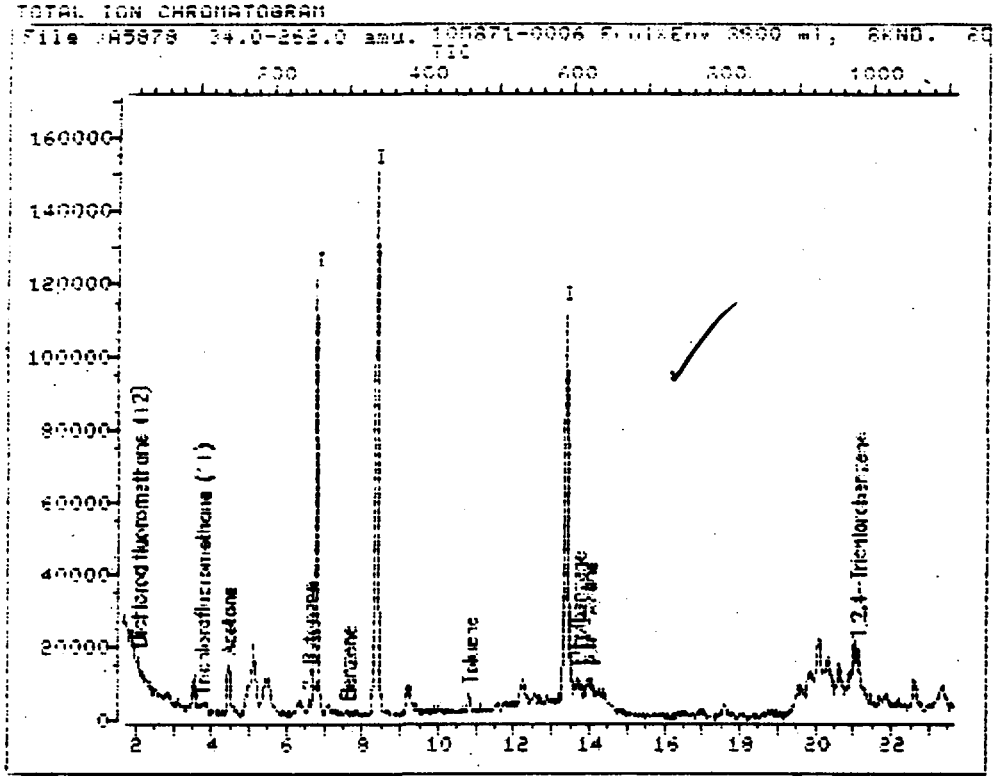
Client Name: Ecology & Environment, Inc
Client ID: BKND
Lab ID: 105871-0006-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

TOTAL ION CHROMATOGRAM



Data File: 0A5878::D3 Quant Output File: 0A5878::SC
Name: 105871-0006 Fcol&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qcal Time: 940610 07:29

Operator ID: 1172
Quant Time : 940610 15:14
Injected at: 940610 14:49

Operator ID: 1172 Quant Rev: 2 Quant Time: 940610 15:14
Output File: ^A5878::RC Injected at: 940610 14:49
Data File: >A5878::D3 Dilution Factor: 1.000000
Name: 105871-0006 Fcal2Fnv Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-929

ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS ID-14
Last Calibration: 930324 08:42 Last Qcal Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units
1)	*Bromochloromethane	6.22	49.0	130397	38.50	ppbv
2)	Dichlorodifluoromethane (12)	2.06	85.0	9674	.974	ppbv
8)	Trichlorofluoromethane (11)	3.24	101.0	2896	.302	ppbv
12)	Acetone	4.46	43.0	55298	20.28	ppbv
18)	2-Butanone	6.59	72.0	2985	4.77	ppbv
22)	*1,4-Difluorobenzene	8.35	114.0	338988	39.00	ppbv
23)	Benzene	7.62	78.0	2409	.648	ppbv
30)	Toluene	10.83	91.0	8046	1.61	ppbv
31)	*Chlorobenzene-d5	13.36	117.0	281910	34.00	ppbv
39)	Ethylbenzene	13.68	91.0	2883	.579	ppbv
40)	p,m-Xylene	13.97	91.0	9034	1.99	ppbv
52)	1,2,4-Trichlorobenzene	21.10	180.0	4420	3.23	ppbv

* Compound is ISTD

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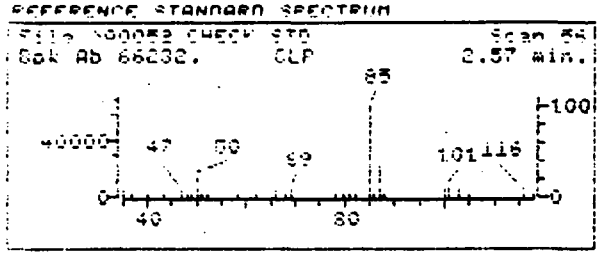
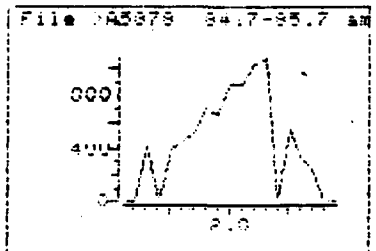
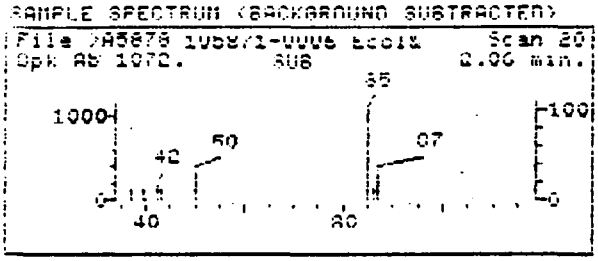
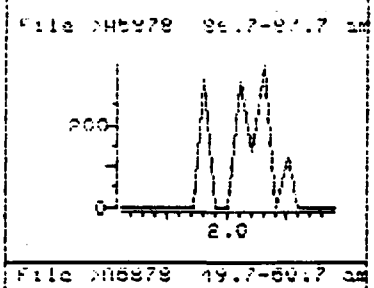
REFERENCE STANDARD SPECTRUM



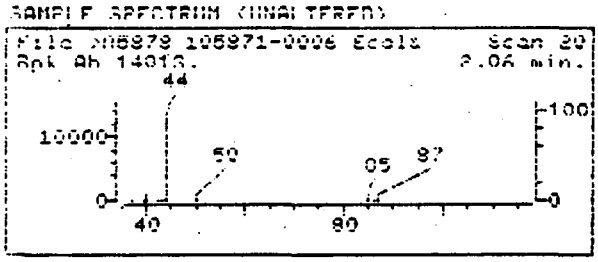


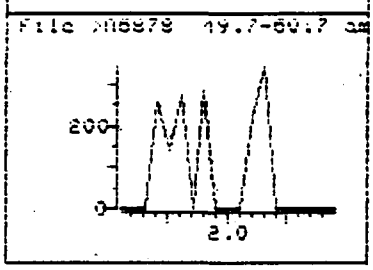
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





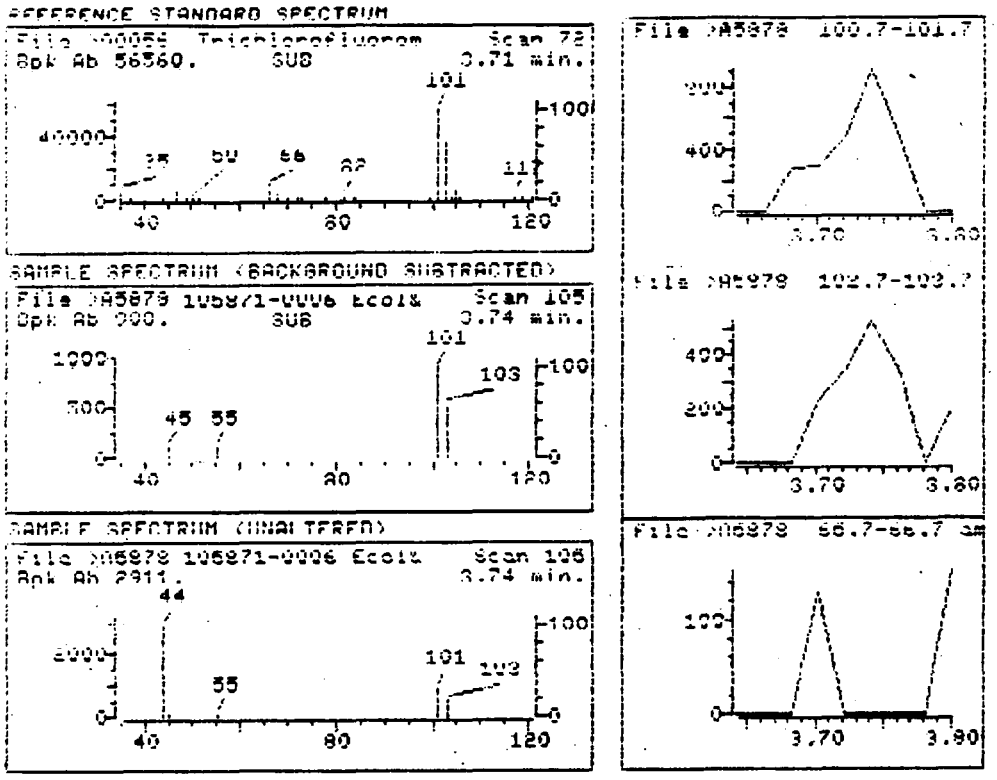
SAMPLE SPECTRUM (UNALTERED)





Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNFW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

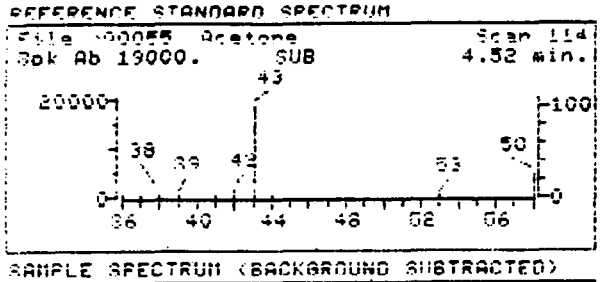
Compound No : 2
Compound Name : Dichlorodifluoromethane (12)
Scan Number : 20
Retention Time: 2.06 min.
Quant Ion : 85.0
Area : 9674
Concentration : .974 ppbv
q-value : 87



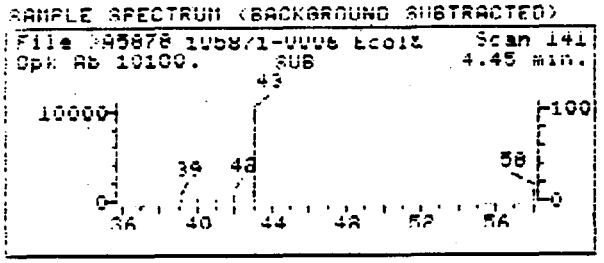
Data File: >A5878::D3 Quant Output File: >A5878::SC
Name: 105871-0006 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNEW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 8
Compound Name : Trichlorofluoromethane (11)
Scan Number : 105
Retention Time: 3.74 min.
Quant Ion : 101.0
Area : 2896
Concentration : .302 ppbv
q-value : 91

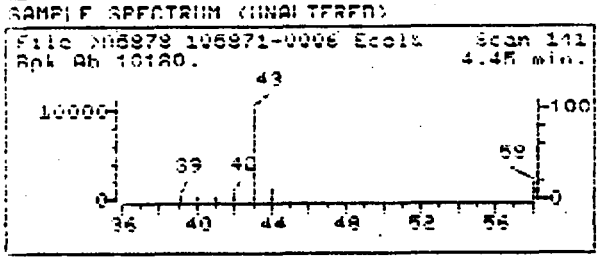
REFERENCE STANDARD SPECTRUM

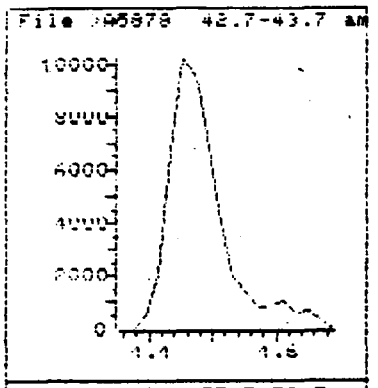


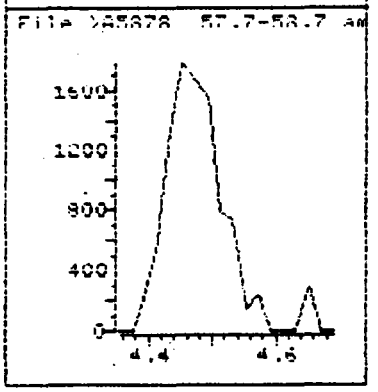
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNAUTERED)



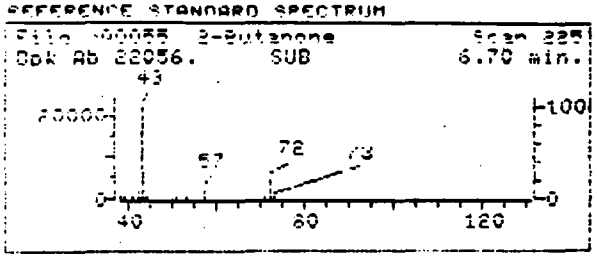


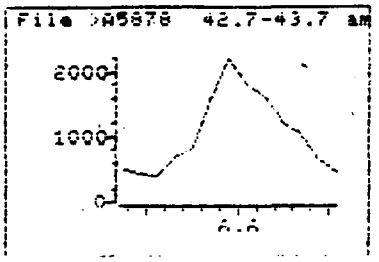


Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNEW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

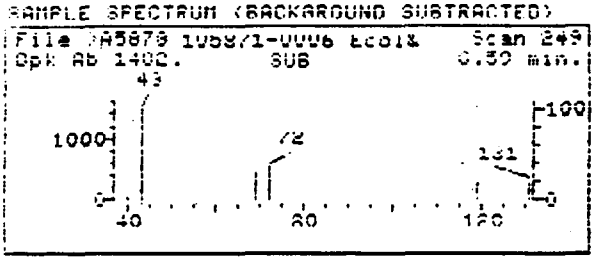
Compound No : 12
Compound Name : Acetone
Scan Number : 141
Retention Time: 4.45 min.
Quant Ion : 43.0
Area : 55798
Concentration : 20.28 ppbv
q-value : 81

REFERENCE STANDARD SPECTRUM

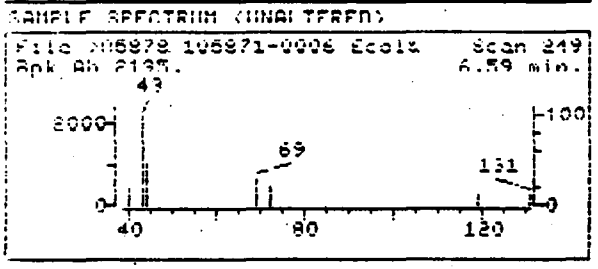


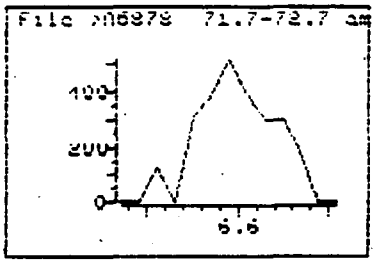


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

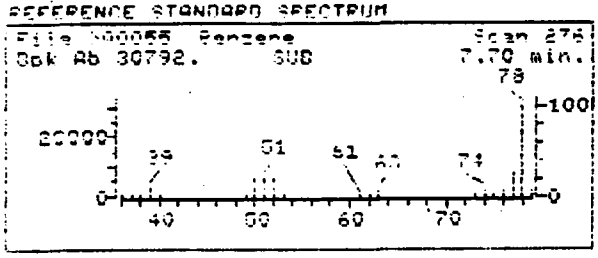


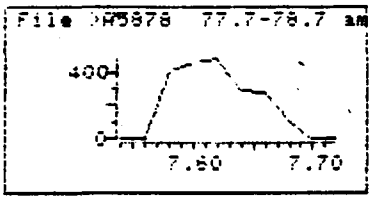


Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNFW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

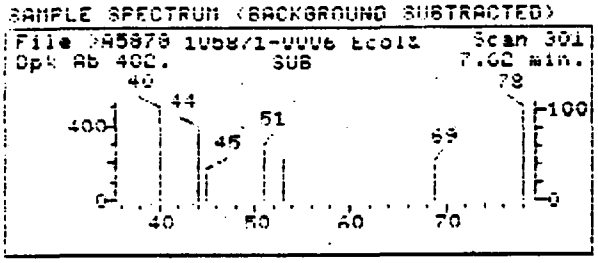
Compound No : 18
Compound Name : 2-Butanone
Scan Number : 249
Retention Time: 6.59 min.
Quant Ion : 72.0
Area : 2985
Concentration : 4.77 ppbv
q-value : 92

REFERENCE STANDARD SPECTRUM

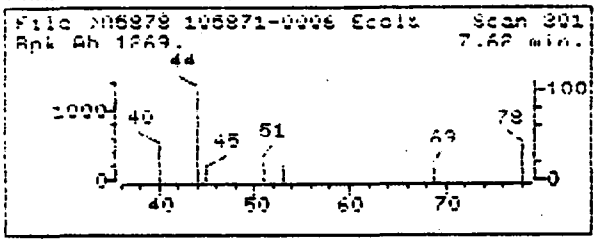


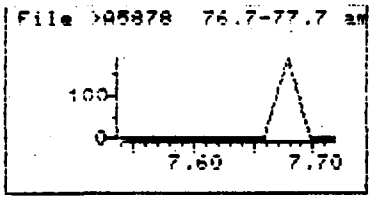


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (FINAL TERFD)

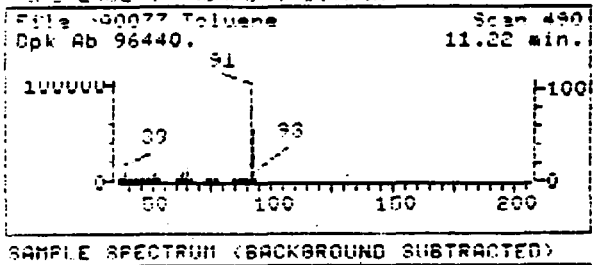




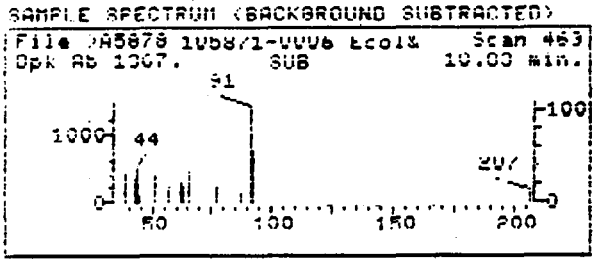
Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNEW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qual Time: 940610 07:29

Compound No : 23
Compound Name : Benzene
Scan Number : 301
Retention Time: 7.62 min.
Quant Ion : 78.0
Area : 2409
Concentration : .648 ppbv
q-value : 100

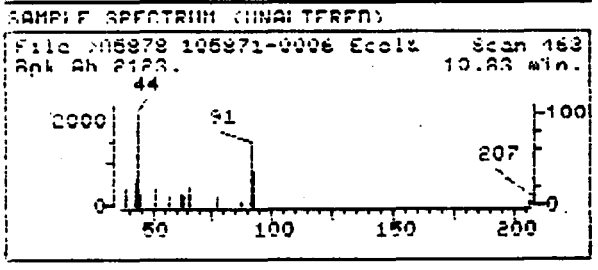
REFERENCE STANDARD SPECTRUM

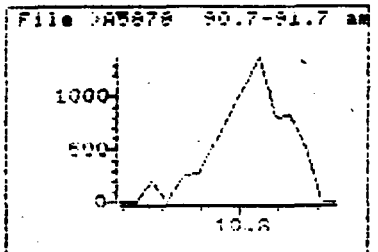


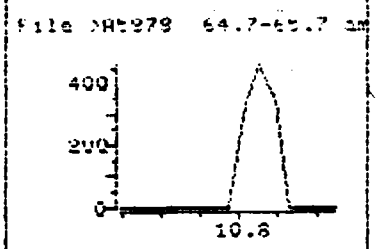
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

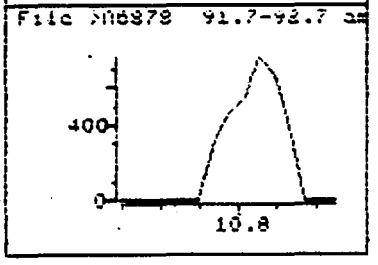


SAMPLE SPECTRUM (UNFILTERED)





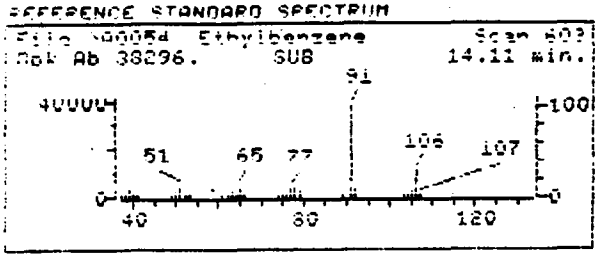




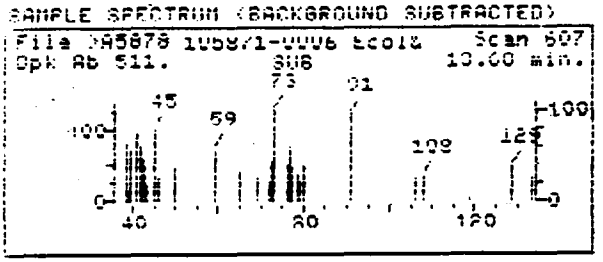
Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-299
Quant Time: 940610 15:14 Quant ID File: IDNFW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 30
Compound Name : Toluene
Scan Number : 463
Retention Time: 10.83 min.
Quant Ion : 91.0
Area : 8046
Concentration : 1.61 ppbv
q-value : 99

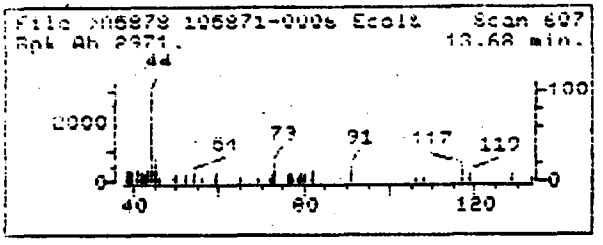
REFERENCE STANDARD SPECTRUM

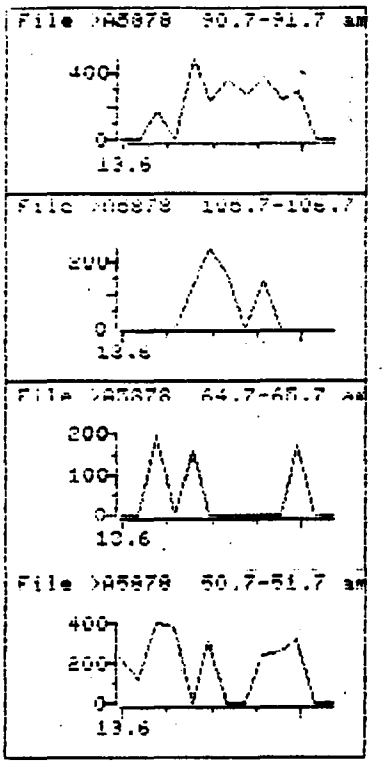


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

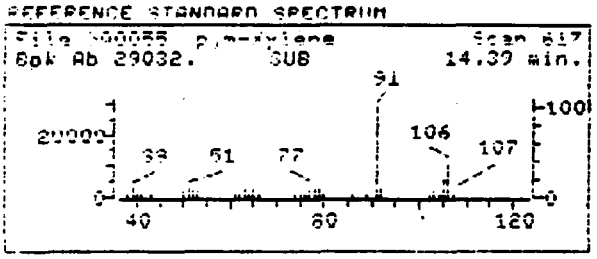




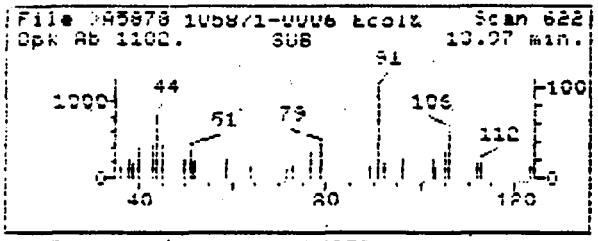
Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006 Ecol&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNEW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 39
Compound Name : Ethylbenzene
Scan Number : 607
Retention Time: 13.68 min.
Quant Ion : 91.0
Area : 2883
Concentration : .579 ppbv
q-value : 92

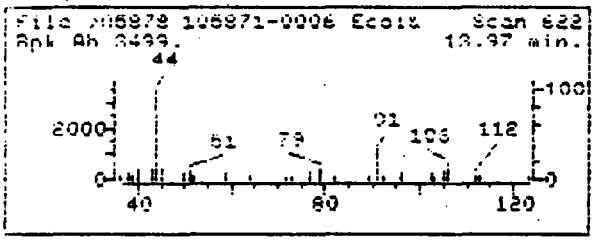
REFERENCE STANDARD SPECTRUM

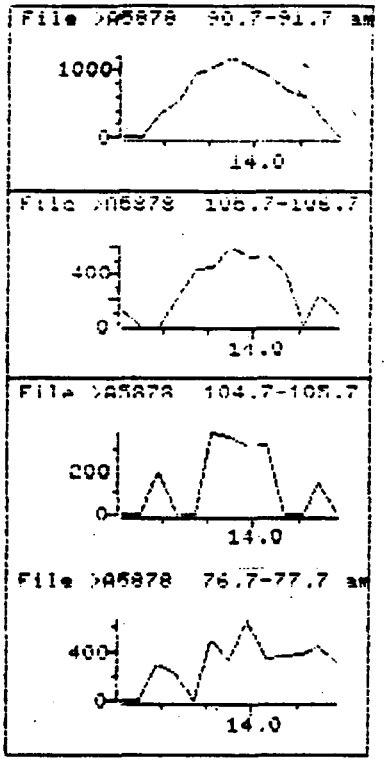


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



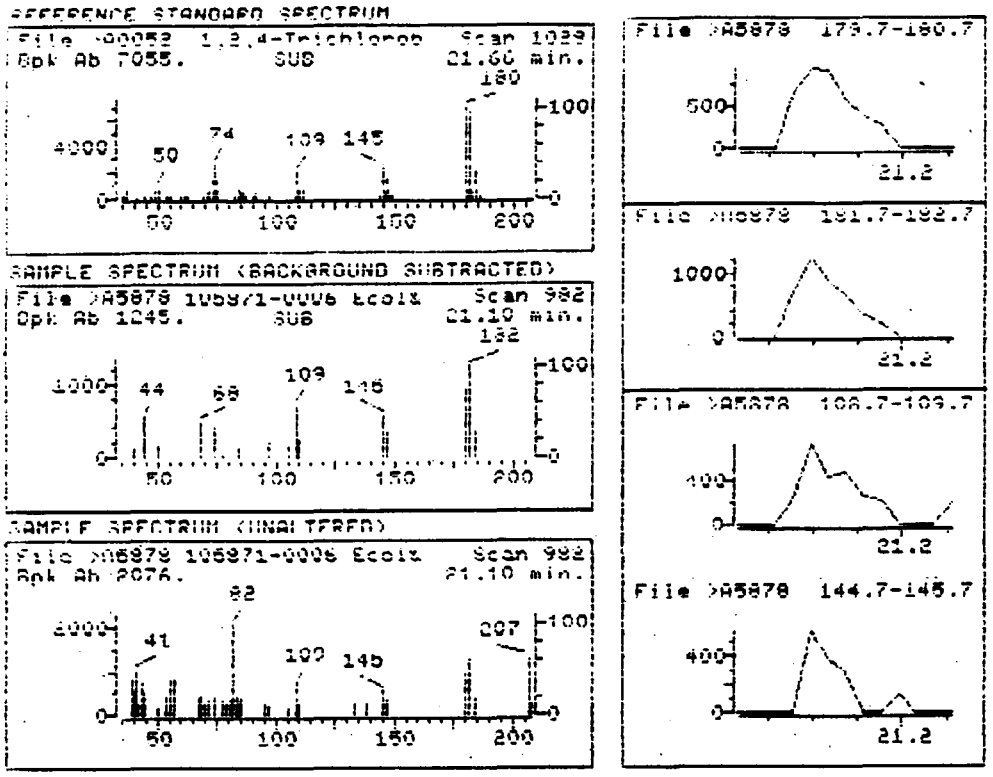
SAMPLE SPECTRUM (UNALTERED)





Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006.Ecol&Fnv Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNFW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 40
Compound Name : p,m-Xylene
Scan Number : 622
Retention Time: 13.97 min.
Quant Ion : 91.0
Area : 9034
Concentration : 1.99 ppbv
q-value : 90



Data File: >A5878::D3 Quant Output File: ^A5878::SC
Name: 105871-0006 Ecoli&Env Instrument ID: SYSTEM 1
Misc: 3300 ml, BKND. 25.6/3.89 A-229
Quant Time: 940610 15:14 Quant ID File: IDNEW1::QT
Injected at: 940610 14:49 Last Calibration: 930324 08:47
Last Qcal Time: 940610 07:29

Compound No : 52
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 982
Retention Time: 21.10 min.
Quant Ion : 180.0
Area : 4420
Concentration : 3.23 ppbv
q-value : 61

Enseco
A Corning Company

Volatile Organics by GCMS - EPA TO14

Client Name: Ecology & Environment, Inc
Client ID: TRIP BLANK
Lab ID: 105871-0007-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

Parameter	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	ND	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

Ensec
A Corning Co.

Volatile Organics by GCMS - EPA TO14 (CONT.)

Client Name: Ecology & Environment, Inc
Client ID: TRIP BLANK
Lab ID: 105871-0007-SA
Matrix: AIR Sampled: 06 JUN 94 Received: 08 JUN 94
Authorized: 08 JUN 94 Prepared: NA Analyzed: 10 JUN 94

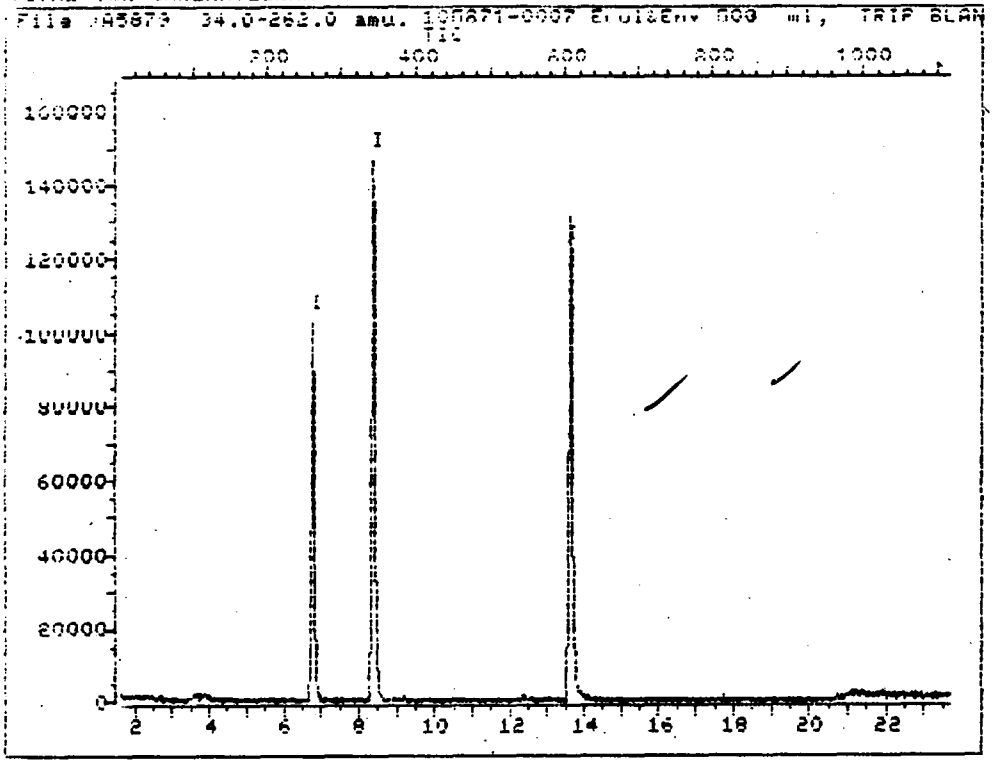
Parameter	Result	Units	Reporting Limit
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not detected
NA = Not applicable

Reported By: Dave Olson Approved By: Val Mallari

TOTAL ION CHROMATOGRAM

File >A5879 34.0-262.0 amu. 105871-0007 Ecol&Env 500 ml, TRIP BLAN



Data File: >A5879::D3 Quant Output File: ^A5879::SC
Name: 105871-0007 Ecol&Env Instrument ID: SYSTEM 1
Misc: 500 ml, TRIP BLANK 24.6/0 93568

Id File: IDNFW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:42 Last Qcal Time: 940610 07:29

Operator ID: 1122
Quant Time : 940610 15:42
Injected at: 940610 15:12

Operator ID: 1122 Quant Rev: 2 Quant Time: 940610 15:42
Output File: ^A5879::SC Injected at: 940610 15:12
Data File: :A5879::D3 Dilution Factor: 1.000000
Name: 105871-0007 Fcol&Fnv Instrument ID: SYSTEM 1
Misc: 500 ml, TRIP BLANK 24.6/0 93568

ID File: IONFW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS 10-14
Last Calibration: 930324 08:42 Last Qcal Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units
1)	*Bromochloromethane	6.79	49.0	117908	38.50	ppbv
22)	*1,4-Difluorobenzene	8.40	114.0	328999	39.00	ppbv
31)	*Chlorobenzene-d5	13.62	117.0	235149	34.00	ppbv

* Compound is ISTD

CALIBRATION

Calibration Report

Title: 1014-SYSTEM 1 CALIBRATED 04/13/99
Calibrated: 990910 14:47

Compound	Files: >AU438 RF 2.24	>AU439 RF 4.48	>AU440 RF 11.21	>AU441 RF 44.84	>AU442 RF 143.50	>AU443 RF 287.00	>AU444 RF 448.40	$\overline{RRT}$	$\overline{RF}$	% RSD	
Dichlorodifluoromethane (12)	2.66016	2.72668	2.77985	2.74911	2.66601	2.51545	2.05150	.283	2.58514	9.602	(Conc=2.28,4.57
Chloromethane	.47549	.59516	.68628	.62984	.62467	.60289	.60253	.576	.58812	8.969	(Conc=2.28,4.57
1,2-Cl-1,1,2,2-F ethane (114)	3.89782	3.90880	3.88787	3.99414	3.82063	2.60566	-	.576	3.68459	14.419	(Conc=2.13,4.26
Vinyl Chloride	.55212	.52885	.59648	.57091	.57170	.56914	.56605	.415	.55648	5.170	
Bromomethane	.60870	.66718	.66924	.67228	.65939	.66896	.62126	.478	.65929	4.848	
Chloroethane	.21989	.22360	.23582	.23470	.23213	.22676	.22447	.502	.22820	2.665	(Conc=2.15,4.3
Trichlorofluoromethane (11)	2.30708	2.31538	2.27078	2.32224	2.28298	1.61984	-	.544	2.18615	12.741	(Conc=2.11,4.22
1,1-Dichloroethene	1.08572	1.09519	1.07642	1.10754	1.10193	1.02910	.80955	.625	1.05189	10.289	(Conc=2.42,4.84
Carbon Disulfide	1.59413	1.38618	1.48771	1.49092	1.08050	-	-	.658	1.35183	11.647	(Conc=5.45,10.9
1,1,2-Cl 1,2,2 F ethane (113)	2.05614	2.05461	2.01952	2.09848	1.99661	1.72291	1.51182	.636	1.88890	15.813	(Conc=2.22,4.44
Acetone	.94989	.91476	.85845	.81356	.64580	.63625	.62380	.658	.77722	18.033	(Conc=2.22,4.44
Methylene Chloride	.50453	.52023	.49678	.50072	.51961	.50311	.50073	.719	.50653	1.867	(Conc=2.42,4.84
t-1,2-Dichloroethene	.58219	.63178	.61844	.61980	.63268	.61806	.60077	.760	.61482	2.908	(Conc=2.42,4.84
1,1-Dichloroethane	1.08225	1.06751	1.05178	1.11528	1.11862	1.09821	.93127	.839	1.06659	6.035	(Conc=2.38,4.75
Vinyl Acetate	-	1.28172	1.29247	1.32757	1.24480	1.21803	1.08286	.872	1.24124	6.963	(Conc=1.[illegible]
c-1,2-Dichloroethene	.62955	.64997	.64235	.65594	.65788	.64486	.63179	.953	.64462	1.711	(Conc=2.[illegible]
2-Butanone	.11285	.08730	.19143	.22065	.20044	.20534	.20077	.977	.17411	29.783	(Conc=2.29,4.57
Chloroform	1.59164	1.66733	1.61987	1.67356	1.73895	1.48014	1.12398	1.031	1.55638	13.506	(Conc=2.48,4.80
1,1,1-Trichloroethane	1.65881	1.64306	1.60069	1.54070	1.66086	1.58279	1.29433	1.042	1.56875	8.286	(Conc=2.22,4.44
Carbon Tetrachloride	1.95437	1.91252	1.94792	1.99124	2.11340	1.82971	1.41446	1.073	1.87766	11.805	(Conc=2.26,4.53
Benzene	.44988	.44839	.45375	.44892	.45177	.41548	.38442	.904	.43609	6.837	(Conc=2.48,4.80
1,2-Dichloroethane	.29859	.29576	.31520	.31972	.33265	.32495	.32623	.921	.31582	4.458	(Conc=2.47,4.93
Trichloroethene	.39472	.36757	.37445	.37746	.38492	.38911	.39891	1.035	.38588	2.947	(Conc=1.84,3.68
1,2-Dichloropropane	.23826	.23013	.24067	.23976	.24953	.25479	.26949	1.079	.24609	5.299	(Conc=2.42,4.84
Bromodichloromethane	.69404	.66455	.70575	.74482	.78454	.65249	.53284	1.155	.68272	11.747	(Conc=2.42,4.84
c-1,3-Dichloropropene	.35140	.34779	.36098	.38839	.41205	.42206	.40692	1.252	.38423	8.018	(Conc=2.51,4.62
4-Methyl-2-Pentanone	.51091	.42166	.50663	.53554	.44127	.45119	.43025	1.312	.47106	9.658	(Conc=2.44,4.89
Toluene	.59843	.56467	.59927	.60914	.60420	.54743	.46067	1.318	.56912	9.312	(Conc=2.42,4.84
t-1,3-Dichloropropene	.25426	.31363	.33120	.36003	.39252	.40626	.36509	.847	.34614	14.937	(Conc=2.69,5.38
1,1,2-Trichloroethane	.33414	.33473	.34310	.36156	.36227	.36129	.35094	.870	.34972	3.588	(Conc=2.38,4.75
Tetrachloroethene	.45515	.45950	.44860	.44340	.45252	.45015	.39662	.868	.44371	4.817	(Conc=2.56,5.11
2-Hexanone	.07698	.09234	.19610	.21947	.19533	.20263	.20568	.920	.16351	34.982	(Conc=2.65,5.29
Dibromochloromethane	.80806	.81388	.87314	.94018	1.00093	.72427	-	.920	.86807	11.594	(Conc=2.[illegible]
1,2-Dibromoethane	.64688	.65118	.70503	.73854	.74376	.68848	.53558	.926	.67162	10.684	(Conc=2.22,4.44
Chlorobenzene	.61461	.60621	.60963	.62826	.63501	.59216	.47332	1.004	.59417	9.279	(Conc=2.42,4.84
Ethylbenzene	.84436	.79584	.81554	.82625	.87040	.64408	.48935	1.029	.75483	18.295	(Conc=2.69,5.38
p,m-Xylene	.71866	.68578	.71268	.74038	.62233	-	-	1.050	.69595	6.541	(Conc=5.18,10.4
o-Xylene	.72128	.68311	.72658	.76441	.76284	.64025	.49979	1.111	.68543	13.542	(Conc=2.51,5.02
Styrene	.32577	.33068	.39412	.43438	.44426	.44935	.37698	1.117	.39365	13.189	(Conc=2.80,5.61

RF - Response Factor (Subscript is amount in ppbv)

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: 1014-SYSTEM 1 CALIBRATED 04/13/93
Calibrated: 930910 14:47

Compound	Files: >AU438 RF 2.24	>AU439 RF 4.48	>AU440 RF 11.21	>AU441 RF 44.94	>AU442 RF 143.50	>AU443 RF 287.00	>AU444 RF 448.40	$\overline{RRT}$	$\overline{RF}$	% RSD	
Bromoform	.65032	.70030	.78513	.93747	.96863	.84731	-	1.141	.81486	15.602	(Conc=1.88,5.77
1,1,2,2-Tetrachloroethane	.59074	.61377	.66802	.79256	.83295	.65146	-	1.247	.68158	13.684	(Conc=2.78,5.98
Benzyl Chloride	.69753	.73012	.78430	.82654	.83411	.88187	.65384	1.252	.76096	9.046	(Conc=1.65,5.30
4-Ethyl Toluene	.89659	.82350	.97996	1.03463	1.12577	.86250	.64329	1.270	.90916	17.228	(Conc=2.00,5.99
1,3,5-Trimethylbenzene	.73923	.84730	.84046	.99321	.98181	.79809	- -	1.283	.86668	11.685	(Conc=2.15,4.26
1,2,4-Trimethylbenzene	.65995	.72434	.77930	.88111	.92967	.79529	.61567	1.345	.76899	14.759	(Conc=2.56,4.13
1,3-Dichlorobenzene	.57278	.41106	.45938	.55573	.58783	.61326	.54558	1.381	.50692	18.253	(Conc=1.72,5.44
1,4-Dichlorobenzene	.57884	.66662	.63543	.76148	.84244	.70115	.55467	1.399	.67409	15.668	(Conc=2.55,4.66
1,2-Dichlorobenzene	.44325	.49845	.49755	.57677	.62619	.48813	-	1.452	.52172	12.817	(Conc=2.80,5.61
1,2,4-Trichlorobenzene	.11739	.15296	.18499	.21752	.31522	.35881	.35941	1.684	.23227	48.168	(Conc=2.01,4.03
Hexachlorobutadiene	.26729	.23305	.17603	.29902	.41701	.46204	.43446	1.628	.32699	33.930	(Conc=1.80,3.61

RF - Response Factor (Subscript is amount in ppbv)

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: 1014-SYSTEM 1 CALIBRATED 04/13/99
Calibrated: 990910 14:47

Files:	>AU438	>AU439	>AU440	>AU441	>AU442	>AU443	>AU444	
	RF	RF	RF	RF	RF	RF	RF	
Compound	2.24	4.48	11.21	44.84	143.50	287.00	448.40	
Dichlorodifluoromethane (12)	2.66016	2.72668	2.72983	2.74911	2.66601	2.51345	2.05150	(Conc=2.28,4.55,11.4,45.5,145.6,291.[illegible]
Chloromethane	.42545	.45916	.46628	.62984	.52467	.60289	.60255	(Conc=2.28,4.59,11.0,45.9,140.6,281.[illegible]
1,2-Di 1,1,2,2-Tetrachloroethane (114)	3.89762	3.98080	3.88787	3.99414	3.82063	2.60586	-	(Conc=2.15,4.26,10.6,42.6,136.3,272.6,4[illegible]
Vinyl Chloride	.33212	.32885	.35640	.37851	.37170	.36914	.36605	
Bromomethane	.68870	.66718	.66924	.67228	.69539	.68096	.62126	
Chloroethane	.21989	.22360	.22982	.23478	.23213	.22676	.22447	(Conc=2.15,4.30,10.8,43.1,137.8,275.[illegible]
Trichlorotrifluoromethane (11)	2.30708	2.31538	2.27028	2.32224	2.28290	1.61904	-	(Conc=2.11,4.22,10.5,42.2,134.9,269.8,4[illegible]
1,1-Dichloroethane	1.08572	1.09515	1.07642	1.13754	1.10195	1.02910	.80939	(Conc=2.42,4.84,12.1,48.4,155.0,310.0,48[illegible]
Carbon Disulfide	1.39413	1.38610	1.40771	1.49092	1.08030	-	-	(Conc=5.45,10.9,27.2,109.0,348.7,697.4,1[illegible]
1,1,2-Tri 1,2,2-Trichloroethane (113)	2.03614	2.05461	2.01982	2.07040	1.99661	1.71291	1.51182	(Conc=2.22,4.44,11.1,44.4,142.1,284.1,44[illegible]
Acetone	.94989	.91476	.85845	.81556	.64380	.63625	.62380	(Conc=2.22,4.44,11.1,44.4,142.1,284.1,[illegible]
Methylene Chloride	.50453	.52023	.49678	.50072	.51961	.50311	.50075	(Conc=2.42,4.84,12.1,48.4,155.0,310.0,48[illegible]
t-1,2-Dichloroethene	.58219	.63178	.61844	.61980	.63268	.61806	.60077	(Conc=2.42,4.84,12.1,48.4,155.0,310.0,48[illegible]
1,1-Dichloroethane	1.08223	1.06731	1.05178	1.11528	1.11862	1.09821	.95127	(Conc=2.38,4.75,11.9,47.5,152.1,304.2,4[illegible]
Vinyl Acetate	-	1.28172	1.29247	1.32757	1.24480	1.21803	1.08286	(Conc=1.88,3.76,9.39,37.6,120.2,[illegible]
c-1,2-Dichloroethene	.62955	.64997	.64235	.65594	.65788	.64486	.65179	(Conc=2.40,4.80,12.0,48.0,153.5,[illegible],4[illegible]
2-Butanone	.11285	.08730	.19143	.22085	.20044	.20534	.20077	(Conc=2.29,4.57,11.4,45.7,146.4,292.7,45[illegible]
Chloroform	1.59164	1.66755	1.61907	1.67356	1.75895	1.48014	1.12598	(Conc=2.40,4.80,12.0,48.0,153.5,307.1,4[illegible]
1,1,1-Trichloroethane	1.65881	1.64306	1.60069	1.54070	1.66086	1.58279	1.29433	(Conc=2.22,4.44,11.1,44.4,142.1,284.1,44[illegible]
Carbon Tetrachloride	1.93437	1.91252	1.94792	1.99124	2.11540	1.82971	1.41446	(Conc=2.26,4.53,11.3,45.3,144.9,289.9,45[illegible]
Benzene	.44988	.44839	.45375	.44892	.45177	.41548	.38442	(Conc=2.40,4.80,12.0,48.0,153.5,307.1,4[illegible]
1,2-Dichloroethane	.29859	.29576	.31320	.31972	.33265	.32455	.32623	(Conc=2.47,4.93,12.3,49.3,157.8,315.[illegible],49[illegible]
Trichloroethene	.39472	.36757	.37445	.37746	.38492	.38911	.39891	(Conc=1.84,3.68,9.19,36.8,117.7,235.3,36[illegible]
1,2-Dichloropropane	.23826	.23015	.24067	.23976	.24953	.25479	.26949	(Conc=2.42,4.84,12.1,48.4,155.0,310.0,48[illegible]
Bromodichloromethane	.69404	.66455	.70575	.74482	.78454	.65249	.53284	(Conc=2.42,4.84,12.1,48.4,155.0,310.0,48[illegible]
c-1,3-Dichloropropene	.35140	.34779	.36098	.38839	.41205	.42206	.40692	(Conc=2.31,4.62,11.5,46.2,147.8,295.6,46[illegible]
4-Methyl-2-Pentanone	.51091	.42166	.50663	.53554	.44127	.45119	.43025	(Conc=2.44,4.89,12.2,48.9,156.4,312.8,48[illegible]
Toluene	.59843	.56467	.59927	.60914	.60420	.54743	.46867	(Conc=2.42,4.84,12.1,48.4,155.0,310.0,48[illegible]
t-1,3-Dichloropropene	.25426	.31363	.35120	.36003	.39252	.40626	.36509	(Conc=2.69,5.38,13.5,53.8,172.2,344.4,53[illegible]
1,1,2-Trichloroethane	.33414	.33475	.34310	.36156	.36227	.36129	.35894	(Conc=2.38,4.75,11.9,47.5,152.1,304.2,47[illegible]
Tetrachloroethene	.45515	.45950	.44860	.44540	.45252	.49015	.39662	(Conc=2.56,5.11,12.8,51.1,163.6,327.2,51[illegible]
2-Hexanone	.07698	.09234	.15610	.21547	.19533	.20263	.20568	(Conc=2.65,5.29,13.2,52.9,169.3,338.6,52[illegible]
Dibromochloromethane	.80806	.81380	.87314	.94018	1.00093	.72427	-	(Conc=2.53,5.07,12.7,50.7,162.2,[illegible],50[illegible]
1,2-Dibromoethane	.64688	.65118	.70503	.73854	.74376	.68048	.53558	(Conc=2.22,4.44,11.1,44.4,142.1,284.1,44[illegible]
Chlorobenzene	.61461	.60621	.60963	.62826	.63501	.59216	.47332	(Conc=2.42,4.84,12.1,48.4,155.0,310.0,48[illegible]
Ethylbenzene	.84436	.79384	.81554	.82625	.87040	.64408	.48935	(Conc=2.69,5.38,13.5,53.8,172.2,344.4,53[illegible]
p,m-Xylene	.71866	.68578	.71260	.74038	.62233	-	-	(Conc=5.18,10.4,25.9,103.6,331.5,663.0,1[illegible]
o-Xylene	.72128	.68311	.72630	.76441	.76284	.64025	.49979	(Conc=2.51,5.02,12.6,50.2,160.7,321.4,50[illegible]
Styrene	.32577	.33068	.39412	.43438	.44426	.44935	.37698	(Conc=2.80,5.61,14.0,56.1,179.4,358.7,56[illegible]
Bromoform	.65832	.70830	.78513	.93747	.96863	.84751	-	(Conc=1.88,3.77,9.42,37.7,120.5,241.1,37[illegible]
1,1,2,2-Tetrachloroethane	.59074	.61377	.66802	.75256	.83295	.63146	-	(Conc=2.78,5.56,13.9,55.6,177.9,355.9,55[illegible]
Benzyl Chloride	.69753	.73812	.78438	.82654	.83411	.80187	.65504	(Conc=1.65,3.30,8.26,33.1,105.8,211.5,33[illegible]
4-Ethyl Toluene	.89659	.82350	.97996	1.03463	1.12377	.86260	.64329	(Conc=2.00,3.99,9.98,39.9,127.7,255.4,39[illegible]
1,3,5-Trimethylbenzene	.73923	.84730	.84046	.99321	.98181	.79809	-	(Conc=2.13,4.26,10.6,42.6,136.3,272.6,42[illegible]
1,2,4-Trimethylbenzene	.65953	.72434	.77930	.88111	.92967	.79529	.61367	(Conc=2.06,4.13,10.3,41.3,132.0,264.0,41[illegible]

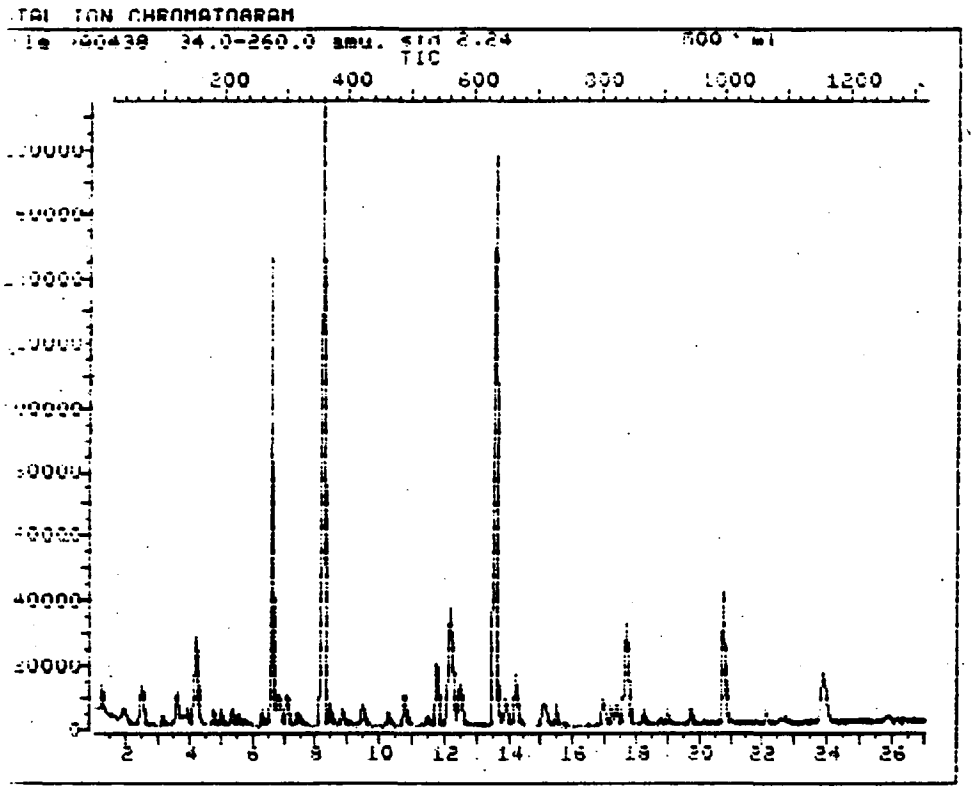
RF - Response Factor (Subscript is amount in ppbv)

Calibration Report

Title: AU14-SYSTEM 1 CALIBRATED 04/13/93
Calibrated: 930910 14:4[illegible]

Compound	Files: >AU438 RF 2.24	>AU439 RF 4.48	>AU440 RF 11.21	>AU441 RF 44.84	>AU442 RF 143.50	>AU443 RF 287.00	>AU444 RF 448.40	
1,3-Dichlorobenzene	.57278	.41106	.45958	.55575	.58783	.61328	.54558	(Conc=1.72,3.44,8.61,34.4,110.2,220.4,[illegible]
1,4-Dichlorobenzene	.57884	.66662	.63343	.76148	.54244	.70115	.53467	(Conc=2.33,4.66,11.7,46.6,149.2,298.5,[illegible]
1,2-Dichlorobenzene	.44325	.49845	.49755	.57677	.62619	.48813		(Conc=2.80,5.61,14.0,56.1,179.4,358.7,[illegible]
1,2,4-Trichlorobenzene	.11739	.15276	.13455	.21792	.21522	.35881	.35941	(Conc=2.01,4.03,10.1,40.3,128.9,257.7,[illegible]
Hexachlorobutadiene	.26729	.23305	.17633	.29902	.41781	.46264	.43446	(Conc=1.80,3.61,9.01,36.1,115.4,230.7,[illegible]

RF - Response Factor (Subscript is amount in ppbv)



Data File: >AU438
Name: std 2.24
Misc: 500 ml

Quant Output File: ^AU438::QC
Instrument ID: SYSTEM 1

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

Operator ID: MARK
Quant Time : 930412 13:36
Injected at: 930412 12:24

Operator ID: MARK Quant Rev: 2 Quant Time: 930412 13:36
Output File: ?AU438::WD Injected at: 930412 12:24
Data File: ?AU438::D1 Dilution Factor: 1.00000
Name: std 2.24 Instrument ID: SYSTEM 1
Mine: 900 ml

ID File: IDNEW1::WT
Title: SYSTEM 1 VOLATILE ORGANICS ID-14
Last Calibration: 930324 08:42 Last Qual Time: 930412 11:35

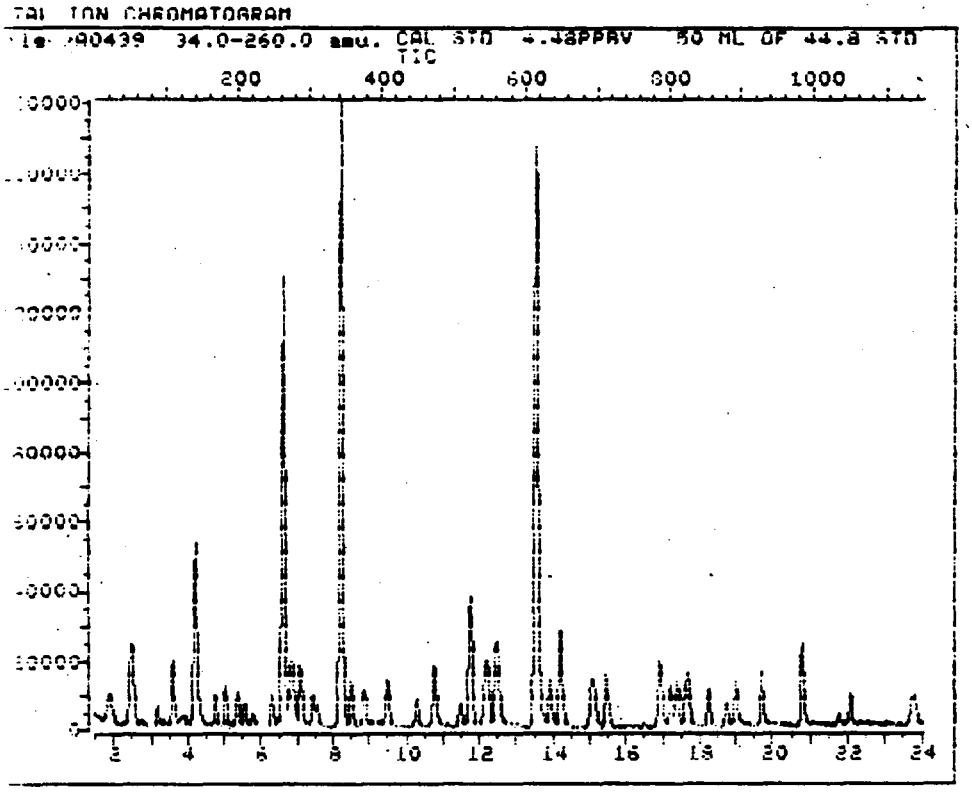
	Compound	R.T.	Q Ion	Area	Conc	Units	q
1)	Bromochloromethane	6.58	49.0	120274	38.50	ppbv	86
2)	Dichlorodifluoromethane (12)	1.89	85.0	27108	2.22	ppbv	86
3)	Chloromethane	2.49	50.0	4675	1.72	ppbv	100
4)	1,2-Cl-1,1,2,2-F ethane (114)	2.42	85.0	37107	2.11	ppbv	99
5)	Vinyl Chloride	2.55	62.0	3325	2.15	ppbv	100
6)	Bromomethane	3.16	94.0	6094	2.07	ppbv	85
7)	Chloroethane	3.30	64.0	2113	2.06	ppbv	100
8)	Trichlorofluoromethane (11)	3.57	101.0	21757	2.07	ppbv	92
9)	1,1-Dichloroethene	4.10	61.0	10878	2.29	ppbv	93
10)	Carbon Disulfide	4.20	76.0	33959	10.47	ppbv	97
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.18	151.0	20203	2.24	ppbv	99
12)	Acetone	4.34	43.0	9425	2.62	ppbv	89
13)	Methylene Chloride	4.73	84.0	5457	2.49	ppbv	91
14)	t-1,2-Dichloroethene	5.01	96.0	6297	2.34	ppbv	86
15)	1,1-Dichloroethane	5.52	63.0	11512	2.38	ppbv	97
17)	c-1,2-Dichloroethene	6.30	96.0	6753	2.35	ppbv	81
18)	2-Butanone	6.44	72.0	1155	1.22	ppbv	83
19)	Chloroform	6.79	83.0	17073	2.31	ppbv	87
20)	1,1,1-Trichloroethane	6.87	97.0	16459	2.30	ppbv	84
21)	Carbon Tetrachloride	7.07	117.0	19539	2.27	ppbv	99
22)	*1,4-Difluorobenzene	8.19	114.0	507498	39.00	ppbv	96
23)	Benzene	7.42	78.0	14050	2.39	ppbv	100
24)	1,2-Dichloroethane	7.54	62.0	9597	2.28	ppbv	95
25)	Trichloroethene	8.48	130.0	9451	1.91	ppbv	94
26)	1,2-Dichloropropane	8.83	63.0	7503	2.40	ppbv	78
27)	Bromodichloromethane	9.48	83.0	21856	2.19	ppbv	95
28)	c-1,3-Dichloropropene	10.27	75.0	10563	2.06	ppbv	95
29)	4-Methyl-2-Pentanone	10.78	43.0	16222	2.29	ppbv	90
30)	Toluene	10.74	91.0	18845	2.34	ppbv	88
31)	*Chlorobenzene-d5	13.52	117.0	376655	34.00	ppbv	96
32)	t-1,3-Dichloropropene	11.46	75.0	7577	1.84	ppbv	91
33)	1,1,2-Trichloroethane	11.78	97.0	8810	2.19	ppbv	90
34)	Tetrachloroethene	11.74	164.0	12908	2.60	ppbv	92
35)	2-Hexanone	12.48	58.0	2260	.931	ppbv	95
36)	Dibromochloromethane	12.44	129.0	22648	2.13	ppbv	96
37)	1,2-Dibromoethane	12.52	107.0	15909	1.91	ppbv	83
38)	Chlorobenzene	13.58	112.0	16477	2.37	ppbv	92
39)	Ethylbenzene	13.92	91.0	25162	2.73	ppbv	97
40)	p,m-Xylene	14.21	91.0	41240	5.05	ppbv	97
41)	o-Xylene	15.04	91.0	20056	2.36	ppbv	91

Operator ID: MARK Quant Rev: 7 Quant Time: 930412 13:36
Output File: PA0438::QQ Injected at: 930412 12:24
Data File: PA0438::D1 Dilution Factor: 1.00000
Name: std 2.24 Instrument ID: SYSTEM 1
Misc: 500 ml

ID File: TONE01::QI
Title: SYSTEM 1 VOLATILE ORGANICS 10-14
Last Calibration: 930324 08:47 Last Qual Time: 930412 11:55

	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	Styrene	15.13	104.0	10105	2.06	ppbv	92
43)	Bromoform	15.45	173.0	13544	1.27	ppbv	82
44)	1,1,2,2-Tetrachloroethane	16.92	83.0	18193	2.14	ppbv	86
45)	Benzyl Chloride	16.98	91.0	12750	1.34	ppbv	89
46)	4-Ethyl Toluene	17.21	105.0	19865	1.67	ppbv	97
47)	1,3,5-Trimethylbenzene	17.41	105.0	17443	1.63	ppbv	98
48)	1,2,4-Trimethylbenzene	18.23	105.0	15051	1.52	ppbv	98
49)	1,3-Dichlorobenzene	18.74	146.0	7103	1.11	ppbv	97
50)	1,4-Dichlorobenzene	19.00	146.0	14941	1.75	ppbv	97
51)	1,2-Dichlorobenzene	19.69	146.0	13749	2.18	ppbv	91
52)	1,2,4-Trichlorobenzene	21.81	180.0	2614	.851	ppbv	92
53)	Hexachlorobutadiene	22.10	225.0	5330	1.20	ppbv	91

* Compound is ISTD



Data File: >A0439
Name: CAL STD 4.48PPBV
Misc: 50 ML OF 44.8 STD

Quant Output File: ^A0439::QC
Instrument ID: SYSTEM 1

Id File: IONEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 931115 08:14

Operator ID: DAVE
Quant Time : 931115 17:07
Injected at: 930412 14:23

QUANT REPORT

Operator ID: DAVE
Quant Rev: 7
Quant Time: 931115 17:07
Output File: ^A0439::QC
Injected at: 930412 14:23
Data File: ^A0439::SC
Dilution Factor: 1.00000
Name: CAL STD 4.48PPBV
Instrument ID: SYSTEM 1
Misc: 50 ML DF 44.8 STD

TO File: TONEW1::QF
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:4
Last Qcal Time: 931115 08:14

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.63	49.0	153241	38.90	ppbv	88
2)	Dichlorodifluoromethane (12)	1.90	85.0	49381	4.86	ppbv	85
3)	Chloromethane	2.50	50.0	10050	4.44	ppbv	100
4)	1,2-Cl-1,1,2,2-F ethane (114)	2.48	85.0	66142	4.59	ppbv	87
5)	Vinyl Chloride	2.56	62.0	5864	4.49	ppbv	100
6)	Bromomethane	3.17	94.0	11897	4.63	ppbv	99
7)	Chloroethane	3.33	64.0	3827	4.52	ppbv	100
8)	Trichlorofluoromethane (11)	3.60	101.0	38891	4.26	ppbv	99
9)	1,1-Dichloroethene	4.13	61.0	21059	4.86	ppbv	97
10)	Carbon Disulfide	4.23	76.0	60136	11.61	ppbv	95
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.21	151.0	36310	3.84	ppbv	97
12)	Acetone	4.35	43.0	16166	5.23	ppbv	93
13)	Methylene Chloride	4.76	84.0	10022	5.26	ppbv	91
14)	t-1,2-Dichloroethene	5.04	96.0	12171	5.14	ppbv	89
15)	1,1-Dichloroethane	5.55	63.0	20179	4.65	ppbv	92
16)	Vinyl Acetate	5.76	43.0	19182	3.92	ppbv	96
17)	c-1,2-Dichloroethene	6.31	96.0	12418	4.63	ppbv	90
18)	2-Butanone	6.45	72.0	866	1.04	ppbv	94
19)	Chloroform	6.82	83.0	31855	4.88	ppbv	96
20)	1,1,1-Trichloroethane	6.90	97.0	29037	4.65	ppbv	96
21)	Carbon Tetrachloride	7.10	117.0	34484	4.48	ppbv	95
22)	*1,4-Difluorobenzene	8.22	114.0	467432	39.00	ppbv	95
23)	Benzene	7.41	78.0	25796	5.35	ppbv	100
24)	1,2-Dichloroethane	7.57	62.0	17476	4.94	ppbv	93
25)	Trichloroethene	8.49	130.0	16212	3.67	ppbv	94
26)	1,2-Dichloropropane	8.86	63.0	13350	5.62	ppbv	87
27)	Bromodichloromethane	9.47	83.0	38550	5.28	ppbv	95
28)	c-1,3-Dichloropropene	10.28	75.0	19258	4.97	ppbv	94
29)	4-Methyl-2-Pentanone	10.77	43.0	24713	5.09	ppbv	99
30)	Toluene	10.75	91.0	32756	4.98	ppbv	89
31)	*Chlorobenzene-d5	13.53	117.0	348523	34.00	ppbv	97
32)	t-1,3-Dichloropropene	11.47	75.0	17296	5.83	ppbv	87
33)	1,1,2-Trichloroethane	11.77	97.0	16298	4.92	ppbv	95
34)	Tetrachloroethene	11.73	164.0	24069	4.87	ppbv	96
35)	2-Hexanone	12.47	58.0	5007	4.87	ppbv	99
36)	Dibromochloromethane	12.45	129.0	42294	4.88	ppbv	98
37)	1,2-Dibromoethane	12.51	107.0	29637	4.32	ppbv	90
38)	Chlorobenzene	13.59	112.0	30076	4.96	ppbv	91
39)	Ethylbenzene	13.93	91.0	43779	5.66	ppbv	94
40)	p,m-Xylene	14.20	91.0	72828	10.64	ppbv	98

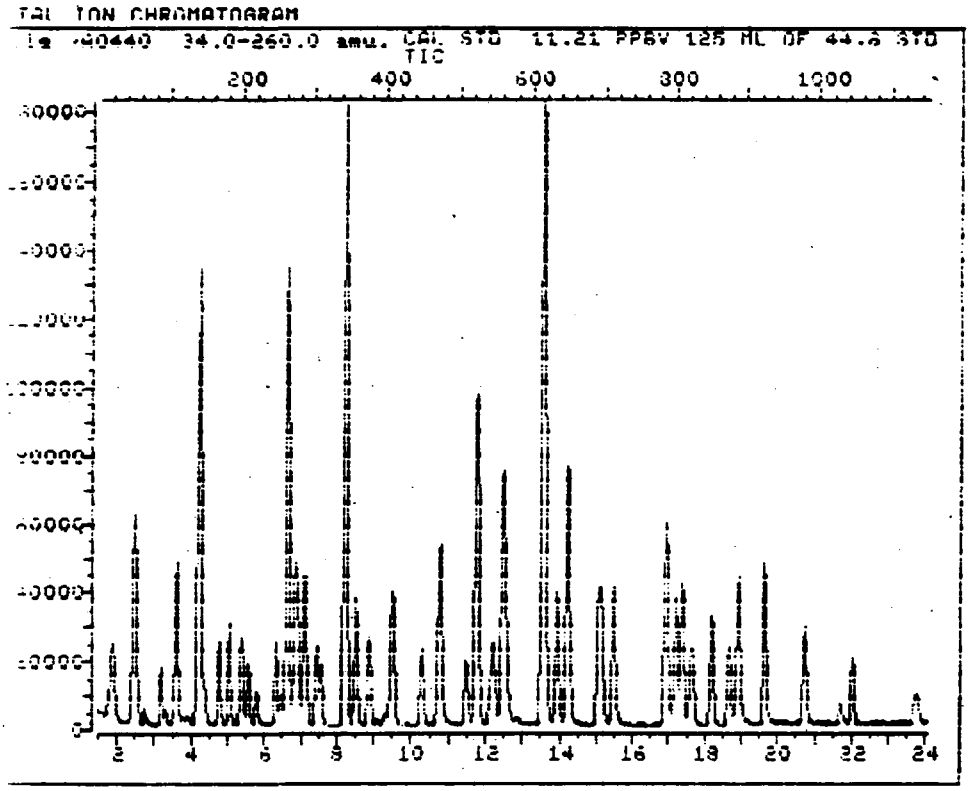
Operator ID: DAVE
Output File: ^AU439::QC
Data File: >AU439::SC
Name: CAL STD 4.48PPBV
Misc: 50 ML OF 44.8 STD

Quant Rev: 7
Quant Time: 931115 17:07
Injected at: 930412 14:23
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 931115 08:14

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	o-Xylene	15.07	91.0	35152	5.02	ppbv	90
42)	Styrene	15.14	104.0	19016	5.13	ppbv	91
43)	Bromoform	15.46	173.0	27063	3.04	ppbv	96
44)	1,1,2,2-Tetrachloroethane	16.91	83.0	34981	6.08	ppbv	92
45)	Benzyl Chloride	16.99	91.0	24698	3.29	ppbv	97
46)	4-Ethyl Toluene	17.22	105.0	33673	3.63	ppbv	87
47)	1,3,5-Trimethylbenzene	17.40	105.0	37000	4.13	ppbv	99
48)	1,2,4-Trimethylbenzene	18.26	105.0	30665	3.83	ppbv	99
49)	1,3-Dichlorobenzene	18.75	146.0	14495	2.88	ppbv	98
50)	1,4-Dichlorobenzene	18.75	146.0	14495	1.92	ppbv	98
51)	1,2-Dichlorobenzene	19.70	146.0	28664	5.57	ppbv	99

* Compound is ISTD



Data File: >A0440
Name: CAL STD 11.21 PPBV
Misc: 125 ML OF 44.8 STD

Quant Output File: ^A0440::QC
Instrument ID: SYSTEM 1

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

Operator ID: DAVE
Quant Time : 930412 15:15
Injected at: 930412 14:50

QUANT REPORT

Operator ID: DAVE
Output File: ^A0440::WC
Data File: ^A0440::C1
Name: CAL STD 11.21 PPBV
Misc: 125 ML SF 44.8 STD

Quant Rev: 7
Quant Time: 930412 15:15
Injected at: 930412 14:50
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS 10-14
Last Calibration: 930324 08:47
Last Qual Time: 930412 11:35

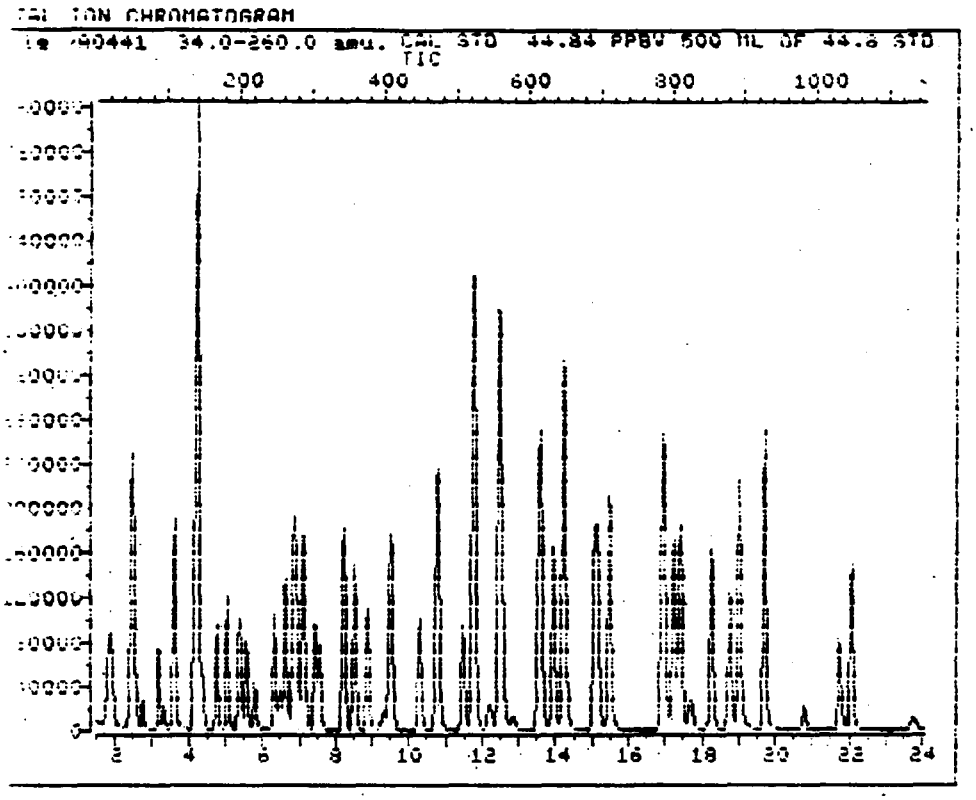
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.63	49.0	152642	38.50	ppbv	83
2)	Dichlorodifluoromethane (12)	1.88	85.0	123130	11.38	ppbv	86
3)	Chloromethane	2.49	50.0	26417	10.93	ppbv	100
4)	1,2-Cl-1,1,2,2-F ethane (114)	2.49	85.0	164129	10.54	ppbv	98
5)	Vinyl Chloride	2.74	62.0	15840	11.56	ppbv	100
6)	Bromomethane	3.18	94.0	29744	11.38	ppbv	96
7)	Chloroethane	3.33	64.0	10060	11.07	ppbv	100
8)	Trichlorofluoromethane (11)	3.61	101.0	94871	10.16	ppbv	97
9)	1,1-Dichloroethene	4.14	61.0	51682	12.29	ppbv	91
10)	Carbon Disulfide	4.24	76.0	152031	52.84	ppbv	96
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.22	151.0	88889	11.13	ppbv	99
12)	Acetone	4.37	43.0	37779	11.83	ppbv	96
13)	Methylene Chloride	4.77	84.0	23852	12.25	ppbv	87
14)	t-1,2-Dichloroethene	5.04	96.0	29693	12.42	ppbv	90
15)	1,1-Dichloroethane	5.55	63.0	49540	11.56	ppbv	99
16)	Vinyl Acetate	5.79	43.0	48117	9.32	ppbv	93
17)	c-1,2-Dichloroethene	6.32	96.0	30561	12.01	ppbv	90
18)	2-Butanone	6.47	72.0	8675	10.33	ppbv	94
19)	Chloroform	6.83	83.0	77030	11.75	ppbv	90
20)	1,1,1-Trichloroethane	6.91	97.0	70444	11.10	ppbv	91
21)	Carbon Tetrachloride	7.12	117.0	87424	11.47	ppbv	97
22)	*1,4-Difluorobenzene	8.22	114.0	457380	39.00	ppbv	96
23)	Benzene	7.44	78.0	63857	12.04	ppbv	100
24)	1,2-Dichloroethane	7.57	62.0	45290	11.93	ppbv	99
25)	Trichloroethene	8.52	130.0	40357	9.05	ppbv	97
26)	1,2-Dichloropropane	8.87	63.0	34181	12.14	ppbv	94
27)	Bromodichloromethane	9.48	83.0	100232	11.14	ppbv	92
28)	c-1,3-Dichloropropene	10.28	75.0	48897	10.56	ppbv	99
29)	4-Methyl-2-Pentanone	10.77	43.0	72606	11.37	ppbv	98
30)	Toluene	10.77	91.0	85110	11.74	ppbv	97
31)	*Chlorobenzene-d5	13.54	117.0	350888	34.00	ppbv	97
32)	t-1,3-Dichloropropene	11.48	75.0	45973	11.96	ppbv	97
33)	1,1,2-Trichloroethane	11.79	97.0	42065	11.22	ppbv	98
34)	Tetrachloroethene	11.75	164.0	59167	12.77	ppbv	93
35)	2-Hexanone	12.48	58.0	21313	9.43	ppbv	92
36)	Dibromochloromethane	12.46	129.0	114170	11.55	ppbv	99
37)	1,2-Dibromoethane	12.54	107.0	80765	10.41	ppbv	96
38)	Chlorobenzene	13.60	112.0	76191	11.74	ppbv	91
39)	Ethylbenzene	13.93	91.0	113203	13.20	ppbv	97
40)	p,m-Xylene	14.21	91.0	190399	25.03	ppbv	98

Operator ID: DAVE Quant Rev: 7 Quant Time: 930412 15:15
Output File: ^A0440::WC Injected at: 930412 14:50
Data File: :A0440::D1 Dilution Factor: 1.00000
Name: CAL STD 11.21 PPBV Instrument ID: SYSTEM 1
Misc: 125 ML CF 44.8 STD

ID File: IDNEW1::WT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qcal Time: 930412 11:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	o-Xylene	15.09	91.0	94145	11.90	ppbv	99
42)	Styrene	15.13	104.0	56985	12.47	ppbv	93
43)	Bromoform	15.47	173.0	76328	7.67	ppbv	97
44)	1,1,2,2-Tetrachloroethane	16.40	83.0	95829	12.08	ppbv	92
45)	Benzyl Chloride	16.96	91.0	66858	7.57	ppbv	99
46)	4-Ethyl Toluene	17.19	105.0	100932	9.13	ppbv	92
47)	1,3,5-Trimethylbenzene	17.37	105.0	92375	9.27	ppbv	98
48)	1,2,4-Trimethylbenzene	18.19	105.0	82919	8.99	ppbv	94
49)	1,3-Dichlorobenzene	18.67	146.0	40819	6.85	ppbv	95
50)	1,4-Dichlorobenzene	18.90	146.0	76223	9.57	ppbv	96
51)	1,2-Dichlorobenzene	19.65	146.0	71939	12.23	ppbv	97
52)	1,2,4-Trichlorobenzene	21.69	180.0	10865	3.80	ppbv	90
53)	Hexachlorobutadiene	22.00	225.0	16368	3.95	ppbv	95

* Compound is ISTD



Data File: >A0441
Name: CAL STD 44.84 PPBV
Misc: 500 ML OF 44.8 STD

Quant Output File: ^A0441::QC
Instrument ID: SYSTEM 1

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

Operator ID: DAVE
Quant Time : 930412 15:55
Injected at: 930412 15:30

Operator ID: DAVE Quant Rev: 7 Quant Time: 930412 15:55
Output File: ^A0441::QC Injected at: 930412 15:30
Data File: >A0441::D1 Dilution Factor: 1.00000
Name: CAL STD 44.84 PPBV Instrument-ID: SYSTEM 1
Misc: 500 1L CF 44.8 STD

ID File: TONE01::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qcal Time: 930412 11:35

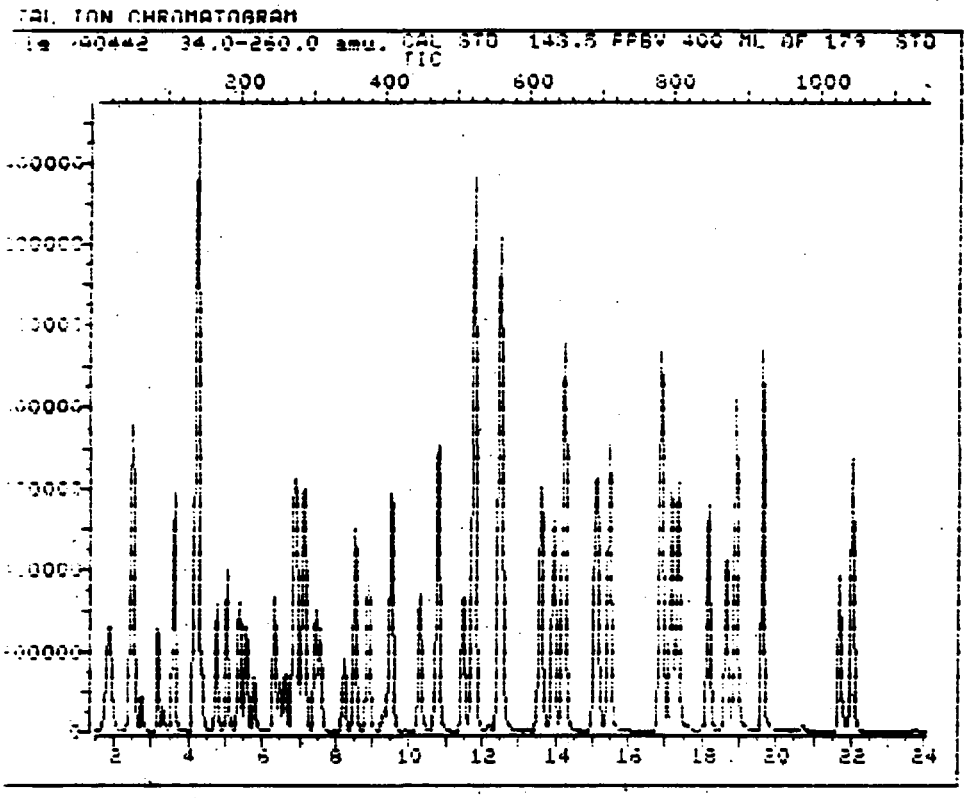
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.53	49.0	152296	38.50	ppbv	84
2)	Dichlorodifluoromethane (12)	1.86	85.0	495020	45.85	ppbv	87
3)	Chloromethane	2.49	50.0	109500	45.42	ppbv	100
4)	1,2-Cl-1,1,2,2-F ethane (114)	2.49	85.0	673070	43.33	ppbv	92
5)	Vinyl Chloride	2.74	62.0	65719	48.05	ppbv	100
6)	Bromomethane	3.16	94.0	119246	45.73	ppbv	95
7)	Chloroethane	3.31	64.0	39968	44.08	ppbv	100
8)	Trichlorofluoromethane (11)	3.61	101.0	387198	41.55	ppbv	99
9)	1,1-Dichloroethene	4.14	61.0	212178	50.56	ppbv	93
10)	Carbon Disulfide	4.24	76.0	642850	223.93	ppbv	95
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.22	151.0	367065	46.05	ppbv	99
12)	Acetone	4.37	43.0	142858	44.83	ppbv	97
13)	Methylene Chloride	4.77	84.0	95926	49.38	ppbv	83
14)	t-1,2-Dichloroethene	5.04	96.0	118739	49.78	ppbv	94
15)	1,1-Dichloroethane	5.57	63.0	209691	49.06	ppbv	95
16)	Vinyl Acetate	5.79	43.0	197352	38.30	ppbv	97
17)	c-1,2-Dichloroethene	6.32	96.0	124495	49.02	ppbv	93
18)	2-Butanone	6.48	72.0	39923	47.63	ppbv	90
19)	Chloroform	6.83	83.0	317635	48.57	ppbv	95
20)	1,1,1-Trichloroethane	6.91	97.0	270539	42.71	ppbv	90
21)	Carbon Tetrachloride	7.10	117.0	356742	46.90	ppbv	99
22)	*1,4-Difluorobenzene	8.22	114.0	458702	39.00	ppbv	94
23)	Benzene	7.44	78.0	253333	47.64	ppbv	100
24)	1,2-Dichloroethane	7.58	62.0	185504	48.71	ppbv	97
25)	Trichloroethene	8.52	130.0	163243	36.51	ppbv	99
26)	1,2-Dichloropropane	8.87	63.0	136570	48.38	ppbv	96
27)	Bromodichloromethane	9.50	83.0	424259	47.01	ppbv	99
28)	c-1,3-Dichloropropene	10.29	75.0	211001	45.42	ppbv	95
29)	4-Methyl-2-Pentanone	10.78	43.0	307883	48.09	ppbv	93
30)	Toluene	10.78	91.0	346975	47.73	ppbv	91
31)	*Chlorobenzene-d5	13.55	117.0	361489	34.00	ppbv	94
32)	t-1,3-Dichloropropene	11.46	75.0	205978	52.01	ppbv	97
33)	1,1,2-Trichloroethane	11.78	97.0	182713	47.29	ppbv	98
34)	Tetrachloroethene	11.76	164.0	240992	50.48	ppbv	94
35)	2-Hexanone	12.45	58.0	121213	52.05	ppbv	97
36)	Dibromochloromethane	12.47	129.0	506500	49.73	ppbv	98
37)	1,2-Dibromoethane	12.52	107.0	348560	43.61	ppbv	93
38)	Chlorobenzene	13.61	112.0	323495	48.38	ppbv	92
39)	Ethylbenzene	13.94	91.0	472703	53.51	ppbv	97
40)	p,m-Xylene	14.21	91.0	815514	104.05	ppbv	99

Operator ID: DAVE Quant Rev: 7 Quant Time: 930412 15:55
Output File: CA0441::QC Injected at: 930412 15:30
Data File: CA0441::D1 Dilution Factor: 1.00000
Name: CAL STD 44.84 PPBV Instrument ID: SYSTEM 1
Misc: 500 ML OF 44.8 STD

ID File: IONEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qcal Time: 930412 11:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	o-Xylene	15.06	91.0	408149	50.07	ppbv	96
42)	Styrene	15.14	104.0	258856	55.00	ppbv	93
43)	Bromoform	15.47	173.0	375469	36.64	ppbv	94
44)	1,1,2,2-Tetrachloroethane	16.92	83.0	444948	54.45	ppbv	92
45)	Benzyl Chloride	16.98	91.0	290438	31.91	ppbv	97
46)	4-Ethyl Toluene	17.24	105.0	439018	38.54	ppbv	94
47)	1,3,5-Trimethylbenzene	17.42	105.0	449848	43.82	ppbv	98
48)	1,2,4-Trimethylbenzene	18.26	105.0	386524	40.66	ppbv	97
49)	1,3-Dichlorobenzene	18.75	146.0	203491	33.14	ppbv	99
50)	1,4-Dichlorobenzene	19.01	146.0	377601	46.01	ppbv	95
51)	1,2-Dichlorobenzene	19.69	146.0	343710	56.72	ppbv	97
52)	1,2,4-Trichlorobenzene	21.72	180.0	93130	31.58	ppbv	92
53)	Hexachlorobutadiene	22.05	225.0	114608	26.85	ppbv	98

* Compound is ISTD



Data File: >A0442
Name: CAL STD 143.5 PPBV
Misc: 400 ML OF 179 STD

Quant Output File: ^A0442::QC
Instrument ID: SYSTEM 1

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 18:47
Last Qcal Time: 930412 11:35

Operator ID: DAVE
Quant Time : 930412 16:22
Injected at: 930412 15:57

QUANT REPORT

Operator ID: DAVE
Output File: ^A0442::QC
Data File: ^A0442::D1
Name: CAL STD 143.5 PPBV
Misc: 400 ML OF 179 STD

Quant Rev: 7
Quant Time: 930412 16:22
Injected at: 930412 15:57
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: IONEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qual Time: 930412 11:35

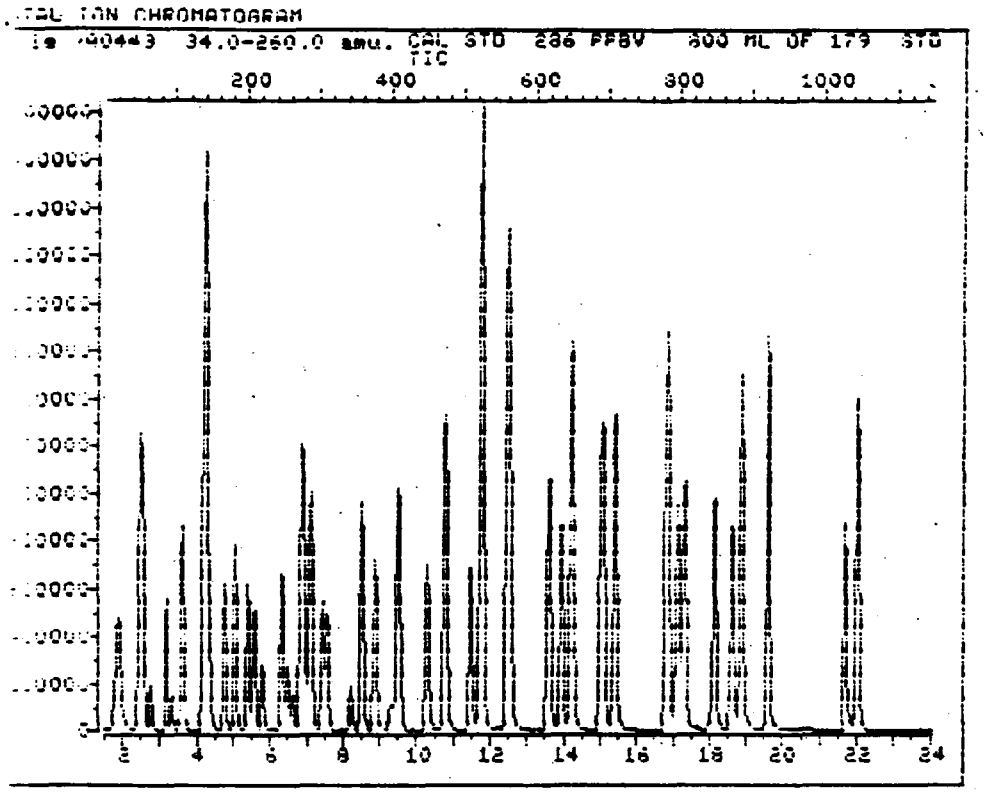
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.63	49.0	152606	38.50	ppbv	87
2)	Dichlorodifluoromethane (12)	1.84	85.0	1538630	142.23	ppbv	86
3)	Chloromethane	2.47	50.0	348134	144.11	ppbv	100
4)	1,2-Cl-1,1,2,2-F ethane (114)	2.49	85.0	2064150	132.61	ppbv	86
5)	Vinyl Chloride	2.74	62.0	211422	154.28	ppbv	100
6)	Bromomethane	3.16	94.0	395539	151.37	ppbv	91
7)	Chloroethane	3.33	64.0	126792	139.56	ppbv	100
8)	Trichlorofluoromethane (11)	3.61	101.0	1220700	130.73	ppbv	95
9)	1,1-Dichloroethene	4.16	61.0	677013	161.01	ppbv	97
10)	Carbon Disulfide	4.24	76.0	1493159	519.06	ppbv	79
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.22	151.0	1124602	140.80	ppbv	96
12)	Acetone	4.35	43.0	362624	113.56	ppbv	97
13)	Methylene Chloride	4.77	84.0	319242	164.01	ppbv	85
14)	t-1,2-Dichloroethene	5.04	96.0	388711	162.62	ppbv	95
15)	1,1-Dichloroethane	5.57	63.0	674405	157.46	ppbv	98
16)	Vinyl Acetate	5.79	43.0	593082	114.87	ppbv	98
17)	c-1,2-Dichloroethene	6.32	96.0	400284	157.30	ppbv	89
18)	2-Butanone	6.48	72.0	116317	138.50	ppbv	91
19)	Chloroform	6.85	83.0	1058049	161.44	ppbv	94
20)	1,1,1-Trichloroethane	6.91	97.0	935487	147.38	ppbv	90
21)	Carbon Tetrachloride	7.12	117.0	1213840	159.27	ppbv	96
22)	*1,4-Difluorobenzene	8.22	114.0	463687	39.00	ppbv	96
23)	Benzene	7.44	78.0	824496	153.39	ppbv	100
24)	1,2-Dichloroethane	7.58	62.0	624110	162.13	ppbv	95
25)	Trichloroethene	8.50	130.0	538650	119.19	ppbv	98
26)	1,2-Dichloropropane	8.87	63.0	459841	161.15	ppbv	92
27)	Bromodichloromethane	9.50	83.0	1445789	158.47	ppbv	97
28)	c-1,3-Dichloropropene	10.29	75.0	724069	154.19	ppbv	94
29)	4-Methyl-2-Pentanone	10.78	43.0	820534	126.80	ppbv	97
30)	Toluene	10.78	91.0	1113460	151.52	ppbv	92
31)	*Chlorobenzene-d5	13.55	117.0	362072	34.00	ppbv	98
32)	t-1,3-Dichloropropene	11.49	75.0	719805	181.47	ppbv	93
33)	1,1,2-Trichloroethane	11.78	97.0	586781	151.63	ppbv	96
34)	Tetrachloroethene	11.76	164.0	788389	164.88	ppbv	93
35)	2-Hexanone	12.45	58.0	352167	150.98	ppbv	95
36)	Dibromochloromethane	12.47	129.0	1728910	169.49	ppbv	92
37)	1,2-Dibromoethane	12.55	107.0	1125486	140.59	ppbv	94
38)	Chlorobenzene	13.61	112.0	1048157	156.51	ppbv	92
39)	Ethylbenzene	13.94	91.0	1596129	180.39	ppbv	99
40)	p,m-Xylene	14.24	91.0	2196965	279.85	ppbv	66

Operator ID: DAVE Quant Rev: 7 Quant Time: 930412 16:22
Output File: ^A0442::QC Injected at: 930412 15:57
Data File: >A0442::D1 Dilution Factor: 1.00000
Name: CAL STD 143.5 PPBV Instrument ID: SYSTEM 1
Misc: 400 ML CF 179 STD

CD File: :DNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qcal Time: 930412 11:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	o-Xylene	15.06	91.0	1305473	159.88	ppbv	94
42)	Styrene	15.14	104.0	848734	180.04	ppbv	93
43)	Bromoform	15.46	173.0	1242970	121.12	ppbv	95
44)	1,1,2,2-Tetrachloroethane	16.37	83.0	1578017	192.81	ppbv	93
45)	Benzyl Chloride	16.93	91.0	939775	103.10	ppbv	98
46)	4-Ethyl Toluene	17.16	105.0	1528219	133.94	ppbv	95
47)	1,3,5-Trimethylbenzene	17.34	105.0	1425075	138.60	ppbv	98
48)	1,2,4-Trimethylbenzene	18.17	105.0	1306831	137.23	ppbv	99
49)	1,3-Dichlorobenzene	18.64	146.0	689838	112.17	ppbv	97
50)	1,4-Dichlorobenzene	18.69	146.0	1338509	162.82	ppbv	96
51)	1,2-Dichlorobenzene	19.62	146.0	1196313	197.11	ppbv	98
52)	1,2,4-Trichlorobenzene	21.68	180.0	432690	146.49	ppbv	98
53)	Hexachlorobutadiene	22.02	225.0	512468	119.85	ppbv	97

* Compound is ISTD



Data File: >A0443
Name: CAL STD 286 PPBV
Misc: 800 ML OF 179 STD

Quant Output File: ^A0443::QC
Instrument ID: SYSTEM 1

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

Operator ID: DAVE
Quant Time : 930412 16:49
Injected at: 930412 16:24

QUANT REPORT

Operator ID: DAVE
Output File: ^A0443::QC
Data File: >A0443::01
Name: CAL STD 286 PPBV
Misc: 600 ML OF 179 STD

Quant Rev: 7
Quant Time: 930412 16:49
Injected at: 930412 16:24
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

QC File: IUNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS 10-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.64	49.0	155165	38.50	ppbv	86
2)	Dichlorodifluoromethane (12)	1.86	85.0	2950827	268.27	ppbv	98
3)	Chloromethane	2.49	50.0	683505	278.26	ppbv	100
4)	1,2-Cl-1,1,2,2-F ethane (114)	2.51	85.0	2862926	180.89	ppbv	31
5)	Vinyl Chloride	2.75	62.0	426984	306.44	ppbv	100
6)	Bromomethane	3.18	94.0	787657	296.47	ppbv	94
7)	Chloroethane	3.34	64.0	251784	272.57	ppbv	80
8)	Trichlorofluoromethane (11)	3.63	101.0	1760483	185.42	ppbv	58
9)	1,1-Dichloroethene	4.16	61.0	1285736	300.73	ppbv	86
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.22	151.0	1961278	241.49	ppbv	62
12)	Acetone	4.38	43.0	728507	224.37	ppbv	96
13)	Methylene Chloride	4.77	84.0	628582	317.61	ppbv	85
14)	t-1,2-Dichloroethene	5.05	96.0	772195	317.73	ppbv	95
15)	1,1-Dichloroethane	5.58	63.0	1346406	309.17	ppbv	96
16)	Vinyl Acetate	5.79	43.0	1180605	224.89	ppbv	97
17)	c-1,2-Dichloroethene	6.32	96.0	798139	308.47	ppbv	91
18)	2-Butanone	6.48	72.0	242226	283.66	ppbv	91
19)	Chloroform	6.85	83.0	1831960	274.92	ppbv	75
20)	1,1,1-Trichloroethane	6.91	97.0	1812290	280.80	ppbv	87
21)	Carbon Tetrachloride	7.13	117.0	2137788	275.87	ppbv	93
22)	*1,4-Difluorobenzene	8.23	114.0	456336	39.00	ppbv	95
23)	Benzene	7.44	78.0	1492963	282.23	ppbv	100
24)	1,2-Dichloroethane	7.58	62.0	1198873	316.47	ppbv	94
25)	Trichloroethene	8.50	130.0	1071300	240.86	ppbv	8
26)	1,2-Dichloropropane	8.88	63.0	924182	329.09	ppbv	94
27)	Bromodichloromethane	9.51	83.0	2366771	263.59	ppbv	61
28)	c-1,3-Dichloropropene	10.29	75.0	1459823	315.88	ppbv	94
29)	4-Methyl-2-Pentanone	10.78	43.0	1651391	259.30	ppbv	95
30)	Toluene	10.78	91.0	1985697	274.58	ppbv	70
31)	*Chlorobenzene-d5	13.55	117.0	357191	34.00	ppbv	96
32)	t-1,3-Dichloropropene	11.47	75.0	1469907	375.65	ppbv	94
33)	1,1,2-Trichloroethane	11.79	97.0	1154620	302.44	ppbv	97
34)	Tetrachloroethene	11.77	164.0	1547350	328.04	ppbv	79
35)	2-Hexanone	12.45	58.0	720796	313.25	ppbv	94
36)	Dibromochloromethane	12.47	129.0	2467580	245.21	ppbv	72
37)	1,2-Dibromoethane	12.55	107.0	2030991	257.16	ppbv	90
38)	Chlorobenzene	13.59	112.0	1928527	291.90	ppbv	90
39)	Ethylbenzene	13.93	91.0	2330366	266.97	ppbv	57
41)	o-Xylene	15.01	91.0	2161819	268.38	ppbv	70
42)	Styrene	15.09	104.0	1693328	364.11	ppbv	92

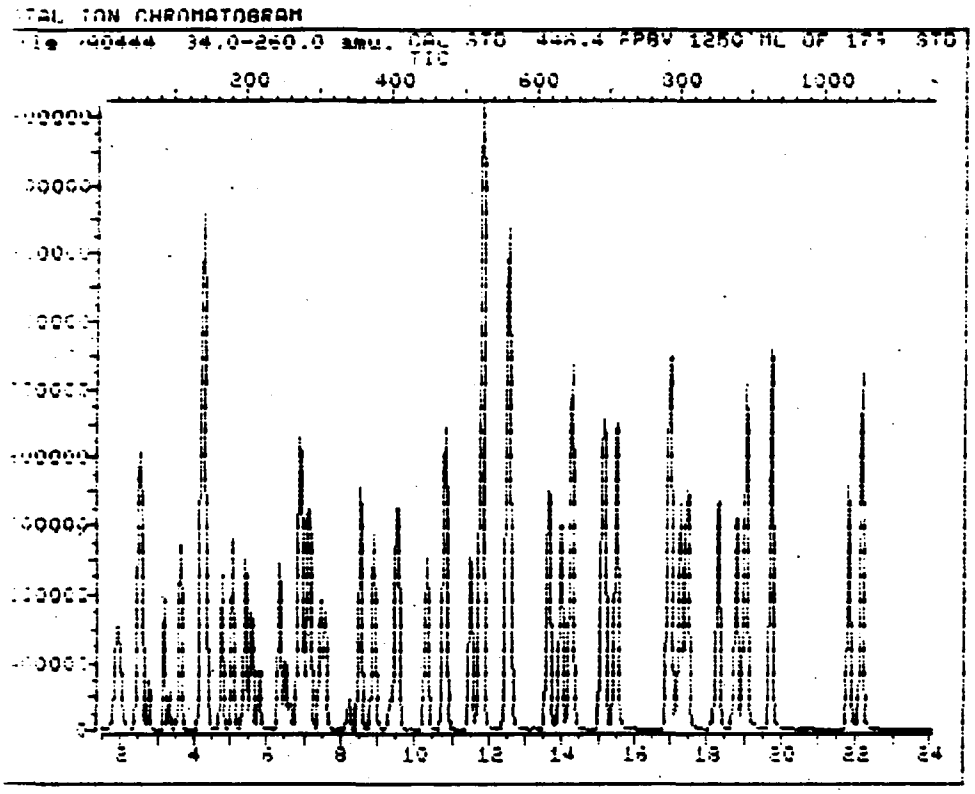
Operator ID: DAVE
Output File: MA0443::QC
Data File: MA0443::D1
Name: CAL STD 286 PPBV
Misc: 800 ML OF 179 STD

Quant Rev: 7
Quant Time: 930412 16:49
Injected at: 930412 16:24
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
43)	Bromoform	15.42	173.0	2146167	211.98	ppbv	67
44)	1,1,2,2-Tetrachloroethane	16.54	83.0	2361014	292.43	ppbv	50
45)	Benzyl Chloride	16.90	91.0	1779930	197.94	ppbv	93
46)	4-Ethyl Toluene	17.13	105.0	2314480	205.63	ppbv	94
47)	1,3,5-Trimethylbenzene	17.33	105.0	2285585	225.34	ppbv	99
48)	1,2,4-Trimethylbenzene	18.15	105.0	2205716	234.79	ppbv	60
49)	1,3-Dichlorobenzene	18.63	146.0	1419975	234.04	ppbv	97
50)	1,4-Dichlorobenzene	18.88	146.0	2198760	271.12	ppbv	62
51)	1,2-Dichlorobenzene	19.61	146.0	1839452	307.22	ppbv	93
52)	1,2,4-Trichlorobenzene	21.67	180.0	971402	333.36	ppbv	98
53)	Hexachlorobutadiene	22.01	225.0	1119826	265.47	ppbv	96

* Compound is ISTD



Data File: ^A0444
Name: CAL STD 448.4 PPBV
Misc: 1250 ML OF 179 STD

Quant Output File: ^A0444::QC
Instrument ID: SYSTEM 1

Id File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

Operator ID: DAVE
Quant Time : 930412 17:18
Injected at: 930412 16:54

Operator ID: DAVE
Output File: ^A0444::QC
Data File: >A0444::D1
Name: CAL STD 448.4 PPBV
Misc: 1250 ML OF 179 STD

Quant Rev: 7
Quant Time: 930412 17:18
Injected at: 930412 16:54
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: IONEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qual Time: 930412 11:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.63	49.0	156321	38.50	ppbv	85
2)	Dichlorodifluoromethane (12)	1.90	85.0	3791664	342.16	ppbv	81
3)	Chloromethane	2.51	50.0	1075212	434.49	ppbv	100
5)	Vinyl Chloride	2.76	62.0	666446	474.76	ppbv	100
6)	Bromomethane	3.17	94.0	1131089	422.59	ppbv	89
7)	Chloroethane	3.33	64.0	392365	421.62	ppbv	100
9)	1,1-Dichloroethene	4.16	61.0	1591504	369.49	ppbv	47
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.23	151.0	2364374	288.98	ppbv	60
12)	Acetone	4.37	43.0	1135708	347.19	ppbv	98
13)	Methylene Chloride	4.77	84.0	984625	493.83	ppbv	78
14)	t-1,2-Dichloroethene	5.06	96.0	1181347	482.49	ppbv	67
15)	1,1-Dichloroethane	5.57	63.0	1797211	409.63	ppbv	67
16)	Vinyl Acetate	5.79	43.0	1652295	312.42	ppbv	93
17)	c-1,2-Dichloroethene	6.34	96.0	1230806	472.17	ppbv	74
18)	2-Butanone	6.49	72.0	372858	433.41	ppbv	90
19)	Chloroform	6.85	83.0	2189646	326.17	ppbv	65
20)	1,1,1-Trichloroethane	6.93	97.0	2332843	358.78	ppbv	66
21)	Carbon Tetrachloride	7.14	117.0	2601064	333.17	ppbv	95
22)	*1,4-Difluorobenzene	8.22	114.0	424265	39.00	ppbv	95
23)	Benzene	7.44	78.0	2006521	407.99	ppbv	100
24)	1,2-Dichloroethane	7.58	62.0	1750706	497.07	ppbv	88
25)	Trichloroethene	8.52	130.0	1595644	385.87	ppbv	97
26)	1,2-Dichloropropane	8.89	63.0	1419801	543.80	ppbv	96
27)	Bromodichloromethane	9.52	83.0	2807276	336.28	ppbv	57
28)	c-1,3-Dichloropropene	10.31	75.0	2044681	475.88	ppbv	84
29)	4-Methyl-2-Pentanone	10.80	43.0	2287832	386.39	ppbv	69
30)	Toluene	10.78	91.0	2427015	360.97	ppbv	42
31)	*Chlorobenzene-d5	13.57	117.0	353124	34.00	ppbv	95
32)	t-1,3-Dichloropropene	11.49	75.0	2040375	527.44	ppbv	83
33)	1,1,2-Trichloroethane	11.80	97.0	1732383	459.00	ppbv	92
34)	Tetrachloroethene	11.78	164.0	2105786	451.57	ppbv	66
35)	2-Hexanone	12.47	58.0	1130270	496.86	ppbv	76
37)	1,2-Dibromoethane	12.57	107.0	2468847	316.21	ppbv	89
38)	Chlorobenzene	13.61	112.0	2380786	364.50	ppbv	64
39)	Ethylbenzene	13.95	91.0	2734812	316.91	ppbv	10
41)	o-Xylene	15.07	91.0	2606812	327.35	ppbv	29
42)	Styrene	15.16	104.0	2194519	477.32	ppbv	56
45)	Benzyl Chloride	16.99	91.0	2241595	252.15	ppbv	65
46)	4-Ethyl Toluene	17.23	105.0	2666480	239.63	ppbv	32
48)	1,2,4-Trimethylbenzene	18.25	105.0	2629738	283.15	ppbv	39

Operator ID: DAVE
Output File: ^A0444::QC
Data File: >A0444::01
Name: CAL STD 448.4 PPBV
Misc: 1250 ML OF 179 STD

Quant Rev: 7
Quant Time: 930412 17:18
Injected at: 930412 16:54
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: IDNEW1::QT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47
Last Qcal Time: 930412 11:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
49)	1,3-Dichlorobenzene	18.76	146.0	1951495	325.35	ppbv	79
50)	1,4-Dichlorobenzene	19.00	146.0	2589952	323.04	ppbv	55
52)	1,2,4-Trichlorobenzene	21.79	180.0	1503214	521.81	ppbv	95
53)	Hexachlorobutadiene	22.12	225.0	1626702	390.07	ppbv	87

* Compound is ISTD

Calibration Check Report

Title: 0014-SYSTEM 1 CALIBRATED 04/13/94
Calibrated: 930910 14:47

Check Standard Data File: 085865
Injection Time: 940610 02:29

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Dichlorodifluoromethane (12)	2.58514	2.93310	13.46	Average	(Conc=45.52)
Chloromethane	.58812	.70915	20.58	Average	(Conc=43.95)
1,2-Cl-1,1,2,2-F ethane (114)	3.68439	3.73012	1.24	Average	(Conc=42.60)
Vinyl Chloride	.35640	.29552	17.07	Average	
Bromomethane	.65929	.56915	13.67	Average	
Chloroethane	.27870	.30992	8.01	Average	(Conc=43.05)
Trichlorofluoromethane (11)	2.18615	2.83566	29.71	Average	(Conc=42.15)
1,1-Dichloroethene	1.03189	1.15292	11.73	Average	(Conc=48.43)
Carbon Disulfide	1.35183	.54268	59.86	Average	(Conc=217.92)
1,1,2-Cl 1,2,2-F ethane (113)	1.88890	2.06215	9.17	Average	(Conc=44.39)
Acetone	.77777	.81238	4.52	Average	(Conc=44.39)
Methylene Chloride	.50653	.43236	14.64	Average	(Conc=48.43)
t-1,2-Dichloroethene	.61482	.49065	20.20	Average	(Conc=48.43)
1,1-Dichloroethane	1.06639	1.02709	3.69	Average	(Conc=47.53)
Vinyl Acetate	1.24124	1.08752	12.38	Average	(Conc=37.58)
c-1,2-Dichloroethene	.64462	.53711	16.68	Average	(Conc=47.98)
2-Butanone	.17411	.18472	6.09	Average	(Conc=45.74)
Chloroform	1.55638	1.68153	8.04	Average	(Conc=47.98)
1,1,1-Trichloroethane	1.56875	1.73074	10.33	Average	(Conc=44.39)
Carbon Tetrachloride	1.87766	2.22877	18.70	Average	(Conc=45.29)
Benzene	.43609	.42799	1.87	Average	(Conc=47.98)
1,2-Dichloroethane	.31582	.44859	42.04	Average	(Conc=49.33)
Trichloroethene	.38388	.36241	5.59	Average	(Conc=36.77)
1,2-Dichloropropane	.24609	.23394	4.94	Average	(Conc=48.43)
Bromodichloromethane	.68277	.76755	12.43	Average	(Conc=48.43)
c-1,3-Dichloropropene	.38423	.34445	10.35	Average	(Conc=46.19)
4-Methyl-2-Pentanone	.47106	.51768	9.90	Average	(Conc=48.88)
Toluene	.56912	.57508	1.05	Average	(Conc=48.43)
t-1,3-Dichloropropene	.34614	.32668	5.62	Average	(Conc=53.81)
1,1,2-Trichloroethane	.34977	.34662	.89	Average	(Conc=47.53)
Tetrachloroethene	.44371	.47598	7.27	Average	(Conc=51.12)
2-Hexanone	.16351	.19563	19.65	Average	(Conc=59.91)
Dibromochloromethane	.86007	.95655	11.22	Average	(Conc=50.67)
1,2-Dibromoethane	.67162	.71461	6.40	Average	(Conc=44.39)
Chlorobenzene	.59417	.60643	2.06	Average	(Conc=48.43)
Ethylbenzene	.75483	.83798	11.02	Average	(Conc=53.81)
p,m-Xylene	.69595	.76453	9.85	Average	(Conc=103.60)
o-Xylene	.68543	.77863	13.68	Average	(Conc=50.22)
Styrene	.39365	.41191	4.64	Average	(Conc=56.05)
Bromoform	.81486	.93883	15.19	Average	(Conc=37.67)

RF - Response Factor from daily standard file at 44.84 ppbv

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

%Diff - % Difference from original average or curve

Calibration Check Report

Title: TO14-SYSTEM 1 CALIBRATED 04/13/93
Calibrated: 930910 14:47

Check Standard Data File: 205865
Injection Time: 940610 07:29

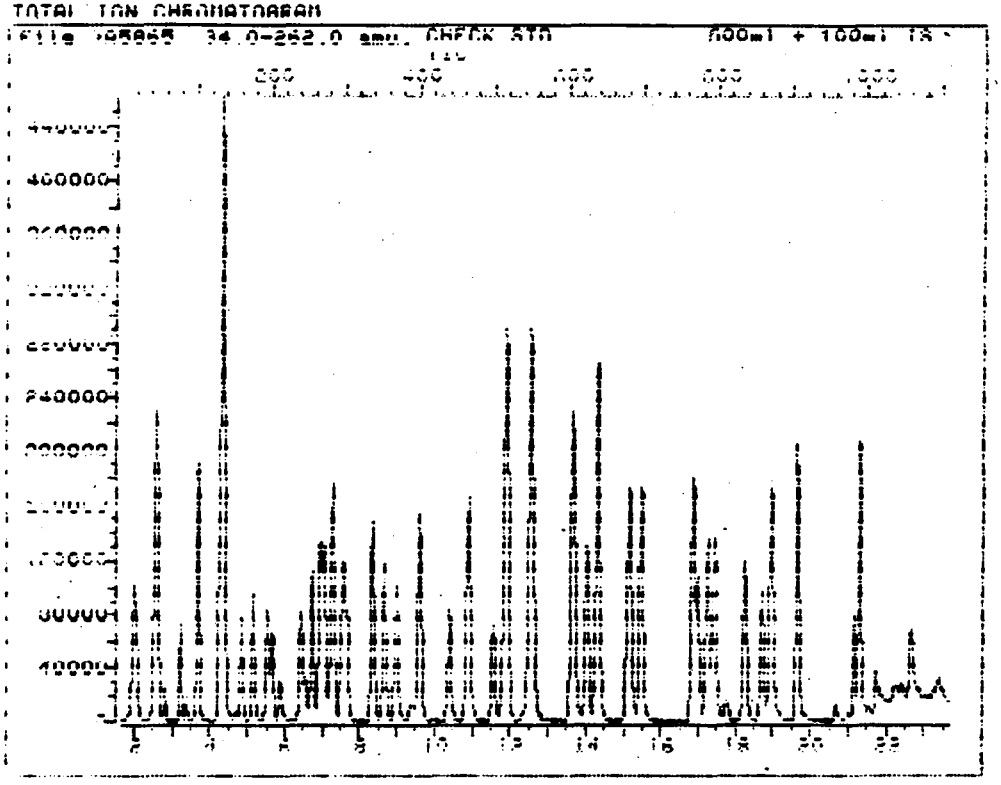
Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
1,1,2,2-Tetrachloroethane	.68158	.77749	6.74	Average	(Conc=55.61)
Benzyl Chloride	.76096	.88086	15.65	Average	(Conc=33.05)
4-Ethyl Toluene	.90916	1.06172	16.78	Average	(Conc=39.91)
1,3,5-Trimethylbenzene	.86668	.95376	10.05	Average	(Conc=42.60)
1,2,4-Trimethylbenzene	.76899	.90634	17.86	Average	(Conc=41.26)
1,3-Dichlorobenzene	.50652	.53804	6.22	Average	(Conc=34.44)
1,4-Dichlorobenzene	.67409	.77677	15.23	Average	(Conc=46.64)
1,2-Dichlorobenzene	.52172	.56771	8.81	Average	(Conc=56.05)
1,2,4-Trichlorobenzene	.23227	.23049	.76	Average	(Conc=40.27)
Hexachlorobutadiene	.32699	.41540	27.04	Average	(Conc=36.05)

RF - Response Factor from daily standard file at 44.84 ppbv

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

%Diff - % Difference from original average or curve

TOTAL ION CHROMATOGRAM



Data File: >95865::01
Name: CHECK STD
Misc: 500ml + 100ml IS

Quant Output File: >95865::SC
Instrument ID: SYSTEM 1

Id File: IDNEW1::W:
Title: SYSTEM 1 VOLATILE ORGANICS ID 14
Last Calibration: 940524 08:42
Last Qual Time: 940609 07:49

Operator ID: LM
Quant Time : 940610 07:54
Injected at: 940610 07:29

Operator ID: LIM
Output File: [illegible]
Data File: [illegible]
Name: [illegible]
Time: [illegible] + [illegible]

Quant Rev: [illegible]
Quant Time: 940610 07:54
Injection Dt: 940610 07:29
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: [illegible]
Title: SYSTEM 1 VOLATILE ORGANICS ID 14
Last Calibration: 930324 08:47
Last Quant Time: 940609 07:49

	Compound	R.T.	Q Ion	Area	Conc	Units	q
1)	*Bromochloromethane	6.74	49.0	179146	38.90	ppbv	97
2)	Dichlorodifluoromethane (12)	2.81	85.0	442864	42.61	ppbv	91
3)	Chloromethane	2.96	50.0	104548	41.63	ppbv	100
4)	1,2 Cl 1,1,2,2 F ethane (114)	2.60	85.0	533027	41.23	ppbv	99
5)	Vinyl Chloride	2.80	62.0	44458	49.94	ppbv	100
6)	Bromomethane	3.21	94.0	85607	45.67	ppbv	96
7)	Chloroethane	3.37	64.0	30314	43.84	ppbv	100
8)	Trichlorofluoromethane (11)	3.69	101.0	480938	40.77	ppbv	97
9)	1,1 Dichloroethene	4.22	61.0	187297	48.00	ppbv	88
10)	Carbon Disulfide	4.32	76.0	396697	109.12	ppbv	97
11)	1,1,2-Cl 1,2,2-F ethane (113)	4.32	151.0	307060	44.22	ppbv	96
12)	Acetone	4.40	43.0	120965	44.33	ppbv	89
13)	Methylene Chloride	4.84	84.0	70239	46.81	ppbv	96
14)	t-1,2 Dichloroethene	5.15	96.0	79708	45.43	ppbv	84
15)	1,1 Dichloroethane	5.65	63.0	163754	46.02	ppbv	99
16)	Vinyl Acetate	5.87	43.0	137092	38.81	ppbv	98
17)	c-1,2-Dichloroethene	6.42	96.0	86445	45.16	ppbv	95
18)	2 Butanone	6.56	72.0	28341	47.36	ppbv	98
19)	Chloroform	6.93	83.0	270633	46.00	ppbv	96
20)	1,1,1 Trichloroethane	7.05	97.0	257712	42.84	ppbv	92
21)	Carbon Tetrachloride	7.22	117.0	338591	44.01	ppbv	95
22)	*1,4-Difluorobenzene	8.34	114.0	341843	39.00	ppbv	98
23)	Benzene	7.59	78.0	179964	46.96	ppbv	100
24)	1,2 Dichloroethane	7.67	62.0	193964	48.07	ppbv	98
25)	Trichloroethene	8.66	130.0	116804	37.68	ppbv	90
26)	1,2 Dichloropropane	8.99	63.0	99309	49.73	ppbv	98
27)	Bromodichloromethane	9.59	83.0	329829	47.50	ppbv	95
28)	c-1,3 Dichloropropene	10.40	75.0	199499	49.51	ppbv	96
29)	4 Methyl-2 Pentanone	10.85	43.0	721798	92.79	ppbv	96
30)	Toluene	10.91	91.0	244119	48.91	ppbv	97
31)	*Chlorobenzene d5	13.62	117.0	263754	54.00	ppbv	87
32)	t-1,3 Dichloropropene	11.55	75.0	176367	56.76	ppbv	94
33)	1,1,2 Trichloroethane	11.84	97.0	127833	46.89	ppbv	93
34)	Tetrachloroethene	11.92	164.0	188757	51.99	ppbv	91
35)	2 Hexanone	12.52	58.0	80297	63.74	ppbv	88
36)	Dibromochloromethane	12.54	129.0	375992	51.39	ppbv	98
37)	1,2 Dibromoethane	12.61	187.0	246879	45.29	ppbv	99
38)	Chlorobenzene	13.68	112.0	227832	50.82	ppbv	98
39)	Ethylbenzene	14.02	91.0	349798	54.12	ppbv	93
40)	p,m-Xylene	14.30	91.0	614430	101.62	ppbv	88

Operator ID: CDI Quant Rev: 2 Quant Time: 940610 07:54
Output File: [illegible] Injected at: 940610 07:29
Data File: [illegible] Dilution Factor: 1.00000
Name: CHECK STD Instrument ID: SYSTEM 1
Mass: 500ml + 100ml IS

ID File: [illegible]
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 910324 08:47 Last Mod Time: 940609 07:49

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	m-Xylene	15.13	91.0	303340	49.60	ppbv	91
42)	Styrene	15.19	104.0	179102	58.33	ppbv	91
43)	Bromoform	15.46	173.0	274119	39.04	ppbv	98
44)	1,1,2,2 Tetrachloroethane	16.89	83.0	213835	56.93	ppbv	8[illegible]
45)	Benzyl Chloride	16.99	91.0	225634	33.21	ppbv	9[illegible]
46)	4 Ethyl Toluene	17.29	105.0	328708	41.26	ppbv	9[illegible]
47)	1,3,5-Trimethylbenzene	17.42	105.0	315188	40.72	ppbv	9[illegible]
48)	1,2,4-Trimethylbenzene	18.24	105.0	290894	42.88	ppbv	98
49)	1,3-Dichlorobenzene	18.71	146.0	143748	34.72	ppbv	9[illegible]
50)	1,4-Dichlorobenzene	18.95	146.0	281041	48.14	ppbv	96
51)	1,2-Dichlorobenzene	19.64	146.0	246842	60.27	ppbv	96
52)	1,2,4 Trichlorobenzene	21.15	180.0	72085	53.34	ppbv	9[illegible]
53)	Hexachlorobutadiene	21.28	225.0	116170	39.81	ppbv	9[illegible]

* Compound is ISTD

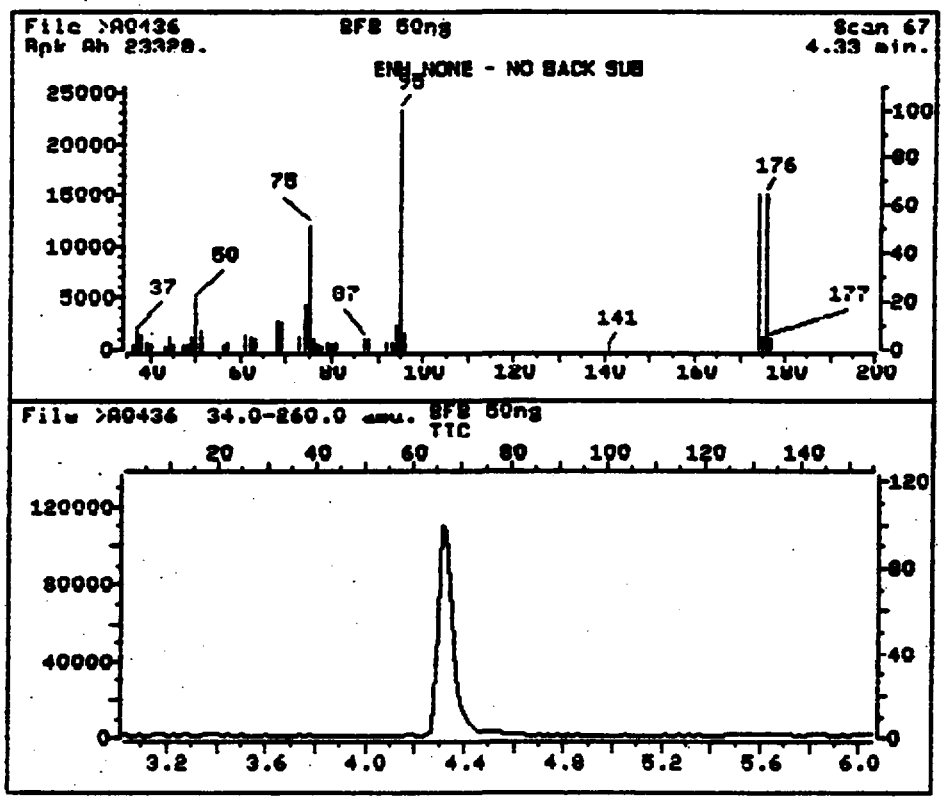
QA/QC

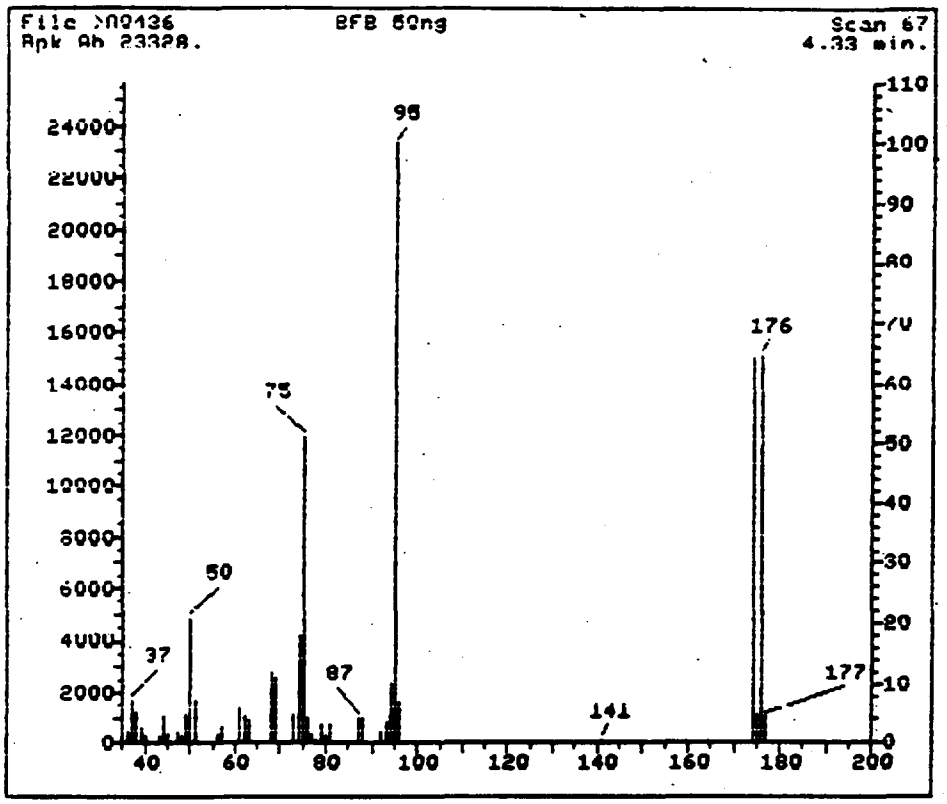
GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	20.73	20.73	Ok
75	30-60% of mass 95	51.26	51.26	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.72	6.72	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	64.24	64.24	Ok
175	5-9% of mass 174	4.80	7.47	Ok
176	95-101% of mass 174	64.75	100.79	Ok
177	5-9% of mass 176	4.37	6.75	Ok
BFB	300,000 < 468563 < 1,400,000	TIC AREA CRITERIA		OK

Injection Date: 04/12/93
Injection Time: 11:07
Data File: >A0436
Scan: 67





>A0436 BFB 50ng
67 NRM

File: >A0436 Scan #: 67 Retn. time: 4.33

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.10	1.7	48.00	1.1	63.10	3.9	77.95	.6	94.05	10.1
37.10	7.3	49.10	4.7	68.10	11.8	78.95	3.0	95.05	100.0
38.10	5.3	50.10	20.7	69.10	10.8	79.95	1.1	96.05	6.7
39.10	2.3	51.10	7.1	73.10	4.9	80.95	3.3	140.85	.5
40.00	1.1	56.10	1.4	74.10	18.1	87.05	4.2	174.05	64.2
43.10	1.1	57.00	2.9	75.05	51.3	87.95	4.1	175.05	4.8
44.00	4.6	61.10	6.0	76.05	4.3	92.05	2.3	175.95	64.8
45.10	1.6	62.10	4.6	76.95	1.5	93.05	3.4	176.95	4.4
47.10	1.6								

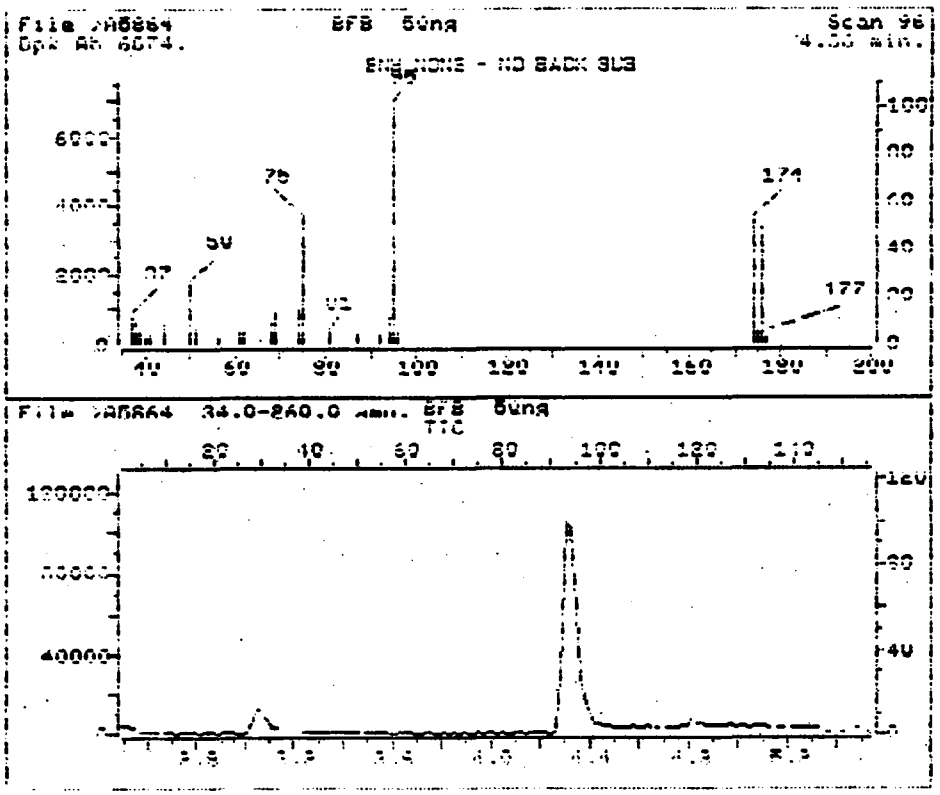
DFTPP PERFORMANCE STANDARD

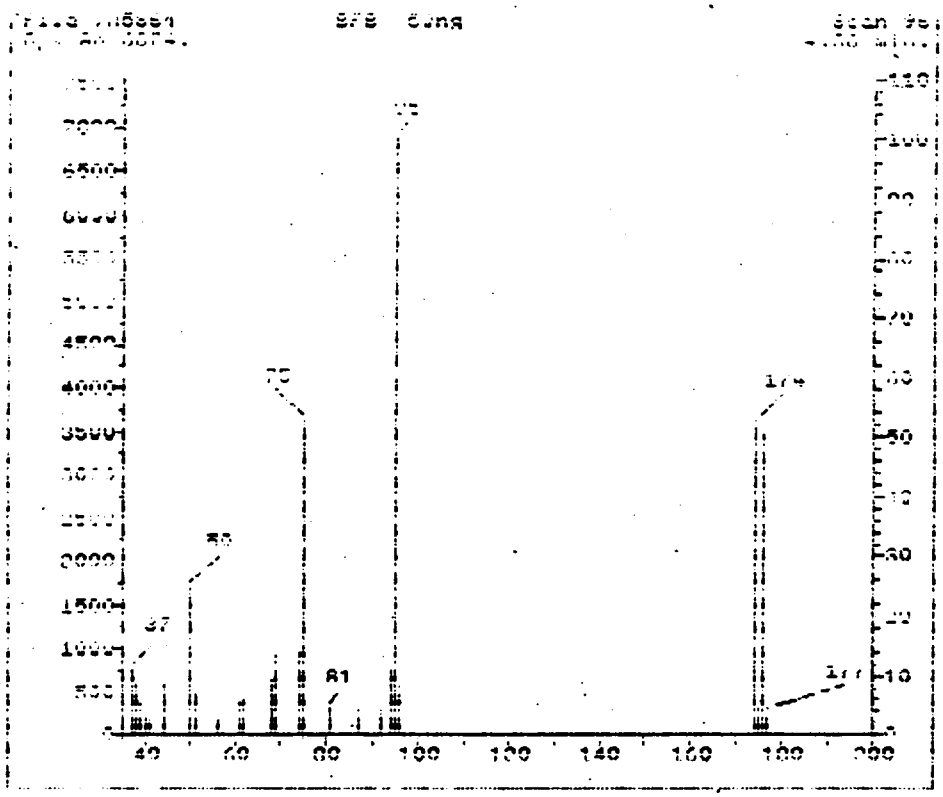
Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Approprietate Peak	Status
51	15-40% of mass 198	24.00	24.00	OK
68	30-60% of mass 198	52.65	52.65	OK
198	Base peak, 100% relative abundance	100.00	100.00	OK
196	1-9% of mass 198	8.07	8.07	OK
197	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 198	92.08	92.08	OK
175	5-9% of mass 174	8.45	8.55	OK
176	95-101% of mass 174	98.21	96.59	OK
177	5-9% of mass 176	6.48	6.91	OK

RFB 250,000 < 442416 < 1,400,000 ALL AREA CRITERIA OK

Injection Date: 06/18/94
Injection Time: 07:09
Data File: X05864
Scan: 96





BFB Sing
NRM

File: 100864 Scan #: 96 Retn. time: 4.36

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
17.00	11.0	58.00	24.8	69.00	13.3	87.00	4.1	174.00	52.1
18.00	8.9	59.00	6.8	74.00	14.4	92.00	4.2	175.00	4.5
19.00	5.0	59.95	2.6	75.00	52.6	94.00	10.9	176.00	50.3
40.00	3.5	61.00	5.5	80.95	4.8	95.00	100.0	176.90	3.5
41.10	3.6	62.00	5.7	86.85	3.9	96.00	8.1	207.10	5.0
44.00	8.6	67.95	9.2						

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A Corning Company

METHOD BLANK REPORT
Air Toxics
Project: 105871

Test: TO-14-G Volatile Organics by GCMS - EPA TO-14
Matrix: AIR
QC Run: 10 JUN 94-A1 **Date Analyzed:** 10 JUN 94

Analyte	Result	Units	Reporting Limit
Dichlorodifluoromethane	ND	ppb (v/v)	2.0
Chloromethane	ND	ppb (v/v)	4.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppb (v/v)	2.0
Vinyl chloride	ND	ppb (v/v)	2.0
Bromomethane	ND	ppb (v/v)	2.0
Chloroethane	ND	ppb (v/v)	4.0
Trichlorofluoromethane	ND	ppb (v/v)	2.0
1,1-Dichloroethene	ND	ppb (v/v)	2.0
Carbon disulfide	ND	ppb (v/v)	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ppb (v/v)	2.0
Acetone	ND	ppb (v/v)	10
Methylene chloride	ND	ppb (v/v)	2.0
trans-1,2-Dichloroethene	ND	ppb (v/v)	2.0
1,1-Dichloroethane	ND	ppb (v/v)	2.0
Vinyl acetate	ND	ppb (v/v)	10
cis-1,2-Dichloroethene	ND	ppb (v/v)	2.0
2-Butanone	ND	ppb (v/v)	10
Chloroform	ND	ppb (v/v)	2.0
1,1,1-Trichloroethane	ND	ppb (v/v)	2.0
Carbon tetrachloride	ND	ppb (v/v)	2.0
Benzene	ND	ppb (v/v)	2.0
1,2-Dichloroethane	ND	ppb (v/v)	2.0
Trichloroethene	ND	ppb (v/v)	2.0
1,2-Dichloropropane	ND	ppb (v/v)	2.0
Bromodichloromethane	ND	ppb (v/v)	2.0
cis-1,3-Dichloropropene	ND	ppb (v/v)	2.0
4-Methyl-2-pentanone	ND	ppb (v/v)	4.0
Toluene	ND	ppb (v/v)	2.0
trans-1,3-Dichloropropene	ND	ppb (v/v)	2.0
1,1,2-Trichloroethane	ND	ppb (v/v)	2.0
Tetrachloroethene	ND	ppb (v/v)	2.0
2-Hexanone	ND	ppb (v/v)	4.0
Dibromochloromethane	ND	ppb (v/v)	2.0
1,2-Dibromoethane (EDB)	ND	ppb (v/v)	2.0
Chlorobenzene	ND	ppb (v/v)	2.0
Ethylbenzene	ND	ppb (v/v)	2.0
Xylenes (total)	ND	ppb (v/v)	2.0
Styrene	ND	ppb (v/v)	2.0
Bromoform	ND	ppb (v/v)	2.0
1,1,2,2-Tetrachloroethane	ND	ppb (v/v)	2.0
Benzyl chloride	ND	ppb (v/v)	2.0
4-Ethyl toluene	ND	ppb (v/v)	2.0
1,3,5-Trimethylbenzene	ND	ppb (v/v)	2.0
1,2,4-Trimethylbenzene	ND	ppb (v/v)	2.0
1,3-Dichlorobenzene	ND	ppb (v/v)	2.0

ND = Not Detected

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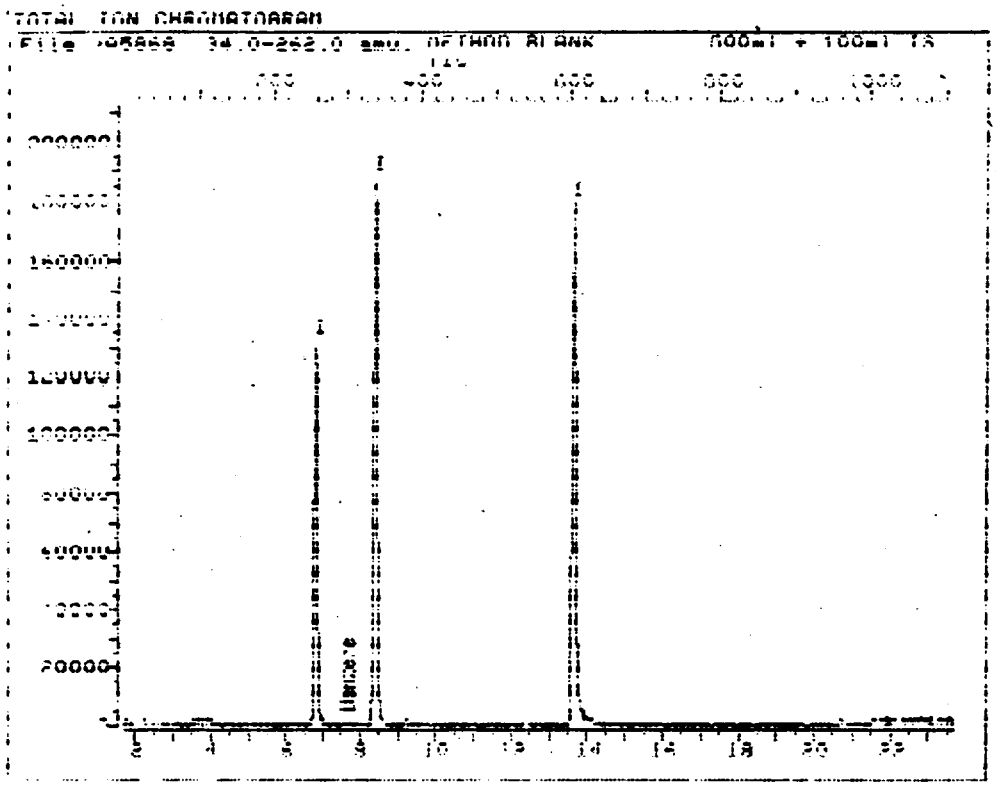
METHOD BLANK REPORT
Air Toxics (cont.)
Project: 105871

Test: TO-14-G Volatile Organics by GCMS - EPA TO-14
Matrix: AIR
QC Run: 10 JUN 94-A1 Date Analyzed: 10 JUN 94

Analyte	Result	Units	Reporting Limit
1,4-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2-Dichlorobenzene	ND	ppb (v/v)	2.0
1,2,4-Trichlorobenzene	ND	ppb (v/v)	4.0
Hexachlorobutadiene	ND	ppb (v/v)	4.0

ND = Not Detected



Data File: >A6868::01 Quant Output File: ^A6868::SC
Name: METHOD BLANK Instrument ID: SYSTEM 1
Misc: 500ml + 100ml IS

Id File: IDNEW1::W1
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Mod Time: 940610 07:29

Operator ID: LJ1
Quant Time : 940610 09:17
Injected at: 940610 08:52

[illegible]

[illegible]

Compound	R.T.	Q Ion	Area	Conc	Units	q
1) Bromodichloromethane	6.79	49.0	159973	18.50	ppbv	9[illegible]
2) * ,4 Difluorobenzene	8.39	114.0	474892	39.00	ppbv	9[illegible]
3) Benzene	7.84	78.0	1698	.356	ppbv	10[illegible]
4) Chlorobenzene-d5	13.81	117.0	149848	34.00	ppbv	9[illegible]

* Compound is ISTD

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A Corning Company

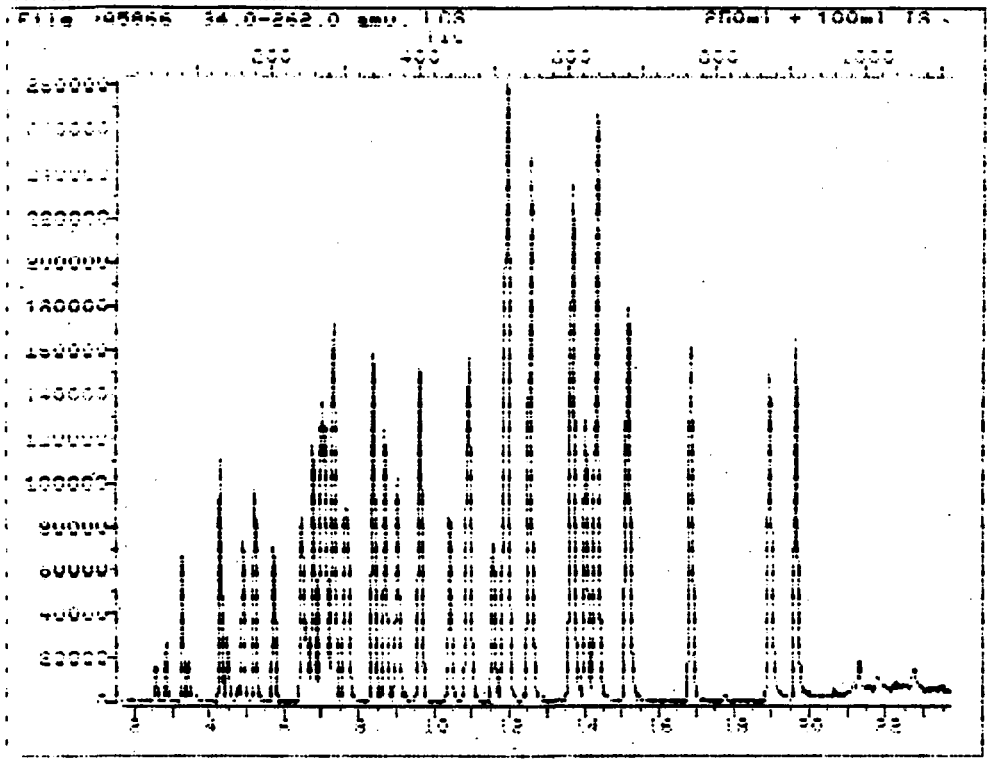
DUPLICATE CONTROL SAMPLE REPORT
Air Toxics
Project: 105871

Category: TO-14 Method TO-14 - Volatile Organics
Matrix: AIR
QC Lot: 10 JUN 94-A1 Date Analyzed: 01 JUN 9
Concentration Units: ppb (v/v)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precisio (RPD) DCS	Precisio (RPD) Limi
Methylene chloride	48.4	45.0	45.2	45.1	93	86-116	0.44	1
1,1-Dichloroethene	48.4	46.2	47.3	46.8	97	90-115	2.4	1
Trichloroethene	36.7	35.6	34.9	35.2	96	85-114	2.0	1
Toluene	48.4	49.7	49.0	49.4	102	92-114	1.4	1
1,1,2,2-Tetrachloroethane	55.5	49.3	46.8	48.0	87	76-124	5.2	1

Calculations are performed before rounding to avoid round-off errors in calculated results.

TOTAL ION CHROMATOGRAM



Data File: 945866::01 Quant Output File: 945866::SU
Name: LCS Instrument ID: SYSTEM 1
Misc: 250ml + 100ml IS

Id File: IDNEW::WT
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 930324 08:47 Last Qual Time: 940610 07:29

Operator ID: LD1
Quant Time : 940610 08:22
Injected at: 940610 07:57

Operator ID: [illegible]
Output File: [illegible]
Data File: [illegible]
Name: [illegible]
Area: [illegible] - [illegible]

Quant Rev: [illegible]
Quant Time: 940610 08:22
Injected at: 940610 07:52
Dilution Factor: 1.00000
Instrument ID: SYSTEM 1

ID File: [illegible]
Title: SYSTEM 1 [illegible]
Last Calibration: 940524 08:47
Last Qual Time: 940610 07:29

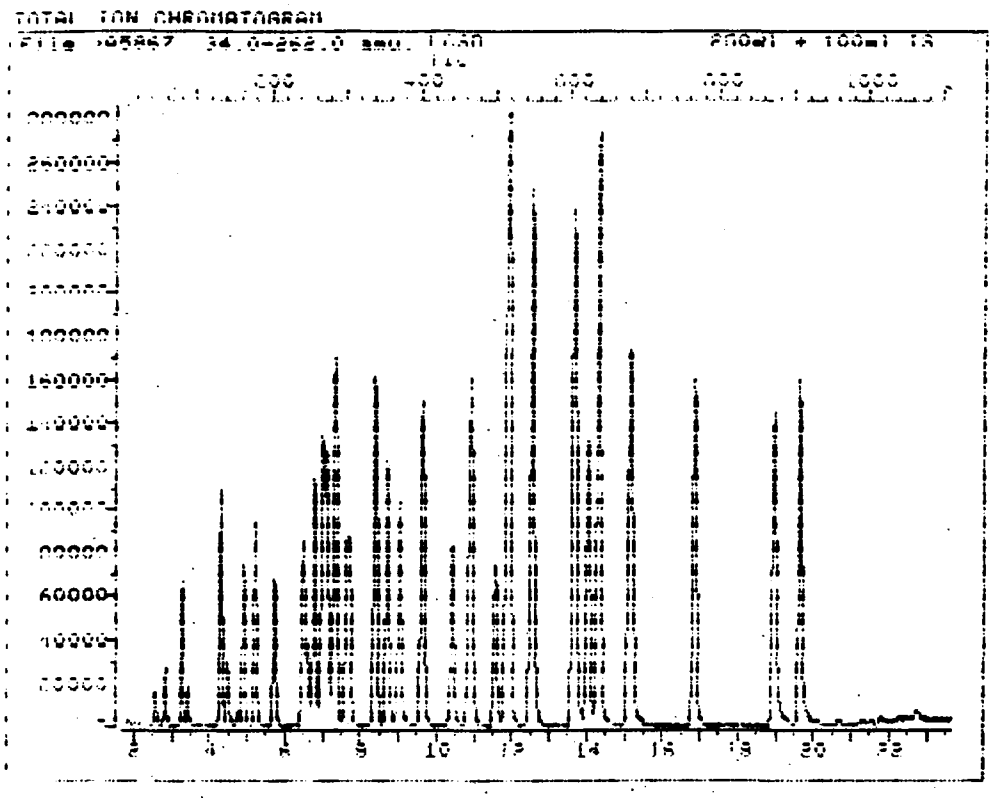
	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	*Bromochloromethane	6.[illegible]	49.0	[illegible]	[illegible]	ppbv	[illegible]
2)	Chloromethane	2.57	50.0	51108	12.74	ppbv	10[illegible]
3)	Vinyl Chloride	2.85	62.0	48319	47.49	ppbv	10[illegible]
5)	Bromomethane	3.28	94.0	85362	43.57	ppbv	9[illegible]
7)	Chloroethane	3.44	64.0	28678	19.71	ppbv	10[illegible]
9)	1,1-Dichloroethene	4.31	61.0	183167	46.15	ppbv	8[illegible]
12)	Acetone	4.47	43.0	102034	36.49	ppbv	8[illegible]
13)	Methylene Chloride	4.91	84.0	66941	44.98	ppbv	9[illegible]
14)	t-1,2 Dichloroethene	5.22	96.0	82079	48.60	ppbv	8[illegible]
15)	1,1-Dichloroethane	5.72	63.0	171448	48.49	ppbv	9[illegible]
17)	c-1,2-Dichloroethene	6.49	96.0	90698	49.05	ppbv	9[illegible]
18)	2-Butanone	6.61	72.0	27791	43.71	ppbv	9[illegible]
19)	Chloroform	7.00	83.0	264720	45.23	ppbv	9[illegible]
20)	1,1,1-Trichloroethane	7.12	97.0	248919	41.78	ppbv	9[illegible]
21)	Carbon Tetrachloride	7.34	117.0	320469	41.77	ppbv	9[illegible]
22)	*1,4-Difluorobenzene	8.39	114.0	358066	39.00	ppbv	9[illegible]
23)	Benzene	7.64	78.0	189141	48.14	ppbv	10[illegible]
24)	1,2-Dichloroethane	7.72	62.0	190823	46.33	ppbv	9[illegible]
25)	Trichloroethene	8.70	130.0	118590	39.64	ppbv	9[illegible]
26)	1,2-Dichloropropane	9.04	63.0	102949	47.93	ppbv	9[illegible]
27)	Bromodichloromethane	9.62	83.0	318988	45.21	ppbv	9[illegible]
28)	c-1,3 Dichloropropene	10.41	75.0	142496	49.05	ppbv	9[illegible]
29)	4-Methyl-2-Pentanone	10.86	43.0	220821	46.46	ppbv	9[illegible]
30)	Toluene	10.92	91.0	262626	49.74	ppbv	9[illegible]
31)	*Chlorobenzene d5	13.63	117.0	276064	34.00	ppbv	8[illegible]
32)	t-1,3-Dichloropropene	11.59	75.0	132637	50.19	ppbv	9[illegible]
33)	1,1,2 Trichloroethane	11.85	97.0	133692	47.68	ppbv	9[illegible]
34)	Tetrachloroethene	11.93	164.0	183998	47.77	ppbv	9[illegible]
35)	2-Hexanone	12.52	58.0	64042	40.46	ppbv	9[illegible]
36)	Dibromochloromethane	12.94	129.0	399999	46.52	ppbv	9[illegible]
38)	Chlorobenzene	13.69	112.0	237285	48.35	ppbv	9[illegible]
39)	Ethylbenzene	14.03	91.0	358032	51.63	ppbv	9[illegible]
40)	p,m-Xylene	14.31	91.0	638139	101.88	ppbv	9[illegible]
41)	o-Xylene	15.12	91.0	311509	49.49	ppbv	9[illegible]
42)	Styrene	15.28	104.0	173348	52.02	ppbv	8[illegible]
44)	1,1,2,2-Tetrachloroethane	16.86	83.0	298991	49.33	ppbv	9[illegible]
49)	1,3 Dichlorobenzene	18.94	146.0	258010	57.44	ppbv	9[illegible]
50)	1,4-Dichlorobenzene	18.94	146.0	258010	39.78	ppbv	9[illegible]
51)	1,2 Dichlorobenzene	19.63	146.0	209729	45.66	ppbv	9[illegible]
52)	1,2,4-Trichlorobenzene	21.17	180.0	4767	2.56	ppbv	9[illegible]

Operator ID: LDJ Quant Rev: 7 Quant Time: 940610 08:22
Output File: [illegible] Injected at: 940610 07:57
Data File: [illegible] Dilution Factor: 1.00000
Name: LDS Instrument ID: SYSTEM 1
Mode: 25Amt + 10Amt IS

ID File: [illegible]
Title: SYSTEM 1 VOLATILE ORGANICS 10-14
Last Calibration: 910324 08:47 Last Quant Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units	q
39	Hexachlorobutadiene	21.31	225.0	8582	2.55	ppbv	96

* Compound is ISTD



Data File: >A5867::D1 Quant Output File: ^A5867::SC
Name: LCSD Instrument ID: SYSTEM 1
Misc: 250ml + 100ml IS

Id File: IDNEW1::QI
Title: SYSTEM 1 VOLATILE ORGANICS TO-14
Last Calibration: 940924 08:47 Last Qual time: 940610 07:29

Operator ID: LD1
Quant Time : 940610 08:49
Injected at: 940610 08:29

Operator ID: [illegible]
Sample File: [illegible]
Data File: [illegible]
Method: [illegible]
Mass: 25.0mL + 100mg IS

Quant Rev: [illegible]
Injected On: 940610 08:29
Dilution Factor: 1.00000
Instrument ID: [illegible] 1

ID File: [illegible]
Title: [illegible] SYSTEM 1 VOLATILE [illegible]
Last Calibration: 940224 08:47

Quant Time: 940610 08:49
Last Qual Time: 940610 07:29

	Compound	R.T.	Q ion	Area	Conc	Units	q
13)	*Bromochloromethane	6.80	49.0	130769	38.50	ppbv	96
13)	Chloromethane	2.59	50.0	51385	13.03	ppbv	100
14)	Vinyl Chloride	2.84	62.0	49927	49.73	ppbv	100
15)	Bromomethane	3.28	94.0	84014	43.46	ppbv	94
17)	Chloroethane	3.44	64.0	28928	48.57	ppbv	100
19)	1,1 Dichloroethene	4.31	61.0	189050	47.29	ppbv	88
12)	Acetone	4.46	43.0	104096	37.73	ppbv	82
13)	Methylene Chloride	4.98	84.0	66443	49.24	ppbv	96
14)	t 1,2 Dichloroethene	5.22	96.0	78899	47.14	ppbv	85
15)	1,1 Dichloroethane	5.71	63.0	172448	49.43	ppbv	91
17)	c-1,2 Dichloroethene	6.48	96.0	89253	48.92	ppbv	92
18)	2-Butanone	6.60	72.0	27903	44.47	ppbv	97
19)	Chloroform	7.00	83.0	260979	45.69	ppbv	98
20)	1,1,1 Trichloroethane	7.10	97.0	248512	42.27	ppbv	94
21)	Carbon Tetrachloride	7.33	117.0	316689	41.83	ppbv	96
22)	*1,4-Difluorobenzene	8.38	114.0	370488	39.00	ppbv	96
23)	Benzene	7.63	78.0	190451	46.85	ppbv	100
24)	1,2 Dichloroethane	7.71	62.0	191732	44.99	ppbv	96
25)	Trichloroethene	8.70	130.0	120086	34.88	ppbv	94
26)	1,2 Dichloropropane	9.03	63.0	105988	47.69	ppbv	98
27)	Bromodichloromethane	9.63	83.0	322120	44.18	ppbv	96
28)	c-1,3 Dichloropropene	10.42	75.0	140423	42.91	ppbv	96
29)	4 Methyl 2 Pentanone	10.87	43.0	217693	44.27	ppbv	97
30)	Toluene	10.91	91.0	267995	48.98	ppbv	96
31)	*Chlorobenzene-D5	13.62	117.0	284009	34.00	ppbv	90
32)	t-1,3 Dichloropropene	11.57	75.0	131299	48.11	ppbv	96
33)	1,1,2 Trichloroethane	11.84	97.0	137903	47.63	ppbv	99
34)	Tetrachloroethene	11.92	164.0	188895	47.51	ppbv	90
35)	2 Hexanone	12.52	58.0	62073	37.99	ppbv	90
36)	Dibromochloromethane	12.54	129.0	362289	45.34	ppbv	96
38)	Chlorobenzene	13.68	112.0	242096	47.79	ppbv	96
39)	Ethylbenzene	14.02	91.0	358511	51.19	ppbv	91
40)	p,m-Xylene	14.32	91.0	626111	48.84	ppbv	91
41)	o-Xylene	15.13	91.0	322378	49.57	ppbv	89
42)	Styrene	15.19	104.0	170993	49.70	ppbv	88
44)	1,1,2,2-Tetrachloroethane	16.85	83.0	284219	46.77	ppbv	89
49)	1,3 Dichlorobenzene	18.94	146.0	249774	54.68	ppbv	96
50)	1,4 Dichlorobenzene	18.94	146.0	248973	58.31	ppbv	96
51)	1,2 Dichlorobenzene	19.64	146.0	216886	49.72	ppbv	94

* Compound is ISTD

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Enseco Air Toxics | Client Name: Ecology Environmental

Lab Proj#: 109871 | Client Project:

Instrument ID: System 1 | Date Analyzed: 06/10/94

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	129149.	6.74	341843.	8.34	263754.	13.62
UPPER LIMIT	258290.		683686.		527508.	
LOWER LIMIT	64573.		170922.		131877.	
EPA SAMPLE NO.						
01 LSC	132533.	6.78	358066.	8.39	275064.	13.63
02 LCD	130769.	6.80	370488.	8.38	284005.	13.63
03 MB	193933.	6.79	424032.	8.39	343046.	13.63
04 109871-1	137366.	6.76	368768.	8.39	229901.	13.35
05 -3	130528.	6.80	360274.	8.39	219353.	13.38
06 -4	136894.	6.80	361237.	8.37	239142.	13.39
07 -5	126797.	6.71	332874.	8.29	200594.	13.34
08 -6	130397.	6.77	338988.	8.35	201910.	13.36
09 -7	117928.	6.79	328999.	8.40	235149.	13.62
10 -2	117286.	6.78	312332.	8.36	162500.	13.48
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

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

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

Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.