Page 1 SPECTRIX CORP REPORT Work Order # 86-12-043
Received: 12/10/86 01/21/87 17:07:24

REPORT TO: Keystone Env. Resources, Inc.
Water Quality Engineering
440 College Park Drive
Monroeville, PA 15146-1536
ATTEN: Shannon Craig

CLIENT: KEYSTONE SAMPLES: 15
COMPANY: Keystone Company, Inc.
FACILITY:

WORK ID: Water
TAKEN: Client
TRANS: Client
TYPE: Project 1573-73
P.O. #: 14-5-50106
INVOICE: under separate cover

PREPARED BY: Spectrix Corporation
3911 Fondren
Suite 100
Houston, Texas 77063-5821
ATTEN: Sample Control
PHONE: (713) 266-6800

CERTIFIED BY
CONTACT: CRUZ

Please call the above number if you have any questions.
NOTE: ALL SAMPLES WILL BE RETAINED FOR 90 DAYS AND THEN DISCARDED. IF YOU WISH YOUR SAMPLES RETURNED TO YOUR FACILITY CALL SAMPLE CONTROL AT THE ABOVE NUMBER.

SAMPLE IDENTIFICATION

01	LAB BLANK (LLW)
02	CAV-OW06-001 (LLW) MS
03	CAV-OW06-001 (LLW) MSD
04	CAV-OW06-001 (LLW) DUP.
05	CAV-OW06-001 (LLW) SPIKE
06	CAV-OW06-001 (LLW)
07	CAV-OW07-001 (LLW)
08	SCK-MW01-001 (LLW)
09	SCK-MW03-001 (LLW)
10	SCK-MW11-001 (LLW)
11	SCK-MW18-001 (LLW)
12	SCK-MW19-001 (LLW)
13	SCK-P01-001 (LLW)
14	SCK-P04-001 (LLW)
15	TRIP BLANK (LLW)

TEST CODES and NAMES used on this report

AG	Silver
AS	Arsenic
BE	Berylium
CD	Cadmium
CN SU	Cyanide in Water
CR	Chromium
CU	Copper
FE	Iron
HG	Mercury
NI	Nickel
PB	Lead
PEST W	EPA Pesticides/PCB's-Water
SB	Antimony
SE	Selenium
TL	Thallium
ZN	Zinc

1012284

003459

LABORATORY: SPECTRIX-HOUSTON

LABORATORY NO: 86-12-045

CLIENT: SPECTRIX-MONROEVILLE

SITE: SOUTH CAVALCADE

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CHECKLIST

SECTION I - Support Information and QC Summaries

✓ Narrative

✓ Introduction to the Spectrix Organic Data Package

✓ Introduction to the Spectrix Inorganic Data Package

✓ Shipping Document, Chain-of-Custody

✓ Organic MS/MSD Data Summary Form

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INTRODUCTION TO THE SPECTRIX ORGANIC DATA PACKAGE

The purpose of this introduction is to clarify several technical report sheets contained in this report. Data sheets showing analytes and concentration are called Organic Analysis Data Sheets (OADS). OADS pages 1 and 2 contain Hazardous Substance List (HSL) compounds associated with Volatile Organics and Semi-Volatile Organics (Base/Neutral/Acids). OADS pages 4 and 5 contain Tentatively Identified Compounds (TIC) found in the Volatiles and Semi-Volatiles analyses. All concentrations listed on pages 1 and 2 are stated in UG/L or UG/KG. Header information listed on pages 1 and 2 includes client number, Spectrix internal sample number, dilution factor used, instrument used in the analysis, date received/date analyzed and other pertinent information. Soil OADS also contain listings for percent moisture and soil pH determined during the extraction process. The reporting section for pages 1 and 2 of the OADS lists individual HSL compounds and four possible listings of the concentrations found. These four possibilities are the actual concentration found, nothing detected at the detection limit as noted with a "U", a value detected but just below the detection limit noted with a "J" and a value also found in the blank noted with a "B". It is possible that a sample may contain a value just below the detection limit and also found in the blank. In this instance a "JB" would be seen after a listed detection limit. A "J" value reported indicates a trace level was found below a concentration where the quantitated value may be in question.

OADS pages 4 and 5 in general list compounds not on the HSL but also found in the GC/MS analysis. These compounds or "non-targeted compounds" are identified by comparing the peak spectra in question to a list of several thousands library spectra stored on the GC/MS magnetic disc. A measure to which the library spectra and the sample spectra are similar is the "purity". Purity is listed on the OADS as a number between 1 and 1000 where 1000 would be an extremely confident identification. OADS pages 4 and 5 list two sections: a header and data reporting section. The header contains client sample name, instrument ID, analyst and data file name. The data section shows cas #, compound name, scan #, purity of each compound and UG/L or UG/KG found. The cas #, or chemical abstract service number, is an identifying number related to the organic compound name and can help clarify differences between common names and IUPAC terminology. The scan # relates to the location of the compound in the run (i.e., retention time). The concentration listed is estimated based on the Internal Standard concentrated which is added to the sample prior to analysis. These estimated values are listed as a "J" and are not to be confused with "J" listed on OADS pages 1 and 2. Only purity values greater than 750 will show the name and cas #. Purity values less than 750 are considered unknowns and only a scan # and concentration are listed. Unknown compounds on the OADS pages 4 and 5 will also be listed on individual library search spectra sheets included in the data package. These raw data sheets show the top 4 matches to the unknown compounds so that best estimation of the compound's identity can be ascertained by you the data user. Additional manual identifications may be achieved at additional costs.

Quantitation report sheets are also found in this package. These data sheets depict raw header and analysis data important for record keeping purposes. The quantitation report also lists surrogate recoveries showing the % recovery of similar HSL compounds for Quality Control determinations. EPA % recovery acceptance levels are available upon request.

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INTRODUCTION TO THE SPECTRIX INORGANIC DATA PACKAGE

The inorganic portion of the data package is designed to serve two purposes, namely, explain the reporting format and describe the methods used in analysis of samples.

Inorganic Analytical Report

Metals are reported in micrograms per liter (ug/L) for aqueous samples and milligrams per kilogram dry weight (mg/Kg dry wt.) for non-aqueous samples. Non-aqueous samples have been calculated to their dry weight basis. Default units for each parameter are shown just below the individual test code. In situations where the reported units differs from the default unit, the reported units will be shown next to the reported value.

Example: The default units for BE_S is mg/Kg dry wt., which indicates that report will be in dry weight basis. Report that shows mg/Kg below a numerical value means that sample was not calculated to dry weight basis.

Percent solid of non-aqueous samples, if performed, will be reported as PSOLID in %.

Reporting for non-metallic elements follow same pattern as metals; ug/L or mg/L for aqueous samples and mg/Kg for non-aqueous samples. Here too, mg/Kg dry weight indicates that samples have been corrected for dry weight.

Methodology for Analysis of Inorganic Parameters

The analysis of metals in aqueous samples is performed according to EPA Contract Laboratory Program (CLP) Protocol Statement of Work (SOW) No. 785, "Inorganic Analysis of Multi-Media, Multi-Concentration Samples", July, 1985. Silver, beryllium, cadmium, chromium, copper, iron, nickel, and zinc are analyzed by ICP emission spectrometry. Antimony, arsenic, lead, selenium and thallium are determined by furnace - AA, and mercury is determined by manual cold vapor. All furnace - AA and ICP analyses are background corrected. L'vov platformed graphite tubes are used for all furnace - AA analyses and matrix modified where applicable.

The analysis of non-aqueous samples is done according to EPA CLP Protocol SOW No. 785. This is a modified version of methods in EPA manual "Test methods for Evaluating Solid Waste", EPA SW-846, July, 1982.

The EP Toxicity leaching procedure is performed according to methods published by EPA in "Test Methods for Evaluating Solid Wastes", EPA SW-846, July, 1982. Analysis of the leachates for metals is performed by the method for aqueous samples cited above.

SPECTRIX

NARRATIVE - ORGANIC ANALYSES

CLIENT: SPECTRIX - MONROEVILLE

LAB NO: 8612045

SITE: South Cavalcade

I. RECEIPT

A. DATE: 12/10/86

B. NO. OF SAMPLES: 10 + QC

C. SAMPLE TYPE: WATER

D. ANALYSIS REQUESTED: All organics following EPA CLP protocol

E. SHIPPING PROBLEMS: NONE

F. DOCUMENTATION PROBLEMS: NONE

G. QC DISTRIBUTION:

LEVEL	MATRIX	VOA	SV	PEST
LOW	WATER	OW06-001	OW06-001	OW06-001

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II. PREPARATION

A. ANALYTICAL LEVELS: Low level water

B. EXTRACTION PROBLEMS: None

III. ANALYSIS

A. ANALYSIS PROBLEMS: None

B. SURROGATE RECOVERIES: Good

IV. OTHER PROBLEMS None

Thomas F. Alterm

Project Manager

SPECTRIX-HOUSTON

NARRATIVE - INORGANIC ANALYSES

CLIENT: SPECTRIX-MONROEVILLE
LAB NO: 86-12-045

SITE: SOUTH CAVALCADE

I. RECEIPT

A. DATE: 12/09/86
B. NO. OF SAMPLES: 6
C. SAMPLE TYPE: Water
D. ANALYSIS REQUESTED: Metals: Ag, As, Be, Cd, Cr, Cu, Fe, Hg, Ni, Pb, Sb, Se, Tl, Zn and CN

II. PREPARATION

A. REFERENCE METHOD: EPA CLP Protocol (SOW784)

B. ANALYTICAL LEVELS: Low level

C. DIGESTION PROBLEMS: None

III. ANALYSIS

A. REFERENCE METHOD: EPA CLP Protocol (SOW784)

B. ANALYSIS PROBLEMS: None

C. SPIKE RECOVERIES: Note that this sample showed presence of chemical interference. Poor to no spike recoveries for several elements. Concentration of Fe was too high to make any sense out of the spiking concentration.

IV. OTHER PROBLEMS None

Ken U. Ene
Department Supervisor

003465

003466

CHAIN OF CUSTODY RECORD

Client/Project Name: Koppers Co Inc

Project Location: South Cavalcade, Houston

Project No.: 1573-73

Field Logbook No.: Scott Barnes/KEK #2

Sampler: (Signature) Scott Barnes

Chain of Custody Tape No.:

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN/GC analysis	CN 1L plastic	Priority Metals + Fe	Pest/PCB 1L analysis				REMARKS
SCK-MW19-001	86/12/10	1145		Ground H_2O	2	1	1	1				
SCK-P04-001	86/12/10	1000		" "	2	1	1	1				
SCK-MW18-001	86/12/10	1712		" "	2	1	1	1				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/10	1858			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
			MF Cruz	86/12/10	18:58

Sample Disposal Method:

Disposed of by: (Signature)

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

ANALYTICAL LABORATORY

ERT

№ 5967

003466

003467

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Co Inc	South Cavalcade, Houston

Project No.	Field Logbook No.
1573-73	Scott Barnes KER #2

Sampler: (Signature)	Chain of Custody Tape No.
Scott Barnes	

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN 1L amber AW	CN 1L plastic	Priority Metals Fe 1L Plastic	Pest/PCB 1L amber			REMARKS
SCK-OW06-001	8/12/10	1245		Ground H_2O	7	3	3	4			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	8/12/10	1905			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature) MF Crey	Date 8/12/10	Time 1905
Sample Disposal Method:			Disposed of by: (Signature)	Date	Time

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

ANALYTICAL LABORATORY

ERT

№ 7357

74-3

003467

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CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Company, Inc.	South Cavalcade, Houston

Project No.	Field Logbook No.
1573-73	KER Scott Barnes No. 2

Sampler: (Signature)	Chain of Custody Tape No.
Scott Barnes	

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN/AE 1 gallon	CN 1 gallon plastic	Pest./PCB 1 gallon	Priority Metals 1 gallon plastic				REMARKS
SCK-MW01-001	86/12/10	1010		water	2	1	1	1				Cooled Hand carried
SCK-P01-001	86/12/10	1230		" "	2	1	1	1				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/10	1857			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
			MF Cruz	86/12/10	18:57
Sample Disposal Method:			Disposed of by: (Signature)	Date	Time

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

Keystone Environmental Resources, Inc
440 College Park
Monroeville PA 15146

ANALYTICAL LABORATORY

Spectrix Corp.
3911 Fondren
Suite 100
Houston, TX 77063

ERT

№ 1466

003469

CHAIN OF CUSTODY RECORD

Client/Project Name: Koppers Co Inc.	Project Location: South Cavalcade, Houston
Project No.: 1573-73	Field Logbook No.:
Sampler: (Signature) Scott Barnes	Chain of Custody Tape No.: KER Scott Barnes #2

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN/AL/Amber	CN 1L plastic	Priority Metals/Fe	Pest/PCB				REMARKS
SCK-MW03-001	86/12/10	1640		Ground H_2O	2	1	1	1				
SCK-MW11-001	86/12/10	1615		" "	2	1	1	1				

	Date	Time		Date	Time
Relinquished by: (Signature) Scott Barnes	86/12/10	1855	Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received for Laboratory: (Signature) M F Cruz	86/12/10	18:55
Sample Disposal Method:			Disposed of by: (Signature)		

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

ANALYTICAL LABORATORY

Spectrix Corp
3911 Fondren. Suite 100
Houston, TX 77063

ERT

№ 5966

1974-3-84

003470

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Company, Inc	South Cavalcade, Houston
Project No.	**Field Logbook No.**
1573-73	KER Scott Barnes #2
Sampler: (Signature)	**Chain of Custody Tape No.**
Scott Barnes	

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	VOA mfc	BN+TCL 1L amber	CN 1L plastic	Priority Metal +Fe	Pest/PCB 1L amber			REMARKS
CAV-0007-001	86/12/10	910			2	2	1	1	1			
SCK-MW11-001	86/12/10	1615			2							
SCK-MW03-001	86/12/10	1640			2							
SCK-P01-001	86/12/10	1230			2							
MS-MSD 0006	86/12/10	1245			6							
CAV-0006-001	86/12/10	1245			2							
SCK-MW01-001	86/12/10	1010			2							
SCK-P04-001	86/12/10	1000			2							

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/10	1855			
Relinquished by: (Signature)	**Date**	**Time**	**Received by: (Signature)**	**Date**	**Time**
Relinquished by: (Signature)	**Date**	**Time**	**Received for Laboratory: (Signature)**	**Date**	**Time**
			MF Cruz	86/12/10	1855
Sample Disposal Method:			**Disposed of by: (Signature)**	**Date**	**Time**

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA. 01742
617-369-8910

ANALYTICAL LABORATORY

Spectrix Corp.
3911 Fondren, Suite 100
Houston, TX, 77063

ERT

№ 5964

74-3

003470

003471

CHAIN OF CUSTODY RECORD

Client/Project Name: Koppers Co Inc	Project Location: South Cavalcade, Houston
Project No.: 1573-73	Field Logbook No.: KER Scott Barnes #2
Sampler: (Signature) Scott Barnes/David Hale	Chain of Custody Tape No.

ANALYSES: VOA

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	VOA						REMARKS
SCK-MW18-001	86/12/10	1145		Ground water	2						
Trip Blank	86/12/10	1000		" "	2						
SCK-MW18-001	86/12/10	1712		" " "	2						

	Date	Time		Date	Time
Relinquished by: (Signature) Scott Barnes	86/12/10	1855	Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received for Laboratory: (Signature) M F Cruz	86/12/10	18:55
Sample Disposal Method:			Disposed of by: (Signature)		

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

ANALYTICAL LABORATORY: Spectrix Corp
3911 Fondren Suite 100
Houston, TX 77063

ERT

№ 5965

74-3

003471

003472

KOPPERS COMPANY, INC.
WATER MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Work Order #: 86-12-045 Contractor: SPECTRIX CORPORATION Site: South Cavalcade

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC RPD	LIMITS* REC-REC
VOA	1,1-Dichloroethene	50	0	33	66	34	68	3	14	61-145
	Trichloroethene	50	0	37	74	39	78	5	14	71-120
SAMPLE NO.	Chlorobenzene	50	0	47	94	51	102	8	13	75-130
CAV-OW06-001	Toluene	50	0	42	84	46	92	9	13	76-125
	Benzene	50	3	45	84	48	90	7	11	76-127
B/N	1,2,4-Trichlorobenzene	50	0	43	86	44	88	2	28	39- 98
	Acenaphthene	50	0	43	86	45	90	5	31	46-118
SAMPLE NO.	2,4-Dinitrotoluene	50	0	51	102*	52	104*	2	38	24- 96
CAV-OW06-001	Pyrene	50	0	57	114	59	118	3	31	26-127
	N-Nitroso-Di-n-Propylamine	50	0	43	86	44	89	3	38	41-116
	1,4-Dichlorobenzene	50	0	39	78	40	80	3	28	36- 97
ACID	Pentachlorophenol	100	0	21	21	20	20	5	50	9-103
	Phenol	100	0	31	31	32	32	3	42	12- 89
SAMPLE NO.	2-Chlorophenol	100	0	28	28	29	29	4	40	27-123
CAV-OW06-001	4-Chloro-3-Methylphenol	100	7	44	37	48	41	10	42	23- 97
	4-Nitrophenol	100	0	27	27	26	26	4	50	10- 80
PEST.	Lindane	0.2	0	0.16	80	0.16	80	0	15	56-123
	Heptachlor	0.2	0	0.16	80	0.12	60	29*	20	40-131
SAMPLE NO.	Aldrin	0.2	0	0.16	80	0.16	80	0	22	40-120
CAV-OW06-001	Dieldrin	0.5	0	0.42	84	0.39	78	7	18	52-126
	Endrin	0.5	0	0.44	88	0.39	78	12	21	56-121
	4,4'-DDT	0.5	0	0.30	60	0.39	78	26	27	38-127

* ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs 0 out of 5 ; outside QC limits
B/N 0 out of 6 ; outside QC limits
ACID 0 out of 5 ; outside QC limits
PEST 1 out of 6 ; outside QC limits

RECOVERY: VOAs 0 out of 10 ; outside QC limits
B/N 2 out of 12 ; outside QC limits
ACID 0 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments:

CHECKLIST

SECTION II - Sample Data Packets

Sample No: CAV-OW06-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: CAV-DW06-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204506
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ----
GC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: 4U12045V06A

DILUTION FACTOR: 1.0.....

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	51
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 J
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = COMPOUND ALSO FOUND IN BLANK

003474

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: CAV-OW06-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204506
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GU....

CASE NO.: ---
GC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C06
DILUTION FACTOR: 1.0.....

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	7 J
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003475

SPECTRIX DC # ---- 8

SAMPLE NUMBER: CAV-OW06-001

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C06

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003476

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-06A

DC No: KEYSTONE
SMO No: CAV-OW06-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 NA.
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003477

INST ID: 4000

SPECTRIX DC # ----- 8

SAMPLE NUMBER: CAV-OW06-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ----

QC REPORT NO.: ----

ANALYST: MB

DATAFILE: 4U12045V06A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.			

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

UG/L

003478

INST ID: 4530

SPECTRIX DC # ---- 8

SAMPLE: CAV-OW06-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ---

QC REPORT NO.: ---

ANALYST: GU

DATAFILE: 4U12045C06

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				UG/L
110-12-3	2-HEXANONE, 5-METHYL-	318	870	* 13 J
540-97-6	CYCLOHEXASILOXANE, DODECAMETHYL-	907	790	4 J
29761-61-0	2-HEXENE, 5,5-DIMETHYL-, (Z)-	1013	802	8 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1034		4 J
20-40-1	DODECANAMIDE, N,N-BIS(2-HYDROXYETHYL)-	1118	786	6 J
74381-40-1	PROPANOIC ACID, 2-METHYL-, 1-(1,1-DIMETHY	1146	867	18 J
0544-50-0	SULFUR, MOL. (S8)	1478	812	18 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1532		14 J
4337-65-9	HEXANEDIOIC ACID, MONO(2-ETHYLHEXYL)ESTER	1685		61 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	2094		13 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	2210		15 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	2398		9 J

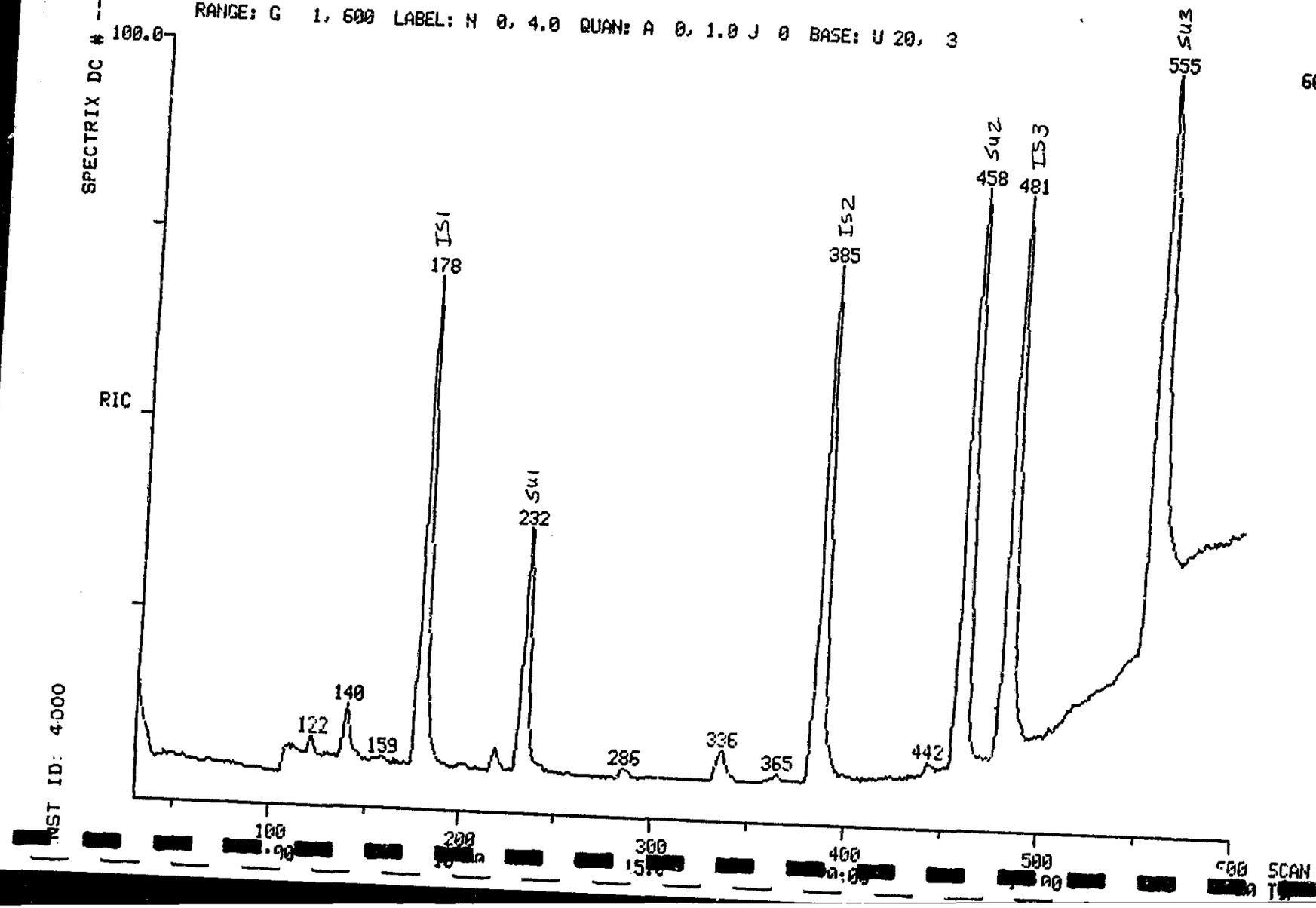
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

* ALSO FOUND IN BLANK

RIC
12/16/86 10:16:00
SAMPLE: CAV-OW06-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V06A #1
CALI: 4U12045V06A #3

SCANS 30 TO 600



SPECTRIX DC # ------14

VOA QUANTITATION REPORT

AMPLE ID. CAV-OW06-001

ILENAME 4U12045V06A

LIENT KEYSTONE

ATE INJECTED 12/16/86 10:16:00

CALIB STD DATE 121486

INST 4000

ANALYST MB

VERIFIED BY GU

CORR. FACTOR 1.00

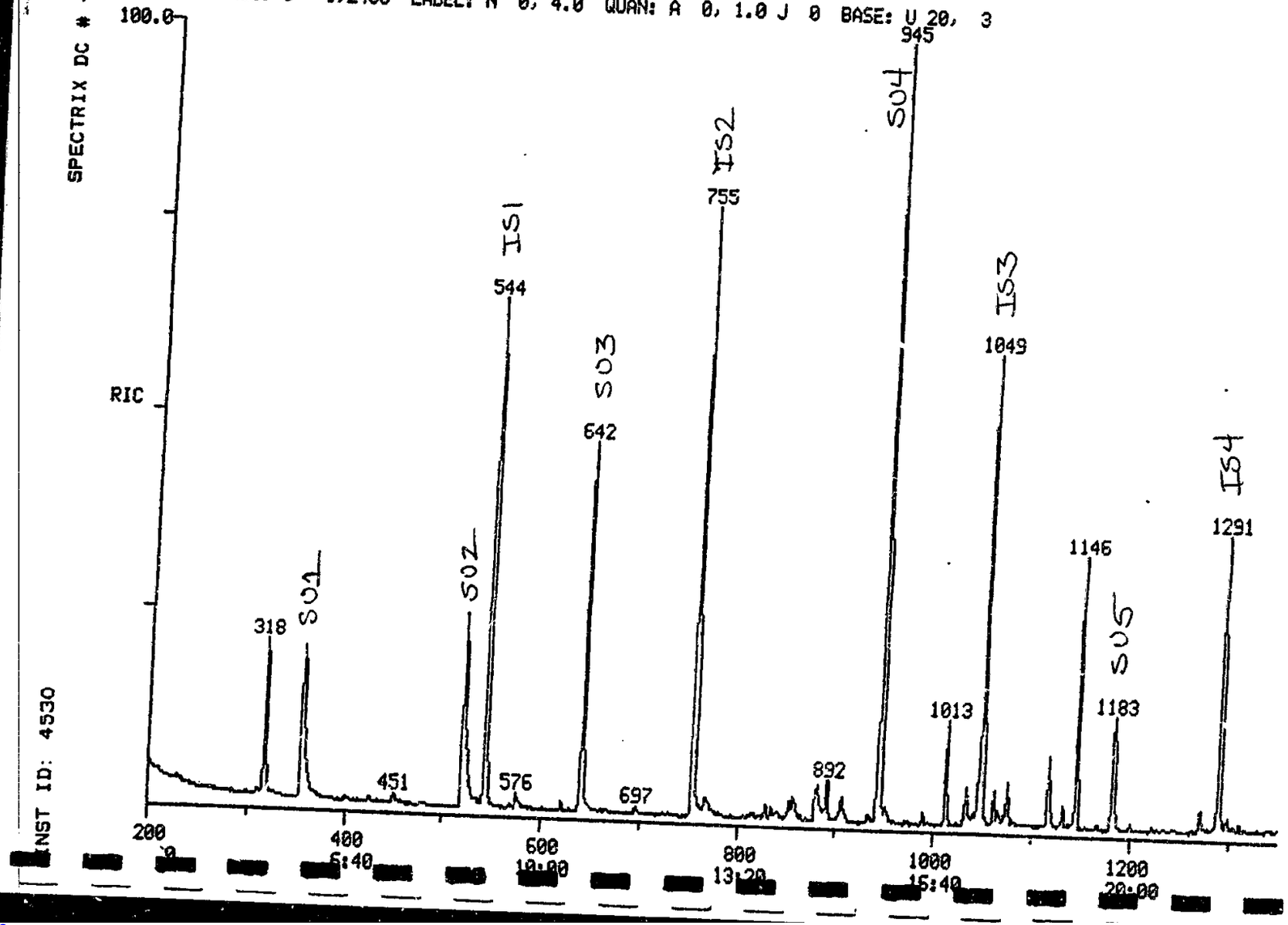
SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
178	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	16444
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	71084
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	57252
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	90 %	1.303	21397
458	CS05	D8-TOLUENE	**SU2**	98	99 %	0.952	61891
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	97 %	1.152	40480
140	CO35	ACETONE		43	51 UG/L	0.787	11011
336	C165	BENZENE		78	3 UG/L	0.873	4882

003482

RIC
12/29/86 15:55:00
SAMPLE: CAV-0W06-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C06 #1
CALI: 4U12045C06 #3

SCANS 200 TO 1350



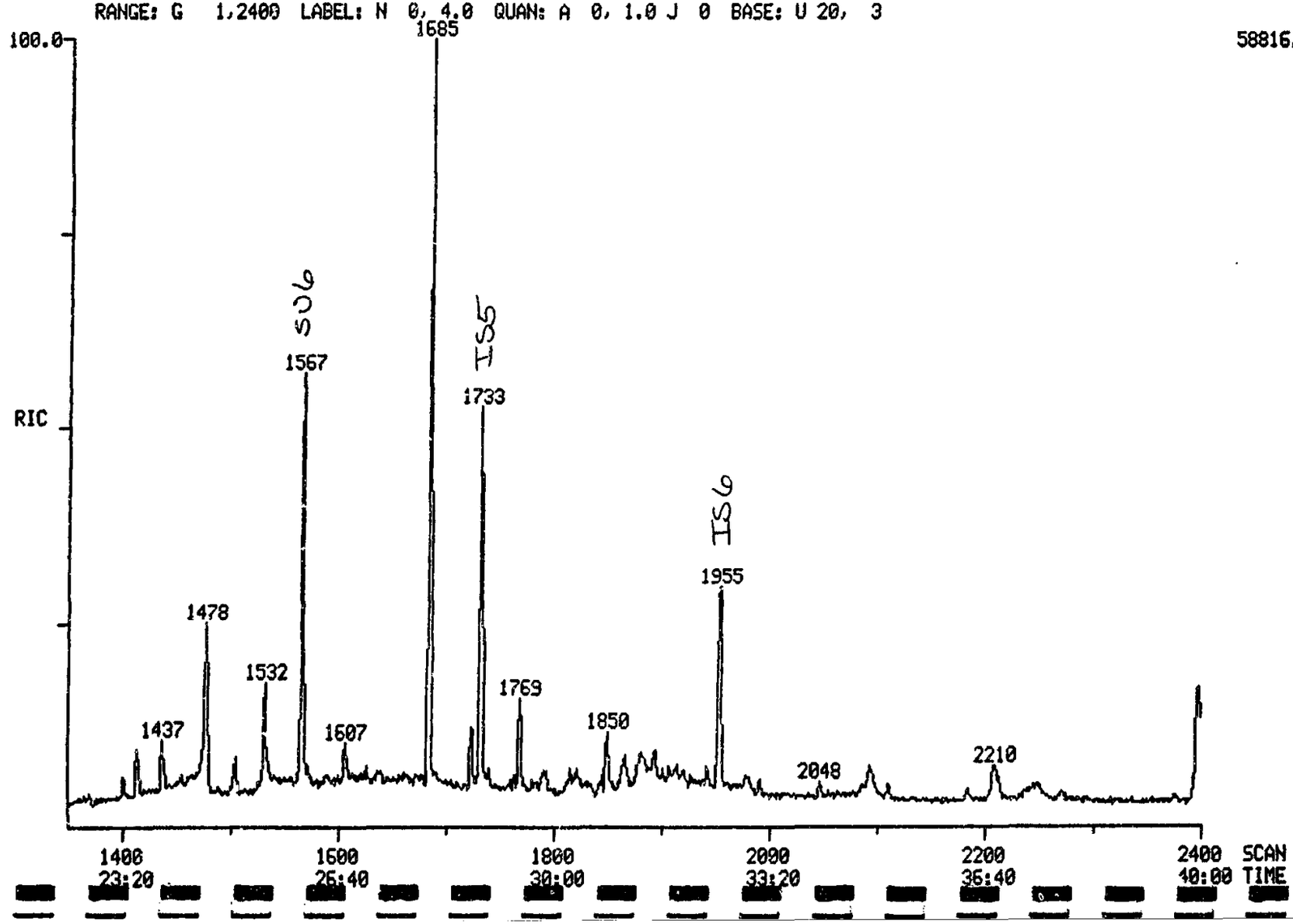
119680.

003482

003483

RIC
12/29/86 15:55:00
SAMPLE: CAV-0W06-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C06 #1 SCANS 1350 TO 2400
CALI: 4U12045C06 #3



003483

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

AMPLE ID.	CAV-OW06-001		
FILENAME	4U12045C06	INST ID.	4530
CLIENT	KEYSTONE	ANALYST	GU
DATE INJECTED	12/29/86 15:55:00	VERIFIED BY	GU
CALIB STD DATE	12/17/86	CORR. FACTOR	1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
544	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	26948
755	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	104266
1049	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	48638
1291	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	56547
1733	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	29648
1955	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	23724
356	CS50	2-FLUOROPHENOL ** SU1 **	112	25 %	0.654	25451
521	CS45	PHENOL-D5 ** SU2 **	99	31 %	0.958	41028
1182	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	29 %	1.127	4245
642	CS20	NITROBENZENE-D5 ** SU3 **	82	87 %	0.850	49995
945	CS25	2-FLUOROBIPHENYL ** SU4 **	172	86 %	0.901	110193
1567	CS30	TERPHENYL-D14 ** SU6 **	244	83 %	0.904	31295
881	C465	P-CHLORO-M-CRESOL	107	7 UG/L	1.167	615:
769	C735	BIS(2-ETHYLHEXYL)PHTHALATE	* 149	3 UG/L	1.021	259-
1867	C760	DI-N-OCTYL PHTHALATE	* 149	1 UG/L	0.955	222:

* BLANK CORRECTED ON DATA SHEET

003485

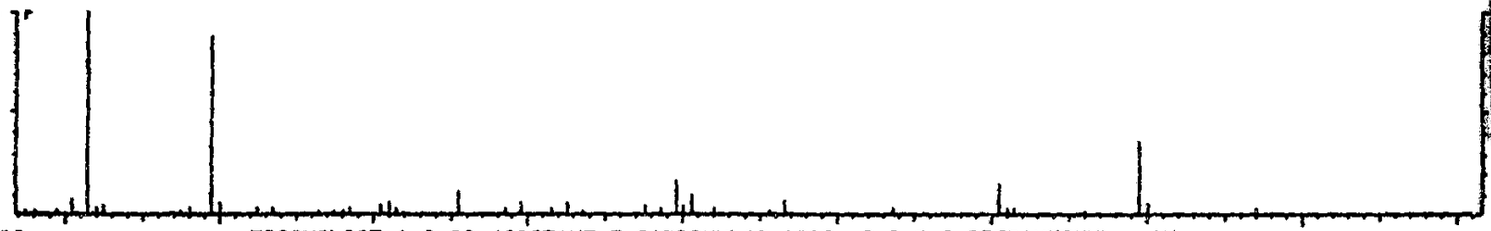
LIBRARY SEARCH
12/29/86 15:55:00 + 17:14
SAMPLE: CAV-0W06-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C06 #1034
CALI: 4U12045C06 # 3

BASE M/Z: 43
RIC: 4599.

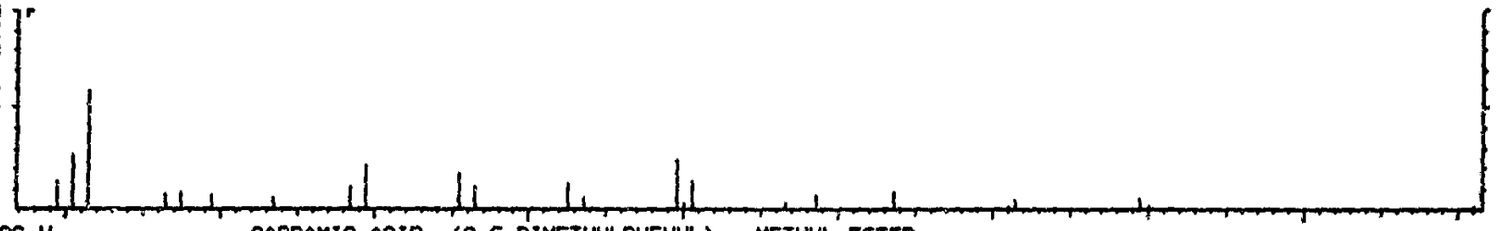
SPECTRIX DC # ----19
ANALYST: GU

1000
SAMPLE



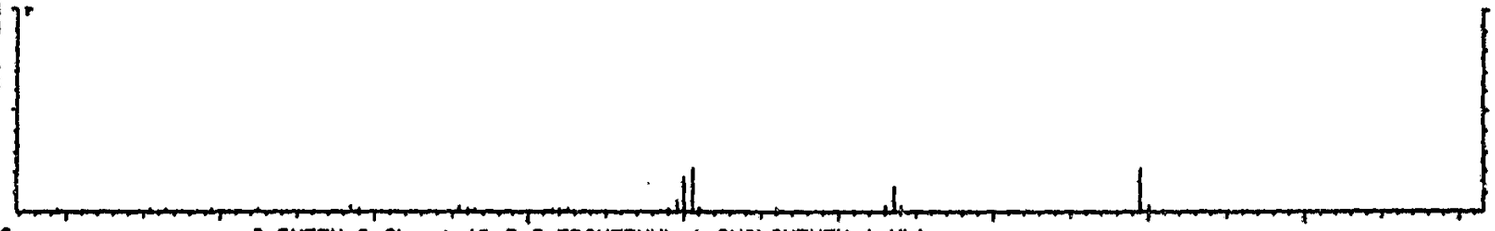
C14.H22.02 TRICYCLO[5.1.0,02,4]OCTANE-5-CARBOXYLIC ACID, 3,3,8,8-TETRAMETHYL-, M!

1000
M WT 222
B PK 43
RANK 1
19902
PUR 447



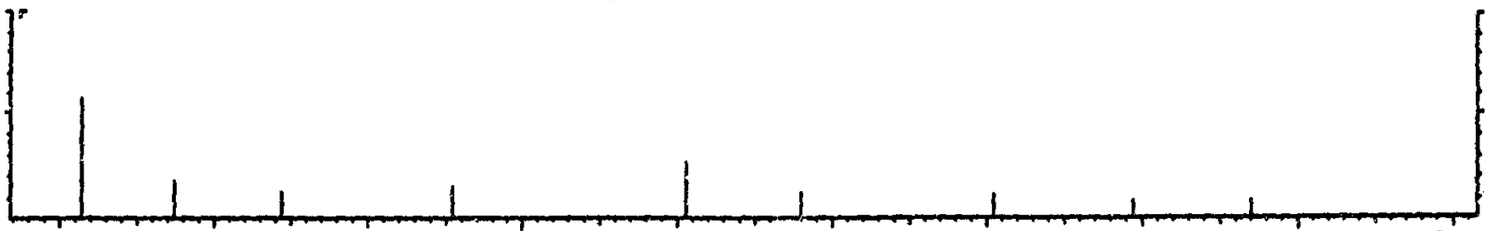
C10.H13.02.N CARBAMIC ACID, (2,6-DIMETHYLPHENYL)-, METHYL ESTER

1000
M WT 179
B PK 121
RANK 2
12917
PUR 331



C13.H22.O 3-BUTEN-2-OL, 4-(2,6,6-TRIMETHYL-1-CYCLOHEXEN-1-YL)-

1000
M WT 194
B PK 43
RANK 3
15455
PUR 322



M/Z 40 60 80 100 120 140 160 180 200 220

INST ID: 4530

003485

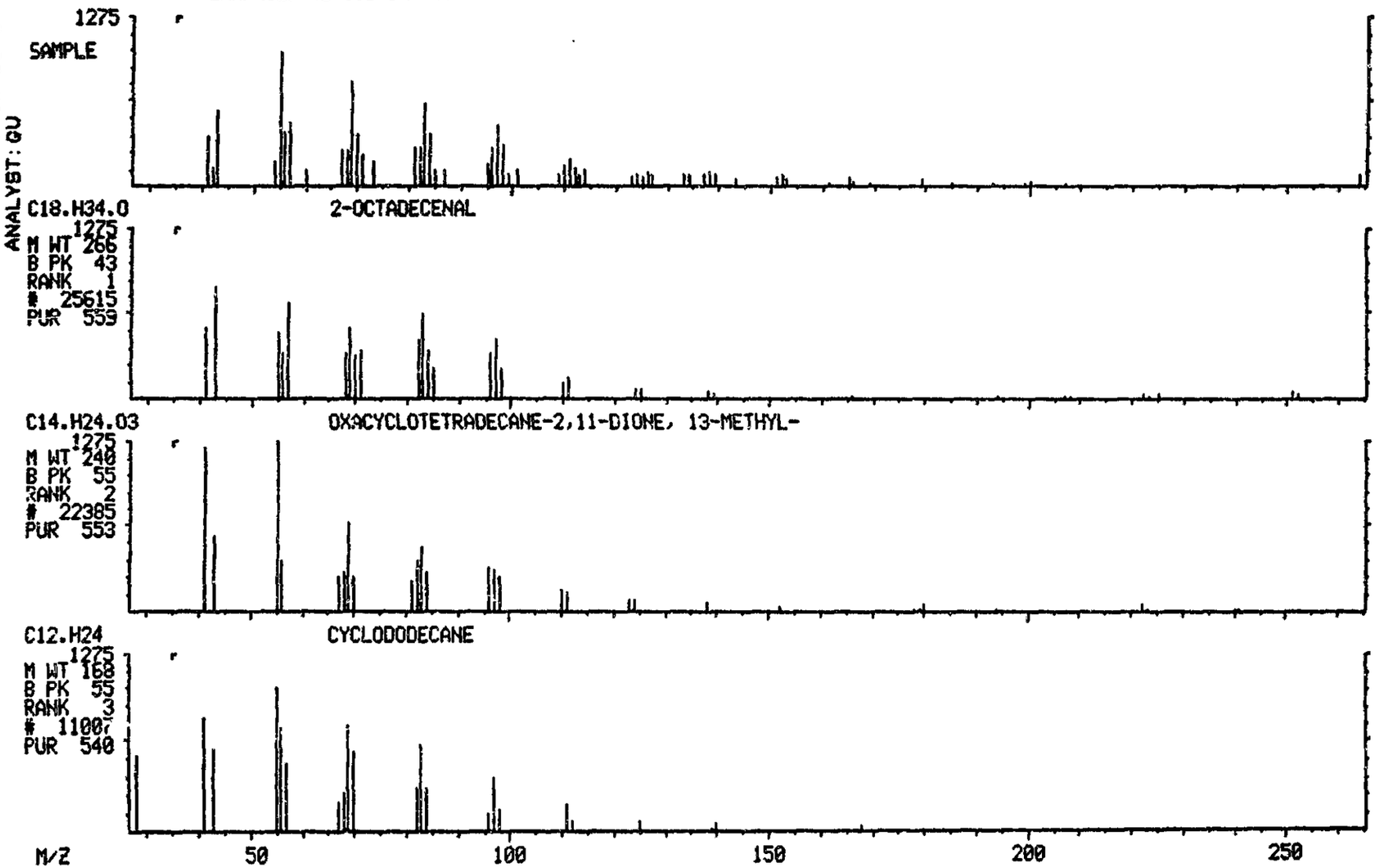
003486

LIBRARY SEARCH
12/29/86 15:55:00 + 25:32
SAMPLE: CAV-0W06-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C06 #1532
CALI: 4U12045C06 # 3

BASE M/Z: 55
RIC: 5471.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



003486

LIBRARY SEARCH
12/29/86 15:55:00 + 34:54
SAMPLE: CAV-0W06-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C06 #2094
CALI: 4U12045C06 # 3

BASE M/Z: 183
RIC: 1355.

SPECTRIX DC # ----19
ANALYST: GU

.1164
SAMPLE

C15.H30.04
1164
M WT 274
B PK 43
RANK 1
26491
PUR 421
DODECANOIC ACID, 2-HYDROXY-1-(HYDROXYMETHYL)ETHYL ESTER

C39.H74.06
1164
M WT 638
B PK 183
RANK 2
41447
PUR 339
DODECANOIC ACID, 1,2,3-PROPANETRIYL ESTER

C14.H26.02
1164
M WT 226
B PK 43
RANK 3
20571
PUR 288
DODECANOIC ACID, ETHENYL ESTER

INST ID: 4530

M/Z
50 100 150 200 250 300 350 400 450 500

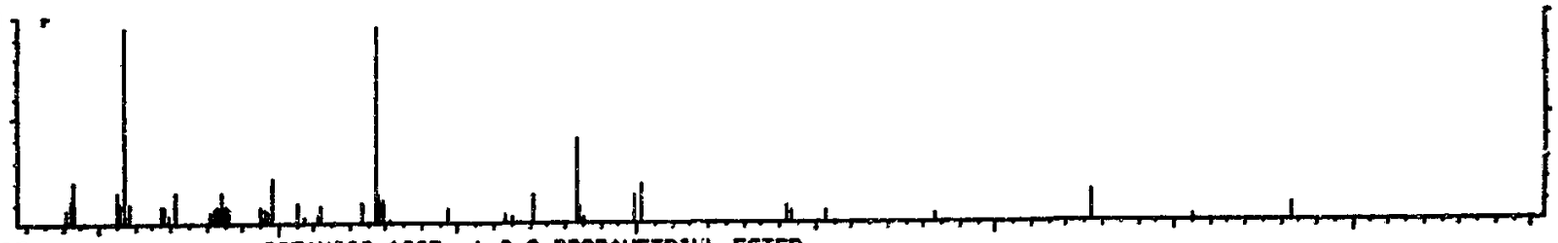
LIBRARY SEARCH
12/29/86 15:55:00 + 36:50
SAMPLE: CAV-0W06-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C06 #2210
CALI: 4U12045C06 # 3

BASE M/Z: 127
RIC: 2203.

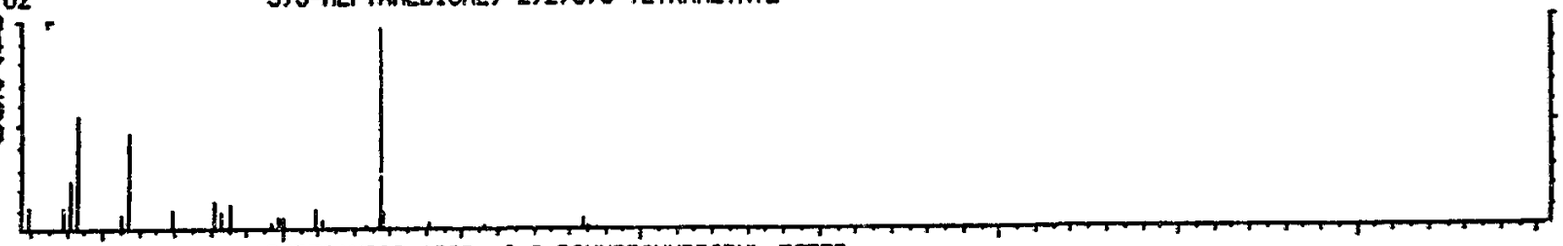
SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530

1049
SAMPLE

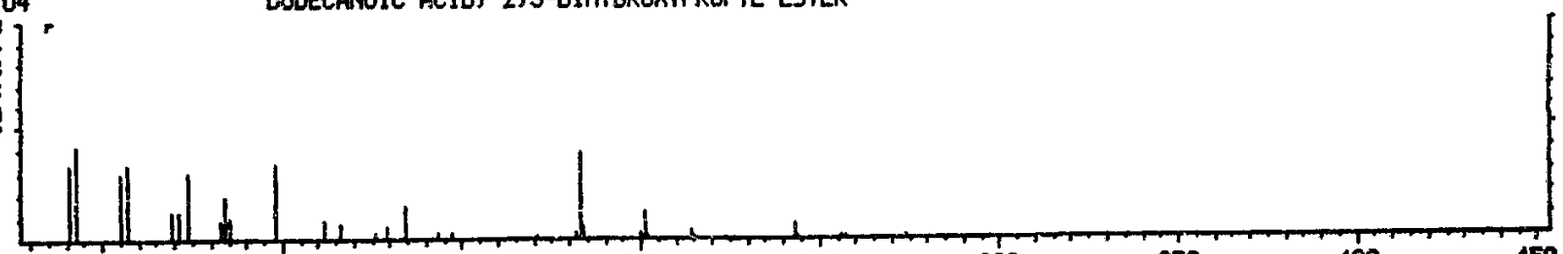


C27.H50.06 OCTANOIC ACID, 1,2,3-PROPANETRIYL ESTER
1049
M WT 470
B PK 57
RANK 1
39126
PUR 429

C11.H20.02 3,5-HEPTANEDIONE, 2,2,6,6-TETRAMETHYL-
1049
M WT 184
B PK 127
RANK 2
13779
PUR 309



C15.H30.04 DODECANOIC ACID, 2,3-DIHYDROXYPROPYL ESTER
1049
M WT 274
B PK 43
RANK 3
26490
PUR 307



M/Z 50 100 150 200 250 300 350 400 450

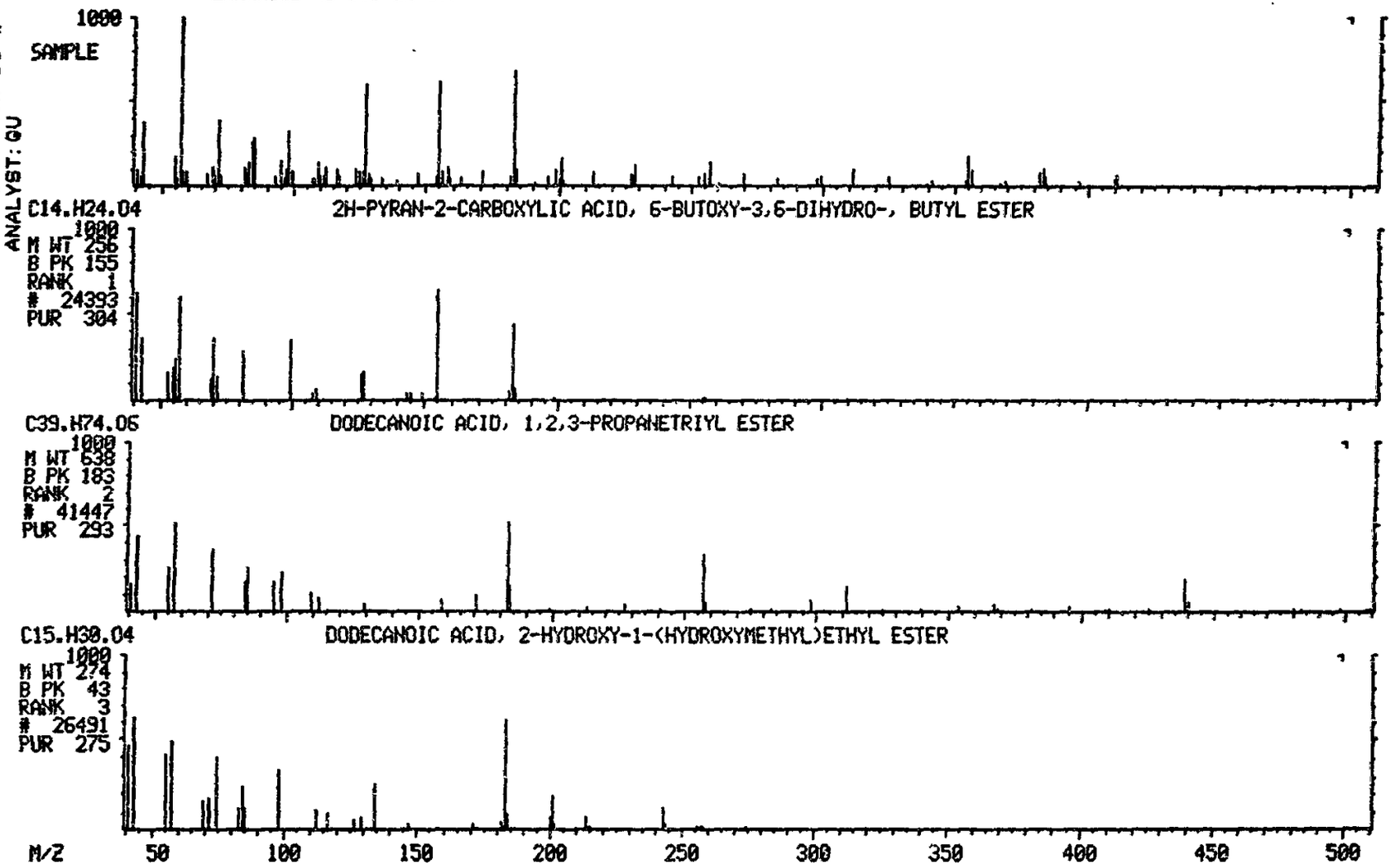
003489

LIBRARY SEARCH
12/29/86 15:55:00 + 39:58
SAMPLE: CAV-0W06-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C06 #2398
CALI: 4U12045C06 # 3

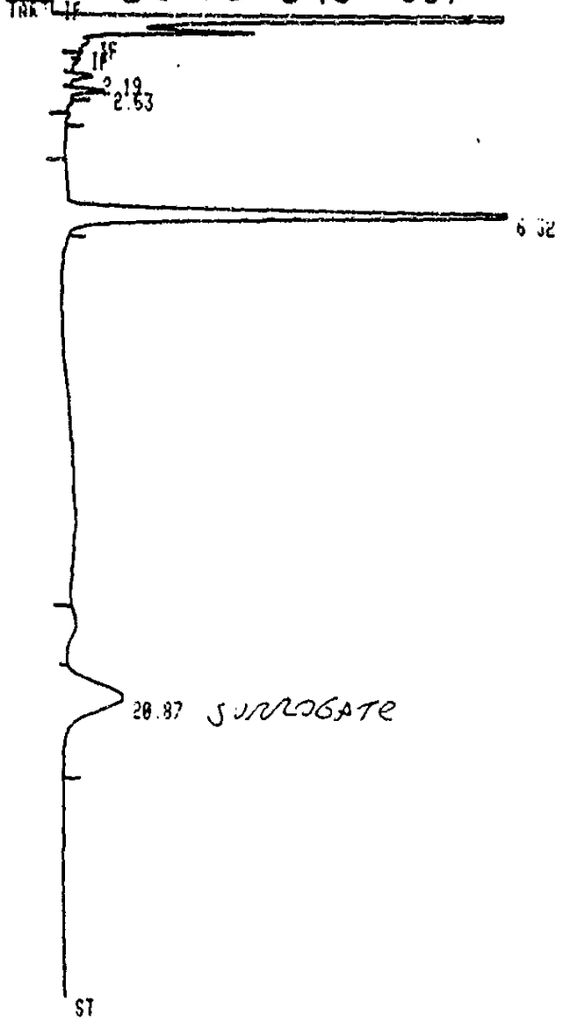
BASE M/Z: 57
RIC: 5000.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



003489

86-12-045-06A RQ



DC # N/A

SPECTRIX CORPORATION

CASE NO. Keystone compa

SAMPLE NO. CAV-SW06-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 60

003490

RUN # 148 DEC/24/86 03:03:07
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.19	2721	PP	0.148	3.166
2.63	4307	PB	0.130	5.012
6.32	71164	PB	0.296	82.837
20.87	7721	PB	0.963	8.985

TOTAL HGHT= 85913
MUL FACTOR= 1.0000E+00

SPECTRIX 6 7 5 0 0 REPORT

Work Order # 86-12-043

Received: 12/10/86

Results by Sample

SAMPLE ID CAV-DW06-001 (LLW) SAMPLE # 06 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	<10 ug/L	FE	35700 ug/L	HG	<0.2 ug/L	NI	68 ug/L	PB	22.5 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	156 ug/L						

SPECTRIX ∇ ≤ O C REPORT

Work Order # 86-12-045

Received: 12/10/86

Results by Sample

SAMPLE ID CAV-DW06-001 (LLW) DUP. SAMPLE # 04 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	10 ug/L
CU	14 ug/L	FE	41700 ug/L	HG	<0.2 ug/L	NI	54 ug/L	PB	22.9 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	162 ug/L						

Received: 12/10/86

SPECTRIX 400 REPORT

Work Order # 86-12-045

Results by Sample

SAMPLE ID CAV-DW06-001 (LLW) SPIKE SAMPLE # 05 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG <10\0 ug/L\%Recovery	AS 14.8\74.0 ug/L\%Recovery	BE 37\74.0 ug/L\%Recovery	CD 34\68.0 ug/L\%Recovery	CN_SU <100 ug/L	CR 139\69.5 ug/L\%Recovery
CU 190\76.0 ug/L\%Recovery	FE 35700\0 ug/L\%Recovery	HG 0.8\80.0 ug/L\%Recovery	NI 377\77.2 ug/L\%Recovery	PB 36.8\69.5 ug/L\%Recovery	SB <44\0 ug/L\%Recovery
SE <5\0 ug/L\%Recovery	TL 32.2\64.4 ug/L\%Recovery	ZN 329\86.5 ug/L\%Recovery			

CHECKLIST

SECTION II - Sample Data Packets

Sample No: CAV-OW07-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003494

SPECTRIX DC # ----- B

ST ID 4000

SAMPLE NUMBER: CAV-OW07-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

ORATORY NAME: SPECTRIX
B SAMPLE ID NO.: 861204507
MPLE MATRIX: WATER
TA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/13/86
TE ANALYZED: 12/13/86

DATAFILE: 4U12045V07

DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003495

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: CAV-OW07-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204507
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GU

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C07
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003496

SPECTRIX DC # ---- 8

SAMPLE NUMBER: CAV-QW07-00

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C07

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
U = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003497

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-07A

DC No: KEYSTONE
SMO No: CAV-OW07-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 JA
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003498

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: CAV-OW07-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: TTO DATAFILE: 4U12045V07

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
124-38-9	CARBON DIOXIDE (ACN) *	35	992	400 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	590		11 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

* ALSO FOUND IN BLANK

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: CAV-OW07-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

QC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12045C07

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
5-54-2	HEXANAL, 2-METHYL-	324	804	16 J 50
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	783		28 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	830		6 J 80
381-40-1	PROPANOIC ACID, 2-METHYL-, 1-(1,1-DIMETHY	1146	882	11 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1948		26 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	2343		14 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	2364		25 J

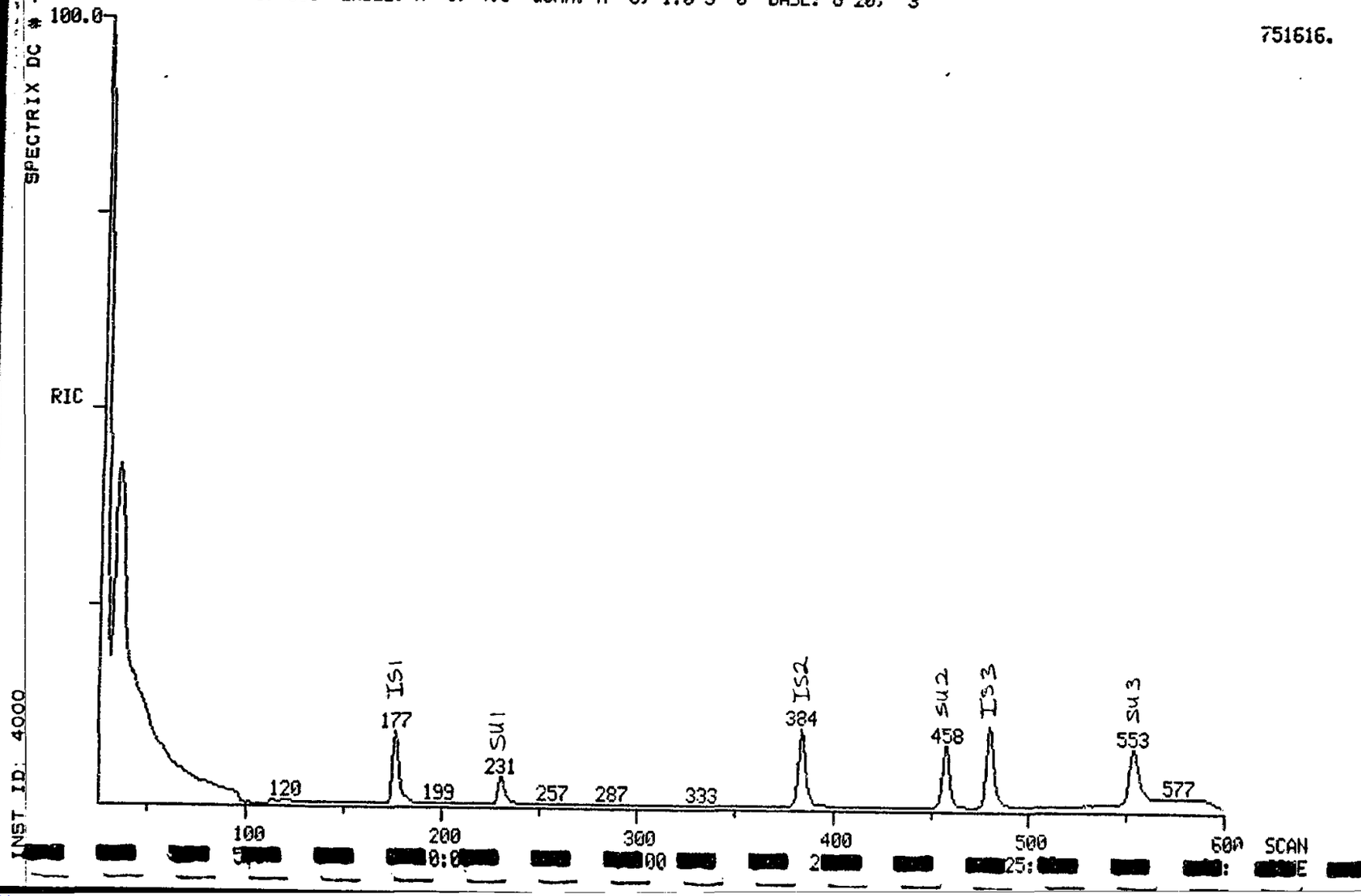
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003501

RIC
12/13/86 17:42:00
SAMPLE: CAV-OW07-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V07 #1 SCANS 25 TO 600
CALI: 4U12045V07 #3

751616.



003501

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	CAV-OW07-001		
.ENAME	4U12045V07	INST	4000
CLIENT	KEYSTONE	ANALYST	TTO
DATE INJECTED	12/13/86 17:42:00	VERIFIED BY	GU
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

CAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	27883
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	119387
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	96315
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	95 %	1.305	27173
457	CS05	D8-TOLUENE	**SU2**	98	98 %	0.952	78514
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	99 %	1.152	49192
121	CO30	METHYLENE CHLORIDE *		84	2 UG/L	0.684	1134

* BLANK CORRECTED ON DATA SHEET

003502

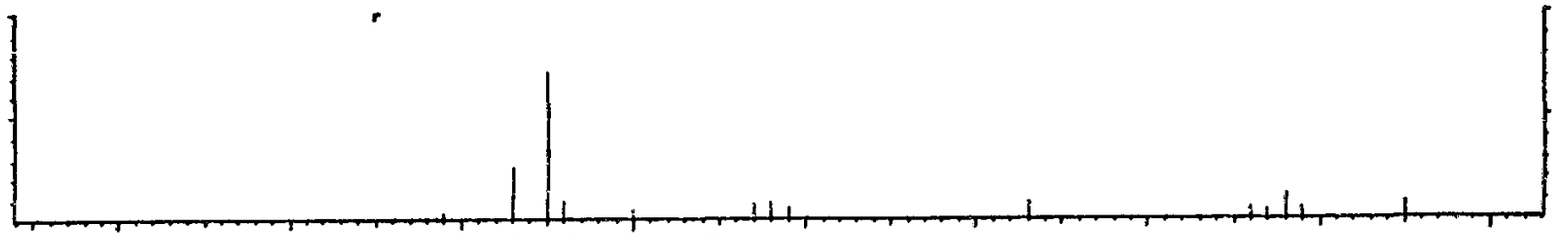
LIBRARY SEARCH
12/13/86 17:42:00 + 29:30
SAMPLE: CAV-OW07-001
CONDS.: ----
ENHANCED (S 15B 2N 0T)

DATA: 4U12045V07 # 590
CALI: 4U12045V07 # 3

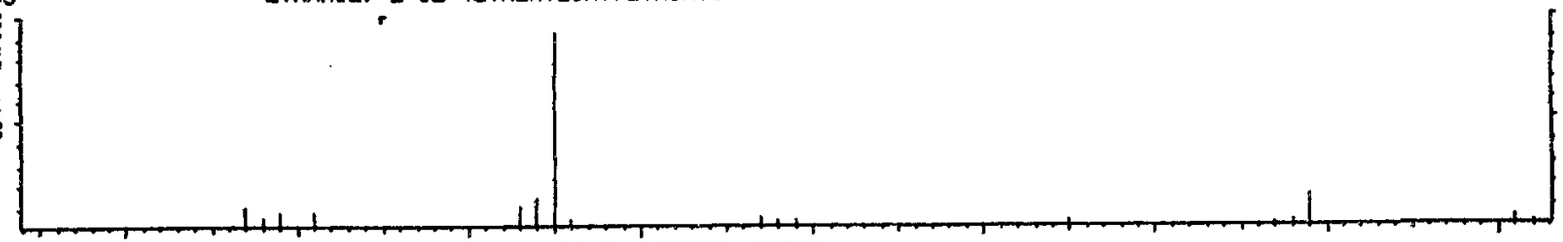
BASE M/Z: 45
RIC: 1607.

SPECTRIX DC # -----19
ANALYST: TTO

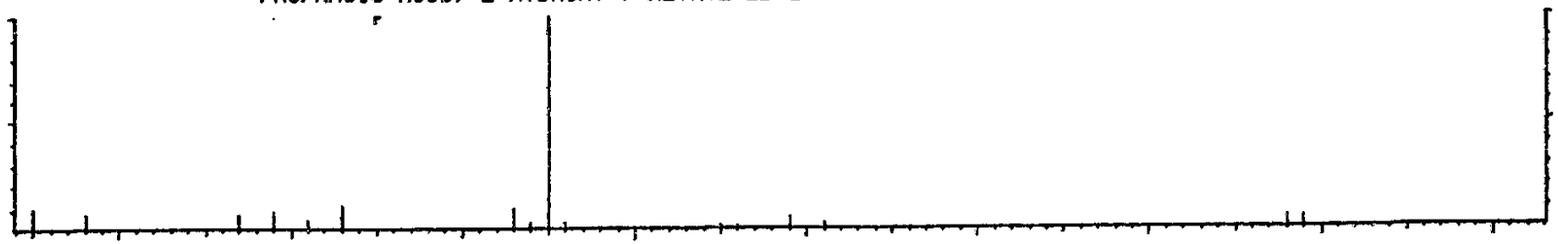
1383
SAMPLE



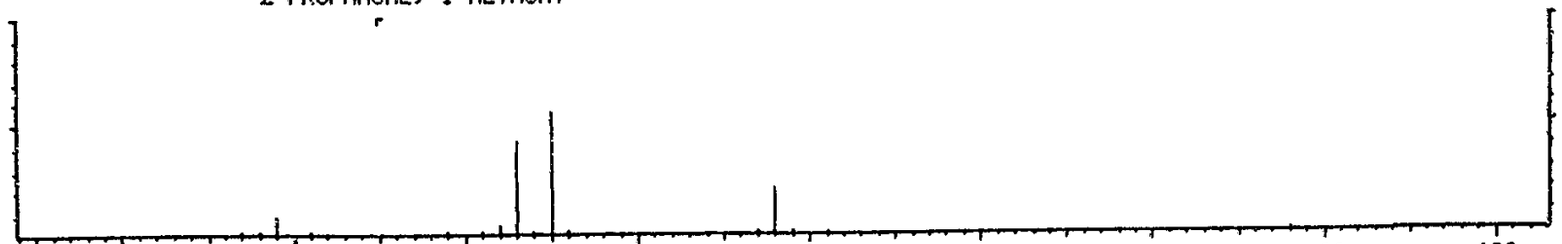
C6.H12.03 ETHANOL, 2-[2-(ETHENYLOXY)ETHOXY]-
1383
M WT 132
B PK 45
RANK 1
4614
PUR 583



C4.H8.03 PROPANOIC ACID, 2-HYDROXY-, METHYL ESTER
1383
M WT 104
B PK 45
RANK 2
1591
PUR 568



C4.H8.02 2-PROPANONE, 1-METHOXY-
1383
M WT 88
B PK 45
RANK 3
747
PUR 551



M/Z 20 30 40 50 60 70 80 90 100

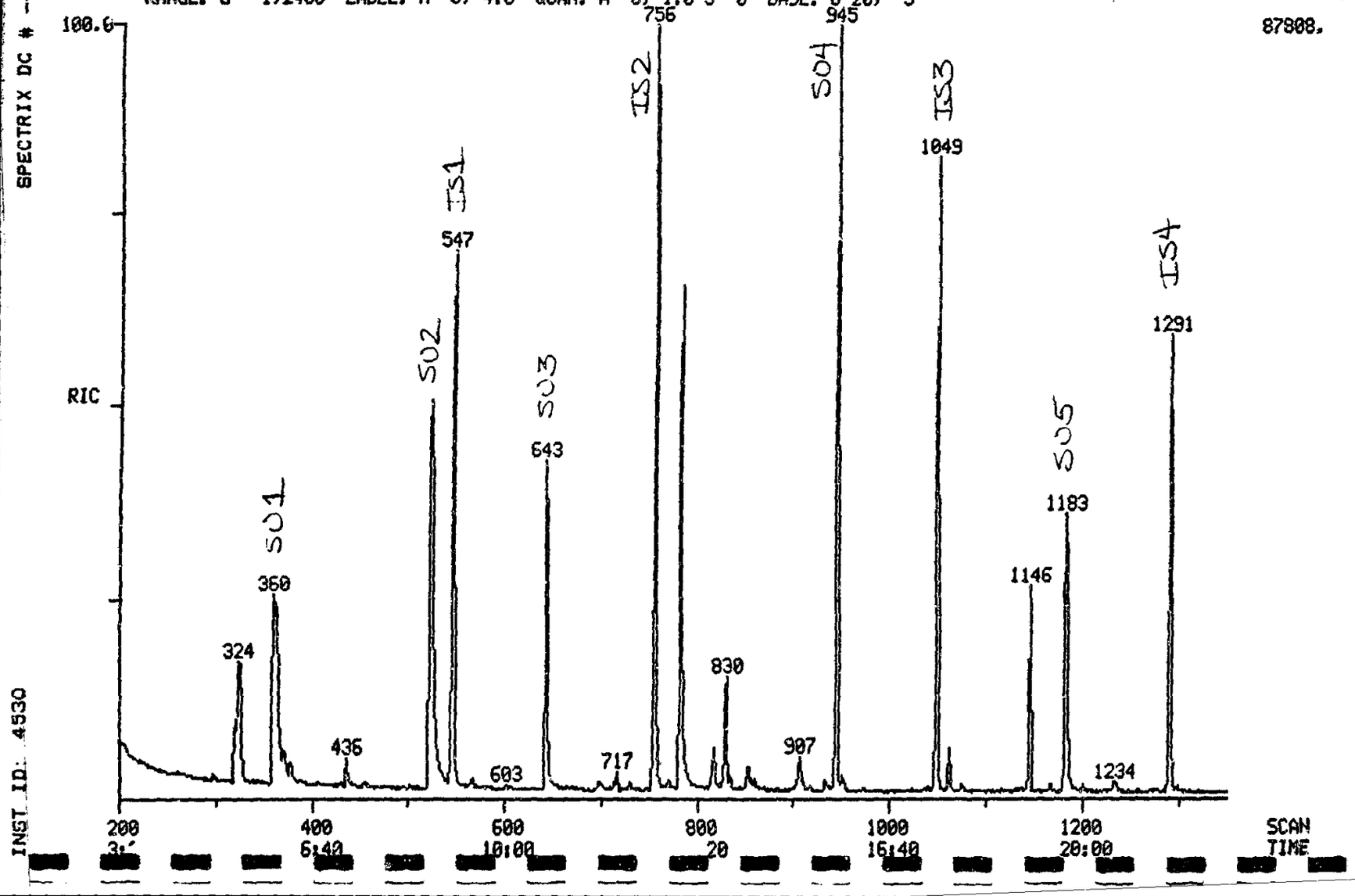
NST ID: 4000

003504

RIC
12/29/85 16:48:00
SAMPLE: CAV-0W07-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C07 #1
CALI: 4U12045C07 #3

SCANS 200 TO 1350



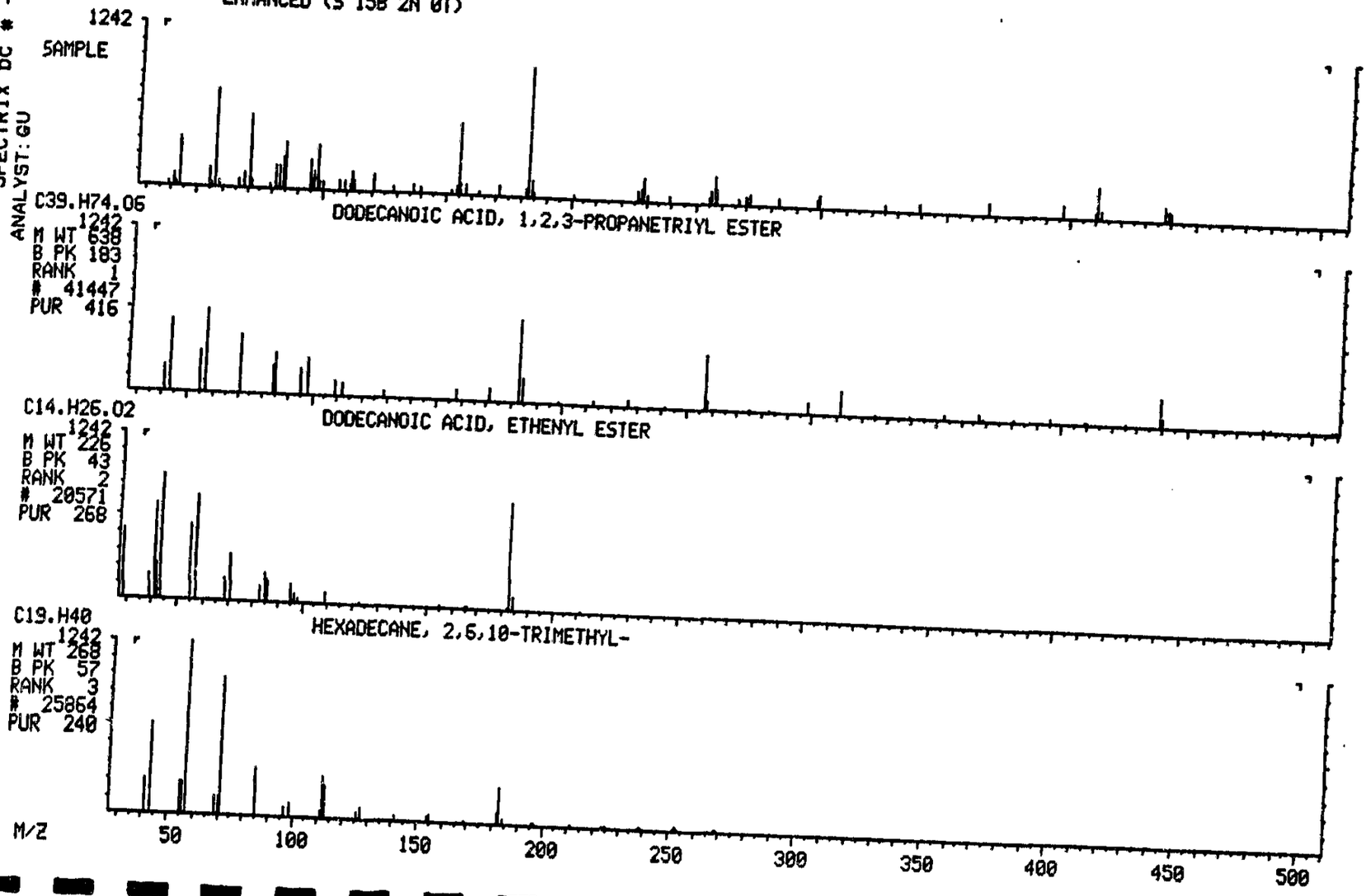
003504

LIBRARY SEARCH
12/29/86 16:48:00 + 39:03
SAMPLE: CAV-0W07-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C07 #2343
CALI: 4U12045C07 # 3

BASE M/Z: 183
RIC: 3567.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



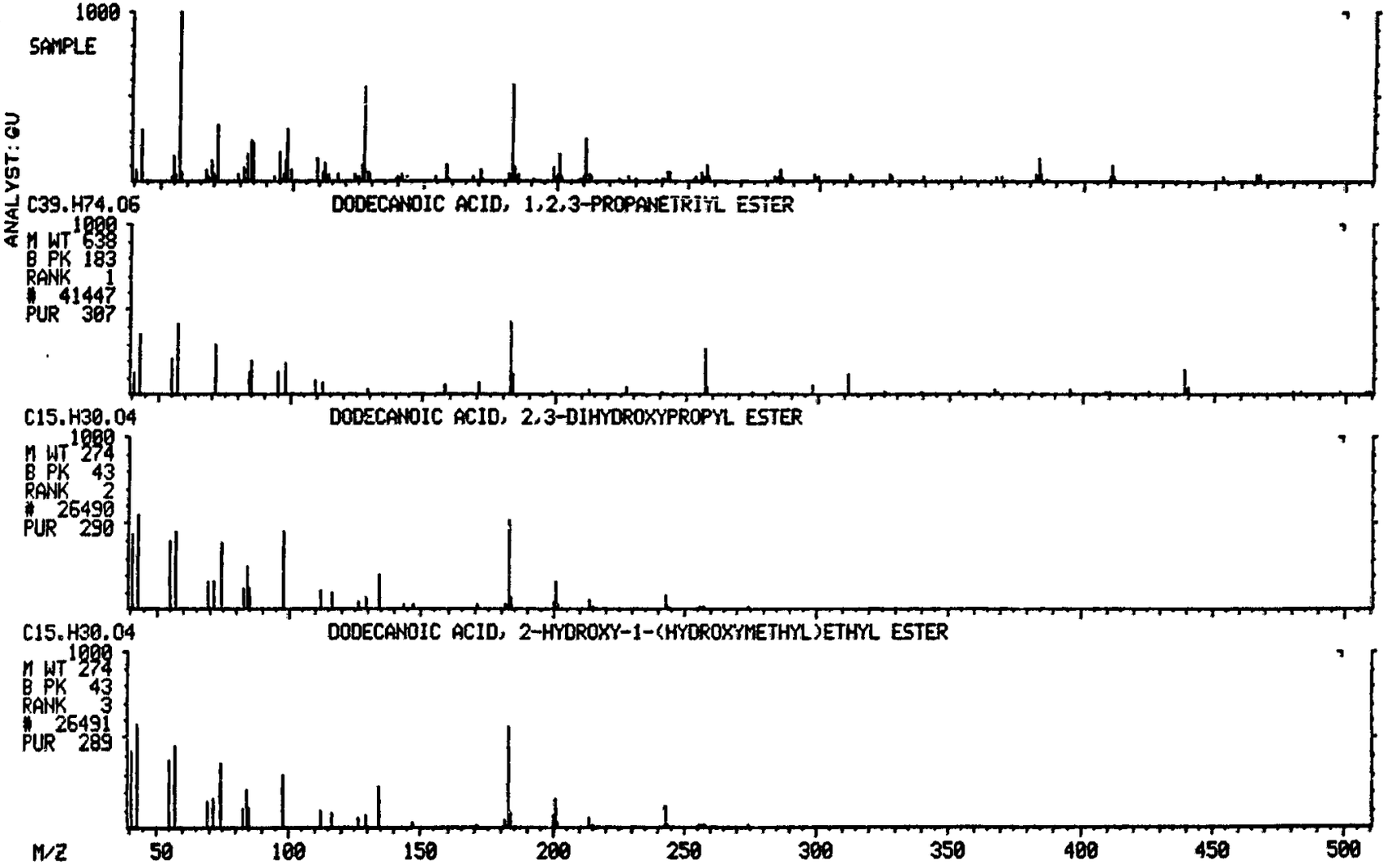
003506

LIBRARY SEARCH
12/29/86 16:48:00 + 39:25
SAMPLE: CAV-0W07-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C07 #2365
CALI: 4U12045C07 # 3

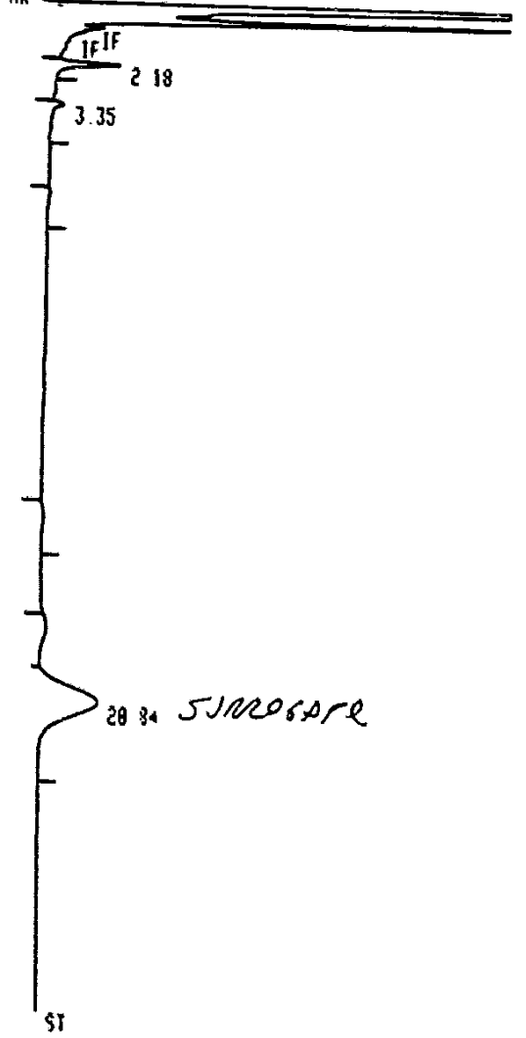
BASE M/Z: 57
RIC: 9023.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



003506

86-12-045-07A R06



DC # N/A

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. CAV-0W07-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 600

003507

RUN # 150 DEC/24/86 04:05:40
WORKFILE ID: C
WORKFILE NAME

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.18	7894	BB	0.136	46.879
3.35	1386	BB	0.195	8.231
20.84	7559	PB	0.990	44.890

TOTAL HCHT= 16839
MUL FACTOR= 1.0000E+00

SPECTRIX REPORT

Work Order # 86-12-045

Received: 12/10/86

Results by Sample

SAMPLE ID CAV-DW07-001 (LLW) SAMPLE # 07 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	95.3 ug/L	BE	20 ug/L	CD	10 ug/L	CN SU	<100 ug/L	CR	155 ug/L
CU	85 ug/L	FE	165000 ug/L	HG	<0.2 ug/L	NI	187 ug/L	PB	159 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	279 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW01-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003509

SPECTRIX-DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW01-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204508
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/13/86
DATE ANALYZED: 12/13/86

DATAFILE: 4U12045V08
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	2 J
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	3 J
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	2 J
C245	STYRENE	5 U
C250	TOTAL XYLENES	3 J

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003510

SPECTRIX DC # ---- 8

INST ID: 4530

SAMPLE NUMBER: SCK-MW01 -001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204508
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: CH

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/30/86

DATAFILE: 4U12045C08B
DILUTION FACTOR: 40.0

CAS #	COMPOUND	UG/L
C315	PHENOL	400 U
C325	BIS(2-CHLOROETHYL)ETHER	400 U
C330	2-CHLOROPHENOL	400 U
C335	1,3-DICHLOROBENZENE	400 U
C340	1,4-DICHLOROBENZENE	400 U
C345	BENZYL ALCOHOL	400 U
C350	1,2-DICHLOROBENZENE	400 U
C355	2-METHYLPHENOL	110 J
C360	BIS(2-CHLOROISOPROPYL)ETHER	400 U
C365	4-METHYLPHENOL	64 J
C370	N-NITROSODIPROPYLAMINE	400 U
C375	HEXACHLOROETHANE	400 U
C410	NITROBENZENE	400 U
C415	ISOPHORONE	400 U
C420	2-NITROPHENOL	400 U
C425	2,4-DIMETHYLPHENOL	550
C430	BENZOIC ACID	2000 U
C435	BIS(2-CHLOROETHOXY)METHANE	400 U
C440	2,4-DICHLOROPHENOL	400 U
C445	1,2,4-TRICHLOROBENZENE	400 U
C450	NAPHTHALENE	3100
C455	4-CHLOROANILINE	400 U
C460	HEXACHLOROBUTADIENE	400 U
C465	P-CHLORO-M-CRESOL	400 U
C470	2-METHYLNAPHTHALENE	110 J
C510	HEXACHLOROCYCLOPENTADIENE	400 U
C515	2,4,6-TRICHLOROPHENOL	400 U
C520	2,4,5-TRICHLOROPHENOL	2000 U
C525	2-CHLORONAPHTHALENE	400 U
C530	2-NITROANILINE	2000 U
C535	DIMETHYL PHTHALATE	400 U
C540	ACENAPHTHYLENE	400 U
C545	3-NITROANILINE	2000 U
C550	ACENAPHTHENE	110 J
C555	2,4-DINITROPHENOL	2000 U
C560	4-NITROPHENOL	2000 U
C565	DIBENZOFURAN	65 J
C570	2,4-DINITROTOLUENE	400 U
C575	2,6-DINITROTOLUENE	400 U

003511

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW01-001

:MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C08B

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	400 U
C585	4-CHLOROPHENYL PHENYL ETHER	400 U
C590	FLUORENE	47 J
C595	4-NITROANILINE	2000 U
C610	4,6-DINITRO-2-METHYLPHENOL	2000 U
C615	N-NITROSODIPHENYLAMINE	400 U
C625	4-BROMOPHENYL PHENYL ETHER	400 U
C630	HEXACHLOROBENZENE	400 U
C635	PENTACHLOROPHENOL	2000 U
C640	PHENANTHRENE	28 J
C645	ANTHRACENE	400 U
C650	DI-N-BUTYL PHTHALATE	400 U
C655	FLUORANTHENE	400 U
C715	PYRENE	400 U
C720	BUTYL BENZYL PHTHALATE	400 U
C725	3,3'-DICHLOROBENZIDINE	800 U
C730	BENZO(A)ANTHRACENE	400 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	400 U
C740	CHRYSENE	400 U
C760	DI-N-OCTYL PHTHALATE	400 U
C765	BENZO(B)FLUORANTHENE	400 U
C770	BENZO(K)FLUORANTHENE	400 U
C775	BENZO(A)PYRENE	400 U
C780	INDENO(1,2,3-CD)PYRENE	400 U
C785	DIBENZO(A,H)ANTHRACENE	400 U
C790	BENZO(GHI)PERYLENE	400 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003512

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-08A

DC No: KEYSTONE
SMO No: SCK-MW01-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 µA
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003513

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW01-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

SDG REPORT NO.: ---- ANALYST: TTO DATAFILE: 4U12045V08

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	49		9 UG/L

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003514

INST ID: 4530

SPECTRIX DC # ---- 8

SAMPLE: SCK-MW01 -001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION

QC REPORT NO.: ---

CASE NO.: ---

ANALYST: GU

DATAFILE: 4U12045C08B

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	590	958	160 J
95-13-6	1H-INDENE	601	944	210 J
498-81-7	CYCLOHEXANEMETHANOL, .ALPHA.,.ALPHA.,4-TR	721	806	230 J
108-68-9	PHENOL, 3,5-DIMETHYL-	753	914	290 J
95-15-8	BENZO[B]THIOPHENE	772	924	210 J
1515-95-3	BENZENE, 1-ETHYL-4-METHOXY-	823	881	160 J
698-71-5	PHENOL, 3-ETHYL-5-METHYL-	845	849	250 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	903		430 J
97-34-8	PHENOL, 3,5-DIETHYL-	929	830	310 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	946		290 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	970		300 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1004		200 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1023		210 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1063		350 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1126		530 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1244		300 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

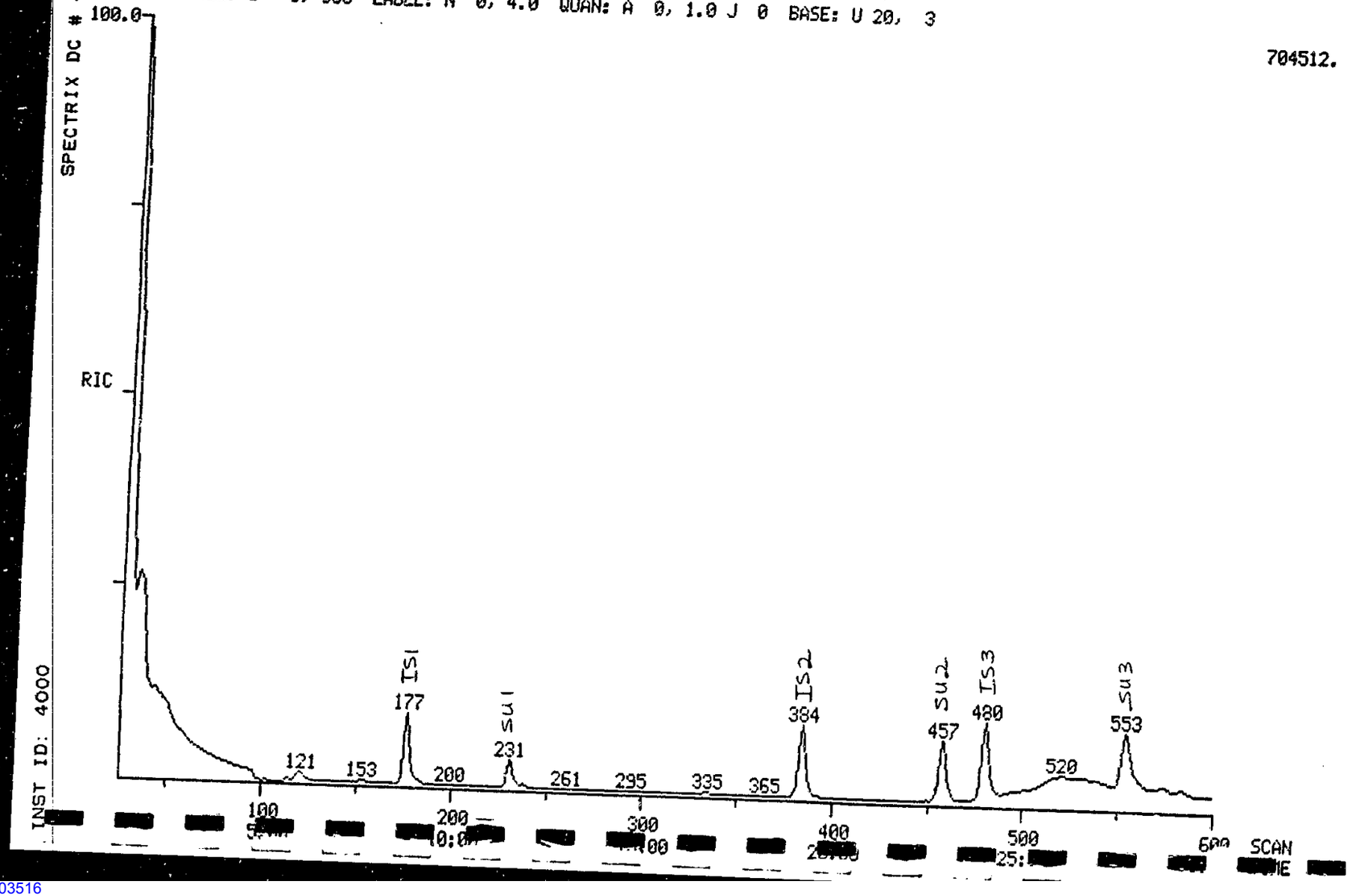
003516

RIC
12/13/86 18:25:00
SAMPLE: SCK-MW01-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V08 #1
CALI: 4U12045V08 #3

SCANS 25 TO 600

704512.



003516

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

AMPLE ID. SCK-MW01-001

.ENAME 4U12045V08

LIENT KEYSTONE

ATE INJECTED 12/13/86 18:25:00

CALIB STD DATE 12-14-86

INST 4000

ANALYST TTO

VERIFIED BY GU

CORR. FACTOR 1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
176	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	26966
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	112640
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	88602
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	94 %	1.313	26086
457	CS05	D8-TOLUENE	**SU2**	98	99 %	0.952	72885
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	97 %	1.152	44750
121	C030	METHYLENE CHLORIDE *		84	7 UG/L	0.688	4135
238	C110	2-BUTANONE *		72	9 UG/L	0.620	1021
335	C165	BENZENE		78	2 UG/L	0.872	4382
461	C230	TOLUENE		92	3 UG/L	0.960	3942
519	C240	ETHYLBENZENE		106	2 UG/L	1.081	1196
583	C250	TOTAL XYLENES		106	3 UG/L	1.215	2300

* BLANK CORRECTED ON DATA SHEET

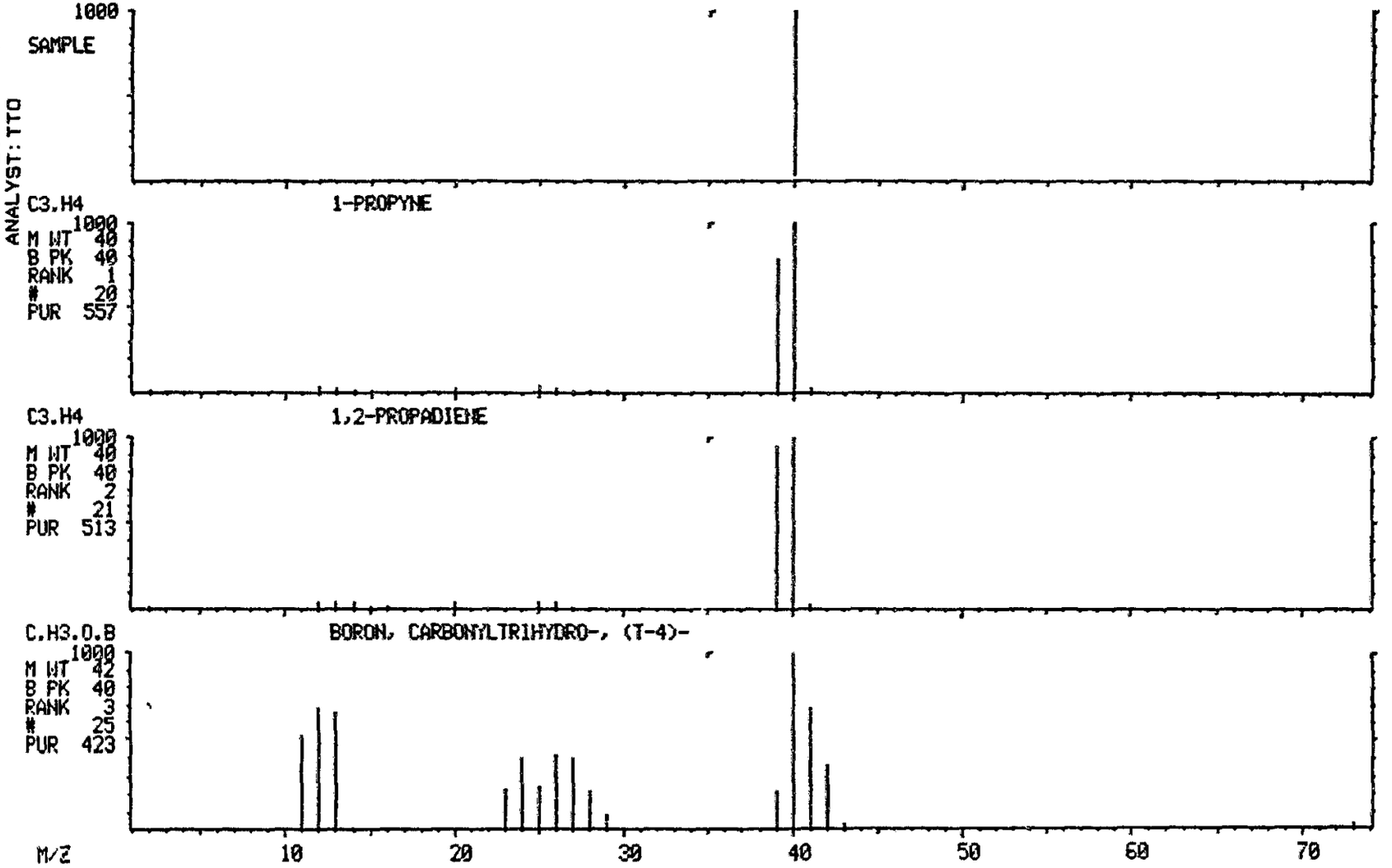
003518

LIBRARY SEARCH
12/13/86 18:25:00 + 2:27
SAMPLE: SCK-MW01-001
CONDS.: ——
ENHANCED (S 15B 2N 0T)

DATA: 4U12045U08 # 43
CALI: 4U12045U08 # 3

BASE M/Z: 40
RIC: 62.

SPECTRIX DC # -----19
ANALYST: TTO
INST ID: 4000

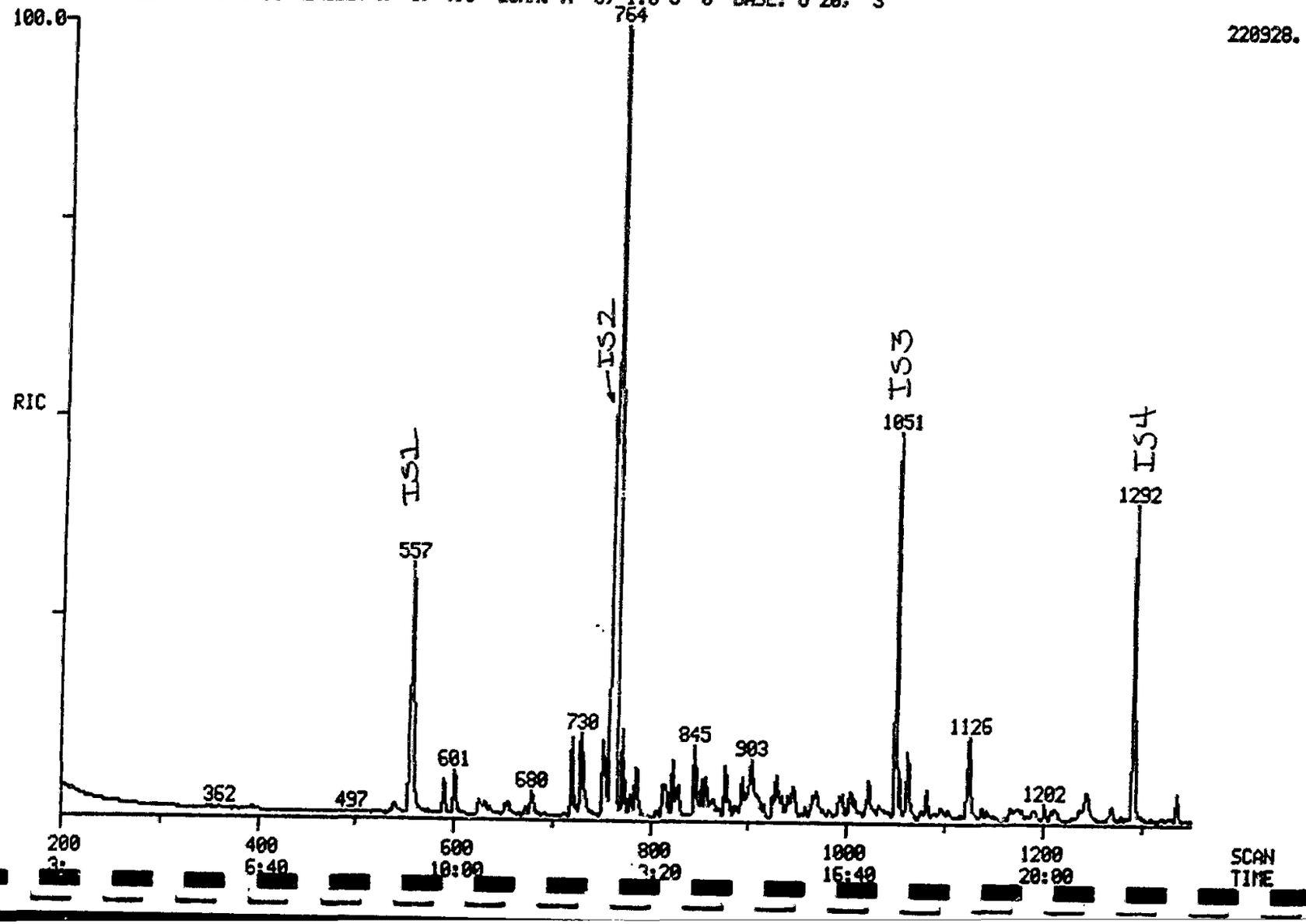


003518

003519

RIC
12/30/86 15:01:00
SAMPLE: SCK-MW01-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C08B #1 SCANS 200 TO 1350
CALI: 4U12045C08B #3



003519

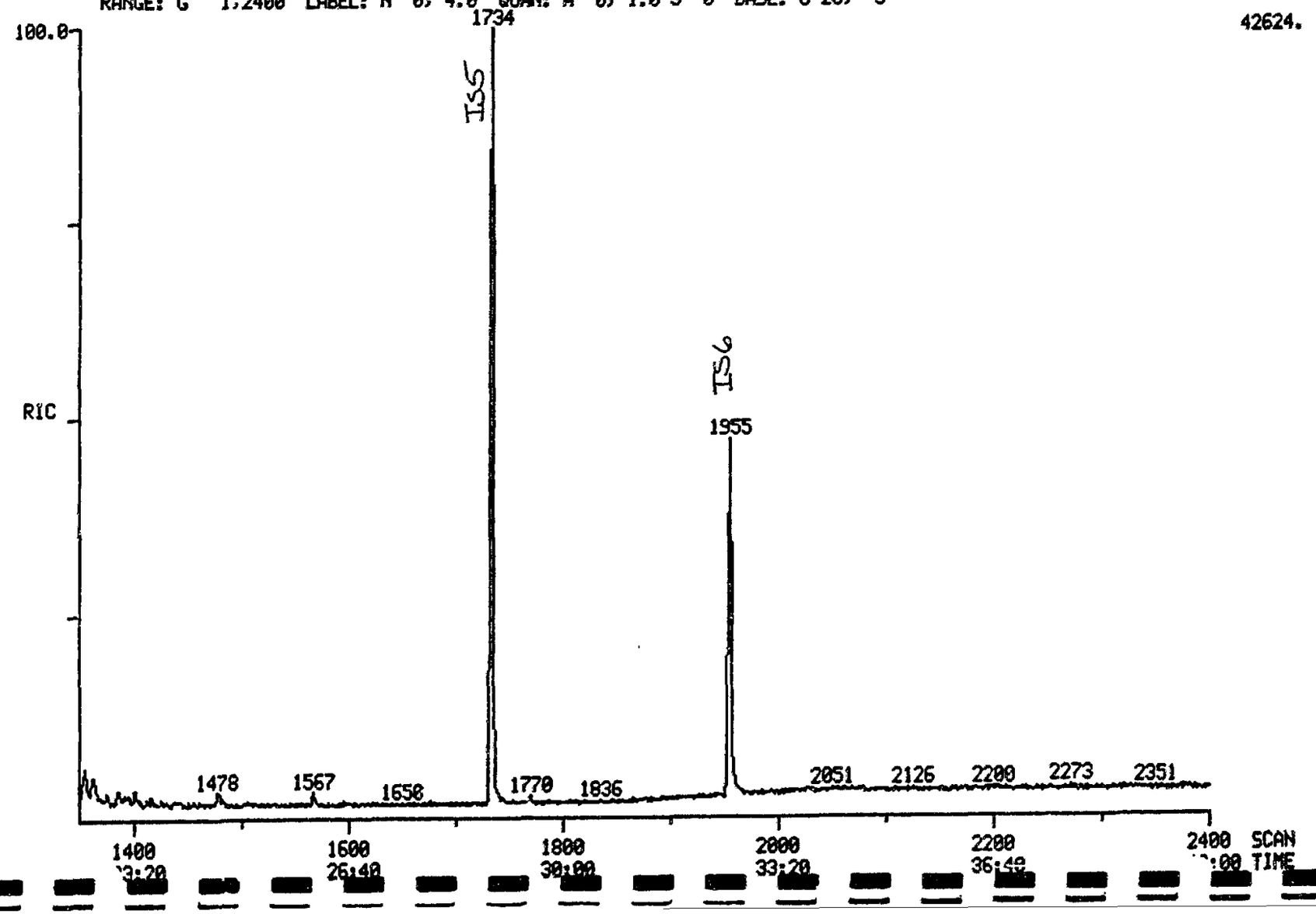
003520

RIC
12/30/86 15:01:00
SAMPLE: SCK-MW01-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C08B #1 SCANS 1350 TO 2400
CALI: 4U12045C08B #3

SPECTRIX DC # ----14

INST ID: 4530



003520

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW01-001

FILENAME 4U12045C08B

CLIENT KEYSTONE

DATE INJECTED 12/30/86 15:01:00

CALIB STD DATE 12/17/86

INST ID. 4530

ANALYST GU

VERIFIED BY GU

CORR. FACTOR 40.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
557	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	1600 UG/L	1.000	4139
760	CI40	NAPHTHALENE-D8 ** IS2 **	136	1600 UG/L	1.000	15865
1051	CI50	ACENAPHTHENE-D10 ** IS3 **	164	1600 UG/L	1.000	7743
1292	CI60	PHENANTHRENE-D10 ** IS4 **	188	1600 UG/L	1.000	10009
1734	CI70	CHRYSENE-D12 ** IS5 **	240	1600 UG/L	1.000	5353
1955	CI75	PERYLENE-D12 ** IS6 **	264	1600 UG/L	1.000	3340
626	C355	2-METHYLPHENOL	108	114 UG/L	1.124	490
652	C365	4-METHYLPHENOL	108	64 UG/L	1.171	280
730	C425	2,4-DIMETHYLPHENOL	122	554 UG/L	0.961	2087
764	C450	NAPHTHALENE	* 128	3131 UG/L	1.005	31551
877	C470	2-METHYLNAPHTHALENE	142	105 UG/L	1.154	886
1055	C550	ACENAPHTHENE	153	113 UG/L	1.004	534
1082	C565	DIBENZOFURAN	168	65 UG/L	1.029	407
1143	C580	DIETHYL PHTHALATE	* 149	45 UG/L	1.088	226
138	C590	FLUORENE	166	47 UG/L	1.083	250
295	C640	PHENANTHRENE	178	28 UG/L	1.002	183

* BLANK CORRECTED ON DATA SHEET

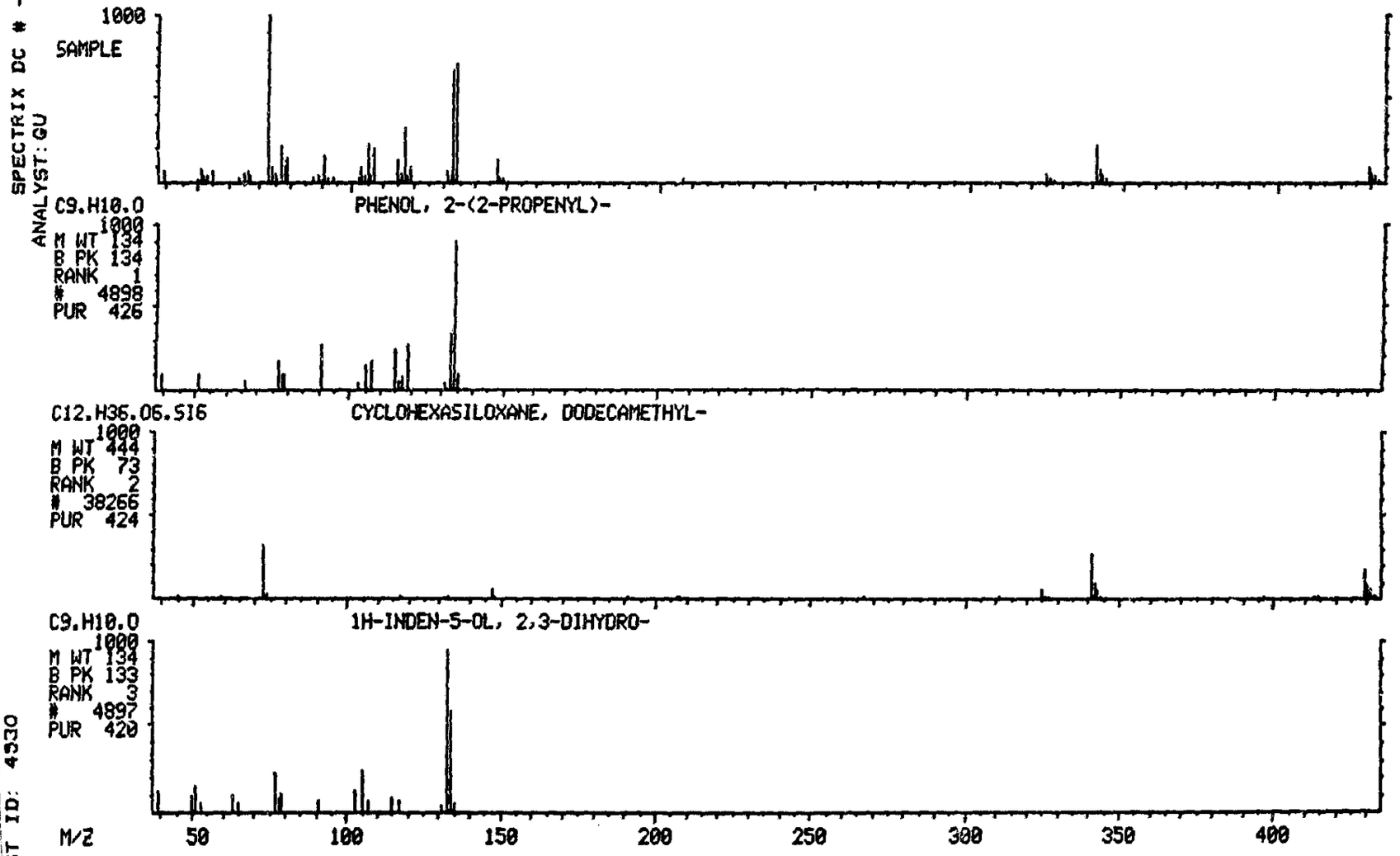
** SURROGATES WERE DILUTED OUT

003522

LIBRARY SEARCH
12/30/86 15:01:00 + 15:03
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B # 903 BASE M/Z: 73
CALI: 4U12045C08B # 3 RIC: 10399.

SPECTRIX DC # ----19
ANALYST: GU



NST ID: 4530

003522

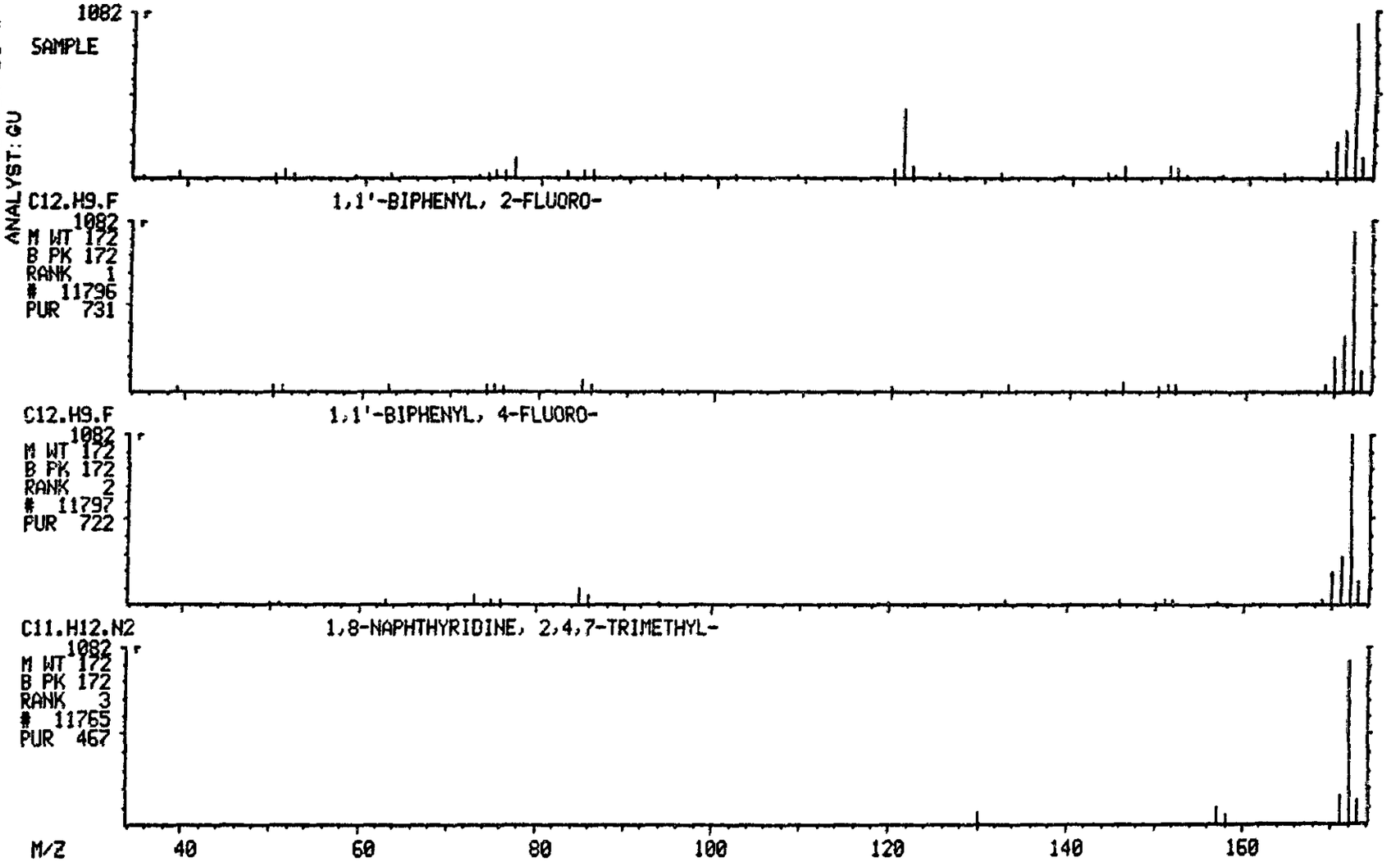
003523

LIBRARY SEARCH
12/30/86 15:01:00 + 15:46
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B # 946
CALI: 4U12045C08B # 3

BASE M/Z: 172
RIC: 4479.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

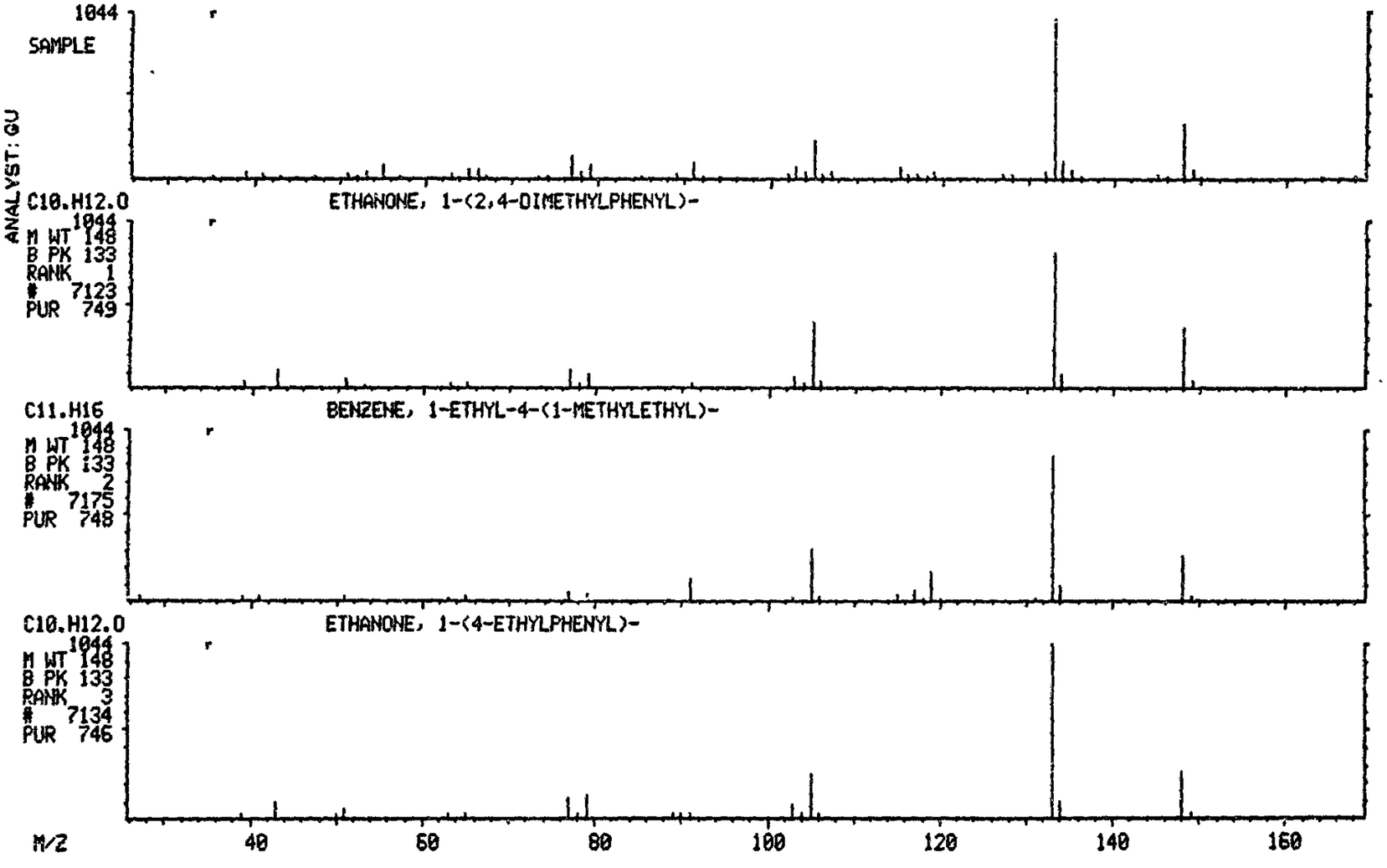
003523

003524

LIBRARY SEARCH
12/30/86 15:01:00 + 16:10
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B # 970 BASE M/Z: 133
CALI: 4U12045C08B # 3 RIC: 5487.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530

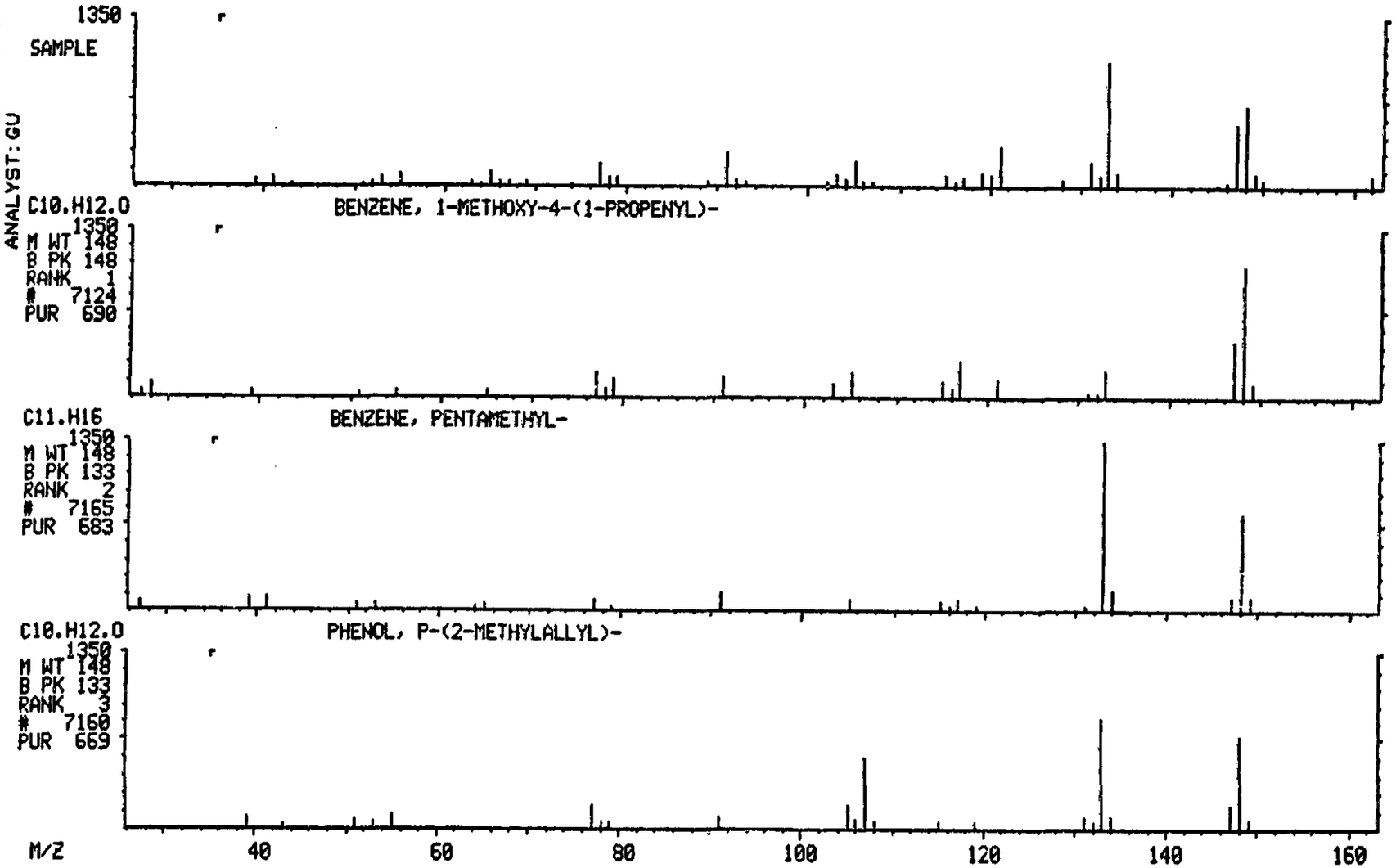


003524

LIBRARY SEARCH
12/30/86 15:01:00 + 16:44
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B #1004 BASE M/Z: 133
CALI: 4U12045C08B # 3 RIC: 4815.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530

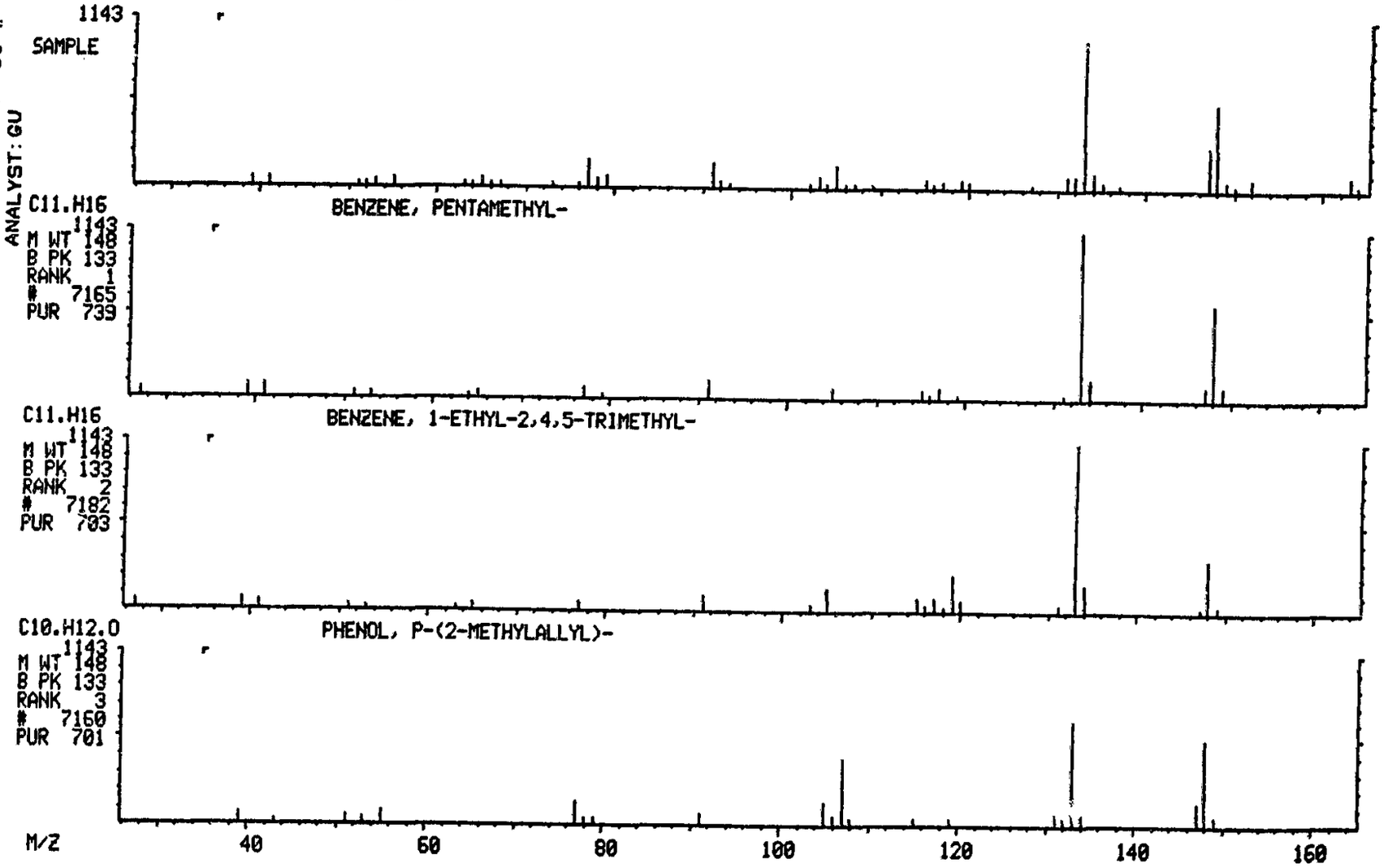


LIBRARY SEARCH
12/30/86 15:01:00 + 17:03
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B #1023
CALI: 4U12045C08B # 3

BASE M/Z: 133
RIC: 7783.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003527

LIBRARY SEARCH
12/30/86 15:01:00 + 17:43
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B #1063
CALI: 4U12045C08B # 3

BASE M/Z: 73
RIC: 15695.

SPECTRIX DC # ----19
ANALYST: GU

1000
SAMPLE

C12.H36.04.SI5
TRISILOXANE, 1,1,1,5,5,5-HEXAMETHYL-3,3-BIS[(TRIMETHYLSILYL)OXY]-
1000
M WT 384
B PK 73
RANK 1
35382
PUR 501

C12.H36.04.SI5
PENTASILOXANE, DODECAMETHYL-
1000
M WT 384
B PK 281
RANK 2
35381
PUR 439

C14.H26.02.SI2
SILANE, [BICYCLO[4.2.0]OCTA-3,7-DIENE-7,8-DIYLBIS(OXY)]BIS[TRIMETHYL-
1000
M WT 282
B PK 73
RANK 3
27273
PUR 350

INST ID: 4530

M/Z 50 100 150 200 250 300 350 400

003527

LIBRARY SEARCH
12/30/86 15:01:00 + 18:46
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B #1126
CALI: 4U12045C08B # 3

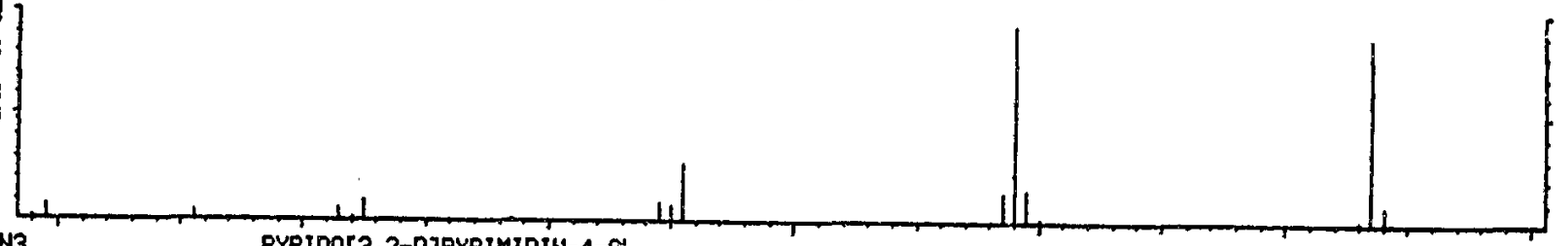
BASE M/Z: 147
RIC: 18207.

SPECTRIX DC # ----19
ANALYST: GU

1329
SAMPLE

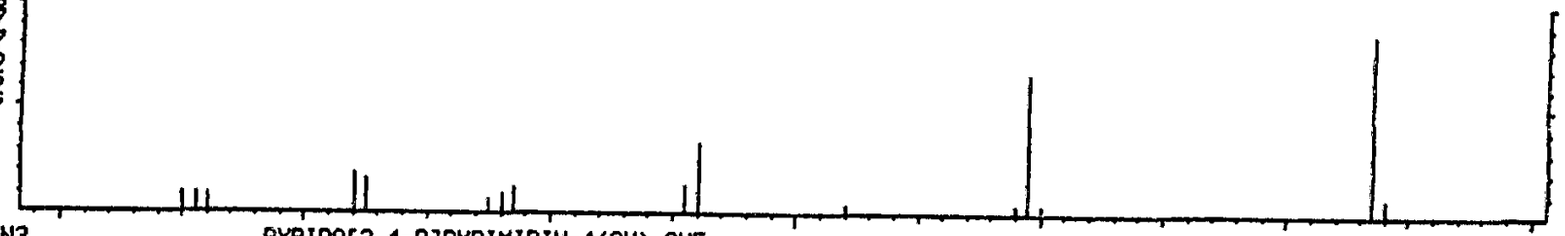
C9.H9.O.N
1329
M WT 147
B PK 118
RANK 1
7103
PUR 669

1H-INDOLE-1-CARBOXALDEHYDE, 2,3-DIHYDRO-



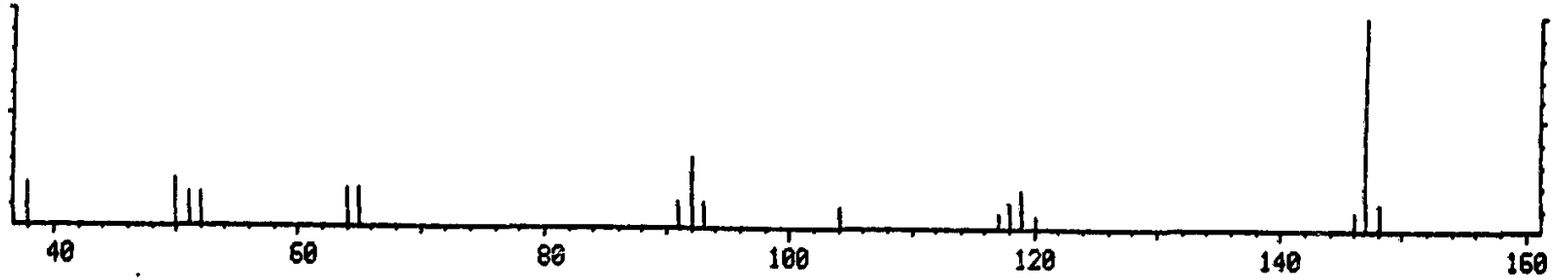
C7.H5.O.N3
1329
M WT 147
B PK 147
RANK 2
7082
PUR 657

PYRIDO[3,2-D]PYRIMIDIN-4-OL



C7.H5.O.N3
1329
M WT 147
B PK 147
RANK 3
7080
PUR 642

PYRIDO[3,4-D]PYRIMIDIN-4(3H)-ONE



M/Z 40 60 80 100 120 140 160

INST ID: 4530

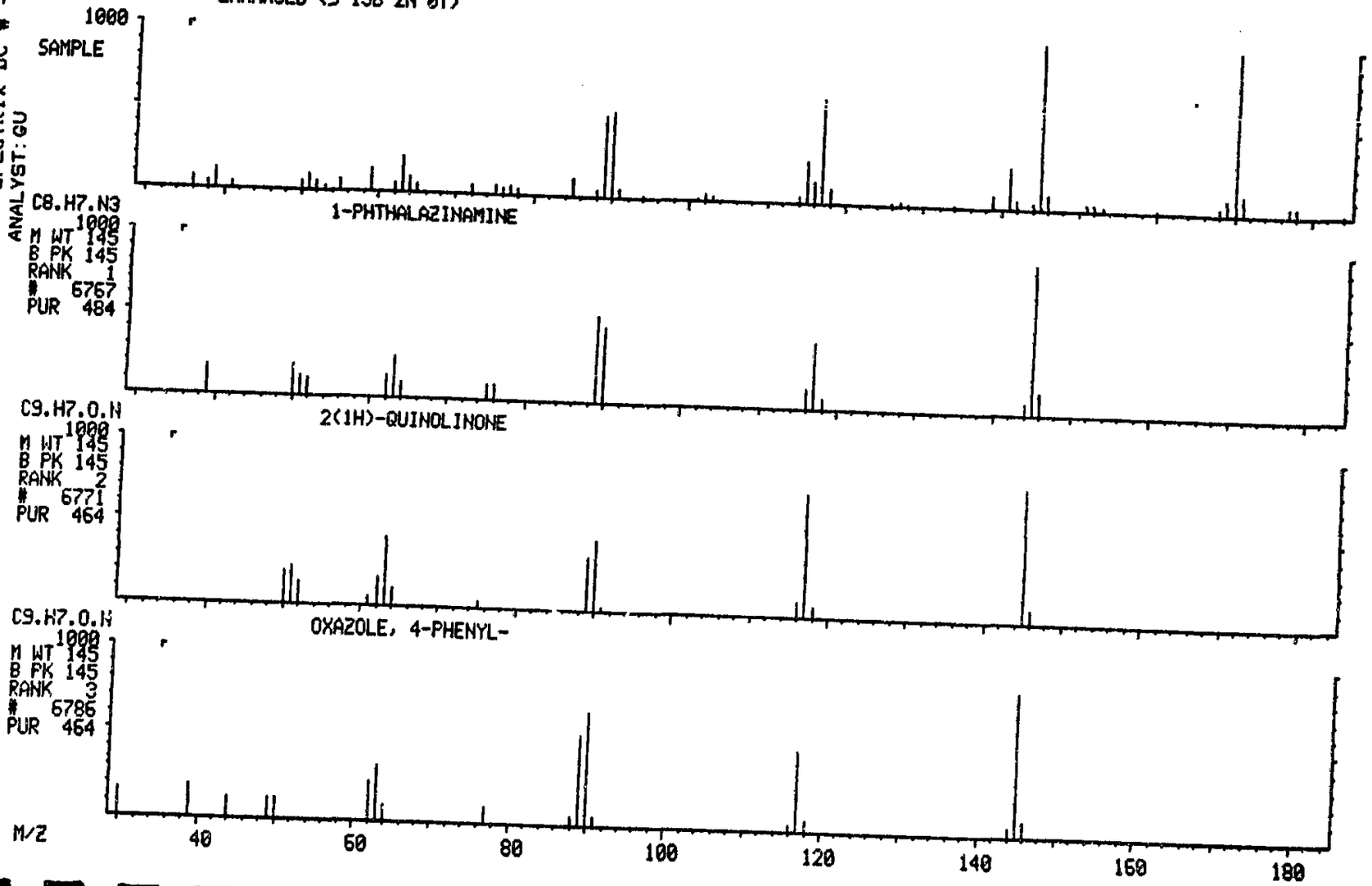
003529

LIBRARY SEARCH
12/30/86 15:01:00 + 20:44
SAMPLE: SCK-MW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C08B #1244
CALI: 4U12045C08B # 3

BASE M/Z: 145
RIC: 6479.

SPECTRIX DC # ----19
ANALYST: GU

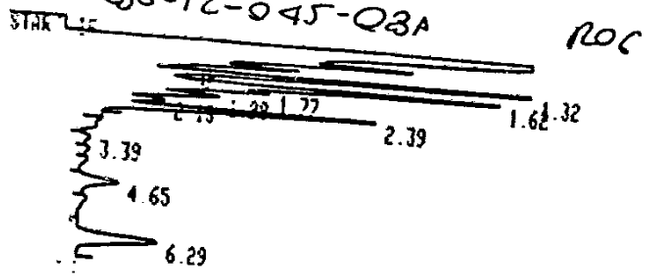


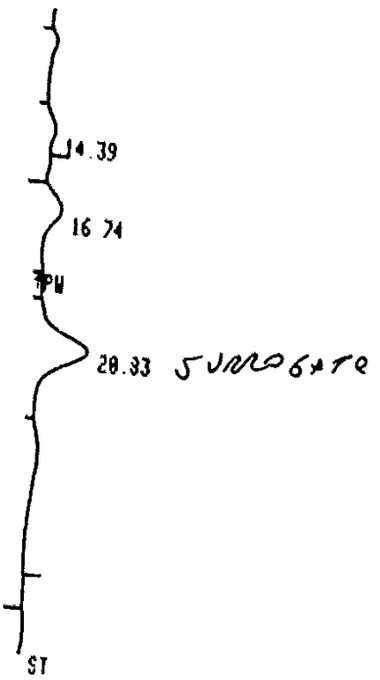
INST ID: 4530

003529

86-12-045-Q3A

ROC





DC # N/A -

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. SCK-MW01-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 600

003530

RUN # 151
WORKFILE ID: C
WORKFILE NAME

DEC/24/86 04:36:56

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.32	70453	D BV	0.086	33.430
1.62	46185	VV	0.124	21.915
1.77	15622	D VV	0.107	7.887
1.98	11269	D VV	0.130	5.347
2.18	5217	D VV	0.128	2.476
2.39	34393	VB	0.118	16.319
3.39	1295	PV	0.211	0.615
4.65	5087	VV	0.256	2.414
6.29	10355	VB	0.280	4.913
14.39	849	PB	0.648	0.403
16.74	2288	BP	0.923	1.086
20.83	6736	VV	1.140	3.196

TOTAL HGHT= 210750
MUL FACTOR= 1.0000E+00

SPECTRIX ≤ 0 0 REPORT

Work Order # 86-12-045

Received: 12/10/86

Results by Sample

SAMPLE ID SCK-MW01-001 (LLW) SAMPLE # 08 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	61.7 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	98 ug/L
CU	41 ug/L	FE	100,000 ug/L	HG	<0.2 ug/L	NI	125 ug/L	PB	80.0 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	196 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW03-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003532

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW03-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204509
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ----
GC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
DATE ANALYZED: 12/15/86

DATAFILE: 4U12045V09
DILUTION FACTOR: 10

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = COMPOUND ALSO FOUND IN BLANK

003533

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW03-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204509
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...GU...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: ...12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: ...12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C09

DILUTION FACTOR: ...1.0...

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	10 U
C435	BIS(2-CHLOROETHOXY)METHANE	50 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	10 U
C525	2-CHLORONAPHTHALENE	50 U
C530	2-NITROANILINE	10 U
C535	DIMETHYL PHTHALATE	50 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	10 U
C550	ACENAPHTHENE	50 U
C555	2,4-DINITROPHENOL	10 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	50 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003534

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW03-00

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C09

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003535

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-09A

DC No: KEYSTONE
SMO No: SCK-MW03-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 ✓A
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003536

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID.	SCK-MW03-001		
FILENAME	4U12045C09	INST ID.	4530
CLIENT	KEYSTONE	ANALYST	GU
DATE INJECTED	12/29/86 19:23:00	VERIFIED BY	GU
CALIB STD DATE	12/17/86	CORR. FACTOR	1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
543	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	2840:
754	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	11372(
1047	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	5877(
1289	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	6854:
1731	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	4347(
1952	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	1876(
353	CS50	2-FLUOROPHENOL ** SU1 **	112	51 %	0.650	5384:
519	CS45	PHENOL-D5 ** SU2 **	99	57 %	0.956	7893(
1181	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	55 %	1.128	882:
640	CS20	NITROBENZENE-D5 ** SU3 **	82	54 %	0.849	3350:
943	CS25	2-FLUOROBIPHENYL ** SU4 **	172	54 %	0.901	7646(
1565	CS30	TERPHENYL-D14 ** SU6 **	244	58 %	0.904	3171:
1767	C735	BIS(2-ETHYLHEXYL)PHTHALATE	*149	2 UG/L	1.021	225'

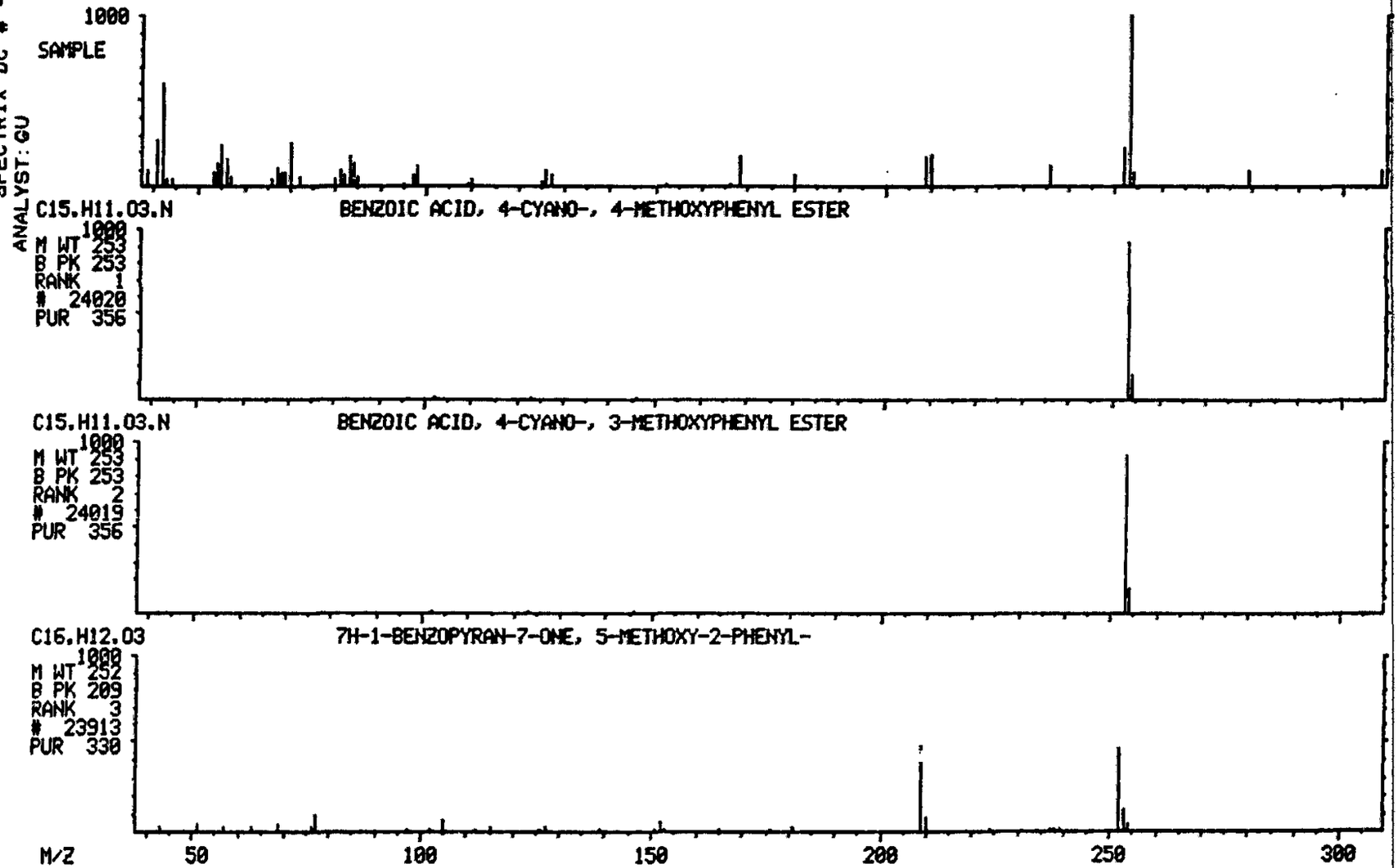
* BLANK CORRECTED ON DATA SHEET

LIBRARY SEARCH
12/29/86 19:23:00 + 24:50
SAMPLE: SCK-MW03-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C09 #1490
CALI: 4U12045C09 # 3

BASE M/Z: 253
RIC: 3947.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

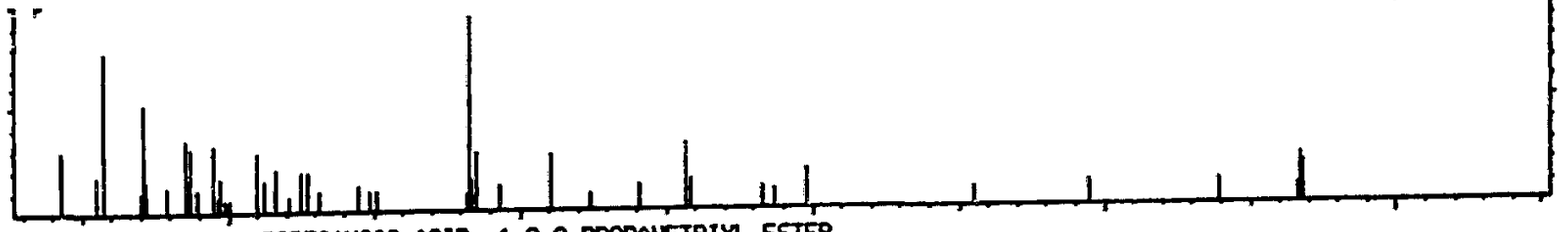
LIBRARY SEARCH
12/29/86 19:23:00 + 39:22
SAMPLE: SCK-MW03-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C09 #2362
CALI: 4U12045C09 # 3

BASE M/Z: 183
RIC: 1131.

SPECTRIX DC # ----19
ANALYST: GU

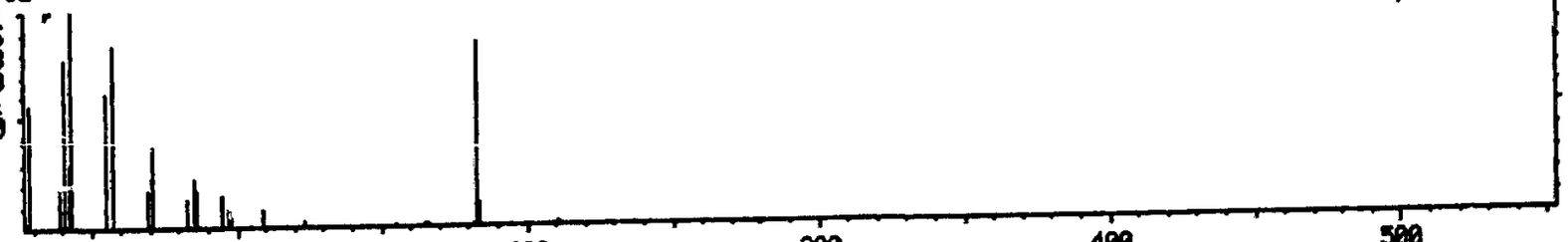
1051
SAMPLE



C39.H74.O6 DODECANOIC ACID, 1,2,3-PROPANETRIYL ESTER
1051
M WT 638
B PK 183
RANK 1
41447
PUR 299

C49.H98.O4 LAURIC ACID, 2-(HEXADECYLOXY)-3-(OCTADECYLOXY)PROPYL ESTER
1051
M WT 750
B PK 467
RANK 2
41923
PUR 289

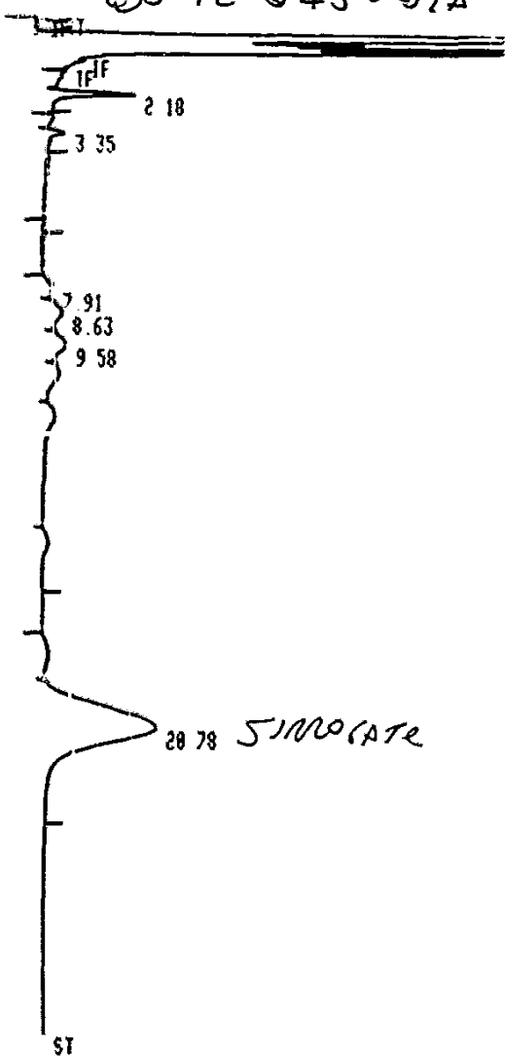
C14.H26.O2 DODECANOIC ACID, ETHENYL ESTER
1051
M WT 226
B PK 43
RANK 3
20571
PUR 210



M/Z 100 200 300 400 500

INST ID: 4530

86-12-045-09A R06



DC # N/A -

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. SCK-MW03-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 6C

003540

RUN # 152 DEC/24/86 05 06 13
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.18	10474	PB	0.137	31.371
3.35	1917	PB	0.178	5.742
7.91	1075	BV	0.433	3.220
8.63	2343	VV	0.670	7.018
9.58	2822	VV	0.718	8.452
20.78	14757	VB	1.278	44.199

TOTAL HGHT= 33388
MUL FACTOR= 1.0000E+00

Received: 12/10/86

SPECTRIX REPORT

Results by Sample

Work Order # 86-12-045

SAMPLE ID SCK-MW03-001 (LLW) SAMPLE # 09 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	<10 ug/L	FE	1420 ug/L	HG	<0.2 ug/L	NI	56 ug/L	PB	<5 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	20 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW11-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003542

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW11-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204510
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
DATE ANALYZED: 12/15/86

DATAFILE: 4U12045V10

DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	50
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003543

INST ID: 4530

SPECTRIX DC # DC # ---- 8
SAMPLE NUMBER: SCK-MW11 -001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204510
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GY

CASE NO.: ---
QC REPORT NO.: \
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C10
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003544

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW11

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C10

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	1 J
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	1 J
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003545

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-10A

DC No: KEYSTONE
SMO No: SCK-MW11-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes _No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. _Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 NA.
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003546

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW11-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

C REPORT NO.: ---- ANALYST: MB DATAFILE: 4U12045V10

B. TENTATIVELY IDENTIFIED COMPOUNDS

AS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				UG/L
	NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.			

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003547

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-MW11-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

DC REPORT NO.: \ ANALYST: GU DATAFILE: 4U12045C10

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT ug/l
10-12-3	2-HEXANONE, 5-METHYL-	* 321	911	10 J
28-68-2	ETHANOL, 2,2'-OXYBIS-, DIACETATE	395	771	5 J
74630-52-7	3-UNDECENE, 6-METHYL-, (E)-	576	842	8 J
12-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	764	825	5 J
540-97-6	CYCLOHEXASILOXANE, DODECAMETHYL-	904	832	5 J
12-27-6	TRIETHYLENE GLYCOL (ACN)	1070	825	15 J
4381-40-1	PROPANOIC ACID, 2-METHYL-, 1-(1,1-DIMETHY	1144	877	8 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1961		12 J

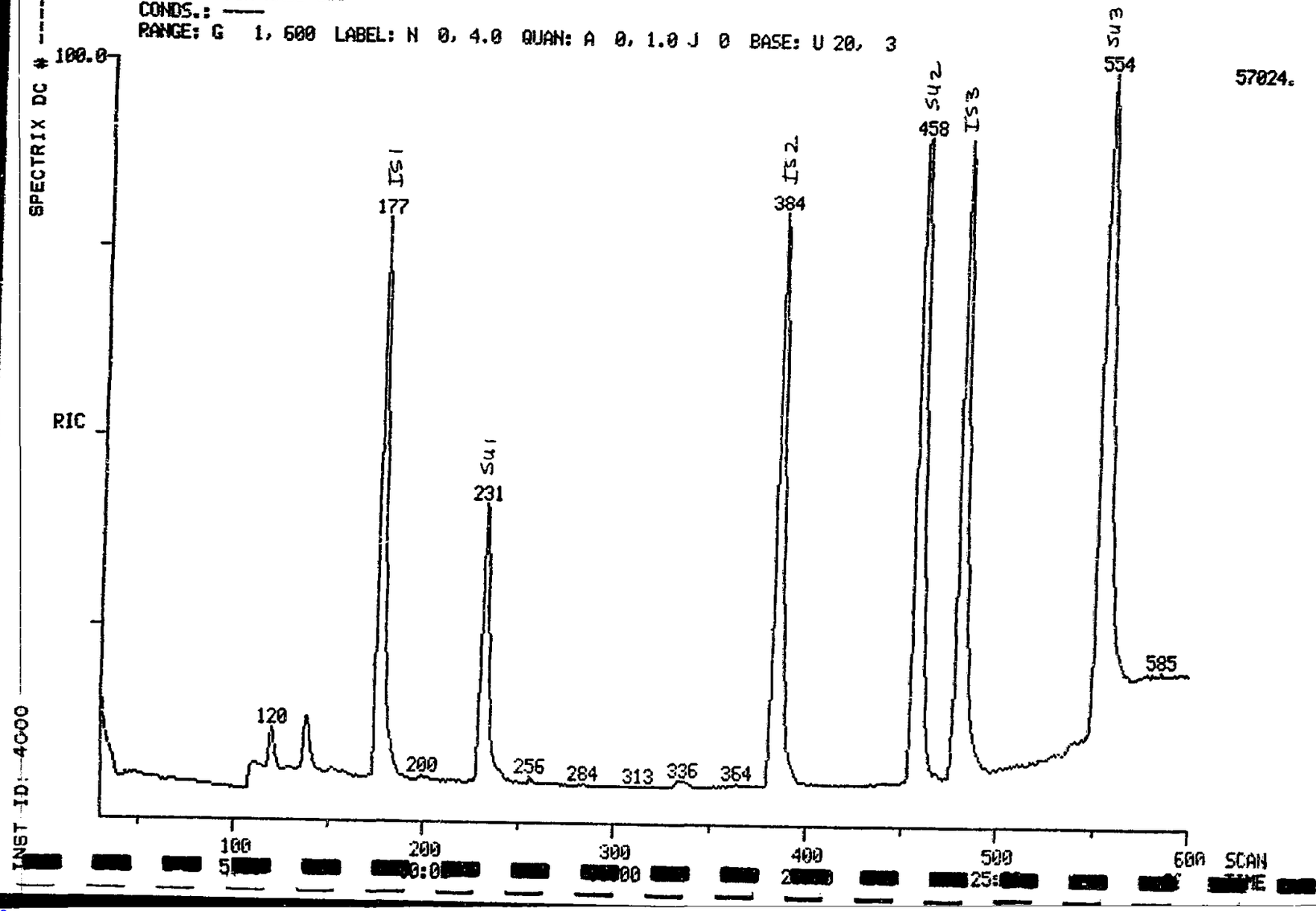
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

* ALSO FOUND IN BLANK

003549

RIC
12/15/86 12:28:00
SAMPLE: SCK-MW11-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V10 #1
CALI: 4U12045V10 #3
SCANS 30 TO 600



57024.

003549

SPECTRIX DC # ------14

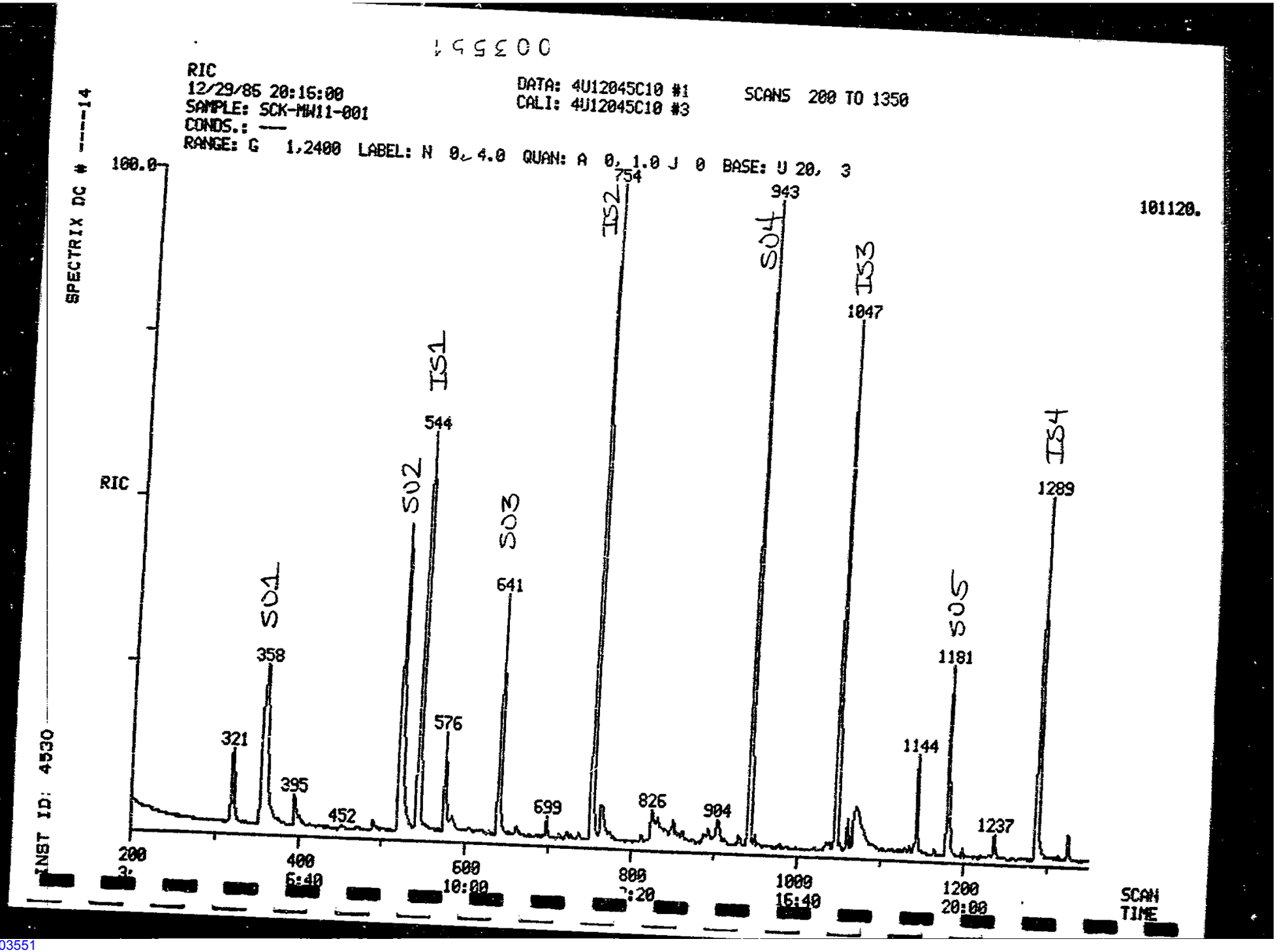
VOA QUANTITATION REPORT

AMPLE ID.	SCK-MW11-001		
.ENAME	4U12045V10	INST	4000
LIENT	KEYSTONE	ANALYST	MB
ATE INJECTED	12/15/86 12:28:00	VERIFIED BY	GU
CALIB STD DATE	121486	CORR. FACTOR	1.00

CAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	17609
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	76281
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	62441
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	90 %	1.305	22758
457	CS05	D8-TOLUENE	**SU2**	98	96 %	0.952	67142
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	107 %	1.152	46653
120	CO30	METHYLENE CHLORIDE *		84	3 UG/L	0.678	1594
38	CO35	ACETONE		43	50 UG/L	0.780	11420

* BLANK CORRECTED ON DATA SHEET

003550


RIC
12/29/85 20:16:00
SAMPLE: SCK-MW11-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 4U12045C10 #1
CALI: 4U12045C10 #3
SCANS 200 TO 1350
101120.
SPECTRIX DC # ----14
INST ID: 4530
100.0
RIC
SD1
358
321
395
452
SD2
544
576
SD3
641
699
IS2
754
826
904
SD4
943
IS3
1047
1144
SD5
1181
1237
IS4
1289
200
400
6:40
600
10:00
800
1000
16:40
1200
20:00
SCAN
TIME

003551

003552

RIC
12/29/86 20:16:00
SAMPLE: SCK-MW11-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

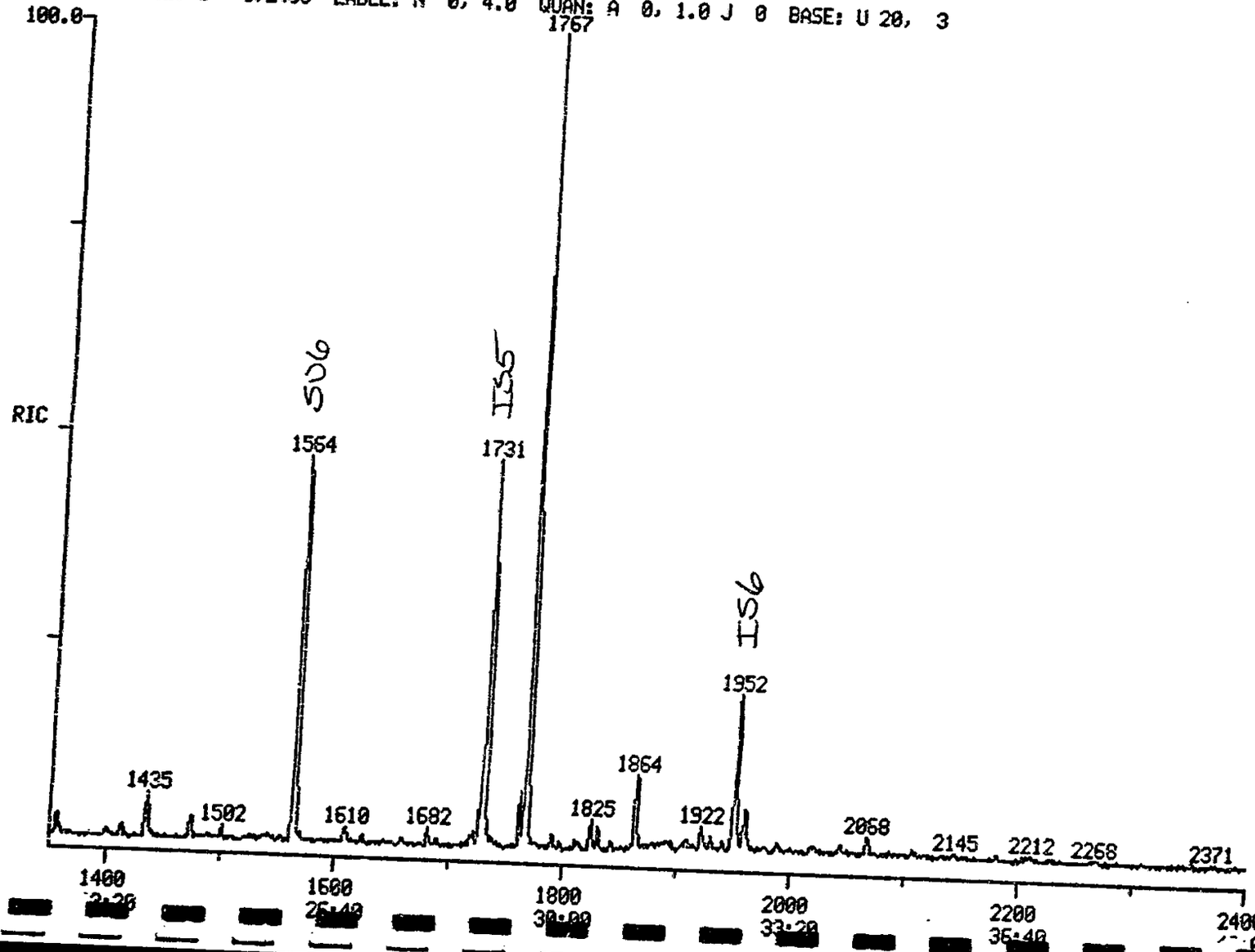
DATA: 4U12045C10 #1
CALI: 4U12045C10 #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14

NST ID: 4530

66432.



003552

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW11-001

.LENAME 4U12045C10 INST ID. 4530

CLIENT KEYSTONE ANALYST GU

DATE INJECTED 12/29/86 20:16:00 VERIFIED BY GU

CALIB STD DATE ~~01/06/87~~ 12/27/86 GU CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
544	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	28373
754	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	113188
1047	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	53169
1289	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	64782
1731	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	39829
1952	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	19853
358	CS50	2-FLUOROPHENOL ** SU1 **	112	47 %	0.658	49874
521	CS45	PHENOL-D5 ** SU2 **	99	54 %	0.958	74802
1181	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	45 %	1.128	71558
641	CS20	NITROBENZENE-D5 ** SU3 **	82	57 %	0.850	35418
943	CS25	2-FLUOROBIPHENYL ** SU4 **	172	58 %	0.901	80919
1564	CS30	TERPHENYL-D14 ** SU6 **	244	61 %	0.904	33477
1292	C640	PHENANTHRENE	178	1 UG/L	1.002	1162
1414	C650	DI-N-BUTYL PHTHALATE	149	1 UG/L	1.097	127[illegible]
767	C735	BIS(2-ETHYLHEXYL)PHTHALATE	149	29 UG/L	1.021	34957
1864	C760	DI-N-OCTYL PHTHALATE	149	5 UG/L	0.955	6580

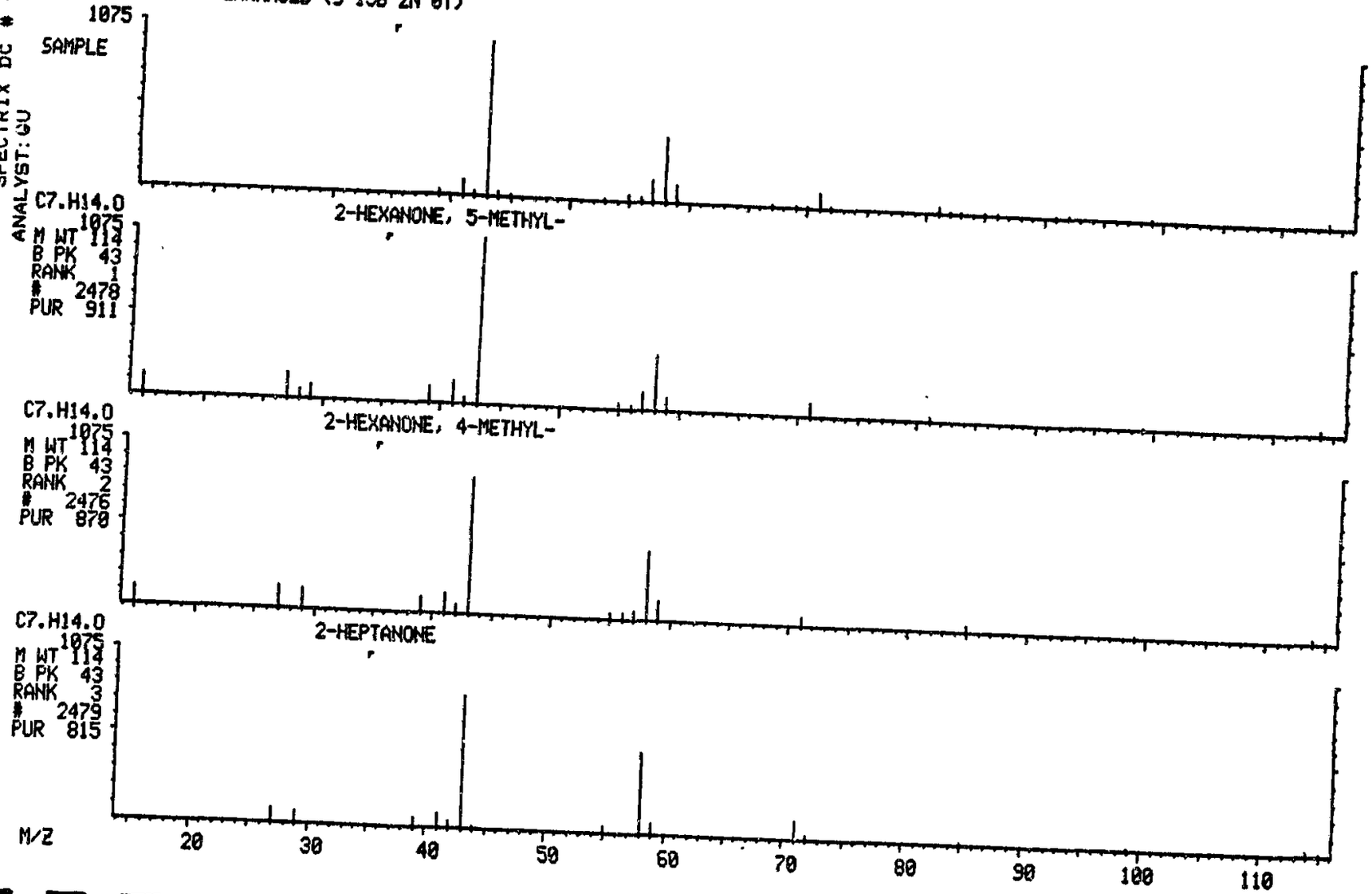
* BLANK CORRECTED ON DATA SHEET

LIBRARY SEARCH
12/29/86 20:16:00 + 5:21
SAMPLE: SCK-MW11-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C10 # 321
CALI: 4U12045C10 # 3

BASE M/Z: 43
RIC: 10543.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

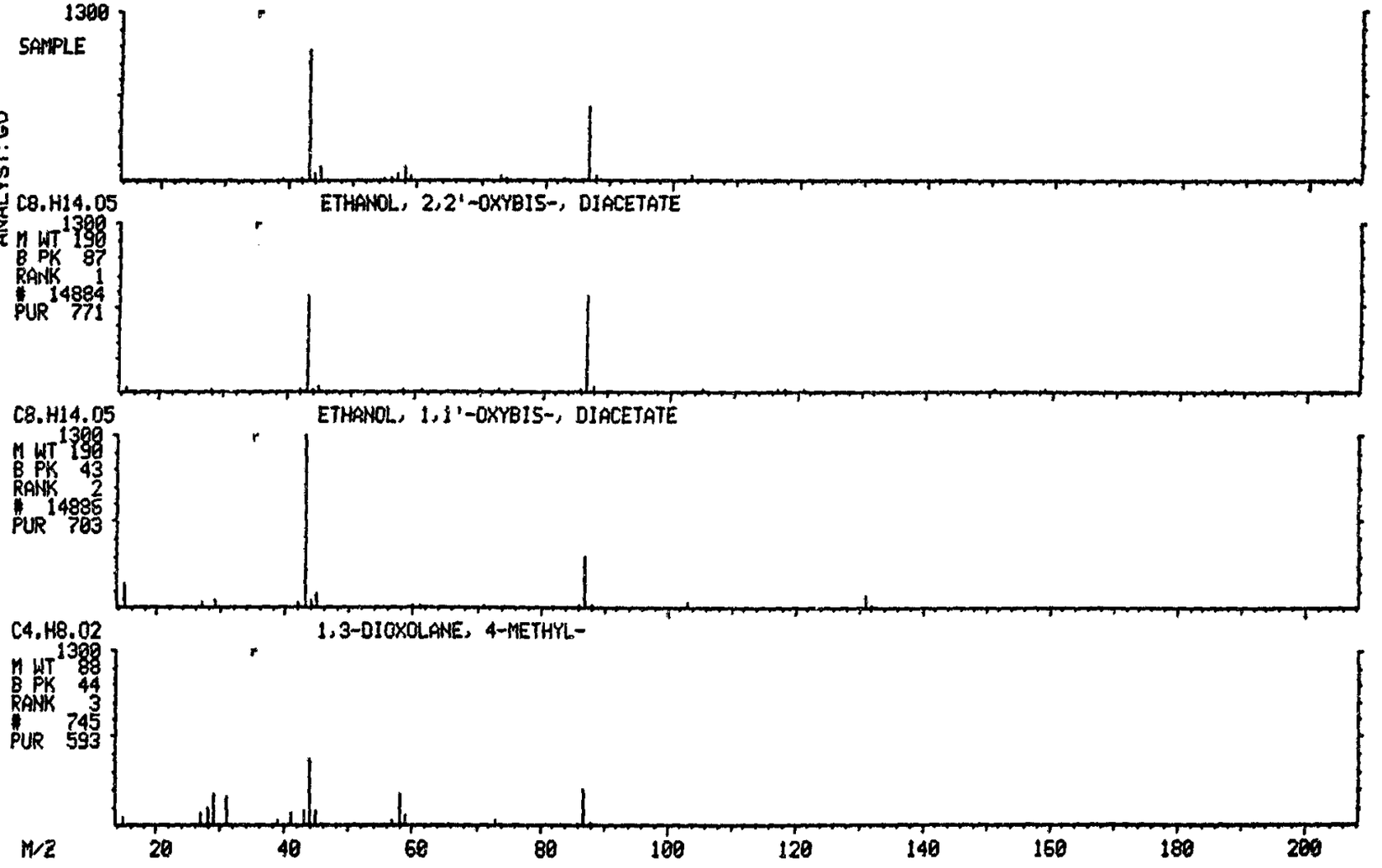
003555

LIBRARY SEARCH
12/29/86 20:16:00 + 6:35
SAMPLE: SCK-MW11-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C10 # 395
CALI: 4U12045C10 # 3

BASE M/Z: 43
RIC: 2947.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



003555

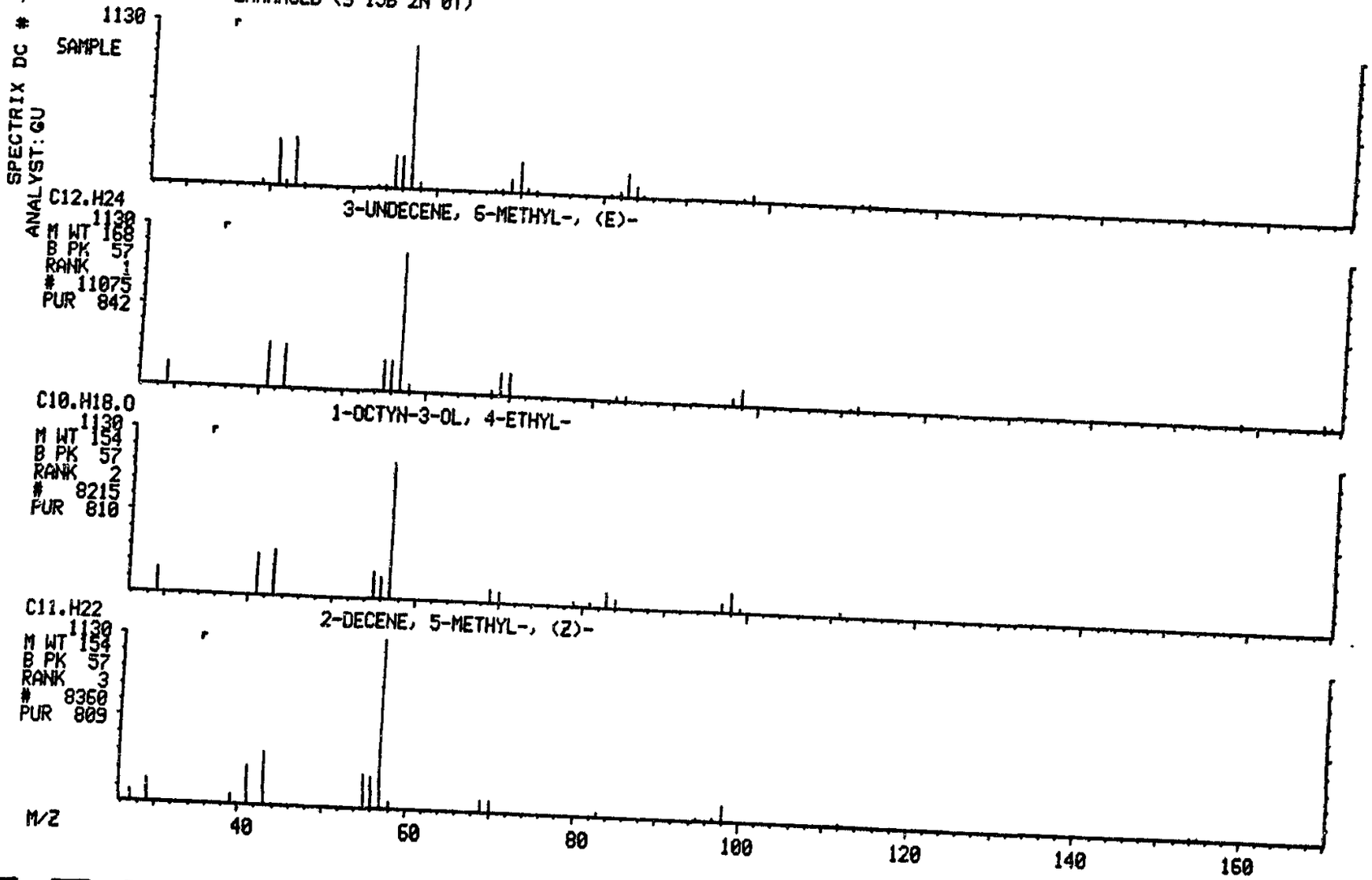
LIBRARY SEARCH
12/29/86 20:16:00 + 9:36
SAMPLE: SCK-MW11-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C10 # 576
CALI: 4U12045C10 # 3

BASE M/Z: 57
RIC: 11967.

SPECTRIX DC # ----19
ANALYST: GU

INST ID: 4530



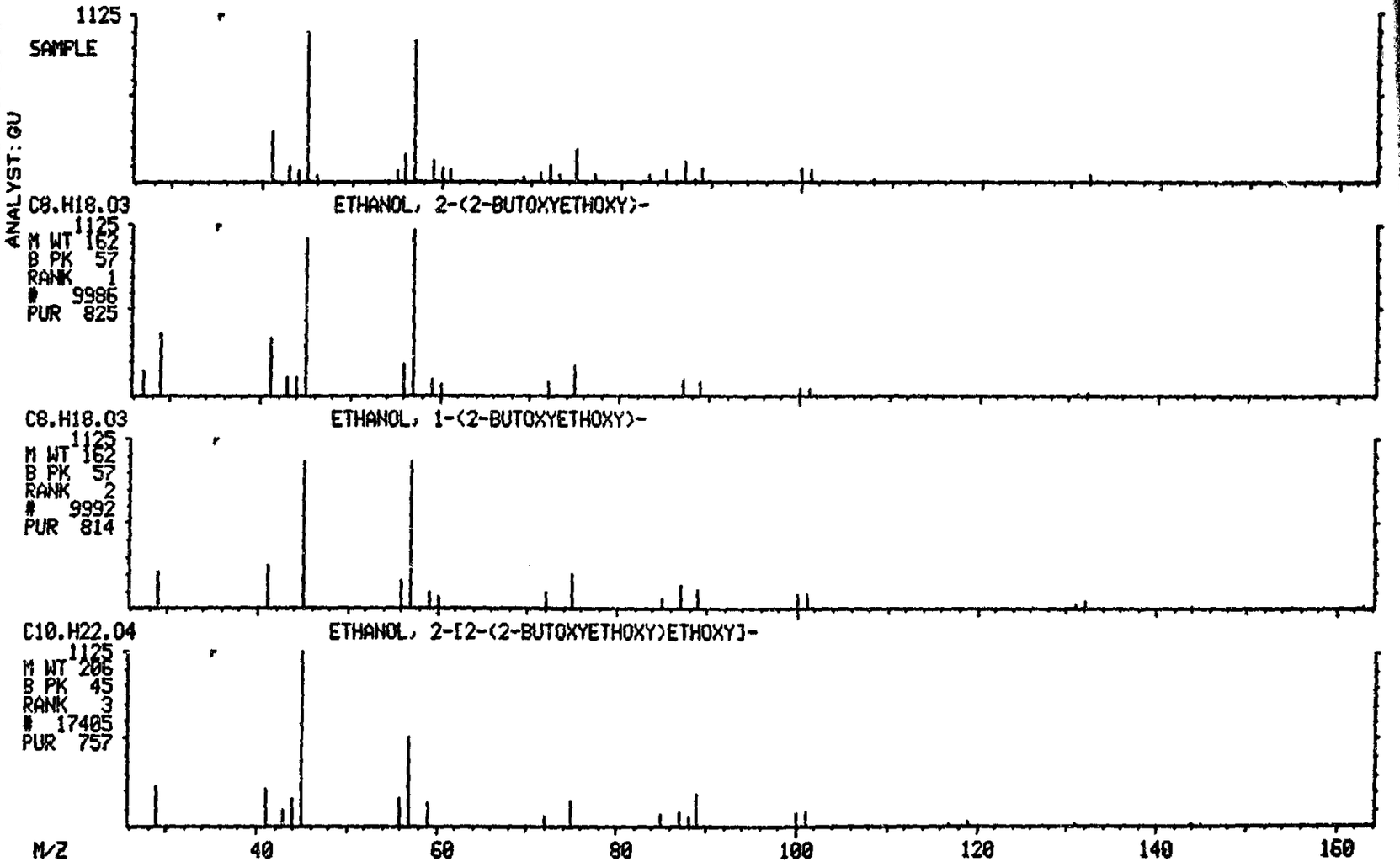
003557

LIBRARY SEARCH
12/29/86 20:16:00 + 12:44
SAMPLE: SCK-MW11-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C10 # 764
CALI: 4U12045C10 # 3

BASE M/Z: 45
RIC: 3239.

SPECTRIX DC # -----19
ANALYST: GU



INST ID: 4530

003557

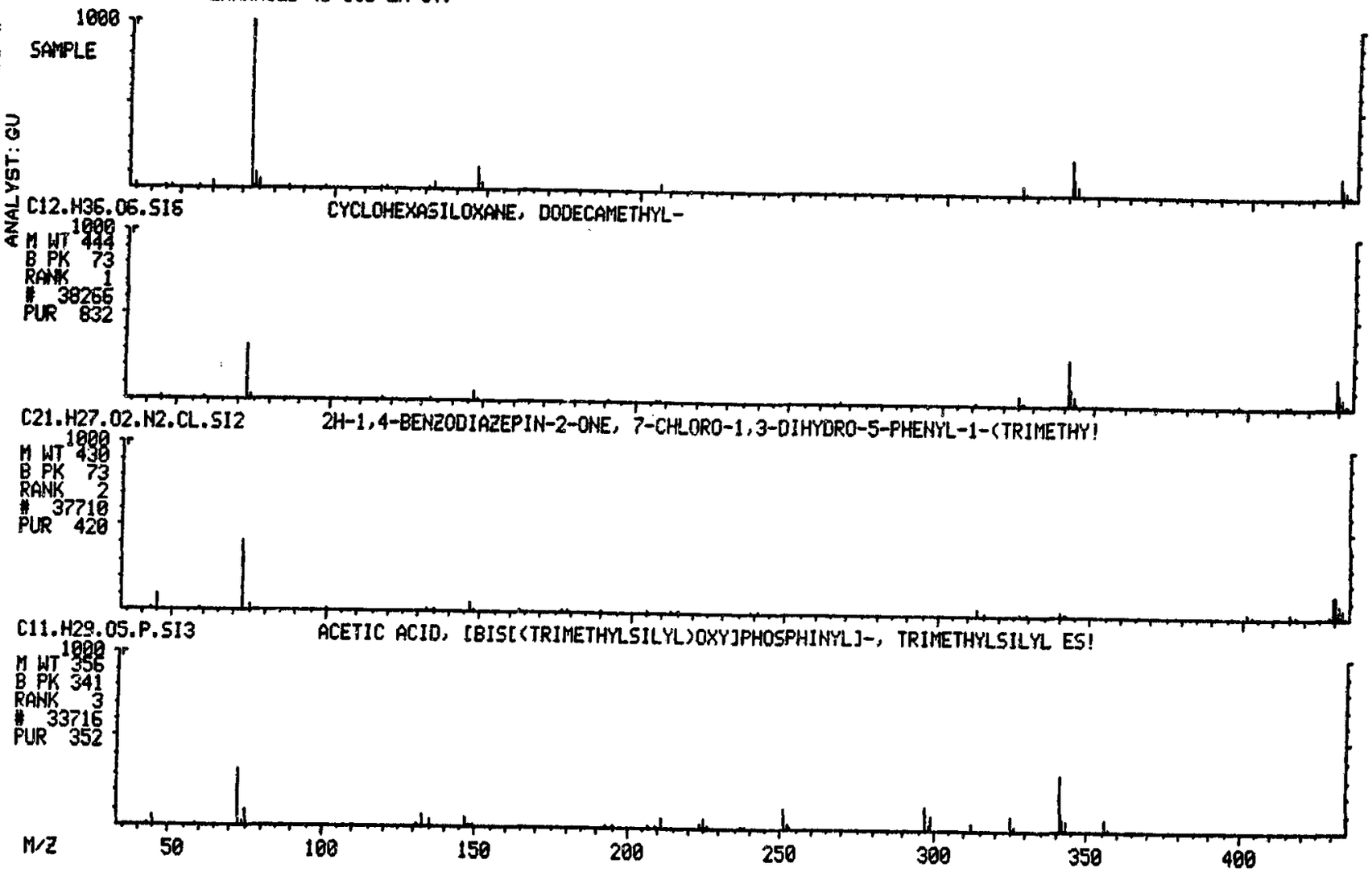
003558

LIBRARY SEARCH
12/29/86 20:16:00 + 15:04
SAMPLE: SCK-MW11-001
COND5.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C10 # 904
CALI: 4U12045C10 # 3

BASE M/Z: 73
RIC: 2595.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003558

003559

LIBRARY SEARCH
12/29/86 20:16:00 + 17:50
SAMPLE: SCK-MW11-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

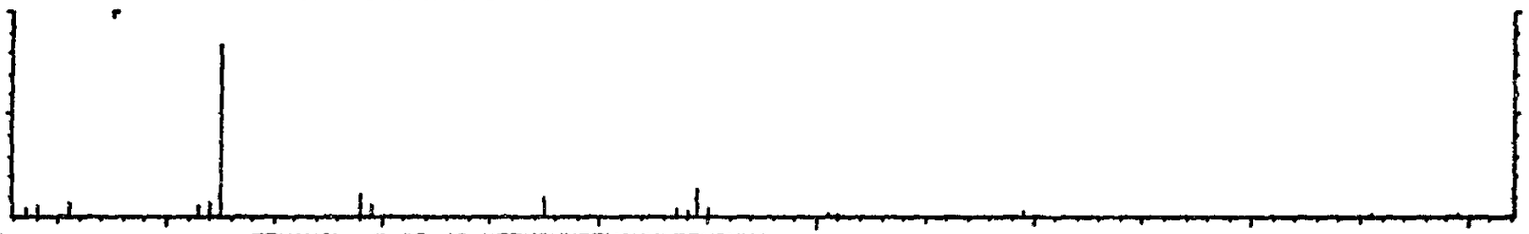
DATA: 4U12045C10 #1070
CALI: 4U12045C10 # 3

BASE M/Z: 45
RIC: 4319.

SPECTRIX DC # ----19
ANALYST: GU

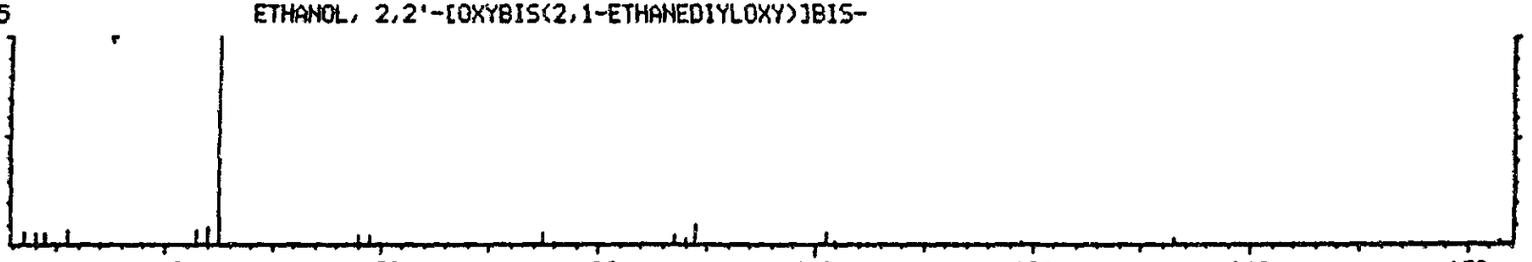
1332
SAMPLE

C6.H14.04 TRIETHYLENE GLYCOL (ACN)
1332
M WT 150
B PK 45
RANK 1
7569
PUR 825



C7.H16.04 ETHANOL, 2-[2-(2-METHOXYETHOXY)ETHOXY]-
1332
M WT 164
B PK 45
RANK 2
10328
PUR 763

C8.H18.05 ETHANOL, 2,2'-[OXYBIS(2,1-ETHANEDIYLOXY)]BIS-
1332
M WT 194
B PK 45
RANK 3
15578
PUR 762



NST ID: 4530

M/Z 40 60 80 100 120 140 160

003559

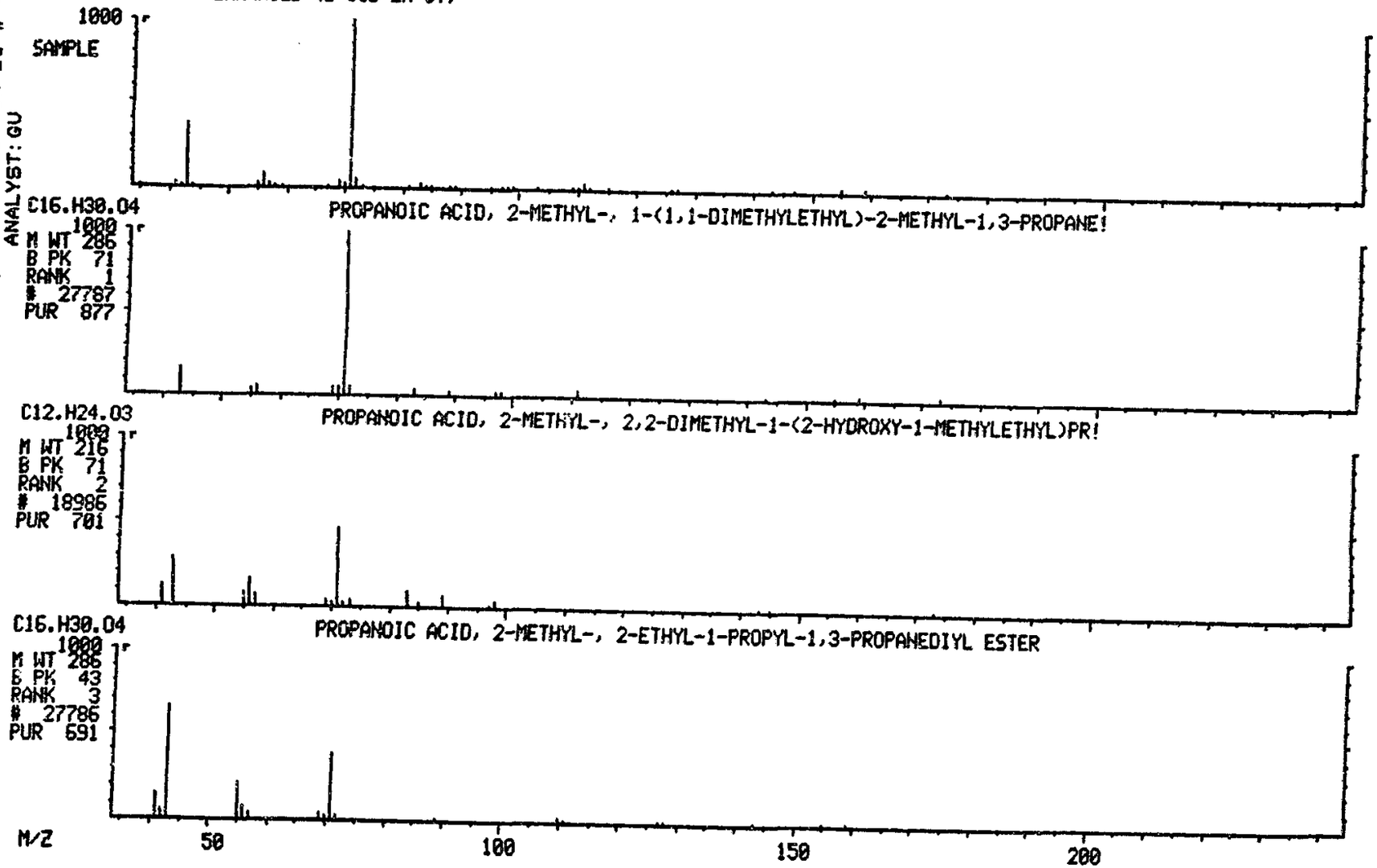
003560

LIBRARY SEARCH
12/29/86 20:16:00 + 19:04
SAMPLE: SCK-MW11-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C10 #1144
CALI: 4U12045C10 # 3

BASE M/Z: 71
RIC: 11679.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

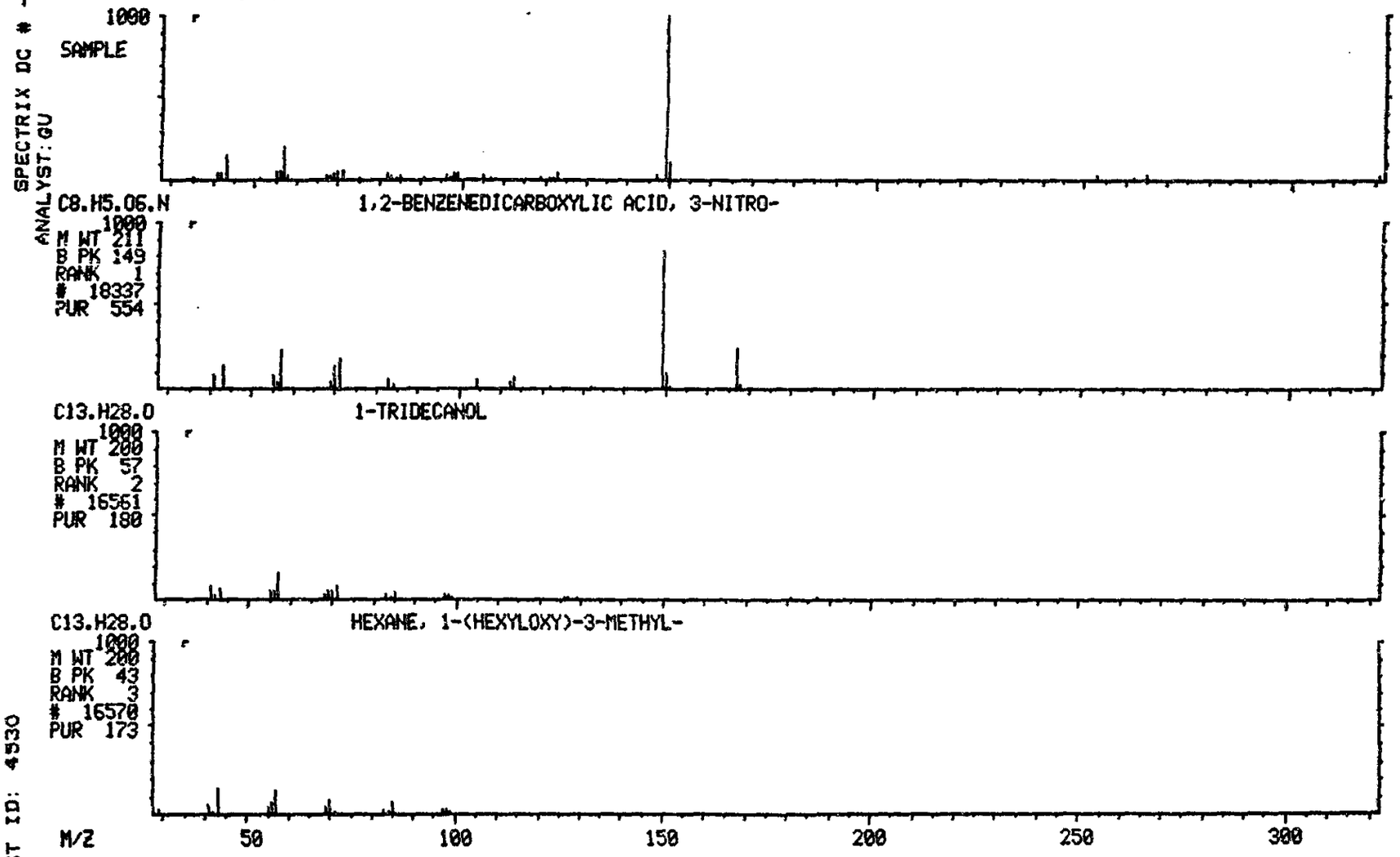
003560

LIBRARY SEARCH
12/29/86 20:16:00 + 32:41
SAMPLE: SCK-MW11-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C10 #1961
CALI: 4U12045C10 # 3

BASE M/Z: 149
RIC: 2855.

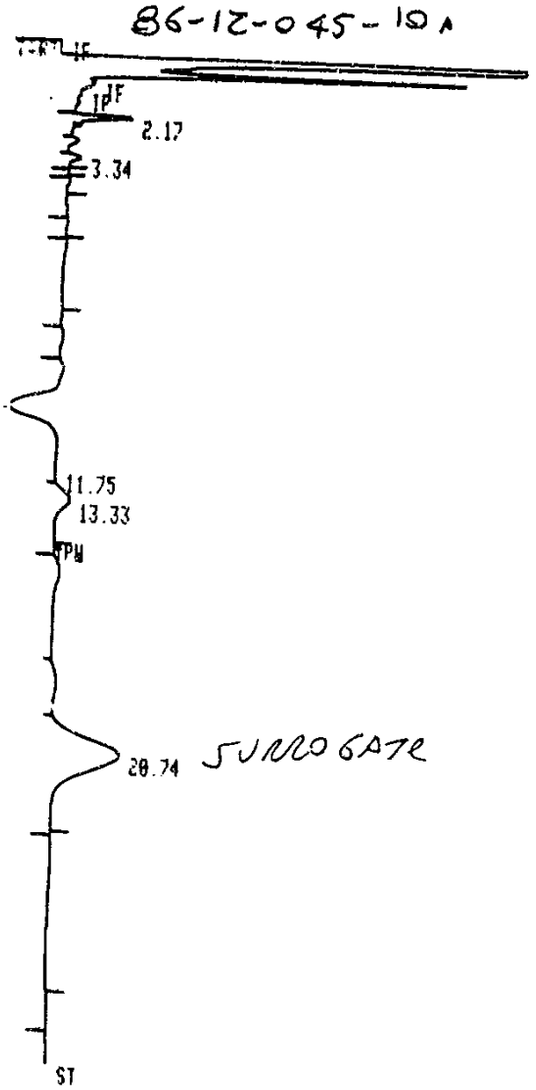
SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

86-12-045-10A

R06



DC # N/A -

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. SK-MW11-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 60

003562

RUN # 153 DEC/24/86 05:39:29
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.17	7736	BV	0.132	29.148
3.34	1678	PB	0.160	6.323
11.75	4451	PV	1.406	16.771
13.33	3726	VB	1.091	14.039
20.74	8949	VB	1.064	33.719

TOTAL HGHT- 26540
MUL FACTOR= 1.0000E+00

SPECTRIX 5 2 0 0 REPORT

Work Order # 86-12-045

Received: 12/10/86

Results by Sample

SAMPLE ID SCK-MW11-001 (LLW) SAMPLE # 10 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	102 ug/L
CU	31 ug/L	FE	91900 ug/L	HG	<0.2 ug/L	NI	131 ug/L	PB	39.2 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	345 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW18-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003564

INST ID: 4000

SPECTRIX DC # ----- 8

INST ID 4000

SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW18-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204511
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ----
GC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
DATE ANALYZED: 12/15/86

DATAFILE: 4U12045V11

DILUTION FACTOR: 10

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 J
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	5 U
C180	BROMOFORM	10 U
C210	2-HEXANONE	5 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	10 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = COMPOUND ALSO FOUND IN BLANK

003566

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW18-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204511
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY:.....

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C11
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003566

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW18-001

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C11

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	130
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003567

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-11A

DC No: KEYSTONE
SMO No: SCK-MW18-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : ~~3400~~ NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003568

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW18-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: MB DATAFILE: 4U12045V11

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

UG/L

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-MW18 -001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

SDG REPORT NO.: --- ANALYST: GU DATAFILE: 4U12045C11

B. TENTATIVELY IDENTIFIED COMPOUNDS

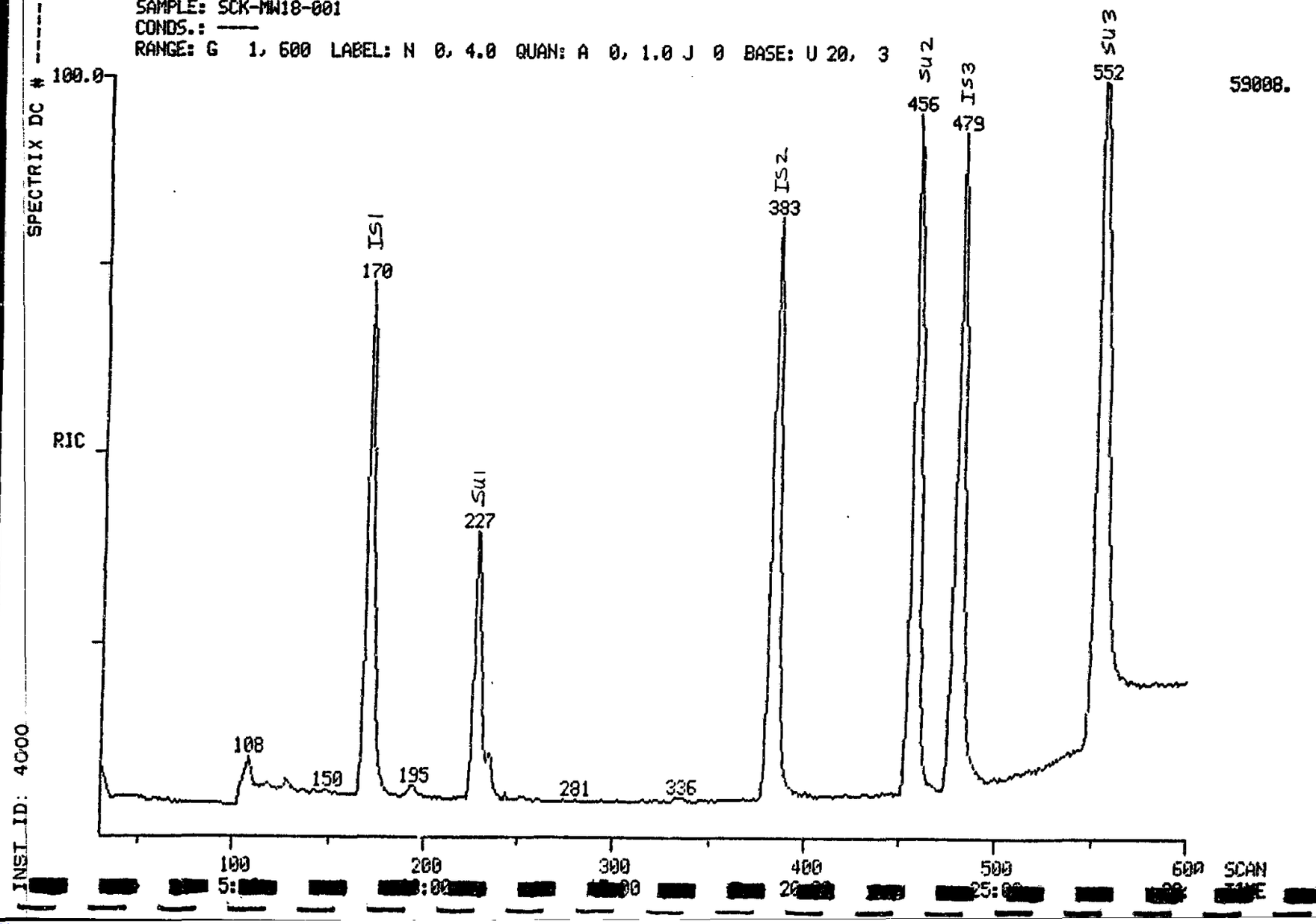
CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
110-12-3	2-HEXANONE, 5-METHYL-	★ 316	923	115000 ug/L

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

* ALSO FOUND IN BLANK

RIC
12/15/86 13:08:00
SAMPLE: SCK-MW18-001
CONDS.: ——
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V11 #1 SCANS 30 TO 600
CALI: 4U12045V11 #3



SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	SCK-MW18-001		
FILENAME	4U12045V11	INST	4000
CLIENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/15/86 13:08:00	VERIFIED BY	GU
CALIB STD DATE	121486	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
170	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	17869
383	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	79770
479	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	64817
227	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	93 %	1.335	23731
456	CS05	D8-TOLUENE	**SU2**	98	97 %	0.952	70644
552	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	101 %	1.152	45725
108	CO30	METHYLENE CHLORIDE *		84	2 UG/L	0.635	1114
128	CO35	ACETONE		43	8 UG/L	0.753	1809

* BLANK CORRECTED ON DATA SHEET

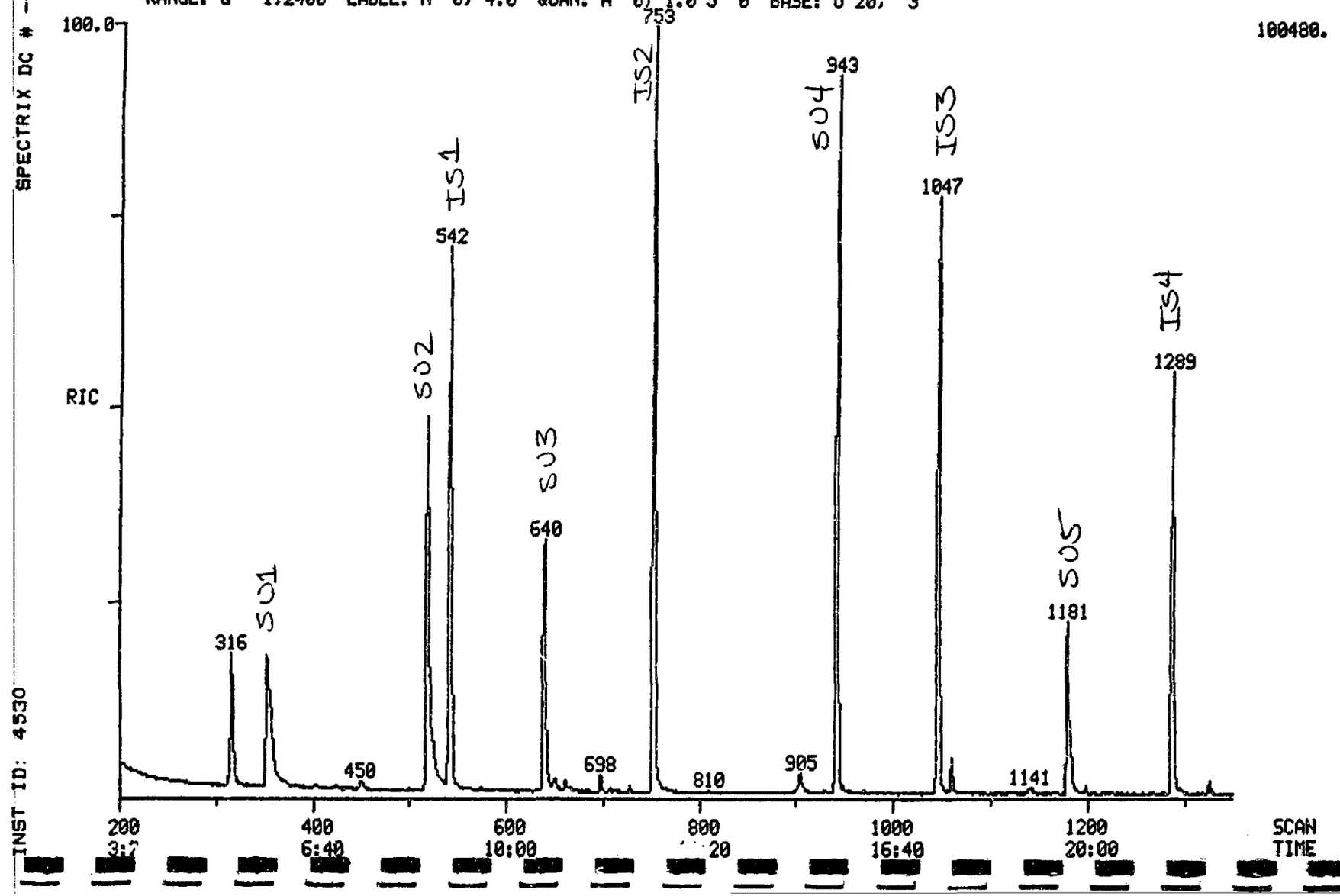
003572

003573

RIC
12/29/86 21:07:00
SAMPLE: SCK-MW18-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C11 #1
CALI: 4U12045C11 #3

SCANS 200 TO 1350



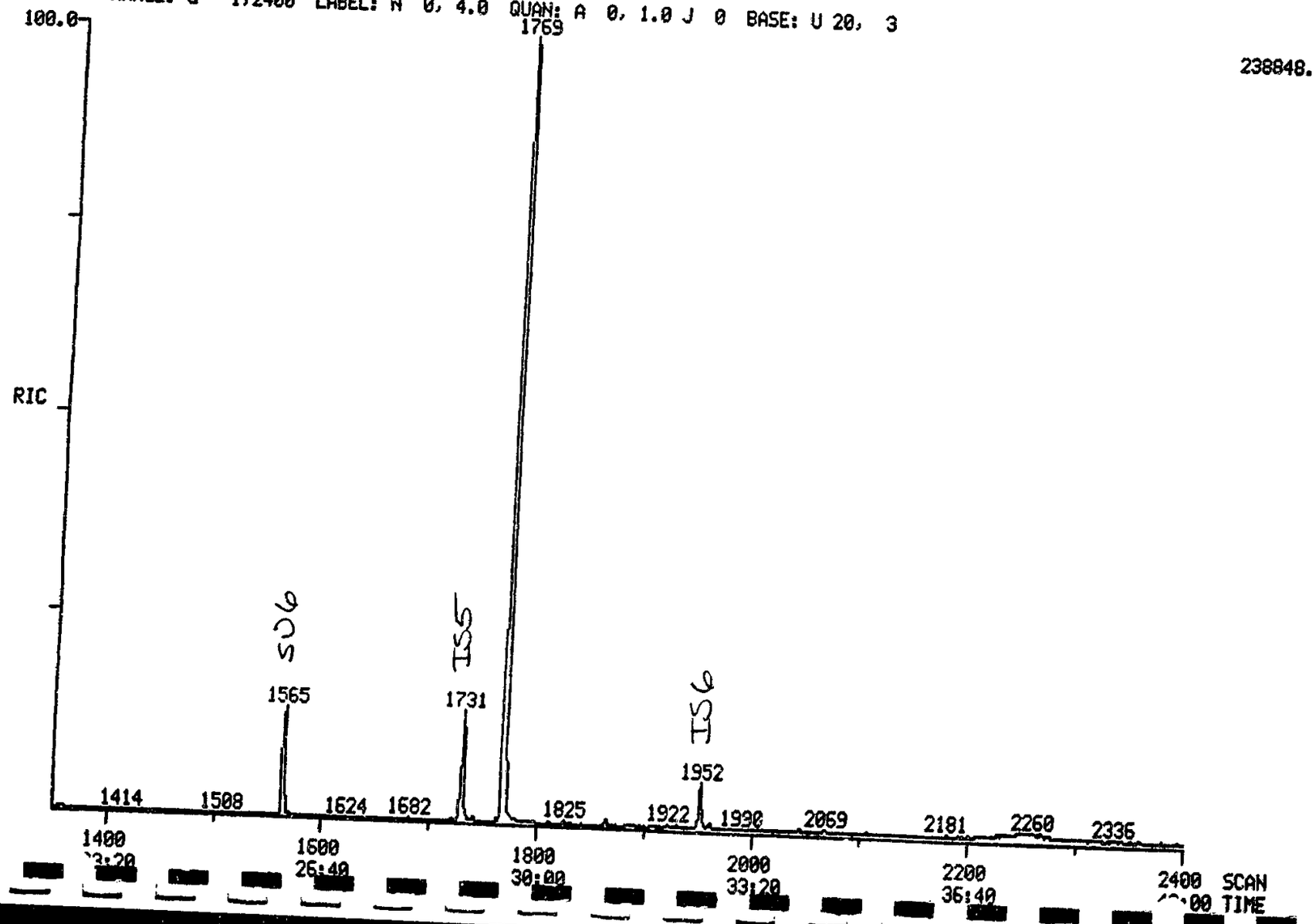
003573

RIC
12/29/86 21:07:00
SAMPLE: SCK-MW18-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C11 #1
CALI: 4U12045C11 #3

SCANS 1350 TO 2400

238848.



SPECTRIX DC # ---# ---- 8

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW18-001

FILENAME 4U12045C11

CLIENT KEYSTONE

DATE INJECTED 12/29/86 21:07:00

CALIB STD DATE 01/06/87

INST ID. 4530

ANALYST GU

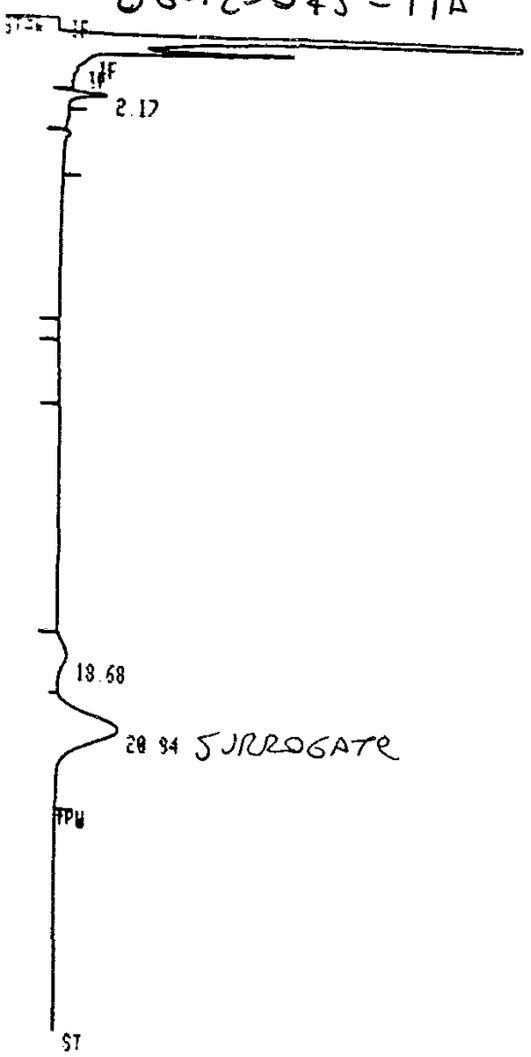
VERIFIED BY GU

CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
542	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	2884
753	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	11637
1047	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	5411
1289	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	6666
1731	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	4313
1952	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	2085
353	CS50	2-FLUOROPHENOL ** SU1 **	112	27 %	0.651	2882
518	CS45	PHENOL-D5 ** SU2 **	99	52 %	0.956	7317
1180	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	41 %	1.127	660
640	CS20	NITROBENZENE-D5 ** SU3 **	82	53 %	0.850	3422
943	CS25	2-FLUOROBIPHENYL ** SU4 **	172	56 %	0.901	7988
1565	CS30	TERPHENYL-D14 ** SU6 **	244	65 %	0.904	3546
1769	C735	BIS(2-ETHYLHEXYL)PHTHALATE	149	* 151 UG/L	1.022	19223
1865	C760	DI-N-OCTYL PHTHALATE	149	* 2 UG/L	0.955	258

* BLANK CORRECTED ON DATA SHEET

86-12-045-1/A R06



DC # N/A -

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. SCK-MW18-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 60

003576

RUN # 154 DEC/24/86 0: 19:46
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.17	4732	PB	0.134	32.845
18.68	1338	BV	0.865	9.287
20.84	8337	VB	0.989	57.868

TOTAL HGHT= 14407
MUL FACTOR= 1.0000E+00

SPECTRIX LOC REPORT

Work Order # 86-12-045

Received: 12/10/86

Results by Sample

SAMPLE ID SCK-MW18-001 (LLW) SAMPLE # 11 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	<10 ug/L	FE	90 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	<5 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	24 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW19-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003578

SPECTRIX DC # ----- 8

ST ID 4000

SAMPLE NUMBER: SCK-MW19-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

ORATORY NAME: SPECTRIX
J SAMPLE ID NO.: 861204512
MPLE MATRIX: WATER
TA RELEASE AUTHORIZED BY: yyH

CASE NO.: ----
GC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
TE ANALYZED: 12/15/86

DATAFILE: 4U12045V12
DILUTION FACTOR: 10

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	14
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	29
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	18
C245	STYRENE	5 J
C250	TOTAL XYLENES	28

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003579

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW19-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204512
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GU

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/30/86

DATAFILE: 4U12045C12A
DILUTION FACTOR: 40.0

CAS #	COMPOUND	UG/L
C315	PHENOL	400 U
C325	BIS(2-CHLOROETHYL)ETHER	400 U
C330	2-CHLOROPHENOL	400 U
C335	1,3-DICHLOROBENZENE	400 U
C340	1,4-DICHLOROBENZENE	400 U
C345	BENZYL ALCOHOL	400 U
C350	1,2-DICHLOROBENZENE	400 U
C355	2-METHYLPHENOL	140 J
C360	BIS(2-CHLOROISOPROPYL)ETHER	400 U
C365	4-METHYLPHENOL	65 J
C370	N-NITROSODIPROPYLAMINE	400 U
C375	HEXACHLOROETHANE	400 U
C410	NITROBENZENE	400 U
C415	ISOPHORONE	400 U
C420	2-NITROPHENOL	400 U
C425	2,4-DIMETHYLPHENOL	800
C430	BENZOIC ACID	2000 U
C435	BIS(2-CHLOROETHOXY)METHANE	400 U
C440	2,4-DICHLOROPHENOL	400 U
C445	1,2,4-TRICHLOROBENZENE	400 U
C450	NAPHTHALENE	3800
C455	4-CHLOROANILINE	400 U
C460	HEXACHLOROBUTADIENE	400 U
C465	P-CHLORO-M-CRESOL	400 U
C470	2-METHYLNAPHTHALENE	140 J
C510	HEXACHLOROCYCLOPENTADIENE	400 U
C515	2,4,6-TRICHLOROPHENOL	400 U
C520	2,4,5-TRICHLOROPHENOL	2000 U
C525	2-CHLORONAPHTHALENE	400 U
C530	2-NITROANILINE	2000 U
C535	DIMETHYL PHTHALATE	400 U
C540	ACENAPHTHYLENE	400 U
C545	3-NITROANILINE	2000 U
C550	ACENAPHTHENE	170 J
C555	2,4-DINITROPHENOL	2000 U
C560	4-NITROPHENOL	2000 U
C565	DIBENZOFURAN	95 J
C570	2,4-DINITROTOLUENE	400 U
C575	2,6-DINITROTOLUENE	400 U

003580

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW19-OC

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C12A

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	400 U
C585	4-CHLOROPHENYL PHENYL ETHER	400 U
C590	FLUORENE	67 J
C595	4-NITROANILINE	2000 U
C610	4,6-DINITRO-2-METHYLPHENOL	2000 U
C615	N-NITROSODIPHENYLAMINE	400 U
C625	4-BROMOPHENYL PHENYL ETHER	400 U
C630	HEXACHLOROBENZENE	400 U
C635	PENTACHLOROPHENOL	2000 U
C640	PHENANTHRENE	40 J
C645	ANTHRACENE	400 U
C650	DI-N-BUTYL PHTHALATE	400 U
C655	FLUORANTHENE	400 U
C715	PYRENE	400 U
C720	BUTYL BENZYL PHTHALATE	400 U
C725	3,3'-DICHLOROBENZIDINE	800 U
C730	BENZO(A)ANTHRACENE	400 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	400 U
C740	CHRYSENE	400 U
C760	DI-N-OCTYL PHTHALATE	400 U
C765	BENZO(B)FLUORANTHENE	400 U
C770	BENZO(K)FLUORANTHENE	400 U
C775	BENZO(A)PYRENE	400 U
C780	INDENO(1,2,3-CD)PYRENE	400 U
C785	DIBENZO(A,H)ANTHRACENE	400 U
C790	BENZO(GHI)PERYLENE	400 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003581

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-12A

DC No: KEYSTONE
SMO No: SCK-MW19-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.05 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.10 U
53494-70-5	ENDRIN KETONE	0.50 U
57-74-9	CHLORDANE	0.10 U
8001-35-2	TOXAPHENE	0.50 U
12674-11-2	AROCLOR-1016	1.0 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	0.50 U
11096-82-5	AROCLOR-1260	1.0 U
		1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 N.A.
2nd Column Inst. : ~~3400~~

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003582

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW19-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

REPORT NO.: ---- ANALYST: MB DATAFILE: 4U12045V12

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.			

UG/L

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

INST ID: 4530 SPECTRIX DC # ---- B

SAMPLE: SCK-MW19 - 001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

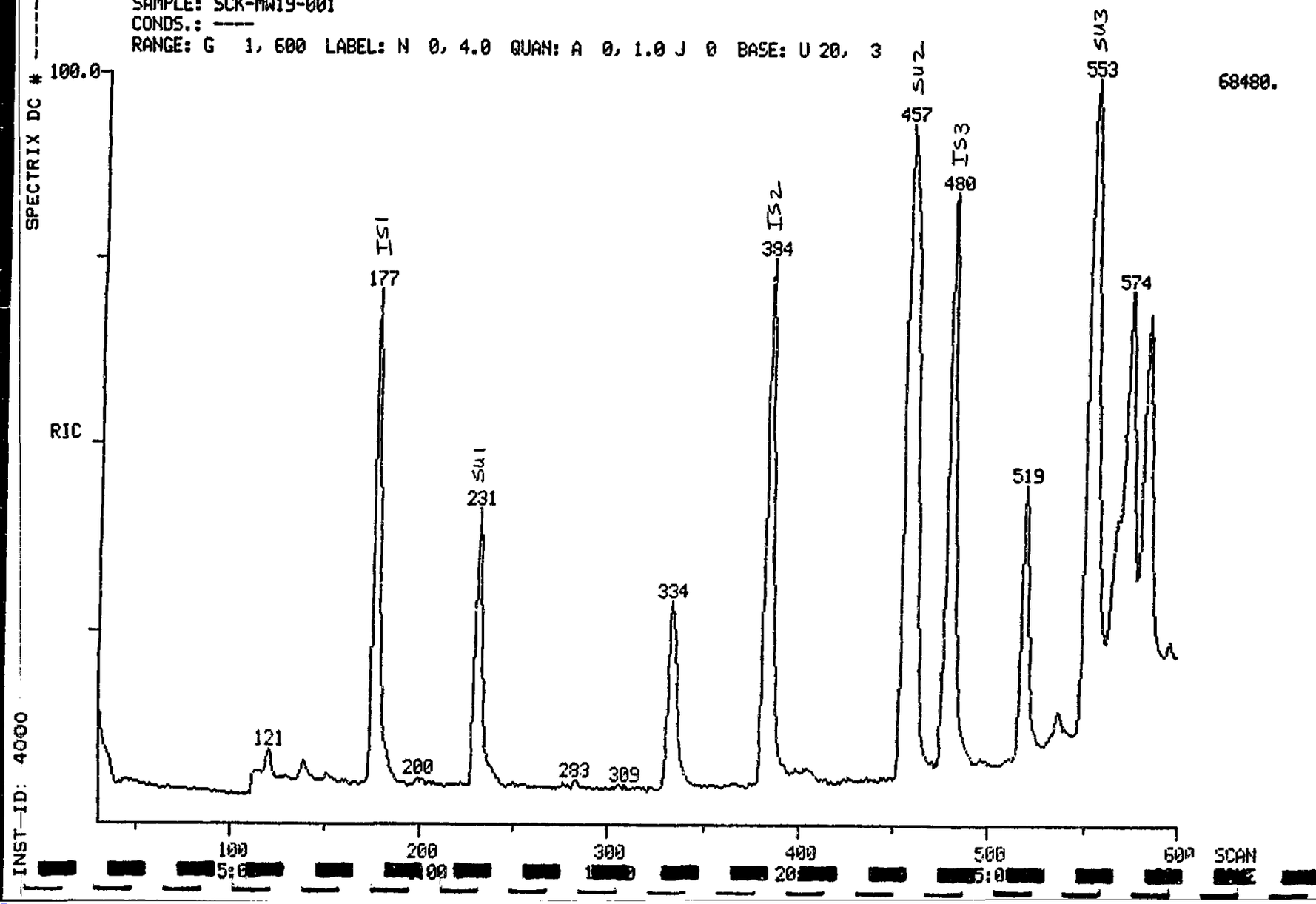
GC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12045C12A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	584	957	240 J
95-13-6	1H-INDENE	595	926	320 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	718		330 J
08-68-9	PHENOL, 3,5-DIMETHYL-	751	912	390 J
95-15-8	BENZO[B]THIOPHENE	770	924	290 J
27-60-6	PHENOL, 2,4,6-TRIMETHYL-	784	907	230 J
2416-94-6	PHENOL, 2,3,6-TRIMETHYL-	812	883	260 J
515-95-3	BENZENE, 1-ETHYL-4-METHOXY-	822	889	240 J
698-71-5	PHENOL, 3-ETHYL-5-METHYL-	845	869	360 J
2471-83-2	1H-INDENE, 1-ETHYLIDENE-	893	876	230 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	902		240 J
97-34-8	PHENOL, 3,5-DIETHYL-	929	830	310 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	945		270 J
39-74-7	ETHANONE, 1-(2,4-DIMETHYLPHENYL)-	970	772	410 J
700-12-9	BENZENE, PENTAMETHYL-	993	771	270 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1004		160 J
700-12-9	BENZENE, PENTAMETHYL-	1023	771	330 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1064		280 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1127		660 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1244		460 J

RIC
12/15/86 13:58:00
SAMPLE: SCK-MW19-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V12 #1 SCANS 30 TO 600
CALI: 4U12045V12 #3



SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	SCK-MW19-001		
FILENAME	4U12045V12	INST	4000
CLIENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/15/86 13:58:00	VERIFIED BY	GU
CALIB STD DATE	121486	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	18655
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	82080
479	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	67302
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.305	24660
457	CS05	D8-TOLUENE	**SU2**	98	98 %	0.954	73887
552	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	99 %	1.152	46444
121	C030	METHYLENE CHLORIDE *		84	2 UG/L	0.684	1245
334	C165	BENZENE		78	14 UG/L	0.870	29302
460	C230	TOLUENE		92	29 UG/L	0.960	36801
519	C240	ETHYLBENZENE		106	18 UG/L	1.084	12324
571	C245	STYRENE		104	4 UG/L	1.192	6148
583	C250	TOTAL XYLENES		106	28 UG/L	1.217	23497

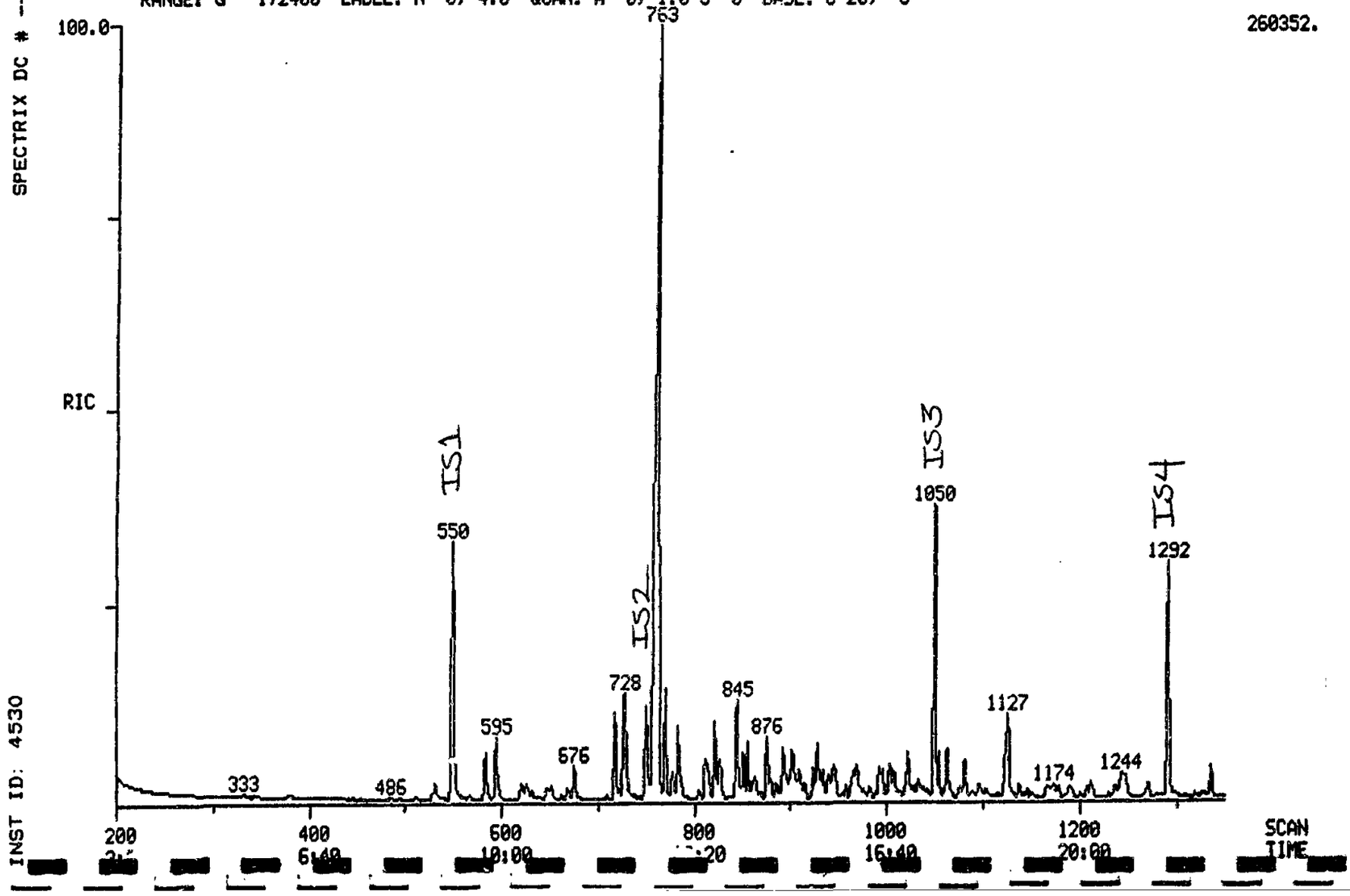
* BLANK CORRECTED ON DATA SHEET

003586

003587

RIC
12/30/86 1[illegible]:46:00
SAMPLE: S[illegible]K-MW19-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C12A #1 SCANS 200 TO 1350
CALI: 4U12045C12A #3

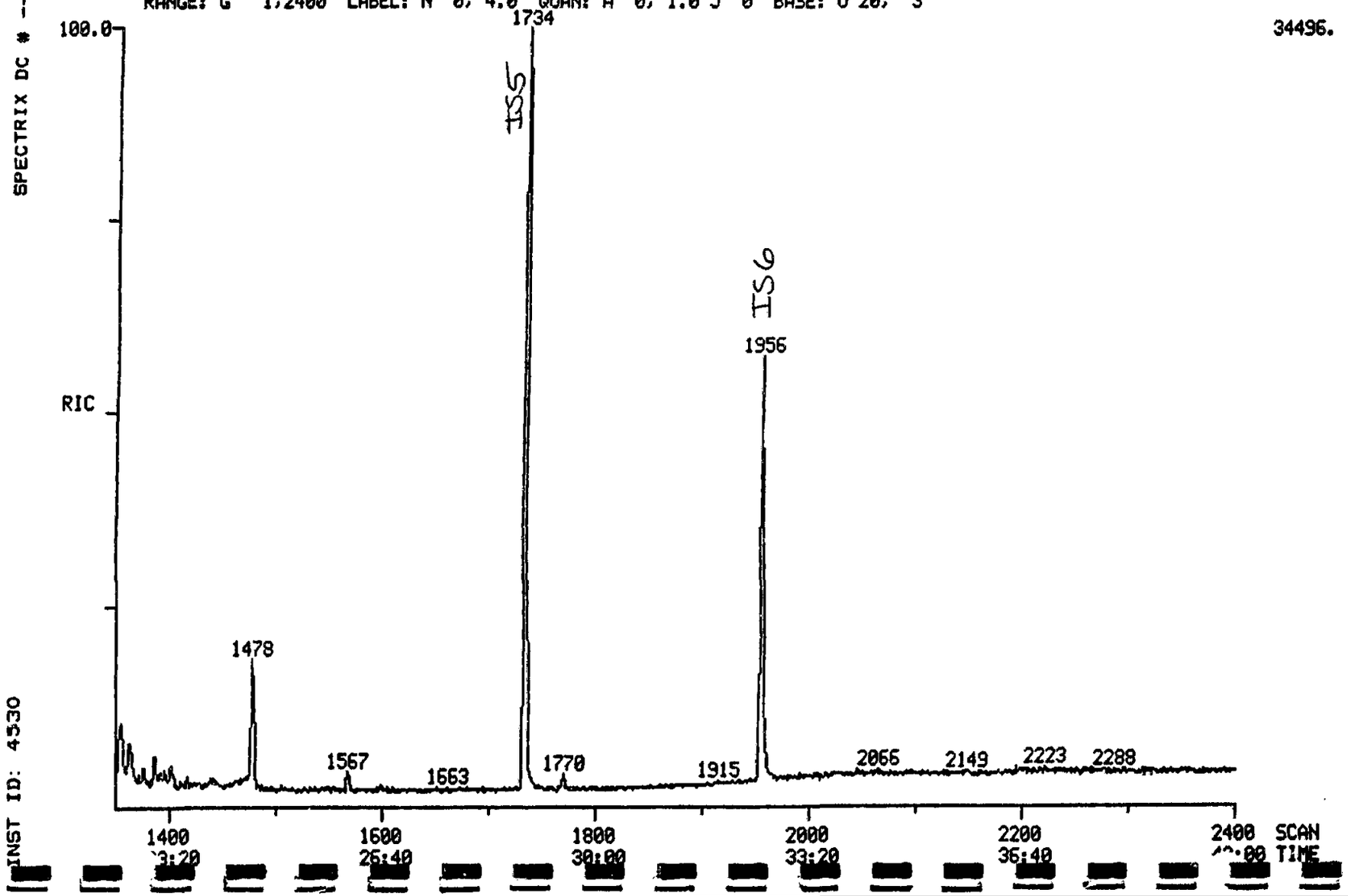


003587

003588

RIC
12/30/86 13:46:00
SAMPLE: SCK-MW19-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C12A #1 SCANS 1350 TO 2400
CALI: 4U12045C12A #3



003588

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW19-001

.LENAME 4U12043C12A

INST ID. 4530

CLIENT KEYSTONE

ANALYST GU

DATE INJECTED 12/30/86 13:46:00

VERIFIED BY GU

CALIB STD DATE 12/17/86

CORR. FACTOR 40.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
550	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	1600 UG/L	1.000	4203
759	CI40	NAPHTHALENE-D8 ** IS2 **	136	1600 UG/L	1.000	16258
1050	CI50	ACENAPHTHENE-D10 ** IS3 **	164	1600 UG/L	1.000	7565
1292	CI60	PHENANTHRENE-D10 ** IS4 **	188	1600 UG/L	1.000	9311
1734	CI70	CHRYSENE-D12 ** IS5 **	240	1600 UG/L	1.000	4753
1956	CI75	PERYLENE-D12 ** IS6 **	264	1600 UG/L	1.000	3055
621	C355	2-METHYLPHENOL	108	135 UG/L	1.129	5803
648	C365	4-METHYLPHENOL	108	65 UG/L	1.178	266
727	C425	2,4-DIMETHYLPHENOL	122	800 UG/L	0.958	2989
763	C450	NAPHTHALENE	* 128	3874 UG/L	1.005	39996
876	C470	2-METHYLNAPHTHALENE	142	143 UG/L	1.154	1241
1055	C550	ACENAPHTHENE	153	167 UG/L	1.005	774
1082	C565	DIBENZOFURAN	168	95 UG/L	1.030	583
1144	C580	DIETHYL PHTHALATE	* 149	26 UG/L	1.090	127
138	C590	FLUORENE	166	67 UG/L	1.084	349
.295	C640	PHENANTHRENE	178	40 UG/L	1.002	244

* BLANK CORRECTED ON DATA SHEET

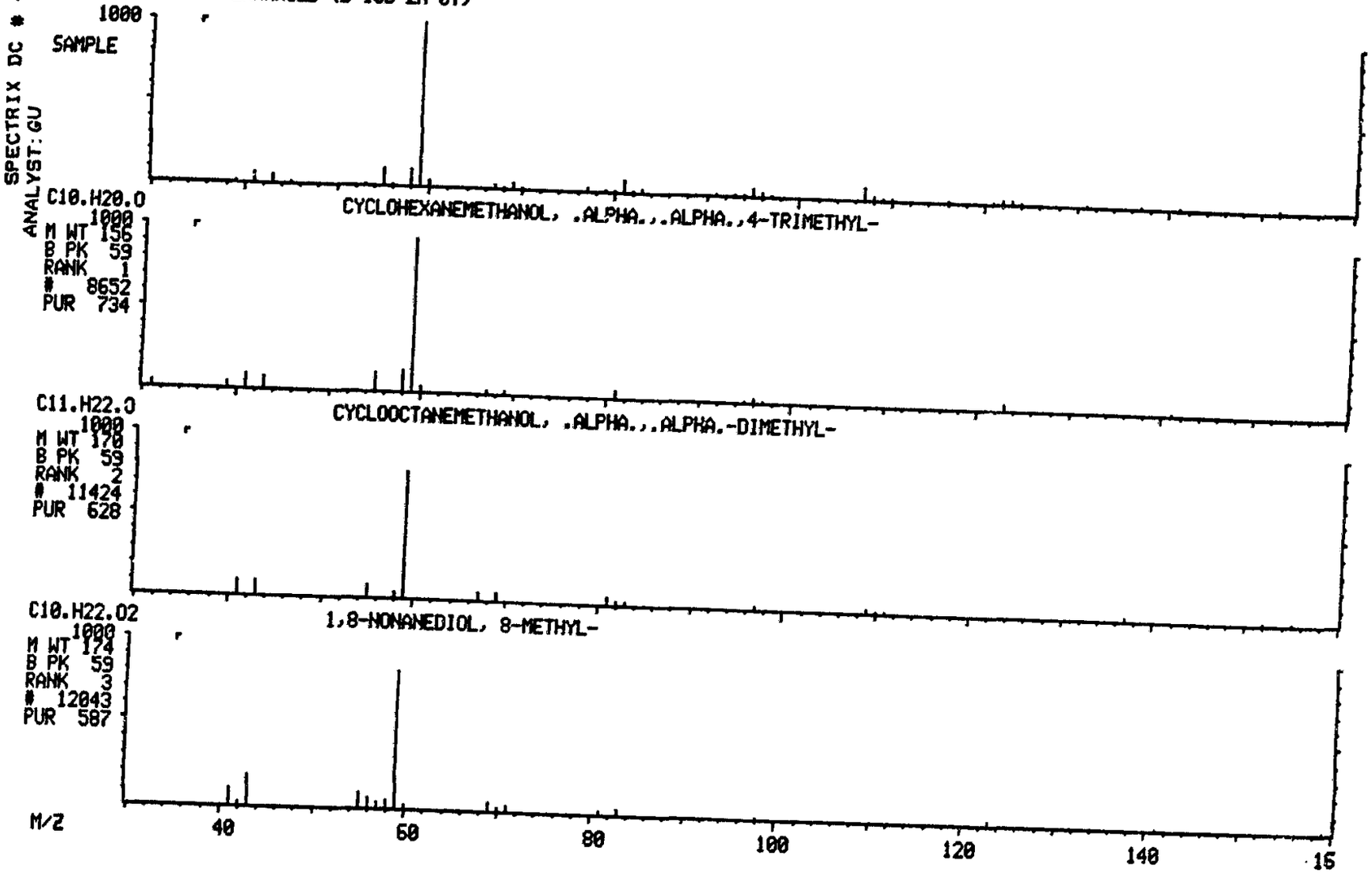
** SURROGATES WERE DILUTED OUT

LIBRARY SEARCH
12/30/86 13:46:00 + 11:58
SAMPLE: SCK-MW19-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C12A # 718
CALI: 4U12045C12A # 3

BASE M/Z: 59
RIC: 23871.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003591

LIBRARY SEARCH
12/30/86 13:46:00 + 15:02
SAMPLE: SCK-MW19-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C12A # 902
CALI: 4U12045C12A # 3

BASE M/Z: 134
RIC: 11247.

SPECTRIX DC # ----19
ANALYST: GU

INST ID: 4530

1400
SAMPLE

C9.H10.O
1400
M WT 134
B PK 134
RANK 1
4898
PUR 738
PHENOL, 2-(2-PROPENYL)-

C9.H10.O
1400
M WT 134
B PK 133
RANK 2
4897
PUR 715
1H-INDEN-5-OL, 2,3-DIHYDRO-

C9.H10.O
1400
M WT 134
B PK 105
RANK 3
4917
PUR 706
BENZENEMETHANOL, AR-ETHENYL-

M/Z
40 50 60 70 80 90 100 110 120 130

003591

003592

LIBRARY SEARCH
12/30/86 13:46:00 + 15:45
SAMPLE: SCK-MW19-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C12A # 945
CALI: 4U12045C12A # 3

BASE M/Z: 172
RIC: 7943.

SPECTRIX DC # ----19
ANALYST: GU

1136
SAMPLE

C12.H9.F
1136
M WT 172
B PK 172
RANK 1
11796
PUR 609
1,1'-BIPHENYL, 2-FLUORO-

C12.H9.F
1136
M WT 172
B PK 172
RANK 2
11797
PUR 583
1,1'-BIPHENYL, 4-FLUORO-

C7.H7.BR
1136
M WT 170
B PK 91
RANK 3
11510
PUR 381
BENZENE, 1-BROMO-4-METHYL-

INST ID: 4530

M/Z 40 60 80 100 120 140 160

003592

003593

LIBRARY SEARCH
12/30/86 13:46:00 + 16:44
SAMPLE: SCK-MW19-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C12A #1004
CALI: 4U12045C12A # 3

BASE M/Z: 133
RIC: 7671.

SPECTRIX DC # ----19
ANALYST: GU

1348
SAMPLE

C11.H16
1348
M WT 148
B PK 133
RANK 1
7165
PUR 703
BENZENE, PENTAMETHYL-

C10.H12.O
1348
M WT 148
B PK 148
RANK 2
7124
PUR 702
BENZENE, 1-METHOXY-4-(1-PROPENYL)-

C10.H12.O
1348
M WT 148
B PK 133
RANK 3
7160
PUR 682
PHENOL, P-(2-METHYLALLYL)-

M/Z 40 60 80 100 120 140 160

INST ID: 4530

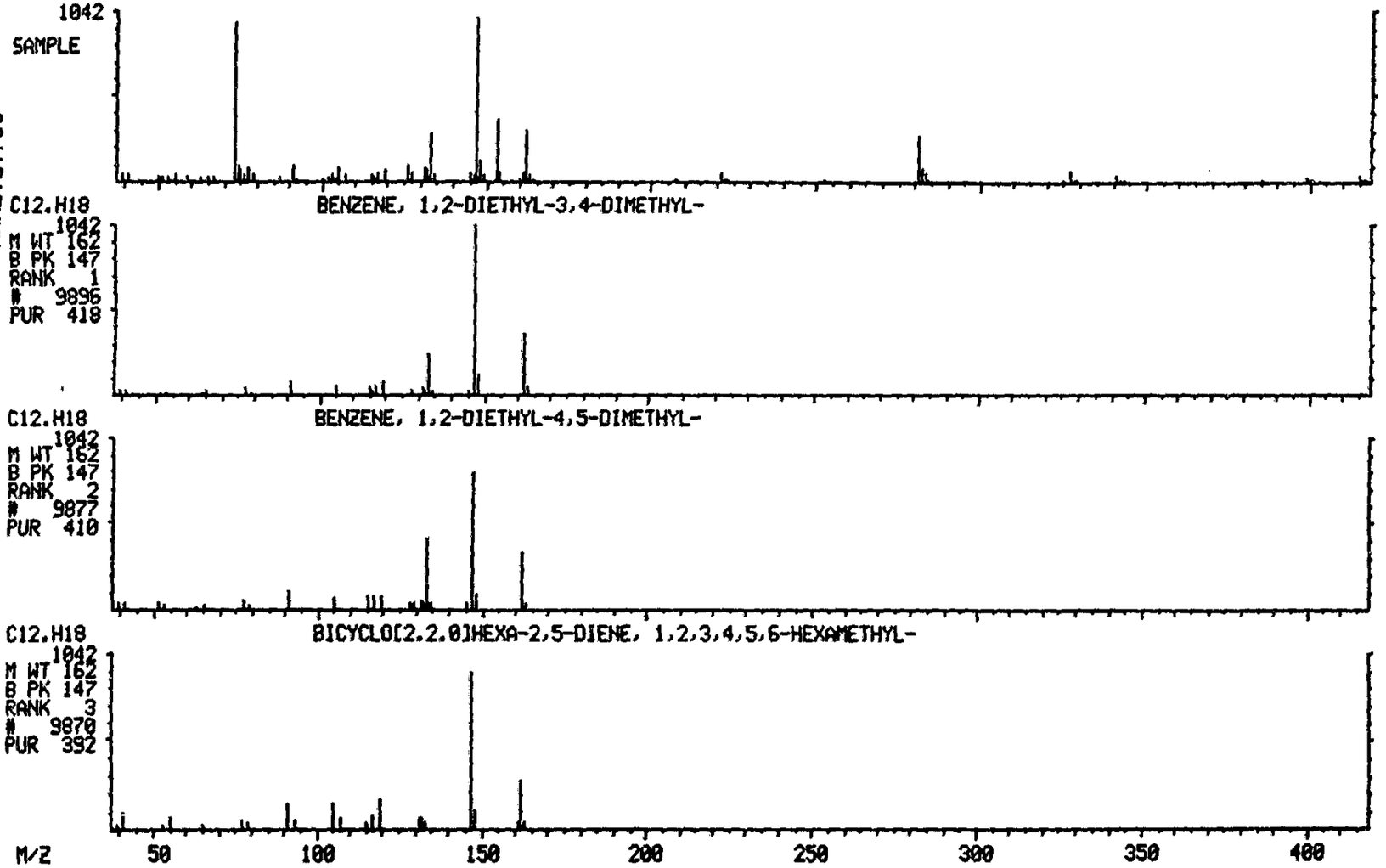
003593

003594

LIBRARY SEARCH
12/30/86 13:46:00 + 17:44
SAMPLE: SCK-MW19-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C12A #1064 BASE M/Z: 147
CALI: 4U12045C12A # 3 RIC: 13391.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003594

003595

LIBRARY SEARCH
12/30/86 13:46:00 + 18:47
SAMPLE: SCK-MW19-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C12A #1127
CALI: 4U12045C12A # 3

BASE M/Z: 147
RIC: 24479.

SPECTRIX DC # ----19
ANALYST: GU

1309
SAMPLE

C9.H9.O.N
1309
M WT 147
B PK 118
RANK 1
7103
PUR 677
1H-INDOLE-1-CARBOXALDEHYDE, 2,3-DIHYDRO-

C7.H5.O.N3
1309
M WT 147
B PK 147
RANK 2
7082
PUR 661
PYRIDO[3,2-D]PYRIMIDIN-4-OL

C7.H5.O.N3
1309
M WT 147
B PK 147
RANK 3
7080
PUR 646
PYRIDO[3,4-D]PYRIMIDIN-4(3H)-ONE

INST ID: 4530

M/Z 40 60 80 100 120 140 160

003595

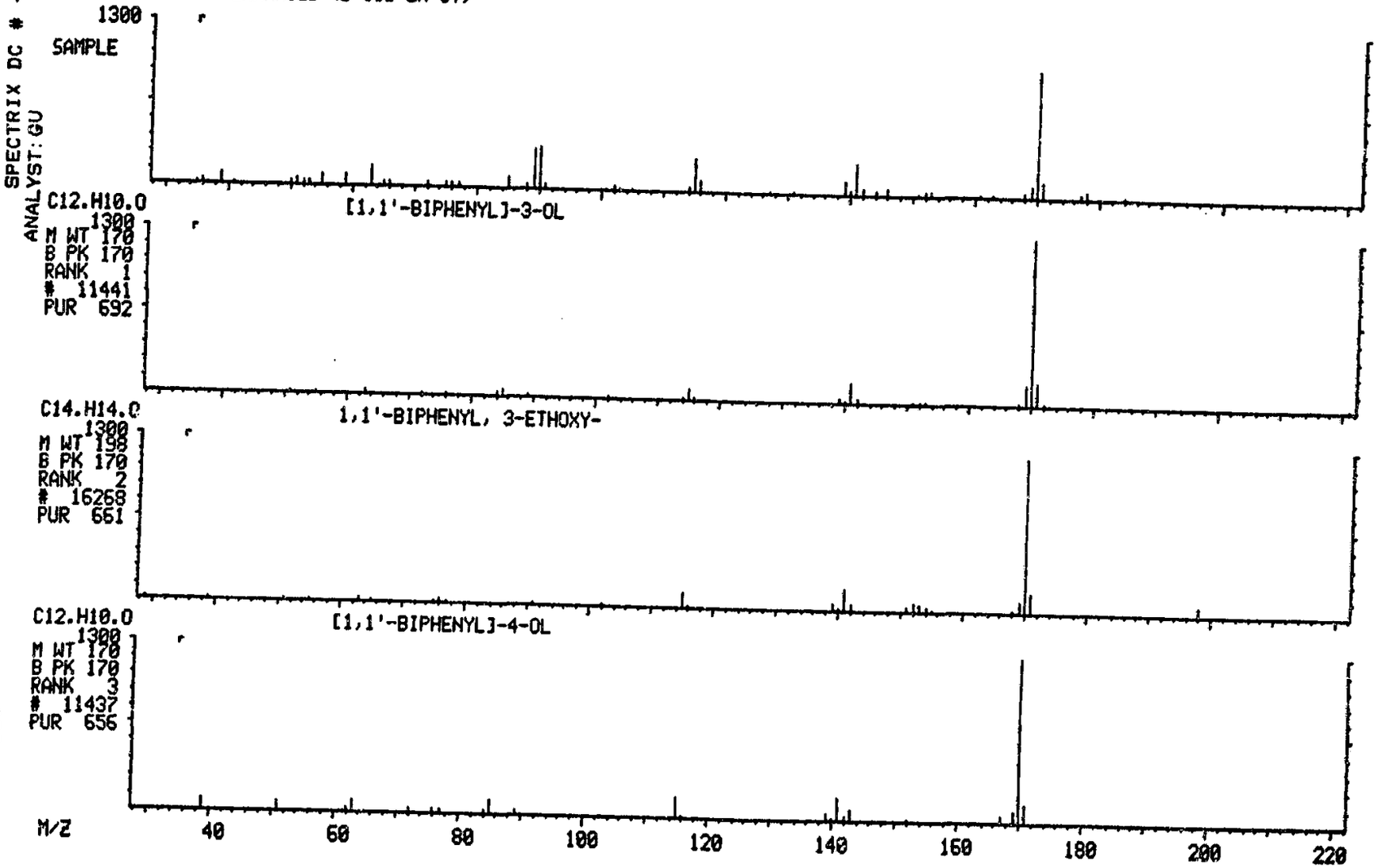
003596

LIBRARY SEARCH
12/30/86 13:46:00 + 20:44
SAMPLE: SCK-MW19-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C12A #1244
CALI: 4U12045C12A # 3

BASE M/Z: 170
RIC: 5343.

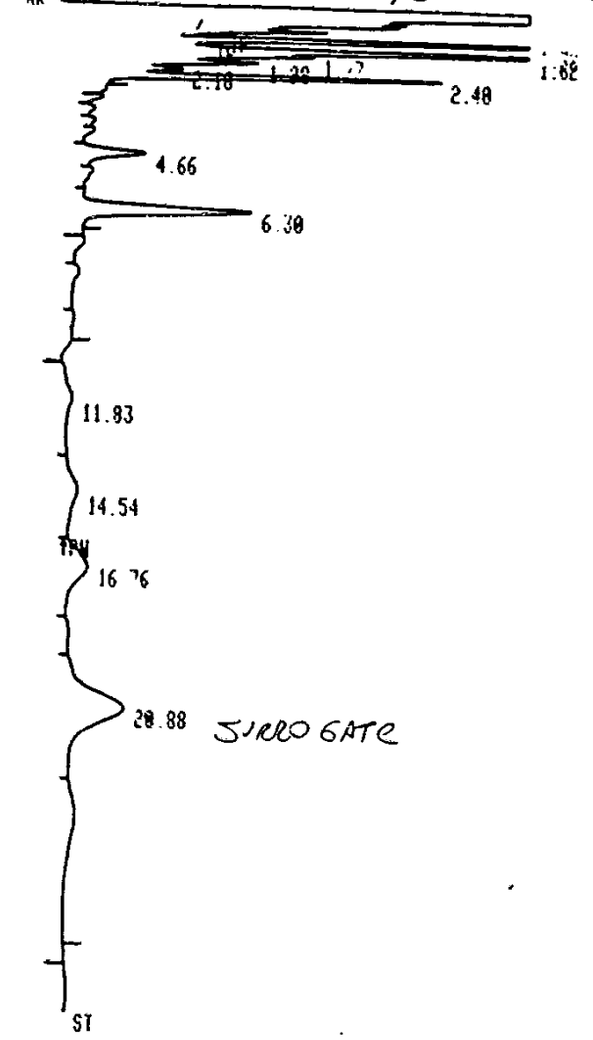
SPECTRIX DC # -----19
ANALYST: GU



INST ID: 4530

003596

86-12-045-12A 206



DC # N/A -

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. SCK-MW19-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 60

003597

RUN # 156 DEC-24/86 07:13:19
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.32	76733	D BV	0.086	28.445
1.62	66649	VV	0.121	24.707
1.77	19862	D VV	0.106	7.363
1.98	14280	D VV	0.132	5.295
2.18	5836	D VV	0.133	2.163
2.40	41640	VB	0.116	15.436
4.66	8121	PV	0.254	3.011
6.30	22065	VB	0.272	8.180
11.83	1729	BV	1.181	0.493
14.54	2014	VV	1.498	0.747
16.76	3232	VV	1.184	1.198
20.88	7994	VV	1.272	2.963

TOTAL HGHT= 269760
MUL FACTOR= 1.0000E+00

Received: 12/10/86

SPECTRIX 500 REPORT
Results by Sample

Work Order # 86-12-045

SAMPLE ID SCK-MW19-001 (LLW) SAMPLE # 12 FRACTIONS: A
Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	64.7 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	<10 ug/L	FE	4920 ug/L	HG	<0.2 ug/L	NI	53 ug/L	PB	37.2 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	57 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-P01-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003599

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-P01-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204513
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
DATE ANALYZED: 12/15/86

DATAFILE: 4U12045V13

DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = COMPOUND ALSO FOUND IN BLANK

003600

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-P01-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204513
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY:.....

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: ...12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C13
DILUTION FACTOR: ...1.0....

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	1 J
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003601

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-P01-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C13

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	19
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003602

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-13A

DC No: KEYSTONE
SMO No: SCK-P01-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 NA
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003603

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-P01-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

C REPORT NO.: ---- ANALYST: MB DATAFILE: 4U12045V13

B. TENTATIVELY IDENTIFIED COMPOUNDS

AS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
95-63-6	BENZENE, 1,2,4-TRIMETHYL-	577	826	20 UG/L

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003604

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-P01-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

GC REPORT NO.: --- ANALYST: GU DATAFILE: 4U1204SC13

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
110-12-3	2-HEXANONE, 5-METHYL-	* 316	926	8 J
128-37-0	PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METH	1074	832	5 J
120-40-1	DODECANAMIDE, N,N-BIS(2-HYDROXYETHYL)-	1115	808	5 J
74381-40-1	PROPANOIC ACID, 2-METHYL-, 1-(1,1-DIMETHY	1144	892	8 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1260		6 J
2648-21-3	1,2-BENZENEDICARBOXYLIC ACID, DIHEPTYL ES	1763	891	4 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1963		13 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

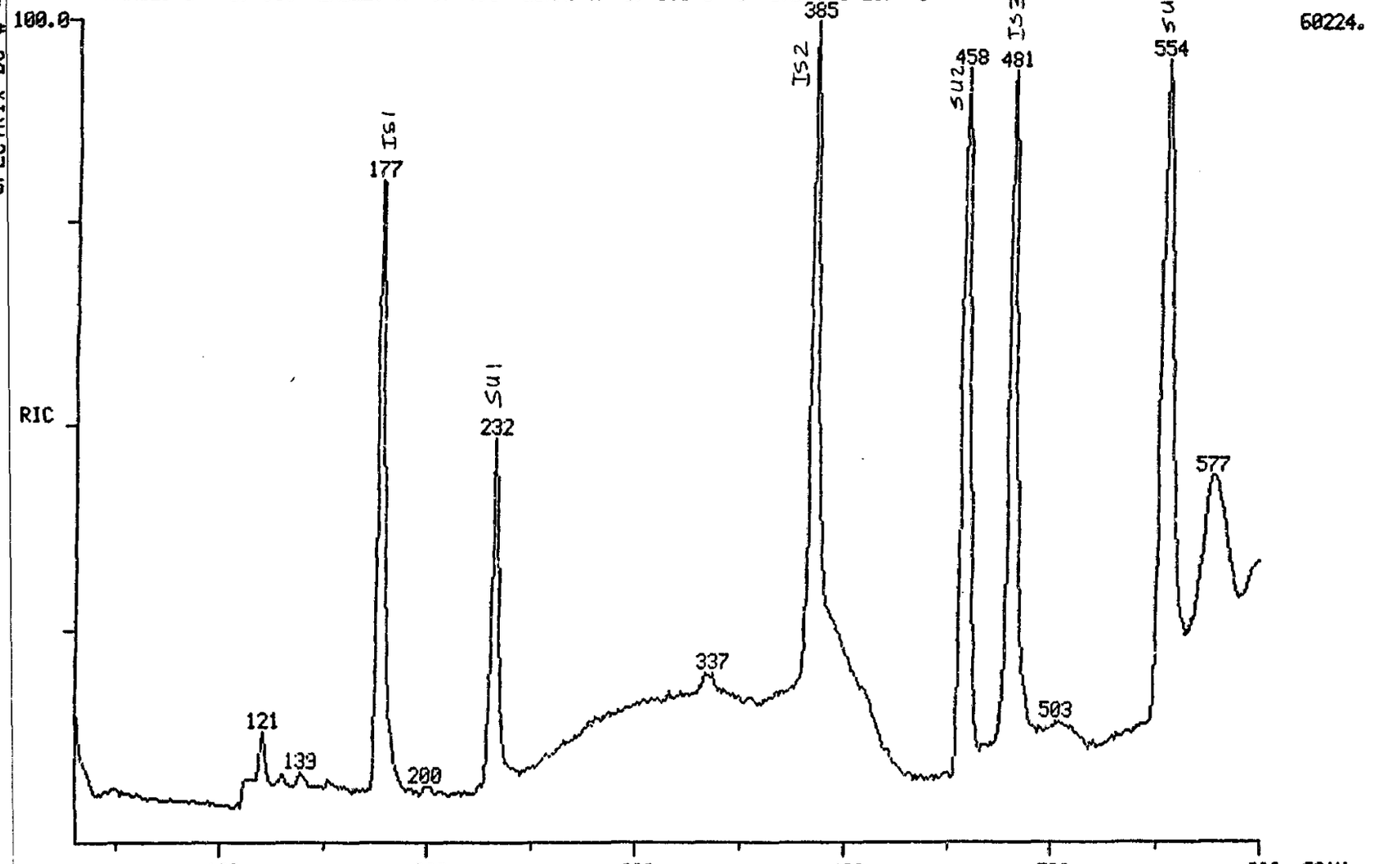
* ALSO FOUND IN BLANK

RIC
12/15/86 14:42:00
SAMPLE: SCK-P01-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V13 #1 SCANS 30 TO 600
CALI: 4U12045V13 #3

SPECTRIX DC # -----14

INST ID: 4000



60224.

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	SCK-P01-001		
FILENAME	4U12045V13	INST	4000
CLIENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/15/86 14:42:00	VERIFIED BY	GU
CALIB STD DATE	121486	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	19264
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	77928
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	67469
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	95 %	1.311	26188
458	CS05	D8-TOLUENE	**SU2**	98	89 %	0.954	67555
654	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	85 %	1.154	39963
121	CO30	METHYLENE CHLORIDE *		84	3 UG/L	0.684	1797

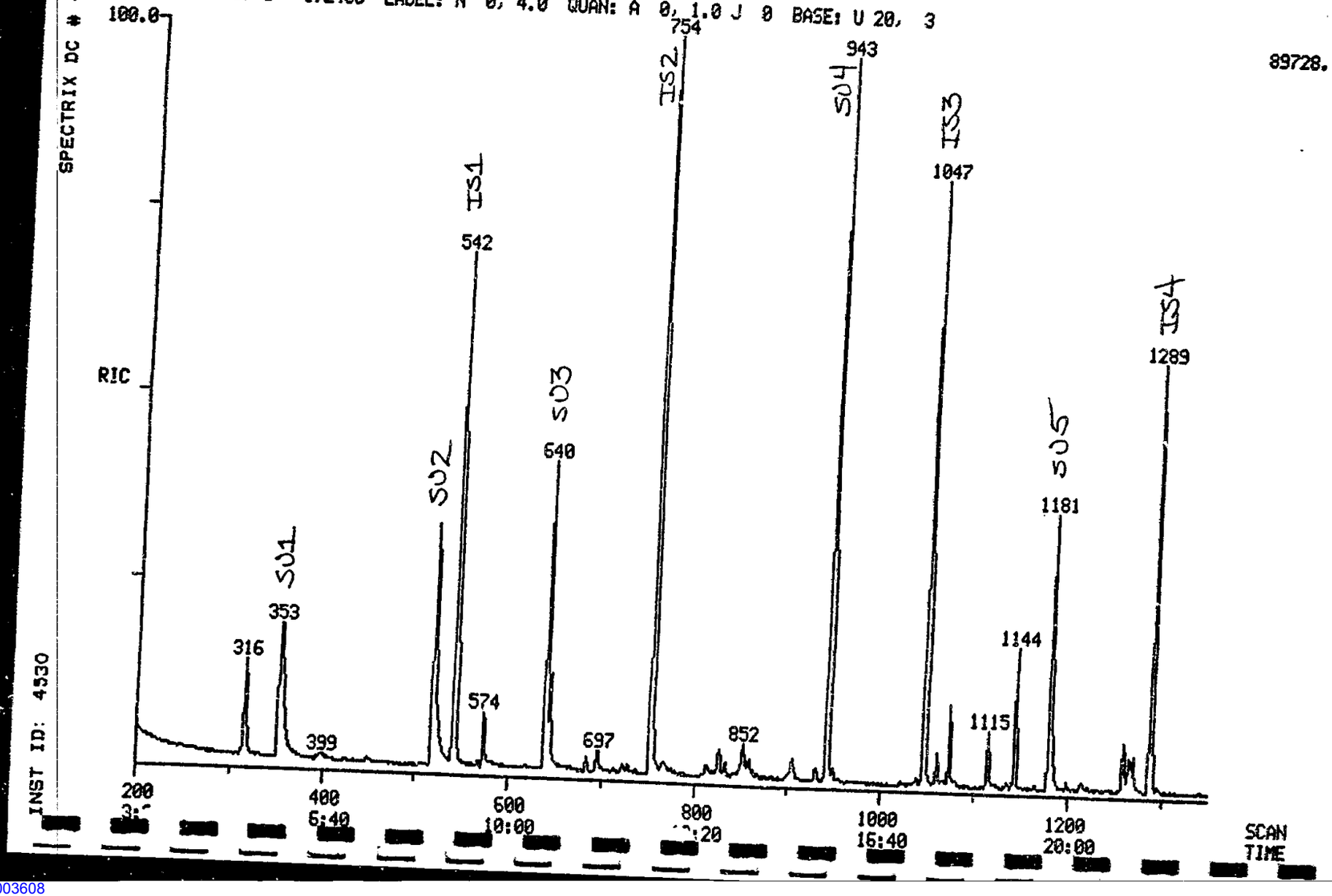
* BLANK CORRECTED ON DATA SHEET

003607

RIC
12/29/86 22:52:00
SAMPLE: SCK-P01-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C13 #1
CALI: 4U12045C13 #3

SCANS 200 TO 1350

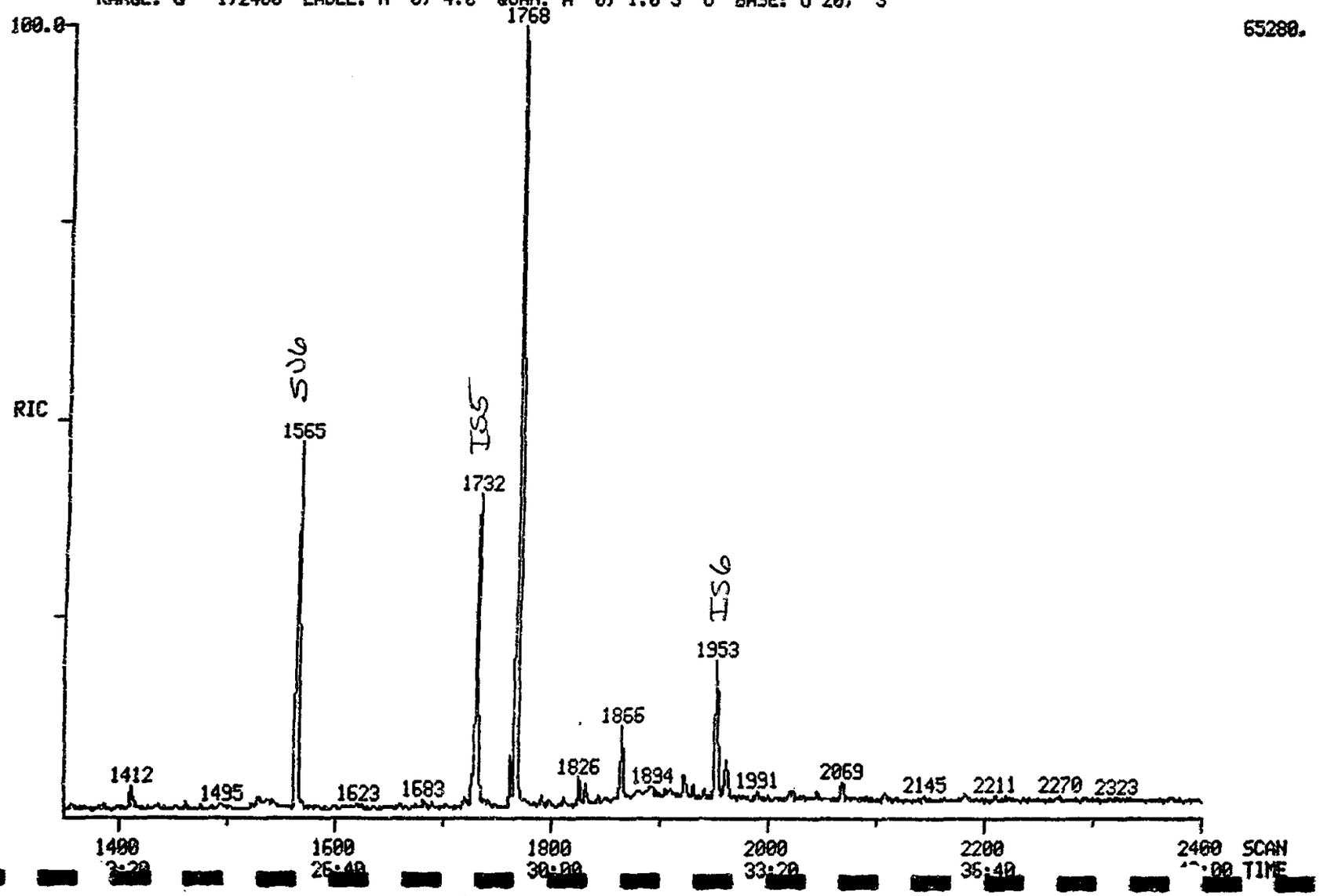


609600

RIC
12/29/86 22:52:00
SAMPLE: SCK-P01-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C13 #1
CALI: 4U12045C13 #3

SCANS 1350 TO 2400



SPECTRIX DC # ----14

INST ID: 4530

003609

SPECTRIX DC # -----14

SEMIVOLATILE WATER REPORT

SAMPLE ID.	SCK-P01-001		
ILENAME	4U12045C13	INST ID.	4530
CLIENT	KEYSTONE	ANALYST	GU
DATE INJECTED	12/29/86 22:52:00	VERIFIED BY	GU
CALIB STD DATE	12/17/86	CORR. FACTOR	1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
542	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	2641
754	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	10620
1047	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	5031
1289	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	6020
1732	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	3394
1953	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	1963
353	CS50	2-FLUOROPHENOL ** SU1 **	112	29 %	0.651	2835
519	CS45	PHENOL-D5 ** SU2 **	99	35 %	0.958	4218
1181	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	54 %	1.128	809
640	CS20	NITROBENZENE-D5 ** SU3 **	82	57 %	0.849	3313
943	CS25	2-FLUOROBIPHENYL ** SU4 **	172	56 %	0.901	7422
1565	CS30	TERPHENYL-D14 ** SU6 **	244	76 %	0.904	3281
684	C415	ISOPHORONE	82	1 UG/L	0.907	228
756	C450	NAPHTHALENE	128	* 1 UG/L	1.003	359
768	C735	BIS(2-ETHYLHEXYL)PHTHALATE	149	* 38 UG/L	1.021	3851
866	C760	DI-N-OCTYL PHTHALATE	149	* 5 UG/L	0.955	615

* BLANK CORRECTED ON DATA SHEET

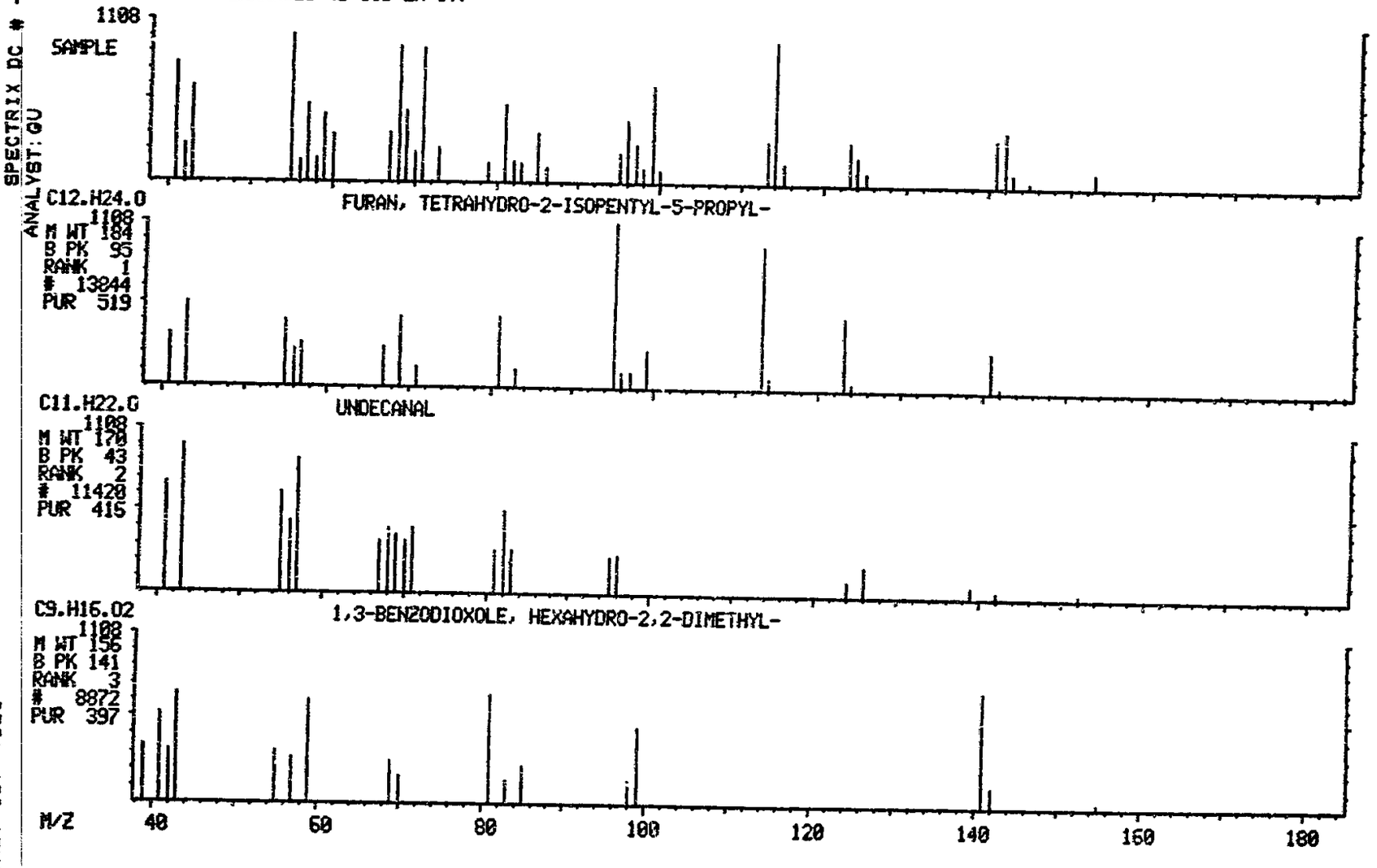
003611

LIBRARY SEARCH
12/29/86 22:52:00 + 21:00
SAMPLE: SCK-P01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C13 #1260
CALI: 4U12045C13 # 3

BASE M/Z: 55
RIC: 4383.

SPECTRIX DC # -----19
ANALYST: GU
INST ID: 4530



003611

003612

LIBRARY SEARCH
12/29/86 22:52:00 + 32:43
SAMPLE: SCK-P01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C13 #1963
CALI: 4U12045C13 # 3

BASE M/Z: 149
RIC: 2691.

SPECTRIX DC # ----19
ANALYST: GU

1065
SAMPLE

C26.H42.04 1,2-BENZENEDICARBOXYLIC ACID, ISODECYL OCTYL ESTER
1065
M WT 418
B PK 149
RANK 1
37229
PUR 716

C8.H5.O6.N 1,2-BENZENEDICARBOXYLIC ACID, 3-NITRO-
1065
M WT 211
B PK 149
RANK 2
18337
PUR 670

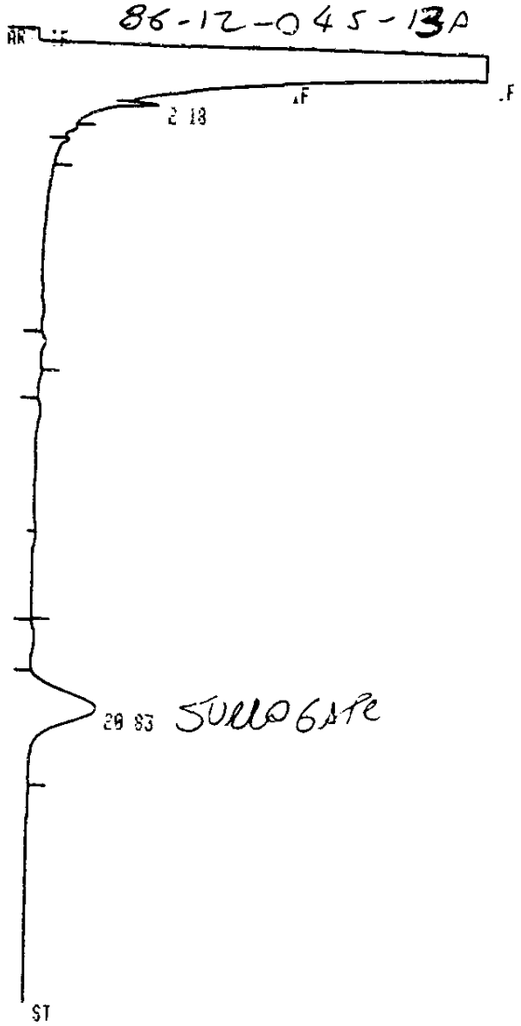
C26.H42.04 1,2-BENZENEDICARBOXYLIC ACID, DIISONONYL ESTER
1065
M WT 418
B PK 149
RANK 3
37231
PUR 655

M/Z 50 100 150 200 250 300

INST ID: 4530

003612

86-12-045-13A 206



DC # N/A

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. SCK-P01-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 600

003613

RUN # 15? DEC/24/86 07:44:35
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
20.83	9119	BB	1.133	100.000

TOTAL HGHT= 9119
MUL FACTOR= 1.0000E+00

Received: 12/10/86

SPECTRIX REPORT

Results by Sample

Work Order # 86-12-045

SAMPLE ID SCK-P01-001 (LLW) SAMPLE # 13 FRACTIONS: A

Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	13 ug/L		
CU	<10 ug/L	FE	4440 ug/L	HG	<0.2 ug/L	NI	30 ug/L	PB	14.8 ug/L	SB	<44 ug/L		
SE	<5 ug/L	TL	<10 ug/L	ZN	14 ug/L								

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-P04-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003615

SPECTRIX DC # ----- 8

NST ID 4000

SAMPLE NUMBER: SCK-P04-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

ORATORY NAME: SPECTRIX
B SAMPLE ID NO.: 861204514
AMPLE MATRIX: WATER
ATA RELEASE AUTHORIZED BY: GU

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
ATE ANALYZED: 12/15/86

DATAFILE: 4U12045V14

DILUTION FACTOR: 10

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003616

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-P04-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204514
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GU

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C14
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003617

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-P04-001

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C14

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003618

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-14A

DC No: KEYSTONE
SMO No: SCK-P04-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.05 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.10 U
53494-70-5	ENDRIN KETONE	0.50 U
57-74-9	CHLORDANE	0.10 U
8001-35-2	TOXAPHENE	0.50 U
12674-11-2	AROCLOR-1016	1.0 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	0.50 U
11096-82-5	AROCLOR-1260	1.0 U
		1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 N/A.
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003619

INST ID: 4000

SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-P04-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ----

C REPORT NO.: ----

ANALYST: MB

DATAFILE: 4U12045V14

B. TENTATIVELY IDENTIFIED COMPOUNDS

AS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	536		

UG/L
6
0036 20

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-P04-

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

GC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12045C14

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
10-12-3	2-HEXANONE, 5-METHYL-	* 315	918	21 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	356		136 J
74630-57-5	3-UNDECENE, 6-METHYL-, (E)-	574	841	50 J
367-34-3	PROPANOIC ACID, 2-METHYL-, 1-(1,1-DIMETHY	1144		7 J

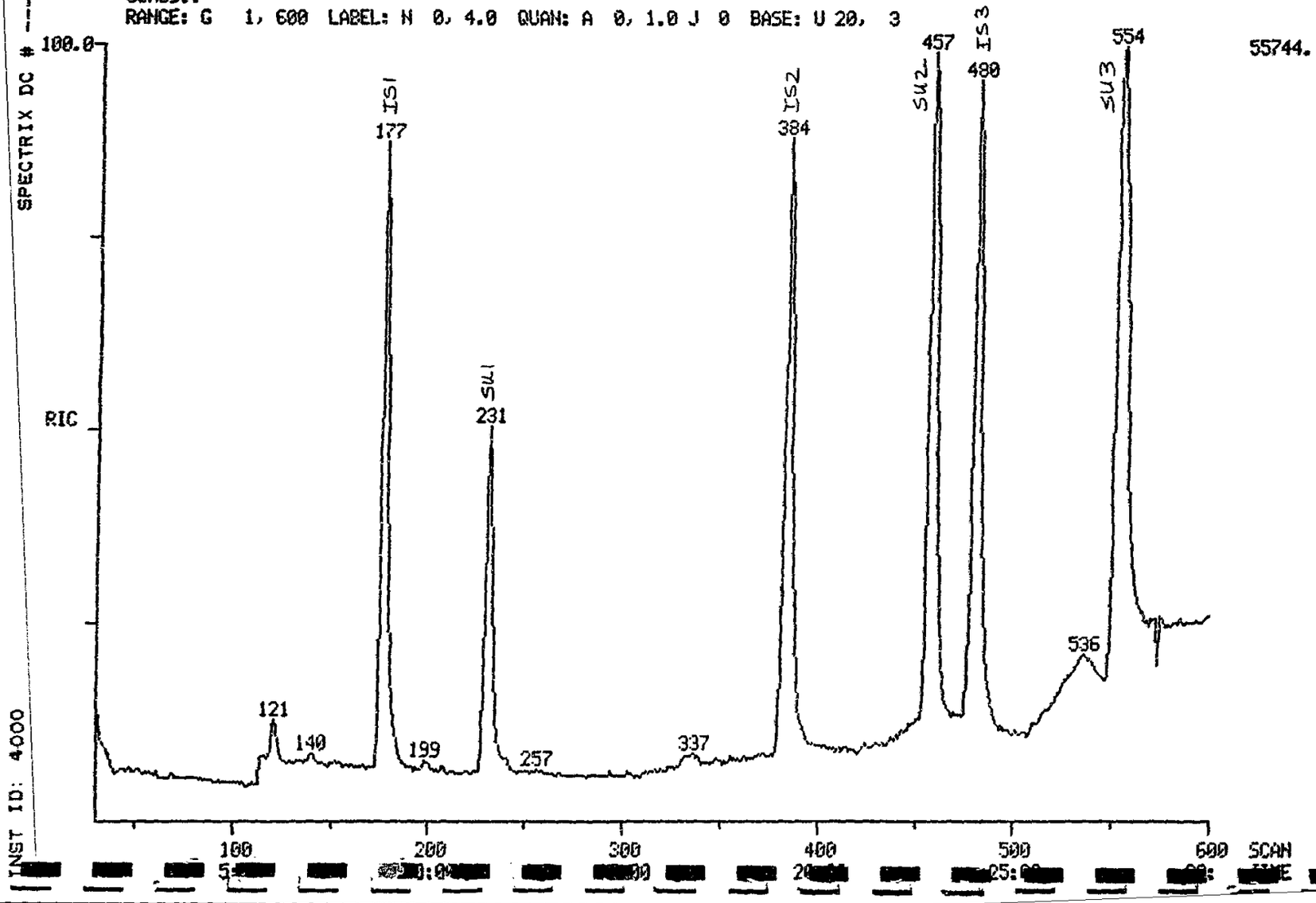
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

* ALSO FOUND IN BLANK

003622

RIC
12/15/86 15:30:00
SAMPLE: SCK-P04-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V14 #1 SCANS 30 TO 600
CALI: 4U12045V14 #3



003622

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID. SCK-P04-001

FILENAME 4U12045V14

CLIENT KEYSTONE

DATE INJECTED 12/15/86 15:30:00

CALIB STD DATE 121486

INST 4000

ANALYST MB

VERIFIED BY GU

CORR. FACTOR 1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	18261
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	75223
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	57684
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	95 %	1.305	24832
457	CS05	D8-TOLUENE	**SU2**	98	101 %	0.952	65232
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	98 %	1.152	39413
121	CO30	METHYLENE CHLORIDE *		84	2 UG/L	0.684	1418

* BLANK CORRECTED ON DATA SHEET

003623

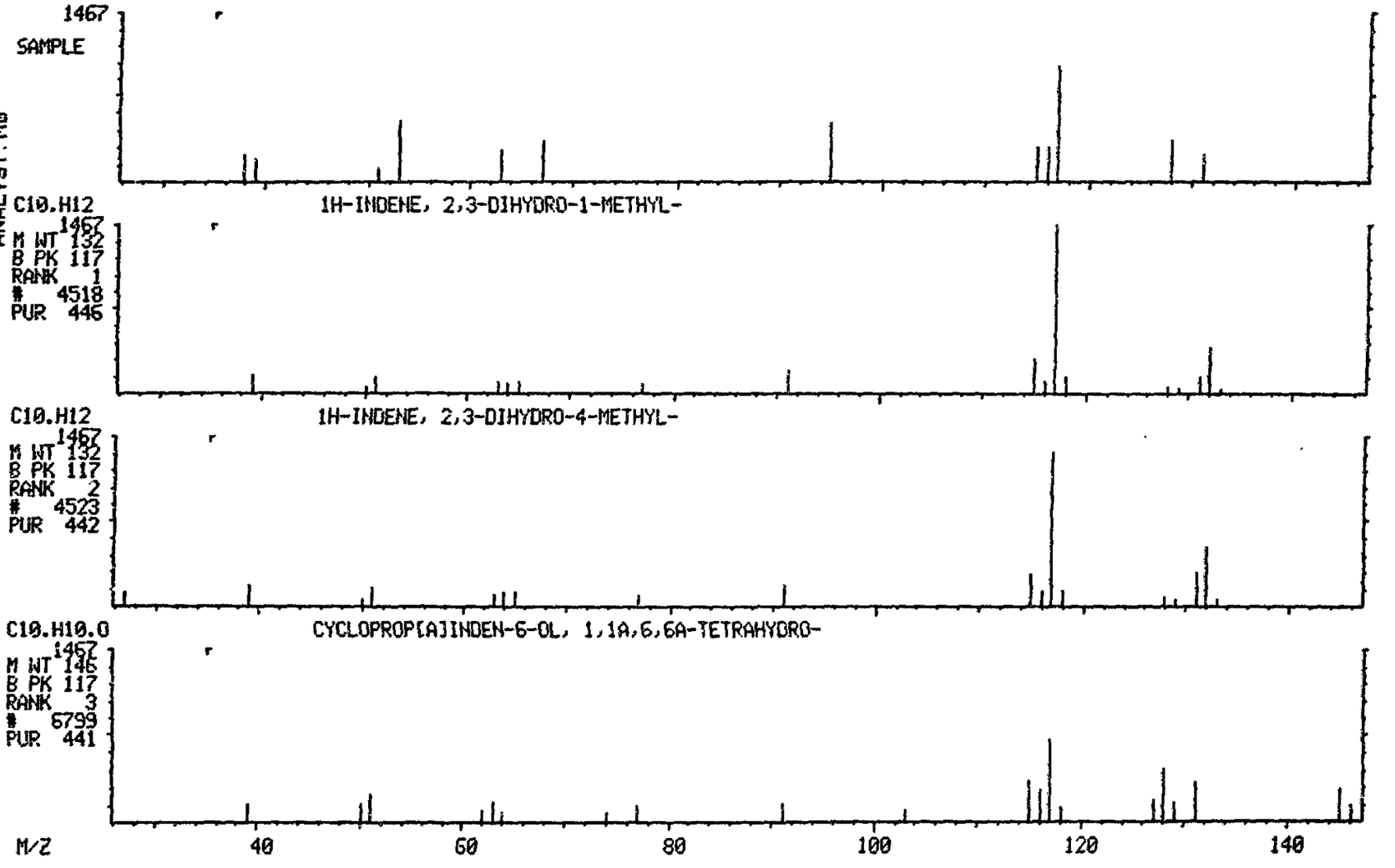
003624

LIBRARY SEARCH
12/15/86 15:30:00 + 26:48
SAMPLE: SCK-P04-001
CONDS.: ----
ENHANCED (S 15B 2N 0T)

DATA: 4U12045V14 # 536
CALI: 4U12045V14 # 3

BASE M/Z: 117
RIC: 965.

SPECTRIX DC # -----19
ANALYST: MB
INST ID: 4000



003624

003625

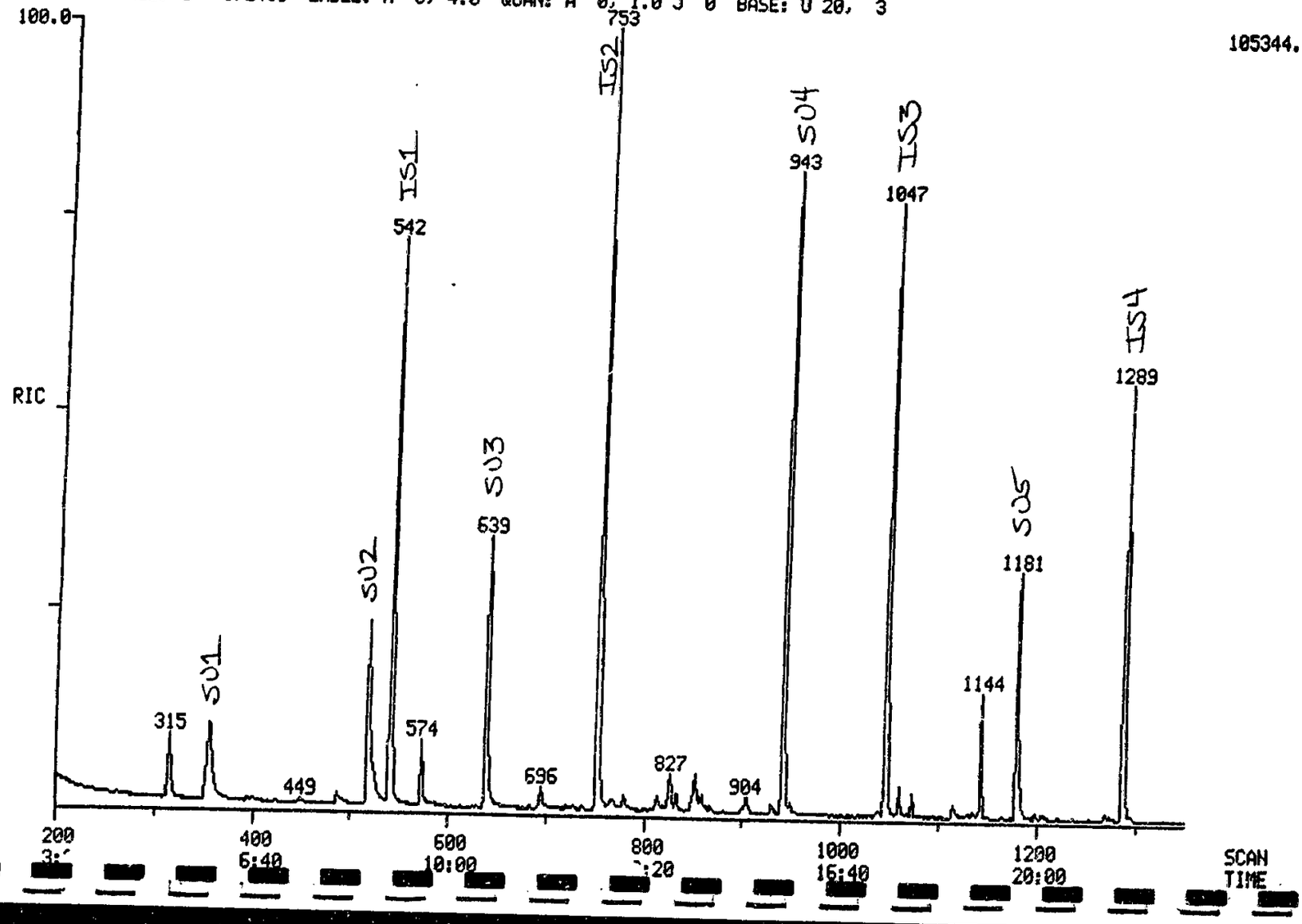
RIC
12/29/86 23:43:00
SAMPLE: SCK-P04-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C14 #1
CALI: 4U12045C14 #3

SCANS 200 TO 1350

SPECTRIX DC # ----14

INST ID: 4530



003625

003626

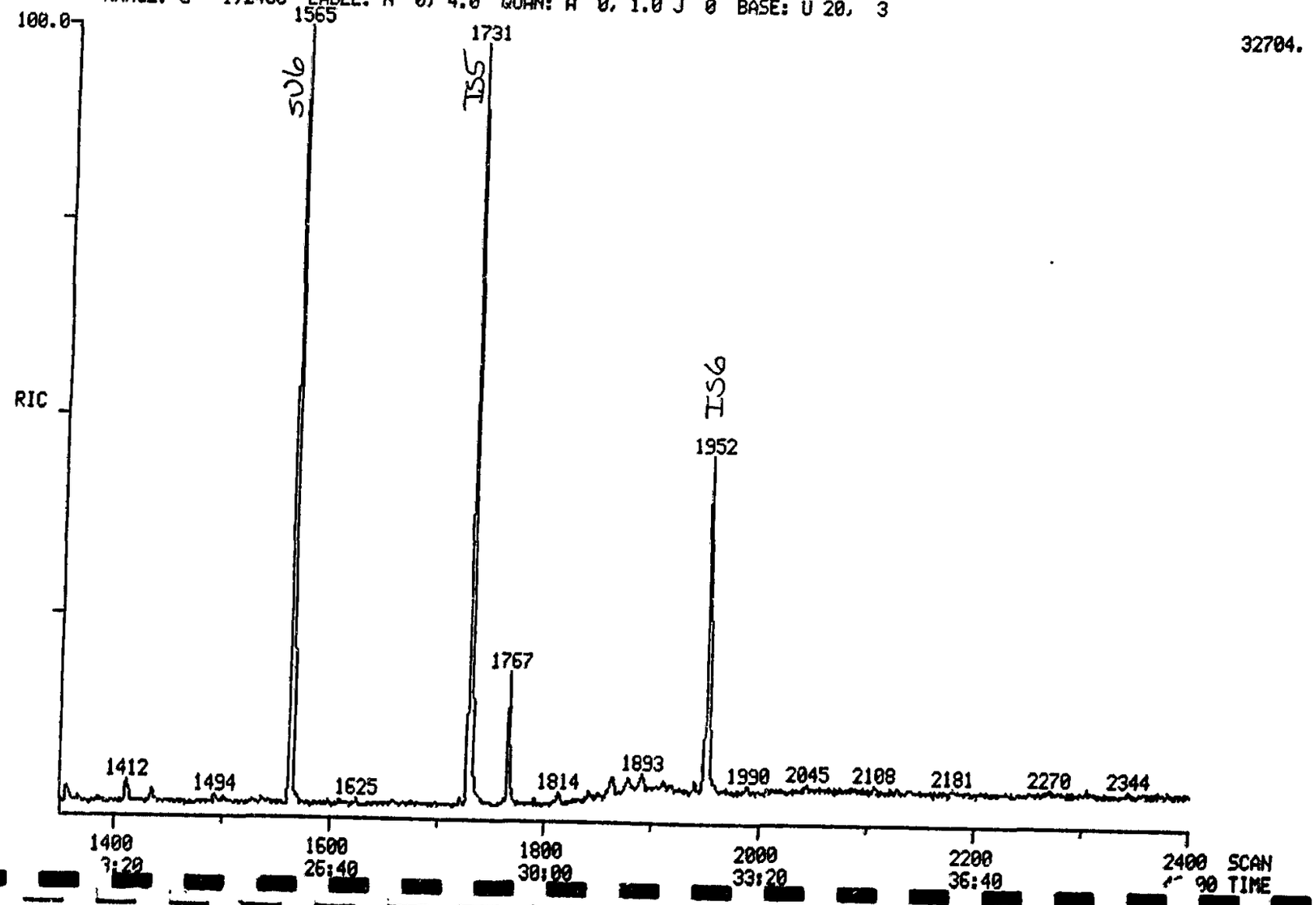
RIC
12/29/86 23:43:00
SAMPLE: SCK-P04-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C14 #1
CALI: 4U12045C14 #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14

INST ID: 4530



003626

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-P04-001

ILENAME 4U12045C14

CLIENT KEYSTONE

DATE INJECTED 12/29/86 23:43:00

CALIB STD DATE 01/06/87

INST ID. 4530

ANALYST GU

VERIFIED BY GU

CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
542	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	2948
753	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	11617
1047	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	5539
1289	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	7002
1731	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	4170
1952	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	2212
354	CS50	2-FLUOROPHENOL ** SU1 **	112	10 %	0.653	1105
518	CS45	PHENOL-D5 ** SU2 **	99	27 %	0.956	3878
1180	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	54 %	1.127	884
639	CS20	NITROBENZENE-D5 ** SU3 **	82	55 %	0.849	3499
943	CS25	2-FLUUOROBIPHENYL ** SU4 **	172	54 %	0.901	7916
1565	CS30	TERPHENYL-D14 ** SU6 **	244	65 %	0.904	3414
756	C450	NAPHTHALENE	* 128	1 UG/L	1.004	270
1767	C735	BIS(2-ETHYLHEXYL)PHTHALATE	* 149	2 UG/L	1.021	305

* BLANK CORRECTED ON DATA SHEET

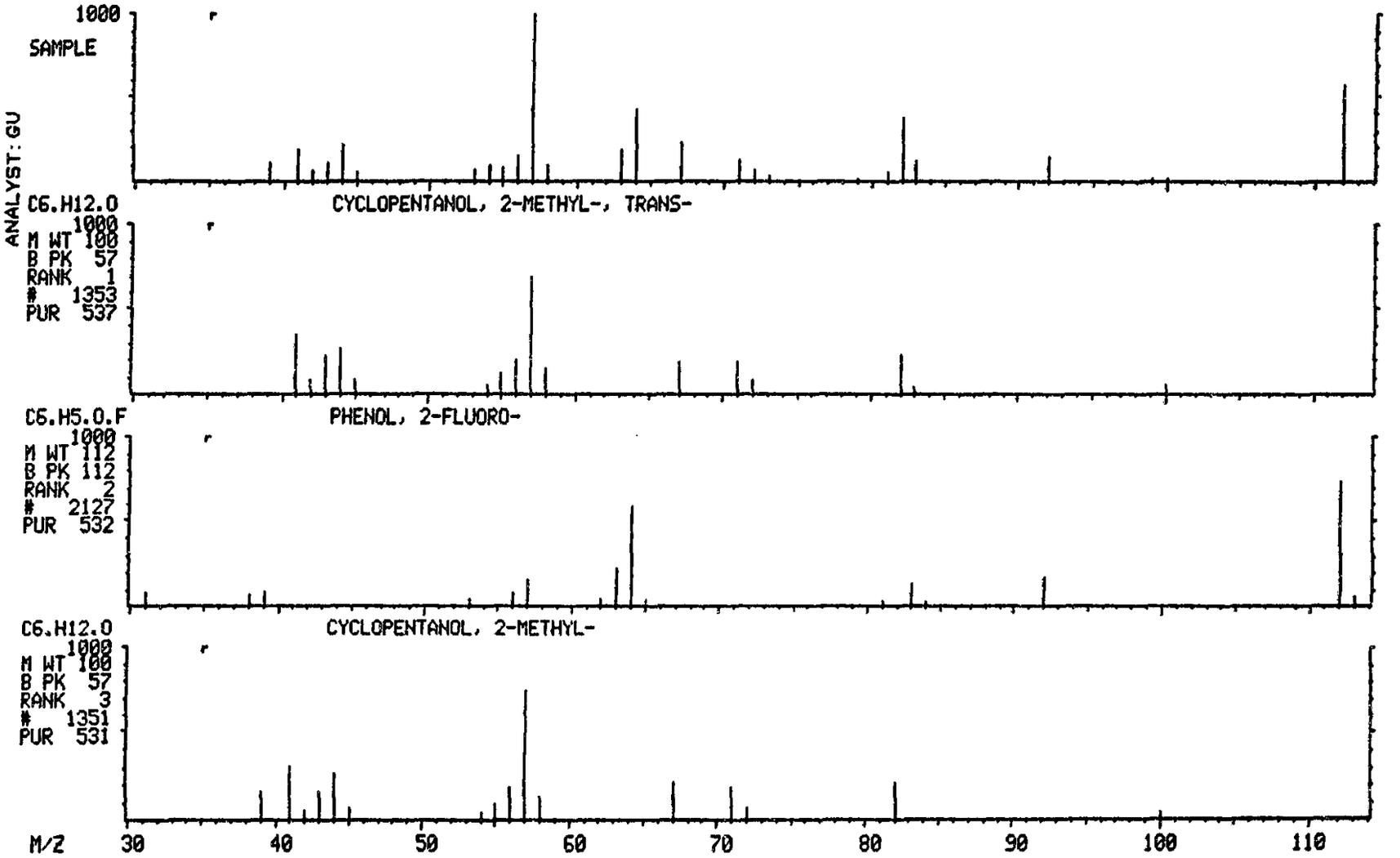
003628

LIBRARY SEARCH
12/29/86 23:43:00 + 5:56
SAMPLE: SCK-P04-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12045C14 # 356
CALI: 4U12045C14 # 3

BASE M/Z: 57
RIC: 7231.

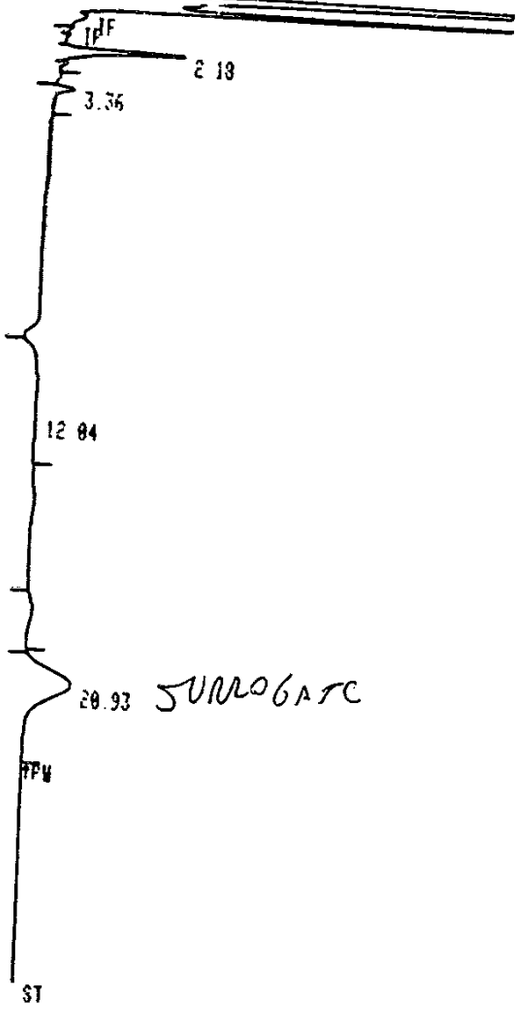
SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003628

86-12-045-14A



DC # N/A

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. SCK-P04-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 600

003629

RUN # 158
WORKFILE ID: C
WORKFILE NAME:

DEC/24/86 08:15:52

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.18	16052	PV	0.151	62.508
3.36	2377	BB	0.163	9.256
12.04	1396	BB	2.165	5.436
20.93	5855	BB	0.980	22.800

TOTAL HGHT= 25680
MUL FACTOR= 1.0000E+00

Received: 12/10/86

SPECTRIX REPORT
Results by Sample

Work Order # 86-12-045

SAMPLE ID SCK-P04-001 (LLW)

SAMPLE # 14 FRACTIONS: A
Date & Time Collected 12/10/86 Category

AG	<10 ug/L	AS	14.2 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L		
CU	<10 ug/L	FE	6850 ug/L	HG	<0.2 ug/L	NI	57 ug/L	PB	<5 ug/L	SB	<44 ug/L		
SE	<5 ug/L	TL	<10 ug/L	ZN	53 ug/L								

CHECKLIST

SECTION II - Sample Data Packets

Sample No: TRIP BLANK

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- N/A SV
- N/A Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- N/A SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- N/A SV chromatogram
- N/A SV quantitation report (surrogates)
- N/A Pest. chromatogram and integrator print out

N/A Inorganic Analysis Data Sheets (IADS)

003631

SPECTRIX DC # ----- 8

NST ID 4000

SAMPLE NUMBER: TRIP BLANK

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

BORATORY NAME: SPECTRIX
B SAMPLE ID NO.: 861204515
AMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GU

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
DATE ANALYZED: 12/15/86

DATAFILE: 4U12045V15

DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003632

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: TRIP BLANK

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

REPORT NO.: ---- ANALYST: MB DATAFILE: 4U12045V15

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				UG/L
	NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.			

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

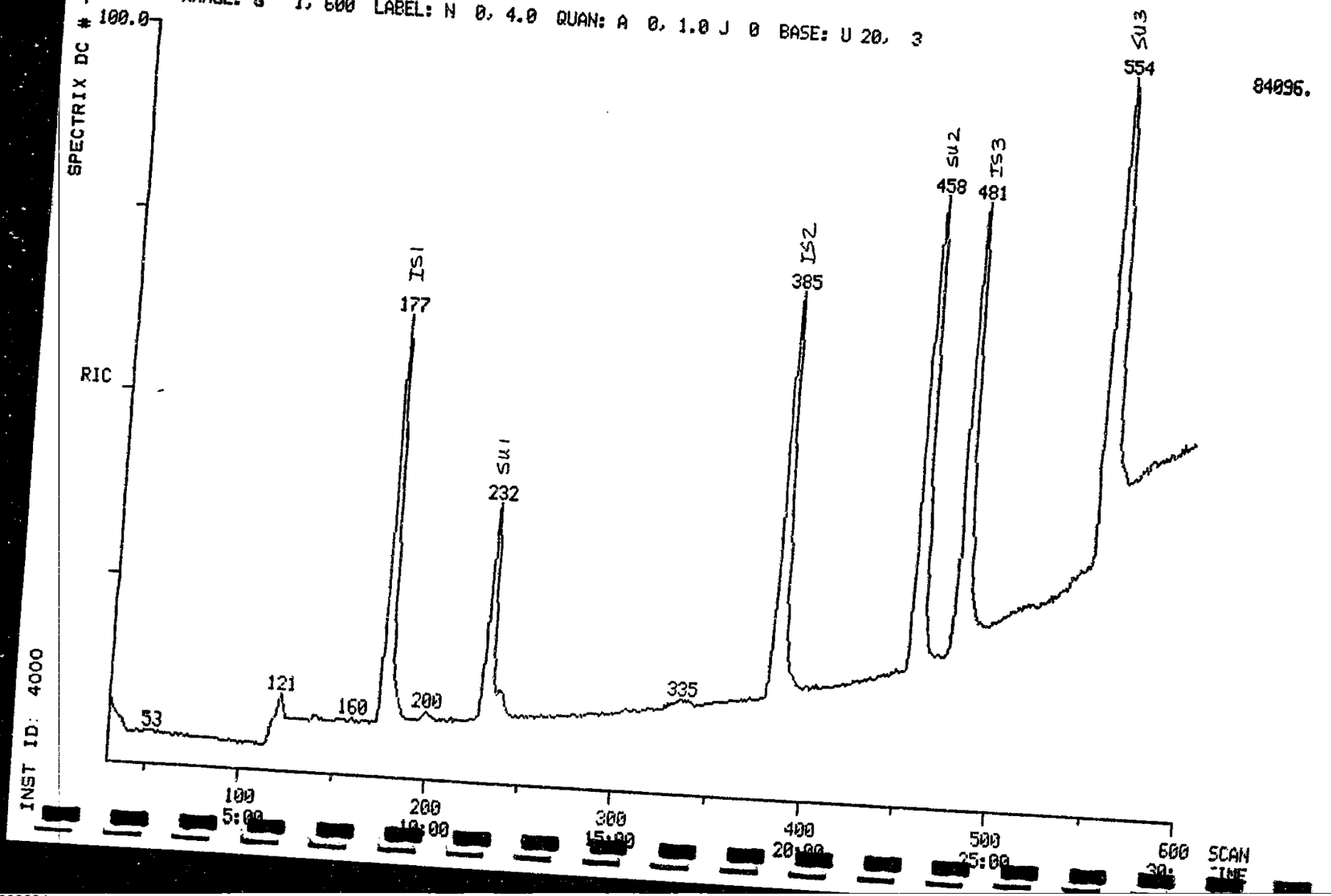
003633

003634

RIC
12/15/86 16:24:00
SAMPLE: TRIP BLANK
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V15 #1
CALI: 4U12045V15 #3

SCANS 30 TO 600



84096.

003634

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	TRIP BLANK		
FILENAME	4U12045V15		
CLIENT	KEYSTONE	INST	4000
DATE INJECTED	12/15/86 16:24:00	ANALYST	MB
CALIB STD DATE	121486	VERIFIED BY	GU
		CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	18813
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	80796
680	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	65902
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	93 %	1.311	24938
458	CS05	D8-TOLUENE	**SU2**	98	97 %	0.954	72007
654	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	101 %	1.154	46138
121	CO30	METHYLENE CHLORIDE *		84	2 UG/L	0.684	1240

* BLANK CORRECTED ON DATA SHEET

003635

CHECKLIST

SECTION III - Blanks

✓ OADS

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram with integrator print out

✓ IADS

003636

SPECTRIX DC # ----- 8

:ST ID 4000

SAMPLE NUMBER: LAB BLANK

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
L SAMPLE ID NO.: 8612041
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
GC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/13/86
DATE ANALYZED: 12/13/86

DATAFILE: 4B1213V01

DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 J
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 J
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003637

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 8612045
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GH

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4B12045C01
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	1 J
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	1 J
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003638

SPECTRIX DC # ---- 8

SAMPLE NUMBER: LLW BLK

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4B12045C01

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	1 J
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	10 U
C730	BENZO(A)ANTHRACENE	20 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	19
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	1 J
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003639

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-01A

DC No: KEYSTONE
SMO No: LAB.BLANK WATER

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. ✓Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 N/A
2nd Column Inst. : ~~3400~~

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

003640

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: LAB BLANK

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: CKT DATAFILE: 481213V01

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
4-38-9	CARBON DIOXIDE (ACN)	48	949	
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	96		

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: LLW BLK

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

QC REPORT NO.: --- ANALYST: GU DATAFILE: 4B12045C01

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/
110-12-3	2-HEXANONE, 5-METHYL-	346	920	90 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	905		45 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1062		50 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1965		4 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

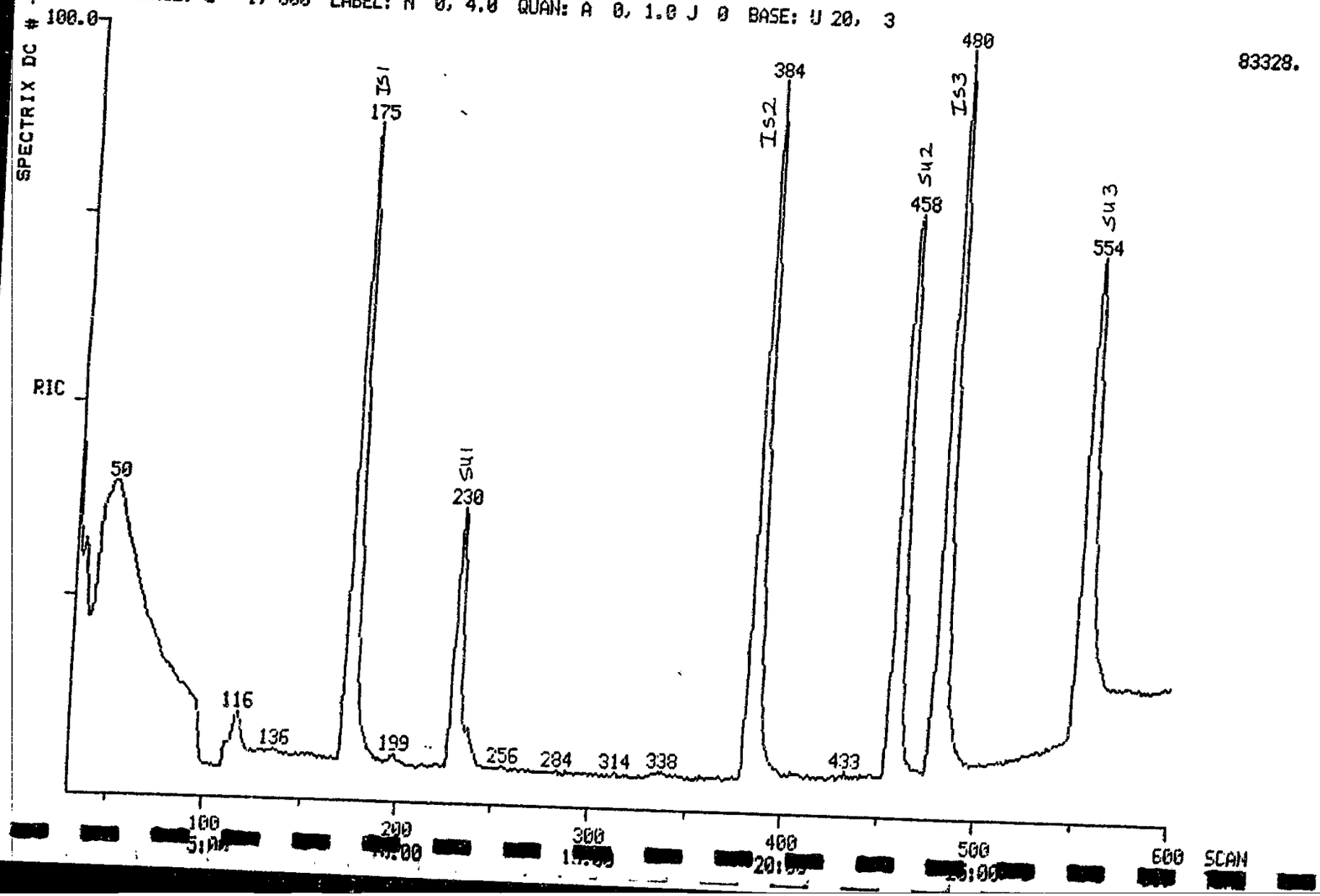
003643

RIC
12/13/86 10:40:00
SAMPLE: LAB BLANK
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4B1213V01 #1
CALI: 4B1213V01 #3

SCANS 30 TO 600

83328.



003643

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID. LAB BLANK

FILENAME 4B1213V01

CLIENT KEYSTONE

INST 4000

DATE INJECTED 12/13/86 10:40:00

ANALYST CKT

CALIB STD DATE 12-14-86

VERIFIED BY

CORR. FACTOR 1.00

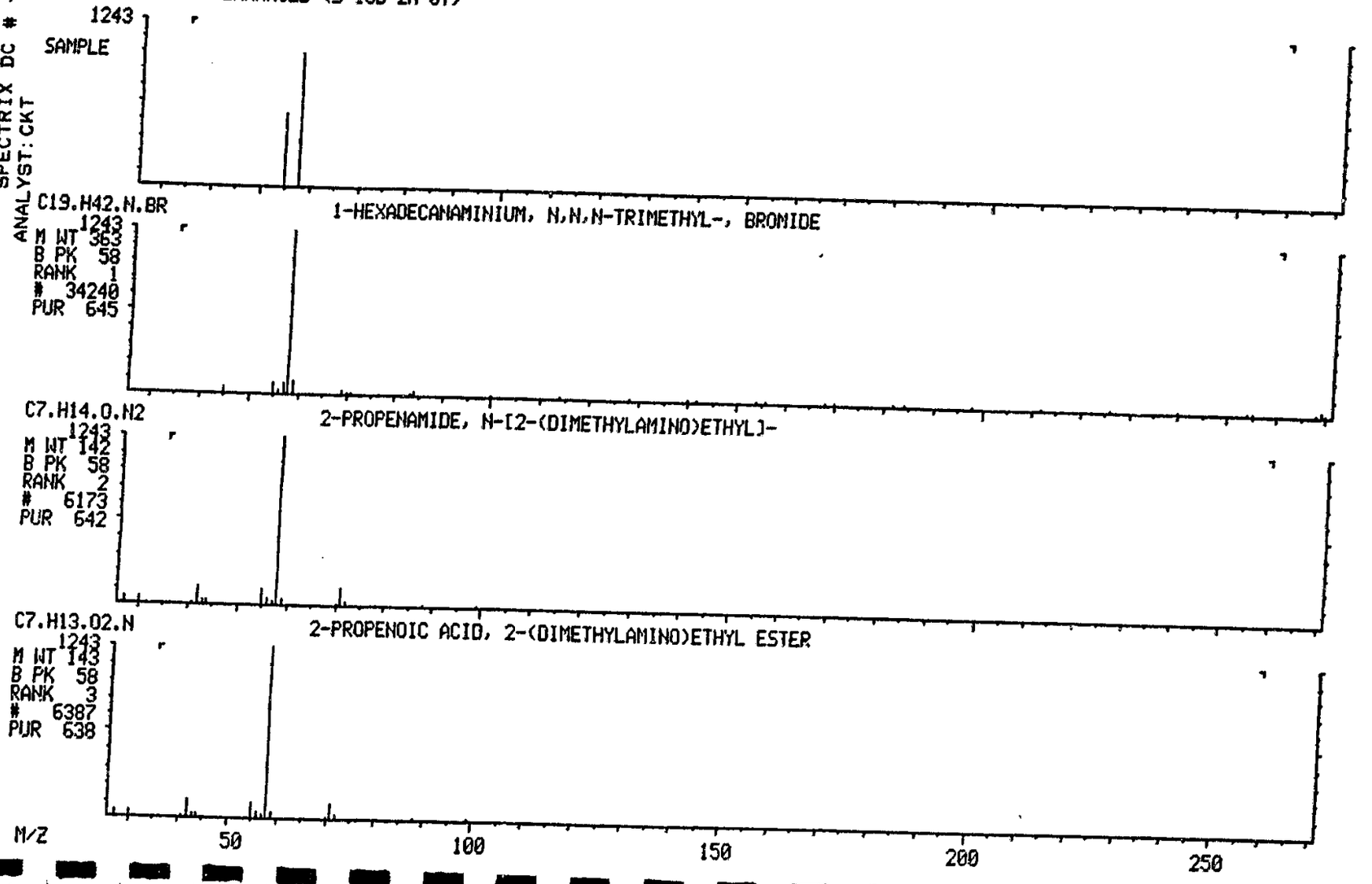
SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
174	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	30379
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	125463
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	100443
230	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	96 %	1.322	29805
457	CS05	D8-TOLUENE	**SU2**	98	99 %	0.952	82044
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	95 %	1.152	49680
116	CO30	METHYLENE CHLORIDE		84	3 UG/L	0.667	2385
237	CI10	2-BUTANONE		72	10 UG/L	0.617	1211

LIBRARY SEARCH
12/13/86 10:40:00 + 4:48
SAMPLE: LAB BLANK
CONDS.: ----
ENHANCED (S 15B 2N 0T)

DATA: 4B1213U01 # 96
CALI: 4B1213U01 # 3

BASE M/Z: 58
RIC: 53.

SPECTRIX DC # -----19
ANALYST: CKT



INST ID: 4000

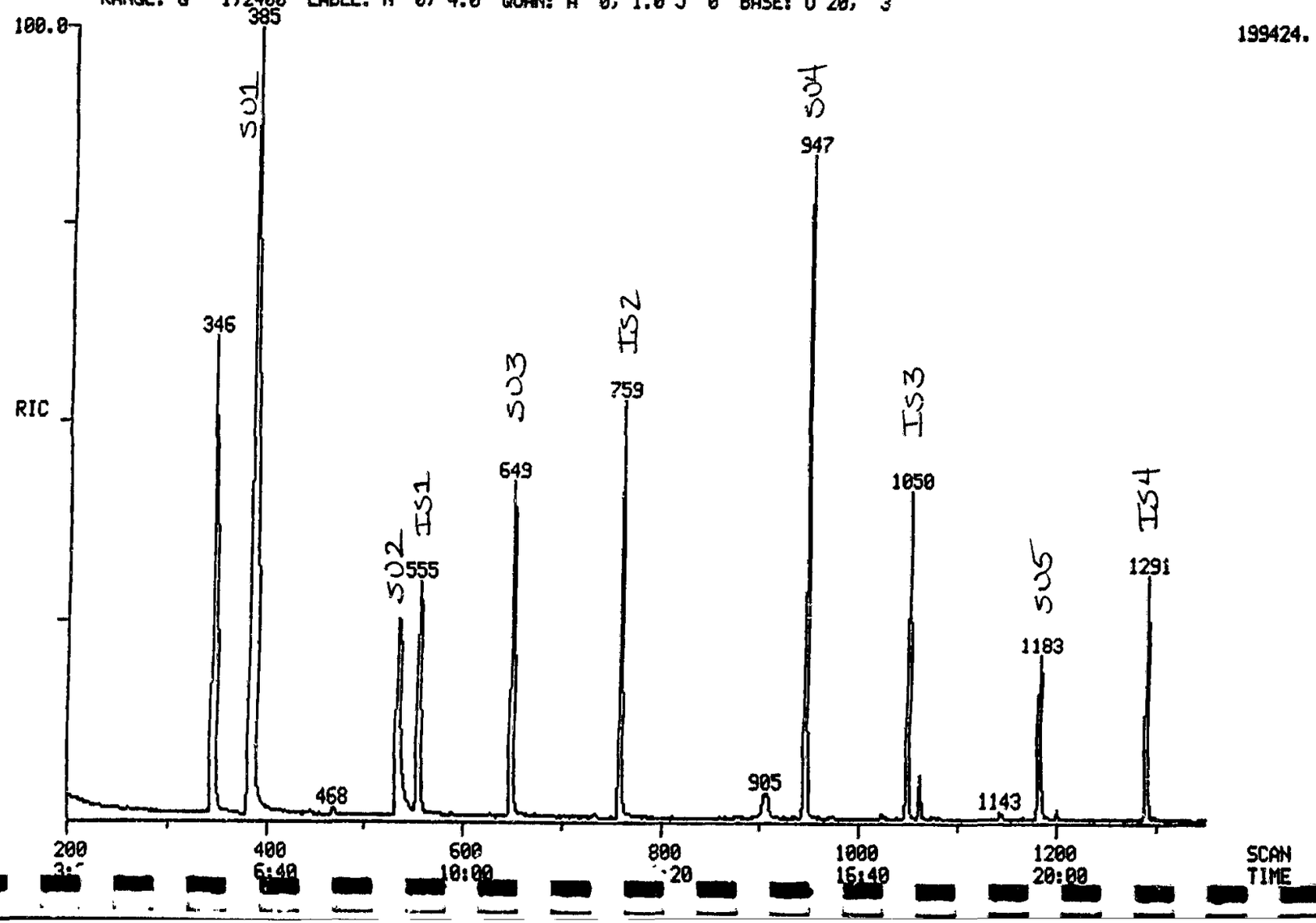
003646

RIC
12/29/86 11:51:00
SAMPLE: LLW BLK
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4B12045C01 #1 SCANS 200 TO 1350
CALI: 4B12045C01 #3

SPECTRIX DC # ----14

INST ID: 4530



003646

003647

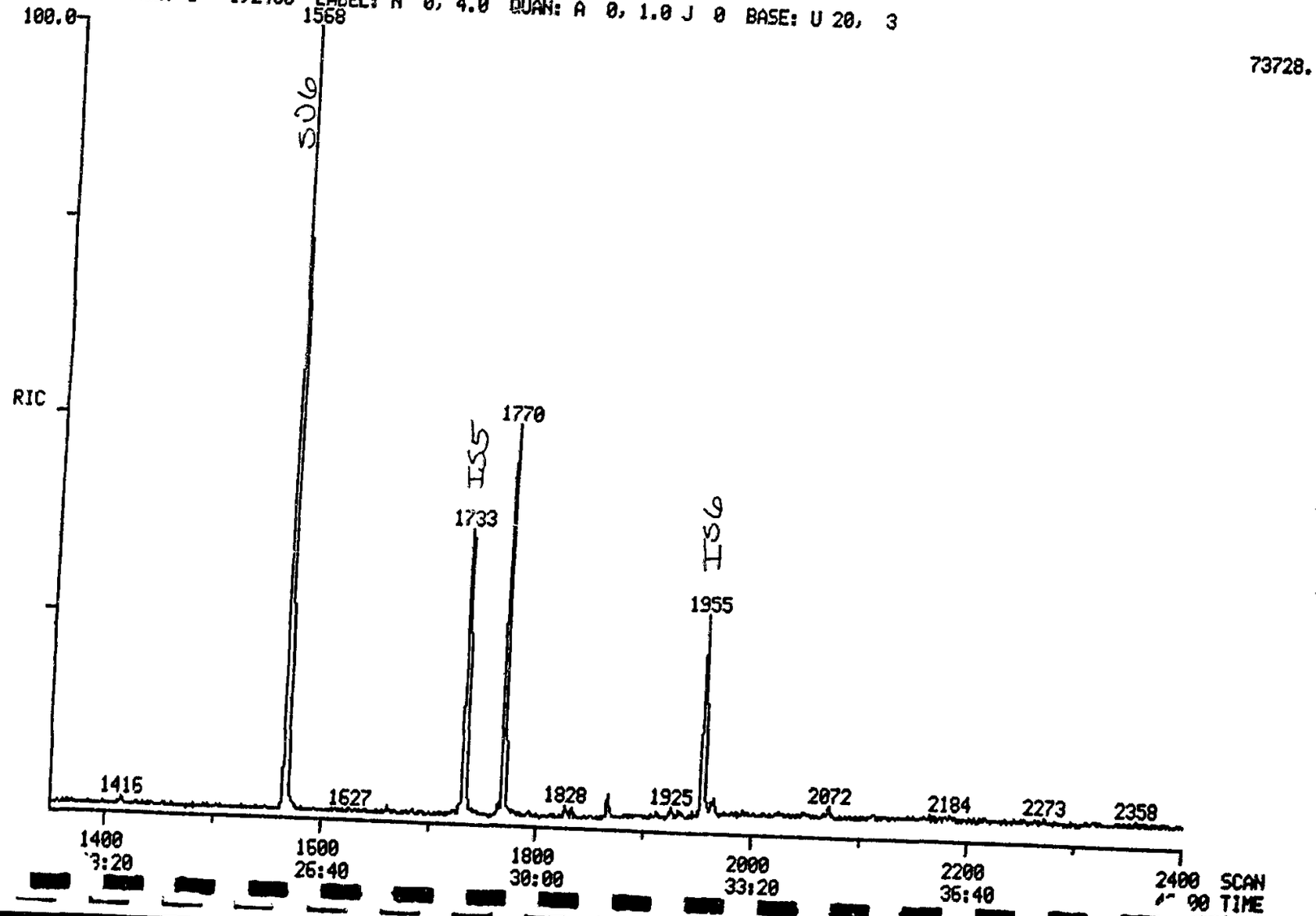
RIC
12/29/86 11:51:00
SAMPLE: LLW BLK
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4B12045C01 #1
CALI: 4B12045C01 #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14

INST ID: 4530



73728.

003647

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. LLW BLK

LENAME 4B12045C01

CLIENT KEYSTONE

DATE INJECTED 12/29/86 11:51:00

CALIB STD DATE 12/17/86 ~~01/06/87~~ GU

INST ID. 4530

ANALYST GU

VERIFIED BY GU

CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
555	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	28905
759	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	118257
1050	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	58976
1291	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	71873
1733	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	39294
1955	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	29401
385	CS50	2-FLUOROPHENOL ** SU1 **	112	51 %	0.694	54477
534	CS45	PHENOL-D5 ** SU2 **	99	49 %	0.962	69414
1183	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	62 %	1.127	10857
649	CS20	NITROBENZENE-D5 ** SU3 **	82	114 %	0.855	74101
947	CS25	2-FLUUOROBIPHENYL ** SU4 **	172	110 %	0.902	171736
1568	CS30	TERPHENYL-D14 ** SU6 **	244	141 %	0.905	76037
762	C450	NAPHTHALENE	128	1 UG/L	1.004	1745
1024	C535	DIMETHYL PHTHALATE	163	1 UG/L	0.975	1460
1143	C580	DIETHYL PHTHALATE	149	1 UG/L	1.089	1750
1770	C735	BIS(2-ETHYLHEXYL)PHTHALATE	149	19 UG/L	1.021	22276
1867	C760	DI-N-OCTYL PHTHALATE	149	1 UG/L	0.955	2857

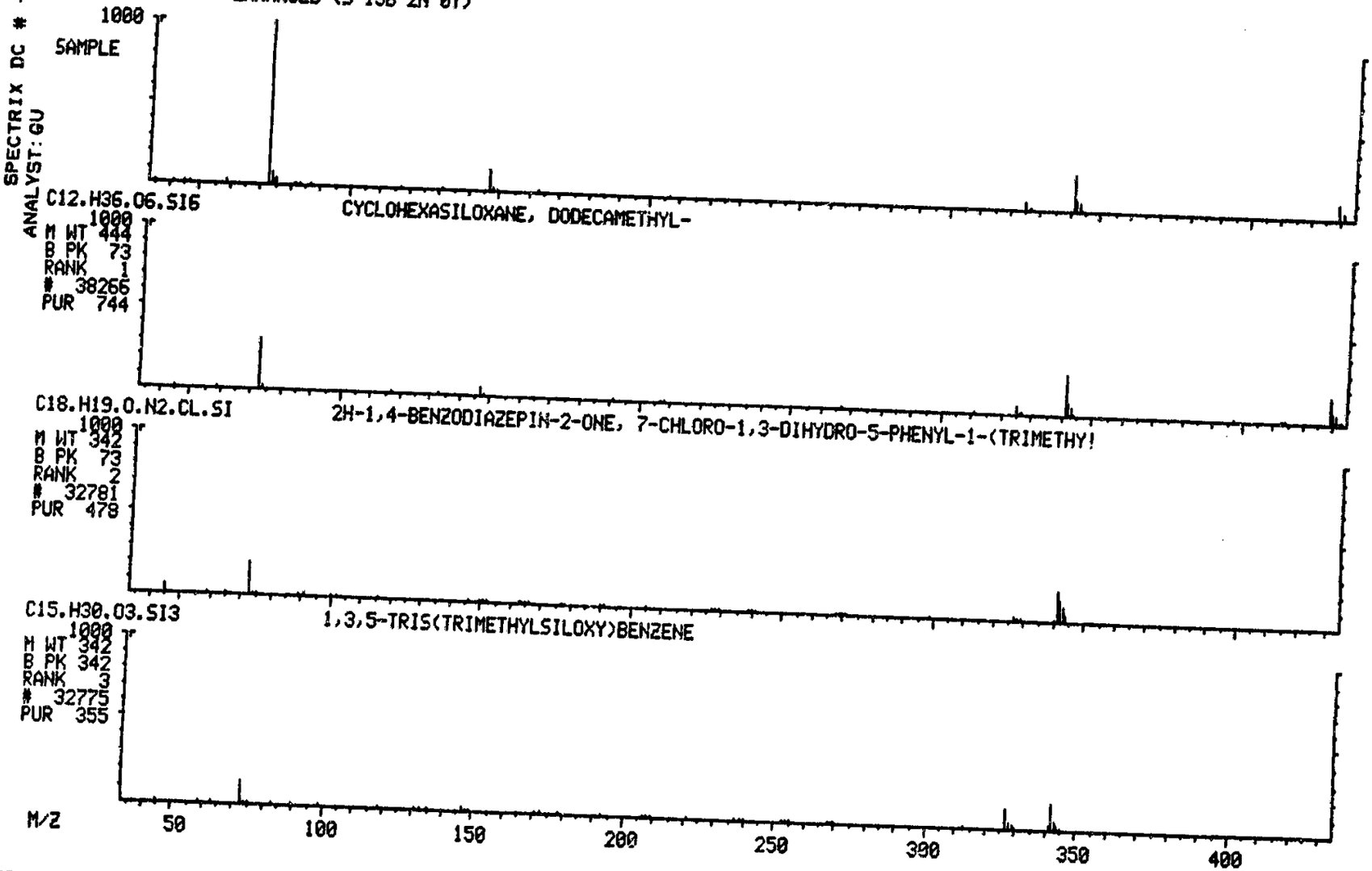
003649

LIBRARY SEARCH
12/29/86 11:51:00 + 15:05
SAMPLE: LLW BLK
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4B12045C01 # 905
CAL.: 4B12045C01 # 3

BASE M/Z: 73
RIC: 5119.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

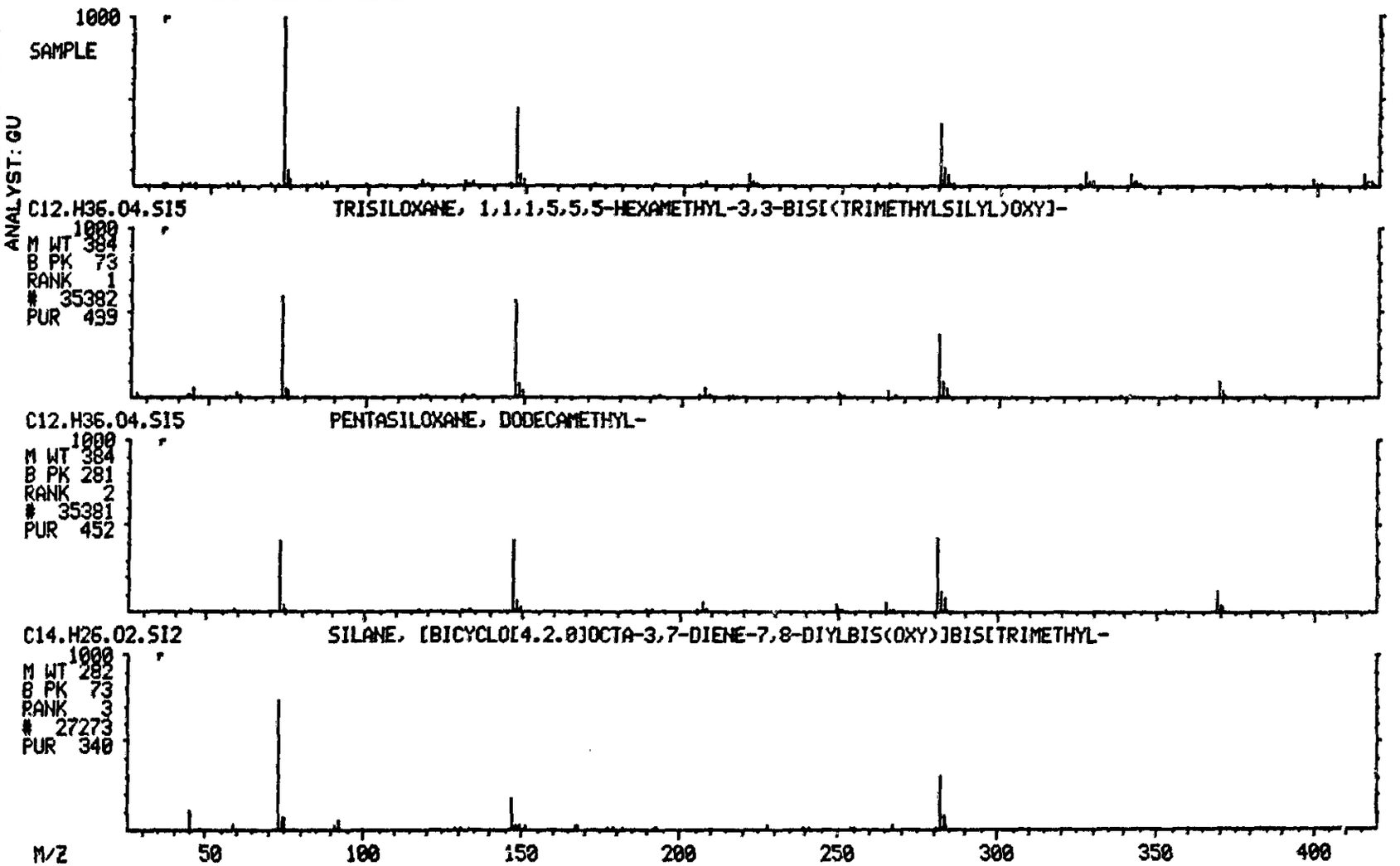
003649

LIBRARY SEARCH
12/29/86 11:51:00 + 17:42
SAMPLE: LLW BLK
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4B12045C01 #1062
CALI: 4B12045C01 # 3

BASE M/Z: 73
RIC: 9055.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



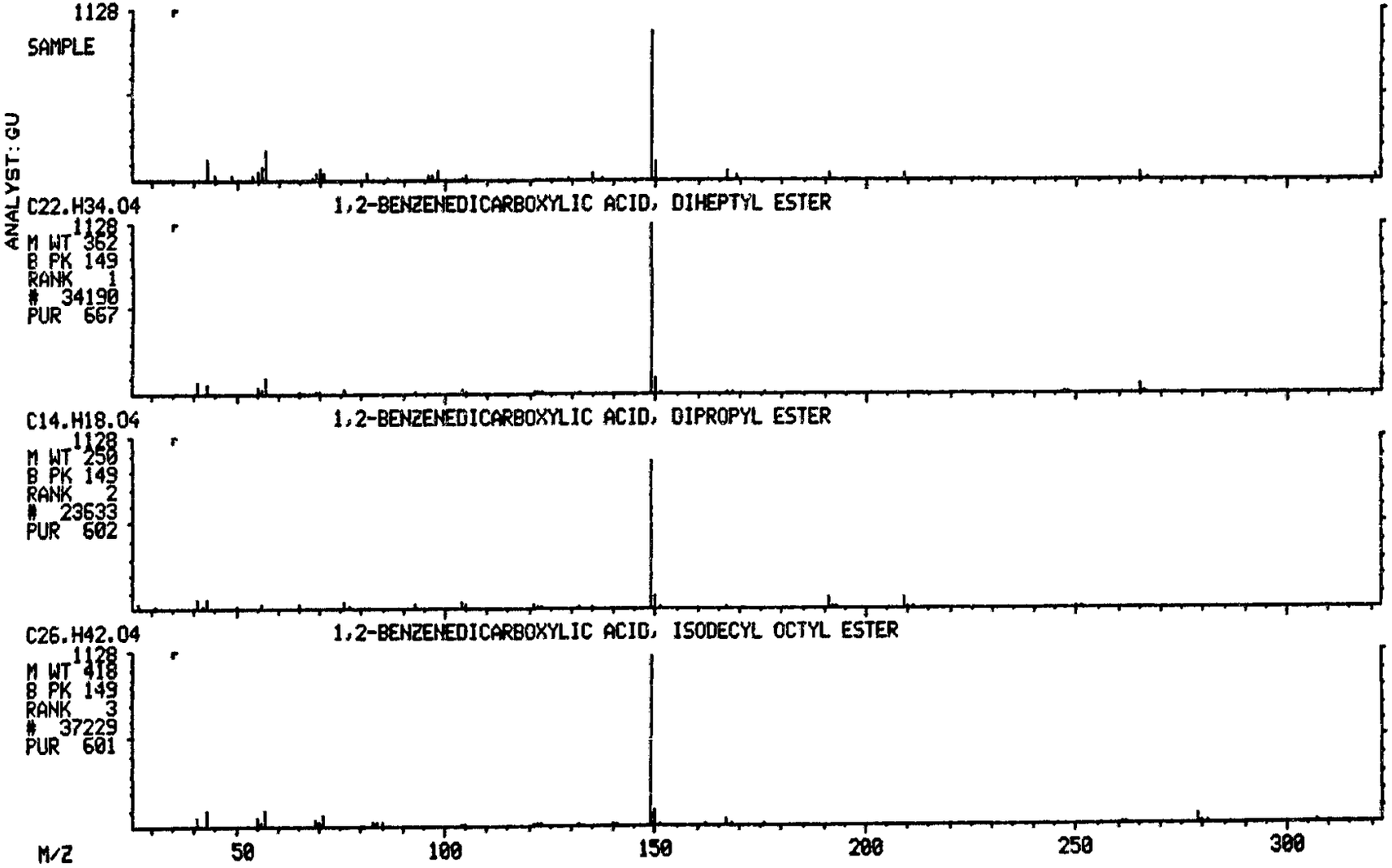
003651

LIBRARY SEARCH
12/29/86 11:51:00 + 32:45
SAMPLE: LLW BLK
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4B12045C01 #1965
CALI: 4B12045C01 # 3

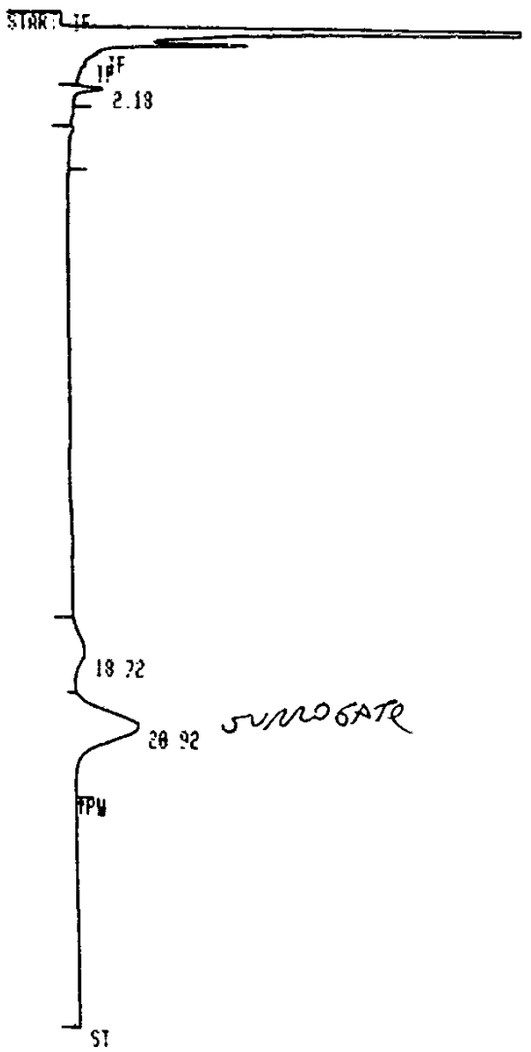
BASE M/Z: 149
RIC: 1411.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



003651

86-12-045-01A R06



DC # N/A -

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. LAB BLANK

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 60

003652

RUN # 145 DEC/24/86 01:29:17
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.13	3513	BB	0.128	26.124
18.72	1509	BV	0.990	11.127
20.93	8513	VB	0.990	62.749

TOTAL HGHT= 13562
MUL FACTOR= 1.0000E+00

SPECTRIX DC # ----- 8

NST ID 4000

SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

ORATORY NAME: SPECTRIX
J SAMPLE ID NO.: 86-
AMPLE MATRIX: WATER
ATA RELEASE AUTHORIZED BY:

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/15/86
ATE ANALYZED: 12/15/86

DATAFILE: EB1215V01

DILUTION FACTOR: 10

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003653

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

C REPORT NO.: ---- ANALYST: MB DATAFILE: EB1215V01

B. TENTATIVELY IDENTIFIED COMPOUNDS

AS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

UG/L

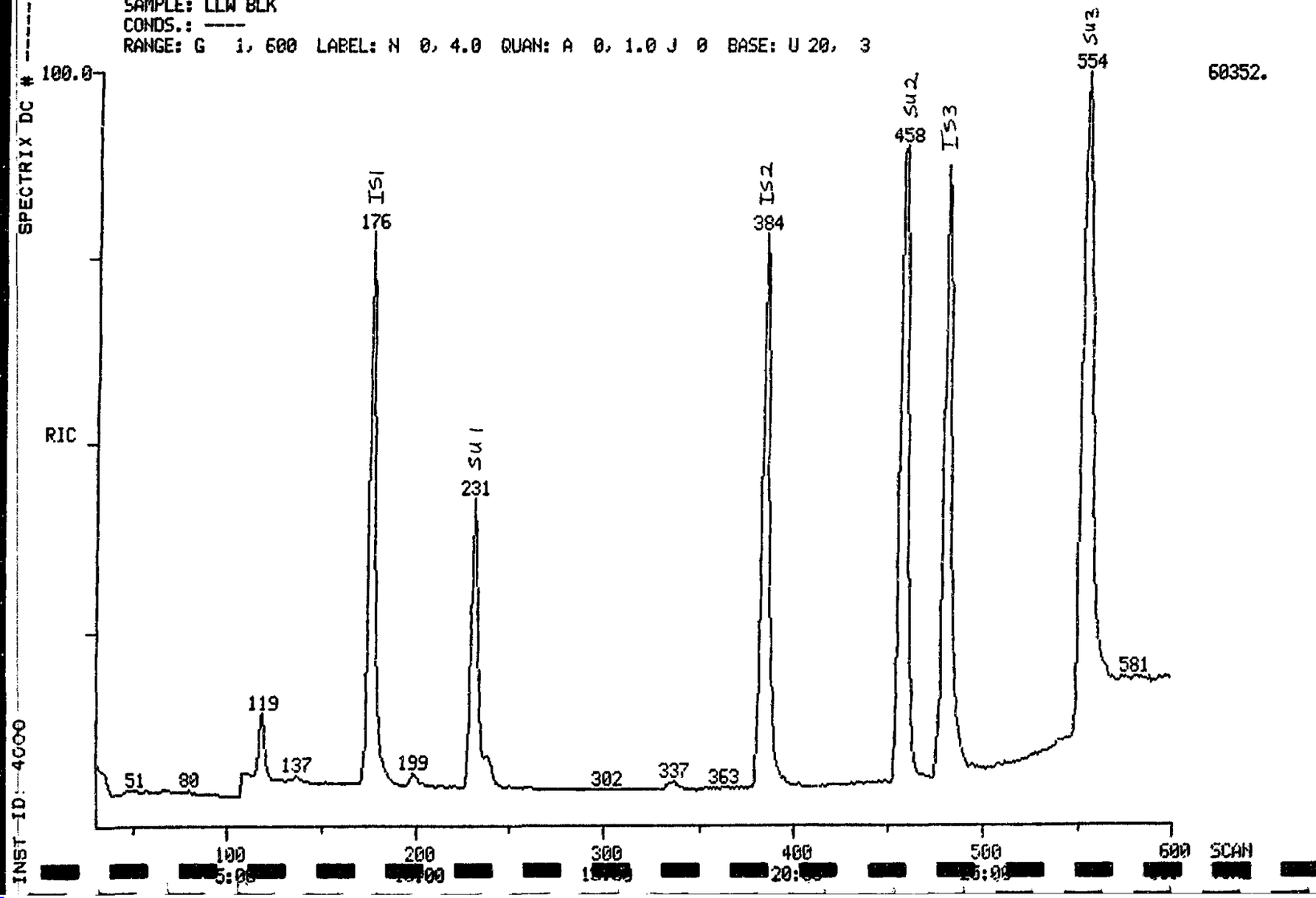
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003655

RIC
12/15/86 10:39:00
SAMPLE: LLW BLK
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: EB1215V01 #1
CALI: EB1215V01 #3

SCANS 30 TO 600



003655

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

AMPLE ID.	LLW BLK		
.ENAME	EB1215V01	INST	4000
LIENT	SPECTRIX	ANALYST	MB
DATE INJECTED	12/15/86 10:39:00	VERIFIED BY	
ALIB STD DATE	121486	CORR. FACTOR	1.00

CAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
176	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	18045
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	78397
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	63588
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.313	23697
457	CS05	D8-TOLUENE	**SU2**	98	98 %	0.952	69688
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	102 %	1.152	45179
118	CO30	METHYLENE CHLORIDE		84	5 UG/L	0.670	2950

003656

SPECTRIX DC # ----- 8

ST ID 4000

SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

ORATORY NAME: SPECTRIX
SAMPLE ID NO.: 86----
MPLE MATRIX: WATER
TA RELEASE AUTHORIZED BY: JPH

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

NCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
TE ANALYZED: 12/16/86

DATAFILE: EB1216V01

DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 J
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003657

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

C REPORT NO.: ---- ANALYST: MB DATAFILE: EB1216V01

B. TENTATIVELY IDENTIFIED COMPOUNDS

AS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

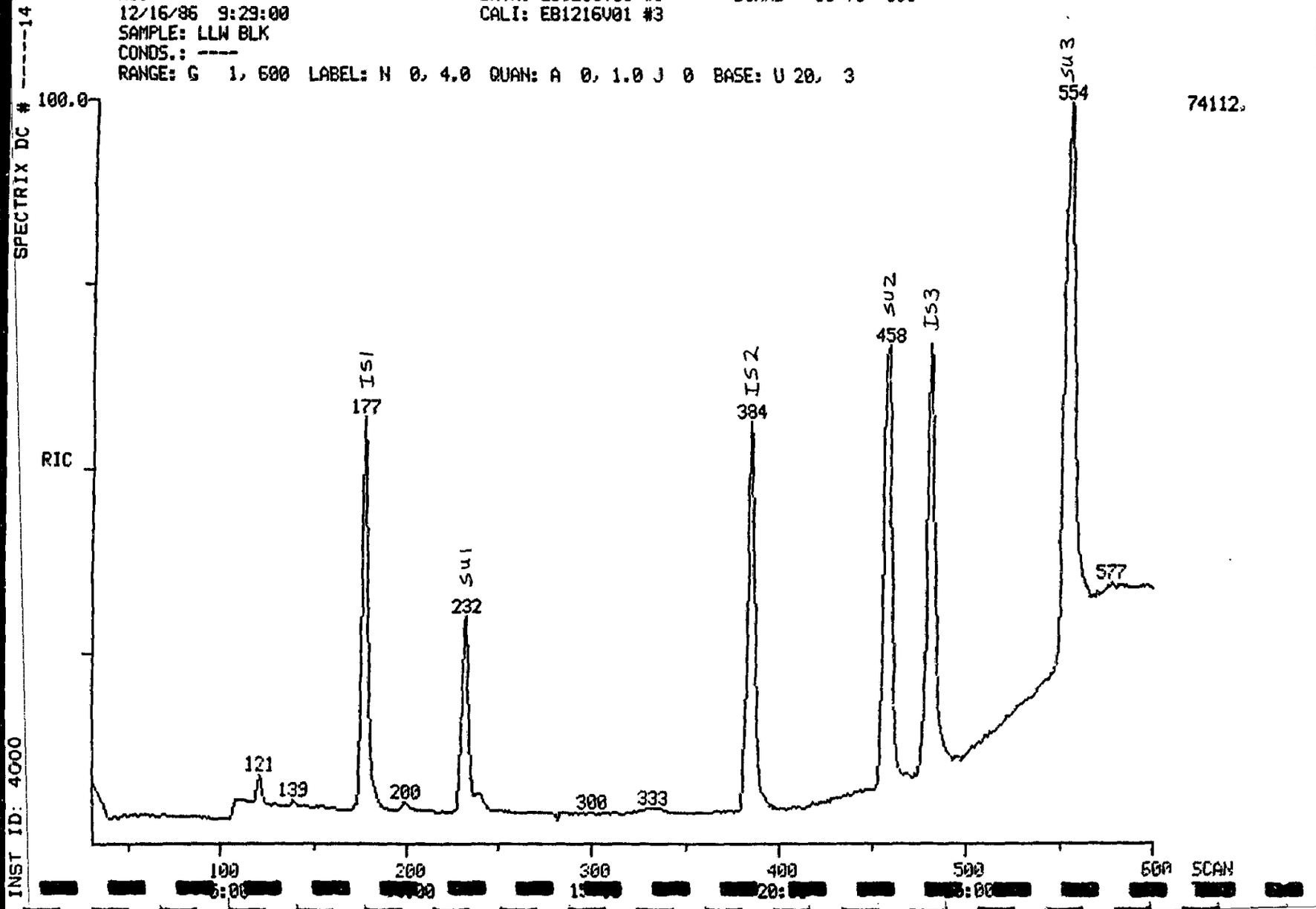
0036 8 UG/L

003659

RIC
12/16/86 9:29:00
SAMPLE: LLW BLK
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: EB1216V01 #1
CALI: EB1216V01 #3

SCANS 30 TO 600



74112.

003659

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	LLW BLK		
FILENAME	EB1216V01	INST	4000
CLIENT	----	ANALYST	MB
DATE INJECTED	12/16/86 9:29:00	VERIFIED BY	JPH
CALIB STD DATE	121486	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	16081
184	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	69361
280	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	55899
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	89 %	1.311	20727
158	CS05	D8-TOLUENE	**SU2**	98	100 %	0.954	61365
353	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	96 %	1.152	39313
121	CO30	METHYLENE CHLORIDE		84	3 UG/L	0.684	1492

003660

eceived: 12/10/86

SPECTRIX 99200 REPORT
Results by Sample

Work Order # 86-12-045

SAMPLE ID LAB BLANK (LLW) SAMPLE # 01 FRACTIONS: A
Date & Time Collected not specified Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CR	<9 ug/L	CU	<10 ug/L
FE	<30 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	<5 ug/L	SB	<44 ug/L	SE	<5 ug/L
TL	<10 ug/L	ZN	<8 ug/L								

CHECKLIST

SECTION IV - Organic Matrix Spikes - Matrix Spike Duplicates
Inorganic Matrix Duplicate and Matrix Spike

✓ OADS

- ✓ VOA
- ✓ SV
- ✓ Pest.

N/A Tentatively Identified Compounds

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

N/A Inorganic Matrix Duplicate and Matrix Spike

003662

SPECTRIX DC # ----- 8

NST ID 4000

SAMPLE NUMBER: CAV-CW06-001 MS

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

BORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204502
AMPLE MATRIX: WATER
ATA RELEASE AUTHORIZED BY: GU

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
ATE ANALYZED: 12/16/86

DATAFILE: 4U12045V02B

DILUTION FACTOR: 10.....

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	60
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	33
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	37
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	45
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	42
C235	CHLOROBENZENE	47
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
= COMPOUND ALSO FOUND IN BLANK

003663

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: CAV-OW06-001 MS

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204502
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GU

CASE NO.: ---
GC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C02
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	31
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	28
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	39
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	43
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	43
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	44
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	43
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	27 J
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	51
C575	2,6-DINITROTOLUENE	10 U

003664

SPECTRIX DC # ---- 8

SAMPLE NUMBER: CAV-OW06-001A

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C02

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	21 J
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	57
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003665

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-02A SPIKE

DC No: KEYSTONE
SMO No: CAV-OW06-001 MS

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.16
76-44-8	HEPTACHLOR	0.16
309-00-2	ALDRIN	0.16
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.42
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.44
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.30
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 NA
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

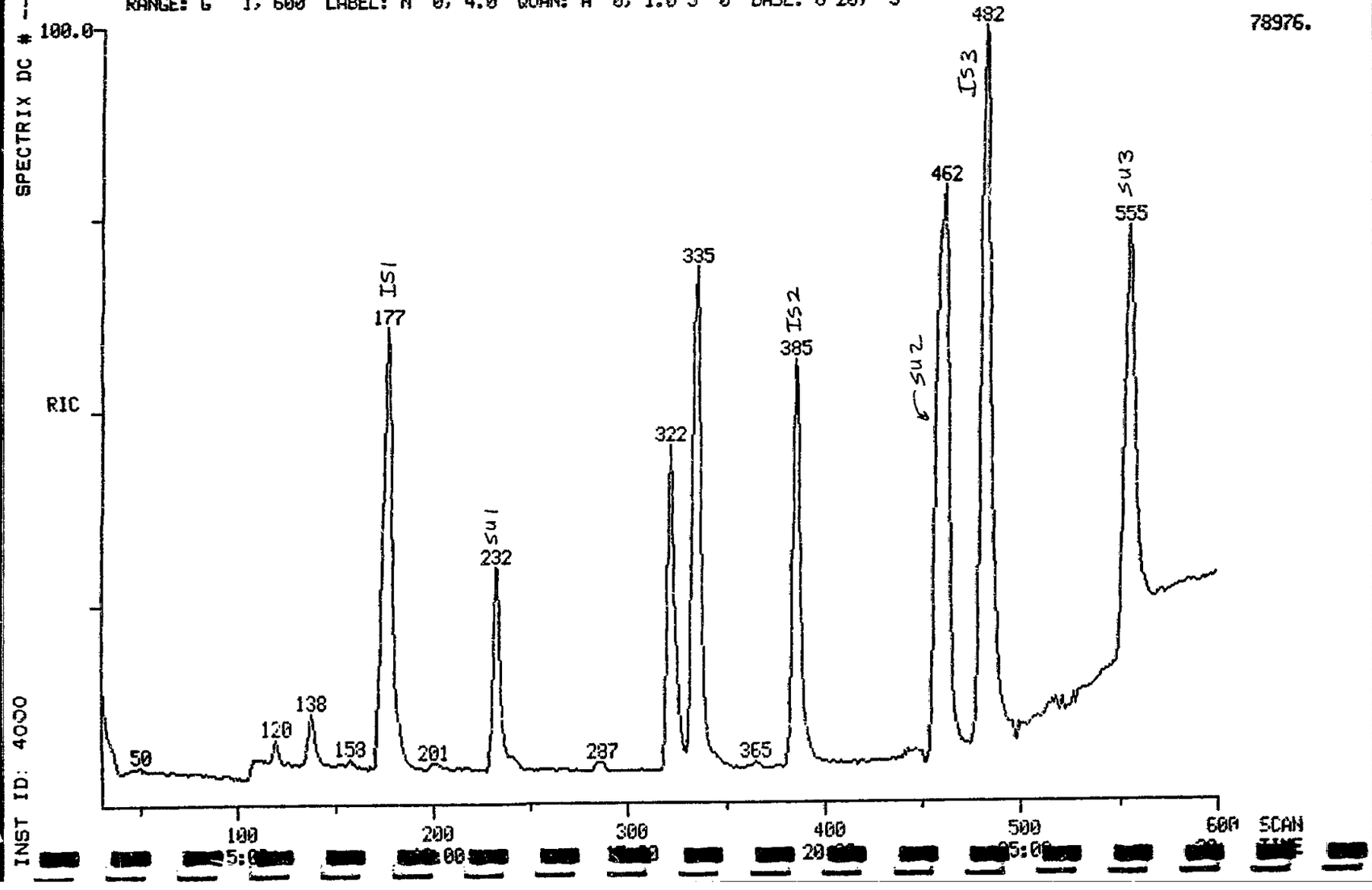
003666

L99E00

RIC
12/16/86 10:59:00
SAMPLE: CAV-OW06-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V02B #1 SCANS 30 TO 500
CALI: 4U12045V02B #3

78976.



003667

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID. CAV-OW06-001

.ENAME 4U12045V02B INST 4000

LIENT KEYSTONE ANALYST MB

DATE INJECTED 12/16/86 10:59:00 VERIFIED BY GU

ALIB STD DATE 121486 CORR. FACTOR 1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	17130
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	73807
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	57436
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.311	22634
458	CS05	D8-TOLUENE	**SU2**	98	100 %	0.952	62757
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	96 %	1.152	40431
138	CO35	ACETONE		43	60 UG/L	0.780	13508
174	CO45	1,1-DICHLOROETHENE		96	33 UG/L	0.983	15800
322	C150	TRICHLOROETHENE		130	37 UG/L	0.836	26240
335	C165	BENZENE		78	45 UG/L	0.870	86381
462	C230	TOLUENE		92	42 UG/L	0.960	44929
483	C235	CHLOROBENZENE		112	47 UG/L	1.004	59844

003668

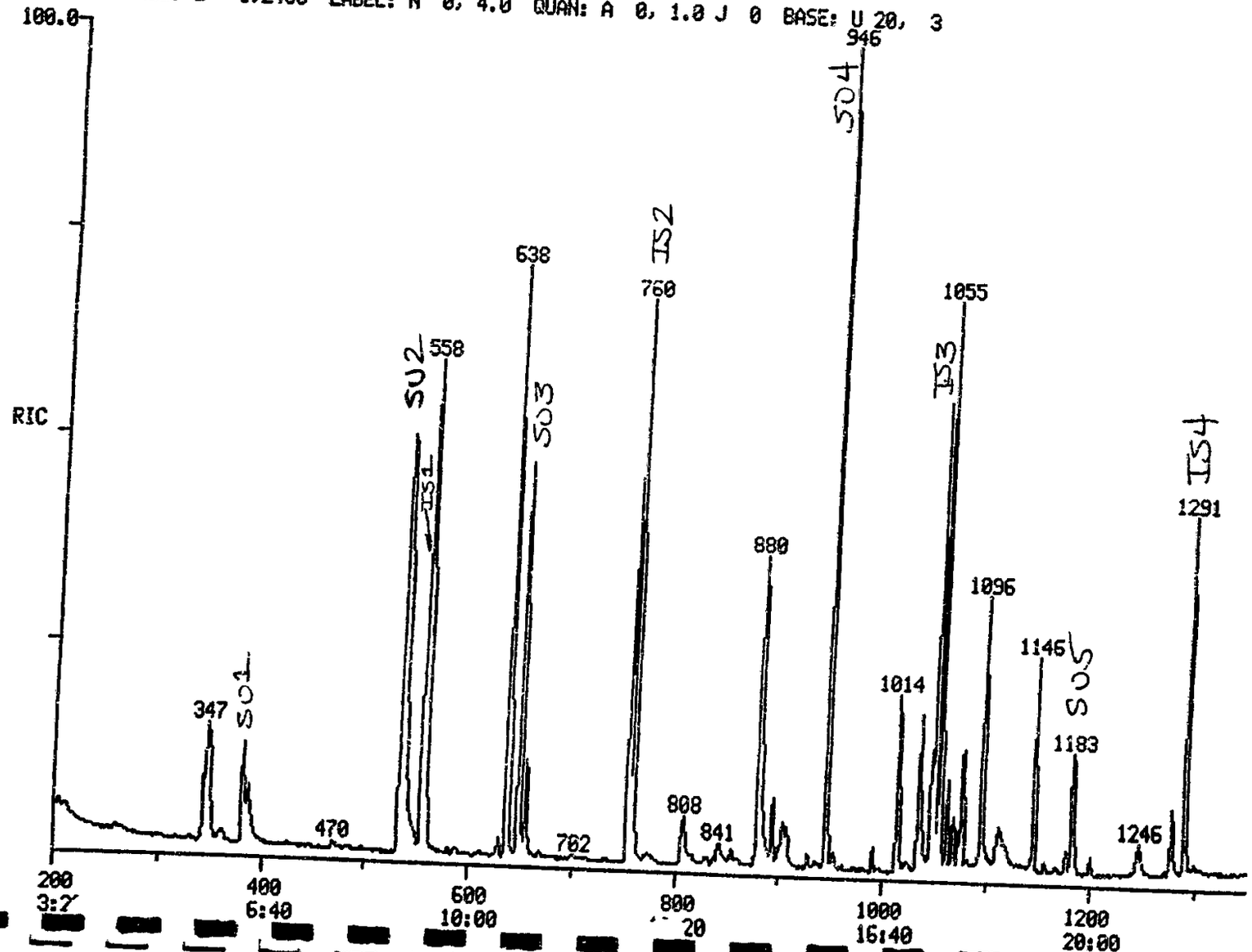
699200

RIC
12/29/86 14:09:00
SAMPLE: CAV-0W06-001MS
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C02 #1
CALI: 4U12045C02 #3

SCANS 200 TO 1350

115072.



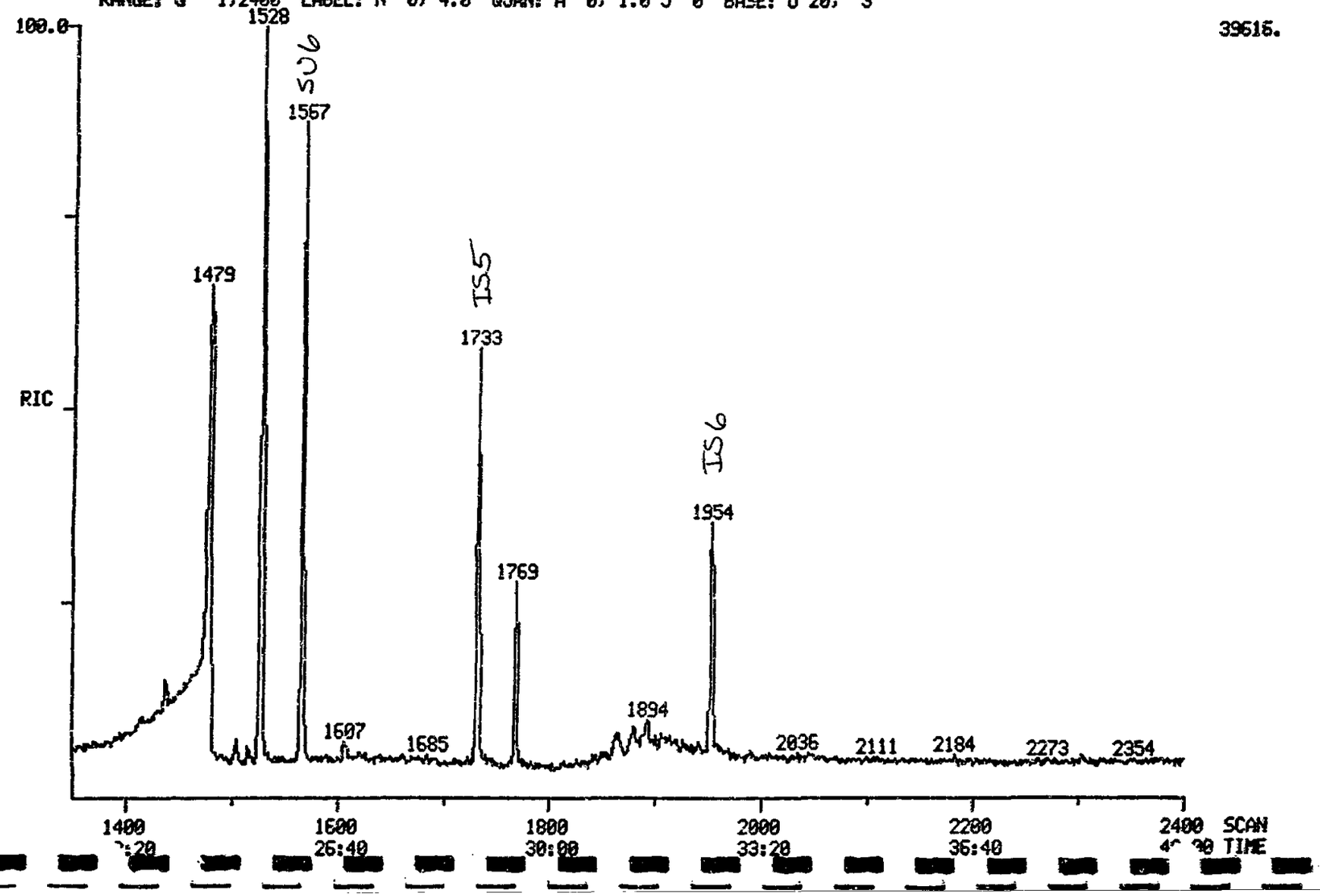
003669

003670

RIC
12/29/86 14:09:00
SAMPLE: CAV-0W06-001MS
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C02 #1
CALI: 4U12045C02 #3

SCANS 1350 TO 2400



003670

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. CAV-OW06-001MS

FILENAME 4U12045C02

CLIENT KEYSTONE

DATE INJECTED 12/29/86 14:09:00

CALIB STD DATE 12/17/86

INST ID. 4530

ANALYST QU

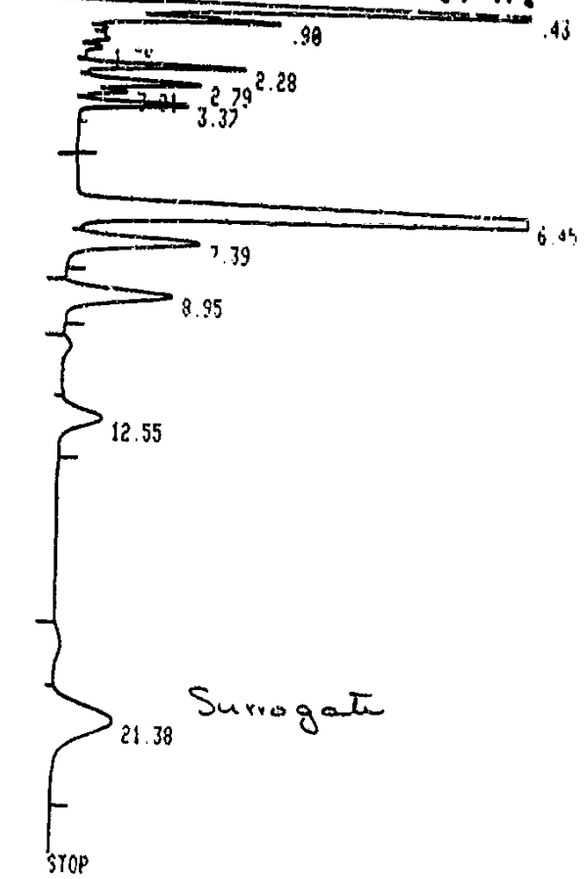
VERIFIED BY GU

CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
556	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	23293
760	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	91217
1050	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	44280
1291	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	53092
1733	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	26593
1954	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	18447
381	CS50	2-FLUOROPHENOL ** SU1 **	112	28 %	0.685	24073
534	CS45	PHENOL-D5 ** SU2 **	99	35 %	0.960	39793
1183	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	32 %	1.127	419
650	CS20	NITROBENZENE-D5 ** SU3 **	82	95 %	0.855	4774
946	CS25	2-FLUOROBIPHENYL ** SU4 **	172	93 %	0.901	108953
1567	CS30	TERPHENYL-D14 ** SU6 **	244	100 %	0.904	33620
536	C315	PHENOL	94	31 UG/L	0.964	43187
535	C330	2-CHLOROPHENOL	128	28 UG/L	0.962	25115
558	C340	1,4-DICHLOROBENZENE	146	39 UG/L	1.004	33990
638	C370	N-NITROSODIPROPYLAMINE	70	43 UG/L	1.147	44032
755	C445	1,2,4-TRICHLOROBENZENE	180	43 UG/L	0.993	2470
762	C450	NAPHTHALENE	128	* 1 UG/L	1.003	249
880	C465	P-CHLORO-M-CRESOL	107	44 UG/L	1.158	3568
1024	C535	DIMETHYL PHTHALATE	163	* 1 UG/L	0.975	130
1055	C550	ACENAPHTHENE	153	43 UG/L	1.005	4622
1111	C560	4-NITROPHENOL	139	27 UG/L	1.058	497
1096	C570	2,4-DINITROTOLUENE	165	51 UG/L	1.044	1523
1143	C580	DIETHYL PHTHALATE	149	* 1 UG/L	1.089	153
1278	C635	PENTACHLOROPHENOL	266	21 UG/L	0.990	308
1528	C715	PYRENE	202	57 UG/L	0.882	5674
1769	C735	BIS(2-ETHYLHEXYL)PHTHALATE	149	* 7 UG/L	1.021	586
1867	C760	DI-N-OCTYL PHTHALATE	149	* 1 UG/L	0.955	150

* BLANK CORRECTED ON DATA SHEET

86-12-045-07A N5 R06



DC # N/A

SPECTRIX CORPORATION

CASE NO. Keystone

SAMPLE NO. CAV-0W06-001

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 600

003672

RUN # 146 DEC/24/86 02:02:50
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
0.43	1216528	DPBB	0.082	79.822
0.90	19698	DTBP	0.117	1.293
1.75	1699	TPP	0.108	0.112
2.28	20874	TPV	0.130	1.370
2.79	15285	TVV	0.196	1.003
3.01	5774	DTVV	0.152	0.379
3.37	13788	TVP	0.169	0.905
6.45	186828	BV	0.290	12.259
7.39	16805	VB	0.348	1.103
8.95	13660	PB	0.403	0.896
12.55	5310	PB	0.583	0.348
21.38	7807	VB	1.029	0.512

TOTAL HGHT= 1524100
MUL FACTOR= 1.0000E+00

INST ID: 4000 SPECTRIX DC # ----- 8

SPECTRIX DC # ----- 8

INST ID 4000 SAMPLE NUMBER: CAV-OW06-001MSD

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204503
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: EU

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/10/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: 4U12045V03B
DILUTION FACTOR: 10

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	100
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	34
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	39
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	48
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	46
C235	CHLOROBENZENE	51
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = COMPOUND ALSO FOUND IN BLANK

003673

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: CAV-OW06-001MS

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861204503
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: GU

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-10-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-13-86
DATE ANALYZED: 12/29/86

DATAFILE: 4U12045C03
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	32
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	29
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	40
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	44
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	44
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	48
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	45
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	26 ~~50~~ J
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	52
C575	2,6-DINITROTOLUENE	10 U

003674

SPECTRIX DC # ---- 8

SAMPLE NUMBER: CAV-OW06-001M

EMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12045C03

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	20 ~~50~~ J
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	59
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	~~69~~ 49
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003675

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-045-03A SPIKE

DC No: KEYSTONE
SMO No: CAV-OW06-001 MS

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/13/86
Date Analyzed: 12/24/86
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.16
76-44-8	HEPTACHLOR	0.12
309-00-2	ALDRIN	0.16
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.39
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.39
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.39
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 NA
2nd Column Inst. : 3400

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

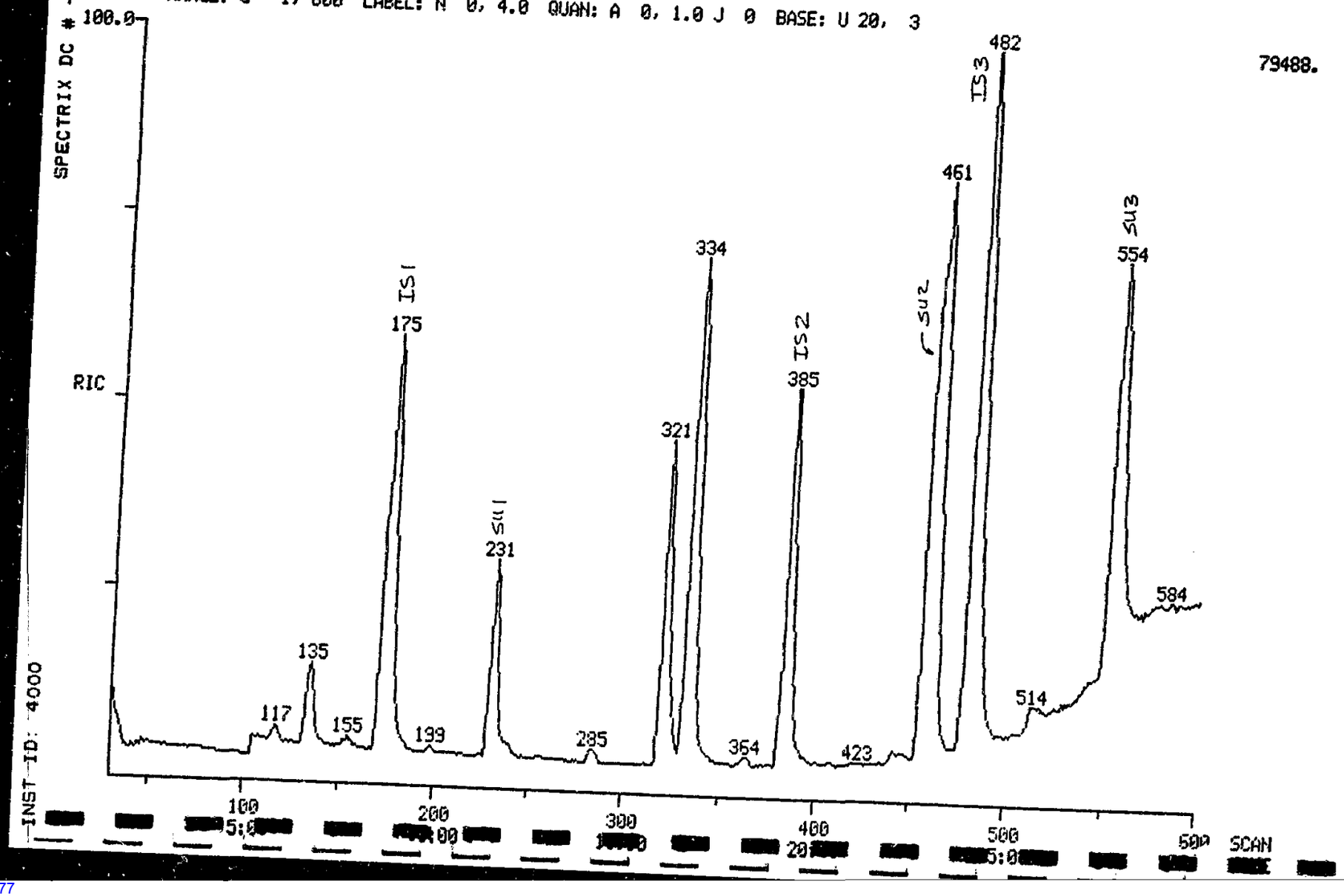
003676

003677

RIC
12/16/86 11:41:00
SAMPLE: CAV-OW06-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045V03B #1
CALI: 4U12045V03B #3

SCANS 30 TO 600



79488.

003677

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	CAV-OW06-001		
.ENAME	4U12045V03B	INST	4000
.IENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/16/86 11:41:00	VERIFIED BY	GU
ALIB STD DATE	121486	CORR. FACTOR	1.00

CAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
175	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	16619
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	71938
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	56054
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.320	22079
457	CS05	D8-TOLUENE	**SU2**	98	100 %	0.952	61233
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	96 %	1.154	39333
135	CO35	ACETONE		43	102 UG/L	0.771	22276
173	CO45	1,1-DICHLOROETHENE		96	34 UG/L	0.989	15956
321	CI50	TRICHLOROETHENE		130	39 UG/L	0.836	27141
334	CI65	BENZENE		78	48 UG/L	0.870	91041
461	CI30	TOLUENE		92	46 UG/L	0.960	47599
482	CI35	CHLOROBENZENE		112	51 UG/L	1.004	63395

003679

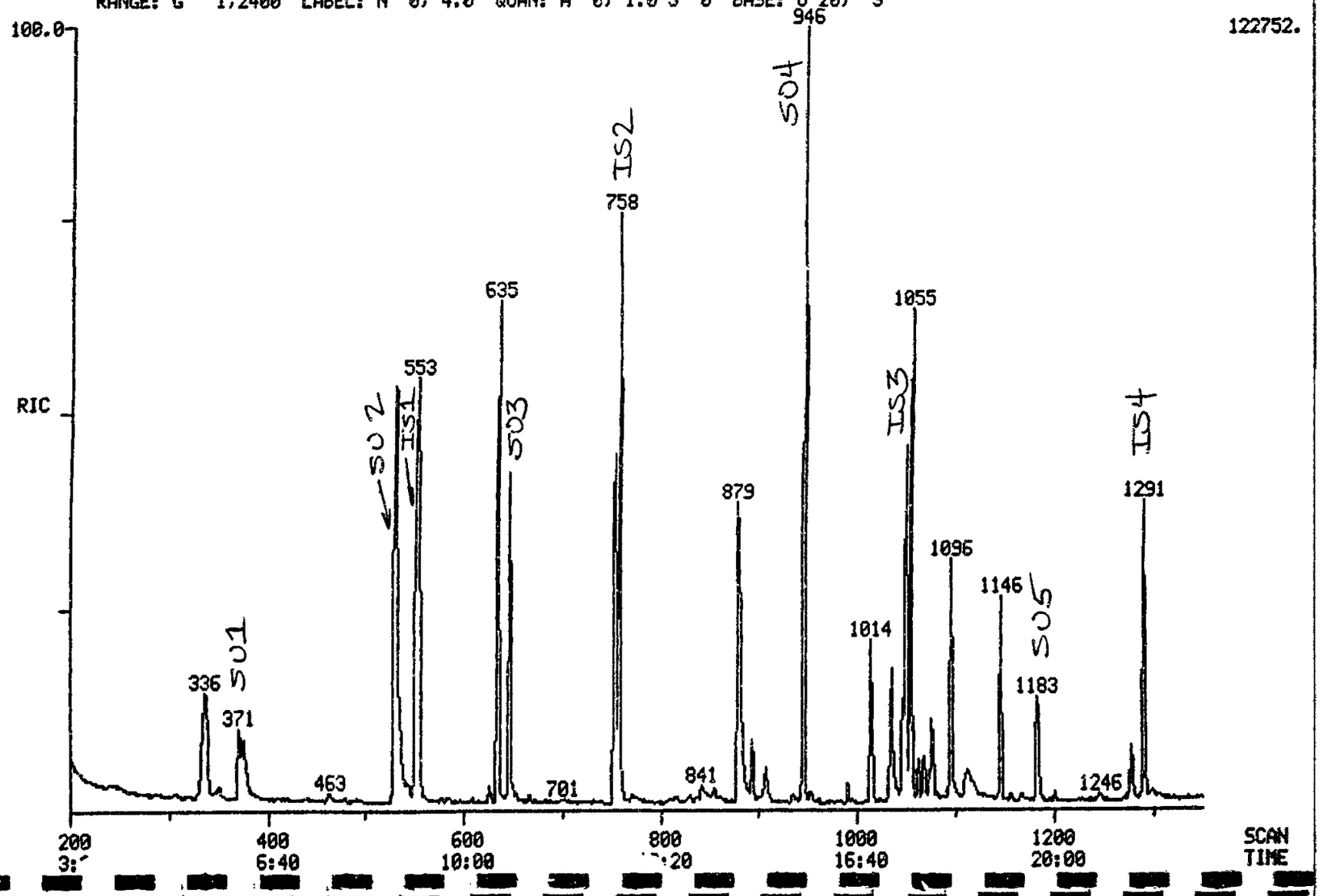
RIC
12/29/86 15:04:00
SAMPLE: CAV-0W06-001MSD
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C03 #1
CALI: 4U12045C03 #3

SCANS 200 TO 1350

SPECTRIX DC # ----14

INST ID: 4530



003679

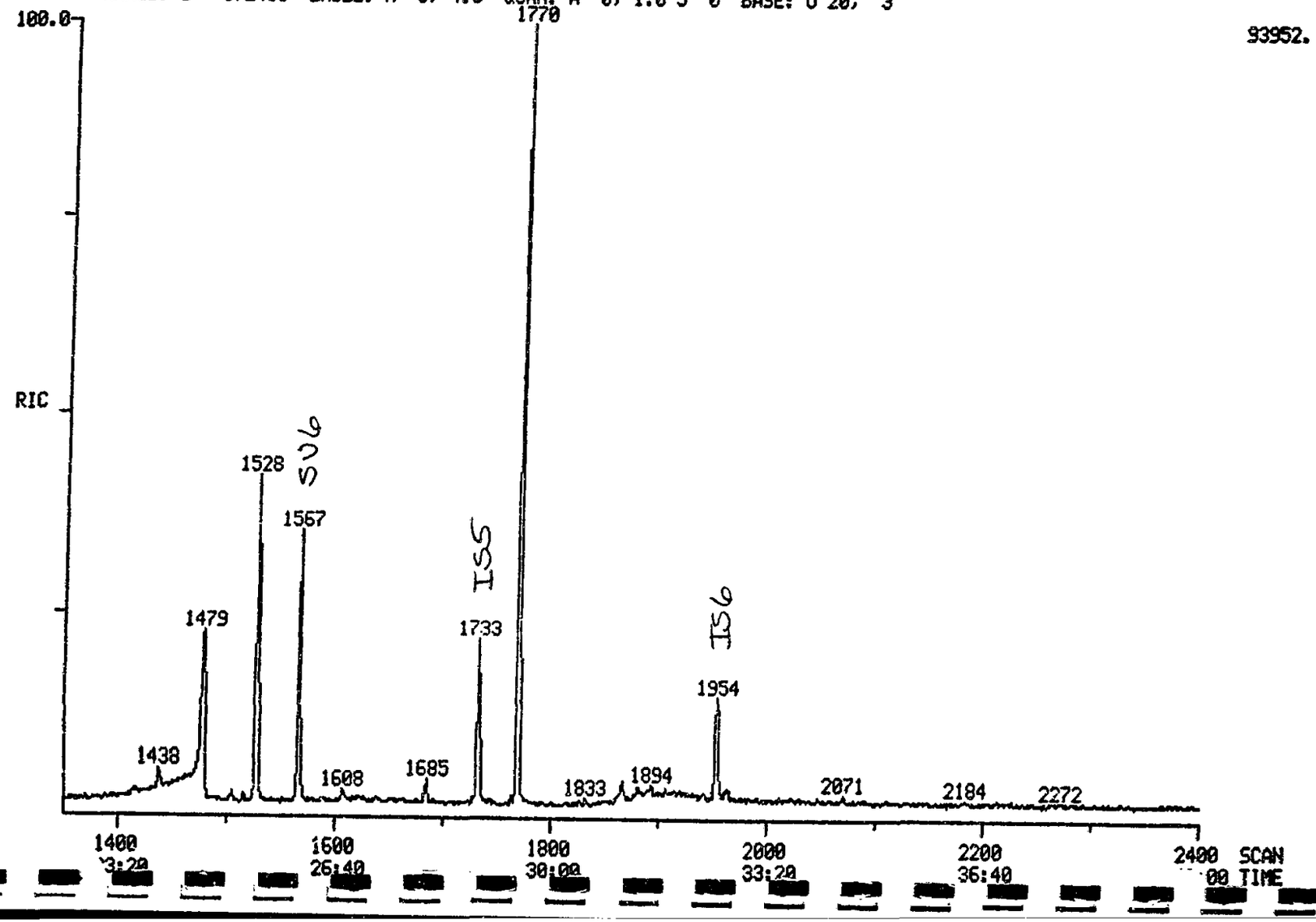
003680

RIC
12/29/86 15:04:00
SAMPLE: CAV-0W06-001MSD
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12045C03 #1
CALI: 4U12045C03 #3

SCANS 1350 TO 2400

93952.



003680

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. CAV-OW06-001MSD

ILENAME 4U12045C03 INST ID. 4530

CLIENT KEYSTONE ANALYST GU

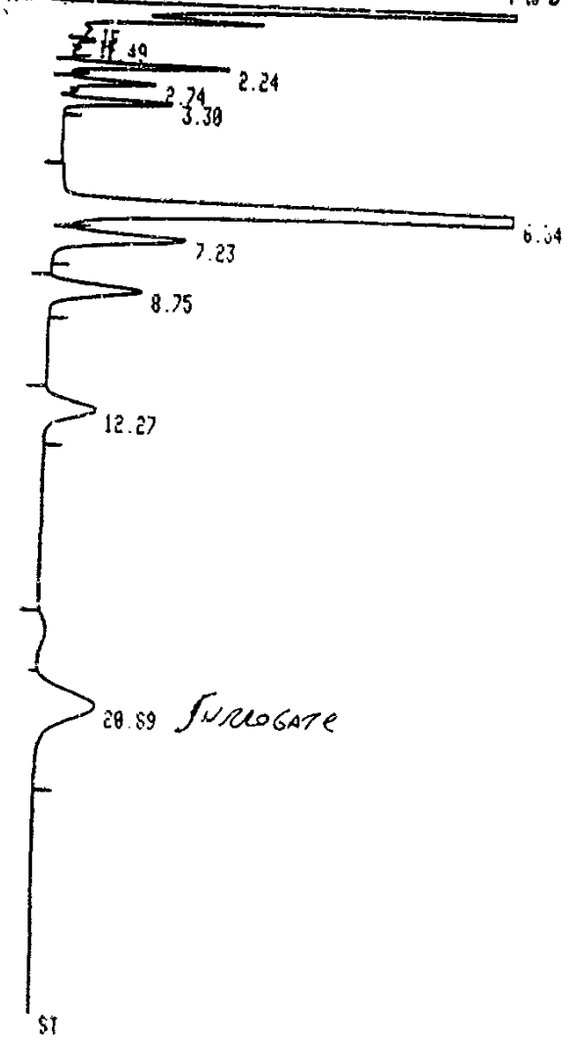
DATE INJECTED 12/29/86 15:04:00 VERIFIED BY GU

CALIB STD DATE 12/17/86 CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
552	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	23894
758	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	92079
1049	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	43446
1291	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	49127
1733	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	24339
1954	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	18364
370	CS50	2-FLUOROPHENOL ** SU1 **	112	28 %	0.670	25000
529	CS45	PHENOL-D5 ** SU2 **	99	35 %	0.958	40738
1183	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	31 %	1.128	4033
647	CS20	NITROBENZENE-D5 ** SU3 **	82	88 %	0.854	44578
946	CS25	2-FLUUOROBIPHENYL ** SU4 **	172	88 %	0.902	10126
1567	CS30	TERPHENYL-D14 ** SU6 **	244	102 %	0.904	3145
531	C315	PHENOL	94	32 UG/L	0.962	4661
530	C330	2-CHLOROPHENOL	128	29 UG/L	0.960	2698
554	C340	1,4-DICHLOROBENZENE	146	40 UG/L	1.004	3546
635	C370	N-NITROSODIPROPYLAMINE	70	44 UG/L	1.150	4633
754	C445	1,2,4-TRICHLOROBENZENE	180	44 UG/L	0.995	2562
761	C450	NAPHTHALENE	128	* 1 UG/L	1.004	226
879	C465	P-CHLORO-M-CRESOL	107	48 UG/L	1.160	3958
1055	C550	ACENAPHTHENE	153	45 UG/L	1.006	4744
1112	C560	4-NITROPHENOL	139	26 UG/L	1.060	485
1096	C570	2,4-DINITROTOLUENE	165	52 UG/L	1.045	1532
1278	C635	PENTACHLOROPHENOL	266	20 UG/L	0.990	272
1528	C715	PYRENE	202	59 UG/L	0.882	5387
1770	C735	BIS(2-ETHYLHEXYL)PHTHALATE	149	* 69 UG/L	1.021	4954
1867	C760	DI-N-OCTYL PHTHALATE	149	* 2 UG/L	0.955	269

* BLANK CORRECTED ON DATA SHEET

86-12-045-03A MJD R06



DC # N/A

SPECTRIX CORPORATION

CASE NO. ~~50A~~ R06 Keystone

SAMPLE NO. SAV-OW06-001 MS

PESTICIDE FRACTION

1st Column - 1D

1.8m X 4mm ID X 6mm OD

1.5% SP 2250

1.95% SP2401

100/120 Supelcoport

Column Temp. 203 °C

Volume Inj. 1.0 ul

Instrument ID VARIAN 60C

003682

RUN # 147 DEC/24/86 22:1:50
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.49	1791	U BP	0.080	0.551
2.24	20788	BB	0.123	6.399
2.74	11132	BV	0.158	3.427
3.30	13802	VB	0.164	4.249
6.34	235032	PB	0.231	72.346
7.23	15638	BB	0.306	4.814
8.75	11961	PB	0.395	3.682
12.27	6805	BB	0.556	2.095
20.89	7922	VB	0.992	2.439

TOTAL HGHT= 324876
MUL FACTOR= 1.0000E+00

GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

Case Number:
Inst ID: 4000
Lab ID: ES1213V01

Laboratory:
Sens Date: 12/13/86
Cali Date:

Contract:
Sens Time: 9:03:00
Analyst: CKT

Data release authorized by: GU

m/z	Ion Abundance Criteria	Spec # 207	
50	15 to 40% of mass 95	33.25	
75	30 to 60% of mass 95	42.95	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	7.79	
173	less than 1% of mass 95	0.00	
174	greater than 50% of mass 95	81.84	
175	5 to 9% of mass 174	6.99	(8.55) 1
176	between 95% and 101% of mass 174	77.66	(94.89) 1
177	5 to 9% of mass 176	5.57	(7.18) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

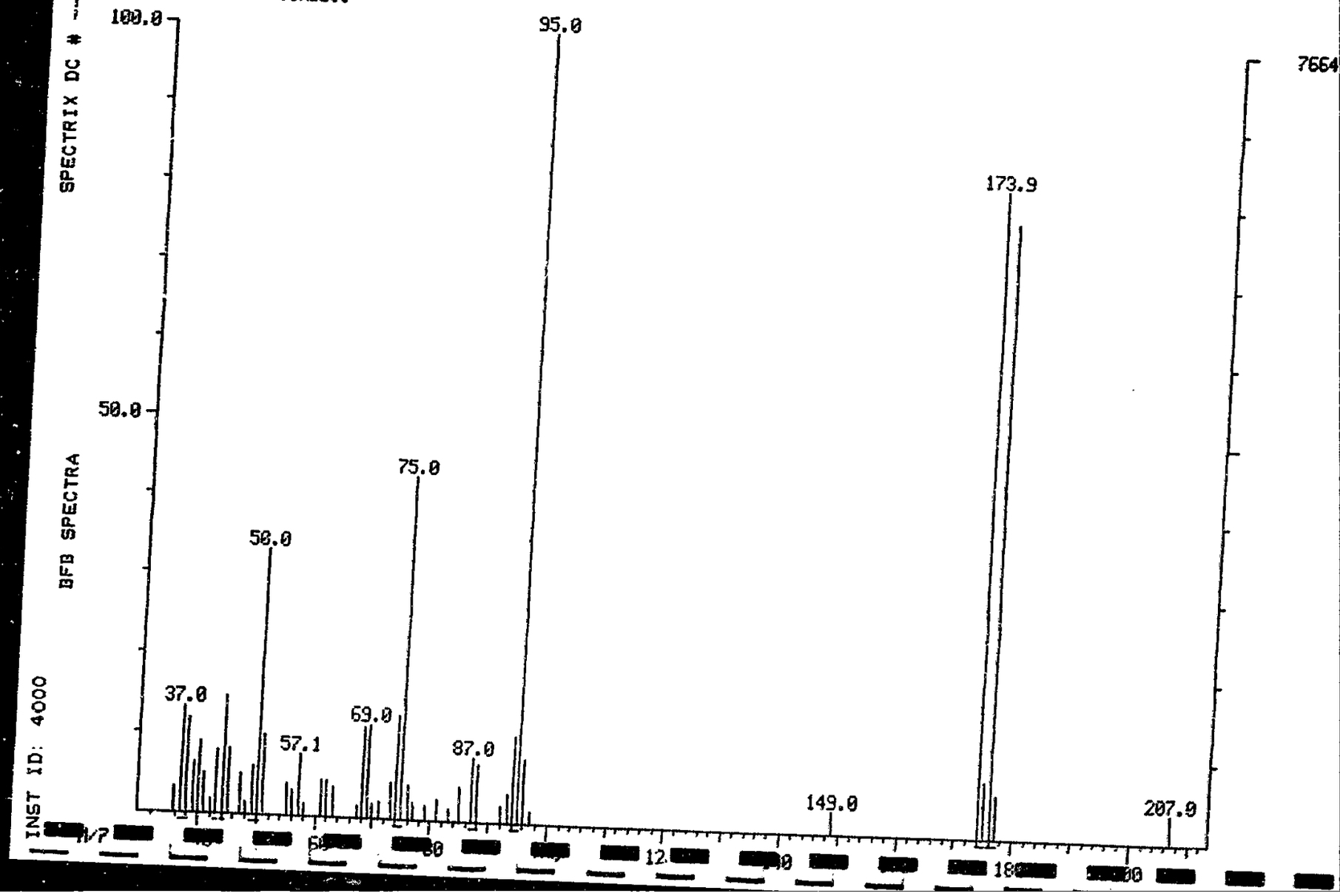
003683

003684

MASS SPECTRUM
12/13/86 9:03:00 + 10:21
SAMPLE: BFB
CONDS.: ----

DATA: ES1213V01 #207
CALI: ES1213V01 #3

BASE M/Z: 95
RIC: 45248.



003684

INST ID: 4000

Mass List — BFB MASS LISTING — SPECTRIX DC # -----15

12/13/86 9:03:00 + 10:21 — Data: ES1213V01 # 207 — Base m/z: 95

Sample: BFB — Cali: ES1213V01 # 3 — RIC: 45248.

Conds.: ----

36 — 0.00 — 0.00 — 0. Minima — Min Inten: 0.

207 — # 0 Maxima

Mass	% RA	% RIC	Inten.
35.93?	3.12	0.53	239.
36.96?F	13.09	2.22	1003.
37.95?F	11.83	2.00	907.
38.98?	6.30	1.07	483.
39.93?	8.95	1.52	686.
40.98?	4.97	0.84	381.
41.98?	1.85	0.31	142.
43.02?F	7.82	1.32	599.
43.98 F	14.38	2.44	1102.
45.02	8.09	1.37	620.
47.01	4.89	0.83	375.
47.94	1.45	0.25	111.
49.02 F	6.13	1.04	470.
50.02 F	33.25	5.63	2548.
51.04	10.02	1.70	768.
55.06	3.97	0.67	304.
56.05	3.25	0.55	249.
57.06	7.49	1.27	574.
58.09	1.60	0.27	123.
61.03	4.49	0.76	344.
62.04	4.36	0.74	334.
63.05	3.60	0.61	276.
67.10	1.60	0.27	123.
68.02	11.20	1.90	858.
69.02	11.56	1.96	886.
70.03	1.79	0.30	137.
71.09	2.22	0.38	170.
73.02	4.37	0.74	335.
74.01 F	12.94	2.19	992.
75.00 F	42.95	7.28	3292.
76.01	4.32	0.73	331.
77.00	2.02	0.34	155.
78.92	1.76	0.30	135.
80.98	2.70	0.46	207.
83.11	1.50	0.25	115.
85.01	4.10	0.69	314.
87.02 F	7.91	1.34	606.
88.02 F	7.11	1.20	545.
92.10	2.02	0.34	155.
93.07	3.71	0.63	284.
94.05 F	10.79	1.83	827.
95.02 F	100.00	16.94	7664.
95.99	7.79	1.32	597.
97.06	1.64	0.28	126.
149.02	2.95	0.50	226.
173.94 F	81.84	13.86	6272.
174.97 F	6.99	1.18	536.
175.95 F	77.66	13.15	5952.
176.97 F	5.57	0.94	427.
207.05	3.54	0.60	271.

003685

GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

Case Number:
Inst ID: 4000
Lab ID: ES1215V01

Laboratory:
Sens Date: 12/15/86
Cali Date:

Contract:
Sens Time: 8:10:00
Analyst: NOT

Data release authorized by: GU

m/z	Ion Abundance Criteria	Spec # 208	
50	15 to 40% of mass 95	32.83	
75	30 to 60% of mass 95	42.41	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	7.93	
173	less than 1% of mass 95	0.00	
174	greater than 50% of mass 95	81.49	
175	5 to 9% of mass 174	6.82	(8.37) 1
176	between 95% and 101% of mass 174	78.58	(96.43) 1
177	5 to 9% of mass 176	5.77	(7.35) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

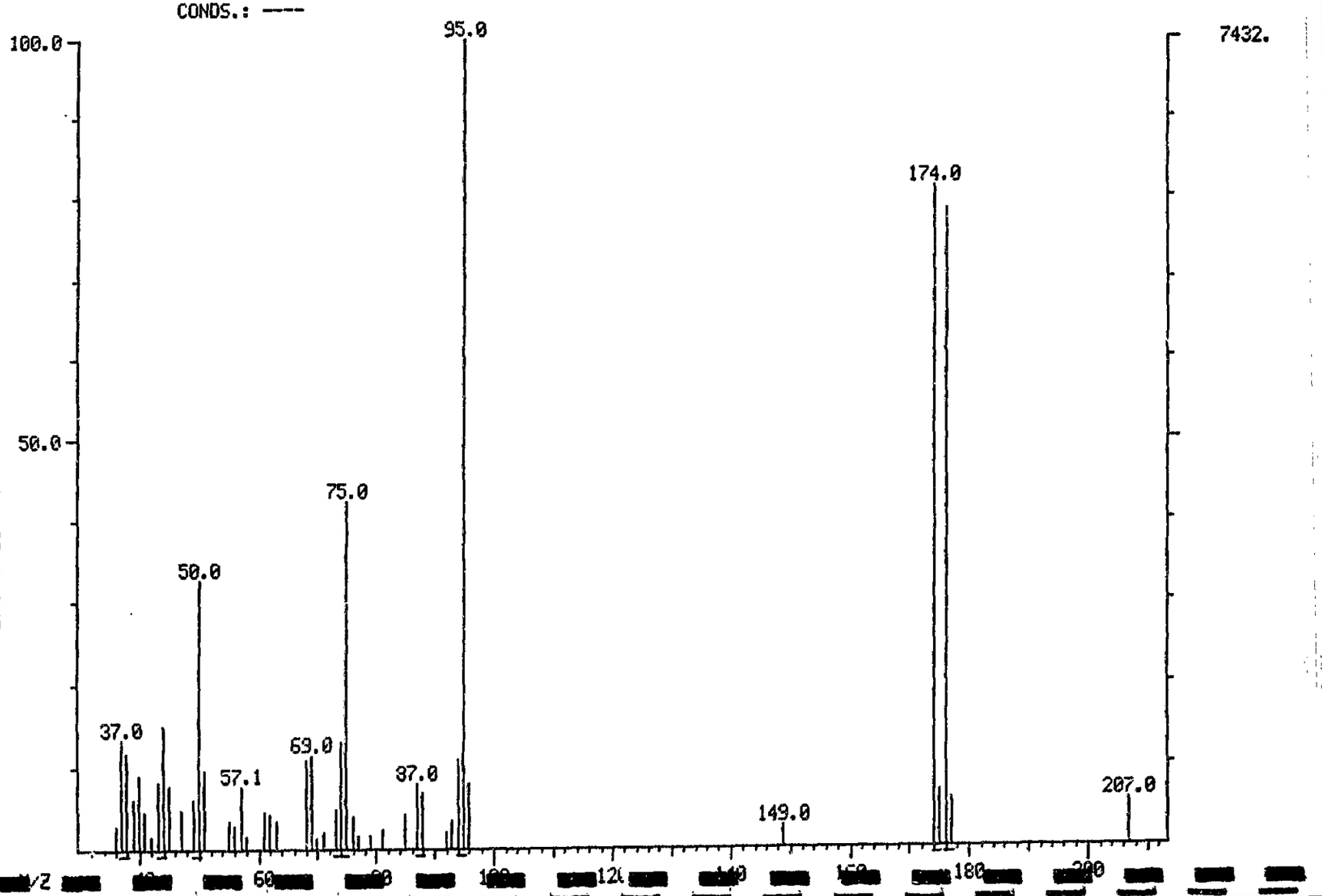
003686

003687

MASS SPECTRUM
12/15/86 8:10:00 + 10:24
SAMPLE: BFB
CONDS.: ----

DATA: ES1215V01 #208
CALI: ES1215V01 #3

BASE M/Z: 95
RIC: 43008.



INST ID: 4000 BFB SPECTRA SPECTRIX DC # -----15

003687

INST ID: 4000 SPECTRIX DC # -----15

BFB MASS LISTING

ass List Data: ES1215V01 # 208 Base m/z: 95

12/15/86 8:10:00 + 10:24 Cali: ES1215V01 # 3 RIC: 43008.

mple: BFB

nds.: ----

36 0.00 0.00 0. Minima Min Inten: 0.

207 # 0 Maxima

Mass	% RA	% RIC	Inten.
35.99?	2.87	0.50	213.
37.02?F	13.12	2.27	975.
38.01?F	11.49	1.99	854.
39.04?	5.99	1.03	445.
39.97?	8.79	1.52	653.
41.05?	4.47	0.77	332.
42.03?	1.68	0.29	125.
43.05?F	7.99	1.38	594.
44.01?F	14.53	2.51	1080.
45.03?	7.64	1.32	568.
47.04?	4.63	0.80	344.
49.05?F	6.14	1.06	456.
50.02 F	32.83	5.67	2440.
51.03	9.39	1.62	698.
55.05	3.34	0.58	248.
56.03	2.92	0.50	217.
57.06	7.63	1.32	567.
58.06	1.53	0.27	114.
61.02	4.53	0.78	337.
62.02	4.06	0.70	302.
63.05	3.34	0.58	248.
68.02	10.83	1.87	805.
69.02	11.19	1.93	832.
70.02	1.36	0.23	101.
71.06	2.19	0.38	163.
73.02 F	4.64	0.80	345.
74.02 F	12.85	2.22	955.
75.02 F	42.41	7.33	3152.
76.02	4.00	0.69	297.
77.03	1.53	0.27	114.
78.94	1.60	0.28	119.
80.99	2.29	0.40	170.
84.98	4.08	0.70	303.
86.98 F	7.98	1.38	593.
87.96 F	6.89	1.19	512.
92.02	1.99	0.34	148.
92.99	3.53	0.61	262.
94.02 F	10.63	1.84	790.
95.02 F	100.00	17.28	7432.
96.02	7.98	1.38	593.
149.05	2.58	0.45	192.
173.95 F	81.49	14.08	6056.
174.95 F	6.82	1.18	507.
175.95 F	78.58	13.58	5840.
176.97 F	5.77	1.00	429.
206.97	5.42	0.94	403.

003688

GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

ase Number:
ist ID: 4000
Lab ID: ES1216V01

Laboratory:
Sens Date: 12/16/86
Cali Date:

Contract:
Sens Time: 7:43:00
Analyst: NOT

Data release authorized by: GU

m/z	Ion Abundance Criteria	Spec # 208	
50	15 to 40% of mass 95	33.22	
75	30 to 60% of mass 95	43.45	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	7.99	
173	less than 1% of mass 95	0.00	
174	greater than 50% of mass 95	83.06	
175	5 to 9% of mass 174	7.12	(8.58) 1
176	between 95% and 101% of mass 174	79.21	(95.36) 1
177	5 to 9% of mass 176	5.73	(7.24) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

003689

003690

MASS SPECTRUM
12/16/86 7:43:00 + 10:24
SAMPLE: BFB
CONDS.: ----

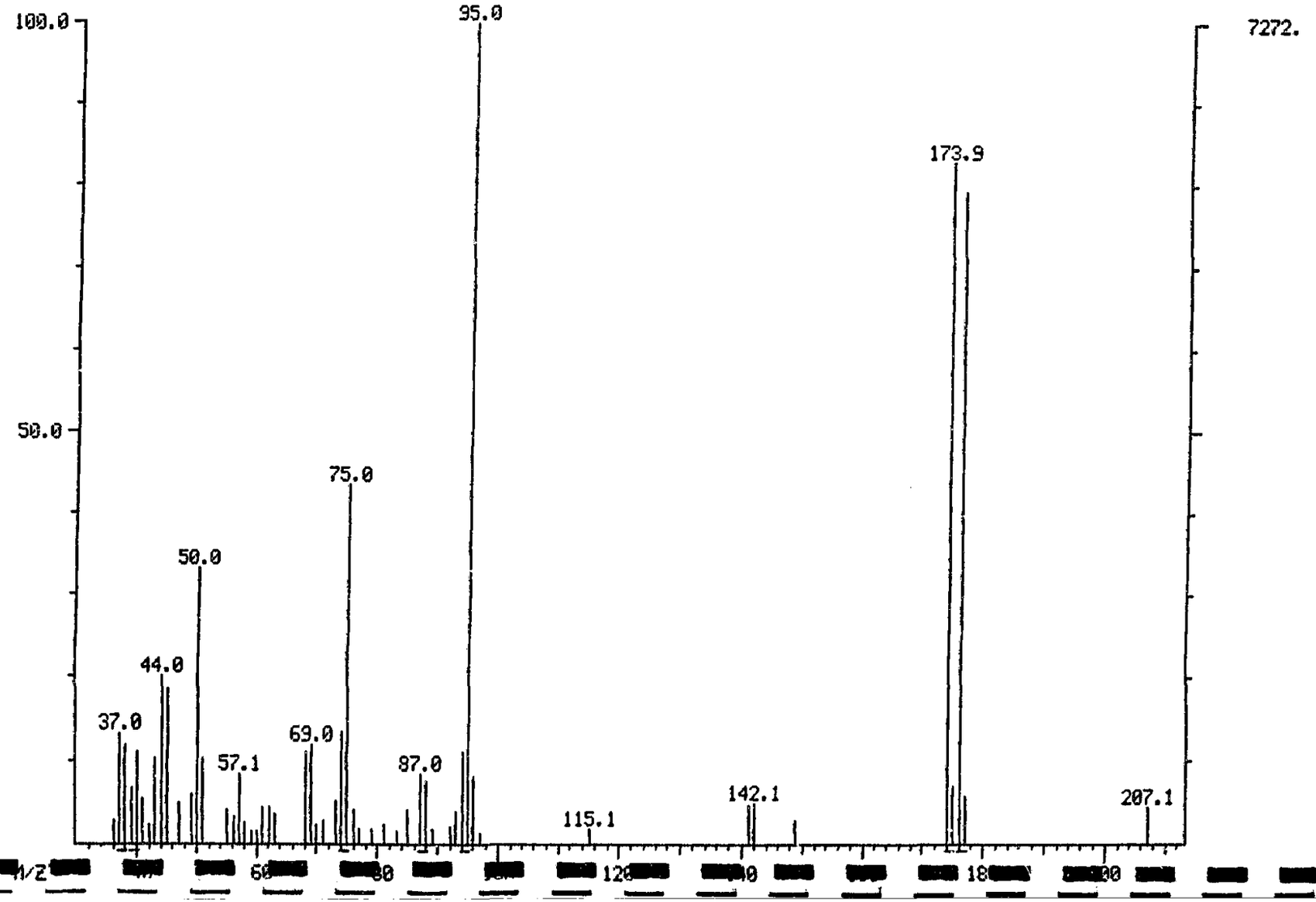
DATA: ES1216V01 #208
CALI: ES1216V01 #3

BASE M/Z: 95
RIC: 46144.

SPECTRIX DC # -----15

BFB SPECTRA

INST ID: 4000



003690

INST ID: 4000

BFB MASS LISTING

SPECTRIX DC # -----15

ass List
12/16/86 7:43:00 + 10:24
Sample: BFB
onds.: ----

Data: ES1216V01 # 208
Cali: ES1216V01 # 3

Base m/z: 95
RIC: 46144.

36 0.00 0.00 0. Minima Min Inten: 0.
207 # 0 Maxima

Mass	% RA	% RIC	Inten.
35.96?	2.97	0.47	216.
36.97?F	13.17	2.08	958.
37.97?F	11.72	1.85	852.
39.00?F	6.83	1.08	497.
39.93?F	10.92	1.72	794.
41.02?	5.43	0.86	395.
42.02?	2.46	0.39	179.
43.03?	10.09	1.59	734.
43.98	19.86	3.13	1444.
45.02	18.26	2.88	1328.
47.05	4.98	0.78	362.
49.01	6.15	0.97	447.
50.02	33.22	5.24	2416.
51.04	10.20	1.61	742.
55.05	4.15	0.65	302.
56.05	3.48	0.55	253.
57.08	8.35	1.32	607.
58.04	2.64	0.42	192.
59.06	1.61	0.25	117.
60.00	1.55	0.24	113.
61.04	4.52	0.71	329.
62.05	4.43	0.70	322.
63.05	3.80	0.60	276.
68.02	11.11	1.75	808.
69.02	11.89	1.87	865.
70.04	2.31	0.36	168.
71.08	2.94	0.46	214.
73.02	5.21	0.82	379.
74.02 F	13.28	2.09	966.
75.01 F	43.45	6.85	3160.
76.02	4.32	0.68	314.
76.99	1.79	0.28	130.
78.91	1.71	0.27	124.
81.04	2.43	0.38	177.
83.09	1.46	0.23	106.
85.00	4.29	0.68	312.
87.00 F	8.39	1.32	610.
87.97 F	7.51	1.18	546.
88.98	1.73	0.27	126.
92.05	1.97	0.31	143.
93.02	3.86	0.61	281.
94.04 F	10.95	1.73	796.
95.01 F	100.00	15.76	7272.
96.00	7.99	1.26	581.
97.06	1.43	0.23	104.
115.09	1.76	0.28	128.
141.06	4.74	0.75	345.
142.08	4.96	0.78	361.
149.05	2.92	0.46	212.
173.94 F	83.06	13.09	6040.
174.98 F	7.12	1.12	518.

Mass	% RA	% RIC	Inten.
175.95 F	79.21	12.48	5760.
177.00 F	5.73	0.90	417.
207.08	4.51	0.71	328.

003691

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

'ase Number:		Laboratory:		Contract:	
inst ID:	4530	Sens Date:	12/29/86	Sens Time:	10:30:00
Lab ID:	ES1229C01	Cali Date:		Analyst:	GU

Data release authorized by: GU

M/E	Ion Abundance Criteria	Spec # 408	
51	30 to 60% of mass 198	45.84	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	22.33	
70	less than 2% of mass 69	0.17	(0.78) 1
127	40 TO 60% of mass 198	52.40	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	6.49	
275	10 TO 30% of mass 198	19.94	
365	greater than 1% of mass 198	1.36	
441	less than mass 443	10.18	
442	greater than 40% of mass 198	86.67	
443	17 TO 23% of mass 442	16.58	(19.13) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

003692

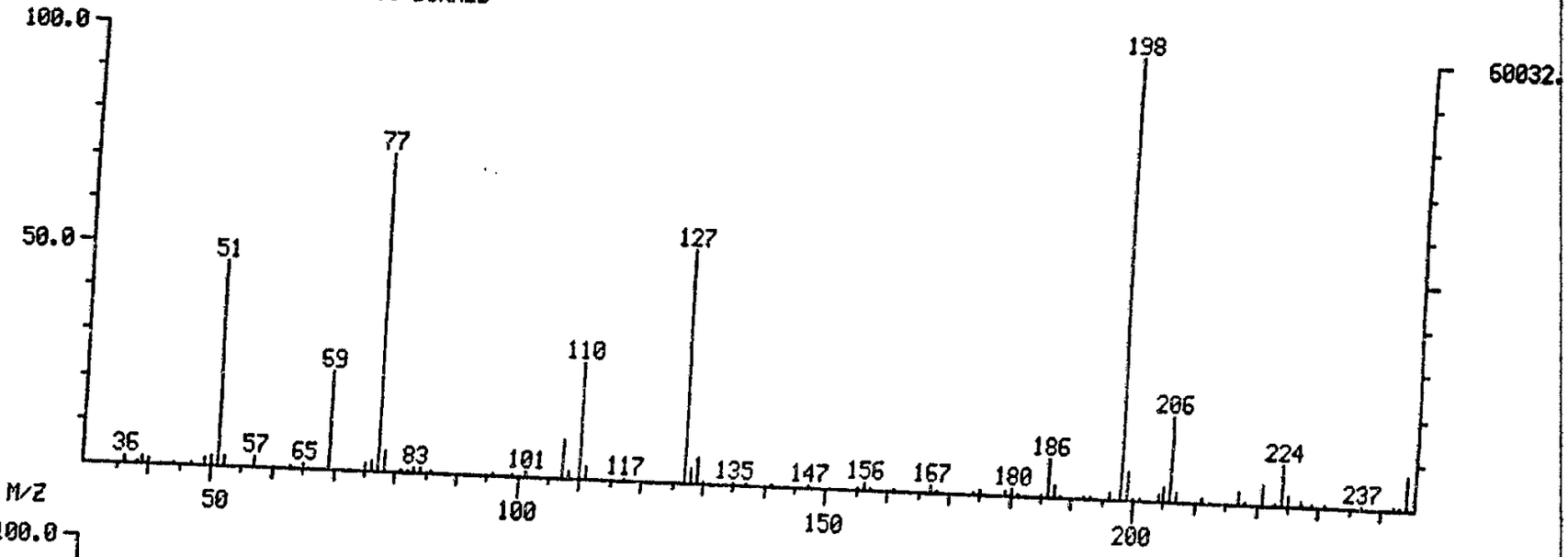
003693

MASS SPECTRUM
12/29/86 10:30:00 + 6:49
SAMPLE: DFTPP
CONDS.: ---
#408 TO #411 SUMMED

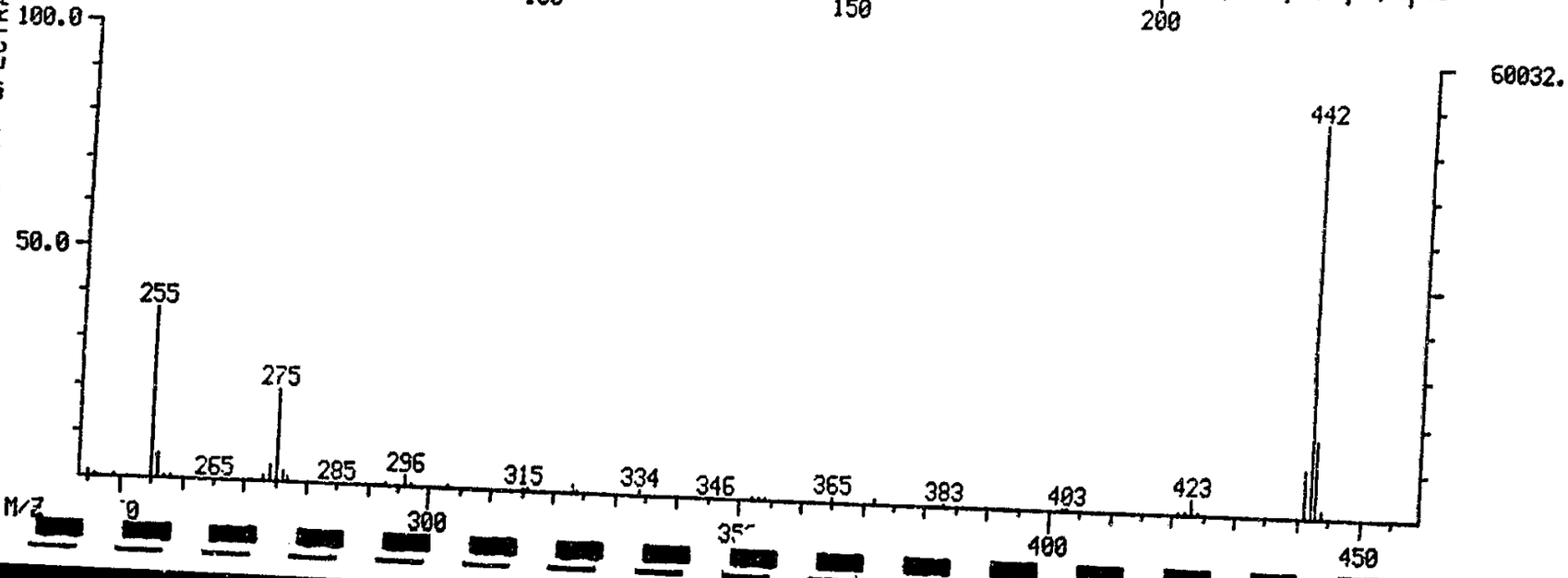
DATA: ES1229C01 #409
CALI: ES1229C01 #3

BASE M/Z: 198
RIC: 407040.

SPECTRIX DC # ----15



DFTPP SPECTRA



INST ID: 4530

INST ID: 4530

DFTPP MASS LISTING

SPECTRIX DC # ----15

Mass List
12/29/86 10:30:00 + 6:49
Sample: DFTPP
Bands.: ---
#408 to #411 summed

Data: ES1229C01 # 409
Cali: ES1229C01 # 3

Base m/z: 198
RIC: 407040.

36 0.00 0.
445

Minima Min Inten: 224.
Maxima # 0

Mass	% RA	Inten.	Mass	% RA	Inten.
36?	1.88	1126.	200	0.44	267.
38?	0.67	404.	201	0.43	257.
39?	1.68	1006.	204	1.74	1042.
40	1.40	839.	205	3.60	2160.
49	1.96	1178.	206	19.08	11456.
50	2.42	1450.	207	2.49	1496.
51	45.84	27520.	211	0.91	546.
52	2.25	1348.	217	2.73	1636.
57	2.28	1366.	218	0.46	274.
63	0.39	232.	221	4.92	2952.
65	1.38	831.	223	0.87	522.
69	22.33	13408.	224	9.34	5608.
75	1.60	960.	225	2.40	1438.
76	2.06	1238.	227	1.28	767.
77	71.32	42816.	229	0.66	396.
78	4.53	2720.	231	0.45	268.
81	0.68	407.	242	0.45	273.
83	1.14	685.	243	0.50	299.
84	1.09	652.	244	7.78	4672.
86	0.75	453.	245	1.03	616.
101	0.99	594.	246	0.51	309.
107	8.62	5176.	255	36.78	22080.
108	1.89	1132.	256	5.35	3212.
110	25.88	15536.	258	0.75	453.
111	2.68	1606.	273	1.23	741.
117	0.37	225.	274	3.53	2120.
127	52.40	31456.	275	19.94	11968.
128	3.57	2144.	276	2.59	1554.
129	5.85	3512.	277	0.89	532.
130	0.44	262.	293	0.40	239.
135	0.59	353.	296	2.47	1482.
137	0.39	234.	297	0.39	237.
155	0.43	260.	303	0.48	290.
156	1.52	915.	323	1.59	952.
161	0.59	357.	334	0.92	552.
167	1.89	1134.	352	0.50	301.
168	0.72	430.	353	0.38	227.
174	0.37	225.	354	0.61	369.
175	1.18	709.	365	1.36	819.
179	1.06	636.	372	0.91	545.
180	1.50	903.	402	0.40	239.
181	0.84	503.	403	0.55	328.
185	0.57	341.	421	0.52	315.
186	8.89	5336.	422	0.46	278.
187	2.69	1614.	423	3.60	2164.
192	0.41	248.	424	0.74	444.
193	0.61	367.	441	10.18	6112.
196	1.53	920.	442	86.67	52032.
198	100.00	60032.	443	16.58	9952.
199	6.49	3896.	444	1.64	983.

003694

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:		Contract:	
Inst ID:	4530	Sens Date:	12/29/86	Sens Time:	10:30:00
Lab ID:	ES1229C01	Cali Date:		Analyst:	GU

Data release authorized by: _____

M/E	Ion Abundance Criteria	Spec # 408	
51	30 to 60% of mass 198	45.84	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	22.33	
70	less than 2% of mass 69	0.17	(0.78) 1
127	40 TO 60% of mass 198	52.40	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	6.49	
275	10 TO 30% of mass 198	19.94	
365	greater than 1% of mass 198	1.36	
441	less than mass 443	10.18	
442	greater than 40% of mass 198	86.67	
443	17 TO 23% of mass 442	16.58	(19.13) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

003695

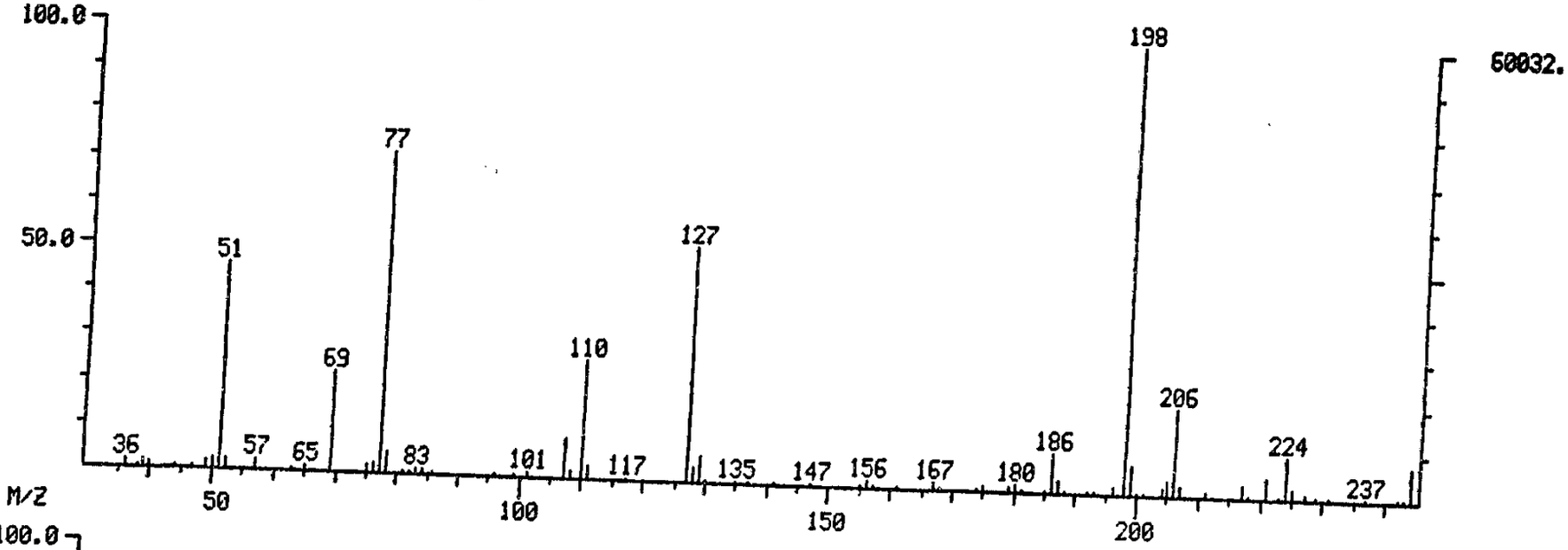
969200

MASS SPECTRUM
12/29/86 10:30:00 + 6:49
SAMPLE: DFTPP
CONDS.: ---
#408 TO #411 SUMMED

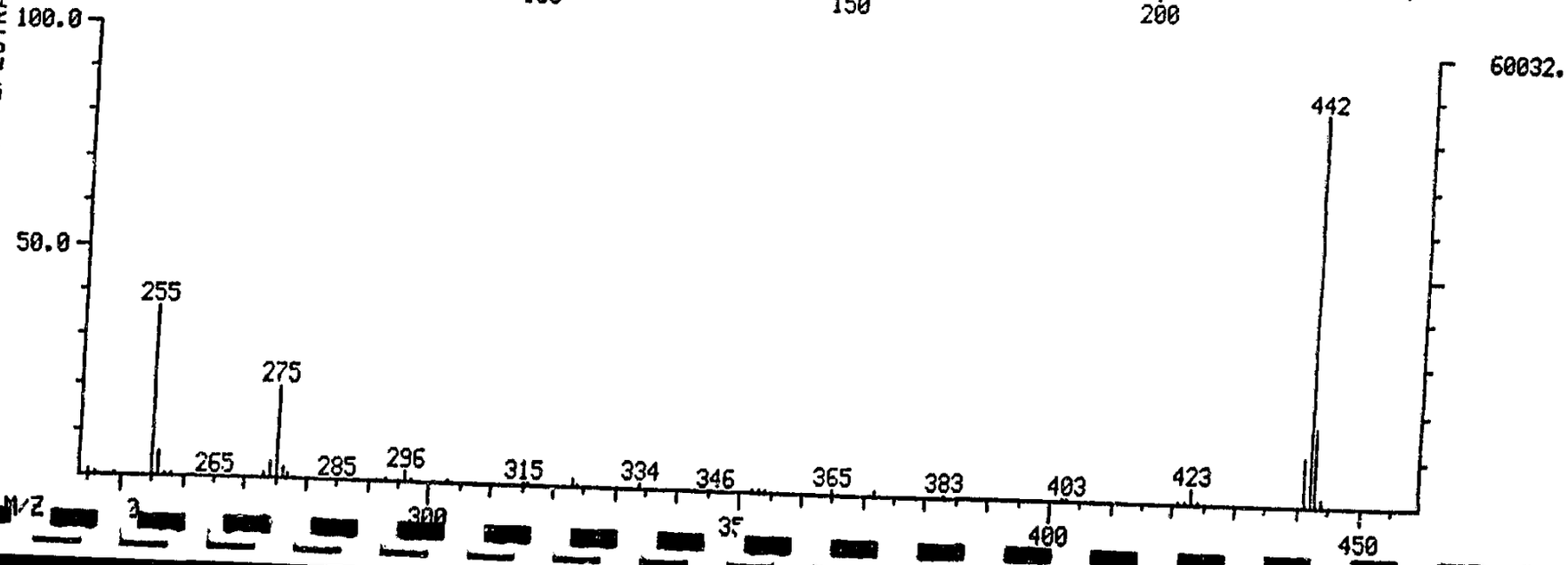
DATA: ES1229C01 #409
CALI: ES1229C01 #3

BASE M/Z: 198
RIC: 407040.

SPECTRIX DC # ----15



DFTPP SPECTRA



INST ID: 4530

003696

INST ID: 4530

Mass List

DFTPP MASS LISTING

SPECTRIX DC # ----15

12/29/86 10:30:00 + 6:49

Data: ES1229C01 # 409

Sample: DFTPP

Cali: ES1229C01 # 3

Base m/z: 198

Conds.: ---

RIC: 407040.

#408 to #411 summed

36 0.00 0.

445 Minima Min Inten: 224.

Mass % RA Inten. Maxima # 0

Mass % RA Inten.

Mass	% RA	Inten.	Mass	% RA	Inten.
36?	1.88	1126.	200	0.44	267.
38?	0.67	404.	201	0.43	257.
39?	1.68	1006.	204	1.74	1042.
40	1.40	839.	205	3.60	2160.
49	1.96	1178.	206	19.08	11456.
50	2.42	1450.	207	2.49	1496.
51	45.84	27520.	211	0.91	546.
52	2.25	1348.	217	2.73	1636.
57	2.28	1366.	218	0.46	274.
63	0.39	232.	221	4.92	2952.
65	1.38	831.	223	0.87	522.
69	22.33	13408.	224	9.34	5608.
75	1.60	960.	225	2.40	1438.
76	2.06	1238.	227	1.28	767.
77	71.32	42816.	229	0.66	396.
78	4.53	2720.	231	0.45	268.
81	0.68	407.	242	0.45	273.
83	1.14	685.	243	0.50	299.
84	1.09	652.	244	7.78	4672.
86	0.75	453.	245	1.03	616.
101	0.99	594.	246	0.51	309.
107	8.62	5176.	255	36.78	22080.
108	1.89	1132.	256	5.35	3212.
110	25.88	15536.	258	0.75	453.
111	2.68	1606.	273	1.23	741.
117	0.37	225.	274	3.53	2120.
127	52.40	31456.	275	19.94	11968.
128	3.57	2144.	276	2.59	1554.
129	5.85	3512.	277	0.89	532.
130	0.44	262.	293	0.40	239.
135	0.59	353.	296	2.47	1482.
137	0.39	234.	297	0.39	237.
155	0.43	260.	303	0.48	290.
156	1.52	915.	323	1.59	952.
161	0.59	357.	334	0.92	552.
167	1.89	1134.	352	0.50	301.
168	0.72	430.	353	0.38	227.
174	0.37	225.	354	0.61	369.
175	1.18	709.	365	1.36	819.
179	1.06	636.	372	0.91	545.
180	1.50	903.	402	0.40	239.
181	0.84	503.	403	0.55	328.
185	0.57	341.	421	0.52	315.
186	8.89	5336.	422	0.46	278.
187	2.69	1614.	423	3.60	2164.
192	0.41	248.	424	0.74	444.
193	0.61	367.	441	10.18	6112.
196	1.53	920.	442	86.67	52032.
198	100.00	60032.	443	16.58	9952.
199	6.49	3896.	444	1.64	983.

003697

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:		Contract:	
Inst ID:	4530	Sens Date:	12/30/86	Sens Time:	8:03:00
Lab ID:	ES1230C01	Cali Date:		Analyst:	GU

Data release authorized by: MPH

M/E	Ion Abundance Criteria	Spec # 399	
51	30 to 60% of mass 198	40.52	
68	less than 2% of mass 69	0.06	(0.28) 1
69	mass 69 relative abundance	21.47	
70	less than 2% of mass 69	0.21	(1.01) 1
127	40 TO 60% of mass 198	50.99	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	6.38	
275	10 TO 30% of mass 198	19.43	
365	greater than 1% of mass 198	1.32	
441	less than mass 443	9.45	
442	greater than 40% of mass 198	78.06	
443	17 TO 23% of mass 442	15.41	(19.74) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

003698

INST ID: 4530

DFTPP MASS LISTING

SPECTRIX DC # ----15

Mass List
12/30/86 8:03:00 + 6:40
Sample: DFTPP
Conds.: ---
#399 to #401 summed

Data: ES1230C01 # 400
Cali: ES1230C01 # 3

Base m/z: 198
RIC: 379904.

36 0.00 0. Minima Min Inten: 226.
445 Maxima # 0

Mass	% RA	Inten.	Mass	% RA	Inten.
36?	1.50	869.	199	6.38	3704.
38?	0.57	329.	200	0.46	267.
39?	1.46	848.	201	0.45	264.
40	1.07	621.	204	1.66	963.
49	1.54	892.	205	3.56	2068.
50	2.19	1274.	206	18.74	10880.
51	40.52	23520.	207	2.41	1400.
52	2.03	1178.	211	0.96	556.
57	2.11	1222.	217	2.70	1568.
63	0.39	228.	218	0.43	247.
65	1.29	747.	221	4.84	2812.
69	21.47	12464.	223	0.84	487.
75	1.55	897.	224	9.12	5296.
76	2.06	1194.	225	2.32	1344.
77	69.68	40448.	227	1.19	689.
78	4.63	2688.	229	0.66	381.
81	0.66	386.	231	0.50	289.
83	1.11	644.	242	0.43	250.
84	1.00	583.	243	0.47	275.
86	0.64	374.	244	7.59	4408.
93	0.41	236.	245	0.99	577.
101	0.96	556.	246	0.52	300.
107	8.26	4792.	249	0.43	248.
108	1.83	1060.	255	35.61	20672.
110	25.69	14912.	256	5.13	2980.
111	2.65	1536.	257	0.40	231.
117	0.40	233.	258	0.74	427.
127	50.99	29600.	273	1.21	705.
128	3.44	1996.	274	3.49	2026.
129	5.80	3368.	275	19.43	11280.
130	0.45	262.	276	2.55	1480.
135	0.54	314.	277	0.86	497.
137	0.39	227.	296	2.55	1478.
155	0.45	263.	297	0.40	234.
156	1.49	865.	303	0.45	263.
161	0.60	348.	323	1.53	887.
167	1.92	1116.	334	0.91	526.
168	0.71	415.	352	0.47	271.
174	0.45	259.	354	0.62	357.
175	1.16	671.	365	1.32	765.
179	1.01	589.	372	0.85	491.
180	1.49	864.	403	0.52	300.
181	0.78	454.	421	0.49	284.
185	0.60	348.	422	0.43	249.
186	8.74	5072.	423	3.39	1970.
187	2.59	1506.	424	0.70	407.
192	0.44	255.	441	9.45	5488.
193	0.59	345.	442	78.06	45312.
196	1.57	914.	443	15.41	8944.
198	100.00	58048.	444	1.47	852.

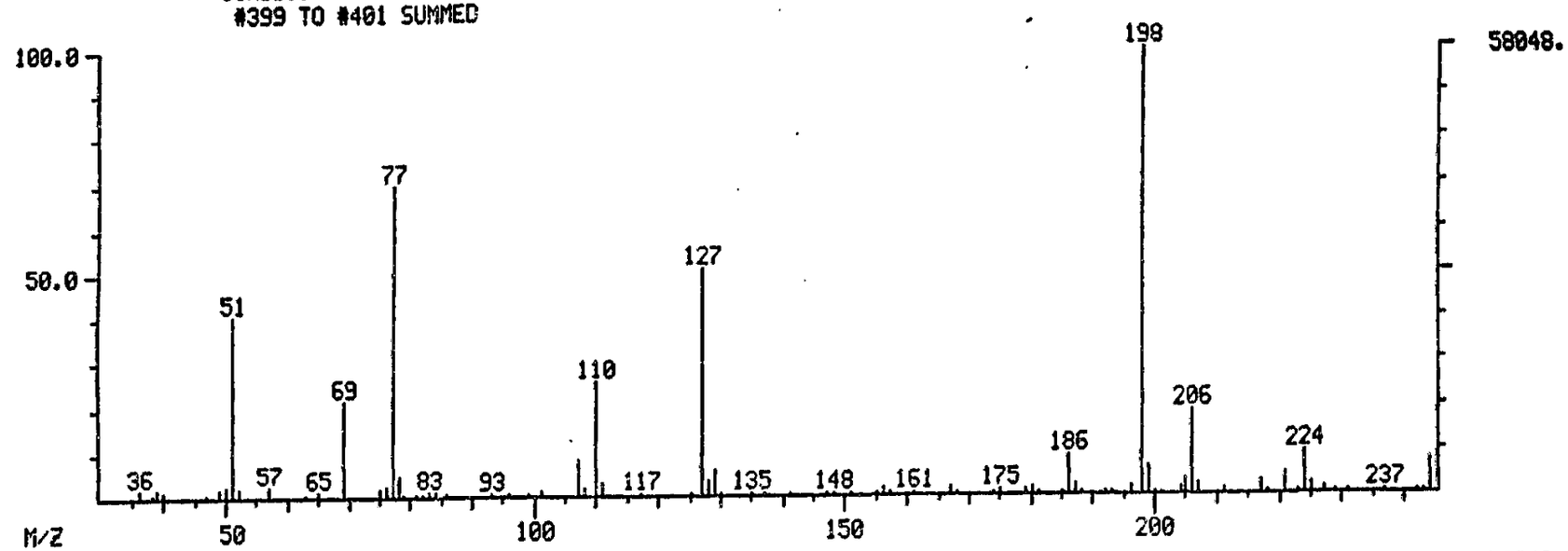
003699

MASS SPECTRUM
12/30/86 8:03:00 + 6:40
SAMPLE: DFTPP
CONDS.: ---
#399 TO #401 SUMMED

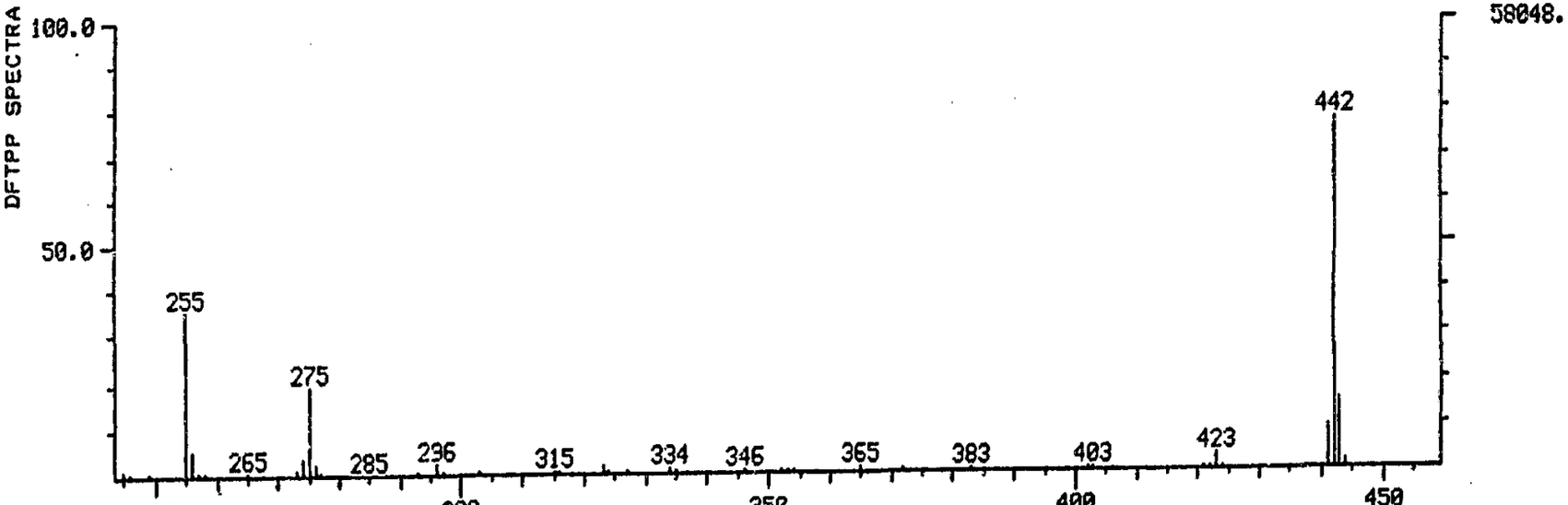
DATA: ES1230C01 #400
CALI: ES1230C01 #3

BASE M/Z: 198
RIC: 379904.

SPECTRIX DC # ----15



DFTPP SPECTRA



INST ID: 4530