ANALYTICAL DATA PACKAGE
Metals Section

CLIENT: VERSAR A&E
SITE: O'BRIEN
CODE-BATCH: VEOBRIEN - 3
CONTROL #: 6432
CASE-SDG: R09042 -
DATE: 13-MAY-92

Versar Laboratories INC.

TRACE METALS SECTION
ANALYSIS NARRATIVE

Versar Code: VEOBRIEN -3
Client: Versar A&E
Control Number: 6432

Date: May 13, 1992
Site: O'Brien

This report contains metals analytical results for ten soil samples which were received at Versar Laboratories, Inc. on April 14, 1992. Two of the samples were analyzed for the following elements:

Antimony	Arsenic	Beryllium	Cadmium
Chromium	Copper	Lead	Mercury
Nickel	Selenium	Silver	Thallium
Zinc			

The remaining eight samples were analyzed for lead only.

Analytical Methods

The samples were prepared and analyzed by the US EPA Test Methods for Evaluating Solid Waste, SW 846, third edition, November 1986, except for percent solids. For percent solids, the samples were prepared and analyzed by the US EPA Contract Laboratory Program (CLP) Statement of Work (SOW) 7/87. The following is a summary of the methods:

Soil Preparation	Method: ICP - 3050, 7.5 GFAA - 3050, 7.6
ICP Analysis	Method: 6010
GFAA Analysis	Method:
Arsenic	7060
Lead	7421
Selenium	7740
Thallium	7841
Mercury - Soil Preparation/Analysis	Method: 7471
Percent Solids Determination	Method: Exhibit D, Sec. IV, Part F, D-84

Analytical Results

The report is divided into the following sections. A description of each part and any comments concerning them is provided below:

Cover Page - Cross reference list of the laboratory sample number and the field sample number.

Form I - Summary of results for each sample.

Form IIA - Initial and continuing calibration verification results. All ICP recoveries were within the 10 % control limits. All graphite furnace atomic absorption (GFAA) and cold vapor atomic absorption (CVAA) recoveries were within the 20 % control limits.

Form III - Initial and continuing calibration blanks and preparation blank results. All blanks were less than the instrumental detection limit (IDL) except for:

Calibration Blank - Pb

Form IV - ICP interference check sample. All recoveries were within the 20 % control limits.

Form VA - Spike sample recovery results. All spike recoveries were within 25 % control limits for all elements except for:

S-2 - Pb

S-8 - Sb, Hg

Form VI - Duplicate results. All relative percent differences (RPD) between the sample and the duplicate were within 20 % control limits except for:

S-2 - Pb

S-8 - As, Hg

Form IX - ICP serial dilution results. All serial dilutions agreed with the original sample results within 10 % control limits except for:

S-8 - Be, Cu, Ni, Zn

Raw Data - Copies of all raw data associated with this report.

General Discussion

The levels of lead detected above the instrumental detection limit in the various blanks, may be considered typical of the method of analysis. All analyses were performed within the required holding times for metals.

The poor antimony spike recovery was probably the result of losses incurred by the volatilization of antimony during the acid digestion. The out of control spike recovery for mercury can be attributed to the nonhomogeneous nature of soil samples. The spike recovery for lead was low because the level of the spike was too low in comparison to the sample concentration.

The high duplicate RPD's for arsenic, lead and mercury were probably due to the nonhomogeneous nature of soil samples.

If there are any questions concerning this report, please contact Janet Jaufmann at (703) 750-3000.

Prepared by: _____

Reviewed by: _____

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.:S-1___

SOW No.: SW_846, 3RD ED.

EPA Sample No.	Lab Sample ID
_S-1_____	__74708_____
_S-10_____	__74717_____
_S-2_____	__74709_____
_S-2_D_____	__74709D_____
_S-2_S_____	__74709S_____
_S-3_____	__74710_____
_S-4_____	__74711_____
_S-5_____	__74712_____
_S-6_____	__74713_____
_S-7_____	__74714_____
_S-8_____	__74716_____
_S-8_D_____	__74716D_____
_S-8_S_____	__74716S_____
_S-9_____	__74715_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Were ICP interelement corrections applied ? Yes/No YES

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

Comments:

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

Signature: [signature] Name: Tammy L. Ugarte

Date: May 13, 1992 Title: Supervisor

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-1

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Lab Sample ID: 74708_____

Level (low/med): _____ Date Received: 04/14/92

% Solids: _84.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	94.5			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

THIS_SAMPLE_WAS_ANALYZED_FOR_LEAD_ONLY.

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-10

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Lab Sample ID: 74717_____

Level (low/med): _____ Date Received: 04/14/92

% Solids: _84.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	1.5	U		P
7440-38-2	Arsenic	3.2			F
7440-41-7	Beryllium	0.94			P
7440-43-9	Cadmium	0.44	U		P
7440-47-3	Chromium	316			P
7440-50-8	Copper	47.5			P
7439-92-1	Lead	11.2			F
7439-97-6	Mercury	0.15			CV
7440-02-0	Nickel	387			P
7782-49-2	Selenium	0.09	U		F
7440-22-4	Silver	0.35	U		P
7440-28-0	Thallium	0.09	U		F
7440-66-6	Zinc	61.2			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-2

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Lab Sample ID: 74709_____

Level (low/med): _____ Date Received: 04/14/92

% Solids: _83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	415			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

THIS_SAMPLE_WAS_ANALYZED_FOR_LEAD_ONLY.

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-3

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Lab Sample ID: 74710_____

Level (low/med): _____ Date Received: 04/14/92

% Solids: _80.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	8880			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-4

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Lab Sample ID: 74711_____

Level (low/med): _____ Date Received: 04/14/92

% Solids: _88.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	9.1			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

THIS_SAMPLE_WAS_ANALYZED_FOR_LEAD_ONLY.

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-5

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____
Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___
Matrix (soil/water): SOIL_ Lab Sample ID: 74712_____
Level (low/med): _____ Date Received: 04/14/92
% Solids: _80.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	19.8			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-6

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Lab Sample ID: 74713_____

Level (low/med): _____ Date Received: 04/14/92

% Solids: _81.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	13.9			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

THIS_SAMPLE_WAS_ANALYZED_FOR_LEAD_ONLY.

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-7

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Lab Sample ID: 74714_____

Level (low/med): _____ Date Received: 04/14/92

% Solids: _81.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	3.6			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

THIS_SAMPLE_WAS_ANALYZED_FOR_LEAD_ONLY.

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-8

Lab Name: VERSAR LABORATORIES INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1

Matrix (soil/water): SOIL Lab Sample ID: 74716

Level (low/med): _____ Date Received: 04/14/92

% Solids: 80.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7440-36-0	Antimony	1.7	U		P	uJ
7440-38-2	Arsenic	2.5			F	
7440-41-7	Beryllium	0.52			P	
7440-43-9	Cadmium	0.50	U		P	
7440-47-3	Chromium	31.6			P	
7440-50-8	Copper	17.2			P	
7439-92-1	Lead	4.3			F	
7439-97-6	Mercury	0.13			CV	
7440-02-0	Nickel	56.6			P	
7782-49-2	Selenium	0.09	U		F	
7440-22-4	Silver	0.40	U		P	
7440-28-0	Thallium	0.09	U		F	
7440-66-6	Zinc	28.6			P	

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S-9

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____
Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___
Matrix (soil/water): SOIL_ Lab Sample ID: 74715_____
Level (low/med): _____ Date Received: 04/14/92
% Solids: _85.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-47-3	Chromium_				NR
7440-50-8	Copper___				NR
7439-92-1	Lead_____	182			F_
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-28-0	Thallium_				NR
7440-66-6	Zinc_____				NR

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
THIS_SAMPLE_WAS_ANALYZED_FOR_LEAD_ONLY.

FORM I - IN

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Initial Calibration Source: NIST_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony	500.0	505.54	101.1	500.0	506.88	101.4	506.91	101.4	P
Arsenic									NR
Beryllium	500.0	504.33	100.9	500.0	507.45	101.5	505.71	101.1	P
Cadmium	500.0	477.07	95.4	500.0	496.16	99.2	501.15	100.2	P
Chromium	500.0	481.22	96.2	500.0	487.03	97.4	491.28	98.3	P
Copper	500.0	487.45	97.5	500.0	494.78	99.0	486.23	97.2	P
Lead									NR
Mercury									NR
Nickel	500.0	470.29	94.1	500.0	480.55	96.1	479.12	95.8	P
Selenium									NR
Silver	500.0	491.65	98.3	500.0	504.34	100.9	508.49	101.7	P
Thallium									NR
Zinc	500.0	483.91	96.8	500.0	499.58	99.9	505.77	101.2	P

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

FORM II (PART 1) - IN

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Initial Calibration Source: NIST_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony				500.0	515.19	103.0			P
Arsenic									NR
Beryllium				500.0	509.53	101.9			P
Cadmium				500.0	496.96	99.4			P
Chromium				500.0	480.83	96.2			P
Copper				500.0	491.11	98.2			P
Lead									NR
Mercury									NR
Nickel				500.0	470.29	94.1			P
Selenium									NR
Silver				500.0	502.95	100.6			P
Thallium									NR
Zinc				500.0	494.22	98.8			P

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

FORM II (PART 1) - IN

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Initial Calibration Source: EPA_LV_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic	50.4	51.30	101.8	50.0	51.60	103.2	49.80	99.6	F
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead	98.4	103.58	105.3	25.0	26.83	107.3	27.53	110.1	F
Mercury	5.0	5.05	101.0	5.0	5.05	101.0	4.94	98.8	CV
Nickel									NR
Selenium	50.3	51.80	103.0	25.0	25.80	103.2	26.20	104.8	F
Silver									NR
Thallium	100.7	103.73	103.0	25.0	25.64	102.6	24.45	97.8	F
Zinc									NR

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

FORM II (PART 1) - IN

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Initial Calibration Source: EPA_LV_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic				50.0	50.60	101.2			F
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead				25.0	29.17	116.7	25.66	102.6	F
Mercury				5.0	4.88	97.6	4.94	98.8	CV
Nickel									NR
Selenium				25.0	25.00	100.0			F
Silver									NR
Thallium				25.0	23.56	94.2			F
Zinc									NR

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

FORM II (PART 1) - IN

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Initial Calibration Source: EPA_LV_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic									NR
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead				25.0	26.13	104.5	27.06	108.2	F
Mercury									NR
Nickel									NR
Selenium									NR
Silver									NR
Thallium									NR
Zinc									NR

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

FORM II (PART 1) - IN

U.S. EPA - CLP

3
BLANKS

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Preparation Blank Matrix (soil/water): SOIL_

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony	17.0	U	17.0	U	17.0	U	17.0	U	1.700	U	P
Arsenic	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	F
Beryllium	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Chromium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Copper	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Lead	1.0	U	1.0	U	1.0	U	2.7		0.100	U	F
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	12.0	U	12.0	U	12.0	U	12.0	U	1.200	U	P
Selenium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	F
Silver	4.0	U	4.0	U	4.0	U	4.0	U	0.400	U	P
Thallium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	F
Zinc	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P

U.S. EPA - CLP

3
BLANKS

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Arsenic											NR
Beryllium											NR
Cadmium											NR
Chromium											NR
Copper											NR
Lead			1.0	U	1.0	U	1.8				F
Mercury			0.2	U							CV
Nickel											NR
Selenium											NR
Silver											NR
Thallium											NR
Zinc											NR

FORM III - IN

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No: _____ SDG No.: S-1___

ICP ID Number: 2-JA_1150___ ICS Source: INOR._VENT._

OK 40.

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony	0	0	-32	-15.1		-28	-14.0	
Arsenic								
Beryllium	0	500	0	460.6	92.1	0	464.1	92.8
Cadmium	0	1000	-2	851.7	85.2	-4	870.5	87.0
Chromium	0	500	6	427.4	85.5	5	427.4	85.5
Copper	0	500	2	471.1	94.2	2	473.6	94.7
Lead								
Mercury								
Nickel	0	1000	7	809.6	81.0	0	829.2	82.9
Selenium								
Silver	0	1000	-5	898.8	89.9	-2	914.9	91.5
Thallium								
Zinc	0	1000	-1	864.3	86.4	-1	876.6	87.7

FORM IV - IN

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

S-2 S

Lab Name: VERSAR_LABORATORIES_INC._ Contract:_____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___
Matrix: __SOIL_____ Level (low/med): _____
% Solids for Sample: _83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony									NR
Arsenic									NR
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead	75-125	330.0943		414.6601		10.03	-843.1		F
Mercury									NR
Nickel									NR
Selenium									NR
Silver									NR
Thallium									NR
Zinc									NR

N/A because sample result is > 4x spike. LR.

Comments:
THIS_SAMPLE_WAS_ANALYZED_FOR_LEAD_ONLY.

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

S-8 S

Lab Name: VERSAR_LABORATORIES_INC._ Contract:_____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___
Matrix: __SOIL_____ Level (low/med): _____
% Solids for Sample: _80.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75-125	146.3720		1.6894	U	N 340.34	✓ 43.0		P ←
Arsenic	75-125	14.9068		2.5273		N 12.30	✓ 100.6		F
Beryllium	75-125	150.5565		0.5158		N 170.17	✓ 88.2		P
Cadmium	75-125	135.0659		0.4969	U	N 170.17	✓ 79.4		P
Chromium	75-125	172.9031		31.6253		N 170.17	✓ 83.0		P
Copper	75-125	322.5406		17.1598		N 340.34	✓ 89.7		P
Lead	75-125	17.9399		4.2741		N 12.30	✓ 111.1		F
Mercury	75-125	0.9745		0.1254		N 0.62	137.0		CV ←
Nickel	75-125	330.0247		56.6012		N 340.34	✓ 80.3		P
Selenium	75-125	12.1149		0.0857	U	N 12.30	✓ 98.5		F
Silver	75-125	142.4777		0.3975	U	N 170.17	✓ 83.7		P
Thallium	75-125	10.8400		0.0857	U	N 12.30	✓ 88.1		F
Zinc	75-125	301.2005		28.5754		N 340.34	✓ 80.1		P
				~~IS SR×4 < SA~~ ? LR					
				IS SR > 4×SA ?					

Comments:

FORM V (Part 1) - IN

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

S-2 D

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Level (low/med): _____

% Solids for Sample: _83.1 % Solids for Duplicate: __83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony								NR
Arsenic								NR
Beryllium								NR
Cadmium								NR
Chromium								NR
Copper								NR
Lead		414.6601		308.8940		29.2		F
Mercury								NR
Nickel								NR
Selenium								NR
Silver								NR
Thallium								NR
Zinc								NR

FORM VI - IN

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

S-8 D

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Level (low/med): _____

% Solids for Sample: _80.5 % Solids for Duplicate: __80.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony		1.6894	U	1.6498	U			P
Arsenic		2.5273		2.0401		21.3		F
Beryllium		0.5158		0.5377		4.1		P
Cadmium		0.4969	U	0.4852	U			P
Chromium		31.6253		28.1415		11.7		P
Copper		17.1598		20.6648		18.5		P
Lead		4.2741		4.7518		10.6		F
Mercury		0.1254		0.2524		67.2		CV
Nickel		56.6012		50.4115		11.6		P
Selenium		0.0857	U	0.1010	U			F
Silver		0.3975	U	0.3882	U			P
Thallium		0.0857	U	0.1010	U			F
Zinc		28.5754		31.6693		10.3		P

FORM VI - IN

U.S. EPA - CLP

9

ICP SERIAL DILUTION

EPA SAMPLE NO.

S-8 L

Lab Name: VERSAR_LABORATORIES_INC._ Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: S-1___

Matrix (soil/water): SOIL_ Level (low/med): _____

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	17.00	U	85.00	U			P
Arsenic							
Beryllium	5.19		15.00	U	100.0		P
Cadmium	5.00	U	25.00	U			P
Chromium	318.23		346.45		8.9		P
Copper	172.67		204.15		18.2		P
Lead							
Mercury							
Nickel	569.55		641.85		12.7		P
Selenium							
Silver	4.00	U	20.00	U			P
Thallium							
Zinc	287.54		338.25		17.6		P

FORM IX - IN

Veobrien 3 6432

File : 643251.WSL

File Record	Laboratory Sample Name	Customer/EPA Sample Name	Type	Matrix	Instrument Dil.	Date	Time	Flag:
1	S0		3		1.0	05/11/92	09:50:00	
2	S		3		1.0	05/11/92	09:53:00	
3	S		3		1.0	05/11/92	09:56:00	
4	S		3		1.0	05/11/92	09:58:00	
5	S		3		1.0	05/11/92	10:01:00	
6	S		3		1.0	05/11/92	10:03:00	
7	CCVC0	CCV	0		1.0	05/11/92	10:08:00	
8	CCVN0	CCV	0		1.0	05/11/92	10:12:00	
9	ICB	ICB	0		1.0	05/11/92	10:15:00	
10	ICSAII	ICSA	0		1.0	05/11/92	10:18:00	
11	ICSAII	ICSA	0		1.0	05/11/92	10:21:00	
12	ICSABII	ICSAB	0		1.0	05/11/92	10:23:00	
13	CAL2		0		1.0	05/11/92	10:27:00	
14	PBS	PBS	0		1.0	05/11/92	10:30:00	
15	LCSMH		0		1.0	05/11/92	10:35:00	
16	74716S		0		1.0	05/11/92	10:38:00	
17	74716		0		1.0	05/11/92	10:41:00	
18	74716D		0		1.0	05/11/92	10:44:00	
19	74716L		0		5.0	05/11/92	10:47:00	
20	CCVC1	CCV	0		1.0	05/11/92	10:54:00	
21	CCVN1	CCV	0		1.0	05/11/92	10:59:00	
22	CCB1	CCB	0		1.0	05/11/92	11:02:00	
23	74717		0		1.0	05/11/92	11:05:00	
24	ZZZZZZ	PBW	0		1.0	05/11/92	11:09:00	
25	ZZZZZZ		0		1.0	05/11/92	11:12:00	
26	ZZZZZZ		0		1.0	05/11/92	11:14:00	
27	ZZZZZZ		0		1.0	05/11/92	11:17:00	
28	ZZZZZZ		0		1.0	05/11/92	11:20:00	
29	ZZZZZZ		0		1.0	05/11/92	11:23:00	
30	ZZZZZZ		0		1.0	05/11/92	11:26:00	
31	ZZZZZZ		0		1.0	05/11/92	11:29:00	
32	ZZZZZZ		0		1.0	05/11/92	11:33:00	
33	CCVC2	CCV	0		1.0	05/11/92	11:43:00	
34	CCVN2	CCV	0		1.0	05/11/92	11:46:00	
35	CCB2	CCB	0		1.0	05/11/92	11:48:00	
36	ZZZZZZ		0		1.0	05/11/92	11:51:00	
37	ZZZZZZ		0		1.0	05/11/92	11:53:00	
38	ZZZZZZ		0		1.0	05/11/92	11:56:00	
39	ICSAIF	ICSA	0		1.0	05/11/92	12:00:00	
40	ICSABIF	ICSAB	0		1.0	05/11/92	12:03:00	
41	CCVC3	CCV	0		1.0	05/11/92	12:05:00	
42	CCVN3		0		1.0	05/11/92	12:08:00	
43	CCB3	CCB	0		1.0	05/11/92	12:11:00	

E646 IDA 56 6468

File : 6468H1.WSL

File Record	Laboratory Sample Name	Customer/EPA Sample Name	Type	Matrix	Instrument Dil.	Date	Time	Flags
1	S0		3		1.0	05/11/92	09:50:00	
2	S		3		1.0	05/11/92	09:53:00	
3	S		3		1.0	05/11/92	09:56:00	
4	S		3		1.0	05/11/92	09:58:00	
5	S		3		1.0	05/11/92	10:01:00	
6	S		3		1.0	05/11/92	10:03:00	
7	CCVC0	CCV	0		1.0	05/11/92	10:08:00	
8	CCVN0	CCV	0		1.0	05/11/92	10:12:00	
9	ICB	ICB	0		1.0	05/11/92	10:15:00	
10	ICSAII	ICSA	0		1.0	05/11/92	10:18:00	
11	ICSAII	ICSA	0		1.0	05/11/92	10:21:00	
12	ICSABII	ICSAB	0		1.0	05/11/92	10:23:00	
13	CAL2		0		1.0	05/11/92	10:27:00	
14	ZZZZZZ	PBS	0		1.0	05/11/92	10:30:00	
15	ZZZZZZ		0		1.0	05/11/92	10:35:00	
16	ZZZZZZ		0		1.0	05/11/92	10:38:00	
17	ZZZZZZ		0		1.0	05/11/92	10:41:00	
18	ZZZZZZ		0		1.0	05/11/92	10:44:00	
19	ZZZZZZ		0		1.0	05/11/92	10:47:00	
20	CCVC1	CCV	0		1.0	05/11/92	10:54:00	
21	CCVN1	CCV	0		1.0	05/11/92	10:59:00	
22	CCB1	CCB	0		1.0	05/11/92	11:02:00	
23	ZZZZZZ		0		1.0	05/11/92	11:05:00	
24	PBW	PBW	0		1.0	05/11/92	11:09:00	
25	LCSM		0		1.0	05/11/92	11:12:00	
26	74983		0		1.0	05/11/92	11:14:00	
27	74983D		0		1.0	05/11/92	11:17:00	
28	74983S		0		1.0	05/11/92	11:20:00	
29	74893L		0		5.0	05/11/92	11:23:00	
30	74984		0		1.0	05/11/92	11:26:00	
31	74984		0		1.0	05/11/92	11:29:00	
32	74999		0		1.0	05/11/92	11:33:00	
33	CCVC2	CCV	0		1.0	05/11/92	11:43:00	
34	CCVN2	CCV	0		1.0	05/11/92	11:46:00	
35	CCB2	CCB	0		1.0	05/11/92	11:48:00	
36	75000		0		1.0	05/11/92	11:51:00	
37	75001		0		1.0	05/11/92	11:53:00	
38	75002		0		1.0	05/11/92	11:56:00	
39	ICSAIF	ICSA	0		1.0	05/11/92	12:00:00	
40	ICSABIF	ICSAB	0		1.0	05/11/92	12:03:00	
41	CCVC3	CCV	0		1.0	05/11/92	12:05:00	
42	CCVN3		0		1.0	05/11/92	12:08:00	
43	CCB3	CCB	0		1.0	05/11/92	12:11:00	

NON-CLP ICP ANALYSIS LOG SHEET

Date: 5/11/92

Code-Batch: Vechrien 3 / EG&G IDA 56 Control Number: 6932 / 6468

Analyst: KT File Name: 643251 Inst. No.: 2

Elements: Al, Ag, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Se, Sb, Si, Sn, Sr, Ti, Tl, V, Y, Zn

Standardization:		Source/Code:
CAL1-S0	Blank	
CAL2-S	1 ppm Cd, Cr, Mn, Ni, Pb, Sb, Sn	04279203
	10 ppm Tl	
CAL3-S	1 ppm Ag, Ba, Be, Cu, Li, Sr, Ti, V, Y	04279204
	10 ppm Al	
CAL4-S	1 ppm B, Co, Mo, Zn	05049201
	10 ppm As, Se	
	50 ppm Ca	
CAL5-S	50 ppm K, Na	05049202
CAL6-S	10 ppm Si	—
CAL7-S	10 ppm Fe	05049203
	100 ppm Mg	

Analysis Run:

QC Set (1)	Source/Code/Comments:
CCVC0	04279207
CCVN0	05119202
ICB	

Sample Set #1

1)	ICSAII	Rerun Hg lamp down
2)	~~ICSABII~~	ICSAII 05069201
3)	~~CAL2~~	ICSABII 05119201
4)	CAL2	
5)	PBS	Vechrien 3 643251
6)	LCSM	
7)	74716S	
8)	74716	
9)	74716D	
10)	74716L	5Fold Ser Dil

QC Set (2)

CCVC1	
CCVN1	
CCB1	

Sample Set #2

1)	74717	High For Fe not needed
2)	PBW	High For B not needed EG&G IDA 56 1468HI
3)	LCSM	
4)	74983	
5)	74983D	
6)	74983S	
7)	74983L	
8)	74984	Hg down rerun
9)	~~ICSAIIF~~ ~~74999~~ 74984	
10)	~~ICSABIIF~~ ~~74000~~ 74999	

NON-CLP ICP ANALYSIS LOG SHEET

Analysis Run:

QC Set (3)	**Source\Code\Comments:**
CCVC2	
CCVN2	
CCB2	

Sample Set #3

1) 75000	
2) 75001	
3) 75002	
4) ICSA1F	
5) ICSAB1F	
6)	
7)	
8)	
9)	
10)	

QC Set (4)

CCVC3	
CCVN3	
CCB3	

Sample Set #4

1)	
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	

QC Set (5)

CCVC4	
CCVN4	
CCB4	

Sample Set #5

1)	
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	

QC Set (6)

CCVC5	
CCVN5	
CCB5	

Method: TAMMY Standard: CAL1-SO

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.0021	.0076	-.0014	.0004	.0001	.0012	.0002
#1	-.0019	.0083	-.0007	.0004	.0000	.0013	.0004
#2	-.0024	.0070	-.0020	.0004	.0001	.0011	.0000

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Avge	.0004	.0000	.0002	.0001	.0003	.1820	.0001
#1	.0006	-.0001	.0001	.0000	.0003	.1791	.0000
#2	.0003	.0001	.0003	.0001	.0003	.1849	.0001

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Avge	.0006	.0001	.0002	.0024	.0007	.0004	-.0014
#1	.0006	.0001	.0004	.0026	-.0010	.0003	-.0010
#2	.0006	.0001	.0000	.0023	.0024	.0004	-.0019

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Avge	-.0016	.0006	.0006	.0000	.0009	-.0012	.0002
#1	-.0029	.0006	.0001	.0000	.0009	-.0007	.0000
#2	-.0003	.0007	.0011	.0000	.0009	-.0017	.0004

Elem	Y_3710	Zn2138
Avge	.0000	.0009
#1	.0000	.0011
#2	.0000	.0007

Method: TAMMY Standard: CAL3-S

Elem	Ag3280	Al3082	Ba4934	Be3130	Cu3247	Li6707	Sr4215
Avge	.3076	.6684	.2514	.2073	.0586	.1061	.2697
#1	.3073	.6673	.2506	.2069	.0584	.1056	.2690
#2	.3079	.6694	.2523	.2077	.0587	.1066	.2704

Elem	Ti3349	V_2924	Y_3710
Avge	.2176	.2340	.0949
#1	.2171	.2334	.0947
#2	.2180	.2346	.0950

Method: TAMMY Standard: CAL4-S

Elem	As1936	B_2497	Ca3179	Co2286	Mo2023	Se1960	Zn2138
Avge	2.595	.1644	1.996	.0728	.0769	2.043	.1741
#1	2.596	.1649	1.992	.0724	.0769	2.044	.1736
#2	2.595	.1639	2.000	.0731	.0770	2.041	.1746

Method: TAMMY Standard: CAL2-S

Elem	Cd2288	Cr2677	Mn2576	Ni2316	Pb2203	Sb2175	Sn1899
Avge	.1696	.1847	.0920	.3001	.0264	.1101	.3445
#1	.1696	.1856	.0917	.2984	.0261	.1099	.3456
#2	.1696	.1839	.0923	.3017	.0266	.1104	.3434

Elem	Tl1908
Avge	.1507
#1	.1499
#2	.1516

Method: TAMMY Standard: CAL7-S

Elem	Fe2599	Mg3822
Avge	.7344	.5796
#1	.7340	.5806
#2	.7347	.5786

Method: TAMMY Standard: CAL5-S

Elem	K_7664	Na5889
Avge	3.558	1.614
#1	3.572	1.619
#2	3.544	1.610

Standardization Report Mon 05-11-92 10:04:57 AM page 1

Method: TAMMY Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag3280	328.068	CAL3-S	CAL1-S0	3.22878	.006919	05/11/92 10:03:05
Al3082	308.265	CAL3-S	CAL1-S0	15.1351	-.115676	05/11/92 10:03:05
As1936	193.696	CAL4-S	CAL1-S0	3.85123	.005227	05/11/92 10:03:05
B_2497	249.773	CAL4-S	CAL1-S0	6.10022	-.002614	05/11/92 10:03:05
Ba4934	493.409	CAL3-S	CAL1-S0	3.07840	-.000284	05/11/92 10:03:05
Be3130	313.042	CAL3-S	CAL1-S0	4.85269	-.005893	05/11/92 10:03:05
Ca3179	317.933	CAL4-S	CAL1-S0	25.0483	-.005367	05/11/92 10:03:05
Cd2288	228.802	CAL2-S	CAL1-S0	5.91216	-.002534	05/11/92 10:03:05
Co2286	228.616	CAL4-S	CAL1-S0	13.7390	.000000	05/11/92 10:03:05
Cr2677	267.716	CAL2-S	CAL1-S0	5.42005	-.001161	05/11/92 10:03:05
Cu3247	324.754	CAL3-S	CAL1-S0	17.0940	-.001221	05/11/92 10:03:05
Fe2599	259.940	CAL7-S	CAL1-S0	6.81133	-.001946	05/11/92 10:03:05
K_7664	766.491	CAL5-S	CAL1-S0	14.8098	-2.69538	05/11/92 10:03:05
Li6707	670.784	CAL3-S	CAL1-S0	9.43396	-.000674	05/11/92 10:03:05
Mg3822	382.231	CAL7-S	CAL1-S0	172.712	-.098692	05/11/92 10:03:05
Mn2576	257.610	CAL2-S	CAL1-S0	10.8865	-.001555	05/11/92 10:03:05
Mo2023	202.300	CAL4-S	CAL1-S0	13.0354	-.002793	05/11/92 10:03:05
Na5889	588.995	CAL5-S	CAL1-S0	31.0187	-.075331	05/11/92 10:03:05
Ni2316	231.604	CAL2-S	CAL1-S0	3.34049	-.002386	05/11/92 10:03:05
Pb2203	220.353	CAL2-S	CAL1-S0	38.4615	-.013736	05/11/92 10:03:05
Sb2175	217.581	CAL2-S	CAL1-S0	8.96287	.012804	05/11/92 10:03:05
Se1960	196.026	CAL4-S	CAL1-S0	4.89151	.007687	05/11/92 10:03:05
Si2881	288.158	CAL6-S	CAL1-S0	59.6506	-.038347	05/11/92 10:03:05
Sn1899	189.989	CAL2-S	CAL1-S0	2.90818	-.001870	05/11/92 10:03:05
Sr4215	421.552	CAL3-S	CAL1-S0	3.70763	.000000	05/11/92 10:03:05
Ti3349	334.941	CAL3-S	CAL1-S0	4.61437	-.003955	05/11/92 10:03:05
Tl1908	190.801	CAL2-S	CAL1-S0	65.8204	.079925	05/11/92 10:03:05
V_2924	292.402	CAL3-S	CAL1-S0	4.27742	-.000917	05/11/92 10:03:05
Y_3710	371.030	CAL3-S	CAL1-S0	10.5422	.000000	05/11/92 10:03:05
Zn2138	213.865	CAL4-S	CAL1-S0	5.77558	-.005363	05/11/92 10:03:05

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Method: TAMMY Sample Name: ccvc0 Operator: kj
Run Time: 05/11/92 10:08:35
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4917	4.976	.0166	-.0005	.4919	.5043	24.26
#1	.4898	4.972	.0155	-.0014	.4908	.5029	24.18
#2	.4935	4.981	.0177	.0003	.4930	.5057	24.34

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4771	.4877	.4812	.4875	4.879	25.46	-.0007
#1	.4821	.4848	.4843	.4875	4.868	25.54	-.0007
#2	.4720	.4907	.4781	.4875	4.890	25.38	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	48.40	.4796	.0007	25.32	.4703	.4748	.5055
#1	48.36	.4788	.0016	25.34	.4782	.4666	.5049
#2	48.43	.4804	-.0002	25.30	.4624	.4831	.5062

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0023	-.0359	.0011	-.0008	.0001	.1369	.4826
#1	-.0179	-.0061	-.0024	-.0016	.0007	.2028	.4820
#2	.0226	-.0657	.0047	.0000	-.0005	.0710	.4832

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0000	.4839
#1	.0015	.4847
#2	-.0015	.4831

Method: TAMMY Sample Name: ccvn0 Operator: kj
Run Time: 05/11/92 10:12:11
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0014	.0097	4.819	.5089	-.0003	.0000	.2004
#1	.0014	.0076	4.831	.5098	-.0003	.0003	.2022
#2	.0014	.0119	4.807	.5081	-.0003	-.0003	.1986

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0038	-.0010	-.0027	.0061	-.0019	-.1068	.5357
#1	.0020	-.0020	-.0012	.0061	-.0000	-.2306	.5330
#2	.0056	.0000	-.0043	.0061	-.0039	.0169	.5384

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0123	-.0000	.5047	8.231	.0007	.0027	.0083
#1	.0000	-.0000	.5019	8.158	.0038	.0082	.0102
#2	-.0247	-.0000	.5074	8.304	-.0024	-.0028	.0064

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.803	4.955	.5089	.4714	.5017	Q4.386	-.0018
#1	4.728	4.947	.5075	.4682	.5004	Q4.396	-.0034
#2	4.878	4.964	.5104	.4746	.5030	Q4.377	-.0003

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.4977	.0041
#1	.4955	.0029
#2	.5000	.0054

Method: TAMMY Sample Name: icb Operator: kj
Run Time: 05/11/92 10:15:20
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0005	.0043	-.0000	-.0009	-.0003	.0007	-.0036
#1	-.0009	.0054	.0002	-.0017	-.0003	.0003	-.0089
#2	.0018	.0032	-.0003	-.0000	-.0003	.0010	.0018

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0013	.0000	-.0004	.0012	.0005	-.2698	-.0007
#1	-.0025	-.0020	-.0012	.0012	-.0049	-.3977	-.0007
#2	.0000	.0020	.0004	.0012	.0058	-.1418	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0247	-.0031	-.0009	-.0066	.0007	-.0082	.0038
#1	-.0247	-.0031	-.0009	-.0133	-.0024	-.0192	-.0026
#2	-.0247	-.0031	.0009	-.0000	.0038	.0027	.0103

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0059	-.0170	-.0031	-.0008	-.0003	-.0376	-.0018
#1	.0014	-.0128	.0081	.0000	-.0000	.0236	-.0046
#2	-.0133	-.0213	-.0143	-.0016	-.0007	-.0988	.0009

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0023	.0004
#1	-.0030	.0012
#2	-.0015	-.0004

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Method: TAMMY Sample Name: icsaii Operator: kj
Run Time: 05/11/92 10:18:33
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Hg lamp down

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0076	L-.1168	.0080	-.0035	-.0003	-.0007	L-.0054
#1	.0074	L-.1178	.0083	-.0026	-.0003	-.0003	L-.0054
#2	.0078	L-.1157	.0077	-.0044	-.0003	-.0010	L-.0054

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0030	.0029	-.0012	-.0024	L-.0015	-2.784	-.0007
#1	-.0034	.0039	-.0012	-.0037	L-.0010	-2.824	-.0007
#2	-.0026	.0020	-.0012	-.0012	L-.0019	-2.744	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0987	-.0015	-.0019	-.0731	-.0024	-.0082	.0154
#1	L-.0987	-.0015	-.0028	-.0709	-.0024	-.0082	.0154
#2	L-.0987	-.0015	-.0009	-.0753	-.0024	-.0082	.0154

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0087	-.0597	-.0029	.0000	-.0033	.1222	-.0012
#1	.0042	-.0554	-.0023	.0000	-.0040	.1551	-.0015
#2	.0133	-.0639	-.0035	.0000	-.0026	.0893	.0009

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0008	-.0066
#1	.0000	-.0062
#2	.0015	-.0070

Analysis Report Mon 05-11-92 10:23:38 AM page 1

Method: TAMMY Sample Name: icsaii Operator: kj
Run Time: 05/11/92 10:21:17
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4554	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0045	486.8	.1026	-.0258	.0003	-.0003	456.2
#1	-.0043	487.2	.1081	-.0289	-.0003	-.0003	455.9
#2	-.0048	486.3	.0972	-.0227	.0009	-.0003	456.4

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0016	.0108	.0062	.0022	170.9	-.4401	.0000
#1	-.0059	.0079	.0066	.0035	171.0	-.6495	.0007
#2	.0027	.0137	.0058	.0010	170.9	-.2306	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	468.3	.0082	.0025	-.0066	.0072	-.0365	-.0315
#1	468.6	.0057	.0007	-.0177	.0048	-.0394	-.0283
#2	467.9	.0106	.0044	.0044	.0095	-.0336	-.0348

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0006	-.0632	-.0147	.0169	.0345	.5284	-.0039
#1	-.0160	-.0760	-.0053	.0169	.0348	.3730	-.0039
#2	.0148	-.0504	-.0240	.0169	.0342	.6838	-.0039

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0008	-.0008
#1	.0015	-.0012
#2	.0000	-.0004

Method: TAMMY Sample Name: icsabii Operator: kj
Run Time: 05/11/92 10:23:57
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.8988	490.2	.1846	-.0191	.4606	.4607	456.9
#1	.9017	492.4	.2074	-.0226	.4635	.4627	459.5
#2	.8959	488.0	.1618	-.0156	.4578	.4586	454.3

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.8517	.4406	.4274	.4711	170.7	-.1587	.0007
#1	.8574	.4436	.4340	.4724	171.6	.2433	-.0007
#2	.8459	.4377	.4208	.4698	169.8	-.5607	.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	469.6	.4343	.0006	-.0022	.8096	.8441	-.0151
#1	471.8	.4386	.0008	.0044	.8160	.8320	-.0132
#2	467.4	.4299	.0005	-.0089	.8031	.8562	-.0171

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0077	-.0504	-.0106	.0159	.0297	.6060	.4379
#1	-.0204	-.0592	-.0039	.0164	.0301	.6604	.4392
#2	.0049	-.0415	-.0173	.0154	.0293	.5516	.4367

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0015	.8643
#1	-.0015	.8692
#2	-.0015	.8593

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Method: TAMMY Sample Name: cal2 Operator: kj
Run Time: 05/11/92 10:27:29
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0009	.0238	-.0043	-.0005	.0003	.0003	.0286
#1	-.0009	.0357	-.0027	-.0009	.0003	.0003	.0412
#2	-.0009	.0119	-.0059	-.0000	.0003	.0003	.0161

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9950	-.0010	.9950	.0012	.0224	-.2327	-.0013
#1	.9857	-.0039	1.003	-.0012	.0234	-.2750	-.0020
#2	1.004	.0020	.9868	.0037	.0214	-.1904	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0123	.9837	.0019	-.0044	.9897	.9972	.9962
#1	.0247	.9844	.0009	-.0044	.9850	.9972	1.000
#2	.0000	.9829	.0028	-.0044	.9945	.9972	.9923

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0039	-.0171	.9880	.0008	-.0007	9.887	-.0031
#1	.0098	-.0213	.9932	.0016	-.0007	9.821	-.0052
#2	-.0021	-.0128	.9828	.0000	-.0007	9.953	-.0009

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0000	.0054
#1	.0000	.0045
#2	.0000	.0062

Analysis Report Blank Sample Mon 05-11-92 10:33:16 AM page 1

Method: TAMMY Sample Name: PBS Operator: kj
Run Time: 05/11/92 10:30:55
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0002	.0097	-.0166	.0061	.0000	.0000	.0215
#1	-.0023	.0011	-.0201	.0052	.0003	.0003	.0197
#2	.0018	.0184	-.0131	.0070	-.0003	-.0003	.0233

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0007	-.0010	.0043	.0012	.0068	-.2327	-.0007
#1	.0001	.0020	.0035	.0012	.0049	.1269	-.0007
#2	-.0016	-.0039	.0050	.0012	.0088	-.5924	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0123	.0008	.0000	-.0000	.0017	.0055	-.0032
#1	.0000	-.0016	-.0028	-.0044	-.0010	.0082	-.0026
#2	-.0247	.0000	.0028	.0044	.0043	.0027	-.0038

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0185	H.1065	.0044	.0000	-.0010	-.0189	.0003
#1	-.0154	H.1236	.0098	.0000	-.0013	-.0329	.0009
#2	.0524	H.0895	-.0010	.0000	-.0007	-.0048	-.0003

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0000	.0012
#1	.0000	.0004
#2	.0000	.0021

Analysis Report Mon 05-11-92 10:37:37 AM page 1

Method: TAMMY Sample Name: LCSMH Operator: kj
Run Time: 05/11/92 10:35:16
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0107	18.25	3.431	1.774	1.853	1.817	17.39
#1	L-.0112	18.22	3.437	1.765	1.854	1.817	17.37
#2	L-.0103	18.28	3.424	1.784	1.851	1.817	17.41

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.624	1.763	1.743	3.635	17.36	17.92	1.989
#1	1.601	1.763	1.745	3.633	17.37	17.94	1.990
#2	1.646	1.764	1.740	3.636	17.35	17.91	1.989

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.10	3.504	1.804	34.36	3.385	3.277	3.365
#1	17.10	3.504	1.804	34.33	3.398	3.255	3.339
#2	17.10	3.505	1.804	34.38	3.373	3.299	3.390

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.530	9.018	3.312	1.728	3.584	3.583	1.785
#1	3.528	9.031	3.309	1.728	3.585	3.588	1.785
#2	3.532	9.005	3.315	1.729	3.583	3.578	1.786

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	1.814	3.287
#1	1.813	3.278
#2	1.815	3.296

Analysis Report Mon 05-11-92 10:40:32 AM page 1

Method: TAMMY Sample Name: 747160 Operator: kj
Run Time: 05/11/92 10:38:10
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.675	H136.9	3.399	1.729	H2.749	1.769	H62.17
#1	1.666	H136.4	3.368	1.710	H2.739	1.761	H62.07
#2	1.683	H137.5	3.430	1.747	H2.759	1.778	H62.26

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.587	1.798	2.032	3.791	H189.4	H43.06	2.020
#1	1.586	1.790	2.021	3.775	H188.7	H42.85	2.010
#2	1.588	1.806	2.043	3.807	H190.0	H43.27	2.029

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H56.34	H5.172	1.702	H54.11	3.879	3.244	L1.720
#1	H56.13	H5.156	1.701	H53.91	3.867	3.214	L1.732
#2	H56.55	H5.187	1.704	H54.32	3.890	3.273	L1.709

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.409	H19.83	3.253	1.973	4.960	4.073	2.037
#1	3.367	H19.73	3.270	1.964	4.936	4.059	2.029
#2	3.450	H19.93	3.236	1.981	4.983	4.087	2.045

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	1.855	3.540
#1	1.848	3.532
#2	1.863	3.548

Analysis Report Mon 05-11-92 10:44:11 AM page 1

Method: TAMMY Sample Name: 74716 Operator: kj
Run Time: 05/11/92 10:41:49
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0023	89.69	.0653	.0627	1.062	.0052	34.72
#1	-.0011	89.59	.0843	.0616	1.061	.0052	34.67
#2	-.0034	89.79	.0464	.0638	1.063	.0052	34.78

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0009	.1060	.3182	.1727	139.9	22.05	.0499
#1	-.0015	.1079	.3178	.1727	139.7	22.02	.0505
#2	-.0003	.1040	.3186	.1727	140.2	22.08	.0492

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.56	1.511	.0019	17.59	.5696	.0550	-.0243
#1	31.51	1.513	.0019	17.57	.5674	.0634	-.0285
#2	31.61	1.510	.0019	17.60	.5717	.0467	-.0202

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0505	4.955	.0074	.2058	2.426	.4326	.2613
#1	-.0192	4.921	.0084	.2060	2.424	.5142	.2619
#2	-.0818	4.989	.0064	.2055	2.427	.3510	.2607

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0542	.2875
#1	.0542	.2867
#2	.0542	.2884

Method: TAMMY Sample Name: 74716D Operator: kj
Run Time: 05/11/92 10:44:25
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0037	95.13	.0522	.0758	1.022	.0055	70.01
#1	-.0027	95.23	.0676	.0728	1.026	.0059	70.08
#2	-.0047	95.03	.0368	.0788	1.018	.0052	69.94

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0021	.0952	.2900	.2129	161.3	25.66	.0451
#1	-.0030	.0942	.2877	.2154	161.7	25.45	.0451
#2	-.0011	.0962	.2923	.2105	160.9	25.87	.0451

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	48.80	2.469	.0040	18.65	.5194	.0638	-.0341
#1	48.95	2.476	.0087	18.68	.5206	.0664	-.0285
#2	48.66	2.462	-.0008	18.62	.5183	.0612	-.0398

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0216	7.576	.0242	.3358	1.842	.5203	.2692
#1	-.0011	7.588	.0241	.3353	1.845	.5596	.2714
#2	-.0421	7.563	.0243	.3363	1.839	.4810	.2671

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0617	.3263
#1	.0617	.3255
#2	.0617	.3271

Method: TAMMY Sample Name: 74716L Operator: kj
Run Time: 05/11/92 10:47:07
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0024	19.76	.0070	.0160	.2251	.0010	7.860
#1	-.0017	19.76	.0130	.0173	.2253	.0010	7.896
#2	-.0031	19.76	.0009	.0147	.2248	.0010	7.824

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0026	.0216	.0693	.0408	31.49	4.530	.0088
#1	-.0026	.0216	.0678	.0421	31.54	4.635	.0088
#2	-.0025	.0216	.0708	.0396	31.45	4.424	.0088

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.019	.3378	.0035	3.811	.1284	.0116	-.0033
#1	7.032	.3386	.0035	3.793	.1298	.0143	-.0045
#2	7.007	.3370	.0035	3.829	.1269	.0088	-.0021

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0039	1.198	.0034	.0429	.5242	.1954	.0556
#1	.0117	1.177	.0074	.0429	.5238	.1904	.0553
#2	-.0038	1.220	-.0005	.0429	.5245	.2005	.0559

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0105	.0677
#1	.0120	.0672
#2	.0090	.0681

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Method: TAMMY Sample Name: CCVC1 Operator: kj
Run Time: 05/11/92 10:54:52
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5043	5.078	.0048	-.0010	.4947	.5075	24.97
#1	.5036	5.080	.0186	-.0014	.4942	.5057	24.87
#2	.5050	5.076	-.0089	-.0006	.4953	.5092	25.06

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4962	.4917	.4870	.4948	4.917	25.87	.0000
#1	.4906	.4887	.4843	.4948	4.892	25.93	.0007
#2	.5018	.4946	.4897	.4948	4.942	25.82	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	49.35	.4942	.0016	25.59	.4806	.4830	.5069
#1	49.22	.4911	.0016	25.62	.4872	.4940	.5113
#2	49.47	.4973	.0016	25.56	.4739	.4720	.5024

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0135	-.0146	-.0009	.0000	-.0008	.0189	.4900
#1	.0135	-.0487	-.0020	.0000	-.0005	-.0420	.4869
#2	.0135	.0195	.0001	.0000	-.0011	.0798	.4930

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.4996
#1	-.0015	.4971
#2	.0000	.5021

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Method: TAMMY Sample Name: CCVN1 Operator: kj
Run Time: 05/11/92 10:59:39
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0016	.0043	4.767	.5115	.0003	.0003	.1610
#1	.0018	.0054	4.763	.5133	.0003	.0003	.1628
#2	.0014	.0032	4.772	.5098	.0003	.0003	.1592

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0008	.0000	.0019	.0061	.0000	.4210	.5236
#1	.0008	.0020	.0012	.0061	-.0029	.4168	.5236
#2	.0008	-.0020	.0027	.0061	.0029	.4253	.5236

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0123	-.0008	.5047	8.165	.0038	-.0000	.0064
#1	.0000	-.0031	.5056	8.167	.0033	.0082	.0051
#2	-.0247	.0016	.5037	8.162	.0043	-.0082	.0077

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.783	5.028	.5210	.4725	.4990	Q4.415	-.0009
#1	4.810	5.049	.5166	.4730	.4984	Q4.433	.0003
#2	4.755	5.006	.5253	.4719	.4997	Q4.396	-.0021

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.4977	.0029
#1	.4970	.0029
#2	.4985	.0029

Analysis Report Blank Sample Mon 05-11-92 11:05:20 AM page 1

Method: TAMMY Sample Name: CCB1 Operator: kj
Run Time: 05/11/92 11:02:57
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0009	-.0043	-.0019	.0000	-.0003	.0000	-.0036
#1	.0005	.0011	.0014	.0026	-.0003	.0003	.0054
#2	.0014	-.0097	-.0052	-.0026	-.0003	-.0003	-.0125

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0017	-.0020	.0015	.0037	-.0024	-.1142	-.0013
#1	-.0009	-.0020	.0004	.0037	-.0058	-.0212	-.0007
#2	-.0025	-.0020	.0027	.0037	.0010	-.2073	-.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0247	.0000	.0019	-.0066	-.0007	.0027	.0051
#1	-.0247	.0000	.0028	-.0089	.0024	-.0082	.0064
#2	-.0247	.0000	.0009	-.0044	-.0038	.0137	.0038

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0115	.0000	-.0006	.0008	-.0010	.0846	-.0006
#1	.0098	.0043	.0006	.0000	-.0013	.0424	-.0003
#2	.0133	-.0043	-.0019	.0016	-.0007	.1269	-.0009

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0015	-.0000
#1	.0015	.0012
#2	.0015	.0012

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Method: TAMMY Sample Name: 74717 Operator: kj
Run Time: 05/11/92 11:05:36
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0168	305.5	.0908	.1301	4.806	.0107	107.0
#1	-.0176	303.5	.0996	.1353	4.793	.0107	106.1
#2	-.0159	307.6	.0821	.1248	4.819	.0107	107.9

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0028	.3837	3.617	.5436	H419.4	23.25	.3619
#1	-.0024	.3788	3.593	.5447	H417.2	23.18	.3632
#2	-.0031	.3886	3.641	.5425	H421.6	23.31	.3605

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	555.4	6.271	.0001	45.45	4.427	.1070	-.0665
#1	551.7	6.222	.0053	45.24	4.379	.1056	-.0626
#2	559.2	6.320	-.0052	45.66	4.474	.1084	-.0705

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0376	5.064	.0609	.3737	20.04	1.542	.8218
#1	-.0936	4.988	.0618	.3724	19.94	1.573	.8175
#2	.0183	5.140	.0599	.3750	20.14	1.510	.8262

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.1175	.7009
#1	.1175	.6927
#2	.1175	.7092

Method: TAMMY Sample Name: PBW Operator: kj
Run Time: 05/11/92 11:09:00
Comment: EG&G IDA 56
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0011	.0562	-.0153	H.0396	.0003	-.0007	.0787
#1	-.0014	.0659	-.0266	H.0392	.0009	-.0010	.0805
#2	-.0009	.0465	-.0039	H.0401	-.0003	-.0003	.0769

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0012	-.0020	.0019	.0037	.0302	.0677	-.0007
#1	-.0015	-.0020	.0035	.0037	.0360	.1058	-.0007
#2	-.0008	-.0020	.0004	.0037	.0243	.0296	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0123	.0016	.0019	.1307	-.0021	-.0055	.0032
#1	.0000	.0031	.0009	.1329	.0010	-.0138	.0001
#2	.0247	-.0000	.0028	.1285	-.0052	.0027	.0064

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0115	H.6178	.0019	.0000	.0003	-.0284	.0006
#1	.0273	H.6093	.0027	.0000	.0007	.0233	.0009
#2	-.0042	H.6263	.0010	.0000	.0000	-.0801	.0003

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0000	.0033
#1	-.0015	.0029
#2	.0015	.0037

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Method: TAMMY Sample Name: LCSM Operator: kj
Run Time: 05/11/92 11:12:17
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.951	20.05	3.810	1.982	1.948	1.942	19.56
#1	1.946	20.06	3.814	1.980	1.954	1.944	19.59
#2	1.955	20.05	3.807	1.984	1.942	1.941	19.54

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.881	1.930	1.913	3.877	18.91	19.80	2.064
#1	1.872	1.939	1.918	3.880	18.95	20.31	2.065
#2	1.891	1.921	1.909	3.873	18.86	19.30	2.063

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.83	3.834	1.962	36.47	3.714	3.702	3.770
#1	18.83	3.838	1.964	36.53	3.728	3.721	3.770
#2	18.83	3.830	1.959	36.41	3.700	3.682	3.769

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.840	11.01	3.792	1.855	3.865	3.689	1.925
#1	3.883	11.05	3.793	1.859	3.870	3.651	1.928
#2	3.798	10.96	3.791	1.852	3.859	3.727	1.922

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	1.955	3.781
#1	1.958	3.781
#2	1.952	3.780

Method: TAMMY Sample Name: 74983 Operator: kj
Run Time: 05/11/92 11:14:58
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0002	.2130	-.0024	.0336	.0924	.0003	53.40
#1	.0001	.2151	.0019	.0345	.0924	.0003	53.29
#2	-.0004	.2108	-.0068	.0327	.0924	.0003	53.51

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0021	.0020	.0074	.0269	.3649	19.83	.0034
#1	-.0042	.0020	.0089	.0257	.3639	19.87	.0034
#2	.0001	.0020	.0058	.0281	.3659	19.78	.0034

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.79	.0224	.0056	36.76	.0052	-.0084	.0044
#1	14.75	.0248	.0047	36.60	.0086	-.0029	.0095
#2	14.83	.0201	.0066	36.92	.0019	-.0139	-.0008

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0113	9.979	.0070	.2540	.0032	-.0154	.0031
#1	-.0096	10.000	.0012	.2537	.0035	-.0107	.0040
#2	-.0131	9.957	.0128	.2542	.0029	-.0201	.0022

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.1419
#1	-.0015	.1415
#2	.0000	.1423

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Method: TAMMY Sample Name: 74983D Operator: Kj
Run Time: 05/11/92 11:17:46
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0004	.1665	-.0071	.0301	.0924	-.0003	51.65
#1	-.0004	.1654	-.0010	.0301	.0929	-.0003	51.38
#2	-.0004	.1676	-.0131	.0301	.0918	-.0003	51.93

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0004	.0010	.0074	.0232	.3561	19.44	.0034
#1	.0000	.0000	.0074	.0208	.3591	19.50	.0034
#2	-.0007	.0020	.0074	.0257	.3532	19.37	.0034

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.62	.0178	.0066	36.47	.0074	.0026	.0018
#1	14.56	.0170	.0047	36.45	.0076	.0081	.0018
#2	14.68	.0186	.0084	36.49	.0072	-.0029	.0018

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0135	9.753	.0126	.2529	.0023	.0317	.0040
#1	.0177	9.744	.0120	.2521	.0026	.0082	.0022
#2	.0093	9.761	.0132	.2537	.0020	.0552	.0058

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0008	.1341
#1	.0000	.1333
#2	.0015	.1349

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Method: TAMMY Sample Name: 74983S Operator: kj
Run Time: 05/11/92 11:20:16
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.801	18.97	3.580	1.884	1.891	1.771	67.74
#1	1.798	19.07	3.617	1.885	1.908	1.785	67.97
#2	1.803	18.87	3.543	1.884	1.874	1.756	67.52

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.729	1.766	1.768	3.626	17.74	37.48	1.927
#1	1.732	1.768	1.769	3.653	17.83	37.77	1.945
#2	1.727	1.764	1.767	3.599	17.64	37.20	1.908

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.53	3.530	1.787	69.05	3.436	3.419	3.492
#1	31.73	3.542	1.797	69.67	3.462	3.430	3.510
#2	31.33	3.517	1.778	68.44	3.409	3.408	3.474

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.618	19.19	3.478	1.965	3.578	3.319	1.782
#1	3.586	19.24	3.475	1.980	3.603	3.271	1.791
#2	3.650	19.14	3.482	1.949	3.553	3.366	1.772

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	1.825	3.619
#1	1.837	3.628
#2	1.812	3.610

Analysis Report Mon 05-11-92 11:25:25 AM page 1

Method: TAMMY Sample Name: 74893L Operator. kj
Run Time: 05/11/92 11:23:02
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0009	.0443	.0041	.0104	.0182	.0010	11.14
#1	-.0009	.0443	.0054	.0104	.0185	.0010	11.16
#2	-.0009	.0443	.0027	.0104	.0179	.0010	11.12

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0005	-.0010	.0043	.0073	.0769	4.232	.0000
#1	-.0017	.0000	.0035	.0061	.0759	4.312	-.0020
#2	.0008	-.0020	.0050	.0086	.0778	4.153	.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.096	.0028	.0037	7.431	-.0024	.0053	.0039
#1	3.133	.0028	.0028	7.436	-.0067	.0082	.0052
#2	3.059	.0028	.0047	7.427	.0019	.0027	.0027

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0097	2.083	.0054	.0511	.0019	.0081	.0018
#1	.0084	2.058	.0023	.0514	.0016	.0693	.0015
#2	-.0279	2.109	.0085	.0508	.0022	-.0530	.0021

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0000	.0318
#1	.0000	.0318
#2	.0000	.0318

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Method: TAMMY Sample Name: 74984 Operator: kj
Run Time: 05/11/92 11:26:25
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0074	-.1168	.0052	-.0039	-.0003	-.0003	-.0036
#1	.0078	-.1178	.0072	-.0035	-.0003	-.0003	-.0054
#2	.0069	-.1157	.0033	-.0044	-.0003	-.0003	-.0018

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0022	.0020	-.0012	.0012	-.0024	-2.520	-.0007
#1	-.0026	.0020	-.0012	.0012	-.0019	-2.399	-.0007
#2	-.0017	.0020	-.0012	.0012	-.0029	-2.640	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0864	-.0015	-.0019	-.0731	-.0024	-.0137	.0134
#1	-.0740	-.0015	-.0009	-.0753	-.0024	-.0137	.0141
#2	-.0987	-.0015	-.0028	-.0709	-.0024	-.0137	.0128

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0007	-.0426	-.0008	.0000	-.0030	.1128	-.0009
#1	.0049	-.0469	-.0019	.0000	-.0026	.1457	-.0009
#2	-.0035	-.0383	.0002	.0000	-.0033	.0799	-.0009

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0000	-.0037
#1	.0000	-.0037
#2	.0000	-.0037

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Method. TAMMY Sample Name: 74984 Operator: kj
Run Time: 05/11/92 11:29:16
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0009	.2043	-.0158	.0315	.0872	-.0007	49.65
#1	.0005	.2043	-.0178	.0320	.0872	-.0010	49.61
#2	-.0023	.2043	-.0139	.0311	.0872	-.0003	49.70

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0014	-.0029	.0046	.0208	.2827	9.448	.0020
#1	.0010	-.0020	.0058	.0208	.2812	9.081	.0020
#2	.0018	-.0039	.0035	.0208	.2841	9.815	.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.82	.0155	.0047	24.49	-.0029	-.0084	-.0028
#1	13.79	.0155	.0047	24.42	-.0010	-.0084	-.0073
#2	13.84	.0155	.0047	24.57	-.0048	-.0084	.0017

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0215	9.710	.0094	.2455	.0023	.0654	.0012
#1	-.0145	9.710	.0107	.2452	.0030	.0748	.0009
#2	-.0285	9.710	.0082	.2458	.0017	.0560	.0015

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.1093
#1	.0000	.1093
#2	-.0015	.1093

Method: TAMMY Sample Name: 74999 Operator: kj
Run Time: 05/11/92 11:33:17
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0008	.0984	.0000	.0261	.1012	.0000	53.77
#1	.0005	.0897	.0001	.0274	.1003	-.0003	53.72
#2	-.0022	.1070	-.0000	.0248	.1020	.0003	53.82

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0025	-.0010	.0074	.0171	.4641	7.472	.0027
#1	-.0042	-.0020	.0105	.0159	.4671	7.741	.0034
#2	-.0008	.0000	.0043	.0183	.4612	7.202	.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	15.04	.0100	.0057	49.99	.0029	.0053	.0160
#1	15.05	.0092	.0084	49.81	.0052	-.0084	.0199
#2	15.03	.0108	.0029	50.17	.0005	.0191	.0122

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0025	9.987	-.0005	.2752	.0075	-.0115	.0034
#1	.0073	9.966	.0012	.2749	.0062	-.1150	.0040
#2	-.0123	10.01	-.0021	.2754	.0089	.0919	.0028

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.0689
#1	.0000	.0672
#2	-.0015	.0705

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Method: TAMMY Sample Name: CCVC2 Operator: kj
Run Time: 05/11/92 11:43:23
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5085	5.089	.0152	-.0015	.4925	.5057	25.34
#1	.5106	5.089	.0114	-.0023	.4942	.5071	25.40
#2	.5064	5.089	.0191	-.0006	.4908	.5043	25.28

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5012	.4926	.4913	.4862	4.938	25.69	-.0007
#1	.5058	.4946	.4936	.4875	4.964	25.79	-.0007
#2	.4965	.4907	.4890	.4850	4.912	25.59	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	49.61	.4965	.0007	25.37	.4791	.4885	.5069
#1	49.72	.4989	-.0002	25.38	.4872	.4885	.5140
#2	49.49	.4942	.0016	25.36	.4710	.4885	.4998

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0018	-.0572	-.0013	.0000	.0006	-.0142	.4912
#1	-.0004	-.0487	-.0073	.0000	.0003	-.0615	.4936
#2	-.0033	-.0657	.0047	.0000	.0009	.0330	.4887

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.5058
#1	.0000	.5078
#2	-.0015	.5037

Analysis Report QC Standard Mon 05-11-92 11:48:41 AM page 1

Method: TAMMY Sample Name: CCVN2 Operator: kj
Run Time: 05/11/92 11:46:19
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0000	.0043	4.835	.5076	-.0006	.0003	.0877
#1	-.0018	.0097	4.836	.5115	-.0009	.0003	.0912
#2	.0018	-.0011	4.833	.5037	-.0003	.0003	.0841

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0041	-.0010	-.0008	.0073	-.0010	.3205	.5263
#1	.0045	-.0020	-.0019	.0061	-.0019	.2772	.5236
#2	.0037	.0000	.0004	.0085	-.0000	.3639	.5290

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	-.0016	.5130	8.160	-.0012	-.0000	.0134
#1	.0247	-.0016	.5149	8.162	-.0000	-.0137	.0128
#2	-.0247	-.0016	.5112	8.158	-.0024	.0137	.0141

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.785	5.062	.4958	.4796	.5020	Q4.466	-.0018
#1	4.801	5.083	.4958	.4788	.5017	Q4.405	-.0009
#2	4.769	5.040	.4958	.4804	.5023	4.528	-.0027

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.4985	.0012
#1	.4985	.0004
#2	.4985	.0021

Analysis Report Blank Sample Mon 05-11-92 11:51:17 AM page 1

Method: TAMMY Sample Name: CCB2 Operator: kj
Run Time: 05/11/92 11:48:55
Comment: EG&G IDA 56
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0023	-.0022	-.0179	.0009	-.0003	-.0003	-.0018
#1	-.0023	-.0032	-.0157	.0000	-.0003	-.0003	-.0018
#2	-.0023	-.0011	-.0201	.0017	-.0003	-.0003	-.0018

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0001	-.0010	.0027	.0037	-.0015	.0740	.0000
#1	.0001	.0000	.0050	.0037	-.0039	.1079	.0007
#2	.0001	-.0020	.0004	.0037	.0010	.0402	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0247	.0000	-.0019	-.0089	.0021	.0027	-.0019
#1	-.0247	.0000	-.0009	-.0089	.0033	.0082	-.0077
#2	-.0247	.0000	-.0028	-.0089	.0010	-.0027	.0038

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0147	.0000	.0042	.0000	-.0010	-.0235	-.0006
#1	-.0231	.0128	.0123	.0000	-.0000	-.0611	-.0009
#2	-.0063	-.0128	-.0039	.0000	-.0020	.0141	-.0003

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0015	.0012
#1	.0015	.0012
#2	.0015	.0012

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Method: TAMMY Sample Name: 75000 Operator: kj
Run Time: 05/11/92 11:51:24
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0001	.1146	-.0050	.0646	.0980	-.0010	50.23
#1	.0005	.1265	-.0062	.0651	.0975	-.0010	50.04
#2	-.0004	.1027	-.0038	.0642	.0986	-.0010	50.43

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0005	-.0039	.0070	.0147	.2982	6.581	.0034
#1	.0000	-.0039	.0058	.0159	.2987	6.609	.0034
#2	.0009	-.0039	.0081	.0134	.2978	6.552	.0034

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.25	.0100	.0056	47.64	.0002	.0054	.0075
#1	14.19	.0108	.0084	47.48	.0048	-.0084	.0183
#2	14.31	.0093	.0028	47.80	-.0043	.0191	-.0034

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0183	10.28	.0065	.2635	.0074	-.0336	.0022
#1	.0183	10.23	.0115	.2627	.0063	.0463	.0022
#2	.0183	10.33	.0015	.2643	.0084	-.1135	.0022

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.0710
#1	-.0015	.0714
#2	.0000	.0705

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Method: TAMMY Sample Name: 75001 Operator: kj
Run Time: 05/11/92 11:53:53
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	.0605	-.0021	.0534	.0924	.0000	48.87
#1	-.0023	.0616	-.0096	.0520	.0918	-.0003	48.97
#2	.0023	.0595	.0053	.0547	.0929	.0003	48.77

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0013	.0118	.0027	.0489	.2403	5.556	.0020
#1	-.0025	.0098	.0019	.0501	.2384	5.439	.0020
#2	-.0000	.0137	.0035	.0476	.2423	5.672	.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	15.15	.0255	.0019	81.79	-.0026	.0027	.0093
#1	15.15	.0247	.0010	81.66	-.0048	.0027	.0131
#2	15.15	.0263	.0028	81.92	-.0005	.0027	.0055

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0037	13.02	-.0095	.2500	.0032	-.0193	.0028
#1	.0036	13.05	-.0059	.2500	.0029	-.0287	.0021
#2	-.0110	12.98	-.0130	.2500	.0035	-.0099	.0034

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.0611
#1	-.0015	.0606
#2	.0000	.0615

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Method: TAMMY Sample Name: 75002 Operator: kj
Run Time: 05/11/92 11:56:22
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0013	.1427	-.0072	.0392	.0992	-.0003	46.69
#1	-.0013	.1416	-.0107	.0379	.0997	.0003	46.66
#2	-.0013	.1438	-.0036	.0405	.0986	-.0010	46.71

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0029	.0118	.0050	.0501	.4350	5.009	.0027
#1	-.0025	.0098	.0043	.0501	.4359	5.287	.0034
#2	-.0034	.0137	.0058	.0501	.4340	4.731	.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.40	.0272	.0047	78.55	.0012	-.0002	.0051
#1	14.38	.0280	.0047	78.63	-.0038	-.0029	.0070
#2	14.41	.0264	.0047	78.48	.0062	.0026	.0032

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0006	12.49	.0074	.2415	.0032	.0217	.0028
#1	-.0046	12.48	.0116	.2415	.0032	.0735	.0009
#2	.0058	12.51	.0033	.2415	.0032	-.0300	.0046

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0008	.0771
#1	.0000	.0771
#2	-.0015	.0771

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Method: TAMMY Sample Name: ICSAIF Operator: kj
Run Time: 05/11/92 12:00:32
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0024	495.6	.1453	-.0250	.0009	-.0003	465.3
#1	-.0004	495.5	.1632	-.0285	.0009	-.0003	465.9
#2	-.0045	495.7	.1273	-.0214	.0009	-.0003	464.6

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0036	.0128	.0054	.0023	172.3	.0867	-.0007
#1	-.0037	.0118	.0066	.0035	172.3	.1841	-.0007
#2	-.0035	.0137	.0043	.0011	172.2	-.0106	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	477.7	.0076	-.0057	-.0044	.0005	-.0100	-.0284
#1	477.6	.0068	-.0085	-.0044	.0014	-.0320	-.0405
#2	477.8	.0083	-.0029	-.0044	-.0005	.0119	-.0163

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0156	-.0637	-.0159	.0169	.0351	.7260	-.0047
#1	-.0050	-.0595	-.0057	.0169	.0356	.5987	-.0026
#2	.0362	-.0680	-.0261	.0169	.0347	.8534	-.0069

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0008	-.0008
#1	.0015	-.0004
#2	.0000	-.0012

Method: TAMMY Sample Name: ICSABIF Operator: kj
Run Time: 05/11/92 12:03:09
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9149	495.4	.1529	-.0234	.4626	.4641	465.4
#1	.9161	496.7	.0967	-.0263	.4629	.4655	465.7
#2	.9137	494.0	.2092	-.0205	.4623	.4627	465.0

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.8705	.4465	.4274	.4736	171.6	-.4168	.0013
#1	.8717	.4475	.4278	.4773	171.9	-.4316	-.0007
#2	.8692	.4455	.4270	.4699	171.3	-.4020	.0034

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	475.8	.4368	-.0030	-.0089	.8292	.8556	-.0140
#1	477.1	.4404	-.0067	-.0044	.8222	.8633	-.0040
#2	474.5	.4332	.0007	-.0133	.8361	.8480	-.0240

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0439	-.0848	-.0382	.0169	.0302	.6611	.4361
#1	-.1221	-.0934	-.0391	.0169	.0303	.4146	.4343
#2	.0344	-.0762	-.0372	.0169	.0302	.9076	.4380

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	-.0015	.8767
#1	-.0015	.8808
#2	-.0015	.8725

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Method: TAMMY Sample Name: CCVC3 Operator: kj
Run Time: 05/11/92 12:05:52
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5030	5.096	.0110	-.0019	.4945	.5095	24.97
#1	.5046	5.136	.0061	-.0023	.4959	.5106	25.05
#2	.5013	5.056	.0160	-.0014	.4930	.5085	24.89

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4970	.4936	.4808	.4911	4.908	25.63	-.0020
#1	.5059	.4926	.4820	.4923	4.933	25.64	-.0034
#2	.4881	.4946	.4797	.4899	4.882	25.62	-.0007

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	49.05	.4904	.0007	25.46	.4703	.4775	.5152
#1	49.20	.4911	.0016	25.53	.4724	.4775	.5127
#2	48.90	.4896	-.0002	25.40	.4681	.4775	.5177

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0212	-.0231	-.0076	.0000	-.0001	.0707	.4872
#1	.0352	-.0317	-.0049	-.0016	-.0004	-.0611	.4869
#2	.0072	-.0146	-.0103	.0016	.0002	.2026	.4875

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0015	.4942
#1	.0015	.4946
#2	.0015	.4938

Analysis Report QC Standard Mon 05-11-92 12:11:02 PM page 1

Method: TAMMY Sample Name: CLPN3 Operator: kj
Run Time: 05/11/92 12:08:41 CCVN3
Comment: veobrien 3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0002	-.0000	4.818	.5163	-.0003	.0000	.0984
#1	.0005	.0011	4.843	.5185	.0003	-.0003	.0984
#2	-.0000	-.0011	4.792	.5142	-.0009	.0003	.0984

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0021	.0020	.0004	.0024	.0000	-.0053	.5323
#1	.0078	.0020	.0012	.0037	.0039	.1016	.5303
#2	-.0036	.0020	-.0004	.0012	-.0039	-.1121	.5344

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	-.0016	.5121	8.211	.0107	-.0082	.0083
#1	.0000	-.0016	.5112	8.224	.0100	-.0082	.0128
#2	.0000	-.0016	.5130	8.198	.0115	-.0082	.0038

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.835	5.079	.5129	.4849	.5050	Q4.382	-.0031
#1	4.847	5.083	.5183	.4852	.5056	Q4.443	-.0027
#2	4.822	5.075	.5075	.4846	.5043	Q4.321	-.0034

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.5023	.0017
#1	.5030	.0004
#2	.5015	.0029

Method: TAMMY Sample Name: CCB3 Operator: kj
Run Time: 05/11/92 12:11:12
Comment: EG&G IDA 56
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0007	.0000	-.0017	.0009	.0003	.0000	.0072
#1	-.0009	.0054	-.0042	-.0009	.0003	.0003	.0018
#2	-.0005	-.0054	.0009	.0026	.0003	-.0003	.0125

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0021	-.0010	.0012	.0049	.0024	.0772	-.0007
#1	-.0008	-.0020	.0027	.0061	.0029	.1164	.0007
#2	-.0034	.0000	-.0004	.0037	.0019	.0381	-.0020

Elem	Mg3822	Mn2576	Mo2023	Na5889	Ni2316	Pb2203	Sb2175
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	-.0008	.0009	-.0000	-.0041	-.0027	.0128
#1	.0000	-.0016	-.0009	.0044	-.0038	-.0028	.0231
#2	.0000	.0000	.0028	-.0044	-.0043	-.0027	.0026

Elem	Se1960	Si2881	Sn1899	Sr4215	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0304	.0085	.0050	.0000	-.0007	-.0423	.0006
#1	.0217	.0213	.0135	.0016	.0000	-.0893	.0003
#2	.0391	-.0043	-.0035	-.0016	-.0013	.0047	.0009

Elem	Y_3710	Zn2138
Units	ppm	ppm
Avge	.0000	.0017
#1	.0015	.0012
#2	-.0015	.0021

[illegible] Hs VEDBRIEN-3 OP

Line Report	Laboratory Sample Name	Customer/EPA Sample Name	Type	Matrix	Instrument Dil.	Date	Time	Fl
1	[illegible]		3		1.0	05/05/92	12:56:40	
[illegible]	[illegible]		3		1.0	05/05/92	13:00:24	
[illegible]	[illegible]		3		1.0	05/05/92	13:04:08	
4	[illegible]		3		1.0	05/05/92	13:07:53	
[illegible]	[illegible]		3		1.0	05/05/92	13:11:38	7=.99
6	ICV	ICV	0		1.0	05/05/92	13:15:21	101.
7	ICB	ICB	0		1.0	05/05/92	13:19:05	
8	CCV1	CCV	0		1.0	05/05/92	13:22:49	103.
9	CCB1	CCB	0		1.0	05/05/92	13:26:34	
10	CRA	CRA	0		1.0	05/05/92	13:30:20	96.
11	ZZZZZ		0		1.0	05/05/92	13:34:03	
12	PBS	PBS	0		1.0	05/05/92	13:37:48	
13	+20		1		1.0	05/05/92	13:41:31	
14	LCSM		0		2.0	05/05/92	13:45:14	97.
15	747168		0		2.0	05/05/92	13:48:58	91.7
16	74716		0		1.0	05/05/92	13:52:41	
17	+20		1		1.0	05/05/92	13:56:25	
18	747160		0		1.0	05/05/92	14:00:09	
19	+20		1		1.0	05/05/92	14:03:52	
20	CCV2	CCV	0		1.0	05/05/92	14:07:40	99.
21	CCB2	CCB	0		1.0	05/05/92	14:11:26	
22	74717		0		1.0	05/05/92	14:15:15	
23	+20		1		1.0	05/05/92	14:19:02	
24	CCV3	CCV	0		1.0	05/05/92	14:22:50	101.
25	CCB3	CCB	0		1.0	05/05/92	14:26:34	

[illegible]
Sample Dates

#	Laboratory	EPA/Customer	Element	Original	Added	Found	% R
1	PBS	PBS	AS193.70	-1.40000	20.000	20.60000	103.0
2	74716		AS193.70	29.50000	20.000	48.90000	97.0
3	74714		AS193.70	10.30000	20.000	38.90000	93.5
4	74717		AS193.70	33.50000	20.000	53.90000	92.0

As VEOBRIEN-3 OP 5 may 92

ICV2R = 50.4
CCV = 50.0
2CSM = 100.0

Element: As
Time: 10:54
ID.Wt File: 6420A861.IDW
Calic. Type: Linear

Wavelength: 193.7
Slit: 0.70
Lamp Current: 2
Energy: 51

Seq. No.: 00001 A/S Pos.: 1 Date: 05/05/

Replicate 1
Peak Area (A-s): -0.000
Background Pk Area (A-s): 0.001
Blank Corrected Pk Area (A-s): -0.000

Time: 10:53
Peak Height (A): 0.002
Background Pk Height (A): 0.007

Replicate 2
Peak Area (A-s): -0.002
Background Pk Area (A-s): 0.003
Blank Corrected Pk Area (A-s): -0.002

Time: 10:53
Peak Height (A): 0.000
Background Pk Height (A): 0.003

Mean Pk Area (A-s): -0.001 SD: 0.0013 RSD(%): 132.

Auto-zero performed.

Seq. No.: 00002 A/S Pos.: 2 Date: 05/05/

Replicate 1
Peak Area (A-s): 0.022
Background Pk Area (A-s): 0.009
Blank Corrected Pk Area (A-s): 0.013

Time: 10:50
Peak Height (A): 0.037
Background Pk Height (A): 0.010

Replicate 2
Peak Area (A-s): 0.021
Background Pk Area (A-s): 0.009
Blank Corrected Pk Area (A-s): 0.012

Time: 10:00
Peak Height (A): 0.06[illegible]
Background Pk Height (A): [illegible]

Mean Pk Area (A-s): 0.012 SD: 0.0002 RSD(%): 1.4[illegible]

Standard number 1 spiked. [10.0]
Correlation coefficient: 1.00000 Slope: 0.0011 Int.: [illegible]

Seq. No.: 00003 A/S Pos.: 3 Date: 05/05/

Replicate 1
Peak Area (A-s): 0.062
Background Pk Area (A-s): 0.009
Blank Corrected Pk Area (A-s): 0.061
Concentration (ug/L): 10.[illegible]

Time: 10:[illegible]
Peak Height (A): 0.1[illegible]
Background Pk Height (A): [illegible]

Replicate 2
Peak Area (A-s): 0.06[illegible]
Background Pk Area (A-s): 0.011
Blank Corrected Pk Area (A-s): 0.1[illegible]
Concentration (ug/L): 20.[illegible]

Time: 10:04
Peak Height (A): 0.13[illegible]
Background Pk Height (A): [illegible]

Mean Conc (ug/L): 20.[illegible] SD: [illegible] RSD(%): 2.15

Standard number [illegible] spiked. [illegible]

000078

MCOBRIEN-[illegible]

As ID: [illegible] Seq. No.: 00004 A/S Pos.: 4 Date: 05/05/[illegible]

Replicate 1
Peak Area (A-s): 0.164
Background Pk Area (A-s): 0.016
Blank Corrected Pk Area (A-s): 0.155
Concentration (ug/L): 48.1

Time: 11:06
Peak Height (A): 0.329
Background Pk Height (A): 0.023

Replicate 2
Peak Area (A-s): 0.167
Background Pk Area (A-s): 0.018
Blank Corrected Pk Area (A-s): 0.158
Concentration (ug/L): 49.1

Time: 11:07
Peak Height (A): 0.323
Background Pk Height (A): 0.025

Mean Conc (ug/L): 48.6 SD: 0.71 RSD(%): 1.45

Standard number 3 applied. [50.0]
Correlation coefficient: 0.99993 Slope: 0.0031 Int: 0.301

As ID: S100 Seq. No.: 00005 A/S Pos.: 5 Date: 05/05/[illegible]

Replicate 1
Peak Area (A-s): 0.236
Background Pk Area (A-s): 0.029
Blank Corrected Pk Area (A-s): 0.207
Concentration (ug/L): 91.3

Time: 13:09
Peak Height (A): 0.143
Background Pk Height (A): 0.042

Replicate 2
Peak Area (A-s): 0.295
Background Pk Area (A-s): 0.027
Blank Corrected Pk Area (A-s): 0.297
Concentration (ug/L): 94.7

Time: 13:11
Peak Height (A): 0.[illegible]
Background Pk Height (A): 0.041

Mean Conc (ug/L): 93.2 SD: 3.16 RSD(%): 3.32

Standard number 4 applied. [100.0]
Correlation coefficient: 0.99988 Slope: 0.0029 Int: 0.304

As ID: ICV Seq. No.: 00006 A/S Pos.: 3 Date: 05/05/[illegible]

Replicate 1
Peak Area (A-s): 0.152
Background Pk Area (A-s): 0.018
Blank Corrected Pk Area (A-s): 0.153
Concentration (ug/L): 51.2

Time: 13:13
Peak Height (A): 0.343
Background Pk Height (A): 0.024

Replicate 2
Peak Area (A-s): 0.157
Background Pk Area (A-s): 0.018
Blank Corrected Pk Area (A-s): 0.154
Concentration (ug/L): 51.5

Time: 13:15
Peak Height (A): 0.336
Background Pk Height (A): 0.02[illegible]

Mean Conc (ug/L): 51.3 SD: 0.22 RSD(%): 0.43

000073

VEOBRIEN-3

As ID: [illegible] Seq. No.: 00007 A/S Pos.: 7 Date: 05/05/[illegible]

Replicate [illegible]
Peak Area (A-s): -0.001
Background Pk Area (A-s): 0.009
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): [illegible]

Time: 13:17
Peak Height (A): 0.005
Background Pk Height (A): 0.007

Replicate 2
Peak Area (A-s): -0.002
Background Pk Area (A-s): 0.009
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -1.8

Time: 13:19
Peak Height (A): 0.006
Background Pk Height (A): 0.007

Mean Conc (ug/L): -1.6 SD: 0.27 RSD(%): 16.4[illegible]

QC sample is within range -10 - 10

As ID: CCV Seq. No.: 00008 A/S Pos.: 8 Date: 05/05[illegible]

Replicate 1
Peak Area (A-s): 0.153
Background Pk Area (A-s): 0.019
Blank Corrected Pk Area (A-s): 0.154
Concentration (ug/L): 51.6

Time: 13:20
Peak Height (A): 0.350
Background Pk Height (A): 0.013

Replicate 2
Peak Area (A-s): 0.154
Background Pk Area (A-s): 0.013
Blank Corrected Pk Area (A-s): 0.155
Concentration (ug/L): 51.7

Time: 13:22
Peak Height (A): 0.353
Background Pk Height (A): [illegible]

Mean Conc (ug/L): 51.6 SD: 0.13 RSD (%): 0.25

QC sample is within range 40.0 - 60.0

As ID: CCB Seq. No.: 00009 A/S Pos.: 9 Date: 05/05[illegible]

Replicate 1
Peak Area (A-s): -0.001
Background Pk Area (A-s): 0.008
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): -1.3

Time: 13:24
Peak Height (A): 0.005
Background Pk Height (A): 0.008

Replicate 2
Peak Area (A-s): -0.003
Background Pk Area (A-s): 0.009
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -2.0

Time: 13:[illegible]
Peak Height (A): 0.005
Background Pk Height (A): 0.007

Mean Conc (ug/L): -1.5 SD: 0.51 RSD(%): 30.7

QC sample is within range -10 - 10

000099

O'BRIEN-3

As ID: [illegible] Seq. No.: 00010 A/S Pos.: 10 Date: 05/05/[illegible]

Replicate 1 Time: 13:20
Peak Area (A-s): 0.031 Peak Height (A): 0.073
Background Pk Area (A-s): 0.014 Background Pk Height (A): 0.011
Blank Corrected Pk Area (A-s): 0.032
Concentration (ug/L): 9.6

Replicate 2 Time: 13:20
Peak Area (A-s): 0.031 Peak Height (A): 0.071
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.011
Blank Corrected Pk Area (A-s): 0.032
Concentration (ug/L): 9.6

Mean Conc (ug/L): 9.6 SD: 0.04 RSD(%): 0.46

QC sample is within range

As ID: BLANK Seq. No.: 00011 A/S Pos.: 11 Date: 05/05/[illegible]

Replicate 1 Time: 13:32
Peak Area (A-s): -0.000 Peak Height (A): 0.005
Background Pk Area (A-s): 0.000 Background Pk Height (A): 0.007
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -1.1

Replicate 2 Time: 13:34
Peak Area (A-s): 0.000 Peak Height (A): 0.005
Background Pk Area (A-s): 0.000 Background Pk Height (A): 0.004
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -1.0

Mean Conc (ug/L): -1.1 SD: 0.15 RSD(%): 13.46

QC sample is within range

As ID: PBS Seq. No.: 00012 A/S Pos.: 12 Date: 05/05/[illegible]

Replicate 1 Time: 13:35
Peak Area (A-s): -0.001 Peak Height (A): 0.005
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.009
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -1.4

Replicate 2 Time: 13:37
Peak Area (A-s): -0.001 Peak Height (A): 0.005
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.008
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -1.4

Mean Conc (ug/L): -1.4 SD: 0.01 RSD(%): 0.33

As ID: [illegible] Seq. No.: 00013 A/S Pos.: 13 Date: 05/05/[illegible]

000091

Replicate 1 Time: 13:[illegible]

VEOBRIEN-3

[illegible] Background Pk Height (A): 0.016
Blank Corrected Pk Area (A-s): 0.[illegible]
Concentration (ug/L): 59.4

Replicate [illegible] Time: 11:4[illegible]
Peak Area (A-s): 0.[illegible] Peak Height (A): 0.108
Background Pk Area (A-s): 0.014 Background Pk Height (A): 0.013
Blank Corrected Pk Area (A-s): 0.063
Concentration (ug/L): 20.[illegible]

Mean Conc (ug/L): 20.6 SD: 0.35 RSD(%): 1.60

As ID: LCSM/2 Seq. No.: 00014 A/S Pos.: 14 Date: 05/05/[illegible]

Replicate 1 Time: 11:42
Peak Area (A-s): 0.142 Peak Height (A): 0.232
Background Pk Area (A-s): 0.01[illegible] Background Pk Height (A): 0.[illegible]
Blank Corrected Pk Area (A-s): 0.142
Concentration (ug/L): 47.3

Replicate 2 Time: 11:45
Peak Area (A-s): 0.147 Peak Height (A): 0.241
Background Pk Area (A-s): 0.012 Background Pk Height (A): 0.020
Blank Corrected Pk Area (A-s): 0.140
Concentration (ug/L): 49.4

Mean Conc (ug/L): 48.[illegible] SD: 1.31 RSD(%): 2.[illegible]

As ID: 747168/2 Seq. No.: 00015 A/S Pos.: 15 Date: 05/05/[illegible]

Replicate 1 Time: 11:47
Peak Area (A-s): 0.190 Peak Height (A): 0.2[illegible]
Background Pk Area (A-s): 0.101 Background Pk Height (A): 0.1[illegible]
Blank Corrected Pk Area (A-s): 0.191
Concentration (ug/L): 63.7

Replicate 2 Time: 1[illegible]
Peak Area (A-s): 0.190 Peak Height (A): 0.245
Background Pk Area (A-s): 0.103 Background Pk Height (A): 0.[illegible]
Blank Corrected Pk Area (A-s): 0.181
Concentration (ug/L): 60.5

Mean Conc (ug/L): 62.[illegible] SD: 0.39 RSD (%): 0.[illegible]

As ID: 74716 Seq. No.: 00016 A/S Pos.: 16 Date: 05/05/[illegible]

Replicate 1 Time: 11:50
Peak Area (A-s): 0.080 Peak Height (A): 0.122
Background Pk Area (A-s): 0.0[illegible] Background Pk Height (A): 0.1[illegible]
Blank Corrected Pk Area (A-s): 0.089
Concentration (ug/L): 30.[illegible]

Replicate 2 Time: 11:53
Peak Area (A-s): 0.090 Peak Height (A): 0.[illegible]
Background Pk Area (A-s): 0.0[illegible] Background Pk Height (A): [illegible]

MCBRIEN-[illegible]

[illegible]

Mean Conc (ug/L): 29.5 SD: 0.41 RSD(%): 1.38

As ID: [illegible] Seq. No.: 00017 A/S Pos.: 17 Date: 05/05/

Replicate 1
Peak Area (A-s): [illegible]
Background Pk Area (A-s): 1.100
Blank Corrected Pk Area (A-s): 0.147
Concentration (ug/L): 49.2

Time: 13:54
Peak Height (A): 0.195
Background Pk Height (A): 1.293

Replicate 2
Peak Area (A-s): 0.145
Background Pk Area (A-s): 1.079
Blank Corrected Pk Area (A-s): 0.146
Concentration (ug/L): 48.7

Time: 13:56
Peak Height (A): 0.190
Background Pk Height (A): 1.124

Mean Conc (ug/L): 48.9 SD: 0.34 RSD(%): 0.[illegible]

As ID: 74710D Seq. No.: 00018 A/S Pos.: 18 Date: 05/05/

Replicate 1
Peak Area (A-s): 0.062
Background Pk Area (A-s): 0.995
Blank Corrected Pk Area (A-s): 0.063
Concentration (ug/L): 20.2

Time: 13:58
Peak Height (A): 0.082
Background Pk Height (A): 1.173

Replicate 2
Peak Area (A-s): 0.062
Background Pk Area (A-s): 0.972
Blank Corrected Pk Area (A-s): 0.063
Concentration (ug/L): 20.1

Time: 14:00
Peak Height (A): 0.[illegible]
Background Pk Height (A): [illegible]

Mean Conc (ug/L): 20.2 SD: 0.09 RSD(%): 0.45

As ID: +20 Seq. No.: 00019 A/S Pos.: 19 Date: 05/05

Replicate 1
Peak Area (A-s): 0.117
Background Pk Area (A-s): 0.[illegible]
Blank Corrected Pk Area (A-s): 0.118
Concentration (ug/L): 29.1

Time: 14:02
Peak Height (A): 0.165
Background Pk Height (A): 1.[illegible]

Replicate 2
Peak Area (A-s): 0.116
Background Pk Area (A-s): 0.975
Blank Corrected Pk Area (A-s): 0.117
Concentration (ug/L): 28.7

Time: 14:03
Peak Height (A): 0.161
Background Pk Height (A): 1.[illegible]

Mean Conc (ug/L): 38.9 SD: 0.30 RSD(%): 0.77

As ID: [illegible] Seq. No.: 00020 A/S Pos.: [illegible] Date: 05/[illegible]

C00083

VEOBRIEN-

Peak Area (A-s): .150 | Peak Height (A): 0.299
Background Pk Area (A-s): 0.000 | Background Pk Height (A): 0.007
Blank Corrected Pk Area (A-s): 0.151
Concentration (ug/L): 50.3

Replicate 2 | Time: 14:07
Peak Area (A-s): 0.147 | Peak Height (A): 0.289
Background Pk Area (A-s): 0.022 | Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.140
Concentration (ug/L): 49.3

Mean Conc (ug/L): 49.8 SD: 0.68 RSD(%): 1.36

QC sample is within range 40.0 - 60.0

As ID: CCB Seq. No.: 00021 A/S Pos.: 9 Date: 05/05/

Replicate 1 | Time: 14:09
Peak Area (A-s): -0.002 | Peak Height (A): 0.005
Background Pk Area (A-s): 0.012 | Background Pk Height (A): 0.009
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -1.0

Replicate 2 | Time: 14:11
Peak Area (A-s): -0.000 | Peak Height (A): 0.005
Background Pk Area (A-s): 0.011 | Background Pk Height (A): 0.008
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -1.2

Mean Conc (ug/L): -1.5 SD: 0.42 RSD(%): 29.40

QC sample is within range -10 - 10

As ID: 74717 Seq. No.: 00022 A/S Pos.: 20 Date: 05/05/

Replicate 1 | Time: 14:13
Peak Area (A-s): 0.108 | Peak Height (A): 0.160
Background Pk Area (A-s): 2.125 | Background Pk Height (A): 1.301
Blank Corrected Pk Area (A-s): 0.109
Concentration (ug/L): 36.1

Replicate 2 | Time: 14:15
Peak Area (A-s): 0.105 | Peak Height (A): 0.167
Background Pk Area (A-s): 2.310 | Background Pk Height (A): 1.37
Blank Corrected Pk Area (A-s): 0.106
Concentration (ug/L): 34.9

Mean Conc (ug/L): 35.5 SD: 0.85 RSD (%): 2.41

As ID: +20 Seq. No.: 00023 A/S Pos.: 21 Date: 05/05

Replicate 1 | Time: 14:17
Peak Area (A-s): 0.161 | Peak Height (A): 0.256
Background Pk Area (A-s): 2.200 | Background Pk Height (A): [illegible]
Blank Corrected Pk Area (A-s): 0.162

000084

VEOBRIEN-3

Replicate [illegible] Time: 14:19
Peak Area (A-s): 0.150 Peak Height (A): 0.247
Background Pk Area (A-s): 0.320 Background Pk Height (A): 1.013
Blank Corrected Pk Area (A-s): 0.160
Concentration (ug/L): 50.5

Mean Conc (ug/L): 52.9 SD: 0.45 RSD(%): 0.83

Seq ID: CCV Seq. No.: 00024 A/S Pos.: 8 Date: 05/05/

Replicate 1 Time: 14:20
Peak Area (A-s): 0.153 Peak Height (A): 0.307
Background Pk Area (A-s): 0.189 Background Pk Height (A): 0.475
Blank Corrected Pk Area (A-s): 0.154
Concentration (ug/L): 51.4

Replicate 2 Time: 14:22
Peak Area (A-s): 0.148 Peak Height (A): 0.311
Background Pk Area (A-s): 0.036 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.149
Concentration (ug/L): 49.0

Mean Conc (ug/L): 50.6 SD: 1.10 RSD(%): 3.17

QC sample is within range 40.0 - 60.0

Seq ID: CCB Seq. No.: 00025 A/S Pos.: 9 Date: 05/05/

Replicate 1 Time: 14:24
Peak Area (A-s): -0.001 Peak Height (A): 0.005
Background Pk Area (A-s): 0.012 Background Pk Height (A): 0.002
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): -1.2

Replicate 2 Time: 14:26
Peak Area (A-s): 0.000 Peak Height (A): 0.005
Background Pk Area (A-s): 0.011 Background Pk Height (A): 0.00
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -1.1

Mean Conc (ug/L): -1.2 SD: 0.15 RSD(%): 12.5

QC sample is within range -10 - 10

MEOBRIEN-S

VERSAR LABORATORIES INC.
Worklist # 10194

06-MAY-92 10:00

Analyst: JH

Date Analyzed: 06-MAY-92

Comments: pre-run

Control #	Code	Batch	Matrix	Analysis Code	Test
6432	VEOBRIEN	3	SOIL	PB3	PB

STANDARD INFORMATION

	Name	Source	Conc.
ICV :		EPA	
CCV :		NIST	25
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	
Prep. Day/Hr. :	06-MAY-92 07:30		

INSTRUMENT # 10

Light Source:	EDL	Gas Flow:	0
Current/Power:	9	Matrix Modifiers:	Y
Slit:	0.7	Signal:	PK AR
Wavelength:	283.3	Tube:	LVP
Background Corr.:	BZ	Replicates:	2
IDL:	1	CRDL:	3
Spike:		Integration Time:	5 SEC

Correlation: 1.0000 Y-Intercept: 6 Slope: 4.16 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	6432	STD 1	1		0	10:00	6		1				
2	6432	STD 4	1		50	10:02	214	50.00	1		100.0	CRA	
3	6432	74708	1	S-1		10:04	1223	292.55	1			Dilute	
4	6432	74709	1	S-2		10:06	1906	456.73	1			Dilute	
5	6432	74710	1	S-3		10:08	2427	581.97	1			Dilute	
6	6432	74711	1	S-4		10:10	625	148.80	1			Dilute	
7	6432	74712	1	S-5		10:12	462	109.62	1			Dilute	
8	6432	74713	1	S-6		10:14	430	101.92	1			Dilute	
9	6432	74714	1	S-7		10:16	151	34.86	1				
10	6432	74715	1	S-9		10:18	1883	451.20	1			Dilute	
11	6432	74716	1	S-8		10:20	213	49.76	1				
12	6432	74717	1	S-10		10:22	411	97.36	1			Dilute	
13	6432	CCV1	1			10:24	123	28.13	1	25	112.5		
14	6432	CCB1	1			10:26	13	1.68	1				

000086

PE	0001	0.006
PE	0002	0.214
PE	0003	1.223
	E-87: VALUE GREATER	THAN ROLLOVER ABSORBANCE
PE	0004	1.906
	E-87: VALUE GREATER	THAN ROLLOVER ABSORBANCE
PE	0005	2.427
	E-87: VALUE GREATER	THAN ROLLOVER ABSORBANCE
PE	0006	0.625
PE	0007	0.462
PE	0008	0.430
PE	0009	0.151
PE	0010	1.883
	E-87: VALUE GREATER	THAN ROLLOVER ABSORBANCE
PE	0011	0.213
PE	0012	0.411
PE	0013	0.123
PE	0014	0.013

VERBRIEN 3 5-6-92 JH

6432

VERSAR LABORATORIES INC.
Worklist # 10195

07-MAY-92 02:00

Analyst: JH

Comments:

Date Analyzed: 06-MAY-92

Control #	Code	Batch	Matrix	Analysis Code	Test
6432	VEOBRIEN	3	SOIL	PB3	PB

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	4I	EPA	98.4
CCV :		NIST	25
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	
Prep. Day/Hr. :	06-MAY-92 07:30		

INSTRUMENT # 1D

Light Source:	EDL	Gas Flow:	0
Current/Power:	9	Matrix Modifiers:	Y
Slit:	0.7	Signal:	PK AR
Wavelength:	283.3	Tube:	LVP
Background Corr.:	BZ	Replicates:	2
IDL:	1	CRDL:	3
Spike:	100	Integration Time:	5 SEC

Correlation: .9991 Y-Intercept: -2.63 Slope: 4.27 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	6432	S0	1		0	11:00	-3		1				
2	6432	S5	1		5	11:05	16	4.36	1		87.2	CRA	
3	6432	S10	2		10	11:10	39		1				
4	6432	S20	3		20	11:15	89		1				
5	6432	S50	4		50	11:20	209		1				
6	6432	ICV	1			11:25	108	25.90	4	98.4	105.3		
7	6432	ICB	1			11:30	-4	-0.32	1				
8	6432	CCV1	1			11:35	112	26.83	1	25	107.3		
9	6432	CCB1	1			11:40	0	0.62	1				
10	6432	CRA	1			11:45	18	4.83	1	5	96.6		
11	6432	PBS	1			11:50	-6	-0.79	1				
12	6432	+10	1			11:55	37	9.28	1	10	92.8		
13	6432	74709D	1	S-2		12:00	231	~~54.69~~	~~50~~	JH		Dilute	
14	6432	+10	1			12:05	261	61.71	50	10	70.2	Dilute	
15	6432	LCSM	1			12:10	91	21.92	5	100	109.6	N	
16	6432	74709S	1	S-2		12:15	264	~~62.41~~	~~50~~	~~100~~ JH	******	Dilute	
17	6432	74716S	1	S-8		12:20	122	29.17	5	100	145.9	N	%REC=135.8
18	6432	74708	1	S-1		12:25	142	33.85	25				
19	6432	+10	1			12:30	179	42.51	25	10	86.6		
20	6432	CCV2	2			12:35	115	27.53	1	25	110.1		
21	6432	CCB2	2			12:40	-7	-1.02	1				

Worklist # 10195

Analyst: JH

Comments:

Date Analyzed: 06-MAY-92

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
22	6432	74709	1	S-2		12:45	288	~~68.03~~	50	JH		Dilute	
23	6432	+10	1			12:50	324	76.46	50	10	84.3	Dilute	
24	6432	74710	1	S-3		12:55	1268	~~297.42~~	100	JH		Dilute	
25	6432	+10	1			13:00	1284	301.17	100	10	37.5	Dilute	
26	6432	74711	1	S-4		13:05	120	~~28.70~~	10	JH		Rerun	BAD CV, RERUN
27	6432	+10	1			13:10	101	24.26	10	10	-44.5		
28	6432	74712	1	S-5		13:15	68	16.53	10				
29	6432	+10	1			13:20	105	25.19	10	10	86.6		
30	6432	74713	1	S-6		13:25	73	~~17.70~~	10	JH		4MSA	
31	6432	+10	1			13:30	104	24.96	10	10	72.6	Rerun	
32	6432	CCV3	3			13:35	122	29.17	1	25	116.7		
33	6432	CCB3	3			13:40	9	2.72	1				
34	6432	74714	1	S-7		11:00	32	8.11	5				
35	6432	+10	1			13:50	75	18.17	5	10	100.7		
36	6432	74715	1	S-9		13:55	88	21.21	100				
37	6432	+10	1			14:00	131	31.28	100	10	100.7		
38	6432	74716	1	S-8		14:05	40	9.98	5				RPD=5.9%
39	6432	+10	1			14:10	82	19.81	5	10	98.3		
40	6432	74716D	1	S-8		14:15	33	~~8.34~~	5	JH		4MSA	
41	6432	+10	1			14:20	64	15.60	5	10	72.6	Rerun	
42	6432	74717	1	S-10		14:25	50	12.32	10				
43	6432	+10	1			14:30	97	23.32	10	10	110.0		
44	6432	CCV4	4			14:35	107	25.66	1	25	102.6		
45	6432	CCB4	4			14:40	1	0.85	1				
46	6432	74713	1	S-6	0	14:42	52	13.16	10			S	
47	6432	+5	1		5	14:44	76		10				r=.9979
48	6432	+10	1		10	14:46	98		10				b=54.2
49	6432	+20	1		20	14:48	135		10				m=4.12
50	6432	74716D	1	S-8	0	14:50	34	9.41	5			S	
51	6432	+5	1		5	14:52	49		5				r=.9952
52	6432	+10	1		10	14:54	62		5				b=32

Worklist # 10195

Analyst: JH

Comments:

Date Analyzed: 06-MAY-92

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
53	6432	+20	1		20	14:56	102		5				m=3.4
54	6432	CCV5	5			15:01	109	26.13	1	25	104.5		
55	6432	CCB5	5			15:06	0	0.62	1				
56	6432	74709S	1	S-2		15:11	138	32.92	100	100	******	N	
57	6432	74709	1	S-2		15:16	149	35.49	100				RPD=22.8%
58	6432	+10	1			15:21	194	46.03	100	10	105.3		
59	6432	74709D	1	S-2		15:26	118	28.24	100				
60	6432	+10	1			15:31	159	37.83	100	10	96.0		
61	6432	74710	1	S-3		15:36	151	35.96	2000				
62	6432	+10	1			15:41	190	45.09	2000	10	91.3		
63	6432	74711	1	S-4		15:46	40	9.98	10				
64	6432	+10	1			15:51	77	18.64	10	10	86.6		
65	6432	CCV6	6			15:56	113	27.07	1	25	108.3		
66	6432	CCB6	6			16:01	5	1.79	1				

000030

95

PE
0.010 0.012

MEAN= 0.011 STD.DEV.= COEF.VAR.= 11.54 %

0.000 AUTOZERO

PE 0001
-0.002 -0.004

MEAN= -0.003 STD.DEV.= COEF.VAR.= 44.71 %

PE 0002
0.021 0.012

MEAN= 0.016 STD.DEV.= COEF.VAR.= 37.71 %

PE 0003
0.037 0.041

MEAN= 0.039 STD.DEV.= COEF.VAR.= 7.54 %

PE 0004
0.093 0.086

MEAN= 0.089 STD.DEV.= COEF.VAR.= 5.29 %

PE 0005
0.207 0.212

MEAN= 0.209 STD.DEV.= COEF.VAR.= 1.80 %

PE 0006
0.109 0.107

MEAN= 0.108 STD.DEV.= COEF.VAR.= 1.50 % 11:25

PE 0007
-0.004 -0.006

MEAN= -0.004 STD.DEV.= COEF.VAR.= 21.71 % 11:30

PE 0008
0.115 0.108

MEAN= 0.112 STD.DEV.= COEF.VAR.= 3.70 % 11:35

PE 0009
0.000 0.001

MEAN= 0.000 STD.DEV.= COEF.VAR.= 26.38 % 11:40

PE 0010
0.019 0.017

MEAN= 0.018 STD.DEV.= COEF.VAR.= 6.50 %

VEOBRIEN 3 5-6-92 JH

6432

PB 0011
-0.007 -0.004

MEAN= -0.006 STD.DEV.= COEF.VAR.= 36.64 %
****
PB 0012
0.032 0.042

MEAN= 0.037 STD.DEV.= COEF.VAR.= 19.19 %
****
PB 0013
0.225 0.237

MEAN= 0.231 STD.DEV.= COEF.VAR.= 3.87 %
****
PB 0014
0.259 0.268

MEAN= 0.261 STD.DEV.= COEF.VAR.= 1.21 %
****
PB 0015
0.098 0.085

MEAN= 0.091 STD.DEV.= COEF.VAR.= 8.11 %
****
PB 0016
0.257 0.271

MEAN= 0.264 STD.DEV.= COEF.VAR.= 3.81 %
****
PB 0017
0.126 0.118

MEAN= 0.122 STD.DEV.= COEF.VAR.= 4.51 %
****
PB 0018
0.144 0.140

MEAN= 0.142 STD.DEV.= COEF.VAR.= 2.27 %
****
PB 0019
0.172 0.187

MEAN= 0.179 STD.DEV.= COEF.VAR.= 6.18 %
****
PB 0020
0.116 0.118

MEAN= 0.115 STD.DEV.= COEF.VAR.= 2.16 %
****
PB 0021
-0.004 -0.009

MEAN= -0.007 STD.DEV.= COEF.VAR.= 46.99 %
****

VEOBRIEN 3 5-6-92 JH
6432

000082

PB 0022
0.297 0.290

MEAN= 0.334 STD.DEV.= COEF.VAR.= 0.29 %

****

PB 0024

1.305

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

1.329

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

MEAN= 1.268 STD.DEV.= COEF.VAR.= 6.87 %

****

PB 0025

1.265

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

1.302

E-87: VALUE GREATER THAN ROLLOVER ABSORBANCE

MEAN= 1.284 STD.DEV.= COEF.VAR.= 2.09 %

****

PB 0026

0.157 0.084

MEAN= 0.120 STD.DEV.= COEF.VAR.= 42.88 % Bad CV

****

PB 0027

0.104 0.099

MEAN= 0.101 STD.DEV.= COEF.VAR.= 3.44 %

****

PB 0028

0.065 0.070

MEAN= 0.068 STD.DEV.= COEF.VAR.= 5.53 %

****

PB 0029

0.097 0.113

MEAN= 0.105 STD.DEV.= COEF.VAR.= 10.57 %

****

PB 0030

0.074 0.072

MEAN= 0.073 STD.DEV.= COEF.VAR.= 0.89 %

****

PB 0031

0.105 0.102

MEAN= 0.104 STD.DEV.= COEF.VAR.= 2.31 %

****

VEDBRIEN 3 5-6-92 JH

6432

PB 0032

0.121 0.123

MEAN= 0.122 STD.DEV.= COEF.VAR.= 1.00 %

****

PB 0033

0.012 0.007

MEAN= 0.009 STD.DEV.= COEF.VAR.= 36.15 %

****

PB 0034

0.033 0.031

MEAN= 0.032 STD.DEV.= COEF.VAR.= 5.43 %

****

PB 0035

0.075 0.076

MEAN= 0.075 STD.DEV.= COEF.VAR.= 0.47 %

PE 0038
0.130 0.13.

MEAN= 0.131 STD.DEV.= COEF.VAR.= 0.58 %

PE 0038
0.040 0.040

MEAN= 0.040 STD.DEV.= COEF.VAR.= 0.02 %

PE 0039
0.085 0.078

MEAN= 0.082 STD.DEV.= COEF.VAR.= 5.75 %

PE 0040
0.037 0.039

MEAN= 0.038 STD.DEV.= COEF.VAR.= 17.27 %

PE 0041
0.070 0.058

MEAN= 0.064 STD.DEV.= COEF.VAR.= 13.85 %

PE 0042
0.055 0.044

MEAN= 0.050 STD.DEV.= COEF.VAR.= 14.75 %

VEO BRIEN 3 5-6-92 JH
6432

PE 0043
0.095 0.098

MEAN= 0.097 STD.DEV.= COEF.VAR.= 3.00 %

PE 0044
0.105 0.110

MEAN= 0.107 STD.DEV.= COEF.VAR.= 2.82 %

PE 0045
0.007 -0.005

MEAN= 0.001 STD.DEV.= COEF.VAR.= 99.99 %

PE 0046 0.052
PE 0047 0.076
PE 0048 0.098
PE 0049 0.135
PE 0050 0.034
PE 0051 0.049
PE 0052 0.062
PE 0053 0.102
PE 0054 0.109
PE 0055 0.000
PE 0056
0.138 0.138

MEAN= 0.138 STD.DEV.= COEF.VAR.= 0.24 %

PE 0057
0.147 0.151

MEAN= 0.149 STD.DEV.= COEF.VAR.= 1.86 %

PE 0058
0.190 0.198

MEAN= [illegible] STD.DEV.= COEF.VAR.= [illegible] %

****

PB 0060

0.157 0.162

MEAN= 0.159 STD.DEV.= COEF.VAR.= 2.20 %

****

PB 0061

0.153 0.149

MEAN= 0.151 STD.DEV.= COEF.VAR.= 1.96 %

****

PB 0062

0.190 0.190

MEAN= 0.190 STD.DEV.= COEF.VAR.= 0.05 %

****

PB 0063

0.039 0.041

MEAN= 0.040 STD.DEV.= COEF.VAR.= 3.50 %

****

PB 0064

0.080 0.074

MEAN= 0.077 STD.DEV.= COEF.VAR.= 5.12 %

****

PB 0065

0.110 0.115

MEAN= 0.113 STD.DEV.= COEF.VAR.= 3.05 %

****

PB 0066

0.005 0.005

MEAN= 0.005 STD.DEV.= COEF.VAR.= 9.79 %

****

VEO BRIEN 3 5-6-92 JH

6432

File : 6490SEL1.WSL Se MW AA - 134, DEOBRIEN-3 OP

File Record	Laboratory Sample Name	Customer/EPA Sample Name	Type	Matrix	Instrument Dil.	Date	Time	Fl
1	S0		3		1.0	05/06/92	08:03:51	
2	S5		3		1.0	05/06/92	08:08:34	
3	S10		3		1.0	05/06/92	08:13:19	
4	S20		3		1.0	05/06/92	08:18:03	
5	S50		3		1.0	05/06/92	08:22:48	99
6	ICV	ICV	0		1.0	05/06/92	08:27:32	103
7	ICB	ICB	0		1.0	05/06/92	08:32:17	
8	CCV1	CCV	0		1.0	05/06/92	08:37:01	105
9	CCB1	CCB	0		1.0	05/06/92	08:41:44	
10	CRA	CRA	0		1.0	05/06/92	08:46:28	110.
11	PBW	PBW	0		1.0	05/06/92	08:51:12	
12	+10		1		1.0	05/06/92	08:55:57	
13	PB1T		0		1.0	05/06/92	09:00:40	
14	+10		1		1.0	05/06/92	09:05:25	W
15	75247S		0		5.0	05/06/92	09:10:09	104
16	75247		0		1.0	05/06/92	09:14:54	
17	+10		1		1.0	05/06/92	09:19:38	
18	PBS	PBS	0		1.0	05/06/92	09:24:25	
19	+10		1		1.0	05/06/92	09:29:09	
20	CCV2	CCV	0		1.0	05/06/92	09:33:59	104
21	CCB2	CCB	0		1.0	05/06/92	09:38:43	
22	LCSM		0		5.0	05/06/92	09:43:32	10[illegible]
23	74716S		0		5.0	05/06/92	09:48:22	98.
24	74716		0		1.0	05/06/92	09:53:10	
25	+10		1		1.0	05/06/92	09:57:57	
26	74716D		0		1.0	05/06/92	10:02:46	
27	+10		1		1.0	05/06/92	10:07:32	
28	74717		0		1.0	05/06/92	10:12:20	
29	+10		1		1.0	05/06/92	10:17:10	W
30	CCV3	CCV	0		1.0	05/06/92	10:21:54	100
31	CCB3	CCB	0		1.0	05/06/92	10:26:39	

Spike Recoveries in 6490SEL1.WSL
Sample Names

#	Laboratory	EPA/Customer	Element	Original	Added	Found	% R
1	PBW	PBW	SE196.00	-0.10000	10.000	10.60000	106.00
2	PB1T		SE196.00	0.00000	10.000	8.10000	81.00
3	75247		SE196.00	0.30000	10.000	10.00000	100.00
4	PBS	PBS	SE196.00	-0.10000	10.000	10.70000	107.00
5	74716		SE196.00	0.30000	10.000	8.90000	89.00
6	74716D		SE196.00	0.20000	10.000	8.50000	85.00
7	74717		SE196.00	-0.60000	10.000	6.10000	61.00

Se MWAA -134; TEOBRIEN-3 OP

ICV2K = 50.3
CCV = 25.0
LCSM = 100.0

Element File: VSE.GEL
Date: 05/06/92
Data File: 6490SEL1.DAT
Technique: HGA

Element: Se
Time: 07:59
ID/Wt File: 6490SEL1.IDW
Calib. Type: Linear

Wavelength: 196.0
Slit: 2.00 L
Lamp Current: 0
Energy: 54

Se ID: S0 Seq. No.: 00001 A/S Pos.: 1 Date: 05/06/

uL dispensed: 30 from 1

Replicate 1 Time: 08:01
Peak Area (A-s): 0.007 Peak Height (A): 0.021
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.124
Blank Corrected Pk Area (A-s): 0.007

uL dispensed: 30 from 1
Replicate 2 (Peak Stored) Time: 08:03
Peak Area (A-s): 0.005 Peak Height (A): 0.017
Background Pk Area (A-s): 0.190 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.005

Mean Pk Area (A-s): 0.006 SD: 0.0013 RSD(%): 21.52

Auto-zero performed.

Se ID: S5 Seq. No.: 00002 A/S Pos.: 2 Date: 05/06/

uL dispensed: 30 from 2

Replicate 1 Time: 08:06
Peak Area (A-s): 0.031 Peak Height (A): 0.068
Background Pk Area (A-s): 0.186 Background Pk Height (A): 0.096
Blank Corrected Pk Area (A-s): 0.025

uL dispensed: 30 from 2
Replicate 2 (Peak Stored) Time: 08:08
Peak Area (A-s): 0.033 Peak Height (A): 0.072
Background Pk Area (A-s): 0.185 Background Pk Height (A): 0.088
Blank Corrected Pk Area (A-s): 0.027

Mean Pk Area (A-s): 0.026 SD: 0.0012 RSD(%): 4.59

Standard number 1 applied. [5.0]
Correlation coefficient: 1.00000 Slope: 0.0052

Se ID: S10 Seq. No.: 00003 A/S Pos.: 3 Date: 05/06

uL dispensed: 30 from 3

Replicate 1 Time: 08:10
Peak Area (A-s): 0.059 Peak Height (A): 0.131
Background Pk Area (A-s): 0.185 Background Pk Height (A): 0.095
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 10.0

uL dispensed: 30 from 3
Replicate 2 (Peak Stored) Time: 08:13
Peak Area (A-s): 0.057 Peak Height (A): 0.129
Background Pk Area (A-s): 0.184 Background Pk Height (A): [illegible]

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Blank Corrected Pk Area (A-s): 0.051
Concentration (ug/L): 9.7

Mean Conc (ug/L): 9.9 SD: 0.25 RSD(%): 2.51

Standard number 2 applied. [10.0]
Correlation coefficient: 0.99983 Slope: 0.0052

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Se ID: S20 Seq. No.: 00004 A/S Pos.: 4 Date: 05/06/

uL dispensed: 30 from 4

Replicate 1 Time: 08:15
Peak Area (A-s): 0.105 Peak Height (A): 0.227
Background Pk Area (A-s): 0.194 Background Pk Height (A): 0.117
Blank Corrected Pk Area (A-s): 0.099
Concentration (ug/L): 19.1

uL dispensed: 30 from 4
Replicate 2 (Peak Stored) Time: 08:18
Peak Area (A-s): 0.105 Peak Height (A): 0.233
Background Pk Area (A-s): 0.195 Background Pk Height (A): 0.114
Blank Corrected Pk Area (A-s): 0.099
Concentration (ug/L): 19.2

Mean Conc (ug/L): 19.1 SD: 0.05 RSD(%): 0.25

Standard number 3 applied. [20.0]
Correlation coefficient: 0.99916 Slope: 0.0050

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Se ID: S50 Seq. No.: 00005 A/S Pos.: 5 Date: 05/06

uL dispensed: 30 from 5

Replicate 1 Time: 08:20
Peak Area (A-s): 0.242 Peak Height (A): 0.513
Background Pk Area (A-s): 0.219 Background Pk Height (A): 0.181
Blank Corrected Pk Area (A-s): 0.236
Concentration (ug/L): 47.3

uL dispensed: 30 from 5
Replicate 2 (Peak Stored) Time: 08:22
Peak Area (A-s): 0.242 Peak Height (A): 0.511
Background Pk Area (A-s): 0.222 Background Pk Height (A): 0.181
Blank Corrected Pk Area (A-s): 0.236
Concentration (ug/L): 47.3

Mean Conc (ug/L): 47.3 SD: 0.00 RSD(%): 0.01

Standard number 4 applied. [50.0]
Correlation coefficient: 0.99936 Slope: 0.0048

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Se ID: ICV Seq. No.: 00006 A/S Pos.: 6 Date: 05/06

uL dispensed: 30 from 6

Replicate 1 Time: 08:25
Peak Area (A-s): 0.130 Peak Height (A): 0.280
Background Pk Area (A-s): 0.191 Background Pk Height (A): 0.183

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Blank Corrected Pk Area (A-s): 0.124
Concentration (ug/L): 26.0

uL dispensed: 30 from 6
Replicate 2 (Peak Stored)   Time: 08:27
Peak Area (A-s): 0.129   Peak Height (A): 0.282
Background Pk Area (A-s): 0.189   Background Pk Height (A): 0.122
Blank Corrected Pk Area (A-s): 0.123
Concentration (ug/L): 25.8

Mean Conc (ug/L): 25.9   SD: 0.11   RSD(%): 0.41

QC sample is within range 20.2 - 30.1

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Se ID: ICB   Seq. No.: 00007   A/S Pos.: 7   Date: 05/06/

uL dispensed: 30 from 7
Replicate 1   Time: 08:29
Peak Area (A-s): 0.007   Peak Height (A): 0.018
Background Pk Area (A-s): 0.163   Background Pk Height (A): 0.069
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.1

uL dispensed: 30 from 7
Replicate 2 (Peak Stored)   Time: 08:32
Peak Area (A-s): 0.007   Peak Height (A): 0.018
Background Pk Area (A-s): 0.162   Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.1

Mean Conc (ug/L): 0.1   SD: 0.00   RSD(%): 0.47

QC sample is within range -5 - 5

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Se ID: CCV   Seq. No.: 00008   A/S Pos.: 8   Date: 05/06

uL dispensed: 30 from 8
Replicate 1   Time: 08:34
Peak Area (A-s): 0.129   Peak Height (A): 0.278
Background Pk Area (A-s): 0.185   Background Pk Height (A): 0.123
Blank Corrected Pk Area (A-s): 0.123
Concentration (ug/L): 25.7

uL dispensed: 30 from 8
Replicate 2 (Peak Stored)   Time: 08:37
Peak Area (A-s): 0.130   Peak Height (A): 0.276
Background Pk Area (A-s): 0.186   Background Pk Height (A): 0.123
Blank Corrected Pk Area (A-s): 0.124
Concentration (ug/L): 26.0

Mean Conc (ug/L): 25.8   SD: 0.20   RSD(%): 0.79

QC sample is within range 20.0 - 30.0

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Se ID: CCB   Seq. No.: 00009   A/S Pos.: 9   Date: 05/06

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uL dispensed: 30 from 9

Replicate 1 | Time: 08:39
Peak Area (A-s): 0.008 | Peak Height (A): 0.017
Background Pk Area (A-s): 0.159 | Background Pk Height (A): 0.067
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.3

uL dispensed: 30 from 9
Replicate 2 (Peak Stored) | Time: 08:41
Peak Area (A-s): 0.009 | Peak Height (A): 0.017
Background Pk Area (A-s): 0.158 | Background Pk Height (A): 0.067
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.6

Mean Conc (ug/L): 0.5 SD: 0.17 RSD(%): 35.7

QC sample is within range -5 - 5

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Se ID: CRA Seq. No.: 00010 A/S Pos.: 10 Date: 05/06

uL dispensed: 30 from 10

Replicate 1 | Time: 08:44
Peak Area (A-s): 0.033 | Peak Height (A): 0.072
Background Pk Area (A-s): 0.163 | Background Pk Height (A): 0.076
Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 5.7

uL dispensed: 30 from 10
Replicate 2 (Peak Stored) | Time: 08:46
Peak Area (A-s): 0.032 | Peak Height (A): 0.074
Background Pk Area (A-s): 0.161 | Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.026
Concentration (ug/L): 5.4

Mean Conc (ug/L): 5.5 SD: 0.17 RSD(%): 3.15

QC sample is within range

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Se ID: PBW Seq. No.: 00011 A/S Pos.: 11 Date: 05/06

uL dispensed: 30 from 11

Replicate 1 | Time: 08:48
Peak Area (A-s): 0.006 | Peak Height (A): 0.016
Background Pk Area (A-s): 0.151 | Background Pk Height (A): 0.063
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.1

uL dispensed: 30 from 11
Replicate 2 (Peak Stored) | Time: 08:51
Peak Area (A-s): 0.006 | Peak Height (A): 0.017
Background Pk Area (A-s): 0.147 | Background Pk Height (A): 0.063
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.1

Mean Conc (ug/L): -0.1 SD: 0.02 RSD(%): 19.

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Se ID: +10 Seq. No.: 00012 A/S Pos.: 12 Date: 05/06/

uL dispensed: 30 from 12

Replicate 1 Time: 08:53
Peak Area (A-s): 0.058 Peak Height (A): 0.132
Background Pk Area (A-s): 0.156 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 10.8

uL dispensed: 30 from 12
Replicate 2 (Peak Stored) Time: 08:55
Peak Area (A-s): 0.056 Peak Height (A): 0.133
Background Pk Area (A-s): 0.156 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.050
Concentration (ug/L): 10.4

Mean Conc (ug/L): 10.6 SD: 0.29 RSD(%): 2.78

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Se ID: PB1T Seq. No.: 00013 A/S Pos.: 13 Date: 05/06/

uL dispensed: 30 from 13

Replicate 1 Time: 08:58
Peak Area (A-s): 0.006 Peak Height (A): 0.019
Background Pk Area (A-s): 0.342 Background Pk Height (A): 0.130
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): 0.1

uL dispensed: 30 from 13
Replicate 2 (Peak Stored) Time: 09:00
Peak Area (A-s): 0.006 Peak Height (A): 0.018
Background Pk Area (A-s): 0.342 Background Pk Height (A): 0.131
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): 0.0

Mean Conc (ug/L): 0.0 SD: 0.04 RSD(%): 128.

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Se ID: +10 Seq. No.: 00014 A/S Pos.: 14 Date: 05/06

uL dispensed: 30 from 14

Replicate 1 Time: 09:03
Peak Area (A-s): 0.045 Peak Height (A): 0.107
Background Pk Area (A-s): 0.351 Background Pk Height (A): 0.130
Blank Corrected Pk Area (A-s): 0.039
Concentration (ug/L): 8.2

uL dispensed: 30 from 14
Replicate 2 (Peak Stored) Time: 09:05
Peak Area (A-s): 0.045 Peak Height (A): 0.109
Background Pk Area (A-s): 0.348 Background Pk Height (A): 0.131
Blank Corrected Pk Area (A-s): 0.038
Concentration (ug/L): 8.0

Mean Conc (ug/L): 8.1 SD: 0.09 RSD(%): 1.09

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Se ID: 75247S/5 Seq. No.: 00015 A/S Pos.: 15 Date: 05/06/

uL dispensed: 30 from 15

Replicate 1 Time: 09:07
Peak Area (A-s): 0.106 Peak Height (A): 0.224
Background Pk Area (A-s): 0.176 Background Pk Height (A): 0.096
Blank Corrected Pk Area (A-s): 0.100
Concentration (ug/L): 20.9

uL dispensed: 30 from 15
Replicate 2 (Peak Stored) Time: 09:10
Peak Area (A-s): 0.105 Peak Height (A): 0.227
Background Pk Area (A-s): 0.173 Background Pk Height (A): 0.099
Blank Corrected Pk Area (A-s): 0.099
Concentration (ug/L): 20.8

Mean Conc (ug/L): 20.8 SD: 0.09 RSD(%): 0.43

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Se ID: 75247 Seq. No.: 00016 A/S Pos.: 16 Date: 05/06

uL dispensed: 30 from 16

Replicate 1 Time: 09:12
Peak Area (A-s): 0.008 Peak Height (A): 0.022
Background Pk Area (A-s): 0.186 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.3

uL dispensed: 30 from 16
Replicate 2 (Peak Stored) Time: 09:14
Peak Area (A-s): 0.007 Peak Height (A): 0.018
Background Pk Area (A-s): 0.191 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

Mean Conc (ug/L): 0.3 SD: 0.08 RSD(%): 31.3

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Se ID: +10 Seq. No.: 00017 A/S Pos.: 17 Date: 05/06

uL dispensed: 30 from 17

Replicate 1 Time: 09:17
Peak Area (A-s): 0.055 Peak Height (A): 0.132
Background Pk Area (A-s): 0.198 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.049
Concentration (ug/L): 10.2

uL dispensed: 30 from 17
Replicate 2 (Peak Stored) Time: 09:19
Peak Area (A-s): 0.053 Peak Height (A): 0.133
Background Pk Area (A-s): 0.200 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 9.9

Mean Conc (ug/L): 10.0 SD: 0.19 RSD(%): 1.8[illegible]
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Se ID: PBS Seq. No.: 00018 A/S Pos.: 18 Date: 05/06/

uL dispensed: 30 from 18

Replicate 1 Time: 09:22
Peak Area (A-s): 0.007 Peak Height (A): 0.017
Background Pk Area (A-s): 0.146 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.1

uL dispensed: 30 from 18
Replicate 2 (Peak Stored) Time: 09:24
Peak Area (A-s): 0.004 Peak Height (A): 0.014
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.057
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.4

Mean Conc (ug/L): -0.1 SD: 0.36 RSD(%): 267.2

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Se ID: +10 Seq. No.: 00019 A/S Pos.: 19 Date: 05/06/

uL dispensed: 30 from 19

Replicate 1 Time: 09:26
Peak Area (A-s): 0.053 Peak Height (A): 0.119
Background Pk Area (A-s): 0.155 Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 9.8

uL dispensed: 30 from 19
Replicate 2 (Peak Stored) Time: 09:29
Peak Area (A-s): 0.062 Peak Height (A): 0.135
Background Pk Area (A-s): 0.165 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.056
Concentration (ug/L): 11.7

Mean Conc (ug/L): 10.7 SD: 1.30 RSD(%): 12.0

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Se ID: CCV Seq. No.: 00020 A/S Pos.: 8 Date: 05/06

uL dispensed: 30 from 8

Replicate 1 Time: 09:31
Peak Area (A-s): 0.132 Peak Height (A): 0.289
Background Pk Area (A-s): 0.176 Background Pk Height (A): 0.113
Blank Corrected Pk Area (A-s): 0.126
Concentration (ug/L): 26.4

uL dispensed: 30 from 8
Replicate 2 (Peak Stored) Time: 09:33
Peak Area (A-s): 0.131 Peak Height (A): 0.290
Background Pk Area (A-s): 0.174 Background Pk Height (A): 0.113
Blank Corrected Pk Area (A-s): 0.125
Concentration (ug/L): 26.1

Mean Conc (ug/L): 26.2 SD: 0.18 RSD(%): 0.69

QC sample is within range 20.0 - 30.0

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Se ID: CCB Seq. No.: 00021 A/S Pos.: 9 Date: 05/06/

uL dispensed: 30 from 9

Replicate 1 Time: 09:36
Peak Area (A-s): 0.007 Peak Height (A): 0.017
Background Pk Area (A-s): 0.146 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

uL dispensed: 30 from 9
Replicate 2 (Peak Stored) Time: 09:38
Peak Area (A-s): 0.006 Peak Height (A): 0.016
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.1

Mean Conc (ug/L): 0.0 SD: 0.15 RSD(%): 340.9

QC sample is within range -5 - 5

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Se ID: LCSM/5 Seq. No.: 00022 A/S Pos.: 20 Date: 05/06/

uL dispensed: 30 from 20

Replicate 1 Time: 09:41
Peak Area (A-s): 0.108 Peak Height (A): 0.244
Background Pk Area (A-s): 0.161 Background Pk Height (A): 0.097
Blank Corrected Pk Area (A-s): 0.102
Concentration (ug/L): 21.3

uL dispensed: 30 from 20
Replicate 2 (Peak Stored) Time: 09:43
Peak Area (A-s): 0.110 Peak Height (A): 0.242
Background Pk Area (A-s): 0.158 Background Pk Height (A): 0.097
Blank Corrected Pk Area (A-s): 0.104
Concentration (ug/L): 21.7

Mean Conc (ug/L): 21.5 SD: 0.28 RSD(%): 1.32

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Se ID: 74716S/5 Seq. No.: 00023 A/S Pos.: 21 Date: 05/06

uL dispensed: 30 from 21

Replicate 1 Time: 09:45
Peak Area (A-s): 0.100 Peak Height (A): 0.209
Background Pk Area (A-s): 0.253 Background Pk Height (A): 0.124
Blank Corrected Pk Area (A-s): 0.093
Concentration (ug/L): 19.6

uL dispensed: 30 from 21
Replicate 2 (Peak Stored) Time: 09:48
Peak Area (A-s): 0.101 Peak Height (A): 0.214
Background Pk Area (A-s): 0.267 Background Pk Height (A): 0.128
Blank Corrected Pk Area (A-s): 0.095
Concentration (ug/L): 19.9

Mean Conc (ug/L): 19.7 SD: 0.21 RSD(%): 1.09

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Se ID: 74716 Seq. No.: 00024 A/S Pos.: 22 Date: 05/06/

uL dispensed: 30 from 22

Replicate 1
Peak Area (A-s): 0.007
Background Pk Area (A-s): 0.691
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

Time: 09:50
Peak Height (A): 0.024
Background Pk Height (A): 0.328

uL dispensed: 30 from 22

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.008
Background Pk Area (A-s): 0.736
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.5

Time: 09:53
Peak Height (A): 0.024
Background Pk Height (A): 0.332

Mean Conc (ug/L): 0.3 SD: 0.21 RSD(%): 62.64

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Se ID: +10 Seq. No.: 00025 A/S Pos.: 23 Date: 05/06/

uL dispensed: 30 from 23

Replicate 1
Peak Area (A-s): 0.048
Background Pk Area (A-s): 0.754
Blank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 8.7

Time: 09:55
Peak Height (A): 0.122
Background Pk Height (A): 0.329

uL dispensed: 30 from 23

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.050
Background Pk Area (A-s): 0.753
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 9.1

Time: 09:57
Peak Height (A): 0.119
Background Pk Height (A): 0.336

Mean Conc (ug/L): 8.9 SD: 0.27 RSD(%): 3.02

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Se ID: 74716D Seq. No.: 00026 A/S Pos.: 24 Date: 05/06.

uL dispensed: 30 from 24

Replicate 1
Peak Area (A-s): 0.008
Background Pk Area (A-s): 0.711
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.4

Time: 10:00
Peak Height (A): 0.021
Background Pk Height (A): 0.327

uL dispensed: 30 from 24

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.006
Background Pk Area (A-s): 0.713
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.0

Time: 10:02
Peak Height (A): 0.021
Background Pk Height (A): 0.319

Mean Conc (ug/L): 0.2 SD: 0.32 RSD(%): 159.

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Se ID: +10 Seq. No.: 00027 A/S Pos.: 25 Date: 05/06/

uL dispensed: 30 from 25

Replicate 1 Time: 10:05
Peak Area (A-s): 0.048 Peak Height (A): 0.123
Background Pk Area (A-s): 0.719 Background Pk Height (A): 0.322
Blank Corrected Pk Area (A-s): 0.041
Concentration (ug/L): 8.7

uL dispensed: 30 from 25
Replicate 2 (Peak Stored) Time: 10:07
Peak Area (A-s): 0.046 Peak Height (A): 0.120
Background Pk Area (A-s): 0.714 Background Pk Height (A): 0.322
Blank Corrected Pk Area (A-s): 0.040
Concentration (ug/L): 8.4

Mean Conc (ug/L): 8.5 SD: 0.21 RSD(%): 2.51

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Se ID: 74717 Seq. No.: 00028 A/S Pos.: 26 Date: 05/06/

uL dispensed: 30 from 26

Replicate 1 Time: 10:09
Peak Area (A-s): 0.004 Peak Height (A): 0.021
Background Pk Area (A-s): 1.374 Background Pk Height (A): 0.650
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.4

uL dispensed: 30 from 26
Replicate 2 (Peak Stored) Time: 10:12
Peak Area (A-s): 0.003 Peak Height (A): 0.021
Background Pk Area (A-s): 1.434 Background Pk Height (A): 0.652
Blank Corrected Pk Area (A-s): -0.004
Concentration (ug/L): -0.7

Mean Conc (ug/L): -0.6 SD: 0.21 RSD(%): 35.0

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Se ID: +10 Seq. No.: 00029 A/S Pos.: 27 Date: 05/06

uL dispensed: 30 from 27

Replicate 1 Time: 10:14
Peak Area (A-s): 0.037 Peak Height (A): 0.082
Background Pk Area (A-s): 1.448 Background Pk Height (A): 0.647
Blank Corrected Pk Area (A-s): 0.031
Concentration (ug/L): 6.6

uL dispensed: 30 from 27
Replicate 2 (Peak Stored) Time: 10:17
Peak Area (A-s): 0.033 Peak Height (A): 0.080
Background Pk Area (A-s): 1.432 Background Pk Height (A): 0.651
Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 5.7

Mean Conc (ug/L): 6.1 SD: 0.64 RSD(%): 10.4

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Se ID: CCV Seq. No.: 00030 A/S Pos.: 8 Date: 05/06/

uL dispensed: 30 from 8

Replicate 1 Time: 10:19
Peak Area (A-s): 0.123 Peak Height (A): 0.285
Background Pk Area (A-s): 0.299 Background Pk Height (A): 0.301
Blank Corrected Pk Area (A-s): 0.117
Concentration (ug/L): 24.5

uL dispensed: 30 from 8
Replicate 2 (Peak Stored) Time: 10:21
Peak Area (A-s): 0.128 Peak Height (A): 0.293
Background Pk Area (A-s): 0.186 Background Pk Height (A): 0.106
Blank Corrected Pk Area (A-s): 0.122
Concentration (ug/L): 25.5

Mean Conc (ug/L): 25.0 SD: 0.67 RSD(%): 2.68

QC sample is within range 20.0 - 30.0

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Se ID: CCB Seq. No.: 00031 A/S Pos.: 9 Date: 05/06/

uL dispensed: 30 from 9

Replicate 1 Time: 10:24
Peak Area (A-s): 0.007 Peak Height (A): 0.020
Background Pk Area (A-s): 0.137 Background Pk Height (A): 0.055
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

uL dispensed: 30 from 9
Replicate 2 (Peak Stored) Time: 10:26
Peak Area (A-s): 0.007 Peak Height (A): 0.017
Background Pk Area (A-s): 0.130 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.1

Mean Conc (ug/L): 0.2 SD: 0.08 RSD(%): 41.87

QC sample is within range -5 - 5

MWAA-134,
DEOBRIEN-3

VERSAR LABORATORIES INC.
Worklist # 10184

05-MAY-92 03:19 P

Analyst: OP

Comments:

Date Analyzed: 05-MAY-92

Control #	Code	Batch	Matrix	Analysis Code	Test
6432	VEOBRIEN	3	SOIL	P2M	TL

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	41	EPA	100.7
CCV :		NIST	25
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	
Prep. Day/Hr. :	05-MAY-92 07:30		

INSTRUMENT # 6

Light Source:	EDL	Gas Flow:	0
Current/Power:	7	Matrix Modifiers:	Y
Slit:	0.7	Signal:	PK AR
Wavelength:	276.8	Tube:	LVP
Background Corr.:	BD	Replicates:	2
IDL:	.5	CRDL:	10
Spike:	100	Integration Time:	5 SEC

Correlation: .9999 Y-Intercept: 1.57 Slope: 3.37 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	6432	S0	1		0	12:40	1		1				
2	6432	S10	1		10	12:45	36	10.21	1		102.1	CRA	
3	6432	S20	2		20	12:50	69		1				
4	6432	S50	3		50	12:55	170		1				
5	6432	ICV	1			13:00	89	25.93	4	100.7	103.0		
6	6432	ICB	1			13:05	-1	-0.76	1				
7	6432	CCV1	1			13:10	88	25.64	1	25	102.5		
8	6432	CCB1	1			13:15	0	-0.47	1				
9	6432	CRA	1			13:20	35	9.92	1	10	99.2		
10	6432	PBS	1			13:25	0	-0.47	1				
11	6432	+20	1			13:30	66	19.11	1	20	95.6		
12	6432	LCSM	1			13:35	62	17.92	5	100	89.6		
13	6432	74716S	1	S-8		13:40	61	17.63	5	100	88.1		
14	6432	74716	1	S-8		13:45	2	0.13	1				
15	6432	+20	1			13:50	61	17.63	1	20	88.1		
16	6432	74716D	1	S-8		13:55	3	0.42	1				RPD = NC
17	6432	+20	1			14:00	67	19.41	1	20	97.0		
18	6432	CCV2	2			14:05	84	24.45	1	25	97.8		
19	6432	CCB2	2			14:10	2	0.13	1				
20	6432	74717	1	S-10		14:15	2	0.13	1				
21	6432	+20	1			14:20	69	20.00	1	20	100.0		

Worklist # 10184

Analyst: OP

Comments:

Date Analyzed: 05-MAY-92

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
22	6432	CCV3	3			14:25	81	23.56	1	25	94.2		
23	6432	CCB3	3			14:30	1	-0.17	1				

WT 1C184

5 may 92

CP

TEBBLER - 3

	-0.001	
	-0.001	
0	-0.001	AV
	0.00	CV
	[illegible]	[illegible]
	0.002	
	-0.000	
1	0.301	AV
	[illegible]	[illegible]
	0.134	
	0.137	
2	0.136	AV
	[illegible]	CV
	0.169	
	0.169	
3	0.169	AV
	0.00	CV
	0.171	
	0.169	
4	0.170	AV
	0.83	CV
	0.087	
	0.09[illegible]	
5	0.089	AV
	2.40	CV
	-0.001	
	-0.001	
6	-0.001	AV
	0.00	CV
	0.167	
	0.199	
7	0.183	AV
	2.80	CV
	-0.001	
	0.001	
8	0.000	AV
	[illegible]	[illegible]
	0.035	
	0.035	
9	0.035	AV
	0.00	CV
	0.001	
	-0.002	
10	0.001	AV
	[illegible]	[illegible]
	0.061	
	0.071	
11	0.065	AV
	10.71	CV

5 may 92

CP

TEBBLER - 3

	0.062	
	0.063	
12	0.062	AV
	1.13	CV
	0.061	
	0.061	
13	0.061	AV
	0.00	CV
	0.062	
	0.062	
14	0.062	AV
	0.00	CV
	0.063	
	0.063	
15	0.061	AV
	3.45	CV
	-0.001	
	0.067	
16	0.063	AV
	[illegible]	[illegible]
	0.067	
	0.067	
17	0.067	AV
	0.00	CV
	0.083	
	0.085	
18	0.084	AV
	8.73	CV
	0.001	
	0.002	
19	0.002	AV
	47.13	CV
	0.001	
	0.002	
20	0.002	AV
	47.13	CV
	0.071	
	0.067	
21	0.069	AV
	4.13	CV
	0.065	
	0.061	
22	0.061	AV
	2.83	CV
	0.001	
	-0.001	
23	0.001	AV

TK

VERSAR LABORATORIES INC.
Worklist # 10188

06-MAY-92 03:03

Analyst: KJ

Comments:

Date Analyzed: 05-MAY-92

Control #	Code	Batch	Matrix	Analysis Code	Test
6432	VEOBRIEN	3	SOIL	P2M	HG
6449	CSD WES	11	SOIL	HGS	HG
6483	MOCA 2	10	SOIL	HGS	HG
6487	MOCA 2	11	SOIL	HGS	HG
6492	MOCA 2	12	SOIL	HGS	HG

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	5E	EPA	5
CCV :		NIST	5
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	
Prep. Day/Hr. :	06-MAY-92 09:10		

INSTRUMENT # 12

Light Source:	HCL	Gas Flow:	1
Current/Power:	7MA	Matrix Modifiers:	N
Slit:	0.7	Signal:	PK HT
Wavelength:	253.7	Tube:	
Background Corr.:		Replicates:	1
IDL:	.2	CRDL:	.2
Spike:	1	Integration Time:	CONT

Correlation: .9999 Y-Intercept: 1.04 Slope: 17.82 Units: PPB

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	6449	S0	1		0	14:55	0		1				
2	6449	S.5	1		.5	14:57	10	0.50	1		100.0	CRA	
3	6449	S2	2		2	14:59	38		1				
4	6449	S5	3		5	15:01	90		1				
5	6449	S10	4		10	15:03	179		1				
6	6449	ICV	1			15:05	91	5.05	1	5	101.0		
7	6449	ICB	1			15:07	2	0.05	1				
8	6449	CCV1	1			15:09	91	5.05	1	5	101.0		
9	6449	CCB1	1			15:11	1	-0.00	1				
10	6449	CRA	1			15:13	4	0.17	1				
11	6449	PBS	1			15:15	1	-0.00	1				
12	6449	LCSM	1			15:17	18	0.95	1	1	95.2		
13	6449	74822	1	9TH AVE METALS-S		15:19	2	0.05	1				
14	6449	CCV2	2			15:21	89	4.94	1	5	98.7		
15	6449	CCB2	2			15:23	1	-0.00	1				
16	6483	PBS	1			15:25	1	-0.00	1				
17	6483	LCSM	1			15:27	18	0.95	1	1	95.2		
18	6483	75161	1	CS-3-042992		15:29	2	0.05	1				
19	6487	75221	1	S1-EAST-043092		15:31	1	-0.00	1				

000112

Worklist # 10188

Analyst: KJ

Comments:

Date Analyzed: 05-MAY-92

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
20	6492	75262	1	D5-8-12		15:33	1	-0.00	1				
21	6492	CCV3	3			15:35	88	4.88	1	5	97.6		
22	6492	CCB3	3			15:37	1	-0.00	1				
23	6432	PBS	1			15:39	1	-0.00	1				
24	6432	LCSM	1			15:41	19	1.01	1	1	100.8		
25	6432	74716	1	S-8		15:43	5	0.22	1				
26	6432	74716D	1	S-8		15:45	9	0.45	1				
27	6432	74716S	1	S-8		15:47	29	1.57	1	1	~~156.9~~	N	135%
28	6432	74717	1	S-10		15:49	6	0.28	1				
29	6432	CCV4	4			15:51	89	4.94	1	5	98.7		
30	6432	CCB4	4			15:53	1	-0.00	1				

VERSAR, INC.
METALS LABORATORY
MERCURY DIGESTION LOG

Page___of___

Project-Batch: Veobrien 3
Control No.: 6432
No. of Samples: 2

Date: 5/6/92
Method Code: HGW or HG
Reference: SW846 3rd Ed
Reference #: 7470 or 74

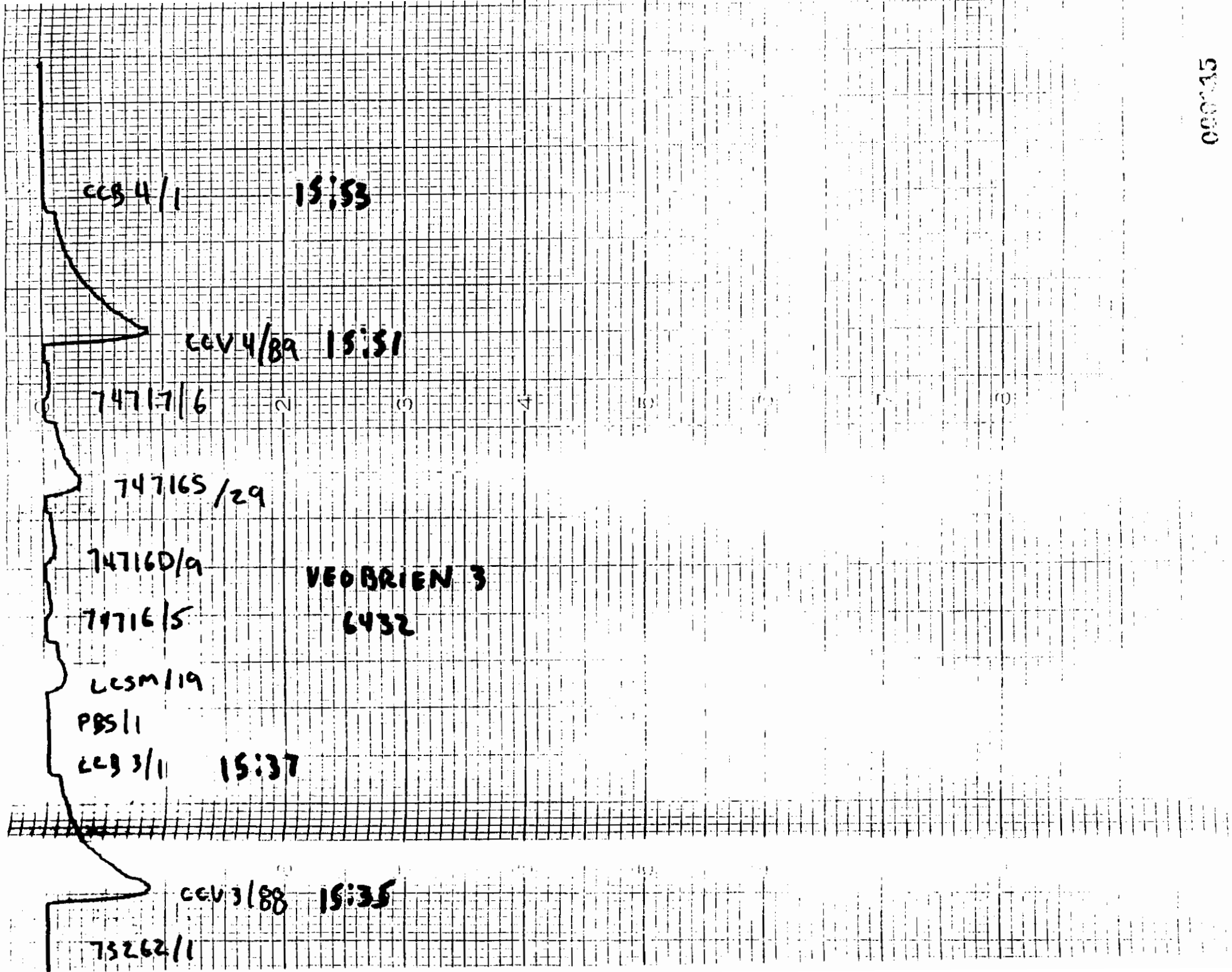
Sample / EPA ID Number		Matrix	Initial Wt./Vol.	Final Vol.	Comments
PBS		HOH	10	100	
LCSM		10H	10		
74716		SOIL	0.217		
74716D			0.216		
74716S			0.203		
74712			0.215		

Lcsm = 1 ml x 0.1 ppm Hg /100ml = 1 ppb

SPIKE = 1 ml x 0.1ppm Hg / 100ml = 1 ppb.
CCV = 0.50 ml x 1.0ppm Hg / 100ml = 5.0 ppb.
ICV/LCS = 1 ml x ICV #5 / 100ml = 5 ppb. LCS Series No.: 0689

STANDARD Source: IV Prep Date: 5/6/92 Prep Time: 9:10

0.5ppb = 5ml x 0.01ppm / 100ml.
2.0ppb = 2ml x 0.1ppm / 100ml.
5.0ppb = 5ml x 0.1ppm / 100ml.


CCB 4/1 15:53
CCV 4/89 15:51
747171/6
747165/29
747160/9
VEOBRIEN 3
74716/5
6432
LCSM/19
PBS/1
LCB 3/1 15:37
CCV 3/88 15:35
73262/1

75262/1

75221/1

75161/2 MGCA 2 10,11,12

6483, 6487, 6492

LCSM/18

PBS/1

CCB2/1 15:23

CCV2/84 15:21

74822/2

LCSM/18

PBS/1 CSD WBS 11

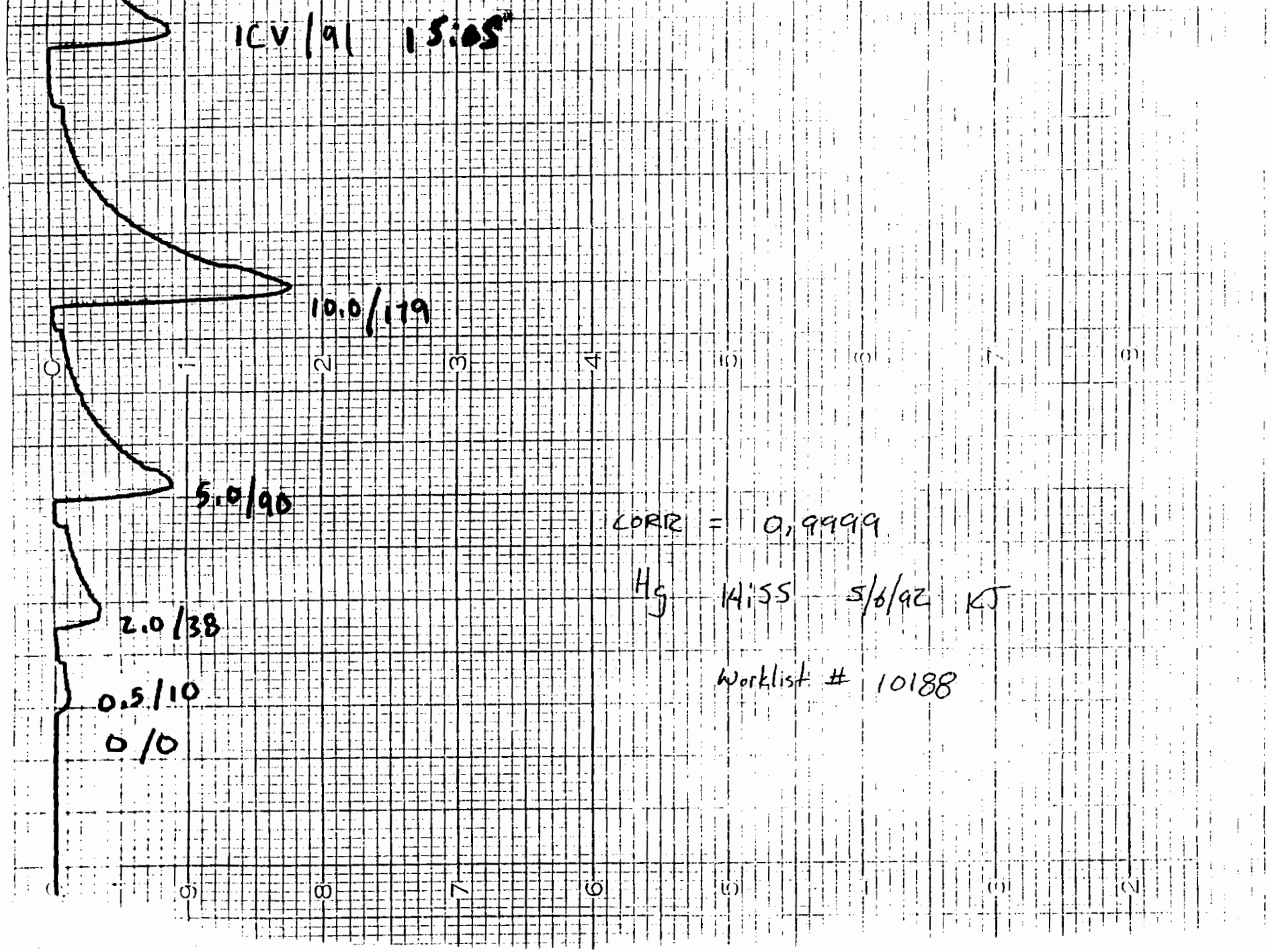
6449

CRA/4

CCB/1 15:11

CCV/91 15:09

CCB/2 15:07


ICV/91 15:05
10.0/179
5.0/90
2.0/38
0.5/10
0/0
CORR = 0.9999
Hg 14:55 5/6/92 KJ
Worklist # 10188

VERSAR LABORATORIES INC.
Prep Worklist # 9936

16-APR-92 02:32

Analyst: JCL.

Date Analyzed: 5-4-92

Comments: A-19 Ag, Be, Cd, Cr, Cu, Ni, Sb, Zn (P21

Reference: SW 846 3rd Ed.

Method: DIS

Control #	Code	Batch	Matrix	Analysis Code	Test
6432	VEOBRIEN	3	SOIL	P2M	DI

Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
1	6432	PBS		1	1	100	Colorless	Clear			Colorless	Clear	
2	6432	LCSM		1	1	100	↓	↓			↓	↓	
3	6432	74716	S-8	1	1.254	100	gray		Y	coarse	yellow	clear	stones
4	6432	74716D		1	1.291	100							
5	6432	74716S		1	1.463	100							
6	6432	74717	S-10	1	1.35	100	↓		↓	↓	↓	↓	↓

000018

VERSAR, INC.
METALS LABORATORY
SPIKE LOG

Code-Batch: Veobrien -2 **Date:** 5-4-92
Control No.: 6432 **Method code:** DIS 2050

***** CLP WATER SPIKING *****

☐ HGA WATER: spike = 0.5 ml of HGA spiking solution / 100 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Sol'n prep date:_____

☐ ICP WATER: spike = 5 ml of CLP ICP SPIKING SOLUTION / 100 ml
0.5 ml of 100ppm Sb / 100 ml
0.5 ml of 10ppm Ag / 100 ml
0.2 ml 100ppm Cr / 100 ml

ICP SPIKING SOLUTION: 5ppm Cu - 40 ppm Ba, Al, As, Se, Tl - 20ppm Fe - 10ppm Mn, Ni, Zn, Co, Pb, V - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

***** CLP SOIL SPIKING *****

☐ HGA SOIL: spike = 1 ml of HGA SPIKING SOLUTION / 200 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Soln prep date:_____

☐ ICP SOIL: spike = 10 ml of ICP SPIKING SOLUTION / 200 ml
1ml of 100ppm Sb / 200 ml
1 ml of 10ppm Ag / 200 ml
0.4ml of 100ppm Cr / 200ml

ICP SPIKING SOLUTION: 40ppm Ba, As, Se, Tl, - 10ppm Co, Pb, Mn, Ni, V, Zn - 5ppm Cu - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

***** NON-CLP SPIKING *****

HGA SPIKE = _____ ml of HGA NON-CLP spiking solution / _____ ml

HGA SPIKING SOLUTION: 10 ppm As, Se, Tl, Pb, 200 ppm Y Sol'n prep date:_____

ICP SPIKE = 5 ml of Solution #1 / 100 ml

SPIKING SOLUTION #1: 40 ppm Ba, Be, Cd, Co, Li, Mo, Sr, V - 80 ppm Cu, Pb, Mn, Ni, Se, Tl - 200 ppm Si - 328 ppm Na
Sol'n prep date: 013192 11A

ICP SPIKE = 5 ml of Solution #2 / 100 ml

SPIKING SOLUTION #2: 40 ppm B, Cr, Y - 80 ppm As, Sb, Sn, Ti, Zn - 400 ppm Al, Ca, Fe, K, Mg, Na
Sol'n prep date: 022592 07A

ICP SPIKE = 5 ml of Solution #3 / 100 ml

SPIKING SOLUTION #3: 40 ppm Ag Sol'n prep date: 022592 08A

000339

VERSAR LABORATORIES INC.
Prep Worklist # 9937

16-APR-92 02:32

Analyst: SCL

Date Analyzed: 5-4-92

Comments: A-19

Reference: SW 846 3rd Ed.

Method: DHS

Control #	Code	Batch	Matrix	Analysis Code	Test
6432	VEOBRIEN	3	SOIL	P2M	DH
6432	VEOBRIEN	3	SOIL	PB3	DH

	Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
	1	6432	PBS		1	1	100	colorless	clear			colorless	clear	
	2	6432	LCSM		1	1	100	↓	↓			↓	↓	
	3	6432	74708	S-1	1	1.059	100	gray		Y	~~[illegible]~~ coarse	~~[illegible]~~	clear	stones
	4	6432	74709	S-2	1	1.029	100							
	5	6432	74709D		1	1.102	100							
	6	6432	74709S		1	1.203	100	↓						
PB 6nW	7	6432	74710	S-3	1	1.009	100	black						
	8	6432	74711	S-4	1	1.24	100							
	9	6432	74712	S-5	1	1.041	100	↓						
	10	6432	74713	S-6	1	1.167	100	gray						
	11	6432	74714	S-7	1	1.390	100							
	12	6432	74715	S-9	1	1.37	100							
	13	6432	74716	S-8	1	1.449	100							
P2M	14	6432	74716D		1	1.232	100							
	15	6432	74716S		1	1.01	100							
	16	6432	74717	S-10	1	1.297	100	↓		↓	↓	↓	↓	↓

000020

VERSAR, INC.
METALS LABORATORY
SPIKE LOG

Code-Batch: Veuhoen -3 **Date:** 5-4-92
Control No.: 6432 **Method code:** DHS 3050

*** CLP WATER SPIKING ***

☐ HGA WATER: spike = 0.5 ml of HGA spiking solution / 100 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Sol'n prep date:_____

☐ ICP WATER: spike = 5 ml of CLP ICP SPIKING SOLUTION / 100 ml
0.5 ml of 100ppm Sb / 100 ml
0.5 ml of 10ppm Ag / 100 ml
0.2 ml 100ppm Cr / 100 ml

ICP SPIKING SOLUTION: 5ppm Cu - 40 ppm Ba, Al, As, Se, Tl - 20ppm Fe - 10ppm Mn, Ni, Zn, Co, Pb, V - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** CLP SOIL SPIKING ***

☐ HGA SOIL: spike = 1 ml of HGA SPIKING SOLUTION / 200 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Soln prep date:_____

☐ ICP SOIL: spike = 10 ml of ICP SPIKING SOLUTION / 200 ml
1ml of 100ppm Sb / 200 ml
1 ml of 10ppm Ag / 200 ml
0.4ml of 100ppm Cr / 200ml

ICP SPIKING SOLUTION: 40ppm Ba, As, Se, Tl, - 10ppm Co, Pb, Mn, Ni, V, Zn - 5ppm Cu - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** NON-CLP SPIKING ***

HGA SPIKE = 1 ml of HGA NON-CLP spiking solution / 100 ml

HGA SPIKING SOLUTION: 10 ppm As, Se, Tl, Pb, 200 ppm Y Sol'n prep date: 013092HA

ICP SPIKE = _____ ml of Solution #1 / _____ ml

SPIKING SOLUTION #1: 40 ppm Ba, Be, Cd, Co, Li, Mo, Sr, V - 80 ppm Cu, Pb, Mn, Ni, Se, Tl - 200 ppm Si - 328 ppm Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #2 / _____ ml

SPIKING SOLUTION #2: 40 ppm B, Cr, Y - 80 ppm As, Sb, Sn, Ti, Zn - 400 ppm Al, Ca, Fe, K, Mg, Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #3 / _____ ml

SPIKING SOLUTION #3: 40 ppm Ag Sol'n prep date:_____

Versar Laboratories INC.

26-APR-92

GENERAL CHEMISTRY
Total Solids Worklist

Worklist ID: 10036	Control	Code	Batch	Job	Location
	6432	VEOBRIEN	3	420.1.0	A-19
	6452	VER FIG	1	420.1.0	A-69

Analysis Date: 20-APR-92

Balance Calibration

Zero	0.0000	0.0000	50 gram	50.0000	49.9997
50 mg	0.0500	0.0501	100 gram	100.0000	99.9998
1 gram	0.9999	1.0000			

Comments:
LCS = NBS 1632b @ 98.4% TS

Cont#	Sample	Cruc. ID.	Crucible Wt. (g)	Crucible + Sample Wt. (g)	Dried Cruc + Sample	% H2O	% Solids	True Value	Comments
6432	MDL1						.0005		Units: g
6432	MDL2						.01		
6432	CB1						0.00		Units: g
6432	ICV1						1.00	1.0	100.0% rec. Units: g
6432	RB1		13.6265		13.6266		< 0.01		
6432	RB2		12.2922		12.2922		< 0.01		
6432	RB3		11.9649		11.9651		< 0.01		
6432	LCS1		13.3545	13.7543	13.7544	0.0000	100	98.4	101.7% rec.
6432	74708		14.8877	24.5315	23.0329	15.5000	84.5		
6432	74709		12.8392	26.8175	24.4591	16.9000	83.1		
6432	74709DP1		12.5467	27.0252	23.7792	22.4000	77.6		Mean = 80.4 RPD = 6.9%
6432	74710		12.9366	18.7432	17.5905	19.9000	80.2		
6432	74711		13.3243	27.2425	25.6387	11.5000	88.5		
6432	74712		11.4250	20.6555	18.8387	19.7000	80.3		
6432	74713		13.6752	32.6375	29.0609	18.9000	81.1		

TM 4/26/92

Analyst Theresa Mathews

Date 4-27-92

Versar Laboratories INC.

26-APR-92

GENERAL CHEMISTRY
Total Solids Worklist

10036

Cont#	Sample	Cruc. ID.	Crucible Wt. (g)	Crucible + Dried Sample Wt. (g)	Cruc + Sample	% H2O	% Solids	True Value	Comments
6432	74714		12.4971	24.0117	21.9304	18.1000	81.9		
6432	74715		12.1856	24.9784	23.1029	14.7000	85.3		
6432	74716		12.3086	28.8342	25.6077	19.5000	80.5		
6432	74716DP2		13.0316	29.7300	26.5812	18.9000	81.1		Mean = 80.8 RPD = 0.8%
6432	74717		13.2229	29.0165	26.6096	15.2000	84.8		
6452	74859		12.2035	20.2536	18.5534	21.1000	78.9		
6452	74860		12.1520	21.8504	19.8805	20.3000	79.7		
6452	74861		13.1077	19.8599	18.2224	24.3000	75.8		
6452	74862		12.0026	19.2015	17.4294	24.6000	75.4		
6452	74863		13.0205	21.1203	19.3166	22.3000	77.7		
6452	74864 (no)		12.0675	18.8374	17.2249	23.8000	76.2		74864 is not on PR sheet

TM 4/24/92

Analyst Theresa Matuszzi

Date 4-27-92

Versar Laboratories INC.

SEMIVOLATILE ANALYSIS
ANALYTICAL DATA PACKAGE

CLIENT: VERSAR A&E
SITE: O'BRIEN (CASE R09042)
PROJECT: 420.1 B#3
CONTROL: 6432
DATE: 05/13/92

Versar INC.

DELIVERABLES INDEX -- BNA ANALYSES ONLY

I. CASE NARRATIVE: Narrative proceeds Volatile Organic data.

II. QC SUMMARY

A. Surrogate Percent Recovery Summary (Form II)
B. Matrix Spike/Matrix Spike Duplicate Summary (Form III)
C. Method Blank Summary (Form IV)
D. GC/MS Tuning and Calibration Standard (Form V)

III. SAMPLE DATA

A. Organic Analysis Data Sheet (Form I)
B. Tentatively Identified Compounds (TIC)
C. Raw Data for the Semivolatile Sample Fraction
1. Reconstruction Ion Chromatogram(s)
2. Quantitation report
3. Raw HSL mass spectra and background subtracted HSL mass spectra with lab generated HSL standard spectra
4. GC/MS library search spectra for each TIC

Note: Samples arranged in alpha-numeric sequence.

IV. STANDARDS DATA

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

V. RAW QC DATA

A. DFTPP (For each 12-hour period, for each GC/MS system)
1. Bar graph spectrum
2. Mass listing
B. Reagent Blank Data
1. Organic Analysis Data Sheet (Form I),
2. Tentatively Identified Compounds (TIC)
3. Raw Data
a. Reconstructed ion chromatogram(s) and quantitation report(s).
b. HSL spectra with lab generated standard.
i. Raw HSL compound spectra
ii. Enhanced or background subtracted spectra
iii. Laboratory generated HSL standard spectra
iv. GC/MS library search spectra for each TIC
v. Quantitation/calculation of each TIC concentration

Versar INC.

V. RAW QC DATA (CONT'D)

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

VI. SAMPLE PREPARATION

A. Parameter Request Sheet
B. GC/FID Screening Data (soils only)
C. Extraction Sample Comments
D. GC/MS Analyst Comments
E. Extraction Chronicle and Worksheets
F. pH Results
G. Dry Weight Factor (soils only)
H. Dilution Factor Worksheet
I. Instrument Injection Logs

I. NARRATIVE

II. QC SUMMARY

6850 Versar Center • P. O. Box 1549 • Springfield. Virginia 22151 • Telephone: (703) 750-3000 • 1-800-283-7727

Versar Laboratories INC.

May 13, 1992

Narrative
Versar A&E - O'Brien/Case R09042
GC/MS Semivolatile Organic Analysis
EPA CLP Protocol (Rev 2/88)
Versar Project 420.1 - Batch 3
Control 6432

This report contains the analytical data for the semivolatile organic analysis of two (2) soil samples. The samples, listed below, were received by Versar Laboratories on April 14, 1992. The samples were analyzed following EPA CLP 2/88 protocol for semivolatile organic compounds. Results for other analytical parameters are provided separately.

SAMPLE LIST

S-8 S-10

==========

GC/MS instrument calibrations using DFTPP met method requirements for semivolatile organic analysis. All calibration criteria were met for the semivolatile initial calibration curve and the continuing calibration standard. All GC/MS analyses occurred during the twelve hour period that followed daily instrument calibration.

Semivolatile surrogate standard recovery values, internal standard area abundance values and associated relative retention times met specified QC requirements for all analyses. One set of semivolatile matrix spike/matrix spike duplicate analyses was performed for this batch shipment of samples. The sample extractions and analyses were performed prior to expiration of the sample holding times. All analyses were performed without dilution.

Detection limits and concentrations of semivolatile compounds present in the soil samples are reported on a "dry weight" basis, which accounts for the moisture content of each sample. Semivolatile non-target compounds have been tentatively identified using the EPA/NBS Mass Spectral Database Library. Explanations of qualifier flags used on the data reporting forms are provided in the listing which immediately follows this case narrative.

Versar Laboratories INC.

Please contact Janet Jaufmann, Client Services Manager, should you have any questions or require additional information pertaining to the semivolatile organic analysis of this batch shipment of samples.

Data Release Approved By:

Linda E. Bock
GC/MS Data QA Officer

Narrative Reviewed By:

Mary Anne Templeton
GC/MS Data QA Assistant

Versar Laboratories INC

Data Qualifier Flags

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

JN — For Non Target Compounds: This flag indicates that the concentration is an estimated value, assuming a 1 to 1 response with the internal standard. For CLP 3/90 both the J and N flags are specified.

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

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

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

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

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

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

Z — This flag is used when benzo(B)fluoranthene and benzo(K)fluoranthene cannot be quantified due to lack of chromatographic separation. The result listed under benzo(B)fluoranthene is the total of both compounds.

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

BRL — This flag is used on the quantitation reports to eliminate compounds below a reasonable confidence limit. All compounds flagged "BRL" are less than the CRQL.

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: VERSAR INC. Contract: _____

Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	S-10	74	70	62	52	47	40	0	0
02	S-8	51	56	63	45	39	41	0	0
03	S-8MS	50	55	68	42	37	38	0	0
04	S-8MSD	61	56	65	45	41	42	0	0
05	SBLK32	68	65	67	53	45	37	0	0

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-14	(18-137)
S4 (PHL) = Phenol-d6	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix Spike - EPA Sample No.: S-8 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	6150	0	2240	36	26- 90
2-Chlorophenol	6150	0	1810	29	25-102
1,4-Dichlorobenzene	4100	0	1580	39	28 104
N-Nitroso-di-n-prop.(1)	4100	0	2000	49	41 126
1,2,4-Trichlorobenzene	4100	0	1550	38	38 107
4-Chloro-3-methylphenol	6150	0	2240	36	26 103
Acenaphthene	4100	0	1870	46	31-137
4-Nitrophenol	6150	0	2290	37	11-114
2,4-Dinitrotoluene	4100	0	1610	39	28- 89
Pentachlorophenol	6150	0	2490	40	17-109
Pyrene	4100	0	2300	56	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	6150	2410	39	-8	35	26- 90
2-Chlorophenol	6150	2140	35	-19	50	25-102
1,4-Dichlorobenzene	4100	1810	44	-12	27	28 104
N-Nitroso-di-n-prop.(1)	4100	2250	55	-12	38	41 126
1,2,4-Trichlorobenzene	4100	1840	45	-17	23	38 107
4-Chloro-3-methylphenol	6150	2550	41	-13	33	26 103
Acenaphthene	4100	1920	47	-2	19	31-137
4-Nitrophenol	6150	2450	40	-8	50	11-114
2,4-Dinitrotoluene	4100	1820	44	-12	47	28- 89
Pentachlorophenol	6150	2520	41	-2	47	17-109
Pyrene	4100	2200	54	4	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
CAP/.32,W5621,W5620,

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: W5624 Lab Sample ID: SBLK32

Date Extracted: 04/23/92 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 05/05/92 Time Analyzed: 1353

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

Instrument ID: W

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	S-10	74719	W5629	05/05/92
02	S-8	74718	W5626	05/05/92
03	S-8MS	74718MS	W5627	05/05/92
04	S-8MSD	74718MSD	W5628	05/05/92

COMMENTS: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
CAP/.32,W5621,W5620,

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: W5568 DFTPP Injection Date: 04/30/92

Instrument ID: W DFTPP Injection Time: 1009

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.8
68	Less than 2.0% of mass 69	0.7 (1.2)1
69	Mass 69 relative abundance	60.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.1
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	18.4
365	Greater than 1.00% of mass 198	1.16
441	Present, but less than mass 443	5.8
442	Greater than 40.0% of mass 198	46.7
443	17.0 - 23.0% of mass 442	8.8 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	30017	W5569	04/30/92	1024
02	SSTD160	30013	W5570	04/30/92	1227
03	SSTD120	30014	W5571	04/30/92	1307
04	SSTD080	30015	W5572	04/30/92	1354
05	SSTD020	30018	W5573	04/30/92	1432

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: W5620 DFTPP Injection Date: 05/05/92

Instrument ID: W DFTPP Injection Time: 1104

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.7
68	Less than 2.0% of mass 69	0.7 (1.3)1
69	Mass 69 relative abundance	57.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	53.3
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	5.9
275	10.0 - 30.0% of mass 198	18.8
365	Greater than 1.00% of mass 198	2.04
441	Present, but less than mass 443	8.3
442	Greater than 40.0% of mass 198	60.1
443	17.0 - 23.0% of mass 442	10.5 (17.5)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	30017	W5621	05/05/92	1121
02	SBLK32	SBLK32	W5624	05/05/92	1353
03	S-8	74718	W5626	05/05/92	1508
04	S-8MS	74718MS	W5627	05/05/92	1546
05	S-8MSD	74718MSD	W5628	05/05/92	1624
06	S-10	74719	W5629	05/05/92	1701

OK

III. SAMPLE DATA PACKAGE

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74718

Sample wt/vol: 30.1 (g/mL) G Lab File ID: W5626

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	810	U
111-44-4	bis(2-Chloroethyl)ether	810	U
95-57-8	2-Chlorophenol	810	U
541-73-1	1,3-Dichlorobenzene	810	U
106-46-7	1,4-Dichlorobenzene	810	U
100-51-6	Benzyl alcohol	810	U
95-50-1	1,2-Dichlorobenzene	810	U
95-48-7	2-Methylphenol	810	U
108-60-1	bis(2-Chloroisopropyl)ether	810	U
106-44-5	3- & 4- Methylphenol	810	U
621-64-7	N-Nitroso-di-n-propylamine	810	U
67-72-1	Hexachloroethane	810	U
98-95-3	Nitrobenzene	810	U
78-59-1	Isophorone	810	U
88-75-5	2-Nitrophenol	810	U
105-67-9	2,4-Dimethylphenol	810	U
65-85-0	Benzoic Acid	4000	U
111-91-1	bis(2-Chloroethoxy)methane	810	U
120-83-2	2,4-Dichlorophenol	810	U
120-82-1	1,2,4-Trichlorobenzene	810	U
91-20-3	Naphthalene	810	U
106-47-8	4-Chloroaniline	810	U
87-68-3	Hexachlorobutadiene	810	U
59-50-7	4-Chloro-3-methylphenol	810	U
91-57-6	2-Methylnaphthalene	810	U
77-47-4	Hexachlorocyclopentadiene	810	U
88-06-2	2,4,6-Trichlorophenol	810	U
95-95-4	2,4,5-Trichlorophenol	4000	U
91-58-7	2-Chloronaphthalene	810	U
88-74-4	2-Nitroaniline	4000	U
131-11-3	Dimethylphthalate	810	U
208-96-8	Acenaphthylene	810	U
606-20-2	2,6-Dinitrotoluene	810	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74718

Sample wt/vol: 30.1 (g/mL) G Lab File ID: W5626

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4000	U
83-32-9	Acenaphthene	810	U
51-28-5	2,4-Dinitrophenol	4000	U UJ
100-02-7	4-Nitrophenol	4000	U
132-64-9	Dibenzofuran	810	U
121-14-2	2,4-Dinitrotoluene	810	U
84-66-2	Diethylphthalate	810	U
7005-72-3	4-Chlorophenyl-phenylether	810	U
86-73-7	Fluorene	810	U
100-01-6	4-Nitroaniline	4000	U UJ
534-52-1	4,6-Dinitro-2-methylphenol	4000	U
86-30-6	N-nitrosodiphenylamine (1)	810	U
101-55-3	4-Bromophenyl-phenylether	810	U
118-74-1	Hexachlorobenzene	810	U
87-86-5	Pentachlorophenol	4000	U
85-01-8	Phenanthrene	810	U
120-12-7	Anthracene	810	U
84-74-2	Di-n-butylphthalate	810	U
206-44-0	Fluoranthene	810	U
129-00-0	Pyrene	810	U UJ
85-68-7	Butylbenzylphthalate	810	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	810	U
218-01-9	Chrysene	810	U
117-81-7	bis(2-Ethylhexyl)phthalate	810	U
117-84-0	Di-n-octyl phthalate	810	U
205-99-2	Benzo(b)fluoranthene	810	U
207-08-9	Benzo(k)fluoranthene	810	U
50-32-8	Benzo(a)pyrene	810	U
193-39-5	Indeno(1,2,3-cd)pyrene	810	U
53-70-3	Dibenz(a,h)anthracene	810	U
191-24-2	Benzo(g,h,i)perylene	810	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S-8

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74718

Sample wt/vol: 30.1 (g/mL) G Lab File ID: W5626

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

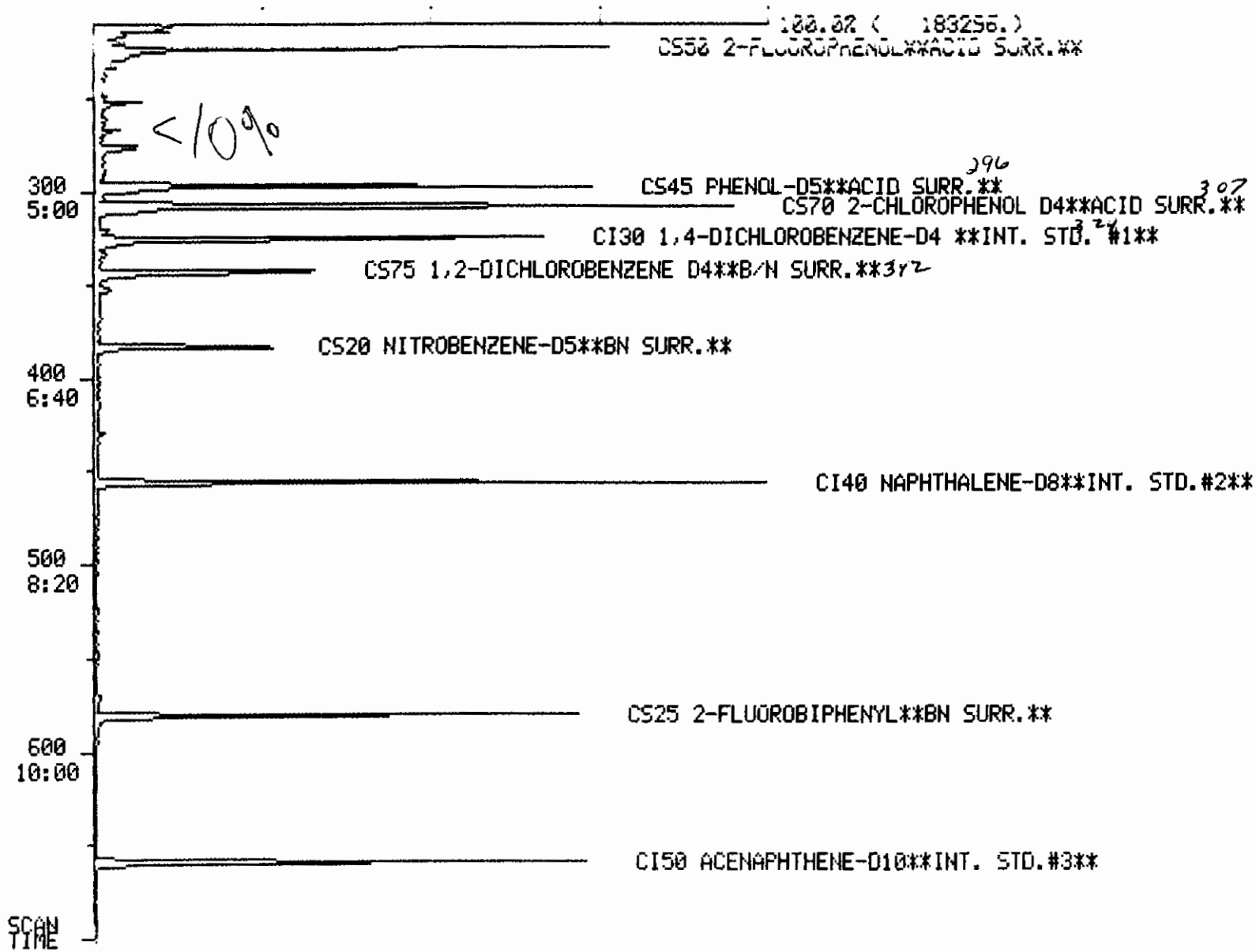
GPC Cleanup: (Y/N) Y pH: 9.1 Dilution Factor: 1.0

Number TICs found: 0

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

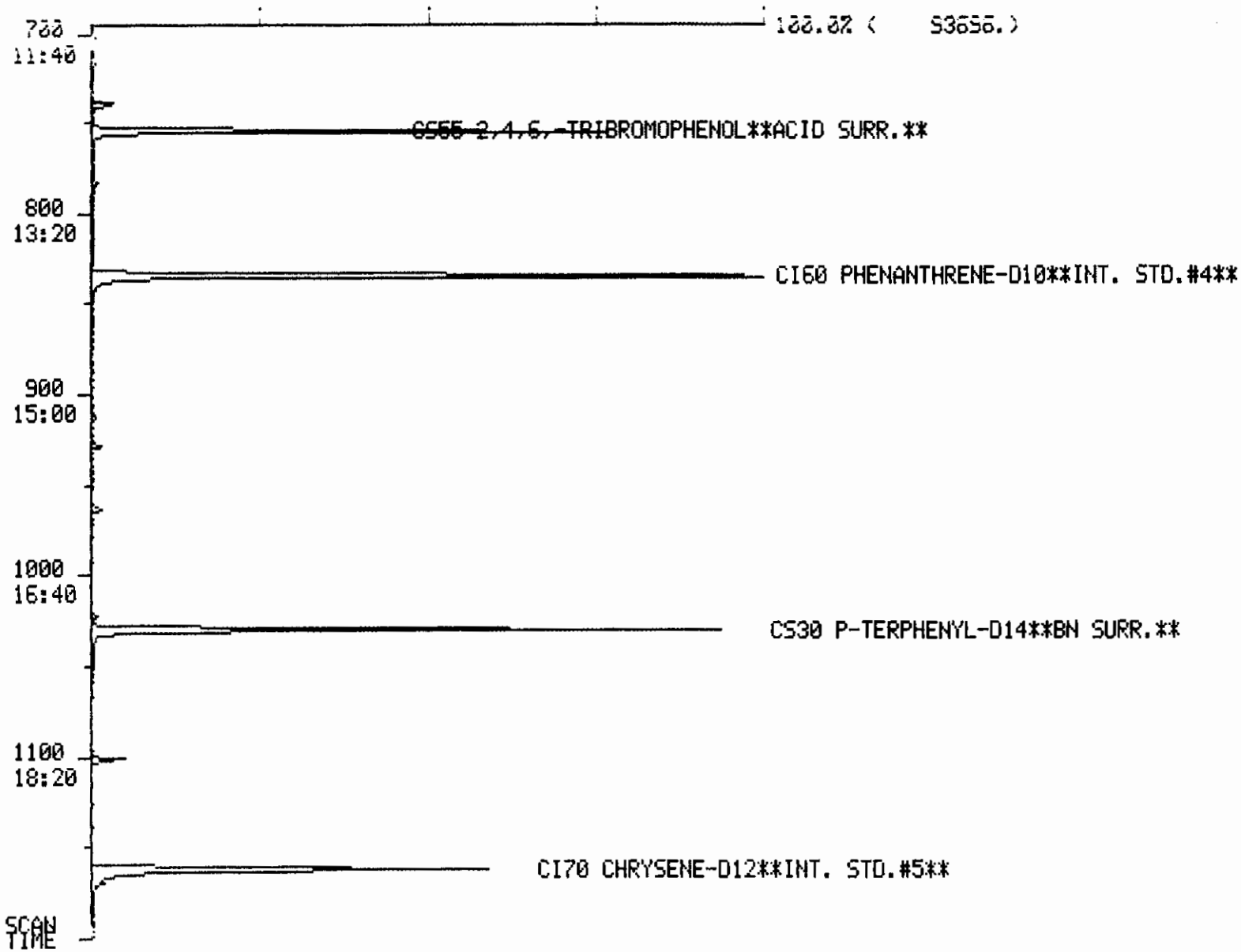
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DATA FROM FILE: W5626 SCANS 210 TO 700 ACQUIRED: 05/05/92 15:08:00
CALI: W5626 #2
SAMPLE: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



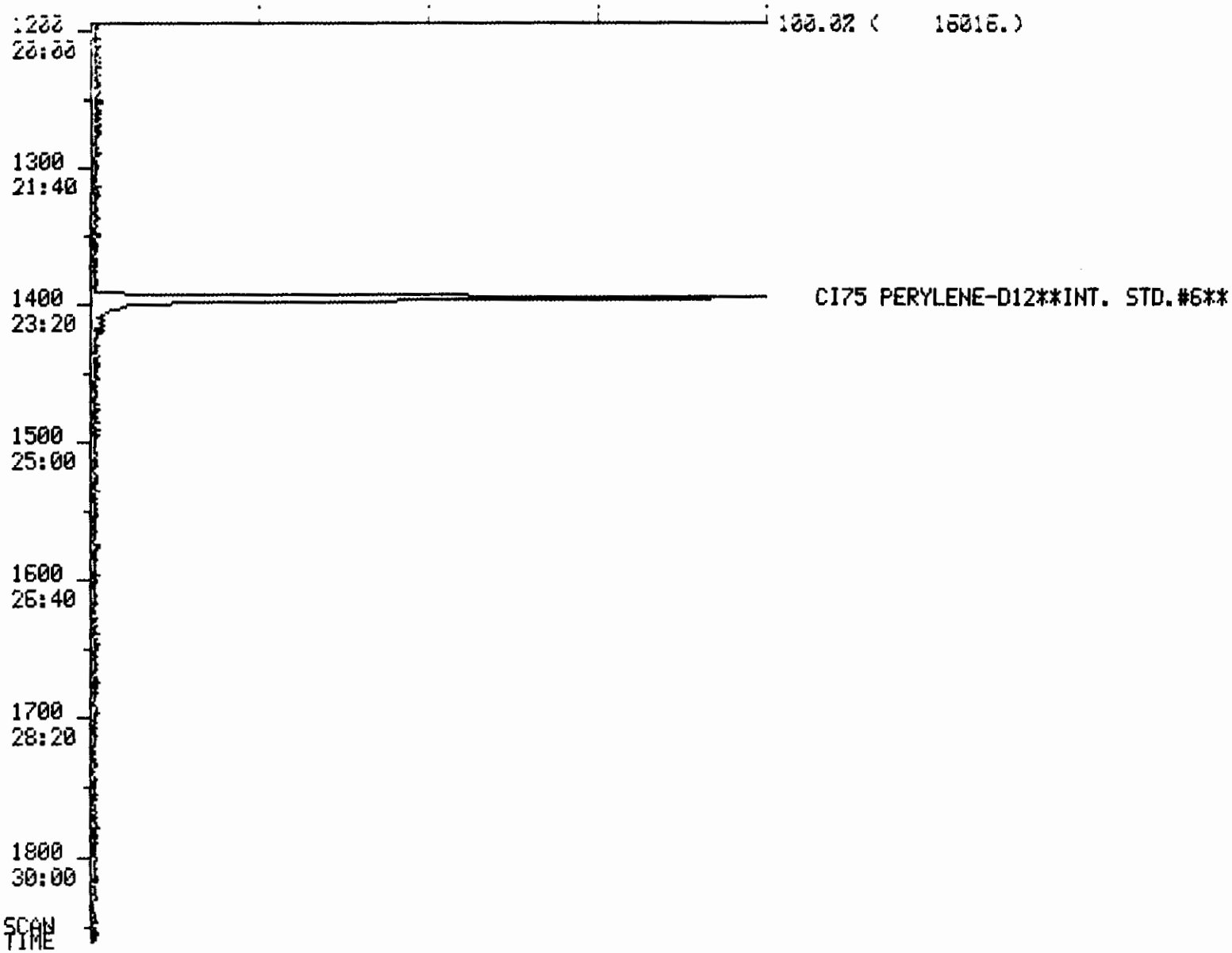
100016

DATA FROM FILE: W5626 SCANS 695 TO 1200 ACQUIRED: 05/05/92 15:08:00
CALI: W5626 #2
SAMPLE: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100017

DATA FROM FILE: W5626 SCANS 1195 TO 1860 ACQUIRED: 05/05/92 15:08:00
CALI: W5626 #2
SAMPLE: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100018

Quantitation Report File: W5626

Data: W5626.TI
05/05/92 15:08:00
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

Compliant Run SJD 5/6/92.

Ready for forms SJD 5/6/92.

AB 5/13/92

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

W5626

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	324	5:24	1	1.000	A BB	29827.	40.000 NG/UL	8.32
2	136	455	7:35	2	1.000	A BB	102788.	40.000 NG/UL	8.32
3	164	659	10:59	3	1.000	A BB	46433.	40.000 NG/UL	8.32
4	188	833	13:53	4	1.000	A BB	62976.	40.000 NG/UL	8.32
5	240	1161	19:21	5	1.000	A BB	44492.	40.000 NG/UL	8.32
6	264	1394	23:14	6	1.000	A BB	24300.	40.000 NG/UL	8.32
7	112	222	3:42	1	0.685	A BB	46527.	29.382 NG*A1	6.11
8	99	296	4:56	1	0.914	A BB	58601.	33.599 NG*A2	6.99
9	82	382	6:22	2	0.840	A BB	32249.	25.386 NG*B1	5.28
10	172	580	9:40	3	0.880	A BB	48312.	27.961 NG*B2	5.81
11	330	753	12:33	3	1.143	A BB	9044.	31.001 NG*A3	6.45
12	244	1029	17:09	5	0.886	A BB	40347.	31.381 NG*B3	6.53
13	132	307	5:07	1	0.948	A BB	41138.	34.238 NG*A4	7.12
14	152	342	5:42	1	1.056	A BB	17107.	24.484 NG*B4	5.09
15	128	307	5:07	1	0.948	A BB	428.	~~0.406 NG~~ BRL	0.08
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	128	457	7:37	2	1.004	A BB	735.	~~0.256 NG~~ BRL	0.05
35	122	429	7:09	2	0.943	A BB	292.	~~0.761 NG~~ BRL	0.16
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

W5626

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:24	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:36	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:00	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:55	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:28	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:41	1.00	0.682	1.00	29.38	50.00	1.248	2.124	0.59
8	4:56	1.00	0.914	1.00	33.60	50.00	1.572	2.339	0.67
9	6:23	1.00	0.840	1.00	25.39	50.00	0.251	0.494	0.51
10	9:42	1.00	0.882	1.00	27.96	50.00	0.832	1.488	0.56
11	12:35	1.00	1.144	1.00	31.00	50.00	0.156	0.251	0.62
12	17:12	1.00	0.882	1.00	31.38	50.00	0.725	1.156	0.63
13	5:07	1.00	0.948	1.00	34.24	50.00	1.103	1.611	0.68
14	5:42	1.00	1.056	1.00	24.48	50.00	0.459	0.937	0.49
15	5:08	1.00	0.951	1.00	0.41	50.00	0.011	1.415	0.01
16	4:57		0.917						
17	5:05		0.941						
18	5:21		0.991						
19	5:26		1.006						
20	5:44		1.062						
21	5:41		1.052						
22	5:55		1.096						
23	5:53		1.090						
24	6:13		1.151						
25	6:08		1.136						
26	6:10		1.142						
27	6:25		0.844						
28	6:49		0.897						
29	6:58		0.917						
30	7:03		0.928						
31	7:14		0.952						
32	7:22		0.969						
33	7:32		0.991						
34	7:38	1.00	1.004	1.00	0.26	50.00	0.006	1.119	0.01
35	7:18	0.98	0.961	0.98	0.76	50.00	0.002	0.149	0.02
36	7:49		1.029						
37	7:57		1.046						
38	8:44		1.149						
39	8:56		1.175						
40	9:21		0.850						
41	9:33		0.868						
42	9:37		0.874						
43	9:52		0.897						
44	10:12		0.927						
45	10:42		0.973						
46	10:36		0.964						
47	10:46		0.979						
48	11:04		1.006						
49	11:02		1.003						
50	11:13		1.020						

Quantitation Report File: W5626

Data: W5626.TI
05/05/92 15:08:00
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2'-OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	149	718	11:58	3	1.090	A BB	217.	~~0.103 NG~~ BRL	0.02
57	NOT FOUND								
58	NOT FOUND								
59	169	738	12:18	4	0.886	A BB	1581.	~~1.641 NG~~ BRL	0.34
60	NOT FOUND								
61	NOT FOUND								

W5626

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
62	NOT FOUND									
63	NOT FOUND									
64	NOT FOUND									
65	149	912	15:12	4	1.095	A BB	1091.	~~0.397 NG~~	BRL	0.08
66	NOT FOUND									
67	NOT FOUND									
68	NOT FOUND									
69	NOT FOUND									
70	NOT FOUND									
71	NOT FOUND									
72	NOT FOUND									
73	NOT FOUND									
74	NOT FOUND									
75	NOT FOUND									
76	NOT FOUND									
77	NOT FOUND									
78	NOT FOUND									
79	NOT FOUND									
80	NOT FOUND									
81	NOT FOUND									
82	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:22		1.033						
52	11:23		1.035						
53	11:31		1.047						
54	12:03		1.095						
55	12:04		1.097						
56	12:00	1.00	1.091	1.00	0.10	50.00	0.004	1.817	0.00
57	12:18		1.118						
58	12:18		0.884						
59	12:21	1.00	0.887	1.00	1.64	50.00	0.020	0.612	0.03
60	13:02		0.937						
61	13:19		0.957						
62	13:41		0.983						
63	13:59		1.005						
64	14:04		1.011						
65	15:14	1.00	1.095	1.00	0.40	50.00	0.014	1.745	0.01
66	16:23		1.177						
67	16:51		0.864						
68	18:20		0.940						
69	19:27		0.997						
70	19:34		1.003						
71	19:29		0.999						
72	19:38		1.007						
73	21:06		0.899						
74	22:13		0.947						
75	22:17		0.950						
76	23:16		0.991						
77	28:04		1.196						
78	28:12		1.202						
79	29:29		1.256						
80	2:25		0.448						
81	14:26		1.037						
82	5:55		1.096						

QUALITY CONTROL/QUALITY ASSURANCE DATA

METHOD: USEPA CLP, BNA LOW SOIL W/O PEST

DATAFILE: W5626 ANALYSIS TIME: 05/05/92 15:08
STANDARD: W5621 ANALYSIS TIME: 05/05/92 11:21
TUNEFILE: W5620 ANALYSIS TIME: 05/05/92 11:04

****** INTERNAL STANDARD AREA CHECK ******

INTERNAL STANDARD	DATA AREA	STD AREA	RATIO	CLP ACCEPT RATIO	STATUS
CI30 1,4-DICHLOROBENZEN	29827.	26814.	111%	50% - 200%	
CI40 NAPHTHALENE-D8**IN	102788.	95941.	107%	50% - 200%	
CI50 ACENAPHTHENE-D10**	46433.	41313.	112%	50% - 200%	
CI60 PHENANTHRENE-D10**	62976.	61924.	102%	50% - 200%	✓
CI70 CHRYSENE-D12**INT.	44492.	36460.	122%	50% - 200%	
CI75 PERYLENE-D12**INT.	24300.	26186.	93%	50% - 200%	

****** INTERNAL STANDARD RT CHECK ******

INTERNAL STANDARD	DATA SCAN	STD SCAN	DIFF [IN SEC]	CLP ACCEPT DIFF	STATUS
CI30 1,4-DICHLOROBENZEN	324	324	0	+/- 30 SECS	
CI40 NAPHTHALENE-D8**IN	455	456	1	+/- 30 SECS	
CI50 ACENAPHTHENE-D10**	659	660	1	+/- 30 SECS	✓
CI60 PHENANTHRENE-D10**	833	835	2	+/- 30 SECS	
CI70 CHRYSENE-D12**INT.	1161	1170	9	+/- 30 SECS	
CI75 PERYLENE-D12**INT.	1394	1408	14	+/- 30 SECS	

****** SURROGATE RECOVERIES ******

SURROGATE	AMT FOUND	AMT ADDED	PERCENT RECOVERY	RECOV LIMITS	STATUS
CS50 2-FLUOROPHENOL**AC	29.4	~~100.0~~ 75	~~29~~ 39	25% - 121%	
CS45 PHENOL-D5**ACID SU	33.6	~~100.0~~	~~34~~ 45	24% - 113%	
CS20 NITROBENZENE-D5**B	25.4	50.0	51	23% - 120%	✓
CS25 2-FLUOROBIPHENYL**	28.0	50.0	56	30% - 115%	
CS55 2,4,6,-TRIBROMOPHE	31.0	~~100.0~~ 75	~~31~~ 41	19% - 122%	
CS30 P-TERPHENYL-D14**B	31.4	50.0	63	18% - 137%	

```
                >>>>INTERNAL STANDARD RIC REPORT<<<<
*****************************INTERNAL STANDARD#1*****************RIC
Mass List                        Data: W5626 # 324          Base m/z:   150
05/05/92 15:08:00 +  5:24        Cali: W5626 #   2          RIC:      85120.
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
*****************************INTERNAL STANDARD#2*****************RIC
Mass List                        Data: W5626 # 455          Base m/z:   136
05/05/92 15:08:00 +  7:35        Cali: W5626 #   2          RIC:     119040.
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
*****************************INTERNAL STANDARD#3*****************RIC
Mass List                        Data: W5626 # 659          Base m/z:   164
05/05/92 15:08:00 + 10:59        Cali: W5626 #   2          RIC:     101120.
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
*****************************INTERNAL STANDARD#4*****************RIC
Mass List                        Data: W5626 # 833          Base m/z:   188
05/05/92 15:08:00 + 13:53        Cali: W5626 #   2          RIC:      77440.
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
*****************************INTERNAL STANDARD#5*****************RIC
Mass List                        Data: W5626 #1161          Base m/z:   240
05/05/92 15:08:00 + 19:21        Cali: W5626 #   2          RIC:      48896.
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
*****************************INTERNAL STANDARD#6*****************RIC
Mass List                        Data: W5626 #1394          Base m/z:   264
05/05/92 15:08:00 + 23:14        Cali: W5626 #   2          RIC:      15056.
Sample: CLP,6432,3,S-8,L,S,74718,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     44        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
       CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO COELUTION
```

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-10

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74719

Sample wt/vol: 30.0 (g/mL) G Lab File ID: W5629

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 11 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	740	U
111-44-4	bis(2-Chloroethyl)ether	740	U
95-57-8	2-Chlorophenol	740	U
541-73-1	1,3-Dichlorobenzene	740	U
106-46-7	1,4-Dichlorobenzene	740	U
100-51-6	Benzyl alcohol	740	U
95-50-1	1,2-Dichlorobenzene	740	U
95-48-7	2-Methylphenol	740	U
108-60-1	bis(2-Chloroisopropyl)ether	740	U
106-44-5	3- & 4- Methylphenol	740	U
621-64-7	N-Nitroso-di-n-propylamine	740	U
67-72-1	Hexachloroethane	740	U
98-95-3	Nitrobenzene	740	U
78-59-1	Isophorone	740	U
88-75-5	2-Nitrophenol	740	U
105-67-9	2,4-Dimethylphenol	740	U
65-85-0	Benzoic Acid	3600	U
111-91-1	bis(2-Chloroethoxy)methane	740	U
120-83-2	2,4-Dichlorophenol	740	U
120-82-1	1,2,4-Trichlorobenzene	740	U
91-20-3	Naphthalene	740	U
106-47-8	4-Chloroaniline	740	U
87-68-3	Hexachlorobutadiene	740	U
59-50-7	4-Chloro-3-methylphenol	740	U
91-57-6	2-Methylnaphthalene	740	U
77-47-4	Hexachlorocyclopentadiene	740	U UJ
88-06-2	2,4,6-Trichlorophenol	740	U
95-95-4	2,4,5-Trichlorophenol	3600	U
91-58-7	2-Chloronaphthalene	740	U
88-74-4	2-Nitroaniline	3600	U
131-11-3	Dimethylphthalate	740	U
208-96-8	Acenaphthylene	740	U
606-20-2	2,6-Dinitrotoluene	740	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-10

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74719

Sample wt/vol: 30.0 (g/mL) G Lab File ID: W5629

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 11 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3600	U
83-32-9	Acenaphthene	740	U
51-28-5	2,4-Dinitrophenol	3600	U UJ
100-02-7	4-Nitrophenol	3600	U
132-64-9	Dibenzofuran	740	U
121-14-2	2,4-Dinitrotoluene	740	U
84-66-2	Diethylphthalate	740	U
7005-72-3	4-Chlorophenyl-phenylether	740	U
86-73-7	Fluorene	740	U
100-01-6	4-Nitroaniline	3600	U UJ
534-52-1	4,6-Dinitro-2-methylphenol	3600	U
86-30-6	N-nitrosodiphenylamine (1)	740	U
101-55-3	4-Bromophenyl-phenylether	740	U
118-74-1	Hexachlorobenzene	740	U
87-86-5	Pentachlorophenol	3600	U
85-01-8	Phenanthrene	740	U
120-12-7	Anthracene	740	U
84-74-2	Di-n-butylphthalate	740	U
206-44-0	Fluoranthene	740	U
129-00-0	Pyrene	560	J
85-68-7	Butylbenzylphthalate	740	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	740	U
218-01-9	Chrysene	740	U
117-81-7	bis(2-Ethylhexyl)phthalate	740	U
117-84-0	Di-n-octyl phthalate	740	U
205-99-2	Benzo(b)fluoranthene	740	U
207-08-9	Benzo(k)fluoranthene	740	U
50-32-8	Benzo(a)pyrene	380	J
193-39-5	Indeno(1,2,3-cd)pyrene	740	U
53-70-3	Dibenz(a,h)anthracene	740	U
191-24-2	Benzo(g,h,i)perylene	740	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S-10

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74719

Sample wt/vol: 30.0 (g/mL) G Lab File ID: W5629

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 11 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

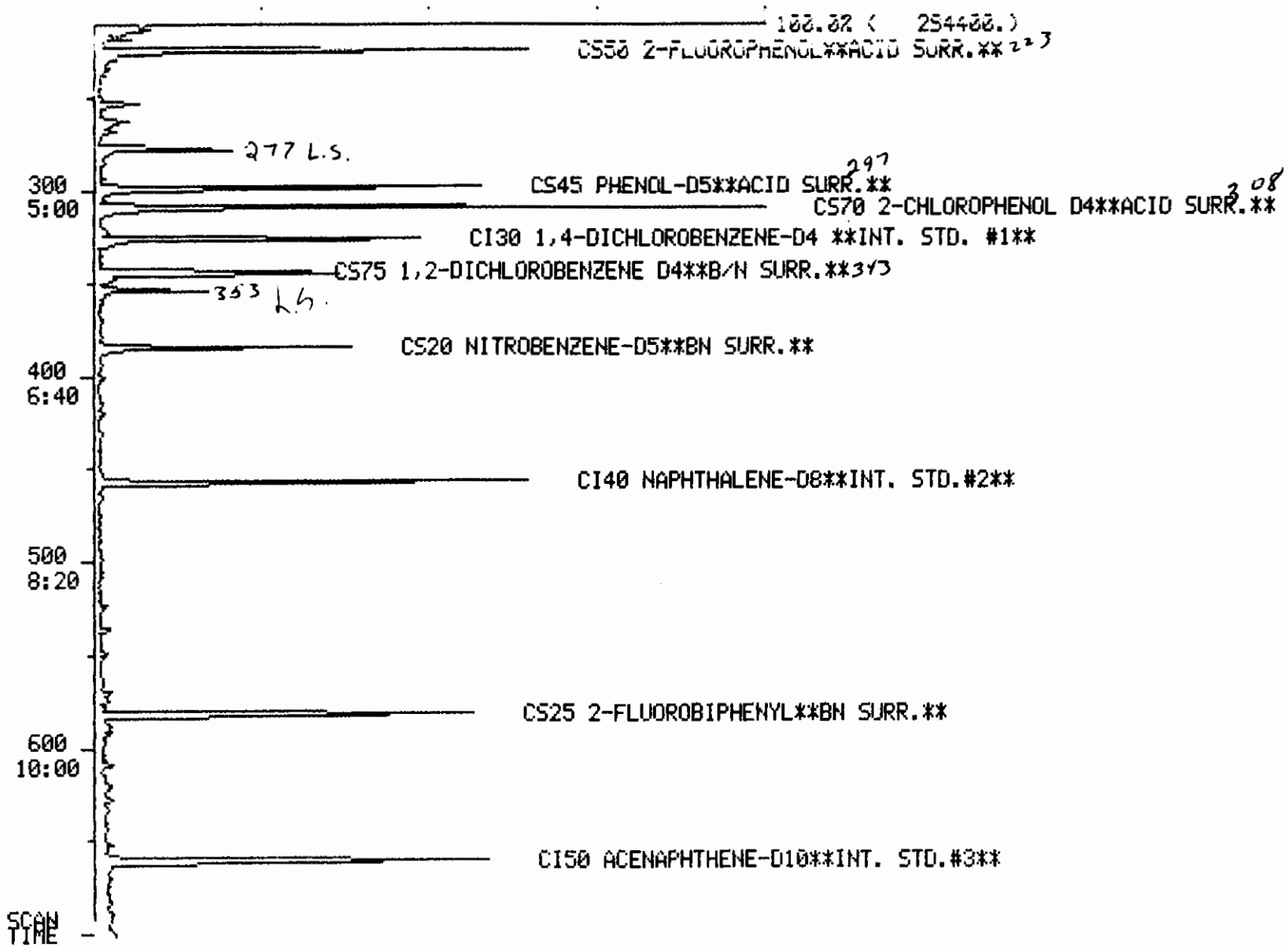
GPC Cleanup: (Y/N) Y pH: 9.6 Dilution Factor: 1.0

Number TICs found: 26

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

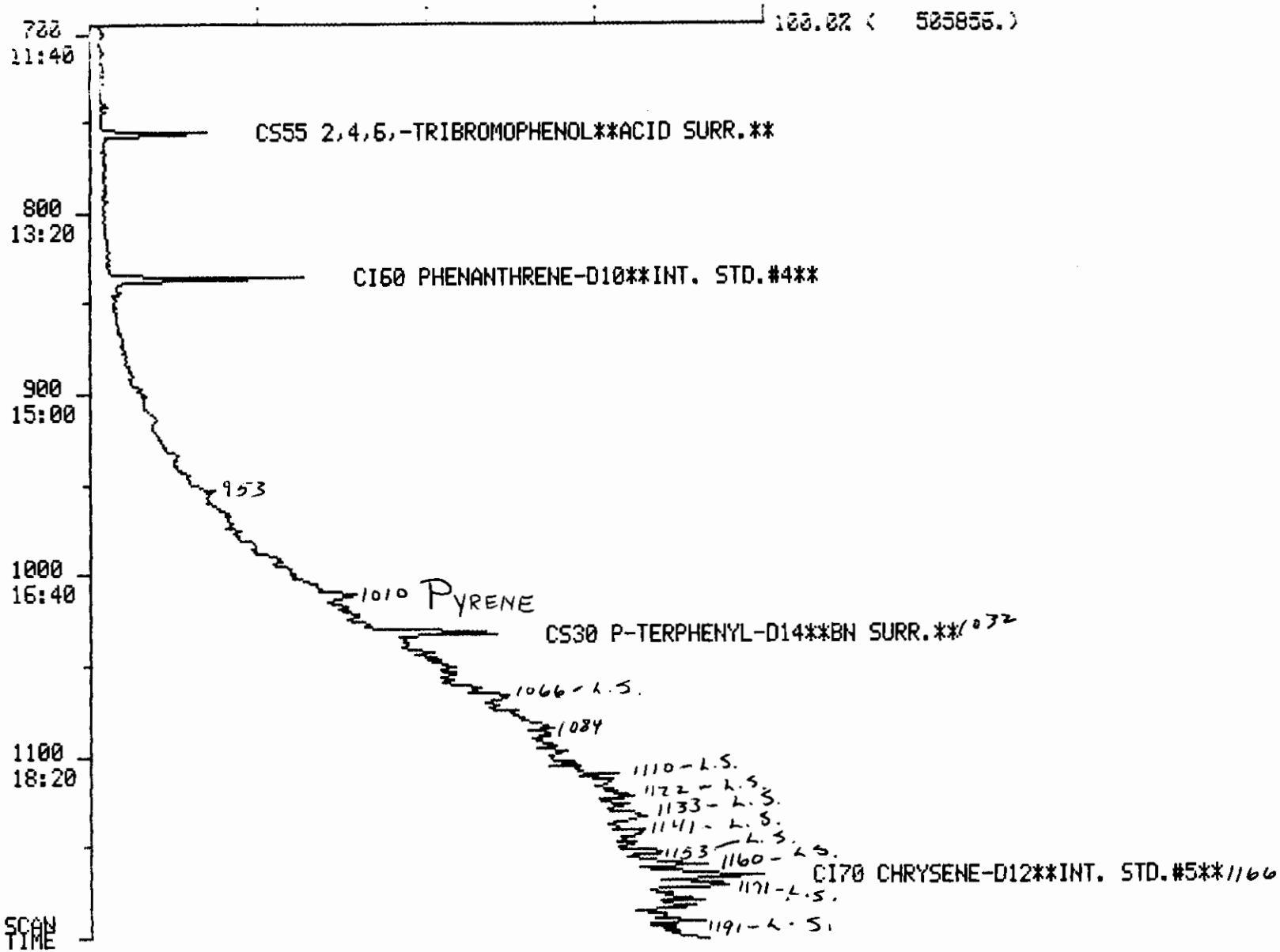
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN KETONE	4.62	1200	JN
2.	UNKNOWN	5.88	820	JN
3.	UNK POLYAROMATIC HYDROCARBON	17.77	1400	JN
4.	UNKNOWN	18.50	1300	JN
5.	UNKNOWN	18.70	1300	JN
6.	UNKNOWN	18.89	2000	JN
7.	UNKNOWN	19.02	2100	JN
8.	UNKNOWN	19.22	2600	JN
9.	UNKNOWN	19.34	2200	JN
10.	UNKNOWN	19.52	3400	JN
11.	UNKNOWN	19.85	1400	JN
12.	UNKNOWN	20.00	2900	JN
13.	UNKNOWN	20.27	2200	JN
14.	UNKNOWN	20.37	2000	JN
15.	UNKNOWN	20.70	2200	JN
16.	UNKNOWN	20.77	3400	JN
17.	UNKNOWN	21.74	2500	JN
18.	UNKNOWN	21.87	2400	JN
19.	UNKNOWN	22.44	2200	JN
20.	UNKNOWN	22.50	2400	JN
21.	UNKNOWN	22.80	1300	JN
22.	UNKNOWN	23.04	2200	JN
23.	UNKNOWN	23.60	1900	JN
24.	UNKNOWN	24.05	2200	JN
25.	UNKNOWN	24.40	1900	JN
26.	UNKNOWN	24.59	1700	JN

DATA FROM FILE: W5629 SCANS 210 TO 700 ACQUIRED: 05/05/92 17:01:00
CALI: W5629 #2
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



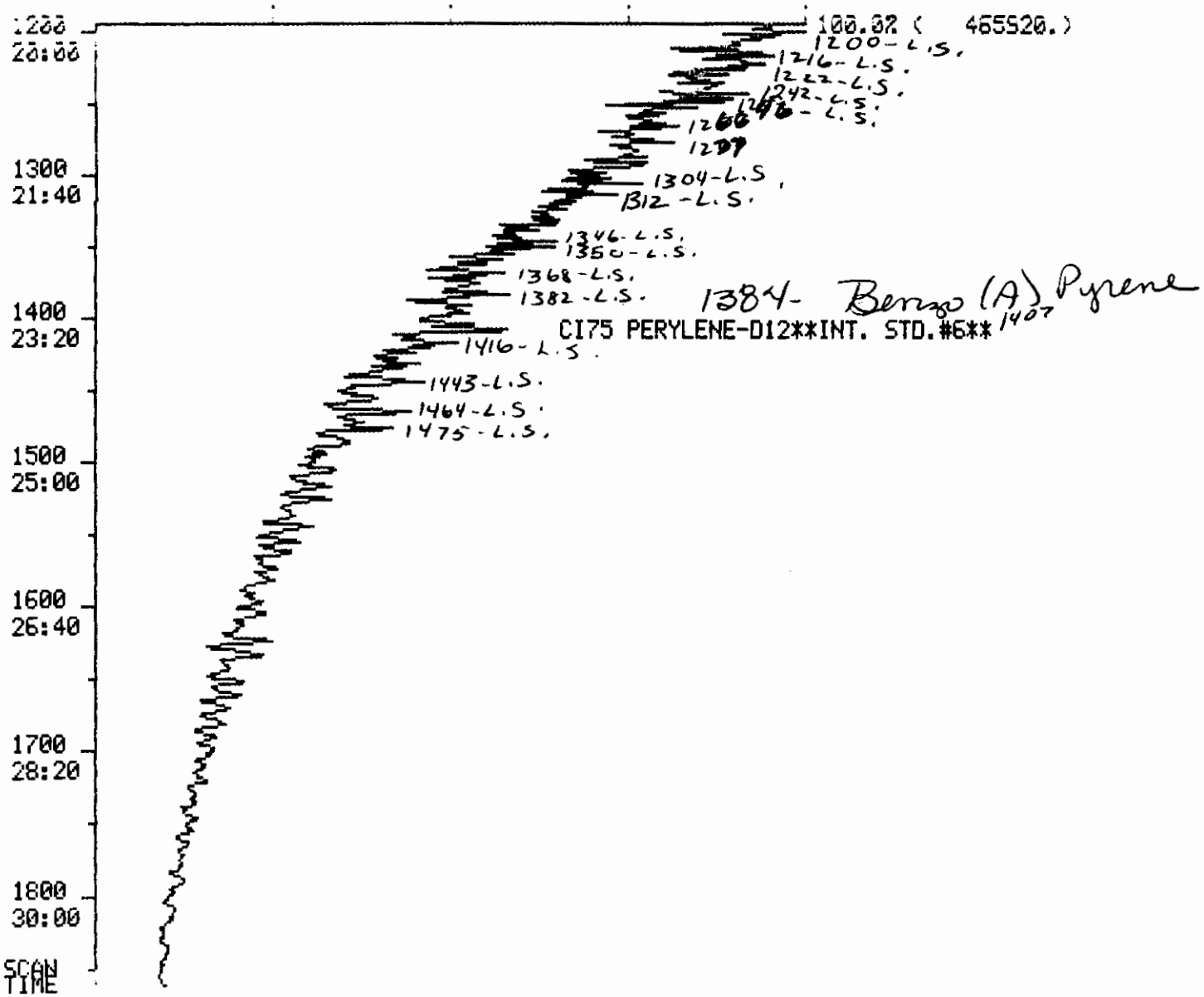
100029

DATA FROM FILE: W5629 SCANS 695 TO 1200 ACQUIRED: 05/05/92 17:01:00
CALI: W5629 #2
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100060

DATA FROM FILE: W5629 SCANS 1195 TO 1860 ACQUIRED: 05/05/92 17:01:00
CALI: W5629 #2
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100031

Quantitation Report File: W5629

Data: W5629.TI
05/05/92 17:01:00
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

Compliant Run SJD 5/6/92.

Ready for forms SJD 5/6/92

5/13/92

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

W5629

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	325	5:25	1	1.000	A BB	33617.	40.000 NG/UL	7.10
2	136	456	7:36	2	1.000	A BB	115340.	40.000 NG/UL	7.10
3	164	660	11:00	3	1.000	A BB	53411.	40.000 NG/UL	7.10
4	188	835	13:55	4	1.000	A BB	76333.	40.000 NG/UL	7.10
5	240	1166	19:26	5	1.000	A BB	55099.	40.000 NG/UL	7.10
6	264	1407	23:27	6	1.000	A BB	51261.	40.000 NG/UL	7.10
7	112	223	3:43	1	0.686	A BB	62470.	35.002 NG*A1	6.21
8	99	297	4:57	1	0.914	A BB	76838.	39.088 NG*A2	6.94
9	82	384	6:24	2	0.842	A BB	52786.	37.031 NG*B1	6.57
10	172	581	9:41	3	0.880	A BB	69580.	35.009 NG*B2	6.21
11	330	755	12:35	3	1.144	A BB	9993.	29.779 NG*A3	5.28
12	244	1032	17:12	5	0.885	A BB	49342.	30.989 NG*B3	5.50
13	132	308	5:08	1	0.948	A BB	55712.	41.140 NG*A4	7.30
14	152	343	5:43	1	1.055	A BB	24783.	31.471 NG*B4	5.58
15	128	308	5:08	1	0.948	A BB	1037.	~~0.872 NG~~	0.15
16	94	298	4:58	1	0.917	A BB	385.	~~0.261 NG~~	0.05
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	77	384	6:24	2	0.842	A BB	362.	~~0.243 NG~~	0.04
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	128	458	7:38	2	1.004	A BB	837.	~~0.259 NG~~	0.05
35	122	431	7:11	2	0.945	A BB	399.	~~0.926 NG~~	0.16
36	NOT FOUND								
37	NOT FOUND								
38	107	525	8:45	2	1.151	A BB	289.	~~0.292 NG~~.	0.05
39	142	535	8:55	2	1.173	A BB	1633.	~~0.847 NG~~	0.15
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	65	608	10:08	3	0.921	A BB	281.	~~0.441 NG~~	0.08
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	153	663	11:03	3	1.005	A BB	360.	~~0.187 NG~~.	0.03
49	NOT FOUND								
50	NOT FOUND								

BRL

W5629

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:24	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:36	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:00	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:55	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:28	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:41	1.01	0.682	1.01	35.00	50.00	1.487	2.124	0.70
8	4:56	1.00	0.914	1.00	39.09	50.00	1.829	2.339	0.78
9	6:23	1.00	0.840	1.00	37.03	50.00	0.366	0.494	0.74
10	9:42	1.00	0.882	1.00	35.01	50.00	1.042	1.488	0.70
11	12:35	1.00	1.144	1.00	29.78	50.00	0.150	0.251	0.60
12	17:12	1.00	0.882	1.00	30.99	50.00	0.716	1.156	0.62
13	5:07	1.00	0.948	1.00	41.14	50.00	1.326	1.611	0.82
14	5:42	1.00	1.056	1.00	31.47	50.00	0.590	0.937	0.63
15	5:08	1.00	0.951	1.00	0.87	50.00	0.025	1.415	0.02
16	4:57	1.00	0.917	1.00	0.26	50.00	0.009	1.754	0.01
17	5:05		0.941						
18	5:21		0.991						
19	5:26		1.006						
20	5:44		1.062						
21	5:41		1.052						
22	5:55		1.096						
23	5:53		1.090						
24	6:13		1.151						
25	6:08		1.136						
26	6:10		1.142						
27	6:25	1.00	0.844	1.00	0.24	50.00	0.003	0.516	0.00
28	6:49		0.897						
29	6:58		0.917						
30	7:03		0.928						
31	7:14		0.952						
32	7:22		0.969						
33	7:32		0.991						
34	7:38	1.00	1.004	1.00	0.26	50.00	0.006	1.119	0.01
35	7:18	0.98	0.961	0.98	0.93	50.00	0.003	0.149	0.02
36	7:49		1.029						
37	7:57		1.046						
38	8:44	1.00	1.149	1.00	0.29	50.00	0.002	0.343	0.01
39	8:56	1.00	1.175	1.00	0.85	50.00	0.011	0.668	0.02
40	9:21		0.850						
41	9:33		0.868						
42	9:37		0.874						
43	9:52		0.897						
44	10:12	0.99	0.927	0.99	0.44	50.00	0.004	0.477	0.01
45	10:42		0.973						
46	10:36		0.964						
47	10:46		0.979						
48	11:04	1.00	1.006	1.00	0.19	50.00	0.005	1.439	0.00
49	11:02		1.003						
50	11:13		1.020						

Quantitation Report File: W5629

Data: W5629.TI
05/05/92 17:01:00
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2'-OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	682	11:22	3	1.033	A BB	616.	~~0.247 NG~~	0.04
52	NOT FOUND								
53	165	689	11:29	3	1.044	A BB	169.	~~0.294 NG~~	0.05
54	166	723	12:03	3	1.095	A BB	928.	~~0.505 NG~~	0.09
55	NOT FOUND								
56	149	719	11:59	3	1.089	A VB	1045.	~~0.431 NG~~	0.08
57	NOT FOUND								
58	NOT FOUND								
59	169	740	12:20	4	0.886	A BB	2640.	~~2.260 NG~~	0.40
60	NOT FOUND								
61	NOT FOUND								

BRL

W5629

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	NOT FOUND								
63	178	837	13:57	4	1.002	A BV	4490.	1.964 NG	0.35
64	178	843	14:03	4	1.010	A VB	3027.	1.214 NG	0.22
65	149	913	15:13	4	1.093	A BB	1721.	0.517 NG	0.09
66	202	982	16:22	4	1.176	A BB	1969.	0.917 NG	0.16
67	202	1010	16:50	5	0.866	A BB	20482.	7.474 NG	1.32
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	252	1329	22:09	6	0.945	M XX	3424.	~~2.556 NG~~ BRL	0.45
75	252	1331	22:11	6	0.946	M XX	4368.	~~2.470 NG~~ BRL	0.44
76	252	1384	23:04	6	0.984	A BB	6438.	5.015 NG	0.89
77	NOT FOUND								
78	278	1689	28:09	6	1.200	A VV	2794.	~~3.708 NG~~ BRL	0.66
79	NOT FOUND								
80	74	140	2:20	1	0.431	A BB	8160.	~~11.126 NG~~ NTC	1.97
81	167	865	14:25	4	1.036	A BB	308.	~~0.187 NG~~ BRL	0.03
82	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:22	1.00	1.033	1.00	0.25	50.00	0.009	1.867	0.00
52	11:23		1.035						
53	11:31	1.00	1.047	1.00	0.29	50.00	0.003	0.431	0.01
54	12:03	1.00	1.095	1.00	0.51	50.00	0.014	1.376	0.01
55	12:04		1.097						
56	12:00	1.00	1.091	1.00	0.43	50.00	0.016	1.817	0.01
57	12:18		1.118						
58	12:18		0.884						
59	12:21	1.00	0.887	1.00	2.26	50.00	0.028	0.612	0.05
60	13:02		0.937						
61	13:19		0.957						
62	13:41		0.983						
63	13:59	1.00	1.005	1.00	1.96	50.00	0.047	1.198	0.04
64	14:04	1.00	1.011	1.00	1.21	50.00	0.032	1.306	0.02
65	15:14	1.00	1.095	1.00	0.52	50.00	0.018	1.745	0.01
66	16:23	1.00	1.177	1.00	0.92	50.00	0.021	1.125	0.02
67	16:51	1.00	0.864	1.00	7.47	50.00	0.297	1.989	0.15
68	18:20		0.940						
69	19:27		0.997						
70	19:34		1.003						
71	19:29		0.999						
72	19:38		1.007						
73	21:06		0.899						
74	22:13	1.00	0.947	1.00	2.56	50.00	0.053	1.045	0.05
75	22:17	1.00	0.950	1.00	2.47	50.00	0.068	1.380	0.05
76	23:16	0.99	0.991	0.99	5.02	50.00	0.100	1.002	0.10
77	28:04		1.196						
78	28:12	1.00	1.202	1.00	3.71	50.00	0.044	0.588	0.07
79	29:29		1.256						
80	2:25	0.97	0.448	0.96	11.13	50.00	0.194	0.873	0.22
81	14:26	1.00	1.037	1.00	0.19	50.00	0.003	0.862	0.00
82	5:55		1.096						

QUALITY CONTROL/QUALITY ASSURANCE DATA

METHOD: USEPA CLP, BNA LOW SOIL W/O PEST

DATAFILE: W5629 ANALYSIS TIME: 05/05/92 17:01
STANDARD: W5621 ANALYSIS TIME: 05/05/92 11:21
TUNEFILE: W5620 ANALYSIS TIME: 05/05/92 11:04

****** INTERNAL STANDARD AREA CHECK ******

INTERNAL STANDARD	DATA AREA	STD AREA	RATIO	CLP ACCEPT RATIO	STATUS
CI30 1,4-DICHLOROBENZEN	33617.	26814.	125%	50% - 200%	
CI40 NAPHTHALENE-D8**IN	115340.	95941.	120%	50% - 200%	
CI50 ACENAPHTHENE-D10**	53411.	41313.	129%	50% - 200%	
CI60 PHENANTHRENE-D10**	76333.	61924.	123%	50% - 200%	✓
CI70 CHRYSENE-D12**INT.	55099.	36460.	151%	50% - 200%	
CI75 PERYLENE-D12**INT.	51261.	26186.	196%	50% - 200%	

****** INTERNAL STANDARD RT CHECK ******

INTERNAL STANDARD	DATA SCAN	STD SCAN	DIFF [IN SEC]	CLP ACCEPT DIFF	STATUS
CI30 1,4-DICHLOROBENZEN	325	324	1	+/- 30 SECS	
CI40 NAPHTHALENE-D8**IN	456	456	0	+/- 30 SECS	
CI50 ACENAPHTHENE-D10**	660	660	0	+/- 30 SECS	✓
CI60 PHENANTHRENE-D10**	835	835	0	+/- 30 SECS	
CI70 CHRYSENE-D12**INT.	1166	1170	4	+/- 30 SECS	
CI75 PERYLENE-D12**INT.	1407	1408	1	+/- 30 SECS	

****** SURROGATE RECOVERIES ******

SURROGATE	AMT FOUND	AMT ADDED	PERCENT RECOVERY	RECOV LIMITS	STATUS
CS50 2-FLUOROPHENOL**AC	35.0	~~100.0~~ 75	~~35~~ 47	25% - 121%	
CS45 PHENOL-D5**ACID SU	39.1	~~100.0~~	~~39~~ 52	24% - 113%	✓
CS20 NITROBENZENE-D5**B	37.0	50.0	74	23% - 120%	
CS25 2-FLUOROBIPHENYL**	35.0	50.0	70	30% - 115%	
CS55 2,4,6,-TRIBROMOPHE	29.8	~~100.0~~ 75	~~30~~ 40	19% - 122%	
CS30 P-TERPHENYL-D14**B	31.0	50.0	62	18% - 137%	

100033

TARGET COMPOUND COMPARISON

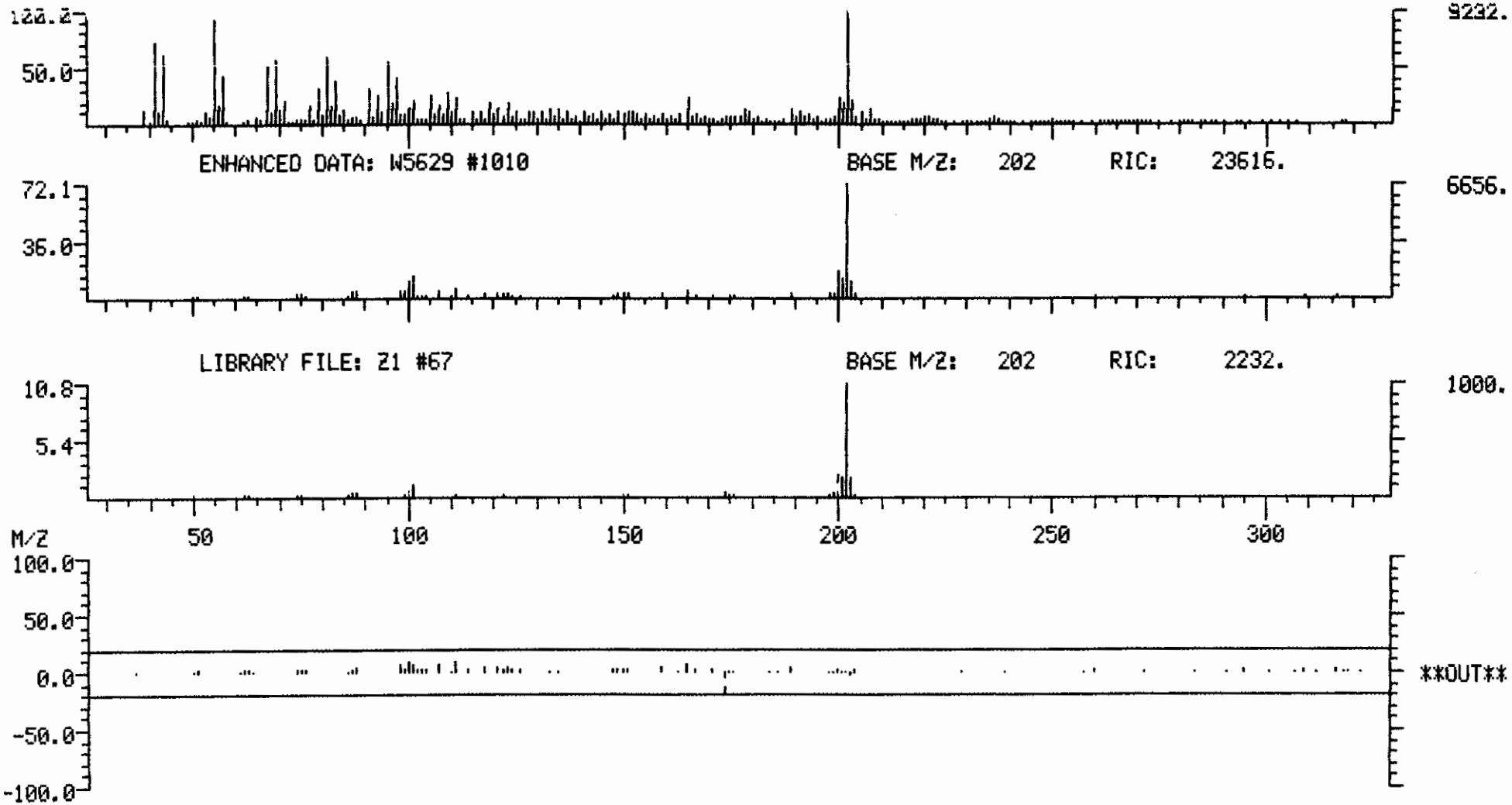
COMPOUND: PYRENE

RAW DATA: W5629 #1010 BASE M/Z: 202 RIC: 197632.

05/05/92 17:01

SAMPLE: CLP,5432,3,S-12,L,S,7471S,3,EPA,10L,

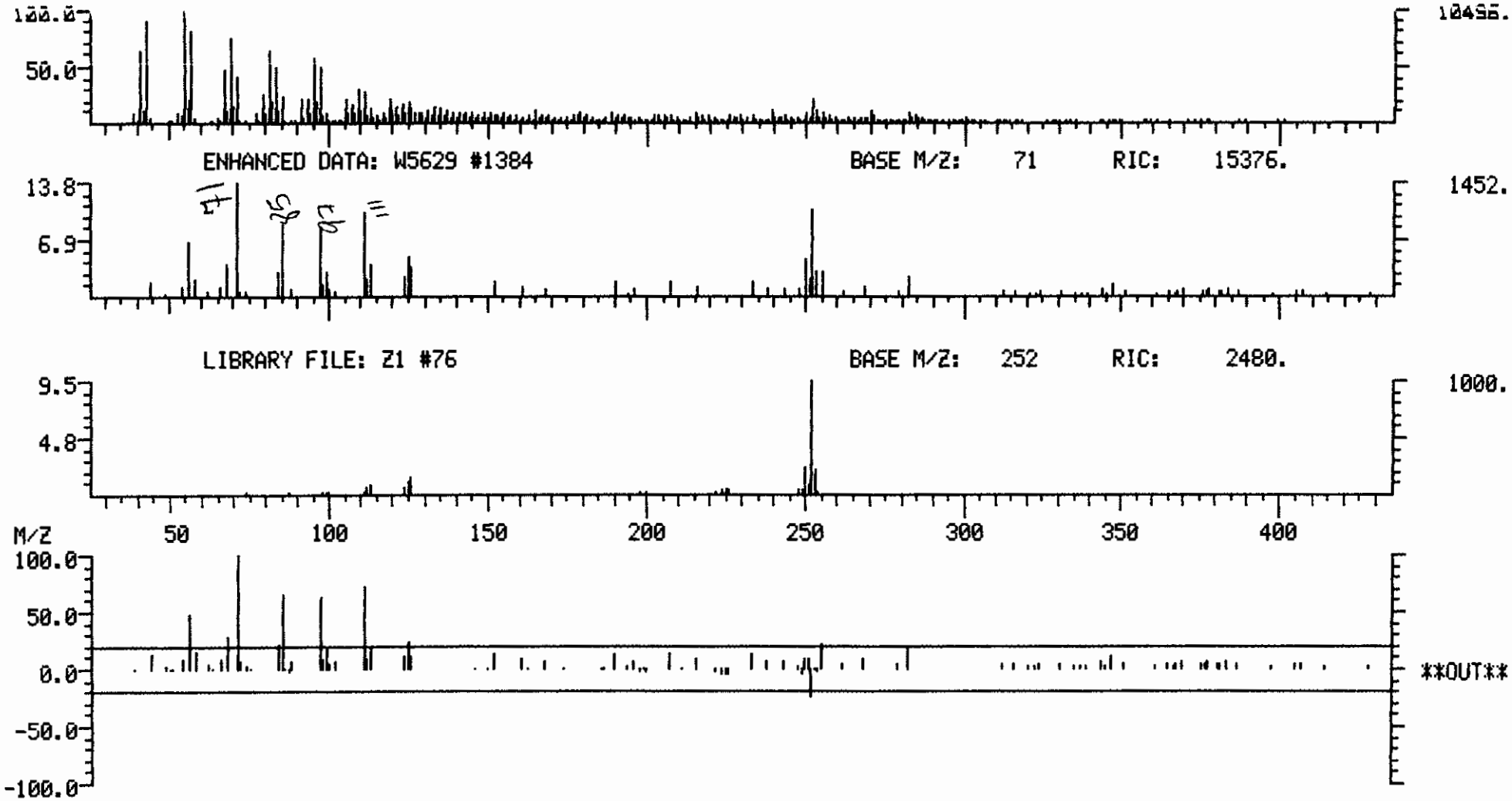
CONDS.: CAP/.32,W5521,W5620,



TARGET COMPOUND COMPARISON

COMPOUND: BENZO(A)PYRENE

RAW DATA: W5629 #1384 BASE M/Z: 55 RIC: 230400.
05/05/92 17:21
SAMPLE: CLP,B432,B,S-12,L,S,74715,B,EPA,10L,
CONDS.: CAP/.32,W5621,W5620,



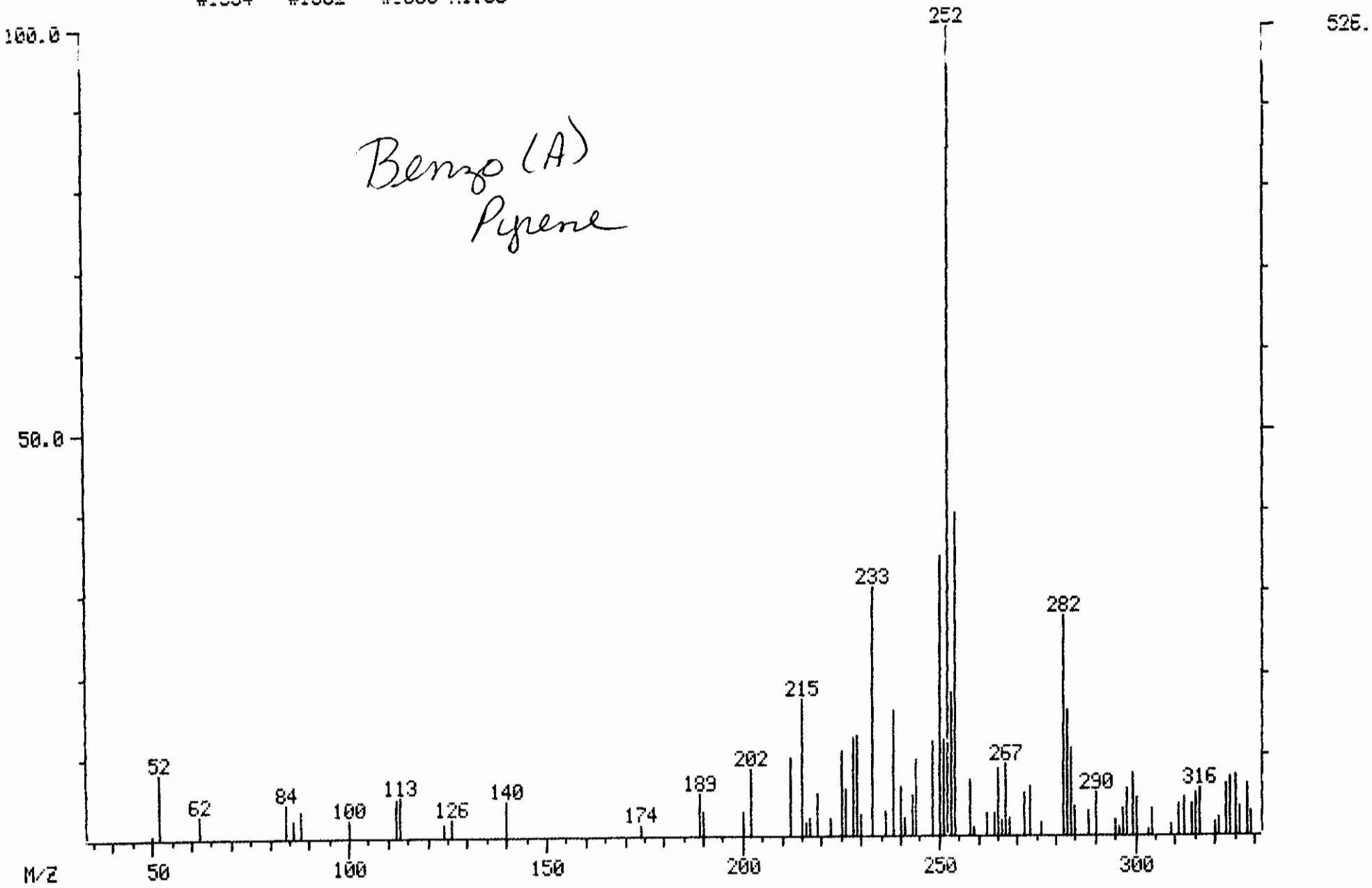
100039

MASS SPECTRUM
05/05/92 17:01:00 + 23:04
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
GC TEMP: 290 DEG. C
#1384 - #1382 - #1385 X1.00

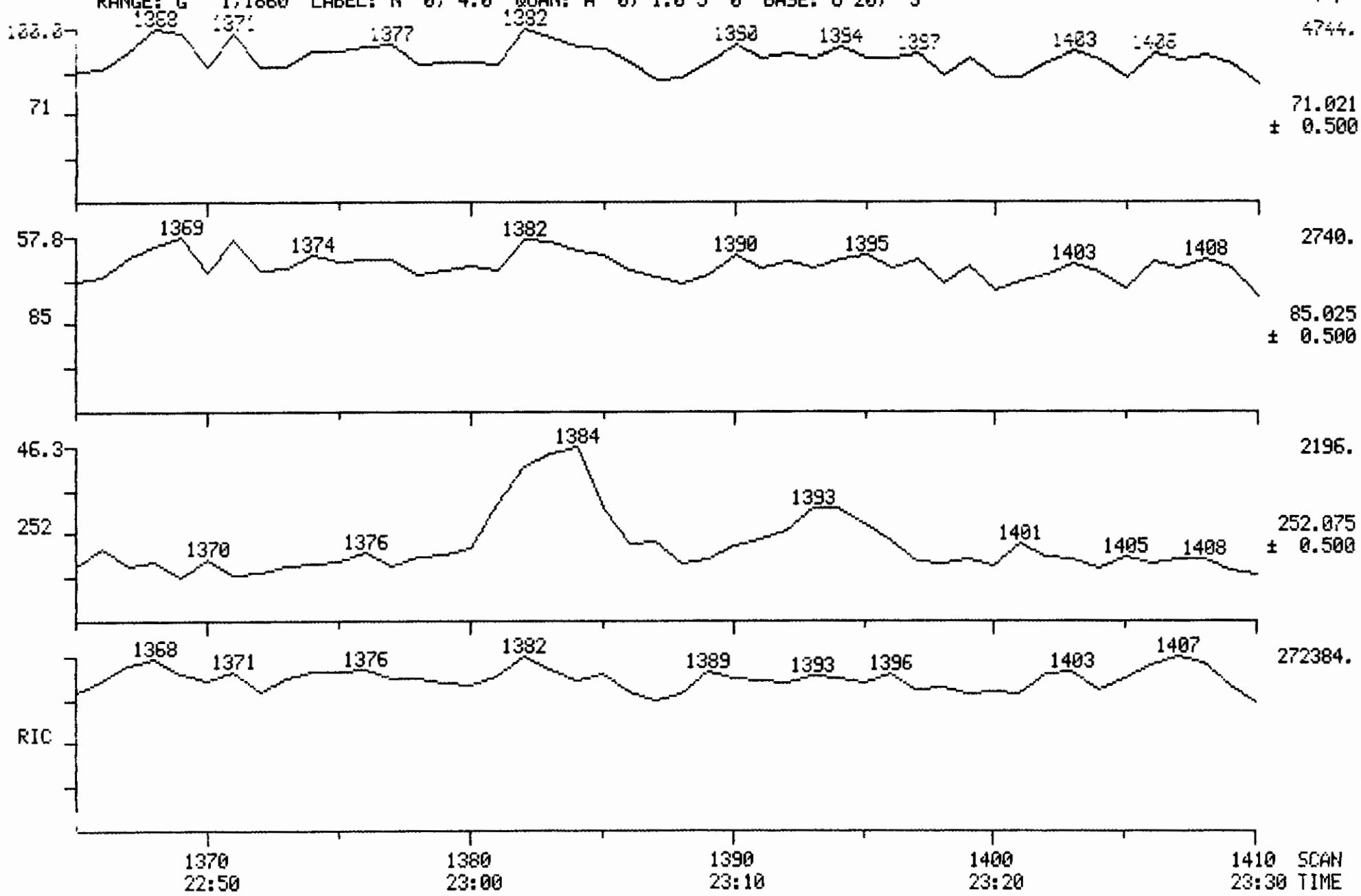
DATA: W5629 #1384
CALI: W5629 #2

BASE M/Z: 252
RIC: 5200.

100001



RIC+MASS CHROMATOGRAMS DATA: W5629 #1384 SCANS 1365 TO 1410
05/05/92 17:01:00 CALI: W5629 #2
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
RANGE: G 1,1860 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100041

Library Search Data: W5629 # 277 Base m/z: 43
05/05/92 17:01:00 + 4:37 Cali: W5629 # 2 RIC: 41792.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
93 matched at least 7 of the 16 largest peaks in the unknown

Ketone

Rank	In.	Name
1	2317	5-HEXEN-2-ONE, 5-METHYL-
2	2333	3-HEXEN-2-ONE, 5-METHYL-
3	2309	3-PENTEN-2-ONE, 3,4-DIMETHYL-
4	2305	3-HEPTEN-2-ONE, (E)-
5	2336	3-HEPTEN-2-ONE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C7.H12.O	112	43	837	916	853
2	C7.H12.O	112	43	789	844	789
3	C7.H12.O	112	43	712	784	712
4	C7.H12.O	112	55	680	743	697
5	C7.H12.O	112	55	674	736	696

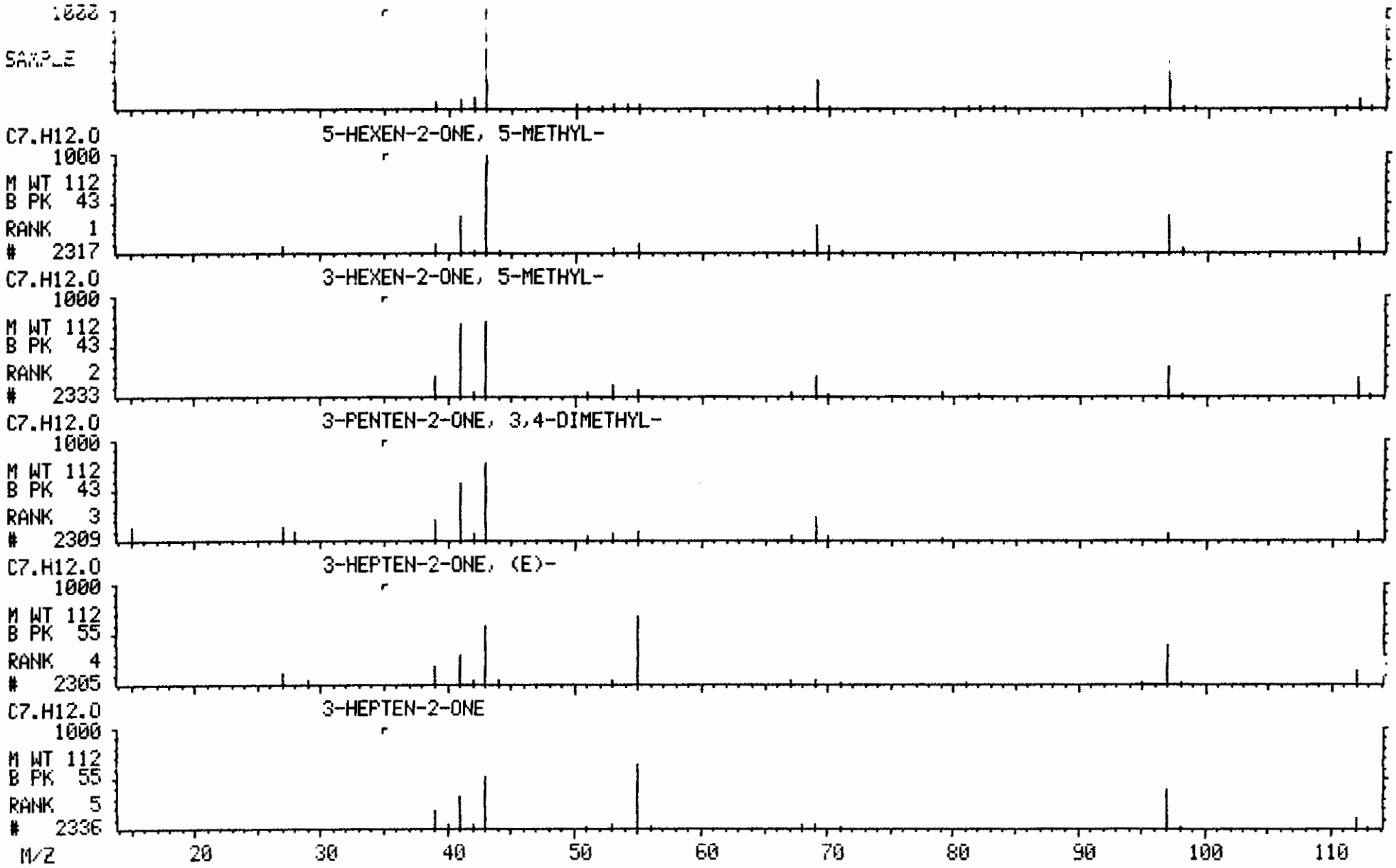
Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	3240-09-3
2	—	—	—	—	5166-53-0
3	—	—	—	—	684-94-6
4	—	—	—	—	5609-09-6
5	—	—	—	—	1119-44-4

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 4:37
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 # 277
CALI: W5629 # 2

BASE M/Z: 43
RIC: 41792.

100043



Library Search Data: W5629 # 353 Base m/z: 43
05/05/92 17:01:00 + 5:53 Cali: W5629 # 2 RIC: 27648.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N 0T)

49429 spectra in LIBRARYNB searched for maximum PURITY
279 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	1671	1,2-ETHANEDIOL, MONOACETATE
2	3054	BUTANOIC ACID, 3-HYDROXY-, METHYL ESTER
3	611	ETHANONE, 1-OXIRANYL-
4	5180	1,2,3-PROPANETRIOL, MONOACETATE
5	7481	HEXANOIC ACID, HYDROXY-, METHYL ESTER

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C4.H8.O3	104	43	628	939	628
2	C5.H10.O3	118	43	607	777	689
3	C4.H6.O2	86	43	594	886	604
4	C5.H10.O4	134	43	590	904	600
5	C7.H14.O3	146	43	582	731	708

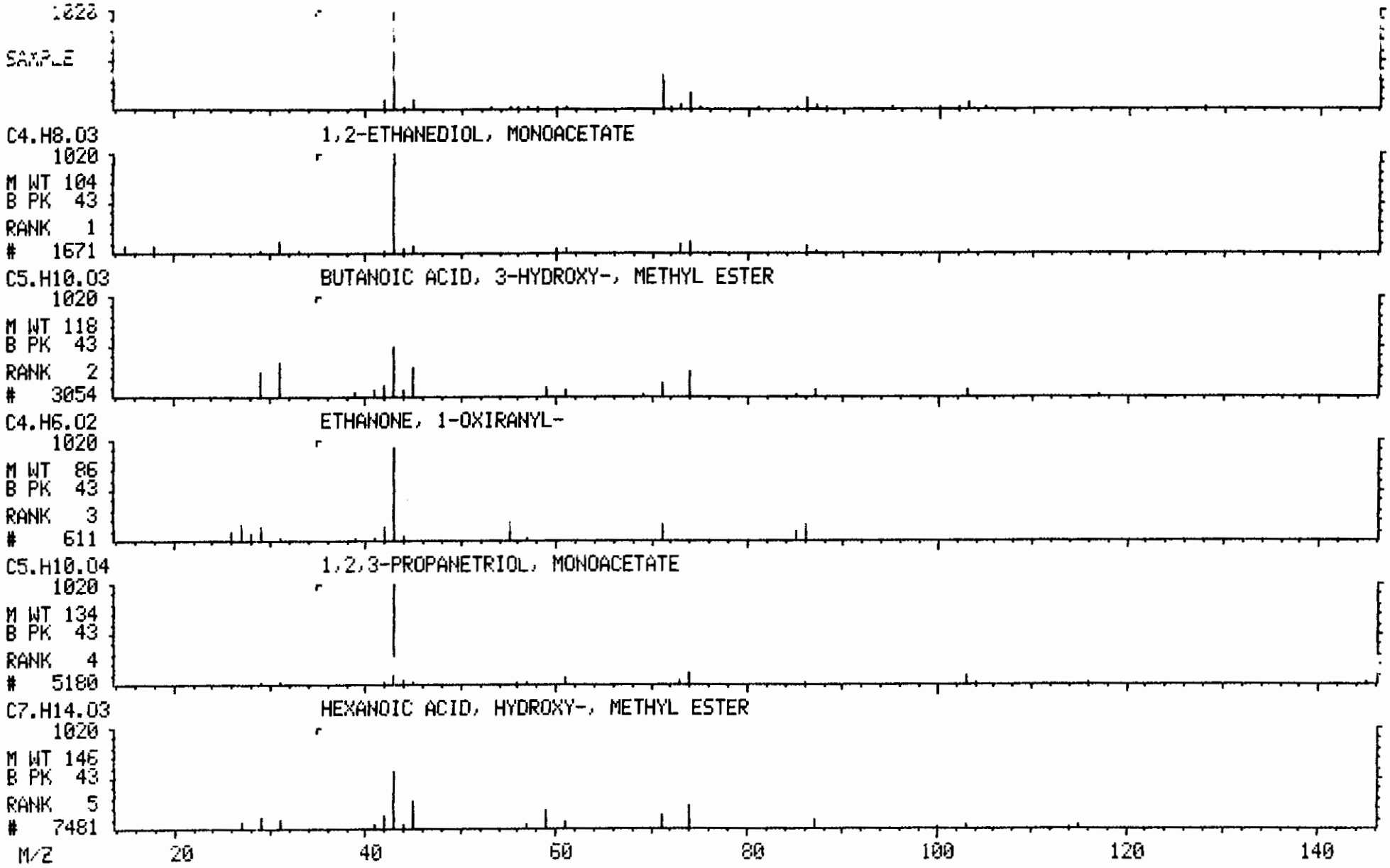
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	542-59-6
2	—	—	—	—	1487-49-6
3	—	—	—	—	4401-11-0
4	—	—	—	—	26446-35-5
5	—	—	—	—	59942-11-9

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 5:53
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 # 353
CALI: W5629 # 2

BASE M/Z: 43
RIC: 27648.

100045



Library Search Data: W5629 #1066 Base m/z: 95
05/05/92 17:01:00 + 17:46 Cali: W5629 # 2 RIC: 33472.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
218 matched at least 4 of the 16 largest peaks in the unknown

Rank	In.	Name
1	21643	PYRENE, 2-METHYL-
2	21641	PYRENE, 4-METHYL-
3	21644	PYRENE, 1-METHYL-
4	21646	11H-BENZO[A]FLUORENE
5	21645	11H-BENZO[B]FLUORENE

PAH

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C17.H12	216	216	583	865	613
2	C17.H12	216	216	575	853	604
3	C17.H12	216	216	568	843	619
4	C17.H12	216	216	553	822	588
5	C17.H12	216	216	539	806	583

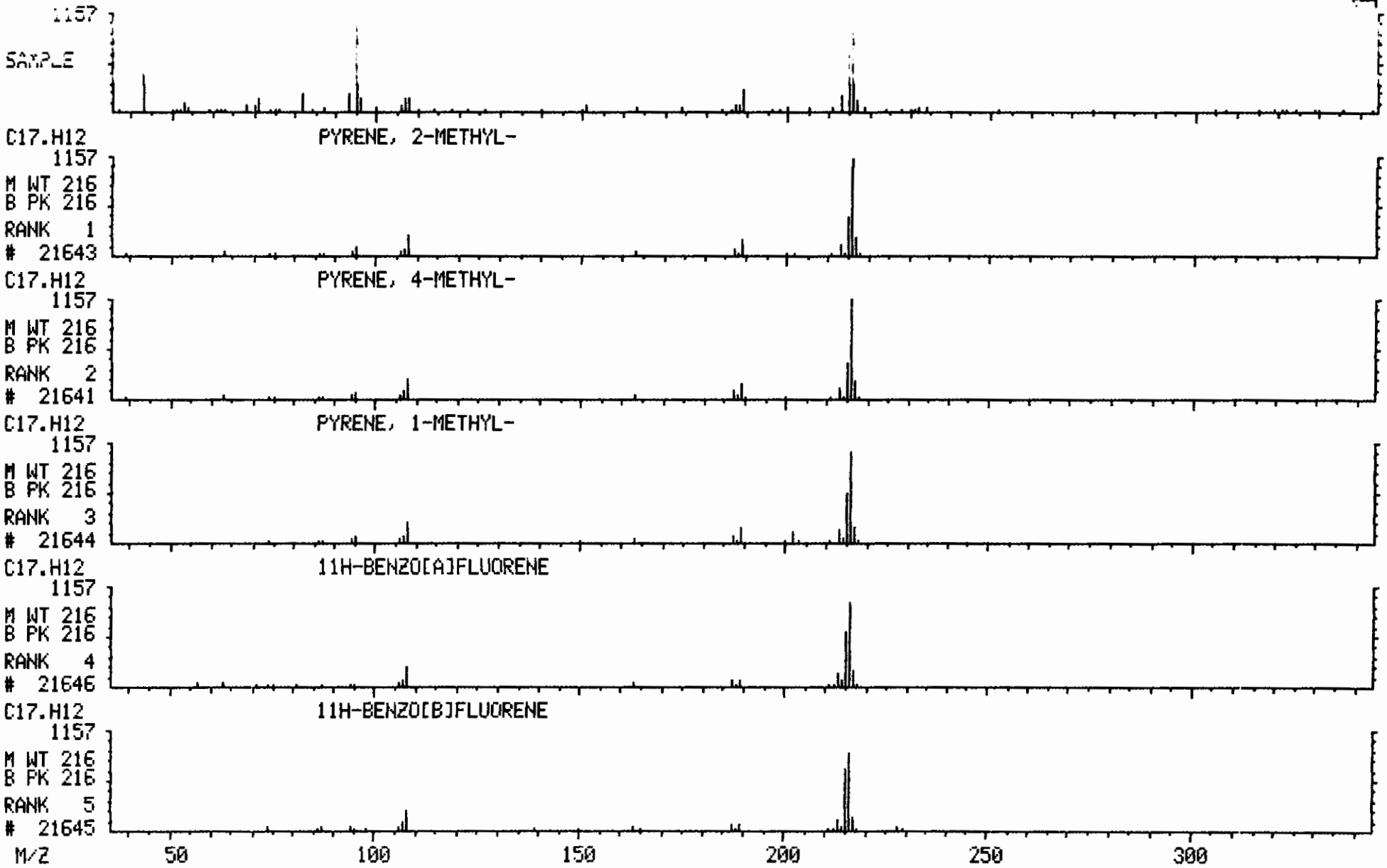
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	3442-78-2
2	—	—	—	—	3353-12-6
3	—	—	—	—	2381-21-7
4	—	—	—	—	238-84-6
5	—	—	—	—	243-17-4

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 17:46
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1066
CALI: W5629 # 2

BASE M/Z: 95
RIC: 33472.

100047



Library Search Data: W5629 #1110 Base m/z: 67
05/05/92 17:01:00 + 18:30 Cali: W5629 # 2 RIC: 31392.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
58 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	28230	PYRIMIDO[5,4-E]-1,2,4-TRIAZIN-7-AMINE, N,N,3-TRIMETHYL-5-(TRIFLUORO*
2	6015	CYCLOPENTANE, 1,2-DIMETHYL-3-(1-METHYLETHENYL)-
3	35628	5-HEPTADECENE, 1-BROMO-
4	5978	BICYCLO[2.2.1]HEPTANE, 1,7,7-TRIMETHYL-
5	5986	1,1'-BICYCLOPENTYL

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C9.H9.N6.F3	258	70	220	604	356
2	C10.H18	138	68	184	746	222
3	C17.H33.BR	316	67	166	640	242
4	C10.H18	138	95	162	656	223
5	C10.H18	138	68	161	727	199

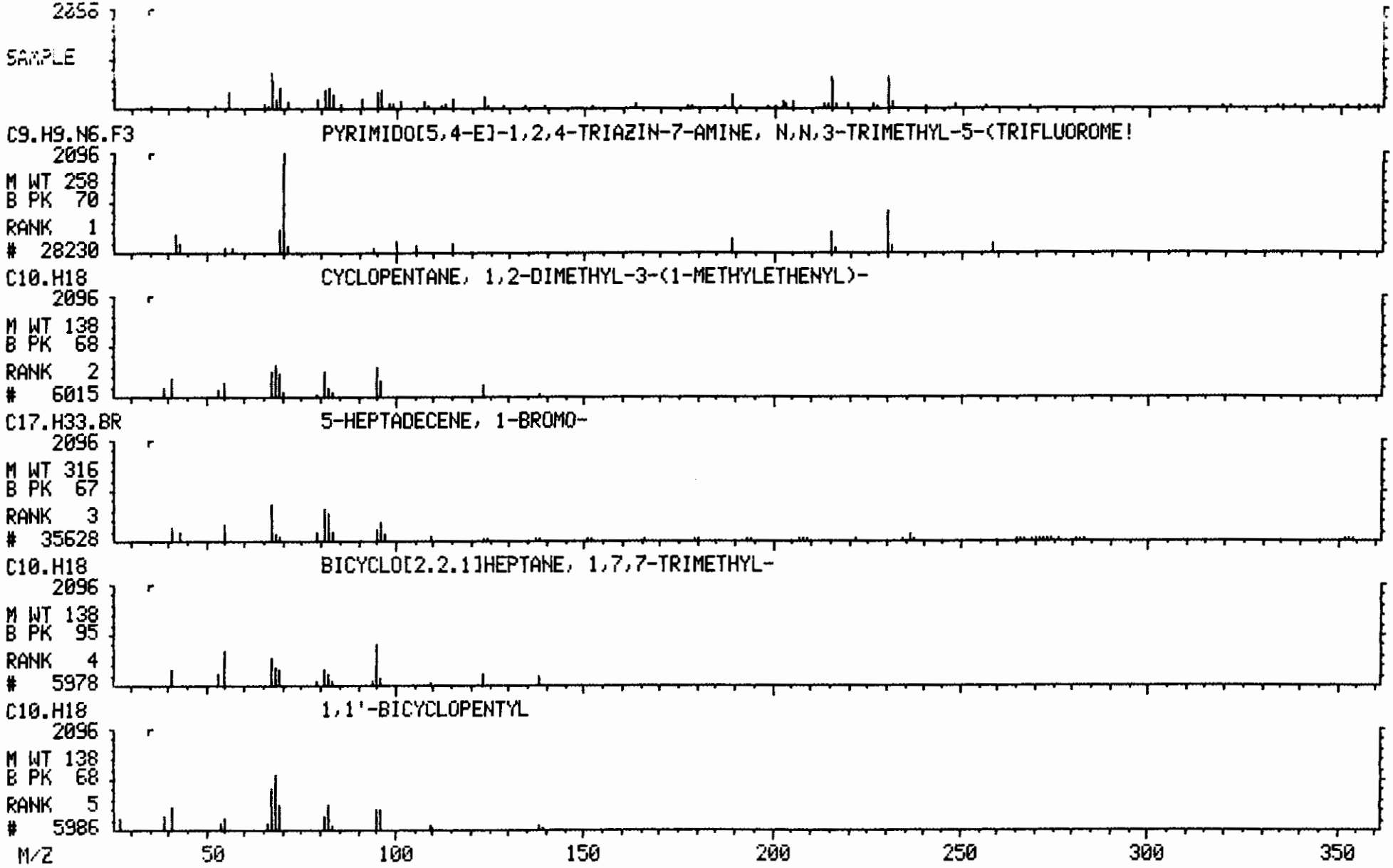
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	32709-27-6
2	—	—	—	—	6983-03-5
3	—	—	—	—	56600-21-6
4	—	—	—	—	464-15-3
5	—	—	—	—	1636-39-1

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 18:30
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1110
CALI: W5629 # 2

BASE M/Z: 67
RIC: 31392.

100043



Library Search Data: W5629 #1122 Base m/z: 215
05/05/92 17:01:00 + 18:42 Cali: W5629 # 2 RIC: 31776.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
156 matched at least 4 of the 16 largest peaks in the unknown

Rank	In.	Name
1	28700	BENZENE, 1,1'-(1,4-DIMETHYL-2,5-CYCLOHEXADIENE-1,4-DIYL)BIS-
2	38746	PREGNAN-20-ONE, 3,17-DIHYDROXY-16-METHYL-, (3.BETA.,5.BETA.,16.ALPH*
3	40966	PREGNANE-3,20-DIOL, DIFORMATE, (3.ALPHA.,5.BETA.,20S)-
4	28691	TRANS-1-(3S-METHYL-1-INDANYLIDENE)-3S-METHYLINDAN
5	39740	PREGNAN-20-ONE, 3-(ACETYLOXY)-, (3.BETA.,5.ALPHA.)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C20.H20	260	245	248	657	298
2	C22.H36.O3	348	55	229	595	366
3	C23.H36.O4	376	215	229	592	356
4	C20.H20	260	215	220	704	284
5	C23.H36.O3	360	43	193	562	297

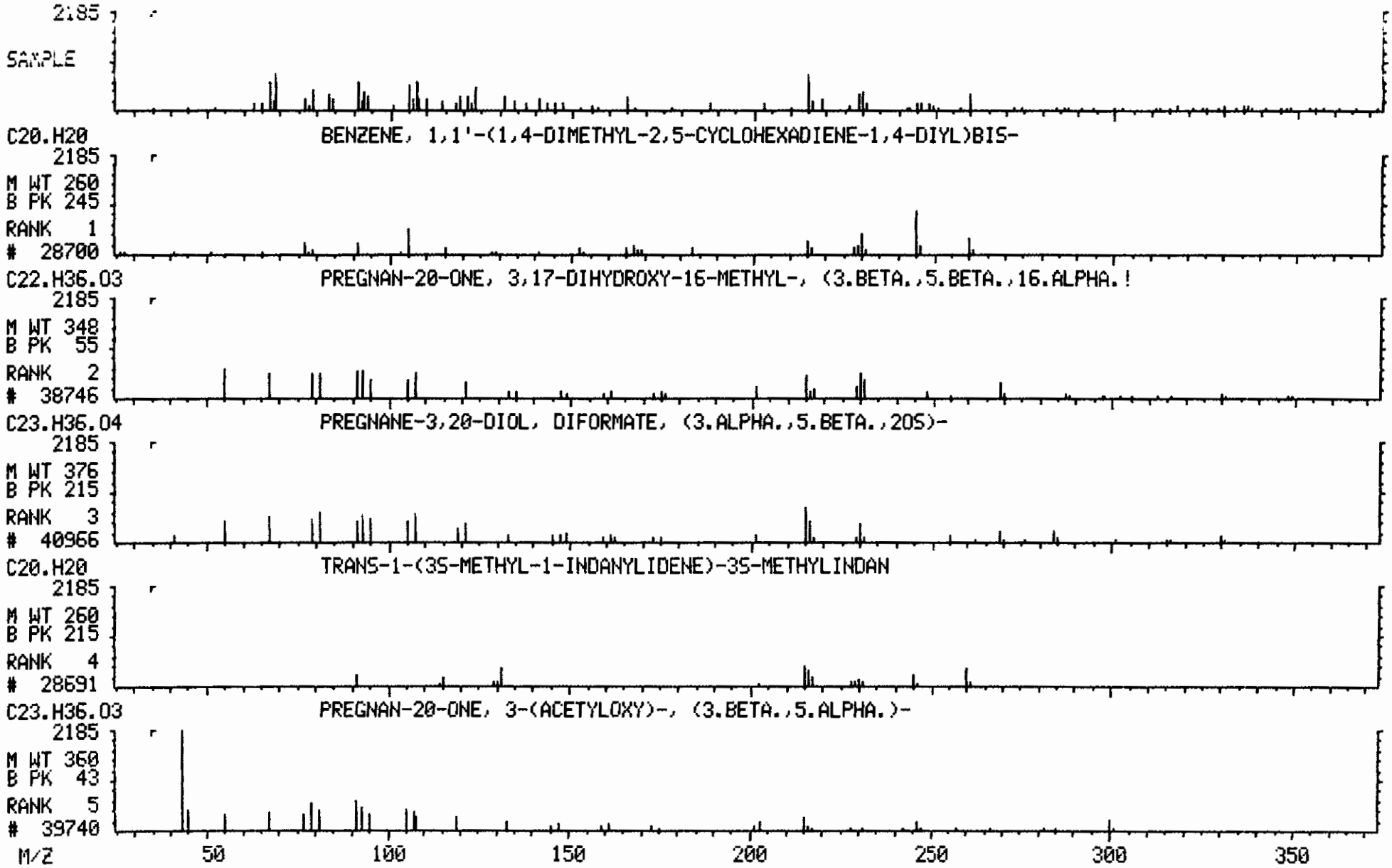
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	74421-24-2
2	—	—	—	—	56630-85-4
3	—	—	—	—	67708-37-6
4	—	—	—	—	96144-72-2
5	—	—	—	—	906-83-2

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 18:42
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1122
CALI: W5629 # 2

BASE M/Z: 215
RIC: 31776.

100051



Library Search Data: W5629 #1133 Base m/z: 41
05/05/92 17:01:00 + 18:53 Cali: W5629 # 2 RIC: 49600.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
103 matched at least 6 of the 16 largest peaks in the unknown

Hyd

Rank	In.	Name
1	20223	2(1H)-NAPHTHALENONE, OCTAHYDRO-4A-METHYL-7-(1-METHYLETHYL)-, (4A.AL*
2	30357	(E,E)-7,11,15-TRIMETHYL-3-METHYLENE-HEXADECA-1,6,10,14-TETRAENE
3	22704	2,6,10-DODECATRIEN-1-OL, 3,7,11-TRIMETHYL-, (Z,E)-
4	17054	CYCLOHEXANE, 1,1-DIMETHYL-2,4-BIS(1-METHYLETHENYL)-, CIS-
5	17056	CYCLOHEXANE, 3,4-BIS(1-METHYLETHENYL)-1,1-DIMETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C14.H24.O	208	81	325	829	386
2	C20.H32	272	69	316	740	393
3	C15.H26.O	222	69	313	760	372
4	C14.H24	192	41	303	781	361
5	C14.H24	192	41	303	781	361

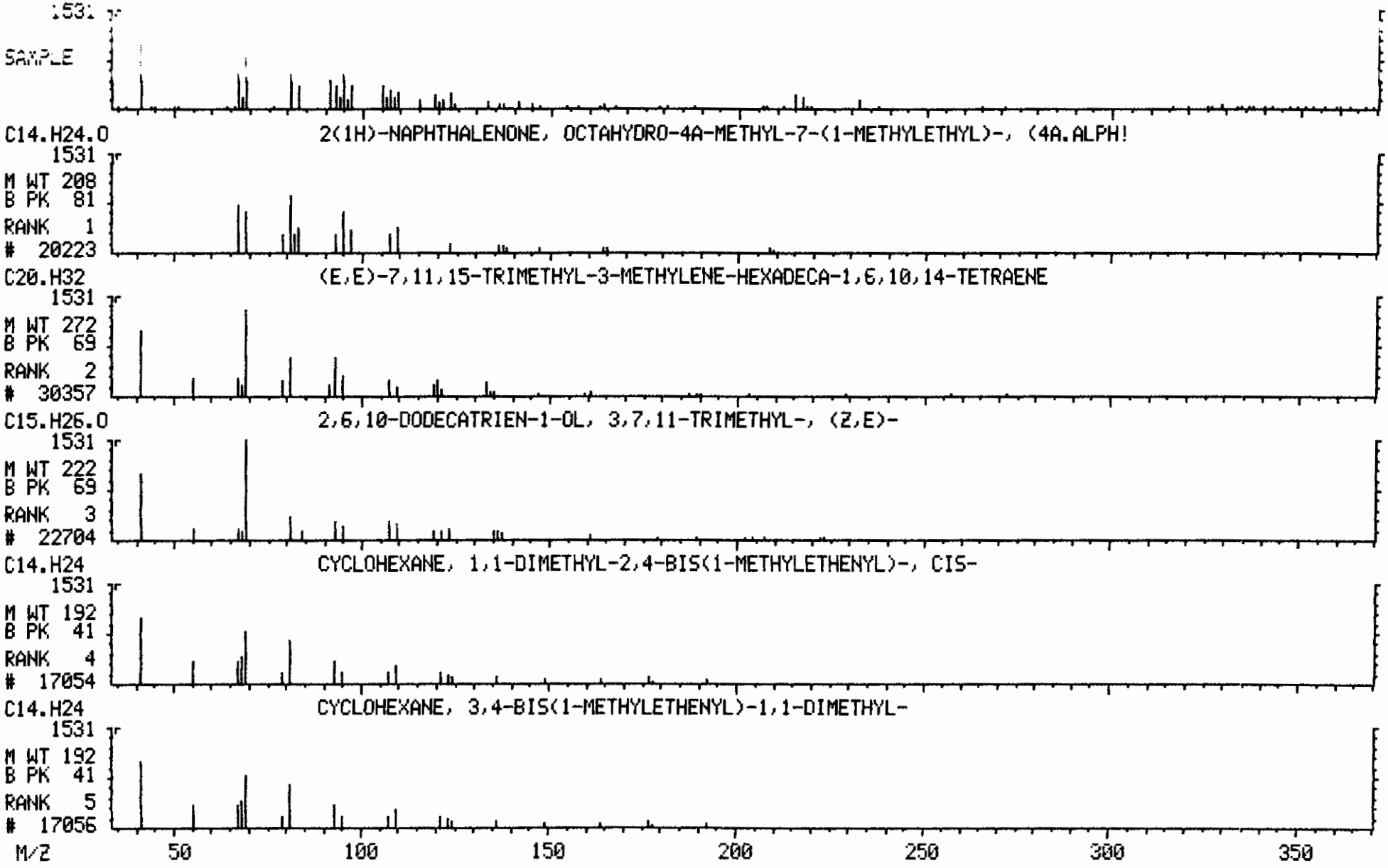
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	54594-42-2
2	—	—	—	—	70901-63-2
3	—	—	—	—	3790-71-4
4	—	—	—	—	62337-98-8
5	—	—	—	—	61142-74-3

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 18:53
SAMPLE: CLP,6432,3,S-10,L,S,74719,8,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1133
CALI: W5629 # 2

BASE M/Z: 41
RIC: 49600.

100053



Library Search Data: W5629 #1141 Base m/z: 55
05/05/92 17:01:00 + 19:01 Cali: W5629 # 2 RIC: 60112.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
323 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	13822	DECANE, 1-CHLORO-
2	10654	2-PROPENAMIDE, 2-METHYL-N-PHENYL-
3	39452	PYRIDINIUM, 1-HEXADECYL-, CHLORIDE, MONOHYDRATE
4	10807	NONANE, 1-CHLORO-
5	24376	TETRADECANE, 1-CHLORO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C10.H21.CL	176	43	427	809	431
2	C10.H11.O.N	161	43	425	821	445
3	C21.H40.O.N.CL	357	55	421	837	476
4	C9.H19.CL	162	43	413	789	413
5	C14.H29.CL	232	43	409	813	455

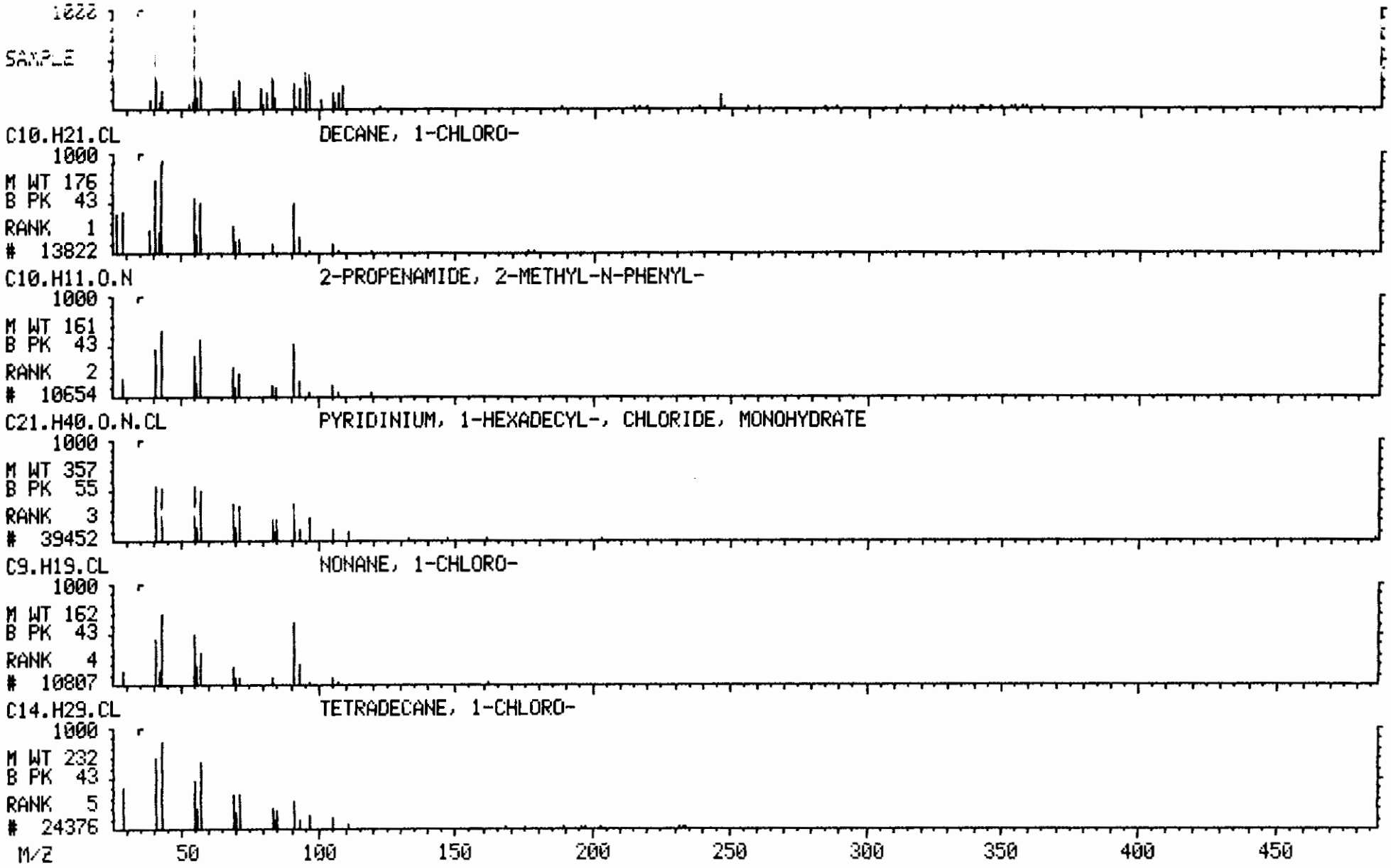
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	1002-69-3
2	—	—	—	—	1611-83-2
3	—	—	—	—	6004-24-6
4	—	—	—	—	2473-01-0
5	—	—	—	—	2425-54-9

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 19:01
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1141
CALI: W5629 # 2

BASE M/Z: 55
RIC: 50112.

100055



Library Search Data: W5629 #1153 Base m/z: 55
05/05/92 17:01:00 + 19:13 Cali: W5629 # 2 RIC: 62464.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
99 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	29460	2,5-FURANDIONE, 3-(DODECENYL)DIHYDRO-
2	34812	1-NAPHTHALENEPROPANOL, .ALPHA.-ETHENYLDECAHYDRO-5-(HYDROXYMETHYL)-. *
3	32750	CYCLOHEXANE, 1,1',1''-(1-PROPANYL-2-YLIDENE)TRIS-
4	40867	1,1':3',1''-TERCYCLOPENTANE, 2'-DODECYL-
5	27473	(R)-(-)-14-METHYL-8-HEXADECYN-1-OL

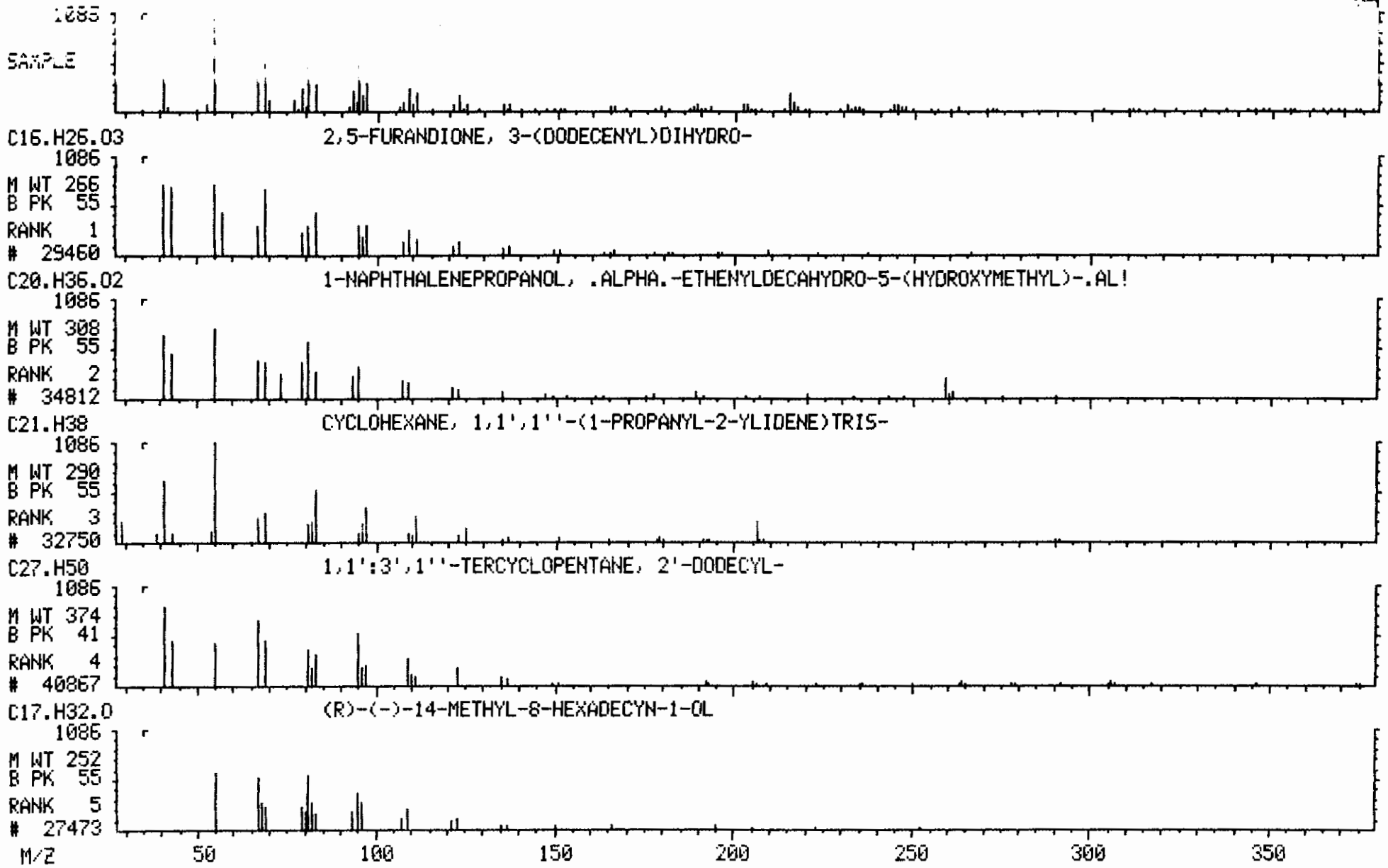
Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C16.H26.O3	266	55	352	802	428
2	C20.H36.O2	308	55	318	724	422
3	C21.H38	290	55	304	718	377
4	C27.H50	374	41	303	729	394
5	C17.H32.O	252	55	299	801	357

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	25377-73-5
2	—	—	—	—	72401-52-6
3	—	—	—	—	55682-89-8
4	—	—	—	—	55282-68-3
5	—	—	—	—	64566-18-3

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 19:13
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1153
CALI: W5629 # 2

BASE M/Z: 55
RIC: 62464.



Library Search Data: W5629 #1160 Base m/z: 55
05/05/92 17:01:00 + 19:20 Cali: W5629 # 2 RIC: 51840.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
54 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	20225	1,13-TETRADECADIEN-3-ONE
2	36559	DODECANE, 1,2-DIBROMO-
3	48066	PHOSPHONIC ACID, DIOCTADECYL ESTER
4	23145	CYCLOHEXANE, 1,2-DIMETHYL-3-PENTYL-4-PROPYL-
5	31374	CYCLOHEXANE, 1-(1,5-DIMETHYLHEXYL)-4-(4-METHYLPENTYL)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C14.H24.O	208	70	351	763	373
2	C12.H24.BR2	326	41	345	722	451
3	C36.H75.O3.P	586	55	342	874	364
4	C16.H32	224	55	339	811	393
5	C20.H40	280	69	334	705	459

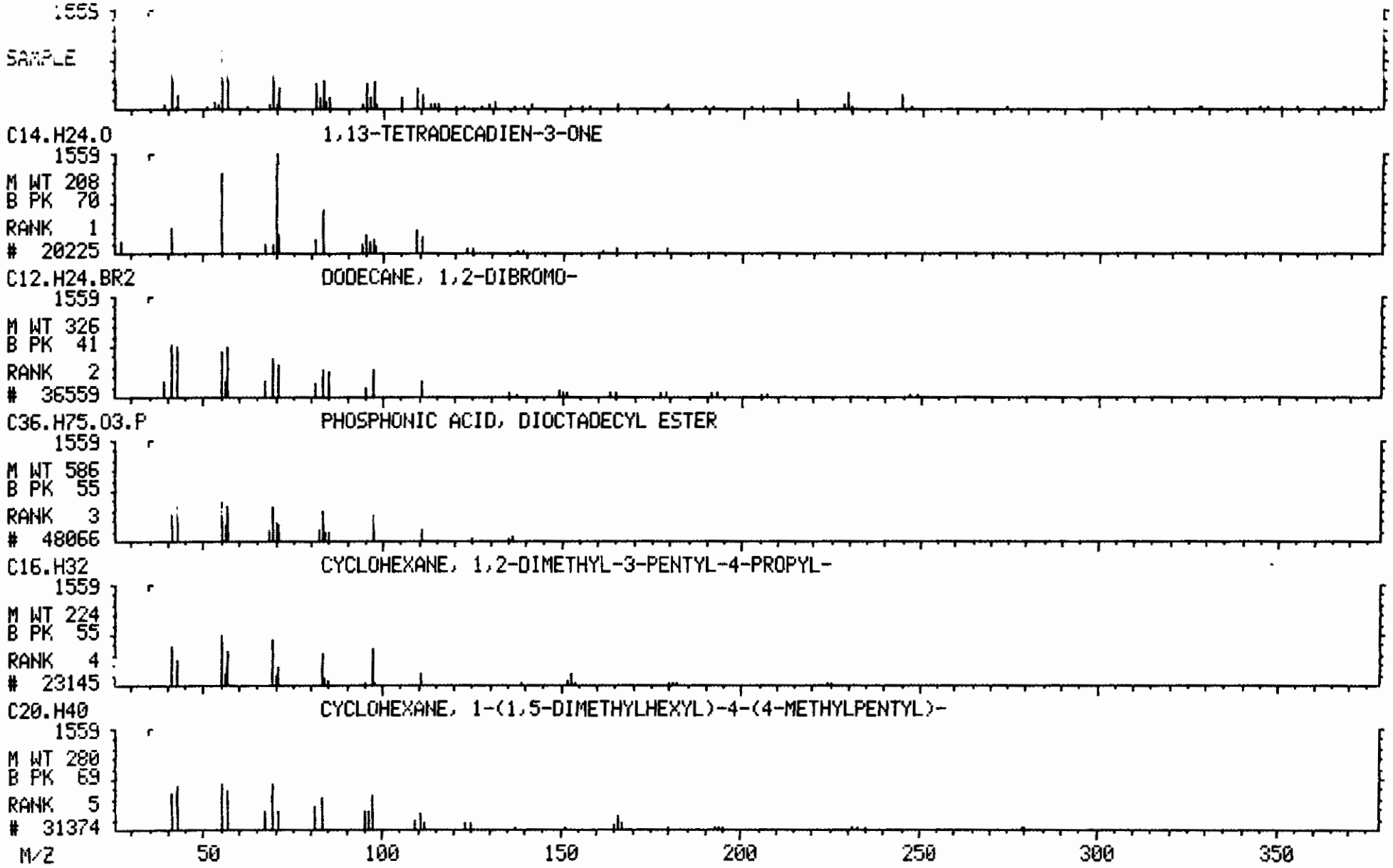
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	58879-40-6
2	—	—	—	—	55334-42-4
3	—	—	—	—	19047-85-9
4	—	—	—	—	62376-17-4
5	—	—	—	—	56009-20-2

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 19:20
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1160
CALI: W5629 # 2

BASE M/Z: 55
RIC: 51840.

C50001



Library Search Data: W5629 #1171 Base m/z: 55
05/05/92 17:01:00 + 19:31 Cali: W5629 # 2 RIC: 81408.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
120 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	36559	DODECANE, 1,2-DIBROMO-
2	29460	2,5-FURANDIONE, 3-(DODECENYL)DIHYDRO-
3	31881	CIS-9,10-EPOXYOCTADECAN-1-OL
4	31374	CYCLOHEXANE, 1-(1,5-DIMETHYLHEXYL)-4-(4-METHYLPENTYL)-
5	33660	1-EICOSANOL

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C12.H24.BR2	326	43	429	902	455
2	C16.H26.O3	266	41	424	898	459
3	C18.H36.O2	284	55	393	941	403
4	C20.H40	280	43	386	841	443
5	C20.H42.O	298	43	368	882	397

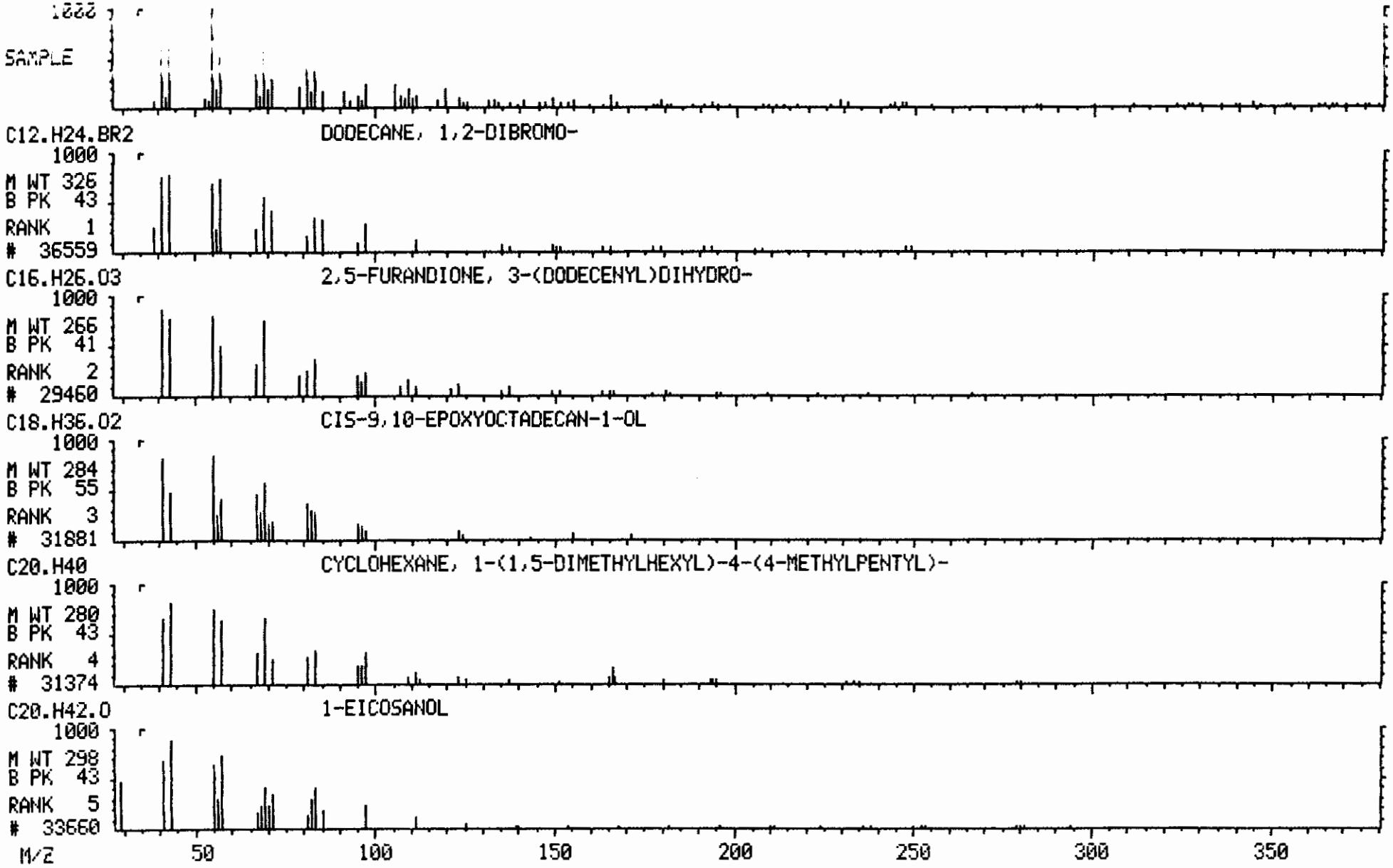
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	55334-42-4
2	—	—	—	—	25377-73-5
3	—	—	—	—	13980-12-6
4	—	—	—	—	56009-20-2
5	—	—	—	—	629-96-9

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 19:31
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1171
CALI: W5629 # 2

BASE M/Z: 55
RIC: 81408.

100061



Library Search Data: W5629 #1191 Base m/z: 95
05/05/92 17:01:00 + 19:51 Cali: W5629 # 2 RIC: 33728.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
122 matched at least 4 of the 16 largest peaks in the unknown

Rank	In.	Name
1	37318	5,8,11,14-EICOSATETRAENOIC ACID, ETHYL ESTER, (ALL-Z)-
2	30866	1,9,12,15-OCTADECATETRAENE, 1-METHOXY-
3	10948	TETRACYCLO[5.2.1.02,6.03,5]DECANE, 4,4-DIMETHYL-
4	42540	CHOLESTAN-3-OL, 2-METHYLENE-, (3.BETA.,5.ALPHA.)-
5	37720	2H-PYRAN, 2-(7-HEPTADECYNYLOXY)TETRAHYDRO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C22.H36.O2	332	79	163	552	276
2	C19.H32.O	276	41	148	443	284
3	C12.H18	162	94	147	571	248
4	C28.H48.O	400	69	147	459	309
5	C22.H40.O2	336	55	145	454	299

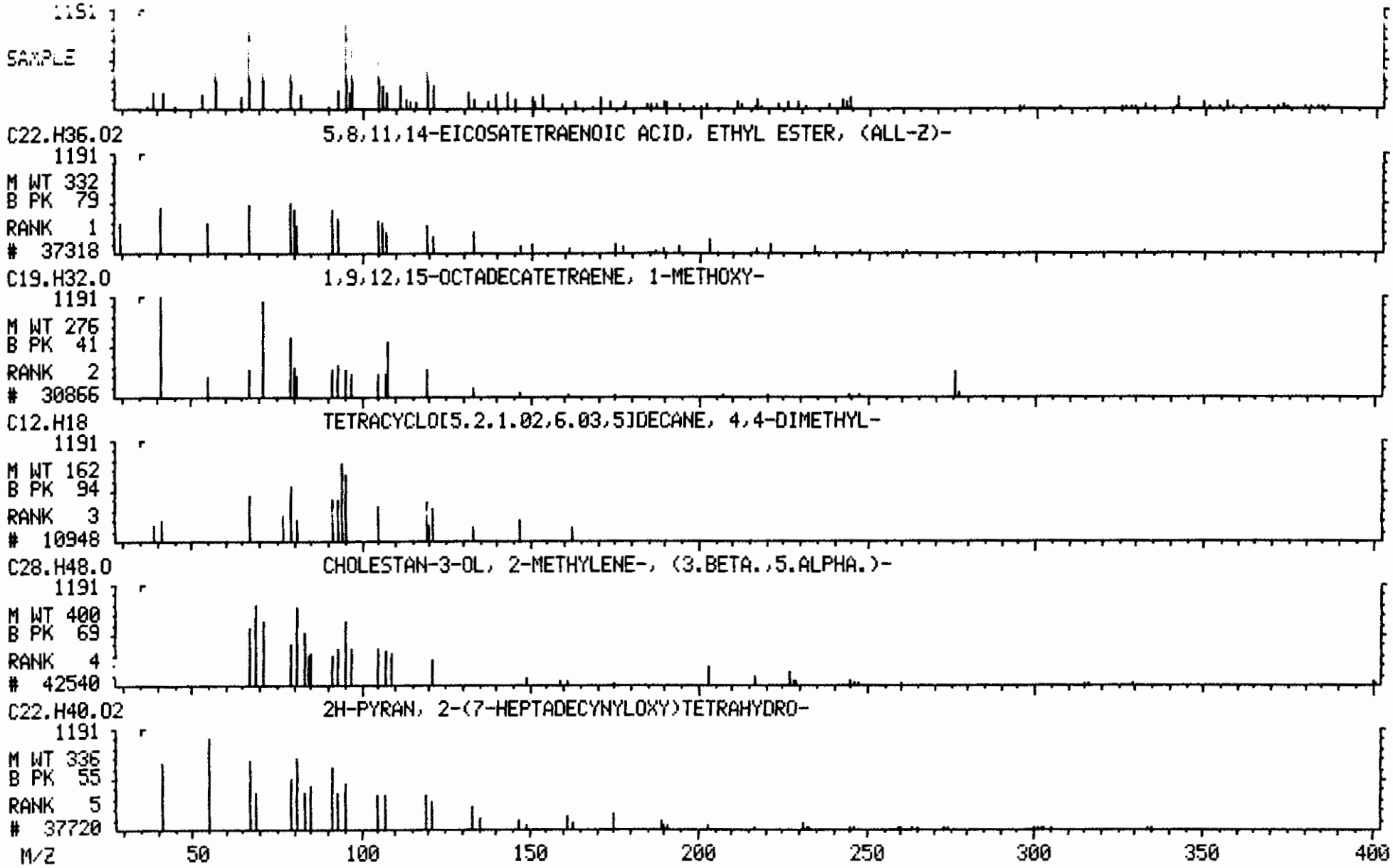
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	1808-26-0
2	—	—	—	—	56847-00-8
3	—	—	—	—	74646-38-1
4	—	—	—	—	22599-96-8
5	—	—	—	—	56599-50-9

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 19:51
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1191
CALI: W5629 # 2

BASE M/Z: 95
RIC: 33728.

000001



Library Search Data: W5629 #1200 Base m/z: 55
05/05/92 17:01:00 + 20:00 Cali: W5629 # 2 RIC: 70400.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
71 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	36559	DODECANE, 1,2-DIBROMO-
2	29495	9-OCTADECENAL
3	31881	CIS-9,10-EPOXYOCTADECAN-1-OL
4	31915	NONADECANOL
5	31374	CYCLOHEXANE, 1-(1,5-DIMETHYLHEXYL)-4-(4-METHYLPENTYL)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C12.H24.BR2	326	41	327	810	388
2	C18.H34.O	266	41	312	867	343
3	C18.H36.O2	284	41	300	868	329
4	C19.H40.O	284	43	300	833	336
5	C20.H40	280	43	295	756	370

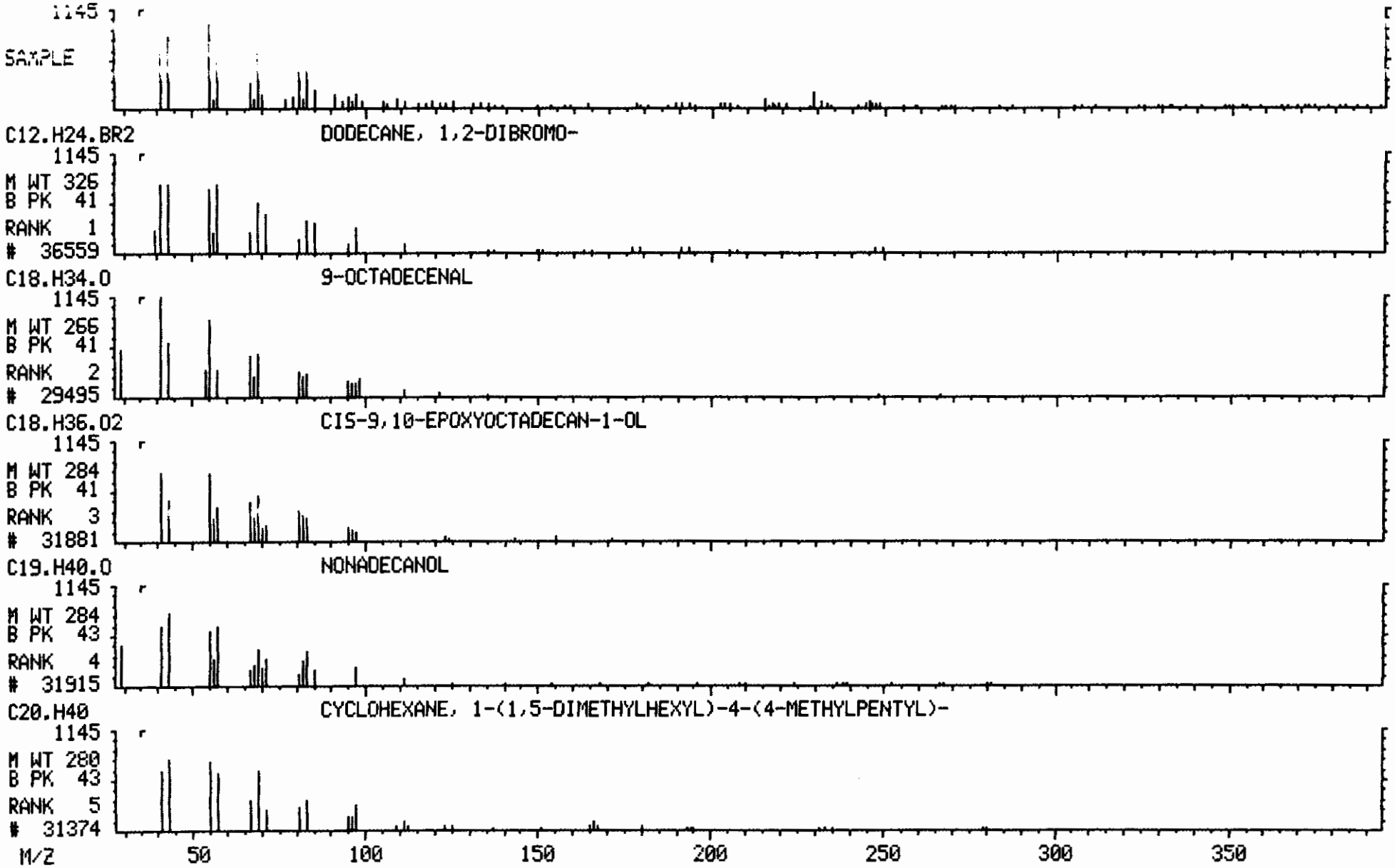
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	55334-42-4
2	—	—	—	—	5090-41-5
3	—	—	—	—	13980-12-6
4	—	—	—	—	52783-43-4
5	—	—	—	—	56009-20-2

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 20:00
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1200
CALI: W5629 # 2

BASE M/Z: 55
RIC: 70400.

100065



Library Search Data: W5629 #1216 Base m/z: 55
05/05/92 17:01:00 + 20:16 Cali: W5629 # 2 RIC: 53568.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
148 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	27470	13-HEPTADECYN-1-OL
2	33600	9,12-OCTADECADIENOYL CHLORIDE, (Z,Z)-
3	31338	9,12-OCTADECADIENOIC ACID (Z,Z)-
4	36304	11,14-EICOSADIENOIC ACID, METHYL ESTER
5	35404	8-HEPTADECYNE, 1-BROMO-

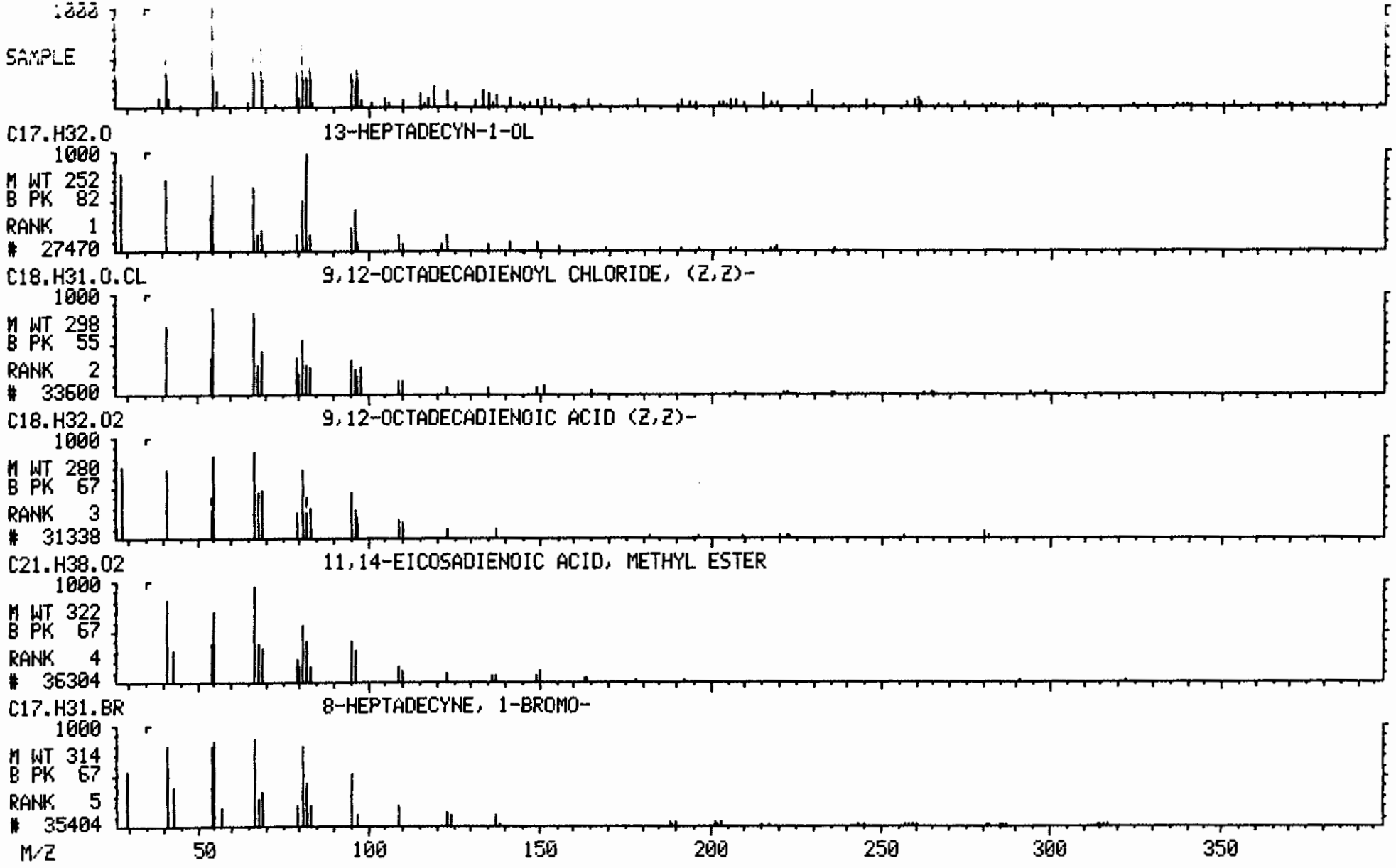
Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C17.H32.O	252	82	325	759	379
2	C18.H31.O.CL	298	55	322	797	381
3	C18.H32.O2	280	67	282	769	352
4	C21.H38.O2	322	67	277	758	346
5	C17.H31.BR	314	67	274	618	373

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	56554-77-9
2	—	—	—	—	7459-33-8
3	—	—	—	—	60-33-3
4	—	—	—	—	2463-02-7
5	—	—	—	—	56599-94-1

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 20:16
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1216
CALI: W5629 # 2

BASE M/Z: 55
RIC: 53568.



100067

Library Search Data: W5629 #1222 Base m/z: 43
05/05/92 17:01:00 + 20:22 Cali: W5629 # 2 RIC: 47936.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
176 matched at least 5 of the 16 largest peaks in the unknown

Rank	In.	Name
1	3990	1-BUTYNE, 3-METHYL-3-(1-METHYLETHOXY)-
2	3992	1-BUTYNE, 3-METHYL-3-PROPOXY-
3	29921	OCTANE, 1,8-DIBROMO-
4	2138	2(1H)-PYRIMIDINONE, 4-AMINO-
5	6373	1-PENTYNE, 3-METHYL-3-(1-METHYLETHOXY)-

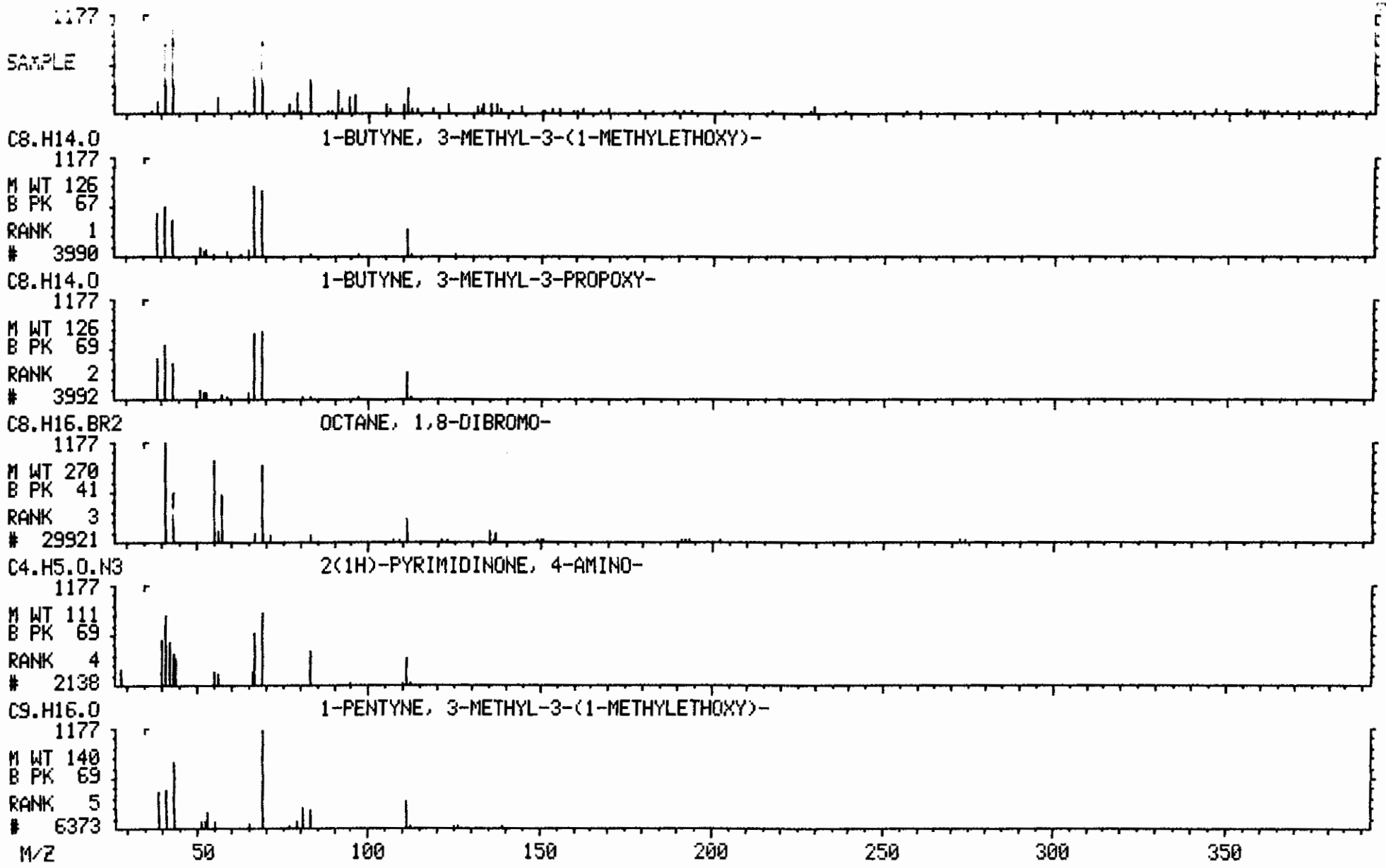
Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C8.H14.O	126	67	229	785	252
2	C8.H14.O	126	69	229	784	254
3	C8.H16.BR2	270	41	220	611	319
4	C4.H5.O.N3	111	69	218	702	294
5	C9.H16.O	140	69	214	775	258

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	53907-63-4
2	—	—	—	—	53907-64-5
3	—	—	—	—	4549-32-0
4	—	—	—	—	71-30-7
5	—	—	—	—	53966-55-5

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 20:22
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1222
CALI: W5629 # 2

BASE M/Z: 43
RIC: 47936.



100069

Library Search Data: W5629 #1242 Base m/z: 55
05/05/92 17:01:00 + 20:42 Cali: W5629 # 2 RIC: 53568.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
89 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	29801	CYCLOHEXANOL, DODECYL-
2	48265	TETRACONTANE, 3,5,24-TRIMETHYL-
3	12300	4-UNDECENE, 3-METHYL-, (Z)-
4	43242	SILANE, TRICHLOROEICOSYL-
5	32178	1-OCTADECANETHIOL

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C18.H36.O	268	57	354	778	411
2	C43.H88	604	57	334	774	363
3	C12.H24	168	55	323	735	361
4	C20.H41.CL3.SI	414	43	318	782	369
5	C18.H38.S	286	57	314	737	397

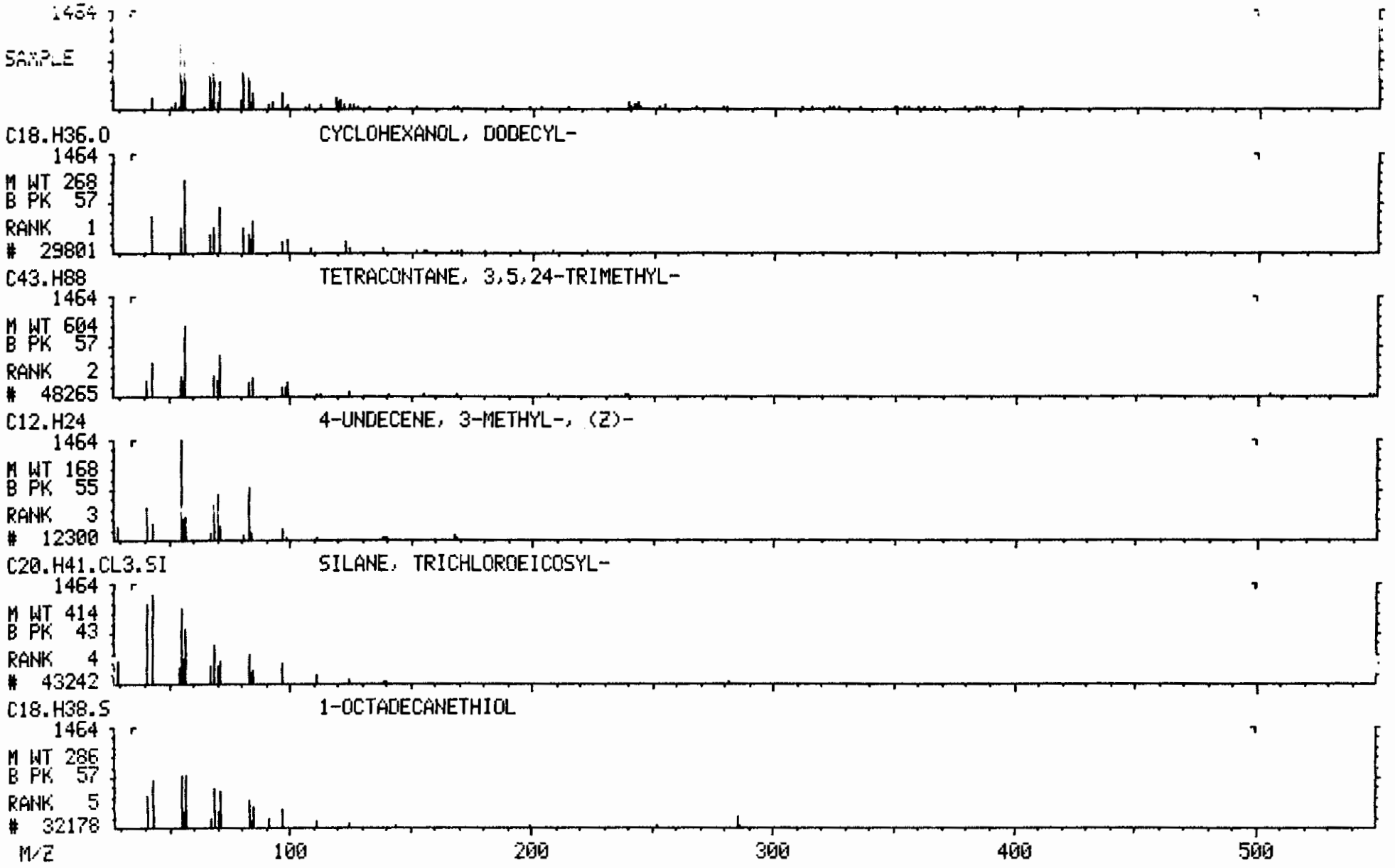
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	55000-30-1
2	—	—	—	—	55162-61-3
3	—	—	—	—	74645-87-7
4	—	—	—	—	18733-57-8
5	—	—	—	—	2885-00-9

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 20:42
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1242
CALI: W5629 # 2

BASE M/Z: 55
RIC: 53568.

100071



Library Search Data: W5629 #1246 Base m/z: 55
05/05/92 17:01:00 + 20:46 Cali: W5629 # 2 RIC: 80768.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
117 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	36559	DODECANE, 1,2-DIBROMO-
2	32403	OCTADECANE, 1-CHLORO-
3	22714	5-AZULENEMETHANOL, 1,2,3,4,5,6,7,8-OCTAHYDRO-.ALPHA.,.ALPHA.,3,8-TE*
4	39452	PYRIDINIUM, 1-HEXADECYL-, CHLORIDE, MONOHYDRATE
5	19360	DODECANE, 1-CHLORO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C12.H24.BR2	326	41	388	853	429
2	C18.H37.CL	288	57	375	809	422
3	C15.H26.O	222	57	362	861	376
4	C21.H40.O.N.CL	357	55	358	925	369
5	C12.H25.CL	204	57	358	849	366

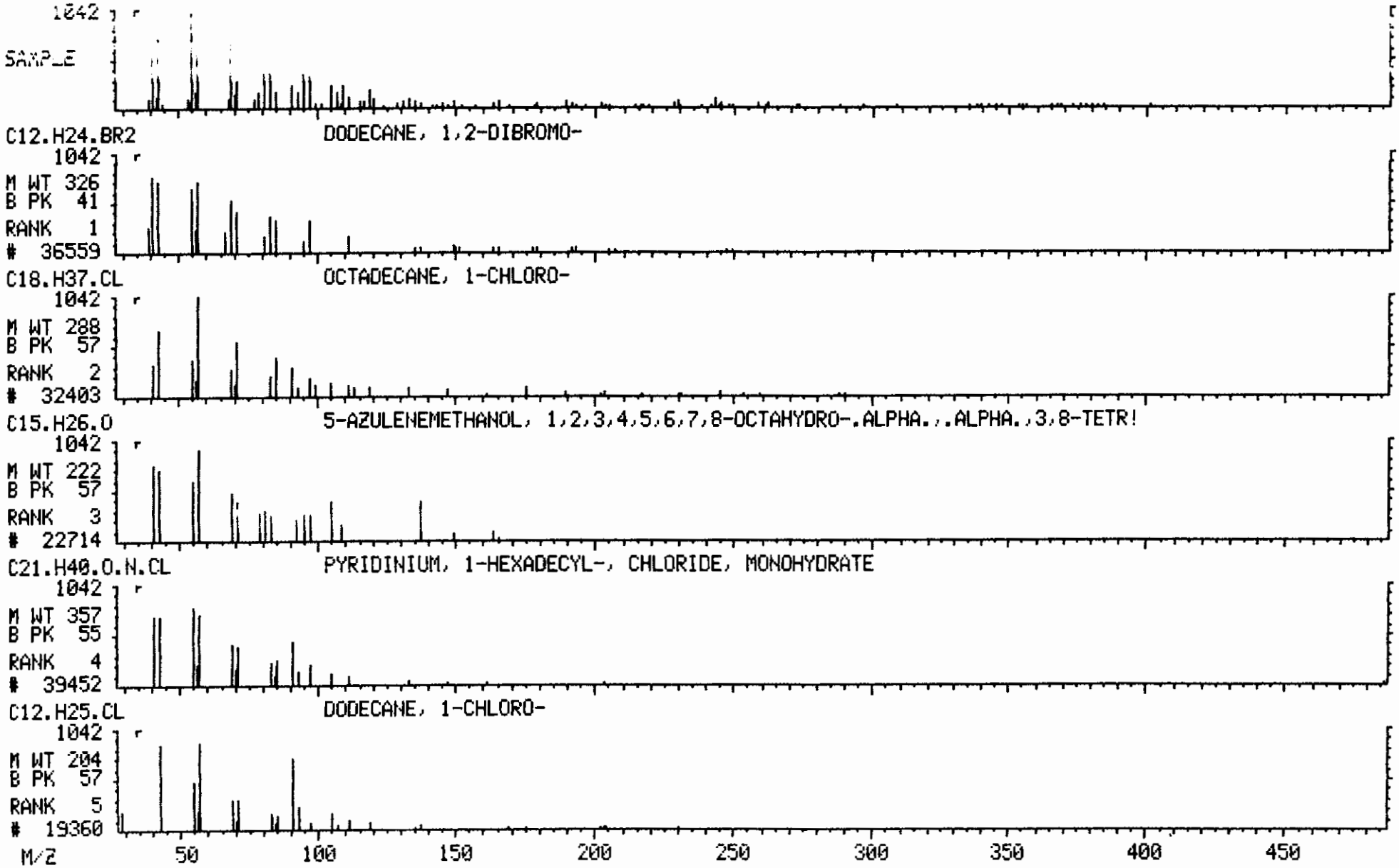
Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	55334-42-4
2	—	—	—	—	3386-33-2
3	—	—	—	—	13822-35-0
4	—	—	—	—	6004-24-6
5	—	—	—	—	112-52-7

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 20:46
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1246
CALI: W5629 # 2

BASE M/Z: 55
RIC: 80768.

100073



Library Search Data: W5629 #1304 Base m/z: 55
05/05/92 17:01:00 + 21:44 Cali: W5629 # 2 RIC: 59264.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
268 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	22714	5-AZULENEMETHANOL, 1,2,3,4,5,6,7,8-OCTAHYDRO-.ALPHA.,.ALPHA.,3,8-TE*
2	10654	2-PROPENAMIDE, 2-METHYL-N-PHENYL-
3	39452	PYRIDINIUM, 1-HEXADECYL-, CHLORIDE, MONOHYDRATE
4	9509	4-HEXENOIC ACID, 3-METHYL-2,6-DIOXO-
5	24376	TETRADECANE, 1-CHLORO-

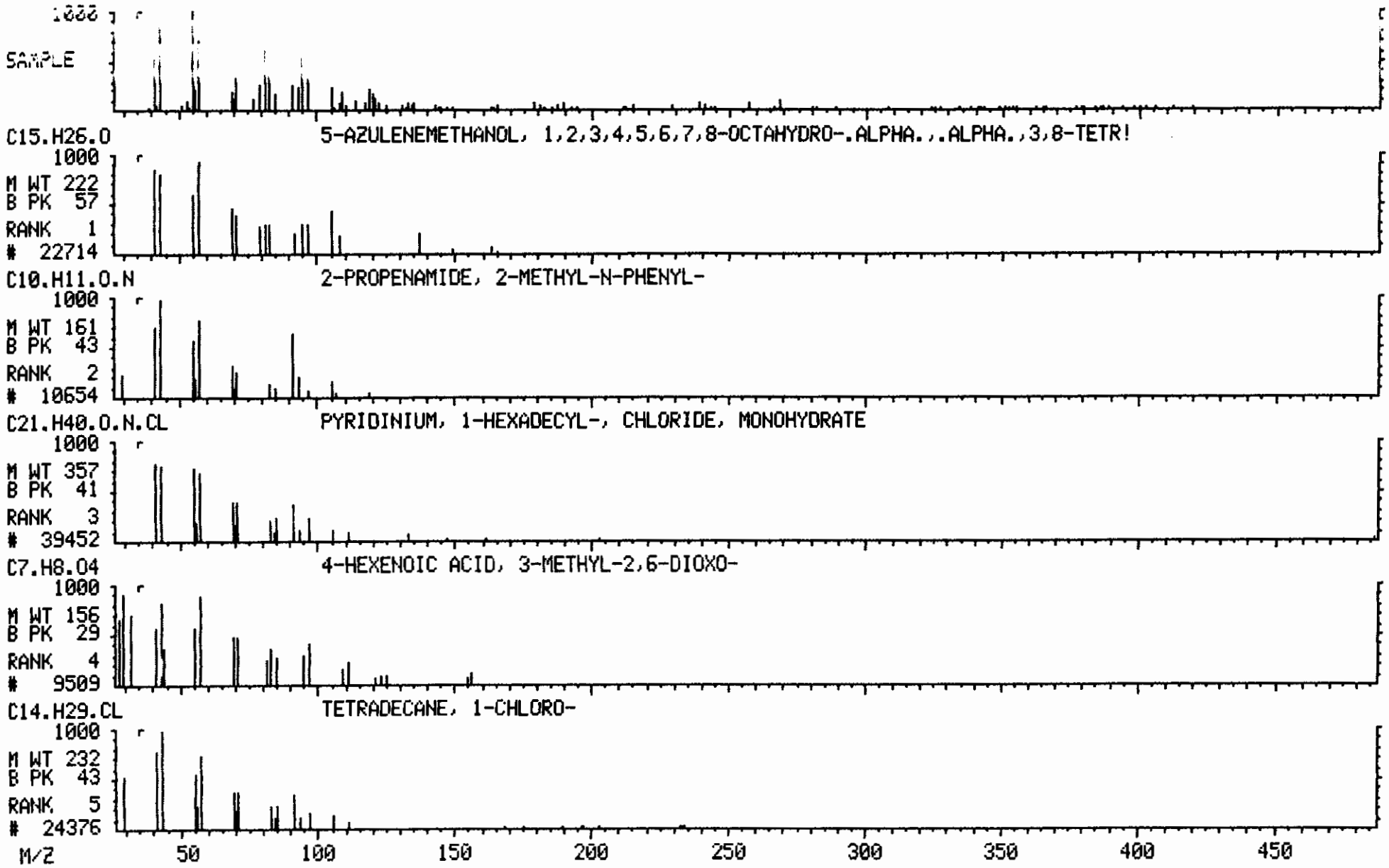
Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H26.O	222	57	362	845	402
2	C10.H11.O.N	161	43	342	896	348
3	C21.H40.O.N.CL	357	41	338	907	360
4	C7.H8.O4	156	29	324	784	389
5	C14.H29.CL	232	43	321	865	350

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	13822-35-0
2	—	—	—	—	1611-83-2
3	—	—	—	—	6004-24-6
4	—	—	—	—	56771-77-8
5	—	—	—	—	2425-54-9

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 21:44
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1304
CALI: W5629 # 2

BASE M/Z: 55
RIC: 59264.



100071

Library Search Data: W5629 #1312 Base m/z: 55
05/05/92 17:01:00 + 21:52 Cali: W5629 # 2 RIC: 57984.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
108 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	39452	PYRIDINIUM, 1-HEXADECYL-, CHLORIDE, MONOHYDRATE
2	19360	DODECANE, 1-CHLORO-
3	10654	2-PROPENAMIDE, 2-METHYL-N-PHENYL-
4	24376	TETRADECANE, 1-CHLORO-
5	43242	SILANE, TRICHLORODEICOSYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C21.H40.O.N.CL	357	55	384	927	397
2	C12.H25.CL	204	57	368	868	377
3	C10.H11.O.N	161	43	367	897	367
4	C14.H29.CL	232	43	363	910	376
5	C20.H41.CL3.SI	414	43	347	951	351

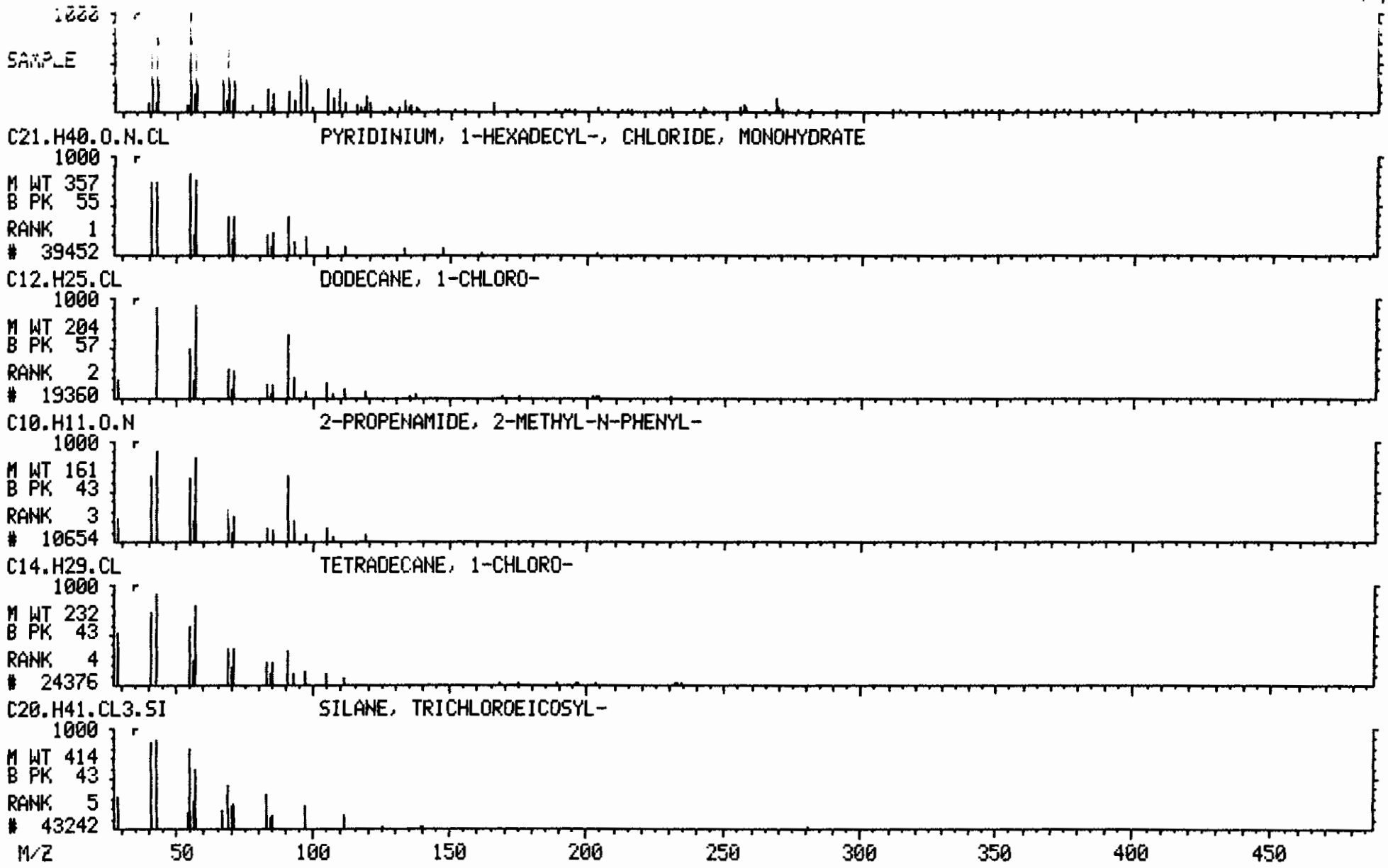
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	6004-24-6
2	—	—	—	—	112-52-7
3	—	—	—	—	1611-83-2
4	—	—	—	—	2425-54-9
5	—	—	—	—	18733-57-8

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 21:52
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1312
CALI: W5629 # 2

BASE M/Z: 55
RIC: 57984.

100077



Library Search Data: W5629 #1346 Base m/z: 55
05/05/92 17:01:00 + 22:26 Cali: W5629 # 2 RIC: 52864.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
160 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	39452	PYRIDINIUM, 1-HEXADECYL-, CHLORIDE, MONOHYDRATE
2	43242	SILANE, TRICHLOROEICOSYL-
3	24376	TETRADECANE, 1-CHLORO-
4	36559	DODECANE, 1,2-DIBROMO-
5	31367	CYCLOTETRADECANE, 1,7,11-TRIMETHYL-4-(1-METHYLETHYL)-

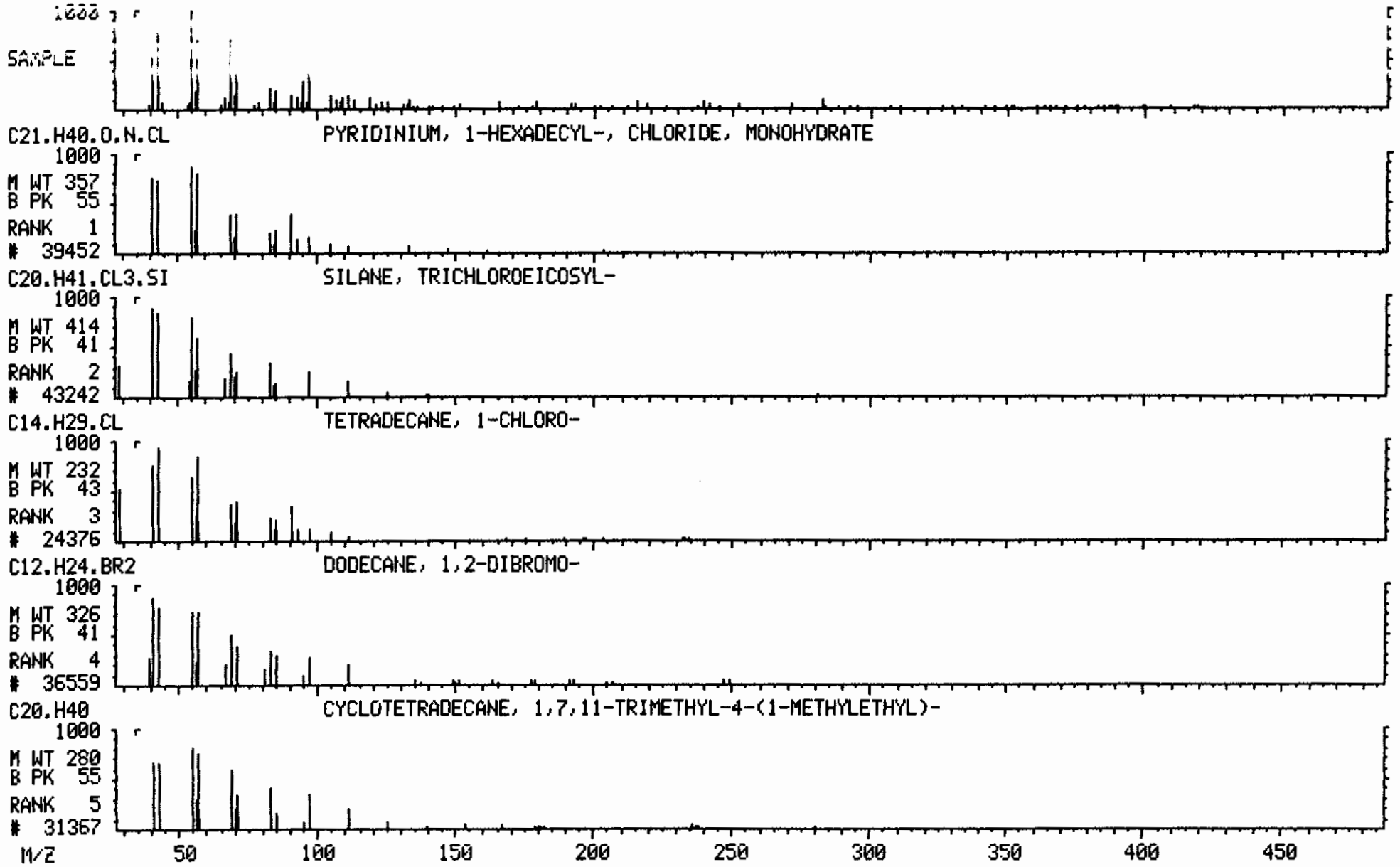
Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C21.H40.O.N.CL	357	55	393	931	405
2	C20.H41.CL3.SI	414	41	379	958	380
3	C14.H29.CL	232	43	371	905	385
4	C12.H24.BR2	326	41	370	827	427
5	C20.H40	280	55	365	869	402

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	6004-24-6
2	—	—	—	—	18733-57-8
3	—	—	—	—	2425-54-9
4	—	—	—	—	55334-42-4
5	—	—	—	—	1786-12-5

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 22:26
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1346
CALI: W5629 # 2

BASE M/Z: 55
RIC: 52864.



100075

Library Search Data: W5629 #1350 Base m/z: 55
05/05/92 17:01:00 + 22:30 Cali: W5629 # 2 RIC: 57408.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
69 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	9672	CYCLOHEXANOL, 1-METHYL-4-(1-METHYLETHYL)-
2	12141	7-OXABICYCLO[4.1.0]HEPTANE, 1-METHYL-4-(2-METHYLOXIRANYL)-
3	22718	1,6,10-DODECATRIEN-3-OL, 3,7,11-TRIMETHYL-, [S-(Z)]-
4	14329	BICYCLO[3.1.1]HEPTANE, 2,6,6-TRIMETHYL-3-(2-PROPENYL)-, (1.ALPHA.,2*
5	19863	1H-3A,7-METHANOAZULENE, OCTAHYDRO-1,4,9,9-TETRAMETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C10.H20.O	156	71	364	871	388
2	C10.H16.O2	168	43	357	840	376
3	C15.H26.O	222	69	357	883	359
4	C13.H22	178	41	348	879	361
5	C15.H26	206	41	348	786	399

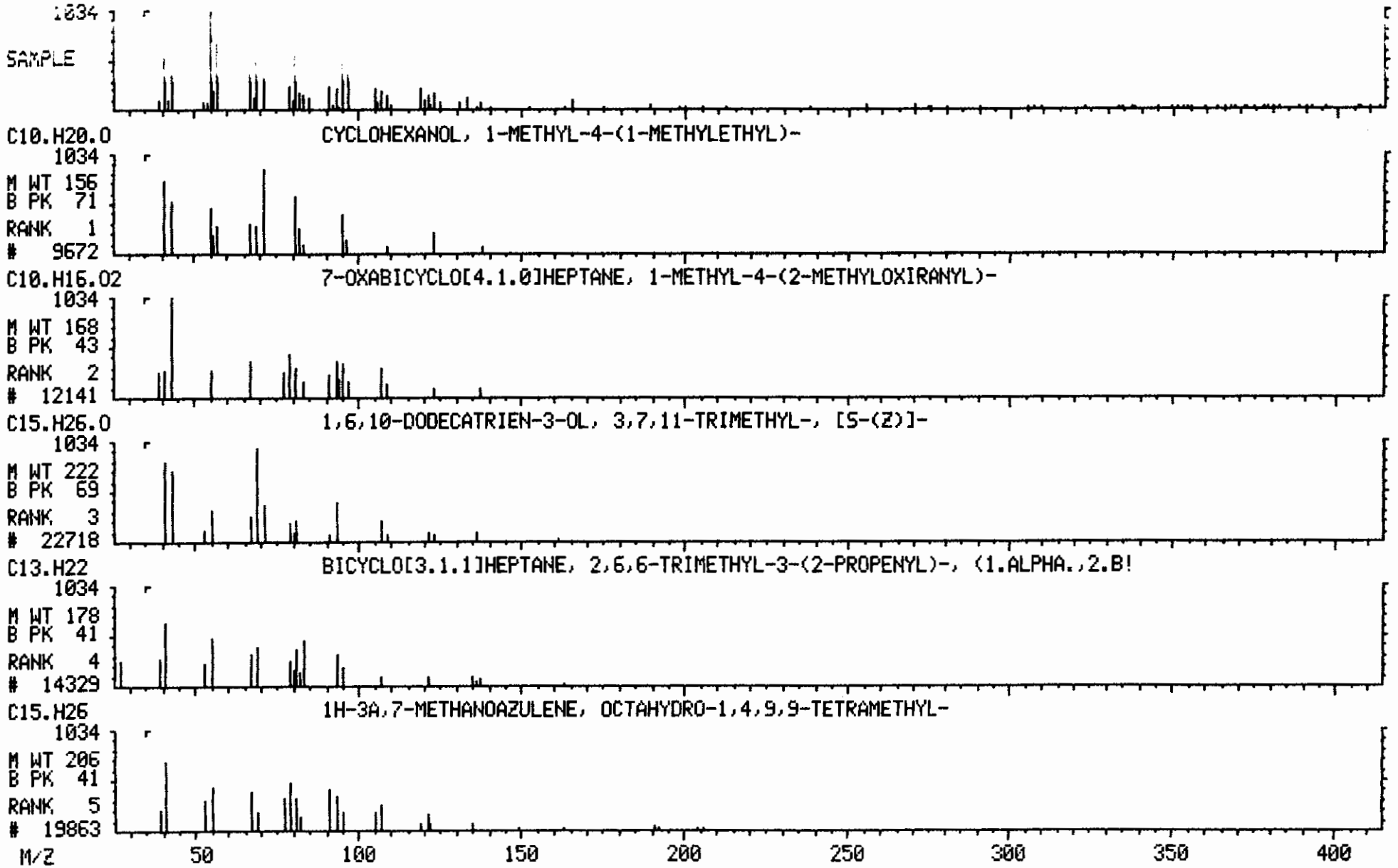
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	21129-27-1
2	—	—	—	—	96-08-2
3	—	—	—	—	142-50-7
4	—	—	—	—	50746-55-9
5	—	—	—	—	19078-35-4

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 22:30
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1350
CALI: W5629 # 2

BASE M/Z: 55
RIC: 57408.

100081



Library Search Data: W5629 #1368 Base m/z: 55
05/05/92 17:01:00 + 22:48 Cali: W5629 # 2 RIC: 31296.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
213 matched at least 6 of the 16 largest peaks in the unknown

alcohol

Rank	In.	Name
1	31915	NONADECANOL
2	33660	1-EICOSANOL
3	9509	4-HEXENOIC ACID, 3-METHYL-2,6-DIOXO-
4	29460	2,5-FURANDIONE, 3-(DODECENYL)DIHYDRO-
5	36559	DODECANE, 1,2-DIBROMO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C19.H40.O	284	43	285	786	345
2	C20.H42.O	298	43	280	772	341
3	C7.H8.O4	156	57	277	763	340
4	C16.H26.O3	266	41	267	663	388
5	C12.H24.BR2	326	41	266	690	365

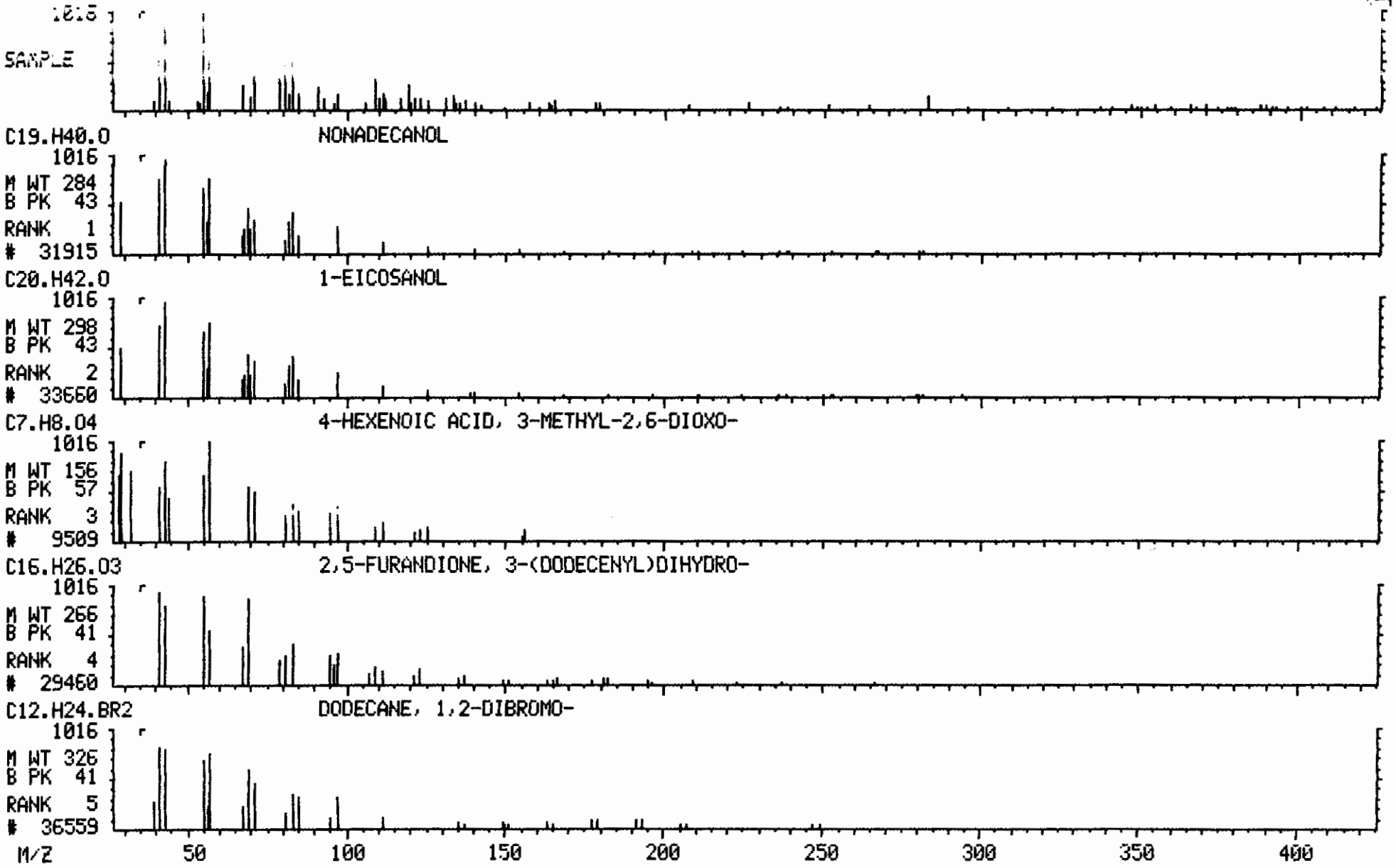
Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	52783-43-4
2	—	—	—	—	629-96-9
3	—	—	—	—	56771-77-8
4	—	—	—	—	25377-73-5
5	—	—	—	—	55334-42-4

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 22:48
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1368
CALI: W5629 # 2

BASE M/Z: 55
RIC: 31296.

100080



Library Search Data: W5629 #1382 Base m/z: 55
05/05/92 17:01:00 + 23:02 Cali: W5629 # 2 RIC: 51840.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
56 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	36559	DODECANE, 1,2-DIBROMO-
2	31881	CIS-9,10-EPOXYOCTADECAN-1-OL
3	33660	1-EICOSANOL
4	32403	OCTADECANE, 1-CHLORO-
5	33406	NONADECANE, 2,3-DIMETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C12.H24.BR2	326	43	301	807	353
2	C18.H36.O2	284	55	263	807	319
3	C20.H42.O	298	43	263	653	328
4	C18.H37.CL	288	57	262	793	302
5	C21.H44	296	43	256	754	305

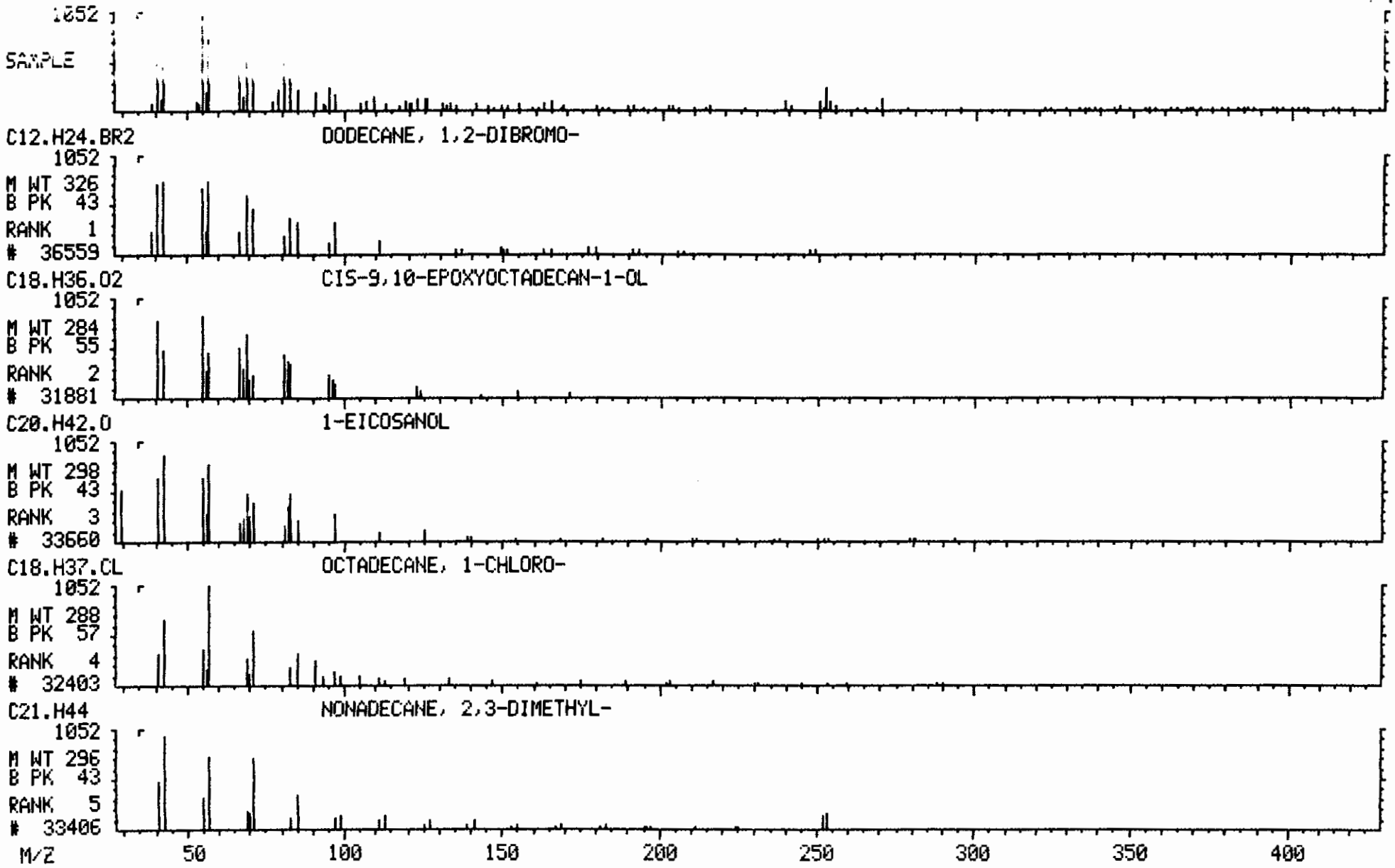
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	55334-42-4
2	—	—	—	—	13980-12-6
3	—	—	—	—	629-96-9
4	—	—	—	—	3386-33-2
5	—	—	—	—	75163-99-4

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 23:02
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1382
CALI: W5629 # 2

BASE M/Z: 55
RIC: 51840.

100085



Library Search Data: W5629 #1416 Base m/z: 43
05/05/92 17:01:00 + 23:36 Cali: W5629 # 2 RIC: 46272.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
205 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	31881	CIS-9,10-EPOXYOCTADECAN-1-OL
2	25675	OXIRANE, TETRADECYL-
3	29800	OCTADECANAL
4	31374	CYCLOHEXANE, 1-(1,5-DIMETHYLHEXYL)-4-(4-METHYLPENTYL)-
5	23110	2-PENTADECYN-1-OL

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C18.H36.O2	284	55	431	874	458
2	C16.H32.O	240	41	406	854	436
3	C18.H36.O	268	43	397	785	461
4	C20.H40	280	43	396	790	486
5	C15.H28.O	224	41	391	860	411

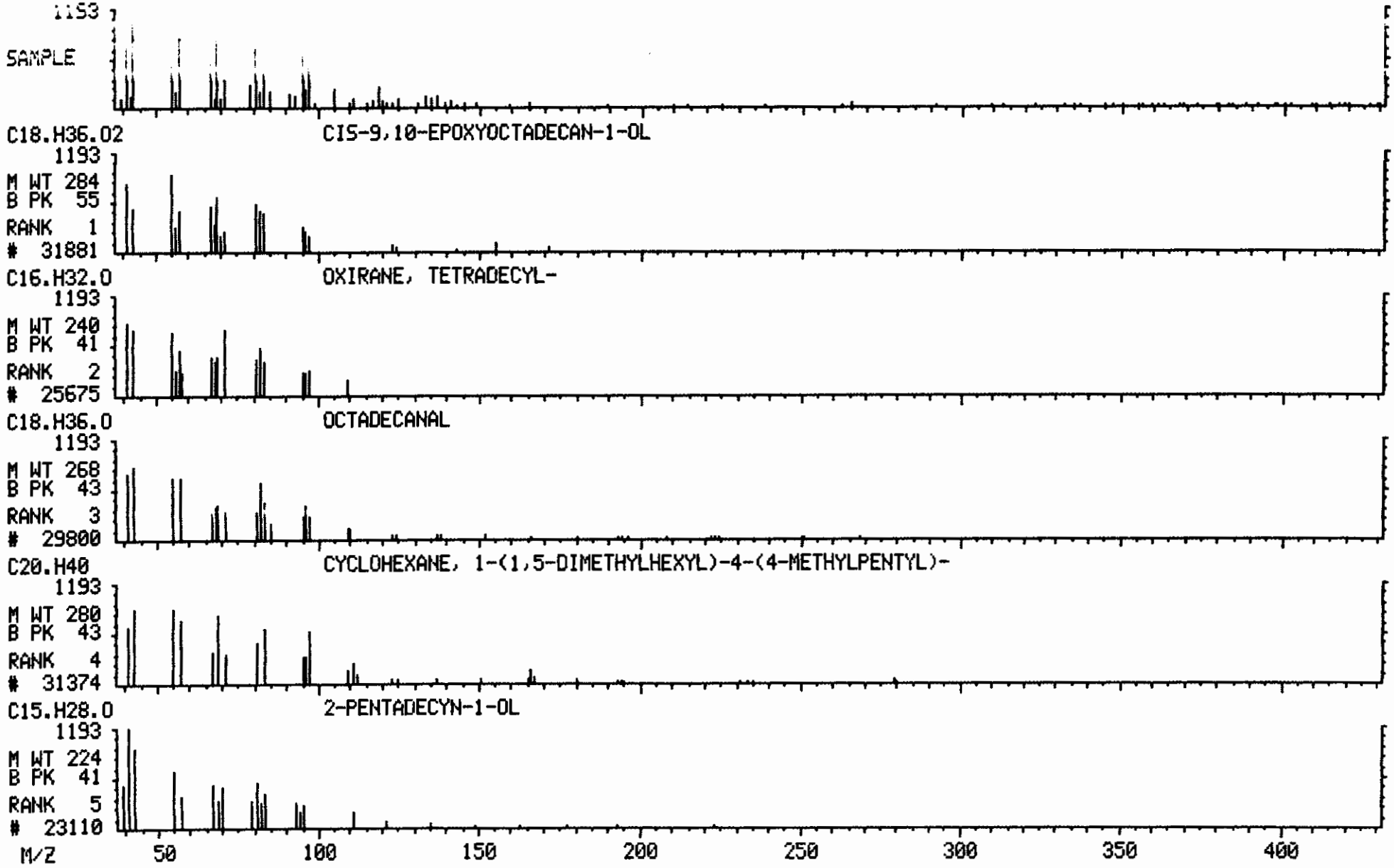
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	13980-12-6
2	—	—	—	—	7320-37-8
3	—	—	—	—	638-66-4
4	—	—	—	—	56009-20-2
5	—	—	—	—	2834-00-6

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 23:36
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1416
CALI: W5629 # 2

BASE M/Z: 43
RIC: 46272.

100087



Library Search Data: W5629 #1443 Base m/z: 55
05/05/92 17:01:00 + 24:03 Cali: W5629 # 2 RIC: 92268.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
61 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	12141	7-OXABICYCLO[4.1.0]HEPTANE, 1-METHYL-4-(2-METHYLOXIRANYL)-
2	39082	9,12,15-OCTADECATRIENOIC ACID, 2,3-DIHYDROXYPROPYL ESTER, (Z,Z,Z)-
3	38563	KAURAN-18-AL, 17-(ACETYLOXY)-, (4.BETA.)-
4	39919	PENTALENE, OCTAHYDRO-1-(2-OCTYLDECYL)-
5	34616	8,11,14-EICOSATRIENOIC ACID, (Z,Z,Z)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C10.H16.O2	168	43	282	914	282
2	C21.H36.O4	352	41	281	739	355
3	C22.H34.O3	346	43	277	830	322
4	C26.H50	362	43	262	842	299
5	C20.H34.O2	306	41	253	786	290

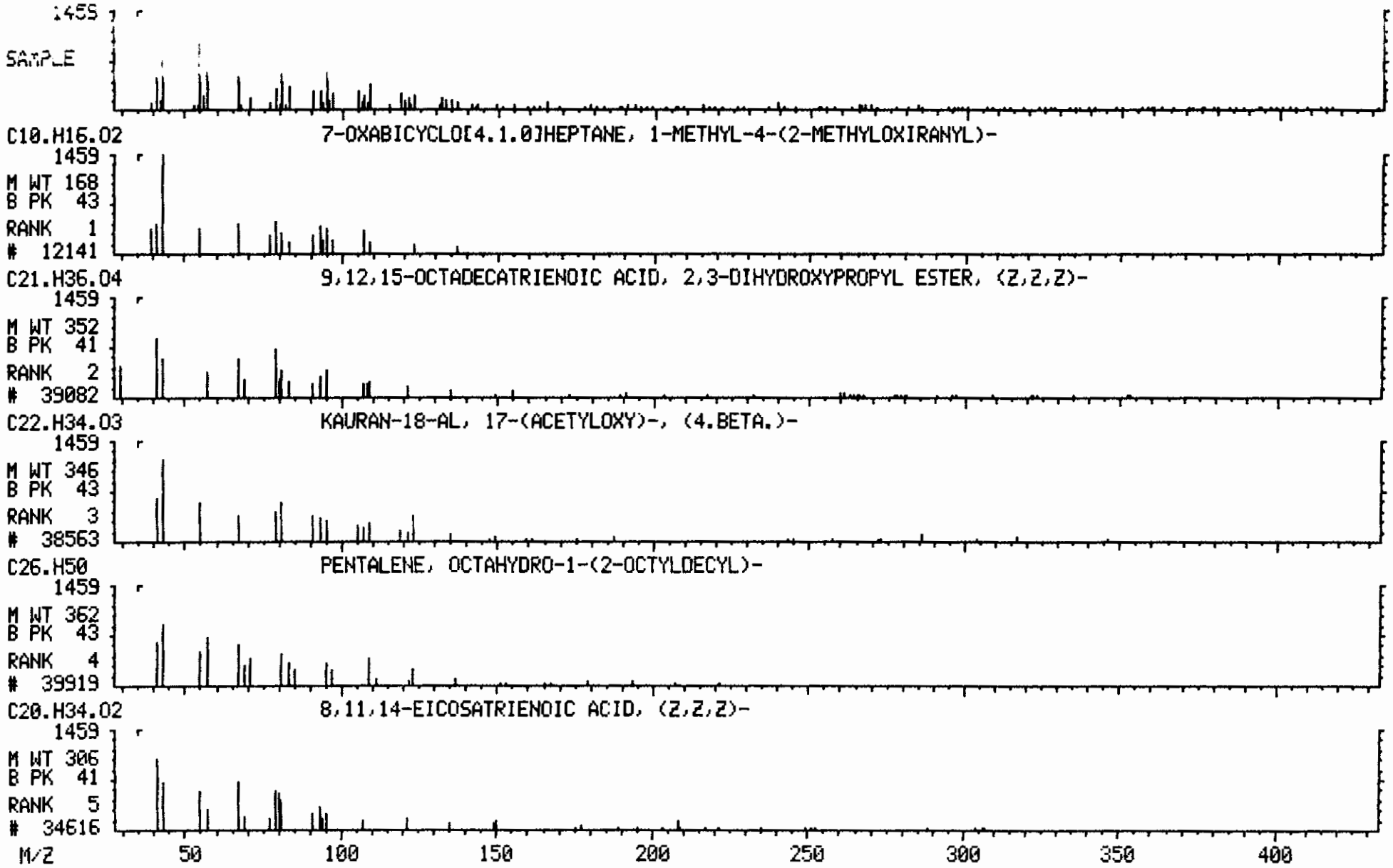
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	96-08-2
2	—	—	—	—	18465-99-1
3	—	—	—	—	55902-84-6
4	—	—	—	—	55401-65-5
5	—	—	—	—	1783-84-2

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 24:03
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1443
CALI: W5629 # 2

BASE M/Z: 55
RIC: 52288.

C00001



Library Search Data: W5629 #1464 Base m/z: 55
05/05/92 17:01:00 + 24:24 Cali: W5629 # 2 RIC: 44352.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
149 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	29460	2,5-FURANDIONE, 3-(DODECENYL)DIHYDRO-
2	31374	CYCLOHEXANE, 1-(1,5-DIMETHYLHEXYL)-4-(4-METHYLPENTYL)-
3	9509	4-HEXENOIC ACID, 3-METHYL-2,6-DIOXO-
4	36559	DODECANE, 1,2-DIBROMO-
5	40730	9-OCTADECENOIC ACID (Z)-, PHENYLMETHYL ESTER

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C16.H26.O3	266	41	354	875	389
2	C20.H40	280	43	350	871	382
3	C7.H8.O4	156	57	343	899	369
4	C12.H24.BR2	326	41	338	830	385
5	C25.H40.O2	372	91	319	738	365

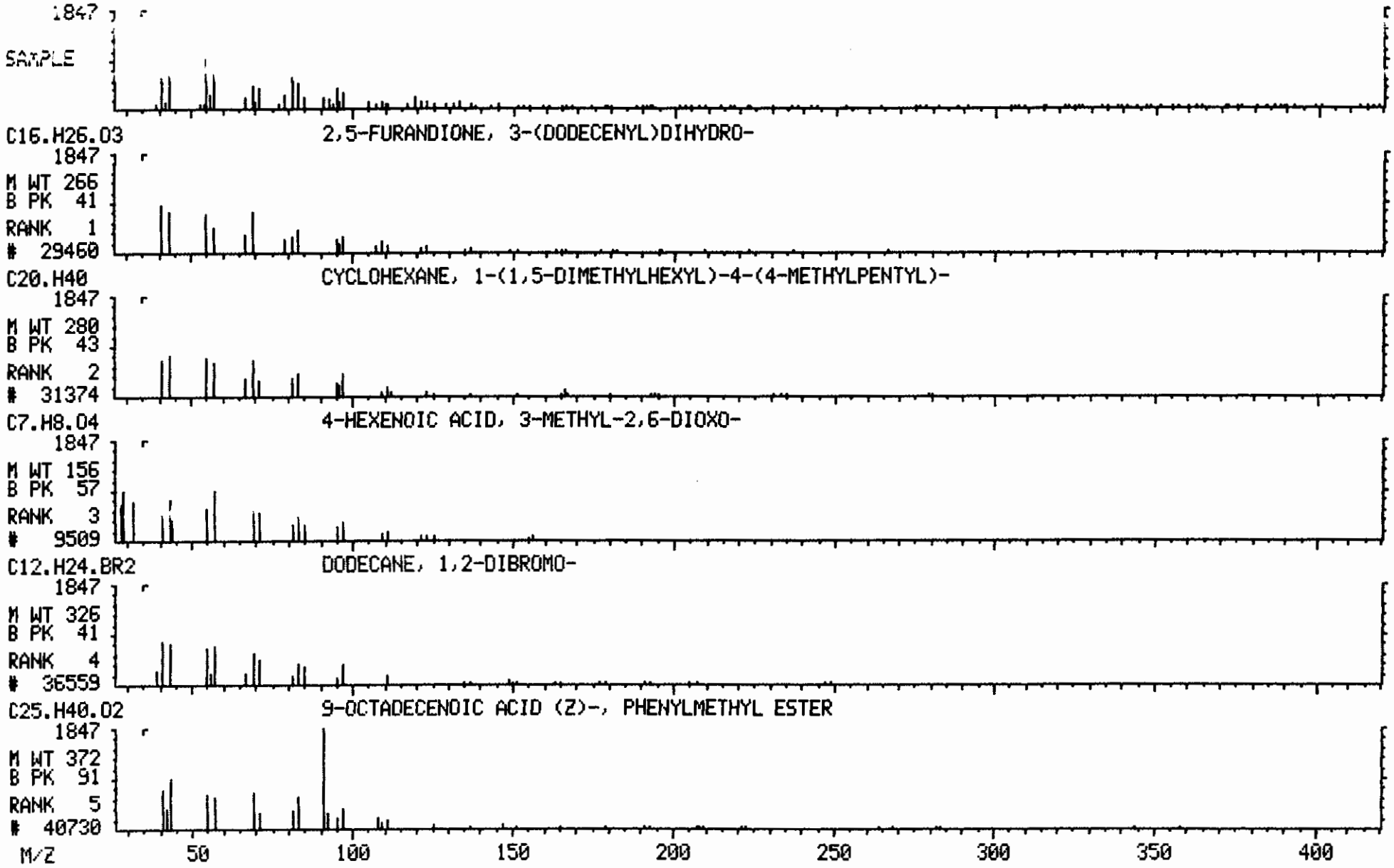
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	25377-73-5
2	—	—	—	—	56009-20-2
3	—	—	—	—	56771-77-8
4	—	—	—	—	55334-42-4
5	—	—	—	—	55130-16-0

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 24:24
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1464
CALI: W5629 # 2

BASE M/Z: 55
RIC: 44352.

10001



Library Search Data: W5629 #1475 Base m/z: 55
05/05/92 17:01:00 + 24:35 Cali: W5629 # 2 RIC: 41728.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

49429 spectra in LIBRARYNB searched for maximum PURITY
73 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	29472	HEXADECADIENOIC ACID, METHYL ESTER
2	31145	NAPHTHALENE, DECAHYDRO-2,6-DIMETHYL-3-OCTYL-
3	29460	2,5-FURANDIONE, 3-(DODECENYL)DIHYDRO-
4	24086	1,14-TETRADECANEDIOL
5	40867	1,1':3',1''-TERCYCLOPENTANE, 2'-DODECYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C17.H30.O2	266	41	226	771	278
2	C20.H38	278	55	212	739	233
3	C16.H26.O3	266	55	203	678	273
4	C14.H30.O2	230	55	198	872	204
5	C27.H50	374	41	196	676	267

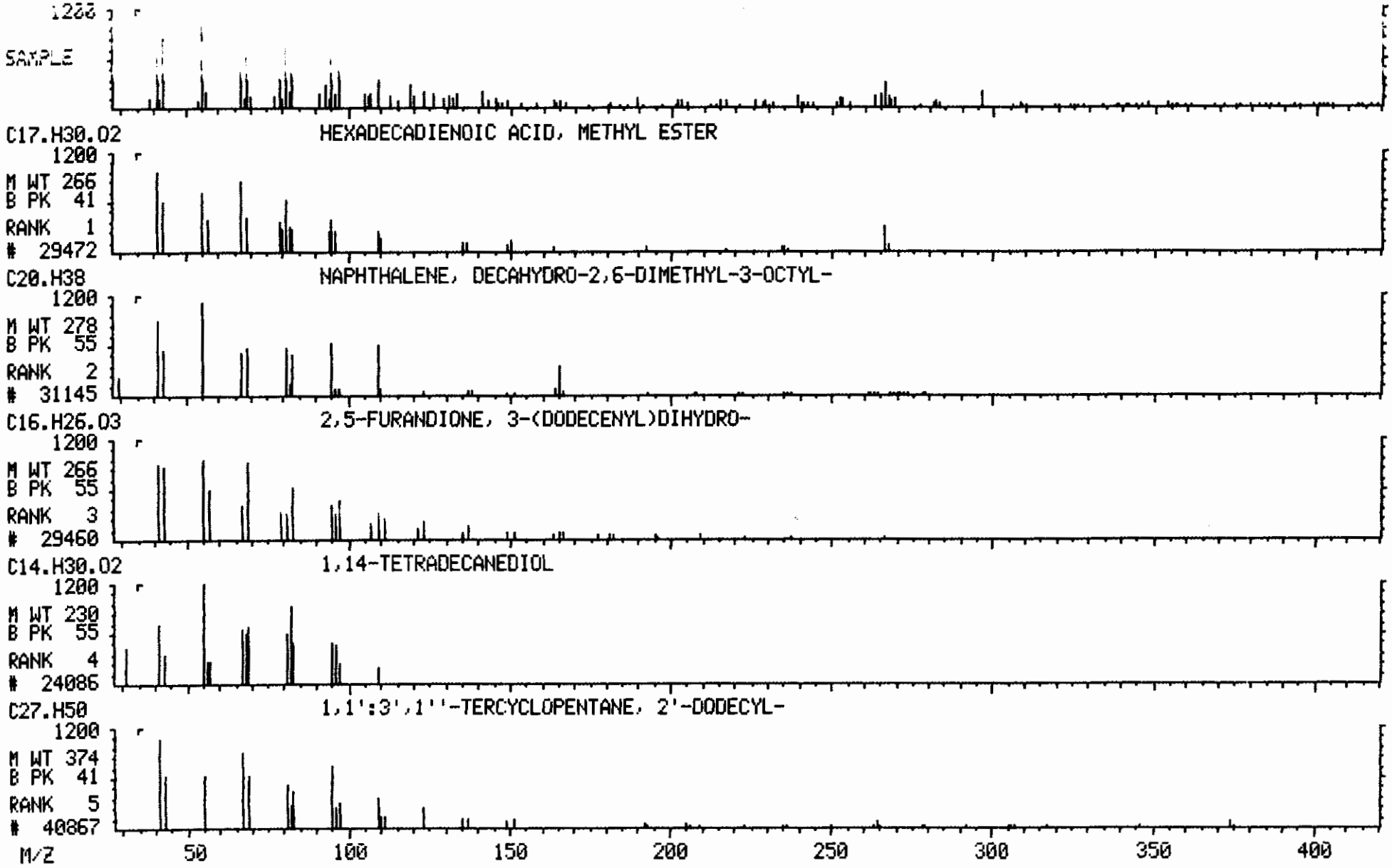
Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	29961-54-4
2	—	—	—	—	54964-85-1
3	—	—	—	—	25377-73-5
4	—	—	—	—	19812-64-7
5	—	—	—	—	55282-68-3

LIBRARY SEARCH (LIBRARYNB)
05/05/92 17:01:00 + 24:35
SAMPLE: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,
ENHANCED (S 15B 2N 0T)

DATA: W5629 #1475
CALI: W5629 # 2

BASE M/Z: 55
RIC: 41728.

100093



```
                >>>>INTERNAL STANDARD RIC REPORT<<<<
****************************INTERNAL STANDARD#1*****************RIC
Mass List                        Data: W5629 # 325          Base m/z:   150
05/05/92 17:01:00 +  5:25        Cali: W5629 #   2          RIC:     103808.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#2*****************RIC
Mass List                        Data: W5629 # 456          Base m/z:   136
05/05/92 17:01:00 +  7:36        Cali: W5629 #   2          RIC:     130304.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     36        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#3*****************RIC
Mass List                        Data: W5629 # 660          Base m/z:   164
05/05/92 17:01:00 + 11:00        Cali: W5629 #   2          RIC:     124032.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     36        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#4*****************RIC
Mass List                        Data: W5629 # 835          Base m/z:   188
05/05/92 17:01:00 + 13:55        Cali: W5629 #   2          RIC:     108288.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#5*****************RIC
Mass List                        Data: W5629 #1166          Base m/z:   240
05/05/92 17:01:00 + 19:26        Cali: W5629 #   2          RIC:      72320.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     39        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#6*****************RIC
Mass List                        Data: W5629 #1407          Base m/z:   264
05/05/92 17:01:00 + 23:27        Cali: W5629 #   2          RIC:      72192.
Sample: CLP,6432,3,S-10,L,S,74719,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     36        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
       CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO COELUTION
```

IV. STANDARDS DATA

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: VERSAR INC. Contract: _____

Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Instrument ID: W Calibration Date(s): 04/30/92 04/30/92

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = W5573 RRF50 = W5569
RRF80 = W5572 RRF120= W5571 RRF160= W5570

OK 7/8.

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol	*	1.819	1.652	1.618	1.615	1.596	1.660	5.5*
bis(2-Chloroethyl)ether		1.806	1.597	1.653	1.580	1.479	1.623	7.4
2-Chlorophenol		1.549	1.410	1.402	1.365	1.307	1.407	6.4
1,3-Dichlorobenzene		1.702	1.544	1.485	1.494	1.435	1.532	6.7
1,4-Dichlorobenzene	*	1.780	1.596	1.628	1.607	1.536	1.629	5.6*
Benzyl alcohol		0.871	0.813	0.863	0.852	0.760	0.832	5.5
1,2-Dichlorobenzene		1.632	1.414	1.426	1.391	1.375	1.448	7.2
2-Methylphenol		1.288	1.215	1.182	1.170	1.116	1.194	5.3
bis(2-Chloroisopropyl)ether		1.813	1.640	1.741	1.750	1.658	1.720	4.1
3- & 4- Methylphenol		1.312	1.231	1.243	1.238	1.217	1.248	3.0
N-Nitroso-di-n-propylamine	#	1.339	1.230	1.301	1.234	1.241	1.269	3.8#
Hexachloroethane		0.883	0.830	0.831	0.784	0.741	0.814	6.6
Nitrobenzene		0.613	0.556	0.575	0.578	0.505	0.565	7.0
ophorone		1.124	1.028	1.054	1.057	1.029	1.058	3.7
-Nitrophenol	*	0.202	0.191	0.182	0.189	0.186	0.190	4.0*
2,4-Dimethylphenol		0.460	0.424	0.440	0.431	0.420	0.435	3.7
Benzoic Acid		0.179	0.179	0.174	0.190	0.198	0.184	5.3
bis(2-Chloroethoxy)methane		0.575	0.555	0.534	0.534	0.507	0.541	4.7
2,4-Dichlorophenol	*	0.285	0.277	0.277	0.279	0.281	0.280	1.2*
1,2,4-Trichlorobenzene		0.364	0.340	0.331	0.330	0.326	0.338	4.5
Naphthalene		1.210	1.117	1.080	1.037	1.079	1.105	5.9
4-Chloroaniline		0.241	0.238	0.305	0.312	0.282	0.276	12.6
Hexachlorobutadiene	*	0.205	0.205	0.198	0.197	0.185	0.198	4.1*
4-Chloro-3-methylphenol	*	0.365	0.347	0.358	0.371	0.347	0.358	3.0*
2-Methylnaphthalene		0.713	0.675	0.653	0.643	0.615	0.660	5.6
Hexachlorocyclopentadiene	#	0.335	0.369	0.380	0.386	0.382	0.370	5.6#
2,4,6-Trichlorophenol	*	0.379	0.369	0.378	0.376	0.377	0.376	1.1*
2,4,5-Trichlorophenol		0.394	0.400	0.409	0.414	0.398	0.403	2.0
2-Chloronaphthalene		1.404	1.282	1.306	1.285	1.287	1.313	3.9
2-Nitroaniline		0.526	0.536	0.594	0.610	0.571	0.567	6.4
Dimethylphthalate		1.583	1.491	1.554	1.515	1.485	1.526	2.8
Acenaphthylene		2.176	2.121	2.182	2.088	2.058	2.125	2.5
2,6-Dinitrotoluene		0.317	0.321	0.354	0.343	0.336	0.334	4.6
3-Nitroaniline		0.163	0.176	0.245	0.242	0.219	0.209	18.0
Acenaphthene	*	1.468	1.385	1.380	1.309	1.324	1.373	4.6*
2,4-Dinitrophenol	#	0.114	0.166	0.178	0.188	0.181	0.165	18.1#
4-Nitrophenol	#	0.284	0.307	0.359	0.350	0.347	0.329	9.8#

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

OK 7/9

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Instrument ID: W Calibration Date(s): 04/30/92 04/30/92

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = W5573 RRF50 = W5569
RRF80 = W5572 RRF120= W5571 RRF160= W5570

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	2.027	1.819	1.841	1.766	1.741	1.839	6.1
2,4-Dinitrotoluene	0.451	0.472	0.529	0.500	0.499	0.490	6.1
Diethylphthalate	1.887	1.800	1.903	1.825	1.830	1.849	2.4
4-Chlorophenyl-phenylether	0.696	0.662	0.645	0.623	0.633	0.652	4.4
Fluorene	1.421	1.336	1.330	1.261	1.282	1.326	4.7
4-Nitroaniline	0.167	0.145	0.222	0.248	0.235	0.203	22.1
4,6-Dinitro-2-methylphenol	0.126	0.139	0.152	0.154	0.162	0.147	9.6
N-nitrosodiphenylamine (1) *	0.735	0.616	0.633	0.652	0.623	0.652	7.4*
4-Bromophenyl-phenylether	0.254	0.233	0.234	0.232	0.254	0.241	4.8
Hexachlorobenzene	0.343	0.318	0.288	0.296	0.307	0.310	6.9
Pentachlorophenol *	0.149	0.153	0.156	0.158	0.163	0.156	3.4*
Phenanthrene	1.441	1.242	1.250	1.232	1.235	1.280	7.1
Anthracene	1.450	1.292	1.292	1.253	1.258	1.309	6.2
-n-butylphthalate	1.827	1.707	1.749	1.669	1.663	1.723	3.9
Fluoranthene *	1.238	1.147	1.114	1.059	1.050	1.122	6.8*
Pyrene	1.757	1.678	1.573	1.469	1.455	1.586	8.3
Butylbenzylphthalate	0.791	0.858	0.891	0.875	0.854	0.854	4.5
3,3'-Dichlorobenzidine	0.096	0.115	0.151	0.154	0.139	0.131	19.0
Benzo(a)anthracene	1.062	1.003	1.026	0.989	0.979	1.012	3.3
Chrysene	1.367	1.150	1.103	1.102	1.079	1.160	10.2
bis(2-Ethylhexyl)phthalate	1.079	1.194	1.217	1.145	1.140	1.155	4.6
Di-n-octyl phthalate *	1.850	2.223	2.356	2.240	2.194	2.173	8.8*
Benzo(b)fluoranthene	1.162	1.173	1.210	1.298	1.149	1.198	5.0
Benzo(k)fluoranthene	1.364	1.291	1.237	0.928	1.011	1.166	16.1
Benzo(a)pyrene *	1.042	1.134	1.095	1.019	1.000	1.058	5.2*
Indeno(1,2,3-cd)pyrene	0.645	0.781	0.698	0.469	0.788	0.676	19.3
Dibenz(a,h)anthracene	0.727	0.708	0.734	0.663	0.652	0.697	5.4
Benzo(g,h,i)perylene	0.834	0.822	0.751	0.697	0.693	0.759	8.8
Nitrobenzene-d5	0.562	0.542	0.560	0.559	0.515	0.548	3.6
2-Fluorobiphenyl	1.563	1.447	1.431	1.393	1.368	1.440	5.2
Terphenyl-d14	1.007	1.007	0.923	0.876	0.854	0.933	7.7
Phenol-d5	2.533	2.314	2.295	2.270	2.137	2.310	6.2
2-Fluorophenol	2.325	2.058	2.062	1.992	1.911	2.070	7.5
2,4,6-Tribromophenol	0.250	0.281	0.276	0.280	0.277	0.273	4.7

(1) Cannot be separated from Diphenylamine

INITIAL CALIBRATION DATA - SEMIVOLATILE HSL COMPOUNDS

CASE NO.
CONTRACT NO.
CONTRACT LAB: VERBAR
INSTRUMENT IDENTIFIER: W
CALIBRATION DATE: 04/30/92
MINIMUM MEAN RF FOR SPCC IS 0.05
MAXIMUM %RSD FOR CCC IS 30%

2/88

LABORATORY ID

	COMPOUND	W5573 RF 20NG	W5569 RF 50NG	W5572 RF 80NG	W5571 RF 120NG	W5570 RF 160NG	MEAN RF	%RSD
C315	PHENOL	1.819	1.652	1.618	1.615	1.596	1.660	5.4
C340	1,4-DICHLOROBENZENE	1.780	1.596	1.628	1.607	1.536	1.630	5.5
C420	2-NITROPHENOL	0.202	0.191	0.182	0.189	0.186	0.190	3.8
C440	2,4-DICHLOROPHENOL	0.285	0.277	0.277	0.279	0.281	0.280	1.2
C460	HEXACHLOROBUTADIENE	0.205	0.205	0.198	0.197	0.185	0.198	4.0
C465	4-CHLORO-3-METHYLPHENOL	0.365	0.347	0.358	0.371	0.347	0.357	2.9
C515	2,4,6-TRICHLOROPHENOL	0.379	0.369	0.378	0.376	0.377	0.376	1.0
C550	ACENAPHTHENE	1.468	1.385	1.380	1.309	1.324	1.373	4.5
C615	N-NITROSODIPHENYLAMINE	0.735	0.616	0.633	0.652	0.623	0.652	7.4
C635	PENTACHLOROPHENOL	0.149	0.153	0.156	0.158	0.163	0.156	3.3
C655	FLUORANTHENE	1.238	1.147	1.114	1.059	1.050	1.122	6.7
C760	DI-N-OCTYL PHTHALATE	1.850	2.223	2.356	2.240	2.194	2.173	8.7
C775	BENZO(A)PYRENE	1.042	1.134	1.095	1.019	1.000	1.058	5.2
C370	N-NITROSO-DI-N-PROPYLAM	1.339	1.230	1.301	1.234	1.241	1.269	3.8
C510	HEXACHLOROCYCLOPENTADIE	0.335	0.369	0.380	0.386	0.382	0.370	5.5
C555	2,4-DINITROPHENOL	0.114	0.166	0.178	0.188	0.181	0.165	17.8
C560	4-NITROPHENOL	0.284	0.307	0.359	0.350	0.347	0.329	9.8
C330	2-CHLOROPHENOL	1.549	1.410	1.402	1.365	1.307	1.407	6.3
C325	BIS (2-CHLOROETHYL) ETH	1.806	1.597	1.653	1.580	1.479	1.623	7.4
C335	1,3-DICHLOROBENZENE	1.702	1.544	1.485	1.494	1.435	1.532	6.6
C350	1,2-DICHLOROBENZENE	1.632	1.414	1.426	1.391	1.375	1.448	7.2
C345	BENZYL ALCOHOL	0.871	0.813	0.863	0.852	0.760	0.832	5.4
C360	BIS (2-CHLOROISOPROPYL)	1.813	1.640	1.741	1.750	1.658	1.721	4.1
C355	2-METHYLPHENOL	1.288	1.215	1.182	1.170	1.116	1.194	5.3
C375	HEXACHLOROETHANE	0.883	0.830	0.831	0.784	0.741	0.814	6.5
C365	4-METHYLPHENOL	1.312	1.231	1.243	1.238	1.217	1.248	2.9
C410	NITROBENZENE	0.613	0.556	0.575	0.578	0.505	0.565	6.9
C415	ISOPHORONE	1.124	1.028	1.054	1.057	1.029	1.058	3.7
C425	2,4-DIMETHYLPHENOL	0.460	0.424	0.440	0.431	0.420	0.435	3.6
C435	BIS (2-CHLOROETHOXY) ME	0.575	0.555	0.534	0.534	0.507	0.541	4.7
C445	1,2,4-TRICHLOROBENZENE	0.364	0.340	0.331	0.330	0.326	0.338	4.6
C450	NAPHTHALENE	1.210	1.117	1.080	1.037	1.079	1.105	5.9
C430	BENZOIC ACID	0.179	0.179	0.174	0.190	0.198	0.184	5.2
C455	4-CHLOROANILINE	0.241	0.238	0.305	0.312	0.282	0.276	12.5
C470	2-METHYLNAPHTHALENE	0.713	0.675	0.653	0.643	0.615	0.660	5.5
C520	2,4,5-TRICHLOROPHENOL	0.394	0.400	0.409	0.414	0.398	0.403	2.0
C525	2-CHLORONAPHTHALENE	1.404	1.282	1.306	1.285	1.287	1.313	3.9
C530	2-NITROANILINE	0.526	0.536	0.594	0.610	0.571	0.567	6.3
C540	ACENAPHTHYLENE	2.176	2.121	2.182	2.088	2.058	2.125	2.5
C535	DIMETHYL PHTHALATE	1.583	1.491	1.554	1.515	1.485	1.526	2.7
C544	2,6-DINITROTOLUENE	0.317	0.321	0.354	0.343	0.336	0.334	4.5
C545	3-NITROANILINE	0.163	0.176	0.245	0.242	0.219	0.209	17.9
C565	DIBENZOFURAN	2.027	1.819	1.841	1.766	1.741	1.839	6.1
C570	2,4-DINITROTOLUENE	0.451	0.472	0.529	0.500	0.499	0.490	6.1
C590	FLUORENE	1.421	1.336	1.330	1.261	1.282	1.326	4.6
C585	4-CHLOROPHENYL-PHENYLET	0.696	0.662	0.645	0.623	0.633	0.652	4.3
C580	DIETHYLPHTHALATE	1.887	1.800	1.903	1.825	1.830	1.849	2.3
C595	4-NITROANILINE	0.167	0.145	0.222	0.248	0.235	0.203	22.0
C610	4,6-DINITRO-2-METHYLPHE	0.126	0.139	0.152	0.154	0.162	0.147	9.6
C625	4-BROMOPHENYL-PHENYLETH	0.254	0.233	0.234	0.232	0.254	0.241	4.6
C630	HEXACHLOROBENZENE	0.343	0.318	0.288	0.296	0.307	0.310	6.8
C640	PHENANTHRENE	1.441	1.242	1.250	1.232	1.239	1.280	7.0
C645	ANTHRACENE	1.450	1.292	1.292	1.253	1.258	1.309	6.1
C650	DI-N-BUTYLPHTHALATE	1.827	1.707	1.749	1.669	1.663	1.723	3.9
C715	PYRENE	1.757	1.678	1.573	1.469	1.455	1.587	8.2
C720	BUTYLBENZYLPHTHALATE	0.791	0.858	0.891	0.875	0.854	0.854	4.4
C730	BENZO(A)ANTHRACENE	1.062	1.003	1.026	0.989	0.979	1.012	3.2
C740	CHRYSENE	1.367	1.150	1.103	1.102	1.079	1.160	10.2
C725	3,3'-DICHLOROBENZIDINE	0.096	0.115	0.151	0.154	0.139	0.131	18.8
C741	BIS(2-ETHYLHEXYL)PHTHAL	1.079	1.194	1.217	1.145	1.140	1.155	4.6
C765	BENZO(B)FLUORANTHENE	1.162	1.173	1.210	1.298	1.149	1.198	5.0
C770	BENZO(K)FLUORANTHENE	1.364	1.291	1.237	0.928	1.011	1.166	16.0
C780	INDENO(1,2,3-CD)PYRENE	0.645	0.781	0.698	0.469	0.788	0.676	19.2
C785	DIBENZ(A,H)ANTHRACENE	0.727	0.708	0.734	0.663	0.652	0.697	5.3
C790	BENZO(G,H,I)PERYLENE	0.834	0.822	0.751	0.697	0.693	0.759	8.7

100090

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Instrument ID: W Calibration date: 05/05/92 Time: 1121

Lab File ID: W5621 Init. Calib. Date(s): 04/30/92 04/30/92

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND		$\overline{RRF}$	RRF50	%D	
Phenol	*	1.660	1.754	-5.7	*
bis(2-Chloroethyl)ether		1.623	1.617	0.4	
2-Chlorophenol		1.407	1.415	-0.6	
1,3-Dichlorobenzene		1.532	1.461	4.6	
1,4-Dichlorobenzene	*	1.629	1.642	-0.8	*
Benzyl alcohol		0.832	0.806	3.1	
1,2-Dichlorobenzene		1.448	1.425	1.6	
2-Methylphenol		1.194	1.191	0.3	
bis(2-Chloroisopropyl)ether		1.720	1.489	13.4	
3- & 4- Methylphenol		1.248	1.259	-0.9	
N-Nitroso-di-n-propylamine	#	1.269	1.227	3.3	#
Hexachloroethane		0.814	0.812	0.2	
Nitrobenzene		0.565	0.516	8.7	
Isophorone		1.058	0.991	6.3	
2-Nitrophenol	*	0.190	0.177	6.8	*
2,4-Dimethylphenol		0.435	0.423	2.8	
Benzoic Acid		0.184	0.149	19.0	
bis(2-Chloroethoxy)methane		0.541	0.545	-0.7	
2,4-Dichlorophenol	*	0.280	0.266	5.0	*
1,2,4-Trichlorobenzene		0.338	0.320	5.3	
Naphthalene		1.105	1.119	-1.3	
4-Chloroaniline		0.276	0.291	-5.4	
Hexachlorobutadiene	*	0.198	0.196	1.0	*
4-Chloro-3-methylphenol	*	0.358	0.343	4.2	*
2-Methylnaphthalene		0.660	0.668	-1.2	
Hexachlorocyclopentadiene	#	0.370	0.266	28.1	#
2,4,6-Trichlorophenol	*	0.376	0.366	2.7	*
2,4,5-Trichlorophenol		0.403	0.379	6.0	
2-Chloronaphthalene		1.313	1.299	1.1	
2-Nitroaniline		0.567	0.477	15.9	
Dimethylphthalate		1.526	1.486	2.6	
Acenaphthylene		2.125	2.190	-3.1	
2,6-Dinitrotoluene		0.334	0.300	10.2	
3-Nitroaniline		0.209	0.157	24.9	
Acenaphthene	*	1.373	1.439	-4.8	*
2,4-Dinitrophenol	#	0.165	0.122	26.1	#
4-Nitrophenol	#	0.329	0.287	12.8	#

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: VERSAR INC. Contract: _____

Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Instrument ID: W Calibration date: 05/05/92 Time: 1121

Lab File ID: W5621 Init. Calib. Date(s): 04/30/92 04/30/92

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	$\overline{RRF}$	RRF50	%D
Dibenzofuran	1.839	1.867	-1.5
2,4-Dinitrotoluene	0.490	0.431	12.0
Diethylphthalate	1.849	1.817	1.7
4-Chlorophenyl-phenylether	0.652	0.632	3.1
Fluorene	1.326	1.376	-3.8
4-Nitroaniline	0.203	0.148	27.1
4,6-Dinitro-2-methylphenol	0.147	0.125	15.0
N-nitrosodiphenylamine (1) *	0.652	0.612	6.1 *
4-Bromophenyl-phenylether	0.241	0.220	8.7
Hexachlorobenzene	0.310	0.294	5.2
Pentachlorophenol *	0.156	0.128	18.0 *
Phenanthrene	1.280	1.198	6.4
Anthracene	1.309	1.306	0.2
Di-n-butylphthalate	1.723	1.745	-1.3
Fluoranthene *	1.122	1.125	-0.3 *
Pyrene	1.586	1.989	-25.4
Butylbenzylphthalate	0.854	0.957	-12.1
3,3'-Dichlorobenzidine	0.131	0.134	-2.3
Benzo(a)anthracene	1.012	1.068	-5.5
Chrysene	1.160	1.225	-5.6
bis(2-Ethylhexyl)phthalate	1.155	1.102	4.6
Di-n-octyl phthalate *	2.173	1.802	17.1 *
Benzo(b)fluoranthene	1.198	1.045	12.8
Benzo(k)fluoranthene	1.166	1.380	-18.4
Benzo(a)pyrene *	1.058	1.002	5.3 *
Indeno(1,2,3-cd)pyrene	0.676	0.621	8.1
Dibenz(a,h)anthracene	0.697	0.588	15.6
Benzo(g,h,i)perylene	0.759	0.731	3.7
Nitrobenzene-d5	0.548	0.494	9.9
2-Fluorobiphenyl	1.440	1.488	-3.3
Terphenyl-d14	0.933	1.156	-23.9
Phenol-d5	2.310	2.339	-1.3
2-Fluorophenol	2.070	2.124	-2.6
2,4,6-Tribromophenol	0.273	0.251	8.1

No TCL [illegible] no action taken

For non-detects (UJ)

(1) Cannot be separated from Diphenylamine

CALIBRATION CHECK - SEMIVOLATILE HSL COMPOUNDS

CASE NO.
CONTRACT NO.
CALIBRATION DATE: 04/30/92
STANDARD FILE: W5621
DATE: 05/05/92 TIME: 11:21
MINIMUM RF FOR SPCC IS .0500
MAXIMUM % D FOR CCC IS 25%

CONTRACT LAB: VERSAR
INSTRUMENT IDENTIFIER: W

	COMPOUND	MEAN RF(I)	RF(O)	% D
C315	PHENOL	1.660	1.754	-5.674
C340	1,4-DICHLOROBENZENE	1.630	1.642	-0.740
C420	2-NITROPHENOL	0.190	0.177	7.051
C440	2,4-DICHLOROPHENOL	0.280	0.266	4.807
C460	HEXACHLOROBUTADIENE	0.198	0.196	1.086
C465	4-CHLORO-3-METHYLPHENOL	0.357	0.343	3.912
C515	2,4,6-TRICHLOROPHENOL	0.376	0.366	2.502
C550	ACENAPHTHENE	1.373	1.439	-4.809
C615	N-NITROSODIPHENYLAMINE	0.652	0.612	6.112
C635	PENTACHLOROPHENOL	0.156	0.128	17.587
C655	FLUORANTHENE	1.122	1.125	-0.251
C760	DI-N-OCTYL PHTHALATE	2.173	1.802	17.079
C775	BENZO(A)PYRENE	1.058	1.002	5.310
C370	N-NITROSO-DI-N-PROPYLAM	1.269	1.227	3.332
C510	HEXACHLOROCYCLOPENTADIE	0.370	0.266	28.159
C555	2,4-DINITROPHENOL	0.165	0.122	26.269
C560	4-NITROPHENOL	0.329	0.287	12.834
C330	2-CHLOROPHENOL	1.407	1.415	-0.582
C325	BIS (2-CHLOROETHYL) ETH	1.623	1.617	0.395
C335	1,3-DICHLOROBENZENE	1.532	1.461	4.611
C350	1,2-DICHLOROBENZENE	1.448	1.425	1.531
C345	BENZYL ALCOHOL	0.832	0.806	3.100
C360	BIS (2-CHLOROISOPROPYL)	1.721	1.489	13.433
C355	2-METHYLPHENOL	1.194	1.191	0.289
C375	HEXACHLOROETHANE	0.814	0.812	0.221
C365	4-METHYLPHENOL	1.248	1.259	-0.896
C410	NITROBENZENE	0.565	0.516	8.740
C415	ISOPHORONE	1.058	0.991	6.345
C425	2,4-DIMETHYLPHENOL	0.435	0.423	2.683
C435	BIS (2-CHLOROETHOXY) ME	0.541	0.545	-0.835
C445	1,2,4-TRICHLOROBENZENE	0.338	0.320	5.483
C450	NAPHTHALENE	1.105	1.119	-1.340
C430	BENZOIC ACID	0.184	0.149	18.765
C455	4-CHLOROANILINE	0.276	0.291	-5.646
C470	2-METHYLNAPHTHALENE	0.660	0.668	-1.296
C520	2,4,5-TRICHLOROPHENOL	0.403	0.379	5.810
C525	2-CHLORONAPHTHALENE	1.313	1.299	1.082
C530	2-NITROANILINE	0.567	0.477	15.903
C540	ACENAPHTHYLENE	2.125	2.190	-3.056
C535	DIMETHYL PHTHALATE	1.526	1.486	2.621
C544	2,6-DINITROTOLUENE	0.334	0.300	10.147
C545	3-NITROANILINE	0.209	0.157	24.695
C565	DIBENZOFURAN	1.839	1.867	-1.557
C570	2,4-DINITROTOLUENE	0.490	0.431	12.162
C590	FLUORENE	1.326	1.376	-3.770
C585	4-CHLOROPHENYL-PHENYLET	0.652	0.632	2.970
C580	DIETHYLPHTHALATE	1.849	1.817	1.721
C595	4-NITROANILINE	0.203	0.148	26.980
C610	4,6-DINITRO-2-METHYLPHE	0.147	0.125	14.879
C625	4-BROMOPHENYL-PHENYLETH	0.241	0.220	8.957
C630	HEXACHLOROBENZENE	0.310	0.294	5.276
C640	PHENANTHRENE	1.280	1.198	6.419
C645	ANTHRACENE	1.309	1.306	0.206
C650	DI-N-BUTYLPHTHALATE	1.723	1.745	-1.259
C715	PYRENE	1.587	1.989	-25.365
C720	BUTYLBENZYLPHTHALATE	0.854	0.957	-12.071
C730	BENZO(A)ANTHRACENE	1.012	1.068	-5.539
C740	CHRYSENE	1.160	1.225	-5.569
C725	3,3'-DICHLOROBENZIDINE	0.131	0.134	-2.163
C741	BIS(2-ETHYLHEXYL)PHTHAL	1.155	1.102	4.635
C765	BENZO(B)FLUORANTHENE	1.198	1.045	12.761
C770	BENZO(K)FLUORANTHENE	1.166	1.380	-18.350
C780	INDENO(1,2,3-CD)PYRENE	0.676	0.621	8.068
C785	DIBENZ(A,H)ANTHRACENE	0.697	0.588	15.591
C790	BENZO(G,H,I)PERYLENE	0.759	0.731	3.734

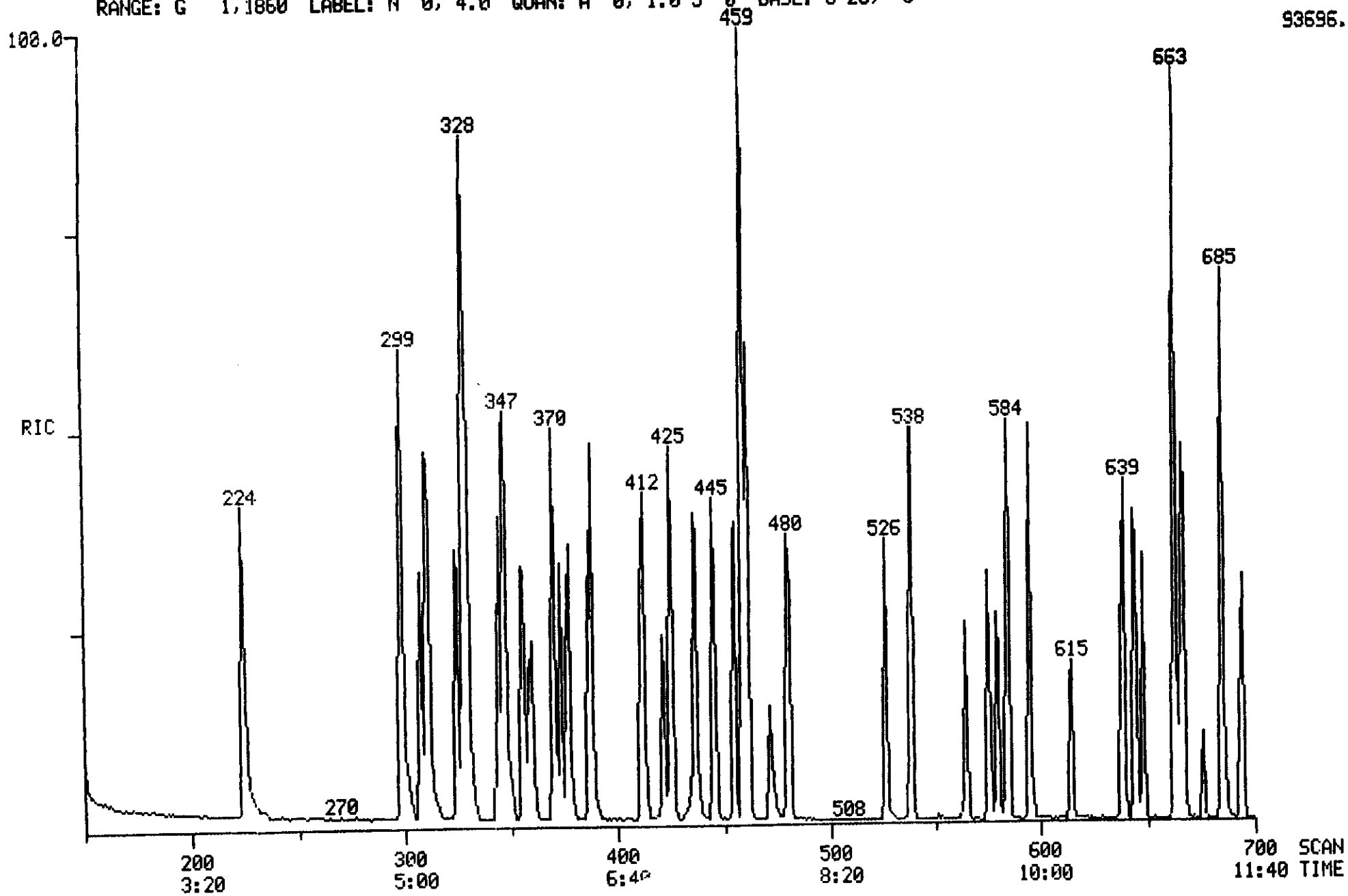
OK/ 2/8, 8270

100101

RIC
04/30/92 14:32:00
SAMPLE: CLP,STAND,SSTD-020,,,30018,B,IC-020,1UL,
CONDS.: CAP/.32,W5573,W5568
RANGE: G 1,1860 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

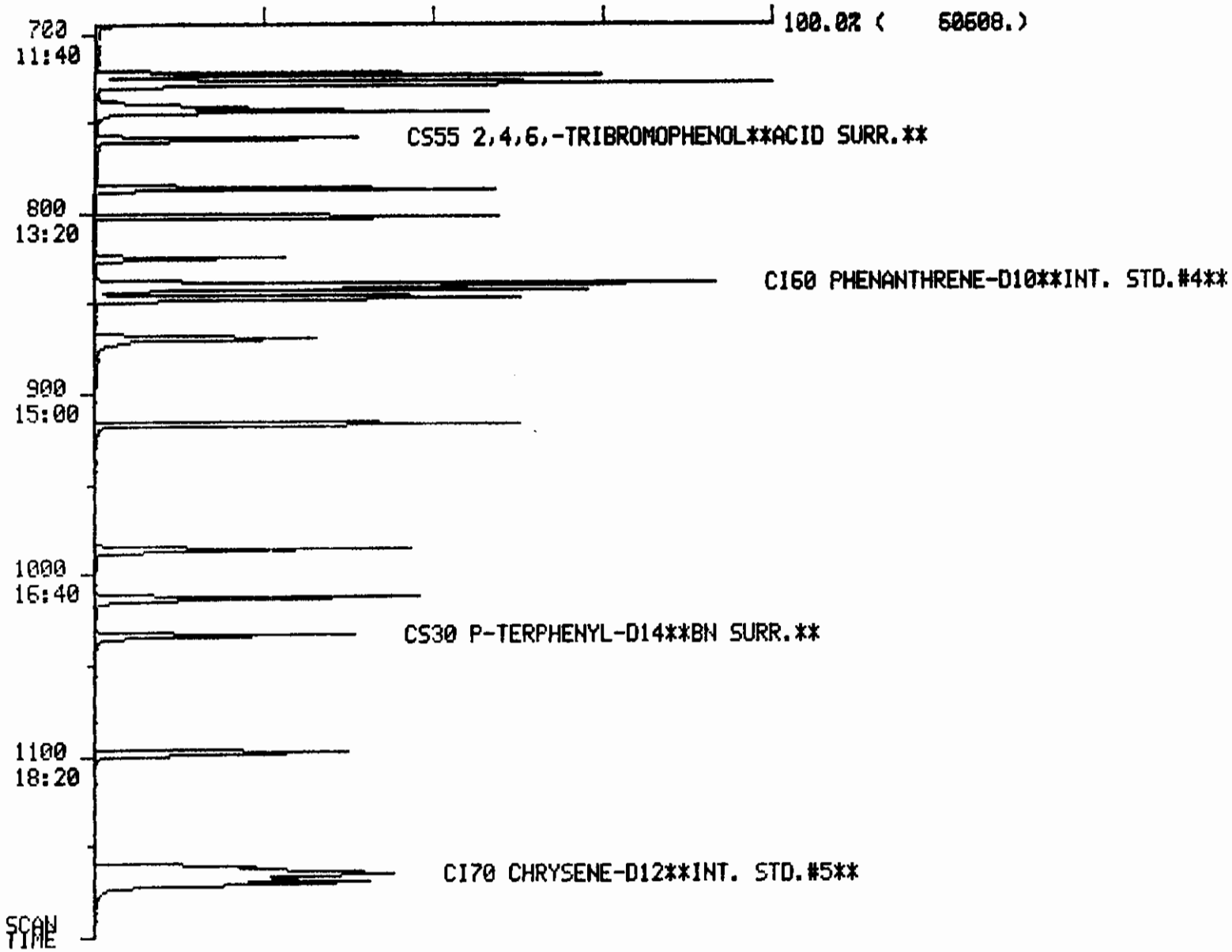
DATA: W5573 #1
CALI: W5573 #2

SCANS 150 TO 700



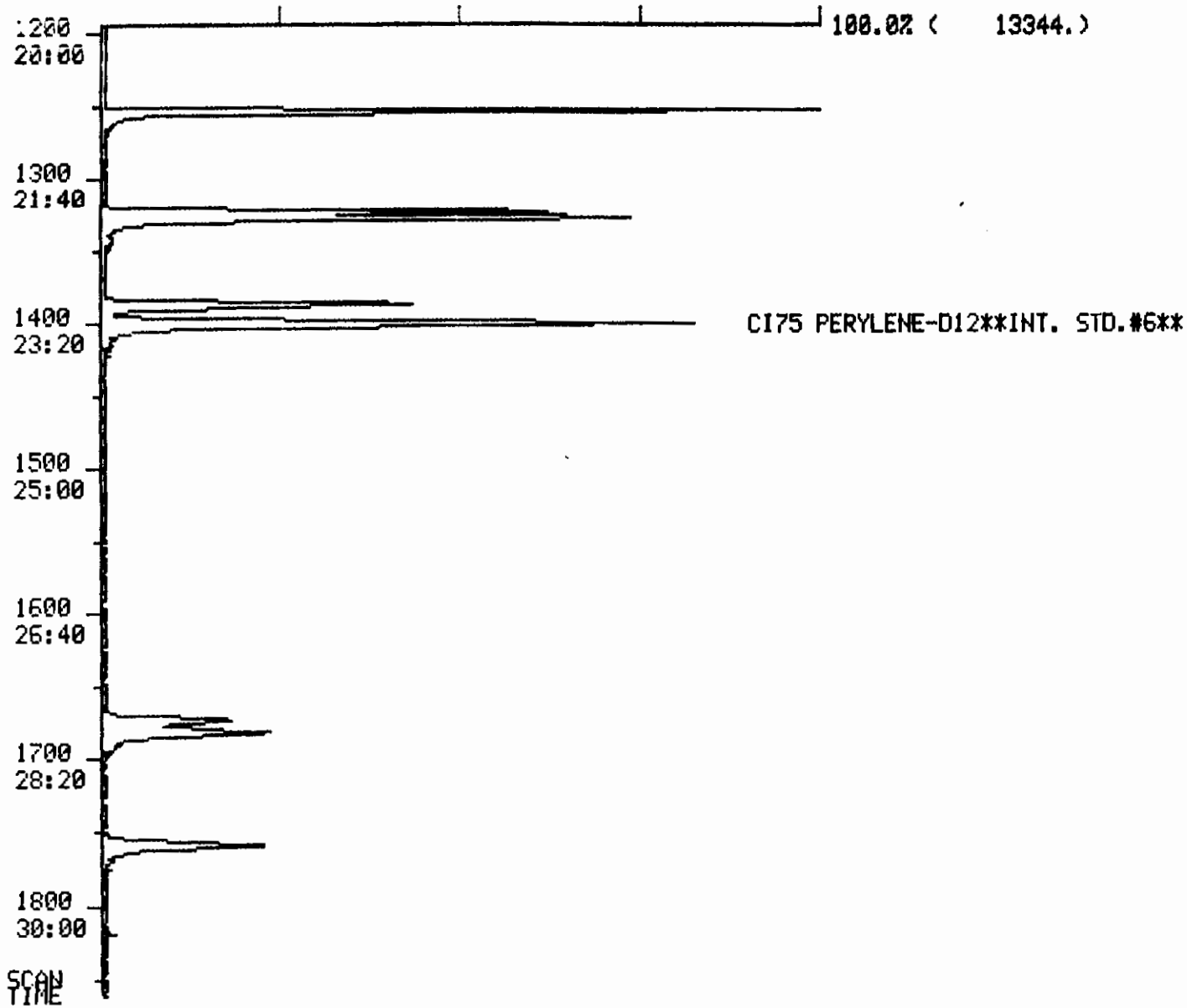
93696.

DATA FROM FILE: W5573 SCANS 695 TO 1200 ACQUIRED: 04/30/92 14:32:00
CALI: W5573 #2
SAMPLE: CLP,STAND,SSTD-020,,,30018,B,IC-020,1UL,
CONDS.: CAP/.32,W5573,W5568



100100

DATA FROM FILE: W5573 SCANS 1195 TO 1860 ACQUIRED: 04/30/92 14:32:00
CALI: W5573 #2
SAMPLE: CLP,STAND,SSTD-020,,,30018,B,IC-020,1UL,
CONDS.: CAP/.32,W5573,W5568



100101

Quantitation Report File: W5573

Data: W5573.TI
04/30/92 14:32:00
Sample: CLP,STAND,SSTD-020,,,30018,B,IC-020,1UL,
Conds.: CAP/.32,W5573,W5568
Formula: Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	328	5:28	1	1.000	A BB	17299.	40.000 NG/UL	2.27
2	136	459	7:39	2	1.000	A BB	59217.	40.000 NG/UL	2.27
3	164	663	11:03	3	1.000	A BB	26233.	40.000 NG/UL	2.27
4	188	838	13:58	4	1.000	A BB	35161.	40.000 NG/UL	2.27
5	240	1164	19:24	5	1.000	A BB	25759.	40.000 NG/UL	2.27
6	264	1400	23:20	6	1.000	A BB	20199.	40.000 NG/UL	2.27
7	112	224	3:44	1	0.683	A BB	20107.	20.000 NG*A1	1.14
8	99	298	4:58	1	0.909	A BB	21910.	20.000 NG*A2	1.14
9	82	386	6:26	2	0.841	A BB	16653.	20.000 NG*B1	1.14
10	172	584	9:44	3	0.881	A BB	20502.	20.000 NG*B2	1.14
11	330	758	12:38	3	1.143	A BB	3277.	20.000 NG*A3	1.14
12	244	1033	17:13	5	0.887	A BB	12972.	20.000 NG*B3	1.14
13	132	310	5:10	1	0.945	A BB	15797.	20.000 NG*A4	1.14
14	152	346	5:46	1	1.055	A BB	9112.	20.000 NG*B4	1.14
15	128	311	5:11	1	0.948	A BB	13400.	20.000 NG.	1.14
16	94	299	4:59	1	0.912	A BB	15735.	20.000 NG.	1.14
17	93	308	5:08	1	0.939	A BB	15623.	20.000 NG	1.14
18	146	324	5:24	1	0.988	A BV	14718.	20.000 NG	1.14
19	146	329	5:29	1	1.003	A VB	15392.	20.000 NG.	1.14
20	146	347	5:47	1	1.058	A BB	14113.	20.000 NG	1.14
21	108	344	5:44	1	1.049	A BB	7531.	20.000 NG	1.14
22	45	359	5:59	1	1.095	A BB	15685.	20.000 NG	1.14
23	108	355	5:55	1	1.082	A BB	11141.	20.000 NG	1.14
24	117	377	6:17	1	1.149	A BB	7637.	20.000 NG	1.14
25	108	370	6:10	1	1.128	A BB	11346.	20.000 NG	1.14
26	70	373	6:13	1	1.137	A BB	11583.	20.000 NG.	1.14
27	77	388	6:28	2	0.845	A BB	18153.	20.000 NG	1.14
28	82	412	6:52	2	0.898	A BB	33292.	20.000 NG	1.14
29	139	421	7:01	2	0.917	A BB	5977.	20.000 NG	1.14
30	107	425	7:05	2	0.926	A BB	13624.	20.000 NG	1.14
31	93	436	7:16	2	0.950	A BB	17026.	20.000 NG	1.14
32	162	445	7:25	2	0.969	A BB	8450.	20.000 NG	1.14
33	180	454	7:34	2	0.989	A BB	10792.	20.000 NG.	1.14
34	128	461	7:41	2	1.004	A BB	35822.	20.000 NG	1.14
35	122	437	7:17	2	0.952	A BB	5305.	20.000 NG	1.14
36	127	472	7:52	2	1.028	A BB	7141.	20.000 NG	1.14
37	225	480	8:00	2	1.046	A BB	6057.	20.000 NG	1.14
38	107	526	8:46	2	1.146	A BB	10793.	20.000 NG.	1.14
39	142	538	8:58	2	1.172	A BB	21125.	20.000 NG	1.14
40	237	564	9:24	3	0.851	A BB	4395.	20.000 NG	1.14
41	196	575	9:35	3	0.867	A BV	4968.	20.000 NG	1.14
42	196	579	9:39	3	0.873	A VB	5165.	20.000 NG	1.14
43	162	595	9:55	3	0.897	A BB	18414.	20.000 NG	1.14
44	65	615	10:15	3	0.928	A BB	6897.	20.000 NG	1.14
45	152	644	10:44	3	0.971	A BB	28543.	20.000 NG	1.14
46	163	639	10:39	3	0.964	A BB	20765.	20.000 NG	1.14
47	165	648	10:48	3	0.977	A BB	4153.	20.000 NG	1.14
48	153	666	11:06	3	1.005	A BB	19259.	20.000 NG.	1.14
49	138	664	11:04	3	1.002	A BB	2139.	20.000 NG	1.14
50	184	675	11:15	3	1.018	A BB	1501.	20.000 NG	1.14

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:28	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:39	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:03	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:58	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:24	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:20	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:44	1.00	0.683	1.00	20.00	20.00	2.325	2.325	1.00
8	4:58	1.00	0.909	1.00	20.00	20.00	2.533	2.533	1.00
9	6:26	1.00	0.841	1.00	20.00	20.00	0.562	0.562	1.00
10	9:44	1.00	0.881	1.00	20.00	20.00	1.563	1.563	1.00
11	12:38	1.00	1.143	1.00	20.00	20.00	0.250	0.250	1.00
12	17:13	1.00	0.887	1.00	20.00	20.00	1.007	1.007	1.00
13	5:10	1.00	0.945	1.00	20.00	20.00	1.826	1.826	1.00
14	5:46	1.00	1.055	1.00	20.00	20.00	1.053	1.053	1.00
15	5:11	1.00	0.948	1.00	20.00	20.00	1.549	1.549	1.00
16	4:59	1.00	0.912	1.00	20.00	20.00	1.819	1.819	1.00
17	5:08	1.00	0.939	1.00	20.00	20.00	1.806	1.806	1.00
18	5:24	1.00	0.988	1.00	20.00	20.00	1.702	1.702	1.00
19	5:29	1.00	1.003	1.00	20.00	20.00	1.780	1.780	1.00
20	5:47	1.00	1.058	1.00	20.00	20.00	1.632	1.632	1.00
21	5:44	1.00	1.049	1.00	20.00	20.00	0.871	0.871	1.00
22	5:59	1.00	1.095	1.00	20.00	20.00	1.813	1.813	1.00
23	5:55	1.00	1.082	1.00	20.00	20.00	1.288	1.288	1.00
24	6:17	1.00	1.149	1.00	20.00	20.00	0.883	0.883	1.00
25	6:10	1.00	1.128	1.00	20.00	20.00	1.312	1.312	1.00
26	6:13	1.00	1.137	1.00	20.00	20.00	1.339	1.339	1.00
27	6:28	1.00	0.845	1.00	20.00	20.00	0.613	0.613	1.00
28	6:52	1.00	0.898	1.00	20.00	20.00	1.124	1.124	1.00
29	7:01	1.00	0.917	1.00	20.00	20.00	0.202	0.202	1.00
30	7:05	1.00	0.926	1.00	20.00	20.00	0.460	0.460	1.00
31	7:16	1.00	0.950	1.00	20.00	20.00	0.575	0.575	1.00
32	7:25	1.00	0.969	1.00	20.00	20.00	0.285	0.285	1.00
33	7:34	1.00	0.989	1.00	20.00	20.00	0.364	0.364	1.00
34	7:41	1.00	1.004	1.00	20.00	20.00	1.210	1.210	1.00
35	7:17	1.00	0.952	1.00	20.00	20.00	0.179	0.179	1.00
36	7:52	1.00	1.028	1.00	20.00	20.00	0.241	0.241	1.00
37	8:00	1.00	1.046	1.00	20.00	20.00	0.205	0.205	1.00
38	8:46	1.00	1.146	1.00	20.00	20.00	0.365	0.365	1.00
39	8:58	1.00	1.172	1.00	20.00	20.00	0.713	0.713	1.00
40	9:24	1.00	0.851	1.00	20.00	20.00	0.335	0.335	1.00
41	9:35	1.00	0.867	1.00	20.00	20.00	0.379	0.379	1.00
42	9:39	1.00	0.873	1.00	20.00	20.00	0.394	0.394	1.00
43	9:55	1.00	0.897	1.00	20.00	20.00	1.404	1.404	1.00
44	10:15	1.00	0.928	1.00	20.00	20.00	0.526	0.526	1.00
45	10:44	1.00	0.971	1.00	20.00	20.00	2.176	2.176	1.00
46	10:39	1.00	0.964	1.00	20.00	20.00	1.583	1.583	1.00
47	10:48	1.00	0.977	1.00	20.00	20.00	0.317	0.317	1.00
48	11:06	1.00	1.005	1.00	20.00	20.00	1.468	1.468	1.00
49	11:04	1.00	1.002	1.00	20.00	20.00	0.163	0.163	1.00
50	11:15	1.00	1.018	1.00	20.00	20.00	0.114	0.114	1.00

Quantitation Report File: W5573

Data: W5573.TI
04/30/92 14:32:00
Sample: CLP,STAND,SSTD-020,,,30018,B,IC-020,1UL,
Conds.: CAP/.32,W5573,W5568
Formula: Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

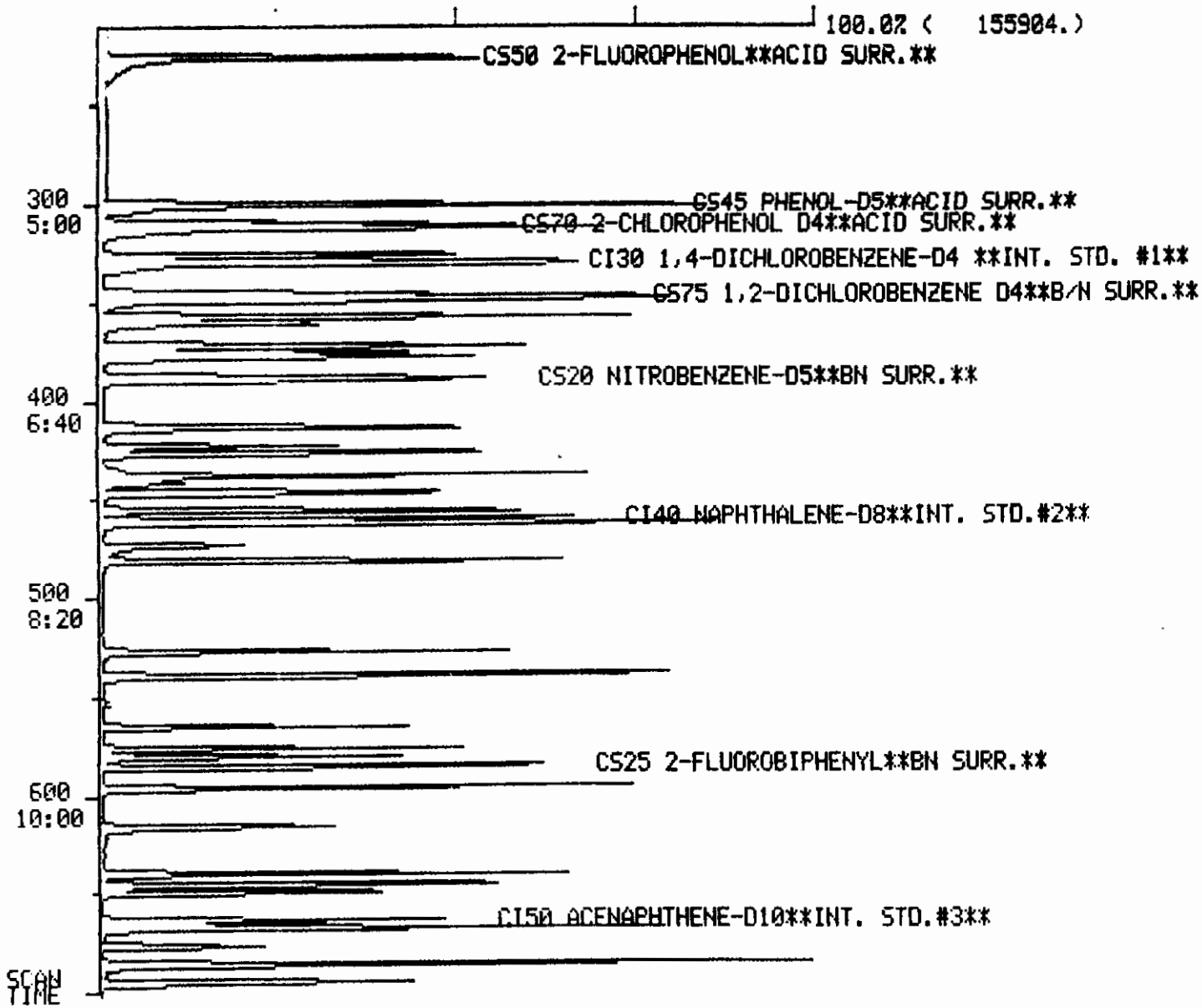
No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2' -OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	685	11:25	3	1.033	A BB	26586.	20.000 NG	1.14
52	109	684	11:24	3	1.032	A BB	3720.	20.000 NG.	1.14
53	165	694	11:34	3	1.047	A BB	5911.	20.000 NG.	1.14
54	166	726	12:06	3	1.095	A BB	18645.	20.000 NG	1.14
55	204	727	12:07	3	1.097	A BB	9123.	20.000 NG	1.14
56	149	722	12:02	3	1.089	A BB	24746.	20.000 NG	1.14
57	138	740	12:20	3	1.116	A BB	2195.	20.000 NG	1.14
58	198	740	12:20	4	0.883	A BB	2212.	20.000 NG	1.14
59	169	743	12:23	4	0.887	A BB	12918.	20.000 NG	1.14
60	248	785	13:05	4	0.937	A BB	4458.	20.000 NG	1.14
61	284	801	13:21	4	0.956	A BB	6022.	20.000 NG	1.14

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	266	824	13:44	4	0.983	A BB	2613.	20.000 NG.	1.14
63	178	841	14:01	4	1.004	A BV	25339.	20.000 NG	1.14
64	178	846	14:06	4	1.010	A VB	25487.	20.000 NG	1.14
65	149	916	15:16	4	1.093	A BB	32124.	20.000 NG	1.14
66	202	985	16:25	4	1.175	A BB	21768.	20.000 NG	1.14
67	202	1012	16:52	5	0.869	A BB	22635.	20.000 NG.	1.14
68	149	1097	18:17	5	0.942	A BB	10187.	20.000 NG	1.14
69	228	1160	19:20	5	0.997	A BV	13680.	20.000 NG	1.14
70	228	1167	19:27	5	1.003	A VB	17605.	20.000 NG	1.14
71	252	1162	19:22	5	0.998	A BB	1242.	20.000 NG	1.14
72	149	1169	19:29	5	1.004	A BB	13894.	20.000 NG	1.14
73	149	1254	20:54	6	0.896	A BB	18689.	20.000 NG	1.14
74	252	1323	22:03	6	0.945	A BV	11732.	20.000 NG	1.14
75	252	1327	22:07	6	0.948	A VB	13773.	20.000 NG	1.14
76	252	1386	23:06	6	0.990	A BV	10522.	20.000 NG	1.14
77	276	1672	27:52	6	1.194	A BV	6511.	20.000 NG	1.14
78	278	1680	28:00	6	1.200	A BB	7339.	20.000 NG	1.14
79	276	1758	29:18	6	1.256	A BB	8418.	20.000 NG	1.14
80	74	149	2:29	1	0.454	A BB	10403.	20.000 NG	1.14
81	167	868	14:28	4	1.036	A BB	18349.	20.000 NG	1.14
82	45	359	5:59	1	1.095	A BB	15685.	20.000 NG	1.14

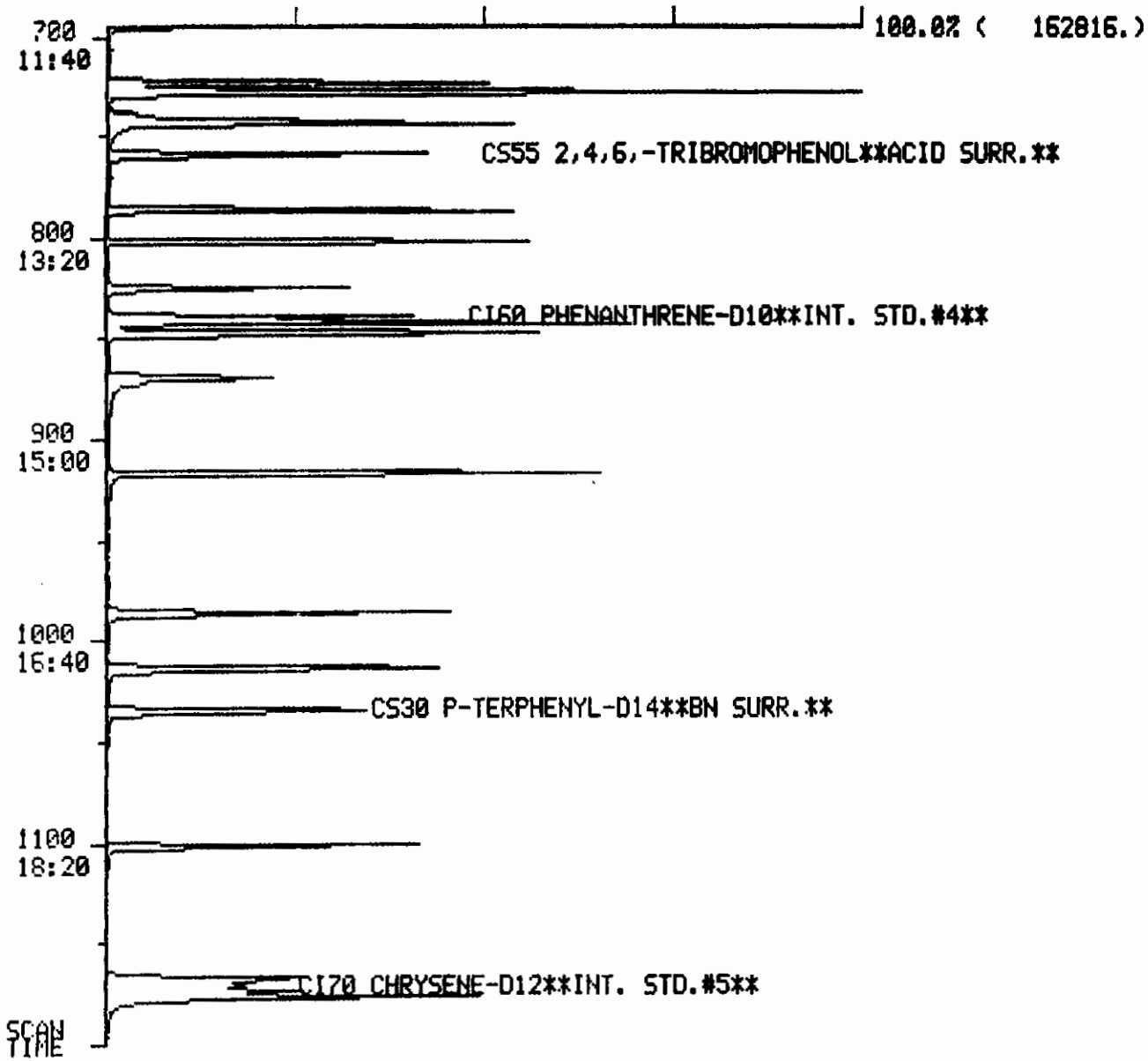
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:25	1.00	1.033	1.00	20.00	20.00	2.027	2.027	1.00
52	11:24	1.00	1.032	1.00	20.00	20.00	0.284	0.284	1.00
53	11:34	1.00	1.047	1.00	20.00	20.00	0.451	0.451	1.00
54	12:06	1.00	1.095	1.00	20.00	20.00	1.421	1.421	1.00
55	12:07	1.00	1.097	1.00	20.00	20.00	0.696	0.696	1.00
56	12:02	1.00	1.089	1.00	20.00	20.00	1.887	1.887	1.00
57	12:20	1.00	1.116	1.00	20.00	20.00	0.167	0.167	1.00
58	12:20	1.00	0.883	1.00	20.00	20.00	0.126	0.126	1.00
59	12:23	1.00	0.887	1.00	20.00	20.00	0.735	0.735	1.00
60	13:05	1.00	0.937	1.00	20.00	20.00	0.254	0.254	1.00
61	13:21	1.00	0.956	1.00	20.00	20.00	0.343	0.343	1.00
62	13:44	1.00	0.983	1.00	20.00	20.00	0.149	0.149	1.00
63	14:01	1.00	1.004	1.00	20.00	20.00	1.441	1.441	1.00
64	14:06	1.00	1.010	1.00	20.00	20.00	1.450	1.450	1.00
65	15:16	1.00	1.093	1.00	20.00	20.00	1.827	1.827	1.00
66	16:25	1.00	1.175	1.00	20.00	20.00	1.238	1.238	1.00
67	16:52	1.00	0.869	1.00	20.00	20.00	1.757	1.757	1.00
68	18:17	1.00	0.942	1.00	20.00	20.00	0.791	0.791	1.00
69	19:20	1.00	0.997	1.00	20.00	20.00	1.062	1.062	1.00
70	19:27	1.00	1.003	1.00	20.00	20.00	1.367	1.367	1.00
71	19:22	1.00	0.998	1.00	20.00	20.00	0.096	0.096	1.00
72	19:29	1.00	1.004	1.00	20.00	20.00	1.079	1.079	1.00
73	20:54	1.00	0.896	1.00	20.00	20.00	1.850	1.850	1.00
74	22:03	1.00	0.945	1.00	20.00	20.00	1.162	1.162	1.00
75	22:07	1.00	0.948	1.00	20.00	20.00	1.364	1.364	1.00
76	23:06	1.00	0.990	1.00	20.00	20.00	1.042	1.042	1.00
77	27:52	1.00	1.194	1.00	20.00	20.00	0.645	0.645	1.00
78	28:00	1.00	1.200	1.00	20.00	20.00	0.727	0.727	1.00
79	29:18	1.00	1.256	1.00	20.00	20.00	0.834	0.834	1.00
80	2:29	1.00	0.454	1.00	20.00	20.00	1.203	1.203	1.00
81	14:28	1.00	1.036	1.00	20.00	20.00	1.044	1.044	1.00
82	5:59	1.00	1.095	1.00	20.00	20.00	1.813	1.813	1.00

DATA FROM FILE: W5569 SCANS 210 TO 700 ACQUIRED: 04/30/92 10:24:00
CALI: W5569 #2
SAMPLE: CLP,STAND,,SSTD-50,,,30017,B,CC-050,1UL,
CONDS.: CAP/.32,W5569,W5568



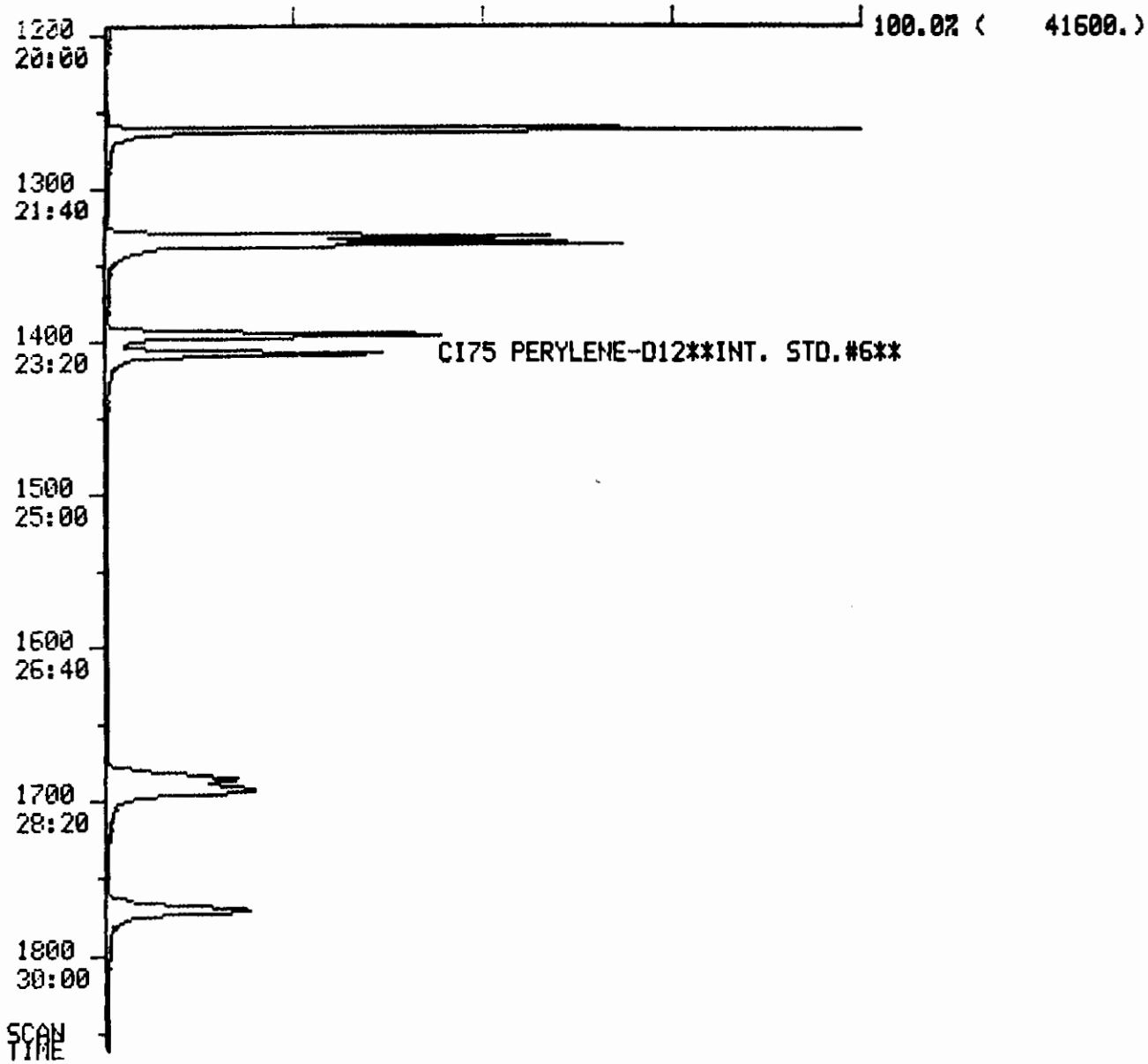
100110

DATA FROM FILE: W5569 SCANS 695 TO 1200 ACQUIRED: 04/30/92 10:24:00
CALI: W5569 #2
SAMPLE: CLP,STAND,,SSTD-50,,,30017,B,CC-050,1UL,
CONDS.: CAP/.32,W5569,W5568



100111

DATA FROM FILE: W5569 SCANS 1195 TO 1860 ACQUIRED: 04/30/92 10:24:00
CALI: W5569 #2
SAMPLE: CLP,STAND,,SSTD-50,,,30017,B,CC-050,1UL,
CONDS.: CAP/.32,W5569,W5568



100112

Quantitation Report File: W5569

Data: W5569.TI
4/30/92 10:24:00
Sample: CLP,STAND,,SSTD-50,,,30017,B,CC-050,1UL,
Conds.: CAP/.32,W5569,W5568
Formula: Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

W5569.

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	328	5:28	1	1.000	A BB	19187.	40.000 NG/UL	0.99
2	136	459	7:39	2	1.000	A BB	65412.	40.000 NG/UL	0.99
3	164	663	11:03	3	1.000	A BB	28179.	40.000 NG/UL	0.99
4	188	838	13:58	4	1.000	A BB	41085.	40.000 NG/UL	0.99
5	240	1170	19:30	5	1.000	A BB	28025.	40.000 NG/UL	0.99
6	264	1407	23:27	6	1.000	A BB	21110.	40.000 NG/UL	0.99
7	112	224	3:44	1	0.683	A BB	49348.	50.000 NG*A1	1.24
8	99	299	4:59	1	0.912	A BB	55491.	50.000 NG*A2	1.24
9	82	387	6:27	2	0.843	A BB	44277.	50.000 NG*B1	1.24
10	172	584	9:44	3	0.881	A BB	50983.	50.000 NG*B2	1.24
11	330	758	12:38	3	1.143	A BB	9903.	50.000 NG*A3	1.24
12	244	1033	17:13	5	0.883	A BV	35269.	50.000 NG*B3	1.24
13	132	310	5:10	1	0.945	A BB	39315.	50.000 NG*A4	1.24
14	152	346	5:46	1	1.055	A BB	22655.	50.000 NG*B4	1.24
15	128	312	5:12	1	0.951	A BB	33816.	50.000 NG.	1.24
16	94	300	5:00	1	0.915	A BB	39616.	50.000 NG.	1.24
17	93	308	5:08	1	0.939	A BB	38300.	50.000 NG	1.24
18	146	324	5:24	1	0.988	A BV	37020.	50.000 NG	1.24
19	146	329	5:29	1	1.003	A VB	38286.	50.000 NG.	1.24
20	146	347	5:47	1	1.058	A BB	33918.	50.000 NG	1.24
21	108	344	5:44	1	1.049	A BB	19499.	50.000 NG	1.24
22	45	359	5:59	1	1.095	A BB	39331.	50.000 NG	1.24
23	108	356	5:56	1	1.085	A BB	29144.	50.000 NG	1.24
24	117	377	6:17	1	1.149	A BB	19897.	50.000 NG	1.24
25	108	371	6:11	1	1.131	A BB	29520.	50.000 NG	1.24
26	70	374	6:14	1	1.140	A BB	29506.	50.000 NG.	1.24
27	77	388	6:28	2	0.845	A BB	45431.	50.000 NG	1.24
28	82	413	6:53	2	0.900	A BB	84027.	50.000 NG	1.24
29	139	421	7:01	2	0.917	A BB	15655.	50.000 NG	1.24
30	107	425	7:05	2	0.926	A BB	34692.	50.000 NG	1.24
31	93	437	7:17	2	0.952	A BB	45371.	50.000 NG	1.24
32	162	445	7:25	2	0.969	A BB	22626.	50.000 NG	1.24
33	180	454	7:34	2	0.989	A BB	27762.	50.000 NG.	1.24
34	128	461	7:41	2	1.004	A BB	91323.	50.000 NG	1.24
35	122	441	7:21	2	0.961	A BB	14644.	50.000 NG	1.24
36	127	472	7:52	2	1.028	A BB	19455.	50.000 NG	1.24
37	225	480	8:00	2	1.046	A BB	16745.	50.000 NG	1.24
38	107	526	8:46	2	1.146	A BB	28377.	50.000 NG.	1.24
39	142	538	8:58	2	1.172	A BB	55171.	50.000 NG	1.24
40	237	564	9:24	3	0.851	A BB	12982.	50.000 NG	1.24
41	196	575	9:35	3	0.867	A BV	12985.	50.000 NG	1.24
42	196	579	9:39	3	0.873	A VB	14074.	50.000 NG	1.24
43	162	595	9:55	3	0.897	A BB	45151.	50.000 NG	1.24
44	65	615	10:15	3	0.928	A BB	18881.	50.000 NG	1.24
45	152	644	10:44	3	0.971	A BB	74695.	50.000 NG	1.24
46	163	639	10:39	3	0.964	A BB	52527.	50.000 NG	1.24
47	165	648	10:48	3	0.977	A BB	11324.	50.000 NG	1.24
48	153	667	11:07	3	1.006	A BB	48775.	50.000 NG.	1.24
49	138	665	11:05	3	1.003	A BB	6192.	50.000 NG	1.24
50	184	676	11:16	3	1.020	A BB	5846.	50.000 NG	1.24

W22-1

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:28	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:39	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:03	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:58	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:27	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:44	1.00	0.683	1.00	50.00	50.00	2.058	2.058	1.00
8	4:59	1.00	0.912	1.00	50.00	50.00	2.314	2.314	1.00
9	6:27	1.00	0.843	1.00	50.00	50.00	0.542	0.542	1.00
10	9:44	1.00	0.881	1.00	50.00	50.00	1.447	1.447	1.00
11	12:38	1.00	1.143	1.00	50.00	50.00	0.281	0.281	1.00
12	17:13	1.00	0.883	1.00	50.00	50.00	1.007	1.007	1.00
13	5:10	1.00	0.945	1.00	50.00	50.00	1.639	1.639	1.00
14	5:46	1.00	1.055	1.00	50.00	50.00	0.945	0.945	1.00
15	5:12	1.00	0.951	1.00	50.00	50.00	1.410	1.410	1.00
16	5:00	1.00	0.915	1.00	50.00	50.00	1.652	1.652	1.00
17	5:08	1.00	0.939	1.00	50.00	50.00	1.597	1.597	1.00
18	5:24	1.00	0.988	1.00	50.00	50.00	1.544	1.544	1.00
19	5:29	1.00	1.003	1.00	50.00	50.00	1.596	1.596	1.00
20	5:47	1.00	1.058	1.00	50.00	50.00	1.414	1.414	1.00
21	5:44	1.00	1.049	1.00	50.00	50.00	0.813	0.813	1.00
22	5:59	1.00	1.095	1.00	50.00	50.00	1.640	1.640	1.00
23	5:56	1.00	1.085	1.00	50.00	50.00	1.215	1.215	1.00
24	6:17	1.00	1.149	1.00	50.00	50.00	0.830	0.830	1.00
25	6:11	1.00	1.131	1.00	50.00	50.00	1.231	1.231	1.00
26	6:14	1.00	1.140	1.00	50.00	50.00	1.230	1.230	1.00
27	6:28	1.00	0.845	1.00	50.00	50.00	0.556	0.556	1.00
28	6:53	1.00	0.900	1.00	50.00	50.00	1.028	1.028	1.00
29	7:01	1.00	0.917	1.00	50.00	50.00	0.191	0.191	1.00
30	7:05	1.00	0.926	1.00	50.00	50.00	0.424	0.424	1.00
31	7:17	1.00	0.952	1.00	50.00	50.00	0.555	0.555	1.00
32	7:25	1.00	0.969	1.00	50.00	50.00	0.277	0.277	1.00
33	7:34	1.00	0.989	1.00	50.00	50.00	0.340	0.340	1.00
34	7:41	1.00	1.004	1.00	50.00	50.00	1.117	1.117	1.00
35	7:21	1.00	0.961	1.00	50.00	50.00	0.179	0.179	1.00
36	7:52	1.00	1.028	1.00	50.00	50.00	0.238	0.238	1.00
37	8:00	1.00	1.046	1.00	50.00	50.00	0.205	0.205	1.00
38	8:46	1.00	1.146	1.00	50.00	50.00	0.347	0.347	1.00
39	8:58	1.00	1.172	1.00	50.00	50.00	0.675	0.675	1.00
40	9:24	1.00	0.851	1.00	50.00	50.00	0.369	0.369	1.00
41	9:35	1.00	0.867	1.00	50.00	50.00	0.369	0.369	1.00
42	9:39	1.00	0.873	1.00	50.00	50.00	0.400	0.400	1.00
43	9:55	1.00	0.897	1.00	50.00	50.00	1.282	1.282	1.00
44	10:15	1.00	0.928	1.00	50.00	50.00	0.536	0.536	1.00
45	10:44	1.00	0.971	1.00	50.00	50.00	2.121	2.121	1.00
46	10:39	1.00	0.964	1.00	50.00	50.00	1.491	1.491	1.00
47	10:48	1.00	0.977	1.00	50.00	50.00	0.321	0.321	1.00
48	11:07	1.00	1.006	1.00	50.00	50.00	1.385	1.385	1.00
49	11:05	1.00	1.003	1.00	50.00	50.00	0.176	0.176	1.00
50	11:16	1.00	1.020	1.00	50.00	50.00	0.166	0.166	1.00

Quantitation Report File: W5569

Data: W5569.TI
04/30/92 10:24:00
Sample: CLP,STAND,,SSTD-50,,,30017,B,CC-050,1UL,
Conds.: CAP/.32,W5569,W5568
Formula: Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2' -OXYBIS(1-CHLOROPROPANE)

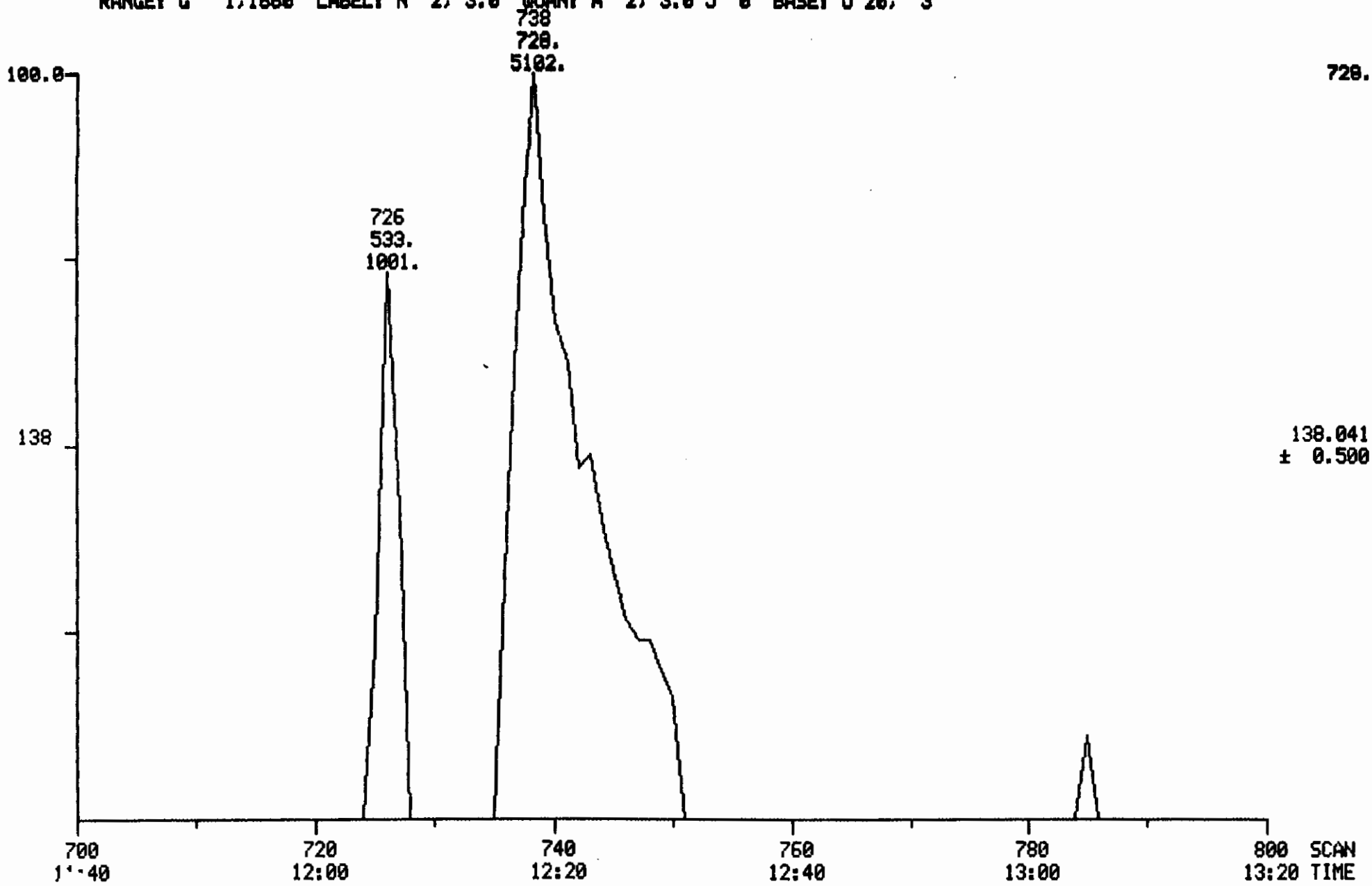
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	685	11:25	3	1.033	A BB	64073.	50.000 NG	1.24
52	109	685	11:25	3	1.033	A BB	10817.	50.000 NG.	1.24
53	165	694	11:34	3	1.047	A BB	16628.	50.000 NG.	1.24
54	166	726	12:06	3	1.095	A BB	47051.	50.000 NG	1.24
55	204	727	12:07	3	1.097	A BB	23314.	50.000 NG	1.24
56	149	722	12:02	3	1.089	A BB	63408.	50.000 NG	1.24
57	138	738	12:18	3	1.113	A BB	5102.	50.000 NG	1.24
58	198	741	12:21	4	0.884	A BB	7162.	50.000 NG	1.24
59	169	743	12:23	4	0.887	A BB	31635.	50.000 NG	1.24
60	248	784	13:04	4	0.936	A BB	11984.	50.000 NG	1.24
61	284	801	13:21	4	0.956	A BB	16313.	50.000 NG	1.24

W2269

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	266	824	13:44	4	0.983	A BB	7872.	50.000 NG.	1.24
63	178	841	14:01	4	1.004	A BV	63809.	50.000 NG	1.24
64	178	846	14:06	4	1.010	A VV	66371.	50.000 NG	1.24
65	149	916	15:16	4	1.093	A BB	87689.	50.000 NG	1.24
66	202	985	16:25	4	1.175	A BB	58928.	50.000 NG	1.24
67	202	1013	16:53	5	0.866	A BB	58788.	50.000 NG.	1.24
68	149	1100	18:20	5	0.940	A BB	30063.	50.000 NG	1.24
69	228	1166	19:26	5	0.997	A BV	35153.	50.000 NG	1.24
70	228	1173	19:33	5	1.003	A VB	40290.	50.000 NG	1.24
71	252	1168	19:28	5	0.998	A BB	4028.	50.000 NG	1.24
72	149	1176	19:36	5	1.005	A BB	41820.	50.000 NG	1.24
73	149	1262	21:02	6	0.897	A BB	58660.	50.000 NG	1.24
74	252	1331	22:11	6	0.946	A BV	30948.	50.000 NG	1.24
75	252	1336	22:16	6	0.950	A VB	34062.	50.000 NG	1.24
76	252	1395	23:15	6	0.991	A BB	29912.	50.000 NG	1.24
77	276	1684	28:04	6	1.197	A BV	20607.	50.000 NG	1.24
78	278	1692	28:12	6	1.203	A BB	18688.	50.000 NG	1.24
79	276	1770	29:30	6	1.258	A BB	21683.	50.000 NG	1.24
80	74	149	2:29	1	0.454	A BB	22961.	50.000 NG	1.24
81	167	868	14:28	4	1.036	A BB	39242.	50.000 NG	1.24
82	45	359	5:59	1	1.095	A BB	39331.	50.000 NG	1.24

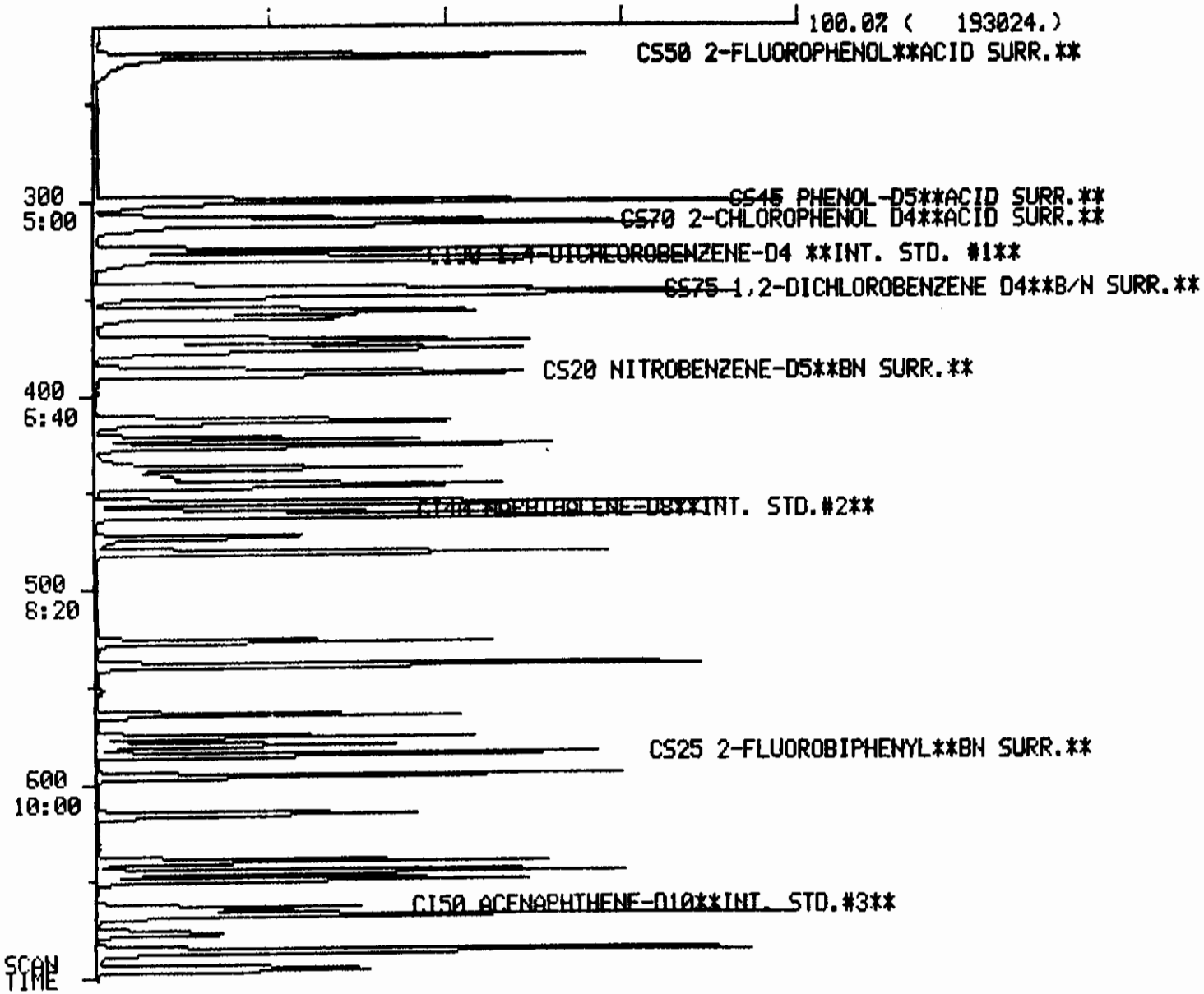
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:25	1.00	1.033	1.00	50.00	50.00	1.819	1.819	1.00
52	11:25	1.00	1.033	1.00	50.00	50.00	0.307	0.307	1.00
53	11:34	1.00	1.047	1.00	50.00	50.00	0.472	0.472	1.00
54	12:06	1.00	1.095	1.00	50.00	50.00	1.336	1.336	1.00
55	12:07	1.00	1.097	1.00	50.00	50.00	0.662	0.662	1.00
56	12:02	1.00	1.089	1.00	50.00	50.00	1.800	1.800	1.00
57	12:18	1.00	1.113	1.00	50.00	50.00	0.145	0.145	1.00
58	12:21	1.00	0.884	1.00	50.00	50.00	0.139	0.139	1.00
59	12:23	1.00	0.887	1.00	50.00	50.00	0.616	0.616	1.00
60	13:04	1.00	0.936	1.00	50.00	50.00	0.233	0.233	1.00
61	13:21	1.00	0.956	1.00	50.00	50.00	0.318	0.318	1.00
62	13:44	1.00	0.983	1.00	50.00	50.00	0.153	0.153	1.00
63	14:01	1.00	1.004	1.00	50.00	50.00	1.242	1.242	1.00
64	14:06	1.00	1.010	1.00	50.00	50.00	1.292	1.292	1.00
65	15:16	1.00	1.093	1.00	50.00	50.00	1.707	1.707	1.00
66	16:25	1.00	1.175	1.00	50.00	50.00	1.147	1.147	1.00
67	16:53	1.00	0.866	1.00	50.00	50.00	1.678	1.678	1.00
68	18:20	1.00	0.940	1.00	50.00	50.00	0.858	0.858	1.00
69	19:26	1.00	0.997	1.00	50.00	50.00	1.003	1.003	1.00
70	19:33	1.00	1.003	1.00	50.00	50.00	1.150	1.150	1.00
71	19:28	1.00	0.998	1.00	50.00	50.00	0.115	0.115	1.00
72	19:36	1.00	1.005	1.00	50.00	50.00	1.194	1.194	1.00
73	21:02	1.00	0.897	1.00	50.00	50.00	2.223	2.223	1.00
74	22:11	1.00	0.946	1.00	50.00	50.00	1.173	1.173	1.00
75	22:16	1.00	0.950	1.00	50.00	50.00	1.291	1.291	1.00
76	23:15	1.00	0.991	1.00	50.00	50.00	1.134	1.134	1.00
77	28:04	1.00	1.197	1.00	50.00	50.00	0.781	0.781	1.00
78	28:12	1.00	1.203	1.00	50.00	50.00	0.708	0.708	1.00
79	29:30	1.00	1.258	1.00	50.00	50.00	0.822	0.822	1.00
80	2:29	1.00	0.454	1.00	50.00	50.00	0.957	0.957	1.00
81	14:28	1.00	1.036	1.00	50.00	50.00	0.764	0.764	1.00
82	5:59	1.00	1.095	1.00	50.00	50.00	1.640	1.640	1.00

MASS CHROMATOGRAM DATA: W5569 #1 SCANS 700 TO 800
04/30/92 10:24:00 CALI: W5569 #2
SAMPLE: CLP,STAND,,SSTD-50,,,30017,B,CC-050,1UL,
CONDS.: CAP/.32,W5569,W5568
C595 4-NITROANILINE
RANGE: G 1,1860 LABEL: N 2, 3.0 QUAN: A 2, 3.0 J 0 BASE: U 20, 3



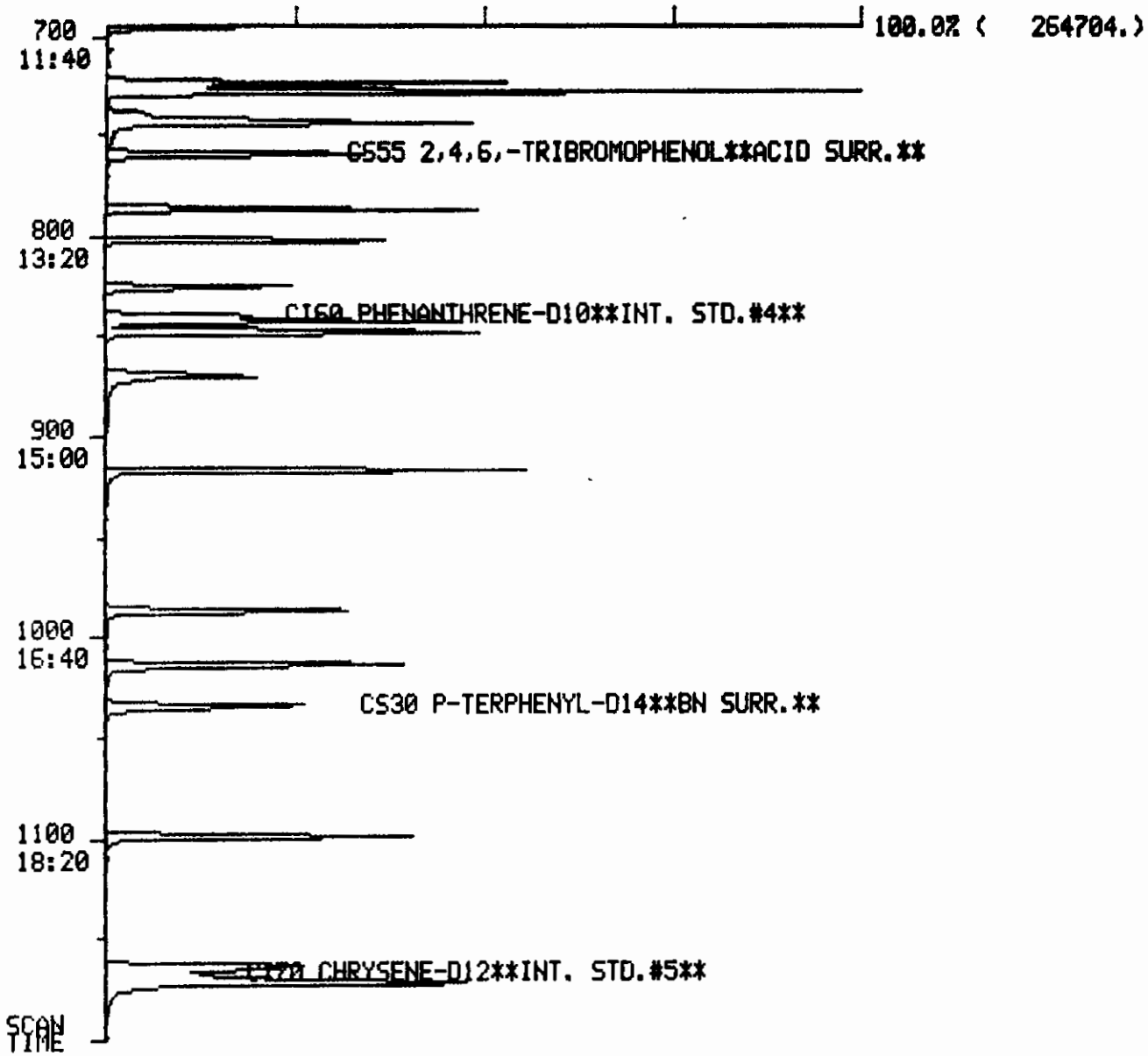
100110

DATA FROM FILE: W5572 SCANS 210 TO 700 ACQUIRED: 04/30/92 13:54:00
CALI: W5572 #2
SAMPLE: CLP,STAND,SSTD-080,,,30015,B,CC-080,1UL
CONDS.: CAP/.32,W5572,W5569,



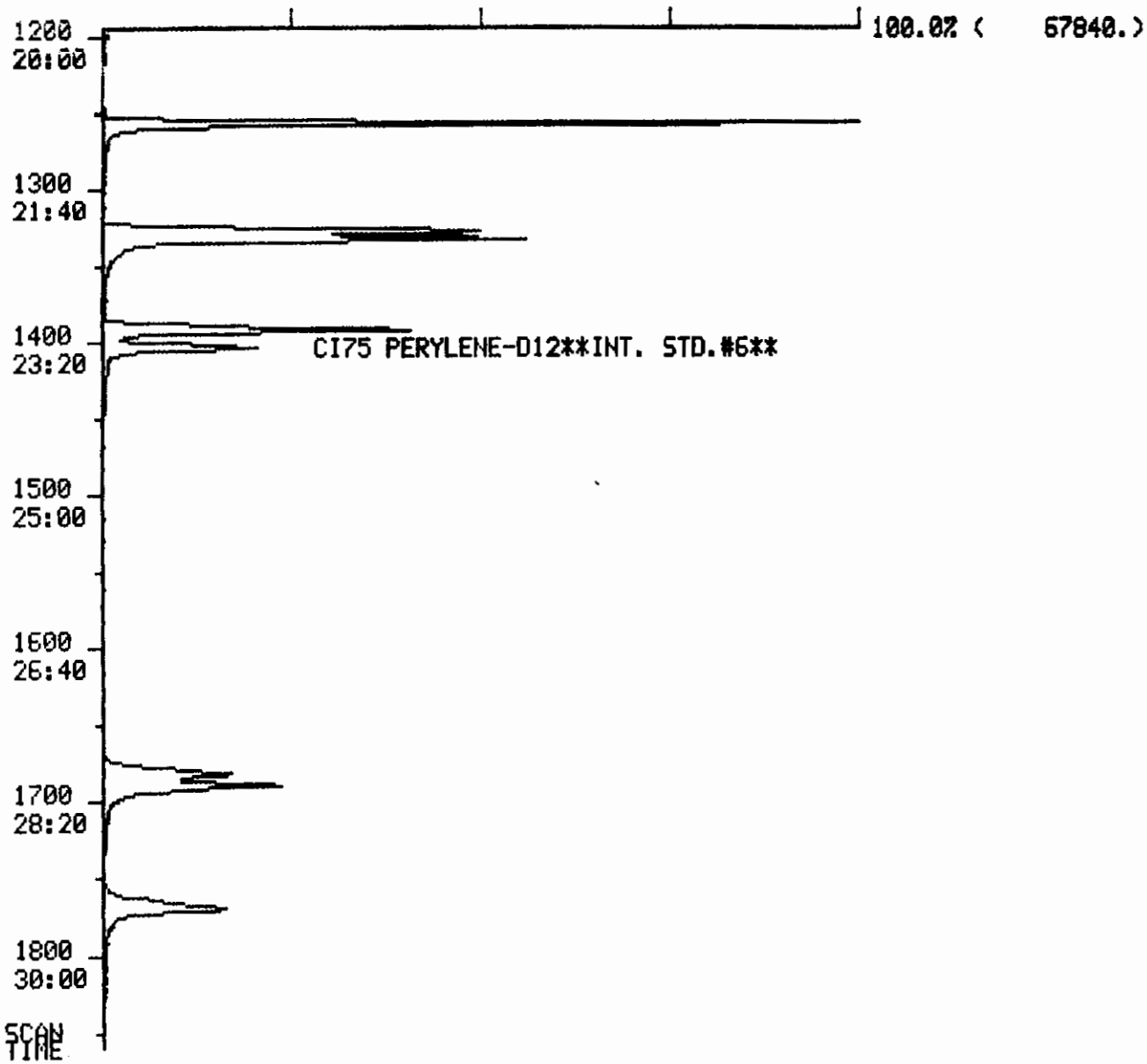
100119

DATA FROM FILE: W5572 SCANS 695 TO 1200 ACQUIRED: 04/30/92 13:54:00
CALI: W5572 #2
SAMPLE: CLP,STAND,SSTD-080,,,30015,B,CC-080,1UL
CONDS.: CAP/.32,W5572,W5569,



100129

DATA FROM FILE: W5572 SCANS 1195 TO 1860 ACQUIRED: 04/30/92 13:54:00
CALI: W5572 #2
SAMPLE: CLP,STAND,SSTD-080,,,30015,B,CC-080,1UL
CONDS.: CAP/.32,W5572,W5569,



100121

Quantitation Report File: W5572

Data: W5572.TI
4/30/92 13:54:00
Sample: CLP,STAND,SSTD-080,,,30015,B,CC-080,1UL
Conds.: CAP/.32,W5572,W5569,
Formula: -- Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	328	5:28	1	1.000	A BB	16295.	40.000 NG/UL	0.63
2	136	459	7:39	2	1.000	A BB	55519.	40.000 NG/UL	0.63
3	164	663	11:03	3	1.000	A BB	23539.	40.000 NG/UL	0.63
4	188	838	13:58	4	1.000	A BB	35410.	40.000 NG/UL	0.63
5	240	1166	19:26	5	1.000	A BB	25655.	40.000 NG/UL	0.63
6	264	1402	23:22	6	1.000	A BB	19277.	40.000 NG/UL	0.63
7	112	224	3:44	1	0.683	A BB	67213.	80.000 NG*A1	1.27
8	99	299	4:59	1	0.912	A BB	74784.	80.000 NG*A2	1.27
9	82	387	6:27	2	0.843	A BB	62222.	80.000 NG*B1	1.27
10	172	584	9:44	3	0.881	A BB	67385.	80.000 NG*B2	1.27
11	330	758	12:38	3	1.143	A BB	12998.	80.000 NG*A3	1.27
12	244	1033	17:13	5	0.886	A BB	47345.	80.000 NG*B3	1.27
13	132	310	5:10	1	0.945	A BB	52881.	80.000 NG*A4	1.27
14	152	346	5:46	1	1.055	A BB	30477.	80.000 NG*B4	1.27
15	128	312	5:12	1	0.951	A BB	45698.	80.000 NG.	1.27
16	94	300	5:00	1	0.915	A BB	52733.	80.000 NG.	1.27
17	93	308	5:08	1	0.939	A BB	53873.	80.000 NG	1.27
18	146	324	5:24	1	0.988	A BV	48407.	80.000 NG	1.27
19	146	329	5:29	1	1.003	A VB	53065.	80.000 NG.	1.27
20	146	347	5:47	1	1.058	A BB	46475.	80.000 NG	1.27
21	108	344	5:44	1	1.049	A BB	28128.	80.000 NG	1.27
22	45	358	5:58	1	1.091	A BB	56750.	80.000 NG	1.27
23	108	355	5:55	1	1.082	A BB	38517.	80.000 NG	1.27
24	117	376	6:16	1	1.146	A BB	27077.	80.000 NG	1.27
25	108	371	6:11	1	1.131	A BB	40496.	80.000 NG	1.27
26	70	374	6:14	1	1.140	A BB	42385.	80.000 NG.	1.27
27	77	389	6:29	2	0.847	A BB	63792.	80.000 NG	1.27
28	82	412	6:52	2	0.898	A BB	117085.	80.000 NG	1.27
29	139	421	7:01	2	0.917	A BB	20244.	80.000 NG	1.27
30	107	425	7:05	2	0.926	A BB	48804.	80.000 NG	1.27
31	93	436	7:16	2	0.950	A BB	59322.	80.000 NG	1.27
32	162	445	7:25	2	0.969	A BB	30751.	80.000 NG	1.27
33	180	454	7:34	2	0.989	A BB	36744.	80.000 NG.	1.27
34	128	461	7:41	2	1.004	A BB	119967.	80.000 NG	1.27
35	122	443	7:23	2	0.965	A BB	19356.	80.000 NG	1.27
36	127	471	7:51	2	1.026	A BB	33866.	80.000 NG	1.27
37	225	480	8:00	2	1.046	A BB	21932.	80.000 NG	1.27
38	107	526	8:46	2	1.146	A BB	39721.	80.000 NG.	1.27
39	142	539	8:59	2	1.174	A BB	72497.	80.000 NG	1.27
40	237	564	9:24	3	0.851	A BB	17895.	80.000 NG	1.27
41	196	575	9:35	3	0.867	A BV	17774.	80.000 NG	1.27
42	196	579	9:39	3	0.873	A VB	19271.	80.000 NG	1.27
43	162	595	9:55	3	0.897	A BB	61483.	80.000 NG	1.27
44	65	615	10:15	3	0.928	A BB	27969.	80.000 NG	1.27
45	152	645	10:45	3	0.973	A BB	102747.	80.000 NG	1.27
46	163	639	10:39	3	0.964	A BB	73142.	80.000 NG	1.27
47	165	649	10:49	3	0.979	A BB	16650.	80.000 NG	1.27
48	153	667	11:07	3	1.006	A BB	64967.	80.000 NG.	1.27
49	138	665	11:05	3	1.003	A BB	11530.	80.000 NG	1.27
50	184	676	11:16	3	1.020	A BB	8394.	80.000 NG	1.27

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:28	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:39	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:03	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:58	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:26	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:44	1.00	0.683	1.00	80.00	80.00	2.062	2.062	1.00
8	4:59	1.00	0.912	1.00	80.00	80.00	2.295	2.295	1.00
9	6:27	1.00	0.843	1.00	80.00	80.00	0.560	0.560	1.00
10	9:44	1.00	0.881	1.00	80.00	80.00	1.431	1.431	1.00
11	12:38	1.00	1.143	1.00	80.00	80.00	0.276	0.276	1.00
12	17:13	1.00	0.886	1.00	80.00	80.00	0.923	0.923	1.00
13	5:10	1.00	0.945	1.00	80.00	80.00	1.623	1.623	1.00
14	5:46	1.00	1.055	1.00	80.00	80.00	0.935	0.935	1.00
15	5:12	1.00	0.951	1.00	80.00	80.00	1.402	1.402	1.00
16	5:00	1.00	0.915	1.00	80.00	80.00	1.618	1.618	1.00
17	5:08	1.00	0.939	1.00	80.00	80.00	1.653	1.653	1.00
18	5:24	1.00	0.988	1.00	80.00	80.00	1.485	1.485	1.00
19	5:29	1.00	1.003	1.00	80.00	80.00	1.628	1.628	1.00
20	5:47	1.00	1.058	1.00	80.00	80.00	1.426	1.426	1.00
21	5:44	1.00	1.049	1.00	80.00	80.00	0.863	0.863	1.00
22	5:58	1.00	1.091	1.00	80.00	80.00	1.741	1.741	1.00
23	5:55	1.00	1.082	1.00	80.00	80.00	1.182	1.182	1.00
24	6:16	1.00	1.146	1.00	80.00	80.00	0.831	0.831	1.00
25	6:11	1.00	1.131	1.00	80.00	80.00	1.243	1.243	1.00
26	6:14	1.00	1.140	1.00	80.00	80.00	1.301	1.301	1.00
27	6:29	1.00	0.847	1.00	80.00	80.00	0.575	0.575	1.00
28	6:52	1.00	0.898	1.00	80.00	80.00	1.054	1.054	1.00
29	7:01	1.00	0.917	1.00	80.00	80.00	0.182	0.182	1.00
30	7:05	1.00	0.926	1.00	80.00	80.00	0.440	0.440	1.00
31	7:16	1.00	0.950	1.00	80.00	80.00	0.534	0.534	1.00
32	7:25	1.00	0.969	1.00	80.00	80.00	0.277	0.277	1.00
33	7:34	1.00	0.989	1.00	80.00	80.00	0.331	0.331	1.00
34	7:41	1.00	1.004	1.00	80.00	80.00	1.080	1.080	1.00
35	7:23	1.00	0.965	1.00	80.00	80.00	0.174	0.174	1.00
36	7:51	1.00	1.026	1.00	80.00	80.00	0.305	0.305	1.00
37	8:00	1.00	1.046	1.00	80.00	80.00	0.198	0.198	1.00
38	8:46	1.00	1.146	1.00	80.00	80.00	0.358	0.358	1.00
39	8:59	1.00	1.174	1.00	80.00	80.00	0.653	0.653	1.00
40	9:24	1.00	0.851	1.00	80.00	80.00	0.380	0.380	1.00
41	9:35	1.00	0.867	1.00	80.00	80.00	0.378	0.378	1.00
42	9:39	1.00	0.873	1.00	80.00	80.00	0.409	0.409	1.00
43	9:55	1.00	0.897	1.00	80.00	80.00	1.306	1.306	1.00
44	10:15	1.00	0.928	1.00	80.00	80.00	0.594	0.594	1.00
45	10:45	1.00	0.973	1.00	80.00	80.00	2.182	2.182	1.00
46	10:39	1.00	0.964	1.00	80.00	80.00	1.554	1.554	1.00
47	10:49	1.00	0.979	1.00	80.00	80.00	0.354	0.354	1.00
48	11:07	1.00	1.006	1.00	80.00	80.00	1.380	1.380	1.00
49	11:05	1.00	1.003	1.00	80.00	80.00	0.245	0.245	1.00
50	11:16	1.00	1.020	1.00	80.00	80.00	0.178	0.178	1.00

Quantitation Report File: W5572

Data: W5572.TI
4/30/92 13:54:00
Sample: CLP,STAND,SSTD-080,,,30015,B,CC-080,1UL
Conds.: CAP/.32,W5572,W5569,
Formula: -- Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

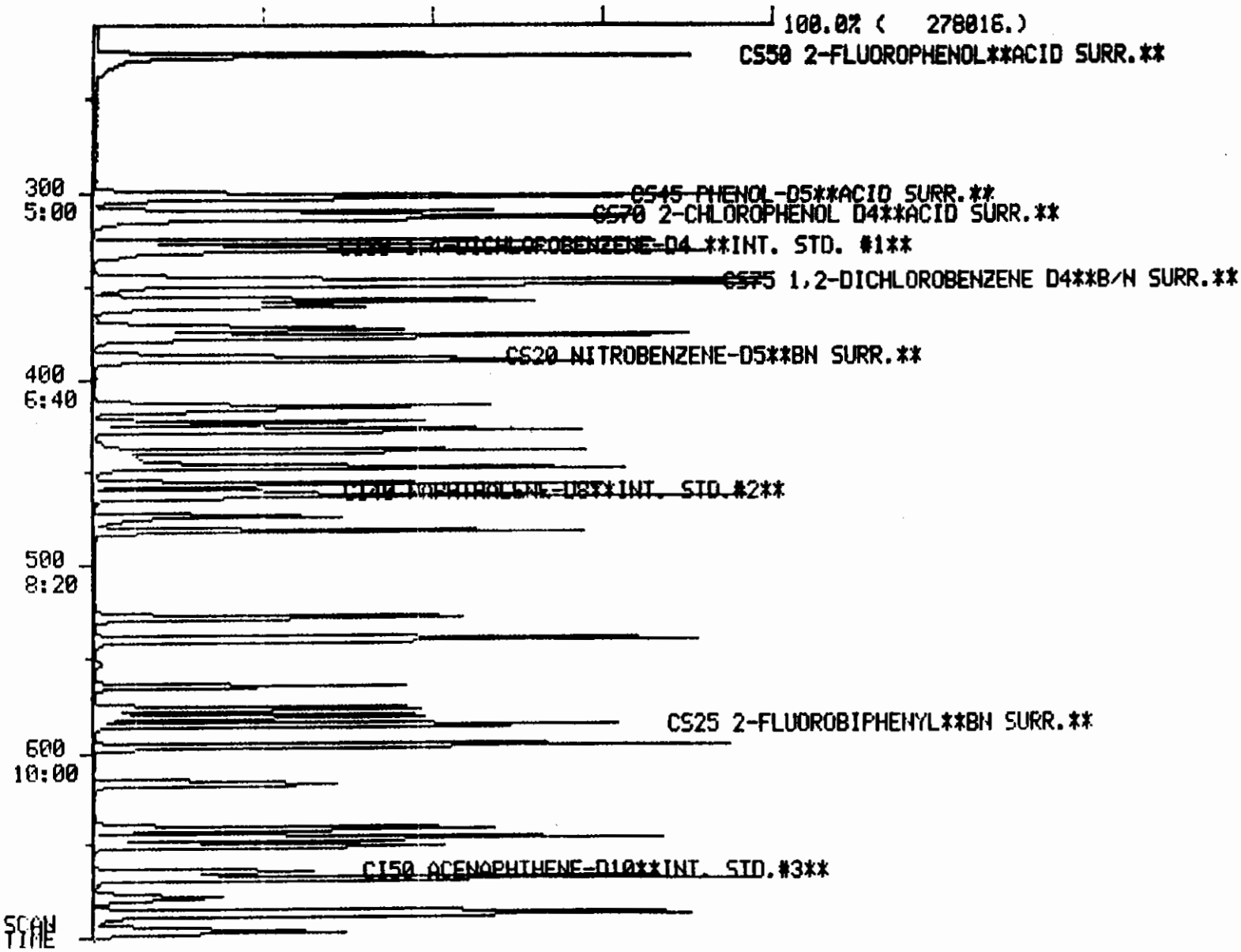
No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2' -OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	685	11:25	3	1.033	A BB	86655.	80.000 NG	1.27
52	109	686	11:26	3	1.035	A BB	16913.	80.000 NG.	1.27
53	165	694	11:34	3	1.047	A BB	24915.	80.000 NG.	1.27
54	166	726	12:06	3	1.095	A BB	62606.	80.000 NG	1.27
55	204	727	12:07	3	1.097	A BB	30348.	80.000 NG	1.27
56	149	723	12:03	3	1.090	A BB	89585.	80.000 NG	1.27
57	138	739	12:19	3	1.115	A BB	10441.	80.000 NG	1.27
58	198	742	12:22	4	0.885	A BB	10754.	80.000 NG	1.27
59	169	744	12:24	4	0.888	A BB	44830.	80.000 NG	1.27
60	248	785	13:05	4	0.937	A BB	16603.	80.000 NG	1.27
61	284	801	13:21	4	0.956	A BB	20411.	80.000 NG	1.27

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	266	824	13:44	4	0.983	A BB	11070.	80.000 NG.	1.27
63	178	841	14:01	4	1.004	A BV	88530.	80.000 NG	1.27
64	178	847	14:07	4	1.011	A VB	91474.	80.000 NG	1.27
65	149	916	15:16	4	1.093	A BB	123854.	80.000 NG	1.27
66	202	985	16:25	4	1.175	A BB	78902.	80.000 NG	1.27
67	202	1013	16:53	5	0.869	A BB	80735.	80.000 NG.	1.27
68	149	1098	18:18	5	0.942	A BB	45717.	80.000 NG	1.27
69	228	1163	19:23	5	0.997	A BV	52656.	80.000 NG	1.27
70	228	1170	19:30	5	1.003	A VB	56577.	80.000 NG	1.27
71	252	1164	19:24	5	0.998	A BB	7763.	80.000 NG	1.27
72	149	1171	19:31	5	1.004	A VB	62467.	80.000 NG	1.27
73	149	1257	20:57	6	0.897	A BB	90816.	80.000 NG	1.27
74	252	1327	22:07	6	0.947	A BV	46659.	80.000 NG	1.27
75	252	1332	22:12	6	0.950	A VB	47698.	80.000 NG	1.27
76	252	1391	23:11	6	0.992	A BB	42223.	80.000 NG	1.27
77	276	1680	28:00	6	1.198	A BV	26897.	80.000 NG	1.27
78	278	1689	28:09	6	1.205	A BB	28287.	80.000 NG	1.27
79	276	1769	29:29	6	1.262	A BB	28967.	80.000 NG	1.27
80	74	149	2:29	1	0.454	A BB	30930.	80.000 NG	1.27
81	167	869	14:29	4	1.037	A BB	59729.	80.000 NG	1.27
82	45	358	5:58	1	1.091	A BB	56750.	80.000 NG	1.27

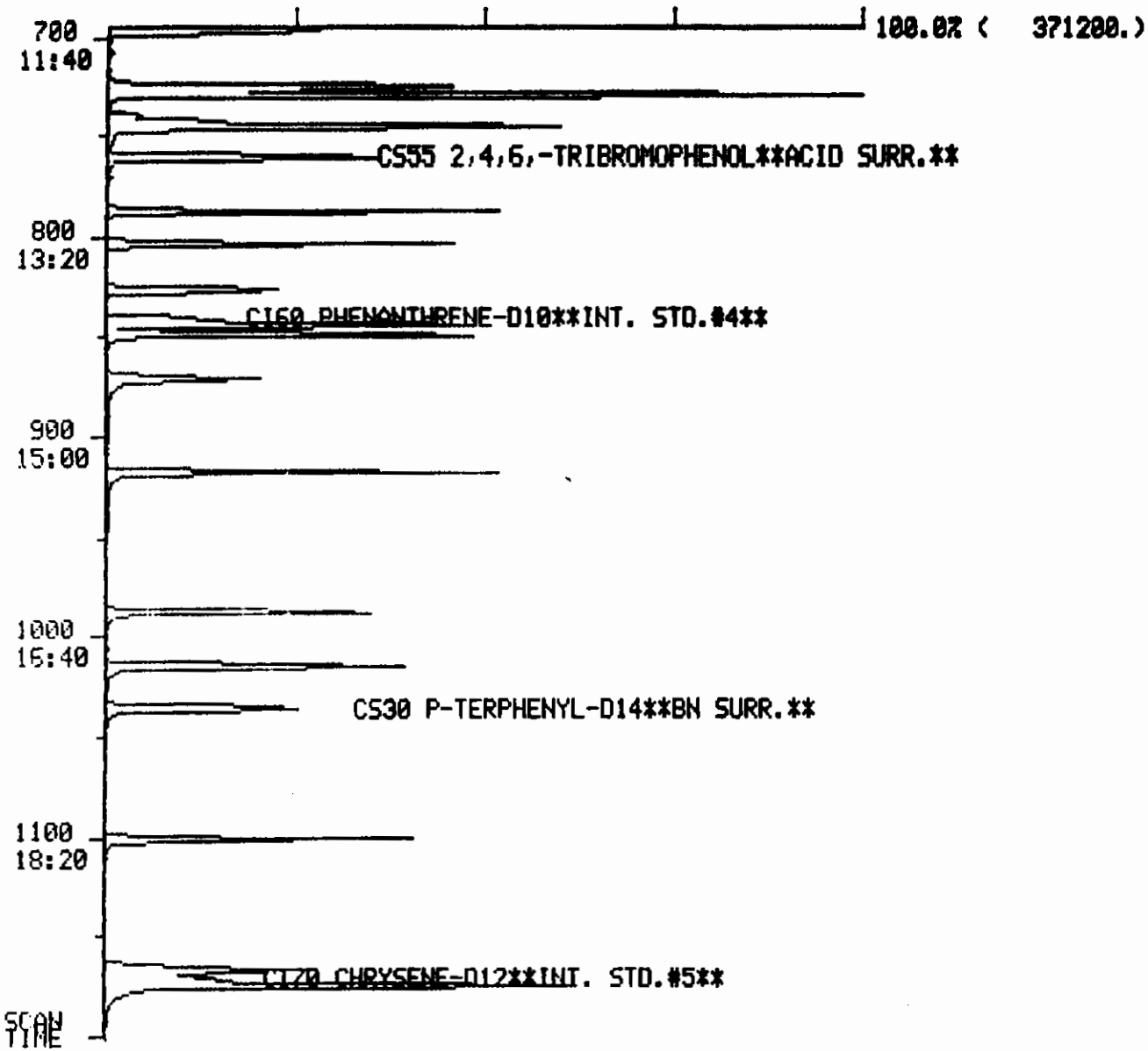
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:25	1.00	1.033	1.00	80.00	80.00	1.841	1.841	1.00
52	11:26	1.00	1.035	1.00	80.00	80.00	0.359	0.359	1.00
53	11:34	1.00	1.047	1.00	80.00	80.00	0.529	0.529	1.00
54	12:06	1.00	1.095	1.00	80.00	80.00	1.330	1.330	1.00
55	12:07	1.00	1.097	1.00	80.00	80.00	0.645	0.645	1.00
56	12:03	1.00	1.090	1.00	80.00	80.00	1.903	1.903	1.00
57	12:19	1.00	1.115	1.00	80.00	80.00	0.222	0.222	1.00
58	12:22	1.00	0.885	1.00	80.00	80.00	0.152	0.152	1.00
59	12:24	1.00	0.888	1.00	80.00	80.00	0.633	0.633	1.00
60	13:05	1.00	0.937	1.00	80.00	80.00	0.234	0.234	1.00
61	13:21	1.00	0.956	1.00	80.00	80.00	0.288	0.288	1.00
62	13:44	1.00	0.983	1.00	80.00	80.00	0.156	0.156	1.00
63	14:01	1.00	1.004	1.00	80.00	80.00	1.250	1.250	1.00
64	14:07	1.00	1.011	1.00	80.00	80.00	1.292	1.292	1.00
65	15:16	1.00	1.093	1.00	80.00	80.00	1.749	1.749	1.00
66	16:25	1.00	1.175	1.00	80.00	80.00	1.114	1.114	1.00
67	16:53	1.00	0.869	1.00	80.00	80.00	1.573	1.573	1.00
68	18:18	1.00	0.942	1.00	80.00	80.00	0.891	0.891	1.00
69	19:23	1.00	0.997	1.00	80.00	80.00	1.026	1.026	1.00
70	19:30	1.00	1.003	1.00	80.00	80.00	1.103	1.103	1.00
71	19:24	1.00	0.998	1.00	80.00	80.00	0.151	0.151	1.00
72	19:31	1.00	1.004	1.00	80.00	80.00	1.217	1.217	1.00
73	20:57	1.00	0.897	1.00	80.00	80.00	2.356	2.356	1.00
74	22:07	1.00	0.947	1.00	80.00	80.00	1.210	1.210	1.00
75	22:12	1.00	0.950	1.00	80.00	80.00	1.237	1.237	1.00
76	23:11	1.00	0.992	1.00	80.00	80.00	1.095	1.095	1.00
77	28:00	1.00	1.198	1.00	80.00	80.00	0.698	0.698	1.00
78	28:09	1.00	1.205	1.00	80.00	80.00	0.734	0.734	1.00
79	29:29	1.00	1.262	1.00	80.00	80.00	0.751	0.751	1.00
80	2:29	1.00	0.454	1.00	80.00	80.00	0.949	0.949	1.00
81	14:29	1.00	1.037	1.00	80.00	80.00	0.843	0.843	1.00
82	5:58	1.00	1.091	1.00	80.00	80.00	1.741	1.741	1.00

DATA FROM FILE: W5571 SCANS 210 TO 700 ACQUIRED: 04/30/92 13:07:00
CALI: W5571 #2
SAMPLE: CLP,STAND,SSTD-120,,,30014,B,IC-120,1UL,
CONDS.: CAP/.32,W5571,W5569



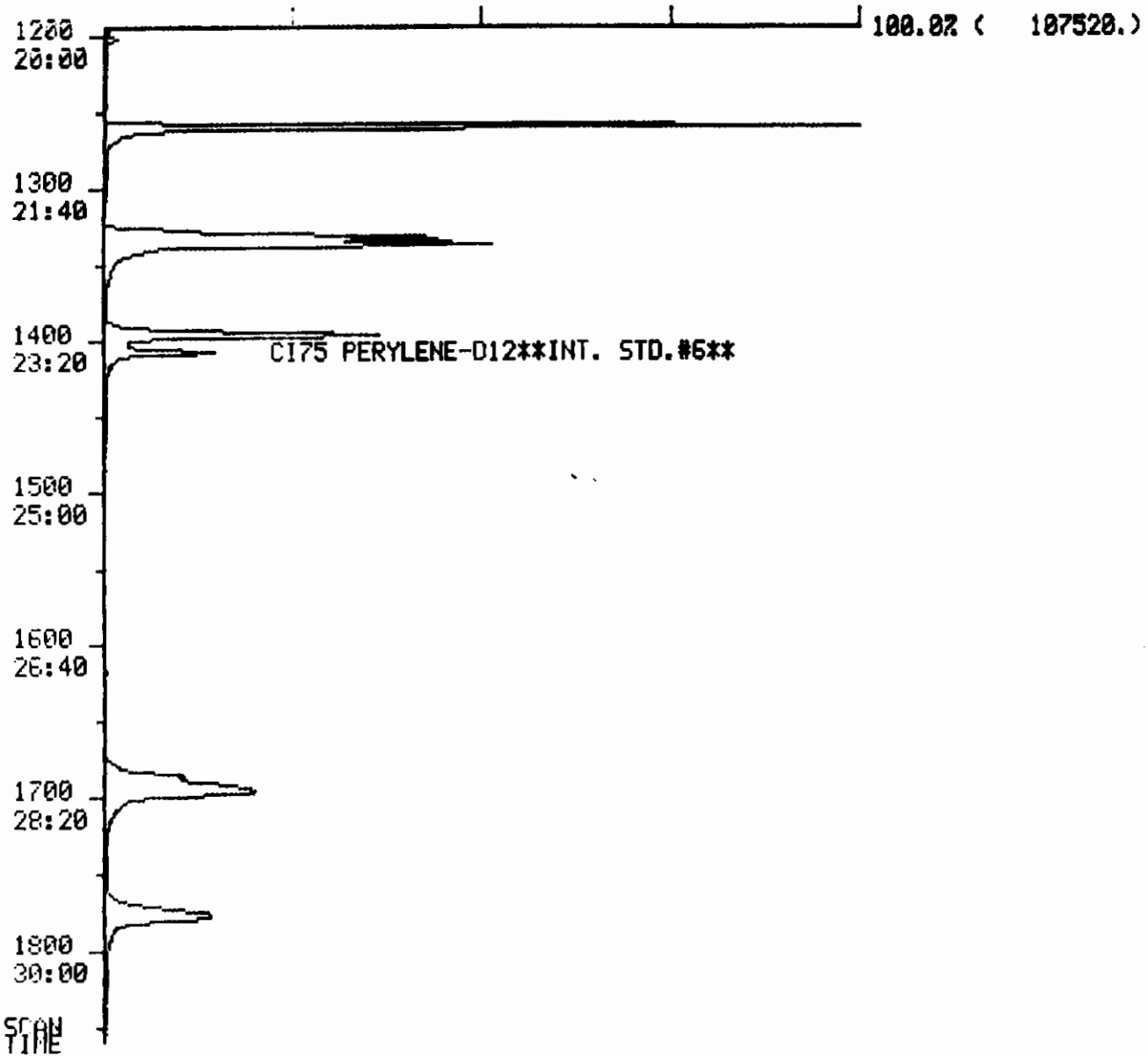
100127

DATA FROM FILE: W5571 SCANS 695 TO 1200 ACQUIRED: 04/30/92 13:07:00
CALI: W5571 #2
SAMPLE: CLP,STAND,SSTD-120,,,30014,B,IC-120,1UL,
CONDS.: CAP/.32,W5571,W5569



100120

DATA FROM FILE: W5571 SCANS 1195 TO 1860 ACQUIRED: 04/30/92 13:07:00
CALI: W5571 #2
SAMPLE: CLP,STAND,SSTD-120,,,30014,B,IC-120,1UL,
CONDS.: CAP/.32,W5571,W5569



100120

Quantitation Report File: W5571

ata: W5571.TI
04/30/92 13:07:00
Sample: CLP,STAND,SSTD-120,,,30014,B,IC-120,1UL,
Conds.: CAP/.32,W5571,W5569
Formula: -- Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	328	5:28	1	1.000	A BB	17670.	40.000 NG/UL	0.43
2	136	460	7:40	2	1.000	A BB	58912.	40.000 NG/UL	0.43
3	164	664	11:04	3	1.000	A BB	25542.	40.000 NG/UL	0.43
4	188	839	13:59	4	1.000	A BB	36467.	40.000 NG/UL	0.43
5	240	1170	19:30	5	1.000	A BB	26871.	40.000 NG/UL	0.43
6	264	1407	23:27	6	1.000	A BB	21729.	40.000 NG/UL	0.43
7	112	225	3:45	1	0.686	A BB	105597.	120.000 NG*A1	1.28
8	99	300	5:00	1	0.915	A BB	120335.	120.000 NG*A2	1.28
9	82	388	6:28	2	0.843	A BB	98872.	120.000 NG*B1	1.28
10	172	585	9:45	3	0.881	A BB	106766.	120.000 NG*B2	1.28
11	330	759	12:39	3	1.143	A BB	21468.	120.000 NG*A3	1.28
12	244	1035	17:15	5	0.885	A BB	70626.	120.000 NG*B3	1.28
13	132	311	5:11	1	0.948	A BB	84010.	120.000 NG*A4	1.28
14	152	347	5:47	1	1.058	A BB,	46702.	120.000 NG*B4	1.28
15	128	313	5:13	1	0.954	A BB'	72366.	120.000 NG.	1.28
16	94	302	5:02	1	0.921	A BV	85623.	120.000 NG.	1.28
17	93	309	5:09	1	0.942	A BB	83768.	120.000 NG	1.28
18	146	325	5:25	1	0.991	A BV	79180.	120.000 NG	1.28
19	146	330	5:30	1	1.006	A VB	85193.	120.000 NG.	1.28
20	146	348	5:48	1	1.061	A BB	73740.	120.000 NG	1.28
21	108	346	5:46	1	1.055	A BB	45177.	120.000 NG	1.28
22	45	359	5:59	1	1.095	A BB	92782.	120.000 NG	1.28
23	108	357	5:57	1	1.088	A BB	62025.	120.000 NG	1.28
24	117	377	6:17	1	1.149	A BB	41548.	120.000 NG	1.28
25	108	372	6:12	1	1.134	A BB	65630.	120.000 NG	1.28
26	70	376	6:16	1	1.146	A BB	65414.	120.000 NG.	1.28
27	77	390	6:30	2	0.848	A BB	102234.	120.000 NG	1.28
28	82	414	6:54	2	0.900	A BV	186730.	120.000 NG	1.28
29	139	422	7:02	2	0.917	A BB	33356.	120.000 NG	1.28
30	107	427	7:07	2	0.928	A BB	76141.	120.000 NG	1.28
31	93	438	7:18	2	0.952	A BB	94330.	120.000 NG	1.28
32	162	447	7:27	2	0.972	A BB	49341.	120.000 NG	1.28
33	180	455	7:35	2	0.989	A BB	58275.	120.000 NG.	1.28
34	128	462	7:42	2	1.004	A BB	183251.	120.000 NG	1.28
35	122	447	7:27	2	0.972	A BB	33513.	120.000 NG	1.28
36	127	473	7:53	2	1.028	A BB	55153.	120.000 NG	1.28
37	225	481	8:01	2	1.046	A BB	34796.	120.000 NG	1.28
38	107	528	8:48	2	1.148	A BB	65542.	120.000 NG.	1.28
39	142	540	9:00	2	1.174	A BB	113672.	120.000 NG	1.28
40	237	564	9:24	3	0.849	A BB	29556.	120.000 NG	1.28
41	196	576	9:36	3	0.867	A BV	28838.	120.000 NG	1.28
42	196	580	9:40	3	0.873	A VB	31690.	120.000 NG	1.28
43	162	596	9:56	3	0.898	A BB	98429.	120.000 NG	1.28
44	65	616	10:16	3	0.928	A BB	46714.	120.000 NG	1.28
45	152	646	10:46	3	0.973	A BB	159965.	120.000 NG	1.28
46	163	641	10:41	3	0.965	A BB	116104.	120.000 NG	1.28
47	165	650	10:50	3	0.979	A BB	26267.	120.000 NG	1.28
48	153	668	11:08	3	1.006	A BB	100278.	120.000 NG.	1.28
49	138	667	11:07	3	1.005	A BV	18517.	120.000 NG	1.28
50	184	678	11:18	3	1.021	A BB	14412.	120.000 NG	1.28

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:28	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:40	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:04	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:59	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:27	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:45	1.00	0.686	1.00	120.00	120.00	1.992	1.992	1.00
8	5:00	1.00	0.915	1.00	120.00	120.00	2.270	2.270	1.00
9	6:28	1.00	0.843	1.00	120.00	120.00	0.559	0.559	1.00
10	9:45	1.00	0.881	1.00	120.00	120.00	1.393	1.393	1.00
11	12:39	1.00	1.143	1.00	120.00	120.00	0.280	0.280	1.00
12	17:15	1.00	0.885	1.00	120.00	120.00	0.876	0.876	1.00
13	5:11	1.00	0.948	1.00	120.00	120.00	1.585	1.585	1.00
14	5:47	1.00	1.058	1.00	120.00	120.00	0.881	0.881	1.00
15	5:13	1.00	0.954	1.00	120.00	120.00	1.365	1.365	1.00
16	5:02	1.00	0.921	1.00	120.00	120.00	1.615	1.615	1.00
17	5:09	1.00	0.942	1.00	120.00	120.00	1.580	1.580	1.00
18	5:25	1.00	0.991	1.00	120.00	120.00	1.494	1.494	1.00
19	5:30	1.00	1.006	1.00	120.00	120.00	1.607	1.607	1.00
20	5:48	1.00	1.061	1.00	120.00	120.00	1.391	1.391	1.00
21	5:46	1.00	1.055	1.00	120.00	120.00	0.852	0.852	1.00
22	5:59	1.00	1.095	1.00	120.00	120.00	1.750	1.750	1.00
23	5:57	1.00	1.088	1.00	120.00	120.00	1.170	1.170	1.00
24	6:17	1.00	1.149	1.00	120.00	120.00	0.784	0.784	1.00
25	6:12	1.00	1.134	1.00	120.00	120.00	1.238	1.238	1.00
26	6:16	1.00	1.146	1.00	120.00	120.00	1.234	1.234	1.00
27	6:30	1.00	0.848	1.00	120.00	120.00	0.578	0.578	1.00
28	6:54	1.00	0.900	1.00	120.00	120.00	1.057	1.057	1.00
29	7:02	1.00	0.917	1.00	120.00	120.00	0.189	0.189	1.00
30	7:07	1.00	0.928	1.00	120.00	120.00	0.431	0.431	1.00
31	7:18	1.00	0.952	1.00	120.00	120.00	0.534	0.534	1.00
32	7:27	1.00	0.972	1.00	120.00	120.00	0.279	0.279	1.00
33	7:35	1.00	0.989	1.00	120.00	120.00	0.330	0.330	1.00
34	7:42	1.00	1.004	1.00	120.00	120.00	1.037	1.037	1.00
35	7:27	1.00	0.972	1.00	120.00	120.00	0.190	0.190	1.00
36	7:53	1.00	1.028	1.00	120.00	120.00	0.312	0.312	1.00
37	8:01	1.00	1.046	1.00	120.00	120.00	0.197	0.197	1.00
38	8:48	1.00	1.148	1.00	120.00	120.00	0.371	0.371	1.00
39	9:00	1.00	1.174	1.00	120.00	120.00	0.643	0.643	1.00
40	9:24	1.00	0.849	1.00	120.00	120.00	0.386	0.386	1.00
41	9:36	1.00	0.867	1.00	120.00	120.00	0.376	0.376	1.00
42	9:40	1.00	0.873	1.00	120.00	120.00	0.414	0.414	1.00
43	9:56	1.00	0.898	1.00	120.00	120.00	1.285	1.285	1.00
44	10:16	1.00	0.928	1.00	120.00	120.00	0.610	0.610	1.00
45	10:46	1.00	0.973	1.00	120.00	120.00	2.088	2.088	1.00
46	10:41	1.00	0.965	1.00	120.00	120.00	1.515	1.515	1.00
47	10:50	1.00	0.979	1.00	120.00	120.00	0.343	0.343	1.00
48	11:08	1.00	1.006	1.00	120.00	120.00	1.309	1.309	1.00
49	11:07	1.00	1.005	1.00	120.00	120.00	0.242	0.242	1.00
50	11:18	1.00	1.021	1.00	120.00	120.00	0.188	0.188	1.00

Quantitation Report File: W5571

Data: W5571.TI
04/30/92 13:07:00
Sample: CLP,STAND,SSTD-120,,,30014,B,IC-120,1UL,
Conds.: CAP/.32,W5571,W5569
Formula: -- Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: SJD Acct. No.: --

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

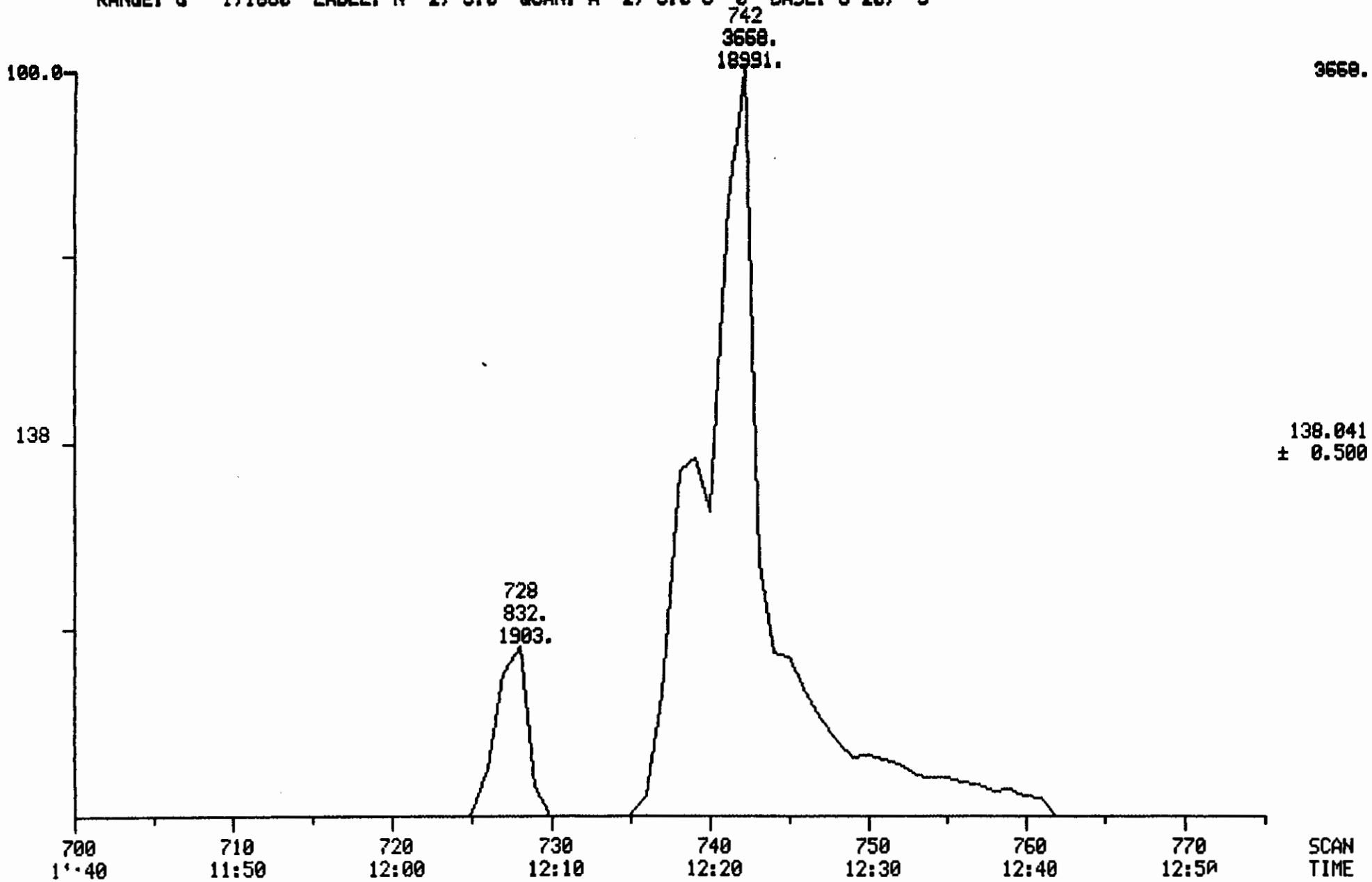
No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2' -OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	686	11:26	3	1.033	A BB	135325.	120.000 NG	1.28
52	109	688	11:28	3	1.036	A BB	26820.	120.000 NG.	1.28
53	165	696	11:36	3	1.048	A BB	38334.	120.000 NG.	1.28
54	166	727	12:07	3	1.095	A BB	96628.	120.000 NG	1.28
55	204	728	12:08	3	1.096	A BB	47749.	120.000 NG	1.28
56	149	724	12:04	3	1.090	A BB	139850.	120.000 NG	1.28
57	138	742	12:22	3	1.117	A BB	18991.	120.000 NG	1.28
58	198	744	12:24	4	0.887	A BB	16857.	120.000 NG	1.28
59	169	745	12:25	4	0.888	A BB	71355.	120.000 NG	1.28
60	248	786	13:06	4	0.937	A BB	25365.	120.000 NG	1.28
61	284	803	13:23	4	0.957	A BB	32361.	120.000 NG	1.28

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	266	825	13:45	4	0.983	A BB	17235.	120.000 NG.	1.28
63	178	843	14:03	4	1.005	A BV	134799.	120.000 NG	1.28
64	178	848	14:08	4	1.011	A VB	137093.	120.000 NG	1.28
65	149	917	15:17	4	1.093	A BB	182626.	120.000 NG	1.28
66	202	987	16:27	4	1.176	A BB	115856.	120.000 NG	1.28
67	202	1014	16:54	5	0.867	A BB	118452.	120.000 NG.	1.28
68	149	1100	18:20	5	0.940	A BB	70551.	120.000 NG	1.28
69	228	1165	19:25	5	0.996	A BV	79754.	120.000 NG	1.28
70	228	1173	19:33	5	1.003	A VB	88858.	120.000 NG	1.28
71	252	1167	19:27	5	0.997	A BB	12449.	120.000 NG	1.28
72	149	1174	19:34	5	1.003	A VB	92310.	120.000 NG	1.28
73	149	1260	21:00	6	0.896	A BB	146034.	120.000 NG	1.28
74	252	1332	22:12	6	0.947	A BV	84598.	120.000 NG	1.28
75	252	1336	22:16	6	0.950	A VB	60476.	120.000 NG	1.28
76	252	1396	23:16	6	0.992	A BB	66398.	120.000 NG	1.28
77	276	1691	28:11	6	1.202	A VB	30600.	120.000 NG	1.28
78	278	1696	28:16	6	1.205	A BB	43233.	120.000 NG	1.28
79	276	1777	29:37	6	1.263	A BB	45459.	120.000 NG	1.28
80	74	149	2:29	1	0.454	A BB,	46615.	120.000 NG	1.28
81	167	870	14:30	4	1.037	A BB'	89122.	120.000 NG	1.28
82	45	359	5:59	1	1.095	A BB	92782.	120.000 NG	1.28

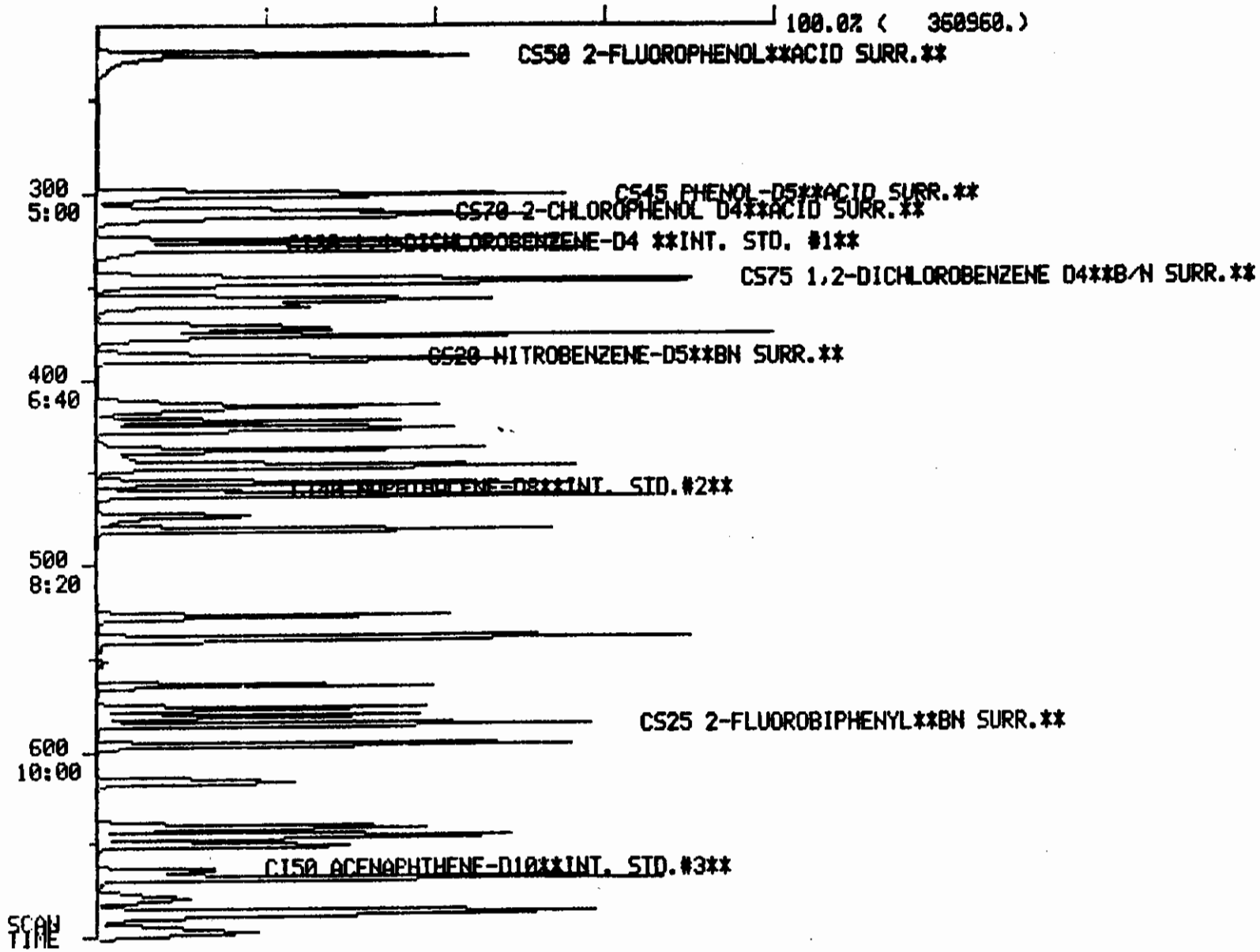
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:26	1.00	1.033	1.00	120.00	120.00	1.766	1.766	1.00
52	11:28	1.00	1.036	1.00	120.00	120.00	0.350	0.350	1.00
53	11:36	1.00	1.048	1.00	120.00	120.00	0.500	0.500	1.00
54	12:07	1.00	1.095	1.00	120.00	120.00	1.261	1.261	1.00
55	12:08	1.00	1.096	1.00	120.00	120.00	0.623	0.623	1.00
56	12:04	1.00	1.090	1.00	120.00	120.00	1.825	1.825	1.00
57	12:22	1.00	1.117	1.00	120.00	120.00	0.248	0.248	1.00
58	12:24	1.00	0.887	1.00	120.00	120.00	0.154	0.154	1.00
59	12:25	1.00	0.888	1.00	120.00	120.00	0.652	0.652	1.00
60	13:06	1.00	0.937	1.00	120.00	120.00	0.232	0.232	1.00
61	13:23	1.00	0.957	1.00	120.00	120.00	0.296	0.296	1.00
62	13:45	1.00	0.983	1.00	120.00	120.00	0.158	0.158	1.00
63	14:03	1.00	1.005	1.00	120.00	120.00	1.232	1.232	1.00
64	14:08	1.00	1.011	1.00	120.00	120.00	1.253	1.253	1.00
65	15:17	1.00	1.093	1.00	120.00	120.00	1.669	1.669	1.00
66	16:27	1.00	1.176	1.00	120.00	120.00	1.059	1.059	1.00
67	16:54	1.00	0.867	1.00	120.00	120.00	1.469	1.469	1.00
68	18:20	1.00	0.940	1.00	120.00	120.00	0.875	0.875	1.00
69	19:25	1.00	0.996	1.00	120.00	120.00	0.989	0.989	1.00
70	19:33	1.00	1.003	1.00	120.00	120.00	1.102	1.102	1.00
71	19:27	1.00	0.997	1.00	120.00	120.00	0.154	0.154	1.00
72	19:34	1.00	1.003	1.00	120.00	120.00	1.145	1.145	1.00
73	21:00	1.00	0.896	1.00	120.00	120.00	2.240	2.240	1.00
74	22:12	1.00	0.947	1.00	120.00	120.00	1.298	1.298	1.00
75	22:16	1.00	0.950	1.00	120.00	120.00	0.928	0.928	1.00
76	23:16	1.00	0.992	1.00	120.00	120.00	1.019	1.019	1.00
77	28:11	1.00	1.202	1.00	120.00	120.00	0.469	0.469	1.00
78	28:16	1.00	1.205	1.00	120.00	120.00	0.663	0.663	1.00
79	29:37	1.00	1.263	1.00	120.00	120.00	0.697	0.697	1.00
80	2:29	1.00	0.454	1.00	120.00	120.00	0.879	0.879	1.00
81	14:30	1.00	1.037	1.00	120.00	120.00	0.815	0.815	1.00
82	5:59	1.00	1.095	1.00	120.00	120.00	1.750	1.750	1.00

MASS CHROMATOGRAM DATA: W5571 #1 SCANS 700 TO 775
04/30/92 13:07:00 CALI: W5571 #2
SAMPLE: CLP,STAND,SSTD-120,,,30014,B,IC-120,1UL,
CONDS.: CAP/.32,W5571,W5569
C595 4-NITROANILINE
RANGE: G 1,1860 LABEL: N 2, 3.0 QUAN: A 2, 3.0 J 0 BASE: U 20, 3



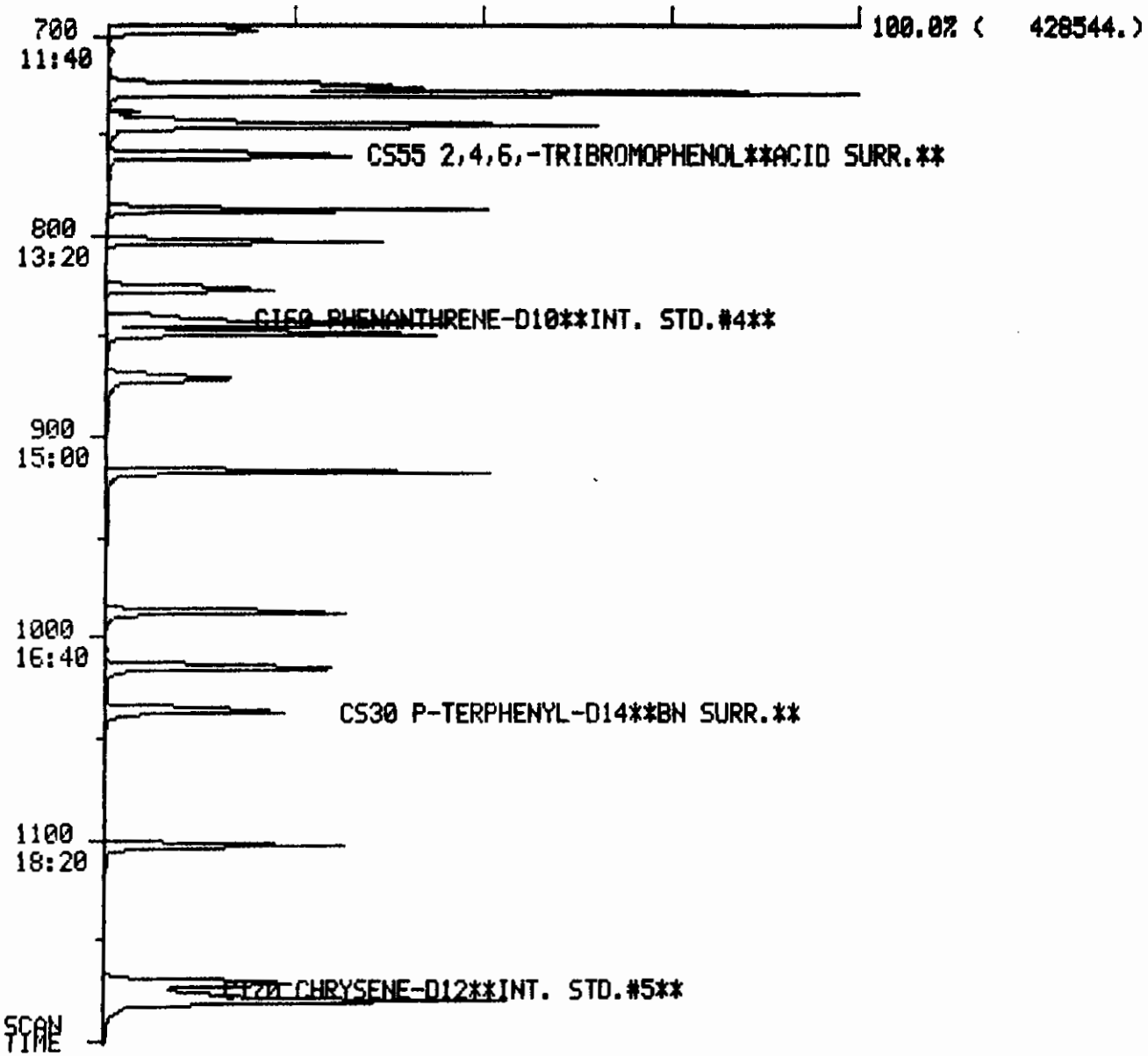
100135

DATA FROM FILE: W5570 SCANS 210 TO 700 ACQUIRED: 04/30/92 12:27:00
CALI: W5570 #2
SAMPLE: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
CONDS.: CAP/.32,W5569,W5568



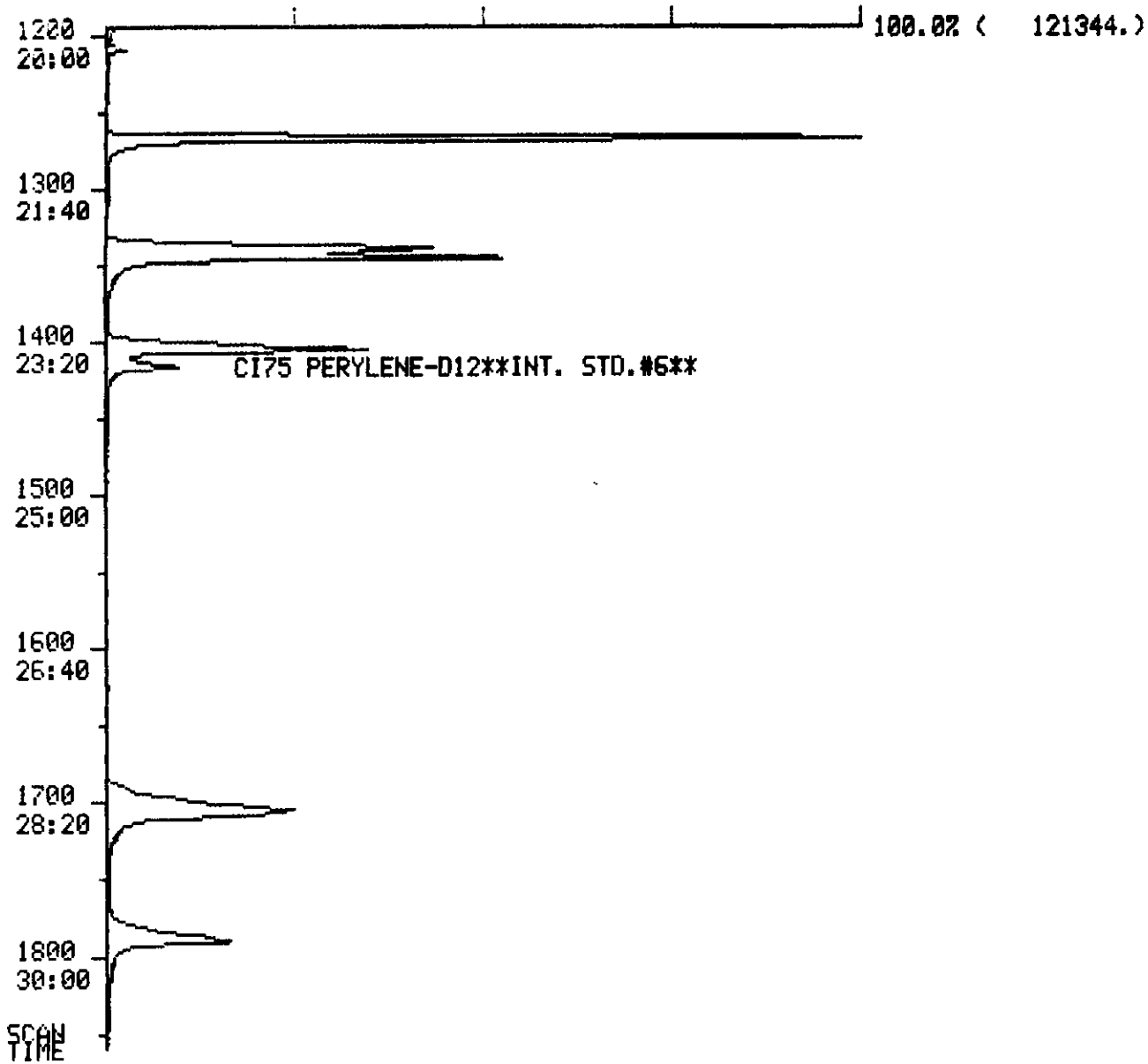
100130

DATA FROM FILE: W5570 SCANS 695 TO 1200 ACQUIRED: 04/30/92 12:27:00
CALI: W5570 #2
SAMPLE: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
CONDS.: CAP/.32,W5569,W5568



100137

DATA FROM FILE: W5570 SCANS 1195 TO 1860 ACQUIRED: 04/30/92 12:27:00
CALI: W5570 #2
SAMPLE: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
CONDS.: CAP/.32,W5569,W5568



100130

Quantitation Report File: W5570

Data: W5570.TI
4/30/92 12:27:00
Sample: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
Conds.: CAP/.32,W5569,W5568
Formula: Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: EDG Acct. No.: --

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	327	5:27	1	1.000	A BB	14767.	40.000 NG/UL	0.32
2	136	459	7:39	2	1.000	A BB	51949.	40.000 NG/UL	0.32
3	164	663	11:03	3	1.000	A BB	22720.	40.000 NG/UL	0.32
4	188	840	14:00	4	1.000	A BB	31582.	40.000 NG/UL	0.32
5	240	1174	19:34	5	1.000	A BB	23107.	40.000 NG/UL	0.32
6	264	1415	23:35	6	1.000	A BB	19393.	40.000 NG/UL	0.32
7	112	225	3:45	1	0.688	A BB	112870.	160.000 NG*A1	1.29
8	99	300	5:00	1	0.917	A BB	126220.	160.000 NG*A2	1.29
9	82	387	6:27	2	0.843	A BB	106990.	160.000 NG*B1	1.29
10	172	585	9:45	3	0.882	A BB	124337.	160.000 NG*B2	1.29
11	330	759	12:39	3	1.145	A BB	25132.	160.000 NG*A3	1.29
12	244	1036	17:16	5	0.882	A BB	78921.	160.000 NG*B3	1.29
13	132	310	5:10	1	0.948	A BB	90596.	160.000 NG*A4	1.29
14	152	346	5:46	1	1.058	A BB	55862.	160.000 NG*B4	1.29
15	128	312	5:12	1	0.954	A BB	77211.	160.000 NG.	1.29
16	94	301	5:01	1	0.920	A BV	94247.	160.000 NG.	1.29
17	93	308	5:08	1	0.942	A BB	87349.	160.000 NG	1.29
18	146	324	5:24	1	0.991	A BV	84775.	160.000 NG	1.29
19	146	329	5:29	1	1.006	A VB	90750.	160.000 NG.	1.29
20	146	347	5:47	1	1.061	A BB	81231.	160.000 NG	1.29
21	108	345	5:45	1	1.055	A BB	44918.	160.000 NG	1.29
22	45	358	5:58	1	1.095	A BB	97923.	160.000 NG	1.29
23	108	356	5:56	1	1.089	A BB	65932.	160.000 NG	1.29
24	117	376	6:16	1	1.150	A BB	43783.	160.000 NG	1.29
25	108	371	6:11	1	1.135	A BB	71897.	160.000 NG	1.29
26	70	376	6:16	1	1.150	A BV	73309.	160.000 NG.	1.29
27	77	389	6:29	2	0.847	A BB	105032.	160.000 NG	1.29
28	82	414	6:54	2	0.902	A BV	213859.	160.000 NG	1.29
29	139	422	7:02	2	0.919	A VB	38645.	160.000 NG	1.29
30	107	426	7:06	2	0.928	A BB	87355.	160.000 NG	1.29
31	93	437	7:17	2	0.952	A BB	105290.	160.000 NG	1.29
32	162	446	7:26	2	0.972	A BB	58349.	160.000 NG	1.29
33	180	455	7:35	2	0.991	A BB	67684.	160.000 NG.	1.29
34	128	462	7:42	2	1.007	A BB	224178.	160.000 NG	1.29
35	122	448	7:28	2	0.976	A VV	41149.	160.000 NG	1.29
36	127	472	7:52	2	1.028	A BB	58550.	160.000 NG	1.29
37	225	480	8:00	2	1.046	A BB	38501.	160.000 NG	1.29
38	107	527	8:47	2	1.148	A BB	72108.	160.000 NG.	1.29
39	142	539	8:59	2	1.174	A BB	127851.	160.000 NG	1.29
40	237	564	9:24	3	0.851	A BB	34712.	160.000 NG	1.29
41	196	576	9:36	3	0.869	A BV	34276.	160.000 NG	1.29
42	196	580	9:40	3	0.875	A VB	36186.	160.000 NG	1.29
43	162	596	9:56	3	0.899	A BB	117003.	160.000 NG	1.29
44	65	616	10:16	3	0.929	A BB	51937.	160.000 NG	1.29
45	152	645	10:45	3	0.973	A BB	187043.	160.000 NG	1.29
46	163	641	10:41	3	0.967	A BB	134976.	160.000 NG	1.29
47	165	650	10:50	3	0.980	A BB	30501.	160.000 NG	1.29
48	153	668	11:08	3	1.008	A BB	120300.	160.000 NG.	1.29
49	138	667	11:07	3	1.006	A BV	19940.	160.000 NG	1.29
50	184	679	11:19	3	1.024	A BB	16415.	160.000 NG	1.29

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:27	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:39	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:03	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	14:00	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:35	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:45	1.00	0.688	1.00	160.00	160.00	1.911	1.911	1.00
8	5:00	1.00	0.917	1.00	160.00	160.00	2.137	2.137	1.00
9	6:27	1.00	0.843	1.00	160.00	160.00	0.515	0.515	1.00
10	9:45	1.00	0.882	1.00	160.00	160.00	1.368	1.368	1.00
11	12:39	1.00	1.145	1.00	160.00	160.00	0.277	0.277	1.00
12	17:16	1.00	0.882	1.00	160.00	160.00	0.854	0.854	1.00
13	5:10	1.00	0.948	1.00	160.00	160.00	1.534	1.534	1.00
14	5:46	1.00	1.058	1.00	160.00	160.00	0.946	0.946	1.00
15	5:12	1.00	0.954	1.00	160.00	160.00	1.307	1.307	1.00
16	5:01	1.00	0.920	1.00	160.00	160.00	1.596	1.596	1.00
17	5:08	1.00	0.942	1.00	160.00	160.00	1.479	1.479	1.00
18	5:24	1.00	0.991	1.00	160.00	160.00	1.435	1.435	1.00
19	5:29	1.00	1.006	1.00	160.00	160.00	1.536	1.536	1.00
20	5:47	1.00	1.061	1.00	160.00	160.00	1.375	1.375	1.00
21	5:45	1.00	1.055	1.00	160.00	160.00	0.760	0.760	1.00
22	5:58	1.00	1.095	1.00	160.00	160.00	1.658	1.658	1.00
23	5:56	1.00	1.089	1.00	160.00	160.00	1.116	1.116	1.00
24	6:16	1.00	1.150	1.00	160.00	160.00	0.741	0.741	1.00
25	6:11	1.00	1.135	1.00	160.00	160.00	1.217	1.217	1.00
26	6:16	1.00	1.150	1.00	160.00	160.00	1.241	1.241	1.00
27	6:29	1.00	0.847	1.00	160.00	160.00	0.505	0.505	1.00
28	6:54	1.00	0.902	1.00	160.00	160.00	1.029	1.029	1.00
29	7:02	1.00	0.919	1.00	160.00	160.00	0.186	0.186	1.00
30	7:06	1.00	0.928	1.00	160.00	160.00	0.420	0.420	1.00
31	7:17	1.00	0.952	1.00	160.00	160.00	0.507	0.507	1.00
32	7:26	1.00	0.972	1.00	160.00	160.00	0.281	0.281	1.00
33	7:35	1.00	0.991	1.00	160.00	160.00	0.326	0.326	1.00
34	7:42	1.00	1.007	1.00	160.00	160.00	1.079	1.079	1.00
35	7:28	1.00	0.976	1.00	160.00	160.00	0.198	0.198	1.00
36	7:52	1.00	1.028	1.00	160.00	160.00	0.282	0.282	1.00
37	8:00	1.00	1.046	1.00	160.00	160.00	0.185	0.185	1.00
38	8:47	1.00	1.148	1.00	160.00	160.00	0.347	0.347	1.00
39	8:59	1.00	1.174	1.00	160.00	160.00	0.615	0.615	1.00
40	9:24	1.00	0.851	1.00	160.00	160.00	0.382	0.382	1.00
41	9:36	1.00	0.869	1.00	160.00	160.00	0.377	0.377	1.00
42	9:40	1.00	0.875	1.00	160.00	160.00	0.398	0.398	1.00
43	9:56	1.00	0.899	1.00	160.00	160.00	1.287	1.287	1.00
44	10:16	1.00	0.929	1.00	160.00	160.00	0.571	0.571	1.00
45	10:45	1.00	0.973	1.00	160.00	160.00	2.058	2.058	1.00
46	10:41	1.00	0.967	1.00	160.00	160.00	1.485	1.485	1.00
47	10:50	1.00	0.980	1.00	160.00	160.00	0.336	0.336	1.00
48	11:08	1.00	1.008	1.00	160.00	160.00	1.324	1.324	1.00
49	11:07	1.00	1.006	1.00	160.00	160.00	0.219	0.219	1.00
50	11:19	1.00	1.024	1.00	160.00	160.00	0.181	0.181	1.00

Quantitation Report File: W5570

Data: W5570.TI
)4/30/92 12:27:00
Sample: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
Conds.: CAP/.32,W5569,W5568
Formula: Instrument: W Weight: 0.028
Submitted by: VERSAR Analyst: EDG Acct. No.: --

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

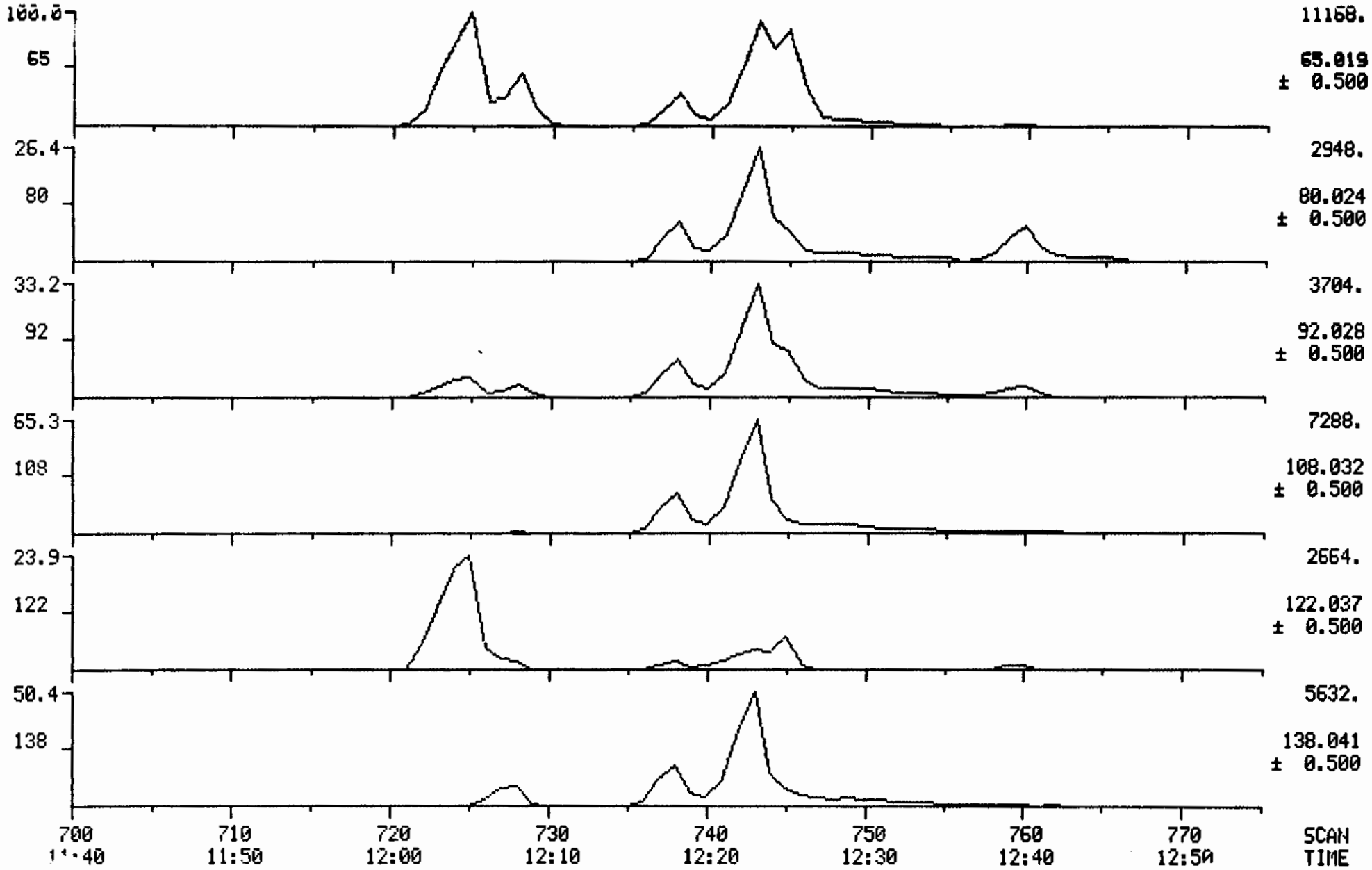
No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2' -OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	686	11:26	3	1.035	A BB	158188.	160.000 NG	1.29
52	109	689	11:29	3	1.039	A BB	31496.	160.000 NG.	1.29
53	165	696	11:36	3	1.050	A BB	45373.	160.000 NG.	1.29
54	166	727	12:07	3	1.097	A BB	116536.	160.000 NG	1.29
55	204	728	12:08	3	1.098	A BB	57571.	160.000 NG	1.29
56	149	725	12:05	3	1.094	A BB	166281.	160.000 NG	1.29
57	138	743	12:23	3	1.121	M XX	21376.	160.000 NG	1.29
58	198	745	12:25	4	0.887	A BB	20462.	160.000 NG	1.29
59	169	745	12:25	4	0.887	A BB	78758.	160.000 NG	1.29
60	248	786	13:06	4	0.936	A BB	32029.	160.000 NG	1.29
61	284	802	13:22	4	0.955	A BB	38792.	160.000 NG	1.29

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	266	825	13:45	4	0.982	A BB	20575.	160.000 NG.	1.29
63	178	843	14:03	4	1.004	A BV	156007.	160.000 NG	1.29
64	178	848	14:08	4	1.010	A VB	158953.	160.000 NG	1.29
65	149	917	15:17	4	1.092	A BB	210056.	160.000 NG	1.29
66	202	987	16:27	4	1.175	A BB	132700.	160.000 NG	1.29
67	202	1014	16:54	5	0.864	A BB	134523.	160.000 NG.	1.29
68	149	1102	18:22	5	0.939	A BV	78943.	160.000 NG	1.29
69	228	1170	19:30	5	0.997	A BV	90504.	160.000 NG	1.29
70	228	1178	19:38	5	1.003	A VB	99687.	160.000 NG	1.29
71	252	1172	19:32	5	0.998	A BB	12802.	160.000 NG	1.29
72	149	1180	19:40	5	1.005	A VB	105407.	160.000 NG	1.29
73	149	1268	21:08	6	0.896	A BB	170217.	160.000 NG	1.29
74	252	1339	22:19	6	0.946	A BV	89165.	160.000 NG	1.29
75	252	1344	22:24	6	0.950	A VB	78411.	160.000 NG	1.29
76	252	1404	23:24	6	0.992	A BB	77610.	160.000 NG	1.29
77	276	1703	28:23	6	1.204	A BB	61093.	160.000 NG	1.29
78	278	1706	28:26	6	1.206	A BB	50549.	160.000 NG	1.29
79	276	1789	29:49	6	1.264	A BB	53766.	160.000 NG	1.29
80	74	149	2:29	1	0.456	A BB	51892.	160.000 NG	1.29
81	167	870	14:30	4	1.036	A BB	100903.	160.000 NG	1.29
82	45	358	5:58	1	1.095	A BB	97923.	160.000 NG	1.29

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:26	1.00	1.035	1.00	160.00	160.00	1.741	1.741	1.00
52	11:29	1.00	1.039	1.00	160.00	160.00	0.347	0.347	1.00
53	11:36	1.00	1.050	1.00	160.00	160.00	0.499	0.499	1.00
54	12:07	1.00	1.097	1.00	160.00	160.00	1.282	1.282	1.00
55	12:08	1.00	1.098	1.00	160.00	160.00	0.633	0.633	1.00
56	12:05	1.00	1.094	1.00	160.00	160.00	1.830	1.830	1.00
57	12:23	1.00	1.121	1.00	160.00	160.00	0.235	0.235	1.00
58	12:25	1.00	0.887	1.00	160.00	160.00	0.162	0.162	1.00
59	12:25	1.00	0.887	1.00	160.00	160.00	0.623	0.623	1.00
60	13:06	1.00	0.936	1.00	160.00	160.00	0.254	0.254	1.00
61	13:22	1.00	0.955	1.00	160.00	160.00	0.307	0.307	1.00
62	13:45	1.00	0.982	1.00	160.00	160.00	0.163	0.163	1.00
63	14:03	1.00	1.004	1.00	160.00	160.00	1.235	1.235	1.00
64	14:08	1.00	1.010	1.00	160.00	160.00	1.258	1.258	1.00
65	15:17	1.00	1.092	1.00	160.00	160.00	1.663	1.663	1.00
66	16:27	1.00	1.175	1.00	160.00	160.00	1.050	1.050	1.00
67	16:54	1.00	0.864	1.00	160.00	160.00	1.455	1.455	1.00
68	18:22	1.00	0.939	1.00	160.00	160.00	0.854	0.854	1.00
69	19:30	1.00	0.997	1.00	160.00	160.00	0.979	0.979	1.00
70	19:38	1.00	1.003	1.00	160.00	160.00	1.079	1.079	1.00
71	19:32	1.00	0.998	1.00	160.00	160.00	0.139	0.139	1.00
72	19:40	1.00	1.005	1.00	160.00	160.00	1.140	1.140	1.00
73	21:08	1.00	0.896	1.00	160.00	160.00	2.194	2.194	1.00
74	22:19	1.00	0.946	1.00	160.00	160.00	1.149	1.149	1.00
75	22:24	1.00	0.950	1.00	160.00	160.00	1.011	1.011	1.00
76	23:24	1.00	0.992	1.00	160.00	160.00	1.000	1.000	1.00
77	28:23	1.00	1.204	1.00	160.00	160.00	0.788	0.788	1.00
78	28:26	1.00	1.206	1.00	160.00	160.00	0.652	0.652	1.00
79	29:49	1.00	1.264	1.00	160.00	160.00	0.693	0.693	1.00
80	2:29	1.00	0.456	1.00	160.00	160.00	0.879	0.879	1.00
81	14:30	1.00	1.036	1.00	160.00	160.00	0.799	0.799	1.00
82	5:58	1.00	1.095	1.00	160.00	160.00	1.658	1.658	1.00

MASS CHROMATOGRAMS DATA: W5570 #743 SCANS 700 TO 775
04/30/92 12:27:00 CALI: W5570 #2
SAMPLE: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
CONDS.: CAP/.32,W5569,W5568
C595 4-NITROANILINE
RANGE: G 1,1850 LABEL: N 2, 3.0 QUAN: A 2, 3.0 J 0 BASE: U 20, 3

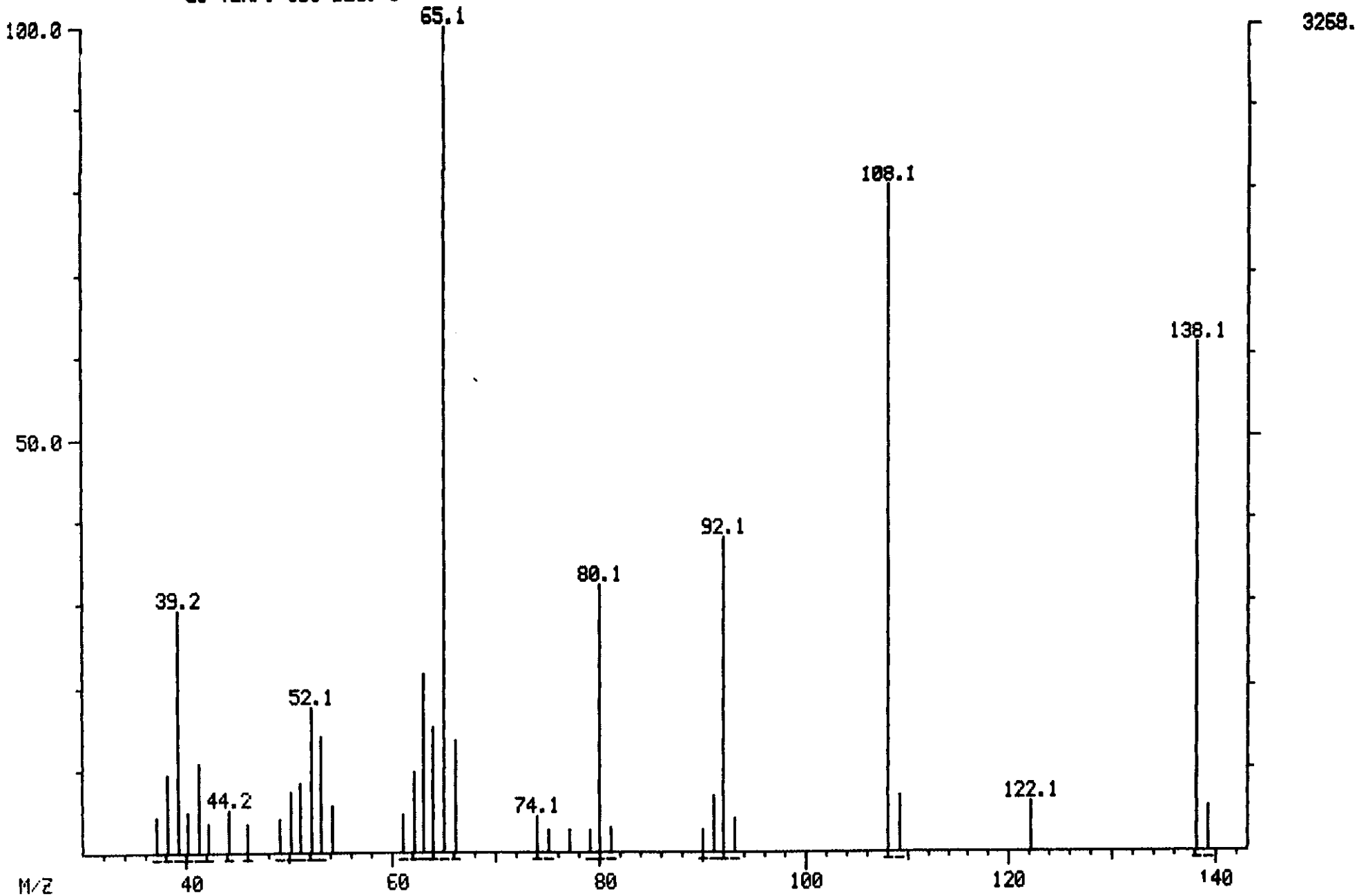


MASS SPECTRUM
04/30/92 12:27:00 + 12:18
SAMPLE: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
CONDS.: CAP/.32,W5569,W5568
GC TEMP: 196 DEG. C

DATA: W5570 #738
CALI: W5570 #2

BASE M/Z: 65
RIC: 18048.

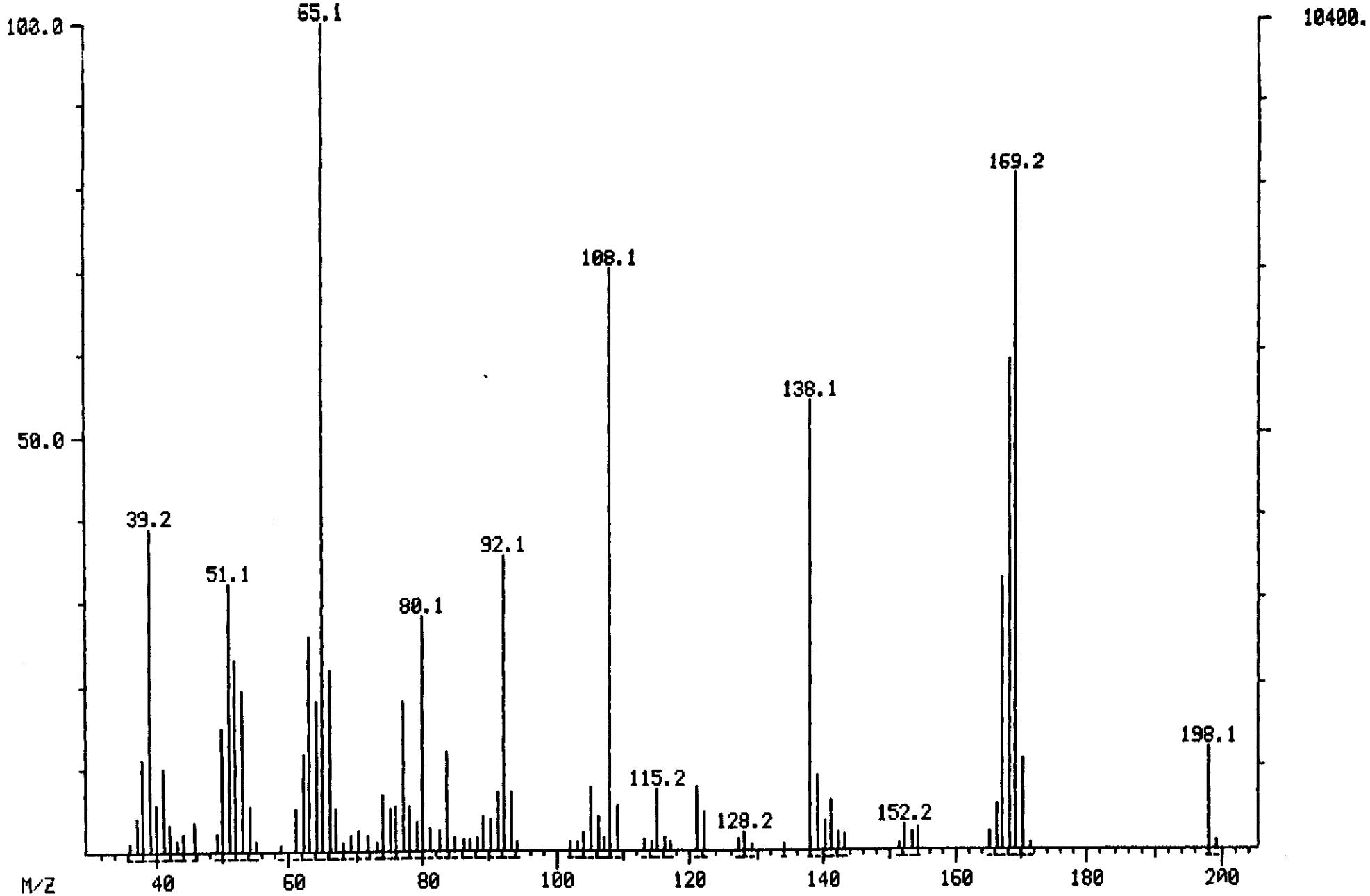
100145



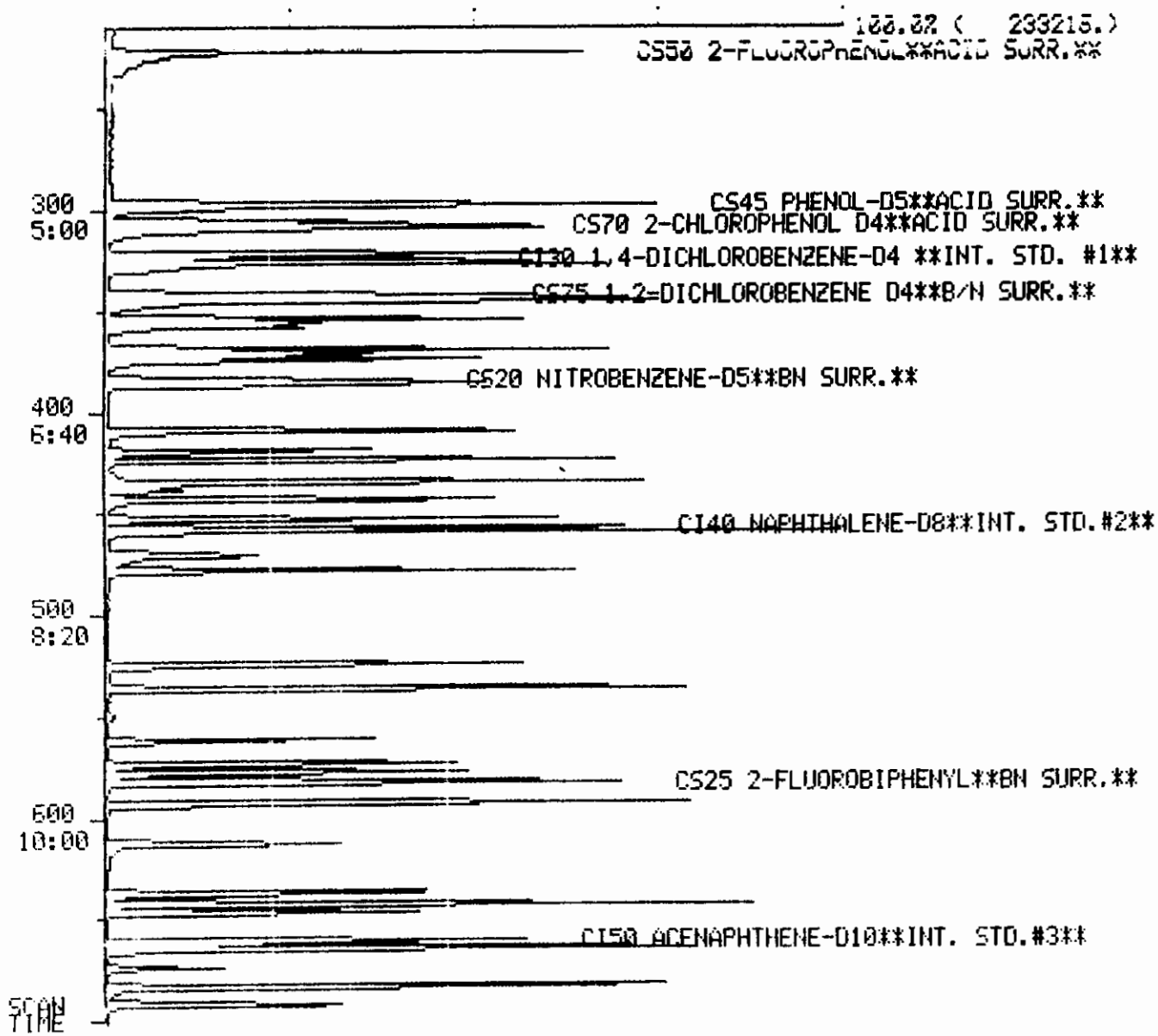
MASS SPECTRUM
04/30/92 12:27:00 + 12:23
SAMPLE: CLP,STAND,,SSTD-160,,,30013,B,IC-160,1UL
CONDS.: CAP/.32,W5569,W5568
GC TEMP: 197 DEG. C

DATA: W5570 #743
CALI: W5570 #2

BASE M/Z: 65
RIC: 98176.

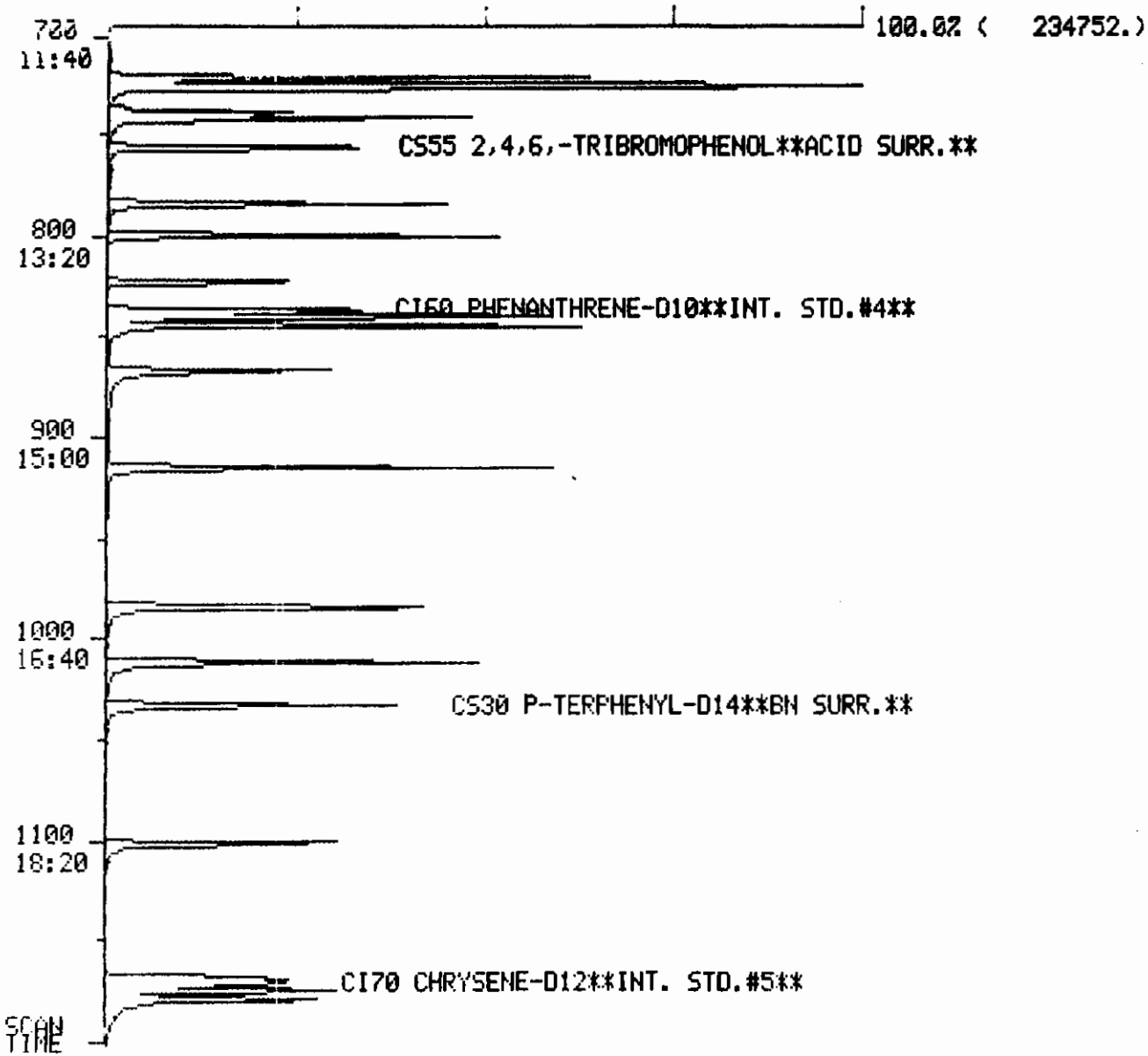


DATA FROM FILE: W5621 SCANS 210 TO 700 ACQUIRED: 05/05/92 11:21:00
CALI: W5621 #2
SAMPLE: CLP,STAND,SSTD-50,,,30017,B,CC-050,1UL,
CONDS.: CAP/.32,W5621,W5620,



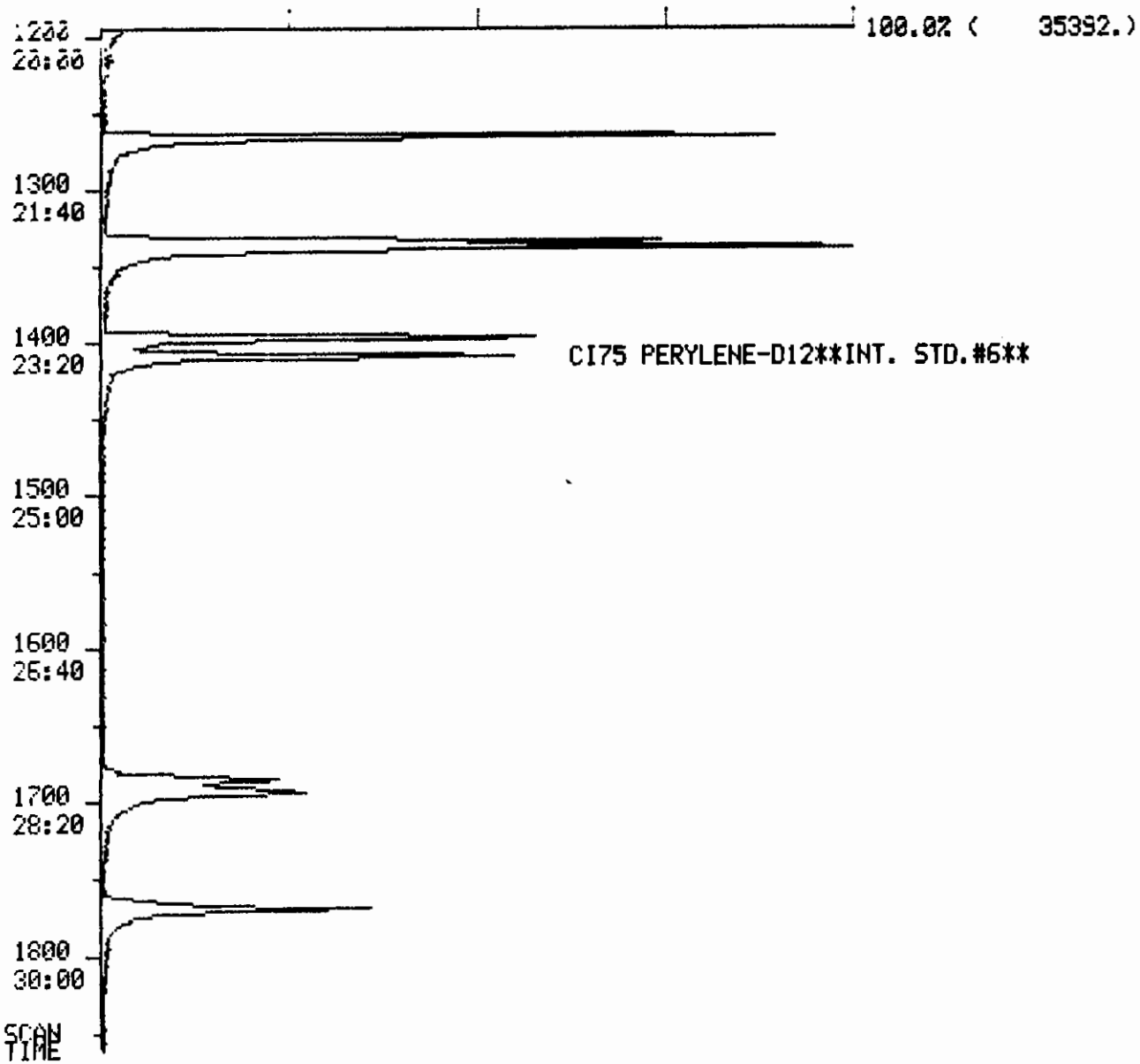
100147

DATA FROM FILE: W5621 SCANS 695 TO 1200 ACQUIRED: 05/05/92 11:21:00
CALI: W5621 #2
SAMPLE: CLP,STAND,SSTD-50,,,30017,B,CC-050,1UL,
CONDS.: CAP/.32,W5621,W5620,



100146

DATA FROM FILE: W5621 SCANS 1195 TO 1860 ACQUIRED: 05/05/92 11:21:00
CALI: W5621 #2
SAMPLE: CLP,STAND,SSTD-50,,,30017,B,CC-050,1UL,
CONDS.: CAP/.32,W5621,W5620,



100143

Quantitation Report File: W5621

ata: W5621.TI
05/05/92 11:21:00
Sample: CLP,STAND,SSTD-50,,,30017,B,CC-050,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

W5621

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	324	5:24	1	1.000	A BB	26814.	40.000 NG/UL	0.99
2	136	456	7:36	2	1.000	A BB	95941.	40.000 NG/UL	0.99
3	164	660	11:00	3	1.000	A BB	41313.	40.000 NG/UL	0.99
4	188	835	13:55	4	1.000	A BB	61924.	40.000 NG/UL	0.99
5	240	1170	19:30	5	1.000	A BB	36460.	40.000 NG/UL	0.99
6	264	1408	23:28	6	1.000	A BB	26186.	40.000 NG/UL	0.99
7	112	221	3:41	1	0.682	A BB	71179.	50.000 NG*A1	1.24
8	99	296	4:56	1	0.914	A BB	78397.	50.000 NG*A2	1.24
9	82	383	6:23	2	0.840	A BB	59285.	50.000 NG*B1	1.24
10	172	582	9:42	3	0.882	A BB	76865.	50.000 NG*B2	1.24
11	330	755	12:35	3	1.144	A BB	12978.	50.000 NG*A3	1.24
12	244	1032	17:12	5	0.882	A BB	52680.	50.000 NG*B3	1.24
13	132	307	5:07	1	0.948	A BB	54008.	50.000 NG*A4	1.24
14	152	342	5:42	1	1.056	A BB	31406.	50.000 NG*B4	1.24
15	128	308	5:08	1	0.951	A BB	47425.	50.000 NG.	1.24
16	94	297	4:57	1	0.917	A BV	58796.	50.000 NG.	1.24
17	93	305	5:05	1	0.941	A BB	54185.	50.000 NG	1.24
18	146	321	5:21	1	0.991	A BV	48976.	50.000 NG	1.24
19	146	326	5:26	1	1.006	A VB	55022.	50.000 NG.	1.24
20	146	344	5:44	1	1.062	A BB	47778.	50.000 NG	1.24
21	108	341	5:41	1	1.052	A BV	27018.	50.000 NG	1.24
22	45	355	5:55	1	1.096	A BB	49919.	50.000 NG	1.24
23	108	353	5:53	1	1.090	A VB	39913.	50.000 NG	1.24
24	117	373	6:13	1	1.151	A BB	27212.	50.000 NG	1.24
25	108	368	6:08	1	1.136	A BB	42208.	50.000 NG	1.24
26	70	370	6:10	1	1.142	A BB	41116.	50.000 NG.	1.24
27	77	385	6:25	2	0.844	A BB	61878.	50.000 NG	1.24
28	82	409	6:49	2	0.897	A BB	118878.	50.000 NG	1.24
29	139	418	6:58	2	0.917	A BB	21183.	50.000 NG	1.24
30	107	423	7:03	2	0.928	A BB	50770.	50.000 NG	1.24
31	93	434	7:14	2	0.952	A BB	65413.	50.000 NG	1.24
32	162	442	7:22	2	0.969	A BB	31940.	50.000 NG	1.24
33	180	452	7:32	2	0.991	A BB	38318.	50.000 NG.	1.24
34	128	458	7:38	2	1.004	A BB	134244.	50.000 NG	1.24
35	122	438	7:18	2	0.961	A VV	17919.	50.000 NG	1.24
36	127	469	7:49	2	1.029	A BB	34920.	50.000 NG	1.24
37	225	477	7:57	2	1.046	A BB	23464.	50.000 NG	1.24
38	107	524	8:44	2	1.149	A BB	41186.	50.000 NG.	1.24
39	142	536	8:56	2	1.175	A BB	80168.	50.000 NG	1.24
40	237	561	9:21	3	0.850	A BB	13730.	50.000 NG	1.24
41	196	573	9:33	3	0.868	A BV	18915.	50.000 NG	1.24
42	196	577	9:37	3	0.874	A VB	19595.	50.000 NG	1.24
43	162	592	9:52	3	0.897	A BB	67057.	50.000 NG	1.24
44	65	612	10:12	3	0.927	A BB	24638.	50.000 NG	1.24
45	152	642	10:42	3	0.973	A BB	113092.	50.000 NG	1.24
46	163	636	10:36	3	0.964	A BB	76722.	50.000 NG	1.24
47	165	646	10:46	3	0.979	A BB	15497.	50.000 NG	1.24
48	153	664	11:04	3	1.006	A BB	74319.	50.000 NG.	1.24
49	138	662	11:02	3	1.003	A BB	8120.	50.000 NG	1.24
50	184	673	11:13	3	1.020	A BB	6294.	50.000 NG	1.24

W5621

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:24	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:36	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:00	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:55	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:28	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:41	1.00	0.682	1.00	50.00	50.00	2.124	2.124	1.00
8	4:56	1.00	0.914	1.00	50.00	50.00	2.339	2.339	1.00
9	6:23	1.00	0.840	1.00	50.00	50.00	0.494	0.494	1.00
10	9:42	1.00	0.882	1.00	50.00	50.00	1.488	1.488	1.00
11	12:35	1.00	1.144	1.00	50.00	50.00	0.251	0.251	1.00
12	17:12	1.00	0.882	1.00	50.00	50.00	1.156	1.156	1.00
13	5:07	1.00	0.948	1.00	50.00	50.00	1.611	1.611	1.00
14	5:42	1.00	1.056	1.00	50.00	50.00	0.937	0.937	1.00
15	5:08	1.00	0.951	1.00	50.00	50.00	1.415	1.415	1.00
16	4:57	1.00	0.917	1.00	50.00	50.00	1.754	1.754	1.00
17	5:05	1.00	0.941	1.00	50.00	50.00	1.617	1.617	1.00
18	5:21	1.00	0.991	1.00	50.00	50.00	1.461	1.461	1.00
19	5:26	1.00	1.006	1.00	50.00	50.00	1.642	1.642	1.00
20	5:44	1.00	1.062	1.00	50.00	50.00	1.425	1.425	1.00
21	5:41	1.00	1.052	1.00	50.00	50.00	0.806	0.806	1.00
22	5:55	1.00	1.096	1.00	50.00	50.00	1.489	1.489	1.00
23	5:53	1.00	1.090	1.00	50.00	50.00	1.191	1.191	1.00
24	6:13	1.00	1.151	1.00	50.00	50.00	0.812	0.812	1.00
25	6:08	1.00	1.136	1.00	50.00	50.00	1.259	1.259	1.00
26	6:10	1.00	1.142	1.00	50.00	50.00	1.227	1.227	1.00
27	6:25	1.00	0.844	1.00	50.00	50.00	0.516	0.516	1.00
28	6:49	1.00	0.897	1.00	50.00	50.00	0.991	0.991	1.00
29	6:58	1.00	0.917	1.00	50.00	50.00	0.177	0.177	1.00
30	7:03	1.00	0.928	1.00	50.00	50.00	0.423	0.423	1.00
31	7:14	1.00	0.952	1.00	50.00	50.00	0.545	0.545	1.00
32	7:22	1.00	0.969	1.00	50.00	50.00	0.266	0.266	1.00
33	7:32	1.00	0.991	1.00	50.00	50.00	0.320	0.320	1.00
34	7:38	1.00	1.004	1.00	50.00	50.00	1.119	1.119	1.00
35	7:18	1.00	0.961	1.00	50.00	50.00	0.149	0.149	1.00
36	7:49	1.00	1.029	1.00	50.00	50.00	0.291	0.291	1.00
37	7:57	1.00	1.046	1.00	50.00	50.00	0.196	0.196	1.00
38	8:44	1.00	1.149	1.00	50.00	50.00	0.343	0.343	1.00
39	8:56	1.00	1.175	1.00	50.00	50.00	0.668	0.668	1.00
40	9:21	1.00	0.850	1.00	50.00	50.00	0.266	0.266	1.00
41	9:33	1.00	0.868	1.00	50.00	50.00	0.366	0.366	1.00
42	9:37	1.00	0.874	1.00	50.00	50.00	0.379	0.379	1.00
43	9:52	1.00	0.897	1.00	50.00	50.00	1.299	1.299	1.00
44	10:12	1.00	0.927	1.00	50.00	50.00	0.477	0.477	1.00
45	10:42	1.00	0.973	1.00	50.00	50.00	2.190	2.190	1.00
46	10:36	1.00	0.964	1.00	50.00	50.00	1.486	1.486	1.00
47	10:46	1.00	0.979	1.00	50.00	50.00	0.300	0.300	1.00
48	11:04	1.00	1.006	1.00	50.00	50.00	1.439	1.439	1.00
49	11:02	1.00	1.003	1.00	50.00	50.00	0.157	0.157	1.00
50	11:13	1.00	1.020	1.00	50.00	50.00	0.122	0.122	1.00

Quantitation Report File: W5621

Data: W5621.TI
05/05/92 11:21:00
Sample: CLP,STAND,SSTD-50,,,30017,B,CC-050,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2'-OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	682	11:22	3	1.033	A BB	96430.	50.000 NG	1.24
52	109	683	11:23	3	1.035	A BB	14820.	50.000 NG.	1.24
53	165	691	11:31	3	1.047	A BB	22237.	50.000 NG.	1.24
54	166	723	12:03	3	1.095	A BB	71064.	50.000 NG	1.24
55	204	724	12:04	3	1.097	A BB	32656.	50.000 NG	1.24
56	149	720	12:00	3	1.091	A BB	93835.	50.000 NG	1.24
57	138	738	12:18	3	1.118	A BB	7663.	50.000 NG	1.24
58	198	738	12:18	4	0.884	A BB	9690.	50.000 NG	1.24
59	169	741	12:21	4	0.887	A BV	47373.	50.000 NG	1.24
60	248	782	13:02	4	0.937	A BB	17005.	50.000 NG	1.24
61	284	799	13:19	4	0.957	A BB	22746.	50.000 NG	1.24

W5621.

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	266	821	13:41	4	0.983	A BB	9927.	50.000 NG.	1.24
63	178	839	13:59	4	1.005	A BV	92730.	50.000 NG	1.24
64	178	844	14:04	4	1.011	A VB	101116.	50.000 NG	1.24
65	149	914	15:14	4	1.095	A BB	135059.	50.000 NG	1.24
66	202	983	16:23	4	1.177	A BB	87055.	50.000 NG	1.24
67	202	1011	16:51	5	0.864	A BB	90666.	50.000 NG.	1.24
68	149	1100	18:20	5	0.940	A BB	43616.	50.000 NG	1.24
69	228	1167	19:27	5	0.997	A BV	48682.	50.000 NG	1.24
70	228	1174	19:34	5	1.003	A VB	55817.	50.000 NG	1.24
71	252	1169	19:29	5	0.999	A BB	6106.	50.000 NG	1.24
72	149	1178	19:38	5	1.007	A VB	50203.	50.000 NG	1.24
73	149	1266	21:06	6	0.899	A BB	58969.	50.000 NG	1.24
74	252	1333	22:13	6	0.947	A BV	34218.	50.000 NG	1.24
75	252	1337	22:17	6	0.950	A VB	45175.	50.000 NG	1.24
76	252	1396	23:16	6	0.991	A BV	32789.	50.000 NG	1.24
77	276	1684	28:04	6	1.196	A BV	20342.	50.000 NG	1.24
78	278	1692	28:12	6	1.202	A BB	19246.	50.000 NG	1.24
79	276	1769	29:29	6	1.256	A BB	23928.	50.000 NG	1.24
80	74	145	2:25	1	0.448	A BB	29249.	50.000 NG	1.24
81	167	866	14:26	4	1.037	A BB	66741.	50.000 NG	1.24
82	45	355	5:55	1	1.096	A BB	49919.	50.000 NG	1.24

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:22	1.00	1.033	1.00	50.00	50.00	1.867	1.867	1.00
52	11:23	1.00	1.035	1.00	50.00	50.00	0.287	0.287	1.00
53	11:31	1.00	1.047	1.00	50.00	50.00	0.431	0.431	1.00
54	12:03	1.00	1.095	1.00	50.00	50.00	1.376	1.376	1.00
55	12:04	1.00	1.097	1.00	50.00	50.00	0.632	0.632	1.00
56	12:00	1.00	1.091	1.00	50.00	50.00	1.817	1.817	1.00
57	12:18	1.00	1.118	1.00	50.00	50.00	0.148	0.148	1.00
58	12:18	1.00	0.884	1.00	50.00	50.00	0.125	0.125	1.00
59	12:21	1.00	0.887	1.00	50.00	50.00	0.612	0.612	1.00
60	13:02	1.00	0.937	1.00	50.00	50.00	0.220	0.220	1.00
61	13:19	1.00	0.957	1.00	50.00	50.00	0.294	0.294	1.00
62	13:41	1.00	0.983	1.00	50.00	50.00	0.128	0.128	1.00
63	13:59	1.00	1.005	1.00	50.00	50.00	1.198	1.198	1.00
64	14:04	1.00	1.011	1.00	50.00	50.00	1.306	1.306	1.00
65	15:14	1.00	1.095	1.00	50.00	50.00	1.745	1.745	1.00
66	16:23	1.00	1.177	1.00	50.00	50.00	1.125	1.125	1.00
67	16:51	1.00	0.864	1.00	50.00	50.00	1.989	1.989	1.00
68	18:20	1.00	0.940	1.00	50.00	50.00	0.957	0.957	1.00
69	19:27	1.00	0.997	1.00	50.00	50.00	1.068	1.068	1.00
70	19:34	1.00	1.003	1.00	50.00	50.00	1.225	1.225	1.00
71	19:29	1.00	0.999	1.00	50.00	50.00	0.134	0.134	1.00
72	19:38	1.00	1.007	1.00	50.00	50.00	1.102	1.102	1.00
73	21:06	1.00	0.899	1.00	50.00	50.00	1.802	1.802	1.00
74	22:13	1.00	0.947	1.00	50.00	50.00	1.045	1.045	1.00
75	22:17	1.00	0.950	1.00	50.00	50.00	1.380	1.380	1.00
76	23:16	1.00	0.991	1.00	50.00	50.00	1.002	1.002	1.00
77	28:04	1.00	1.196	1.00	50.00	50.00	0.621	0.621	1.00
78	28:12	1.00	1.202	1.00	50.00	50.00	0.588	0.588	1.00
79	29:29	1.00	1.256	1.00	50.00	50.00	0.731	0.731	1.00
80	2:25	1.00	0.448	1.00	50.00	50.00	0.873	0.873	1.00
81	14:26	1.00	1.037	1.00	50.00	50.00	0.862	0.862	1.00
82	5:55	1.00	1.096	1.00	50.00	50.00	1.489	1.489	1.00

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERSAR INC. Contract: _____

Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID (Standard): W5621 Date Analyzed: 05/05/92

Instrument ID: W Time Analyzed: 1121

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	26814	5.40	95941	7.60	41313	11.00
	UPPER LIMIT	53628		191882		82626	
	LOWER LIMIT	13407		47970		20656	
	EPA SAMPLE NO.						
01	S-10	33617	5.42	115340	7.60	53411	11.00
02	S-8	29827	5.40	102788	7.58	46433	10.99
03	S-8MS	31468	5.40	113322	7.58	48193	10.99
04	S-8MSD	32760	5.40	114012	7.58	52599	10.99
05	SBLK32	28442	5.40	98710	7.58	42159	10.99

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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 SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID (Standard): W5621 Date Analyzed: 05/05/92

Instrument ID: W Time Analyzed: 1121

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	61924	13.92	36460	19.50	26186	23.47
	UPPER LIMIT	123848		72920		52372	
	LOWER LIMIT	30962		18230		13093	
	EPA SAMPLE NO.						
01	S-10	76333	13.92	55099	19.44	51261	23.45
02	S-8	62976	13.89	44492	19.35	24300	23.24
03	S-8MS	68943	13.90	44271	19.35	28596	23.25
04	S-8MSD	72203	13.90	47094	19.37	30345	23.27
05	SBLK32	60030	13.90	37737	19.40	27607	23.32

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

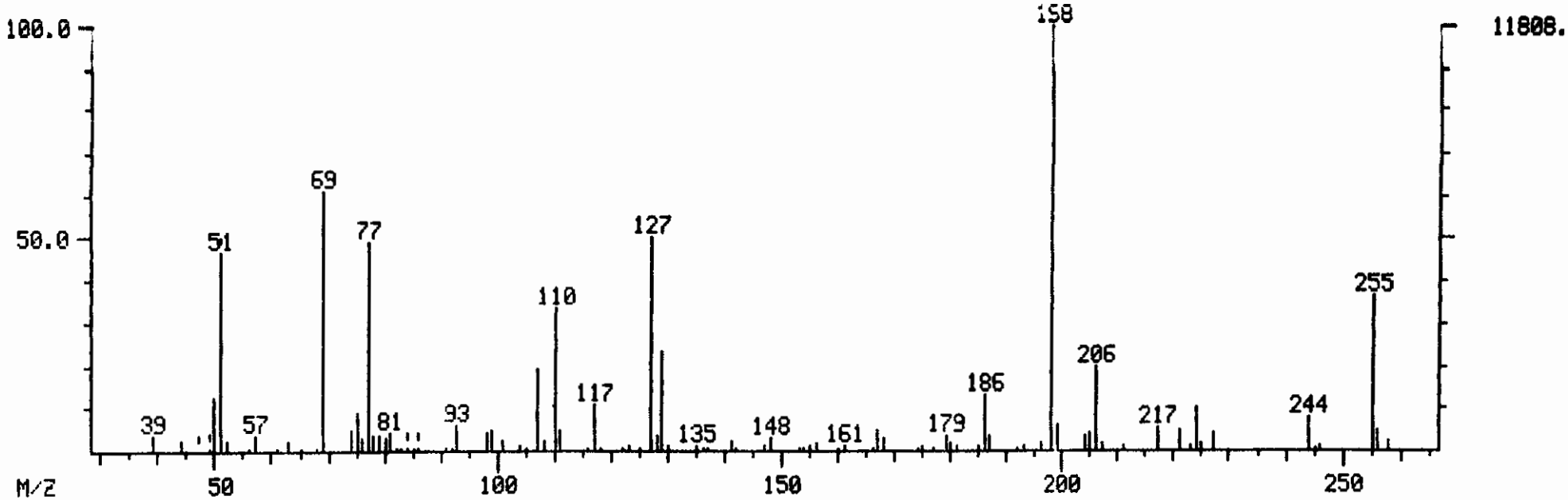
V. RAW QC DATA

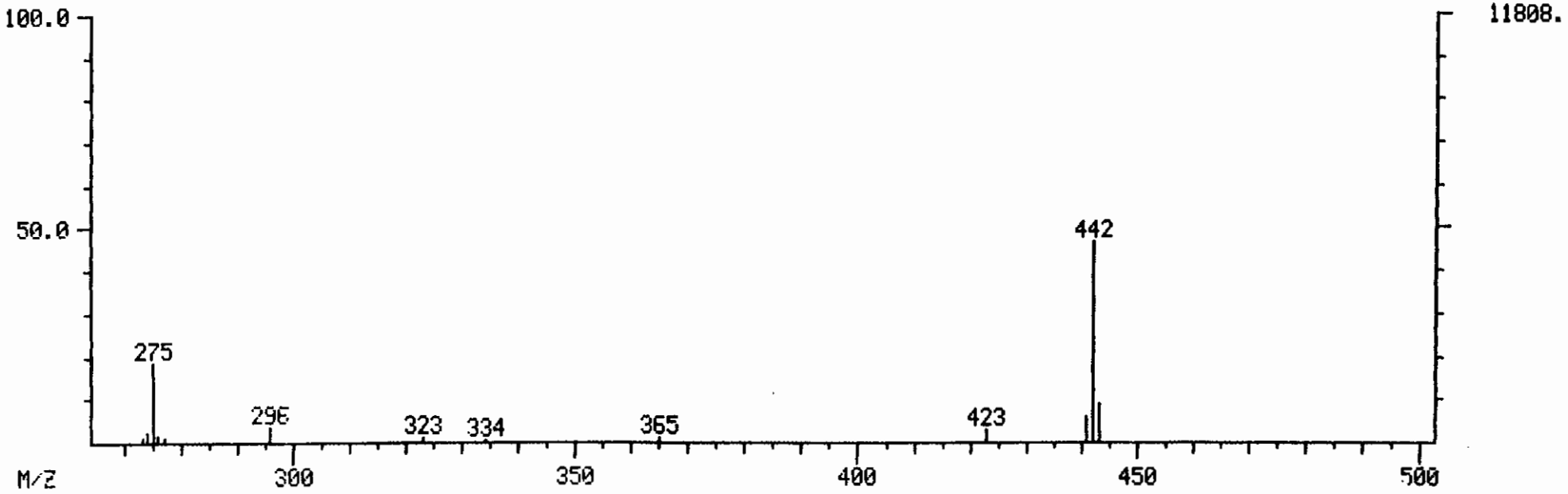
MASS SPECTRUM
04/30/92 10:09:00 + 5:29
SAMPLE: DFTPP STD# 27493 50NG 1UL
CONDS.: : RESTEK 30M RTX-5 : 1MIN.@50C TO 300C@25C/MIN.
GC TEMP: 241 DEG. C
#328 TO #330 SUMMED - #325 X1.00

DATA: W5568 #329
CALI: W5568 #2

BASE M/Z: 198
RIC: 90240.

100153



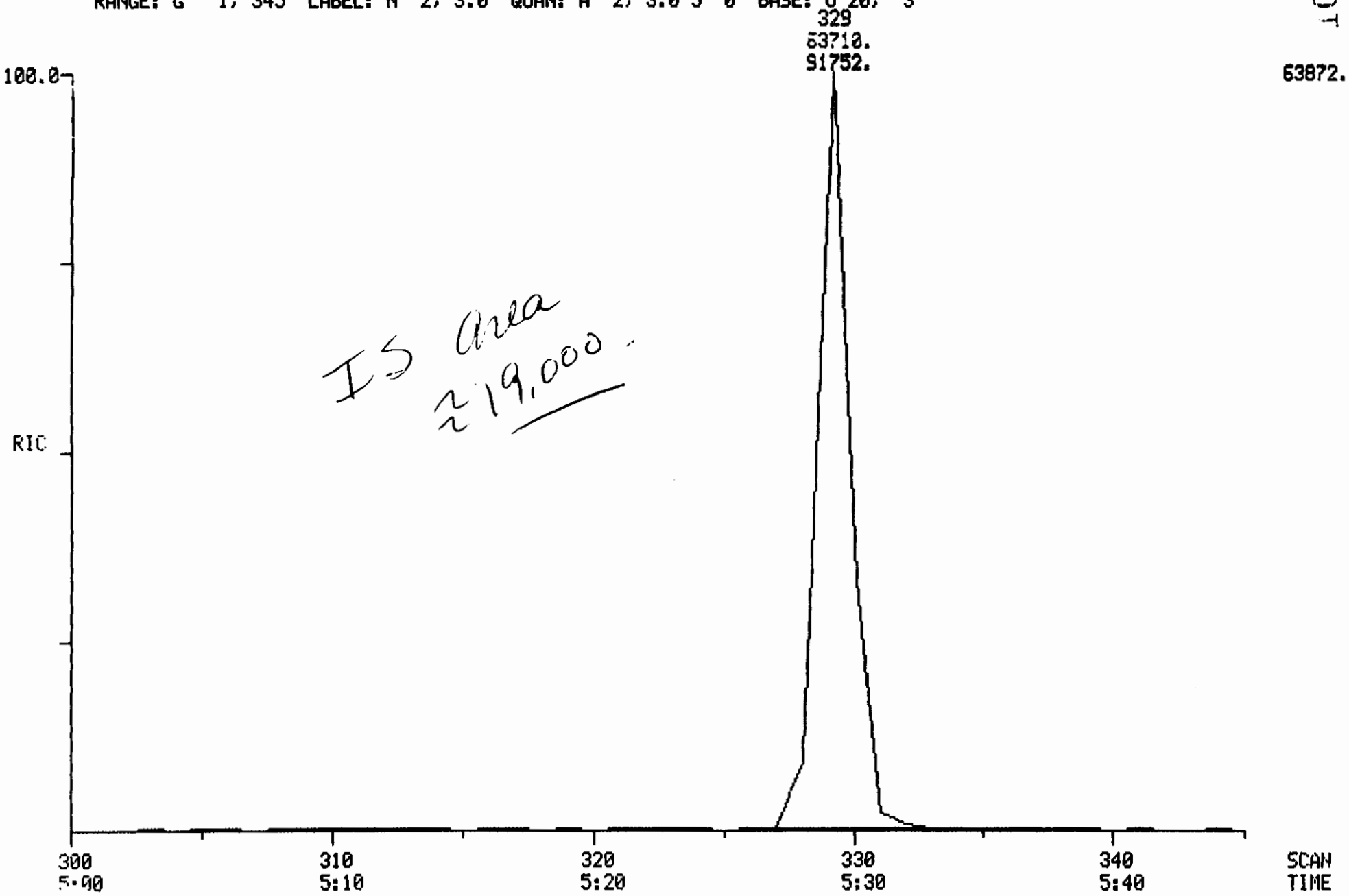


Mass List Data: W5568 # 329 Base m/z: 198
04/30/92 10:09:00 + 5:29 Cali: W5568 # 2 RIC: 90240.
Sample: DFTPP STD# 27493 50NG 1UL
onds.: : RESTEK 30M RTX-5 : 1MIN.@50C TO 300C@25C/MIN.
#328 to #330 Summed - #325 X1.00

39 0.00 0.00 0. Minima Min inten: 82.
443 # 0 Maxima

Mass		% RA	% RIC	Inten.	Mass	% RA	% RIC	Inten.
39.00?		3.55	0.46	419.	153.00	0.74	0.10	87.
44.00?		2.40	0.31	283.	155.00	1.23	0.16	145.
49.00?	S	0.76	0.10	90.	156.00	1.63	0.21	193.
50.00?		12.38	1.62	1462.	160.00	0.80	0.11	95.
51.00?	S	46.75	6.12	5520.	161.00	0.95	0.12	112.
52.00?		2.53	0.33	299.	167.00	4.67	0.61	551.
56.00?		0.87	0.11	103.	168.00	3.12	0.41	368.
57.00?		3.68	0.48	434.	174.00	0.88	0.12	104.
63.00?		2.11	0.28	249.	175.00	1.27	0.17	150.
65.00?		0.75	0.10	89.	179.00	3.47	0.45	410.
68.00?		0.71	0.09	84.	180.00	1.75	0.23	207.
69.00		60.91	7.97	7192.	181.00	0.97	0.13	114.
74.00		4.93	0.64	582.	185.00	1.31	0.17	155.
75.00		8.93	1.17	1054.	186.00	13.23	1.73	1562.
76.00		2.81	0.37	332.	187.00	3.79	0.50	447.
77.00		49.05	6.42	5792.	192.00	0.90	0.12	106.
78.00		3.54	0.46	418.	193.00	0.91	0.12	108.
79.00		3.33	0.44	393.	196.00	1.95	0.25	230.
80.00		3.01	0.39	356.	198.00	100.00	13.09	11808.
81.00		4.46	0.58	527.	199.00	6.06	0.79	715.
82.00		0.87	0.11	103.	204.00	3.35	0.44	396.
83.00		0.89	0.12	105.	205.00	4.47	0.59	528.
85.00		0.86	0.11	101.	206.00	19.72	2.58	2328.
86.00	S	0.80	0.10	94.	207.00	1.94	0.25	229.
91.00		0.82	0.11	97.	211.00	1.06	0.14	125.
92.00		0.80	0.11	95.	217.00	5.12	0.67	605.
93.00		5.85	0.77	691.	221.00	4.85	0.63	573.
98.00		4.41	0.58	521.	223.00	0.93	0.12	110.
99.00		4.65	0.61	549.	224.00	10.26	1.34	1212.
101.00		2.37	0.31	280.	225.00	1.91	0.25	226.
104.00		0.91	0.12	108.	227.00	4.40	0.58	520.
105.00		0.85	0.11	100.	244.00	7.64	1.00	902.
107.00		19.24	2.52	2272.	245.00	0.81	0.11	96.
108.00		2.69	0.35	318.	246.00	0.99	0.13	117.
110.00		33.67	4.41	3976.	255.00	36.65	4.80	4328.
111.00		4.95	0.65	585.	256.00	4.84	0.63	571.
116.00		0.81	0.11	96.	258.00	2.13	0.28	252.
117.00		10.54	1.38	1244.	273.00	0.96	0.13	113.
122.00		0.75	0.10	89.	274.00	2.68	0.35	317.
123.00		1.21	0.16	143.	275.00	18.36	2.40	2168.
127.00		50.14	6.56	5920.	276.00	1.93	0.25	228.
128.00		3.84	0.50	453.	277.00	1.12	0.15	132.
129.00		23.31	3.05	2752.	296.00	3.68	0.48	435.
130.00		1.48	0.19	175.	323.00	1.30	0.17	153.
135.00		1.48	0.19	175.	365.00	1.16	0.15	137.
137.00		0.83	0.11	98.	423.00	2.98	0.39	352.
141.00		2.67	0.35	315.	441.00	5.78	0.76	682.
142.00		0.76	0.10	90.	442.00	46.68	6.11	5512.
147.00		1.15	0.15	136.	443.00	8.77	1.15	1036.
148.00		2.73	0.36	322.				

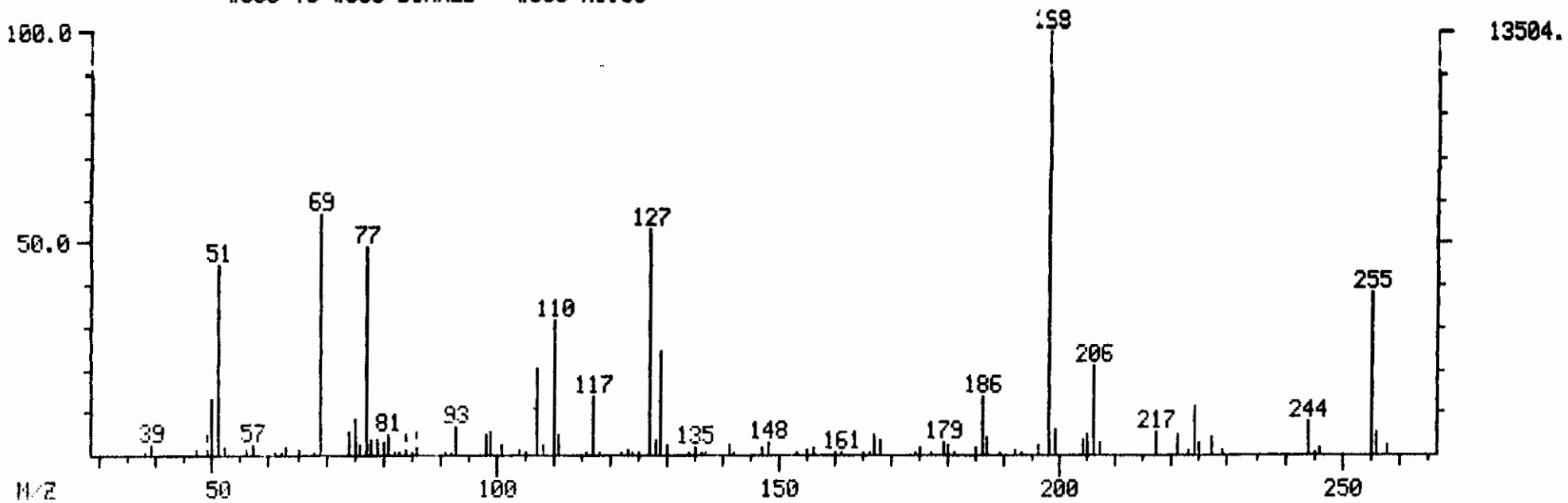
RIC DATA: W5568 #328 SCANS 300 TO 345
04/30/92 10:03:00 CALI: W5568 #2
SAMPLE: DFTPP STD# 27493 50NG 1UL
CONDS.: : RESTEK 30M RTX-5 : 1MIN.@50C TO 300C@25C/MIN.
RANGE: G 1, 345 LABEL: N 2, 3.0 QUAN: A 2, 3.0 J 0 BASE: U 20, 3

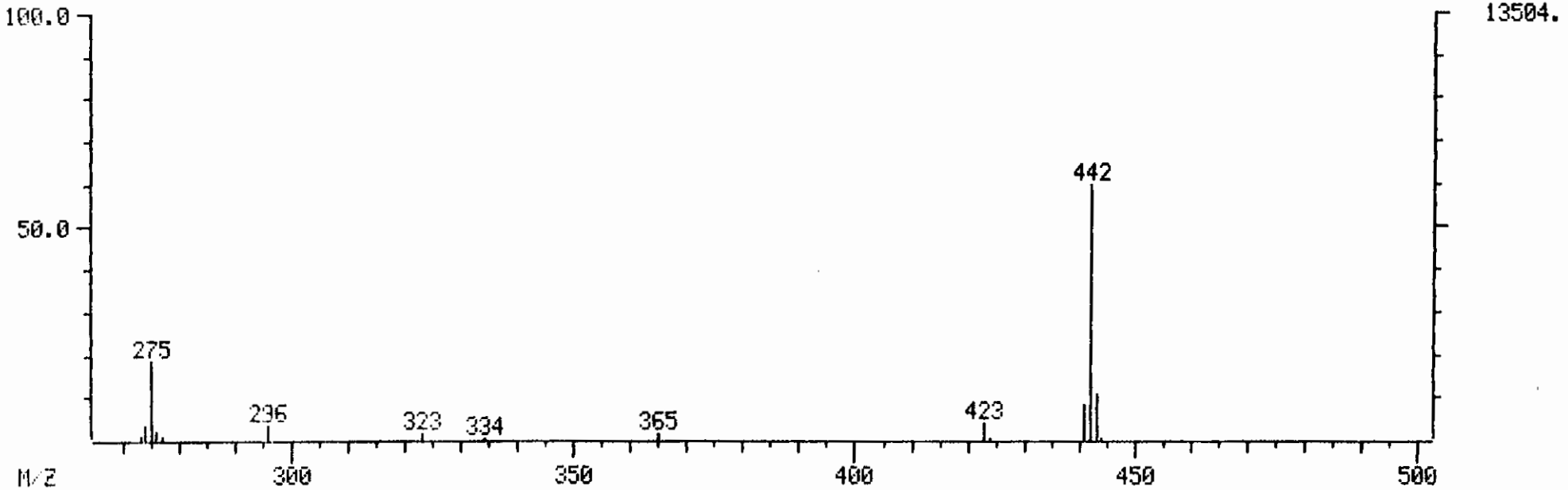


MASS SPECTRUM
05/05/92 11:04:00 + 6:07
SAMPLE: DFTPP STD# 27493 50NG 1UL
CONDS.: : RESTEK 30M RTX-5 : 1MIN.@50C TO 300C@25C/MIN.
GC TEMP: 237 DEG. C
#355 TO #358 SUMMED - #350 X1.00

DATA: W5620 #367
CALI: W5620 #2

BASE M/Z: 198
RIC: 108544.





10010C1

Mass List Data: W5620 # 367 Base m/z: 198
05/05/92 11:04:00 + 6:07 Cali: W5620 # 2 RIC: 108544.
Sample: DFTPP STD# 27493 50NG 1UL
Cond.: : RESTEK 30M RTX-5 : 1MIN.@50C TO 300C@25C/MIN.
#366 to #368 Summed - #360 X1.00

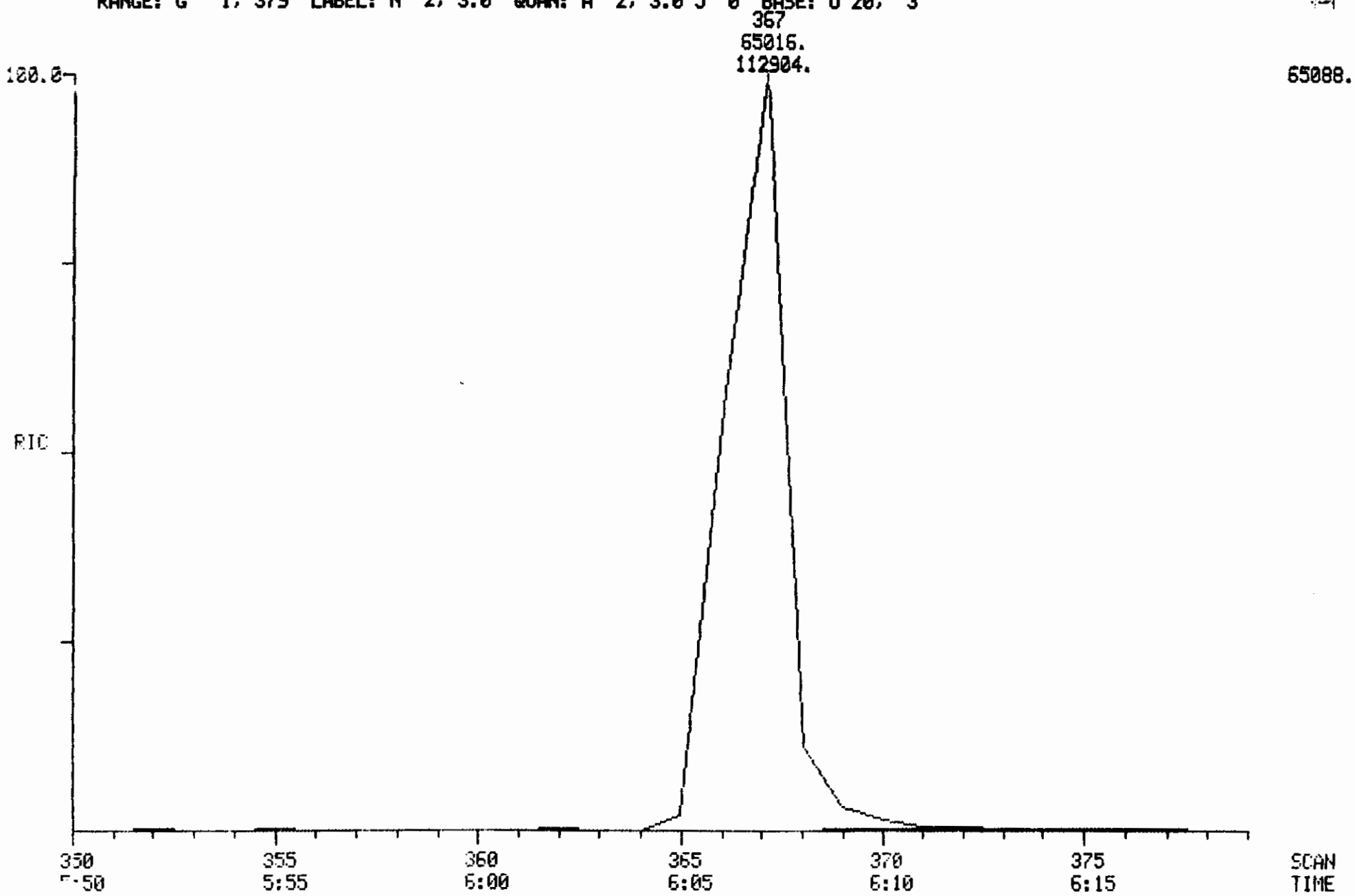
38 0.00 0.00 0. Minima Min inten: 90.
444 # 0 Maxima

Mass		% RA	% RIC	Inten.	Mass	% RA	% RIC	Inten.
39.00?		2.53	0.31	341.	153.00	0.70	0.09	94.
47.00?		1.18	0.15	159.	155.00	0.91	0.11	123.
49.00?	S	1.37	0.17	185.	156.00	2.01	0.25	271.
50.00?		13.28	1.65	1794.	161.00	0.90	0.11	121.
51.00?		44.67	5.56	6032.	167.00	4.61	0.57	623.
52.00?		1.93	0.24	261.	168.00	3.35	0.42	452.
56.00?		1.23	0.15	166.	174.00	0.87	0.11	118.
57.00?		2.44	0.30	330.	175.00	1.71	0.21	231.
63.00?		1.65	0.21	223.	179.00	3.01	0.37	407.
65.00?		1.17	0.15	158.	180.00	2.51	0.31	339.
68.00?		0.73	0.09	98.	181.00	0.87	0.11	118.
69.00		57.05	7.10	7704.	185.00	1.81	0.23	245.
74.00		5.22	0.65	705.	186.00	13.67	1.70	1846.
75.00		8.66	1.08	1170.	187.00	3.94	0.49	532.
76.00		2.23	0.28	301.	189.00	0.71	0.09	96.
77.00		48.87	6.08	6600.	192.00	1.21	0.15	164.
78.00		3.34	0.42	451.	193.00	0.72	0.09	97.
79.00		3.30	0.41	445.	196.00	2.30	0.29	310.
80.00		2.87	0.36	388.	198.00	100.00	12.44	13504.
81.00		4.68	0.58	632.	199.00	5.91	0.74	798.
82.00		0.87	0.11	118.	204.00	3.31	0.41	447.
83.00		0.88	0.11	119.	205.00	4.69	0.58	634.
84.00	S	0.93	0.12	126.	206.00	20.76	2.58	2804.
85.00		0.83	0.10	112.	207.00	2.72	0.34	367.
86.00	S	1.69	0.21	228.	217.00	5.62	0.70	759.
91.00		0.90	0.11	121.	221.00	4.64	0.58	626.
92.00		0.78	0.10	105.	223.00	1.24	0.15	168.
93.00		6.69	0.83	904.	224.00	11.12	1.38	1502.
98.00		4.53	0.56	612.	225.00	2.78	0.35	375.
99.00		5.20	0.65	702.	227.00	4.31	0.54	582.
101.00		2.43	0.30	328.	229.00	1.16	0.14	157.
104.00		1.09	0.14	147.	244.00	7.85	0.98	1060.
105.00		0.86	0.11	116.	246.00	2.05	0.26	277.
107.00		20.14	2.51	2720.	255.00	38.39	4.78	5184.
108.00		2.53	0.31	341.	256.00	5.52	0.69	745.
110.00		31.58	3.93	4264.	258.00	2.20	0.27	297.
111.00		4.88	0.61	659.	273.00	1.47	0.18	198.
116.00		0.83	0.10	112.	274.00	3.50	0.44	473.
117.00		13.48	1.68	1820.	275.00	18.75	2.33	2532.
118.00		0.73	0.09	99.	276.00	2.15	0.27	290.
122.00		0.73	0.09	98.	277.00	1.36	0.17	183.
123.00		1.18	0.15	159.	296.00	3.87	0.48	523.
127.00		53.32	6.63	7200.	323.00	1.87	0.23	252.
128.00		3.80	0.47	513.	334.00	0.79	0.10	107.
129.00		24.56	3.05	3316.	365.00	2.04	0.25	275.
130.00		2.11	0.26	285.	423.00	3.90	0.48	526.
135.00		2.00	0.25	270.	441.00	8.29	1.03	1120.
141.00		2.60	0.32	351.	442.00	60.07	7.47	8112.
147.00		1.79	0.22	242.	443.00	10.52	1.31	1420.
148.00		2.81	0.35	380.	444.00	0.87	0.11	118.

RIC
05/05/92 11:04:00
SAMPLE: DFTPP STD# 27493 50NG 1UL
CONDS.: : RESTEK 30M RTX-5 : 1MIN.@50C TO 300C@25C/MIN.
RANGE: G 1, 379 LABEL: N 2, 3.0 QUAN: A 2, 3.0 J 0 BASE: U 20, 3

DATA: W5620 #366
CALI: W5620 #2

SCANS 350 TO 379



Versar Laboratories INC.

REAGENT BLANK DATA

6850 Versar Center • P. O. Box 1549 • Springfield, Virginia 22151 • Telephone: (703) 750-3000 • 1-800-283-7727

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK32

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: SBLK32

Sample wt/vol: 30.0 (g/mL) G Lab File ID: W5624

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	660	U
111-44-4	bis(2-Chloroethyl)ether	660	U
95-57-8	2-Chlorophenol	660	U
541-73-1	1,3-Dichlorobenzene	660	U
106-46-7	1,4-Dichlorobenzene	660	U
100-51-6	Benzyl alcohol	660	U
95-50-1	1,2-Dichlorobenzene	660	U
95-48-7	2-Methylphenol	660	U
108-60-1	bis(2-Chloroisopropyl)ether	660	U
106-44-5	3- & 4- Methylphenol	660	U
621-64-7	N-Nitroso-di-n-propylamine	660	U
67-72-1	Hexachloroethane	660	U
98-95-3	Nitrobenzene	660	U
78-59-1	Isophorone	660	U
88-75-5	2-Nitrophenol	660	U
105-67-9	2,4-Dimethylphenol	660	U
65-85-0	Benzoic Acid	3200	U
111-91-1	bis(2-Chloroethoxy)methane	660	U
120-83-2	2,4-Dichlorophenol	660	U
120-82-1	1,2,4-Trichlorobenzene	660	U
91-20-3	Naphthalene	660	U
106-47-8	4-Chloroaniline	660	U
87-68-3	Hexachlorobutadiene	660	U
59-50-7	4-Chloro-3-methylphenol	660	U
91-57-6	2-Methylnaphthalene	660	U
77-47-4	Hexachlorocyclopentadiene	660	U
88-06-2	2,4,6-Trichlorophenol	660	U
95-95-4	2,4,5-Trichlorophenol	3200	U
91-58-7	2-Chloronaphthalene	660	U
88-74-4	2-Nitroaniline	3200	U
131-11-3	Dimethylphthalate	660	U
208-96-8	Acenaphthylene	660	U
606-20-2	2,6-Dinitrotoluene	660	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK32

J ` Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: SBLK32

Sample wt/vol: 30.0 (g/mL) G Lab File ID: W5624

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3200	U
83-32-9	Acenaphthene	660	U
51-28-5	2,4-Dinitrophenol	3200	U
100-02-7	4-Nitrophenol	3200	U
132-64-9	Dibenzofuran	660	U
121-14-2	2,4-Dinitrotoluene	660	U
84-66-2	Diethylphthalate	660	U
7005-72-3	4-Chlorophenyl-phenylether	660	U
86-73-7	Fluorene	660	U
100-01-6	4-Nitroaniline	3200	U
534-52-1	4,6-Dinitro-2-methylphenol	3200	U
86-30-6	N-nitrosodiphenylamine (1)	660	U
101-55-3	4-Bromophenyl-phenylether	660	U
118-74-1	Hexachlorobenzene	660	U
87-86-5	Pentachlorophenol	3200	U
85-01-8	Phenanthrene	660	U
120-12-7	Anthracene	660	U
84-74-2	Di-n-butylphthalate	660	U
206-44-0	Fluoranthene	660	U
129-00-0	Pyrene	660	U
85-68-7	Butylbenzylphthalate	660	U
91-94-1	3,3'-Dichlorobenzidine	1300	U
56-55-3	Benzo(a)anthracene	660	U
218-01-9	Chrysene	660	U
117-81-7	bis(2-Ethylhexyl)phthalate	660	U
117-84-0	Di-n-octyl phthalate	660	U
205-99-2	Benzo(b)fluoranthene	660	U
207-08-9	Benzo(k)fluoranthene	660	U
50-32-8	Benzo(a)pyrene	660	U
193-39-5	Indeno(1,2,3-cd)pyrene	660	U
53-70-3	Dibenz(a,h)anthracene	660	U
191-24-2	Benzo(g,h,i)perylene	660	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK32

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: SBLK32

Sample wt/vol: 30.0 (g/mL) G Lab File ID: W5624

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

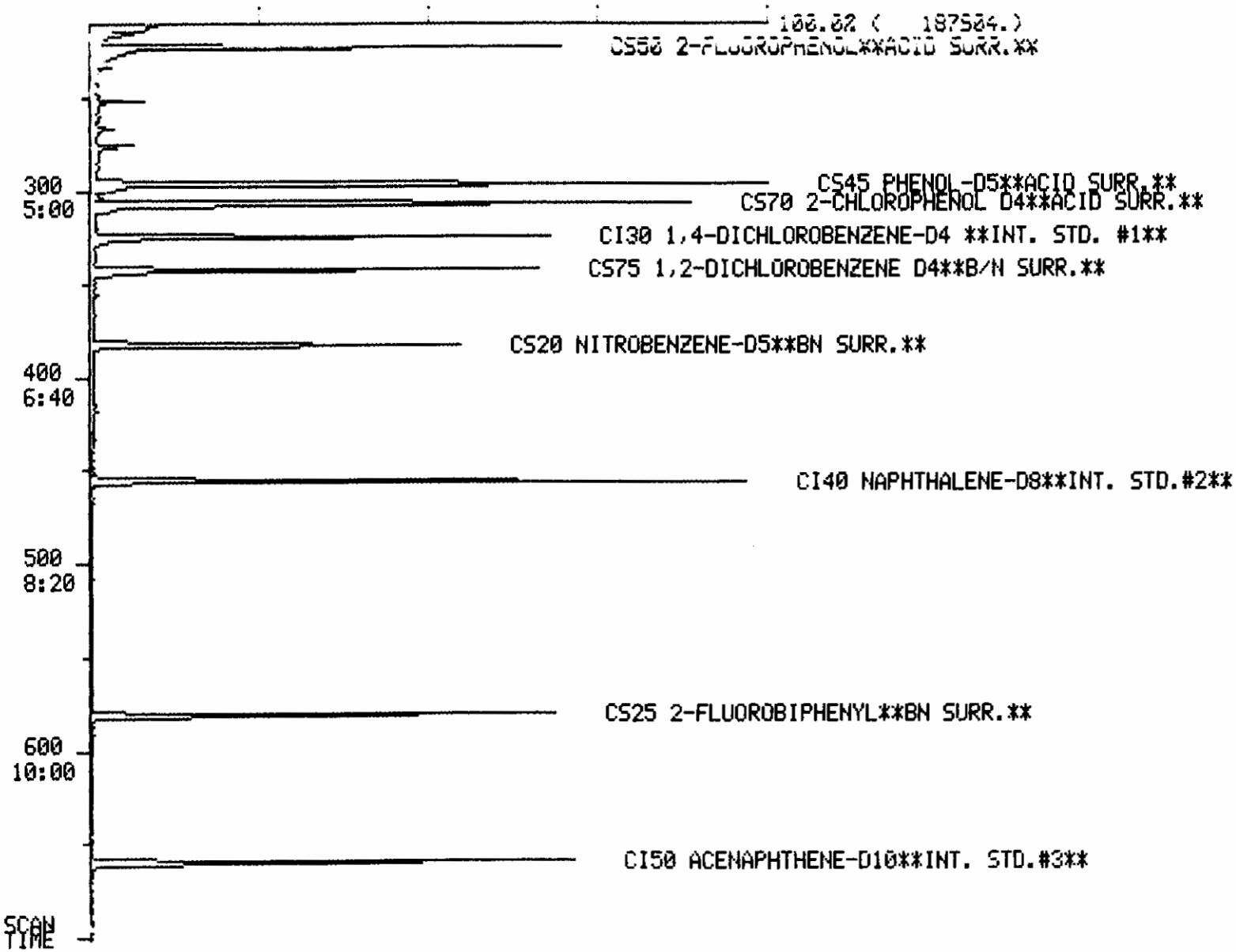
GPC Cleanup: (Y/N) Y pH: _____ Dilution Factor: 1.0

Number TICs found: 0

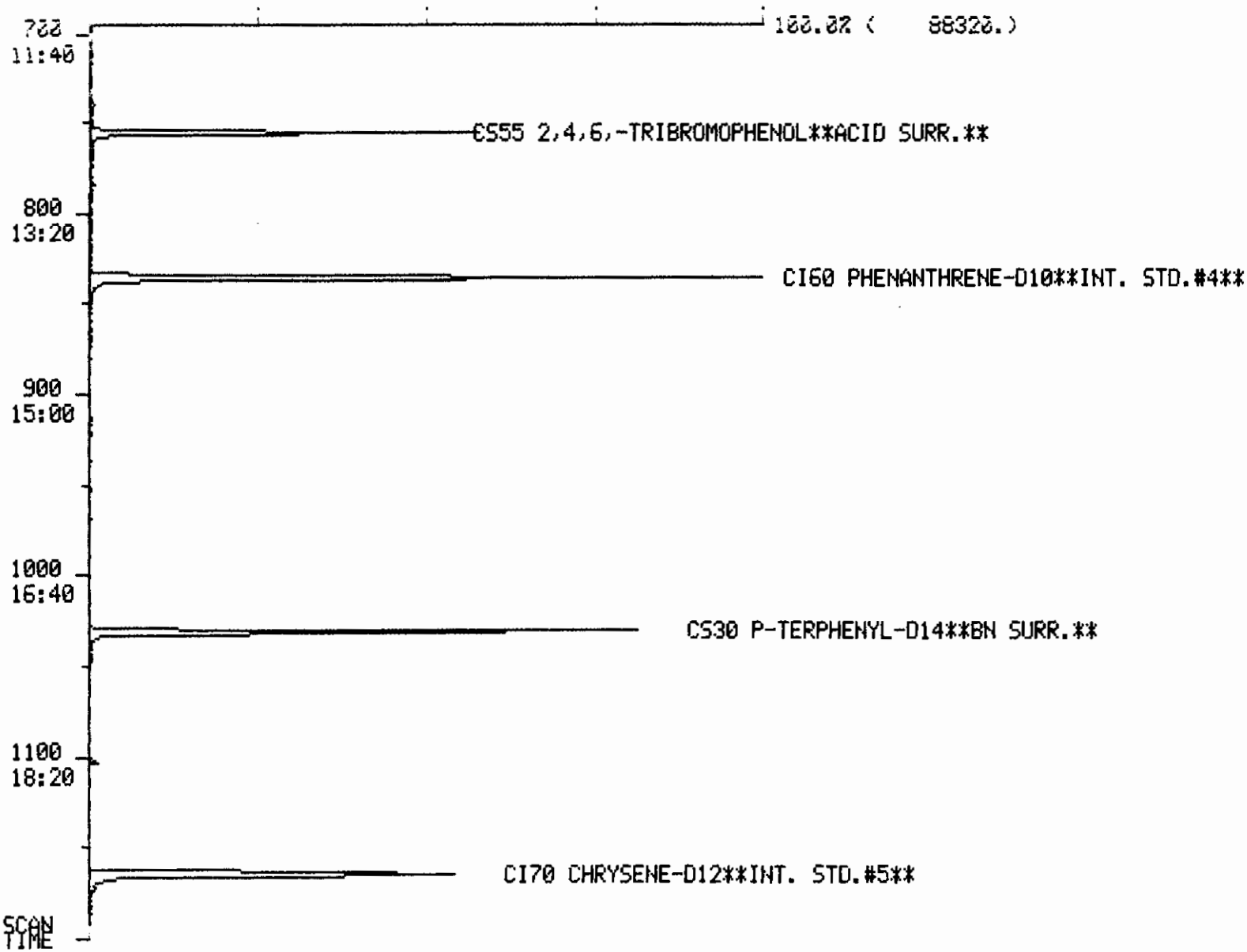
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DATA FROM FILE: W5624 SCANS 210 TO 700 ACQUIRED: 05/05/92 13:53:00
CALI: W5624 #2
SAMPLE: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,

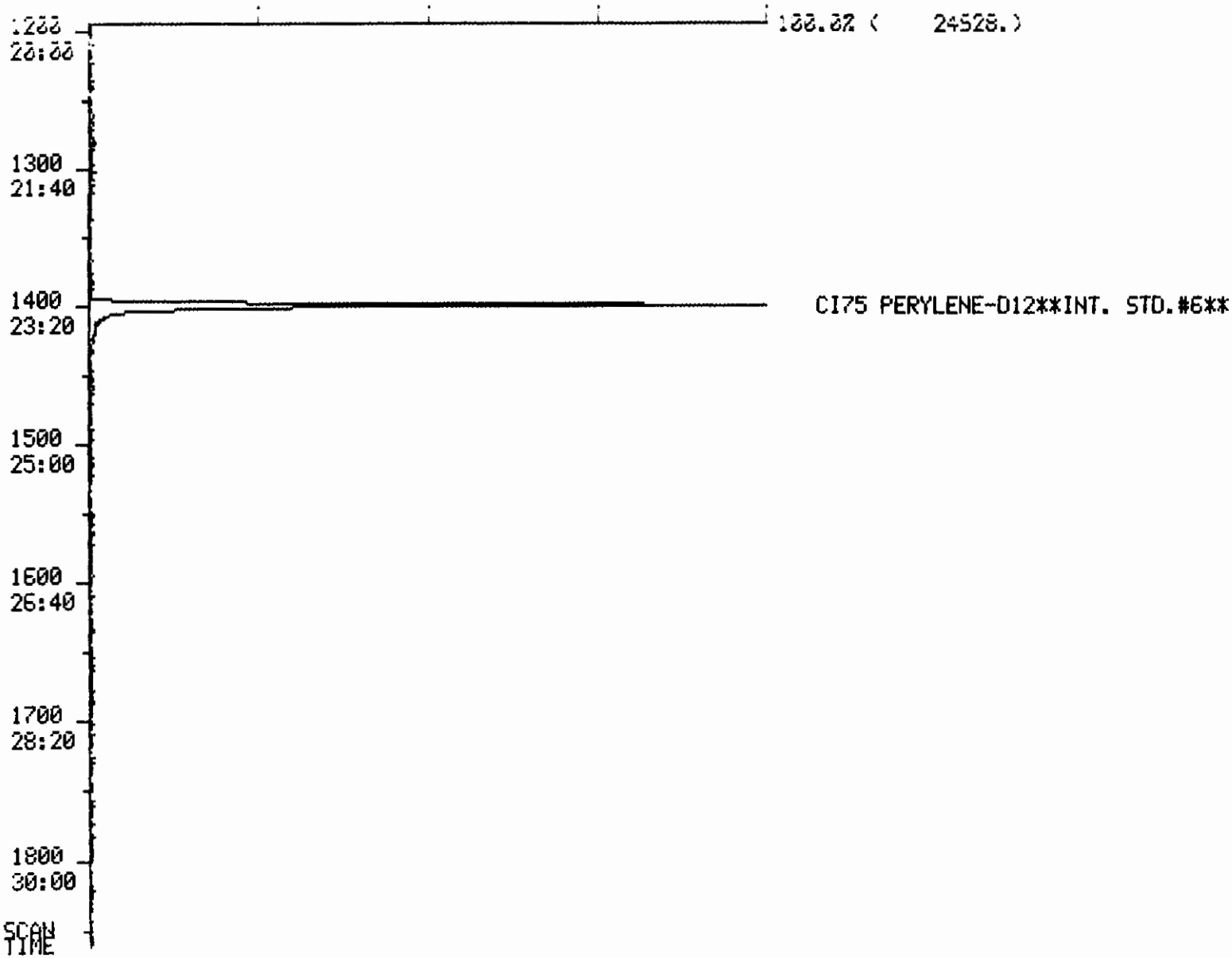


DATA FROM FILE: W5624 SCANS 695 TO 1200 ACQUIRED: 05/05/92 13:53:00
CALI: W5624 #2
SAMPLE: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100160

DATA FROM FILE: W5624 SCANS 1195 TO 1860 ACQUIRED: 05/05/92 13:53:00
CALI: W5624 #2
SAMPLE: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100170

Quantitation Report File: W5624

Data: W5624.TI
05/05/92 13:53:00
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

Compliant Run SJD 5/6/92.

Ready for forms. DB 5/13/92

W5624

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	324	5:24	1	1.000	A BB	28442.	40.000 NG/UL	7.72
2	136	455	7:35	2	1.000	A BB	98710.	40.000 NG/UL	7.72
3	164	659	10:59	3	1.000	A BB	42159.	40.000 NG/UL	7.72
4	188	834	13:54	4	1.000	A BB	60030.	40.000 NG/UL	7.72
5	240	1164	19:24	5	1.000	A BB	37737.	40.000 NG/UL	7.72
6	264	1399	23:19	6	1.000	A BB	27607.	40.000 NG/UL	7.72
7	112	222	3:42	1	0.685	A BB	50890.	33.702 NG*A1	6.51
8	99	295	4:55	1	0.910	A BB	66062.	39.721 NG*A2	7.67
9	82	382	6:22	2	0.840	A BB	41585.	34.088 NG*B1	6.58
10	172	580	9:40	3	0.880	A BB	50855.	32.417 NG*B2	6.26
11	330	754	12:34	3	1.144	A BB	7438.	28.081 NG*A3	5.42
12	244	1030	17:10	5	0.885	A BV	36531.	33.499 NG*B3	6.47
13	132	306	5:06	1	0.944	A BB	48408.	42.250 NG*A4	8.16
14	152	342	5:42	1	1.056	A BB	21988.	33.002 NG*B4	6.37
15	128	307	5:07	1	0.948	A BB	232.	~~0.231 NG~~ BRL	0.04
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	108	342	5:42	1	1.056	A BB	337.	~~0.588 NG~~ BRL	0.11
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

W5624

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:24	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:36	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:00	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:55	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:28	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:41	1.00	0.682	1.00	33.70	50.00	1.431	2.124	0.67
8	4:56	1.00	0.914	1.00	39.72	50.00	1.858	2.337	0.79
9	6:23	1.00	0.840	1.00	34.09	50.00	0.337	0.494	0.68
10	9:42	1.00	0.882	1.00	32.42	50.00	0.965	1.488	0.65
11	12:35	1.00	1.144	1.00	28.08	50.00	0.141	0.251	0.56
12	17:12	1.00	0.882	1.00	33.50	50.00	0.774	1.156	0.67
13	5:07	1.00	0.948	1.00	42.25	50.00	1.362	1.611	0.85
14	5:42	1.00	1.056	1.00	33.00	50.00	0.618	0.937	0.66
15	5:08	1.00	0.951	1.00	0.23	50.00	0.007	1.415	0.00
16	4:57		0.917						
17	5:05		0.941						
18	5:21		0.991						
19	5:26		1.006						
20	5:44		1.062						
21	5:41	1.00	1.052	1.00	0.59	50.00	0.009	0.806	0.01
22	5:55		1.096						
23	5:53		1.090						
24	6:13		1.151						
25	6:08		1.136						
26	6:10		1.142						
27	6:25		0.844						
28	6:49		0.897						
29	6:58		0.917						
30	7:03		0.928						
31	7:14		0.952						
32	7:22		0.969						
33	7:32		0.991						
34	7:38		1.004						
35	7:18		0.961						
36	7:49		1.029						
37	7:57		1.046						
38	8:44		1.149						
39	8:56		1.175						
40	9:21		0.850						
41	9:33		0.868						
42	9:37		0.874						
43	9:52		0.897						
44	10:12		0.927						
45	10:42		0.973						
46	10:36		0.964						
47	10:46		0.979						
48	11:04		1.006						
49	11:02		1.003						
50	11:13		1.020						

Quantitation Report File: W5624

Data: W5624.TI
05/05/92 13:53:00
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2'-OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	169	739	12:19	4	0.886	A BB	251.	~~0.273 NG~~ BRL	0.05
60	NOT FOUND								
61	NOT FOUND								

100174

W5624

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	NOT FOUND								
63	NOT FOUND								
64	NOT FOUND								
65	149	913	15:13	4	1.095	A BB	584.	~~0.223 NG~~ BRL	0.04
66	NOT FOUND								
67	202	1009	16:49	5	0.867	A BB	213.	~~0.113 NG~~ BRL	0.02
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								
81	NOT FOUND								
82	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:22		1.033						
52	11:23		1.035						
53	11:31		1.047						
54	12:03		1.095						
55	12:04		1.097						
56	12:00		1.091						
57	12:18		1.118						
58	12:18		0.884						
59	12:21	1.00	0.887	1.00	0.27	50.00	0.003	0.612	0.01
60	13:02		0.937						
61	13:19		0.957						
62	13:41		0.983						
63	13:59		1.005						
64	14:04		1.011						
65	15:14	1.00	1.095	1.00	0.22	50.00	0.008	1.745	0.00
66	16:23		1.177						
67	16:51	1.00	0.864	1.00	0.11	50.00	0.005	1.989	0.00
68	18:20		0.940						
69	19:27		0.997						
70	19:34		1.003						
71	19:29		0.999						
72	19:38		1.007						
73	21:06		0.899						
74	22:13		0.947						
75	22:17		0.950						
76	23:16		0.991						
77	28:04		1.196						
78	28:12		1.202						
79	29:29		1.256						
80	2:25		0.448						
81	14:26		1.037						
82	5:55		1.096						

QUALITY CONTROL/QUALITY ASSURANCE DATA

METHOD: USEPA CLP390, BNA WATER RECOVERY

DATAFILE: W5624 ANALYSIS TIME: 05/05/92 13:53
STANDARD: W5621 ANALYSIS TIME: 05/05/92 11:21
TUNEFILE: W5620 ANALYSIS TIME: 05/05/92 11:04

****** INTERNAL STANDARD AREA CHECK ******

INTERNAL STANDARD	DATA AREA	STD AREA	RATIO	CLP ACCEPT RATIO	STATUS
CI30 1,4-DICHLOROBENZEN	28442.	26814.	106%	50% - 200%	
CI40 NAPHTHALENE-D8**IN	98710.	95941.	103%	50% - 200%	
CI50 ACENAPHTHENE-D10**	42159.	41313.	102%	50% - 200%	
CI60 PHENANTHRENE-D10**	60030.	61924.	97%	50% - 200%	✓
CI70 CHRYSENE-D12**INT.	37737.	36460.	104%	50% - 200%	
CI75 PERYLENE-D12**INT.	27607.	26186.	105%	50% - 200%	

****** INTERNAL STANDARD RT CHECK ******

INTERNAL STANDARD	DATA SCAN	STD SCAN	DIFF [IN SEC]	CLP ACCEPT DIFF	STATUS
CI30 1,4-DICHLOROBENZEN	324	324	0	+/- 30 SECS	
CI40 NAPHTHALENE-D8**IN	455	456	1	+/- 30 SECS	
CI50 ACENAPHTHENE-D10**	659	660	1	+/- 30 SECS	✓
CI60 PHENANTHRENE-D10**	834	835	1	+/- 30 SECS	
CI70 CHRYSENE-D12**INT.	1164	1170	6	+/- 30 SECS	
CI75 PERYLENE-D12**INT.	1399	1408	9	+/- 30 SECS	

****** SURROGATE RECOVERIES ******

SURROGATE	AMT FOUND	AMT ADDED	PERCENT RECOVERY	RECOV LIMITS	STATUS
CS50 2-FLUOROPHENOL**AC	33.7	~~100.0~~ 75	~~34~~ 45	21% - 110%	
CS45 PHENOL-D5**ACID SU	39.7	~~100.0~~	~~40~~ 53	10% - 110%	
CS20 NITROBENZENE-D5**B	34.1	50.0	68	35% - 114%	
CS25 2-FLUOROBIPHENYL**	32.4	50.0	65	43% - 116%	✓
CS55 2,4,6,-TRIBROMOPHE	28.1	~~100.0~~ 75	~~28~~ 37	10% - 123%	
CS30 P-TERPHENYL-D14**B	33.5	50.0	67	33% - 141%	
CS70 2-CHLOROPHENOL D4*	42.3	~~100.0~~ 75	~~42~~ 56	33% - 110%	
CS75 1,2-DICHLOROBENZEN	33.0	50.0	66	16% - 110%	

```
                >>>>INTERNAL STANDARD RIC REPORT<<<<
****************************INTERNAL STANDARD#1*****************RIC
Mass List                        Data: W5624 # 324          Base m/z:   150
05/05/92 13:53:00 +  5:24        Cali: W5624 #   2          RIC:      93696.
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#2*****************RIC
Mass List                        Data: W5624 # 455          Base m/z:   136
05/05/92 13:53:00 +  7:35        Cali: W5624 #   2          RIC:     116096.
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     36        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#3*****************RIC
Mass List                        Data: W5624 # 659          Base m/z:   164
05/05/92 13:53:00 + 10:59        Cali: W5624 #   2          RIC:      95232.
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#4*****************RIC
Mass List                        Data: W5624 # 834          Base m/z:   188
05/05/92 13:53:00 + 13:54        Cali: W5624 #   2          RIC:      74240.
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#5*****************RIC
Mass List                        Data: W5624 #1164          Base m/z:   240
05/05/92 13:53:00 + 19:24        Cali: W5624 #   2          RIC:      39808.
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
****************************INTERNAL STANDARD#6*****************RIC
Mass List                        Data: W5624 #1399          Base m/z:   264
05/05/92 13:53:00 + 23:19        Cali: W5624 #   2          RIC:      19936.
Sample: CLP,6432,3,SBLK32,L,S,RB3132,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Enhanced (S 15B 2N OT)

     42        0.00    0.00        0. Minima      Min inten:       0.
     30                        #   0  Maxima
       CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO COELUTION
```

MATRIX SPIKE DATA

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8MS

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74718MS

Sample wt/vol: 30.1 (g/mL) G Lab File ID: W5627

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	810	U
111-44-4	bis(2-Chloroethyl)ether	810	U
95-57-8	2-Chlorophenol	810	U
541-73-1	1,3-Dichlorobenzene	810	U
106-46-7	1,4-Dichlorobenzene	810	U
100-51-6	Benzyl alcohol	810	U
95-50-1	1,2-Dichlorobenzene	810	U
95-48-7	2-Methylphenol	810	U
108-60-1	bis(2-Chloroisopropyl)ether	810	U
106-44-5	3- & 4- Methylphenol	810	U
621-64-7	N-Nitroso-di-n-propylamine	810	U
67-72-1	Hexachloroethane	810	U
98-95-3	Nitrobenzene	810	U
78-59-1	Isophorone	810	U
88-75-5	2-Nitrophenol	810	U
105-67-9	2,4-Dimethylphenol	810	U
65-85-0	Benzoic Acid	4000	U
111-91-1	bis(2-Chloroethoxy)methane	810	U
120-83-2	2,4-Dichlorophenol	810	U
120-82-1	1,2,4-Trichlorobenzene	810	U
91-20-3	Naphthalene	810	U
106-47-8	4-Chloroaniline	810	U
87-68-3	Hexachlorobutadiene	810	U
59-50-7	4-Chloro-3-methylphenol	810	U
91-57-6	2-Methylnaphthalene	810	U
77-47-4	Hexachlorocyclopentadiene	810	U
88-06-2	2,4,6-Trichlorophenol	810	U
95-95-4	2,4,5-Trichlorophenol	4000	U
91-58-7	2-Chloronaphthalene	810	U
88-74-4	2-Nitroaniline	4000	U
131-11-3	Dimethylphthalate	810	U
208-96-8	Acenaphthylene	810	U
606-20-2	2,6-Dinitrotoluene	810	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8MS

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74718MS

Sample wt/vol: 30.1 (g/mL) G Lab File ID: W5627

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 dec. ____ Date Extracted: 04/23/92

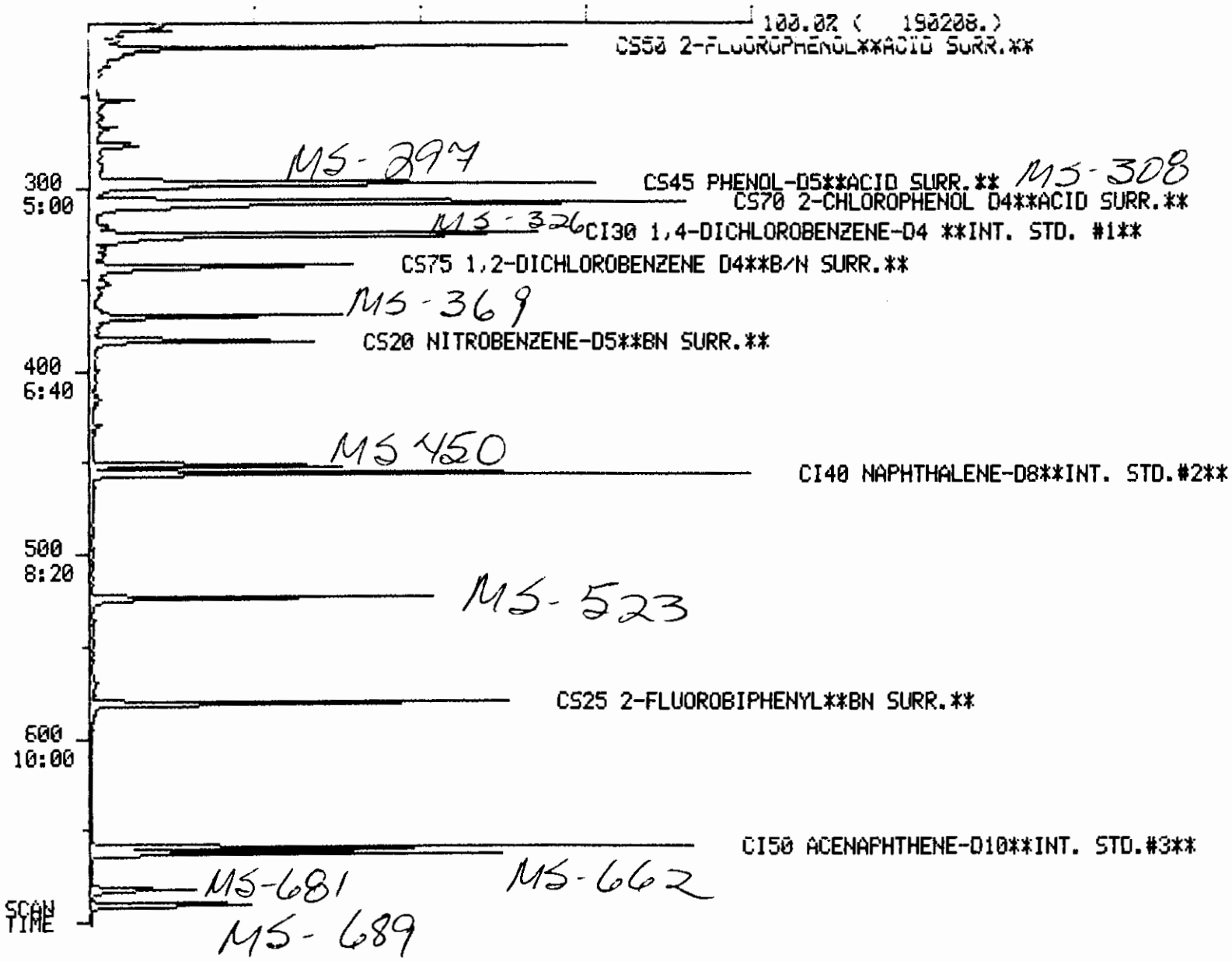
Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4000	U
83-32-9	Acenaphthene	810	U
51-28-5	2,4-Dinitrophenol	4000	U
100-02-7	4-Nitrophenol	4000	U
132-64-9	Dibenzofuran	810	U
121-14-2	2,4-Dinitrotoluene	810	U
84-66-2	Diethylphthalate	810	U
7005-72-3	4-Chlorophenyl-phenylether	810	U
86-73-7	Fluorene	810	U
100-01-6	4-Nitroaniline	4000	U
534-52-1	4,6-Dinitro-2-methylphenol	4000	U
86-30-6	N-nitrosodiphenylamine (1)	810	U
101-55-3	4-Bromophenyl-phenylether	810	U
118-74-1	Hexachlorobenzene	810	U
87-86-5	Pentachlorophenol	4000	U
85-01-8	Phenanthrene	810	U
120-12-7	Anthracene	810	U
84-74-2	Di-n-butylphthalate	810	U
206-44-0	Fluoranthene	810	U
129-00-0	Pyrene	810	U
85-68-7	Butylbenzylphthalate	810	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	810	U
218-01-9	Chrysene	810	U
117-81-7	bis(2-Ethylhexyl)phthalate	810	U
117-84-0	Di-n-octyl phthalate	810	U
205-99-2	Benzo(b)fluoranthene	810	U
207-08-9	Benzo(k)fluoranthene	810	U
50-32-8	Benzo(a)pyrene	810	U
193-39-5	Indeno(1,2,3-cd)pyrene	810	U
53-70-3	Dibenz(a,h)anthracene	810	U
191-24-2	Benzo(g,h,i)perylene	810	U

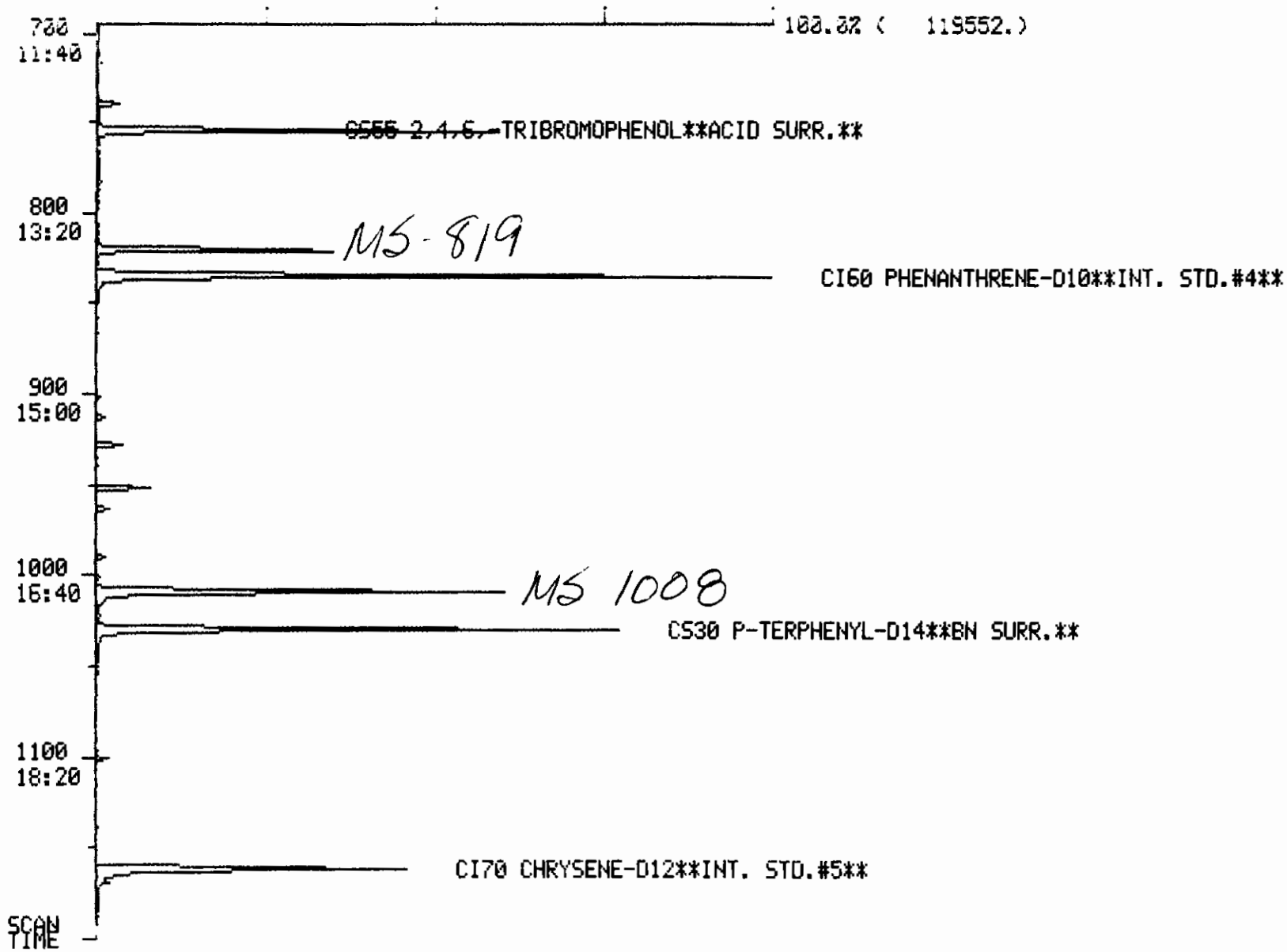
(1) - Cannot be separated from Diphenylamine

DATA FROM FILE: W5627 SCANS 210 TO 700 ACQUIRED: 05/05/92 15:46:00
CALI: W5627 #2
SAMPLE: CLP,6432,3,S-8MS,L,S,74718MS,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



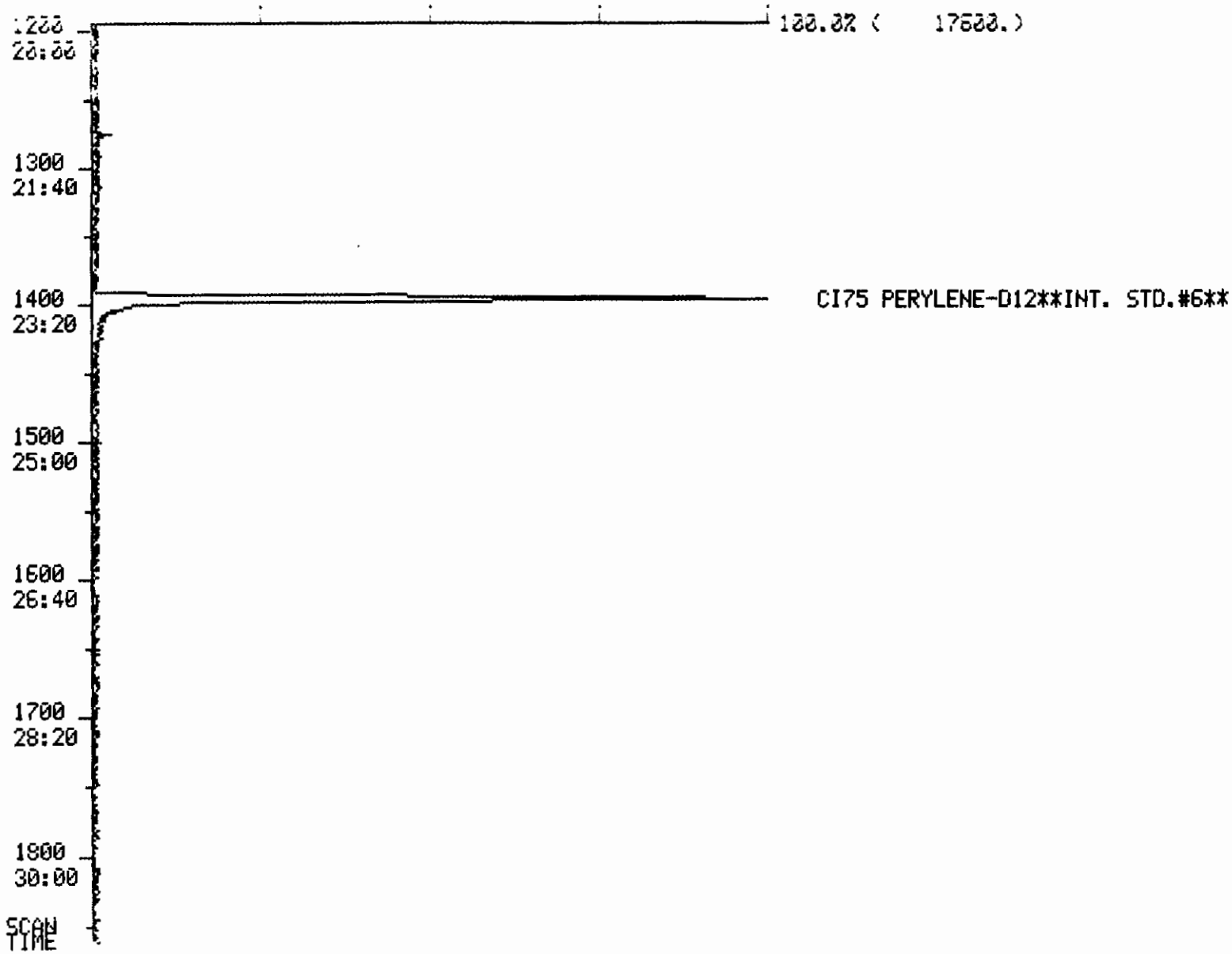
100181

DATA FROM FILE: W5627 SCANS 695 TO 1200 ACQUIRED: 05/05/92 15:46:00
CALI: W5627 #2
SAMPLE: CLP,6432,3,S-8MS,L,S,74718MS,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100118

DATA FROM FILE: W5627 SCANS 1195 TO 1860 ACQUIRED: 05/05/92 15:46:00
CALI: W5627 #2
SAMPLE: CLP,6432,3,S-8MS,L,S,74718MS,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100183

Quantitation Report File: W5627

Data: W5627.TI
05/05/92 15:46:00
Sample: CLP,6432,3,S-BMS,L,S,74718MS,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

Compliant Run SJD 5/6/92.

Ready for forms

5/13/92

100184

W5627

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	324	5:24	1	1.000	A BB	31468.	40.000 NG/UL	5.07
2	136	455	7:35	2	1.000	A BB	113322.	40.000 NG/UL	5.07
3	164	659	10:59	3	1.000	A BB	48193.	40.000 NG/UL	5.07
4	188	834	13:54	4	1.000	A BB	68943.	40.000 NG/UL	5.07
5	240	1161	19:21	5	1.000	A BB	44271.	40.000 NG/UL	5.07
6	264	1395	23:15	6	1.000	A BB	28596.	40.000 NG/UL	5.07
7	112	222	3:42	1	0.685	A BB	45771.	27.397 NG*A1	3.47
8	99	296	4:56	1	0.914	A BB	57660.	31.336 NG*A2	3.97
9	82	383	6:23	2	0.842	A BB	34879.	24.905 NG*B1	3.16
10	172	580	9:40	3	0.880	A BB	49191.	27.430 NG*B2	3.48
11	330	753	12:33	3	1.143	A BB	8559.	28.267 NG*A3	3.58
12	244	1029	17:09	5	0.886	A BB	43803.	34.239 NG*B3	4.34
13	132	307	5:07	1	0.948	A BB	42193.	33.285 NG*A4	4.22
14	152	342	5:42	1	1.056	A BB	19691.	26.713 NG*B4	3.39
15	128	308	5:08	1	0.951	A BB	24554.	22.059 NG MS	2.80
16	94	297	4:57	1	0.917	A BB	37630.	27.268 NG. MS	3.46
17	NOT FOUND								
18	146	326	5:26	1	1.006	A BB	24905.	~~21.665 NG~~ Miss ID	2.75
19	146	326	5:26	1	1.006	A BB	24905.	19.285 NG MS	2.44
20	146	326	5:26	1	1.006	A BB	24905.	~~22.208 NG~~ Miss ID	2.81
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	70	369	6:09	1	1.139	A BB	23580.	24.434 NG. MS	3.10
27	77	383	6:23	2	0.842	A BB	196.	~~0.134 NG~~ BRL	0.02
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	180	450	7:30	2	0.989	A BB	17149.	18.945 NG MS	2.40
34	128	457	7:37	2	1.004	A BB	714.	~~0.225 NG~~	0.03
35	122	429	7:09	2	0.943	A BB	254.	~~0.606 NG~~ BRL	0.08
36	NOT FOUND								
37	NOT FOUND								
38	107	523	8:43	2	1.149	A BB	26599.	27.338 NG. MS	3.46
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	153	662	11:02	3	1.005	A BB	39452.	22.753 NG. MS	2.88
49	NOT FOUND								
50	NOT FOUND								

W5627

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:24	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:36	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:00	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:55	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:28	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:41	1.00	0.682	1.00	27.40	50.00	1.164	2.124	0.55
8	4:56	1.00	0.914	1.00	31.34	50.00	1.466	2.339	0.63
9	6:23	1.00	0.840	1.00	24.90	50.00	0.246	0.494	0.50
10	9:42	1.00	0.882	1.00	27.43	50.00	0.817	1.488	0.55
11	12:35	1.00	1.144	1.00	28.27	50.00	0.142	0.251	0.57
12	17:12	1.00	0.882	1.00	34.24	50.00	0.792	1.156	0.68
13	5:07	1.00	0.948	1.00	33.28	50.00	1.073	1.611	0.67
14	5:42	1.00	1.056	1.00	26.71	50.00	0.501	0.937	0.53
15	5:08	1.00	0.951	1.00	22.06	50.00	0.624	1.415	0.44
16	4:57	1.00	0.917	1.00	27.27	50.00	0.957	1.754	0.55
17	5:05		0.941						
18	5:21	1.02	0.991	1.02	21.67	50.00	0.633	1.461	0.43
19	5:26	1.00	1.006	1.00	19.28	50.00	0.633	1.642	0.39
20	5:44	0.95	1.062	0.95	22.21	50.00	0.633	1.425	0.44
21	5:41		1.052						
22	5:55		1.096						
23	5:53		1.090						
24	6:13		1.151						
25	6:08		1.136						
26	6:10	1.00	1.142	1.00	24.43	50.00	0.599	1.227	0.49
27	6:25	0.99	0.844	1.00	0.13	50.00	0.001	0.516	0.00
28	6:49		0.897						
29	6:58		0.917						
30	7:03		0.928						
31	7:14		0.952						
32	7:22		0.969						
33	7:32	1.00	0.991	1.00	18.95	50.00	0.121	0.320	0.38
34	7:38	1.00	1.004	1.00	0.23	50.00	0.005	1.119	0.00
35	7:18	0.98	0.961	0.98	0.60	50.00	0.002	0.149	0.01
36	7:49		1.029						
37	7:57		1.046						
38	8:44	1.00	1.149	1.00	27.34	50.00	0.188	0.343	0.55
39	8:56		1.175						
40	9:21		0.850						
41	9:33		0.868						
42	9:37		0.874						
43	9:52		0.897						
44	10:12		0.927						
45	10:42		0.973						
46	10:36		0.964						
47	10:46		0.979						
48	11:04	1.00	1.006	1.00	22.75	50.00	0.655	1.439	0.46
49	11:02		1.003						
50	11:13		1.020						

Quantitation Report File: W5627

Data: W5627.TI
05/05/92 15:46:00
Sample: CLP,6432,3,S-8MS,L,S,74718MS,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2'-OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	109	681	11:21	3	1.033	A BB	9642.	27.886 NG. MS	3.53
53	165	689	11:29	3	1.046	A BB	10211.	19.682 NG. MS	2.49
54	NOT FOUND								
55	NOT FOUND								
56	149	718	11:58	3	1.090	A BB	235.	~~0.107 NG~~ BRL	0.01
57	NOT FOUND								
58	NOT FOUND								
59	169	739	12:19	4	0.886	A BB	1788.	~~1.675 NG~~ BRL	0.21
60	NOT FOUND								
61	NOT FOUND								

W5627

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
62	266	819	13:39	4	0.982	A BB	6712.	30.365 NG. MS	3.85
63	178	836	13:56	4	1.002	A BB	202.	~~0.098 NG~~	0.01
64	NOT FOUND								
65	149	912	15:12	4	1.094	A BB	1908.	~~0.634 NG~~ BRL	0.08
66	202	981	16:21	4	1.176	A BB	220.	~~0.112 NG~~	0.01
67	202	1008	16:48	5	0.868	A BB	61951.	28.136 NG. MS	3.57
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								
81	NOT FOUND								
82	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:22		1.033						
52	11:23	1.00	1.035	1.00	27.89	50.00	0.160	0.287	0.56
53	11:31	1.00	1.047	1.00	19.68	50.00	0.170	0.431	0.39
54	12:03		1.095						
55	12:04		1.097						
56	12:00	1.00	1.091	1.00	0.11	50.00	0.004	1.817	0.00
57	12:18		1.118						
58	12:18		0.884						
59	12:21	1.00	0.887	1.00	1.70	50.00	0.021	0.612	0.03
60	13:02		0.937						
61	13:19		0.957						
62	13:41	1.00	0.983	1.00	30.36	50.00	0.078	0.128	0.61
63	13:59	1.00	1.005	1.00	0.10	50.00	0.002	1.198	0.00
64	14:04		1.011						
65	15:14	1.00	1.095	1.00	0.63	50.00	0.022	1.745	0.01
66	16:23	1.00	1.177	1.00	0.11	50.00	0.003	1.125	0.00
67	16:51	1.00	0.864	1.00	28.14	50.00	1.119	1.989	0.56
68	18:20		0.940						
69	19:27		0.997						
70	19:34		1.003						
71	19:29		0.999						
72	19:38		1.007						
73	21:06		0.899						
74	22:13		0.947						
75	22:17		0.950						
76	23:16		0.991						
77	28:04		1.196						
78	28:12		1.202						
79	29:29		1.256						
80	2:25		0.448						
81	14:26		1.037						
82	5:55		1.096						

QUALITY CONTROL/QUALITY ASSURANCE DATA

METHOD: USEPA CLP, BNA LOW SOIL W/O PEST

DATAFILE: W5627 ANALYSIS TIME: 05/05/92 15:46
STANDARD: W5621 ANALYSIS TIME: 05/05/92 11:21
TUNEFILE: W5620 ANALYSIS TIME: 05/05/92 11:04

****** INTERNAL STANDARD AREA CHECK ******

INTERNAL STANDARD	DATA AREA	STD AREA	RATIO	CLP ACCEPT RATIO	STATUS
CI30 1,4-DICHLOROBENZEN	31468.	26814.	117%	50% - 200%	
CI40 NAPHTHALENE-D8**IN	113322.	95941.	118%	50% - 200%	
CI50 ACENAPHTHENE-D10**	48193.	41313.	117%	50% - 200%	
CI60 PHENANTHRENE-D10**	68943.	61924.	111%	50% - 200%	
CI70 CHRYSENE-D12**INT.	44271.	36460.	121%	50% - 200%	
CI75 PERYLENE-D12**INT.	28596.	26186.	109%	50% - 200%	

****** INTERNAL STANDARD RT CHECK ******

INTERNAL STANDARD	DATA SCAN	STD SCAN	DIFF [IN SEC]	CLP ACCEPT DIFF	STATUS
CI30 1,4-DICHLOROBENZEN	324	324	0	+/- 30 SECS	
CI40 NAPHTHALENE-D8**IN	455	456	1	+/- 30 SECS	
CI50 ACENAPHTHENE-D10**	659	660	1	+/- 30 SECS	
CI60 PHENANTHRENE-D10**	834	835	1	+/- 30 SECS	
CI70 CHRYSENE-D12**INT.	1161	1170	9	+/- 30 SECS	
CI75 PERYLENE-D12**INT.	1395	1408	13	+/- 30 SECS	

****** SURROGATE RECOVERIES ******

SURROGATE	AMT FOUND	AMT ADDED	PERCENT RECOVERY	RECOV LIMITS	STATUS
CS50 2-FLUOROPHENOL**AC	27.4	~~100.0~~ 75	~~27~~ 37	25% - 121%	
CS45 PHENOL-D5**ACID SU	31.3	~~100.0~~	~~31~~ 42	24% - 113%	
CS20 NITROBENZENE-D5**B	24.9	50.0	50	23% - 120%	
CS25 2-FLUOROBIPHENYL**	27.4	50.0	55	30% - 115%	
CS55 2,4,6,-TRIBROMOPHE	28.3	~~100.0~~ 75	~~28~~ 38	19% - 122%	
CS30 P-TERPHENYL-D14**B	34.2	50.0	68	18% - 137%	

Versar Laboratories INC

MATRIX SPIKE DUPLICATE DATA

6850 Versar Center • P. O. Box 1549 • Springfield, Virginia 22151 • Telephone: (703) 750-3000 • 1-800-283-7727

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8MSD

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74718MSD

Sample wt/vol: 30.1 (g/mL) G Lab File ID: W5628

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 dec. ____ Date Extracted: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	810	U
111-44-4	bis(2-Chloroethyl)ether	810	U
95-57-8	2-Chlorophenol	810	U
541-73-1	1,3-Dichlorobenzene	810	U
106-46-7	1,4-Dichlorobenzene	810	U
100-51-6	Benzyl alcohol	810	U
95-50-1	1,2-Dichlorobenzene	810	U
95-48-7	2-Methylphenol	810	U
108-60-1	bis(2-Chloroisopropyl)ether	810	U
106-44-5	3- & 4- Methylphenol	810	U
621-64-7	N-Nitroso-di-n-propylamine	810	U
67-72-1	Hexachloroethane	810	U
98-95-3	Nitrobenzene	810	U
78-59-1	Isophorone	810	U
88-75-5	2-Nitrophenol	810	U
105-67-9	2,4-Dimethylphenol	810	U
65-85-0	Benzoic Acid	4000	U
111-91-1	bis(2-Chloroethoxy)methane	810	U
120-83-2	2,4-Dichlorophenol	810	U
120-82-1	1,2,4-Trichlorobenzene	810	U
91-20-3	Naphthalene	810	U
106-47-8	4-Chloroaniline	810	U
87-68-3	Hexachlorobutadiene	810	U
59-50-7	4-Chloro-3-methylphenol	810	U
91-57-6	2-Methylnaphthalene	810	U
77-47-4	Hexachlorocyclopentadiene	810	U
88-06-2	2,4,6-Trichlorophenol	810	U
95-95-4	2,4,5-Trichlorophenol	4000	U
91-58-7	2-Chloronaphthalene	810	U
88-74-4	2-Nitroaniline	4000	U
131-11-3	Dimethylphthalate	810	U
208-96-8	Acenaphthylene	810	U
606-20-2	2,6-Dinitrotoluene	810	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8MSD

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74718MSD

Sample wt/vol: 30.1 (g/mL) G Lab File ID: W5628

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 dec. ____ Date Extracted: 04/23/92

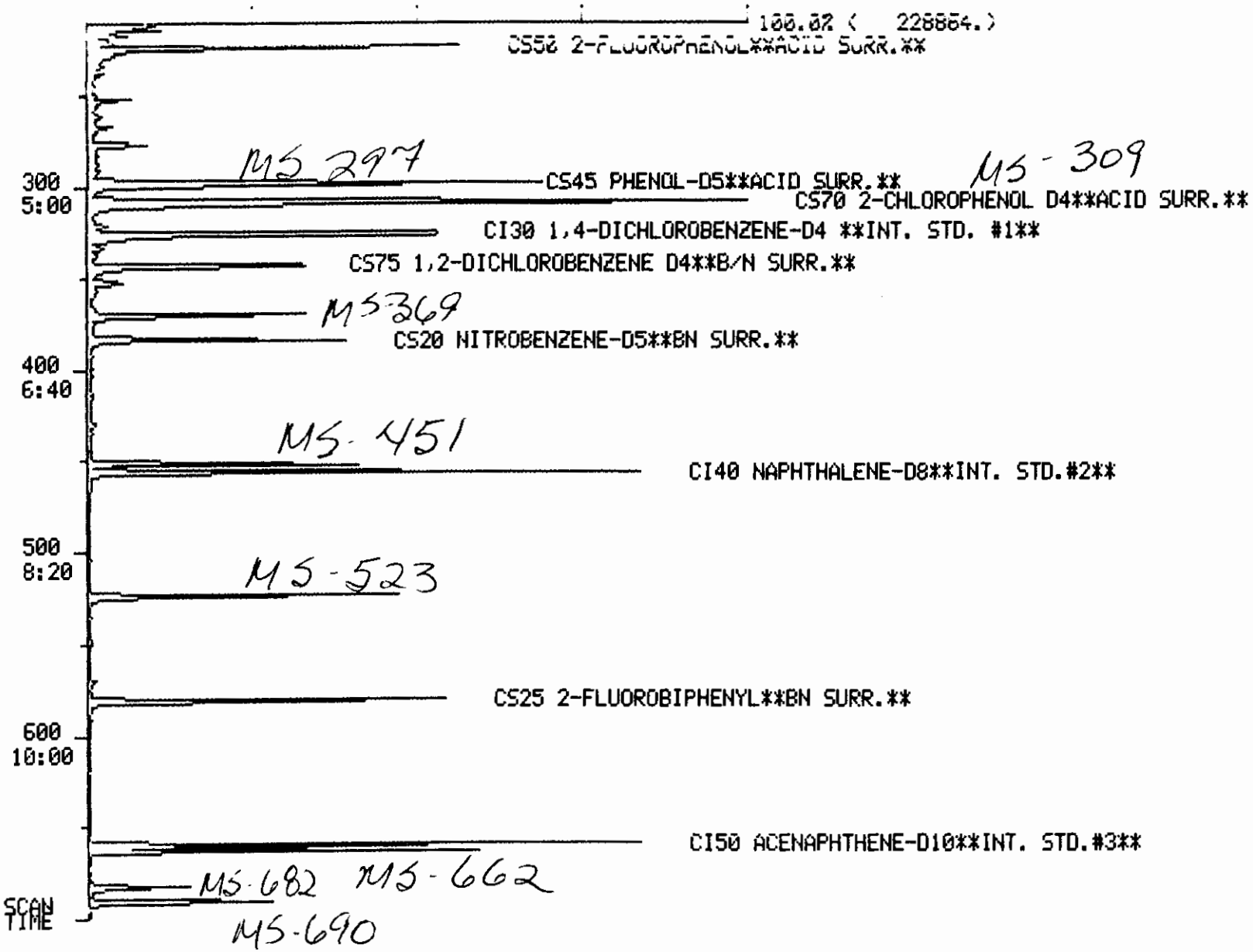
Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/05/92

GPC Cleanup: (Y/N) Y pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4000	U
83-32-9	Acenaphthene	810	U
51-28-5	2,4-Dinitrophenol	4000	U
100-02-7	4-Nitrophenol	4000	U
132-64-9	Dibenzofuran	810	U
121-14-2	2,4-Dinitrotoluene	810	U
84-66-2	Diethylphthalate	810	U
7005-72-3	4-Chlorophenyl-phenylether	810	U
86-73-7	Fluorene	810	U
100-01-6	4-Nitroaniline	4000	U
534-52-1	4,6-Dinitro-2-methylphenol	4000	U
86-30-6	N-nitrosodiphenylamine (1)	810	U
101-55-3	4-Bromophenyl-phenylether	810	U
118-74-1	Hexachlorobenzene	810	U
87-86-5	Pentachlorophenol	4000	U
85-01-8	Phenanthrene	810	U
120-12-7	Anthracene	810	U
84-74-2	Di-n-butylphthalate	810	U
206-44-0	Fluoranthene	810	U
129-00-0	Pyrene	810	U
85-68-7	Butylbenzylphthalate	810	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	810	U
218-01-9	Chrysene	810	U
117-81-7	bis(2-Ethylhexyl)phthalate	810	U
117-84-0	Di-n-octyl phthalate	810	U
205-99-2	Benzo(b)fluoranthene	810	U
207-08-9	Benzo(k)fluoranthene	810	U
50-32-8	Benzo(a)pyrene	810	U
193-39-5	Indeno(1,2,3-cd)pyrene	810	U
53-70-3	Dibenz(a,h)anthracene	810	U
191-24-2	Benzo(g,h,i)perylene	810	U

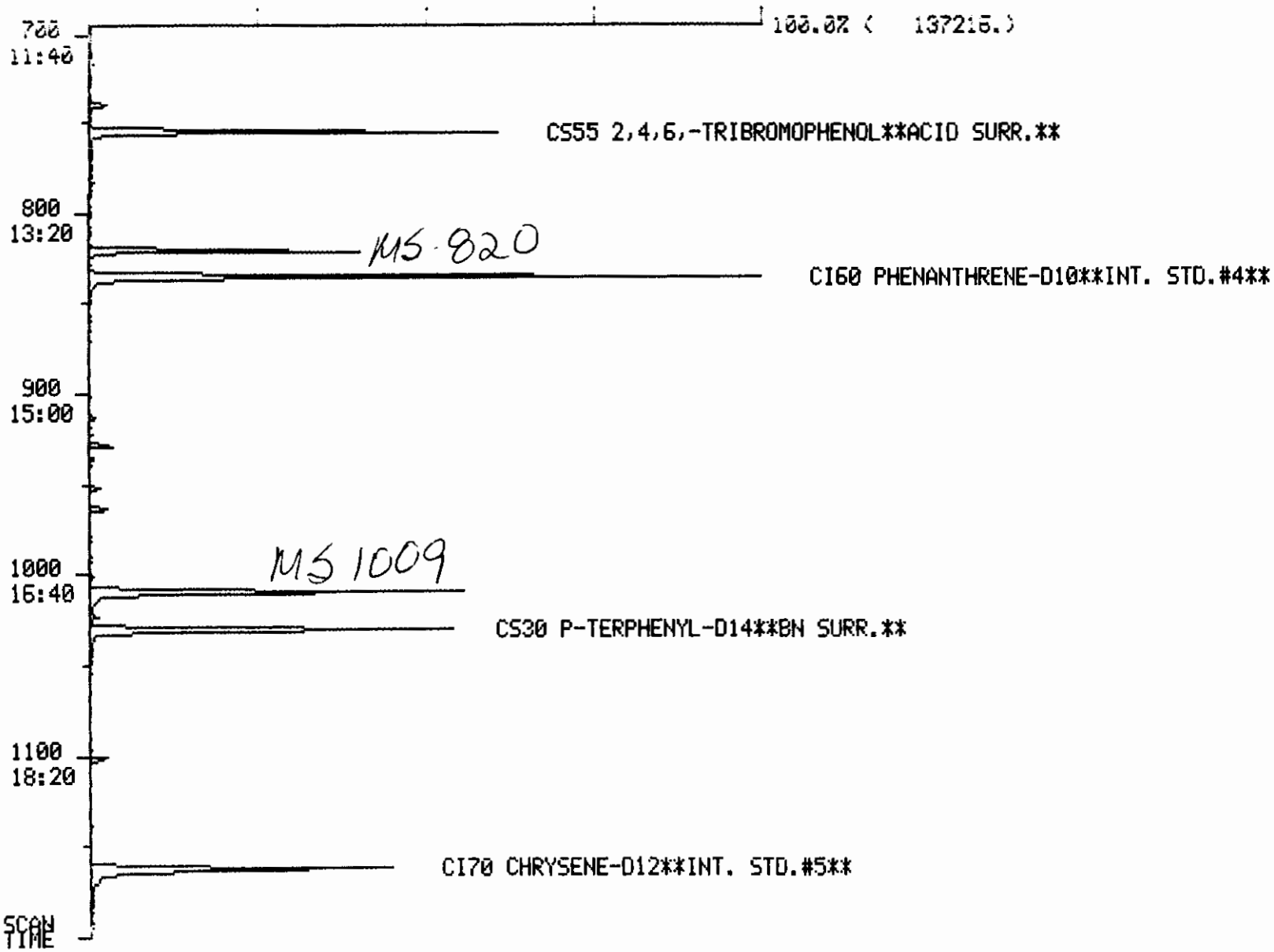
(1) - Cannot be separated from Diphenylamine

DATA FROM FILE: W5628 SCANS 210 TO 700 ACQUIRED: 05/05/92 16:24:00
CALI: W5628 #2
SAMPLE: CLP,6432,3,S-8MSD,L,S,74718MSD,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



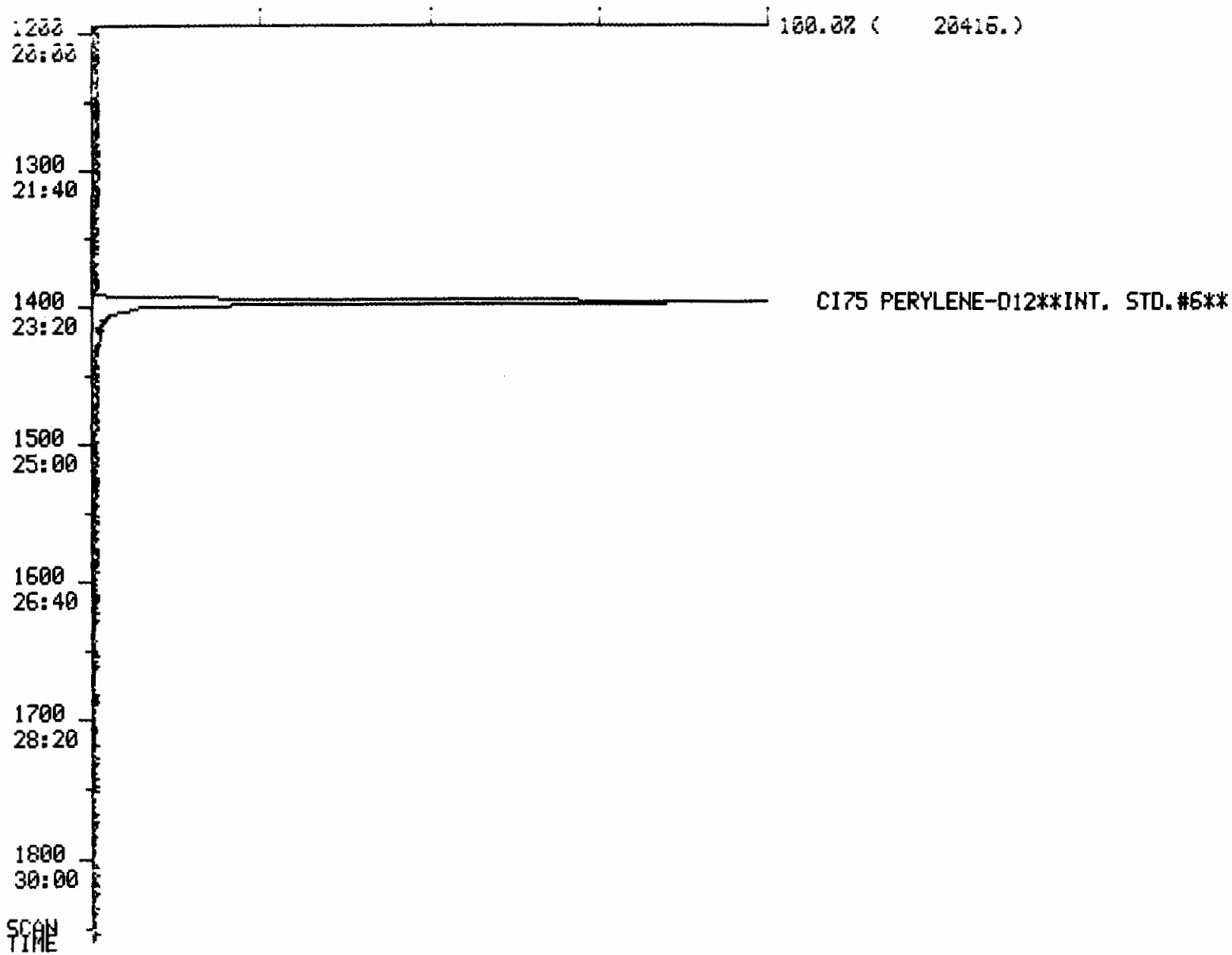
100195

DATA FROM FILE: W5628 SCANS 695 TO 1200 ACQUIRED: 05/05/92 16:24:00
CALI: W5628 #2
SAMPLE: CLP,6432,3,S-8MSD,L,S,74718MSD,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100194

DATA FROM FILE: W5628 SCANS 1195 TO 1860 ACQUIRED: 05/05/92 16:24:00
CALI: W5628 #2
SAMPLE: CLP,6432,3,S-8MSD,L,S,74718MSD,B,EPA,1UL,
CONDS.: CAP/.32,W5621,W5620,



100195

Quantitation Report File: W5628

Data: W5628.TI
05/05/92 16:24:00
Sample: CLP,6432,3,S-8MSD,L,S,74718MSD,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS20 NITROBENZENE-D5**BN SURR.**
10	CS25 2-FLUOROBIPHENYL**BN SURR.**
11	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**
13	CS70 2-CHLOROPHENOL D4**ACID SURR.**
14	CS75 1,2-DICHLOROBENZENE D4**B/N SURR.**
15	C330 2-CHLOROPHENOL
16	C315 PHENOL
17	C325 BIS (2-CHLOROETHYL) ETHER
18	C335 1,3-DICHLOROBENZENE
19	C340 1,4-DICHLOROBENZENE
20	C350 1,2-DICHLOROBENZENE
21	C345 BENZYL ALCOHOL
22	C360 BIS (2-CHLOROISOPROPYL) ETHER
23	C355 2-METHYLPHENOL
24	C375 HEXACHLOROETHANE
25	C365 4-METHYLPHENOL
26	C370 N-NITROSO-DI-N-PROPYLAMINE
27	C410 NITROBENZENE
28	C415 ISOPHORONE
29	C420 2-NITROPHENOL
30	C425 2,4-DIMETHYLPHENOL
31	C435 BIS (2-CHLOROETHOXY) METHANE
32	C440 2,4-DICHLOROPHENOL
33	C445 1,2,4-TRICHLOROBENZENE
34	C450 NAPHTHALENE
35	C430 BENZOIC ACID
36	C455 4-CHLOROANILINE
37	C460 HEXACHLOROBUTADIENE
38	C465 4-CHLORO-3-METHYLPHENOL
39	C470 2-METHYLNAPHTHALENE
40	C510 HEXACHLOROCYCLOPENTADIENE
41	C515 2,4,6-TRICHLOROPHENOL
42	C520 2,4,5-TRICHLOROPHENOL
43	C525 2-CHLORONAPHTHALENE
44	C530 2-NITROANILINE
45	C540 ACENAPHTHYLENE
46	C535 DIMETHYL PHTHALATE
47	C544 2,6-DINITROTOLUENE

Compliant Run
5/6/92

Ready for forms

5/13/92

W5628

No	Name
48	C550 ACENAPHTHENE
49	C545 3-NITROANILINE
50	C555 2,4-DINITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	324	5:24	1	1.000	A BB	32760.	40.000 NG/UL	4.79
2	136	455	7:35	2	1.000	A BB	114012.	40.000 NG/UL	4.79
3	164	659	10:59	3	1.000	A BB	52599.	40.000 NG/UL	4.79
4	188	834	13:54	4	1.000	A BB	72203.	40.000 NG/UL	4.79
5	240	1162	19:22	5	1.000	A BB	47094.	40.000 NG/UL	4.79
6	264	1396	23:16	6	1.000	A BB	30345.	40.000 NG/UL	4.79
7	112	222	3:42	1	0.685	A BB	53357.	30.678 NG*A1	3.67
8	99	296	4:56	1	0.914	A BB	64211.	33.519 NG*A2	4.01
9	82	383	6:23	2	0.842	A BB	43018.	30.530 NG*B1	3.65
10	172	580	9:40	3	0.880	A BB	54585.	27.888 NG*B2	3.34
11	330	754	12:34	3	1.144	A BB	10422.	31.537 NG*A3	3.77
12	244	1029	17:09	5	0.886	A BB	44219.	32.492 NG*B3	3.89
13	132	307	5:07	1	0.948	A BB	48442.	36.707 NG*A4	4.39
14	152	342	5:42	1	1.056	A BB	20321.	26.480 NG*B4	3.17
15	128	309	5:09	1	0.954	A BB	30208.	26.068 NG. MS	3.12
16	94	297	4:57	1	0.917	A BB	42194.	29.369 NG. MS	3.51
17	NOT FOUND								
18	146	326	5:26	1	1.006	A BB	29741.	~~24.852 NG~~ Miss ID	~~2.97~~
19	146	326	5:26	1	1.006	A BB	29741.	22.121 NG MS	2.65
20	146	326	5:26	1	1.006	A BB	29741.	~~25.475 NG~~ Miss ID	3.05
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	70	369	6:09	1	1.139	A BB	27497.	27.369 NG. MS	3.27
27	77	383	6:23	2	0.842	A BB	200.	~~0.136 NG~~ BRL	0.02
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	180	451	7:31	2	0.991	A BB	20499.	22.509 NG. MS	2.69
34	128	457	7:37	2	1.004	A BB	982.	~~0.308 NG~~ BRL	0.04
35	122	429	7:09	2	0.943	A BB	386.	~~0.906 NG~~	0.11
36	NOT FOUND								
37	NOT FOUND								
38	107	523	8:43	2	1.149	A BB	30435.	31.092 NG MS	3.72
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	153	662	11:02	3	1.005	A BB	44365.	23.443 NG MS	2.80
49	NOT FOUND								
50	NOT FOUND								

W5628

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	5:24	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	7:36	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	11:00	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	13:55	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	19:30	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	23:28	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	3:41	1.00	0.682	1.00	30.68	50.00	1.303	2.124	0.61
8	4:56	1.00	0.914	1.00	33.52	50.00	1.568	2.339	0.67
9	6:23	1.00	0.840	1.00	30.53	50.00	0.302	0.494	0.61
10	9:42	1.00	0.882	1.00	27.89	50.00	0.830	1.488	0.56
11	12:35	1.00	1.144	1.00	31.54	50.00	0.159	0.251	0.63
12	17:12	1.00	0.882	1.00	32.49	50.00	0.751	1.156	0.65
13	5:07	1.00	0.948	1.00	36.71	50.00	1.183	1.611	0.73
14	5:42	1.00	1.056	1.00	26.48	50.00	0.496	0.937	0.53
15	5:08	1.00	0.951	1.00	26.07	50.00	0.738	1.415	0.52
16	4:57	1.00	0.917	1.00	29.37	50.00	1.030	1.754	0.59
17	5:05		0.941						
18	5:21	1.02	0.991	1.02	24.85	50.00	0.726	1.461	0.50
19	5:26	1.00	1.006	1.00	22.12	50.00	0.726	1.642	0.44
20	5:44	0.95	1.062	0.95	25.48	50.00	0.726	1.425	0.51
21	5:41		1.052						
22	5:55		1.096						
23	5:53		1.090						
24	6:13		1.151						
25	6:08		1.136						
26	6:10	1.00	1.142	1.00	27.37	50.00	0.671	1.227	0.55
27	6:25	0.99	0.844	1.00	0.14	50.00	0.001	0.516	0.00
28	6:49		0.897						
29	6:58		0.917						
30	7:03		0.928						
31	7:14		0.952						
32	7:22		0.969						
33	7:32	1.00	0.991	1.00	22.51	50.00	0.144	0.320	0.45
34	7:38	1.00	1.004	1.00	0.31	50.00	0.007	1.119	0.01
35	7:18	0.98	0.961	0.98	0.91	50.00	0.003	0.149	0.02
36	7:49		1.029						
37	7:57		1.046						
38	8:44	1.00	1.149	1.00	31.09	50.00	0.214	0.343	0.62
39	8:56		1.175						
40	9:21		0.850						
41	9:33		0.868						
42	9:37		0.874						
43	9:52		0.897						
44	10:12		0.927						
45	10:42		0.973						
46	10:36		0.964						
47	10:46		0.979						
48	11:04	1.00	1.006	1.00	23.44	50.00	0.675	1.439	0.47
49	11:02		1.003						
50	11:13		1.020						

Quantitation Report File: W5628

Data: W5628.TI
05/05/92 16:24:00
Sample: CLP,6432,3,S-BMSD,L,S,74718MSD,B,EPA,1UL,
Conds.: CAP/.32,W5621,W5620,
Formula: Instrument: W Weight: 0.026
Submitted by: VERSAR Analyst: SJD Acct. No.:

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

No	Name
51	C565 DIBENZOFURAN
52	C560 4-NITROPHENOL
53	C570 2,4-DINITROTOLUENE
54	C590 FLUORENE
55	C585 4-CHLOROPHENYL-PHENYLETHER
56	C580 DIETHYLPHTHALATE
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C650 DI-N-BUTYLPHTHALATE
66	C655 FLUORANTHENE
67	C715 PYRENE
68	C720 BUTYLBENZYLPHTHALATE
69	C730 BENZO(A)ANTHRACENE
70	C740 CHRYSENE
71	C725 3,3'-DICHLOROBENZIDINE
72	C741 BIS(2-ETHYLHEXYL)PHTHALATE
73	C760 DI-N-OCTYL PHTHALATE
74	C765 BENZO(B)FLUORANTHENE
75	C770 BENZO(K)FLUORANTHENE
76	C775 BENZO(A)PYRENE
77	C780 INDENO(1,2,3-CD)PYRENE
78	C785 DIBENZ(A,H)ANTHRACENE
79	C790 BENZO(G,H,I)PERYLENE
80	C310 N-NITROSODIMETHYLAMINE
81	C647 CARBAZOLE
82	C357 2,2'-OXYBIS(1-CHLOROPROPANE)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	109	682	11:22	3	1.035	A BB	11297.	29.936 NG. MS	3.58
53	165	690	11:30	3	1.047	A BB	12557.	22.176 NG. MS	2.65
54	NOT FOUND								
55	NOT FOUND								
56	149	718	11:58	3	1.090	A BB	275.	~~0.115 NG~~ BR	0.01
57	NOT FOUND								
58	NOT FOUND								
59	169	739	12:19	4	0.886	A BB	1628.	~~1.474 NG~~ BR	0.18
60	NOT FOUND								
61	NOT FOUND								

W5628

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
62	266	820	13:40	4	0.983	A BB	7141.	30.847 NG	MS	3.69
63	178	837	13:57	4	1.004	A BB	322.	~~0.149 NG~~	BRL	0.02
64	178	841	14:01	4	1.008	A BB	191.	0.081 NG		0.01
65	149	912	15:12	4	1.094	A BB	1349.	~~0.428 NG~~		0.05
66	202	980	16:20	4	1.175	A BB	316.	~~0.156 NG~~		0.02
67	202	1009	16:49	5	0.868	A BB	62690.	26.765 NG.	MS	3.20
68	NOT FOUND									
69	228	1164	19:24	5	1.002	A BB	234.	~~0.186 NG~~	BRL	0.02
70	NOT FOUND									
71	NOT FOUND									
72	NOT FOUND									
73	NOT FOUND									
74	NOT FOUND									
75	NOT FOUND									
76	NOT FOUND									
77	NOT FOUND									
78	NOT FOUND									
79	NOT FOUND									
80	NOT FOUND									
81	167	864	14:24	4	1.036	A BB	177.	~~0.114 NG~~	BRL	0.01
82	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:22		1.033						
52	11:23	1.00	1.035	1.00	29.94	50.00	0.172	0.287	0.60
53	11:31	1.00	1.047	1.00	22.18	50.00	0.191	0.431	0.44
54	12:03		1.095						
55	12:04		1.097						
56	12:00	1.00	1.091	1.00	0.12	50.00	0.004	1.817	0.00
57	12:18		1.118						
58	12:18		0.884						
59	12:21	1.00	0.887	1.00	1.47	50.00	0.018	0.612	0.03
60	13:02		0.937						
61	13:19		0.957						
62	13:41	1.00	0.983	1.00	30.85	50.00	0.079	0.128	0.62
63	13:59	1.00	1.005	1.00	0.15	50.00	0.004	1.198	0.00
64	14:04	1.00	1.011	1.00	0.08	50.00	0.002	1.306	0.00
65	15:14	1.00	1.095	1.00	0.43	50.00	0.015	1.745	0.01
66	16:23	1.00	1.177	1.00	0.16	50.00	0.004	1.125	0.00
67	16:51	1.00	0.864	1.00	26.77	50.00	1.065	1.989	0.54
68	18:20		0.940						
69	19:27	1.00	0.997	1.00	0.19	50.00	0.004	1.068	0.00
70	19:34		1.003						
71	19:29		0.999						
72	19:38		1.007						
73	21:06		0.899						
74	22:13		0.947						
75	22:17		0.950						
76	23:16		0.991						
77	28:04		1.196						
78	28:12		1.202						
79	29:29		1.256						
80	2:25		0.448						
81	14:26	1.00	1.037	1.00	0.11	50.00	0.002	0.862	0.00
82	5:55		1.096						

QUALITY CONTROL/QUALITY ASSURANCE DATA

METHOD: USEPA CLP, BNA LOW SOIL W/O PEST

DATAFILE: W5628 ANALYSIS TIME: 05/05/92 16:24
STANDARD: W5621 ANALYSIS TIME: 05/05/92 11:21
TUNEFILE: W5620 ANALYSIS TIME: 05/05/92 11:04

****** INTERNAL STANDARD AREA CHECK ******

INTERNAL STANDARD	DATA AREA	STD AREA	RATIO	CLP ACCEPT RATIO	STATUS
CI30 1,4-DICHLOROBENZEN	32760.	26814.	122%	50% - 200%	
CI40 NAPHTHALENE-D8**IN	114012.	95941.	119%	50% - 200%	
CI50 ACENAPHTHENE-D10**	52599.	41313.	127%	50% - 200%	
CI60 PHENANTHRENE-D10**	72203.	61924.	117%	50% - 200%	✓
CI70 CHRYSENE-D12**INT.	47094.	36460.	129%	50% - 200%	
CI75 PERYLENE-D12**INT.	30345.	26186.	116%	50% - 200%	

****** INTERNAL STANDARD RT CHECK ******

INTERNAL STANDARD	DATA SCAN	STD SCAN	DIFF [IN SEC]	CLP ACCEPT DIFF	STATUS
CI30 1,4-DICHLOROBENZEN	324	324	0	+/- 30 SECS	
CI40 NAPHTHALENE-D8**IN	455	456	1	+/- 30 SECS	
CI50 ACENAPHTHENE-D10**	659	660	1	+/- 30 SECS	✓
CI60 PHENANTHRENE-D10**	834	835	1	+/- 30 SECS	
CI70 CHRYSENE-D12**INT.	1162	1170	8	+/- 30 SECS	
CI75 PERYLENE-D12**INT.	1396	1408	12	+/- 30 SECS	

****** SURROGATE RECOVERIES ******

SURROGATE	AMT FOUND	AMT ADDED	PERCENT RECOVERY	RECOV LIMITS	STATUS
CS50 2-FLUOROPHENOL**AC	30.7	~~100.0~~ 75	~~31~~ 41	25% - 121%	
CS45 PHENOL-D5**ACID SU	33.5	~~100.0~~	~~24~~ 45	24% - 113%	
CS20 NITROBENZENE-D5**B	30.5	50.0	61	23% - 120%	✓
CS25 2-FLUOROBIPHENYL**	27.9	50.0	56	30% - 115%	
CS55 2,4,6,-TRIBROMOPHE	31.5	~~100.0~~ 75	~~22~~ 42	19% - 122%	
CS30 P-TERPHENYL-D14**B	32.5	50.0	65	18% - 137%	

VI. SAMPLE PREPARATION PACKAGE

VERSAR LABORATORIES INC.
PARAMETER REQUEST SHEET

Deliver To: 46

Control: 6432 Case: R09042
Code: VEOBRIEN SDG:
Batch: 3 Quote: 9201850
Job Number: 420.1.0 Charge:

Manager: JAUFMANN Site: OBRIEN
Company: VERSAR

Rec'd: [illegible] Rep'd: [illegible]
Due: 27-MAY-92 Report: [illegible]
Exp Due: 28-APR-92 Dispose: [illegible]

QC Type: STANDARD
Disposal: [illegible] Type: [illegible]

Comments: DO QC on designated samples.

Test	Qty	Control	Field Number	Date	Time
[illegible]					
	[illegible]	QC	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]	QC	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
TS	[illegible]				
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]	QC	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
	[illegible]	QC	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
XBNA	[illegible]				
	[illegible]	QC	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
BNA	[illegible]				
	[illegible]	QC	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]
VOAL	[illegible]				
	7720	8 QC	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]

QC = Quality control; DUP = Field Duplicate

Control #: 6432

st Samp#	X	Comment	Field Number	Matrix	Location	Other Tests

Empty; TB = Trip Blank; FB = Field Blank; SEE = See Batch

Versar Laboratories INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	INDUSTRIAL HYGIENE SAMPLE
209042 PRC 5004.020 BWWST	O'BRIEN Breakwater Corrective Measure Implementation	Y / N

SAMPLERS: (Signature)	(Printed)
Mark D. Maio	Mark DeMaio (510) 246-8010

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Lead	Priority Pollutant Metals	VOC's	SVOC's (BNA)					REMARKS
S-1	4/9	4:04		X	S-1	1	X								
S-2	4/9	4:00pm		X	S-2	1	X								
S-3	4/9	3:55		X	S-3	1	X								
~~108~~ MD S-4	4/9	3:50pm		X	S-4	1	X								~~[illegible]~~
S-5	4/10	3:50pm		X	S-5	1	X								
S-6	4/10	3:55 PM		X	S-6	1	X								
S-7	4/10	6:51		X	S-7	1	X								
S-8	4/10	5:15		X	S-8	4		X 1	X 2*	X 1					2 VOA samples labeled S-8a and S-[illegible]
S-9	4/10	3:40pm		X	S-9	1	X								
S-10	4/10	7:45		X	S-10	3		1	1	1					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Mark D. Maio	4/13/92 4:00pm	Fedex Airbill # 2184815791			
(Printed) Mark De Maio		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Debbie Maxwell	4/14/92 12:10	* TOOK 2 VOA's due to difficulty in obtaining headfree sample - lab to decide which sample to use
(Printed)		(Printed) Debbie Maxwell		

[illegible] Shipment (white and yellow): Copy to Coordinator Field Files (pink).

Versar Laboratories INC.

SAMPLE RECEIVING CHECKLIST
SHIPMENT CONDITION INSPECTION UPON ARRIVAL

CONTROL NO.: 6432
JOB CODE:
INSPECTED BY: DM (Print Name)

DATE RECEIVED: 4-14-92
DATE INSPECTED: ↓
TIME INSPECTED: 12:10

PAPERWORK:	YES	NO	INTACT	BROKEN
Hand Delivered		✓		
Airbill	✓			
Cooler Custody Seals	✓		✓	
Bottle Custody Seals	✓		✓	
Chain of Custody	✓			
Traffic Reports		✓		
Sample Tags		✓		
Tags Listed on Chain of Custody		✓		

SAMPLE CONDITION:	COOL	AMBIENT	WARM	HOT	DEGREES C
Cooler Temperature	✓				10°

	YES	NO	
Ice	✓		MELTED
Bottles Broken		✓	
Bottles Leaking		✓	

	OK	Not OK	Not Checked	Not Applicable
Preservation pH				✓

SHIPMENT CONDITION:	OK	Not OK	Major	Minor
	✓			

PROBLEMS AND COMMENTS:

D Maxwell
Signature

4/14/92
Date

Date	Time	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	

100200

VERSAR LABORATORIES INC
ORGANIC EXTRACTION LAB
SOIL/SOLID SAMPLE PREPARATION
COMMENT SHEET

23-APR-92

Worklist Id: 10016
Analysis Code: XBNA

Contl#	Code	Batch	Job Number	Matrix	Level	Location
6432	VEOBRIEN	3	420.1.0	SOIL	L	A-19

Sample # 74718 Field # S-8 pH 9.10

Consistency	Color	Artifacts	Moisture
✓ Sand	Tan	None	Dry
Clay	Red-Brown	✓ Rocks or Stones	✓ Moist
Soil	✓ Brown-Black	Plant Matter	Wet
	Other	Other	(Std. H20)

Was additional NaSO4 needed to dry Matrix? No ___ Yes ✓ Amount (g) 10g

NOTES:

Sample # 74719 Field # S-10 pH 9.66

Consistency	Color	Artifacts	Moisture
✓ Sand	Tan	None	Dry
✓ Clay	Red-Brown	✓ Rocks or Stones	✓ Moist
Soil	Brown-Black	Plant Matter	Wet
	Other gray	Other	(Std. H20)

Was additional NaSO4 needed to dry Matrix? No ___ Yes ✓ Amount (g) 5g

NOTES:

100207

ABC 1002B GPC Logbook

Instrument # 1

Sample #	Code	Batch	Cntl #	Parameter	Run #	Dump time	Collect time	Wash time	Date	Technician	Comments
74086	CIBADDAY	1,2	6315,96	X35V	370	23:00	24:00	13:00	4-20-92	MH	
74086MS	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
Rinse	—	—	—	—	372	1:30	3:00	0:00	4/21/92	KA	4 parts
74087	CIBADDAY	2	6396	X35V	373	23:00	24:00	13:00	↓	↓	
74089	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
74090	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
74086MSD	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
Rinse	—	—	—	—	374	1:30	3:00	0:00	4/28/92		23 parts
RB3132	VEOBRIEN	3	6432	XBNA	375	23:00	24:00	13:00	4/28/92	KA	10 parts
RB3133	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
RB3130	CSDWES	11	6449	X827	↓	↓	↓	↓	↓	↓	Cal 041492-1
RB3131	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
74820	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
74718	VEOBRIEN	3	6432	XBNA	↓	↓	↓	↓	↓	↓	↓
74719	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
GBLK	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
74718MS	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
74718MSD	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

100203

GPC Weekly Calibration
Organic Extraction Laboratory

Prepared by PRodnite Date 4-16-92

GPC Calibration Number 041492-1

UV Detector Calibration

Instrument # 1
Flow rate 5ml/min
Hood Temp. 70°C

GPC Standard no. 23199
System pressure 80PSI
CH_2Cl_2 lot # 88433

Semi volatile window parameters

Dump time 23m
Collect time 24m
Wash time 13m

Pesticide\ PCB window parameters

Dump time 28m
Collect time 19m
Wash time 13m
Pesticide 3/90 CLP cal performed? no

Pesticide/PCB Recovery Verification

Pesticides

Lindane	____%	___ng	Dieldrin	____%	___ng
Heptachlor	____%	___ng	Endrin	____%	___ng
Aldrin	____%	___ng	4,4' DDT	____%	___ng

PCB

Visually confirmed? _____

Arochlor 1016	____%	___ng
Arochlor 1260	____%	___ng

Blank			*Standard nos.*		*expected final conc.*
Tetrachloro-m-xylene	_____%	___ng	Pest Matrix	_____	_____ng/ml
Decachlorobiphenyl	_____%	___ng	PCB Matrix	_____	_____ng/ml
			Pest 12/90 surrogate	_____	_____ng/ml

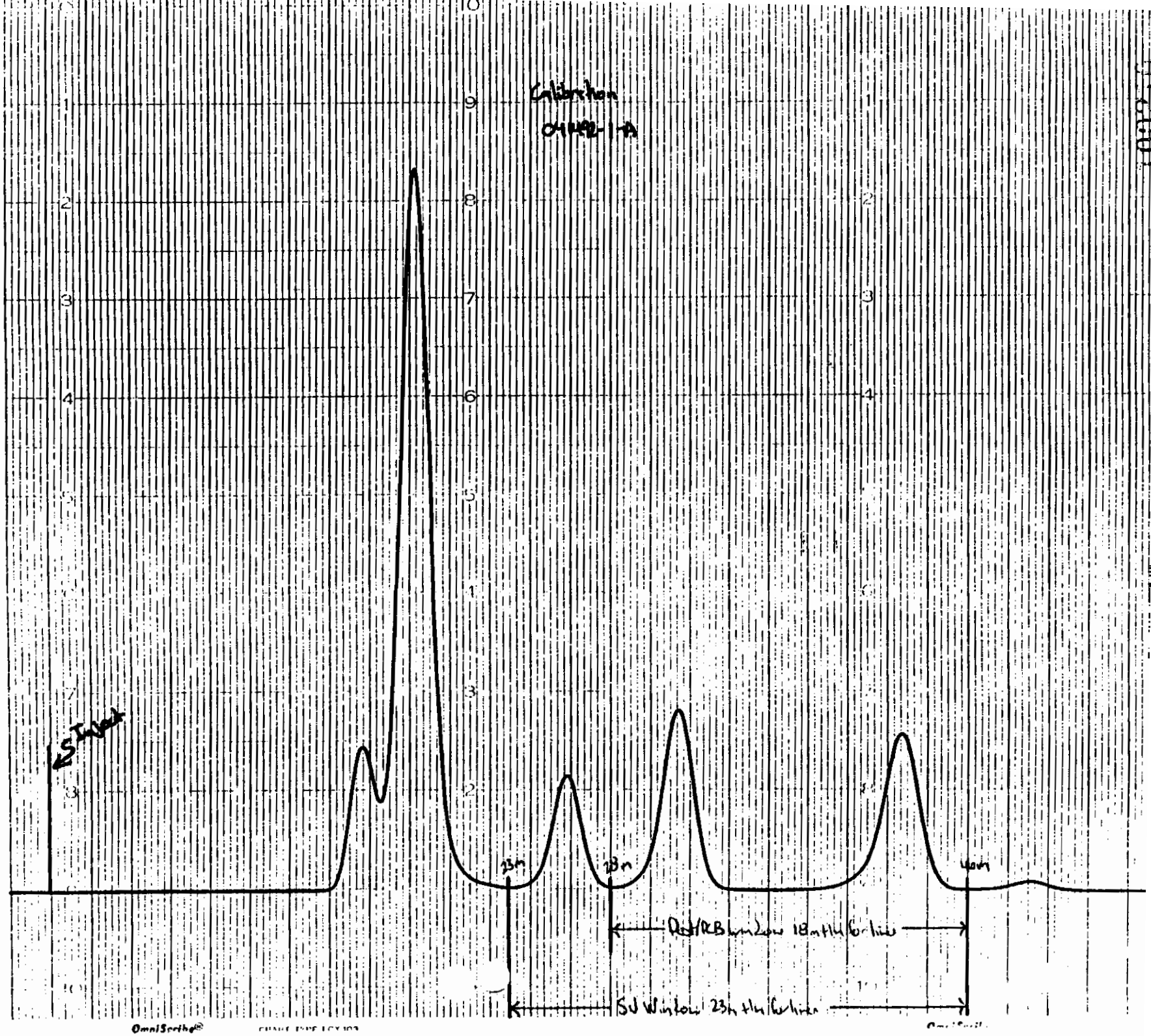
Comments:

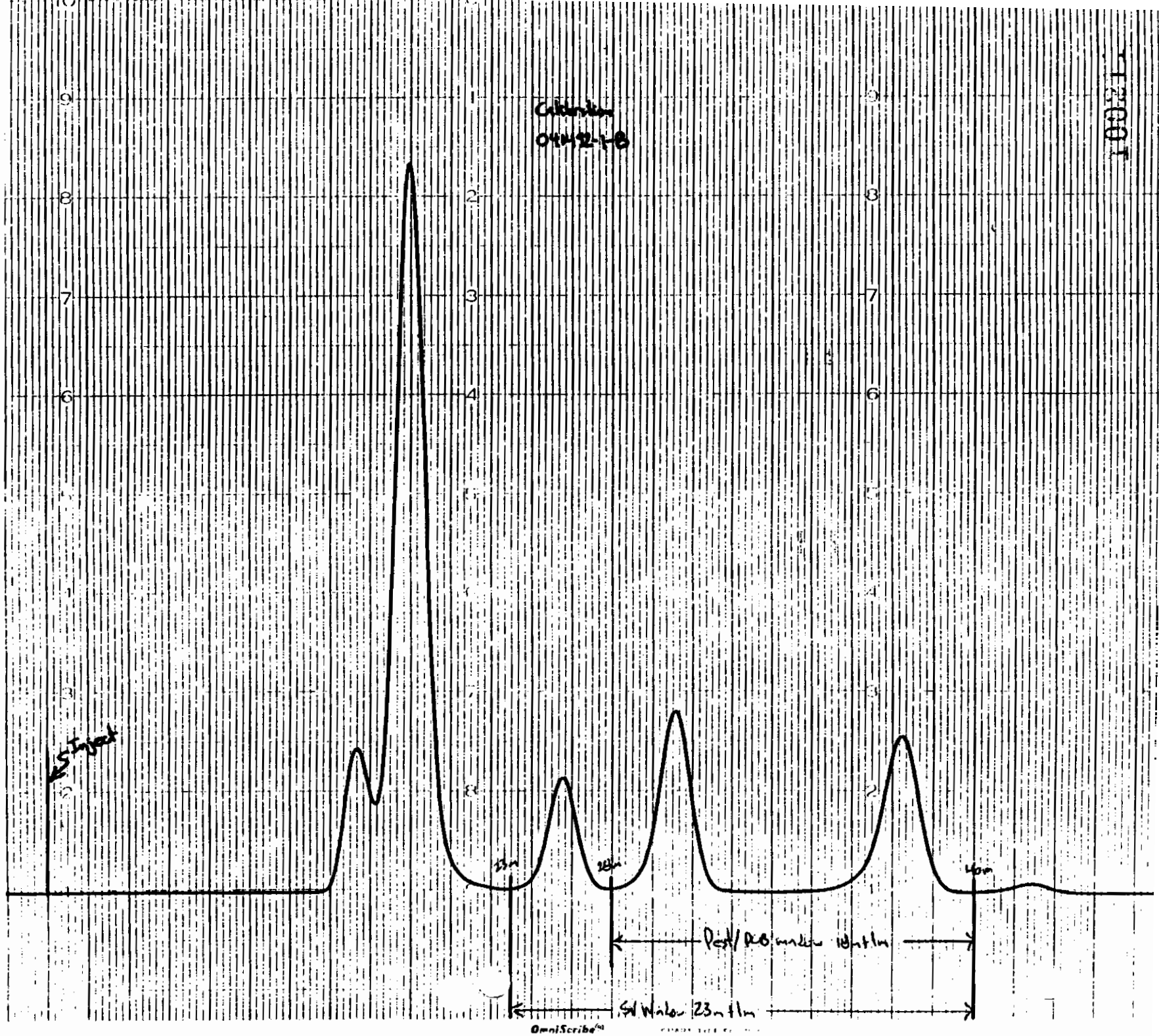
system cleaned prior to calibration

Calibration Expiration Date 4-21-92

Data Quality Manager, OEL [signature] Date 4-16-92

100203


Calibration
04492-1-A
Inject
23m
28m
40m
Rest/RCB window 18m thk for line
SJ Window 23m thk for line
OmniScribe


Calibration
04M92-1-B
Inject
23m
28m
40m
Pest/PCB window 18mtlm
SV Window 23mtlm
OmniScribe

VERSAR LABORATORIES 23-APR-92

Internal Chain of Custody
Organic Extraction Lab

Worklist ID: 10016 Analysis Code: XBNA /

Contl#	Code	Batch	Job Number	Matrix	Level	Location	#Samps	#Extrs
6432	VEOBRIEN	3	420.1.0	SOIL	L	A-19	2	6
						Totals:	2	6

Versar Sample Numbers:
74718
74719

Sample Extraction: Location: A-19 Received by: K Scott
Returned by: K Scott

EVENT	STARTED	DATE	COMPLETED	DATE	LOCATION
Extraction	K Scott	4/23/92	K Scott	4/23/92	F1
Secondary Extraction	—	—	—	—	—
Initial Concentration	Z Willis	4/27/92	Z Willis	4/27/92	—
GPC Preparation	Z Willis	4/27/92	Z Willis	4/27/92	F-1
GPC Clean-Up	K Scott	4/28/92	M. [illegible]	4-29-92	—
GPC Concentration	M. [illegible]	4-29-92	M. [illegible]	4-29-92	—
BNA/PEST Split	—	—	—	—	—
Acid Clean-Up	—	—	—	—	—
Column Clean-Up	—	—	—	—	—
Final Concentration	M. [illegible]	4-29-92	M. [illegible]	4-29-92	—

Vial Up: If split procedure was performed, include parameter.

XBNA (Parameter)	M. [illegible]	4-29-92	M. [illegible]	4-29-92	F-1
(Parameter)					

Analysis: Extracts Relinquished By: Extracts Received By:

Complete all applicable information before and after working on samples or extracts. All names should be signed: first initial, last name.

100212

EXTRACTS READY FOR ANALYSIS

DATE 4-29-92

CODE VEO BRIEN BATCH 3 CONTROL # 6432

DATE RECEIVED 4-14-92 DATE EXTRACTED 4-23-92

OF EXTRACT 7 # OF SAMPLES 2

MATRIX Low Soil PARAMETER XBNA LOCATION F-1

IS THIS A RE-EXTRACTION? No

COMMENTS Note High Soil pH.

TECHNICIAN SIGNATURE M. [illegible]

==========

SUPERVISOR USE ONLY

PROVIDE AN EXPLANATION IF ANSWER IS NO

Was the extraction holding time met?	☑ YES	☐ NO
Was proper QC performed with the extraction?	☑ YES	☐ NO
Are all columns complete, initialed, and dated?	☑ YES	☐ NO
Is column information accurate?	☑ YES	☐ NO
Is header information complete and accurate?	☑ YES	☐ NO
Were the correct standards used in the extraction?	☑ YES	☐ NO
Are final volumes correct?	☑ YES	☐ NO
Are sample comments included, initialed and dated?	☑ YES	☐ NO
Are dry weights included with the data package?	☑ YES	☐ NO
Are dry weights correct?	☑ YES	☐ NO

What clean-up procedure was used? GPC

SUPERVISOR _____ SECTION CHIEF [illegible]

100213

23-APR-92

VERSAR LABORATORIES
BNA (/PEST) SOIL/SOLIDS
EXTRACTION/CONCENTRATION WORKLIST

Contl#	Code	Batch	Job Number	Matrix	Level	Location
6432	VEOBRIEN	3	420.1.0	SOIL	L	A-19

Analysis Code: XBNA /
Worklist ID: 10016

CH2Cl2 Lot#: BB833

Extract Date: 4/23/92

Date Conc'd: 4/27/92

Prep Method:
Sonication ✓
Soxhlet ____
Other ____

Technician: [illegible]

Technician: [illegible]

Spiking Solutions:
MS S.VOA 28191 SSS S.VOA 29884
MS PEST — SSS PEST —

Comment:

Sample/QC Number	Field Number	Sample Weight/ Volume	Spike Vol S.VOA MS	Spike Vol S.VOA SSS	Spike Vol PEST MS	Spike Vol PEST SSS	Initial Extract Final Vol	Sample Comments
RB3132	S-8	—	—	1mL	NA	NA	10mL	
RB3133	S-8	—	—	↓	↓	↓	↓	
74718 MS	S-8	30.08g	1mL	↓	↓	↓	↓	
74718 MSD	S-8	30.09g	1mL	↓	↓	↓	↓	
74718	S-8	30.10g	—	↓	↓	↓	↓	
74719	S-10	30.00g		↓	↓	↓	↓	

Reviewed By [signature] 4-29-92

100214

VERSAR LABORATORIES
GPC WORKLIST

23-APR-92

Contl#	Code	Batch	Job Number	Matrix	Level	Location
6432	VEOBRIEN	3	420.1.0	SOIL	L	A-19

Analysis Code: XBNA
Worklist ID: 10016
Hood Temp: 21°C
Calibration Seq#: 41492-1

Date Prepped: 4-27-92
Technician: E. Williams
Date Cleaned: 4/28/92
Technician: K. Scott

Date Conc: 4-29-92
Technician: MN
Run #: 375
CH2Cl2 Lot#: BB833

Comment: 5 mls. of extract is loaded to the column with each injection.

Sample/QC Number	Extract Split for Clean-Up	Number of Injection	Total Vol to GPC	Final GPC Volume	Sample Comments
RB3132	N	1	5mL	1mL	
RB3133	↓	↓	↓	↓	
74718 MS	↓	↓	↓	↓	
74718 MSD	↓	↓	↓	↓	
74718	↓	↓	↓	↓	
74719	↓	↓	↓	↓	

Reviewed By [signature] 4-29-92

100215

VERSAR LABORATORIES 23-APR-92

BNA (/PEST) SOIL/SOLID
COLUMN CLEANUP/VIAL WORKLIST

Contl#	Code	Batch	Job Number	Matrix	Level	Location
6432	VEOBRIEN	3	420.1.0	SOIL	L	A-19

Analysis Code: XBNA /
Worklist ID: 10016

Column Cleanup Method: Lot#
Alumina ____ ____
Florisil ____ ____
Other ____ ____

Remaining Extract Location: Tray# — Loc —

Project Completion Date: 4-29-92

Comment: ____

Sample/QC	Contl Numbr	Vol to BNA	BNA Final Vol	Vol to PEST	Acid Clean Y/N	Col Clean Y/N	Volume to Column	PEST Final Vol	Sample Comments
RB3132	6432	1mL	1mL	NA	NA	NA	NA	NA	
RB3133	6432	↓	↓	↓	↓	↓	↓	↓	
74718 MS	6432	↓	↓	↓	↓	↓	↓	↓	
74718 MSD	6432	↓	↓	↓	↓	↓	↓	↓	
74718	6432	↓	↓	↓	↓	↓	↓	↓	
74719	6432	✓	✓	✓	✓	✓	✓	✓	

Reviewed By [signature] 4-29-92

100210

VERSAR INC. Total Solids

Project :VEOBRIEN Cont #:6432 Case : Batch :3

Oven Temp :109 oC Date :04-21-1992 Analyst :SL

Versar Sample#	Field Sample#	Tray Weight	Tray + Wet Wt Sample	Net Wet Weight Sample	Tray + Dry Wt Sample	Net Dry Weight Sample	% Moisture	Dry Weight Factor
74718	S-8	1.13g	6.21g	5.08g	5.23g	4.10g	19.3%	1.24
74719	S-10	1.11g	6.13g	5.02g	5.55g	4.44g	11.6%	1.13

Expect 75/50.

VERSAR LABORATORIES INC.
GC/MS SECTION
Analysis Log

Control #: 6432
Code: VEOBRIEN - 3
Test: BNAL
Matrix: SOIL
Hold Time: 08-MAY-92

30-APR-92

Batch Comments
Do QC on designated samples.

Sample	PR Comment	Field Number	File #	Run Date	Valid	HT Met	Comments	Rerun File	Valid	Rerun File	Valid
RB3132			W5624	5-5	y	y					
RB3133			W5632	5-5	y	y					
74718 MS			W5627	5-5	y	y					
74718 MSD			W5628	5-5	y	y					
74718	QC	S-8	W5626	5-5	y	y					
74719		S-10	W5629	5-5	y	y					

Rec'd 4-29 Due 5-12

Analytical Difficulties:

Relinquished by _____ Received by _____ Date _____

Instrument Run Date Data Worked Up Init Standards Pack Init

ERSAR LABORATORIES INC. BNA INJECTION LOG GC/MS INSTRUMENT ID W DATE 4/30/92 ASCII FILE ✓ STREAMER NO. 184

W043092A .91/MSQ
W043092B .91/MSQ

000001

FILE NAME	METHOD	CONTROL NUMBER	BATCH	FIELD NUMBER	LEVEL	MATRX	VERSAR NUMBER	TYPE	CODE	EXT. VOL.	COMB. VOL.	FINAL VOL.	DIL.	IS VOL.	IS NUMBER	VALI INJ.
W5565				DFTPP 50ng												
W5566				DFTPP 50ng					Tuned @		9:05					
W5567				SSTD 50			30017	CC-50	IS 10N		RAISED	EM				
W5568				DFTPP 50ng					Tuned @		10:09		Expires (22:09)			
W5569				SSTD 50			30017	CC-50								
W5570				SSTD 160			30013	IC 160								
W5571				SSTD 120			30014	IC-120								
W5572				SSTD 80			30015	IC-80								
W5573				SSTD 20			30018	IC-20								
W5574	CLP	6400, 6402	2,5	SBLK50	L	W	RB3050	3/90	Ver Saba	1ml	.4ml	.4ml		4µl	28796	y
W5575		6400	2	PW02	L	W	74213			2ml						2P S
W5576				FLD BLK			74214			1ml						
W5577				EQ BLKH			74215									
W5578				S7 BW01S			74216									All S
W5579				S7BW01D			74217									
W5580				S7GW04D			74218									y

ALYST SIGNATURE S. Dunford DATE 4/30/92

ERSAR LABORATORIES INC. BNA INJECTION LOG GC/MS INSTRUMENT ID P DATE 5/5/92 ASCII FILE W0505092A.91 MSQ STREAMER NO. 184

000006

ue Sectors = 16,894

FILE NAME	METHOD	CONTROL NUMBER	BATCH	FIELD NUMBER	LEVEL	MATRX	VERSAR NUMBER	TYPE	CODE	EXT. VOL.	CONC. VOL.	FINAL VOL.	DIL.	IS VOL.	IS NUMBER	VALID INJ.
W5616				DFTPP 50ng												
W5617				DFTPP 50ng												
W5618				SSTD 50			30017		IS Qua	too	low					
W5619				DFTPP 50ng												
W5620				DFTPP 50ng					Tuned @	11:04						
W5621				SSTD 50			30017									
W5622	CLP	6400 6403	2,5	SBLK51	L	W	RB3051	3/10	VeSaba	1ml	.4ml	.4ml		4µl	28796	
W5623	↓	6439	2	69399MS	L	W	74753MS	↓	CTADOLER	↓	↓	↓		↓	↓	
W5624	↓	6432	3	SBLK32	L	S	RB3132	BNA	VeOBrian	1ml	.4ml	.4ml		4µl		
W5625		6481	1	SBLK52	L	W	RB3152	8279	Va AVR	1ml+ 1ml	.3ml+ .3ml	.6ml		6µl		
W5626		6432	3	S-8	L	S	74718	BNA	VEOBRIAN	1ml	.4ml	.4ml		4µl		
W5627				S-8 MS			74718MS									
W5628				S-8 MSD			74718MSD									
W5629				S-10			74719									
W5630		6481	1	AUR-3	L	W	75135	8270	VaAVR	1ml+ 1ml	.3ml+ .3ml	.6ml		6µl		
W5631	↓	↓	↓	AUR-4	L	↓	75136	↓	↓	↓	↓	↓		↓	↓	

ALYST SIGNATURE S. Dunford DATE 5/5/92

VERSAR LABORATORIES INC. BNA INJECTION LOG GC/MS INSTRUMENT ID W DATE 5/5/92 ASCII FILE _____ STREAMER NO. _____

000007

FILE NAME	METHOD	CONTROL NUMBER	BATCH	FIELD NUMBER	LEVEL	MATRX	VERSAR NUMBER	TYPE	CODE	EXT. VOL.	COMB. VOL.	FINAL VOL.	DIL.	IS VOL.	IS NUMBER	VALID INJ.
N5632	CLP	6432	3	SBLK33	L	S	RB3133	BNAL	VEOBRIAN	1ml	.4ml	.4ml		4ml	28796	
N5633	↓	6481	1	SBLK53	L	W	RB3153	8270	VoANR	1ml + 1ml	.3ml + .3ml	.6ml		6ml	↓	

100221

LYST SIGNATURE S. Dunford DATE 5/5/92

Versar Laboratories INC.

GC/MS VOLATILE ANALYSIS
ANALYTICAL DATA PACKAGE

CLIENT: VERSAR A&E
SITE: O'BRIEN
CASE: R09042
PROJECT: 420.1 BATCH 3
CONTROL: 6432
DATE: 05/12/92

Versar INC.

DELIVERABLES INDEX -- VOA ANALYSES ONLY

I. CASE NARRATIVE

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

II. QC SUMMARY

A. Surrogate Percent Recovery Summary (Form II)
B. Matrix Spike/Matrix Spike Duplicate Summary (Form III)
C. Method Blank Summary (Form IV)
D. GC/MS Tuning and Calibration Standard (Form V)

III. SAMPLE DATA

A. Organic Analysis Data Sheet (Form I)
B. Tentatively Identified Compounds (TIC)
C. Raw Data for the Volatile Sample Fraction
   1. Reconstructed Ion Chromatogram (s)
   2. Quantitation Report
   3. Raw HSL mass spectra and background subtract HSL mass spectra with lab generated HSL standard spectra
   4. GC/MS library search spectra for each TIC

Note: Samples arranged in alpha-numeric sequence.

IV. STANDARDS DATA

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

V. RAW QC DATA

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

Versar INC.

V. RAW QC DATA (CONT'D)

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

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

VI. SAMPLE PREPARATION

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

I. NARRATIVE

II. QC SUMMARY

6850 Versar Center • P. O. Box 1549 • Springfield. Virginia 22151 • Telephone: (703) 750-3000 • 1-800-283-7727

Versar Laboratories INC.

May 12, 1992

Narrative
Versar A&E - O'Brien
Case R09042
GC/MS Volatile Organic Analysis
EPA CLP 2/88 Protocol
Versar Project 420.1 - Batch 3
Control 6432

This report contains the analytical data from the volatile organic analysis of two (2) soil samples. The samples, listed below, were received by Versar Laboratories on April 14, 1992 and were analyzed for volatile organic compounds following EPA CLP (Rev 2/88) protocol.

SAMPLE LIST

S-8 S-10

==========

GC/MS instrument calibrations using BFB met method requirements for volatile analysis. The initial calibration curves and continuing calibration standard met SPCC and CCC criteria. All GC/MS analyses were performed during the twelve hour period that followed instrument calibration. Both samples were initially analyzed prior to expiration of sample holding time. The reanalysis of S-10 was performed after expiration of sample holding time.

Volatile surrogate standard recovery values did not meet QC limits for S-10. The sample was reanalyzed (RE) and all surrogate standard recovery values were compliant in the reanalysis. Both sets of data are included in the data reporting package. Internal standard area abundance values and associated relative retention times met QC limits for all analyses. The samples were analyzed without dilution. One set of matrix spike/matrix spike duplicate (MS/MSD) analyses was performed for this batch shipment of samples.

Detection limits and concentration of volatile compounds present in the soil samples have been reported on a "dry weight" basis, which accounts for the moisture content of each sample. Identification of volatile non-target compounds has been performed using the EPA/NBS Mass Spectral Database Library. Explanations of data qualifier flags used on the data reporting forms may be found on the listing immediately following this case narrative.

Versar Laboratories INC.

Please contact Janet Jaufmann, Client Services Manager, should you require additional information or have any questions pertaining to the analysis of these samples for volatile organic compounds.

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature:

Data Release Approved By:

M. A. Templeton

Mary Anne Templeton
GC/MS Data QA Assistant

Narrative Reviewed By:

Linda E. Bock
GC/MS Data QA Officer

Versar Laboratories INC.

Data Qualifier Flags

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

JN — For Non Target Compounds: This flag indicates that the concentration is an estimated value, assuming a 1 to 1 response with the internal standard. For CLP 3/90 both the J and N flags are specified.

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

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

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

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

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

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

Z — This flag is used when benzo(B)fluoranthene and benzo(K)fluoranthene cannot be quantified due to lack of chromatographic separation. The result listed under benzo(B)fluoranthene is the total of both compounds.

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

BRL — This flag is used on the quantitation reports to eliminate compounds below a reasonable confidence limit. All compounds flagged "BRL" are less than the CRQL.

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	S-10	117	139 *	99	0	1
02	S-10RE	99	92	93	0	0
03	S-8	100	95	99	0	0
04	S-8MS	101	95	96	0	0
05	S-8MSD	99	91	99	0	0
06	VBLK42	99	99	103	0	0
07	VBLK73	101	92	96	0	0

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix Spike - EPA Sample No.: S-8 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	61.7	0	52.0	84	59-172
Trichloroethene	61.7	0	66.5	108	62-137
Benzene	61.7	0	64.9	105	66-142
Toluene	61.7	0	66.9	108	59-139
Chlorobenzene	61.7	0	68.1	110	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	61.7	54.8	89	-6	22	59-172
Trichloroethene	61.7	67.5	109	-1	24	62-137
Benzene	61.7	64.7	105	0	21	66-142
Toluene	61.7	65.4	106	2	21	59-139
Chlorobenzene	61.7	66.9	108	2	21	60-133

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

* Values outside of QC limits

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

COMMENTS: 74720A,V/H,EPA
CLP,6432,3,S-8,L,SOI

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: S6342 Lab Sample ID: VBLK42

Date Analyzed: 04/22/92 Time Analyzed: 1123

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

Instrument ID: S

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	S-10	74721A	S6352	1936
02	S-8	74720A	S6349	1721
03	S-8MS	74720MS	S6350	1806
04	S-8MSD	74720MSD	S6351	1851

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: Y3773 Lab Sample ID: VBLK73

Date Analyzed: 05/01/92 Time Analyzed: 1528

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

Instrument ID: Y

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	S-10RE	74721ARE	Y3774	1613

COMMENTS: CLP,BLANK,,VBLK73,L,S,VBLK73,V/H,BLANK,5ML,,
CAP/.32,Y3772,Y3766,Y3773,,

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

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: S6158 BFB Injection Date: 04/08/92

Instrument ID: S BFB Injection Time: 0909

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.6
75	30.0 - 60.0% of mass 95	40.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	1.0 (1.2)1
174	Greater than 50.0% of mass 95	83.1
175	5.0 - 9.0% of mass 174	6.8 (8.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.3 (100.2)1
177	5.0 - 9.0% of mass 176	5.4 (6.5)2

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

.S TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	29893	S6160	04/08/92	1104
02	VSTD200	29894	S6161	04/08/92	1142
03	VSTD150	29895	S6162	04/08/92	1220
04	VSTD100	29896	S6163	04/08/92	1258
05	VSTD050	29897	S6164	04/08/92	1336

OK

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

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: S6340 BFB Injection Date: 04/22/92

Instrument ID: S BFB Injection Time: 0937

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.8
75	30.0 - 60.0% of mass 95	40.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.9
175	5.0 - 9.0% of mass 174	5.9 (8.0)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.6 (95.6)1
177	5.0 - 9.0% of mass 176	4.9 (7.0)2

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

.S TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	29953	S6341	04/22/92	1015
02	VBLK42	VBLK42	S6342	04/22/92	1123
03	S-8	74720A	S6349	04/22/92	1721
04	S-8MS	74720MS	S6350	04/22/92	1806
05	S-8MSD	74720MSD	S6351	04/22/92	1851
06	S-10	74721A	S6352	04/22/92	1936

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

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID: Y3766 BFB Injection Date: 05/01/92

Instrument ID: Y BFB Injection Time: 1044

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.7
75	30.0 - 60.0% of mass 95	49.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	88.6
175	5.0 - 9.0% of mass 174	6.3 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.5 (97.6)1
177	5.0 - 9.0% of mass 176	5.6 (6.5)2

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

.S TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	30034	Y3768	05/01/92	1211
02	VSTD200	30035	Y3769	05/01/92	1244
03	VSTD150	30036	Y3770	05/01/92	1324
04	VSTD100	30037	Y3771	05/01/92	1401
05	VSTD050	30038	Y3772	05/01/92	1431
06	VBLK73	VBLK73	Y3773	05/01/92	1528
07	S-10RE	74721ARE	Y3774	05/01/92	1613

III. SAMPLE DATA PACKAGE

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74720A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6349

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 Date Analyzed: 04/22/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene chloride	7	~~B~~ UJ
67-64-1	Acetone	140	
75-15-0	Carbon disulfide	6	U UJ
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
108-05-4	Vinyl acetate	12	U UJ
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U UJ
108-10-1	4-Methyl-2-pentanone	12	U
591-78-6	2-Hexanone	12	U UJ
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total xylenes	6	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S-8

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74720A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6349

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 Date Analyzed: 04/22/92

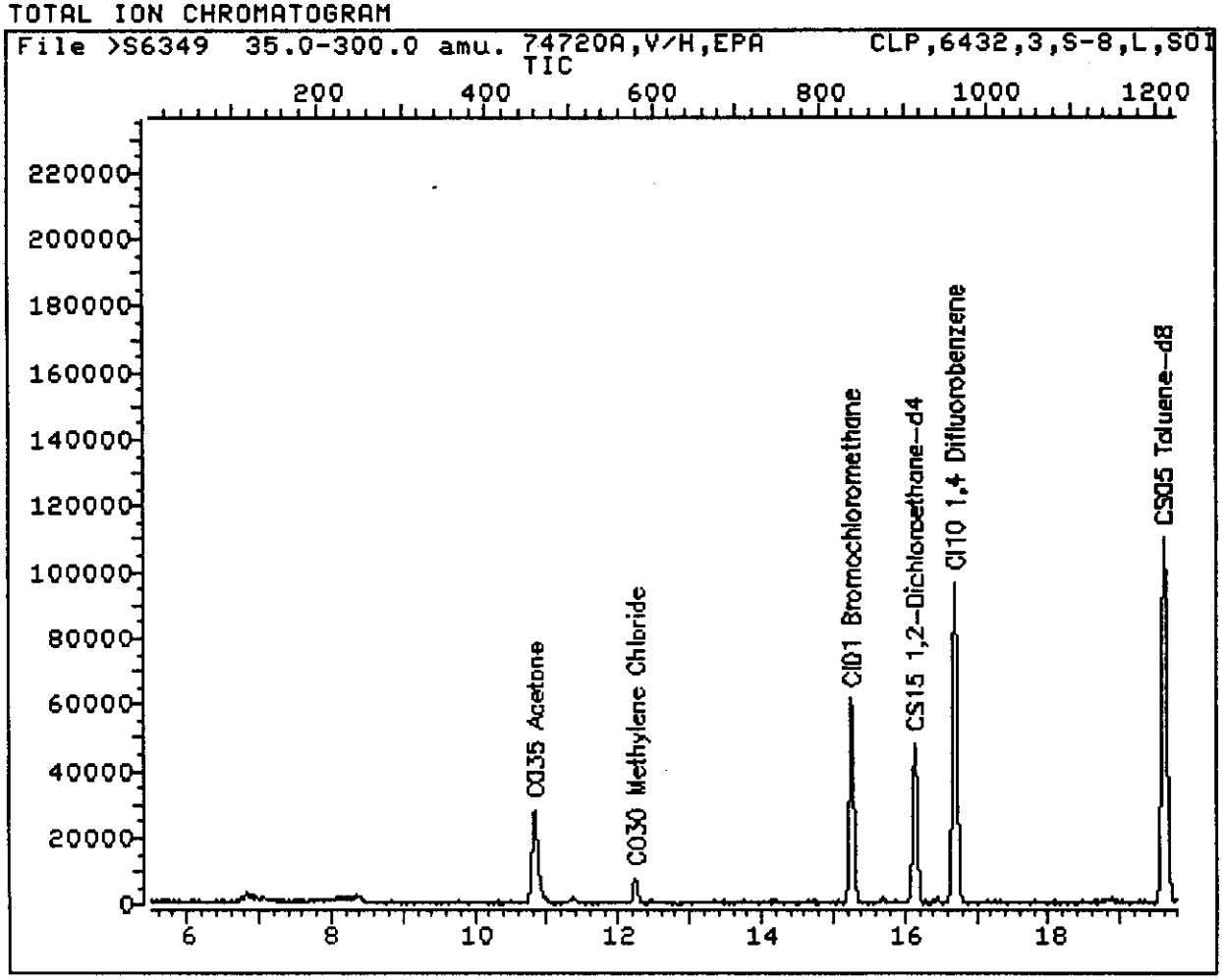
Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	27.99	25	JN

TOTAL ION CHROMATOGRAM



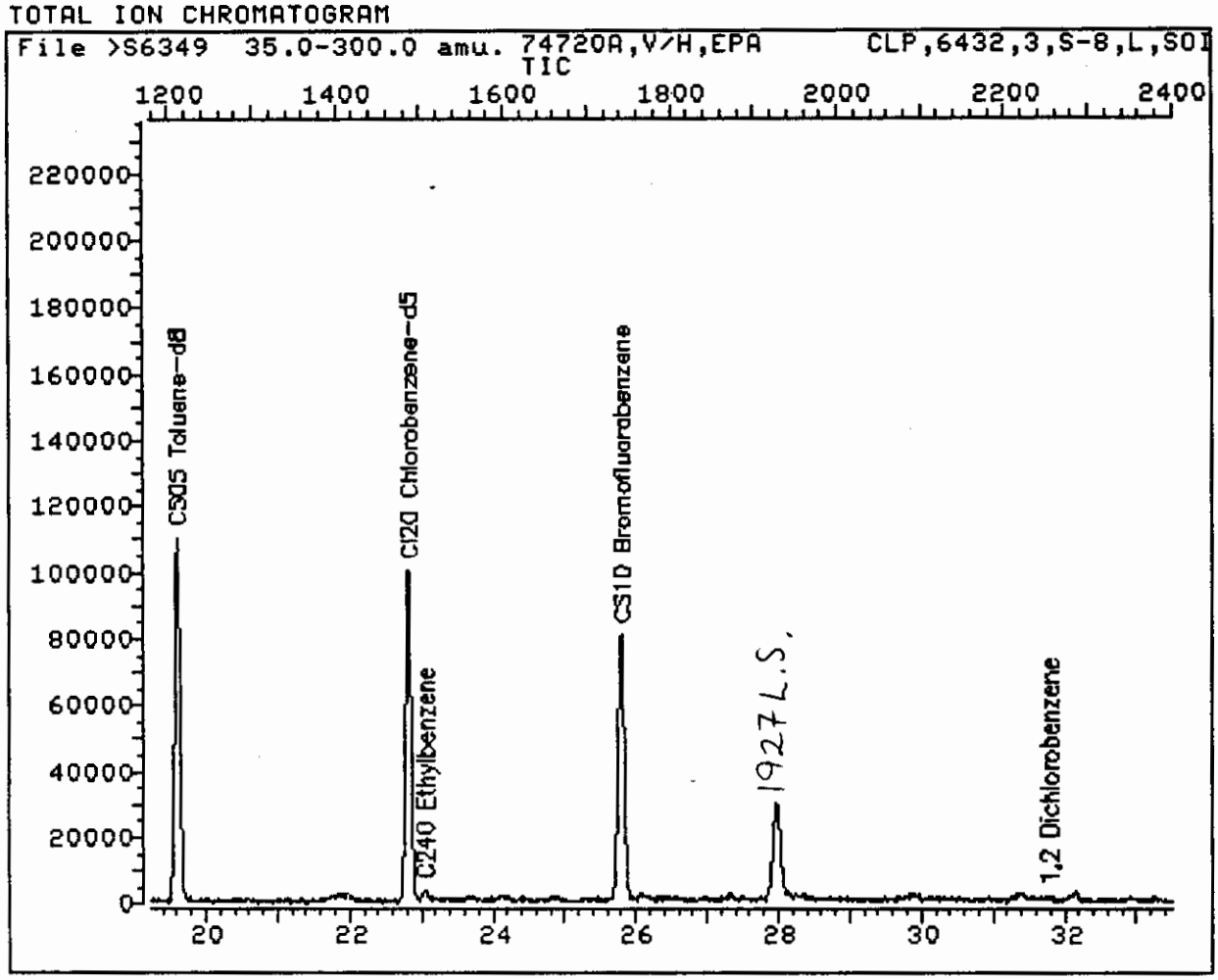
Data File: >S6349::D4 Quant Output File: ^S6349::D1
Name: 74720A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 18:00
Injected at: 920422 17:21

Page 1 of 2

TOTAL ION CHROMATOGRAM



Data File: >S6349::D4 Quant Output File: ^S6349::D1
Name: 74720A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 18:00
Injected at: 920422 17:21

QUANT REPORT

erator ID: VLI_GCMS Quant Rev: 7 Quant Time: 920422 18:00
utput File: ^S6349::D1 Injected at: 920422 17:21
Data File: >S6349::D4 Dilution Factor: 1.00000
Name: 74720A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8,L,SOIL,5G/5ML

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.26	837	35136	50.00	UG/L	91
6)	C030 Methylene Chloride	12.25	579	6957	5.84	UG/L	94
7)	C035 Acetone	10.84	458	108789	111.42	UG/L	92
14)	CS15 1,2-Dichloroethane-d4	16.14	913	77685	49.35	UG/L	88
17)	*CI10 1,4 Difluorobenzene	16.70	961	173421	50.00	UG/L	97
31)	*CI20 Chlorobenzene-d5	22.83	1486	159612	50.00	UG/L	95
37)	CS05 Toluene-d8	19.61	1210	203472	49.77	UG/L	99
39)	C240 Ethylbenzene	23.05	1505	1843^	~~1.22 UG/L~~	BRL	85
43)	CS10 Bromofluorobenzene	25.81	1741	101960	47.73	UG/L	99
44)	1,2 Dichlorobenzene	31.79	2253	1537	~~1537.00 NO CALIB~~ NTC		88

* Compound is ISTD

Run compliant
Ready for forms
DW
4-23-92

5/6/92

QA/QC Check Report

ta File: >S6349 Analysis Time: 04/22/92 17:21
Name: 74720A,V/H,EPA
Misc: CLP,6432,3,S-8,L,SOIL,5G/5ML

==========

Internal Standard Comparison
Std Data File: >S6341
Analysis Time: 04/22/92 10:15

Internal Standard	Sample Area	Std Area	%
CI01 Bromochloromethane	35136	37211	94.4
CI10 1,4 Difluorobenzene	173421	194243	89.3
CI20 Chlorobenzene-d5	159612	177541	89.9

% = (Sample Area/Std Area)*100
* Area outside limits

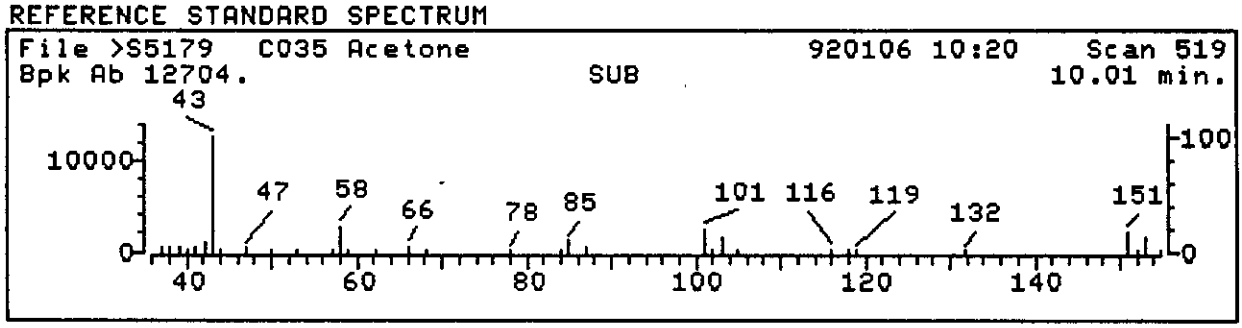
==========

Surrogate Recovery Summary

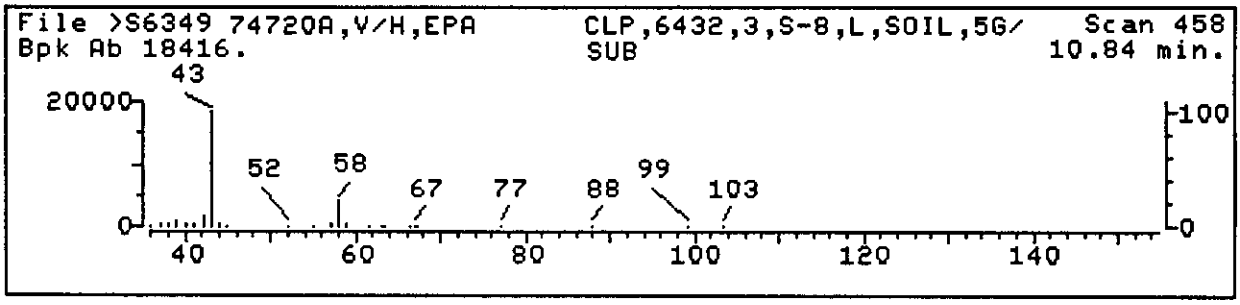
Surrogate Compound	Added	(Corr.) Found	%Rec	QC Limits Lower	Upper
15 1,2-Dichloroethane-d4	50	49	98	70	121
CS05 Toluene-d8	50	50	100	81	117
CS10 Bromofluorobenzene	50	48	96	74	121

* Recovery value outside limits

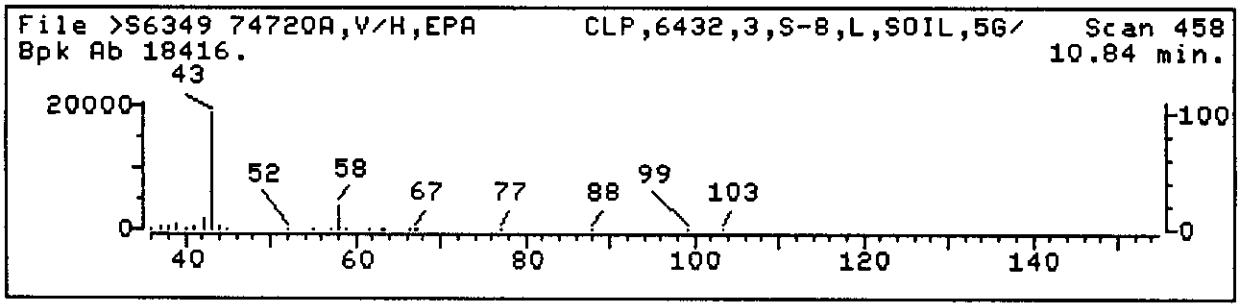
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



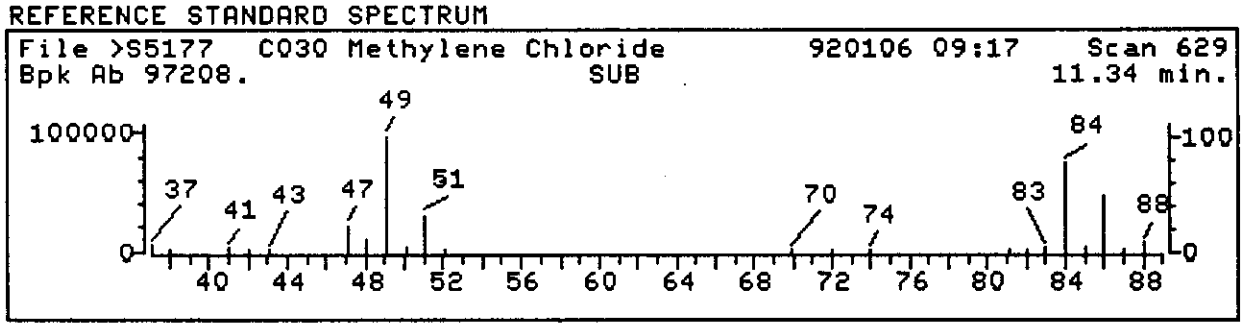
SAMPLE SPECTRUM (UNALTERED)



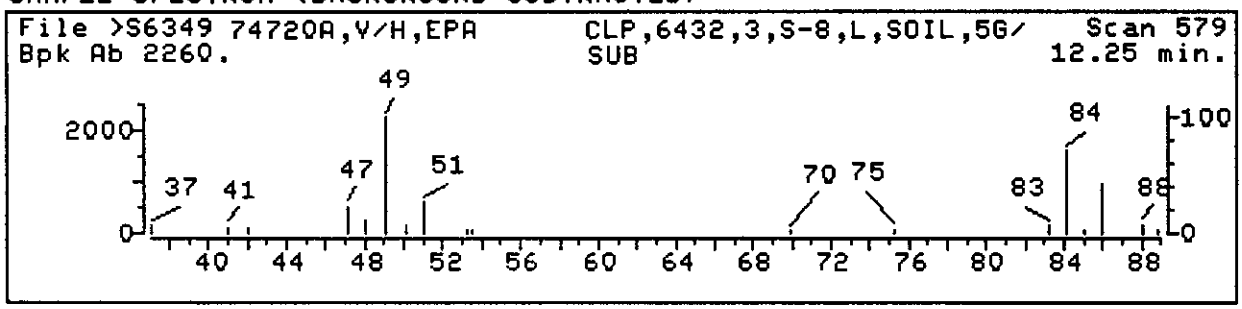
Data File: >S6349::D4 Quant Output File: ^S6349::D1
Name: 74720A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8,L,SOIL,5G/5ML
Quant Time: 920422 18:00 Quant ID File: ID_CVI::QT
Injected at: 920422 17:21 Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

Compound No : 7
Compound Name : C035 Acetone
Scan Number : 458
Retention Time: 10.84 min.
Quant Ion : 43.0
Area : 108789
Concentration : 111.42 UG/L
q-value : 92

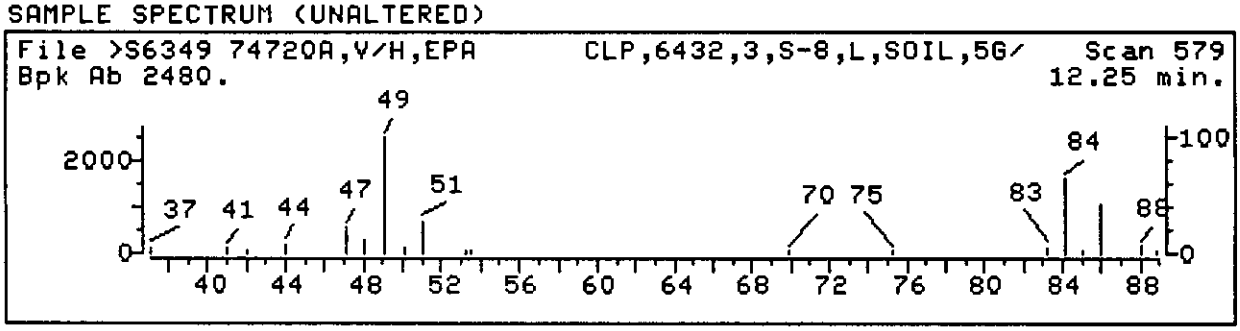
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >S6349::D4 Quant Output File: ^S6349::D1
Name: 74720A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8,L,SOIL,5G/5ML
Quant Time: 920422 18:00 Quant ID File: ID_CVI::QT
Injected at: 920422 17:21 Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

Compound No : 6
Compound Name : C030 Methylene Chloride
Scan Number : 579
Retention Time: 12.25 min.
Quant Ion : 84.0
Area : 6957
Concentration : 5.84 UG/L
q-value : 94

MS data file header from : >S6349::D4

Sample: 74720A,V/H,EPA Operator: VLI_GCMS REG. GRP. 4/22/92 17:21
Misc : CLP,6432,3,S-8,L,SOIL,5G/5ML
Sys. #: 1 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: S
Method file: METCAV Tuning file: BFBHP2 No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures :	10.	140.	180.	240.	0.
Chromatographic times, min. :	2.0	0.0	30.0	8.0	0.0
Chromatographic rate, deg/min:	10.0	5.0	30.0	.2	0.0

>S6349 74720A,V/H,EPA CLP,6432,3,S-8,L,SOIL,5G/5ML
35.0| 300.0 CLP TIC
Upslope: .2000 Area Reject: 26581. Max Peaks: 1 Bunch: -1 Valley >100 %
Dnslope: 0.0000 Results File IS6349 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	27.98	1914	1927	1939	29712	236568	215437	100.00	100.000

Sum of corrected areas: 215437.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	265810.	15.26	5.50 - 15.98
2	50.0	449607.	16.70	15.98 - 19.77
3	50.0	541817.	22.83	19.77 - 33.51

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

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

6:12 PM WED., 22 APR., 1992

Instrument ID: S Analyzed on: 4/22/92 17:21
Result 1 in PBM results file: LS6349
Retention Time: 27.98 Area: 215437 Tentative Conc: 20.00
The unknown area is 39.76% of the nearest internal standard

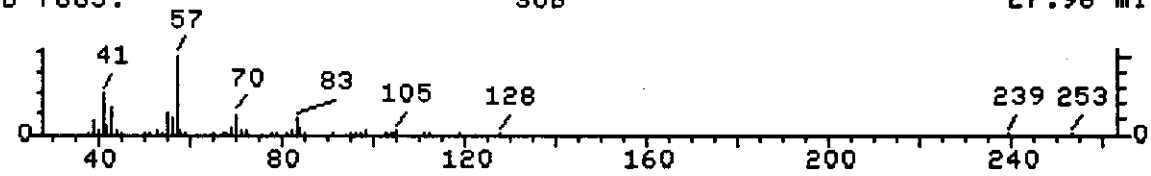
1.	Heptane, 1,1'-oxybis-	214	C14H30O
2.	1-Pentene, 4,4-dimethyl-	98	C7H14
3.	Heptane, 2-bromo-	178	C7H15Br
4.	Diazene, bis(1,1-dimethylethyl)-	142	C8H18N2
5.	2-Decenal, (Z)-	154	C10H18O

Sample file: >S6349 Spectrum #: 1927
Search speed: 1 Tilting option: N No. of ion ranges searched: 42

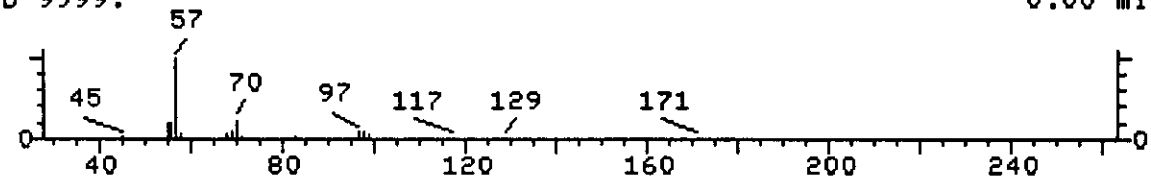
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	43	629641	4214	NBS49K	45	45	2	0	100	21	17	14
2.	33*	762629	1234	NBS49K	35	41	1	0	83	38	10	19
3.	28	1974045	1287	NBS49K	45	39	1	0	72	41	8	16
4.	25	927833	1270	NBS49K	38	33	0	0	81	47	7	19
5.	11	2497258	4052	NBS49K	45	49	2	0	36	63	2	12

work
hyd

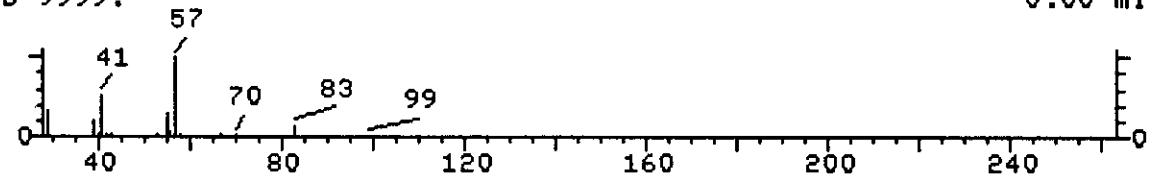
File >S6349 74720A,V/H,EPA CLP,6432,3,S-8,L,SOIL,5G/5ML Scan 1927
Bpk Ab 7665. SUB 27.98 min.



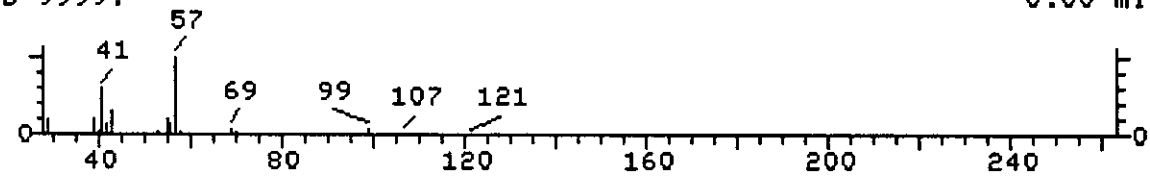
File NBS49K Heptane, 1,1'-oxybis- Scan 21341
Bpk Ab 9999. 0.00 min.



File NBS49K 1-Pentene, 4,4-dimethyl- Scan 1188
Bpk Ab 9999. 0.00 min.



File NBS49K Heptane, 2-bromo- Scan 14108
Bpk Ab 9999. 0.00 min.



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-10

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74721A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6352

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 15 Date Analyzed: 04/22/92

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S-10

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74721A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6352

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 15 Date Analyzed: 04/22/92

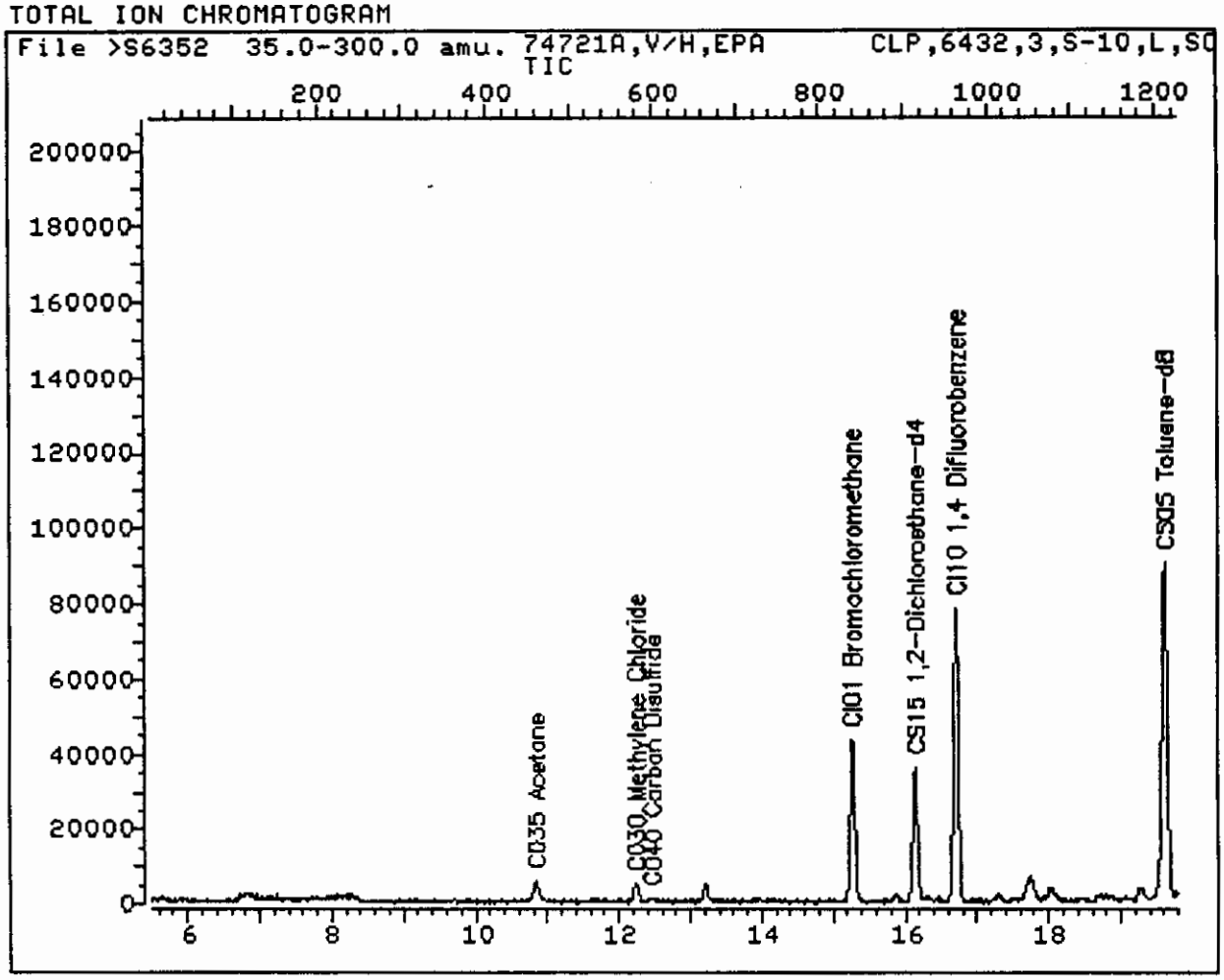
Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN CYCLIC HYDROCARBON	21.21	25	JN
2.	UNKNOWN	21.94	8.2	JN
3.	UNKNOWN	22.52	8.2	JN
4.	UNKNOWN	23.41	7.1	JN
5.	UNKNOWN HYDROCARBON	23.71	27	JN
6.	UNKNOWN CYCLIC HYDROCARBON	24.42	7.1	JN
7.	UNKNOWN HYDROCARBON	24.63	26	JN
8.	UNKNOWN	26.99	5.9	JN
9.	UNKNOWN HYDROCARBON	27.99	45	JN
10.	UNKNOWN SUBSTITUTED BENZENE	29.01	7.1	JN
11.	UNKNOWN HYDROCARBON	31.40	32	JN
12.	UNKNOWN SUBSTITUTED BENZENE	32.14	7.1	JN

TOTAL ION CHROMATOGRAM

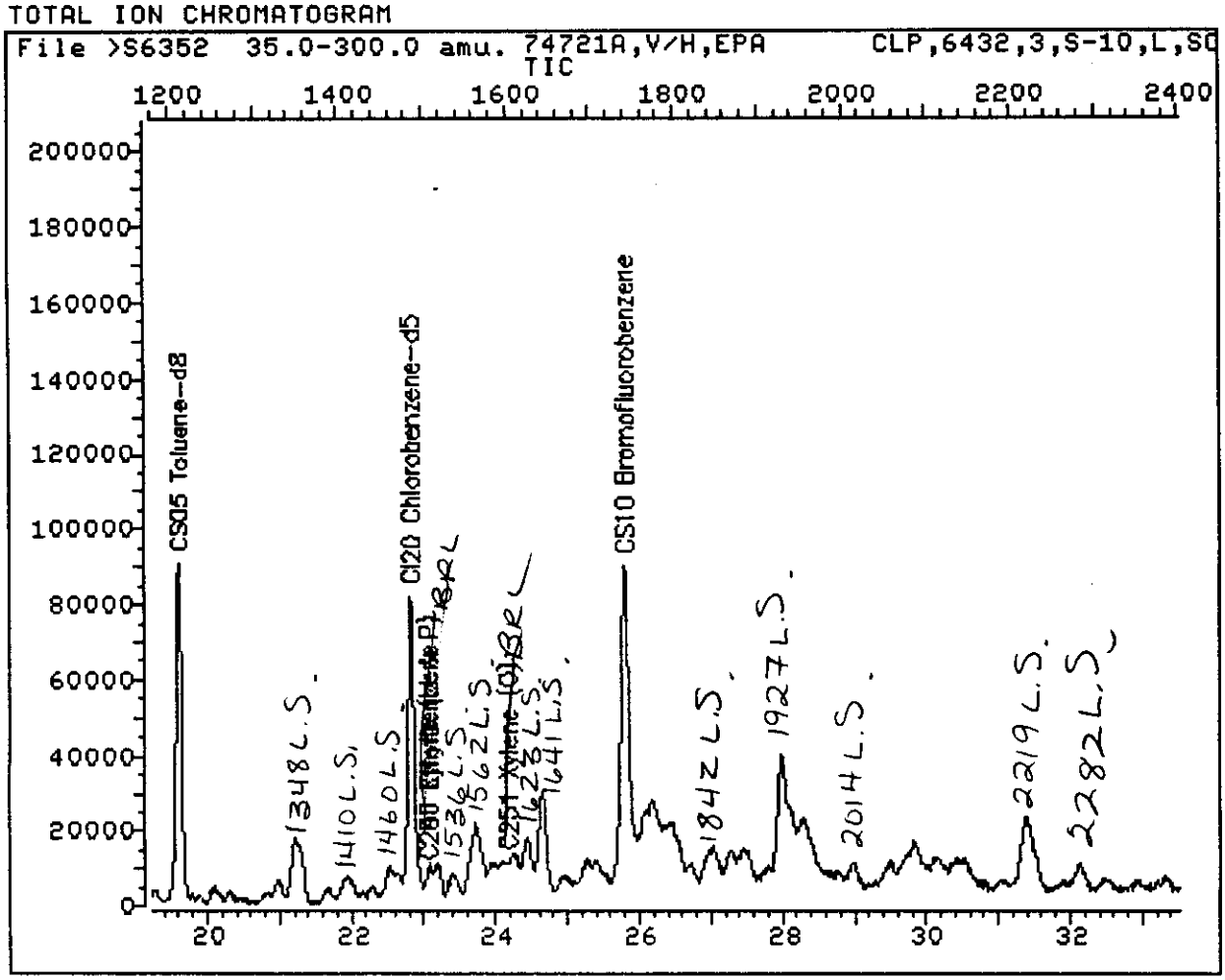


Data File: >S6352::D4 Quant Output File: ^S6352::D1
Name: 74721A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-10,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 20:15
Injected at: 920422 19:36

TOTAL ION CHROMATOGRAM



Data File: >S6352::D4 Quant Output File: ^S6352::D1
Name: 74721A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-10,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 20:15
Injected at: 920422 19:36

QUANT REPORT

'erator ID: VLI_GCMS Quant Rev: 7 Quant Time: 920422 20:15
utput File: ^S6352::D1 Injected at: 920422 19:36
Data File: >S6352::D4 Dilution Factor: 1.00000
Name: 74721A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-10,L,SOIL,5G/5ML

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.26	838	26318	50.00	UG/L	94
6)	C030 Methylene Chloride	12.24	579	4611	5.16	UG/L	96
7)	C035 Acetone	10.84	459	20989	28.70	UG/L	97
8)	C040 Carbon Disulfide	12.46	598	2826	~~1.07 UG/L~~	BRL	100
14)	CS15 1,2-Dichloroethane-d4	16.15	914	58176	49.34	UG/L	93
17)	*CI10 1,4 Difluorobenzene	16.71	962	141525	50.00	UG/L	96
31)	*CI20 Chlorobenzene-d5	22.82	1486	109302	50.00	UG/L	95
37)	CS05 Toluene-d8	19.61	1211	163200	58.29	UG/L	99
39)	C240 Ethylbenzene	23.06	1506	2333	~~2.25 UG~~/L		82
41)	C250 Xylene (M & P)	23.06	1506	2333	~~1.71 UG~~/L	BRL	82
42)	C251 Xylene (O)	24.17	1601	1505	1~~.17 UG~~/L		92
43)	CS10 Bromofluorobenzene	25.80	1741	101808	69.59	UG/L	92

* Compound is ISTD

3rd SS ↑
Ready for forms
DW
5-4-92

5/6/92

QA/QC Check Report

ta File: >S6352 Analysis Time: 04/22/92 19:36
ame: 74721A,V/H,EPA
Misc: CLP,6432,3,S-10,L,SOIL,5G/5ML

==========

Internal Standard Comparison
Std Data File: >S6341
Analysis Time: 04/22/92 10:15

Internal Standard	Sample Area	Std Area	%
CI01 Bromochloromethane	26318	37211	70.7
CI10 1,4 Difluorobenzene	141525	194243	72.9
CI20 Chlorobenzene-d5	109302	177541	61.6

% = (Sample Area/Std Area)*100
* Area outside limits

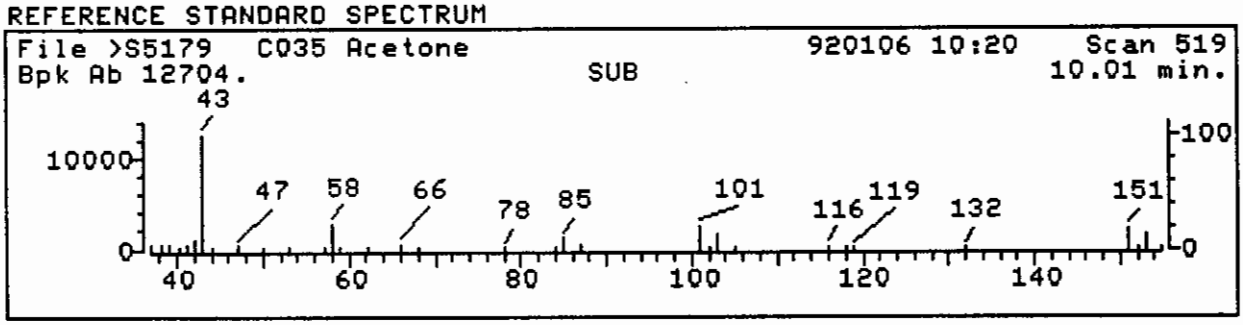
==========

Surrogate Recovery Summary

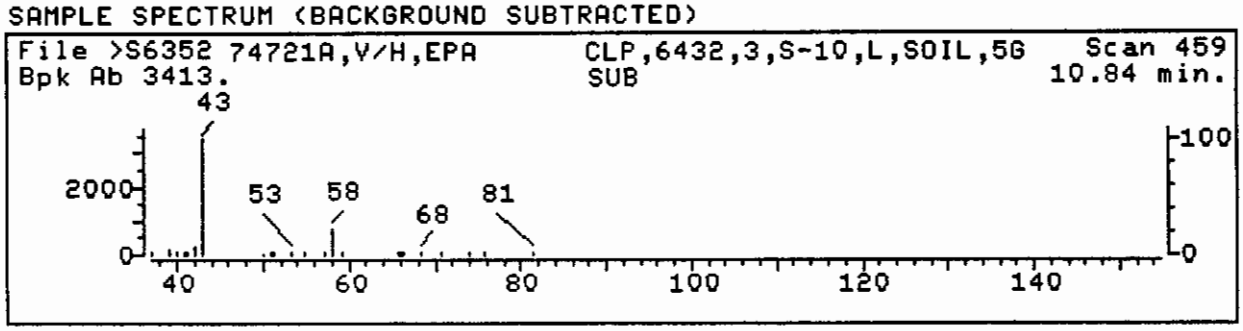
Surrogate Compound	Added	(Corr.) Found	%Rec	QC Limits Lower	Upper
15 1,2-Dichloroethane-d4	50	49	98	70	121
CS05 Toluene-d8	50	58	116	81	117
CS10 Bromofluorobenzene	50	70	140* ↑	74	121

* Recovery value outside limits

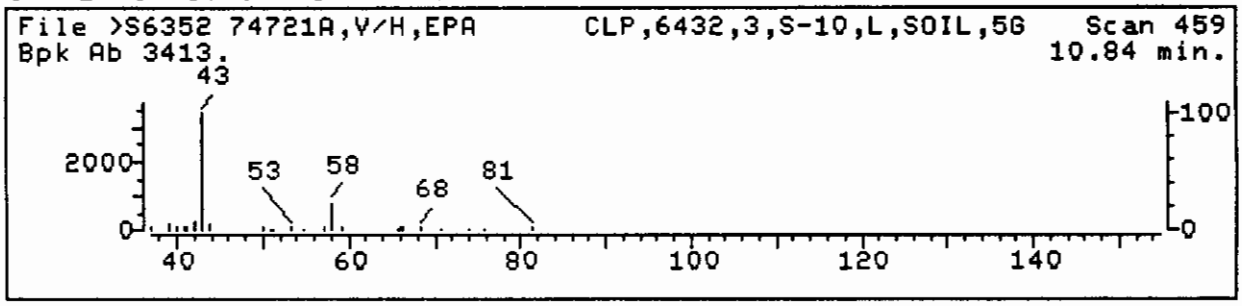
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



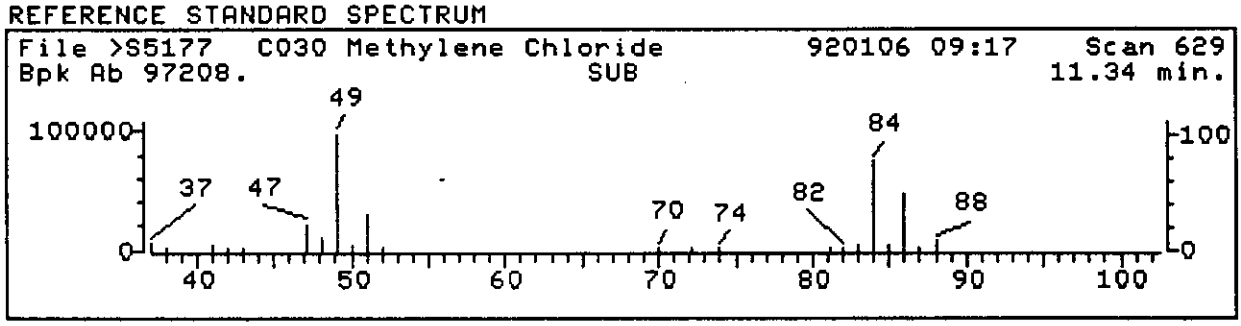
SAMPLE SPECTRUM (UNALTERED)



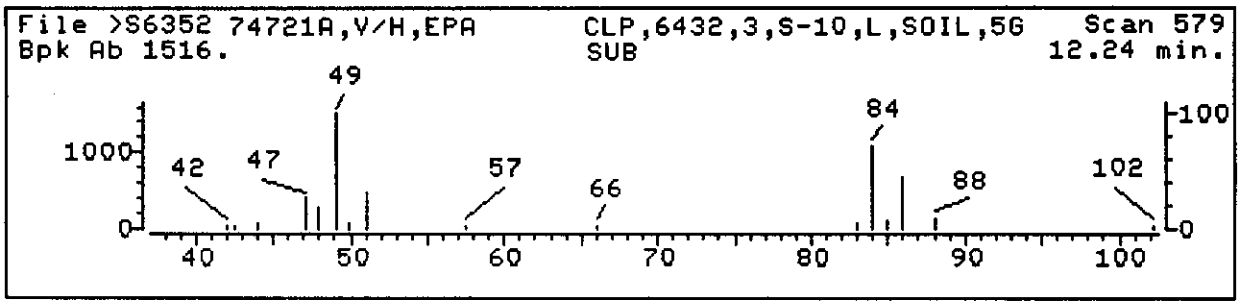
Data File: >S6352::D4 Quant Output File: ^S6352::D1
Name: 74721A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-10,L,SOIL,5G/5ML
Quant Time: 920422 20:15 Quant ID File: ID_CVI::QT
Injected at: 920422 19:36 Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

Compound No : 7
Compound Name : C035 Acetone
Scan Number : 459
Retention Time: 10.84 min.
Quant Ion : 43.0
Area : 20989
Concentration : 28.70 UG/L
q-value : 97

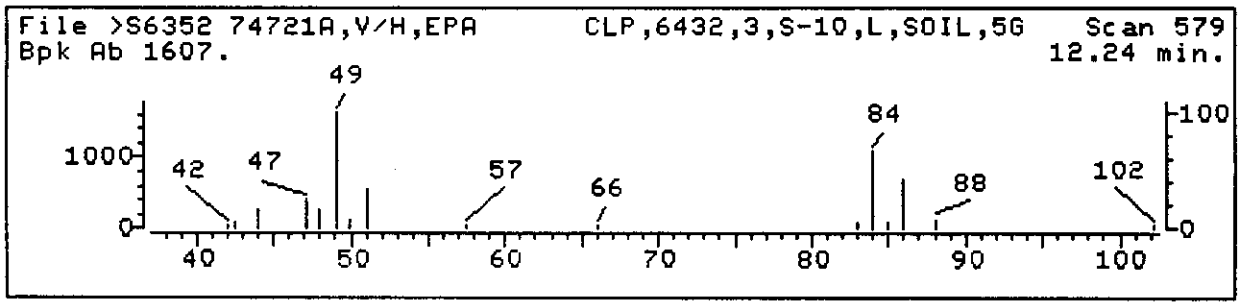
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >S6352::D4 Quant Output File: ^S6352::D1
Name: 74721A,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-10,L,SOIL,5G/5ML
Quant Time: 920422 20:15 Quant ID File: ID_CVI::QT
Injected at: 920422 19:36 Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

Compound No : 6
Compound Name : C030 Methylene Chloride
Scan Number : 579
Retention Time: 12.24 min.
Quant Ion : 84.0
Area : 4611
Concentration : 5.16 UG/L
q-value : 96

MS data file header from : >S6352::D4

Sample: 74721A,V/H,EPA Operator: VLI_GCMS REG. GRP. 4/22/92 19:36
Misc : CLP,6432,3,S-10,L,SOIL,5G/5ML
Sys. #: 1 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: S
Method file: METCAV Tuning file: BFBHP2 No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures :	10.	140.	180.	240.	0.
Chromatographic times, min. :	2.0	0.0	30.0	8.0	0.0
Chromatographic rate, deg/min:	10.0	5.0	30.0	.2	0.0

>S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML
35.0| 300.0 CLP TIC
Upslope: .2000 Area Reject: 19205. Max Peaks: 12 Bunch: -1 Valley >100 %
Dnslope: 0.0000 Results File IS6352 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	21.21	1338	1348	1367	17747	203341	187777	54.31	11.966
2	21.94	1399	1410	1424	5977	94580	61826*	17.88	3.940
3	22.52	1451	1460	1468	7750	98298	59072	17.09	3.764
4	23.41	1526	1536	1547	6101	87326	50271	14.54	3.203
5	23.71	1548	1562	1576	18919	269452	203233	58.78	12.950
6	24.42	1617	1623	1632	8871	150809	53703	15.53	3.422
7	24.63	1633	1641	1657	26577	269644	202060	58.44	12.876
8	26.98	1830	1842	1843	8435	108797	48372	13.99	3.082
9	27.98	1917	1927	1946	30310	545718	345752	100.00	22.032
10	29.00	2007	2014	2027	6738	121985	53828	15.57	3.430
11	31.39	2205	2219	2243	19871	353632	246286	71.23	15.694
12	32.13	2274	2282	2297	6707	132018	57133	16.52	3.641

Sum of corrected areas: 1569313.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	192051.	15.26	5.50 - 15.98
2	50.0	354601.	16.71	15.98 - 19.77
3	50.0	451143.	22.82	19.77 - 33.53

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

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

8:28 PM WED., 22 APR., 1992

Instrument ID: S Analyzed on: 4/22/92 19:36
Result 1 in PBM results file: LS6352
Retention Time: 21.21 Area: 187777 Tentative Conc: 21.00
The unknown area is 41.62% of the nearest internal standard

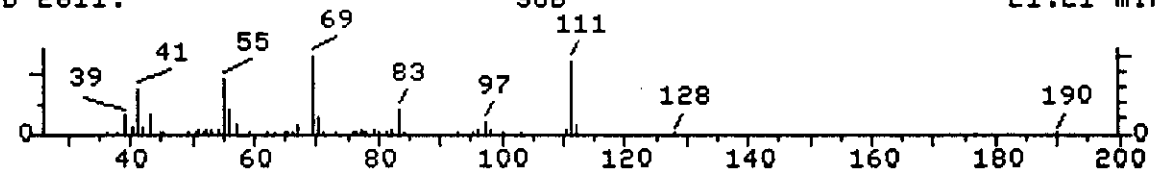
1.	Cyclohexane, 2-ethyl-1,3-dimethyl-	140	C10H20
2.	Cyclooctane, butyl-	168	C12H24
3.	Cyclohexane, 1,1,3-trimethyl-	126	C9H18
4.	2-Butenediamide, 2-methyl-, (E)-	128	C5H8N2O2
5.	4(1H)-Pyridinone, 2,3-dihydro-1-methyl-	111	C6H9NO
6.	1,5-Heptadiene, 3,3,5-trimethyl-	138	C10H18

Sample file: >S6352 Spectrum #: 1348
Search speed: 1 Tilting option: N No. of ion ranges searched: 40

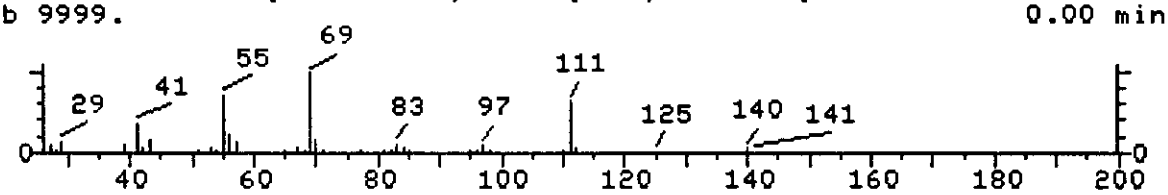
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	76	7045672	11858	NBS49K	64	36	2	0	99	7	45	23
2.	60	16538935	11900	NBS49K	54	41	2	0	93	13	30	17
3.	60	3073663	11838	NBS49K	52	46	2	0	93	11	30	13
4.	20*	41138185	11846	NBS49K	28	71	3	0	93	53	5	13
5.	20*	35488007	11814	NBS49K	29	75	3	0	93	53	5	13
6.	15	74630298	3756	NBS49K	35	49	2	0	80	59	3	12

unk
Cyclic
hyd

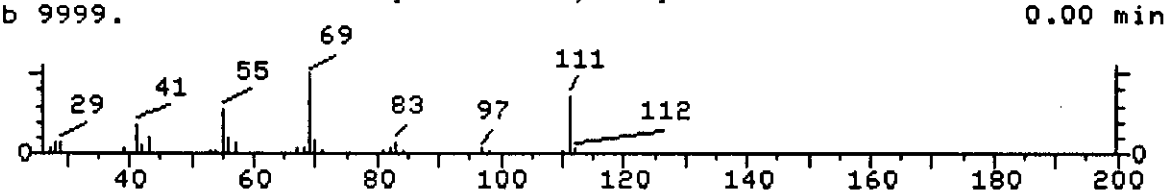
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1348
Bpk Ab 2611. SUB 21.21 min.



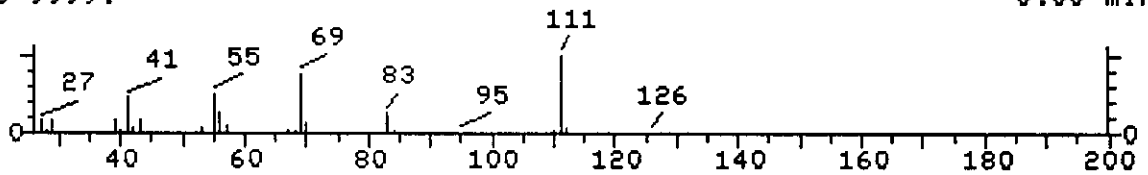
File NBS49K Cyclohexane, 2-ethyl-1,3-dimethyl- Scan 6395
Bpk Ab 9999. 0.00 min.



File NBS49K Cyclooctane, butyl- Scan 12293
Bpk Ab 9999. 0.00 min.



File NBS49K Cyclohexane, 1,1,3-trimethyl- Scan 4037
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 2 in PBM results file: LS6352
Retention Time: 21.94 Area: 61826 Tentative Conc: 7.00
The unknown area is 13.70% of the nearest internal standard

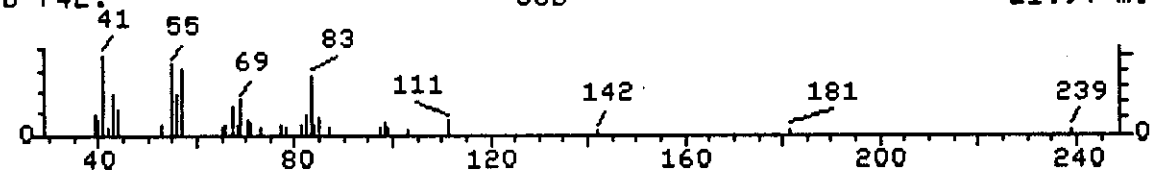
1. 1H-1,2,4-Triazole, 1-methyl- (8CI9CI)	83	C3H5N3
2. Pyridine, 2,3,4,5-tetrahydro-	83	C5H9N
3. 5-CYANO-1,2,3-THIADIAZOLE	111	C3HN3S
4. 2-Pentene, 4,4-dimethyl-	98	C7H14
5. Cyclopropane, 1,1,2,2-tetramethyl-	98	C7H14
6. 2-Butenal, 3-methyl-	84	C5H8O

Sample file: >S6352 Spectrum #: 1410
Search speed: 1 Tilting option: N No. of ion ranges searched: 46

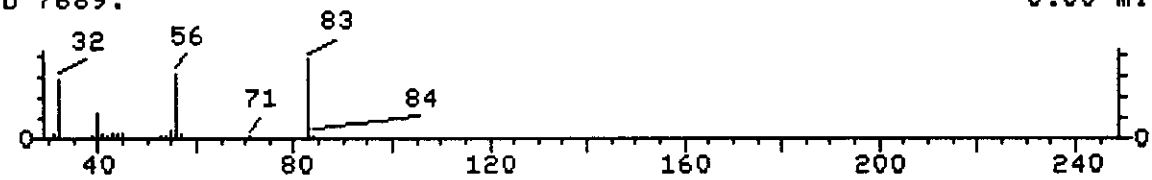
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	26*	6086211	6129	NBS49K	25	68	1	0	50	44	8	14
2.	25*	505180	6132	NBS49K	22	71	3	0	135	48	7	12
3.	20*	57352020	6152	NBS49K	31	56	3	0	353	53	5	13
4.	15*	26232984	6145	NBS49K	24	66	2	0	58	58	3	14
5.	15*	4127473	6149	NBS49K	24	73	2	0	61	60	3	14
6.	15*	107868	6133	NBS49K	22	80	3	0	88	60	3	12

unknown

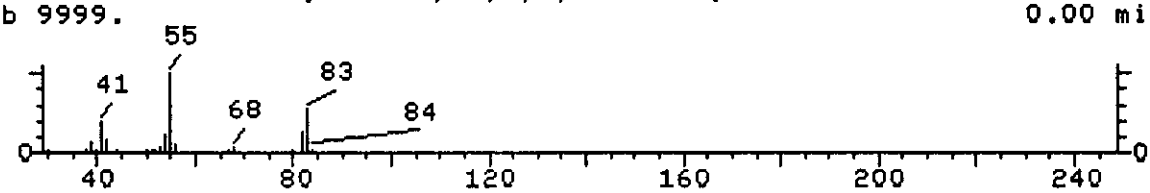
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1410
Bpk Ab 742. SUB 21.94 min.



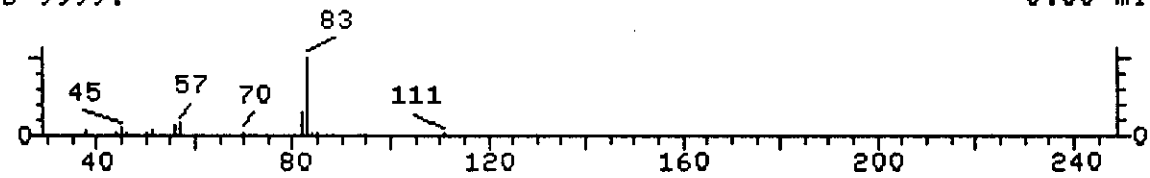
File NBS49K 1H-1,2,4-Triazole, 1-methyl- (8CI9CI) Scan 472
Bpk Ab 7689. 0.00 min.



File NBS49K Pyridine, 2,3,4,5-tetrahydro- Scan 481
Bpk Ab 9999. 0.00 min.



File NBS49K 5-CYANO-1,2,3-THIADIAZOLE Scan 2139
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 3 in PBM results file: LS6352
Retention Time: 22.52 Area: 59072 Tentative Conc: 7.00
The unknown area is 13.09% of the nearest internal standard

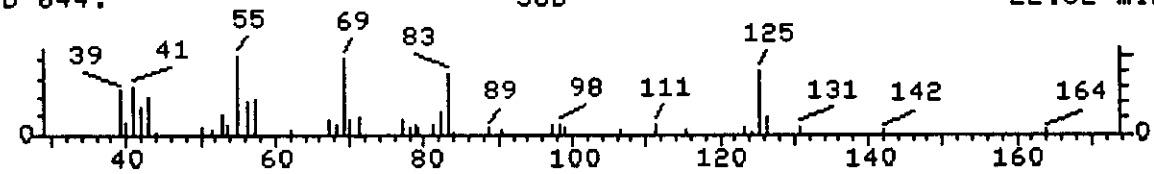
1.	1H-1,2,4-Triazole, 1-butyl- (8CI9CI)	125	C6H11N3
2.	Cyclopentane, ethyl-	98	C7H14
3.	1-Hexene, 3,3,5-trimethyl-	126	C9H18
4.	Cyclopentane, (2-methylpropyl)-	126	C9H18

Sample file: >S6352 Spectrum #: 1460
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

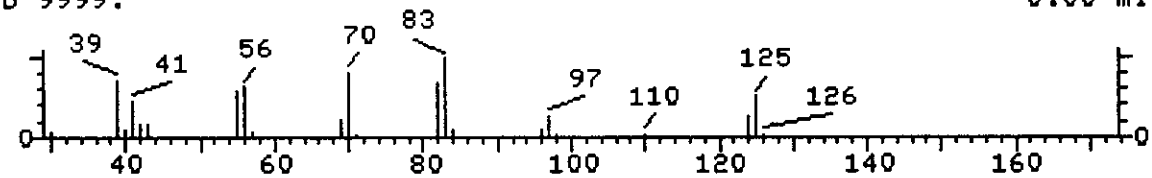
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	20*	6086222	14441	NBS49K	24	96	3	0	64	54	5	12
2.	15*	1640897	3855	NBS49K	28	73	3	0	89	59	3	13
3.	11*	13427435	3954	NBS49K	20	73	2	0	96	62	2	13
4.	11*	3788327	5910	NBS49K	31	87	2	0	52	61	2	14

unknown

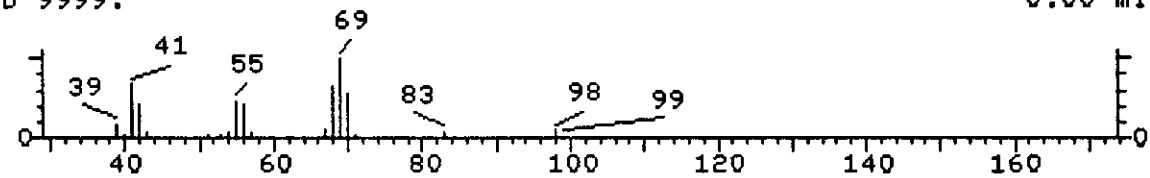
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1460
Bpk Ab 844. SUB 22.52 min.



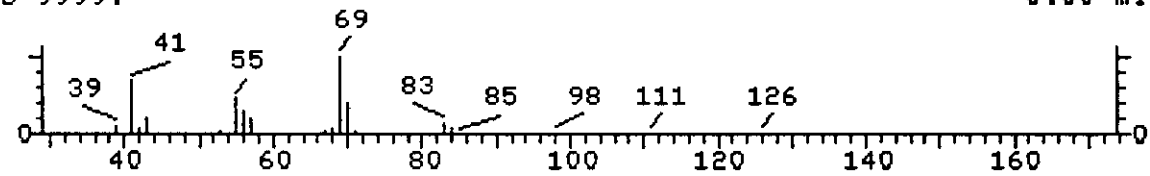
File NBS49K 1H-1,2,4-Triazole, 1-butyl- (8CI9CI) Scan 3766
Bpk Ab 9999. 0.00 min.



File NBS49K Cyclopentane, ethyl- Scan 1215
Bpk Ab 9999. 0.00 min.



File NBS49K 1-Hexene, 3,3,5-trimethyl- Scan 4062
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 4 in PBM results file: LS6352
Retention Time: 23.41 Area: 50271 Tentative Conc: 6.00
The unknown area is 11.14% of the nearest internal standard

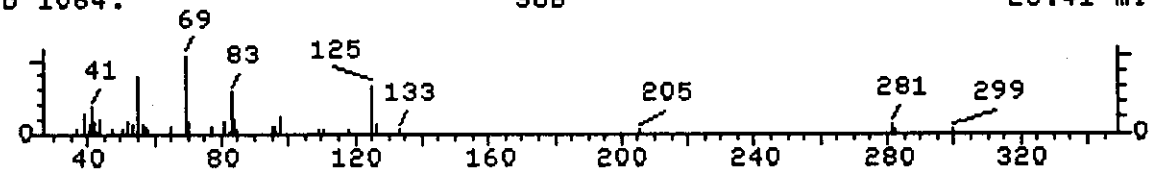
1.	Cyclohexane, 1,1,3,5-tetramethyl-, cis-	140	C10H20
2.	Cytidine, 2'-deoxy-5-methyl-	241	C10H15N3O4
3.	Thiophene, 2-(1,1-dimethylethyl)-	140	C8H12S
4.	5-Undecen-4-one	168	C11H20O
5.	Cyclohexane, 1,2-diethyl-3-methyl-	154	C11H22
6.	4-Picoline, 2-(tert-butylthio)-	181	C10H15NS

unk

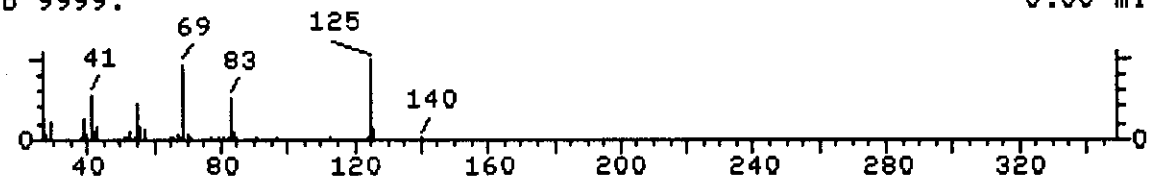
Sample file: >S6352 Spectrum #: 1536
Search speed: 1 Tilting option: N No. of ion ranges searched: 31

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	30*	50876329	14482	NBS49K	42	60	1	0	61	46	10	21
2.	30*	838073	14623	NBS49K	46	82	1	0	60	46	10	21
3.	25	1689787	14467	NBS49K	46	47	2	0	61	46	7	13
4.	25	56312551	14536	NBS49K	45	48	1	0	54	46	7	15
5.	25	61141808	14503	NBS49K	46	52	1	0	100	46	7	14
6.	25	18794360	14556	NBS49K	37	44	1	0	61	46	7	14

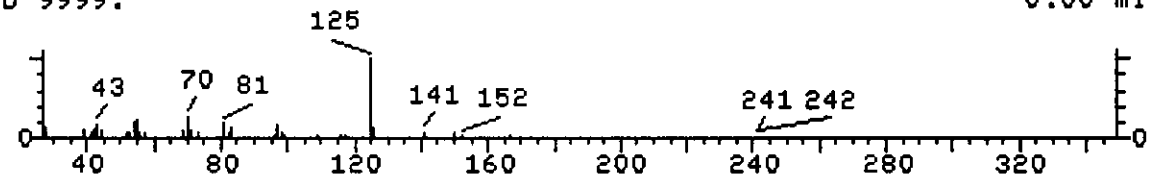
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1536
Bpk Ab 1064. SUB 23.41 min.



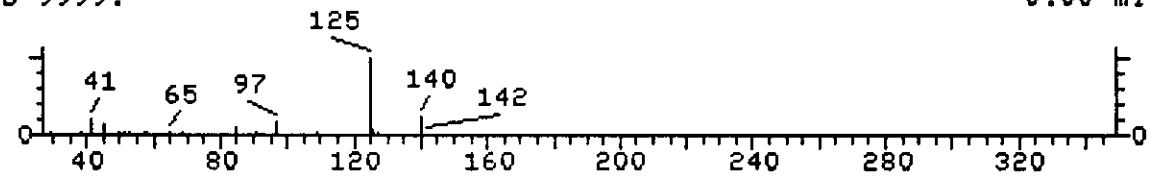
File NBS49K Cyclohexane, 1,1,3,5-tetramethyl-, cis- Scan 6434
Bpk Ab 9999. 0.00 min.



File NBS49K Cytidine, 2'-deoxy-5-methyl- Scan 25744
Bpk Ab 9999. 0.00 min.



File NBS49K Thiophene, 2-(1,1-dimethylethyl)- Scan 6303
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 5 in PBM results file: LS6352
Retention Time: 23.71 Area: 203233 Tentative Conc: 23.00
The unknown area is 45.05% of the nearest internal standard

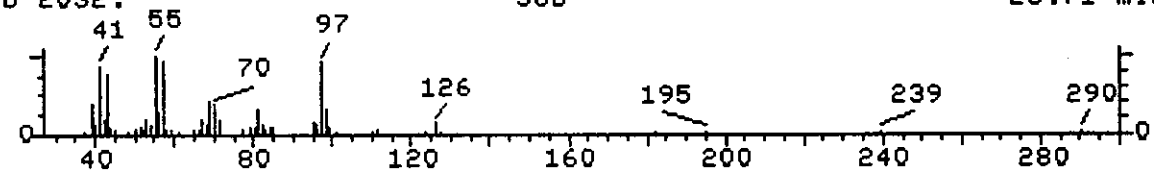
1.	2-Hexene, 3,4,4-trimethyl-	126	C9H18
2.	3-Butene-1,2-diol, 1-(2-furyl)-2,3-dimethyl-	182	C10H14O3
3.	2-Pyrazoline, 5-ethyl-1,4-dimethyl-	126	C7H14N2
4.	3-Heptanone, 5-methylene-	126	C8H14O
5.	4-Hepten-3-one, 5-methyl-	126	C8H14O
6.	Cyclohexane, 1-ethyl-4-methyl-, trans-	126	C9H18

Sample file: >S6352 Spectrum #: 1562
Search speed: 1 Tilting option: N No. of ion ranges searched: 41

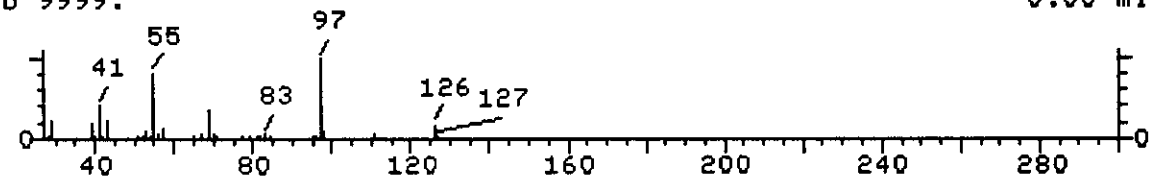
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	44*	53941198	9136	NBS49K	32	61	0	0	74	33	16	27
2.	42*	19757518	9256	NBS49K	43	87	3	0	92	23	17	13
3.	36*	14339232	9121	NBS49K	28	54	0	0	92	32	12	19
4.	36*	20690704	9122	NBS49K	22	52	2	0	764	28	14	13
5.	36*	1447263	9126	NBS49K	28	63	0	0	72	35	12	19
6.	35*	6236880	9137	NBS49K	34	60	1	0	94	32	12	18

unk hyd

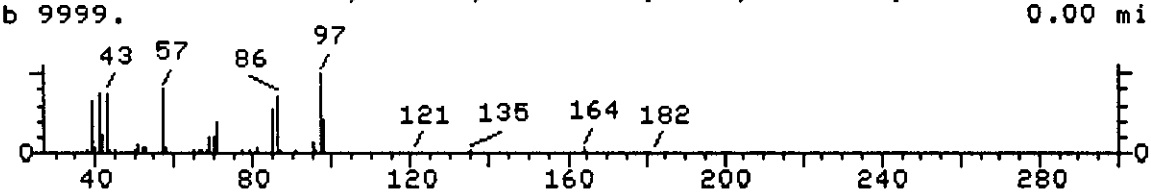
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1562
Bpk Ab 2032. SUB 23.71 min.



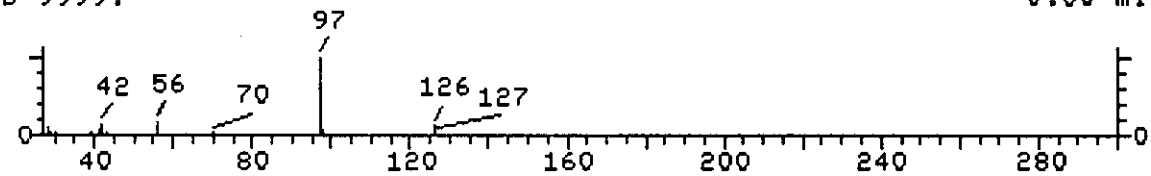
File NBS49K 2-Hexene, 3,4,4-trimethyl- Scan 4055
Bpk Ab 9999. 0.00 min.



File NBS49K 3-Butene-1,2-diol, 1-(2-furyl)-2,3-dimethyl- Scan 15060
Bpk Ab 9999. 0.00 min.



File NBS49K 2-Pyrazoline, 5-ethyl-1,4-dimethyl- Scan 3935
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 6 in PBM results file: LS6352
Retention Time: 24.42 Area: 53703 Tentative Conc: 6.00
The unknown area is 11.90% of the nearest internal standard

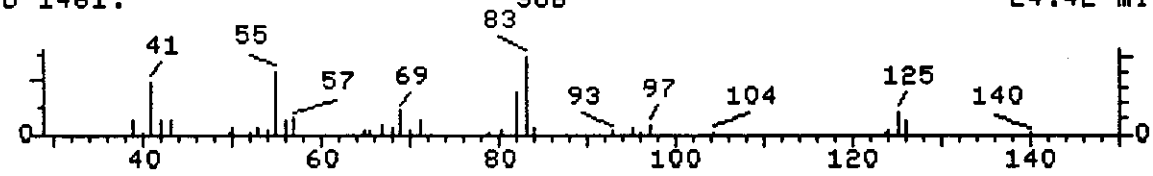
1.	Cyclohexane, propyl-	126	C9H18
2.	Cyclopentane, 1-methyl-2-(2-propenyl)-, trans-	124	C9H16
3.	Cyclohexane, azido-	125	C6H11N3
4.	Cyclopentane, 1-ethyl-1-methyl-	112	C8H16
5.	Pyridine, 1-acetyl-1,2,3,4-tetrahydro-	125	C7H11NO
6.	2-Hexene, 4,4,5-trimethyl-	126	C9H18

Sample file: >S6352 Spectrum #: 1623
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

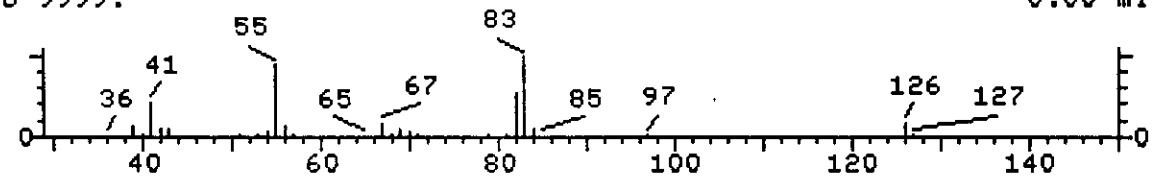
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	59*	1678928	6179	NBS49K	56	41	2	0	88	21	27	34
2.	42*	50746537	6173	NBS49K	36	65	3	0	79	24	17	13
3.	30*	19573229	6174	NBS49K	48	40	2	0	90	49	10	28
4.	29	16747505	6165	NBS49K	56	48	2	0	98	34	12	12
5.	28*	19615271	14443	NBS49K	25	52	2	0	41	39	10	14
6.	26*	55702619	6180	NBS49K	27	56	2	0	100	43	8	14

not cyclic hyd

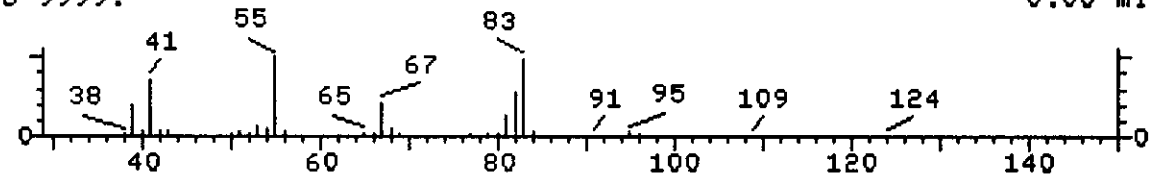
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1623
Bpk Ab 1461. SUB 24.42 min.



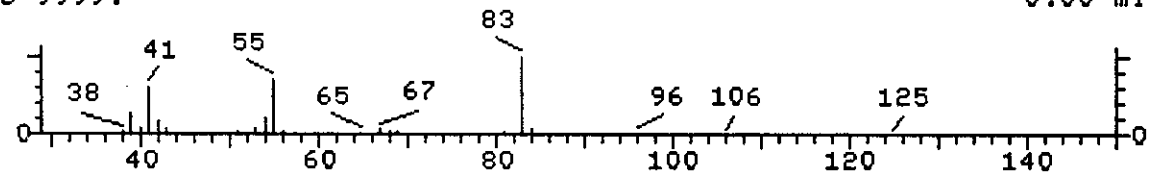
File NBS49K Cyclohexane, propyl- Scan 4028
Bpk Ab 9999. 0.00 min.



File NBS49K Cyclopentane, 1-methyl-2-(2-propenyl)-, trans- Scan 3715
Bpk Ab 9999. 0.00 min.



File NBS49K Cyclohexane, azido- Scan 3772
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 7 in PBM results file: LS6352
Retention Time: 24.63 Area: 202060 Tentative Conc: 22.00
The unknown area is 44.79% of the nearest internal standard

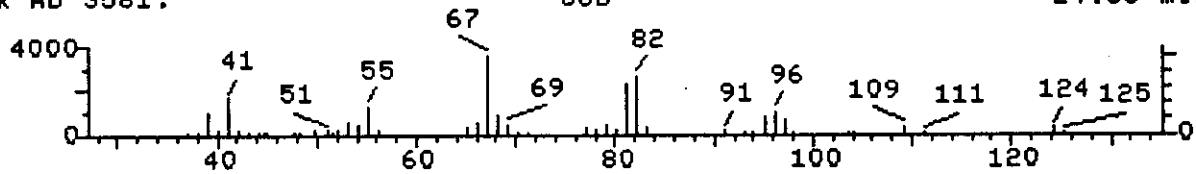
1.	3-Octyne, 7-methyl-	124	C9H16
2.	Cyclopentane, ethylidene-	96	C7H12
3.	Pentalene, octahydro-2-methyl-	124	C9H16
4.	3,4-Nonadiene	124	C9H16
5.	1,4-Pentadiene, 3-propyl-	110	C8H14
6.	4-Nonyne	124	C9H16

Sample file: >S6352 Spectrum #: 1641
Search speed: 1 Tilting option: N No. of ion ranges searched: 41

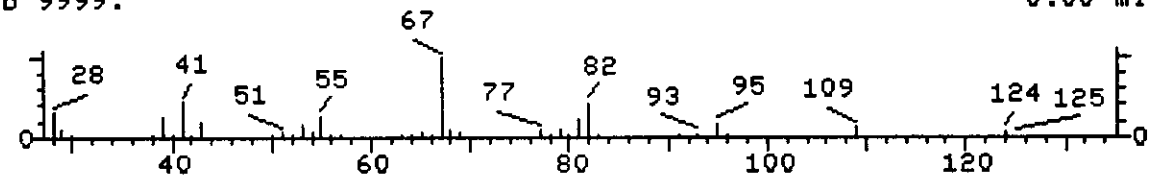
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	52*	37050069	5899	NBS49K	47	51	0	0	82	43	17	55
2.	44*	2146374	3462	NBS49K	46	47	0	0	100	50	13	54
3.	41*	3868642	8960	NBS49K	64	47	1	0	58	55	11	63
4.	39	37050036	5898	NBS49K	45	46	1	0	76	27	14	16
5.	26	996838	3480	NBS49K	53	45	2	0	87	43	8	14
6.	25*	20184912	3483	NBS49K	33	67	2	0	73	49	7	14

unk hyd

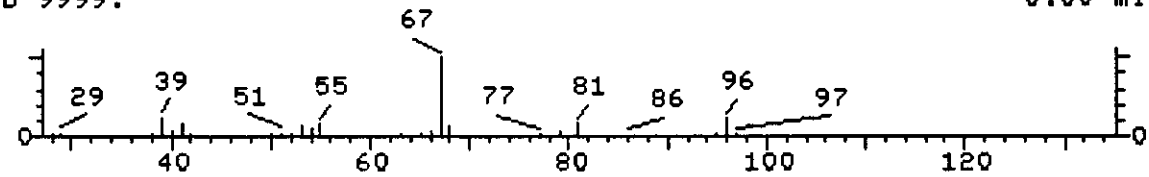
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1641
Bpk Ab 3581. SUB 24.63 min.



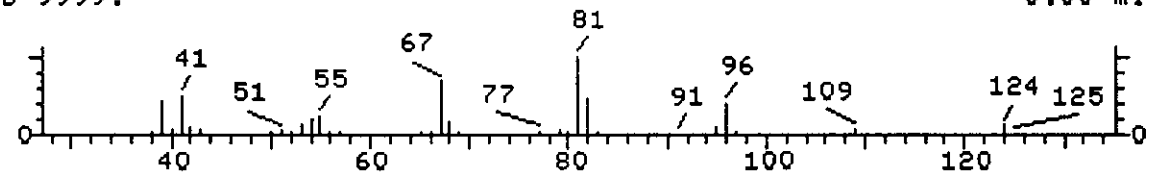
File NBS49K 3-Octyne, 7-methyl- Scan 3728
Bpk Ab 9999. 0.00 min.



File NBS49K Cyclopentane, ethylidene- Scan 1012
Bpk Ab 9999. 0.00 min.



File NBS49K Pentalene, octahydro-2-methyl- Scan 3731
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 8 in PBM results file: LS6352
Retention Time: 26.98 Area: 48372 Tentative Conc: 5.00
The unknown area is 10.72% of the nearest internal standard

1.	Cyclopentane, (1-methylbutyl)-	140	C10H20
2.	1H-1,2,4-Triazole, 1-ethyl-	97	C4H7N3
3.	7-Oxabicyclo[4.1.0]heptane, 3-methyl-	112	C7H12O
4.	Cyclopentane, 1,3-dimethyl-2-(1-methylethenyl)-, (1. alpha.,2.alpha.,3.beta.)-	138	C10H18
5.	Cyclohexane, 1-methyl-2-propyl-	140	C10H20
6.	Cyclohexane, 1-methyl-3-propyl-	140	C10H20

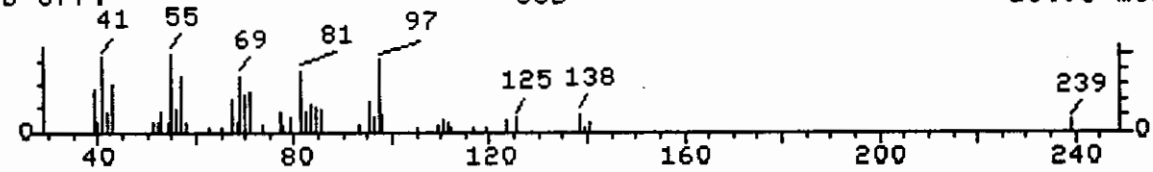
unk

Sample file: >S6352 Spectrum #: 1842
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

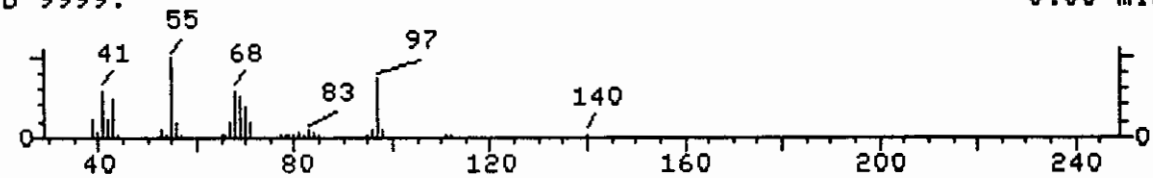
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	18*	4737433	9173	NBS49K	46	62	1	0	100	57	4	21
2.	18*	16778704	9073	NBS49K	38	58	1	0	78	56	4	21
3.	15*	36099511	9099	NBS49K	52	64	3	0	95	59	3	15
4.	15*	61142312	5771	NBS49K	42	65	0	0	58	64	3	44
5.	12*	4291796	9174	NBS49K	30	59	0	0	96	65	2	22
6.	12*	4291809	9176	NBS49K	30	62	0	0	100	65	2	22

~~Cyclo hyd~~

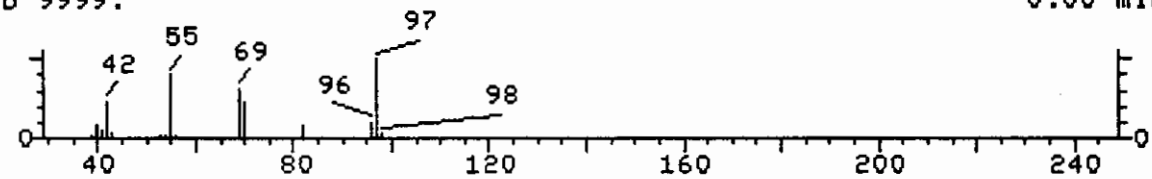
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1842
Bpk Ab 677. SUB 26.98 min.



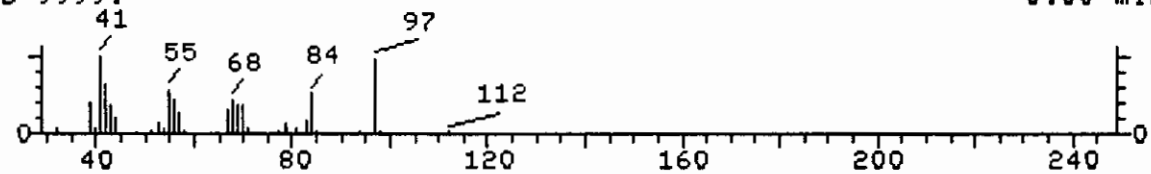
File NBS49K Cyclopentane, (1-methylbutyl)- Scan 6428
Bpk Ab 9999. 0.00 min.



File NBS49K 1H-1,2,4-Triazole, 1-ethyl- Scan 1048
Bpk Ab 9999. 0.00 min.



File NBS49K 7-Oxabicyclo[4.1.0]heptane, 3-methyl- Scan 2332
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 9 in PBM results file: LS6352
Retention Time: 27.98 Area: 345752 Tentative Conc: 38.00
The unknown area is 76.64% of the nearest internal standard

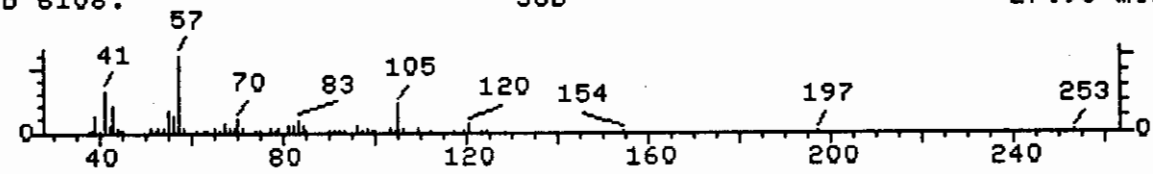
1.	1-Pentene, 4,4-dimethyl-	98	C7H14
2.	3-Undecene, 6-methyl-, (E)-	168	C12H24
3.	1-Hexene, 4-methyl-	98	C7H14
4.	Butane, 1-chloro-2-methyl-	106	C5H11Cl
5.	Ethanedioic acid, dibutyl ester	202	C10H18O4
6.	Heptane, 3-(chloromethyl)-	148	C8H17Cl

Sample file: >S6352 Spectrum #: 1927
Search speed: 1 Tilting option: N No. of ion ranges searched: 62

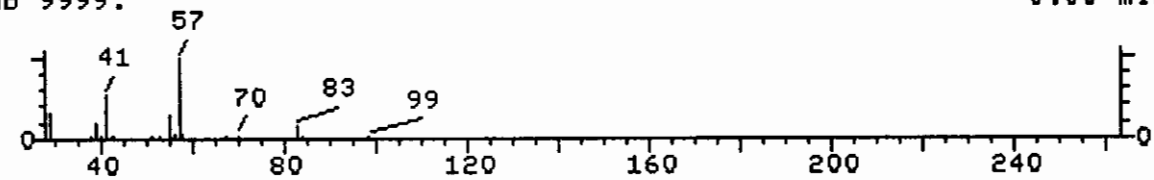
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	47*	762629	1234	NBS49K	38	38	0	0	95	42	16	44
2.	36	74630527	9550	NBS49K	41	46	2	0	97	26	14	13
3.	31*	3769231	1042	NBS49K	36	57	2	0	93	40	10	17
4.	30	616137	1242	NBS49K	35	54	1	0	68	31	12	13
5.	29	2050604	1293	NBS49K	33	26	1	0	81	34	12	12
6.	28	123046	9768	NBS49K	37	47	1	0	80	40	10	14

unk
chyd

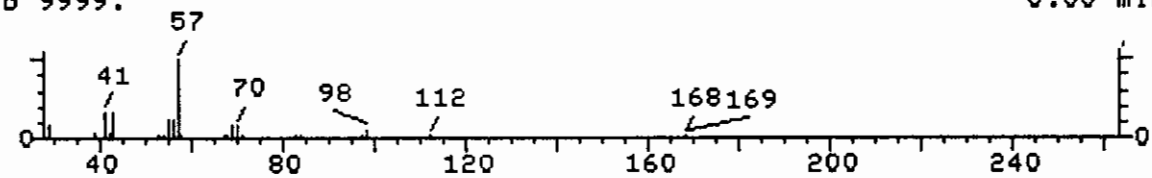
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 1927
Bpk Ab 6108. SUB 27.98 min.



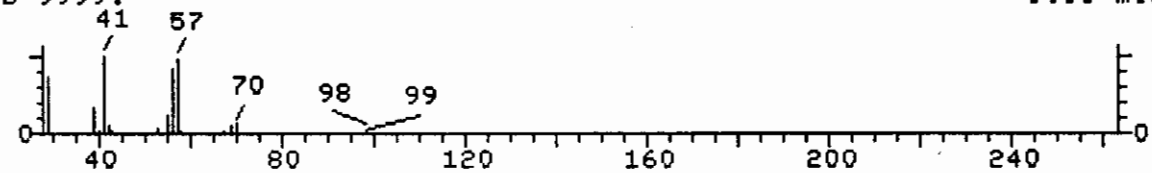
File NBS49K 1-Pentene, 4,4-dimethyl- Scan 1188
Bpk Ab 9999. 0.00 min.



File NBS49K 3-Undecene, 6-methyl-, (E)- Scan 12310
Bpk Ab 9999. 0.00 min.



File NBS49K 1-Hexene, 4-methyl- Scan 1204
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 10 in PBM results file: LS6352
Retention Time: 29.00 Area: 53828 Tentative Conc: 6.00
The unknown area is 11.93% of the nearest internal standard

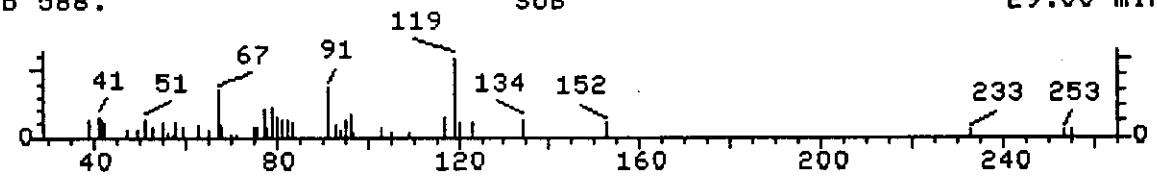
1.	Benzene, 1-methyl-3-(1-methylethyl)-	134	C10H14
2.	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14
3.	Ethanone, 1-(3-methylphenyl)-	134	C9H10O
4.	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14
5.	Benzene, (1,1-dimethylethyl)-	134	C10H14
6.	Pyridine, 5-ethenyl-2-methyl-	119	C8H9N

Sample file: >S6352 Spectrum #: 2014
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

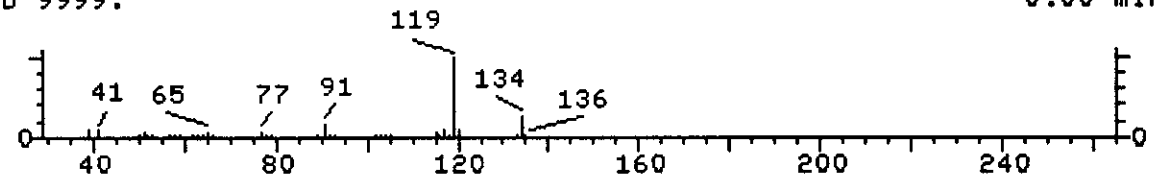
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	30*	535773	13538	NBS49K	29	60	0	0	80	44	12	21
2.	28*	874419	13536	NBS49K	22	66	0	0	81	44	8	16
3.	26*	585740	13524	NBS49K	24	83	2	0	69	44	8	14
4.	25*	2870044	13529	NBS49K	22	67	0	0	78	46	7	16
5.	25*	98066	13528	NBS49K	24	71	0	0	90	46	7	17
6.	20*	140761	13518	NBS49K	28	77	1	0	72	55	5	15

unk
Sub
benzene

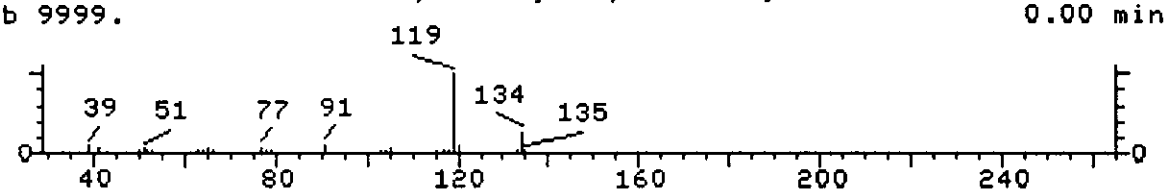
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 2014
Bpk Ab 588. SUB 29.00 min.



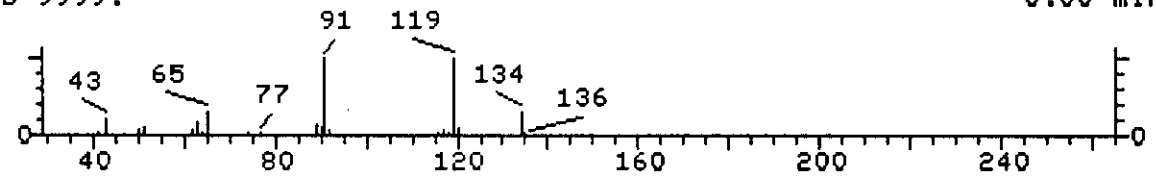
File NBS49K Benzene, 1-methyl-3-(1-methylethyl)- Scan 5323
Bpk Ab 9999. 0.00 min.



File NBS49K Benzene, 1-ethyl-2,4-dimethyl- Scan 5319
Bpk Ab 9999. 0.00 min.



File NBS49K Ethanone, 1-(3-methylphenyl)- Scan 5260
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 11 in PBM results file: LS6352
Retention Time: 31.39 Area: 246286 Tentative Conc: 27.00
The unknown area is 54.59% of the nearest internal standard

1. Naphthalene, decahydro-, trans- 138 C10H18
2. o-Menth-8-ene 138 C10H18
3. Spiro[4.5]decane 138 C10H18
4. Naphthalene, decahydro- 138 C10H18
5. Bicyclo[3.1.0]hexan-2-one, 5-(1-methylethyl)- 138 C9H14O
6. 1,1'-Bicyclopentyl 138 C10H18

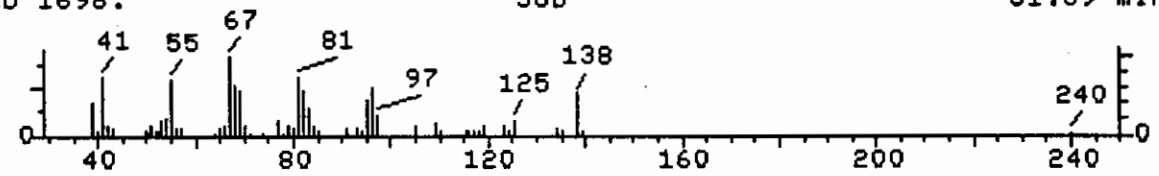
unk hyd

Sample file: >S6352 Spectrum #: 2219
Search speed: 1 Tilting option: N No. of ion ranges searched: 45

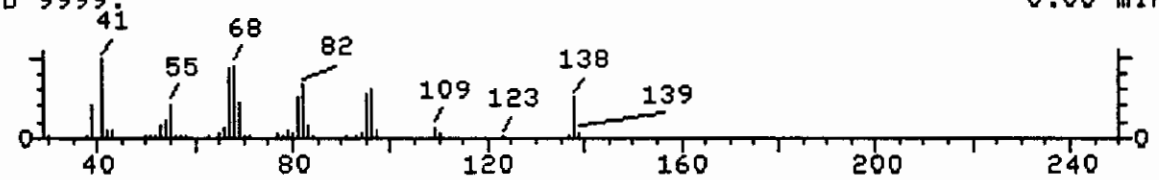
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	91*	493027	17244	NBS49K	97	25	0	0	71	37	47	97
2.	72*	15193256	8978	NBS49K	60	59	0	0	59	32	32	73
3.	69*	176636	17247	NBS49K	63	61	1	0	57	35	26	60
4.	62*	91178	17232	NBS49K	56	56	0	0	49	43	18	67
5.	56*	513202	8973	NBS49K	55	60	0	0	71	46	14	66
6.	55*	1636391	3645	NBS49K	62	56	1	0	93	45	18	60

Naphtha

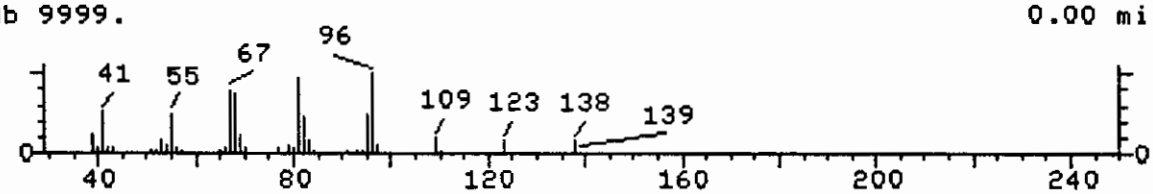
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 2219
Bpk Ab 1698. SUB 31.39 min.



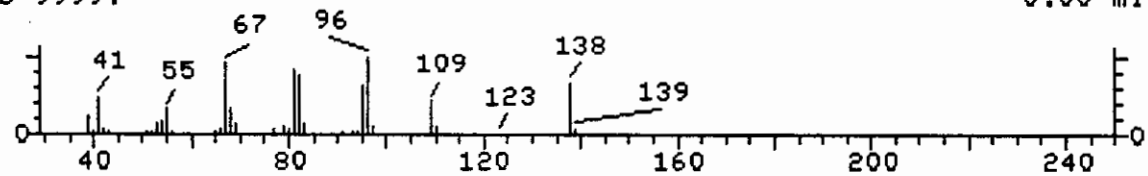
File NBS49K Naphthalene, decahydro-, trans- Scan 6054
Bpk Ab 9999. 0.00 min.



File NBS49K o-Menth-8-ene Scan 6035
Bpk Ab 9999. 0.00 min.



File NBS49K Spiro[4.5]decane Scan 6061
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 19:36
Result 12 in PBM results file: LS6352
Retention Time: 32.13 Area: 57133 Tentative Conc: 6.00
The unknown area is 12.66% of the nearest internal standard

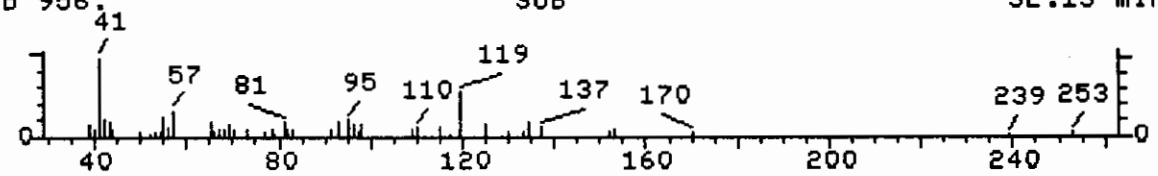
1.	Benzene, 1,2,3,4-tetramethyl-	134	C10H14
2.	Benzene, 1-methyl-2-(1-methylethyl)-	134	C10H14
3.	Benzene, methyl(1-methylethyl)-	134	C10H14
4.	Benzene, 1-methyl-3-(1-methylethyl)-	134	C10H14
5.	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14
6.	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14

Sample file: >S6352 Spectrum #: 2282
Search speed: 1 Tilting option: N No. of ion ranges searched: 44

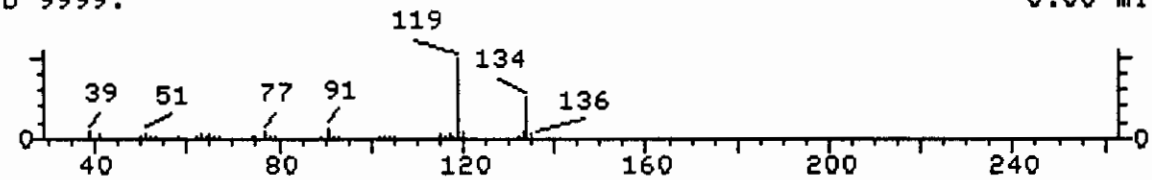
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	488233	16251	NBS49K	27	52	1	0	37	48	7	15
2.	25*	527844	13539	NBS49K	25	52	1	0	37	48	7	14
3.	25*	25155151	13531	NBS49K	28	62	1	0	50	48	7	15
4.	25*	535773	13538	NBS49K	24	65	1	0	55	48	7	14
5.	25*	874419	13536	NBS49K	23	65	1	0	55	48	7	14
6.	25*	2870044	13529	NBS49K	23	66	1	0	55	48	7	14

unk
Sub
benzene

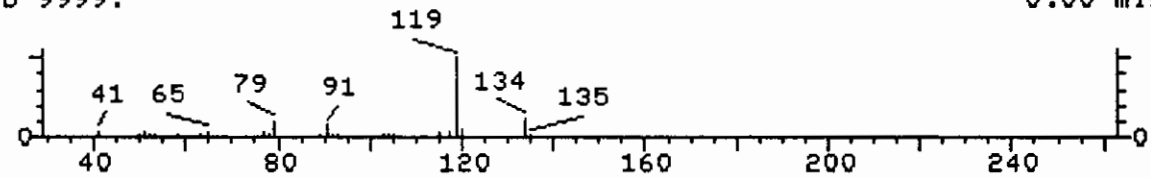
File >S6352 74721A,V/H,EPA CLP,6432,3,S-10,L,SOIL,5G/5ML Scan 2282
Bpk Ab 956. SUB 32.13 min.



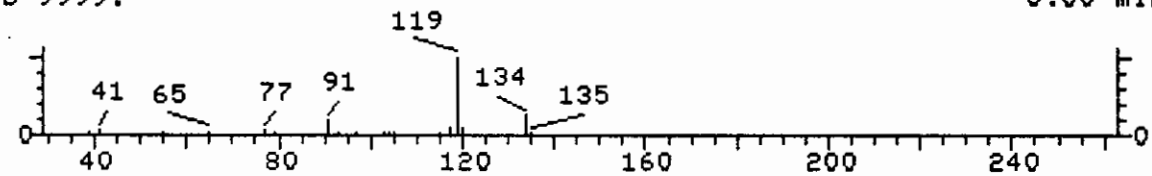
File NBS49K Benzene, 1,2,3,4-tetramethyl- Scan 5302
Bpk Ab 9999. 0.00 min.



File NBS49K Benzene, 1-methyl-2-(1-methylethyl)- Scan 5325
Bpk Ab 9999. 0.00 min.



File NBS49K Benzene, methyl(1-methylethyl)- Scan 5307
Bpk Ab 9999. 0.00 min.



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-10RE

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74721ARE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y3774

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 15 Date Analyzed: 05/01/92

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

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S-10RE

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74721ARE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y3774

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 15 Date Analyzed: 05/01/92

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

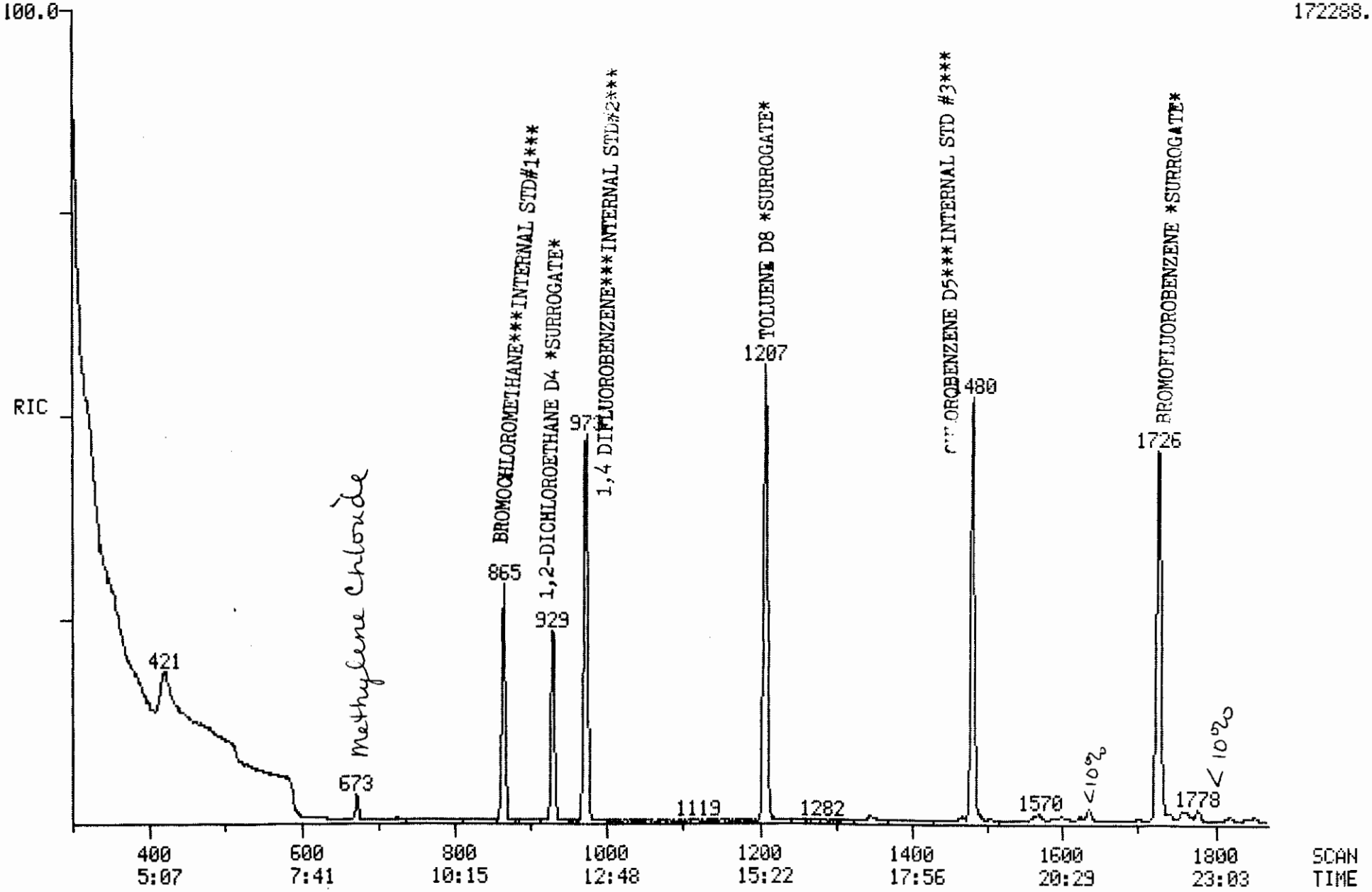
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC
05/01/92 16:13:00 RE, RE
SAMPLE: CLP,6432,3,S-10,L,S,74721A,V/H,EPA,RE,5G/5ML,,
CONDS.: CAP/.32,Y3772,Y3766,Y3773,,
RANGE: G 1,1868 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: Y3774 #1
CALI: Y3774 #3

SCANS 300 TO 1868

100061



Quantitation Report File: Y3774

Data: Y3774.TI
05/01/92 16:13:00
Sample: CLP,6432,3,S-10,L,S,74721A,V/H,EPA,RE,5G/5ML,,
Conds.: CAP/.32,Y3772,Y3766,Y3773,,
Formula: Instrument: Y Weight: 5.000
Submitted by: VERSAR Analyst: JFH Acct. No.: VEOBRIEN

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

No	Name
1	CI01 BROMOCHLOROMETHANE****INTERNAL STANDARD#1 ****
2	CI10 1,4-DIFLUOROBENZENE****INTERNAL STANDARD#2 ****
3	CI20 CHLOROBENZENE-D5****INTERNAL STANDARD#3 ****
4	CS15 1,2-DICHLOROETHANE-D4***SURROGATE#1***
5	CS05 TOLUENE-D8***SURROGATE#2***
6	CS10 4-BROMOFLUOROBENZENE***SURROGATE#3***
7	C010 CHLOROMETHANE
8	C015 BROMOMETHANE
9	C020 VINYL CHLORIDE
10	C025 CHLOROETHANE
11	C030 METHYLENE CHLORIDE
12	C035 ACETONE
13	C040 CARBON DISULFIDE
14	C045 1,1-DICHLOROETHENE
15	C050 1,1-DICHLOROETHANE
16	C060 CHLOROFORM
17	C115 1,1,1-TRICHLOROETHANE
18	C110 2-BUTANONE
19	C120 CARBON TETRACHLORIDE
20	C125 VINYL ACETATE
21	C130 BROMODICHLOROMETHANE
22	C140 1,2-DICHLOROPROPANE
23	C145 CIS-1,3,DICHLOROPROPENE
24	C150 TRICHLOROETHENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C165 BENZENE
28	C170 TRANS-1,3-DICHLOROPROPENE
29	C175 2-CHLOROETHYLVINYLETHER
30	C180 BROMOFORM
31	C210 2-HEXANONE
32	C205 4-METHYL-2-PENTANONE
33	C220 TETRACHLOROETHENE
34	C225 1,1,2,2-TETRACHLOROETHANE
35	C230 TOLUENE
36	C235 CHLOROBENZENE
37	C240 ETHYLBENZENE
38	C245 STYRENE
39	C250 O/P XYLENE
40	C065 1,2-DICHLOROETHANE
41	C251 M-XYLENE
42	C054 TRANS-1,2,DICHLOROETHENE
43	C055 CIS-1,2-DICHLOROETHENE

Run compliant
Ready for forms
DW
5-4-92

5/6/92

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	865	11:05	1	1.000	A BB	39706.	50.000 UG/L*	16.84
2	114	973	12:28	2	1.000	A BB	208303.	50.000 UG/L*	16.84
3	117	1480	18:57	3	1.000	A BB	195088.	50.000 UG/L*	16.84
4	65	929	11:54	1	1.074	A BB	75809.	46.517 UG/L%	15.67
5	98	1207	15:27	3	0.816	A BB	213276.	49.420 UG/L%	16.65
6	95	1727	22:07	3	1.167	A BB	90891.	46.110 UG/L%	15.53
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	84	673	8:37	1	0.778	A BB	5590.	4.705 UG/L	1.58
12	NOT FOUND								
13	76	693	8:52	1	0.801	A BB	512.	~~0.152 UG/L~~ BRL	0.05
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
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33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	11:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	12:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	19:02	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	11:57	1.00	1.074	1.00	46.52	50.00	1.909	2.052	0.93
5	15:31	1.00	0.816	1.00	49.42	50.00	1.093	1.106	0.99
6	22:12	1.00	1.167	1.00	46.11	50.00	0.466	0.505	0.92
7	5:01		0.451						
8	6:22		0.572						
9	5:21		0.481						
10	6:31		0.586						
11	8:39	1.00	0.777	1.00	4.71	50.00	0.141	1.496	0.09

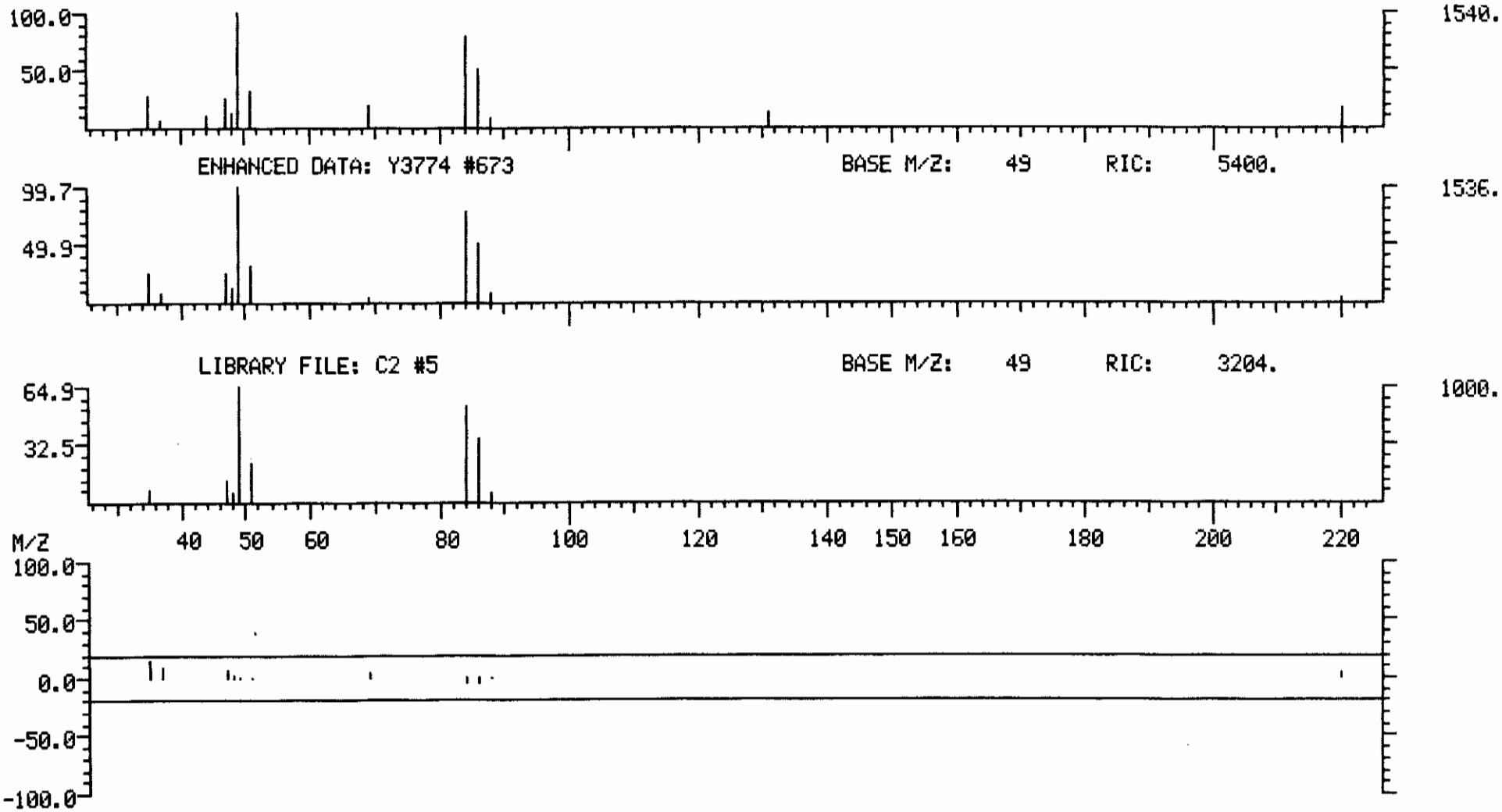
100063

Y 3774

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	7:39		0.688						
13	8:54	1.00	0.800	1.00	0.15	50.00	0.013	4.229	0.00
14	8:00		0.719						
15	9:42		0.872						
16	10:51		0.975						
17	11:33		0.923						
18	10:10		0.914						
19	12:01		0.961						
20	9:32		0.763						
21	13:58		1.117						
22	13:32		1.082						
23	14:53		1.190						
24	13:16		1.060						
25	17:36		1.406						
26	16:16		1.300						
27	12:15		0.980						
28	15:50		1.266						
29	14:14		1.138						
30	21:38		1.729						
31	16:04		0.845						
32	14:20		0.754						
33	17:13		0.904						
34	21:50		1.147						
35	15:42		0.825						
36	19:08		1.005						
37	19:10		1.007						
38	20:35		1.082						
39	20:33		1.080						
40	12:06		1.087						
41	19:22		1.017						
42	9:08		0.820						
43	10:36		0.953						

DATA FILE: Y3774 #673 LIBRARY FILE: C2 #5
TARGET COMPOUND COMPARISON CALI: Y3774 #3
COMPOUND: C030 METHYLENE CHLORIDE

RAW DATA: Y3774 #673 BASE M/Z: 49 RIC: 6176.
05/01/92 16:13



100065

IV. STANDARDS DATA

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

OK 30

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Instrument ID: S Calibration Date(s): 04/08/92 04/08/92

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

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

LAB FILE ID: RRF20 = S6160 RRF50 = S6164
RRF100= S6163 RRF150= S6162 RRF200= S6161

COMPOUND		RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane	#	1.013	0.909	0.908	0.824	0.994	0.930	8.2#
Bromomethane		1.168	1.080	1.126	1.001	1.060	1.087	5.9
Vinyl chloride	*	0.812	0.728	0.737	0.649	0.607	0.707	11.3*
Chloroethane		0.765	0.741	0.759	0.686	0.750	0.740	4.3
Methylene chloride		2.027	1.694	1.548	1.451	1.469	1.638	14.5
Acetone		1.655	1.479	1.326	0.823	1.532	1.363	23.8
Carbon disulfide		3.794	3.630	3.960	3.439	3.779	3.720	5.3
1,1-Dichloroethene	*	1.290	1.216	1.246	1.125	1.205	1.216	5.0*
1,1-Dichloroethane	#	2.824	2.667	2.712	2.507	2.626	2.667	4.4#
1,2-Dichloroethene (total)							0.000	0.0
trans-1,2-dichloroethene		1.470	1.360	1.341	1.222	1.326	1.344	6.6
cis-1,2-dichloroethene		1.587	1.524	1.522	1.418	1.498	1.510	4.0
Chloroform	*	2.917	2.856	2.845	2.684	2.746	2.810	3.3*
1,2-Dichloroethane		2.505	2.426	2.420	2.212	2.268	2.366	5.1
2-Butanone		0.350	0.364	0.334	0.204	0.336	0.318	20.3
1,1,1-Trichloroethane		0.404	0.379	0.391	0.359	0.395	0.386	4.5
Carbon tetrachloride		0.383	0.364	0.388	0.342	0.379	0.371	5.0
Vinyl acetate		0.224	0.261	0.248	0.207	0.253	0.239	9.4
Bromodichloromethane		0.457	0.456	0.459	0.440	0.457	0.454	1.7
1,2-Dichloropropane	*	0.399	0.388	0.382	0.360	0.373	0.380	3.9*
cis-1,3-Dichloropropene		0.564	0.540	0.537	0.522	0.539	0.540	2.8
Trichloroethene		0.375	0.358	0.353	0.322	0.341	0.350	5.6
Dibromochloromethane		0.539	0.483	0.470	0.436	0.470	0.480	7.8
1,1,2-Trichloroethane		0.380	0.354	0.339	0.310	0.344	0.345	7.3
Benzene		1.266	1.205	1.203	1.127	1.167	1.194	4.3
Trans-1,3-dichloropropene		0.440	0.438	0.434	0.415	0.434	0.432	2.3
Bromoform	#	0.490	0.467	0.470	0.404	0.486	0.463	7.5#
4-Methyl-2-pentanone		1.042	1.046	1.058	0.776	1.103	1.005	13.0
2-Hexanone		0.527	0.550	0.550	0.381	0.603	0.522	16.0
Tetrachloroethene		0.374	0.361	0.358	0.335	0.356	0.357	3.9
1,1,2,2-Tetrachloroethane	#	0.693	0.668	0.644	0.529	0.679	0.643	10.3#
Toluene	*	0.773	0.777	0.755	0.728	0.754	0.757	2.6*
Chlorobenzene	#	1.006	1.016	0.938	0.858	0.883	0.940	7.5#
Ethylbenzene	*	0.464	0.459	0.449	0.414	0.426	0.442	4.9*
Styrene		1.091	1.108	1.092	1.002	1.027	1.064	4.4
Xylenes		0.653	0.643	0.632	0.596	0.627	0.630	3.4
Xylenes		0.604	0.578	0.556	0.527	0.536	0.560	5.6
Toluene-d8		1.174	1.249	1.242	1.146	1.194	1.201	3.7

Bromofluorobenzene	0.634	0.674	0.651	0.609	0.655	0.645	3.8
1,2-Dichloroethane-d4	2.086	1.997	2.036	1.888	1.928	1.987	4.0

Initial Calibration Data
HSL Compounds

:e No: ----------

Instrument ID: ----------

Contractor: ----------

Calibration Date: 04/08/92 ----------

Contract No: ----------

-

OK ✓
2/88 ✓

Minimum $\overline{RF}$ for SPCC is

Maximum % RSD for CCC is %

Compound	Laboratory ID: >S6160 RF 20.00	>S6164 RF 50.00	>S6163 RF 100.00	>S6162 RF 150.00	>S6161 RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC
C010 Chloromethane	1.01338	.90927	.90829	.82431	.99450	.92995	8.187		
C015 Bromomethane	1.16811	1.08048	1.12650	1.00117	1.06054	1.08736	5.862		
C020 Vinyl Chloride	.81215	.72819	.73733	.64904	.60706	.70675	11.357		
C025 Chloroethane	.76543	.74062	.75880	.68578	.75050	.74023	4.299		
C030 Methylene Chloride	2.02691	1.69359	1.54815	1.45100	1.46860	1.63765	14.517		
C035 Acetone	1.65505	1.47865	1.32646	.82323	1.53145	1.36297	23.767		
C040 Carbon Disulfide	3.79435	3.63050	3.96037	3.43912	3.77913	3.72069	5.269		
C045 1,1-Dichloroethene	1.28990	1.21573	1.24629	1.12543	1.20531	1.21653	4.982		
C050 1,1-Dichloroethane	2.82419	2.66722	2.71162	2.50739	2.62607	2.66730	4.350		
C054 Trans 1-2 Dichloroethene	1.47045	1.36039	1.34098	1.22246	1.32641	1.34414	6.586		
C055 Cis 1-2 Dichloroethene	1.58655	1.52362	1.52176	1.41839	1.49821	1.50971	4.017		
C060 Chloroform	2.91659	2.85629	2.84521	2.68366	2.74614	2.80958	3.319		
15 1,2-Dichloroethane-d4	2.08636	1.99730	2.03598	1.88796	1.92811	1.98714	4.030		
C065 1,2-Dichloroethane	2.50459	2.42572	2.41966	2.21181	2.26853	2.36606	5.130		
C110 2 Butanone	.34960	.36443	.33353	.20395	.33562	.31743	20.363		
C115 1,1,1-Trichloroethane	.40385	.37873	.39119	.35914	.39505	.38559	4.494		
C120 Carbon Tetrachloride	.38343	.36390	.38768	.34247	.37929	.37135	4.975		
C125 Vinyl Acetate	.22357	.26127	.24791	.20695	.25254	.23845	9.431		
C130 Bromodichloromethane	.45664	.45561	.45865	.44046	.45663	.45360	1.637		
C140 1,2-Dichloropropane	.39871	.38848	.38201	.35974	.37319	.38042	3.903		
C145 cis-1,3-Dichloropropene	.56352	.53976	.53672	.52161	.53919	.54016	2.782		
C150 Trichloroethene	.37490	.35751	.35288	.32169	.34115	.34963	5.655		
C155 Dibromochloromethane	.53878	.48280	.47012	.43598	.46984	.47950	7.803		
C160 1,1,2-Trichloroethane	.37988	.35449	.33874	.30975	.34428	.34543	7.363		
C165 Benzene	1.26624	1.20500	1.20257	1.12737	1.16699	1.19364	4.309		
C170 trans-1,3-Dichloropropene	.44048	.43802	.43371	.41462	.43414	.43219	2.363		
C180 Bromoform	.48962	.46739	.47000	.40418	.48650	.46354	7.463		
C205 4-Methyl-2-Pentanone	1.04157	1.04614	1.05846	.77605	1.10285	1.00501	12.962		
C210 2-Hexanone	.52719	.55026	.55023	.38088	.60338	.52239	16.061		
C220 Tetrachloroethene	.37364	.36068	.35755	.33490	.35588	.35653	3.915		
C225 1,1,2,2-Tetrachloroethane	.69292	.66760	.64406	.52901	.67911	.64254	10.263		
C230 Toluene	.77343	.77704	.75467	.72799	.75405	.75744	2.579		

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

$\overline{RF}$ - Average Response Factor

.RSD - Percent Relative Standard Deviation

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

100069

Initial Calibration Data
HSL Compounds

se No: Instrument ID:

Contractor: Calibration Date: 04/08/92

Contract No:

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

Laboratory ID:	>S6160	>S6164	>S6163	>S6162	>S6161				
	RF	RF	RF	RF	RF				
Compound	20.00	50.00	100.00	150.00	200.00	$\overline{RF}$	% RSD	CCC	SPCC
CS05 Toluene-d8	1.17375	1.24902	1.24215	1.14647	1.19380	1.20104	3.669		
C235 Chlorobenzene	1.00613	1.01565	.93807	.85791	.88339	.94023	7.529		
C240 Ethylbenzene	.46368	.45870	.44873	.41371	.42629	.44222	4.852		
C245 Styrene	1.09076	1.10813	1.09232	1.00162	1.02733	1.06403	4.383		
C25D Xylene (M & P)	.65344	.64288	.63246	.59649	.62731	.63052	3.411		
C251 Xylene (O)	.60428	.57764	.55565	.52712	.53610	.56016	5.605		
CS10 Bromofluorobenzene	.63371	.67445	.65052	.60851	.65501	.64444	3.845		
1,2 Dichlorobenzene	-	-	-	-	-	-	-		
1,3 Dichlorobenzene	-	-	-	-	-	-	-		
1,4 Dichlorobenzene	-	-	-	-	-	-	-		

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Instrument ID: Y Calibration Date(s): 05/01/92 05/01/92

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

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

LAB FILE ID: RRF20 = Y3768 RRF50 = Y3772
RRF100= Y3771 RRF150= Y3770 RRF200= Y3769

COMPOUND		RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane	#	2.154	2.462	2.466	2.584	1.759	2.285	14.6#
Bromomethane		1.475	1.628	1.560	1.536	1.544	1.549	3.5
Vinyl chloride	*	2.564	2.662	2.654	2.619	2.544	2.609	2.0*
Chloroethane		1.197	1.353	1.349	1.292	1.254	1.289	5.1
Methylene chloride		1.707	1.496	1.387	1.333	1.263	1.437	12.0
Acetone		1.202	1.138	1.046	1.103	0.881	1.074	11.3
Carbon disulfide		4.386	4.229	4.240	3.949	3.936	4.148	4.8
1,1-Dichloroethene	*	1.292	1.263	1.261	1.179	1.231	1.245	3.4*
1,1-Dichloroethane	#	2.735	2.631	2.619	2.588	2.588	2.632	2.3#
1,2-Dichloroethene (total)							0.000	0.0
Trans-1,2-dichloroethene		1.579	1.503	1.465	1.378	1.379	1.461	5.9
cis-1,2-dichloroethene		1.665	1.687	1.675	1.608	1.583	1.644	2.8
Chloroform	*	3.291	3.118	3.037	2.974	2.928	3.070	4.7*
1,2-Dichloroethane		2.340	2.195	2.113	2.267	2.197	2.222	3.8
2-Butanone		0.880	0.939	0.828	0.926	0.830	0.881	5.9
1,1,1-Trichloroethane		0.641	0.571	0.593	0.580	0.582	0.593	4.7
Carbon tetrachloride		0.595	0.508	0.535	0.507	0.521	0.533	6.8
Vinyl acetate		0.285	0.285	0.292	0.313	0.284	0.292	4.2
Bromodichloromethane		0.475	0.457	0.451	0.469	0.454	0.461	2.2
1,2-Dichloropropane	*	0.286	0.276	0.278	0.281	0.269	0.278	2.3*
cis-1,3-Dichloropropene		0.504	0.499	0.492	0.522	0.507	0.505	2.2
Trichloroethene		0.416	0.403	0.405	0.390	0.384	0.400	3.2
Dibromochloromethane		0.414	0.415	0.403	0.423	0.400	0.411	2.3
1,1,2-Trichloroethane		0.268	0.271	0.259	0.277	0.266	0.268	2.5
Benzene		1.089	1.013	0.990	0.995	0.967	1.011	4.6
Trans-1,3-dichloropropene		0.370	0.368	0.365	0.398	0.389	0.378	3.9
Bromoform	#	0.302	0.330	0.305	0.330	0.316	0.317	4.2#
4-Methyl-2-pentanone		0.295	0.323	0.301	0.327	0.301	0.309	4.7
2-Hexanone		0.279	0.329	0.317	0.363	0.323	0.322	9.3
Tetrachloroethene		0.399	0.383	0.378	0.364	0.365	0.378	3.8
1,1,2,2-Tetrachloroethane	#	0.316	0.339	0.314	0.346	0.309	0.325	5.1#
Toluene	*	1.245	1.169	1.145	1.182	1.171	1.182	3.2*
Chlorobenzene	#	0.931	0.890	0.872	0.886	0.872	0.890	2.7#
Ethylbenzene	*	0.451	0.426	0.431	0.448	0.464	0.444	3.5*
Styrene		0.956	0.995	0.963	0.980	0.985	0.976	1.6
Xylenes		0.617	0.602	0.582	0.607	0.615	0.605	2.3
Xylenes		0.573	0.576	0.569	0.579	0.586	0.577	1.1
Toluene-d8		1.168	1.106	1.158	1.081	1.030	1.109	5.1

Bromofluorobenzene	0.495	0.505	0.516	0.493	0.467	0.495	3.7
1,2-Dichloroethane-d4	2.086	2.052	2.088	2.067	1.927	2.044	3.3

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INITIAL CALIBRATION DATA
VOLATILE HSL COMPOUNDS

Case No: STAND Region: _____ Instrument ID: Y

Contractor: VERSAR INC. Calibration Date: 05/01/92

Contract No: _____

Min AVE RF for SPCC is 0.300 (1) Max %RSD for CCC is 30%

Laboratory ID	Y3768	Y3772	Y3771	Y3770	Y3769			CCC*
Compound	RF(20)	RF(50)	RF(100)	RF(150)	RF(200)	AVE RF	% RSD	SPCC**
Chloromethane	2.154	2.462	2.466	2.584	1.759	2.285	14.6	* *
Bromomethane	1.475	1.628	1.560	1.536	1.544	1.549	3.5	
Vinyl chloride	2.564	2.662	2.654	2.619	2.544	2.609	2.0	*
Chloroethane	1.197	1.353	1.349	1.292	1.254	1.289	5.1	
Methylene chloride	1.707	1.496	1.387	1.333	1.263	1.437	12.1	
Acetone	1.202	1.138	1.046	1.103	0.881	1.074	11.3	
Carbon disulfide	4.386	4.229	4.240	3.949	3.936	4.148	4.8	
1,1-Dichloroethene	1.292	1.263	1.261	1.179	1.231	1.245	3.4	*
1,1-Dichloroethane	2.735	2.631	2.619	2.588	2.588	2.632	2.3	* *
Trans-1,2-dichloroethene	1.579	1.503	1.465	1.378	1.379	1.461	5.9	
Cis-1,2-dichloroethene	1.665	1.687	1.675	1.608	1.583	1.644	2.8	
Chloroform	3.291	3.118	3.037	2.974	2.928	3.070	4.7	*
1,2-Dichloroethane	2.340	2.195	2.113	2.267	2.197	2.222	3.8	
2-Butanone	0.880	0.939	0.828	0.926	0.830	0.881	5.9	
1,1,1-Trichloroethane	0.641	0.571	0.593	0.580	0.582	0.593	4.7	
Carbon tetrachloride	0.595	0.508	0.535	0.507	0.521	0.533	6.8	
Vinyl acetate	0.285	0.285	0.292	0.313	0.284	0.292	4.2	
Bromodichloromethane	0.475	0.457	0.451	0.469	0.454	0.461	2.2	
1,2-Dichloropropane	0.286	0.276	0.278	0.281	0.269	0.278	2.3	*
cis-1,3-Dichloropropene	0.504	0.499	0.492	0.522	0.507	0.505	2.2	
Trichloroethene	0.416	0.403	0.405	0.390	0.384	0.400	3.2	
Dibromochloromethane	0.414	0.415	0.403	0.423	0.400	0.411	2.3	
1,1,2-Trichloroethane	0.268	0.271	0.259	0.277	0.266	0.268	2.5	
Benzene	1.089	1.013	0.990	0.995	0.967	1.011	4.6	
Trans-1,3-dichloropropene	0.370	0.368	0.365	0.398	0.389	0.378	3.9	
2-Chloroethylvinylether	0.030	0.039	0.037	0.040	0.039	0.037	11.0	
Bromoform	0.302	0.330	0.305	0.330	0.316	0.317	4.2	* *
4-Methyl-2-pentanone	0.295	0.323	0.301	0.327	0.301	0.309	4.7	
2-Hexanone	0.279	0.329	0.317	0.363	0.323	0.322	9.3	
Tetrachloroethene	0.399	0.383	0.378	0.364	0.365	0.378	3.8	
1,1,2,2-Tetrachloroethane	0.316	0.339	0.314	0.346	0.309	0.325	5.1	* *
Toluene	1.245	1.169	1.145	1.182	1.171	1.182	3.2	*
Chlorobenzene	0.931	0.890	0.872	0.886	0.872	0.890	2.7	* *
Ethylbenzene	0.451	0.426	0.431	0.448	0.464	0.444	3.5	*
Styrene	0.956	0.995	0.963	0.980	0.985	0.976	1.6	
Xylenes	0.617	0.602	0.582	0.607	0.615	0.605	2.3	
Xylenes	0.573	0.576	0.569	0.579	0.586	0.577	1.1	

Response Factor (number is the amount of ug/L)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
C - - System Performance Check Compounds (**)
(1) - - Minimum AVE RF for Bromoform is 0.250

Form VI

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Instrument ID: S Calibration date: 04/22/92 Time: 1015

Lab File ID: S6341 Init. Calib. Date(s): 04/08/92 04/08/92

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

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

COMPOUND		$\overline{RRF}$	RRF50	%D	
Chloromethane	#	0.930	1.160	-24.7	#
Bromomethane		1.087	1.145	-5.3	
Vinyl chloride	*	0.707	0.848	-19.9	*
Chloroethane		0.740	0.817	-10.4	
Methylene chloride		1.638	1.696	-3.5	
Acetone		1.363	1.390	-2.0	
Carbon disulfide		3.720	5.030	-35.2	
1,1-Dichloroethene	*	1.216	1.251	-2.9	*
1,1-Dichloroethane	#	2.667	2.773	-4.0	#
1,2-Dichloroethene (total)					
Trans-1,2-dichloroethene		1.344	1.360	-1.2	
Cis-1,2-dichloroethene		1.510	1.504	0.4	
Chloroform	*	2.810	2.864	-1.9	*
1,2-Dichloroethane		2.366	2.500	-5.7	
2-Butanone		0.318	0.330	-3.8	
1,1,1-Trichloroethane		0.386	0.373	3.4	
Carbon tetrachloride		0.371	0.341	8.1	
Vinyl acetate		0.239	0.646	-99.9	
Bromodichloromethane		0.454	0.456	-0.4	
1,2-Dichloropropane	*	0.380	0.381	-0.3	*
cis-1,3-Dichloropropene		0.540	0.557	-3.1	
Trichloroethene		0.350	0.325	7.1	
Dibromochloromethane		0.480	0.408	15.0	
1,1,2-Trichloroethane		0.345	0.313	9.3	
Benzene		1.194	1.224	-2.5	
Trans-1,3-dichloropropene		0.432	0.437	-1.2	
Bromoform	#	0.463	0.337	27.2	#
4-Methyl-2-pentanone		1.005	0.665	33.8	
2-Hexanone		0.522	0.679	-30.1	
Tetrachloroethene		0.357	0.325	9.0	
1,1,2,2-Tetrachloroethane	#	0.643	0.529	17.7	#
Toluene	*	0.757	0.794	-4.9	*
Chlorobenzene	#	0.940	0.950	-1.1	#
Ethylbenzene	*	0.442	0.474	-7.2	*
Styrene		1.064	1.014	4.7	
Xylenes		0.630	0.623	1.1	
Xylenes		0.560	0.591	-5.5	
Toluene-d8		1.201	1.281	-6.7	
Bromofluorobenzene		0.645	0.669	-3.7	

no TCLs found, no action taken

1,2-Dichloroethane-d4	1.987	2.240	-12.7

Continuing Calibration Check
HSL Compounds

se No: Calibration Date: 04/22/92

Contractor: Time: 10:15

Contract No: Laboratory ID: >S6341

Instrument ID: Initial Calibration Date: 04/22/92

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

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Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
C010 Chloromethane	.92995	1.16033	24.77		
C015 Bromomethane	1.08736	1.14509	5.31		
C020 Vinyl Chloride	.70675	.84846	20.05		
C025 Chloroethane	.74023	.81710	10.38		
C030 Methylene Chloride	1.63765	1.69627	3.58		
C035 Acetone	1.36297	1.38948	1.95		
C040 Carbon Disulfide	3.72069	5.02991	35.19		
C045 1,1-Dichloroethene	1.21653	1.25065	2.80		
C050 1,1-Dichloroethane	2.66730	2.77300	3.96		
C054 Trans 1-2 Dichloroethene	1.34414	1.36016	1.19		
C055 Cis 1-2 Dichloroethene	1.50971	1.50437	.35		
C060 Chloroform	2.80958	2.86356	1.92		
C115 1,2-Dichloroethane-d4	1.98714	2.23996	12.72		
C065 1,2-Dichloroethane	2.36606	2.50031	5.67		
C110 2 Butanone	.31743	.33041	4.09		
C115 1,1,1-Trichloroethane	.38559	.37255	3.38		
C120 Carbon Tetrachloride	.37135	.34113	8.14		
C125 Vinyl Acetate	.23845	.64568	170.78		
C130 Bromodichloromethane	.45360	.45585	.50		
C140 1,2-Dichloropropane	.38042	.38083	.11		
C145 cis-1,3-Dichloropropene	.54016	.55743	3.20		
C150 Trichloroethene	.34963	.32529	6.96		
C155 Dibromochloromethane	.47950	.40766	14.98		
C160 1,1,2-Trichloroethane	.34543	.31320	9.33		
C165 Benzene	1.19364	1.22430	2.57		
C170 trans-1,3-Dichloropropene	.43219	.43721	1.16		
C180 Bromoform	.46354	.33693	27.31		
C205 4-Methyl-2-Pentanone	1.00501	.66494	33.84		
C210 2-Hexanone	.52239	.67899	29.98		
C220 Tetrachloroethene	.35653	.32460	8.96		
C225 1,1,2,2-Tetrachloroethane	.64254	.52944	17.60		
C230 Toluene	.75744	.79440	4.88		

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

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

Diff - % Difference from original average or curve

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

100076

Continuing Calibration Check
HSL Compounds

se No: Calibration Date: 04/22/92

Contractor: Time: 10:15

Contract No: Laboratory ID: >S6341

Instrument ID: Initial Calibration Date: 04/22/92

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

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
CS05 Toluene-d8	1.20104	1.28074	6.64		
C235 Chlorobenzene	.94023	.95015	1.06		
C240 Ethylbenzene	.44222	.47443	7.28		
C245 Styrene	1.06403	1.01406	4.70		
C250 Xylene (M & P)	.63052	.62321	1.16		
C251 Xylene (O)	.56016	.59082	5.47		
CS10 Bromofluorobenzene	.64444	.66924	3.85		
1,2 Dichlorobenzene	-	-	-		
1,3 Dichlorobenzene	-	-	-		
1,4 Dichlorobenzene	-	-	-		

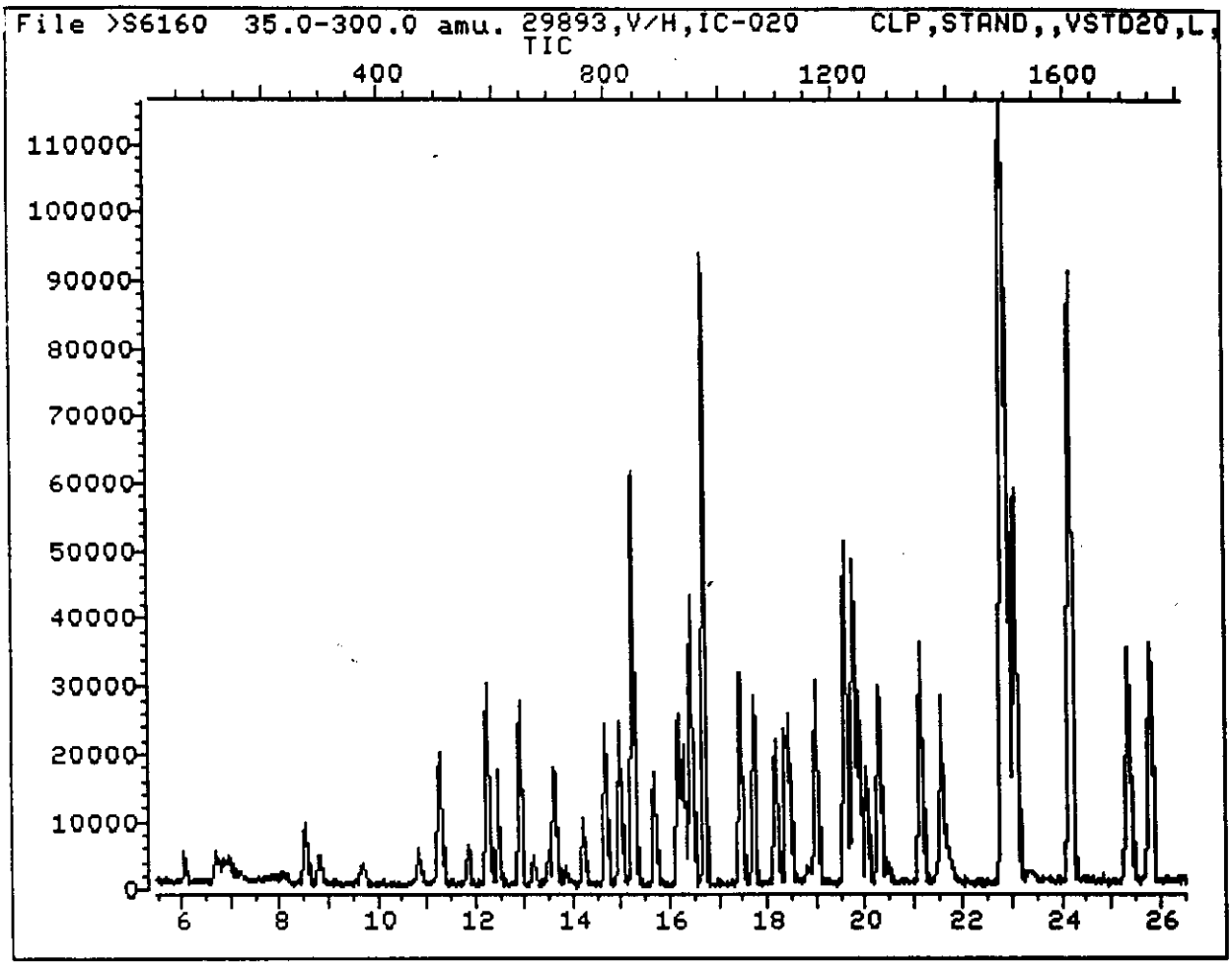
RF - Response Factor from daily standard file at 50.00 UG/L

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

Diff - % Difference from original average or curve

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

TOTAL ION CHROMATOGRAM



Data File: >S6160::D3 Quant Output File: ^S6160::D1
Name: 29893,V/H,IC-020 Instrument ID: S
Misc: CLP,STAND,,VSTD20,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28 Last Qcal Time: 920407 09:22

Operator ID: DIANE
Quant Time : 920408 11:36
Injected at: 920408 11:04

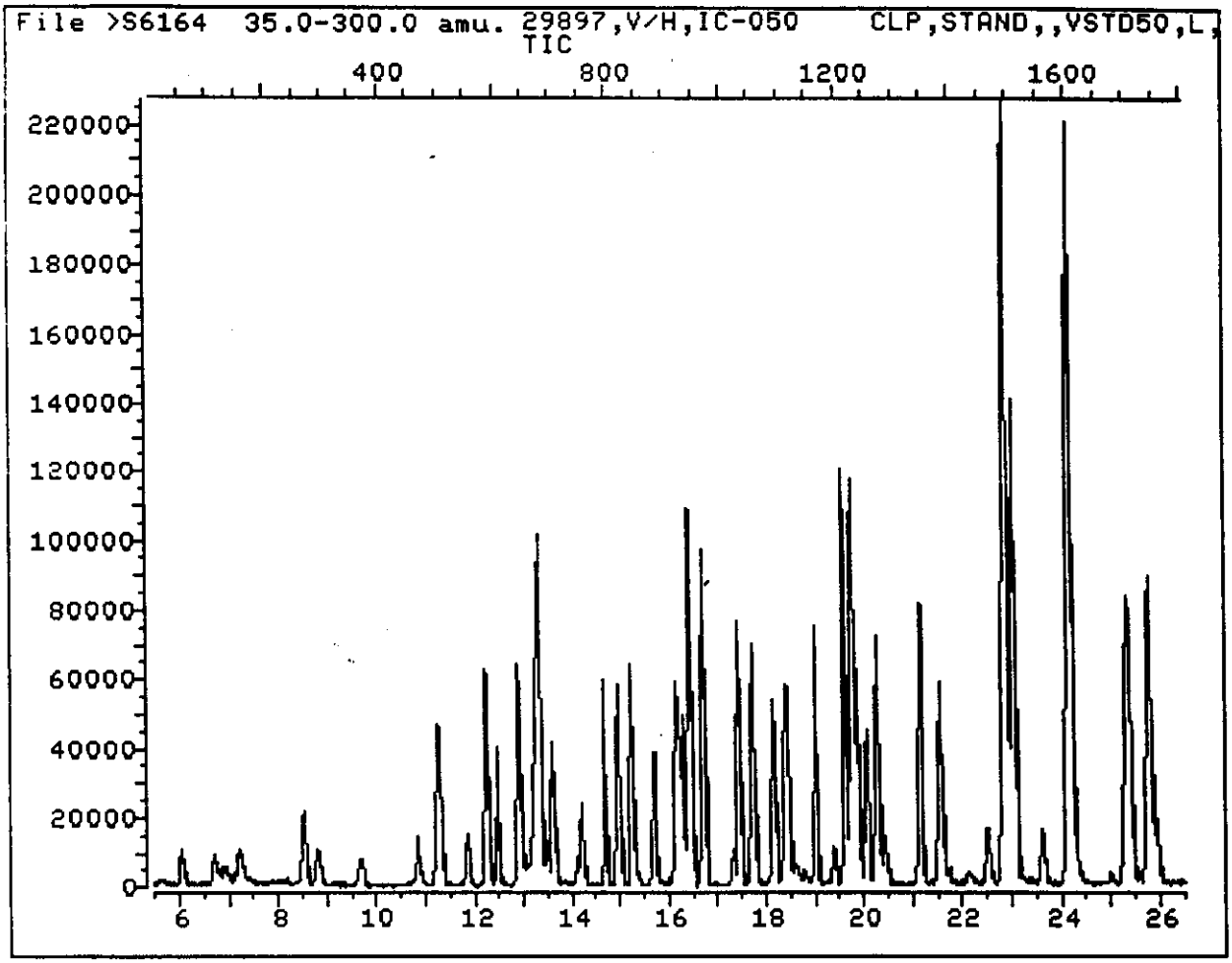
QUANT REPORT

Operator ID: DIANE Quant Rev: 7 Quant Time: 920408 11:36
Output File: ^S6160::D1 Injected at: 920408 11:04
Data File: >S6160::D3 Dilution Factor: 1.00000
Name: 29893,V/H,IC-020 Instrument ID: S
Misc: CLP,STAND,,VSTD20,L,SOIL,5ML

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28 Last Qcal Time: 920407 09:22

	Compound	R.T.	Scan#	Area	Conc	Units	α
1)	*CI01 Bromochloromethane	15.25	840	36499	50.00	UG/L	94
2)	C010 Chloromethane	6.04	51	14795	16.39	UG/L	94
3)	C015 Bromomethane	8.50	261	17054	20.01	UG/L	95
4)	C020 Vinyl Chloride	6.69	106	11857	18.30	UG/L	91
5)	C025 Chloroethane	8.82	289	11175	18.05	UG/L	92
6)	C030 Methylene Chloride	12.23	581	29592	24.54	UG/L	96
7)	C035 Acetone	10.84	462	24163	23.37	UG/L	93
8)	C040 Carbon Disulfide	12.45	600	55396	19.54	UG/L	100
9)	C045 1,1-Dichloroethene	11.26	498	18832	22.74	UG/L	94
10)	C050 1,1-Dichloroethane	13.62	701	41232	20.33	UG/L	96
1)	C054 Trans 1-2 Dichloroethene	12.88	637	21468	21.83	UG/L	79
12)	C055 Cis 1-2 Dichloroethene	14.67	791	23163	20.01	UG/L	87
13)	C060 Chloroform	14.95	815	42581	20.02	UG/L	89
14)	CS15 1,2-Dichloroethane-d4	16.13	916	30460	18.64	UG/L	90
15)	C065 1,2-Dichloroethane	16.28	929	36566	19.08	UG/L	89
16)	C110 2 Butanone	14.21	751	5104	19.19	UG/L	71
17)	*CI10 1,4 Difluorobenzene	16.69	964	177393	50.00	UG/L	98
18)	C115 1,1,1-Trichloroethane	15.69	878	28656	23.58	UG/L	98
19)	C120 Carbon Tetrachloride	16.19	921	27207	24.43	UG/L	96
20)	C125 Vinyl Acetate	13.45	686	15864	21.13	UG/L	74
21)	C130 Bromodichloromethane	18.15	1089	32402	19.86	UG/L	95
22)	C140 1,2-Dichloropropane	17.71	1051	28291	19.50	UG/L	74
23)	C145 cis-1,3-Dichloropropene	19.00	1162	39986	19.61	UG/L	97
24)	C150 Trichloroethene	17.45	1029	26602	22.80	UG/L	98
25)	C155 Dibromochloromethane	21.56	1381	38230	26.08	UG/L	99
26)	C160 1,1,2-Trichloroethane	20.29	1272	26955	23.36	UG/L	97
27)	C165 Benzene	16.44	942	89849	21.46	UG/L	100
28)	C170 trans-1,3-Dichloropropene	19.86	1236	31255	19.81	UG/L	93
29)	C180 Bromoform	25.30	1702	34742	29.54	UG/L	98
30)	*CI20 Chlorobenzene-d5	22.82	1489	176662	50.00	UG/L	95
31)	C205 4-Methyl-2-Pentanone	18.45	1115	73602	24.63	UG/L	83
32)	C210 2-Hexanone	20.05	1252	37254	13.97	UG/L	82
33)	C220 Tetrachloroethene	21.15	1346	26403	23.75	UG/L	98
34)	C225 1,1,2,2-Tetrachloroethane	25.38	1709	48965	24.07	UG/L	94
35)	C230 Toluene	19.76	1227	54654	19.19	UG/L	94
36)	CS05 Toluene-d8	19.60	1213	82943	17.68	UG/L	94
37)	C235 Chlorobenzene	22.91	1497	71098	20.42	UG/L	86
38)	C240 Ethylbenzene	22.89	1495	32766	19.33	UG/L	59
39)	C245 Styrene	24.19	1607	77078	19.82	UG/L	89
40)	C250 Xylene (M & P)	23.05	1509	46175	19.85	UG/L	77
41)	C251 Xylene (O)	24.16	1604	42701	19.97	UG/L	77
42)	CS10 Bromofluorobenzene	25.78	1743	44781	18.75	UG/L	95

TOTAL ION CHROMATOGRAM



Data File: >S6164::D3 Quant Output File: ^S6164::D1
Name: 29897,V/H,IC-050 Instrument ID: S
Misc: CLP,STAND,,VSTD50,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28 Last Qcal Time: 920407 09:22

Operator ID: DIANE
Quant Time : 920408 14:08
Injected at: 920408 13:36

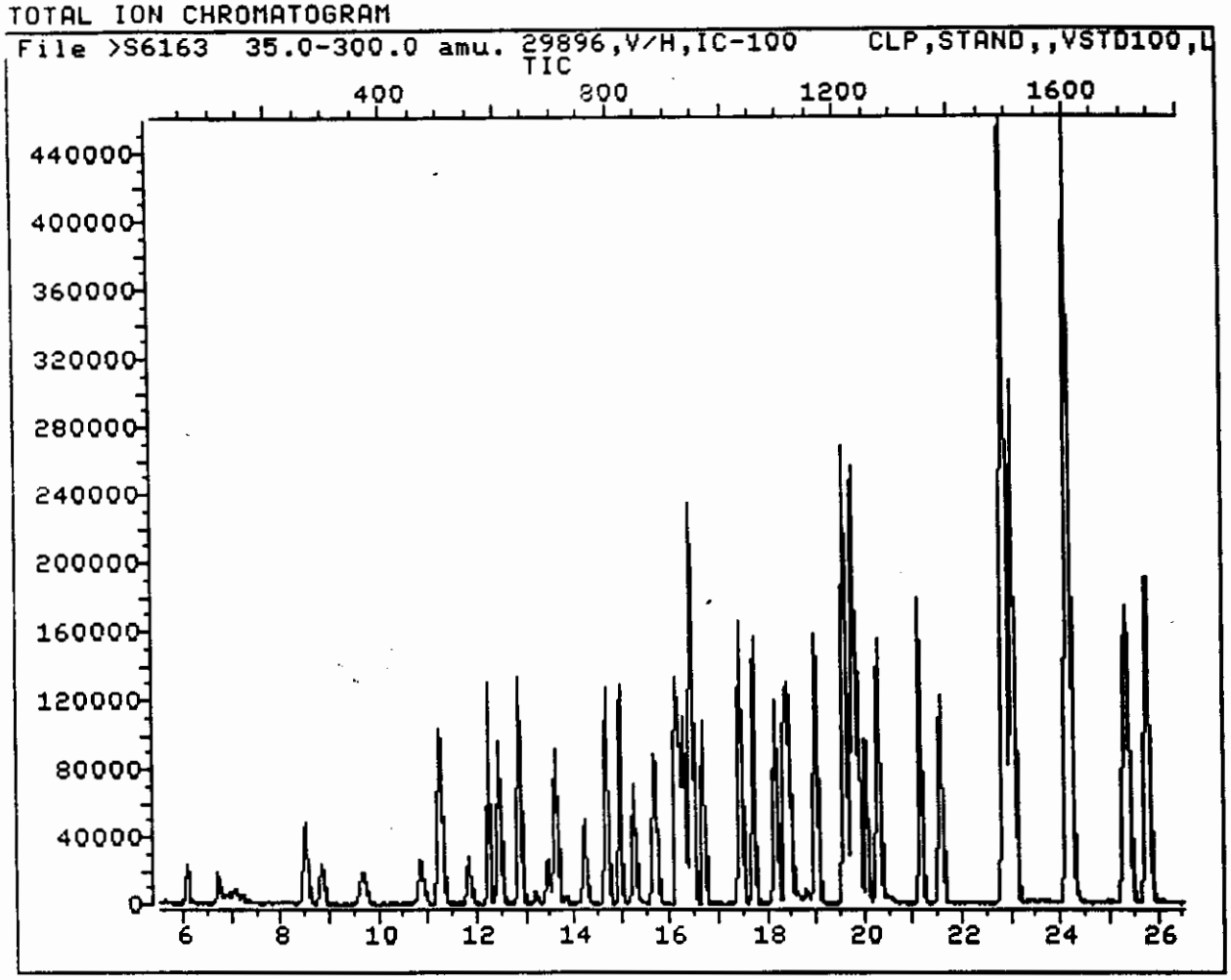
QUANT REPORT

Operator ID: DIANE
Quant Rev: 7
Quant Time: 920408 14:08
Output File: ^S6164::D1
Injected at: 920408 13:36
Data File: >S6164::D3
Dilution Factor: 1.00000
Name: 29897,V/H,IC-050
Instrument ID: S
Misc: CLP,STAND,,VSTD50,L,SOIL,5ML

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28
Last Qcal Time: 920407 09:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.25	839	37088	50.00	UG/L	91
2)	C010 Chloromethane	6.05	50	33723	36.76	UG/L	94
3)	C015 Bromomethane	8.51	261	40073	46.27	UG/L	99
4)	C020 Vinyl Chloride	6.71	107	27007	41.01	UG/L	88
5)	C025 Chloroethane	8.82	288	27468	43.66	UG/L	91
6)	C030 Methylene Chloride	12.23	580	62812	51.26	UG/L	95
7)	C035 Acetone	10.83	460	54840	52.21	UG/L	97
8)	C040 Carbon Disulfide	12.46	600	134648	46.73	UG/L	100
9)	C045 1,1-Dichloroethene	11.26	497	45089	53.59	UG/L	92
10)	C050 1,1-Dichloroethane	13.62	699	98922	47.99	UG/L	92
1)	C054 Trans 1-2 Dichloroethene	12.88	636	50454	50.49	UG/L	78
12)	C055 Cis 1-2 Dichloroethene	14.68	790	56508	48.05	UG/L	82
13)	C060 Chloroform	14.95	813	105934	49.00	UG/L	93
14)	CS15 1,2-Dichloroethane-d4	16.13	914	74076	44.61	UG/L	93
15)	C065 1,2-Dichloroethane	16.29	928	89965	46.19	UG/L	96
16)	C110 2 Butanone	14.21	750	13516	50.02	UG/L	71
17)	*CI10 1,4 Difluorobenzene	16.70	963	182076	50.00	UG/L	97
18)	C115 1,1,1-Trichloroethane	15.68	876	68957	55.29	UG/L	97
19)	C120 Carbon Tetrachloride	16.20	920	66258	57.96	UG/L	99
20)	C125 Vinyl Acetate	13.45	685	47571	61.73	UG/L	73
21)	C130 Bromodichloromethane	18.14	1087	82955	49.54	UG/L	92
22)	C140 1,2-Dichloropropane	17.71	1050	70732	47.51	UG/L	72
23)	C145 cis-1,3-Dichloropropene	19.00	1160	98277	46.95	UG/L	95
24)	C150 Trichloroethene	17.44	1027	65094	54.34	UG/L	95
25)	C155 Dibromochloromethane	21.54	1378	87907	58.43	UG/L	98
26)	C160 1,1,2-Trichloroethane	20.28	1270	64544	54.49	UG/L	94
27)	C165 Benzene	16.43	940	219402	51.05	UG/L	100
28)	C170 trans-1,3-Dichloropropene	19.87	1235	79753	49.24	UG/L	94
29)	C180 Bromoform	25.30	1700	85101	70.49	UG/L	95
30)	*CI20 Chlorobenzene-d5	22.80	1486	171980	50.00	UG/L	93
31)	C205 4-Methyl-2-Pentanone	18.45	1113	179915	61.84	UG/L	86
32)	C210 2-Hexanone	20.04	1249	94633	36.44	UG/L	83
33)	C220 Tetrachloroethene	21.13	1343	62030	57.33	UG/L	99
34)	C225 1,1,2,2-Tetrachloroethane	25.37	1706	114813	57.97	UG/L	95
35)	C230 Toluene	19.76	1225	133635	48.19	UG/L	94
36)	CS05 Toluene-d8	19.59	1211	214807	47.03	UG/L	99
37)	C235 Chlorobenzene	22.90	1494	174672	51.53	UG/L	81
38)	C240 Ethylbenzene	22.89	1493	78887	47.80	UG/L	58
39)	C245 Styrene	24.18	1604	190576	50.33	UG/L	85
40)	C250 Xylene (M & P)	23.04	1506	110563	48.82	UG/L	77
41)	C251 Xylene (O)	24.15	1601	99343	47.73	UG/L	76
42)	CS10 Bromofluorobenzene	25.78	1741	115992	49.88	UG/L	91

TOTAL ION CHROMATOGRAM



Data File: >S6163::D3 Quant Output File: ^S6163::D1
Name: 29896,V/H,IC-100 Instrument ID: S
Misc: CLP,STAND,,VSTD100,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28 Last Qcal Time: 920407 09:22

Operator ID: DIANE
Quant Time : 920408 13:30
Injected at: 920408 12:58

QUANT REPORT

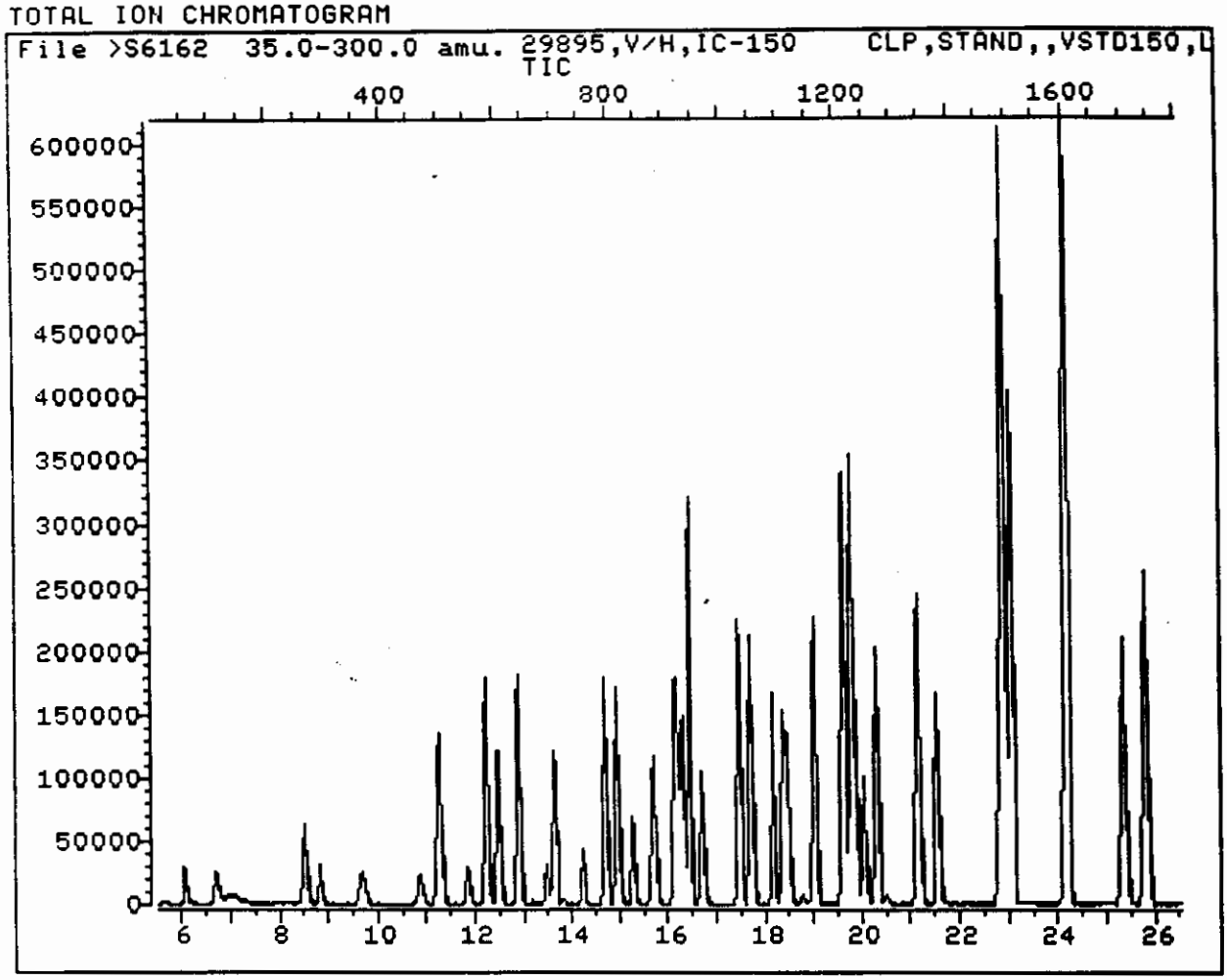
Operator ID: DIANE
Output File: ^S6163::D1
Data File: >S6163::D3
Name: 29896,V/H,IC-100
Misc: CLP,STAND,,VSTD100,L,SOIL,5ML

Quant Rev: 7
Quant Time: 920408 13:30
Injected at: 920408 12:58
Dilution Factor: 1.00000
Instrument ID: S

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28
Last Qcal Time: 920407 09:22

	Compound	R.T.	Scan#	Area	Conc	Units	Q
1)	*CI01 Bromochloromethane	15.25	834	41194	50.00	UG/L	96
2)	C010 Chloromethane	6.06	47	74832	73.45	UG/L	98
3)	C015 Bromomethane	8.51	257	92810	96.48	UG/L	99
4)	C020 Vinyl Chloride	6.70	102	60747	83.05	UG/L	94
5)	C025 Chloroethane	8.83	284	62516	89.46	UG/L	94
6)	C030 Methylene Chloride	12.23	576	127549	93.72	UG/L	93
7)	C035 Acetone	10.84	456	109284	93.66	UG/L	99
8)	C040 Carbon Disulfide	12.46	595	326287	101.96	UG/L	100
9)	C045 1,1-Dichloroethene	11.26	492	102679	109.87	UG/L	92
10)	C050 1,1-Dichloroethane	13.62	695	223405	97.59	UG/L	95
1)	C054 Trans 1-2 Dichloroethene	12.88	631	110481	99.53	UG/L	75
12)	C055 Cis 1-2 Dichloroethene	14.67	785	125375	95.98	UG/L	83
13)	C060 Chloroform	14.95	809	234411	97.63	UG/L	95
14)	CS15 1,2-Dichloroethane-d4	16.13	910	167740	90.94	UG/L	92
15)	C065 1,2-Dichloroethane	16.28	923	199351	92.14	UG/L	95
16)	C110 2 Butanone	14.21	745	27479	91.55	UG/L	69
17)	*CI10 1,4 Difluorobenzene	16.69	958	203237	50.00	UG/L	97
18)	C115 1,1,1-Trichloroethane	15.69	872	159008	114.22	UG/L	96
19)	C120 Carbon Tetrachloride	16.19	915	157580	123.50	UG/L	99
20)	C125 Vinyl Acetate	13.46	681	100768	117.14	UG/L	74
21)	C130 Bromodichloromethane	18.15	1083	186428	99.75	UG/L	92
22)	C140 1,2-Dichloropropane	17.71	1045	155279	93.44	UG/L	73
23)	C145 cis-1,3-Dichloropropene	19.01	1156	218161	93.38	UG/L	95
24)	C150 Trichloroethene	17.44	1022	143436	107.28	UG/L	96
25)	C155 Dibromochloromethane	21.54	1373	191091	113.79	UG/L	96
26)	C160 1,1,2-Trichloroethane	20.28	1265	137688	104.14	UG/L	98
27)	C165 Benzene	16.44	936	488813	101.90	UG/L	100
28)	C170 trans-1,3-Dichloropropene	19.87	1230	176291	97.52	UG/L	94
29)	C180 Bromoform	25.30	1695	191044	141.76	UG/L	97
30)	*CI20 Chlorobenzene-d5	22.81	1482	189502	50.00	UG/L	94
31)	C205 4-Methyl-2-Pentanone	18.44	1108	401159	125.14	UG/L	85
32)	C210 2-Hexanone	20.03	1244	208539	72.88	UG/L	84
33)	C220 Tetrachloroethene	21.14	1339	135511	113.66	UG/L	94
34)	C225 1,1,2,2-Tetrachloroethane	25.37	1701	244101	111.86	UG/L	96
35)	C230 Toluene	19.76	1221	286024	93.62	UG/L	93
36)	CS05 Toluene-d8	19.60	1207	470781	93.54	UG/L	97
37)	C235 Chlorobenzene	22.91	1490	355531	95.19	UG/L	81
38)	C240 Ethylbenzene	22.88	1488	170071	93.52	UG/L	57
39)	C245 Styrene	24.19	1600	413995	99.23	UG/L	90
40)	C250 Xylene (M & P)	23.05	1502	239705	96.05	UG/L	76
41)	C251 Xylene (O)	24.14	1596	210594	91.83	UG/L	74
42)	CS10 Bromofluorobenzene	25.78	1736	246549	96.23	UG/L	94

TOTAL ION CHROMATOGRAM



Data File: >S6162::D3 Quant Output File: ^S6162::D1
Name: 29895,V/H,IC-150 Instrument ID: S
Misc: CLP,STAND,,VSTD150,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28 Last Qcal Time: 920407 09:22

Operator ID: DIANE
Quant Time : 920408 12:52
Injected at: 920408 12:20

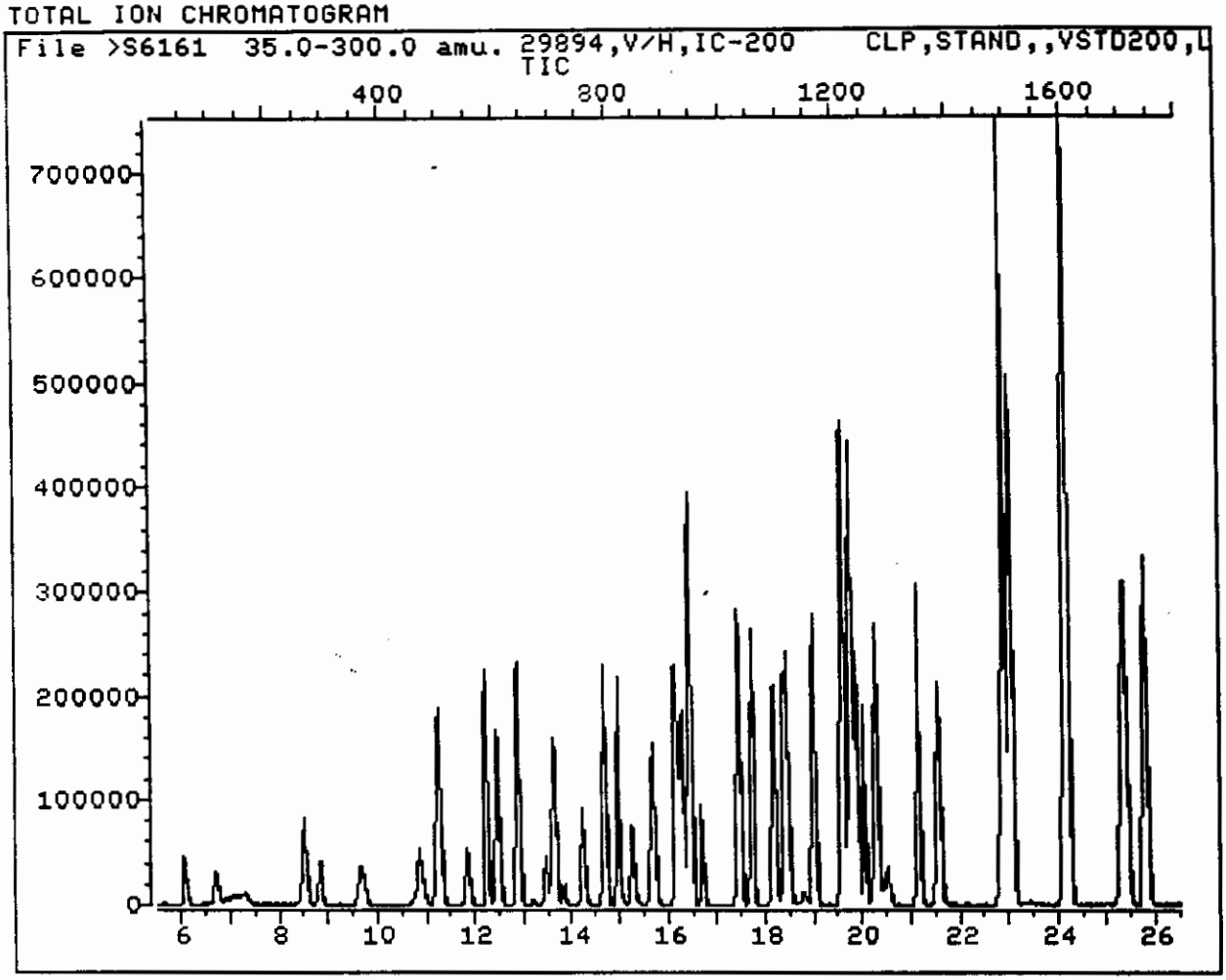
QUANT REPORT

erator ID: DIANE
Quant Rev: 7
Quant Time: 920408 12:52
Output File: ^S6162::D1
Injected at: 920408 12:20
Data File: >S6162::D3
Dilution Factor: 1.00000
Name: 29895,V/H,IC-150
Instrument ID: S
Misc: CLP,STAND,,VSTD150,L,SOIL,5ML

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28
Last Qcal Time: 920407 09:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.25	836	40005	50.00	UG/L	92
2)	C010 Chloromethane	6.06	48	98929	99.99	UG/L	96
3)	C015 Bromomethane	8.51	258	120155	128.62	UG/L	99
4)	C020 Vinyl Chloride	6.70	103	77894	109.66	UG/L	95
5)	C025 Chloroethane	8.82	285	82304	121.28	UG/L	95
6)	C030 Methylene Chloride	12.23	577	174142	131.76	UG/L	94
7)	C035 Acetone	10.84	458	98800	87.20	UG/L	97
8)	C040 Carbon Disulfide	12.45	596	412746	132.81	UG/L	100
9)	C045 1,1-Dichloroethene	11.26	494	135068	148.83	UG/L	94
10)	C050 1,1-Dichloroethane	13.62	696	300925	135.35	UG/L	91
11)	C054 Trans 1-2 Dichloroethene	12.88	633	146713	136.10	UG/L	73
2)	C055 Cis 1-2 Dichloroethene	14.68	787	170228	134.18	UG/L	80
13)	C060 Chloroform	14.95	810	322080	138.13	UG/L	92
14)	CS15 1,2-Dichloroethane-d4	16.13	911	226583	126.50	UG/L	92
15)	C065 1,2-Dichloroethane	16.29	925	265451	126.34	UG/L	95
16)	C110 2 Butanone	14.21	747	24477	83.98	UG/L	69
17)	*CI10 1,4 Difluorobenzene	16.69	959	199640	50.00	UG/L	95
18)	C115 1,1,1-Trichloroethane	15.68	873	215096	157.29	UG/L	97
19)	C120 Carbon Tetrachloride	16.20	917	205111	163.65	UG/L	98
20)	C125 Vinyl Acetate	13.45	682	123945	146.68	UG/L	73
21)	C130 Bromodichloromethane	18.15	1084	263799	143.69	UG/L	95
22)	C140 1,2-Dichloropropane	17.71	1047	215454	131.98	UG/L	73
23)	C145 cis-1,3-Dichloropropene	19.00	1157	312401	136.13	UG/L	93
24)	C150 Trichloroethene	17.45	1024	192667	146.70	UG/L	93
25)	C155 Dibromochloromethane	21.55	1375	261116	158.29	UG/L	97
26)	C160 1,1,2-Trichloroethane	20.28	1267	185517	142.84	UG/L	97
27)	C165 Benzene	16.43	937	675207	143.29	UG/L	100
28)	C170 trans-1,3-Dichloropropene	19.88	1232	248326	139.84	UG/L	94
29)	C180 Bromoform	25.32	1698	242074	182.87	UG/L	97
30)	*CI20 Chlorobenzene-d5	22.81	1483	184333	50.00	UG/L	94
31)	C205 4-Methyl-2-Pentanone	18.45	1110	429157	137.63	UG/L	86
32)	C210 2-Hexanone	20.04	1246	210627	75.68	UG/L	84
33)	C220 Tetrachloroethene	21.15	1341	185197	159.69	UG/L	98
34)	C225 1,1,2,2-Tetrachloroethane	25.37	1703	292544	137.81	UG/L	96
35)	C230 Toluene	19.76	1222	402577	135.46	UG/L	93
36)	CS05 Toluene-d8	19.59	1208	633999	129.50	UG/L	99
37)	C235 Chlorobenzene	22.91	1492	474422	130.59	UG/L	79
38)	C240 Ethylbenzene	22.88	1489	228779	129.33	UG/L	59
39)	C245 Styrene	24.18	1601	553897	136.49	UG/L	88
40)	C250 Xylene (M & P)	23.04	1503	329860	135.89	UG/L	77
41)	C251 Xylene (O)	24.15	1598	291497	130.67	UG/L	73
42)	CS10 Bromofluorobenzene	25.78	1738	336503	135.02	UG/L	91

TOTAL ION CHROMATOGRAM



Data File: >S6161::D3 Quant Output File: ^S6161::D1
Name: 29894,V/H,IC-200 Instrument ID: S
Misc: CLP,STAND,,VSTD200,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28 Last Qcal Time: 920407 09:22

Operator ID: DIANE
Quant Time : 920408 12:14
Injected at: 920408 11:42

QUANT REPORT

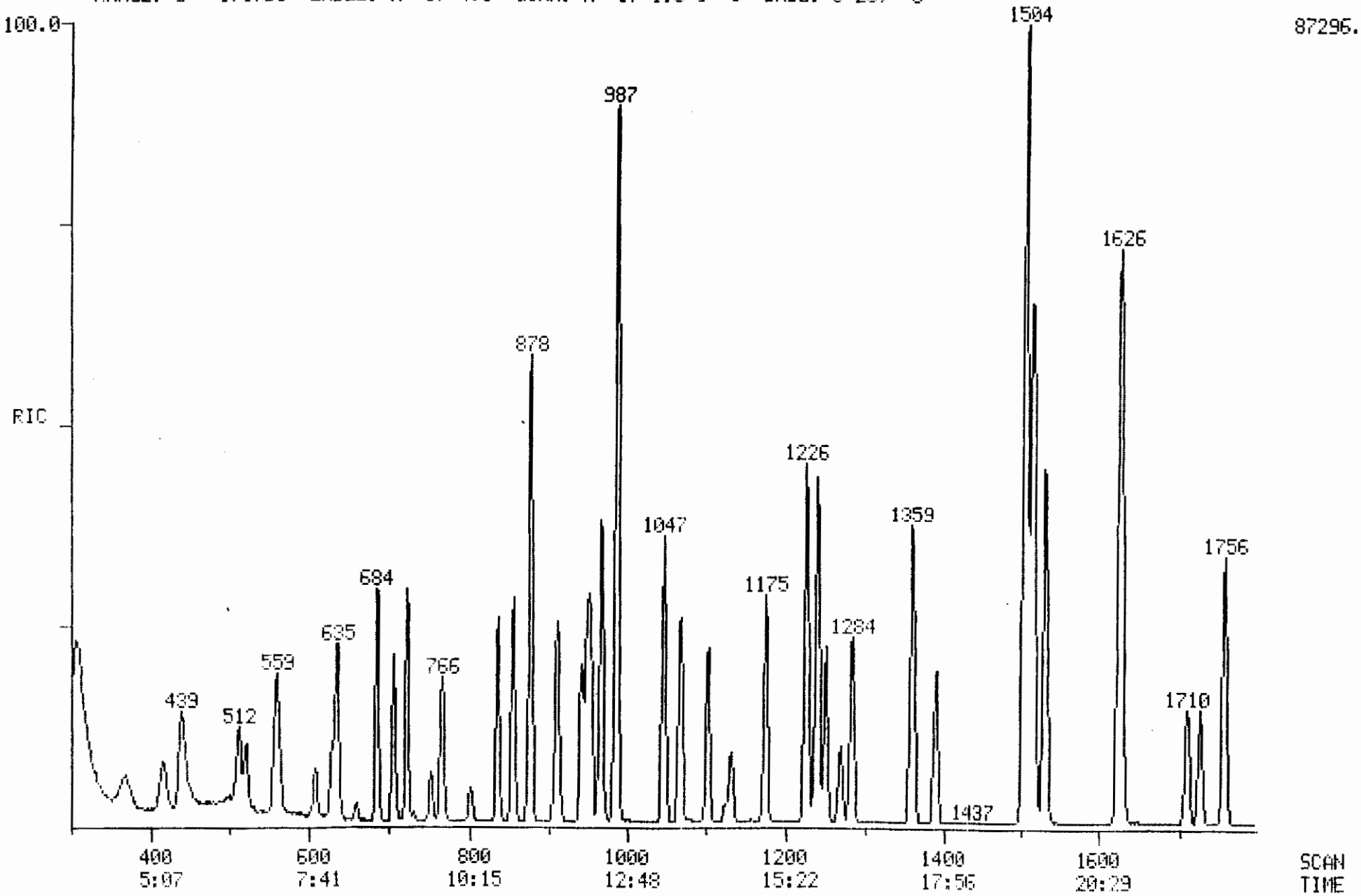
Operator ID: DIANE
Output File: ^S6161::D1
Data File: >S6161::D3
Name: 29894,V/H,IC-200
Misc: CLP,STAND,,VSTD200,L,SOIL,5ML

Quant Rev: 7
Quant Time: 920408 12:14
Injected at: 920408 11:42
Dilution Factor: 1.00000
Instrument ID: S

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920316 10:28
Last Qcal Time: 920407 09:22

		Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01	Bromochloromethane	15.25	836	37344	50.00	UG/L	90
2)	C010	Chloromethane	6.05	48	148554	160.84	UG/L	95
3)	C015	Bromomethane	8.51	258	158419	181.67	UG/L	98
4)	C020	Vinyl Chloride	6.70	103	90680	136.76	UG/L	91
5)	C025	Chloroethane	8.81	284	112107	176.97	UG/L	91
6)	C030	Methylene Chloride	12.23	577	219373	177.81	UG/L	93
7)	C035	Acetone	10.85	459	228762	216.28	UG/L	96
8)	C040	Carbon Disulfide	12.45	596	564511	194.58	UG/L	100
9)	C045	1,1-Dichloroethene	11.25	493	180045	212.52	UG/L	94
10)	C050	1,1-Dichloroethane	13.62	696	392272	189.01	UG/L	93
1)	C054	Trans 1-2 Dichloroethene	12.87	632	198134	196.90	UG/L	77
12)	C055	Cis 1-2 Dichloroethene	14.68	787	223797	188.98	UG/L	82
13)	C060	Chloroform	14.95	810	410208	188.46	UG/L	89
14)	CS15	1,2-Dichloroethane-d4	16.13	911	288013	172.25	UG/L	90
15)	C065	1,2-Dichloroethane	16.29	925	338864	172.78	UG/L	96
16)	C110	2 Butanone	14.21	747	50134	184.26	UG/L	69
17)	*CI10	1,4 Difluorobenzene	16.70	960	178690	50.00	UG/L	97
18)	C115	1,1,1-Trichloroethane	15.68	873	282364	230.68	UG/L	98
19)	C120	Carbon Tetrachloride	16.20	917	271098	241.66	UG/L	99
20)	C125	Vinyl Acetate	13.45	682	180509	238.66	UG/L	74
21)	C130	Bromodichloromethane	18.16	1085	326384	198.63	UG/L	92
22)	C140	1,2-Dichloropropane	17.71	1047	266742	182.56	UG/L	72
23)	C145	cis-1,3-Dichloropropene	19.00	1157	385392	187.62	UG/L	93
24)	C150	Trichloroethene	17.44	1024	243840	207.43	UG/L	94
25)	C155	Dibromochloromethane	21.54	1375	335820	227.44	UG/L	97
26)	C160	1,1,2-Trichloroethane	20.27	1266	246079	211.69	UG/L	98
27)	C165	Benzene	16.43	937	834119	197.76	UG/L	100
28)	C170	trans-1,3-Dichloropropene	19.86	1231	310305	195.23	UG/L	94
29)	C180	Bromoform	25.30	1697	347733	293.48	UG/L	99
30)	*CI20	Chlorobenzene-d5	22.80	1483	166910	50.00	UG/L	94
31)	C205	4-Methyl-2-Pentanone	18.45	1110	736304	260.78	UG/L	84
32)	C210	2-Hexanone	20.04	1246	402841	159.85	UG/L	84
33)	C220	Tetrachloroethene	21.15	1341	237597	226.25	UG/L	97
34)	C225	1,1,2,2-Tetrachloroethane	25.37	1703	453400	235.89	UG/L	96
35)	C230	Toluene	19.76	1222	503436	187.08	UG/L	94
36)	CS05	Toluene-d8	19.60	1209	797029	179.79	UG/L	98
37)	C235	Chlorobenzene	22.91	1492	589785	179.28	UG/L	79
38)	C240	Ethylbenzene	22.87	1489	284607	177.68	UG/L	58
39)	C245	Styrene	24.18	1601	685888	186.66	UG/L	87
40)	C250	Xylene (M & P)	23.04	1503	418818	190.54	UG/L	75
41)	C251	Xylene (O)	24.15	1598	357925	177.20	UG/L	72
42)	CS10	Bromofluorobenzene	25.79	1739	437312	193.78	UG/L	99

RIC DATA: Y3768 #1 SCANS 300 TO 1796
05/01/92 12:11:00 CALI: Y3768 #3
SAMPLE: CLP,STAND,,VSTD20,L,S,30034,V/H,IC-020,5ML,,
CONDS.: CAP/.32,Y3768,Y3766,,
RANGE: G 1,1796 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100008

Quantitation Report File: Y3768

Data: Y3768.TI
05/01/92 12:11:00
Sample: CLP,STAND,,VSTD20,L,S,30034,V/H,IC-020,5ML,,
Conds.: CAP/.32,Y3768,Y3766,,
Formula: Instrument: Y Weight: 5.000
Submitted by: VERSAR Analyst: JFH Acct. No.: STAND

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

No	Name
1	CI01 BROMOCHLOROMETHANE****INTERNAL STANDARD#1 ****
2	CI10 1,4-DIFLUOROBENZENE****INTERNAL STANDARD#2 ****
3	CI20 CHLOROBENZENE-D5****INTERNAL STANDARD#3 ****
4	CS15 1,2-DICHLOROETHANE-D4***SURROGATE#1***
5	CS05 TOLUENE-D8***SURROGATE#2***
6	CS10 4-BROMOFLUOROBENZENE***SURROGATE#3***
7	C010 CHLOROMETHANE
8	C015 BROMOMETHANE
9	C020 VINYL CHLORIDE
10	C025 CHLOROETHANE
11	C030 METHYLENE CHLORIDE
12	C035 ACETONE
13	C040 CARBON DISULFIDE
14	C045 1,1-DICHLOROETHENE
15	C050 1,1-DICHLOROETHANE
16	C060 CHLOROFORM
17	C115 1,1,1-TRICHLOROETHANE
18	C110 2-BUTANONE
19	C120 CARBON TETRACHLORIDE
20	C125 VINYL ACETATE
21	C130 BROMODICHLOROMETHANE
22	C140 1,2-DICHLOROPROPANE
23	C145 CIS-1,3,DICHLOROPROPENE
24	C150 TRICHLOROETHENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C165 BENZENE
28	C170 TRANS-1,3-DICHLOROPROPENE
29	C175 2-CHLOROETHYLVINYLETHER
30	C180 BROMOFORM
31	C210 2-HEXANONE
32	C205 4-METHYL-2-PENTANONE
33	C220 TETRACHLOROETHENE
34	C225 1,1,2,2-TETRACHLOROETHANE
35	C230 TOLUENE
36	C235 CHLOROBENZENE
37	C240 ETHYLBENZENE
38	C245 STYRENE
39	C250 O/P XYLENE
40	C065 1,2-DICHLOROETHANE
41	C251 M-XYLENE
42	C054 TRANS-1,2,DICHLOROETHENE
43	C055 CIS-1,2-DICHLOROETHENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	878	11:15	1	1.000	A BB	37252.	50.000 UG/L*	5.26
2	114	986	12:37	2	1.000	A BB	193683.	50.000 UG/L*	5.26
3	117	1504	19:15	3	1.000	A BB	184899.	50.000 UG/L*	5.26
4	65	943	12:04	1	1.074	A BV	31076.	20.000 UG/L%	2.11
5	98	1226	15:42	3	0.815	A BB	86370.	20.000 UG/L%	2.11
6	95	1756	22:29	3	1.168	A BB	36593.	20.000 UG/L%	2.11
7	50	416	5:20	1	0.474	A BB	32098.	20.000 UG/L	2.11
8	94	512	6:33	1	0.583	A BB	21986.	20.000 UG/L	2.11
9	62	438	5:36	1	0.499	A BB	38205.	20.000 UG/L	2.11
10	64	521	6:40	1	0.593	A BB	17843.	20.000 UG/L	2.11
11	84	684	8:45	1	0.779	A BB	25438.	20.000 UG/L	2.11
12	43	608	7:47	1	0.692	A BB	17913.	20.000 UG/L	2.11
13	76	705	9:02	1	0.803	A BB	65352.	20.000 UG/L	2.11
14	96	635	8:08	1	0.723	A BB	19258.	20.000 UG/L	2.11
15	63	767	9:49	1	0.874	A BB	40750.	20.000 UG/L	2.11
16	83	856	10:58	1	0.975	A BB	49035.	20.000 UG/L	2.11
17	97	912	11:41	2	0.925	A BB	49631.	20.000 UG/L	2.11
18	43	803	10:17	1	0.915	A BB	13111.	20.000 UG/L	2.11
19	117	950	12:10	2	0.963	A BB	46071.	20.000 UG/L	2.11
20	43	753	9:38	2	0.764	A BB	22079.	20.000 UG/L	2.11
21	83	1103	14:07	2	1.119	A BB	36773.	20.000 UG/L	2.11
22	63	1068	13:40	2	1.083	A BB	22127.	20.000 UG/L	2.11
23	75	1175	15:03	2	1.192	A BB	39077.	20.000 UG/L	2.11
24	130	1047	13:24	2	1.062	A BB	32240.	20.000 UG/L	2.11
25	129	1390	17:48	2	1.410	A BB	32062.	20.000 UG/L	2.11
26	97	1283	16:26	2	1.301	A BB	20738.	20.000 UG/L	2.11
27	78	967	12:23	2	0.981	A BB	84391.	20.000 UG/L	2.11
28	75	1250	16:00	2	1.268	A BB	28701.	20.000 UG/L	2.11
29	63	1124	14:24	2	1.140	A BB	2319.	20.000 UG/L	2.11
30	173	1710	21:54	2	1.734	A BB	23396.	20.000 UG/L	2.11
31	43	1270	16:16	3	0.844	A BB	20650.	20.000 UG/L	2.11
32	43	1132	14:30	3	0.753	A BB	21815.	20.000 UG/L	2.11
33	164	1359	17:24	3	0.904	A BB	29514.	20.000 UG/L	2.11
34	83	1726	22:06	3	1.148	A BB	23395.	20.000 UG/L	2.11
35	91	1239	15:52	3	0.824	A BB	92063.	20.000 UG/L	2.11
36	112	1512	19:22	3	1.005	A BB	68887.	20.000 UG/L	2.11
37	106	1515	19:24	3	1.007	A BB	33326.	20.000 UG/L	2.11
38	104	1627	20:50	3	1.082	A BB	70706.	20.000 UG/L	2.11
39	106	1625	20:48	3	1.080	A BB	45653.	20.000 UG/L	2.11
40	62	955	12:14	1	1.088	A BB	34868.	20.000 UG/L	2.11
41	106	1530	19:35	3	1.017	A BB	42394.	20.000 UG/L	2.11
42	96	722	9:15	1	0.822	A BB	23530.	20.000 UG/L	2.11
43	96	837	10:43	1	0.953	A BB	24815.	20.000 UG/L	2.11

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	11:15	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	12:37	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	19:15	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	12:04	1.00	1.074	1.00	20.00	20.00	2.086	2.086	1.00
5	15:42	1.00	0.815	1.00	20.00	20.00	1.168	1.168	1.00
6	22:29	1.00	1.168	1.00	20.00	20.00	0.495	0.495	1.00
7	5:20	1.00	0.474	1.00	20.00	20.00	2.154	2.154	1.00
8	6:33	1.00	0.583	1.00	20.00	20.00	1.475	1.475	1.00
9	5:36	1.00	0.499	1.00	20.00	20.00	2.564	2.564	1.00
10	6:40	1.00	0.593	1.00	20.00	20.00	1.197	1.197	1.00
11	8:45	1.00	0.779	1.00	20.00	20.00	1.707	1.707	1.00

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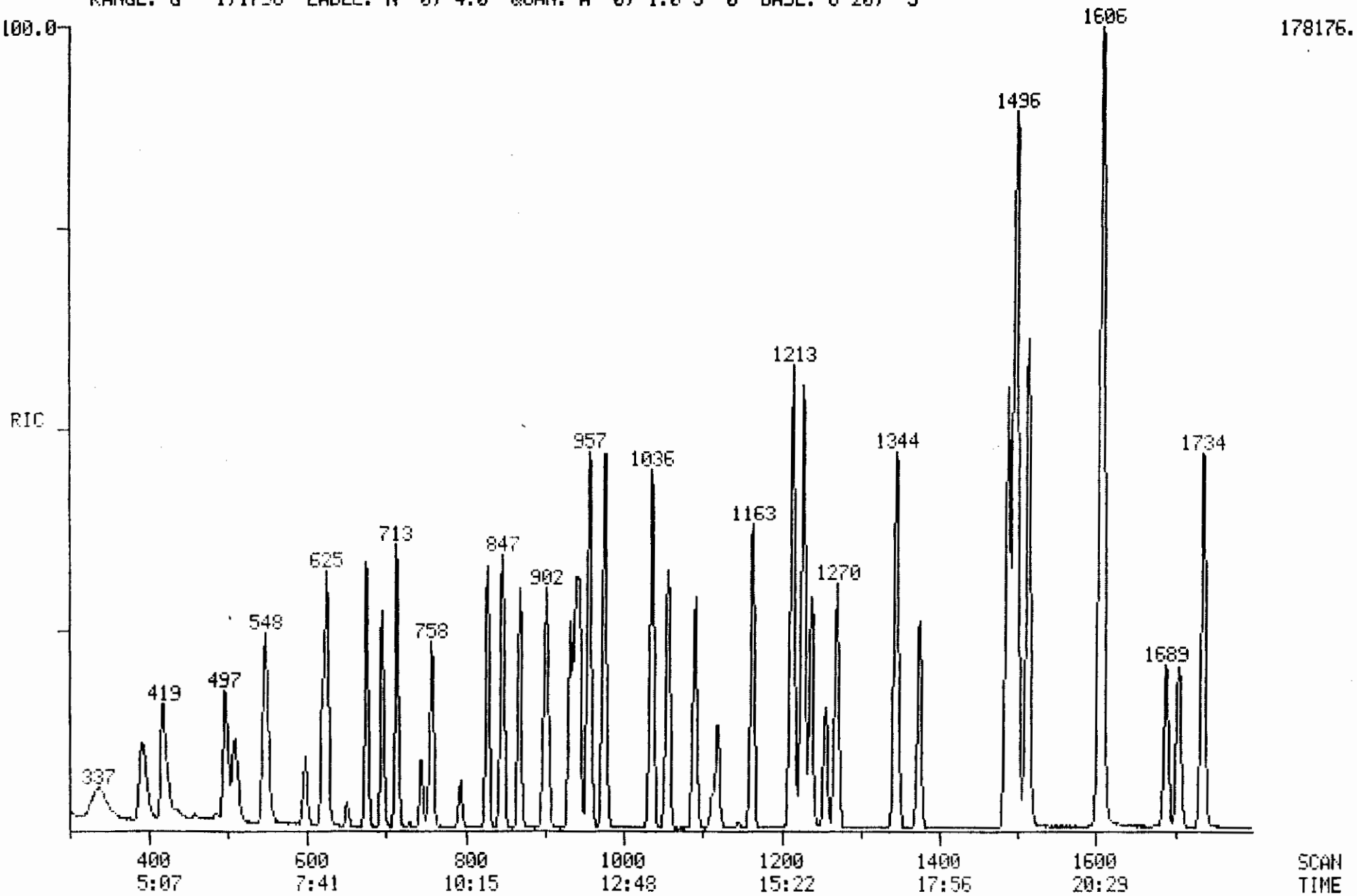
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	7:47	1.00	0.692	1.00	20.00	20.00	1.202	1.202	1.00
13	9:02	1.00	0.803	1.00	20.00	20.00	4.386	4.386	1.00
14	8:08	1.00	0.723	1.00	20.00	20.00	1.292	1.292	1.00
15	9:49	1.00	0.874	1.00	20.00	20.00	2.735	2.735	1.00
16	10:58	1.00	0.975	1.00	20.00	20.00	3.291	3.291	1.00
17	11:41	1.00	0.925	1.00	20.00	20.00	0.641	0.641	1.00
18	10:17	1.00	0.915	1.00	20.00	20.00	0.880	0.880	1.00
19	12:10	1.00	0.963	1.00	20.00	20.00	0.595	0.595	1.00
20	9:38	1.00	0.764	1.00	20.00	20.00	0.285	0.285	1.00
21	14:07	1.00	1.119	1.00	20.00	20.00	0.475	0.475	1.00
22	13:40	1.00	1.083	1.00	20.00	20.00	0.286	0.286	1.00
23	15:03	1.00	1.192	1.00	20.00	20.00	0.504	0.504	1.00
24	13:24	1.00	1.062	1.00	20.00	20.00	0.416	0.416	1.00
25	17:48	1.00	1.410	1.00	20.00	20.00	0.414	0.414	1.00
26	16:26	1.00	1.301	1.00	20.00	20.00	0.268	0.268	1.00
27	12:23	1.00	0.981	1.00	20.00	20.00	1.089	1.089	1.00
28	16:00	1.00	1.268	1.00	20.00	20.00	0.370	0.370	1.00
29	14:24	1.00	1.140	1.00	20.00	20.00	0.030	0.030	1.00
30	21:54	1.00	1.734	1.00	20.00	20.00	0.302	0.302	1.00
31	16:16	1.00	0.844	1.00	20.00	20.00	0.279	0.279	1.00
32	14:30	1.00	0.753	1.00	20.00	20.00	0.295	0.295	1.00
33	17:24	1.00	0.904	1.00	20.00	20.00	0.399	0.399	1.00
34	22:06	1.00	1.148	1.00	20.00	20.00	0.316	0.316	1.00
35	15:52	1.00	0.824	1.00	20.00	20.00	1.245	1.245	1.00
36	19:22	1.00	1.005	1.00	20.00	20.00	0.931	0.931	1.00
37	19:24	1.00	1.007	1.00	20.00	20.00	0.451	0.451	1.00
38	20:50	1.00	1.082	1.00	20.00	20.00	0.956	0.956	1.00
39	20:48	1.00	1.080	1.00	20.00	20.00	0.617	0.617	1.00
40	12:14	1.00	1.088	1.00	20.00	20.00	2.340	2.340	1.00
41	19:35	1.00	1.017	1.00	20.00	20.00	0.573	0.573	1.00
42	9:15	1.00	0.822	1.00	20.00	20.00	1.579	1.579	1.00
43	10:43	1.00	0.953	1.00	20.00	20.00	1.665	1.665	1.00

137768
100091

RIC DATA: Y3772 #1 SCANS 300 TO 1796
05/01/92 14:31:00 CALI: Y3772 #3
SAMPLE: CLP,STAND,,VSTD50,L,S,00038,V/H,IC-050,5ML,,
CONDS.: CAP/.32,Y3772,Y3766,,
RANGE: G 1,1796 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100092

Quantitation Report File: Y3772

Data: Y3772.TI
05/01/92 14:31:00
Sample: CLP,STAND,,VSTD50,L,S,30038,V/H,IC-050,5ML,,
Conds.: CAP/.32,Y3772,Y3766,,
Formula: Instrument: Y Weight: 5.000
Submitted by: VERSAR Analyst: JFH Acct. No.: STAND

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

No	Name
1	CI01 BROMOCHLOROMETHANE****INTERNAL STANDARD#1 ****
2	CI10 1,4-DIFLUOROBENZENE****INTERNAL STANDARD#2 ****
3	CI20 CHLOROBENZENE-D5****INTERNAL STANDARD#3 ****
4	CS15 1,2-DICHLOROETHANE-D4***SURROGATE#1***
5	CS05 TOLUENE-D8***SURROGATE#2***
6	CS10 4-BROMOFLUOROBENZENE***SURROGATE#3***
7	C010 CHLOROMETHANE
8	C015 BROMOMETHANE
9	C020 VINYL CHLORIDE
10	C025 CHLOROETHANE
11	C030 METHYLENE CHLORIDE
12	C035 ACETONE
13	C040 CARBON DISULFIDE
14	C045 1,1-DICHLOROETHENE
15	C050 1,1-DICHLOROETHANE
16	C060 CHLOROFORM
17	C115 1,1,1-TRICHLOROETHANE
18	C110 2-BUTANONE
19	C120 CARBON TETRACHLORIDE
20	C125 VINYL ACETATE
21	C130 BROMODICHLOROMETHANE
22	C140 1,2-DICHLOROPROPANE
23	C145 CIS-1,3,DICHLOROPROPENE
24	C150 TRICHLOROETHENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C165 BENZENE
28	C170 TRANS-1,3-DICHLOROPROPENE
29	C175 2-CHLOROETHYLVINYLETHER
30	C180 BROMOFORM
31	C210 2-HEXANONE
32	C205 4-METHYL-2-PENTANONE
33	C220 TETRACHLOROETHENE
34	C225 1,1,2,2-TETRACHLOROETHANE
35	C230 TOLUENE
36	C235 CHLOROBENZENE
37	C240 ETHYLBENZENE
38	C245 STYRENE
39	C250 O/P XYLENE
40	C065 1,2-DICHLOROETHANE
41	C251 M-XYLENE
42	C054 TRANS-1,2,DICHLOROETHENE
43	C055 CIS-1,2-DICHLOROETHENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	128	869	11:08	1	1.000	A BB	39191.	50.000	UG/L*	2.33
2	114	977	12:31	2	1.000	A BB	209396.	50.000	UG/L*	2.33
3	117	1486	19:02	3	1.000	A BB	202446.	50.000	UG/L*	2.33
4	65	933	11:57	1	1.074	A BV	80428.	50.000	UG/L%	2.33
5	98	1212	15:31	3	0.816	A BB	223916.	50.000	UG/L%	2.33
6	95	1734	22:12	3	1.167	A BB	102276.	50.000	UG/L%	2.33
7	50	392	5:01	1	0.451	A BB	96476.	50.000	UG/L	2.33
8	94	497	6:22	1	0.572	A BB	63793.	50.000	UG/L	2.33
9	62	418	5:21	1	0.481	A BB	104332.	50.000	UG/L	2.33
10	64	509	6:31	1	0.586	A BB	53013.	50.000	UG/L	2.33
11	84	675	8:39	1	0.777	A BB	58632.	50.000	UG/L	2.33
12	43	598	7:39	1	0.688	A BB	44600.	50.000	UG/L	2.33
13	76	695	8:54	1	0.800	A BB	165720.	50.000	UG/L	2.33
14	96	625	8:00	1	0.719	A BB	49512.	50.000	UG/L	2.33
15	63	758	9:42	1	0.872	A BB	103110.	50.000	UG/L	2.33
16	83	847	10:51	1	0.975	A BB	122197.	50.000	UG/L	2.33
17	97	902	11:33	2	0.923	A BB	119595.	50.000	UG/L	2.33
18	43	794	10:10	1	0.914	A BB	36797.	50.000	UG/L	2.33
19	117	939	12:01	2	0.961	A BB	106341.	50.000	UG/L	2.33
20	43	745	9:32	2	0.763	A BV	59620.	50.000	UG/L	2.33
21	83	1091	13:58	2	1.117	A BB	95761.	50.000	UG/L	2.33
22	63	1057	13:32	2	1.082	A BB	57805.	50.000	UG/L	2.33
23	75	1163	14:53	2	1.190	A BB	104585.	50.000	UG/L	2.33
24	130	1036	13:16	2	1.060	A BB	84385.	50.000	UG/L	2.33
25	129	1374	17:36	2	1.406	A BB	86978.	50.000	UG/L	2.33
26	97	1270	16:16	2	1.300	A BB	56647.	50.000	UG/L	2.33
27	78	957	12:15	2	0.980	A BB	212173.	50.000	UG/L	2.33
28	75	1237	15:50	2	1.266	A VB	77120.	50.000	UG/L	2.33
29	63	1112	14:14	2	1.138	A BB	8212.	50.000	UG/L	2.33
30	173	1689	21:38	2	1.729	A BB	69130.	50.000	UG/L	2.33
31	43	1255	16:04	3	0.845	A BB	66551.	50.000	UG/L	2.33
32	43	1120	14:20	3	0.754	A BB	65338.	50.000	UG/L	2.33
33	164	1344	17:13	3	0.904	A BB	77439.	50.000	UG/L	2.33
34	83	1705	21:50	3	1.147	A BB	68659.	50.000	UG/L	2.33
35	91	1226	15:42	3	0.825	A BB	236669.	50.000	UG/L	2.33
36	112	1494	19:08	3	1.005	A BB	180252.	50.000	UG/L	2.33
37	106	1497	19:10	3	1.007	A BB	86194.	50.000	UG/L	2.33
38	104	1608	20:35	3	1.082	A BB	201430.	50.000	UG/L	2.33
39	106	1605	20:33	3	1.080	A BB	121922.	50.000	UG/L	2.33
40	62	945	12:06	1	1.087	A BV	86039.	50.000	UG/L	2.33
41	106	1512	19:22	3	1.017	A BB	116673.	50.000	UG/L	2.33
42	96	713	9:08	1	0.820	A BB	58903.	50.000	UG/L	2.33
43	96	828	10:36	1	0.953	A BB	66104.	50.000	UG/L	2.33

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	11:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	12:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	19:02	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	11:57	1.00	1.074	1.00	50.00	50.00	2.052	2.052	1.00
5	15:31	1.00	0.816	1.00	50.00	50.00	1.106	1.106	1.00
6	22:12	1.00	1.167	1.00	50.00	50.00	0.505	0.505	1.00
7	5:01	1.00	0.451	1.00	50.00	50.00	2.462	2.462	1.00
8	6:22	1.00	0.572	1.00	50.00	50.00	1.628	1.628	1.00
9	5:21	1.00	0.481	1.00	50.00	50.00	2.662	2.662	1.00
10	6:31	1.00	0.586	1.00	50.00	50.00	1.353	1.353	1.00
11	8:39	1.00	0.777	1.00	50.00	50.00	1.496	1.496	1.00

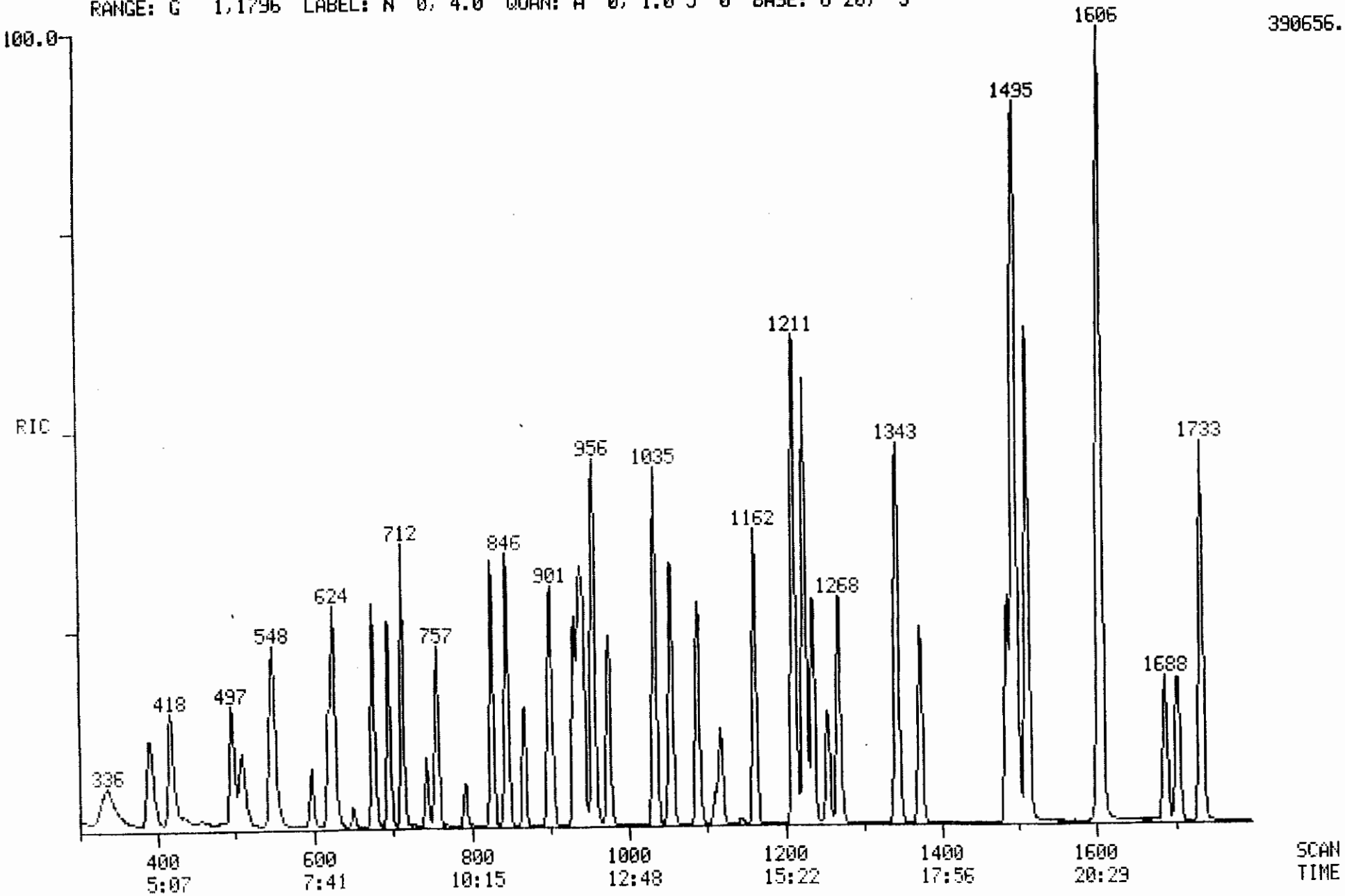
V3777 100094

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	7:39	1.00	0.688	1.00	50.00	50.00	1.138	1.138	1.00
13	8:54	1.00	0.800	1.00	50.00	50.00	4.229	4.229	1.00
14	8:00	1.00	0.719	1.00	50.00	50.00	1.263	1.263	1.00
15	9:42	1.00	0.872	1.00	50.00	50.00	2.631	2.631	1.00
16	10:51	1.00	0.975	1.00	50.00	50.00	3.118	3.118	1.00
17	11:33	1.00	0.923	1.00	50.00	50.00	0.571	0.571	1.00
18	10:10	1.00	0.914	1.00	50.00	50.00	0.939	0.939	1.00
19	12:01	1.00	0.961	1.00	50.00	50.00	0.508	0.508	1.00
20	9:32	1.00	0.763	1.00	50.00	50.00	0.285	0.285	1.00
21	13:58	1.00	1.117	1.00	50.00	50.00	0.457	0.457	1.00
22	13:32	1.00	1.082	1.00	50.00	50.00	0.276	0.276	1.00
23	14:53	1.00	1.190	1.00	50.00	50.00	0.499	0.499	1.00
24	13:16	1.00	1.060	1.00	50.00	50.00	0.403	0.403	1.00
25	17:36	1.00	1.406	1.00	50.00	50.00	0.415	0.415	1.00
26	16:16	1.00	1.300	1.00	50.00	50.00	0.271	0.271	1.00
27	12:15	1.00	0.980	1.00	50.00	50.00	1.013	1.013	1.00
28	15:50	1.00	1.266	1.00	50.00	50.00	0.368	0.368	1.00
29	14:14	1.00	1.138	1.00	50.00	50.00	0.039	0.039	1.00
30	21:38	1.00	1.729	1.00	50.00	50.00	0.330	0.330	1.00
31	16:04	1.00	0.845	1.00	50.00	50.00	0.329	0.329	1.00
32	14:20	1.00	0.754	1.00	50.00	50.00	0.323	0.323	1.00
33	17:13	1.00	0.904	1.00	50.00	50.00	0.383	0.383	1.00
34	21:50	1.00	1.147	1.00	50.00	50.00	0.339	0.339	1.00
35	15:42	1.00	0.825	1.00	50.00	50.00	1.169	1.169	1.00
36	19:08	1.00	1.005	1.00	50.00	50.00	0.890	0.890	1.00
37	19:10	1.00	1.007	1.00	50.00	50.00	0.426	0.426	1.00
38	20:35	1.00	1.082	1.00	50.00	50.00	0.995	0.995	1.00
39	20:33	1.00	1.080	1.00	50.00	50.00	0.602	0.602	1.00
40	12:06	1.00	1.087	1.00	50.00	50.00	2.195	2.195	1.00
41	19:22	1.00	1.017	1.00	50.00	50.00	0.576	0.576	1.00
42	9:08	1.00	0.820	1.00	50.00	50.00	1.503	1.503	1.00
43	10:36	1.00	0.953	1.00	50.00	50.00	1.687	1.687	1.00

RIC
05/01/92 14:01:00
SAMPLE: CLP,STAND,,VSTD100,L,S,30037,U/H,IC-100,5ML,,
CONDS.: CAP/.32,Y3771,Y3766,,
RANGE: G 1,1796 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: Y3771 #1
CALI: Y3771 #3

SCANS 300 TO 1796



100096

Quantitation Report File: Y3771

Data: Y3771.TI
05/01/92 14:01:00
Sample: CLP,STAND,,VSTD100,L,S,30037,V/H,IC-100,5ML,,
Conds.: CAP/.32,Y3771,Y3766,,
Formula: Instrument: Y Weight: 5.000
Submitted by: VERSAR Analyst: JFH Acct. No.: STAND

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

No	Name
1	CI01 BROMOCHLOROMETHANE****INTERNAL STANDARD#1 ****
2	CI10 1,4-DIFLUOROBENZENE****INTERNAL STANDARD#2 ****
3	CI20 CHLOROBENZENE-D5****INTERNAL STANDARD#3 ****
4	CS15 1,2-DICHLOROETHANE-D4***SURROGATE#1***
5	CS05 TOLUENE-D8***SURROGATE#2***
6	CS10 4-BROMOFLUOROBENZENE***SURROGATE#3***
7	C010 CHLOROMETHANE
8	C015 BROMOMETHANE
9	C020 VINYL CHLORIDE
10	C025 CHLOROETHANE
11	C030 METHYLENE CHLORIDE
12	C035 ACETONE
13	C040 CARBON DISULFIDE
14	C045 1,1-DICHLOROETHENE
15	C050 1,1-DICHLOROETHANE
16	C060 CHLOROFORM
17	C115 1,1,1-TRICHLOROETHANE
18	C110 2-BUTANONE
19	C120 CARBON TETRACHLORIDE
20	C125 VINYL ACETATE
21	C130 BROMODICHLOROMETHANE
22	C140 1,2-DICHLOROPROPANE
23	C145 CIS-1,3,DICHLOROPROPENE
24	C150 TRICHLOROETHENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C165 BENZENE
28	C170 TRANS-1,3-DICHLOROPROPENE
29	C175 2-CHLOROETHYLVINYLETHER
30	C180 BROMOFORM
31	C210 2-HEXANONE
32	C205 4-METHYL-2-PENTANONE
33	C220 TETRACHLOROETHENE
34	C225 1,1,2,2-TETRACHLOROETHANE
35	C230 TOLUENE
36	C235 CHLOROBENZENE
37	C240 ETHYLBENZENE
38	C245 STYRENE
39	C250 O/P XYLENE
40	C065 1,2-DICHLOROETHANE
41	C251 M-XYLENE
42	C054 TRANS-1,2,DICHLOROETHENE
43	C055 CIS-1,2-DICHLOROETHENE

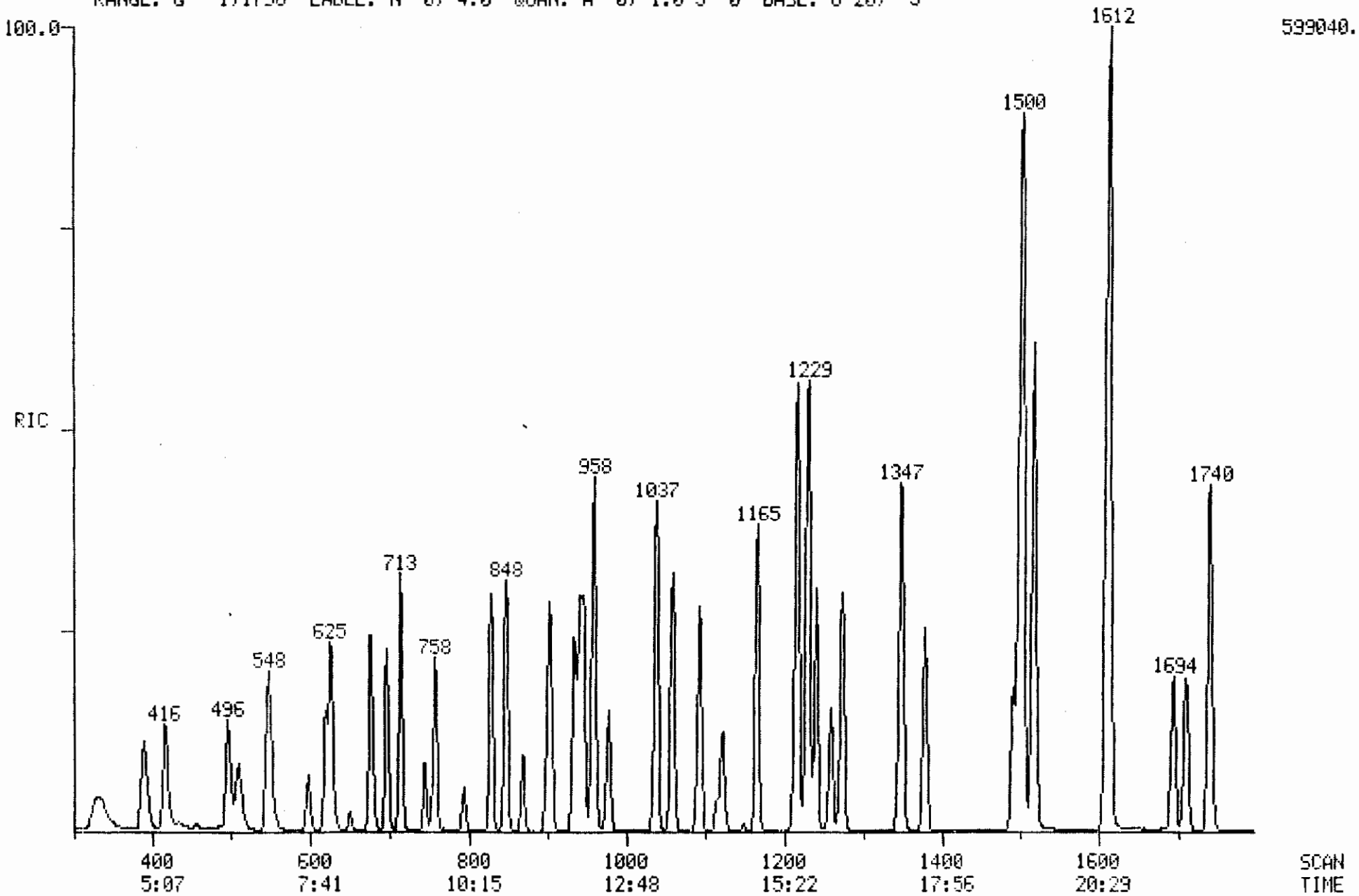
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	868	11:07	1	1.000	A BB	43072.	50.000 UG/L*	1.20
2	114	975	12:29	2	1.000	A BB	224903.	50.000 UG/L*	1.20
3	117	1485	19:01	3	1.000	A BB	221909.	50.000 UG/L*	1.20
4	65	932	11:56	1	1.074	A BV	179874.	100.000 UG/L%	2.41
5	98	1211	15:30	3	0.815	A BB	514022.	100.000 UG/L%	2.41
6	95	1733	22:11	3	1.167	A BB	228900.	100.000 UG/L%	2.41
7	50	390	5:00	1	0.449	A BB	212469.	100.000 UG/L	2.41
8	94	497	6:22	1	0.573	A BB	134399.	100.000 UG/L	2.41
9	62	418	5:21	1	0.482	A BB	228646.	100.000 UG/L	2.41
10	64	509	6:31	1	0.586	A BB	116203.	100.000 UG/L	2.41
11	84	675	8:39	1	0.778	A BB	119516.	100.000 UG/L	2.41
12	43	597	7:39	1	0.688	A BB	90068.	100.000 UG/L	2.41
13	76	694	8:53	1	0.800	A BB	365210.	100.000 UG/L	2.41
14	96	624	7:59	1	0.719	A BB	108595.	100.000 UG/L	2.41
15	63	757	9:42	1	0.872	A BB	225605.	100.000 UG/L	2.41
16	83	846	10:50	1	0.975	A BB	261632.	100.000 UG/L	2.41
17	97	901	11:32	2	0.924	A BB	266582.	100.000 UG/L	2.41
18	43	793	10:09	1	0.914	A BB	71354.	100.000 UG/L	2.41
19	117	939	12:01	2	0.963	A BB	240636.	100.000 UG/L	2.41
20	43	743	9:31	2	0.762	A BB	131329.	100.000 UG/L	2.41
21	83	1090	13:57	2	1.118	A BB	202784.	100.000 UG/L	2.41
22	63	1055	13:31	2	1.082	A BB	125252.	100.000 UG/L	2.41
23	75	1161	14:52	2	1.191	A BB	221368.	100.000 UG/L	2.41
24	130	1034	13:14	2	1.061	A BB	182343.	100.000 UG/L	2.41
25	129	1372	17:34	2	1.407	A BB	181266.	100.000 UG/L	2.41
26	97	1268	16:14	2	1.301	A BB	116276.	100.000 UG/L	2.41
27	78	956	12:14	2	0.981	A BB	445274.	100.000 UG/L	2.41
28	75	1235	15:49	2	1.267	A VB	164324.	100.000 UG/L	2.41
29	63	1111	14:14	2	1.139	A BB	16493.	100.000 UG/L	2.41
30	173	1687	21:36	2	1.730	A BB	137320.	100.000 UG/L	2.41
31	43	1254	16:03	3	0.844	A BB	140472.	100.000 UG/L	2.41
32	43	1118	14:19	3	0.753	A BB	133559.	100.000 UG/L	2.41
33	164	1343	17:12	3	0.904	A BB	167773.	100.000 UG/L	2.41
34	83	1704	21:49	3	1.147	A BB	139158.	100.000 UG/L	2.41
35	91	1225	15:41	3	0.825	A BB	508027.	100.000 UG/L	2.41
36	112	1493	19:07	3	1.005	A BB	387206.	100.000 UG/L	2.41
37	106	1496	19:09	3	1.007	A BB	191201.	100.000 UG/L	2.41
38	104	1607	20:35	3	1.082	A BB	427230.	100.000 UG/L	2.41
39	106	1603	20:32	3	1.079	A BB	258245.	100.000 UG/L	2.41
40	62	944	12:05	1	1.088	A BV	181998.	100.000 UG/L	2.41
41	106	1511	19:21	3	1.016	A BB	252557.	100.000 UG/L	2.41
42	96	712	9:07	1	0.820	A BB	126188.	100.000 UG/L	2.41
43	96	827	10:35	1	0.953	A BB	144301.	100.000 UG/L	2.41

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	11:07	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	12:29	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	19:01	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	11:56	1.00	1.074	1.00	100.00	100.00	2.088	2.088	1.00
5	15:30	1.00	0.815	1.00	100.00	100.00	1.158	1.158	1.00
6	22:11	1.00	1.167	1.00	100.00	100.00	0.516	0.516	1.00
7	5:00	1.00	0.449	1.00	100.00	100.00	2.466	2.466	1.00
8	6:22	1.00	0.573	1.00	100.00	100.00	1.560	1.560	1.00
9	5:21	1.00	0.482	1.00	100.00	100.00	2.654	2.654	1.00
10	6:31	1.00	0.586	1.00	100.00	100.00	1.349	1.349	1.00
11	8:39	1.00	0.778	1.00	100.00	100.00	1.387	1.387	1.00

V3771 100093

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	7:39	1.00	0.688	1.00	100.00	100.00	1.046	1.046	1.00
13	8:53	1.00	0.800	1.00	100.00	100.00	4.240	4.240	1.00
14	7:59	1.00	0.719	1.00	100.00	100.00	1.261	1.261	1.00
15	9:42	1.00	0.872	1.00	100.00	100.00	2.619	2.619	1.00
16	10:50	1.00	0.975	1.00	100.00	100.00	3.037	3.037	1.00
17	11:32	1.00	0.924	1.00	100.00	100.00	0.593	0.593	1.00
18	10:09	1.00	0.914	1.00	100.00	100.00	0.828	0.828	1.00
19	12:01	1.00	0.963	1.00	100.00	100.00	0.535	0.535	1.00
20	9:31	1.00	0.762	1.00	100.00	100.00	0.292	0.292	1.00
21	13:57	1.00	1.118	1.00	100.00	100.00	0.451	0.451	1.00
22	13:31	1.00	1.082	1.00	100.00	100.00	0.278	0.278	1.00
23	14:52	1.00	1.191	1.00	100.00	100.00	0.492	0.492	1.00
24	13:14	1.00	1.061	1.00	100.00	100.00	0.405	0.405	1.00
25	17:34	1.00	1.407	1.00	100.00	100.00	0.403	0.403	1.00
26	16:14	1.00	1.301	1.00	100.00	100.00	0.259	0.259	1.00
27	12:14	1.00	0.981	1.00	100.00	100.00	0.990	0.990	1.00
28	15:49	1.00	1.267	1.00	100.00	100.00	0.365	0.365	1.00
29	14:14	1.00	1.139	1.00	100.00	100.00	0.037	0.037	1.00
30	21:36	1.00	1.730	1.00	100.00	100.00	0.305	0.305	1.00
31	16:03	1.00	0.844	1.00	100.00	100.00	0.317	0.317	1.00
32	14:19	1.00	0.753	1.00	100.00	100.00	0.301	0.301	1.00
33	17:12	1.00	0.904	1.00	100.00	100.00	0.378	0.378	1.00
34	21:49	1.00	1.147	1.00	100.00	100.00	0.314	0.314	1.00
35	15:41	1.00	0.825	1.00	100.00	100.00	1.145	1.145	1.00
36	19:07	1.00	1.005	1.00	100.00	100.00	0.872	0.872	1.00
37	19:09	1.00	1.007	1.00	100.00	100.00	0.431	0.431	1.00
38	20:35	1.00	1.082	1.00	100.00	100.00	0.963	0.963	1.00
39	20:32	1.00	1.079	1.00	100.00	100.00	0.582	0.582	1.00
40	12:05	1.00	1.088	1.00	100.00	100.00	2.113	2.113	1.00
41	19:21	1.00	1.018	1.00	100.00	100.00	0.569	0.569	1.00
42	9:07	1.00	0.820	1.00	100.00	100.00	1.465	1.465	1.00
43	10:35	1.00	0.953	1.00	100.00	100.00	1.675	1.675	1.00

RIC DATA: Y3770 #1 SCANS 300 TO 1796
05/01/92 13:24:00 CALI: Y3770 #3
SAMPLE: CLP,STAND,,VSTD150,L,S,30036,V/H,IC-150,5ML
CONDS.: CAP/.32,Y3770,Y3766,,
RANGE: G 1,1796 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100100

Quantitation Report File: Y3770

Data: Y3770.TI
05/01/92 13:24:00
Sample: CLP,STAND,,VSTD150,L,S,30036,V/H,IC-150,5ML
Conds.: CAP/.32,Y3770,Y3766,,
Formula: Instrument: Y Weight: 5.000
Submitted by: VERSAR Analyst: JFH Acct. No.: STAND

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

No	Name
1	CI01 BROMOCHLOROMETHANE****INTERNAL STANDARD#1 ****
2	CI10 1,4-DIFLUOROBENZENE****INTERNAL STANDARD#2 ****
3	CI20 CHLOROBENZENE-D5****INTERNAL STANDARD#3 ****
4	CS15 1,2-DICHLOROETHANE-D4***SURROGATE#1***
5	CS05 TOLUENE-D8***SURROGATE#2***
6	CS10 4-BROMOFLUOROBENZENE***SURROGATE#3***
7	C010 CHLOROMETHANE
8	C015 BROMOMETHANE
9	C020 VINYL CHLORIDE
10	C025 CHLOROETHANE
11	C030 METHYLENE CHLORIDE
12	C035 ACETONE
13	C040 CARBON DISULFIDE
14	C045 1,1-DICHLOROETHENE
15	C050 1,1-DICHLOROETHANE
16	C060 CHLOROFORM
17	C115 1,1,1-TRICHLOROETHANE
18	C110 2-BUTANONE
19	C120 CARBON TETRACHLORIDE
20	C125 VINYL ACETATE
21	C130 BROMODICHLOROMETHANE
22	C140 1,2-DICHLOROPROPANE
23	C145 CIS-1,3,DICHLOROPROPENE
24	C150 TRICHLOROETHENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C165 BENZENE
28	C170 TRANS-1,3-DICHLOROPROPENE
29	C175 2-CHLOROETHYLVINYLETHER
30	C180 BROMOFORM
31	C210 2-HEXANONE
32	C205 4-METHYL-2-PENTANONE
33	C220 TETRACHLOROETHENE
34	C225 1,1,2,2-TETRACHLOROETHANE
35	C230 TOLUENE
36	C235 CHLOROBENZENE
37	C240 ETHYLBENZENE
38	C245 STYRENE
39	C250 O/P XYLENE
40	C065 1,2-DICHLOROETHANE
41	C251 M-XYLENE
42	C054 TRANS-1,2,DICHLOROETHENE
43	C055 CIS-1,2-DICHLOROETHENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	869	11:08	1	1.000	A BB	41078.	50.000 UG/L*	0.81
2	114	978	12:31	2	1.000	A BB	218944.	50.000 UG/L*	0.81
3	117	1490	19:05	3	1.000	A BB	214701.	50.000 UG/L*	0.81
4	65	934	11:58	1	1.075	A BV	254733.	150.000 UG/L%	2.44
5	98	1215	15:33	3	0.815	A BB	696505.	150.000 UG/L%	2.44
6	95	1740	22:17	3	1.168	A BB	317655.	150.000 UG/L%	2.44
7	50	389	4:59	1	0.448	A BB	318488.	150.000 UG/L	2.44
8	94	496	6:21	1	0.571	A BB	189324.	150.000 UG/L	2.44
9	62	416	5:20	1	0.479	A BB	322779.	150.000 UG/L	2.44
10	64	508	6:30	1	0.585	A BB	159251.	150.000 UG/L	2.44
11	84	675	8:39	1	0.777	A BB	164303.	150.000 UG/L	2.44
12	43	598	7:39	1	0.688	A BB	135977.	150.000 UG/L	2.44
13	76	695	8:54	1	0.800	A BB	486631.	150.000 UG/L	2.44
14	96	625	8:00	1	0.719	A BB	145279.	150.000 UG/L	2.44
15	63	758	9:42	1	0.872	A BB	318901.	150.000 UG/L	2.44
16	83	848	10:51	1	0.976	A BB	366555.	150.000 UG/L	2.44
17	97	903	11:34	2	0.923	A BB	380861.	150.000 UG/L	2.44
18	43	794	10:10	1	0.914	A BB	114114.	150.000 UG/L	2.44
19	117	941	12:03	2	0.962	A BB	332934.	150.000 UG/L	2.44
20	43	745	9:32	2	0.762	A BB	205847.	150.000 UG/L	2.44
21	83	1093	14:00	2	1.118	A BB	308369.	150.000 UG/L	2.44
22	63	1058	13:33	2	1.082	A BB	184397.	150.000 UG/L	2.44
23	75	1165	14:55	2	1.191	A BB	342878.	150.000 UG/L	2.44
24	130	1037	13:17	2	1.060	A BB	255899.	150.000 UG/L	2.44
25	129	1377	17:38	2	1.408	A BB	277928.	150.000 UG/L	2.44
26	97	1272	16:17	2	1.301	A BB	182226.	150.000 UG/L	2.44
27	78	959	12:17	2	0.981	A BB	653653.	150.000 UG/L	2.44
28	75	1239	15:52	2	1.267	A VB	261351.	150.000 UG/L	2.44
29	63	1115	14:17	2	1.140	A BB	26130.	150.000 UG/L	2.44
30	173	1694	21:41	2	1.732	A BB	216475.	150.000 UG/L	2.44
31	43	1258	16:06	3	0.844	A BV	233672.	150.000 UG/L	2.44
32	43	1122	14:22	3	0.753	A BB	210470.	150.000 UG/L	2.44
33	164	1347	17:15	3	0.904	A BB	234319.	150.000 UG/L	2.44
34	83	1710	21:54	3	1.148	A BB	222707.	150.000 UG/L	2.44
35	91	1229	15:44	3	0.825	A BB	761552.	150.000 UG/L	2.44
36	112	1498	19:11	3	1.005	A BB	570705.	150.000 UG/L	2.44
37	106	1501	19:13	3	1.007	A BB	288236.	150.000 UG/L	2.44
38	104	1613	20:39	3	1.083	A BB	630937.	150.000 UG/L	2.44
39	106	1610	20:37	3	1.081	A BB	390784.	150.000 UG/L	2.44
40	62	946	12:07	1	1.089	A BV	279377.	150.000 UG/L	2.44
41	106	1517	19:25	3	1.018	A BB	372814.	150.000 UG/L	2.44
42	96	713	9:08	1	0.820	A BB	169819.	150.000 UG/L	2.44
43	96	829	10:37	1	0.954	A BB	198219.	150.000 UG/L	2.44

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	11:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	12:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	19:05	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	11:58	1.00	1.075	1.00	150.00	150.00	2.067	2.067	1.00
5	15:33	1.00	0.815	1.00	150.00	150.00	1.081	1.081	1.00
6	22:17	1.00	1.168	1.00	150.00	150.00	0.493	0.493	1.00
7	4:59	1.00	0.448	1.00	150.00	150.00	2.584	2.584	1.00
8	6:21	1.00	0.571	1.00	150.00	150.00	1.536	1.536	1.00
9	5:20	1.00	0.479	1.00	150.00	150.00	2.619	2.619	1.00
10	6:30	1.00	0.585	1.00	150.00	150.00	1.292	1.292	1.00
11	8:39	1.00	0.777	1.00	150.00	150.00	1.333	1.333	1.00

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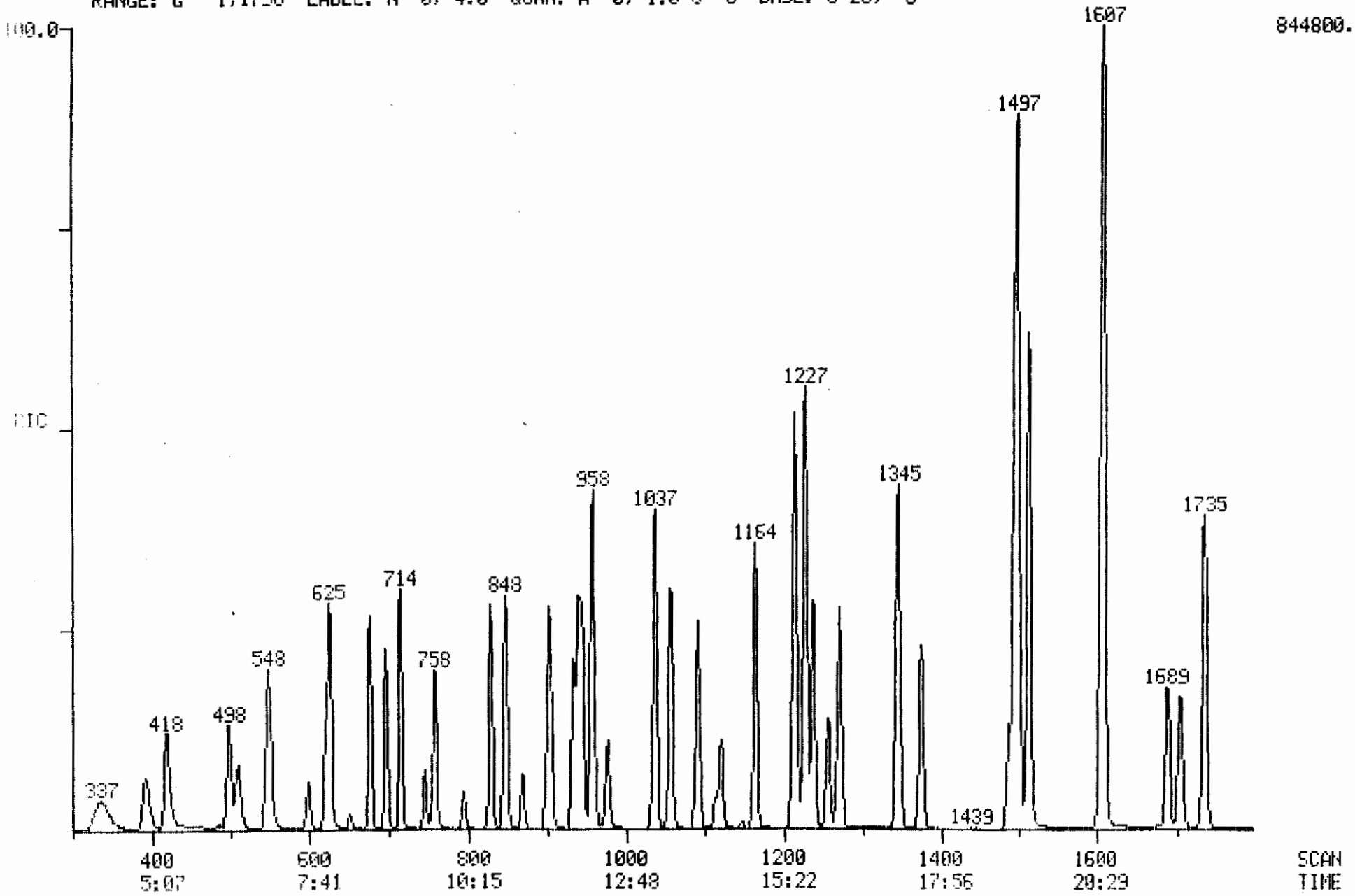
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	7:39	1.00	0.688	1.00	150.00	150.00	1.103	1.103	1.00
13	8:54	1.00	0.800	1.00	150.00	150.00	3.949	3.949	1.00
14	8:00	1.00	0.719	1.00	150.00	150.00	1.179	1.179	1.00
15	9:42	1.00	0.872	1.00	150.00	150.00	2.588	2.588	1.00
16	10:51	1.00	0.976	1.00	150.00	150.00	2.974	2.974	1.00
17	11:34	1.00	0.923	1.00	150.00	150.00	0.580	0.580	1.00
18	10:10	1.00	0.914	1.00	150.00	150.00	0.926	0.926	1.00
19	12:03	1.00	0.962	1.00	150.00	150.00	0.507	0.507	1.00
20	9:32	1.00	0.762	1.00	150.00	150.00	0.313	0.313	1.00
21	14:00	1.00	1.118	1.00	150.00	150.00	0.469	0.469	1.00
22	13:33	1.00	1.082	1.00	150.00	150.00	0.281	0.281	1.00
23	14:55	1.00	1.191	1.00	150.00	150.00	0.522	0.522	1.00
24	13:17	1.00	1.060	1.00	150.00	150.00	0.390	0.390	1.00
25	17:38	1.00	1.408	1.00	150.00	150.00	0.423	0.423	1.00
26	16:17	1.00	1.301	1.00	150.00	150.00	0.277	0.277	1.00
27	12:17	1.00	0.981	1.00	150.00	150.00	0.995	0.995	1.00
28	15:52	1.00	1.267	1.00	150.00	150.00	0.398	0.398	1.00
29	14:17	1.00	1.140	1.00	150.00	150.00	0.040	0.040	1.00
30	21:41	1.00	1.732	1.00	150.00	150.00	0.330	0.330	1.00
31	16:06	1.00	0.844	1.00	150.00	150.00	0.363	0.363	1.00
32	14:22	1.00	0.753	1.00	150.00	150.00	0.327	0.327	1.00
33	17:15	1.00	0.904	1.00	150.00	150.00	0.364	0.364	1.00
34	21:54	1.00	1.148	1.00	150.00	150.00	0.346	0.346	1.00
35	15:44	1.00	0.825	1.00	150.00	150.00	1.182	1.182	1.00
36	19:11	1.00	1.005	1.00	150.00	150.00	0.886	0.886	1.00
37	19:13	1.00	1.007	1.00	150.00	150.00	0.448	0.448	1.00
38	20:39	1.00	1.083	1.00	150.00	150.00	0.980	0.980	1.00
39	20:37	1.00	1.081	1.00	150.00	150.00	0.607	0.607	1.00
40	12:07	1.00	1.089	1.00	150.00	150.00	2.267	2.267	1.00
41	19:25	1.00	1.018	1.00	150.00	150.00	0.579	0.579	1.00
42	9:08	1.00	0.820	1.00	150.00	150.00	1.378	1.378	1.00
43	10:37	1.00	0.954	1.00	150.00	150.00	1.608	1.608	1.00

Y3770

RIC DATA: Y3769 #1 SCANS 300 TO 1796
05/01/92 12:44:00 CALI: Y3769 #3
SAMPLE: CLP,STAND,,VSTD200,L,S,30035,V/H,IC-200,5ML,,
CONDS.: CAP/.32,Y3769,Y3766,,
RANGE: G 1,1796 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



Quantitation Report File: Y3767

Data: Y3769.TI
05/01/92 12:44:00
Sample: CLP,STAND,,VSTD200,L,S,30035,V/H,IC-200,5ML,,
Conds.: CAP/.32,Y3769,Y3766,,
Formula: Instrument: Y Weight: 5.000
Submitted by: VERSAR Analyst: JFH Acct. No.: STAND

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

No	Name
1	CI01 BROMOCHLOROMETHANE****INTERNAL STANDARD#1 ****
2	CI10 1,4-DIFLUOROBENZENE****INTERNAL STANDARD#2 ****
3	CI20 CHLOROBENZENE-D5****INTERNAL STANDARD#3 ****
4	CS15 1,2-DICHLOROETHANE-D4***SURROGATE#1***
5	CS05 TOLUENE-D8***SURROGATE#2***
6	CS10 4-BROMOFLUOROBENZENE***SURROGATE#3***
7	C010 CHLOROMETHANE
8	C015 BROMOMETHANE
9	C020 VINYL CHLORIDE
10	C025 CHLOROETHANE
11	C030 METHYLENE CHLORIDE
12	C035 ACETONE
13	C040 CARBON DISULFIDE
14	C045 1,1-DICHLOROETHENE
15	C050 1,1-DICHLOROETHANE
16	C060 CHLOROFORM
17	C115 1,1,1-TRICHLOROETHANE
18	C110 2-BUTANONE
19	C120 CARBON TETRACHLORIDE
20	C125 VINYL ACETATE
21	C130 BROMODICHLOROMETHANE
22	C140 1,2-DICHLOROPROPANE
23	C145 CIS-1,3,DICHLOROPROPENE
24	C150 TRICHLOROETHENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C165 BENZENE
28	C170 TRANS-1,3-DICHLOROPROPENE
29	C175 2-CHLOROETHYLVINYLETHER
30	C180 BROMOFORM
31	C210 2-HEXANONE
32	C205 4-METHYL-2-PENTANONE
33	C220 TETRACHLOROETHENE
34	C225 1,1,2,2-TETRACHLOROETHANE
35	C230 TOLUENE
36	C235 CHLOROBENZENE
37	C240 ETHYLBENZENE
38	C245 STYRENE
39	C250 O/P XYLENE
40	C065 1,2-DICHLOROETHANE
41	C251 M-XYLENE
42	C054 TRANS-1,2,DICHLOROETHENE
43	C055 CIS-1,2-DICHLOROETHENE

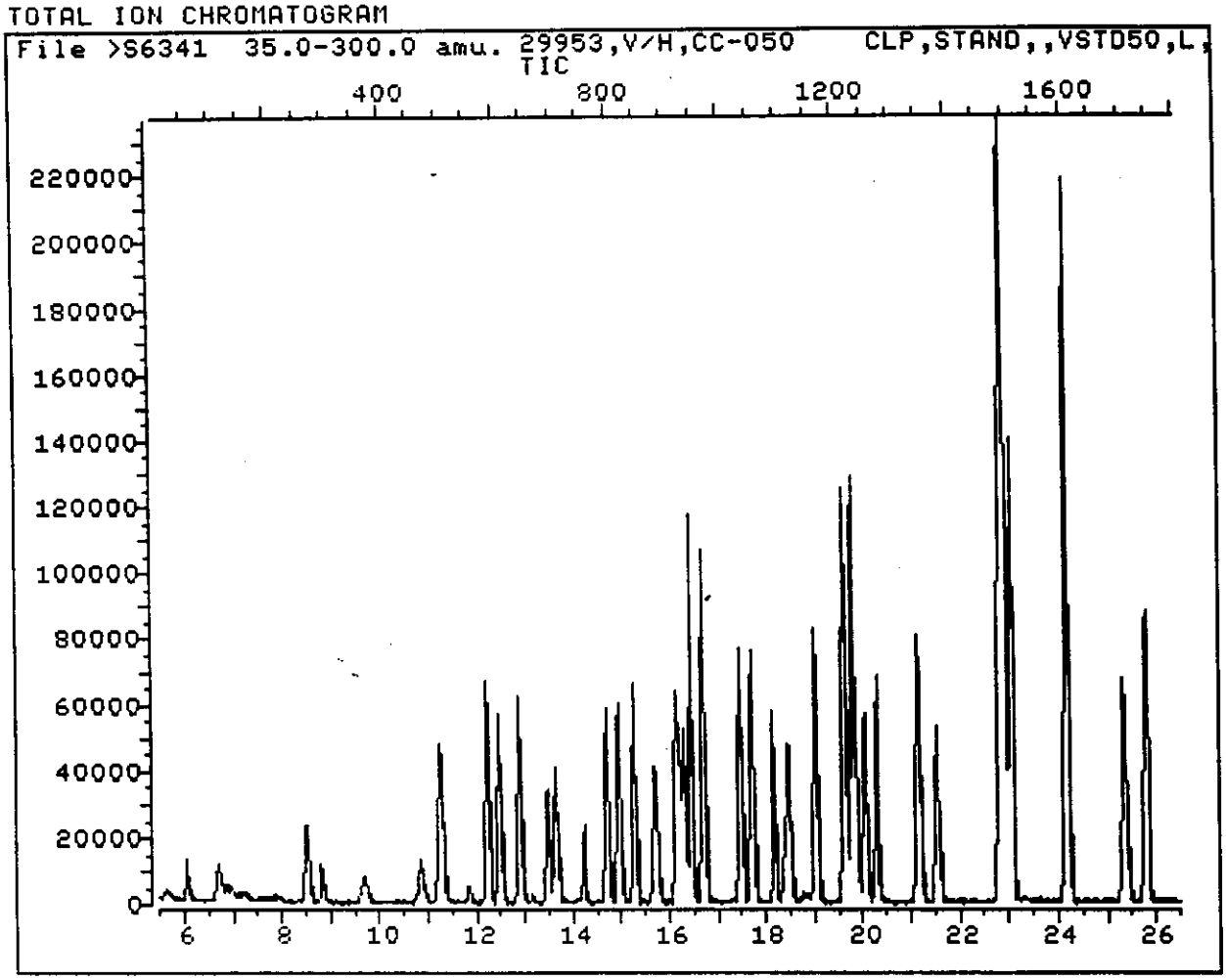
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	869	11:08	1	1.000	A BB	40103.	50.000 UG/L*	0.61
2	114	977	12:31	2	1.000	A BB	220445.	50.000 UG/L*	0.61
3	117	1487	19:02	3	1.000	A BB	219300.	50.000 UG/L*	0.61
4	65	934	11:58	1	1.075	A BV	309135.	200.000 UG/L%	2.45
5	98	1213	15:32	3	0.816	A BB	903368.	200.000 UG/L%	2.45
6	95	1735	22:13	3	1.167	A BB	410014.	200.000 UG/L%	2.45
7	50	392	5:01	1	0.451	A BB	282207.	200.000 UG/L	2.45
8	94	498	6:23	1	0.573	A BB	247630.	200.000 UG/L	2.45
9	62	418	5:21	1	0.481	A BB	408135.	200.000 UG/L	2.45
10	64	509	6:31	1	0.586	A BB	201195.	200.000 UG/L	2.45
11	84	676	8:39	1	0.778	A BB	202625.	200.000 UG/L	2.45
12	43	599	7:40	1	0.689	A BB	141401.	200.000 UG/L	2.45
13	76	696	8:55	1	0.801	A BB	631450.	200.000 UG/L	2.45
14	96	625	8:00	1	0.719	A BB	197539.	200.000 UG/L	2.45
15	63	759	9:43	1	0.873	A BB	415174.	200.000 UG/L	2.45
16	83	848	10:51	1	0.976	A BB	469646.	200.000 UG/L	2.45
17	97	903	11:34	2	0.924	A BB	513635.	200.000 UG/L	2.45
18	43	795	10:11	1	0.915	A BB	133100.	200.000 UG/L	2.45
19	117	941	12:03	2	0.963	A BB	459591.	200.000 UG/L	2.45
20	43	745	9:32	2	0.763	A BB	250639.	200.000 UG/L	2.45
21	83	1092	13:59	2	1.118	A BB	399978.	200.000 UG/L	2.45
22	63	1057	13:32	2	1.082	A BB	236906.	200.000 UG/L	2.45
23	75	1164	14:54	2	1.191	A BB	447317.	200.000 UG/L	2.45
24	130	1037	13:17	2	1.061	A BB	338731.	200.000 UG/L	2.45
25	129	1374	17:36	2	1.406	A BB	352747.	200.000 UG/L	2.45
26	97	1270	16:16	2	1.300	A BB	234243.	200.000 UG/L	2.45
27	78	958	12:16	2	0.981	A BB	853009.	200.000 UG/L	2.45
28	75	1237	15:50	2	1.266	A VB	342766.	200.000 UG/L	2.45
29	63	1113	14:15	2	1.139	A BB	34388.	200.000 UG/L	2.45
30	173	1689	21:38	2	1.729	A BB	278262.	200.000 UG/L	2.45
31	43	1256	16:05	3	0.845	A BB	283460.	200.000 UG/L	2.45
32	43	1120	14:20	3	0.753	A BB	264064.	200.000 UG/L	2.45
33	164	1345	17:13	3	0.905	A BB	320249.	200.000 UG/L	2.45
34	83	1705	21:50	3	1.147	A BB	270906.	200.000 UG/L	2.45
35	91	1227	15:43	3	0.825	A BB	1027620.	200.000 UG/L	2.45
36	112	1495	19:09	3	1.005	A BB	764874.	200.000 UG/L	2.45
37	106	1498	19:11	3	1.007	A BB	406687.	200.000 UG/L	2.45
38	104	1609	20:36	3	1.082	A BB	863978.	200.000 UG/L	2.45
39	106	1606	20:34	3	1.080	A BB	539182.	200.000 UG/L	2.45
40	62	946	12:07	1	1.089	A BV	352394.	200.000 UG/L	2.45
41	106	1513	19:22	3	1.017	A BB	513787.	200.000 UG/L	2.45
42	96	714	9:09	1	0.822	A BB	221174.	200.000 UG/L	2.45
43	96	829	10:37	1	0.954	A BB	253925.	200.000 UG/L	2.45

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	11:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	12:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	19:02	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	11:58	1.00	1.075	1.00	200.00	200.00	1.927	1.927	1.00
5	15:32	1.00	0.816	1.00	200.00	200.00	1.030	1.030	1.00
6	22:13	1.00	1.167	1.00	200.00	200.00	0.467	0.467	1.00
7	5:01	1.00	0.451	1.00	200.00	200.00	1.759	1.759	1.00
8	6:23	1.00	0.573	1.00	200.00	200.00	1.544	1.544	1.00
9	5:21	1.00	0.481	1.00	200.00	200.00	2.544	2.544	1.00
10	6:31	1.00	0.586	1.00	200.00	200.00	1.254	1.254	1.00
11	8:39	1.00	0.778	1.00	200.00	200.00	1.263	1.263	1.00

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	7:40	1.00	0.689	1.00	200.00	200.00	0.881	0.881	1.00
13	8:55	1.00	0.801	1.00	200.00	200.00	3.936	3.936	1.00
14	8:00	1.00	0.719	1.00	200.00	200.00	1.231	1.231	1.00
15	9:43	1.00	0.873	1.00	200.00	200.00	2.588	2.588	1.00
16	10:51	1.00	0.976	1.00	200.00	200.00	2.928	2.928	1.00
17	11:34	1.00	0.924	1.00	200.00	200.00	0.582	0.582	1.00
18	10:11	1.00	0.915	1.00	200.00	200.00	0.830	0.830	1.00
19	12:03	1.00	0.963	1.00	200.00	200.00	0.521	0.521	1.00
20	9:32	1.00	0.763	1.00	200.00	200.00	0.284	0.284	1.00
21	13:59	1.00	1.118	1.00	200.00	200.00	0.454	0.454	1.00
22	13:32	1.00	1.082	1.00	200.00	200.00	0.269	0.269	1.00
23	14:54	1.00	1.191	1.00	200.00	200.00	0.507	0.507	1.00
24	13:17	1.00	1.061	1.00	200.00	200.00	0.384	0.384	1.00
25	17:36	1.00	1.406	1.00	200.00	200.00	0.400	0.400	1.00
26	16:16	1.00	1.300	1.00	200.00	200.00	0.266	0.266	1.00
27	12:16	1.00	0.981	1.00	200.00	200.00	0.967	0.967	1.00
28	15:50	1.00	1.266	1.00	200.00	200.00	0.389	0.389	1.00
29	14:15	1.00	1.139	1.00	200.00	200.00	0.039	0.039	1.00
30	21:38	1.00	1.729	1.00	200.00	200.00	0.316	0.316	1.00
31	16:05	1.00	0.845	1.00	200.00	200.00	0.323	0.323	1.00
32	14:20	1.00	0.753	1.00	200.00	200.00	0.301	0.301	1.00
33	17:13	1.00	0.905	1.00	200.00	200.00	0.365	0.365	1.00
34	21:50	1.00	1.147	1.00	200.00	200.00	0.309	0.309	1.00
35	15:43	1.00	0.825	1.00	200.00	200.00	1.171	1.171	1.00
36	19:09	1.00	1.005	1.00	200.00	200.00	0.872	0.872	1.00
37	19:11	1.00	1.007	1.00	200.00	200.00	0.464	0.464	1.00
38	20:36	1.00	1.082	1.00	200.00	200.00	0.985	0.985	1.00
39	20:34	1.00	1.080	1.00	200.00	200.00	0.615	0.615	1.00
40	12:07	1.00	1.089	1.00	200.00	200.00	2.197	2.197	1.00
41	19:22	1.00	1.017	1.00	200.00	200.00	0.586	0.586	1.00
42	9:09	1.00	0.822	1.00	200.00	200.00	1.379	1.379	1.00
43	10:37	1.00	0.954	1.00	200.00	200.00	1.583	1.583	1.00

1/3769

TOTAL ION CHROMATOGRAM



Data File: >S6341::D4 Quant Output File: ^S6341::D1
Name: 29953,V/H,CC-050 Instrument ID: S
Misc: CLP,STAND,,VSTD50,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: DIANE
Quant Time : 920422 11:16
Injected at: 920422 10:15

QUANT REPORT

Operator ID: DIANE
Output File: ^S6341::D1
Data File: >S6341::D4
Name: 29953,V/H,CC-050
Misc: CLP,STAND,,VSTD50,L,SOIL,5ML

Quant Rev: 7
Quant Time: 920422 11:16
Injected at: 920422 10:15
Dilution Factor: 1.00000
Instrument ID: S

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.25	838	37211	50.00	UG/L	88
2)	C010 Chloromethane	6.04	49	43177	50.00	UG/L	99
3)	C015 Bromomethane	8.52	261	42610	50.00	UG/L	97
4)	C020 Vinyl Chloride	6.69	105	31572	50.00	UG/L	94
5)	C025 Chloroethane	8.83	288	30405	50.00	UG/L	98
6)	C030 Methylene Chloride	12.24	580	63120	50.00	UG/L	92
7)	C035 Acetone	10.84	460	51704	50.00	UG/L	99
8)	C040 Carbon Disulfide	12.46	599	187168	50.00	UG/L	100
9)	C045 1,1-Dichloroethene	11.26	496	46538	50.00	UG/L	91
10)	C050 1,1-Dichloroethane	13.62	699	103186	50.00	UG/L	94
1)	C054 Trans 1-2 Dichloroethene	12.88	635	50613	50.00	UG/L	74
12)	C055 Cis 1-2 Dichloroethene	14.69	790	55979	50.00	UG/L	79
13)	C060 Chloroform	14.95	813	106556	50.00	UG/L	92
14)	CS15 1,2-Dichloroethane-d4	16.13	914	83351	50.00	UG/L	91
15)	C065 1,2-Dichloroethane	16.28	927	93039	50.00	UG/L	95
16)	C110 2 Butanone	14.21	749	12295	50.00	UG/L	71
17)	*CI10 1,4 Difluorobenzene	16.69	962	194243	50.00	UG/L	96
18)	C175 2-CHLOROETHYLVINYLETHER	18.37	1106	12969	50.00	UG/L	74
19)	C115 1,1,1-Trichloroethane	15.69	876	72366	50.00	UG/L	99
20)	C120 Carbon Tetrachloride	16.19	919	66262	50.00	UG/L	97
21)	C125 Vinyl Acetate	13.46	685	125419	50.00	UG/L	72
22)	C130 Bromodichloromethane	18.15	1087	88545	50.00	UG/L	90
23)	C140 1,2-Dichloropropane	17.71	1049	73973	50.00	UG/L	76
24)	C145 cis-1,3-Dichloropropene	19.00	1160	108276	50.00	UG/L	95
25)	C150 Trichloroethene	17.44	1026	63185	50.00	UG/L	92
26)	C155 Dibromochloromethane	21.55	1378	79186	50.00	UG/L	99
27)	C160 1,1,2-Trichloroethane	20.28	1269	60837	50.00	UG/L	99
28)	C165 Benzene	16.44	940	237811	50.00	UG/L	100
29)	C170 trans-1,3-Dichloropropene	19.87	1234	84925	50.00	UG/L	92
30)	C180 Bromoform	25.32	1701	65446	50.00	UG/L	96
31)	*CI20 Chlorobenzene-d5	22.81	1486	177541	50.00	UG/L	92
32)	C205 4-Methyl-2-Pentanone	18.46	1113	118054	50.00	UG/L	86
33)	C210 2-Hexanone	20.04	1249	120548	50.00	UG/L	82
34)	C220 Tetrachloroethene	21.15	1344	57629	50.00	UG/L	93
35)	C225 1,1,2,2-Tetrachloroethane	25.38	1706	93997	50.00	UG/L	95
6)	C230 Toluene	19.76	1225	141039	50.00	UG/L	93
37)	CS05 Toluene-d8	19.60	1211	227383	50.00	UG/L	97
38)	C235 Chlorobenzene	22.90	1494	168691	50.00	UG/L	80
39)	C240 Ethylbenzene	22.88	1492	84230	50.00	UG/L	59
40)	C245 Styrene	24.19	1604	180038	50.00	UG/L	85
41)	C250 Xylene (M & P)	23.04	1506	110645	50.00	UG/L	78

42)	C251 Xylene (O)	24.15	1601	104894	50.00 UG/L	75
43)	CS10 Bromofluorobenzene	25.79	1741	118817	50.00 UG/L	90

Compound is ISTD

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID (Standard): S6341 Date Analyzed: 04/22/92

Instrument ID: S Time Analyzed: 1015

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	37211	15.25	194243	16.69	177541	22.81
	UPPER LIMIT	74422		388486		355082	
	LOWER LIMIT	18606		97122		88770	
	EPA SAMPLE NO.						
01	S-10	26318	15.26	141525	16.71	109302	22.82
02	S-8	35136	15.26	173421	16.70	159612	22.83
03	S-8MS	33023	15.26	157365	16.71	142440	22.82
04	S-8MSD	32932	15.28	168300	16.73	151210	22.84
05	VBLK42	37865	15.26	191130	16.70	174382	22.82

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

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Lab File ID (Standard): Y3772 Date Analyzed: 05/01/92

Instrument ID: Y Time Analyzed: 1431

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	39191	11.14	209396	12.52	202446	19.04
	UPPER LIMIT	78382		418792		404892	
	LOWER LIMIT	19596		104698		101223	
	EPA SAMPLE NO.						
01	S-10RE	39706	11.09	208303	12.47	195088	18.95
02	VBLK73	40590	11.19	207068	12.60	190266	19.20

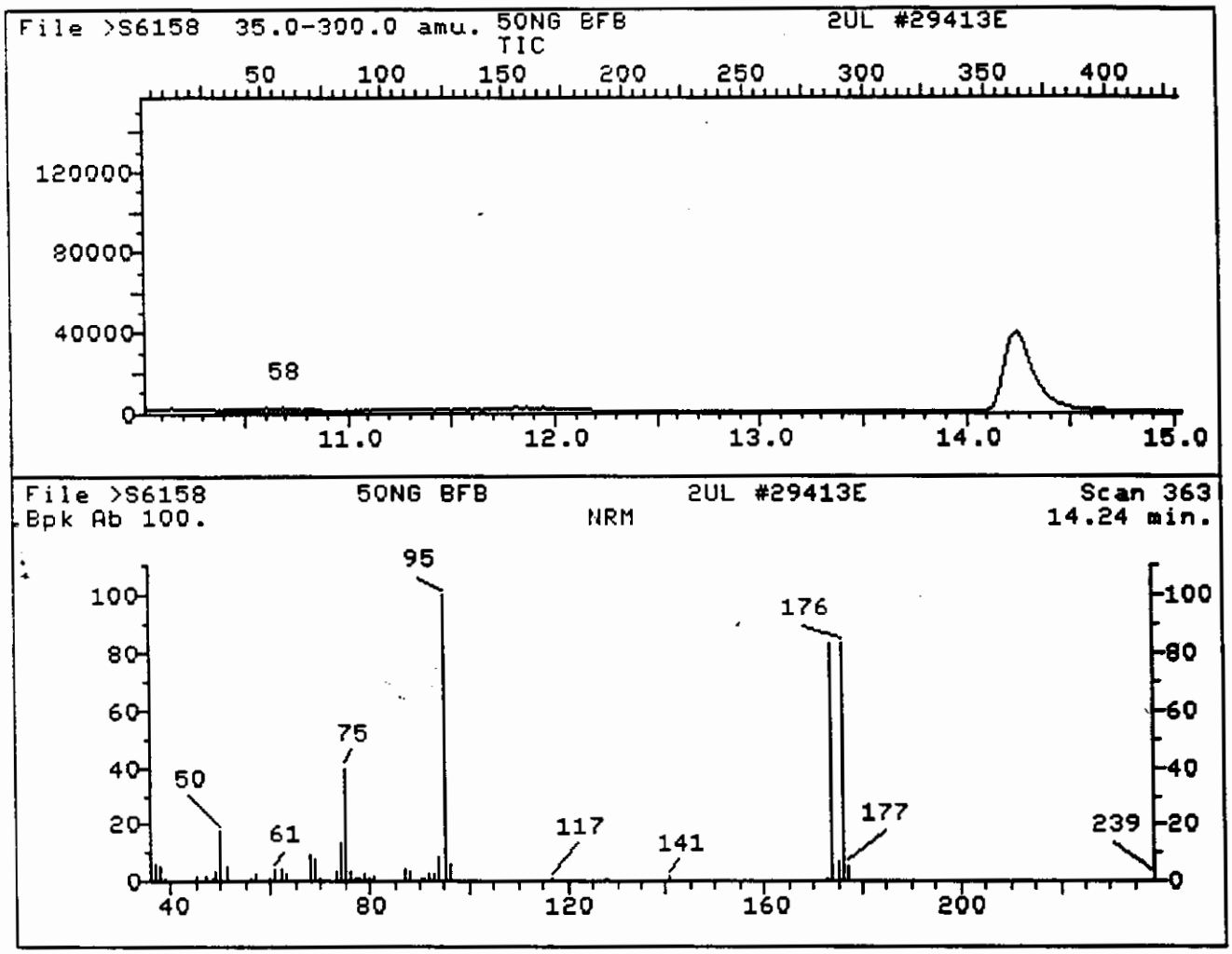
IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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.

V. RAW QC DATA



Data File Name : >S6158::D3
Instrument : S
Name : 50NG BFB
Misc. : 2UL #29413E

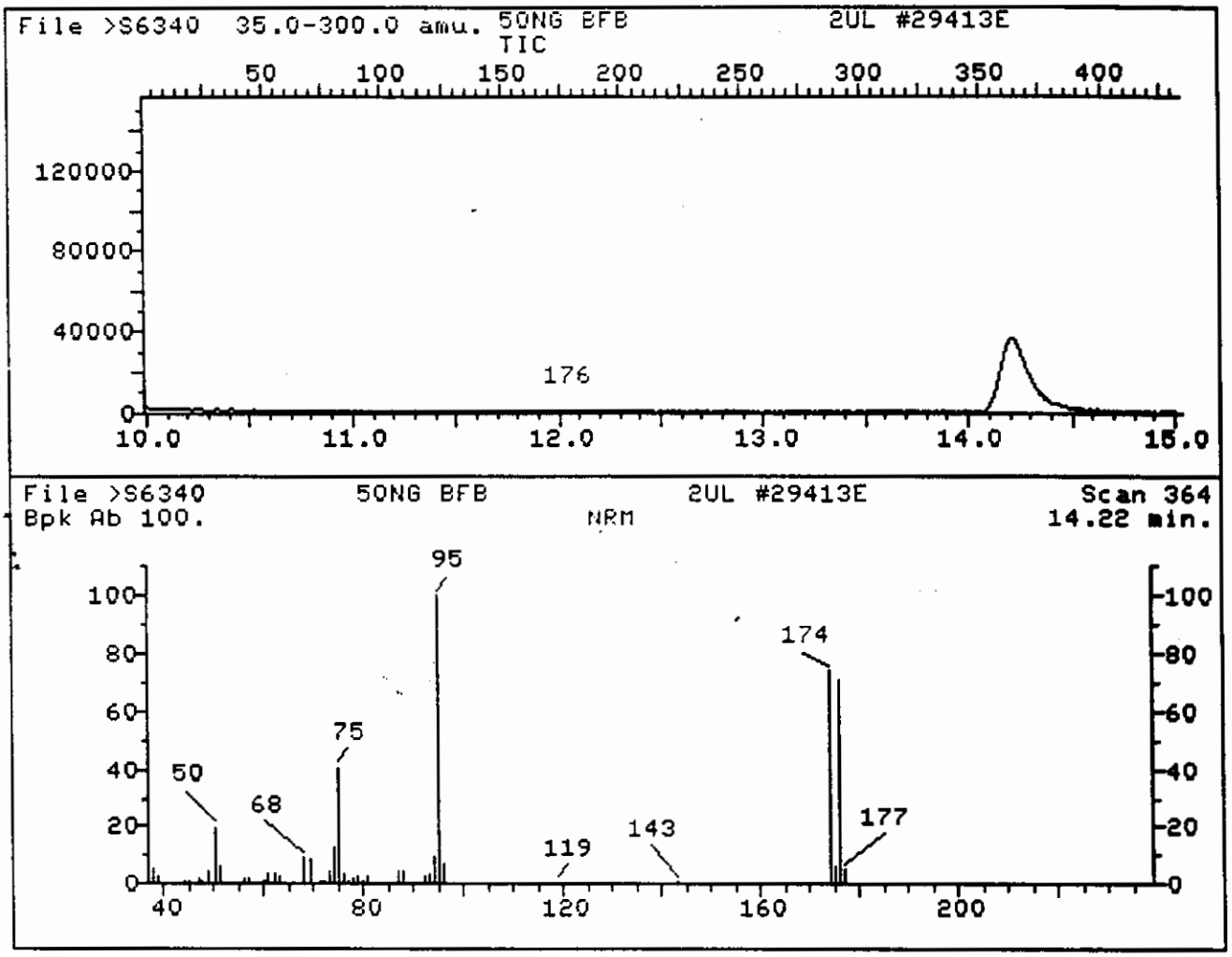
Injected : 4/08/92 9:09

>S6158 50NG BFB 2UL #29413E
363 NRM

File: >S6158 Scan #: 363 Retn. time: 14.24

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.702	56.15	.765	73.10	3.243	87.00	4.157	128.00	.788
37.05	6.076	57.05	2.558	74.10	13.499	88.00	3.769	129.90	.571
38.05	5.413	59.95	1.051	75.10	39.961	90.70	.857	136.80	.594
38.95	1.393	61.05	4.089	76.00	3.598	90.90	.811	141.00	1.496
45.05	1.473	62.10	4.089	77.00	1.348	92.10	2.341	172.80	.982
47.05	1.759	63.10	2.764	77.40	.879	93.00	3.026	174.00	83.132
48.15	.925	66.70	.525	78.00	1.359	94.00	8.497	175.10	6.795
48.95	3.700	68.10	9.171	78.90	2.707	95.10	100.000	176.00	83.280
50.05	17.588	69.10	7.903	80.00	1.096	96.10	6.350	177.00	5.391
51.05	5.562	69.90	.811	80.80	2.101	117.00	.937	239.05	1.176
55.95	.834	72.30	.560						

Data File Name : >S6158::D3
Instrument : S Injected : 4/08/92 9:09
Name : 50NG BFB
Misc. : 2UL #29413E



Data File Name : >S6340::D4
Instrument : S
Name : 50NG BFB
Misc. : 2UL #29413E

Injected : 4/22/92 9:37

>S6340 50NG BFB 2UL #29413E
364 NRM

File: >S6340 Scan #: 364 Retn. time: 14.22

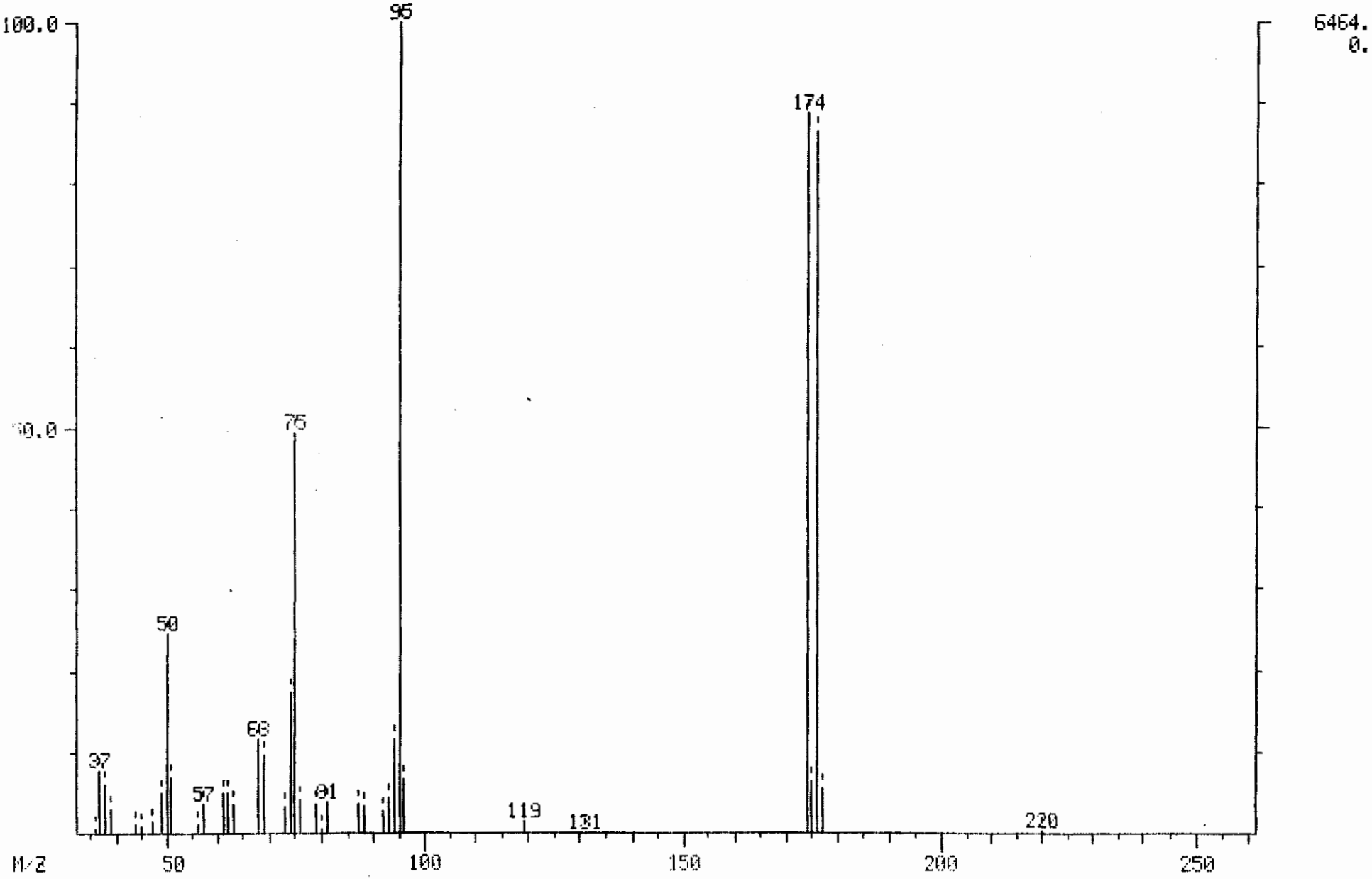
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	6.256	51.05	5.681	69.10	8.705	79.00	2.669	95.10	100.000
38.05	5.032	56.05	1.849	71.30	.735	80.00	.979	96.10	7.321
39.05	2.461	56.95	1.971	71.50	.722	80.90	2.608	119.00	.588
43.95	1.396	59.55	.490	72.30	.735	87.00	4.212	143.00	.686
44.95	1.334	59.95	.759	73.10	4.040	88.10	4.224	174.00	73.935
46.45	.600	60.15	.784	74.10	12.782	90.90	.429	175.10	5.950
47.05	1.885	60.95	3.685	75.10	40.793	92.10	2.326	176.10	70.642
47.65	.955	62.10	3.722	76.10	3.771	93.10	3.159	177.10	4.946
48.95	4.065	63.10	2.853	77.00	.930	94.10	9.635	239.05	.637
50.05	19.797	68.00	9.415	78.00	2.069				

Data File Name : >S6340::D4
Instrument : S Injected : 4/22/92 9:37
Name : 50NG BFB
Misc. : 2UL #29413E

MASS SPECTRUM
05/01/92 10:44:00 + 11:28
SAMPLE: BFB 50NG #287950
CONDS.: INST Y:RTX-VOA 60M,0.32MM,100C(1MIN) TO 180C @20C/MIN
TEMP: 180 DEG. C
#895 TO #897 AVERAGED - #850

DATA: Y3766 #896
CALI: Y3766 #3

BASE M/Z: 95
RIC: 32320.



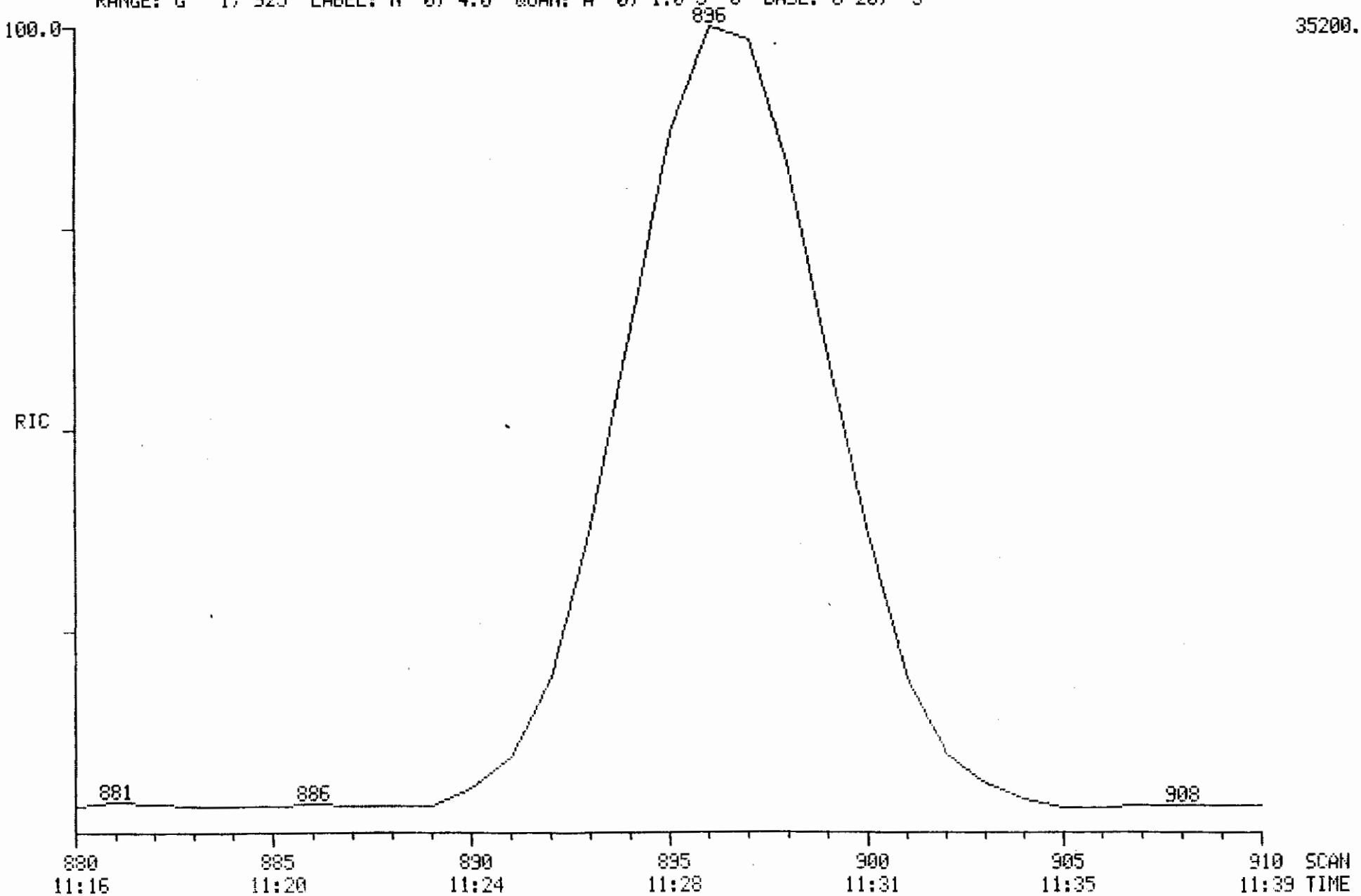
100116

Mass List Data: Y3766 # 896 Base m/z: 95
05/01/92 10:44:00 + 11:28 Cali: Y3766 # 3 RIC: 32320.
Sample: BFB 50NG #28795D
Conds.: INST Y:RTX-VOA 60M,0.32MM,100C(1MIN) TO 180C @20C/MIN
#895 to #897 averaged - #850

36 0.00 0. Minima Min Inten: 0.
220 Maxima # 0

Mass		% RA	Inten.
36?	S	0.48	31.
37?	S	7.84	507.
38?	S	6.03	390.
39?	S	2.94	190.
44?	S	1.13	73.
45?	S	0.88	57.
47?	S	1.47	95.
49?	S	5.03	325.
50?	S	24.66	1594.
51?	S	6.82	441.
56?	S	1.08	70.
57?	S	3.62	234.
61?	S	4.92	318.
62?	S	4.97	321.
63?	S	3.47	224.
68?	S	11.68	755.
69	S	9.61	621.
73	S	3.36	217.
74	S	17.48	1130.
75	S	49.50	3200.
76	S	4.13	267.
79	S	3.50	226.
80	S	0.42	27.
81	S	3.87	250.
87	S	3.48	225.
88	S	3.37	218.
92	S	2.83	183.
93	S	4.41	285.
94	S	11.57	748.
95	S	100.00	6464.
96	S	6.61	427.
119	S	1.41	91.
131	S	0.02	1.
174	S	88.61	5728.
175	S	6.25	404.
176	S	86.51	5592.
177	S	5.65	365.
220	S	0.20	13.

RIC DATA: Y3766 #895 SCANS 880 TO 910
05/01/92 10:44:00 CAL: Y3766 #3
SAMPLE: BFB 50NG #28795D
CONDS.: INST Y:RTX-VOA 60M,0.32MM,100C(1MIN) TO 180C @20C/MIN
RANGE: G 1, 925 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100120

Versar Laboratories INC.

REAGENT BLANK DATA

6850 Versar Center • P. O. Box 1549 • Springfield, Virginia 22151 • Telephone: (703) 750-3000 • 1-800-283-7727

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK42

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: VBLK42

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6342

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

% Moisture: not dec. ____ Date Analyzed: 04/22/92

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK42

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: VBLK42

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6342

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

% Moisture: not dec. ____ Date Analyzed: 04/22/92

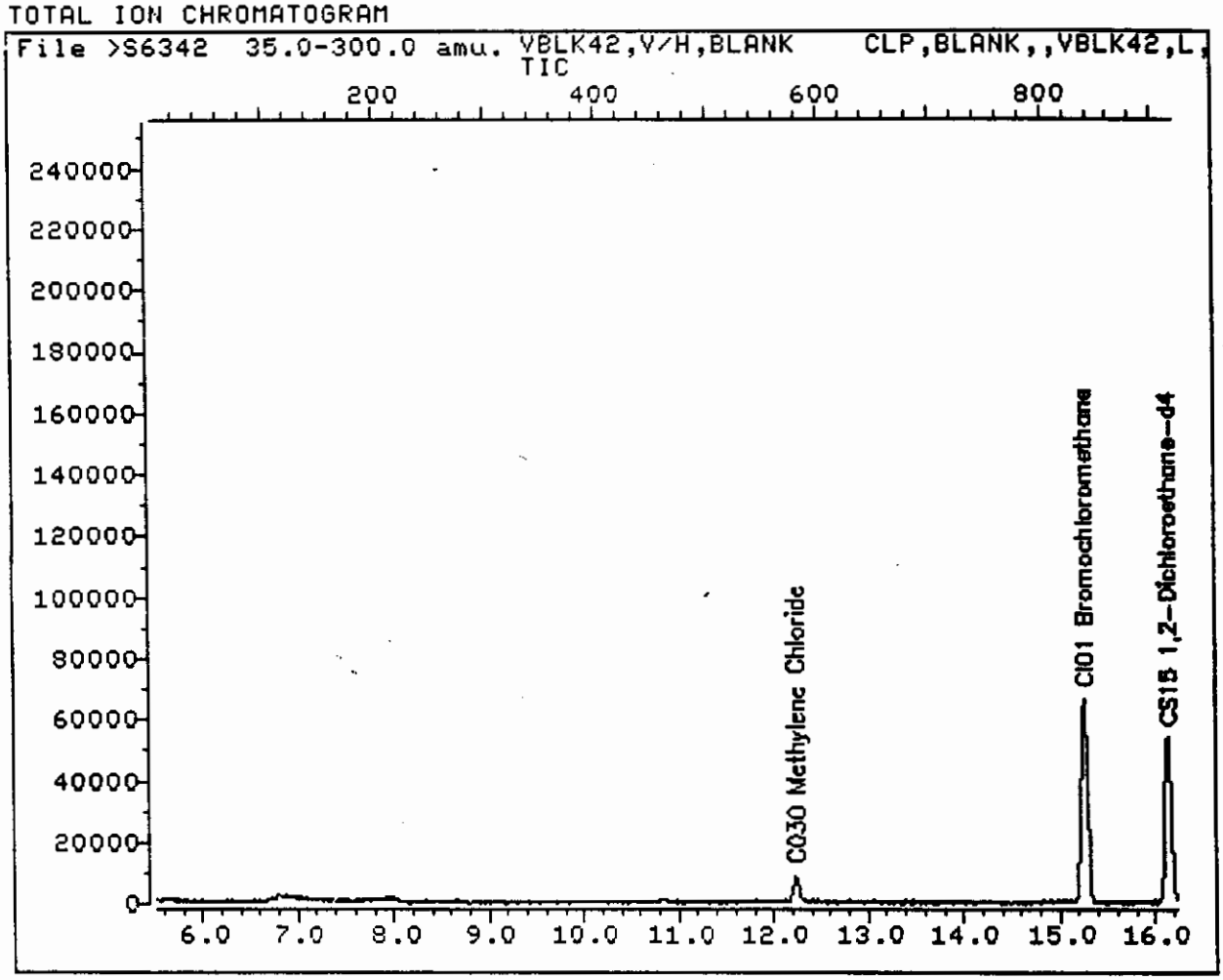
Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

TOTAL ION CHROMATOGRAM



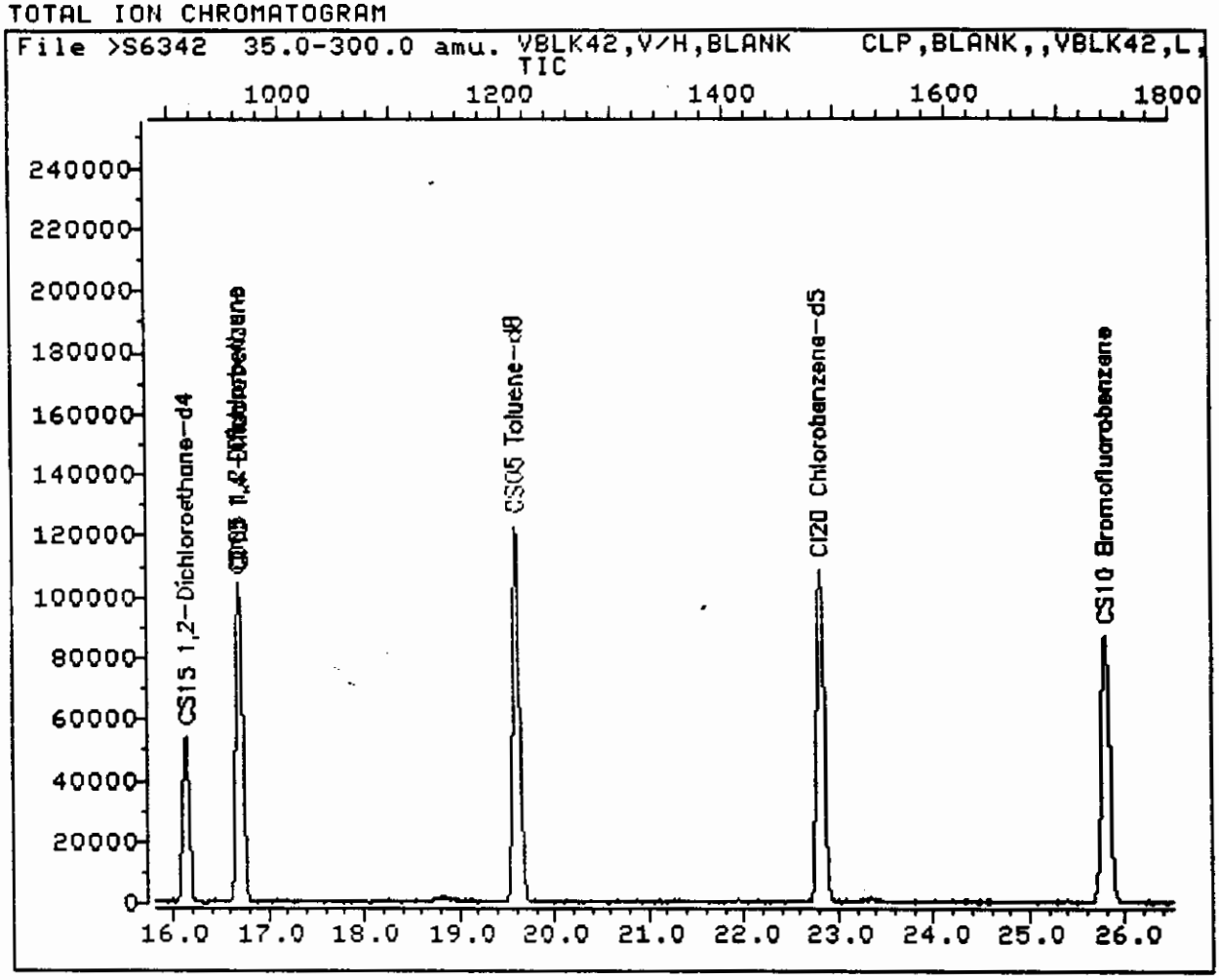
Data File: >S6342::D4 Quant Output File: ^S6342::D1
Name: VBLK42,V/H,BLANK Instrument ID: S
Misc: CLP,BLANK,,VBLK42,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: DIANE
Quant Time : 920422 11:56
Injected at: 920422 11:23

Page 1 of 2

TOTAL ION CHROMATOGRAM



Data File: >S6342::D4 Quant Output File: ^S6342::D1
Name: VBLK42,V/H,BLANK Instrument ID: S
Misc: CLP,BLANK,,VBLK42,L,SOIL,5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: DIANE
Quant Time : 920422 11:56
Injected at: 920422 11:23

QUANT REPORT

Operator ID: DIANE
Output File: ^S6342::D1
Data File: >S6342::D4
Name: VBLK42,V/H,BLANK
Misc: CLP,BLANK,,VBLK42,L,SOIL,5ML

Quant Rev: 7
Quant Time: 920422 11:56
Injected at: 920422 11:23
Dilution Factor: 1.00000
Instrument ID: S

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.26	836	37865	~~50.00~~	~~UG/L~~	84
6)	C030 Methylene Chloride	12.24	577	7615	5.93	UG/L	98
14)	CS15 1,2-Dichloroethane-d4	16.15	912	87038	51.31	UG/L	90
15)	C065 1,2-Dichloroethane	16.69	959	7884	~~4.16~~	~~UG/L~~ NC	22
17)	*CI10 1,4 Difluorobenzene	16.70	960	191130	50.00	UG/L	97
31)	*CI20 Chlorobenzene-d5	22.82	1484	174382	50.00	UG/L	92
37)	CS05 Toluene-d8	19.61	1209	222218	49.75	UG/L	98
43)	CS10 Bromofluorobenzene	25.80	1740	115393	49.44	UG/L	95

* Compound is ISTD

Run compliant
Ready for forms
DW
4-22-92

4/6/92

QA/QC Check Report

Data File: >S6342 Analysis Time: 04/22/92 11:23
Name: VBLK42,V/H,BLANK
Misc: CLP,BLANK,,VBLK42,L,SOIL,5ML

==========

Internal Standard Comparison
Std Data File: >S6341
Analysis Time: 04/22/92 10:15

Internal Standard	Sample Area	Std Area	%
CI01 Bromochloromethane	37865	37211	101.8
CI10 1,4 Difluorobenzene	191130	194243	98.4
CI20 Chlorobenzene-d5	174382	177541	98.2

% = (Sample Area/Std Area)*100
* Area outside limits

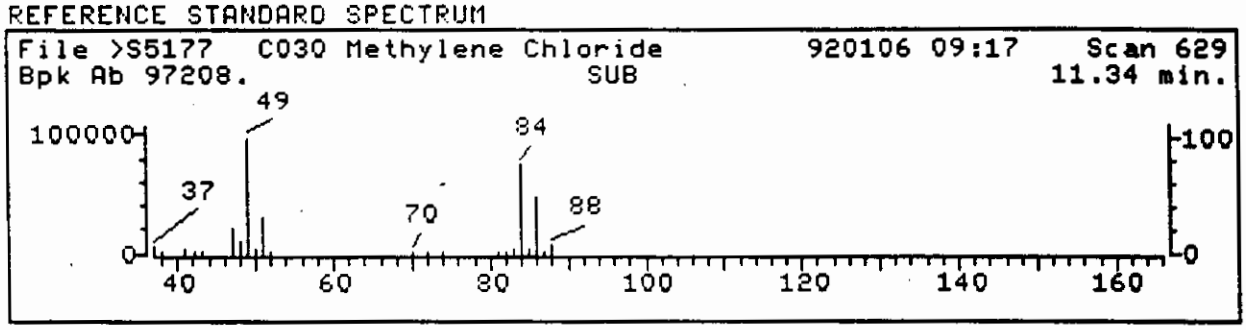
==========

Surrogate Recovery Summary

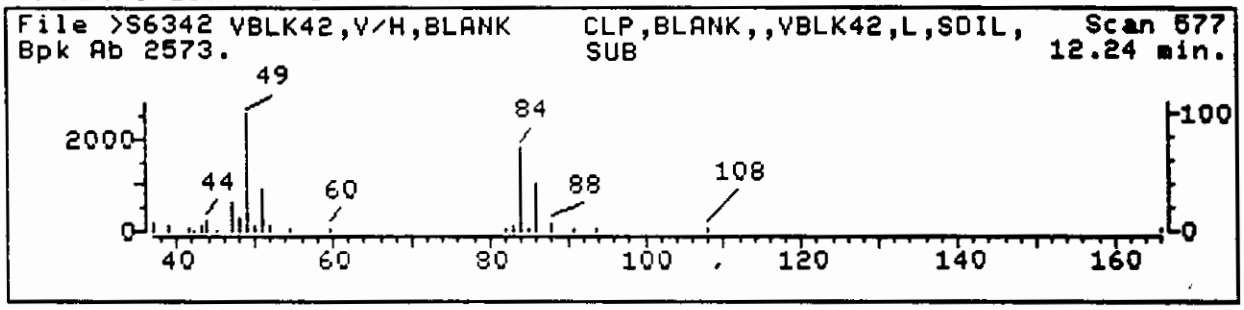
Surrogate Compound	Added	(Corr.) Found	%Rec	QC Limits Lower	Upper
CS15 1,2-Dichloroethane-d4	50	51	102	70	121
CS05 Toluene-d8	50	50	100	81	117
CS10 Bromofluorobenzene	50	49	98	74	121

* Recovery value outside limits

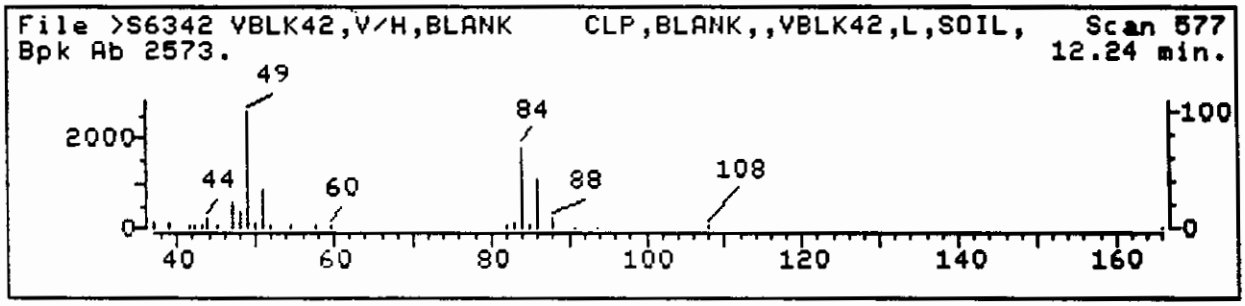
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >S6342::D4 Quant Output File: ^S6342::D1
Name: VBLK42,V/H,BLANK Instrument ID: S
Misc: CLP,BLANK,,VBLK42,L,SOIL,5ML
Quant Time: 920422 11:56 Quant ID File: ID_CVI::QT
Injected at: 920422 11:23 Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

Compound No : 6
Compound Name : C030 Methylene Chloride
Scan Number : 577
Retention Time: 12.24 min.
Quant Ion : 84.0
Area : 7615
Concentration : 5.93 UG/L
q-value : 98

MS data file header from : >S6342::D4

Sample: VBLK42,V/H,BLANK Operator: DIANE REG. GRP. 4/22/92 11:23
Misc : CLP,BLANK,,VBLK42,L,SOIL,5ML
Sys. #: 1 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: S
Method file: METCAV Tuning file: BFBHP2 No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures :	10.	140.	180.	240.	0.
Chromatographic times, min. :	2.0	0.0	30.0	8.0	0.0
Chromatographic rate, deg/min:	10.0	5.0	30.0	.2	0.0

No peaks found.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	286287.	15.26	5.52 - 15.98
2	50.0	485170.	16.70	15.98 - 19.76
3	50.0	579173.	22.82	19.76 - 26.51

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

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

12:08 PM WED., 22 APR., 1992

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK73

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: VBLK73

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y3773

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

% Moisture: not dec. _____ Date Analyzed: 05/01/92

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK73

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: VBLK73

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y3773

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

% Moisture: not dec. _____ Date Analyzed: 05/01/92

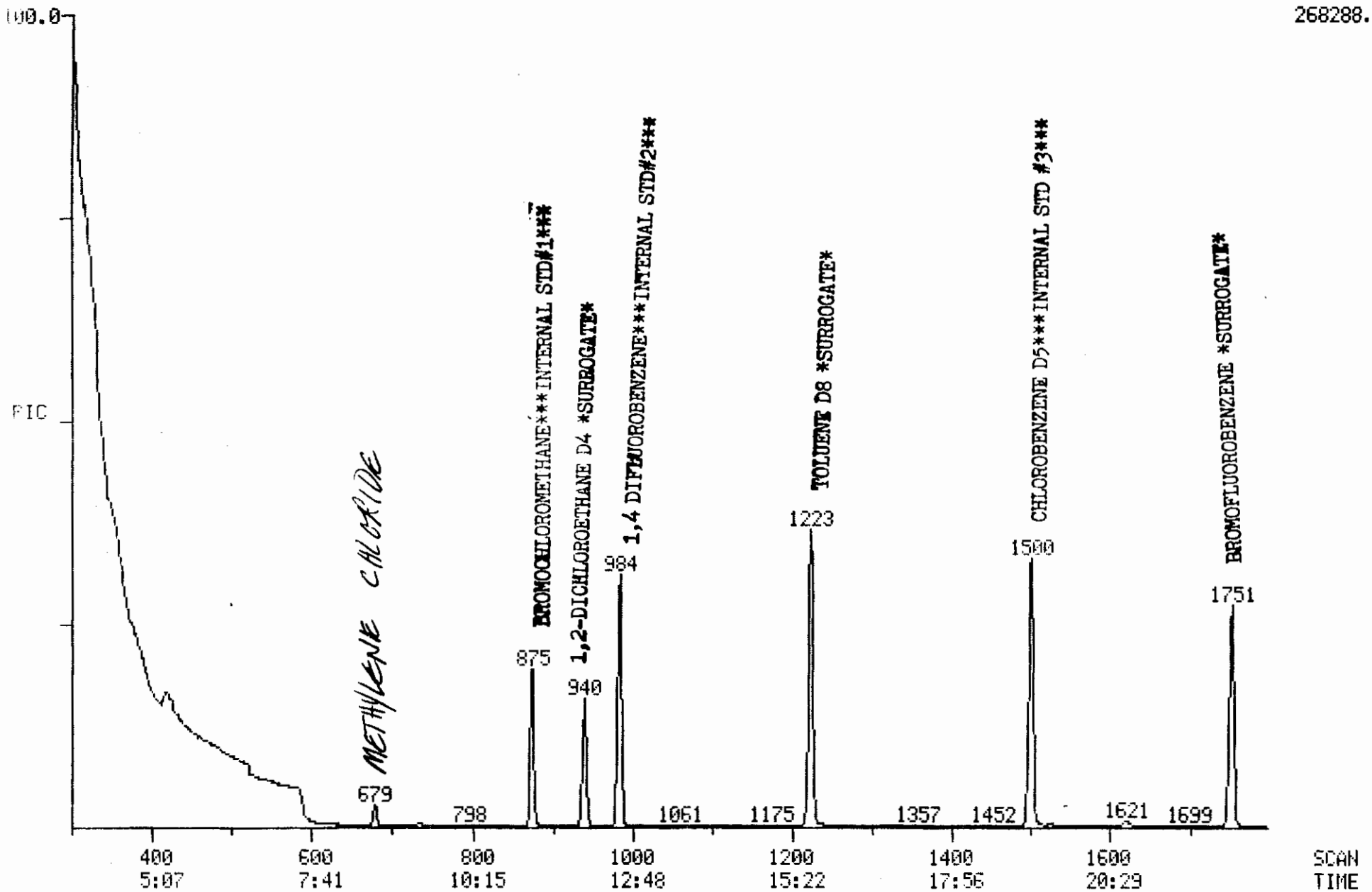
Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

RIC DATA: Y3773 #1 SCANS 300 TO 1796
05/01/92 15:28:00 CALI: Y3773 #3
SAMPLE: CLP,BLANK,,VBLK73,L,S,VBLK73,V/H,BLANK,5ML,,
CONDS.: CAP/.32,Y3772,Y3766,Y3773,,
RANGE: G 1,1796 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100132

Quantitation Report File: Y3772

Data: Y3773.TI
05/01/92 15:28:00
Sample: CLP,BLANK,,VBLK73,L,S,VBLK73,V/H,BLANK,5ML,,
Conds.: CAP/.32,Y3772,Y3766,Y3773,,
Formula: Instrument: Y Weight: 5.000
Submitted by: VERSAR Analyst: JFH Acct. No.: BLANK

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

No	Name
1	CI01 BROMOCHLOROMETHANE****INTERNAL STANDARD#1 ****
2	CI10 1,4-DIFLUOROBENZENE****INTERNAL STANDARD#2 ****
3	CI20 CHLOROBENZENE-D5****INTERNAL STANDARD#3 ****
4	CS15 1,2-DICHLOROETHANE-D4***SURROGATE#1***
5	CS05 TOLUENE-D8***SURROGATE#2***
6	CS10 4-BROMOFLUOROBENZENE***SURROGATE#3***
7	C010 CHLOROMETHANE
8	C015 BROMOMETHANE
9	C020 VINYL CHLORIDE
10	C025 CHLOROETHANE
11	C030 METHYLENE CHLORIDE
12	C035 ACETONE
13	C040 CARBON DISULFIDE
14	C045 1,1-DICHLOROETHENE
15	C050 1,1-DICHLOROETHANE
16	C060 CHLOROFORM
17	C115 1,1,1-TRICHLOROETHANE
18	C110 2-BUTANONE
19	C120 CARBON TETRACHLORIDE
20	C125 VINYL ACETATE
21	C130 BROMODICHLOROMETHANE
22	C140 1,2-DICHLOROPROPANE
23	C145 CIS-1,3,DICHLOROPROPENE
24	C150 TRICHLOROETHENE
25	C155 DIBROMOCHLOROMETHANE
26	C160 1,1,2-TRICHLOROETHANE
27	C165 BENZENE
28	C170 TRANS-1,3-DICHLOROPROPENE
29	C175 2-CHLOROETHYLVINYLETHER
30	C180 BROMOFORM
31	C210 2-HEXANONE
32	C205 4-METHYL-2-PENTANONE
33	C220 TETRACHLOROETHENE
34	C225 1,1,2,2-TETRACHLOROETHANE
35	C230 TOLUENE
36	C235 CHLOROBENZENE
37	C240 ETHYLBENZENE
38	C245 STYRENE
39	C250 O/P XYLENE
40	C065 1,2-DICHLOROETHANE
41	C251 M-XYLENE
42	C054 TRANS-1,2,DICHLOROETHENE
43	C055 CIS-1,2-DICHLOROETHENE

Run complete
Ready for review
JFH
5-1-92

5/6/92

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	128	874	11:11	1	1.000	A BB	40590	50.000 UG/L*	16.46
2	114	984	12:36	2	1.000	A BB	207068	50.000 UG/L*	16.46
3	117	1500	19:12	3	1.000	A BB	190266	50.000 UG/L*	16.46
4	65	940	12:02	1	1.076	A BB	79556.	47.753 UG/L%	15.72 96
5	98	1223	15:40	3	0.815	A BB	213584.	50.746 UG/L%	16.71 101
6	95	1751	22:25	3	1.167	A BB	88446.	46.007 UG/L%	15.15 92
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	84	679	8:42	1	0.777	A BB	6747.	5.555 UG/L	1.83
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	91	1237	15:50	3	0.825	A BB	829.	~~0.186 UG/L~~	0.06
36	112	1507	19:18	3	1.005	A BB	1074.	~~0.317 UG/L~~	0.10
37	106	1512	19:22	3	1.008	A BB	1028.	~~0.635 UG/L~~	0.21
38	104	1623	20:47	3	1.082	A BB	3033.	~~0.801 UG/L~~	0.26
39	106	1620	20:45	3	1.080	A BB	2040.	~~0.890 UG/L~~	0.29
40	NOT FOUND								
41	106	1526	19:32	3	1.017	A BB	1926.	~~0.878 UG/L~~	0.29
42	NOT FOUND								
43	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	11:08	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	12:31	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	19:02	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	11:57	1.01	1.074	1.00	47.75	50.00	1.960	2.052	0.96
5	15:31	1.01	0.816	1.00	50.75	50.00	1.123	1.106	1.01
6	22:12	1.01	1.167	1.00	46.01	50.00	0.465	0.505	0.92
7	5:01		0.451						
8	6:22		0.572						
9	5:21		0.481						
10	6:31		0.586						
11	8:39	1.01	0.777	1.00	5.56	50.00	0.166	1.496	0.11

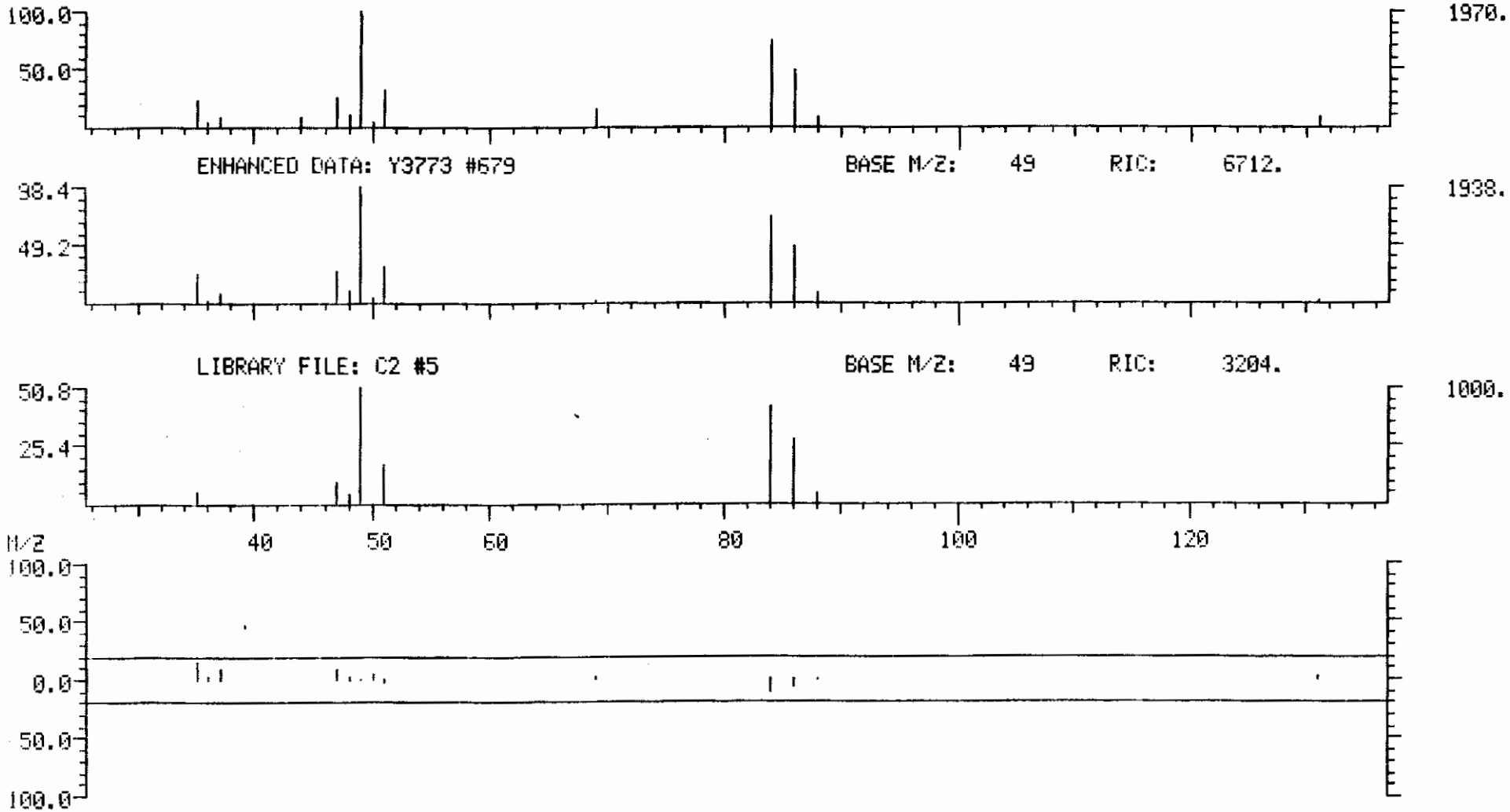
137773

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	7:39		0.688						
13	8:54		0.800						
14	8:00		0.719						
15	9:42		0.872						
16	10:51		0.975						
17	11:33		0.923						
18	10:10		0.914						
19	12:01		0.961						
20	9:32		0.763						
21	13:58		1.117						
22	13:32		1.082						
23	14:53		1.190						
24	13:16		1.060						
25	17:36		1.406						
26	16:16		1.300						
27	12:15		0.980						
28	15:50		1.266						
29	14:14		1.138						
30	21:38		1.729						
31	16:04		0.845						
32	14:20		0.754						
33	17:13		0.904						
34	21:50		1.147						
35	15:42	1.01	0.825	1.00	0.19	50.00	0.004	1.169	0.00
36	19:08	1.01	1.005	1.00	0.32	50.00	0.006	0.890	0.01
37	19:10	1.01	1.007	1.00	0.63	50.00	0.005	0.426	0.01
38	20:35	1.01	1.082	1.00	0.80	50.00	0.016	0.995	0.02
39	20:33	1.01	1.080	1.00	0.89	50.00	0.011	0.602	0.02
40	12:06		1.087						
41	19:22	1.01	1.017	1.00	0.88	50.00	0.010	0.576	0.02
42	9:08		0.820						
43	10:36		0.953						

13773

DATA FILE: Y3773 #679 LIBRARY FILE: C2 #5
TARGET COMPOUND COMPARISON CALI: Y3773 #3
COMPOUND: C030 METHYLENE CHLORIDE

RAW DATA: Y3773 #679 BASE M/Z: 49 RIC: 7664.
05/01/92 15:28



100136

Versar Laboratories INC

MATRIX SPIKE DATA

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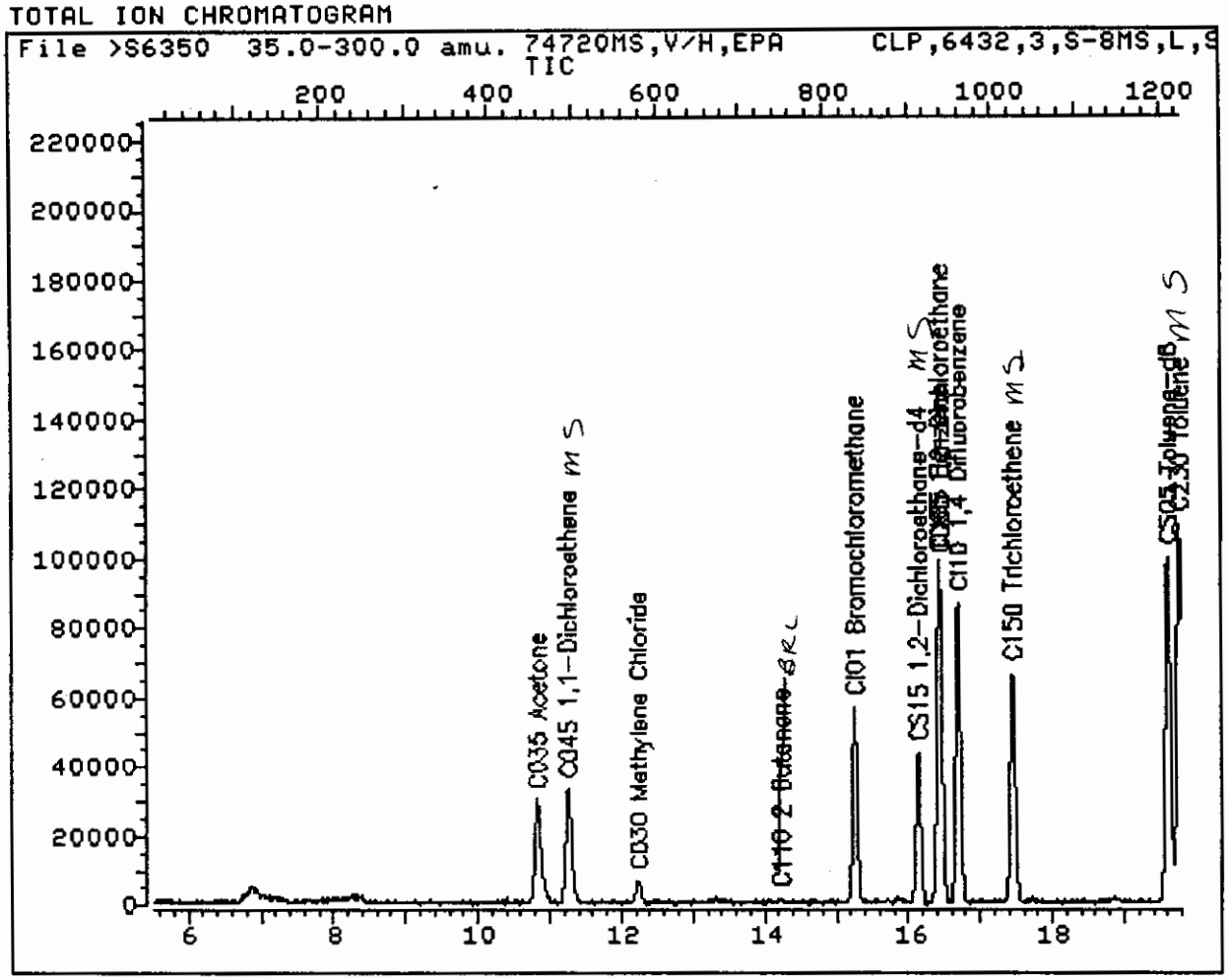
TOTAL ION CHROMATOGRAM



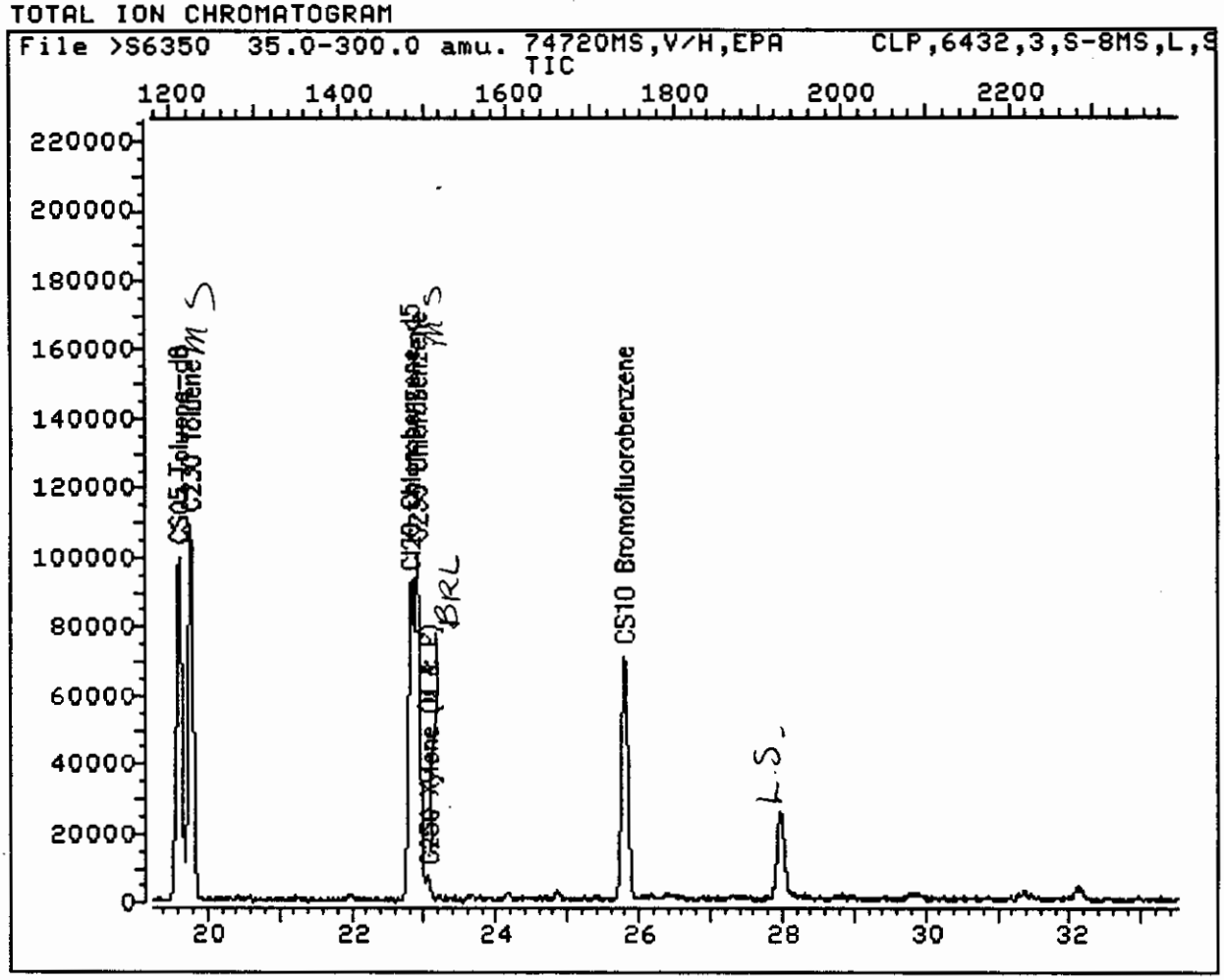
Data File: >S6350::D4 Quant Output File: ^S6350::D1
Name: 74720MS,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8MS,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 18:45
Injected at: 920422 18:06

Page 1 of 2

TOTAL ION CHROMATOGRAM



Data File: >S6350::D4 Quant Output File: ^S6350::D1
Name: 74720MS,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8MS,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 18:45
Injected at: 920422 18:06

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8MS

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74720MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6350

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 Date Analyzed: 04/22/92

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene chloride	6	BJ
67-64-1	Acetone	170	
75-15-0	Carbon disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
108-05-4	Vinyl acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total xylenes	6	U

QUANT REPORT

erator ID: VLI_GCMS Quant Rev: 7 Quant Time: 920422 18:45
utput File: ^S6350::D1 Injected at: 920422 18:06
Data File: >S6350::D4 Dilution Factor: 1.00000
Name: 74720MS,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8MS,L,SOIL,5G/5ML

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.26	836	33023	50.00	UG/L	89
6)	C030 Methylene Chloride	12.24	577	5826	5.20	UG/L	91
7)	C035 Acetone	10.83	456	122709	133.71	UG/L	94
9)	C045 1,1-Dichloroethene	11.26	493	34778	MS 42.10	UG/L	91
14)	CS15 1,2-Dichloroethane-d4	16.15	912	70660	47.76	UG/L	88
15)	C065 1,2-Dichloroethane	16.45	938	2032	~~1.23 UG~~/L		99
16)	C110 2 Butanone	14.22	747	460	~~2.11 UG~~/L	BRL	85
17)	*CI10 1,4 Difluorobenzene	16.71	960	157365	50.00	UG/L	98
25)	C150 Trichloroethene	17.45	1024	55171	MS 53.89	UG/L	95
28)	C165 Benzene	16.44	937	202531	MS 52.56	UG/L	100
31)	*CI20 Chlorobenzene-d5	22.82	1484	142440	50.00	UG/L	94
36)	C230 Toluene	19.78	1223	122695	MS 54.22	UG/L	95
7)	CS05 Toluene-d8	19.61	1209	185002	50.71	UG/L	98
38)	C235 Chlorobenzene	22.91	1492	149483	MS 55.23	UG/L	89
41)	C250 Xylene (M & P)	23.07	1505	4593	~~2.59 UG/L~~	BRL	86
43)	CS10 Bromofluorobenzene	25.80	1739	90093	47.26	UG/L	95

* Compound is ISTD

Run compliant
Ready for forms
DW
4-23-92

DB 5/6/92

QA/QC Check Report

ta File: >S6350 Analysis Time: 04/22/92 18:06
Name: 74720MS,V/H,EPA
Misc: CLP,6432,3,S-8MS,L,SOIL,5G/5ML

==========

Internal Standard Comparison
Std Data File: >S6341
Analysis Time: 04/22/92 10:15

Internal Standard	Sample Area	Std Area	%
CI01 Bromochloromethane	33023	37211	88.7
CI10 1,4 Difluorobenzene	157365	194243	81.0
CI20 Chlorobenzene-d5	142440	177541	80.2

% = (Sample Area/Std Area)*100
* Area outside limits

==========

Surrogate Recovery Summary

Surrogate Compound	Added	(Corr.) Found	%Rec	QC Limits Lower	Upper
15 1,2-Dichloroethane-d4	50	48	96	70	121
CS05 Toluene-d8	50	51	102	81	117
CS10 Bromofluorobenzene	50	47	94	74	121

* Recovery value outside limits

Versar Laboratories INC

MATRIX SPIKE DUPLICATE DATA

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S-8MSD

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74720MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6351

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 Date Analyzed: 04/22/92

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

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S-8MSD

Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: R09042 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID: 74720MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S6351

Level: (low/med) LOW Date Received: 04/14/92

% Moisture: not dec. 19 Date Analyzed: 04/22/92

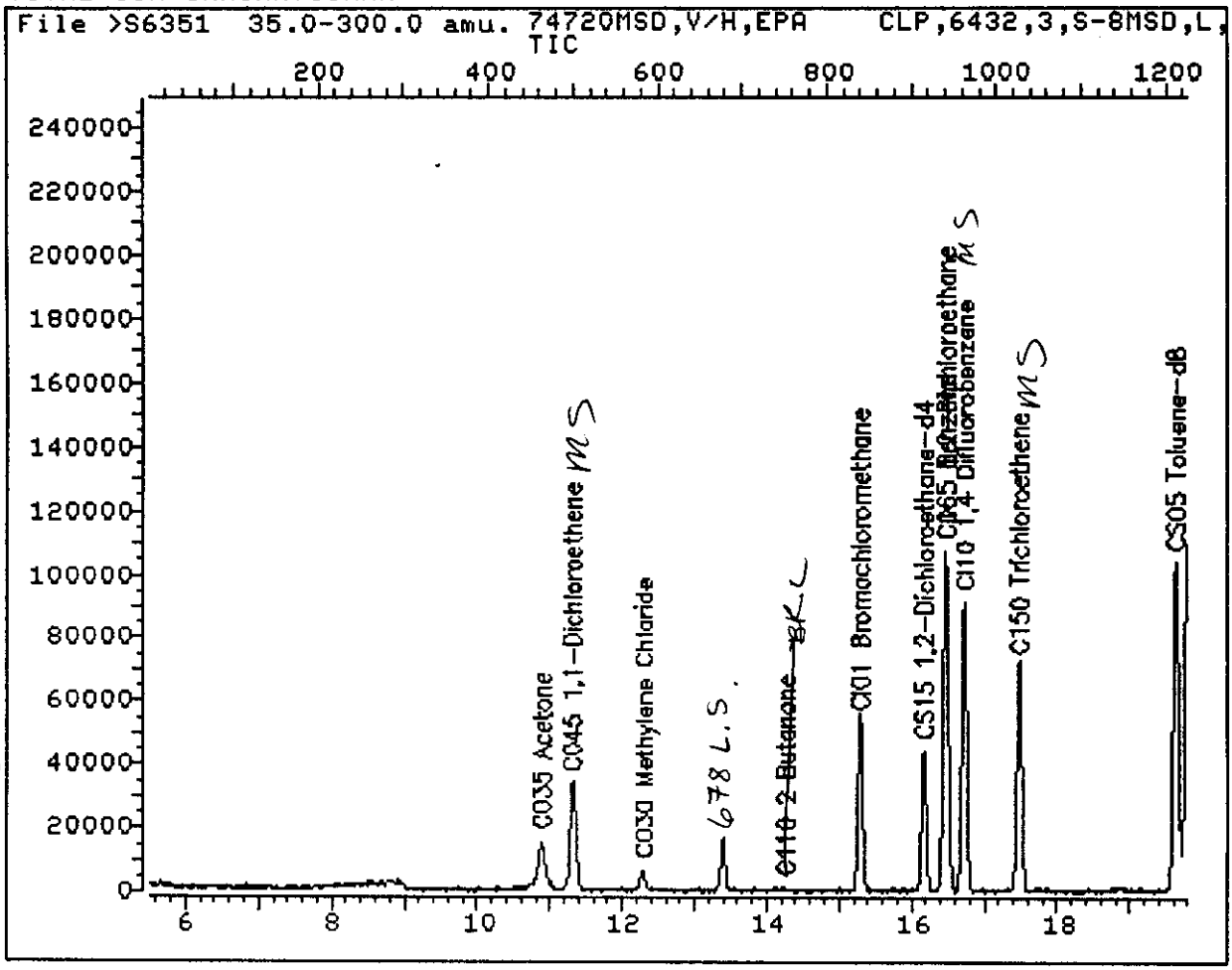
Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 64197	ACETIC ACID	13.41	19	JN
2.	UNKNOWN HYDROCARBON	28.01	11	JN

TOTAL ION CHROMATOGRAM

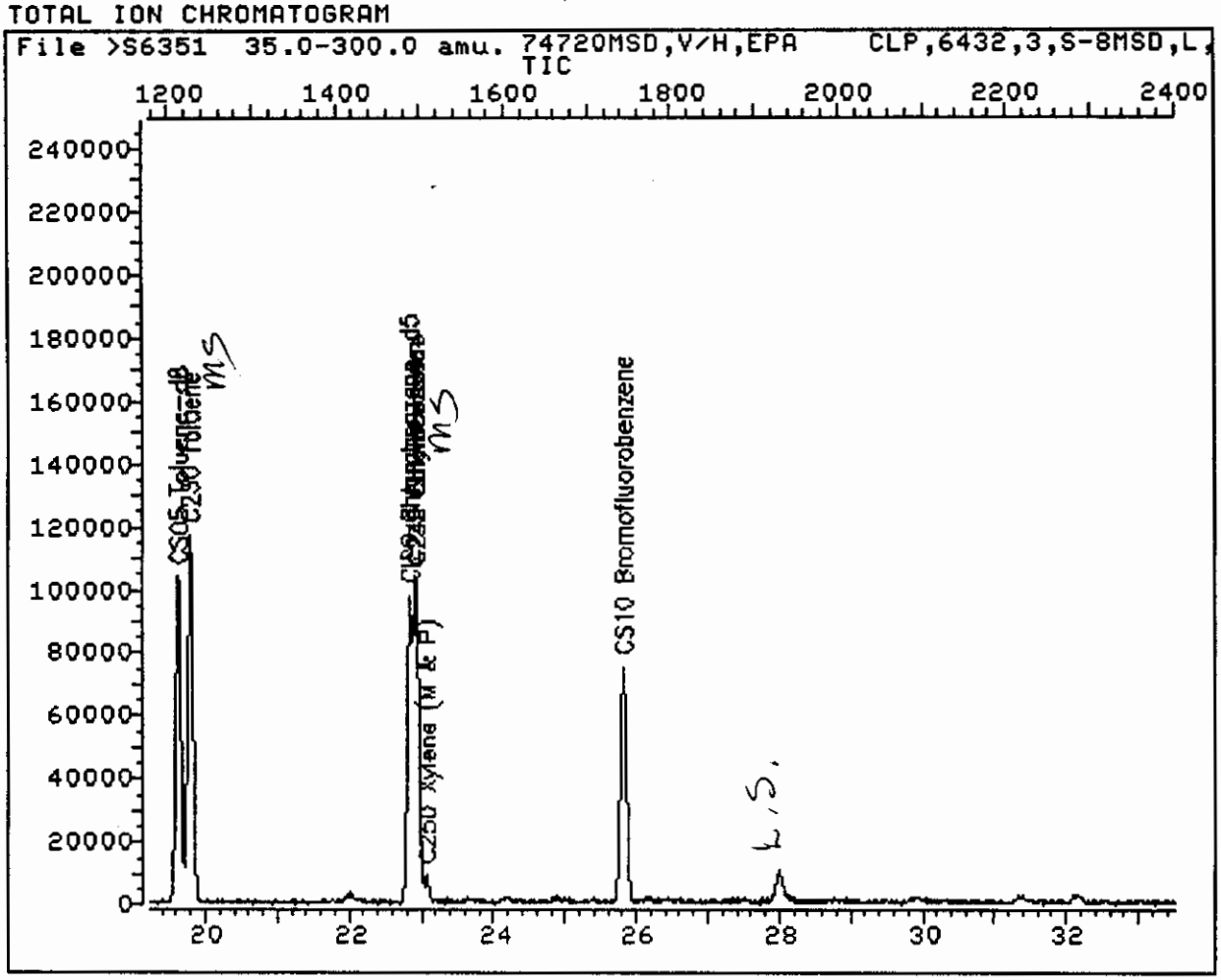


Data File: >S6351::D4 Quant Output File: ^S6351::D1
Name: 74720MSD,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8MSD,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 19:30
Injected at: 920422 18:51

TOTAL ION CHROMATOGRAM



Data File: >S6351::D4 Quant Output File: ^S6351::D1
Name: 74720MSD,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8MSD,L,SOIL,5G/5ML

Id File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

Operator ID: VLI_GCMS
Quant Time : 920422 19:30
Injected at: 920422 18:51

QUANT REPORT

erator ID: VLI_GCMS Quant Rev: 7 Quant Time: 920422 19:30
utput File: ^S6351::D1 Injected at: 920422 18:51
Data File: >S6351::D4 Dilution Factor: 1.00000
Name: 74720MSD,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8MSD,L,SOIL,5G/5ML

ID File: ID_CVI::QT
Title: IFB
Last Calibration: 920421 10:37 Last Qcal Time: 920422 10:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI01 Bromochloromethane	15.28	839	32932	50.00	UG/L	95
6)	C030 Methylene Chloride	12.30	583	6150	5.50	UG/L	93
7)	C035 Acetone	10.89	462	75960	83.00	UG/L	98
9)	C045 1,1-Dichloroethene	11.31	498	36535	MS 44.35	UG/L	92
14)	CS15 1,2-Dichloroethane-d4	16.17	915	72722	49.29	UG/L	92
15)	C065 1,2-Dichloroethane	16.47	941	1981	~~1.20 UG/L~~	BRL	85
16)	C110 2 Butanone	14.26	751	319	~~1.47 UG/L~~	BRL	76
17)	*CI10 1,4 Difluorobenzene	16.73	963	168300	50.00	UG/L	96
25)	C150 Trichloroethene	17.48	1027	59894	MS 54.70	UG/L	94
28)	C165 Benzene	16.47	941	215861	MS 52.38	UG/L	100
31)	*CI20 Chlorobenzene-d5	22.84	1487	151210	50.00	UG/L	94
36)	C230 Toluene	19.80	1226	127217	MS 52.95	UG/L	91
7)	CS05 Toluene-d8	19.63	1212	191777	49.51	UG/L	97
38)	C235 Chlorobenzene	22.94	1495	155614	MS 54.16	UG/L	91
39)	C240 Ethylbenzene	22.93	1494	1550	~~1.08 UG~~/L	BRL	73
41)	C250 Xylene (M & P)	23.08	1507	6238	3.31	UG/L	91
43)	CS10 Bromofluorobenzene	25.82	1742	92199	45.55	UG/L	93

* Compound is ISTD

Run compliant
Ready for forms
DW
4-23-92

5/6/92

QA/QC Check Report

ta File: >S6351 Analysis Time: 04/22/92 18:51
ame: 74720MSD,V/H,EPA
Misc: CLP,6432,3,S-8MSD,L,SOIL,5G/5ML

==========

Internal Standard Comparison
Std Data File: >S6341
Analysis Time: 04/22/92 10:15

Internal Standard	Sample Area	Std Area	%
CI01 Bromochloromethane	32932	37211	88.5
CI10 1,4 Difluorobenzene	168300	194243	86.6
CI20 Chlorobenzene-d5	151210	177541	85.2

% = (Sample Area/Std Area)*100
* Area outside limits

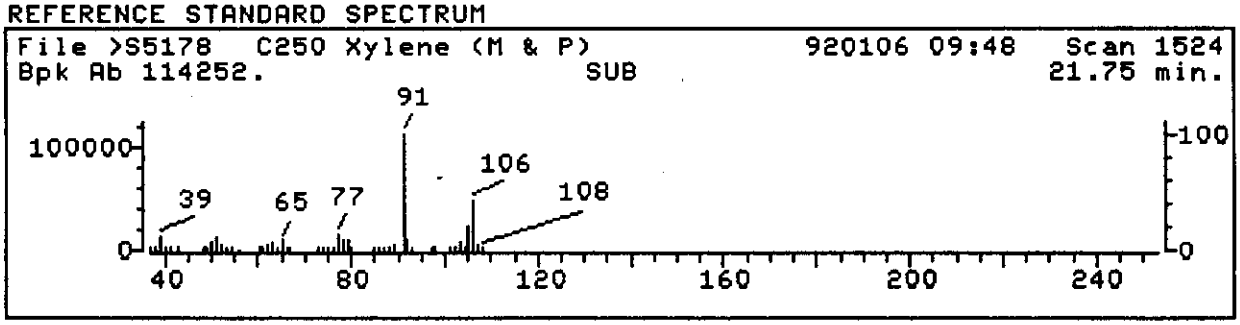
==========

Surrogate Recovery Summary

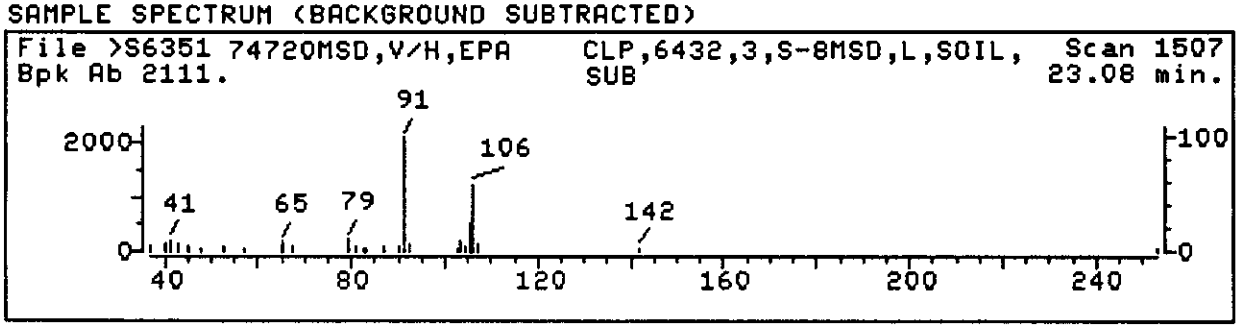
Surrogate Compound	Added	(Corr.) Found	%Rec	QC Limits Lower	Upper
15 1,2-Dichloroethane-d4	50	49	98	70	121
CS05 Toluene-d8	50	50	100	81	117
CS10 Bromofluorobenzene	50	46	92	74	121

* Recovery value outside limits

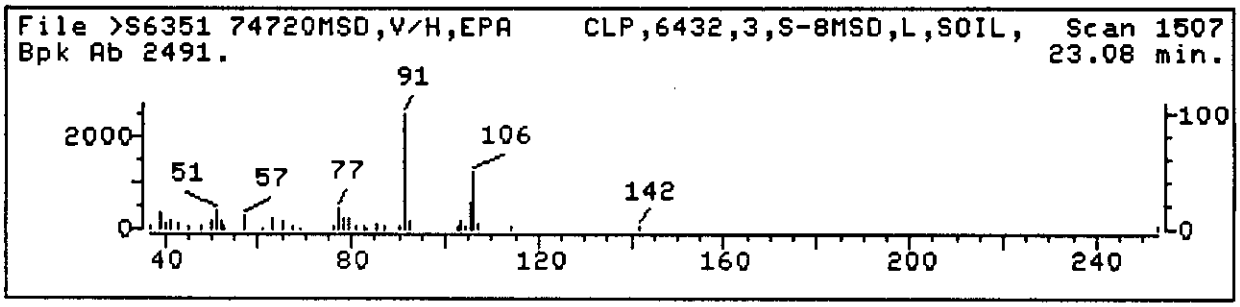
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >S6351::D4 Quant Output File: ^S6351::D1
Name: 74720MSD,V/H,EPA Instrument ID: S
Misc: CLP,6432,3,S-8MSD,L,SOIL,5G/5ML
Quant Time: 920422 19:30 Quant ID File: ID_CVI::QT
Injected at: 920422 18:51 Last Calibration: 920421 10:37
Last Qcal Time: 920422 10:15

Compound No : 41
Compound Name : C250 Xylene (M & P)
Scan Number : 1507
Retention Time: 23.08 min.
Quant Ion : 106.0
Area : 6238
Concentration : 3.31 UG/L
q-value : 91

MS data file header from : >S6351::D4

Sample: 74720MSD,V/H,EPA Operator: VLI_GCMS REG. GRP. 4/22/92 18:51
Misc : CLP,6432,3,S-8MSD,L,SOIL,5G/5ML
Sys. #: 1 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: S
Method file: METCAV Tuning file: BFBHP2 No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures :	10.	140.	180.	240.	0.
Chromatographic times, min. :	2.0	0.0	30.0	8.0	0.0
Chromatographic rate, deg/min:	10.0	5.0	30.0	.2	0.0

>S6351 74720MSD,V/H,EPA CLP,6432,3,S-8MSD,L,SOIL,5G/5ML
35.0| 300.0 CLP TIC
Upslope: .2000 Area Reject: 24362. Max Peaks: 2 Bunch: -1 Valley >100 %
Dnslope: 0.0000 Results File IS6351 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	13.41	666	678	686	16122	81407	73357	89.29	47.172
2	28.00	1916	1929	1940	10982	92519	82152	100.00	52.828

Sum of corrected areas: 155509.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	243619.	15.28	5.51 - 16.01
2	50.0	427202.	16.73	16.01 - 19.79
3	50.0	465270.	22.84	19.79 - 33.52

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

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

7:50 PM WED., 22 APR., 1992

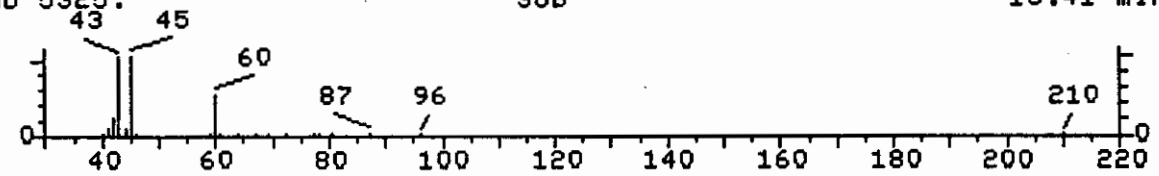
Instrument ID: S Analyzed on: 4/22/92 18:51
Result 1 in PBM results file: LS6351
Retention Time: 13.41 Area: 73357 Tentative Conc: 15.00
The unknown area is 30.11% of the nearest internal standard

1. Acetic acid 60 $C_2H_4O_2$
2. Hydrazine, ethyl- 60 $C_2H_8N_2$
3. Hydrazine, 1,2-dimethyl- 60 $C_2H_8N_2$

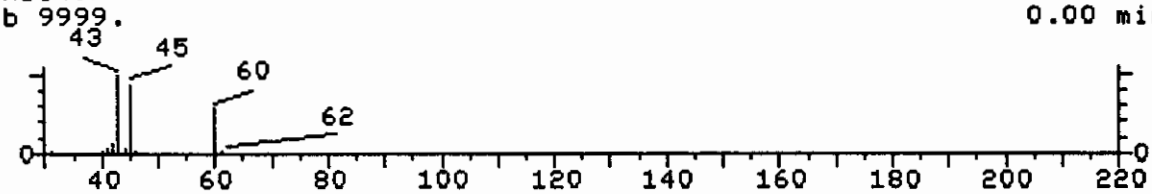
Sample file: >S6351 Spectrum #: 678
Search speed: 1 Tilting option: N No. of ion ranges searched: 44

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	81*	64197	1999	NBS49K	40	50	0	0	88	8	53	44
2.	33*	624806	2003	NBS49K	40	48	2	0	100	36	10	19
3.	20*	540738	2002	NBS49K	25	70	2	0	50	55	5	14

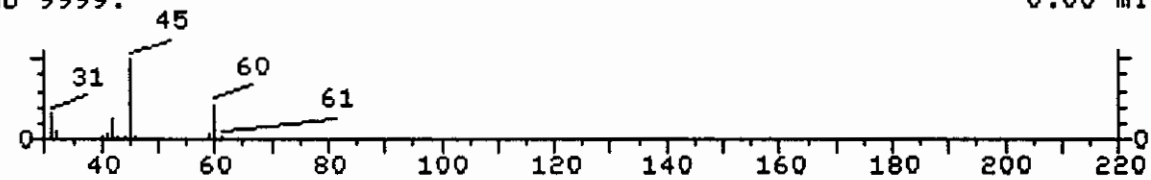
File >S6351 74720MSD,V/H,EPA CLP,6432,3,S-8MSD,L,SOIL,5G/5 Scan 678
Bpk Ab 5325. SUB 13.41 min.



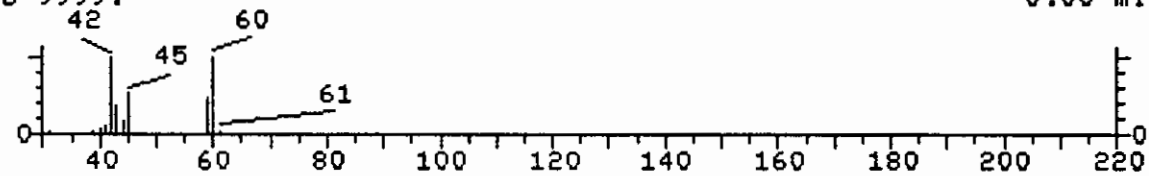
File NBS49K Acetic acid Scan 113
Bpk Ab 9999. 0.00 min.



File NBS49K Hydrazine, ethyl- Scan 118
Bpk Ab 9999. 0.00 min.



File NBS49K Hydrazine, 1,2-dimethyl- Scan 116
Bpk Ab 9999. 0.00 min.



Instrument ID: S Analyzed on: 4/22/92 18:51
Result 2 in PBM results file: LS6351
Retention Time: 28.00 Area: 82152 Tentative Conc: 9.00
The unknown area is 17.66% of the nearest internal standard

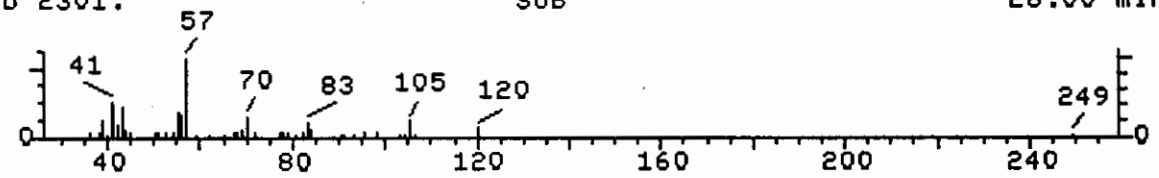
1.	1-Pentene, 4,4-dimethyl-	98	C7H14
2.	Butane, 1-chloro-2-methyl-	106	C5H11Cl
3.	1-Hexanol, 2-ethyl-	130	C8H18O
4.	Ethanedioic acid, dibutyl ester	202	C10H18O4
5.	1-Pentanol, 2-ethyl-4-methyl-	130	C8H18O

zink
H-C

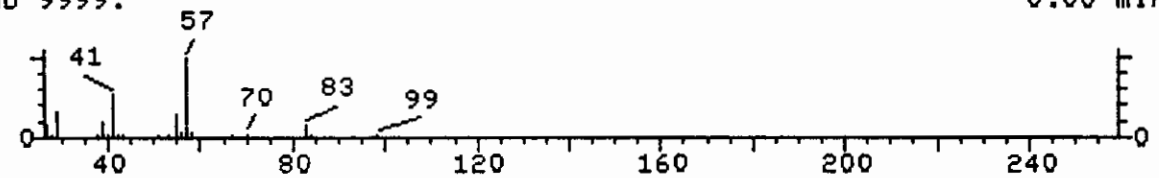
Sample file: >S6351 Spectrum #: 1929
Search speed: 1 Tilting option: N No. of ion ranges searched: 45

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	35*	762629	1234	NBS49K	33	43	0	0	85	50	11	30
2.	31	616137	1242	NBS49K	31	58	0	0	81	40	10	17
3.	29	104767	3969	NBS49K	31	63	0	0	66	37	10	15
4.	29	2050604	1293	NBS49K	30	29	0	0	75	42	8	17
5.	26	106672	1264	NBS49K	25	65	0	0	67	38	10	12

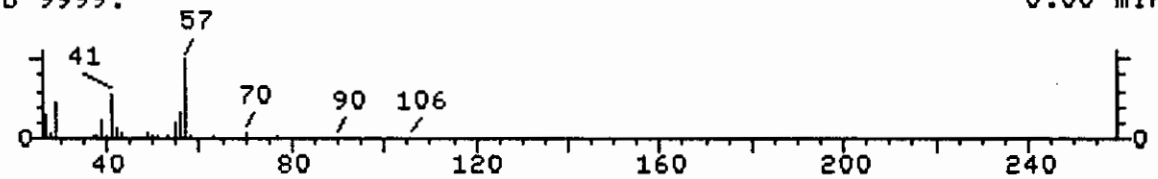
File >S6351 74720MSD,V/H,EPA CLP,6432,3,S-8MSD,L,SOIL,5G/5 Scan 1929
Bpk Ab 2301. SUB 28.00 min.



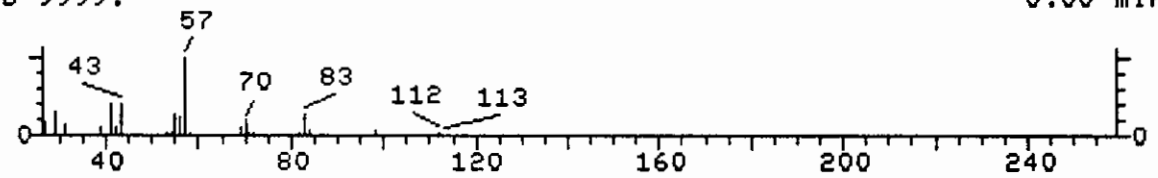
File NBS49K 1-Pentene, 4,4-dimethyl- Scan 1188
Bpk Ab 9999. 0.00 min.



File NBS49K Butane, 1-chloro-2-methyl- Scan 1790
Bpk Ab 9999. 0.00 min.



File NBS49K 1-Hexanol, 2-ethyl- Scan 4748
Bpk Ab 9999. 0.00 min.



VI. SAMPLE PREPARATION PACKAGE

6850 Versar Center • P. O. Box 1549 • Springfield. Virginia 22151 • Telephone: (703) 750-3000 • 1-800-283-7727

XBNA — 48				
74718 A QC	S-8	SOIL	A-19	BNAL
74719 A	S-10	SOIL	A-19	BNAL
BNAL — 48				
74718 A QC	S-8	SOIL	A-19	XBNA
74719 A	S-10	SOIL	A-19	XBNA
VOAL — 48				
74720 B QC	S-8	SOIL	VOA-6	
74721 A	S-10	SOIL	VOA-6	

= Quality Control; FDUP = Field Duplicate; FLT = Filtered; BKN = Broken; EMP

Continued ->

100158

Versa. Laboratories INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	INDUSTRIAL HYGIENE SAMPLE
R09042 PRC 45004.020 BVWST	O'BRIEN Breakwater Corrective Measure Implementation	Y (N)

SAMPLERS: (Signature) Mark D. Maio (Printed) Mark DeMaio (510) 246-8010

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Lead	Priority Pollutant Metals	VOC's	SVOC's (BNA)					REMARKS
S-1	4/9	4:04		X	S-1	1	X								
S-2	4/9	4:00pm		X	S-2	1	X								
S-3	4/9	3:55		X	S-3	1	X								
~~F108~~ MD S-4	4/9	3:50pm		X	S-4	1	X								~~F108~~
S-5	4/10	3:50pm		X	S-5	1	X								
S-6	4/10	3:55 PM		X	S-6	1	X								
S-7	4/10	6:51		X	S-7	1	X								
S-8	4/10	5:15		X	S-8	4		X 1	X 2	X 1					2 VOA Samples labeled S-[illegible] and S-[illegible]
S-9	4/10	3:40pm		X	S-9	1	X								
S-10	4/10	7:45		X	S-10	3		1	1	1					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Mark D. Maio	4/13/92 4:00pm	Fedex Airbill # 2184815791			
(Printed) Mark De Maio		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Debbie Maxwell	4/14/92 12:10	* TOOK 2 VOA's due to difficulty in obtaining headfree sample - lab to decide which sample to use
(Printed)		(Printed) Debbie Maxwell		

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

Versar Laboratories INC.

SAMPLE RECEIVING CHECKLIST
SHIPMENT CONDITION INSPECTION UPON ARRIVAL

CONTROL NO.: 6432 DATE RECEIVED: 4-14-92
JOB CODE: DATE INSPECTED: 4
INSPECTED BY: DM (Print Name) TIME INSPECTED: 12:10

PAPERWORK:	YES	NO	INTACT	BROKEN
Hand Delivered		✓		
Airbill	✓			
Cooler Custody Seals	✓		✓	
Bottle Custody Seals	✓		✓	
Chain of Custody	✓			
Traffic Reports		✓		
Sample Tags		✓		
Tags Listed on Chain of Custody		✓		

SAMPLE CONDITION:	COOL	AMBIENT	WARM	HOT	DEGREES C
Cooler Temperature	✓				10°

	YES	NO	
Ice	✓		MELTED
Bottles Broken		✓	
Bottles Leaking		✓	

	OK	Not OK	Not Checked	Not Applicable
Preservation pH				✓ *

SHIPMENT CONDITION:	OK	Not OK	Major	Minor
	✓			

PROBLEMS AND COMMENTS:

D Maxwell
Signature

4/14/92
Date

Date	Time	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	

100160

VERSAR LABORATORIES INC.
GC/MS SECTION
Analysis Log

Control #: 6432
Code: VEOBRIEN - 3
Test: VOAL
Matrix: SOIL
Hold Time: 24-APR-92

20-APR-92

Batch Comments
Do QC on designated samples.

Sample	PR Comment	Field Number	File #	Run Date	Valid	HT Met	Comments	Rerun File	Valid	Rerun File	Valid
74720	QC	S-8	S6349	4-22	yes	yes					
74721		S-10	S6352	↓	NO	yes	3rd SS↑	Y3774	yes		
74720MS		S-8 MS	S6350	4-22	yes	yes					
74720MSD		S-8 MSD	S6351	↓	yes	yes					

DONE

Analytical Difficulties:

Relinquished by _____ Received by _____ Date _____

Instrument Run Date Data Worked Up, Init. Standards Pack, Init.

100161

Versar Laboratories INC.

26-APR-92

GENERAL CHEMISTRY
Total Solids Worklist

Worklist ID: 10036	Control	Code	Batch	Job	Location
	6432	VEOBRIEN	3	420.1.0	A-19
	6452	VER FIG	1	420.1.0	A-69

Analysis Date: 20-APR-92

Balance Calibration

Zero	0.0000	0.0000	50 gram	50.0000	49.9997
50 mg	0.0500	0.0501	100 gram	100.0000	99.9998
1 gram	0.9999	1.0000			

Comments:
LCS = NBS 1632b @ 98.4% TS

Cont#	Sample	Cruc. ID.	Crucible Wt. (g)	Crucible + Sample Wt. (g)	Dried Cruc + Sample	% H2O	% Solids	True Value	Comments
6432	MDL1						.0005		Units: g
6432	MDL2						.01		
6432	CB1						0.00		Units: g
6432	ICV1						1.00	1.0	100.0% rec. Units: g
6432	RB1		13.6265		13.6266		< 0.01		
6432	RB2		12.2922		12.2922		< 0.01		
6432	RB3		11.9649		11.9651		< 0.01		
6432	LCS1		13.3545	13.7543	13.7544	0.0000	100	98.4	101.7% rec.
6432	74708		14.8877	24.5315	23.0329	15.5000	84.5		S-1
6432	74709		12.8392	26.8175	24.4591	16.9000	83.1		S-2
6432	74709DP1		12.5467	27.0252	23.7792	22.4000	77.6		Mean = 80.4 RPD = 6.9%
6432	74710		12.9366	18.7432	17.5905	19.9000	80.2		S-3
6432	74711		13.3243	27.2425	25.6387	11.5000	88.5		S-4
6432	74712		11.4250	20.6555	18.8387	19.7000	80.3		S-5
6432	74713		13.6752	32.6375	29.0609	18.9000	81.1		S-6

TM 4/26/92

Analyst Theresa Mathiasi

Date 4-27-92

100162

Versar Laboratories INC.

26-APR-92

GENERAL CHEMISTRY
Total Solids Worklist

10036

Cont#	Sample	Cruc. ID.	Crucible Crucible Wt. (g)	Dried + Sample Wt. (g)	Cruc + Sample	% H2O	% Solids	True Value	Comments
6432	74714		12.4971	24.0117	21.9304	18.1000	81.9		S-7
6432	74715		12.1856	24.9784	23.1029	14.7000	85.3		S-9
6432	74716		12.3086	28.8342	25.6077	19.5000	80.5		S-8
6432	74716DP2		13.0316	29.7300	26.5812	18.9000	81.1		Mean = 80.8 RPD = 0.8%
6432	74717		13.2229	29.0165	26.6096	15.2000	84.8		S-10
6452	74859		12.2035	20.2536	18.5534	21.1000	78.9		
6452	74860		12.1520	21.8504	19.8805	20.3000	79.7		
6452	74861		13.1077	19.8599	18.2224	24.3000	75.8		
6452	74862		12.0026	19.2015	17.4294	24.6000	75.4		
6452	74863		13.0205	21.1203	19.3166	22.3000	77.7		
6452	74864		12.0675	18.8374	17.2249	23.8000	76.2		74864 is not on PR sheet

TM 4/24/92

Analyst Theresa Matuszzi

Date 4-27-92

100163

ERSAR LABORATORIES INC. VOA INJECTION LOG GC/MS INSTRUMENT ID S DATE 4-8-92 ASCII FILE yes STREAMER NO. D2, D3, D4

000032

FILE NAME	METHOD	CONTROL NUMBER	BATCH	FIELD NUMBER	LEVEL	MATRX	VERSAR NUMBER	TYPE	CODE	DIL. F/T	DIL. F/T	VOL. PURGED	FINAL DIL	IS NUMBER	HOLD TIME	VALID ANALYSIS
S6158				50ng BFB			29413E		Tuned @ 9:09			2uL				
S6159	CLP	STAND		VSTD 10	L	S	29892	V/H	IC-010			5mL				
S6160	CLP	STAND		VSTD 20	L	S	29893	V/H	IC-020			5mL				
S6161	CLP	STAND		VSTD 200	L	S	29894	V/H	IC-200			5mL				
S6162	CLP	STAND		VSTD 150	L	S	29895	V/H	IC-150			5mL				
S6163	CLP	STAND		VSTD 100	L	S	29896	V/H	IC-100			5mL				
S6164	CLP	STAND		VSTD 50	L	S	29897	V/H	IC-050			5mL				
S6165	CLP	BLANK		VBLK65	L	S	VBLK65	V/H	BLANK			5G/5mL				
S6166	CLP	6402	4	SBSL1	L	S	74271A	V/H	EPA vers Subcq			5G/5mL				yes
S6167	CLP	↓	↓	S6S15A	L	S	74280A	V/H	↓			5G/5mL				yes
S6168	CLP			S7SL01	L	S	74281A	V/H				5G/5mL				yes
S6169	CLP			S7SL01D	L	S	74282A	V/H				5G/5mL				yes
S6170	CLP			S7SL02	L	S	74283A	V/H				5G/5mL				yes
S6171	CLP			S7SL03	L	S	74284A	V/H				5G/5mL				yes
S6172	CLP			S7SL03MS	L	S	~~74285A~~ 74284MS	V/H	MS			5G/5mL				yes
S6173	CLP	↓	↓	S7SL03MSD	L	S	~~74286A~~ 74284MSD	V/H	↓ MSD	↓		5G/5mL				yes

ANALYST SIGNATURE Diane E. Wiegel DATE 4-8-92

000032

VERSAR LABORATORIES INC. VOA INJECTION LOG GC/MS INSTRUMENT ID S DATE 4-22-92 ASCII FILE Yes STREAMER NO. D2, D3, D4

000047

FILE NAME	METHOD	CONTROL NUMBER	BATCH	FIELD NUMBER	LEVEL	MATRX	VERSAR NUMBER	TYPE	CODE	DIL. F/T	DIL. F/T	VOL. PURGED	FINAL DIL	IS NUMBER	HOLD TIME	VALID ANALYSIS
S6340				50ng BFB			29413E	Tuned @ 9:27				2uL				
S6341	CLP	STAND		VSTD50	L	S	29953	V/H	CC-050			5mL				
S6342	CLP	BLANK		VBLK42	L	S	VBLK42	V/H	BLANK			5mL				
S6343	CLP	6420	1	SSF-01	L	S	74591A	V/H	EPA VERS RA		1g 5mL	5mL	1/5			RR str.
S6344	CLP	↓	↓	SSF-01 ms	L	S	74591ms	V/H	EPAms		1G 5mL	5mL	1/5	Run @ 1/5		Yes ①
S6345	CLP	↓	↓	SSF-01 msD	L	S	74591msD	V/H	EPAmsD		1G 5mL	5mL	1/5	due to hydrocarbons		Yes ②
S6346	CLP	↓	↓	SSF-01	L	S	74591A	V/H	EPA			5G/5mL			3rd IS ↓	2nd SS ↑
S6347	CLP	↓	↓	SSF-02	L	S	74592A	V/H	EPA			5G/5mL			3rd IS ↓	2nd SS ↑ 3rd SS ↓
S6348	CLP	↓	↓	BK-SSF	L	S	74593A	V/H	EPA			5G/5mL				Yes ③
S6349	CLP	6432	3	S-8	L	S	74720A	V/H	EPA VEOBRIEN			5G/5mL				yes ④
S6350	CLP	↓	↓	S-8ms	L	S	74720ms	V/H	ms			5G/5mL				yes ⑤
S6351	CLP	↓	↓	S-8msD	L	S	74720msD	V/H	msD			5G/5mL				yes ⑥
S6352	CLP	6432	3	S-10	L	S	74721A	V/H	EPA			5G/5mL				3rd SS ↑
S6353	CLP	6420	1	SSF-01	L	S	74591A	V/H	EPA Vers RA			5G/5mL			2nd & 3rd IS ↓ 2nd SS ↑	Yes ⑦ OK mod
S6354	CLP/BTX	6440	22	62870	L	S	74758A	V/H	EPA vers per			5G/5mL				yes ⑧
S6355	CLP/BTX	↓	↓	62873	L	S	74759A	V/H	EPA			5G/5mL				yes ⑨

ANALYST SIGNATURE Diane E. Wiegel DATE 4-22-92

ERSAR LABORATORIES INC. VOA INJECTION LOG GC/MS INSTRUMENT ID Y DATE 05-01-92 ASCII FILE Y050192A.MSQ (CURVE) STREAMER NO. 191

Y050192B.MSQ

000037

FILE NAME	METHOD	CONTROL NUMBER	BATCH	FIELD NUMBER	LEVEL	MATRX	VERSAR NUMBER	TYPE	CODE	DIL. F/T	DIL. F/T	VOL. PURGED	FINAL DIL	IS NUMBER	HOLD TIME	VALID ANALYSIS
Y3766				BFB 50ng			28795D		TUNED @ 10:44			2ml				
Y3767	CLP	STAND		VSTD10	L	S	30033	V/H	IC-010			5ml				
Y3768	CLP	STAND		VSTD20	L	S	30034	V/H	IC-020			5ml				
Y3769	CLP	STAND		VSTD200	L	S	30035	V/H	IC-200			5ml				
Y3770	CLP	STAND		VSTD150	L	S	30036	V/H	IC-150			5ml				
Y3771	CLP	STAND		VSTD100	L	S	30037	V/H	IC-100			5ml				
Y3772	CLP	STAND		VSTD50	L	S	30038	V/H	IC-050			5ml				
Y3773	CLP	BLANK		VBLK73	L	S	VBLK73	V/H	BLANK			5ml				
Y3774	CLP	6432	3	S-10	L	S	74721A	V/H	EPA VEO BRIEN	RE		5G / 5ml				Yes ①
Y3775	CLP	6426	1	SSF-02	L	S	74592A	V/H	EPA VERS RA	RE		5G / 5ml				3rd Is Yes ② ok match ✓

100166

NALYST SIGNATURE Judy F. Hill DATE 05-01-92