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Versar INC.

441308

SEMIVOLATILE ANALYSIS
DATA SUMMARY PACKAGE

CLIENT : VERSAR DIV. 31
SITE : CDM
PROJECT: 420.1
CONTROL: 2536
DATE : 05/30/90

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I. NARRATIVE

II. QC SUMMARY

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May 30, 1990

Narrative
Versar Division 31 - CDM
Semivolatile Organic Analysis - EPA CLP Protocol
Versar Project 420.1 - Batch 2
Control 2536

This report contains the analytical data for the semivolatile organic analysis of six (6) sludge samples. The samples listed below arrived at Versar on April 19, 1990. Results from the Toxicity Characteristic Leaching Procedure (TCLP) will be reported separately. Results for additional analytical parameters are provided separately.

SAMPLE LIST

1	3	6
2	5	7

//

GC/MS instrument calibrations using DFTPP met requirements for semivolatile organic analysis. SPCC and CCC criteria were met for the semivolatile initial calibration curves and the continuing calibration standards. All GC/MS analyses occurred during the twelve hour period that followed daily instrument calibration. All sample extractions and analyses for semivolatile organic compounds were completed within ten days of sample receipt.

Semivolatile surrogate standard recovery values met specified criteria for all initial sample analyses. The analysis of 1-MSD had all surrogate recovery values above the specified QC limits. When considering all other surrogate recovery values, it appears that the MSD was double-spiked during extraction. The low soil blank extracted with the samples, SBLK66, was not spiked with surrogate solution during extraction. Another blank, SBLK65, extracted on the same day has been included in this report. Internal standard area abundances and associated relative retention times met specified QC limits for all analyses. One set of matrix spike and matrix spike duplicate (MS/MSD) QC analyses was analyzed for the soil matrix. Most recovery and all relative percent difference (RPD) values were within specified limits. The samples were analyzed without dilution. A dilution factor of 1.053 should be applied to the low soil samples when verifying detection limits. This value will correct for the method specified pesticide split. Nontarget compounds were tentatively identified using the EPA/NBS Mass Spectral Database Library.

Detection limits and concentrations of semivolatile organic compounds in the soil samples are reported on a "dry weight" basis, which accounts for the moisture content of the samples. The sludge samples were analyzed using protocol developed for the soil matrix and "SOIL" appears as the matrix on the reporting forms.

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Definitions of data qualifier flags used on the individual data summary pages are provided in the listing which immediately follows this case narrative.

Please contact Janet Beckman, Laboratory Project Manager, should you have any questions or require additional information pertaining to the semivolatile organic analysis of these samples.

Data Release Approved By:

Linda E. Bock
GC/MS Data Quality Manager
Laboratory Operations

Narrative Reviewed By:

Lawrence P. Pollack
GC/MS Quality Assurance Manager

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Data Qualifier Flags

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

For Non Target Compounds: This flag indicates that the concentration is an estimated value, assuming a 1 to 1 response with the internal standard.

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

u This flag states that the compound was analyzed for but was not detected. The number is the minimum attainable detection limit for the sample.

X or T This flag states that the mass spectrum does not meet EPA CLP criteria for confirmation, but compound presence is strongly suspected.

E This flag is used to indicate that the quantitation of the analyte is outside the linear calibration of the curve and that dilution was required in order to properly quantitate.

D This flag is used to indicate the value for the target analyte was calculated from a dilution (see "E" flag above).

Y This flag is used when a matrix spike compound is also confirmed present in the unspiked sample.

Flags excerpted from and established by the US EPA Contract Lab Program (CLP) protocol.

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

ORIGINAL
(Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	2	39	44	56	44	37	34	0	0
02	3	58	60	71	63	58	29	0	0
03	7	46	56	71	57	48	53	0	0
04	SBLK66	0 D	0 D	0 D	0 D	0 D	0 D	0	0
	SBLK65	62	72	73	70	72	66		0

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl	(18-137)
S4 (PHL)	= Phenol-d5	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Level:(low/med) MED

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	1	83	78	76	82	85	71	0	0
02	5	84	85	78	85	90	63	0	0
03	6	87	76	81	86	96	94	0	0
04	1MS	90	82	81	89	94	88	0	0
05	1MSD	163 *	143 *	138 *	165 *	183 *	165 *	0	6
06	SBLK82	92	85	82	94	99	84	0	0

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl	(18-137)
S4 (PHL)	= Phenol-d5	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ORIGINAL

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix Spike - EPA Sample No.: 1 Level:(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	264000	0	218000	83	26- 90
2-Chlorophenol	264000	0	204000	77	25-102
1,4-Dichlorobenzene	264000	0	100000	38	28 104
N-Nitroso-di-n-prop.(1)	264000	0	101000	38 *	41 126
1,2,4-Trichlorobenzene	264000	0	107000	41	38 107
4-Chloro-3-methylphenol	264000	0	233000	88	26 103
Acenaphthene	264000	0	97200	37	31-137
4-Nitrophenol	264000	0	191000	72	11-114
2,4-Dinitrotoluene	264000	0	102000	39	28- 89
Pentachlorophenol	264000	0	192000	73	17-109
Pyrene	264000	0	96200	36	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	293000	231000	79	5	35	26- 90
2-Chlorophenol	293000	216000	74	4	50	25-102
1,4-Dichlorobenzene	293000	104000	35	8	27	28 104
N-Nitroso-di-n-prop.(1)	293000	104000	35 *	8	38	41 126
2,4-Trichlorobenzene	293000	109000	37 *	10	23	38 107
4-Chloro-3-methylphenol	293000	231000	79	11	33	26 103
Acenaphthene	293000	97400	33	11	19	31-137
4-Nitrophenol	293000	209000	71	1	50	11-114
2,4-Dinitrotoluene	293000	109000	37	5	47	28- 89
Pentachlorophenol	293000	188000	64	13	47	17-109
Pyrene	293000	94500	32 *	12	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 4 out of 22 outside limits

COMMENTS: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN

4B
SEMIVOLATILE METHOD BLANK SUMMARY

ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Lab File ID: T2630 Lab Sample ID: SBLK66

Date Extracted: 04/26/90 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 05/16/90 Time Analyzed: 2320

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

Instrument ID: T

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	2	16413	T2631	05/17/90
02	3	16414	T2632	05/17/90
03	7	16424	T2633	05/17/90

COMMENTS: CLP,VERSCDM,2536,SBLK66,L,S,RB7966,B,BLK,420.1 B#2,1UL,
INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN

4B
SEMIVOLATILE METHOD BLANK SUMMARY

ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Lab File ID: T2590 Lab Sample ID: SBLK82

Date Extracted: 04/29/90 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 05/15/90 Time Analyzed: 1612

Matrix: (soil/water) SOIL Level:(low/med) MED

Instrument ID: T

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	1	16419	T2591	05/15/90
02	5	16422	T2599	05/16/90
03	6	16423	T2594	05/15/90
04	1MS	16419MS	T2592	05/15/90
05	1MSD	16419MSD	T2593	05/15/90

COMMENTS: CLP,VERSCDM,2536,SBLK82,M,S,RB7982,B,,420.1.0,2,1UL,
INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

ORIGINAL (Red)

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Lab File ID: T2568 DFTPP Injection Date: 05/14/90

Instrument ID: T DFTPP Injection Time: 1723

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	61.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	45.4
7	Less than 1.0% of mass 198	0.0
8	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.0
275	10.0 - 30.0% of mass 198	23.9
365	Greater than 1.00% of mass 198	2.00
441	Present, but less than mass 443	10.9
442	Greater than 40.0% of mass 198	74.2
443	17.0 - 23.0% of mass 442	13.9 (18.7)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	22658	T2569	05/14/90	1742
02	SSTD160	22659	T2570	05/14/90	1856
03	SSTD120	22660	T2571	05/14/90	1950
04	SSTD80	22661	T2572	05/14/90	2113
05	SSTD20	22662	T2573	05/14/90	2207
06	SSTD50	22658	T2598	05/15/90	2257

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

ORIGINAL (Red)

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Lab File ID: T2582 DFTPP Injection Date: 05/15/90

Instrument ID: T DFTPP Injection Time: 0912

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	48.2
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	43.6
7	Less than 1.0% of mass 198	0.0
8	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	23.5
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than mass 443	11.8
442	Greater than 40.0% of mass 198	77.3
443	17.0 - 23.0% of mass 442	14.3 (18.5)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	22658	T2583	05/15/90	942
02	SBLK82	SBLK82	T2590	05/15/90	1612
03	1	16419	T2591	05/15/90	1706
04	1MS	16419MS	T2592	05/15/90	1759
05	1MSD	16419MSD	T2593	05/15/90	1853
06	6	16423	T2594	05/15/90	1946

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

ORIGINAL (Red)

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Lab File ID: T2597 DFTPP Injection Date: 05/15/90

Instrument ID: T DFTPP Injection Time: 2240

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	56.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	44.9
[illegible]7	Less than 1.0% of mass 198	0.0
[illegible]8	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.0
365	Greater than 1.00% of mass 198	1.95
441	Present, but less than mass 443	7.7
442	Greater than 40.0% of mass 198	50.6
443	17.0 - 23.0% of mass 442	9.5 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	22658	T2598	05/15/90	2257
02	5	16422	T2599	05/16/90	0003

FORM V SV 1/87 Rev. 100012

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

ORIGINAL (Red)

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Lab File ID: T2623 DFTPP Injection Date: 05/16/90

Instrument ID: T DFTPP Injection Time: 1644

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	59.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	54.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	43.2
[illegible]7	Less than 1.0% of mass 198	0.0
[illegible]8	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	27.4
365	Greater than 1.00% of mass 198	2.42
441	Present, but less than mass 443	9.2
442	Greater than 40.0% of mass 198	58.8
443	17.0 - 23.0% of mass 442	11.4 (19.4)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	22658	T2624	05/16/90	1701
02	SSTD160	22659	T2625	05/16/90	1816
03	SSTD120	22739	T2626	05/16/90	1909
04	SSTD80	22661	T2627	05/16/90	2023
05	SSTD20	22662	T2628	05/16/90	2132
06	SBLK66	SBLK66	T2630	05/16/90	2320
07	2	16413	T2631	05/17/90	0012
08	3	16414	T2632	05/17/90	0104
09	7	16424	T2633	05/17/90	0156

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

ORIGINAL (Red)

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Lab File ID: T2640 DFTPP Injection Date: 05/17/90

Instrument ID: T DFTPP Injection Time: 0923

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.2
68	Less than 2.0% of mass 69	0.6 (1.2)1
69	Mass 69 relative abundance	49.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	40.8
[illegible]7	Less than 1.0% of mass 198	0.0
[illegible]3	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	27.9
365	Greater than 1.00% of mass 198	2.01
441	Present, but less than mass 443	7.7
442	Greater than 40.0% of mass 198	49.2
443	17.0 - 23.0% of mass 442	10.0 (20.3)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	22658	T2641	05/17/90	942
02	SBLK65	SBLK65	T2642	05/17/90	1110

FORM V SV 1/87 Rev.

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III. SAMPLE DATA PACKAGE

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1 ORIGINAL (Red)

L. Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16419

Sample wt/vol: 1.1 (g/mL) G Lab File ID: T2591

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 33 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 0.97

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	26000	U
111-44-4	bis(2-Chloroethyl)ether	26000	U
95-57-8	2-Chlorophenol	26000	U
541-73-1	1,3-Dichlorobenzene	26000	U
106-46-7	1,4-Dichlorobenzene	26000	U
100-51-6	Benzyl alcohol	26000	U
95-50-1	1,2-Dichlorobenzene	26000	U
95-48-7	2-Methylphenol	26000	U
108-60-1	bis(2-Chloroisopropyl)ether	26000	U
106-44-5	4-Methylphenol	26000	U
621-64-7	N-Nitroso-di-n-propylamine	26000	U
67-72-1	Hexachloroethane	26000	U
98-95-3	Nitrobenzene	26000	U
78-59-1	Isophorone	26000	U
88-75-5	2-Nitrophenol	26000	U
105-67-9	2,4-Dimethylphenol	26000	U
65-85-0	Benzoic Acid	130000	U
111-91-1	bis(2-Chloroethoxy)methane	26000	U
120-83-2	2,4-Dichlorophenol	26000	U
120-82-1	1,2,4-Trichlorobenzene	26000	U
91-20-3	Naphthalene	26000	U
106-47-8	4-Chloroaniline	26000	U
87-68-3	Hexachlorobutadiene	26000	U
59-50-7	4-Chloro-3-methylphenol	26000	U
91-57-6	2-Methylnaphthalene	26000	U
77-47-4	Hexachlorocyclopentadiene	26000	U
88-06-2	2,4,6-Trichlorophenol	26000	U
95-95-4	2,4,5-Trichlorophenol	130000	U
91-58-7	2-Chloronaphthalene	26000	U
88-74-4	2-Nitroaniline	130000	U
131-11-3	Dimethylphthalate	26000	U
208-96-8	Acenaphthylene	26000	U
606-20-2	2,6-Dinitrotoluene	26000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1 ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16419

Sample wt/vol: 1.1 (g/mL) G Lab File ID: T2591

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 33 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 0.97

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	130000	U
83-32-9	Acenaphthene	26000	U
51-28-5	2,4-Dinitrophenol	130000	U
100-02-7	4-Nitrophenol	130000	U
132-64-9	Dibenzofuran	26000	U
121-14-2	2,4-Dinitrotoluene	26000	U
84-66-2	Diethylphthalate	26000	U
7005-72-3	4-Chlorophenyl-phenylether	26000	U
86-73-7	Fluorene	26000	U
100-01-6	4-Nitroaniline	130000	U
534-52-1	4,6-Dinitro-2-methylphenol	130000	U
86-30-6	N-nitrosodiphenylamine (1)	26000	U
101-55-3	4-Bromophenyl-phenylether	26000	U
118-74-1	Hexachlorobenzene	26000	U
87-86-5	Pentachlorophenol	130000	U
85-01-8	Phenanthrene	26000	U
120-12-7	Anthracene	26000	U
84-74-2	Di-n-butylphthalate	26000	U
206-44-0	Fluoranthene	26000	U
129-00-0	Pyrene	26000	U
85-68-7	Butylbenzylphthalate	26000	U
91-94-1	3,3'-Dichlorobenzidine	52000	U
56-55-3	Benzo(a)anthracene	26000	U
218-01-9	Chrysene	26000	U
117-81-7	bis(2-Ethylhexyl)phthalate	26000	U
117-84-0	Di-n-octyl phthalate	26000	U
205-99-2	Benzo(b)fluoranthene	26000	U
207-08-9	Benzo(k)fluoranthene	26000	U
50-32-8	Benzo(a)pyrene	26000	U
193-39-5	Indeno(1,2,3-cd)pyrene	26000	U
53-70-3	Dibenz(a,h)anthracene	26000	U
191-24-2	Benzo(g,h,i)perylene	26000	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

1 ORIGINAL (Red)

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16419

Sample wt/vol: 1.1 (g/mL) G Lab File ID: T2591

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 33 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 0.97

Number TICs found: 19

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN SILOXANE	11.70	5300	J
2.	UNKNOWN	12.50	7900	J
3.	UNKNOWN	17.94	16000	J
4.	UNKNOWN	19.55	11000	J
5.	UNKNOWN	24.79	13000	J
6.	UNKNOWN	25.14	13000	J
7.	UNKNOWN	26.86	16000	J
8.	UNKNOWN	28.86	16000	J
9.	UNKNOWN	31.76	100000	J
10.	UNKNOWN HYDROCARBON	32.81	29000	J
.	UNKNOWN	33.32	16000	J
12.	UNKNOWN	33.44	24000	J
13.	UNKNOWN	35.34	61000	J
14.	UNKNOWN	35.92	110000	J
15.	UNKNOWN	36.72	160000	J
16.	UNKNOWN	37.41	130000	J
17.	UNKNOWN	39.81	260000	J
18.	UNKNOWN	41.69	320000	J
19.	UNKNOWN	44.26	85000	J

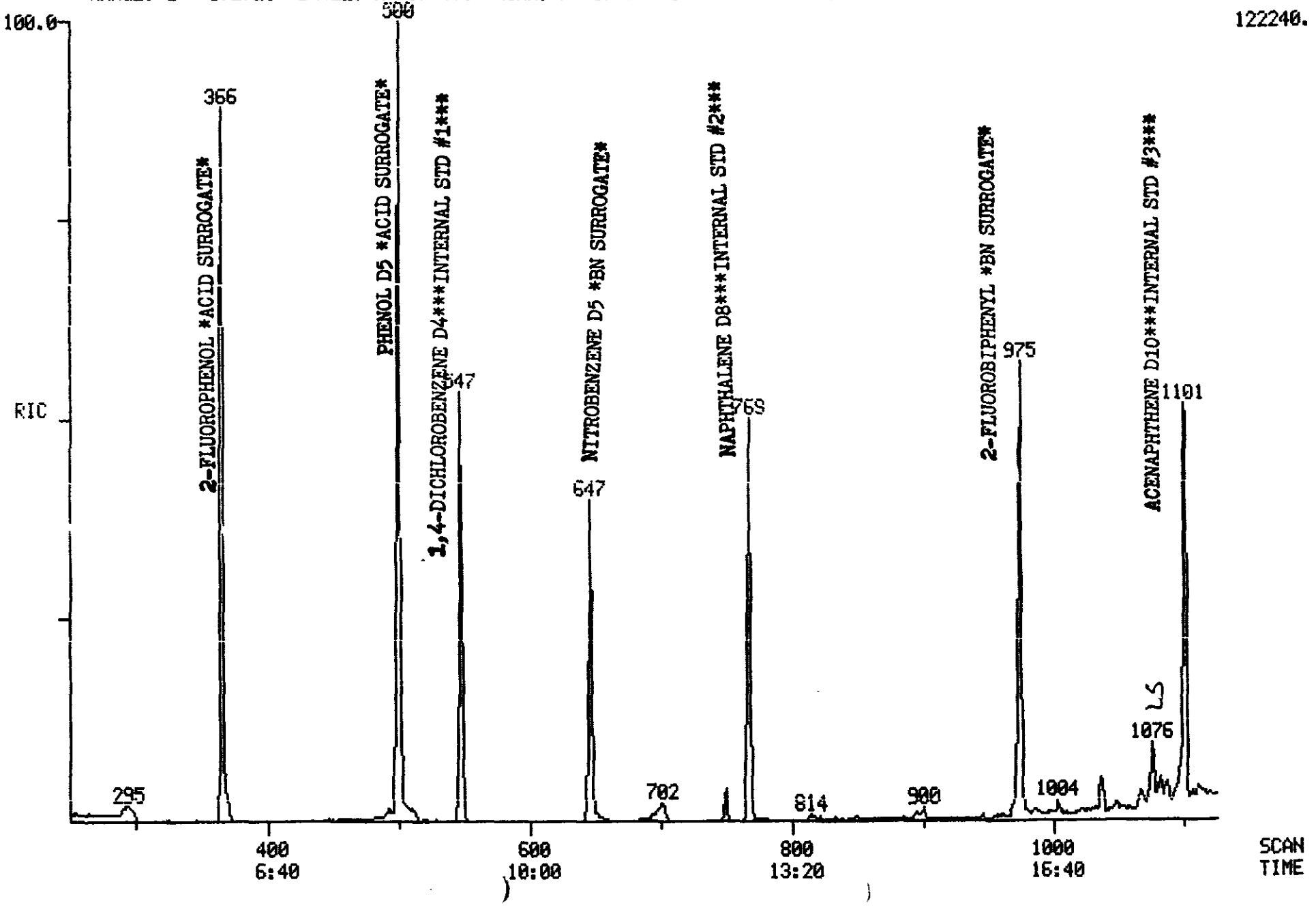
ORIGINAL (Red)

RIC
05/15/90 17:06:00
SAMPLE: CLP,VERSCOM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@35C TO 302@8C/MIN
RANGE: C 1,2720 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: T2591 #1
CALI: T2591 #2

SCANS 250 TO 1125

IOG019



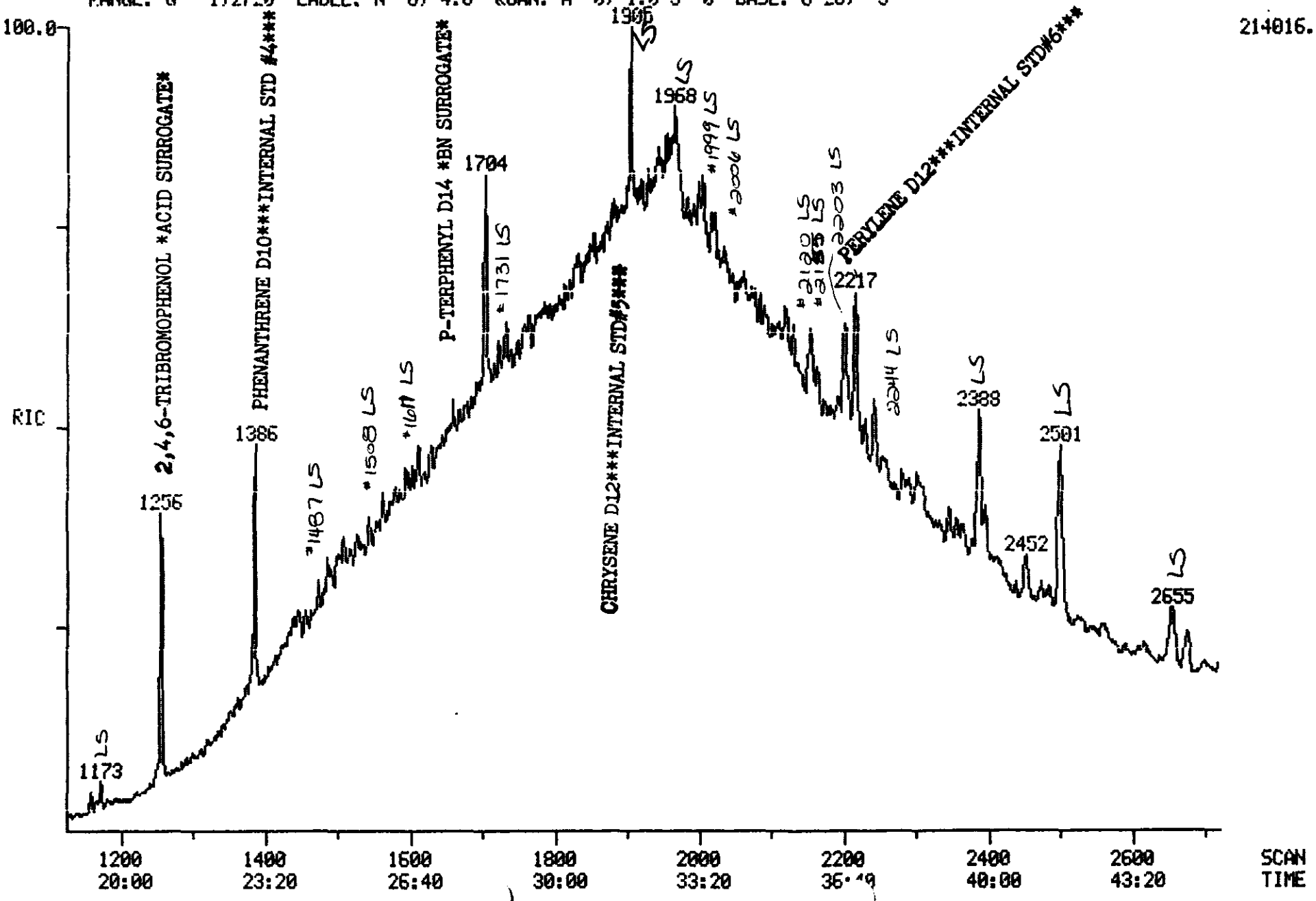
ORIGINAL (Red)

RIC
05/15/90 17:06:00
SAMPLE: CLP,VEPSCDM,2536,1,M,5,16419,B,,420,1.0,2,1UL,
CONDS.: INST T COLUMN=PESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
RANGE: G 1,2720 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: T2591 #1
CALI: T2591 #2

SCANS 1125 TO 2720

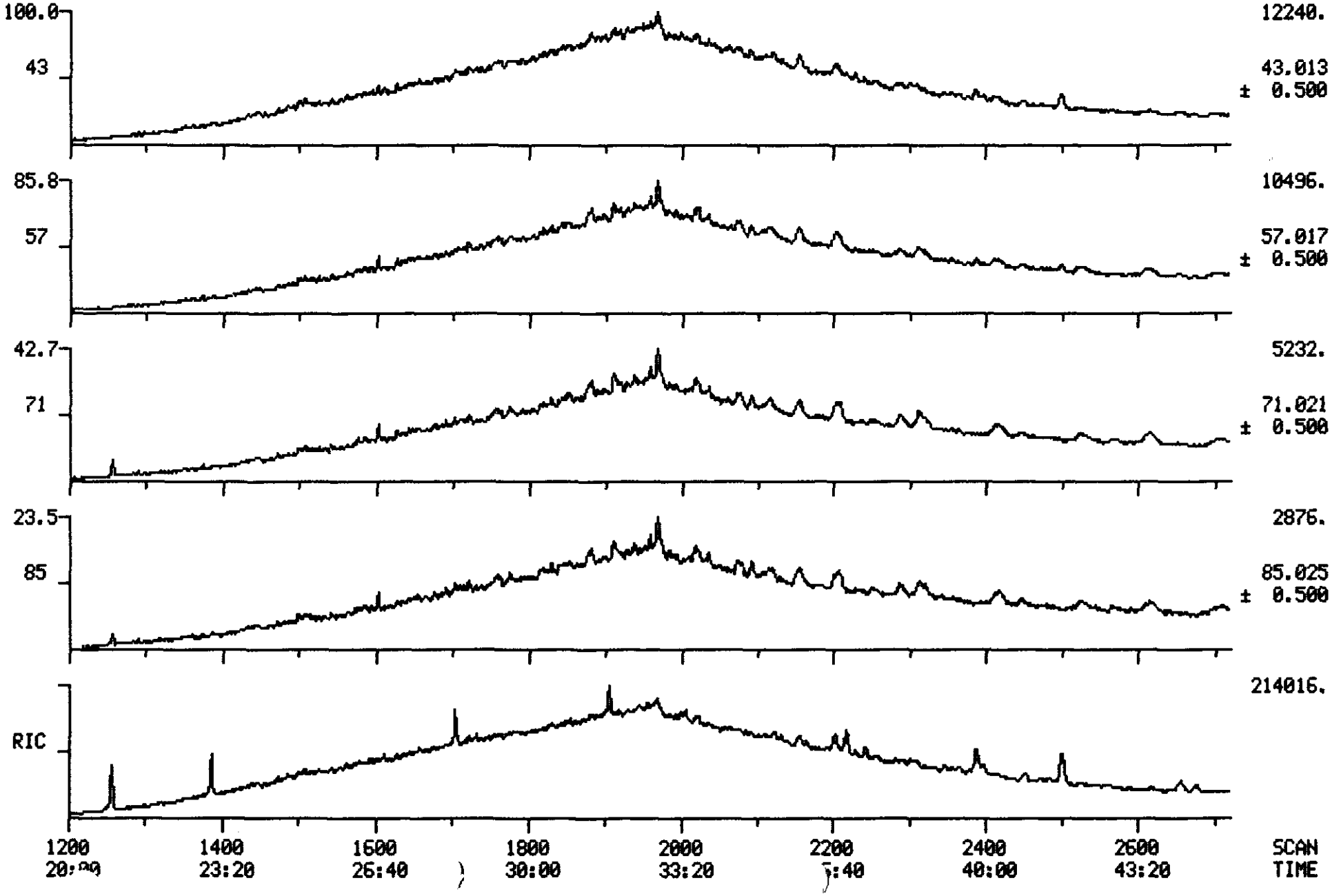
100020



ORIGINAL (Red)

RIC+MASS CHROMATOGRAMS DATA: T2591 #1 SCANS 1200 TO 2720
05/15/90 17:06:00 CALI: T2591 #2
SAMPLE: CLP,VERSCOM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: G 1,3500 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

100021



Quantitation Report File: T2591

Data: T2591.TI
05/15/90 17:06:00
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

ORIGINAL (Red)

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	C330 2-CHLOROPHENOL
3	C315 PHENOL
4	C325 BIS (2-CHLOROETHYL) ETHER
5	C335 1,3-DICHLOROBENZENE
6	C340 1,4-DICHLOROBENZENE
7	C350 1,2-DICHLOROBENZENE
8	C345 BENZYL ALCOHOL
9	C360 BIS (2-CHLOROISOPROPYL) ETHER
10	C355 2-METHYLPHENOL
11	C375 HEXACHLOROETHANE
12	C365 4-METHYLPHENOL
13	C370 N-NITROSO-DI-N-PROPYLAMINE
14	CS50 2-FLUOROPHENOL**ACID SURR.**
15	CS45 PHENOL-D5**ACID SURR.**
16	CI40 NAPHTHALENE-D8**INT. STD.#2**
17	C410 NITROBENZENE
18	C415 ISOPHORONE
19	C420 2-NITROPHENOL
20	C425 2,4-DIMETHYLPHENOL
21	C435 BIS (2-CHLOROETHOXY) METHANE
22	C440 2,4-DICHLOROPHENOL
23	C445 1,2,4-TRICHLOROBENZENE
24	C450 NAPHTHALENE
25	C430 BENZOIC ACID
26	C455 4-CHLOROANILINE
27	C460 HEXACHLOROBUTADIENE
28	C465 4-CHLORO-3-METHYLPHENOL
29	C470 2-METHYLNAPHTHALENE
30	CS20 NITROBENZENE-D5**BN SURR.**
31	CI50 ACENAPHTHENE-D10**INT. STD.#3**
32	C510 HEXACHLOROCYCLOPENTADIENE
33	C515 2,4,6-TRICHLOROPHENOL
34	C520 2,4,5-TRICHLOROPHENOL
35	C525 2-CHLORONAPHTHALENE
36	C530 2-NITROANILINE
37	C540 ACENAPHTHYLENE
38	C535 DIMETHYL PHTHALATE
39	C544 2,6-DINITROTOLUENE
40	C550 ACENAPHTHENE
41	C545 3-NITROANILINE
42	C555 2,4-DINITROPHENOL
43	C565 DIBENZOFURAN
44	C560 4-NITROPHENOL
45	C570 2,4-DINITROTOLUENE
46	C590 FLUORENE
47	C585 4-CHLOROPHENYL-PHENYLETHER

✓ 5/22/90

All surrogate recoveries and IS areas Compliant.

No TBL's detected

17 LIBRARY SEARCHES

100022

T2591

ORIGINAL
(Red)

No	Name
48	C580 DIETHYLPHTHALATE
49	C595 4-NITROANILINE
50	C610 4,6-DINITRO-2-METHYLPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	547	9:07	1	1.000	A BB	15261.	40.000	NG/UL	6.67
2	NOT FOUND									
3	NOT FOUND									
4	NOT FOUND									
5	NOT FOUND									
6	NOT FOUND									
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	112	366	6:06	1	0.669	A BB	34173.	84.792	NG*A1	14.15
15	99	500	8:20	1	0.914	A BB	48340.	82.224	NG*A2	13.72
16	136	767	12:47	16	1.000	A BB	47547.	40.000	NG/UL	6.67
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	82	647	10:47	16	0.844	A BB	35506.	41.637	NG*B1	6.95
31	164	1101	18:21	31	1.000	A BB	40969.	40.000	NG/UL	6.67
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	149	1200	20:00	31	1.090	A BB	293.	~~0.156~~	~~NG~~	0.03
49	NOT FOUND									
50	NOT FOUND									

T2591

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	9:05	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	8:37		0.949						
3	8:20		0.917						
4	8:33		0.941						
5	8:59		0.989						
6	9:08		1.006						
7	9:38		1.061						
8	9:34		1.053						
9	10:00		1.101						
10	9:55		1.092						
11	10:27		1.150						
12	10:20		1.138						
13	10:25		1.147						
14	6:03	1.01	0.666	1.00	84.79	50.00	1.791	1.056	1.70
15	8:18	1.00	0.914	1.00	82.22	50.00	2.534	1.541	1.64
16	12:46	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
17	10:48		0.846						
18	11:28		0.898						
19	11:43		0.918						
20	11:52		0.930						
21	12:12		0.956						
22	12:24		0.971						
23	12:38		0.990						
24	12:49		1.004						
25	12:14		0.958						
26	13:07		1.027						
27	13:22		1.047						
28	14:38		1.146						
29	14:57		1.171						
30	10:45	1.00	0.842	1.00	41.64	50.00	0.597	0.717	0.83
31	18:20	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
32	15:39		0.854						
33	15:57		0.870						
34	16:04		0.876						
35	16:29		0.899						
36	17:01		0.928						
37	17:50		0.973						
38	17:43		0.966						
39	17:58		0.980						
40	18:26		1.005						
41	18:22		1.002						
42	18:40		1.018						
43	18:56		1.033						
44	18:56		1.033						
45	19:11		1.046						
46	20:03		1.094						
47	20:05		1.095						
48	20:00	1.00	1.091	1.00	0.16	50.00	0.006	1.835	0.00
49	20:21		1.110						
50	20:27		1.115						

ORIGINAL
(Red)

Quantitation Report File: T2591

Data: T2591.TI
05/15/90 17:06:00
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

ORIGINAL (Red)

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
51	C615 N-NITROSODIPHENYLAMINE
52	C625 4-BROMOPHENYL-PHENYLETHER
53	C630 HEXACHLOROBENZENE
54	CS25 2-FLUOROBIPHENYL**BN SURR.**
55	CI60 PHENANTHRENE-D10**INT. STD.#4**
56	C635 PENTACHLOROPHENOL
57	C640 PHENANTHRENE
58	C645 ANTHRACENE
59	C650 DI-N-BUTYLPHTHALATE
60	C655 FLUORANTHENE
61	C715 PYRENE
62	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
63	CI70 CHRYSENE-D12**INT. STD.#5**
64	C720 BUTYLBENZYLPHTHALATE
65	C730 BENZO(A)ANTHRACENE
66	C740 CHRYSENE
67	C725 3,3'-DICHLOROBENZIDINE
68	C741 BIS(2-ETHYLHEXYL)PHTHALATE
69	CS30 P-TERPHENYL-D14**BN SURR.**
70	CI75 PERYLENE-D12**INT. STD.#6**
71	C760 DI-N-OCTYL PHTHALATE
72	C765 BENZO(B)FLUORANTHENE
73	C770 BENZO(K)FLUORANTHENE
74	C775 BENZO(A)PYRENE
75	C780 INDENO(1,2,3-CD)PYRENE
76	C785 DIBENZ(A,H)ANTHRACENE
77	C790 BENZO(G,H,I)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	172	975	16:15	31	0.886	A BB	51113.	38.932 NG*B2	6.50
55	188	1386	23:06	55	1.000	A BB	72360.	40.000 NG/UL	6.67
56	NOT FOUND								
57	178	1390	23:10	55	1.003	A BV	712.	~~0.358 NG~~	0.06
58	178	1400	23:20	55	1.010	A VB	337.	~~0.171 NG~~	0.03
59	149	1516	25:16	55	1.094	A BB	1435.	~~0.468 NG~~	0.08
60	202	1624	27:04	55	1.172	A BB	139.	~~0.066 NG~~	0.01
61	202	1667	27:47	63	0.875	A BB	737.	~~0.352 NG~~	0.06
62	330	1256	20:56	31	1.141	A BB	22722.	70.827 NG*A3	11.82
63	240	1905	31:45	63	1.000	A BB	63715.	40.000 NG/UL	6.67
64	NOT FOUND								
65	NOT FOUND								
66	228	1908	31:48	63	1.002	A BB	461.	~~0.385 NG~~	0.06

T2591

ORIGINAL (Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
67	NOT FOUND								
68	149	1920	32:00	63	1.008	A BB	1310.	~~0.752 NG~~	0.13
69	244	1704	28:24	63	0.894	A BB	52579.	38.185 NG*B3	6.37
70	264	2217	36:57	70	1.000	A VB	59089.	40.000 NG/UL	6.67
71	149	2022	33:42	70	0.912	A BB	637.	~~0.201 NG~~	0.03
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	20:32		1.120						
52	21:39		1.181						
53	22:03		1.203						
54	16:13	1.00	0.885	1.00	38.93	50.00	0.998	1.282	0.78
55	23:04	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
56	22:40		0.983						
57	23:08	1.00	1.003	1.00	0.36	50.00	0.008	1.099	0.01
58	23:17	1.00	1.009	1.00	0.17	50.00	0.004	1.087	0.00
59	25:14	1.00	1.094	1.00	0.47	50.00	0.016	1.695	0.01
60	27:01	1.00	1.171	1.00	0.07	50.00	0.002	1.160	0.00
61	27:45	1.00	0.875	1.00	0.35	50.00	0.009	1.316	0.01
62	20:54	1.00	1.140	1.00	70.83	50.00	0.444	0.313	1.42
63	31:42	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
64	30:07		0.950						
65	31:39		0.998						
66	31:47	1.00	1.003	1.00	0.38	50.00	0.006	0.752	0.01
67	31:40		0.999						
68	31:57	1.00	1.008	1.00	0.75	50.00	0.016	1.094	0.02
69	28:21	1.00	0.894	1.00	38.19	50.00	0.660	0.864	0.76
70	36:51	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
71	33:49	1.00	0.918	0.99	0.20	50.00	0.009	2.143	0.00
72	35:13		0.956						
73	35:19		0.958						
74	36:36		0.993						
75	42:54		1.164						
76	43:04		1.169						
77	44:45		1.214						

Quantitation Report File: QCREF

Data: T2591.TI
05/15/90 17:06:00
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

ORIGINAL (Red)

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
10	CS20 NITROBENZENE-D5**BN SURR.**
11	CS25 2-FLUOROBIPHENYL**BN SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**

Scan	Time	Area(Hght)		Amount		Name
547	9:07	15261.		40.000	NG/UL	CI30 1,4-DICHLOROBENZENE-D4
767	12:47	47547.		40.000	NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1101	18:21	40969.		40.000	NG/UL	CI50 ACENAPHTHENE-D10**INT.
1386	23:06	72360.		40.000	NG/UL	CI60 PHENANTHRENE-D10**INT.
1905	31:45	63715.		40.000	NG/UL	CI70 CHRYSENE-D12**INT. STD.
2217	36:57	59089.		40.000	NG/UL	CI75 PERYLENE-D12**INT. STD.
366	6:06	34173.	85	84.792	NG*A1	CS50 2-FLUOROPHENOL**ACID SU
500	8:20	48340.	82	82.224	NG*A2	CS45 PHENOL-D5**ACID SURR.**
1256	20:56	22722.	71	70.827	NG*A3	CS55 2,4,6,-TRIBROMOPHENOL**
647	10:47	35506.	83	41.637	NG*B1	CS20 NITROBENZENE-D5**BN SUR
975	16:15	51113.	78	38.932	NG*B2	CS25 2-FLUOROBIPHENYL**BN SU
1704	28:24	52579.	76	38.185	NG*B3	CS30 P-TERPHENYL-D14**BN SUR

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	9:05	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	12:46	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	18:20	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	23:04	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	31:42	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	36:51	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	6:03	1.01	0.666	1.00	84.79	50.00	1.791	1.056	1.70
8	8:18	1.00	0.914	1.00	82.22	50.00	2.534	1.541	1.64
9	20:54	1.00	1.140	1.00	70.83	50.00	0.444	0.313	1.42
10	10:45	1.00	0.842	1.00	41.64	50.00	0.597	0.717	0.83
11	16:13	1.00	0.885	1.00	38.93	50.00	0.998	1.282	0.78
12	28:21	1.00	0.894	1.00	38.19	50.00	0.660	0.864	0.76

Quantitation Report File: ISREF

ORIGINAL (Red)

Data: T2583.TI
05/15/90 9:42:00
Sample: CLP,,,SSTD 50,,,22659,B,CC-050,,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: -

Data: T2591.TI
05/15/90 17:06:00
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
3	CI40 NAPHTHALENE-D8**INT. STD. #2**
4	CI40 NAPHTHALENE-D8**INT. STD. #2**
5	CI50 ACENAPHTHENE-D10**INT. STD. #3**
6	CI50 ACENAPHTHENE-D10**INT. STD. #3**
7	CI60 PHENANTHRENE-D10**INT. STD. #4**
8	CI60 PHENANTHRENE-D10**INT. STD. #4**
9	CI70 CHRYSENE-D12**INT. STD. #5**
10	CI70 CHRYSENE-D12**INT. STD. #5**
11	CI75 PERYLENE-D12**INT. STD. #6**
12	CI75 PERYLENE-D12**INT. STD. #6**

Scan	Time	Area(Hght)	Amount	Name
545	9:05	15588.	40.000 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
547	9:07	15261.	39.161 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
766	12:46	52356.	40.000 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
767	12:47	47547.	36.326 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1100	18:20	40125.	40.000 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1101	18:21	40969.	40.841 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1384	23:04	81463.	40.000 NG/UL	CI60 PHENANTHRENE-D10**INT.
1386	23:06	72360.	35.530 NG/UL	CI60 PHENANTHRENE-D10**INT.
1902	31:42	72781.	40.000 NG/UL	CI70 CHRYSENE-D12**INT. STD.
1905	31:45	63715.	35.018 NG/UL	CI70 CHRYSENE-D12**INT. STD.
2211	36:51	61203.	40.000 NG/UL	CI75 PERYLENE-D12**INT. STD
2217	36:57	59089.	38.618 NG/UL	CI75 PERYLENE-D12**INT. STD.

ORIGINAL (Red)

Library Search Data: T2591 # 702 Base m/z: 73
05/15/90 17:06:00 + 11:42 Cali: T2591 # 2 RIC: 2243
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNR searched for maximum PURITY
362 matched at least 3 of the 9 largest peaks in the unknown

Siloxane

Rank	In.	Name
1	34667	BENZOIC ACID, 2,4-BIS[(TRIMETHYLSILYL)OXY]-, TRIMETHYLSILYL ESTER
2	34650	CYCLOPENTASILOXANE, DECAMETHYL-
3	34666	BENZOIC ACID, 2,5-BIS(TRIMETHYLSILOXY)-, TRIMETHYLSILYL ESTER
4	40810	BENZENEETHANAMINE, N-[(PENTAFLUOROPHENYL)METHYLENE]-.BETA.,3,4-TRIS*
5	36250	PHENETHYLAMINE, N-METHYL-.BETA.,3,4-TRIS(TRIMETHYLSILOXY)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C16.H30.O4.SI3	370	73	700	700	937
2	C10.H30.O5.SI5	370	73	690	783	873
3	C16.H30.O4.SI3	370	73	626	626	829
4	C24.H34.O3.N.F5.SI3	563	73	618	642	774
5	C18.H37.O3.N.SI3	399	355	552	552	736

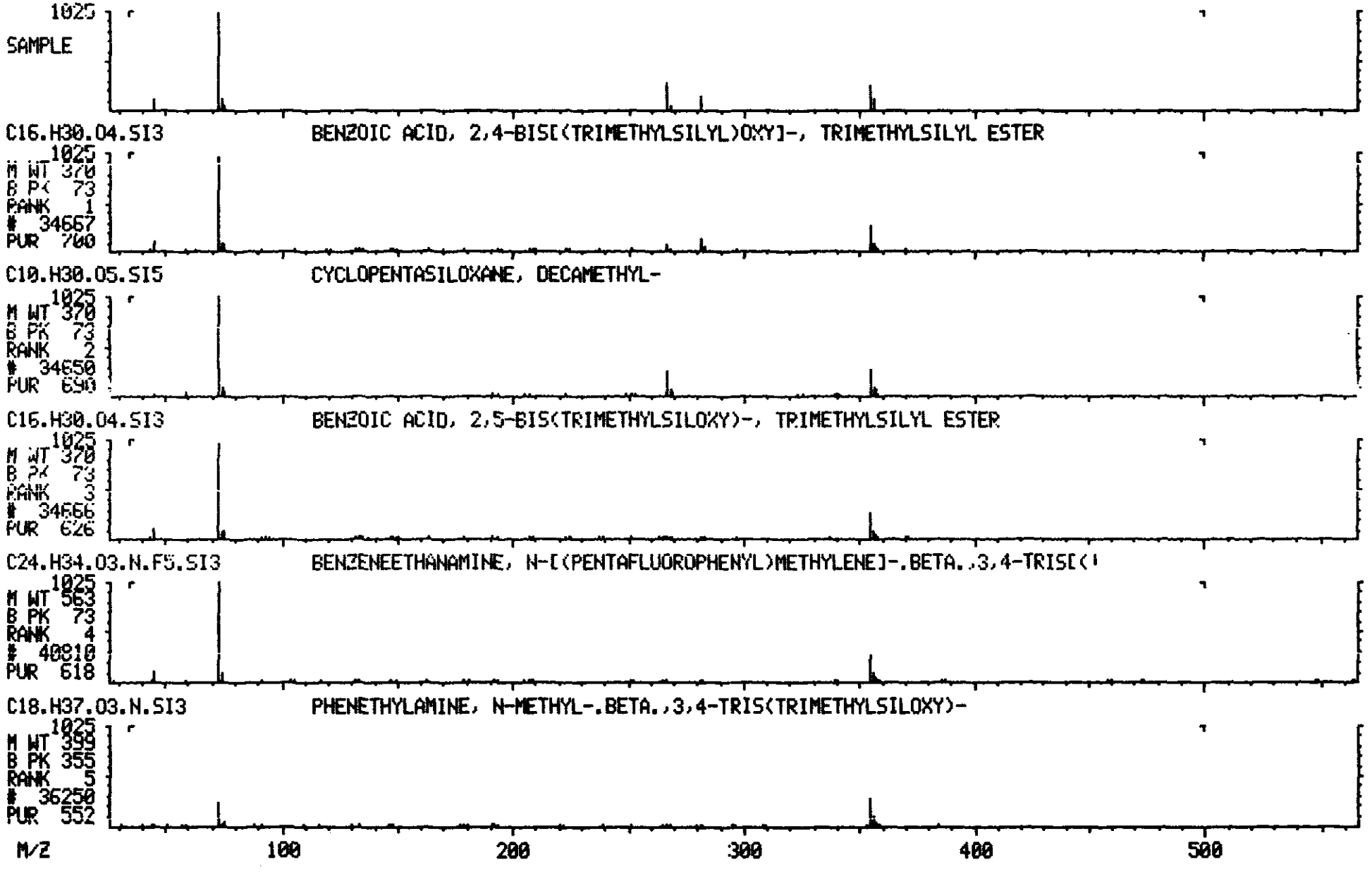
Rank	Ret. Time	B.P. Int.	US. Par. 1	US. Par. 2	C.A.S. #
1	—	—	—	—	10586-16-0
2	—	—	—	—	541-02-6
3	—	—	—	—	3618-20-0
4	—	—	—	—	55429-13-5
5	—	—	—	—	10538-85-9

LIBRARY SEARCH
05/15/90 17:06:00 + 11:42
SAMPLE: CLP,VERSCOM,2526,1,M,S,16419,6,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 # 702
CALI: T2591 # 2

BASE M/Z: 73
RIC: 2243.

100030



Library Search Data: T2591 # 750 Base m/z: 39
05/15/90 17:06:00 + 12:30 Cali: T2591 # 2 RIC: 3903.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
204 matched at least 5 of the 16 largest peaks in the unknown

Rank	In.	Name
1	751	THIIRANE, 2,3-DIMETHYL-, TRANS-
2	2725	THIOPHENE, 2-ETHYLTETRAHYDRO-
3	1484	THIOPHENE, TETRAHYDRO-2-METHYL-
4	7916	1,2,4-TRITHIOLANE, 3,5-DIMETHYL-
5	4442	HEXANE, 3-METHOXY-3-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C4.H8.S	88	59	462	733	566
2	C6.H12.S	116	45	427	673	592
3	C5.H10.S	102	41	403	657	555
4	C4.H8.S3	152	59	387	580	592
5	C8.H18.O	130	55	375	617	553

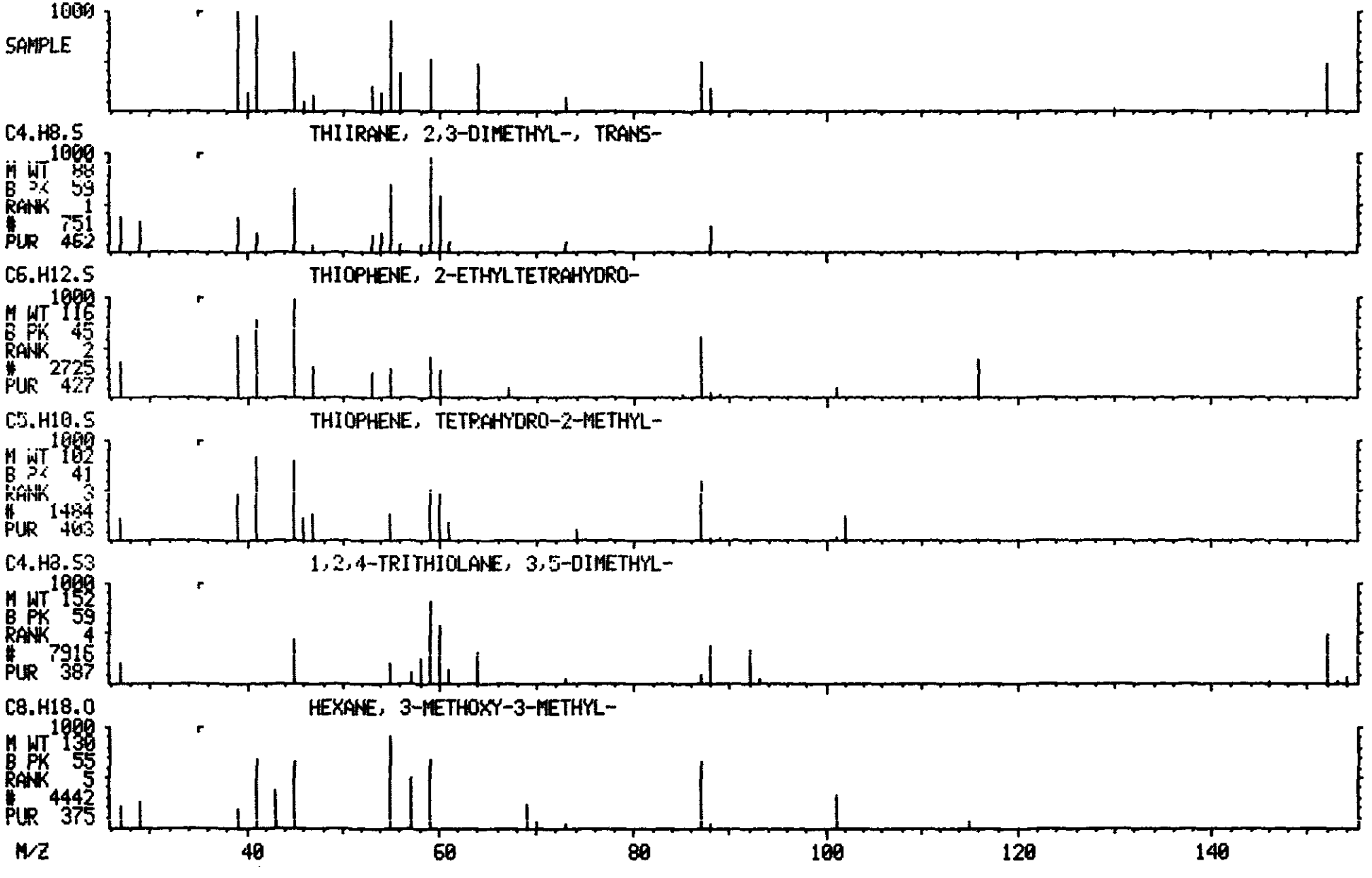
Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	5955-98-6
2	—	—	—	—	1551-32-2
3	—	—	—	—	1795-09-1
4	—	—	—	—	23654-92-4
5	—	—	—	—	74630-91-4

LIBRARY SEARCH
05/15/90 17:06:00 + 12:30
SAMPLE: CLP,VERSCOM,2536,1,M,S,16419,6,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 # 750
CALI: T2591 # 2

BASE M/Z: 39
RIC: 3903.

100032



Library Search Data: T2591 #1076 Base m/z: 41
05/15/90 17:06:00 + 17:56 Cali: T2591 # 2 RIC: 7967.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
222 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	17876	1H-INDENE, OCTAHYDRO-2,2,4,4,7,7-HEXAMETHYL-, TRANS-
2	19982	3-HEXADECYNE
3	26962	9-EICOSYNE
4	23711	5-OCTADECYNE
5	23707	9-OCTADECYNE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H28	208	41	673	908	704
2	C16.H30	222	67	582	799	585
[illegible]	C20.H38	278	55	567	743	626
[illegible]	C18.H34	250	54	561	761	606
5	C18.H34	250	55	556	765	589

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	54832-83-6
2	—	—	—	—	61886-62-2
3	—	—	—	—	71899-38-2
4	—	—	—	—	71899-42-8
5	—	—	—	—	35365-59-4

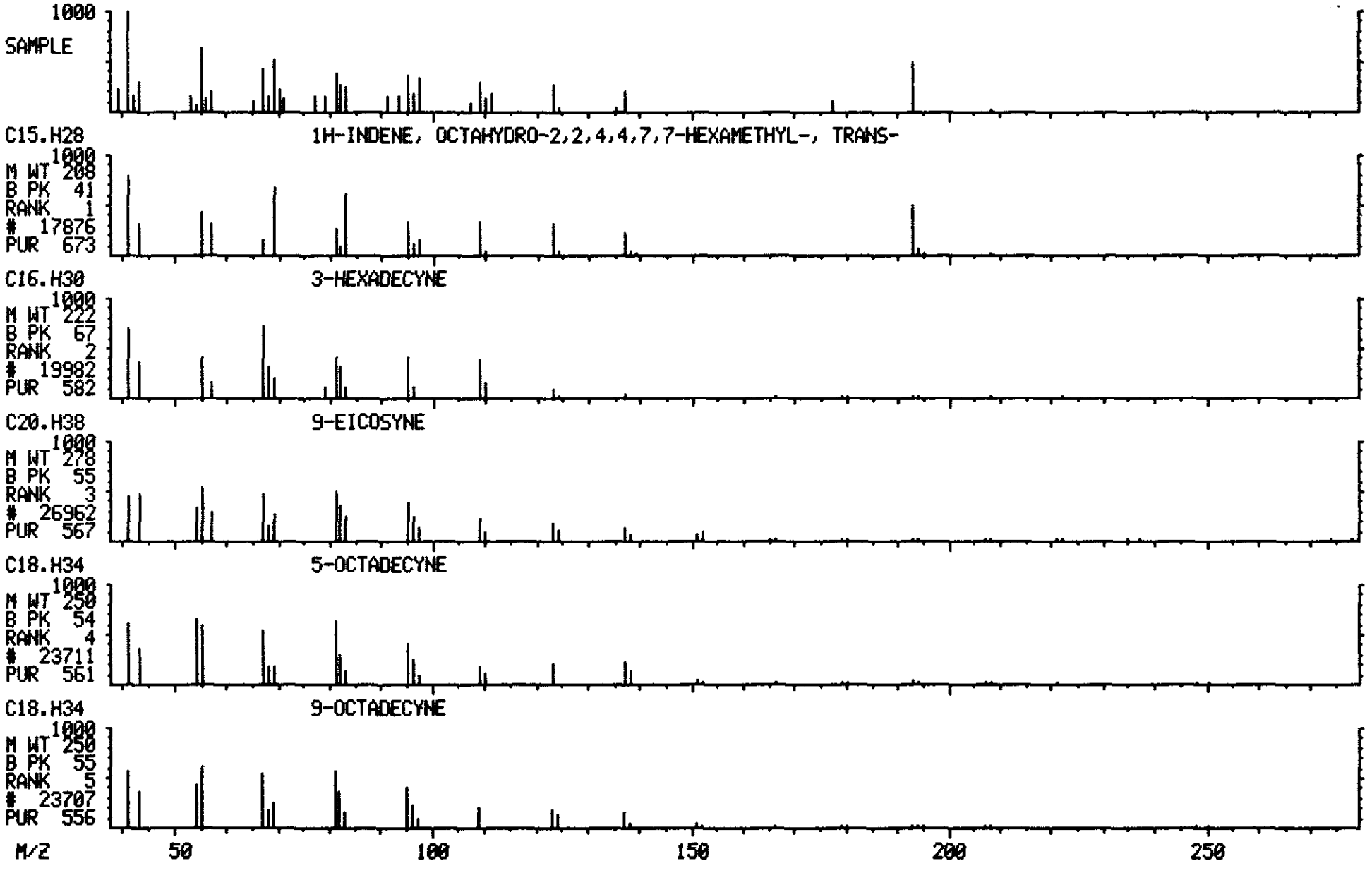
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 17:56
SAMPLE: CLP,VERSCOM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1076
CALI: T2591 # 2

BASE M/Z: 41
RIC: 7967.

100034



Library Search Data: T2591 #1173 Base m/z: 123
05/15/90 17:06:00 + 19:33 Cali: T2591 # 2 RIC: 5791.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN ORIGINAL (Red)
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
157 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	7819	BICYCLO[3.1.1]HEPTANE-2-CARBOXALDEHYDE, 6,6-DIMETHYL-
2	30354	ETHANOL, 2-(9-OCTADECENYLOXY)-, (Z)-
3	26962	9-EICOSYNE
4	23710	3-OCTADECYNE
5	18454	6-OCTEN-1-OL, 3,7-DIMETHYL-, PROPANOATE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C10.H16.O	152	123	593	935	604
2	C20.H40.O2	312	55	582	688	667
[illegible]	C20.H38	278	55	580	692	658
[illegible]	C18.H34	250	67	576	695	583
5	C13.H24.O2	212	41	570	910	577

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	4764-14-1
2	—	—	—	—	5353-25-3
3	—	—	—	—	71899-38-2
4	—	—	—	—	61886-64-4
5	—	—	—	—	141-14-0

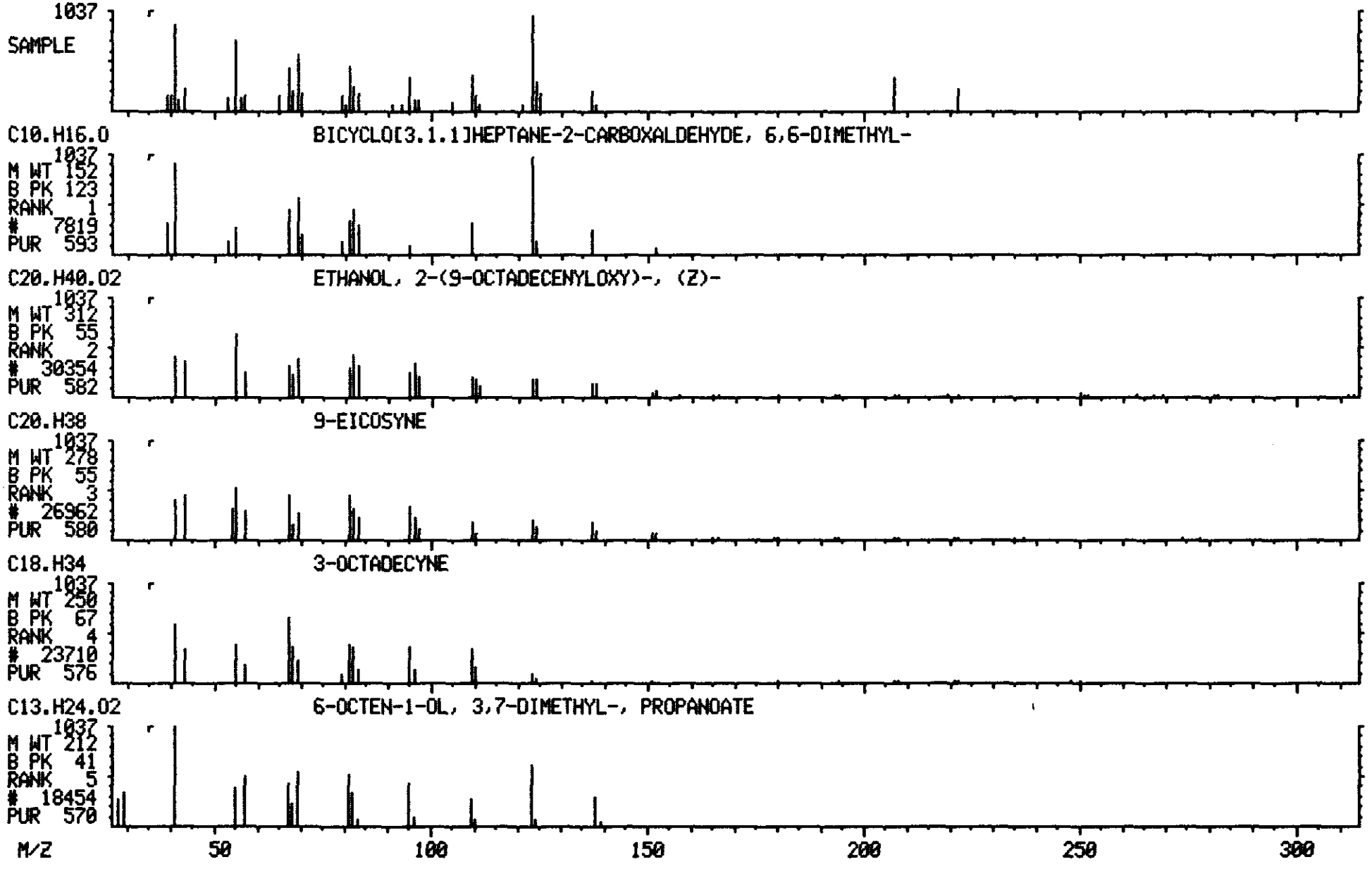
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 19:33
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 158 2N 0T)

DATA: T2591 #1173
CALI: T2591 # 2

BASE M/Z: 123
RIC: 5791.

100036



Library Search Data: T2591 #1487 Base m/z: 41
05/15/90 17:06:00 + 24:47 Cali: T2591 # 2 RIC: 7047.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
274 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	19979	CYCLOHEXANE, 1-(CYCLOHEXYLMETHYL)-4-(1-METHYLETHYL)-
2	16173	6-OCTEN-1-OL, 3,7-DIMETHYL-, ACETATE
3	13773	6-OCTEN-1-OL, 3,7-DIMETHYL-, FORMATE
4	25402	1H-INDENE, 5-BUTYL-6-HEXYLOCTAHYDRO-
5	23460	2,5,9-TETRADECATRIENE, 3,12-DIETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C16.H30	222	55	485	812	511
2	C12.H22.O2	198	43	484	907	490
[illegible]	C11.H20.O2	184	41	478	960	482
[illegible]	C19.H36	264	41	477	846	530
5	C18.H32	248	81	472	787	512

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	54965-61-6
2	—	—	—	—	150-84-5
3	—	—	—	—	105-85-1
4	—	—	—	—	55044-36-5
5	—	—	—	—	74685-87-3

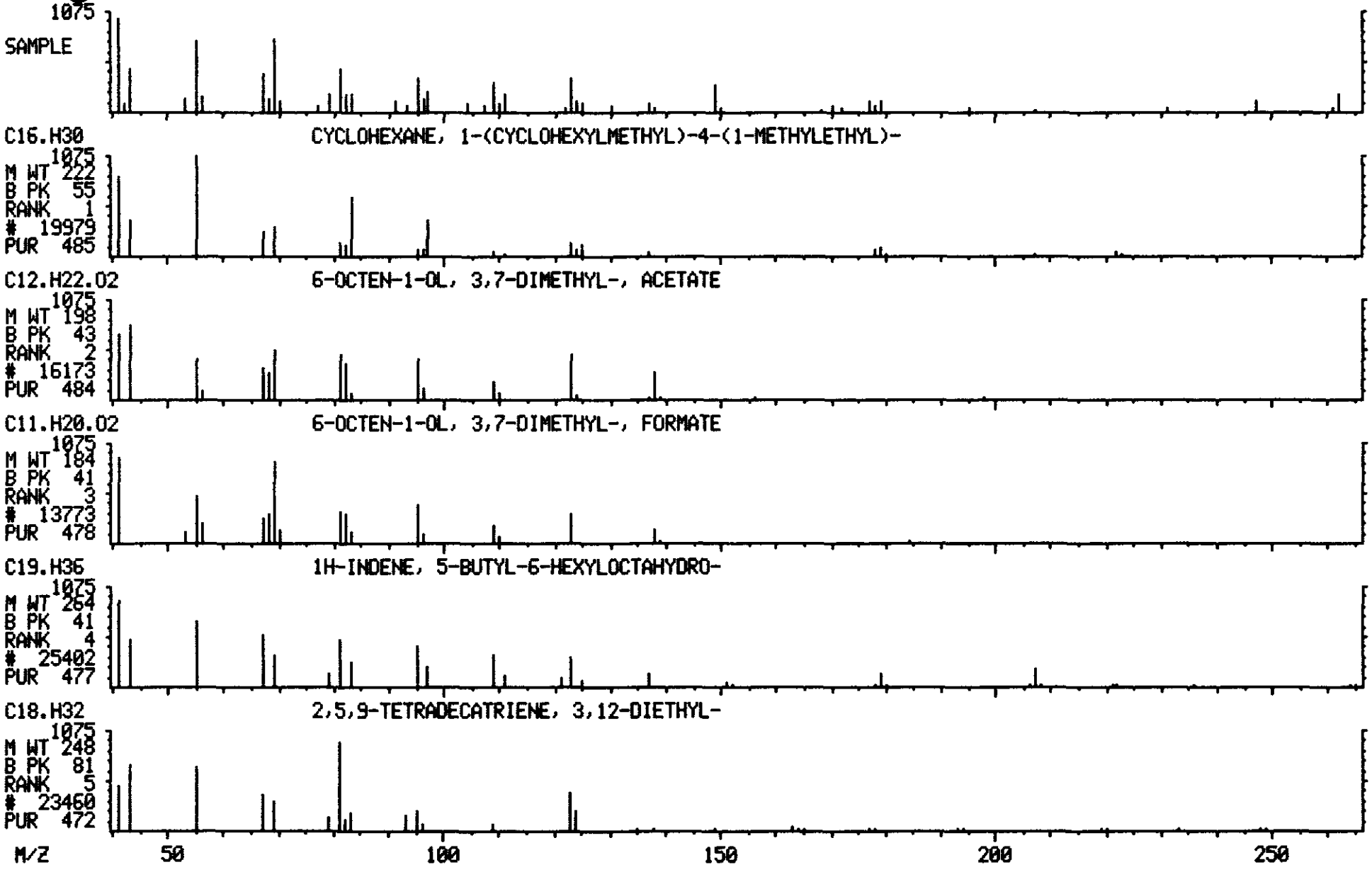
LIBRARY SEARCH
05/15/90 17:06:00 + 24:47
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1487
CALI: T2591 # 2

BASE M/Z: 41
RIC: 7047.

ORIGINAL (Red)

100038



Library Search Data: T2591 #1508 Base m/z: 95
05/15/90 17:06:00 + 25:08 Cali: T2591 # 2 RIC: 6567.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
301 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	26955	1-EICOSYNE
2	19982	3-HEXADECYNE
3	23710	3-OCTADECYNE
4	15498	3-TETRADECYNE
5	19987	7-HEXADECYNE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C20.H38	278	96	479	798	510
2	C16.H30	222	41	445	858	458
	C18.H34	250	41	444	828	460
	C14.H26	194	67	440	817	453
5	C16.H30	222	41	429	763	479

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	765-27-5
2	—	—	—	—	61886-62-2
3	—	—	—	—	61886-64-4
4	—	—	—	—	60212-32-0
5	—	—	—	—	74685-28-2

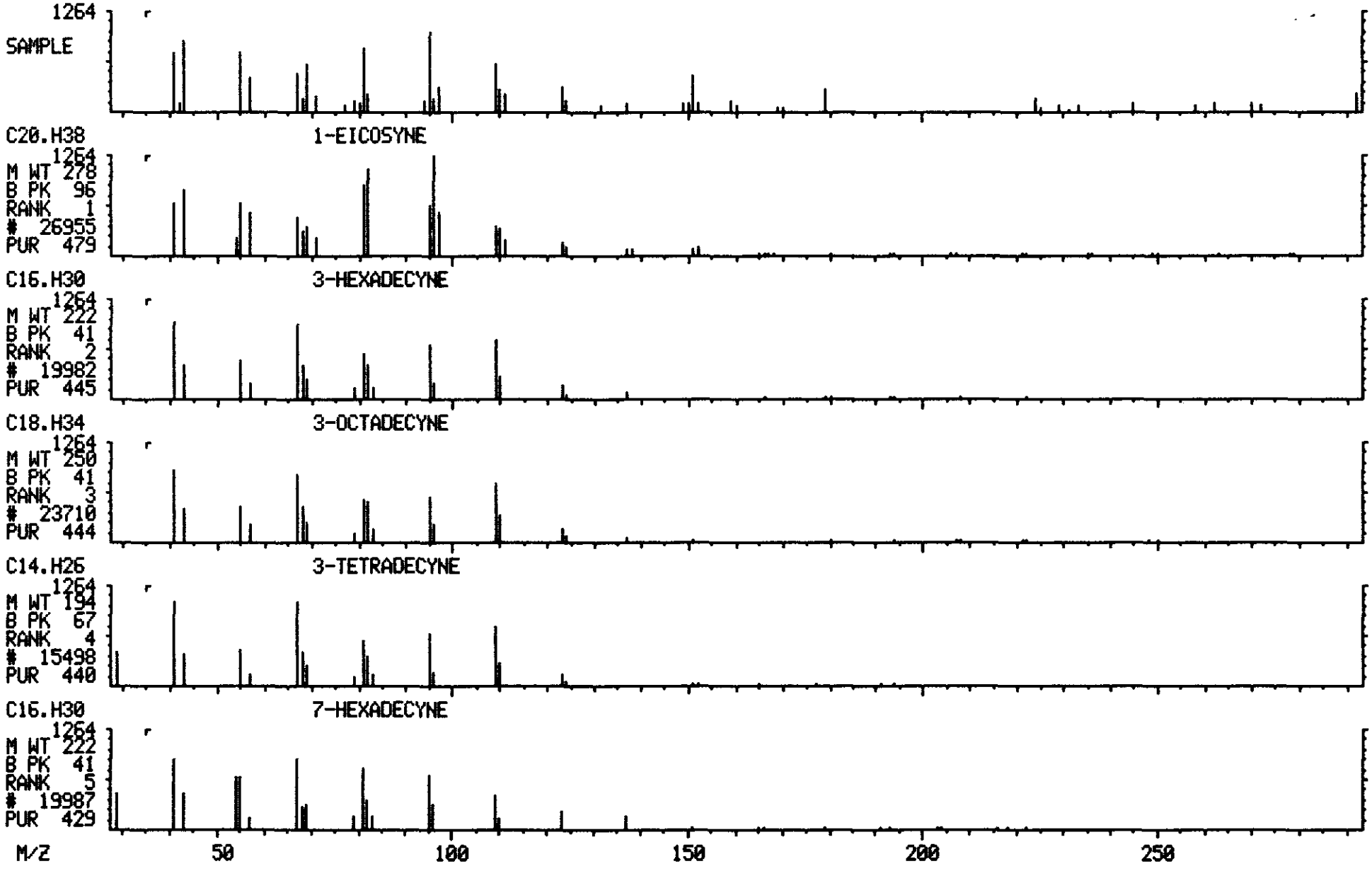
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 25:08
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1508
CALI: T2591 # 2

BASE M/Z: 95
RIC: 6567.

100040



Library Search Data: T2591 #1611 Base m/z: 58
05/15/90 17:06:00 + 26:51 Cali: T2591 # 2 RIC: 8831.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
140 matched at least 5 of the 16 largest peaks in the unknown

Rank	In.	Name
1	692	3-PENTANAMINE
2	30045	1,4-METHANO-2H-CYCLOPENT[D]OXEPIN-2,5(4H)-DIONE, 6-[(DIMETHYLAMINO)*
3	4194	2-BUTANONE, 4-(DIMETHYLAMINO)-3-METHYL-
4	653	CYCLOBUTANE, METHOXY-
5	2593	2-PENTANONE, 4-AMINO-4-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C5.H13.N	87	58	718	930	750
2	C17.H27.O4.N	309	58	703	859	777
3	C7.H15.O.N	129	58	699	915	748
4	C5.H10.O	86	58	688	869	760
5	C6.H13.O.N	115	58	617	787	724

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	616-24-0
2	—	—	—	—	32562-94-0
3	—	—	—	—	22104-62-7
4	—	—	—	—	18593-33-4
5	—	—	—	—	625-04-7

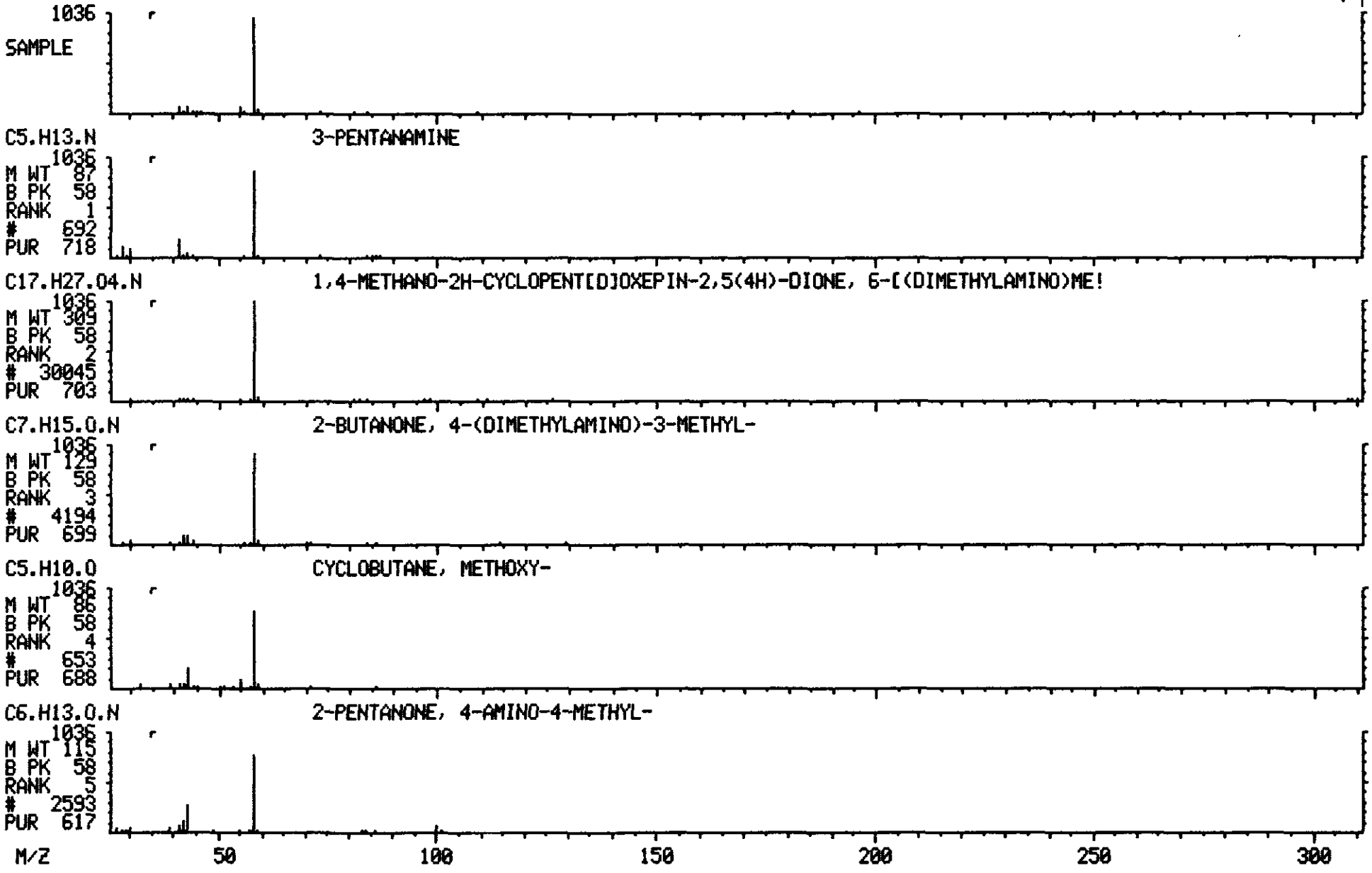
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 26:51
SAMPLE: CLP,VERSCOM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1611
CALI: T2591 # 2

BASE M/Z: 58
RIC: 8831.

100042



Library Search Data: T2591 #1731 Base m/z: 55
05/15/90 17:06:00 + 28:51 Cali: T2591 # 2 RIC: 7031 ORIGINAL (Red)
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
111 matched at least 5 of the 16 largest peaks in the unknown

Rank	In.	Name
1	28053	ALLOPREGNANE
2	29492	D-HOMOPREGNANE, (5.ALPHA.)-
3	28052	PREGNANE (VAN)
4	28060	D-DIHOMOANDROSTANE, (5.ALPHA.)-
5	29476	D-DIHOMOANDROSTAN-17B-ONE, (5.ALPHA.)

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C21.H36	288	55	521	844	588
2	C22.H38	302	55	499	810	545
[illegible]	C21.H36	288	55	490	807	575
[illegible]	C21.H36	288	55	489	795	564
5	C21.H34.O	302	55	414	742	476

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	641-85-0
2	—	—	—	—	35575-28-1
3	—	—	—	—	481-26-5
4	—	—	—	—	35575-54-3
5	—	—	—	—	32319-07-6

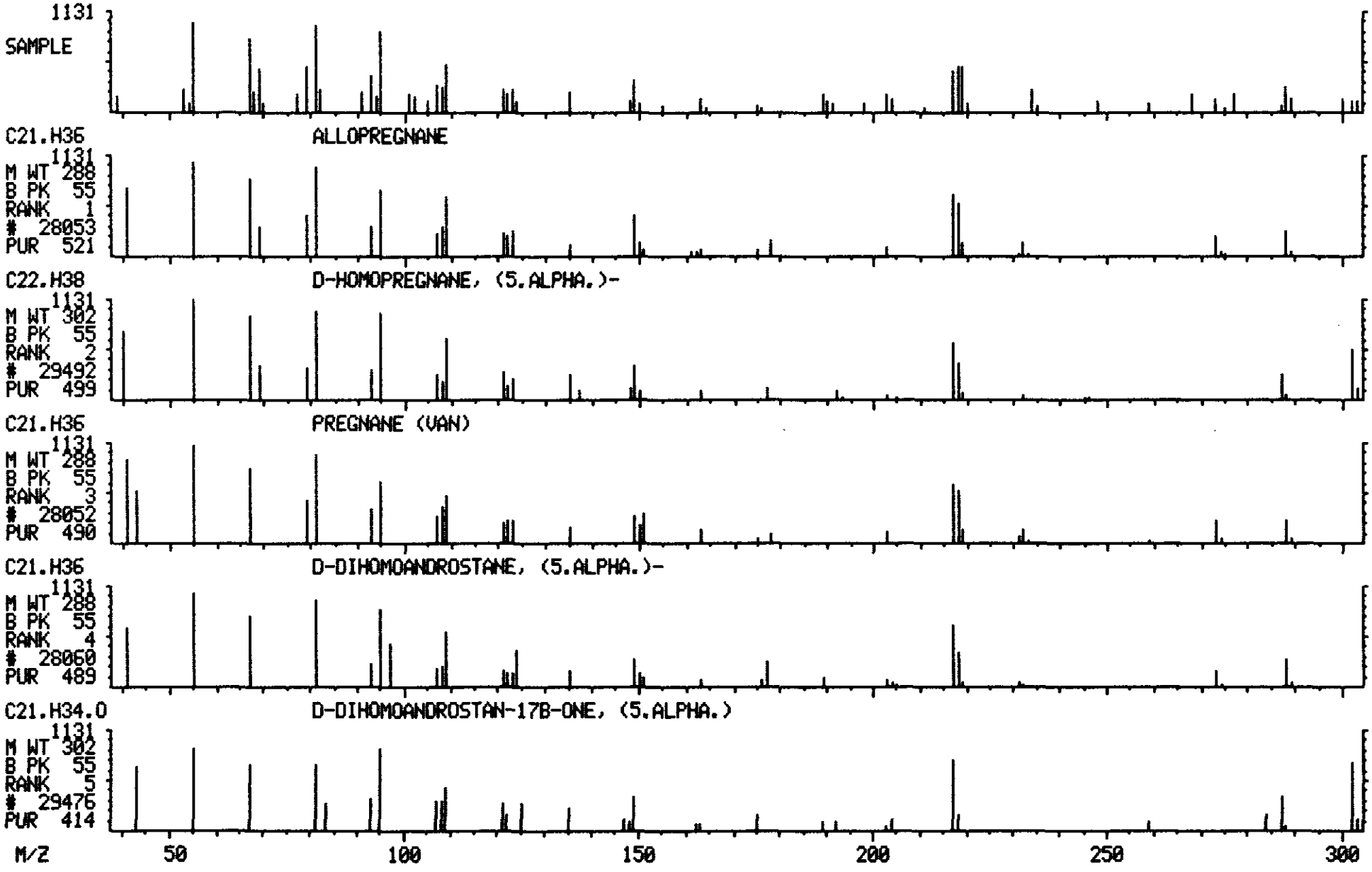
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 28:51
SAMPLE: CLP,VERSCOM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1731
CALI: T2591 # 2

BASE M/Z: 55
RIC: 7031.

100044



Library Search Data: T2591 #1905 Base m/z: 240 ORIGINAL
05/15/90 17:06:00 + 31:45 Cali: T2591 # 2 RIC: 46591. (Red)
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
176 matched at least 4 of the 16 largest peaks in the unknown

Rank	In.	Name
1	22368	PHENOL, 2,2'-(1,2-ETHANEDIYLIDENEDINITRILO)BIS-
2	22391	[1]BENZOTHIENO[3,2-B][1]BENZOTHIOPHENE
3	22392	[1]BENZOTHIENO[4,5-B][1]BENZOTHIOPHENE
4	22393	INDENO[2',1':4,5]THIENO[3,2-B]THIOPYRAN
5	22379	BENZENAMINE, 4-(6-METHYL-2-BENZOTHIAZOLYL)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C14.H12.O2.N2	240	240	610	873	674
2	C14.H8.S2	240	240	580	885	629
3	C14.H8.S2	240	240	555	844	636
4	C14.H8.S2	240	240	548	902	594
5	C14.H12.N2.S	240	240	537	908	562

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	1149-16-2
2	—	—	—	—	248-70-4
3	—	—	—	—	55134-02-6
4	—	—	—	—	56830-85-4
5	—	—	—	—	92-36-4

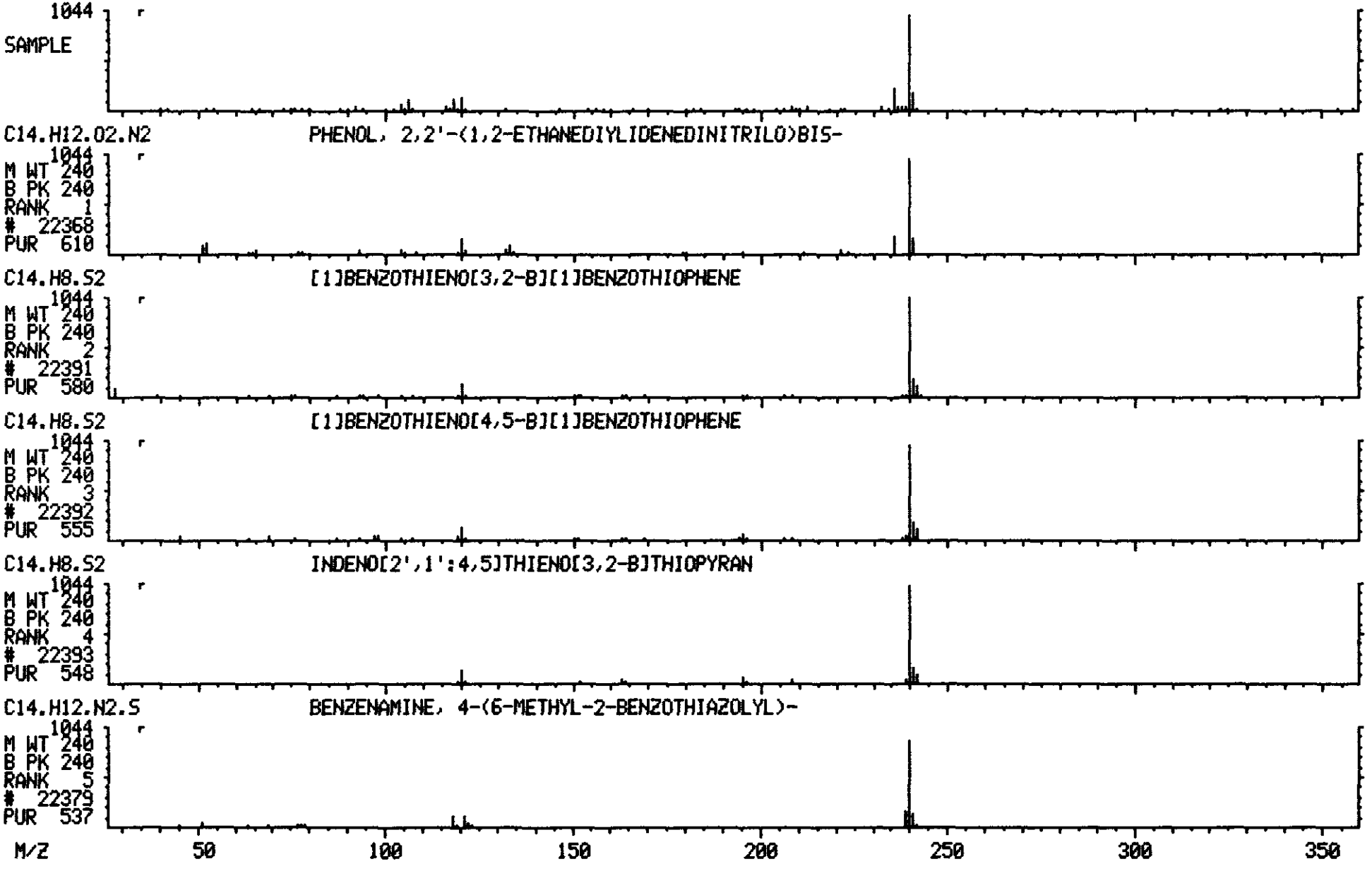
ORIGINAL (Red)

100046

LIBRARY SEARCH
05/15/90 17:06:00 + 31:45
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1905
CALI: T2591 # 2

BASE M/Z: 240
RIC: 46591.



Library Search Data: T2591 #1968 Base m/z: 57 ORIGINAL
05/15/90 17:06:00 + 32:48 Cali: T2591 # 2 RIC: 12783. (Red)
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
347 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	18533	DODECANE, 2,6,10-TRIMETHYL-
2	36033	OCTACOSANE
3	36736	NONACOSANE
4	41326	TETRATETRACONTANE
5	25863	HEPTADECANE, 2,6-DIMETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H32	212	57	538	939	559
2	C28.H58	394	57	520	864	562
[illegible]	C29.H60	408	57	519	867	585
[illegible]	C44.H90	618	57	518	874	577
5	C19.H40	268	57	513	864	539

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	3891-98-3
2	—	—	—	—	630-02-4
3	—	—	—	—	630-03-5
4	—	—	—	—	7098-22-8
5	—	—	—	—	54105-67-8

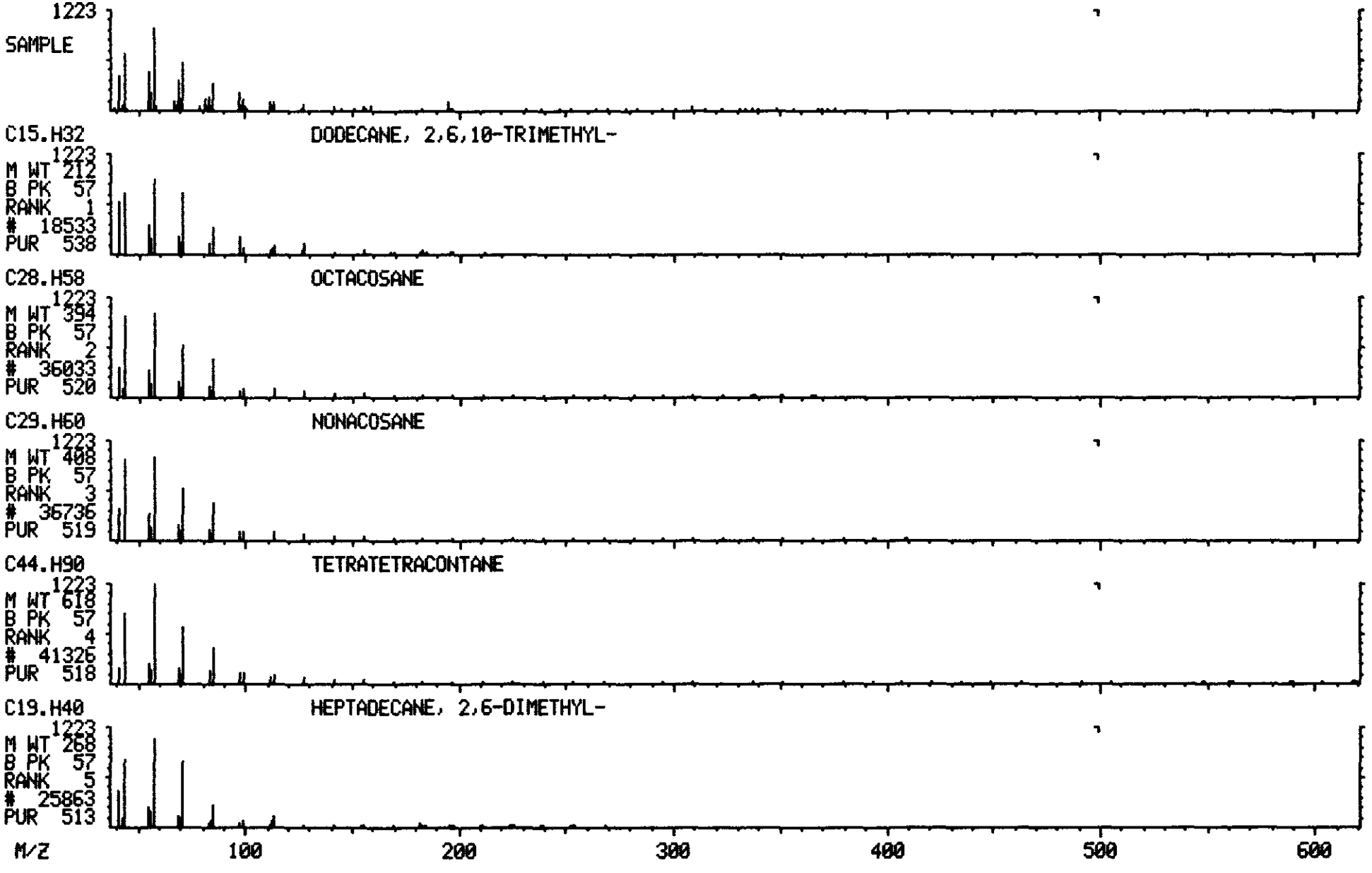
ORIGINAL (Red)

100048

LIBRARY SEARCH
05/15/90 17:06:00 + 32:48
SAMPLE: CLP,VERSCOM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1968
CALI: T2591 # 2

BASE M/Z: 57
RIC: 12783.



Library Search Data: T2591 #1999 Base m/z: 81
05/15/90 17:06:00 + 33:19 Cali: T2591 # 2 RIC: 7335.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
214 matched at least 4 of the 16 largest peaks in the unknown

Rank	In.	Name
1	34894	A-NORCHOLESTAN-2-ONE, (5.ALPHA.)-
2	34899	CHOLESTANE (VAN)
3	26560	D-HOMOANDROSTANE, (5.ALPHA.)-
4	34898	COPROSTANE
5	34772	CHOLEST-22-ENE, (5.ALPHA.)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C26.H44.O	372	41	329	691	447
2	C27.H48	372	43	324	657	440
[illegible]	C20.H34	274	81	321	669	448
[illegible]	C27.H48	372	55	290	646	416
5	C27.H46	370	55	287	589	434

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	2310-36-3
2	—	—	—	—	481-21-0
3	—	—	—	—	35575-26-9
4	—	—	—	—	481-20-9
5	—	—	—	—	55282-65-0

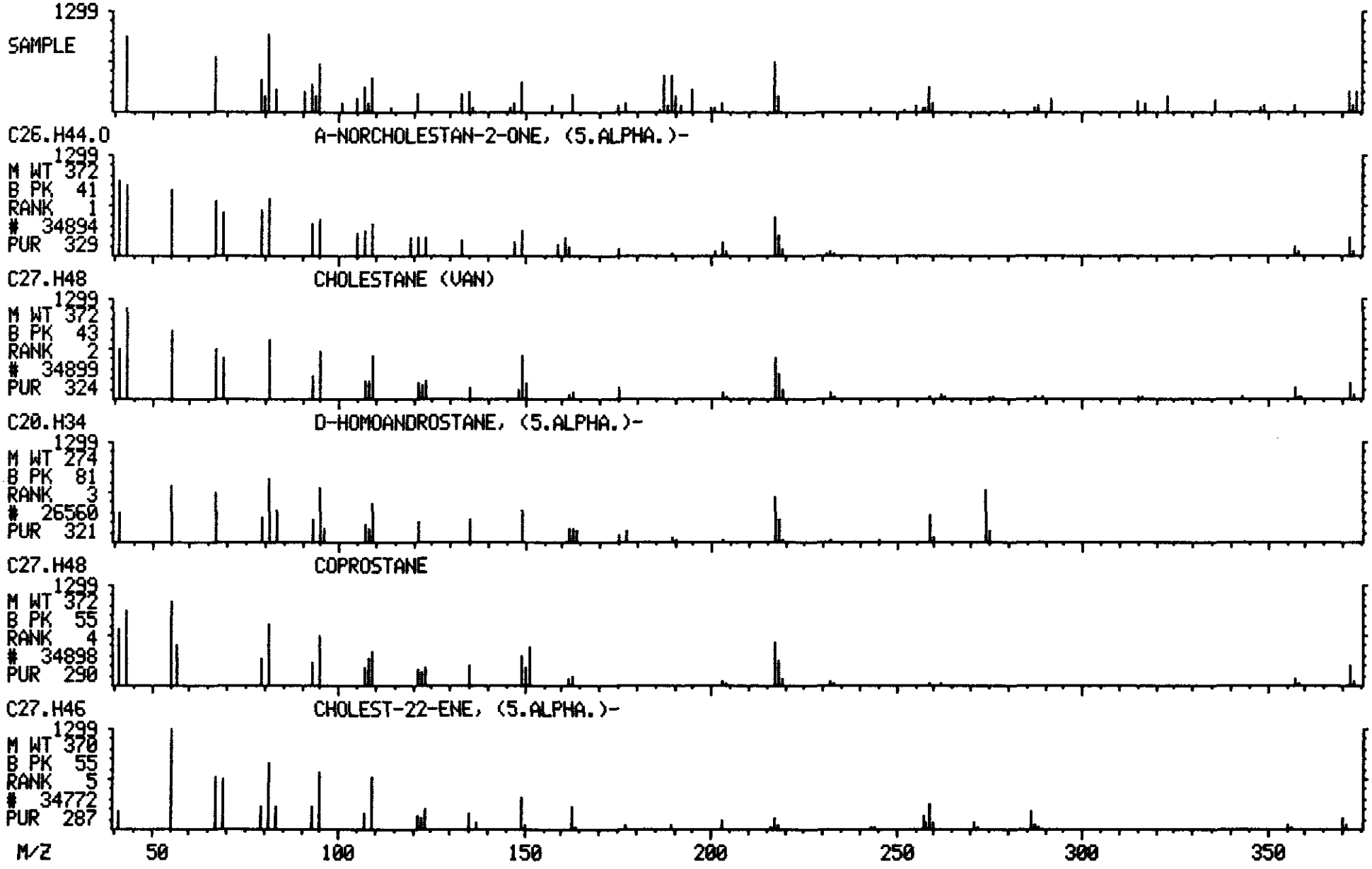
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 33:19
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #1999
CALI: T2591 # 2

BASE M/Z: 81
RIC: 7335.

100050



Library Search Data: T2591 #2006 Base m/z: 123
05/15/90 17:06:00 + 33:26 Cali: T2591 # 2 RIC: 10927.ORIGINAL
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL, (Red)
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
80 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	5387	BICYCLO[2.2.1]HEPTANE, 1,3,3-TRIMETHYL-
2	18454	6-OCTEN-1-OL, 3,7-DIMETHYL-, PROPANOATE
3	5359	BICYCLO[3.1.1]HEPTANE, 2,6,6-TRIMETHYL-
4	13773	6-OCTEN-1-OL, 3,7-DIMETHYL-, FORMATE
5	5380	BICYCLO[4.1.0]HEPTANE, 3,7,7-TRIMETHYL-, [1S-(1.ALPHA.,3.BETA.,6.AL*

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C10.H18	138	123	487	914	497
2	C13.H24.O2	212	41	476	868	512
3	C10.H18	138	55	467	883	467
	C11.H20.O2	184	69	466	884	484
5	C10.H18	138	95	453	843	453

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	6248-88-0
2	—	—	—	—	141-14-0
3	—	—	—	—	473-55-2
4	—	—	—	—	105-85-1
5	—	—	—	—	2778-68-9

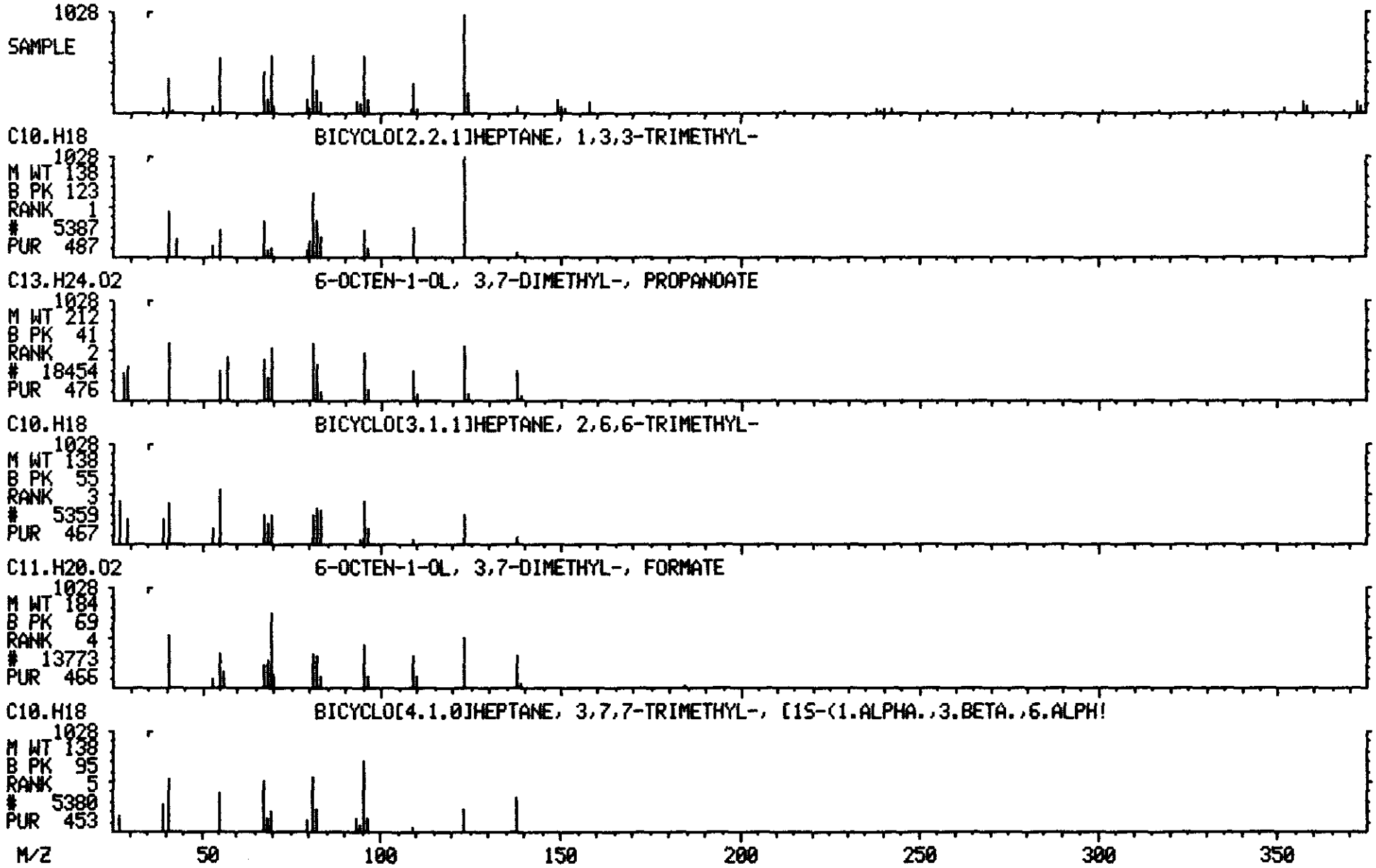
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 33:26
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #2006
CALI: T2591 # 2

BASE M/Z: 123
RIC: 10927.

100052



Library Search Data: T2591 #2120 Base m/z: 43 ORIGINAL (Red)
05/15/90 17:06:00 + 35:20 Cali: T2591 # 2 RIC: 7783.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
153 matched at least 5 of the 16 largest peaks in the unknown

Rank	In.	Name
1	26560	D-HOMOANDROSTANE, (5.ALPHA.)-
2	34772	CHOLEST-22-ENE, (5.ALPHA.)-
3	34762	5.ALPHA.-CHOLEST-22-ENE, (Z)-
4	34769	CHOLEST-22-ENE, (5.ALPHA.,20.XI.)-
5	30003	1-NAPHTHALENEPROPANOL, .ALPHA.-ETHENYLDECAHYDRO-5-(HYDROXYMETHYL)-.*

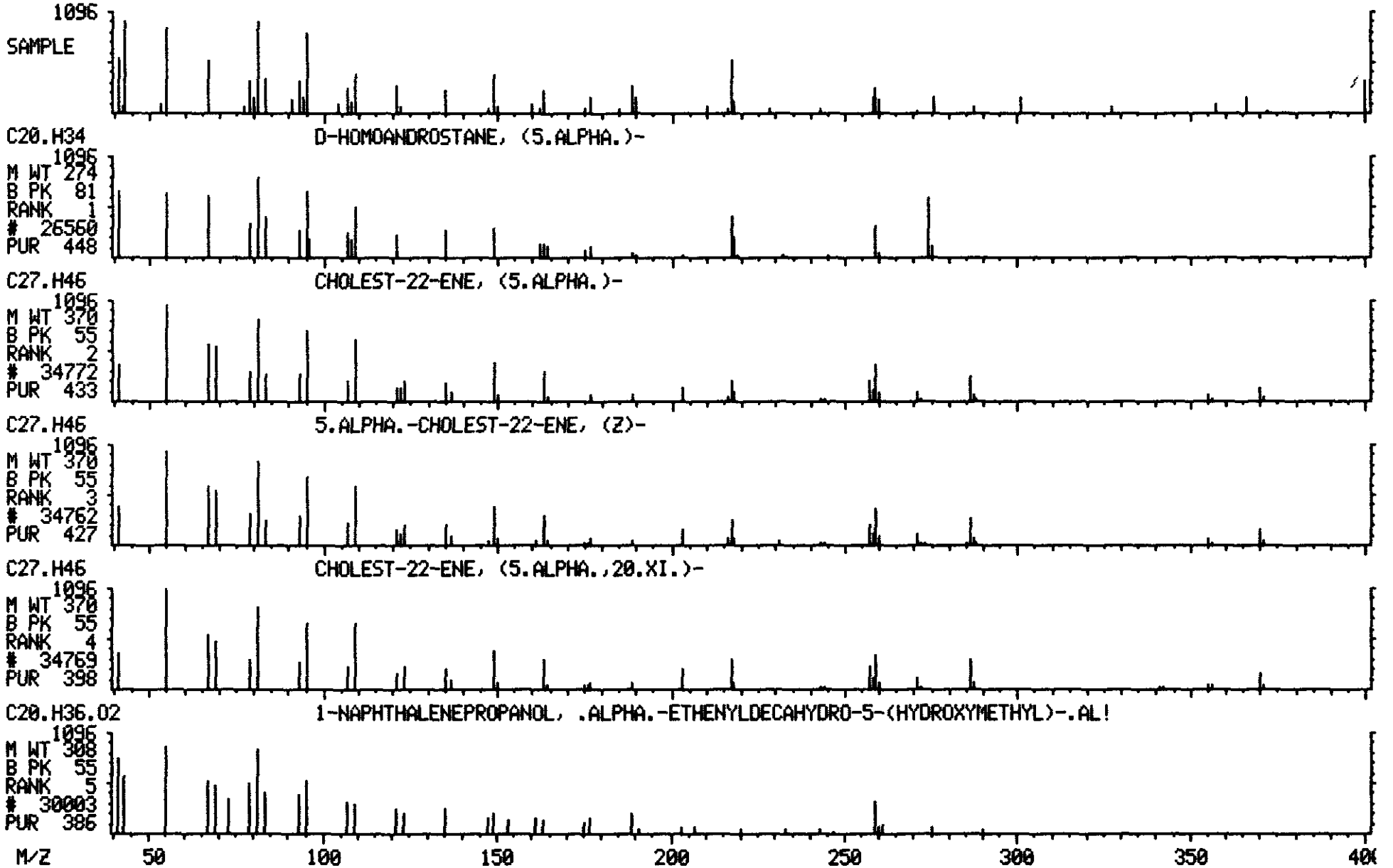
Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C20.H34	274	81	448	734	577
2	C27.H46	370	55	433	673	609
[illegible]	C27.H46	370	55	427	653	619
	C27.H46	370	55	398	643	588
5	C20.H36.O2	308	55	386	732	511

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	35575-26-9
2	—	—	—	—	55282-65-0
3	—	—	—	—	15076-93-4
4	—	—	—	—	54514-99-7
5	—	—	—	—	72401-52-6

LIBRARY SEARCH
05/15/90 17:06:00 + 35:20
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30200C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #2120
CALI: T2591 # 2

BASE M/Z: 43
RIC: 7783.



100054

Library Search Data: T2591 #2155 Base m/z: 43
05/15/90 17:06:00 + 35:55 Cali: T2591 # 2 RIC: 13839.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 300@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
270 matched at least 5 of the 16 largest peaks in the unknown

Rank	In.	Name
1	34899	CHOLESTANE (VAN)
2	26561	D-HOMOANDROSTANE, (5.ALPHA.,13.ALPHA.)-
3	26560	D-HOMOANDROSTANE, (5.ALPHA.)-
4	33513	9,12,15-OCTADECATRIENOIC ACID, 2,3-DIHYDROXYPROPYL ESTER, (Z,Z,Z)-
5	28052	PREGNANE (VAN)

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C27.H48	372	43	364	836	421
2	C20.H34	274	41	348	854	396
[illegible]	C20.H34	274	41	330	825	392
[illegible]	C21.H36.O4	352	41	305	718	365
5	C21.H36	288	41	305	727	394

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	481-21-0
2	—	—	—	—	54482-31-4
3	—	—	—	—	35575-26-9
4	—	—	—	—	18465-99-1
5	—	—	—	—	481-26-5

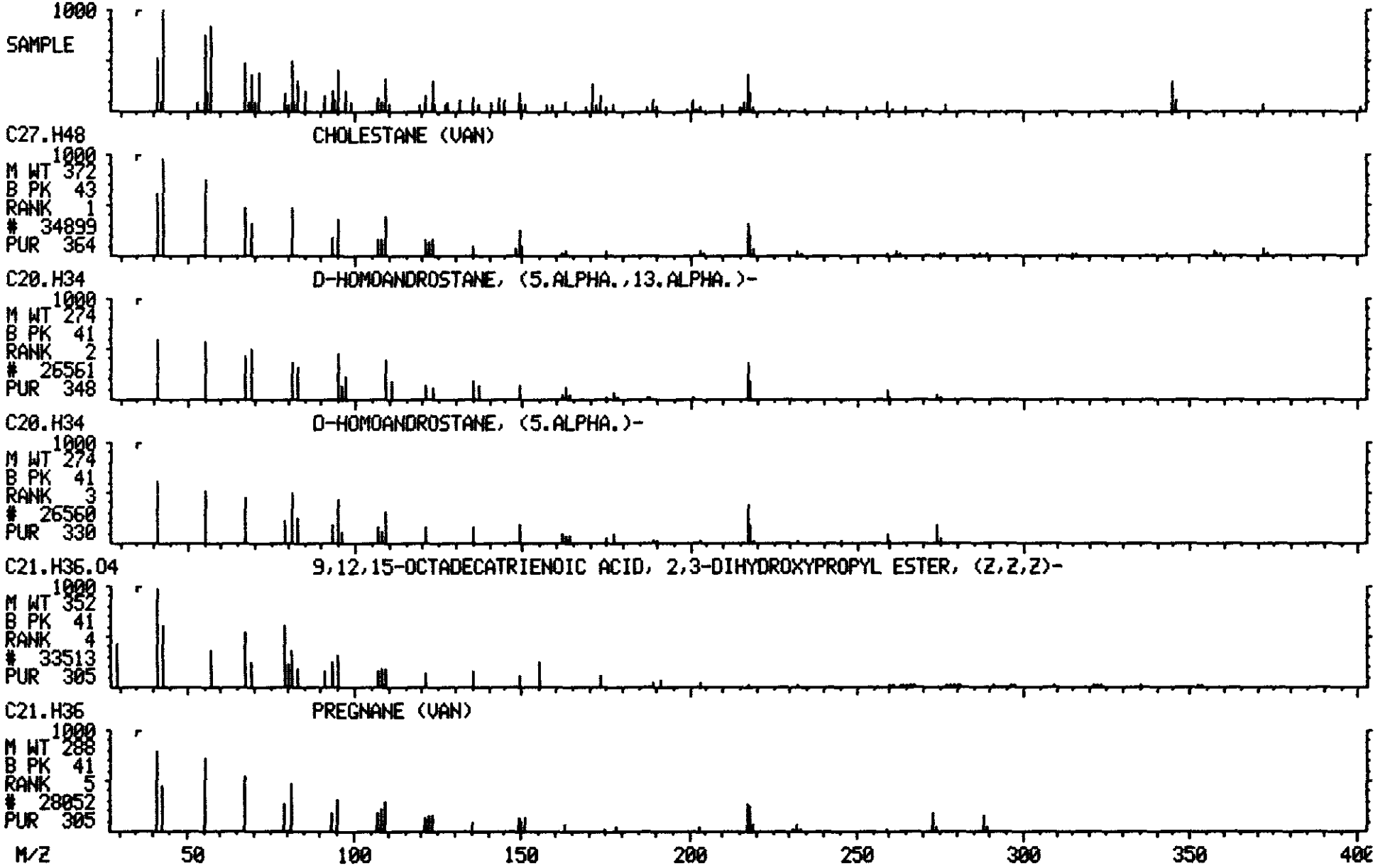
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 35:55
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #2155
CALI: T2591 # 2

BASE M/Z: 43
RIC: 13839.

100056



Library Search Data: T2591 #2203 Base m/z: 55
05/15/90 17:06:00 + 36:43 Cali: T2591 # 2 RIC: 21023.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
179 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	17550	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*
2	34092	PHENANTHRENE, 9-DODECYLTETRADECAHYDRO-
3	17547	TRICYCLO[4.3.0.07,9]NONANE, 2,2,5,5,8,8-HEXAMETHYL-, (1.ALPHA.,6.BE*
4	34095	ANTHRACENE, 9-DODECYLTETRADECAHYDRO-
5	17549	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H26	206	41	565	949	565
2	C26.H48	360	191	517	939	529
[illegible]	C15.H26	206	69	500	958	507
	C26.H48	360	191	496	913	514
5	C15.H26	206	41	479	859	480

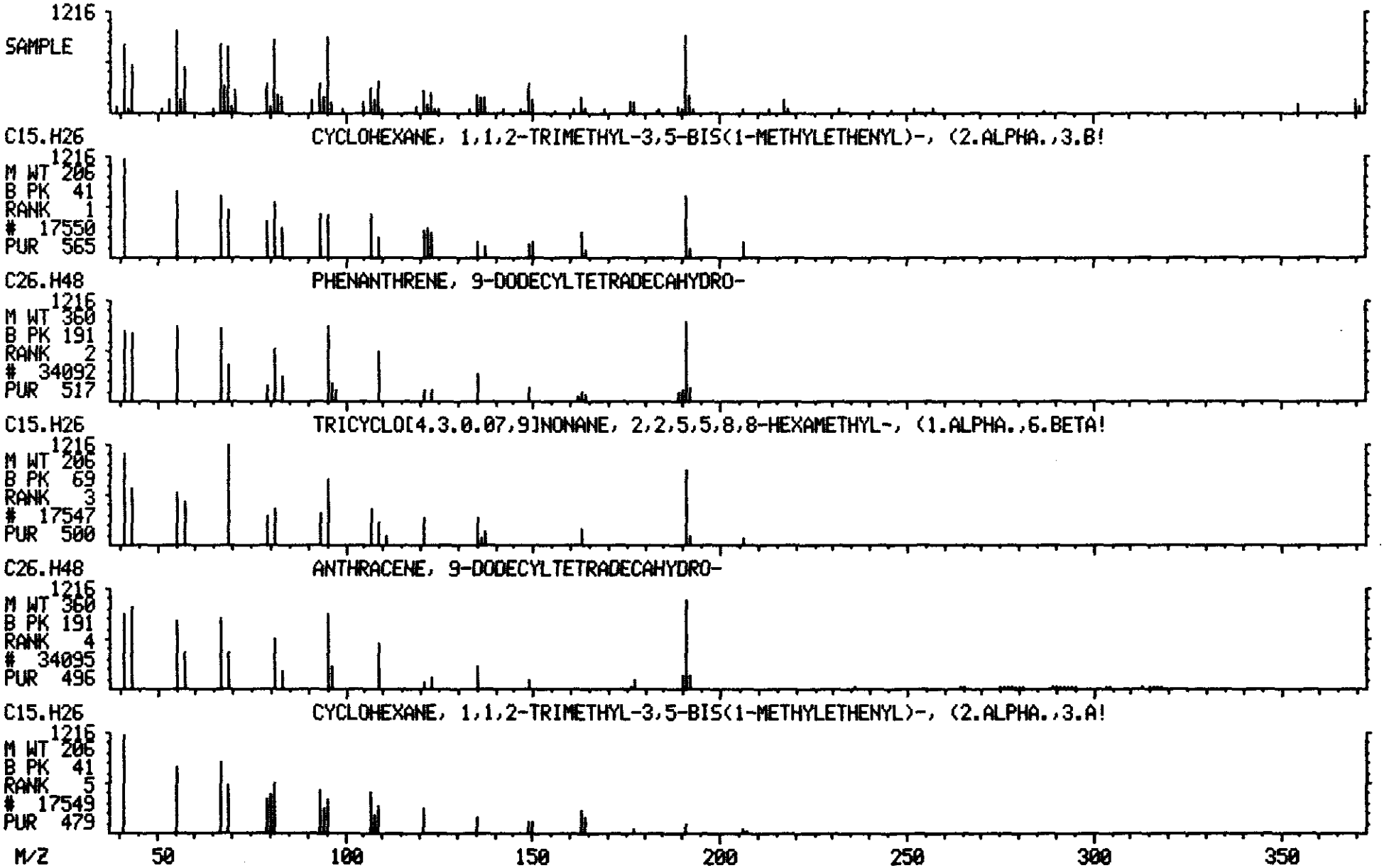
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	62337-97-7
2	—	—	—	—	55334-01-5
3	—	—	—	—	54832-82-5
4	—	—	—	—	55401-75-7
5	—	—	—	—	62337-96-6

LIBRARY SEARCH
05/15/90 17:06:00 + 36:43
SAMPLE: CLP,VERSCDM,2536,1,M,5,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #2203
CALI: T2591 # 2

BASE M/Z: 55
RIC: 21023.

100058



Library Search Data: T2591 #2244 Base m/z: 95
05/15/90 17:06:00 + 37:24 Cali: T2591 # 2 RIC: 17471.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN ORIGINAL (Rec)
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
63 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	17550	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*
2	15128	1,8-NONADIENE, 2,7-DIMETHYL-5-(1-METHYLETHENYL)-
3	17549	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*
4	32292	CYCLOPROPANEOCTANOIC ACID, 2-[[2-[(2-ETHYLCYCLOPROPYL)METHYL]CYCLOP*
5	26562	ANTHRACENE, 9-CYCLOHEXYLTETRADECAHYDRO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H26	206	41	614	932	614
2	C14.H24	192	55	509	935	512
3	C15.H26	206	41	509	844	510
	C22.H38.O2	334	67	505	761	564
5	C20.H34	274	95	485	849	507

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	62337-97-7
2	—	—	—	—	68702-20-5
3	—	—	—	—	62337-96-6
4	—	—	—	—	10152-71-3
5	—	—	—	—	55255-70-4

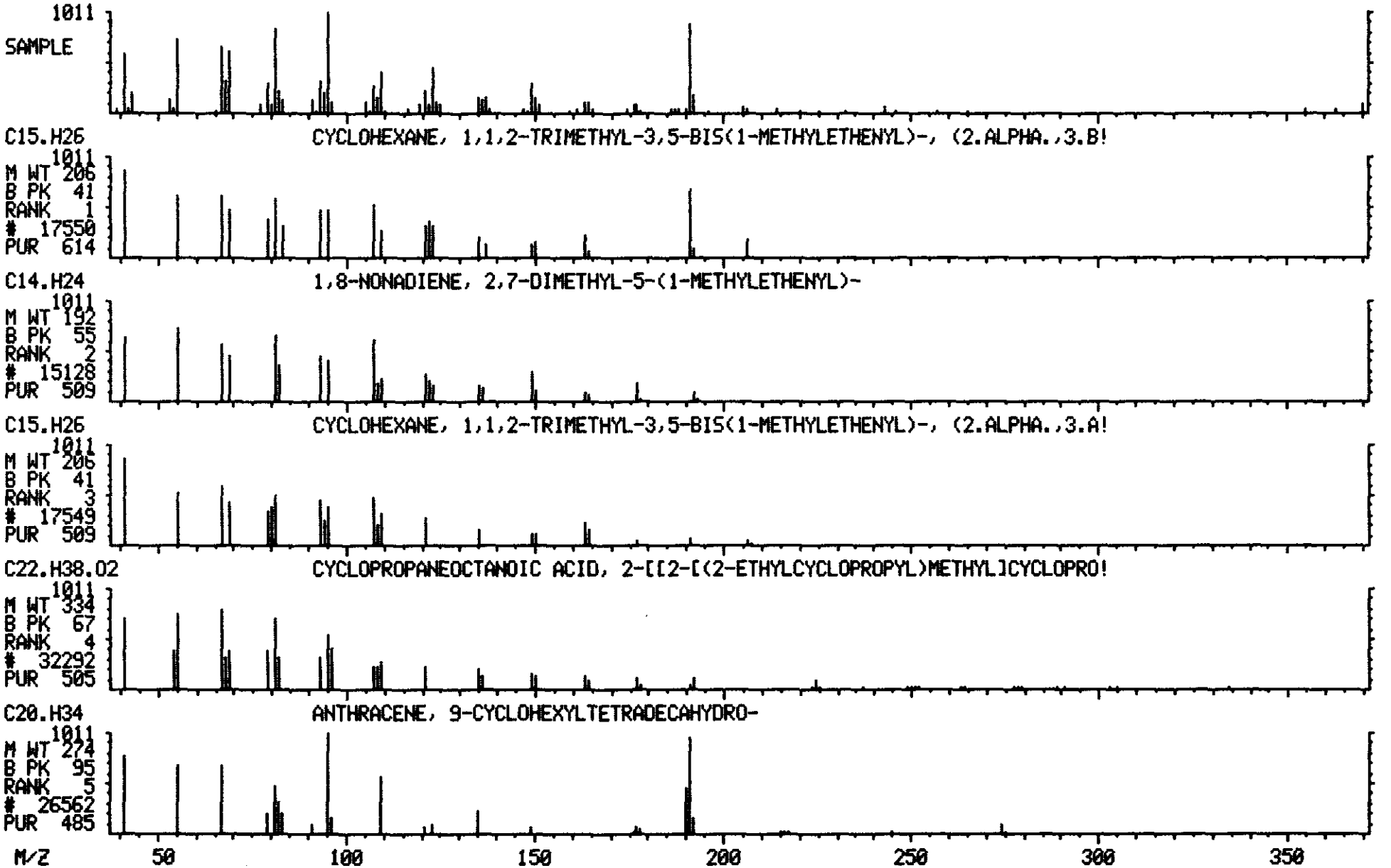
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 37:24
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #2244
CALI: T2591 # 2

BASE M/Z: 95
RIC: 17471.

100000



Library Search Data: T2591 #2388 Base m/z: 191
05/15/90 17:06:00 + 39:48 Cali: T2591 # 2 RIC: 33087.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
118 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	17550	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*
2	25543	AZULENO[4,5-B]FURAN-2(3H)-ONE, DECAHYDRO-8,9-DIHYDROXY-6,9A-DIMETHY*
3	34092	PHENANTHRENE, 9-DODECYLTETRADECAHYDRO-
4	23459	ANTHRACENE, 9-BUTYLTETRADECAHYDRO-
5	17547	TRICYCLO[4.3.0.07,9]NONANE, 2,2,5,5,8,8-HEXAMETHYL-, (1.ALPHA.,6.BE*

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H26	206	41	564	901	564
2	C15.H22.O4	266	191	549	857	592
3	C26.H48	360	191	537	943	537
[illegible]	C18.H32	248	191	522	877	564
5	C15.H26	206	191	522	959	522

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	62337-97-7
2	—	—	—	—	5090-67-5
3	—	—	—	—	55334-01-5
4	—	—	—	—	55133-89-6
5	—	—	—	—	54832-82-5

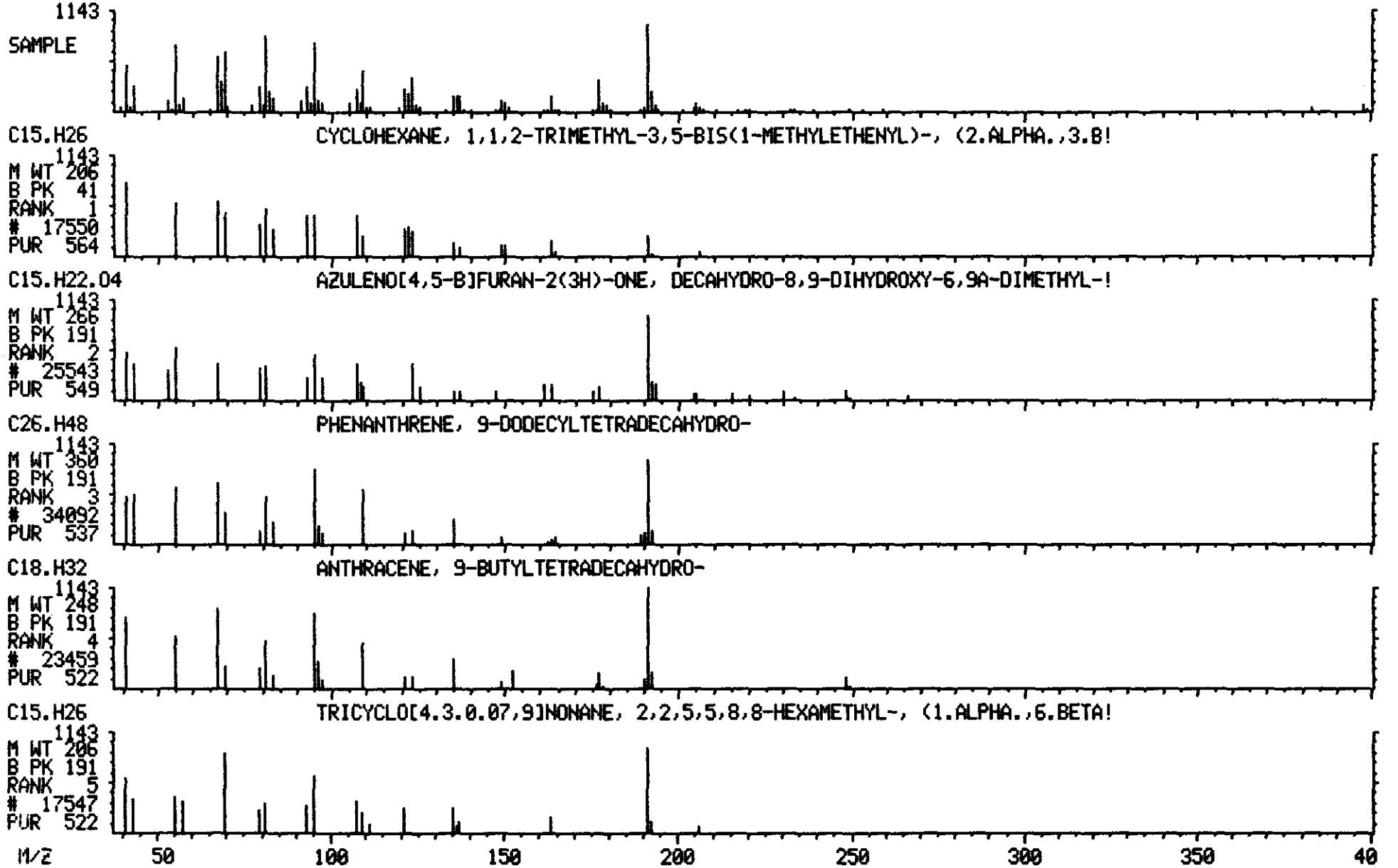
ORIGINAL (Red)

100062

LIBRARY SEARCH
05/15/90 17:06:00 + 39:48
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 158 2N 0T)

DATA: T2591 #2388
CALI: T2591 # 2

BASE M/Z: 191
RIC: 33087.



Library Search Data: T2591 #2501 Base m/z: 191
05/15/90 17:06:00 + 41:41 Cali: T2591 # 2 RIC: 41151.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
144 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	17550	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*
2	34092	PHENANTHRENE, 9-DODECYLTETRADECAHYDRO-
3	17547	TRICYCLO[4.3.0.07,9]NONANE, 2,2,5,5,8,8-HEXAMETHYL-, (1.ALPHA.,6.BE*
4	25543	AZULENO[4,5-B]FURAN-2(3H)-ONE, DECAHYDRO-8,9-DIHYDROXY-6,9A-DIMETHY*
5	34095	ANTHRACENE, 9-DODECYLTETRADECAHYDRO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H26	206	41	587	867	587
2	C26.H48	360	191	581	938	581
[illegible]	C15.H26	206	191	579	955	579
[illegible]	C15.H22.O4	266	191	541	838	592
5	C26.H48	360	191	536	912	555

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	62337-97-7
2	—	—	—	—	55334-01-5
3	—	—	—	—	54832-82-5
4	—	—	—	—	5090-67-5
5	—	—	—	—	55401-75-7

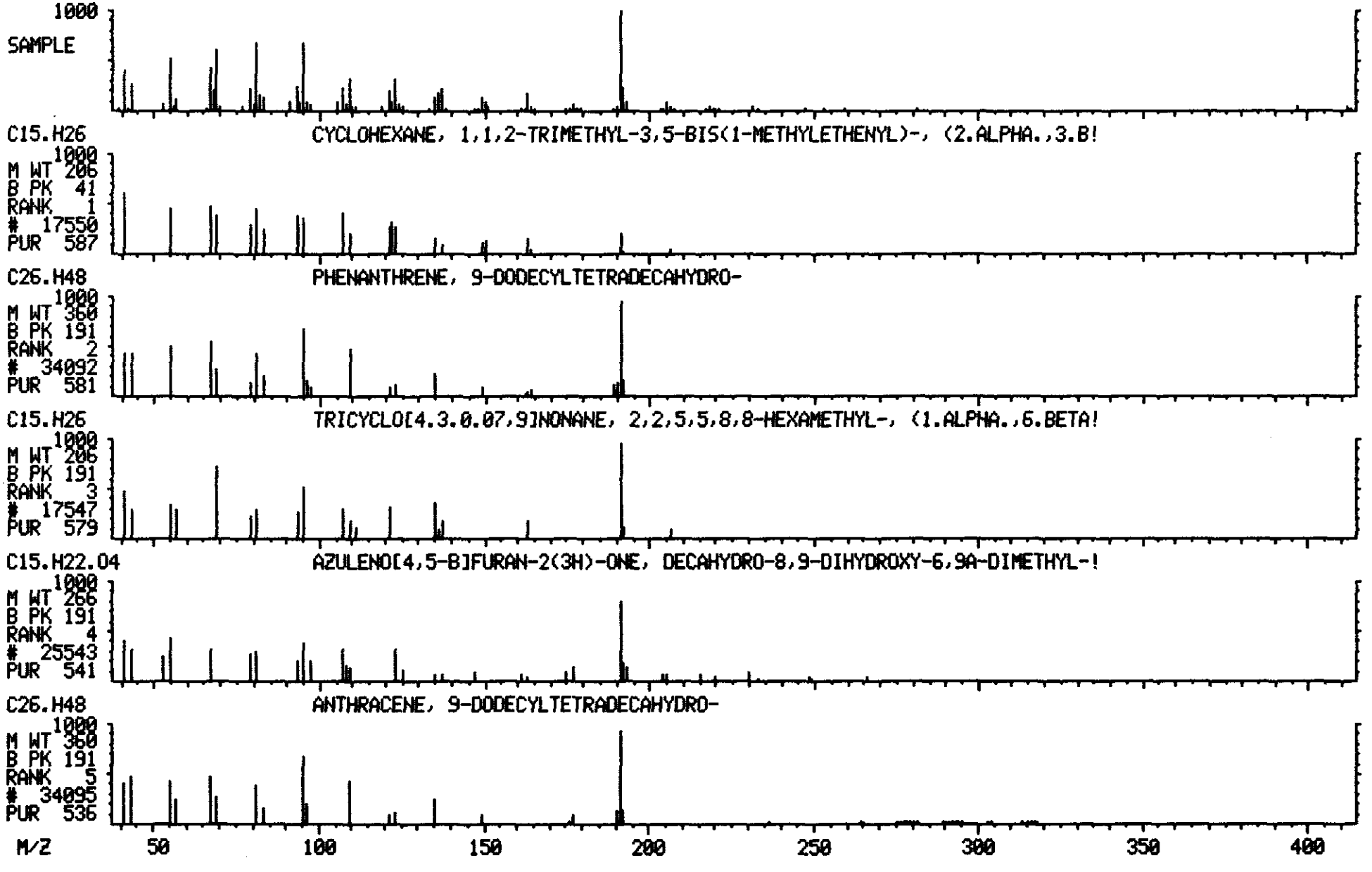
ORIGINAL (Red)

LIBRARY SEARCH
05/15/90 17:06:00 + 41:41
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 158 2N 0T)

DATA: T2591 #2501
CALI: T2591 # 2

BASE M/Z: 191
RIC: 41151.

100004



Library Search Data: T2591 #2655 Base m/z: 191 ORIGINAL
05/15/90 17:06:00 + 44:15 Cali: T2591 # 2 RIC: 10815. (Rec)
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
90 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	17537	1H-3A,7-METHANOAZULENE, OCTAHYDRO-1,4,9,9-TETRAMETHYL-, (1.ALPHA.,3*
2	34092	PHENANTHRENE, 9-DODECYLTETRADECAHYDRO-
3	17547	TRICYCLO[4.3.0.07,9]NONANE, 2,2,5,5,8,8-HEXAMETHYL-, (1.ALPHA.,6.BE*
4	17549	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*
5	26562	ANTHRACENE, 9-CYCLOHEXYLTETRADECAHYDRO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H26	206	41	552	839	563
2	C26.H48	360	191	530	901	566
^	C15.H26	206	191	522	913	544
	C15.H26	206	41	504	853	508
5	C20.H34	274	95	495	880	524

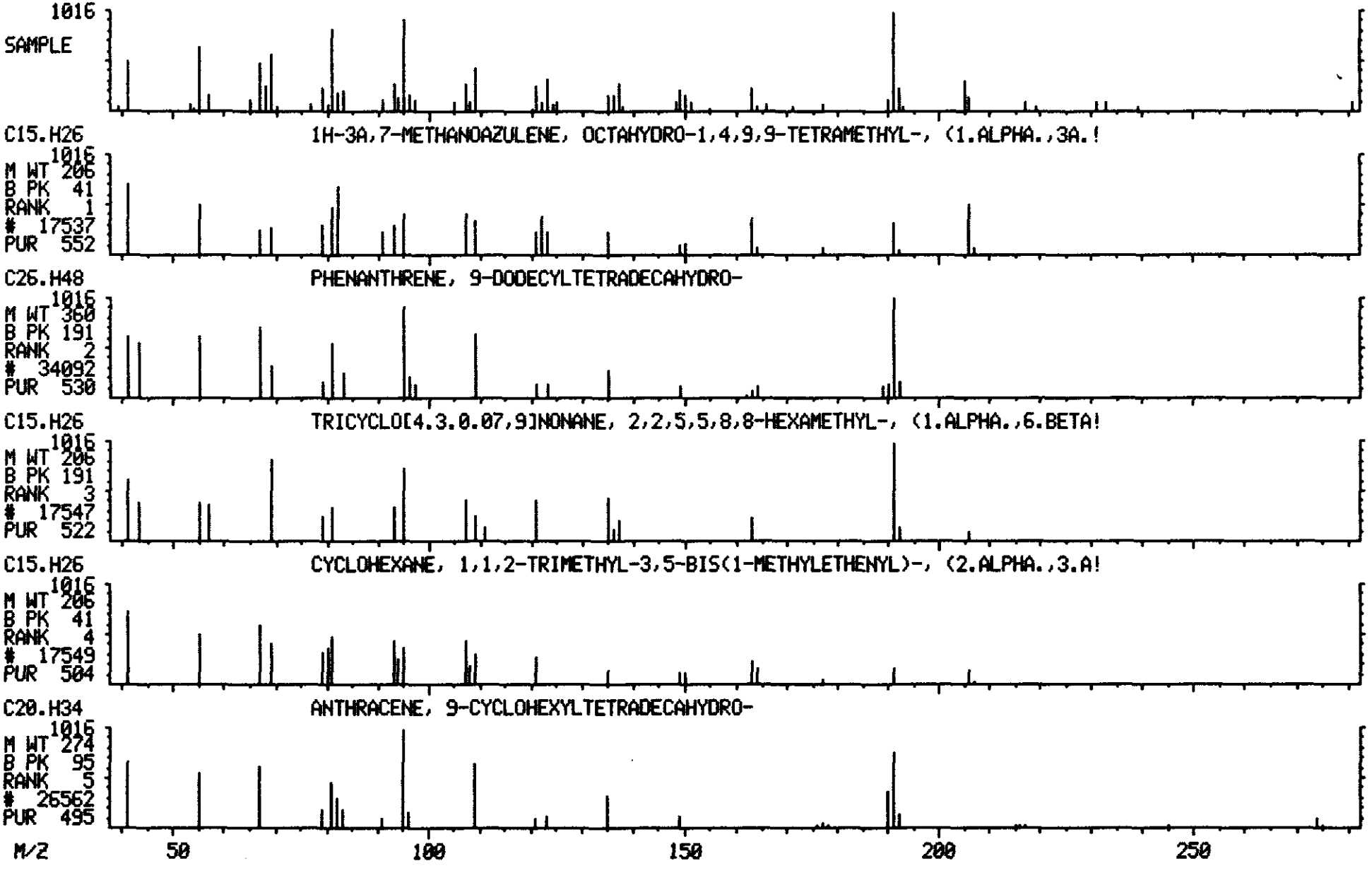
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	3724-42-3
2	—	—	—	—	55334-01-5
3	—	—	—	—	54832-82-5
4	—	—	—	—	62337-96-6
5	—	—	—	—	55255-70-4

LIBRARY SEARCH
05/15/90 17:06:00 + 44:15
SAMPLE: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2591 #2655
CALI: T2591 # 2

BASE M/Z: 191
RIC: 10815.

100066



```
        >>>>INTERNAL STANDARD RIC REPORT<<<<
*****************************INTERNAL STANDARD#1****************RIC
Mass List                      Data: T2591 # 547          Base m/z:   150
05/15/90 17:06:00 +  9:07      Cali: T2591 #   2          RIC:      56320.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*****************************INTERNAL STANDARD#2****************RIC
```

ORIGINAL (Red)

```
Mass List                          Data: T2591 # 768          Base m/z:   136
05/15/90 17:06:00 + 12:48          Cali: T2591 #   2          RIC:      54400.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*************************INTERNAL STANDARD#3*****************RIC
Mass List                          Data: T2591 #1101          Base m/z:   164
05/15/90 17:06:00 + 18:21          Cali: T2591 #   2          RIC:      56448.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*************************INTERNAL STANDARD#4*****************RIC
Mass List                          Data: T2591 #1386          Base m/z:   188
05/15/90 17:06:00 + 23:06          Cali: T2591 #   2          RIC:      56832.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*************************INTERNAL STANDARD#5*****************RIC
Mass List                          Data: T2591 #1905          Base m/z:   240
05/15/90 17:06:00 + 31:45          Cali: T2591 #   2          RIC:      47680.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*************************INTERNAL STANDARD#6*****************RIC
Mass List                          Data: T2591 #2205          Base m/z:    95
05/15/90 17:06:00 + 36:45          Cali: T2591 #   2          RIC:      13664.
Sample: CLP,VERSCDM,2536,1,M,S,16419,B,,420.1.0,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     39        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
     ANALYST: CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO CONTAMINATION
```

ORIGINAL (Red)

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2 ORIGINAL (Red)

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16413

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T2631

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 30 dec. ____ Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	990	U
111-44-4	bis(2-Chloroethyl)ether	990	U
95-57-8	2-Chlorophenol	990	U
541-73-1	1,3-Dichlorobenzene	990	U
106-46-7	1,4-Dichlorobenzene	990	U
100-51-6	Benzyl alcohol	990	U
95-50-1	1,2-Dichlorobenzene	990	U
95-48-7	2-Methylphenol	990	U
108-60-1	bis(2-Chloroisopropyl)ether	990	U
106-44-5	4-Methylphenol	990	U
621-64-7	N-Nitroso-di-n-propylamine	990	U
67-72-1	Hexachloroethane	990	U
98-95-3	Nitrobenzene	990	U
78-59-1	Isophorone	990	U
88-75-5	2-Nitrophenol	990	U
105-67-9	2,4-Dimethylphenol	990	U
65-85-0	Benzoic Acid	4800	U
111-91-1	bis(2-Chloroethoxy)methane	990	U
120-83-2	2,4-Dichlorophenol	990	U
120-82-1	1,2,4-Trichlorobenzene	990	U
91-20-3	Naphthalene	990	U
106-47-8	4-Chloroaniline	990	U
87-68-3	Hexachlorobutadiene	990	U
59-50-7	4-Chloro-3-methylphenol	990	U
91-57-6	2-Methylnaphthalene	990	U
77-47-4	Hexachlorocyclopentadiene	990	U
88-06-2	2,4,6-Trichlorophenol	990	U
95-95-4	2,4,5-Trichlorophenol	4800	U
91-58-7	2-Chloronaphthalene	990	U
88-74-4	2-Nitroaniline	4800	U
131-11-3	Dimethylphthalate	990	U
208-96-8	Acenaphthylene	990	U
606-20-2	2,6-Dinitrotoluene	990	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2 ORIGINAL (Red)

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16413

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T2631

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 30 dec. ____ Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4800	U
83-32-9	Acenaphthene	990	U
51-28-5	2,4-Dinitrophenol	4800	U
100-02-7	4-Nitrophenol	4800	U
132-64-9	Dibenzofuran	990	U
121-14-2	2,4-Dinitrotoluene	990	U
84-66-2	Diethylphthalate	990	U
7005-72-3	4-Chlorophenyl-phenylether	990	U
86-73-7	Fluorene	990	U
100-01-6	4-Nitroaniline	4800	U
534-52-1	4,6-Dinitro-2-methylphenol	4800	U
86-30-6	N-nitrosodiphenylamine (1)	990	U
101-55-3	4-Bromophenyl-phenylether	990	U
118-74-1	Hexachlorobenzene	990	U
87-86-5	Pentachlorophenol	4800	U
85-01-8	Phenanthrene	990	U
120-12-7	Anthracene	990	U
84-74-2	Di-n-butylphthalate	990	U
206-44-0	Fluoranthene	990	U
129-00-0	Pyrene	990	U
85-68-7	Butylbenzylphthalate	990	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
56-55-3	Benzo(a)anthracene	990	U
218-01-9	Chrysene	990	U
117-81-7	bis(2-Ethylhexyl)phthalate	990	U
117-84-0	Di-n-octyl phthalate	990	U
205-99-2	Benzo(b)fluoranthene	990	U
207-08-9	Benzo(k)fluoranthene	990	U
50-32-8	Benzo(a)pyrene	990	U
193-39-5	Indeno(1,2,3-cd)pyrene	990	U
53-70-3	Dibenz(a,h)anthracene	990	U
191-24-2	Benzo(g,h,i)perylene	990	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2 ORIGINAL (BLANK)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16413

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T2631

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 30 dec. ____ Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

Number TICs found: 8

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

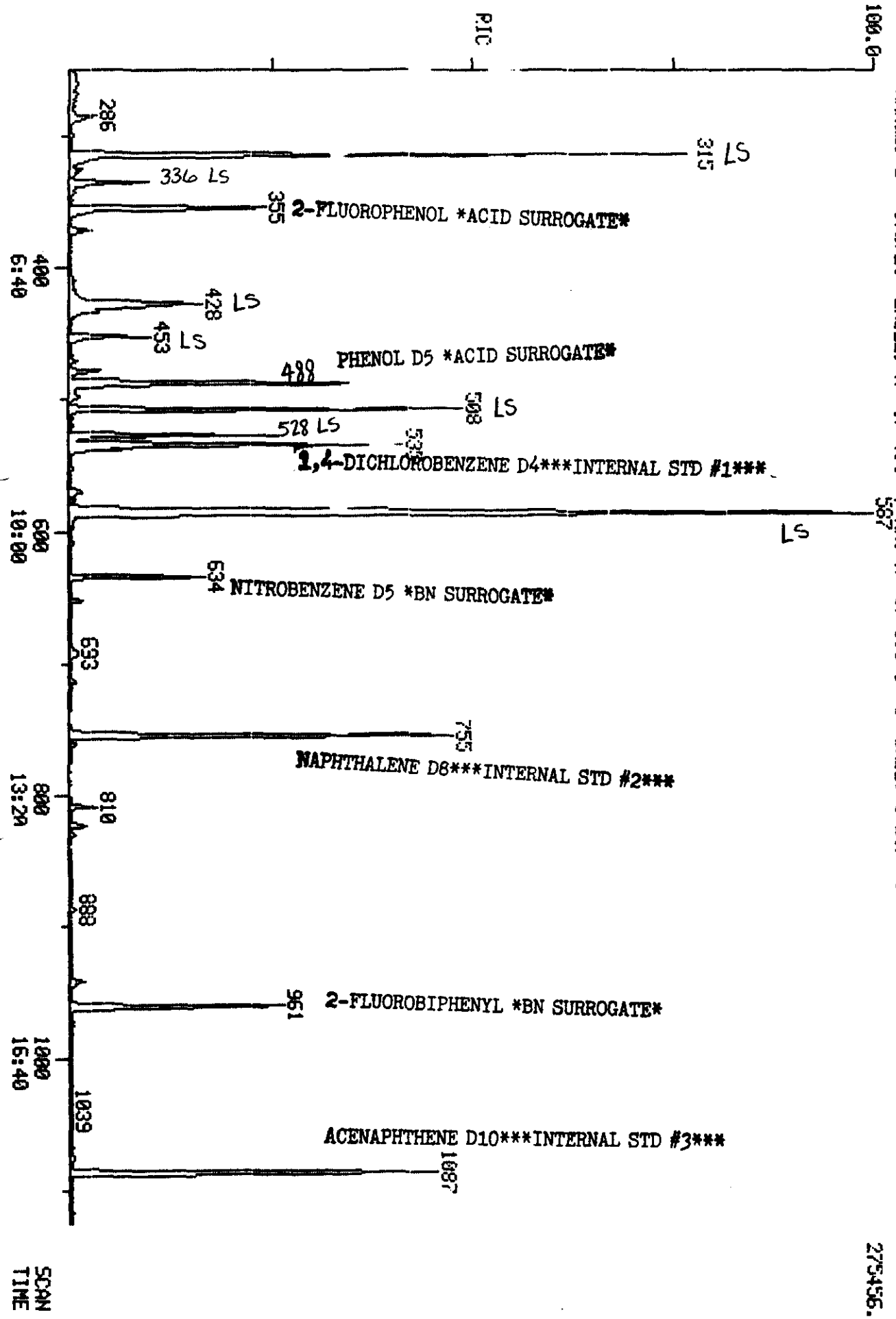
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.25	7100	J
2.	UNKNOWN	5.60	800	J
3.	UNKNOWN	7.13	1600	J
4.	UNKNOWN KETONE	7.55	900	J
5.	UNKNOWN	8.47	4600	J
6. 18641-71-9	3-HEPTANONE, 2,4-DIMETHYL-	8.80	2300	J
7.	UNKNOWN	9.79	8900	J
8.	UNKNOWN	34.02	1500	J

ORIGINAL
(Red)

PIC
05/17/90 0:12:00
SAMPLE: CLP,VEPSCOM,2536,2,L,5,16413,B,,420.1 E#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: C 1,2720 LABEL: N 0, 4.0 GAIN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: T2631 #1
CALI: T2631 #2

SCANS 250 TO 1125



100072

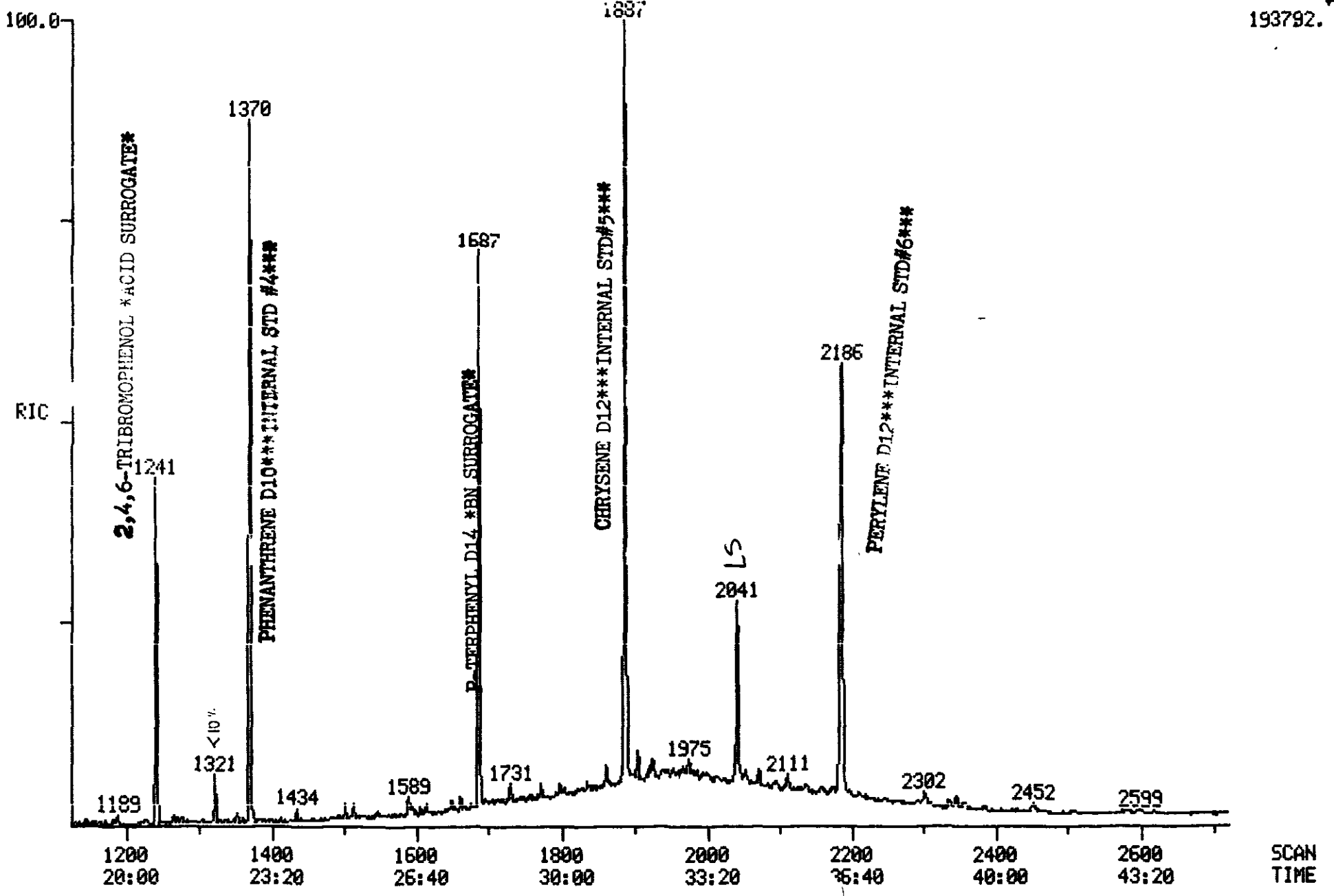
ORIGINAL (Red)

RIC
05/17/90 0:12:00
SAMPLE: CLP,VERSCOM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: G 1,2720 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: T2631 #1
CALI: T2631 #2

SCANS 1125 TO 2720

100073



Quantitation Report File: T2631

ORIGINAL (Red)

Data: T2631.TI
05/17/90 0:12:00
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	C330 2-CHLOROPHENOL
3	C315 PHENOL
4	C325 BIS (2-CHLOROETHYL) ETHER
5	C335 1,3-DICHLOROBENZENE
6	C340 1,4-DICHLOROBENZENE
7	C350 1,2-DICHLOROBENZENE
8	C345 BENZYL ALCOHOL
9	C360 BIS (2-CHLOROISOPROPYL) ETHER
10	C355 2-METHYLPHENOL
11	C375 HEXACHLOROETHANE
12	C365 4-METHYLPHENOL
13	C370 N-NITROSO-DI-N-PROPYLAMINE
14	CS50 2-FLUOROPHENOL**ACID SURR.**
15	CS45 PHENOL-D5**ACID SURR.**
16	CI40 NAPHTHALENE-D8**INT. STD.#2**
17	C410 NITROBENZENE
18	C415 ISOPHORONE
19	C420 2-NITROPHENOL
20	C425 2,4-DIMETHYLPHENOL
21	C435 BIS (2-CHLOROETHOXY) METHANE
22	C440 2,4-DICHLOROPHENOL
23	C445 1,2,4-TRICHLOROBENZENE
24	C450 NAPHTHALENE
25	C430 BENZOIC ACID
26	C455 4-CHLOROANILINE
27	C460 HEXACHLOROBUTADIENE
28	C465 4-CHLORO-3-METHYLPHENOL
29	C470 2-METHYLNAPHTHALENE
30	CS20 NITROBENZENE-D5**BN SURR.**
31	CI50 ACENAPHTHENE-D10**INT. STD.#3**
32	C510 HEXACHLOROCYCLOPENTADIENE
33	C515 2,4,6-TRICHLOROPHENOL
34	C520 2,4,5-TRICHLOROPHENOL
35	C525 2-CHLORONAPHTHALENE
36	C530 2-NITROANILINE
37	C540 ACENAPHTHYLENE
38	C535 DIMETHYL PHTHALATE
39	C544 2,6-DINITROTOLUENE
40	C550 ACENAPHTHENE
41	C545 3-NITROANILINE
42	C555 2,4-DINITROPHENOL
43	C565 DIBENZOFURAN
44	C560 4-NITROPHENOL
45	C570 2,4-DINITROTOLUENE
46	C590 FLUORENE
47	C585 4-CHLOROPHENYL-PHENYLETHER

✓ 5/23/90

Ready for forms

All IS areas + surrogate recoveries are compliant.
5-17-90.

100074

T2631

ORIGINAL (Red)

No	Name
48	C580 DIETHYLPHTHALATE
49	C595 4-NITROANILINE
50	C610 4,6-DINITRO-2-METHYLPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	535	8:55	1	1.000	A BB	31019.	40.000 NG/UL	9.21
2	128	508	8:28	1	0.950	A BB	554.	~~0.318 NG.~~ BRL	0.12
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	NOT FOUND								
7	NOT FOUND								
8	NOT FOUND								
9	45	587	9:47	1	1.097	A BB	37205.	~~12.942 NG~~ MS ID	2.98
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	112	355	5:55	1	0.664	A BB	34098.	35.046 NG*A1	8.07
15	99	488	8:08	1	0.912	A BB	58192.	41.520 NG*A2	9.56
16	136	754	12:34	16	1.000	A BB	96284.	40.000 NG/UL	9.21
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND							BRL	
25	122	713	11:53	16	0.946	A BB	714.	~~1.589 NG~~	0.37
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	82	634	10:34	16	0.841	A BB	29726.	18.699 NG*B1	4.31
31	164	1087	18:07	31	1.000	A BB	63484.	40.000 NG/UL	9.21
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	149	1187	19:47	31	1.092	A BB	258.	BRL ~~0.088 NG~~	0.02
49	NOT FOUND								
50	NOT FOUND								

T2631

ORIGINAL (Red)

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	8:54	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	8:27	1.00	0.949	1.00	0.52	50.00	0.014	1.379	0.01
3	8:10		0.918						
4	8:23		0.942						
5	8:48		0.989						
6	8:57		1.006						
7	9:27		1.062						
8	9:23		1.054						
9	9:49	1.00	1.103	0.99	12.94	50.00	0.960	3.707	0.26
10	9:45		1.096						
11	10:16		1.154						
12	10:10		1.142						
13	10:14		1.150						
14	5:54	1.00	0.663	1.00	35.05	50.00	0.879	1.255	0.70
15	8:08	1.00	0.914	1.00	41.52	50.00	1.501	1.807	0.83
16	12:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
17	10:37		0.845						
18	11:16		0.897						
19	11:32		0.918						
20	11:41		0.930						
21	12:01		0.956						
22	12:12		0.971						
23	12:27		0.991						
24	12:38		1.005						
25	12:02	0.99	0.958	0.99	1.59	50.00	0.006	0 187	0.03
26	12:56		1.029						
27	13:10		1.048						
28	14:26		1.149						
29	14:45		1.174						
30	10:34	1.00	0.841	1.00	18.70	50.00	0.247	0.660	0.37
31	18:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
32	15:27		0.854						
33	15:45		0.870						
34	15:51		0.876						
35	16:17		0.900						
36	16:48		0.928						
37	17:37		0.973						
38	17:31		0.968						
39	17:45		0.981						
40	18:13		1.006						
41	18:09		1.003						
42	18:28		1.020						
43	18:43		1.034						
44	18:43		1.034						
45	18:58		1.048						
46	19:49		1.095						
47	19:52		1.098						
48	19:47	1.00	1.093	1.00	0.09	50.00	0.003	1.842	0.00
49	20:09		1.113						
50	20:14		1.118						

Quantitation Report File: T2631

Data: T2631.TI
05/17/90 0:12:00
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@6C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

ORIGINAL (Red)

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
51	C615 N-NITROSODIPHENYLAMINE
52	C625 4-BROMOPHENYL-PHENYLETHER
53	C630 HEXACHLOROBENZENE
54	CS25 2-FLUOROBIPHENYL**BN SURR.**
55	CI60 PHENANTHRENE-D10**INT. STD.#4**
56	C635 PENTACHLOROPHENOL
57	C640 PHENANTHRENE
58	C645 ANTHRACENE
59	C650 DI-N-BUTYLPHTHALATE
60	C655 FLUORANTHENE
61	C715 PYRENE
62	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
63	CI70 CHRYSENE-D12**INT. STD.#5**
64	C720 BUTYLBENZYLPHTHALATE
65	C730 BENZO(A)ANTHRACENE
66	C740 CHRYSENE
67	C725 3,3'-DICHLOROBENZIDINE
68	C741 BIS(2-ETHYLHEXYL)PHTHALATE
69	CS30 P-TERPHENYL-D14**BN SURR.**
70	CI75 PERYLENE-D12**INT. STD.#6**
71	C760 DI-N-OCTYL PHTHALATE
72	C765 BENZO(B)FLUORANTHENE
73	C770 BENZO(K)FLUORANTHENE
74	C775 BENZO(A)PYRENE
75	C780 INDENO(1,2,3-CD)PYRENE
76	C785 DIBENZ(A,H)ANTHRACENE
77	C790 BENZO(G,H,I)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	172	961	16:01	31	0.884	A BB	44382.	21.026 NG*B2	4.84
55	188	1370	22:50	55	1.000	A BB	149592.	40.000 NG/UL	9.21
56	NOT FOUND								
57	178	1374	22:54	55	1.003	A BB	1819.	BRL ~~0.453 NG~~	0.10
58	178	1374	22:54	55	1.003	A BB	1819.	~~0.442 NG~~	0.10
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	330	1241	20:41	31	1.142	A BB	22729.	32.492 NG*A3	7.48
63	240	1887	31:27	63	1.000	A BB	198098.	40.000 NG/UL	9.21
64	149	1792	29:52	63	0.950	A BB	525.	~~0.177 NG~~	0.04
65	228	1884	31:24	63	0.998	A BV	1456.	BRL ~~0.288 NG~~	0.07
66	228	1891	31:31	63	1.002	A VB	2058.	~~0.515 NG~~	0.12

T2631

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
67	NOT FOUND								
68	149	1904	31:44	63	1 009	A BV	3881.	BRL ~~0.935 NG~~	0.22
69	244	1686	28:06	63	0.893	A BB	125460.	26.788 NG→B3	6.17
70	264	2185	36:25	70	1.000	A BB	175470.	40.000 NG/UL	9.21
71	149	2013	33:33	70	0.921	A BB	269.	~~0.043 NG~~	0.01
72	252	2090	34:50	70	0.957	A BV	1466.	BRL ~~0.289 NG~~	0.07
73	252	2095	34:55	70	0.959	A VB	1078.	~~0.226 NG~~	0.05
74	252	2156	35:56	70	0.987	A BB	922.	~~0.191 NG~~	0.04
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	20:19		1.122						
52	21:26		1.184						
53	21:50		1.206						
54	16:01	1.00	0.885	1.00	21.03	50.00	0.559	1.330	0.42
55	22:50	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
56	22:27		0.983						
57	22:54	1.00	1.003	1.00	0.45	50.00	0.010	1.074	0.01
58	23:03	0.99	1.009	0.99	0.44	50.00	0.010	1.101	0.01
59	25:01		1.096						
60	26:47		1.173						
61	27:30		0.874						
62	20:40	1.00	1.142	1.00	32.49	50.00	0.286	0.441	0.65
63	31:27	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
64	29:53	1.00	0.950	1.00	0.18	50.00	0.002	0.598	0.00
65	31:24	1.00	0.998	1.00	0.29	50.00	0.006	1.020	0.01
66	31:32	1.00	1.003	1.00	0.51	50.00	0.008	0.807	0.01
67	31:26		0.999						
68	31:44	1.00	1.009	1.00	0.94	50.00	0.016	0.838	0.02
69	28:06	1.00	0.893	1.00	26.79	50.00	0.507	0.946	0.54
70	36:26	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
71	33:33	1.00	0.921	1.00	0.04	50.00	0.001	1.437	0.00
72	34:53	1.00	0.957	1.00	0.29	50.00	0.007	1.156	0.01
73	34:58	1.00	0.960	1.00	0.23	50.00	0.005	1.086	0.00
74	36:11	0.99	0.993	0.99	0.19	50.00	0.004	1.101	0.00
75	42:13		1.159						
76	42:24		1.164						
77	44:00		1.208						

Quantitation Report File: QCREF

ORIGINAL
(Red)

Data: T2631.TI
05/17/90 0:12:00
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@6C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
10	CS20 NITROBENZENE-D5**BN SURR.**
11	CS25 2-FLUOROBIPHENYL**BN SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**

x 1.053

Scan	Time	Area(Hght)		Amount		Name
535	8:55	31019.	9	40.000	NG/UL	CI30 1,4-DICHLOROBENZENE-D4
754	12:34	96284.	9	40.000	NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1087	18:07	63484.		40.000	NG/UL	CI50 ACENAPHTHENE-D10**INT.
1370	22:50	149592.	8	40.000	NG/UL	CI60 PHENANTHRENE-D10**INT.
1887	31:27	198098.		40.000	NG/UL	CI70 CHRYSENE-D12**INT. STD.
2185	36:25	175470.		40.000	NG/UL	CI75 PERYLENE-D12**INT. STD
355	5:55	34098.	37	35.046	NG*A1	CS50 2-FLUOROPHENOL**ACID SU
488	8:08	58192.	44	41.520	NG*A2	CS45 PHENOL-D5**ACID SURR.**
1241	20:41	22729.	34	32.492	NG*A3	CS55 2,4,6,-TRIBROMOPHENOL**
634	10:34	29726.	39	18.699	NG*B1	CS20 NITROBENZENE-D5**BN SUR
961	16:01	44382.	44	21.026	NG*B2	CS25 2-FLUOROBIPHENYL**BN SU
1686	28:06	125460.	56	26.788	NG*B3	CS30 P-TERPHENYL-D14**BN SUR

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:54	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	12:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	18:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	22:50	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	31:27	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	36:26	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	5:54	1.00	0.663	1.00	35.05	50.00	0.879	1.255	0.70
8	8:08	1.00	0.914	1.00	41.52	50.00	1.501	1.807	0.83
9	20:40	1.00	1.142	1.00	32.49	50.00	0.286	0.441	0.65
10	10:34	1.00	0.841	1.00	18.70	50.00	0.247	0.660	0.37
11	16:01	1.00	0.885	1.00	21.03	50.00	0.559	1.330	0.42
12	28:06	1.00	0.893	1.00	26.79	50.00	0.507	0.946	0.54

Quantitation Report File: ISREF

ORIGINAL

Data: T2624.TI
05/16/90 17:01:00
Sample: CLP,,,SSTD50,,,22658,B,CC050,,,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.004
Submitted by: VERSAR Analyst: TS Acct. No.: ____

Data: T2631.TI
05/17/90 0:12:00
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
3	CI40 NAPHTHALENE-D8**INT. STD. #2**
4	CI40 NAPHTHALENE-D8**INT. STD. #2**
5	CI50 ACENAPHTHENE-D10**INT. STD. #3**
6	CI50 ACENAPHTHENE-D10**INT. STD. #3**
7	CI60 PHENANTHRENE-D10**INT. STD. #4**
8	CI60 PHENANTHRENE-D10**INT. STD. #4**
9	CI70 CHRYSENE-D12**INT. STD. #5**
10	CI70 CHRYSENE-D12**INT. STD. #5**
11	CI75 PERYLENE-D12**INT. STD. #6**
12	CI75 PERYLENE-D12**INT. STD. #6**

Scan	Time	Area(Hght)	Amount	Name
534	8:54	21230.	40.000 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
535	8:55	31019.	58.444 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
754	12:34	67127.	40.000 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
754	12:34	96284.	57.374 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1086	18:06	45485.	40.000 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1087	18:07	63484.	55.828 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1370	22:50	109533.	40.000 NG/UL	CI60 PHENANTHRENE-D10**INT.
1370	22:50	149592.	54.629 NG/UL	CI60 PHENANTHRENE-D10**INT.
1887	31:27	129519.	40.000 NG/UL	CI70 CHRYSENE-D12**INT. STD.
1887	31:27	198098.	61.180 NG/UL	CI70 CHRYSENE-D12**INT. STD.
2186	36:26	121131.	40.000 NG/UL	CI75 PERYLENE-D12**INT. STD.
2185	36:25	175470.	57.944 NG/UL	CI75 PERYLENE-D12**INT. STD.

Library Search Data: T2631 # 315 Base m/z: 43
05/17/90 0:12:00 + 5:15 Cali: T2631 # 2 RIC: 173823
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL
(Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
97 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	806	HYDROPEROXIDE, 1,1-DIMETHYLETHYL
2	2776	2-PENTANOL, 2,4-DIMETHYL-
3	1334	OXIRANE, TETRAMETHYL-
4	2696	1,3-DIOXOLANE, 2,2,4-TRIMETHYL-
5	9176	2-HEXANONE, 6-(ACETYLOXY)-

Rank	Formula	M. Wt	B. Pk	Purity	Fit	RFit
1	C4.H10.O2	90	59	759	877	766
2	C7.H16.O	116	59	727	765	743
3	C6.H12.O	100	59	701	827	707
4	C6.H12.O2	116	43	677	733	845
5	C8.H14.O3	158	43	673	709	715

Rank	Ret. Time	B. P. Int.	US. Par. 1	US. Par. 2	C. A. S. #
1	—	—	—	—	75-91-2
2	—	—	—	—	625-06-9
3	—	—	—	—	5076-20-0
4	—	—	—	—	1193-11-9
5	—	—	—	—	4305-26-4

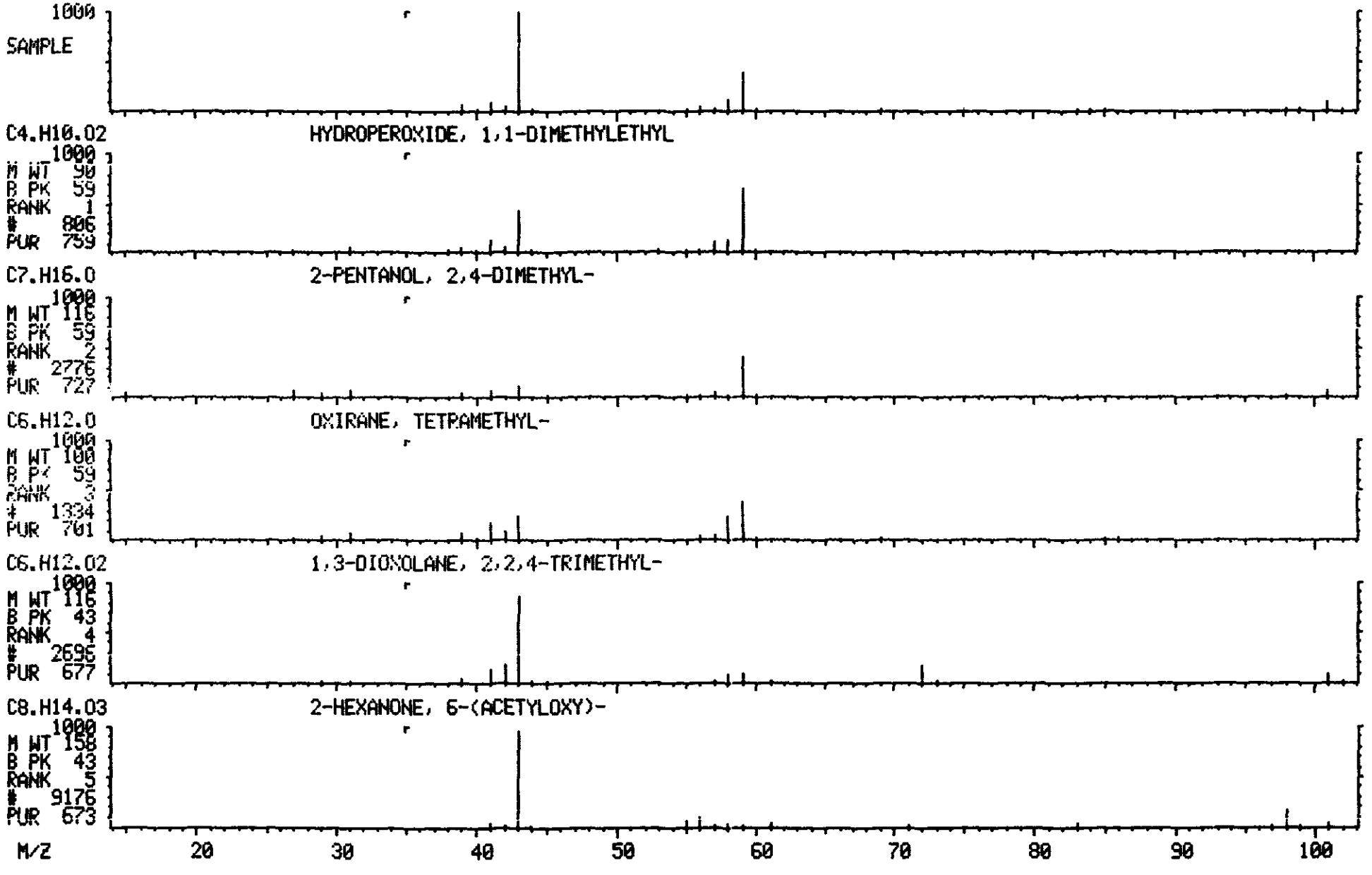
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 5:15
SAMPLE: CLP,VERSCDM,2536,2,L,S,16413,6,,420.1 B#2,1UL,
CONDS.· INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 # 315
CALI: T2631 # 2

BASE M/Z: 43
RIC: 173823.

100082



Library Search Data: T2631 # 336 Base m/z: 41 ORIGINAL
05/17/90 0:12:00 + 5:36 Cali: T2631 # 2 RIC: 20767. (Red)
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
108 matched at least 8 of the 16 largest peaks in the unknown

Rank	In.	Name
1	1076	1-PROPENE, 3,3'-OXYBIS-
2	1111	2-HEXENAL, (E)-
3	2216	2-HEPTENAL, (Z)-
4	11012	4-DODECENE, (E)-
5	11013	5-DODECENE, (E)-

Rank	Formula	M. Wt	B. Pk	Purity	Fit	RFit
1	C6.H10.O	98	41	779	899	792
2	C6.H10.O	98	41	760	911	760
3	C7.H12.O	112	41	745	908	747
4	C12.H24	168	55	701	790	742
5	C12.H24	168	55	694	782	740

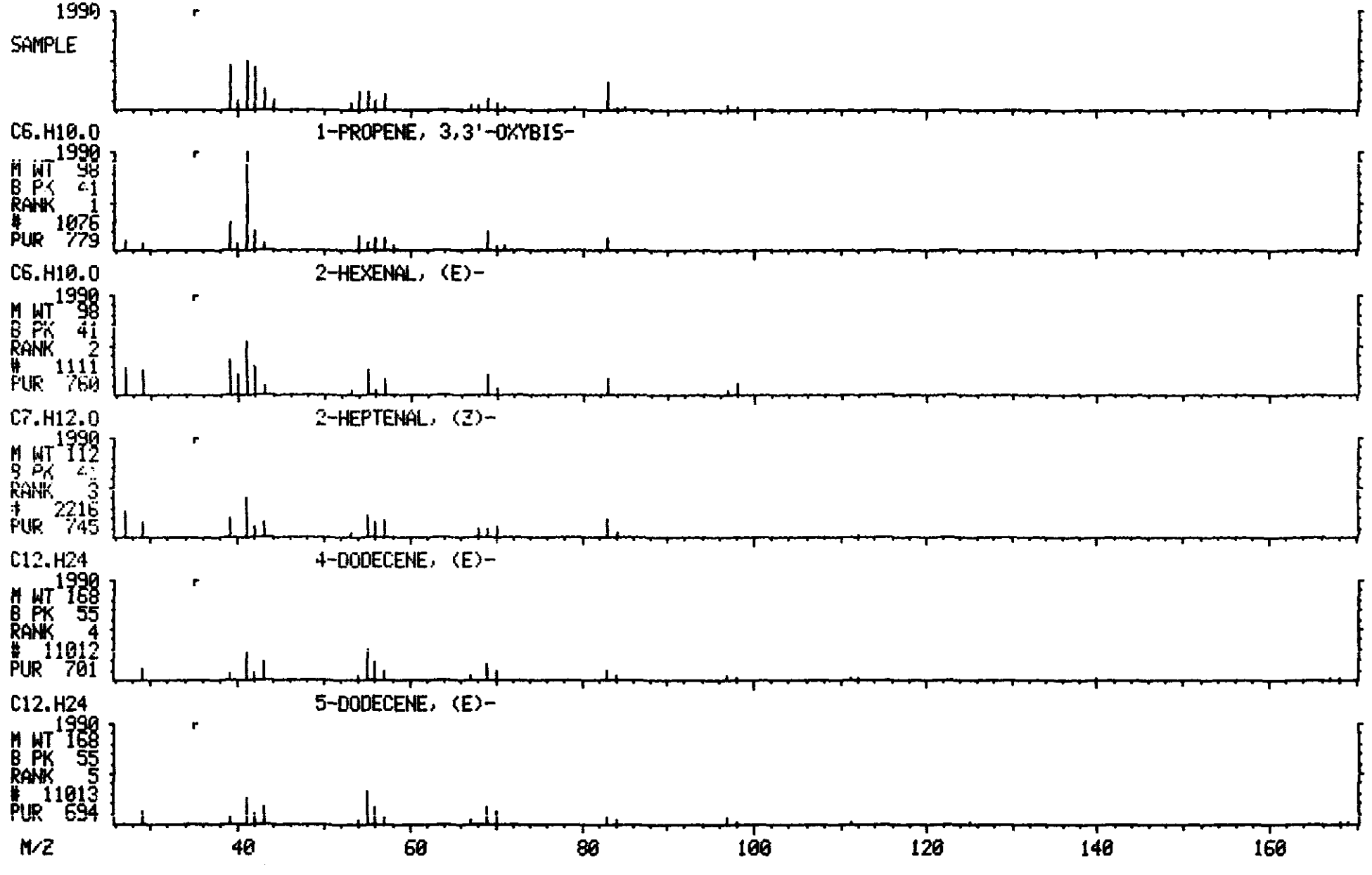
Rank	Ret. Time	B. P. Int.	US. Par. 1	US. Par. 2	C. A. S. #
1	—	—	—	—	557-40-4
2	—	—	—	—	6728-26-3
3	—	—	—	—	57266-86-1
4	—	—	—	—	7206-15-7
5	—	—	—	—	7206-16-8

ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 5:36
SAMPLE: CLP,VERSCOM,2536,2,L,5,16413,6,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 # 336
CALI: T2631 # 2

BASE M/Z: 41
RIC: 20767.



100084

Library Search Data: T2631 # 428 Base m/z: 43
05/17/90 0:12:00 + 7:08 Cali: T2631 # 2 RIC: 38591.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL
(Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
267 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	10299	HEXANE, 2-BROMO-
2	2427	ETHANONE, 1-(3-ETHYLOXIRANYL)-
3	10300	HEXANE, 3-BROMO-
4	4088	2-HEXANONE, 3,3-DIMETHYL-
5	10303	PENTANE, 3-BROMO-3-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C6.H13.BR	164	43	848	897	885
2	C6.H10.O2	114	43	839	896	884
3	C6.H13.BR	164	43	833	878	870
4	C8.H16.O	128	43	803	849	810
5	C6.H13.BR	164	43	789	870	827

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	3377-86-4
2	—	—	—	—	17257-81-7
3	—	—	—	—	3377-87-5
4	—	—	—	—	26118-38-7
5	—	—	—	—	25346-31-0

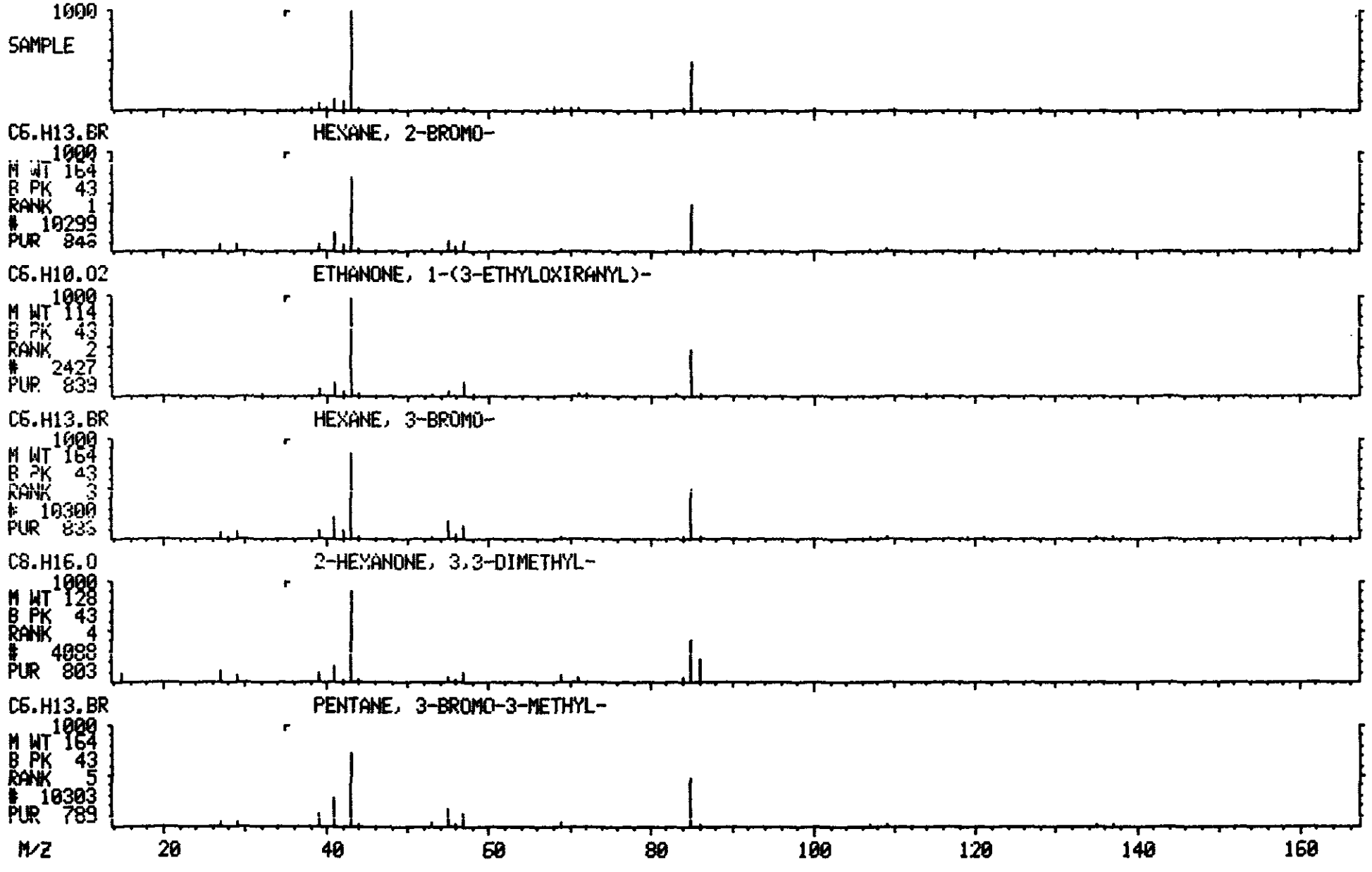
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 7:08
SAMPLE: CLP,VERSCOM,2536,2,L,S,16412,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 # 428
CALI: T2631 # 2

BASE M/Z: 43
RIC: 38591.

100086



Library Search Data: T2631 # 453 Base m/z: 43
05/17/90 0:12:00 + 7:33 Cali: T2631 # 2 RIC: 22143.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL
(Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
274 matched at least 6 of the 16 largest peaks in the unknown

Ketone.

Rank	In.	Name
1	2147	2(5H)-FURANONE, 5,5-DIMETHYL-
2	2176	5-HEXEN-2-ONE, 5 METHYL-
3	2183	3-HEXEN-2-ONE, 5 METHYL-
4	2165	3-PENTEN-2-ONE, 3,4-DIMETHYL-
5	2071	2-PROPANONE, 1,1,1-TRIFLUORO-

Rank	Formula	M. Wt	B. Pk	Purity	Fit	RFit
1	C6.H8.O2	112	43	842	888	918
2	C7.H12.O	112	43	824	887	860
3	C7.H12.O	112	43	742	795	775
4	C7.H12.O	112	43	736	803	765
5	C3.H3.O.F3	112	43	685	813	718

Rank	Ret. Time	B. P. Int.	US. Par. 1	US. Par. 2	C. A. S. #
1	—	—	—	—	20019-64-1
2	—	—	—	—	3240-09-3
3	—	—	—	—	5166-53-0
4	—	—	—	—	684-94-6
5	—	—	—	—	421-50-1

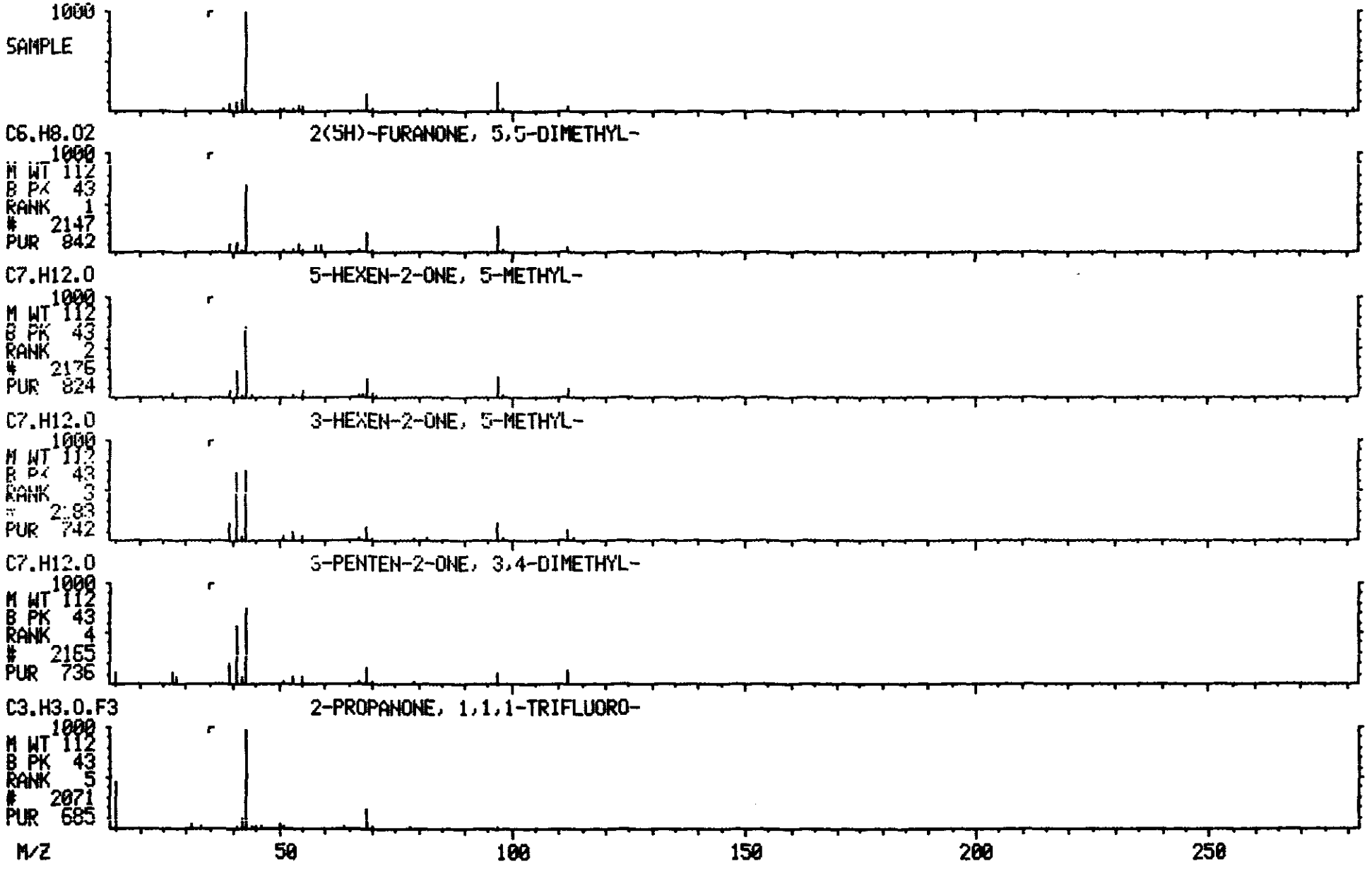
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 7:33
SAMPLE: CLP,VERSCOM,2536,2,L,5,16413,6,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 # 453
CALI: T2631 # 2

BASE M/Z: 43
RIC: 22143.

100088



Library Search Data: T2631 # 508 Base m/z: 43
05/17/90 0:12:00 + 8:28 Cali: T2631 # 2 RIC: 111743.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNR searched for maximum PURITY
153 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	6315	3-HEPTANONE, 2,4-DIMETHYL-
2	1264	2,4-PENTANEDIONE
3	2385	BUTANOIC ACID, ETHENYL ESTER
4	7550	PENTANE, 3-BROMO-
5	1261	1-PROPEN-2-OL, ACETATE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C9.H18.O	142	43	839	935	839
2	C5.H8.O2	100	43	789	919	813
3	C6.H10.O2	114	43	724	844	754
4	C5.H11.BR	150	43	722	849	743
5	C5.H8.O2	100	43	695	833	779

Rank	Ret. Time	B.P. Int.	US. Par. 1	US. Par. 2	C.A.S. #
1	—	—	—	—	18641-71-9
2	—	—	—	—	123-54-6
3	—	—	—	—	123-20-6
4	—	—	—	—	1809-10-5
5	—	—	—	—	108-22-5

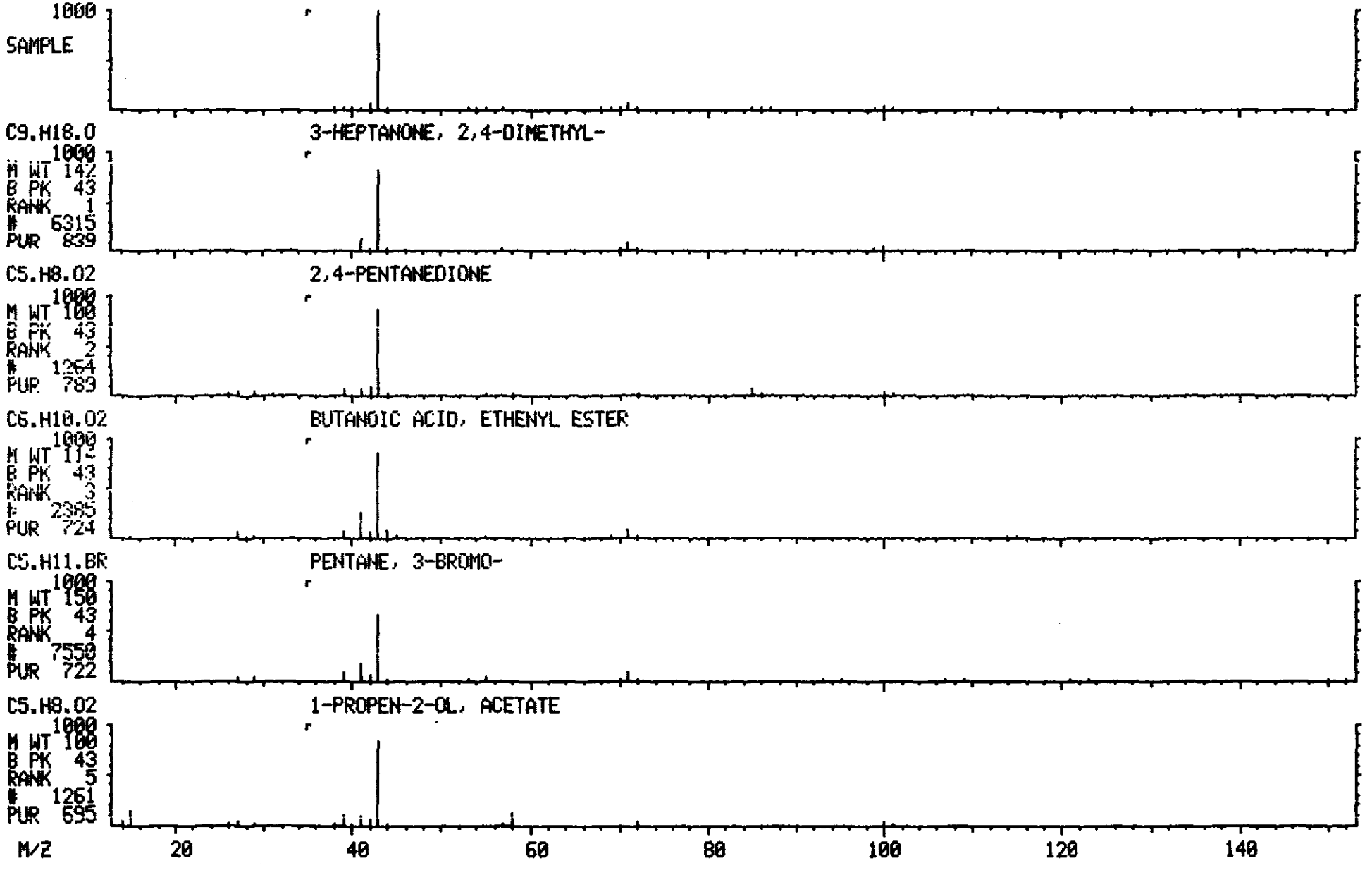
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 8:28
SAMPLE: CLP,VERSCOM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302C@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 # 508
CALI: T2631 # 2

BASE M/Z: 43
RIC: 111743.

100090



Library Search Data: T2631 # 528 Base m/z: 43
05/17/90 0:12:00 + 8:48 Cali: T2631 # 2 RIC: 56703.ORIGINAL
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL, (Red)
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
153 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	6315	3-HEPTANONE, 2,4-DIMETHYL-
2	1264	2,4-PENTANEDIONE
3	8698	2-PENTENE, 5-(PENTYLOXY)-, (E)-
4	2385	BUTANOIC ACID, ETHENYL ESTER
5	7550	PENTANE, 3-BROMO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C9.H18.O	142	43	824	918	860
2	C5.H8.O2	100	43	770	913	792
3	C10.H20.O	156	43	725	776	773
4	C6.H10.O2	114	43	710	840	741
5	C5.H11.BR	150	43	706	845	728

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	18641-71-9
2	—	—	—	—	123-54-6
3	—	—	—	—	56052-85-8
4	—	—	—	—	123-20-6
5	—	—	—	—	1809-10-5

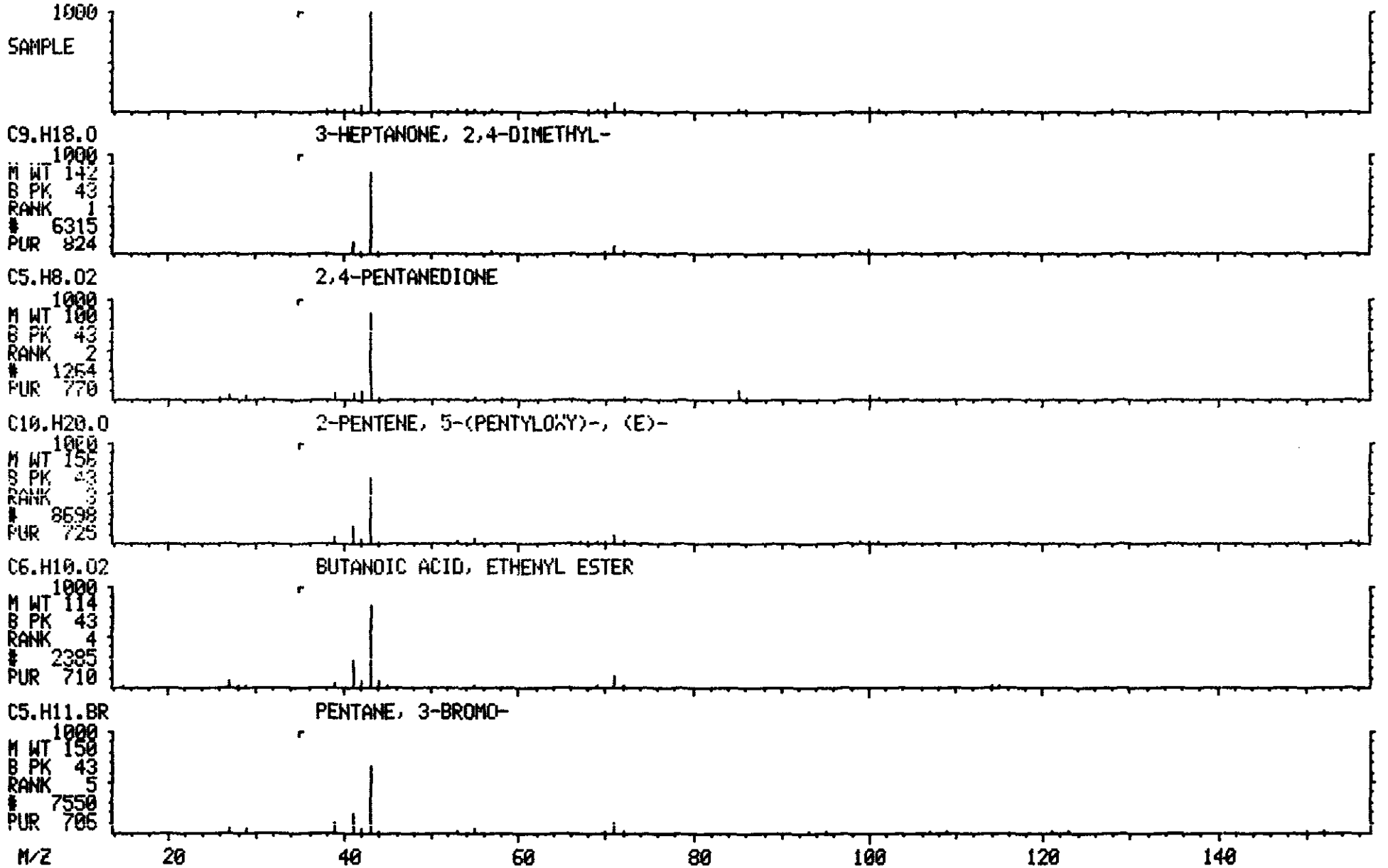
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 8:46
SAMPLE: CLP,VERSCDM,2536,2,L,5,16412,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 # 528
CALI: T2631 # 2

BASE M/Z: 43
RIC: 56703.

100092



Library Search Data: T2631 # 587 Base m/z: 43
05/17/90 0:12:00 + 9:47 Cali: T2631 # 2 RIC: 218367.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL
(Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
128 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	1590	1,2-ETHANEDIOL, MONOACETATE
2	613	ETHANONE, 1-OXIRANYL-
3	2875	BUTANOIC ACID, 3-HYDROXY-, METHYL ESTER
4	6936	HEXANOIC ACID, HYDROXY-, METHYL ESTER
5	2665	PENTANOIC ACID, 2-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C4.H8.O3	104	43	692	948	692
2	C4.H6.O2	86	43	648	870	659
3	C5.H10.O3	118	43	634	761	715
4	C7.H14.O3	146	43	611	726	735
5	C6.H12.O2	116	43	581	709	647

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	542-59-6
2	—	—	—	—	4401-11-0
3	—	—	—	—	1487-49-6
4	—	—	—	—	59942-11-9
5	—	—	—	—	97-61-0

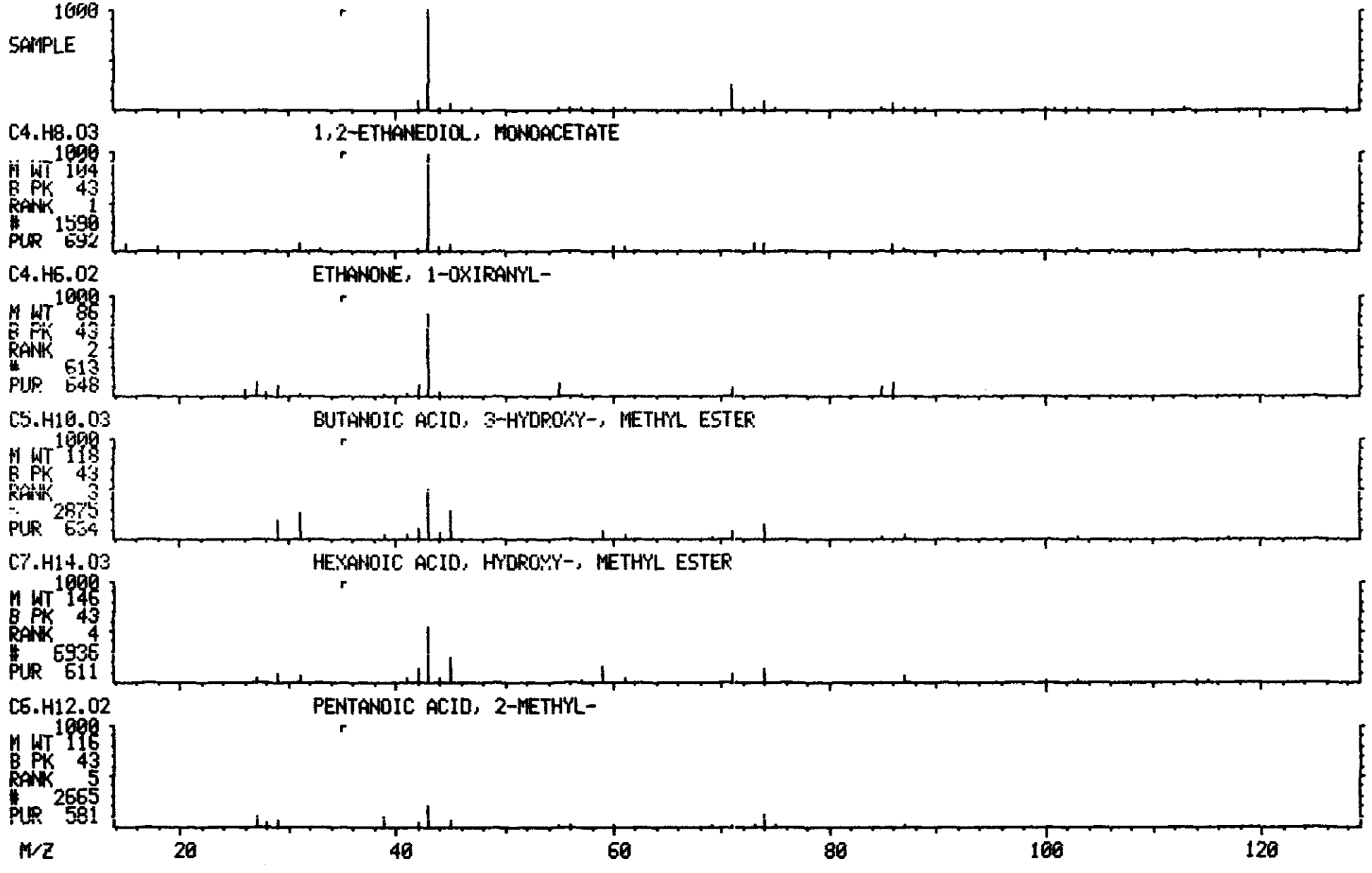
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 9:47
SAMPLE: CLP,VERSCOM,2336,2,L,S,16413,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 # 587
CALI: T2631 # 2

BASE M/Z: 43
RIC: 218367.

100094



Library Search Data: T2631 #2041 Base m/z: 59
05/17/90 0:12:00 + 34:01 Cali: T2631 # 2 RIC: 36735
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
89 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	27222	9-OCTADECENAMIDE, (Z)-
2	1394	PENTANAMIDE
3	11424	CYCLOOCTANEMETHANOL, .ALPHA.,.ALPHA.-DIMETHYL-
4	27224	9-OCTADECENAMIDE
5	11729	CYCLOHEXANE, 1,4-DIETHOXY-, TRANS-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C18.H35.O.N	281	59	559	890	614
2	C5.H11.O.N	101	59	424	825	443
3	C11.H22.O	170	59	414	867	433
4	C18.H35.O.N	281	41	413	669	341
5	C10.H20.O2	172	59	402	717	532

Rank	Ret.Time	B.P.Int.	US.Par.1	US Par.2	C.A.S. #
1	—	—	—	—	301-02-0
2	—	—	—	—	626-97-1
3	—	—	—	—	16624-06-9
4	—	—	—	—	3322-62-1
5	—	—	—	—	29887-72-7

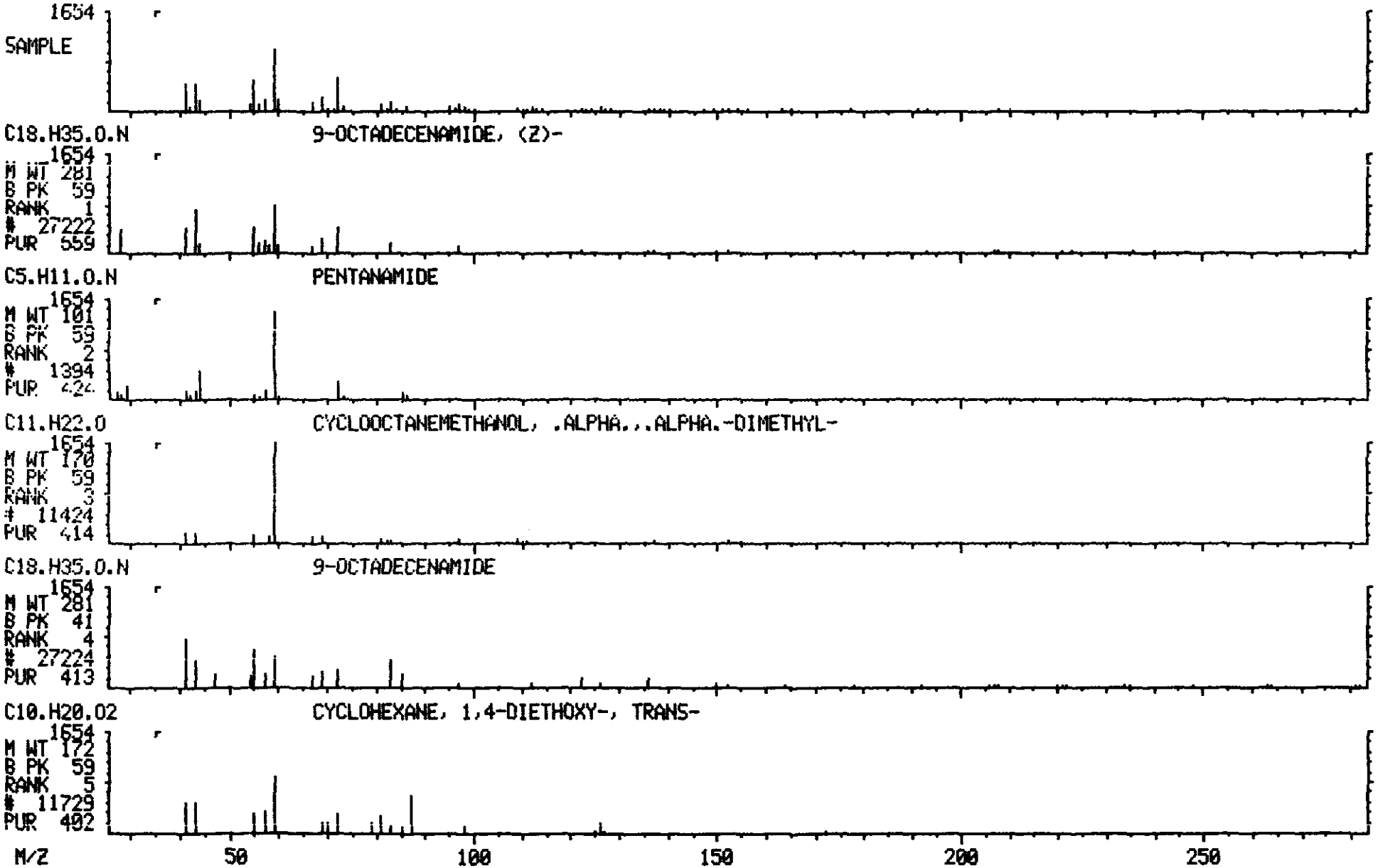
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 0:12:00 + 34:01
SAMPLE: CLP,VERSCOM,2556,2,L,S,16413,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 3020SC/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2631 #2041
CALI: T2631 # 2

BASE M/Z: 59
RIC: 36735.

100096



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        >>>>INTERNAL STANDARD RIC REPORT<<<<
*****************************INTERNAL STANDARD#1****************RIC
Mass List                        Data: T2631 # 535          Base m/z:   150
05/17/90  0:12:00 +  8:55        Cali: T2631 #   2          RIC:      98048.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                        *   0  Maxima
*****************************INTERNAL STANDARD#2****************RIC
Mass List                        Data: T2631 # 755          Base m/z:   136
05/17/90  0:12:00 + 12:35        Cali: T2631 #   2          RIC:     114698.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                        *   0  Maxima
*****************************INTERNAL STANDARD#3****************RIC
Mass List                        Data: T2631 #1087          Base m/z:   164
05/17/90  0:12:00 + 18:07        Cali: T2631 #   2          RIC:     108672.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                        *   0  Maxima
*****************************INTERNAL STANDARD#4****************RIC
Mass List                        Data: T2631 #1370          Base m/z:   188
05/17/90  0:12:00 + 22:50        Cali: T2631 #   2          RIC:     150272.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                        *   0  Maxima
*****************************INTERNAL STANDARD#5****************RIC
Mass List                        Data: T2631 #1887          Base m/z:   240
05/17/90  0:12:00 + 31:27        Cali: T2631 #   2          RIC:     174848.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                        *   0  Maxima
*****************************INTERNAL STANDARD#6****************RIC
Mass List                        Data: T2631 #2185          Base m/z:   264
05/17/90  0:12:00 + 36:25        Cali: T2631 #   2          RIC:     100480.
Sample: CLP,VERSCDM,2536,2,L,S,16413,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                        *   0  Maxima
     ANALYST: CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO CONTAMINATION
```

ORIGINAL (Red)

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3 ORIGINAL (Red)

L. Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16414

Sample wt/vol: 30.7 (g/mL) G Lab File ID: T2632

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 24 dec. ____ Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	890	U
111-44-4	bis(2-Chloroethyl)ether	890	U
95-57-8	2-Chlorophenol	890	U
541-73-1	1,3-Dichlorobenzene	890	U
106-46-7	1,4-Dichlorobenzene	890	U
100-51-6	Benzyl alcohol	890	U
95-50-1	1,2-Dichlorobenzene	890	U
95-48-7	2-Methylphenol	890	U
108-60-1	bis(2-Chloroisopropyl)ether	890	U
106-44-5	4-Methylphenol	890	U
621-64-7	N-Nitroso-di-n-propylamine	890	U
67-72-1	Hexachloroethane	890	U
98-95-3	Nitrobenzene	890	U
78-59-1	Isophorone	890	U
88-75-5	2-Nitrophenol	890	U
105-67-9	2,4-Dimethylphenol	890	U
65-85-0	Benzoic Acid	4300	U
111-91-1	bis(2-Chloroethoxy)methane	890	U
120-83-2	2,4-Dichlorophenol	890	U
120-82-1	1,2,4-Trichlorobenzene	890	U
91-20-3	Naphthalene	890	U
106-47-8	4-Chloroaniline	890	U
87-68-3	Hexachlorobutadiene	890	U
59-50-7	4-Chloro-3-methylphenol	890	U
91-57-6	2-Methylnaphthalene	890	U
77-47-4	Hexachlorocyclopentadiene	890	U
88-06-2	2,4,6-Trichlorophenol	890	U
95-95-4	2,4,5-Trichlorophenol	4300	U
91-58-7	2-Chloronaphthalene	890	U
88-74-4	2-Nitroaniline	4300	U
131-11-3	Dimethylphthalate	890	U
208-96-8	Acenaphthylene	890	U
606-20-2	2,6-Dinitrotoluene	890	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3 ORIGINAL (Red)

L. Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16414

Sample wt/vol: 30.7 (g/mL) G Lab File ID: T2632

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 24 dec. ____ Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4300	U
83-32-9	Acenaphthene	890	U
51-28-5	2,4-Dinitrophenol	4300	U
100-02-7	4-Nitrophenol	4300	U
132-64-9	Dibenzofuran	890	U
121-14-2	2,4-Dinitrotoluene	890	U
84-66-2	Diethylphthalate	890	U
7005-72-3	4-Chlorophenyl-phenylether	890	U
86-73-7	Fluorene	890	U
100-01-6	4-Nitroaniline	4300	U
534-52-1	4,6-Dinitro-2-methylphenol	4300	U
86-30-6	N-nitrosodiphenylamine (1)	890	U
101-55-3	4-Bromophenyl-phenylether	890	U
118-74-1	Hexachlorobenzene	890	U
87-86-5	Pentachlorophenol	4300	U
85-01-8	Phenanthrene	890	U
120-12-7	Anthracene	890	U
84-74-2	Di-n-butylphthalate	890	U
206-44-0	Fluoranthene	890	U
129-00-0	Pyrene	890	U
85-68-7	Butylbenzylphthalate	890	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
56-55-3	Benzo(a)anthracene	890	U
218-01-9	Chrysene	890	U
117-81-7	bis(2-Ethylhexyl)phthalate	890	U
117-84-0	Di-n-octyl phthalate	890	U
205-99-2	Benzo(b)fluoranthene	890	U
207-08-9	Benzo(k)fluoranthene	890	U
50-32-8	Benzo(a)pyrene	890	U
193-39-5	Indeno(1,2,3-cd)pyrene	890	U
53-70-3	Dibenz(a,h)anthracene	890	U
191-24-2	Benzo(g,h,i)perylene	890	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

3 ORIGINAL (Red)

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16414

Sample wt/vol: 30.7 (g/mL) G Lab File ID: T2632

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. 24 dec. ____ Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.25	4500	J
2.	UNKNOWN	5.60	810	J
3.	UNKNOWN	6.22	360	J
4.	UNKNOWN KETONE	7.55	630	J
5.	UNKNOWN KETONE	8.47	1700	J
6.	UNKNOWN	8.82	4500	J
7.	UNKNOWN	9.75	4100	J
8.	UNKNOWN	22.04	540	J
9.	UNKNOWN	34.04	1100	J
10.	UNKNOWN	34.94	630	J

RIC
05/17/90 1:04:00
SAMPLE: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=PESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: G 1,2720 LABEL: N 0, 4.0 CUAN: A 0, 1.0 J 0 BASE: U 20, 3

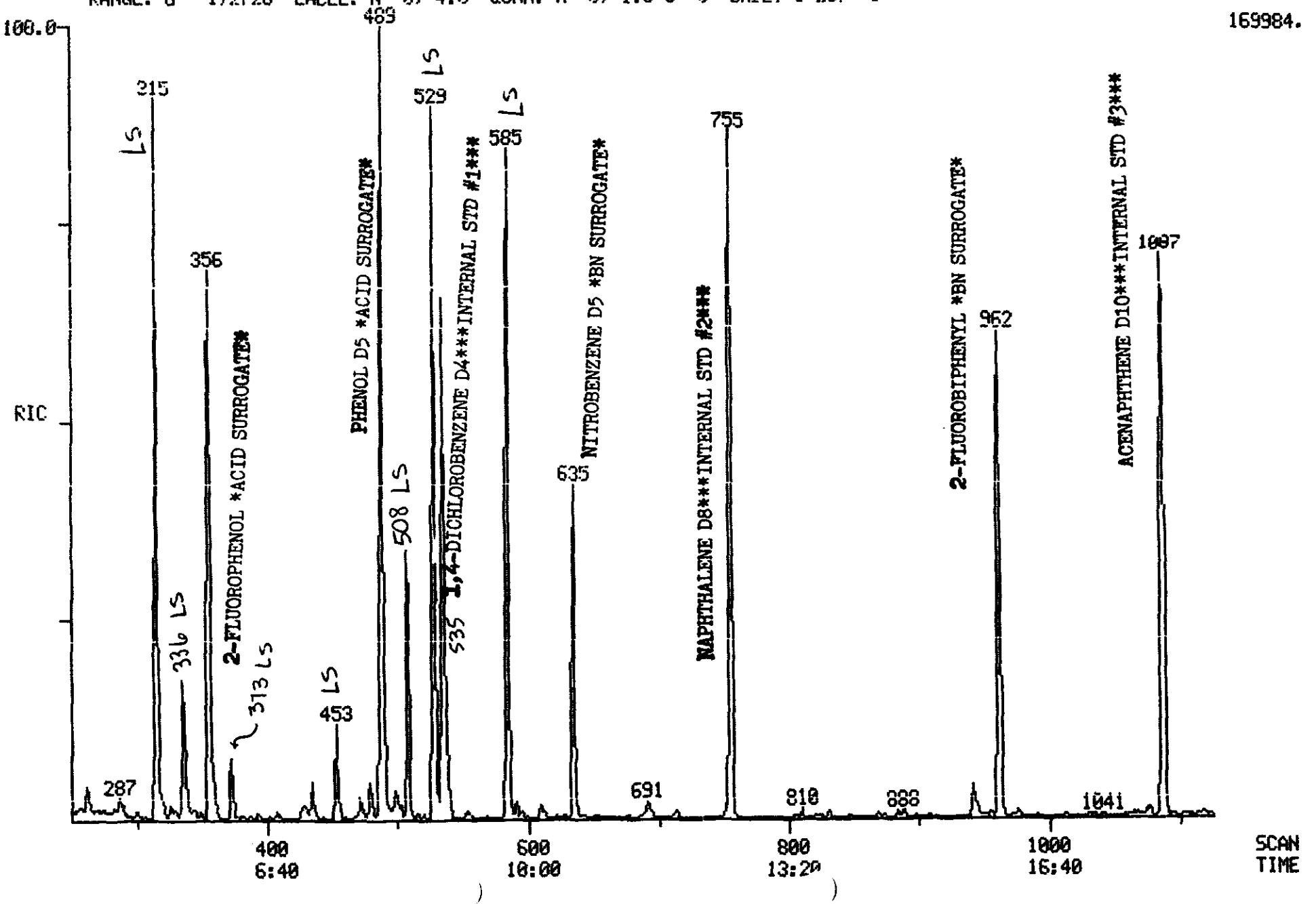
DATA: T2632 #1
CALI: T2632 #2

SCANS 250 TO 1125

ORIGINAL (Red)

100401

169984.



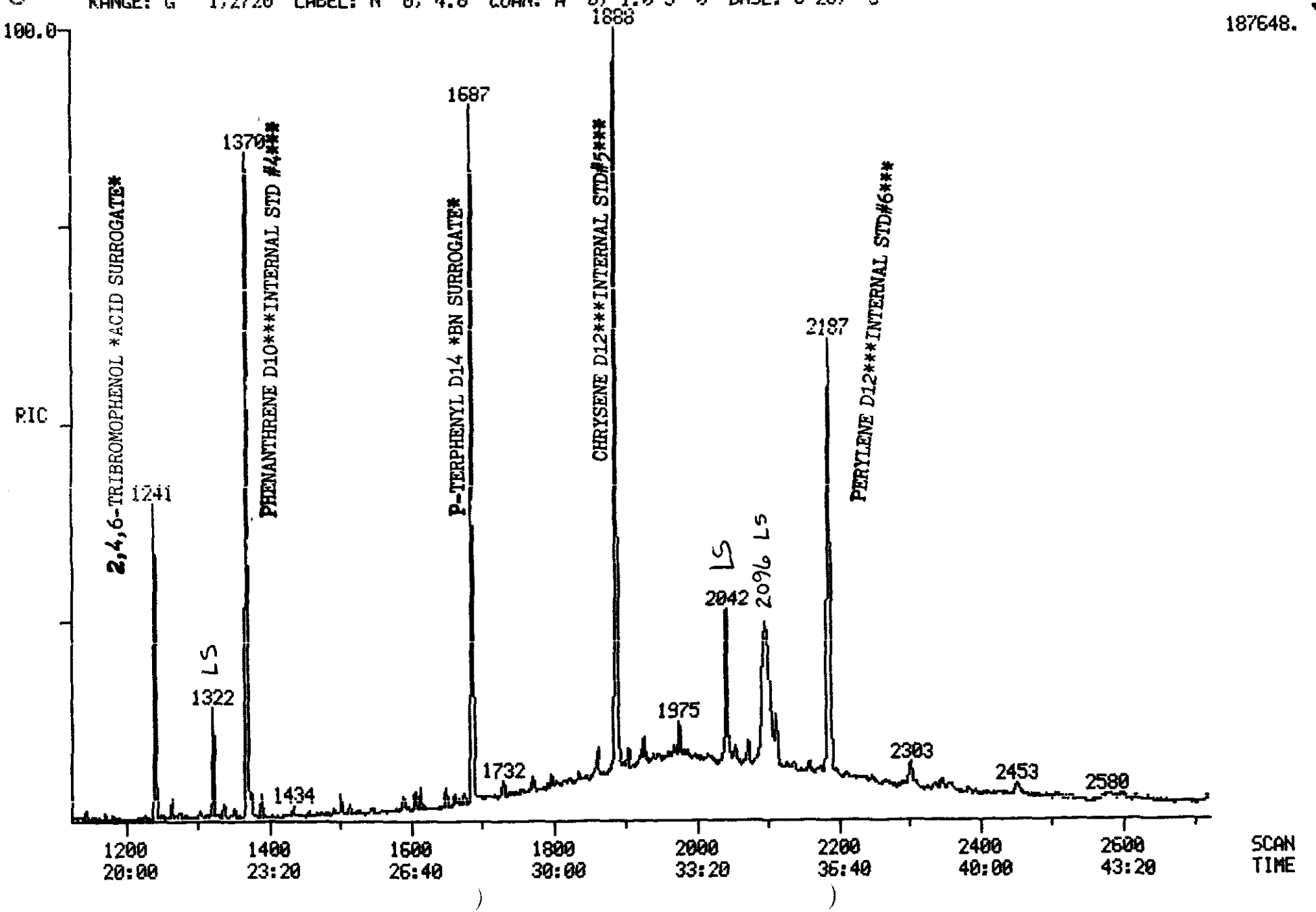
RIC
05/17/90 1:04:00
SAMPLE: CLP,VEPSCDM,2536,3,L,S,16414,B,,420.1 P#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: G 1,2720 LABEL: N 0, 4.0 CUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: T2632 #1
CALI: T2632 #2

SCANS 1125 TO 2720

ORIGINAL (Red)

100102



Quantitation Report File: T2632

ORIGINAL
(Red)

Data: T2632.TI
05/17/90 1:04:00
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	C330 2-CHLOROPHENOL
3	C315 PHENOL
4	C325 BIS (2-CHLOROETHYL) ETHER
5	C335 1,3-DICHLOROBENZENE
6	C340 1,4-DICHLOROBENZENE
7	C350 1,2-DICHLOROBENZENE
8	C345 BENZYL ALCOHOL
9	C360 BIS (2-CHLOROISOPROPYL) ETHER
10	C355 2-METHYLPHENOL
11	C375 HEXACHLOROETHANE
12	C365 4-METHYLPHENOL
13	C370 N-NITROSO-DI-N-PROPYLAMINE
14	CS50 2-FLUOROPHENOL**ACID SURR.**
15	CS45 PHENOL-D5**ACID SURR.**
16	CI40 NAPHTHALENE-D8**INT. STD. #2**
17	C410 NITROBENZENE
18	C415 ISOPHORONE
19	C420 2-NITROPHENOL
20	C425 2,4-DIMETHYLPHENOL
21	C435 BIS (2-CHLOROETHOXY) METHANE
22	C440 2,4-DICHLOROPHENOL
23	C445 1,2,4-TRICHLOROBENZENE
24	C450 NAPHTHALENE
25	C430 BENZOIC ACID
26	C455 4-CHLOROANILINE
27	C460 HEXACHLOROBUTADIENE
28	C465 4-CHLORO-3-METHYLPHENOL
29	C470 2-METHYLNAPHTHALENE
30	CS20 NITROBENZENE-D5**BN SURR.**
31	CI50 ACENAPHTHENE-D10**INT. STD. #3**
32	C510 HEXACHLOROCYCLOPENTADIENE
33	C515 2,4,6-TRICHLOROPHENOL
34	C520 2,4,5-TRICHLOROPHENOL
35	C525 2-CHLORONAPHTHALENE
36	C530 2-NITROANILINE
37	C540 ACENAPHTHYLENE
38	C535 DIMETHYL PHTHALATE
39	C544 2,6-DINITROTOLUENE
40	C550 ACENAPHTHENE
41	C545 3-NITROANILINE
42	C555 2,4-DINITROPHENOL
43	C565 DIBENZOFURAN
44	C560 4-NITROPHENOL
45	C570 2,4-DINITROTOLUENE
46	C590 FLUORENE
47	C585 4-CHLOROPHENYL-PHENYLETHER

✓ DQ 5/23/90

Ready for forms. DQ

All IS areas + surrogate recoveries are compliant. SJO 5-17-90.

T2632

ORIGINAL
(Red)

No	Name
48	C580 DIETHYLPHTHALATE
49	C595 4-NITROANILINE
50	C610 4,6-DINITRO-2-METHYLPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	535	8:55	1	1.000	A BB	31963.	40.000 NG/UL	8.31
2	128	508	8:28	1	0.950	A BB	229.	BRL ~~0.208 NG~~	0.04
3	94	491	8:11	1	0.918	A BB	296.	BRL ~~0.179 NG~~	0.04
4	NOT FOUND								
5	NOT FOUND								
6	NOT FOUND								
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	112	356	5:56	1	0.665	A BB	55621.	55.479 NG*A1	11.53
15	99	489	8:09	1	0.914	A BB	86798.	60.101 NG*A2	12.49
16	136	755	12:35	16	1.000	A BB	99624.	40.000 NG/UL	8.31
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	122	713	11:53	16	0.944	A BB	579.	BRL ~~1.245 NG~~	0.26
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	82	635	10:35	16	0.841	A BB	45495.	27.659 NG*B1	5.75
31	164	1087	18:07	31	1.000	A BB	66037.	40.000 NG/UL	8.31
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	152	1057	17:37	31	0.972	A BB	223.	BRL ~~0.067 NG~~	0.01
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	168	1123	18:43	31	1.033	A BB	325.	BRL ~~0.103 NG~~	0.02
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	149	1187	19:47	31	1.092	A BB	308.	BRL ~~0.101 NG~~	0.02
49	NOT FOUND								
50	NOT FOUND								

T2632

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	8:54	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	8:27	1.00	0.949	1.00	0.21	50.00	0.006	1.379	0.00
3	8:10	1.00	0.918	1.00	0.18	50.00	0.007	2.069	0.00
4	8:23		0.942						ORIGINAL
5	8:48		0.989						(Red)
6	8:57		1.006						
7	9:27		1.062						
8	9:23		1.054						
9	9:49		1.103						
10	9:45		1.096						
11	10:16		1.154						
12	10:10		1.142						
13	10:14		1.150						
14	5:54	1.01	0.663	1.00	55.48	50.00	1.392	1.255	1.11
15	8:08	1.00	0.914	1.00	60.10	50.00	2.172	1.807	1.20
16	12:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
17	10:37		0.845						
18	11:16		0.897						
19	11:32		0.918						
20	11:41		0.930						
21	12:01		0.956						
22	12:12		0.971						
23	12:27		0.991						
24	12:38		1.005						
25	12:02	0.99	0.958	0.99	1.24	50.00	0.005	0.187	0.02
26	12:56		1.029						
27	13:10		1.048						
28	14:26		1.149						
29	14:45		1.174						
30	10:34	1.00	0.841	1.00	27.66	50.00	0.365	0.660	0.55
31	18:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
32	15:27		0.854						
33	15:45		0.870						
34	15:51		0.876						
35	16:17		0.900						
36	16:48		0.928						
37	17:37	1.00	0.973	1.00	0.07	50.00	0.003	2.019	0.00
38	17:31		0.968						
39	17:45		0.981						
40	18:13		1.006						
41	18:09		1.003						
42	18:28		1.020						
43	18:43	1.00	1.034	1.00	0.10	50.00	0.004	1.911	0.00
44	18:43		1.034						
45	18:58		1.048						
46	19:49		1.095						
47	19:52		1.098						
48	19:47	1.00	1.093	1.00	0.10	50.00	0.004	1.842	0.00
49	20:09		1.113						
50	20:14		1.118						

Quantitation Report File: T2632

ORIGINAL
(Red)

Data: T2632.TI
05/17/90 1:04:00
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
51	C615 N-NITROSODIPHENYLAMINE
52	C625 4-BROMOPHENYL-PHENYLETHER
53	C630 HEXACHLOROBENZENE
54	CS25 2-FLUOROBIPHENYL**BN SURR.**
55	CI60 PHENANTHRENE-D10**INT. STD.#4**
56	C635 PENTACHLOROPHENOL
57	C640 PHENANTHRENE
58	C645 ANTHRACENE
59	C650 DI-N-BUTYLPHTHALATE
60	C655 FLUORANTHENE
61	C715 PYRENE
62	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
63	CI70 CHRYSENE-D12**INT. STD.#5**
64	C720 BUTYLBENZYLPHTHALATE
65	C730 BENZO(A)ANTHRACENE
66	C740 CHRYSENE
67	C725 3,3'-DICHLOROBENZIDINE
68	C741 BIS(2-ETHYLHEXYL)PHTHALATE
69	CS30 P-TERPHENYL-D14**BN SURR.**
70	CI75 PERYLENE-D12**INT. STD.#6**
71	C760 DI-N-OCTYL PHTHALATE
72	C765 BENZO(B)FLUORANTHENE
73	C770 BENZO(K)FLUORANTHENE
74	C775 BENZO(A)PYRENE
75	C780 INDENO(1,2,3-CD)PYRENE
76	C785 DIBENZ(A,H)ANTHRACENE
77	C790 BENZO(G,H,I)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	172	962	16:02	31	0.885	A BB	63154.	28.763 NG*B2	5.98
55	188	1370	22:50	55	1.000	A BV	151191.	40.000 NG/UL	8.31
56	NOT FOUND								
57	178	1374	22:54	55	1.003	A BB	2954.	BRL ~~0.728 NG~~	0.15
58	178	1374	22:54	55	1.003	A BB	2954.	~~0.710 NG~~	0.15
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	330	1241	20:41	31	1.142	A BB	20310.	27.911 NG*A3	5.80
63	240	1888	31:28	63	1.000	A BB	194866.	40.000 NG/UL	8.31
64	149	1793	29:53	63	0.950	A BB	795.	~~0.273 NG~~	0.06
65	228	1884	31:24	63	0.998	A BV	2795.	BRL ~~0.363 NG~~	0.12
66	228	1891	31:31	63	1.002	A VB	3960.	~~1.007 NG~~	0.21

K6165A

T2632

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	ORIGINAL (Red) Tot
67	NOT FOUND								
68	149	1904	31:44	63	1.008	A VB	2138.	BdL ~~0.524 NG~~	0.11
69	244	1687	28:07	63	0.894	A BB	156843.	34.044 NG*B3	7.07
70	264	2186	36:26	70	1.000	A BB	171110.	40.000 NG/UL	8.31
71	NOT FOUND								
72	252	2091	34:51	70	0.957	A BV	3007.	~~0.608 NG~~	0.13
73	252	2096	34:56	70	0.959	A VB	2864.	BdL ~~0.617 NG~~	0.13
74	252	2170	36:10	70	0.993	A BB	2034.	~~0.432 NG~~	0.09
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	20:19		1.122						
52	21:26		1.184						
53	21:50		1.206						
54	16:01	1.00	0.885	1.00	28.76	50.00	0.765	1.330	0.58
55	22:50	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
56	22:27		0.983						
57	22:54	1.00	1.003	1.00	0.73	50.00	0.016	1.074	0.01
58	23:03	0.99	1.009	0.99	0.71	50.00	0.016	1.101	0.01
59	25:01		1.096						
60	26:47		1.173						
61	27:30		0.874						
62	20:40	1.00	1.142	1.00	27.91	50.00	0.246	0.441	0.56
63	31:27	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
64	29:53	1.00	0.950	1.00	0.27	50.00	0.003	0.598	0.01
65	31:24	1.00	0.998	1.00	0.56	50.00	0.011	1.020	0.01
66	31:32	1.00	1.003	1.00	1.01	50.00	0.016	0.807	0.02
67	31:26		0.999						
68	31:44	1.00	1.009	1.00	0.52	50.00	0.009	0.838	0.01
69	28:06	1.00	0.893	1.00	34.04	50.00	0.644	0.946	0.68
70	36:26	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
71	33:33		0.921						
72	34:53	1.00	0.957	1.00	0.61	50.00	0.014	1.156	0.01
73	34:58	1.00	0.960	1.00	0.62	50.00	0.013	1.086	0.01
74	36:11	1.00	0.993	1.00	0.43	50.00	0.010	1.101	0.01
75	42:13		1.159						
76	42:24		1.164						
77	44:00		1.208						

Quantitation Report File: QCREF

ORIGINAL (Red)

Data: T2632.TI
05/17/90 1:04:00
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
10	CS20 NITROBENZENE-D5**BN SURR.**
11	CS25 2-FLUOROBIPHENYL**BN SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**

X 1.053

Scan	Time	Area(Hght)		Amount		Name
535	8:55	31963.		40.000	NG/UL	CI30 1,4-DICHLOROBENZENE-D4
755	12:35	99624.	90	40.000	NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1087	18:07	66037.		40.000	NG/UL	CI50 ACENAPHTHENE-D10**INT.
1370	22:50	151191.	Rec	40.000	NG/UL	CI60 PHENANTHRENE-D10**INT.
1888	31:28	194866.		40.000	NG/UL	CI70 CHRYSENE-D12**INT. STD
2186	36:26	171110.		40.000	NG/UL	CI75 PERYLENE-D12**INT. STD.
356	5:56	55621.	58	55.479	NG*A1	CS50 2-FLUOROPHENOL**ACID SU
489	8:09	86798.	63	60.101	NG*A2	CS45 PHENOL-D5**ACID SURR.**
1241	20:41	20310.	29	27.911	NG*A3	CS55 2,4,6,-TRIBROMOPHENOL**
635	10:35	45495.	58	27.659	NG*B1	CS20 NITROBENZENE-D5**BN SUR
962	16:02	63154.	61	28.763	NG*B2	CS25 2-FLUOROBIPHENYL**BN SU
1687	28:07	156843.	72	34.014	NG*B3	CS30 P-TERPHENYL-D14**BN SUR

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:54	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	12:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	18:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	22:50	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	31:27	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	36:26	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	5:54	1.01	0.663	1.00	55.48	50.00	1.392	1.255	1.11
8	8:08	1.00	0.914	1.00	60.10	50.00	2.172	1.807	1.20
9	20:40	1.00	1.142	1.00	27.91	50.00	0.246	0.441	0.56
10	10:34	1.00	0.841	1.00	27.66	50.00	0.365	0.660	0.55
11	16:01	1.00	0.885	1.00	28.76	50.00	0.765	1.330	0.58
12	28:06	1.00	0.893	1.00	34.04	50.00	0.644	0.946	0.68

Quantitation Report File: ISREF

ORIGINAL (Red)

Data: T2624.TI
05/16/90 17:01:00
Sample: CLP,,,SSTD50,,,22658,B,CC050,,,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.004
Submitted by: VERSAR Analyst: TS Acct. No.: ____

Data: T2632.TI
05/17/90 1:04:00
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
3	CI40 NAPHTHALENE-D8**INT. STD. #2**
4	CI40 NAPHTHALENE-D8**INT. STD. #2**
5	CI50 ACENAPHTHENE-D10**INT. STD. #3**
6	CI50 ACENAPHTHENE-D10**INT. STD. #3**
7	CI60 PHENANTHRENE-D10**INT. STD. #4**
8	CI60 PHENANTHRENE-D10**INT. STD. #4**
9	CI70 CHRYSENE-D12**INT. STD. #5**
10	CI70 CHRYSENE-D12**INT. STD. #5**
11	CI75 PERYLENE-D12**INT. STD. #6**
12	CI75 PERYLENE-D12**INT. STD. #6**

Scan	Time	Area(Hght)	Amount	Name
534	8:54	21230.	40.000 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
535	8:55	31963.	60.222 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
754	12:34	67127.	40.000 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
755	12:35	99624.	59.364 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1086	18:06	45485.	40.000 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1087	18:07	66037.	58.074 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1370	22:50	109533.	40.000 NG/UL	CI60 PHENANTHRENE-D10**INT.
1370	22:50	151191.	55.213 NG/UL	CI60 PHENANTHRENE-D10**INT.
1887	31:27	129519.	40.000 NG/UL	CI70 CHRYSENE-D12**INT. STD.
1888	31:28	194866.	60.181 NG/UL	CI70 CHRYSENE-D12**INT. STD.
2186	36:26	121131.	40.000 NG/UL	CI75 PERYLENE-D12**INT. STD.
2186	36:26	171110.	56.504 NG/UL	CI75 PERYLENE-D12**INT. STD.

Library Search Data: T2632 # 315 Base m/z: 43
05/17/90 1:04:00 + 5:15 Cali: T2632 # 2 RIC: 123135.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
97 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	806	HYDROPEROXIDE, 1,1-DIMETHYLETHYL
2	2776	2-PENTANOL, 2,4-DIMETHYL-
3	1334	OXIRANE, TETRAMETHYL-
4	2696	1,3-DIOXOLANE, 2,2,4-TRIMETHYL-
5	9176	2-HEXANONE, 6-(ACETYLOXY)-

Rank	Formula	M. Wt	B. Pk	Purity	Fit	RFit
1	C4.H10.O2	90	59	753	871	760
2	C7.H16.O	116	59	721	758	738
3	C6.H12.O	100	59	686	810	694
4	C6.H12.O2	116	43	682	738	847
5	C8.H14.O3	158	43	677	713	720

Rank	Ret. Time	B. P. Int.	US. Par. 1	US. Par. 2	C. A. S. #
1	—	—	—	—	75-91-2
2	—	—	—	—	625-06-9
3	—	—	—	—	5076-20-0
4	—	—	—	—	1193-11-9
5	—	—	—	—	4305-26-4

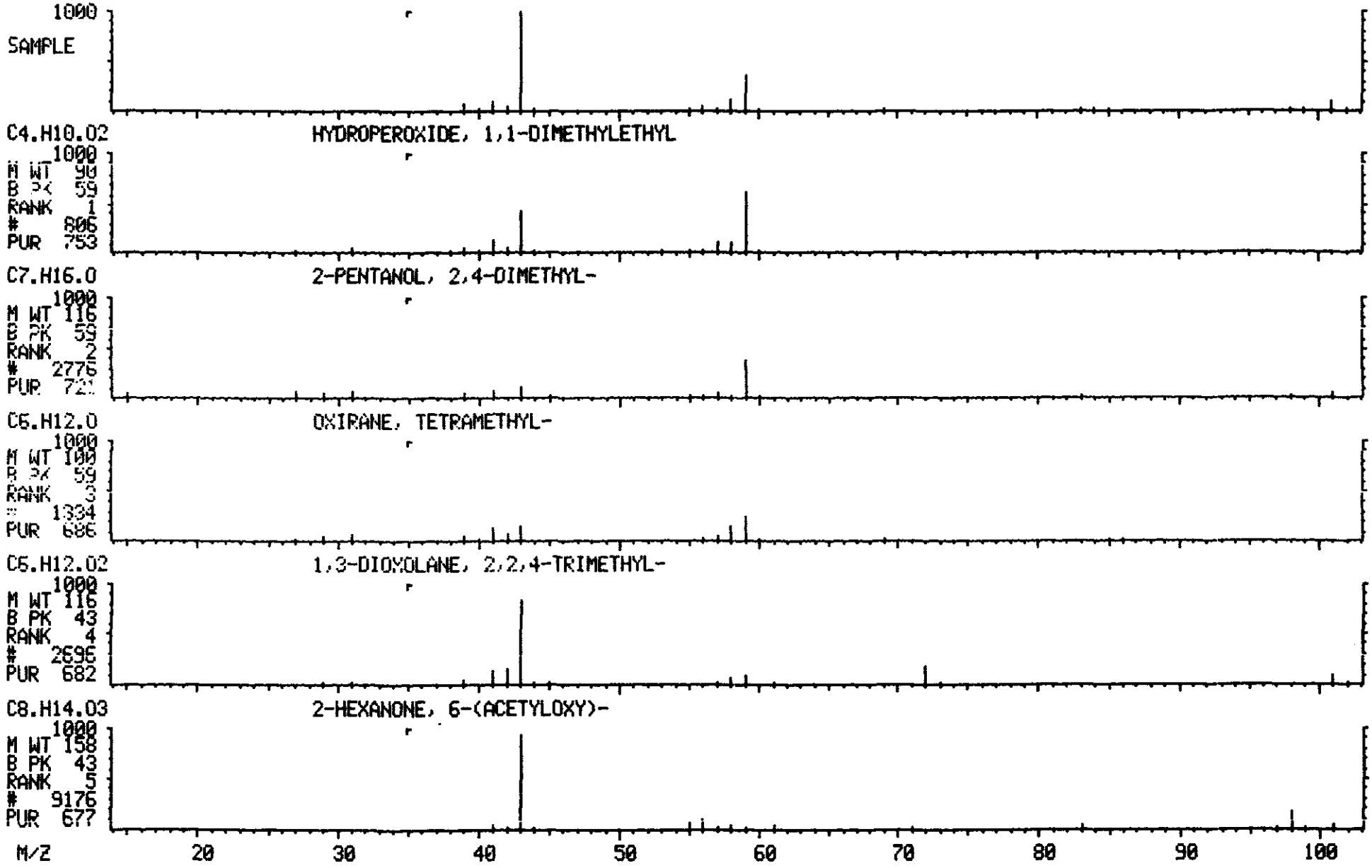
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 1:04:00 + 5:15
SAMPLE: CLP,VERSCOM,2536,3,L,S,16414,6,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@3SC TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 # 315
CALI: T2632 # 2

BASE M/Z: 43
RIC: 123135.

100110



Library Search Data: T2632 # 336 Base m/z: 41
05/17/90 1:04:00 + 5:36 Cali: T2632 # 2 RIC: 22655 ORIGINAL (Red)
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
149 matched at least 8 of the 16 largest peaks in the unknown

Rank	In.	Name
1	1076	1-PROPENE, 3,3'-OXYBIS-
2	2216	2-HEPTENAL, (Z)-
3	2184	4-PENTENAL, 2-ETHYL-
4	1111	2-HEXENAL, (E)-
5	4411	1-HEPTANOL, 6-METHYL-

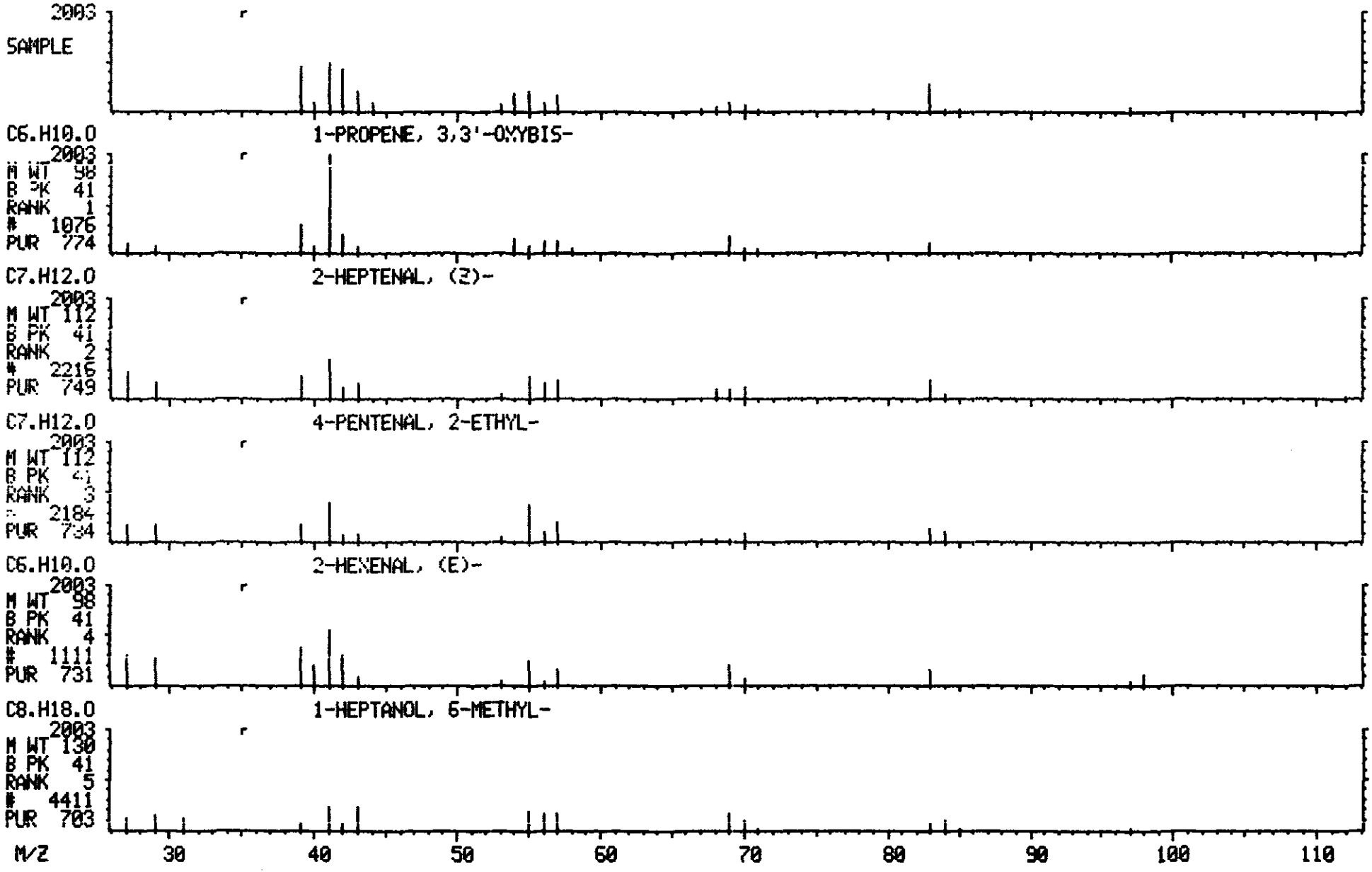
Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C6.H10.O	98	41	774	892	788
2	C7.H12.O	112	41	749	908	771
3	C7.H12.O	112	41	734	876	734
4	C6.H10.O	98	41	731	876	797
5	C8.H18.O	130	41	703	843	703

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	557-40-4
2	—	—	—	—	57266-86-1
3	—	—	—	—	5204-80-8
4	—	—	—	—	6728-26-3
5	—	—	—	—	1653-40-3

LIBRARY SEARCH
05/17/90 1:04:00 + 5:36
SAMPLE: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 G#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 # 336
CALI: T2632 # 2

BASE M/Z: 41
RIC: 22655.



100112

Library Search Data: T2632 # 373 Base m/z: 55 ORIGINAL
05/17/90 1:04:00 + 6:13 Cali: T2632 # 2 RIC: 9583. (Ped)
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
261 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	1075	2-HEXENAL
2	1109	3-PENTENAL, 4-METHYL-
3	8201	2-DECENAL, (E)-
4	16828	2-UNDECANETHIOL, 2-METHYL-
5	1111	2-HEXENAL, (E)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C6.H10.O	98	41	752	891	764
2	C6.H10.O	98	41	747	843	758
3	C10.H18.O	154	41	741	864	818
4	C12.H26.S	202	41	737	859	795
5	C6.H10.O	98	41	729	865	769

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	505-57-7
2	—	—	—	—	5362-50-5
3	—	—	—	—	3913-81-3
4	—	—	—	—	10059-13-9
5	—	—	—	—	6728-26-3

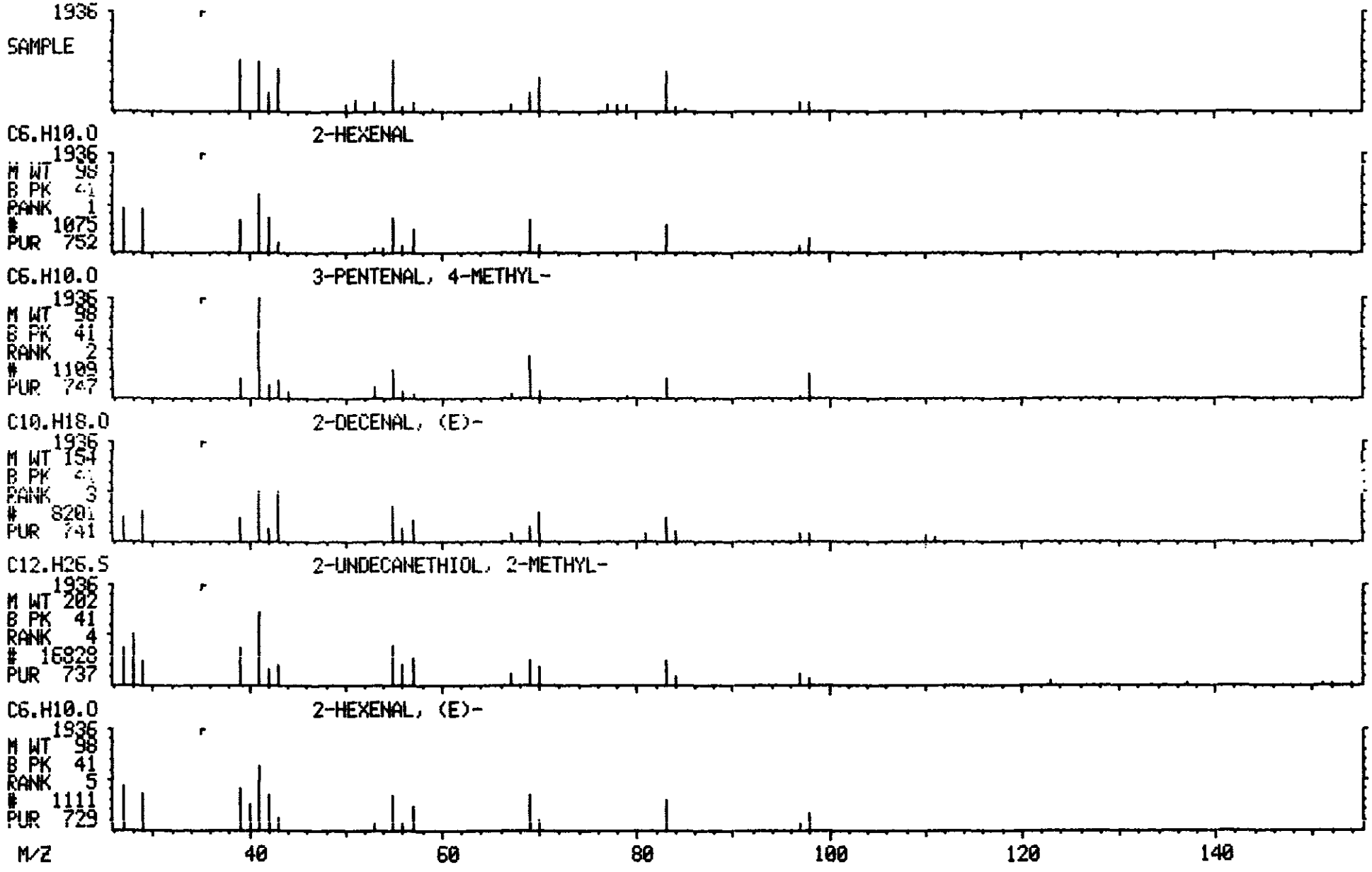
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 1:04:00 + 6:13
SAMPLE: CLP,VERSCOM,2526,3,L,5,16414,P,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 # 373
CALI: T2632 # 2

BASE M/Z: 55
RIC: 9583.

100114



Library Search Data: T2632 # 453 Base m/z: 43 ORIGINAL
05/17/90 1:04:00 + 7:33 Cali: T2632 # 2 RIC: 16351. (Red)
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNH searched for maximum PURITY
274 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	2147	2(5H)-FURANONE, 5,5-DIMETHYL-
2	2176	5-HEXEN-2-ONE, 5-METHYL-
3	2165	3-PENTEN-2-ONE, 3,4-DIMETHYL-
4	2183	3-HEXEN-2-ONE, 5-METHYL-
5	2071	2-PROPANONE, 1,1,1-TRIFLUORO-

Ketone

Rank	Formula	M. Wt	B. Pk	Purity	Fit	RFit
1	C6.H8.O2	112	43	852	889	928
2	C7.H12.O	112	43	836	890	872
3	C7.H12.O	112	43	748	807	777
4	C7.H12.O	112	43	746	793	790
5	C3.H3.O.F3	112	43	685	806	720

Rank	Ret. Time	B. P. Int.	US. Par. 1	US. Par. 2	C. A. S. #
1	—	—	—	—	20019-64-1
2	—	—	—	—	3240-09-3
3	—	—	—	—	684-94-6
4	—	—	—	—	5166-53-0
5	—	—	—	—	421-50-1

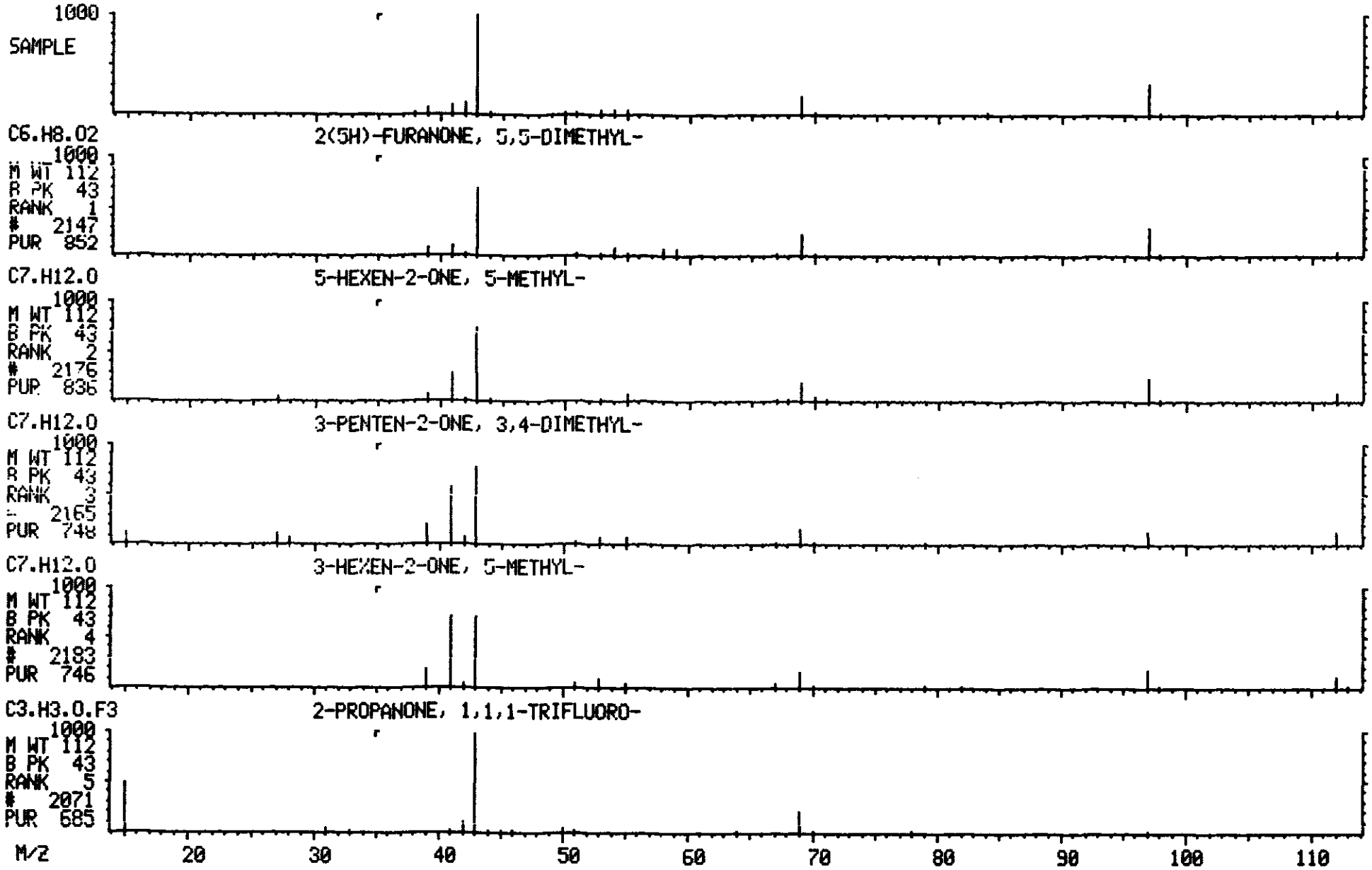
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 1:04:00 + 7:33
SAMPLE: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 # 453
CALI: T2632 # 2

BASE M/Z: 43
RIC: 16351.

100116



Library Search Data: T2632 # 508 Base m/z: 43
05/17/90 1:04:00 + 8:28 Cali: T2632 # 2 RIC: 46463.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
296 matched at least 6 of the 16 largest peaks in the unknown

Ketone

Rank	In.	Name
1	6315	3-HEPTANONE, 2,4-DIMETHYL-
2	1264	2,4-PENTANEDIONE
3	613	ETHANONE, 1-OXIRANYL-
4	2385	BUTANOIC ACID, ETHENYL ESTER
5	4427	PENTANE, 1-PROPOXY-

Rank	Formula	M. Wt	B. Pk	Purity	Fit	RFit
1	C9.H18.O	142	43	839	934	842
2	C5.H8.O2	100	43	784	920	808
3	C4.H6.O2	86	43	768	885	772
4	C6.H10.O2	114	43	723	845	754
5	C8.H18.O	130	43	722	849	775

Rank	Ret. Time	B.P. Int.	US. Par. 1	US. Par. 2	C.A.S. #
1	—	—	—	—	18641-71-9
2	—	—	—	—	123-54-6
3	—	—	—	—	4401-11-0
4	—	—	—	—	123-20-6
5	—	—	—	—	18641-82-2

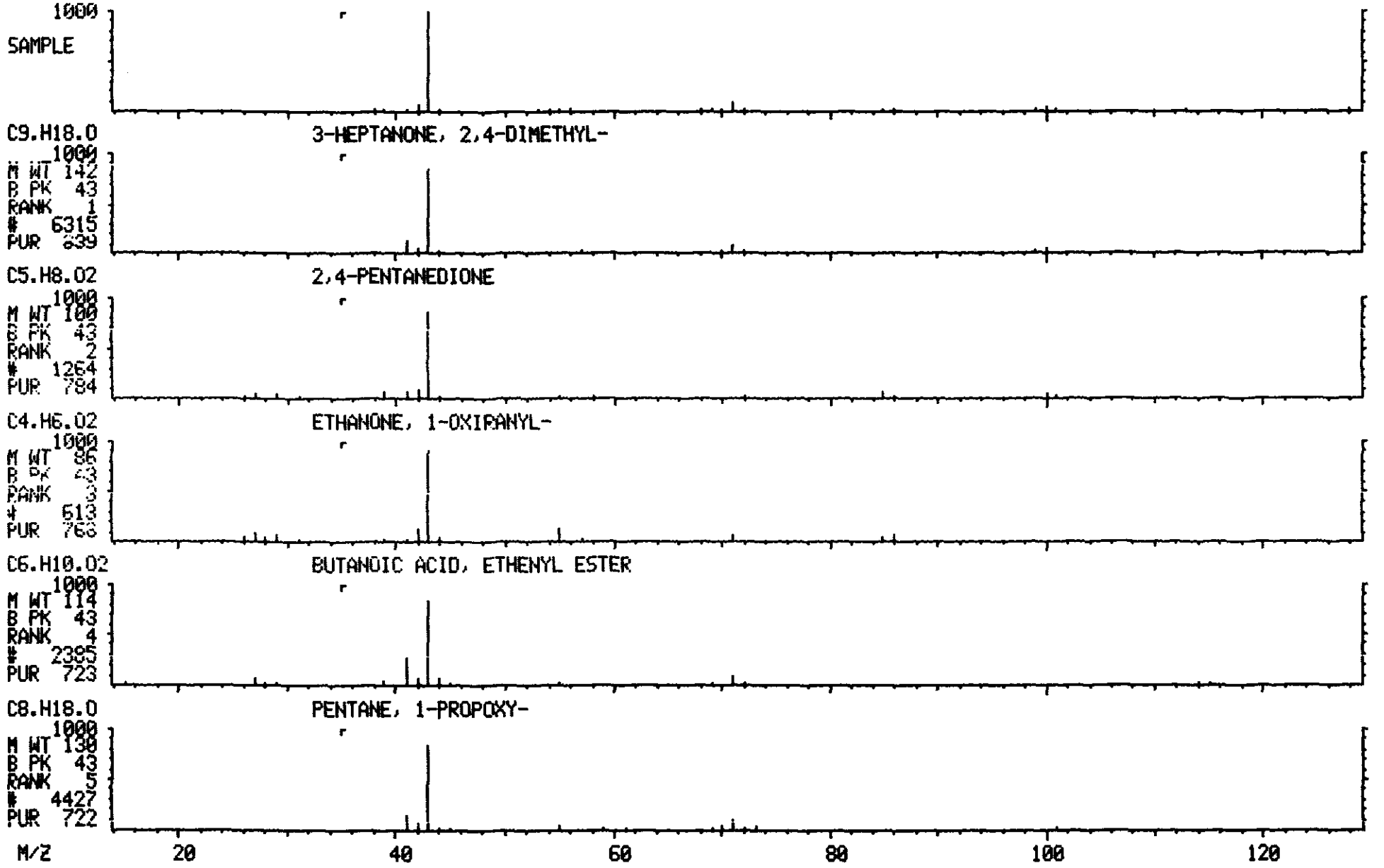
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 1:04:00 + 8:28
SAMPLE: CLP,VERSCOM,2526,3,L,S,16414,E,,420.1 R#2,1UL,
CONDS.: INST T COLUMN=PESTEK 30M RTX-5 4MINR38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 # 508
CALI: T2632 # 2

BASE M/Z: 43
RIC: 46463.

100118



Library Search Data: T2632 # 529 Base m/z: 43
05/17/90 1:04:00 + B:49 Cali: T2632 # 2 RIC: 123903.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@6C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
152 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	6315	3-HEPTANONE, 2,4-DIMETHYL-
2	16936	2H-PYRAN-2,3-DIOL, TETRAHYDRO-, DIACETATE, TRANS-
3	1264	2,4-PENTANEDIONE
4	16935	2H-PYRAN-2,3-DIOL, TETRAHYDRO-, DIACETATE, CIS-
5	2385	BUTANOIC ACID, ETHENYL ESTER

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C9.H18.O	142	43	821	916	860
2	C9.H14.O5	202	43	787	860	894
3	C5.H8.O2	100	43	771	913	793
4	C9.H14.O5	202	43	768	842	869
5	C6.H10.O2	114	43	712	842	742

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	18641-71-9
2	—	—	—	—	3021-94-1
3	—	—	—	—	123-54-6
4	—	—	—	—	2396-74-9
5	—	—	—	—	123-20-6

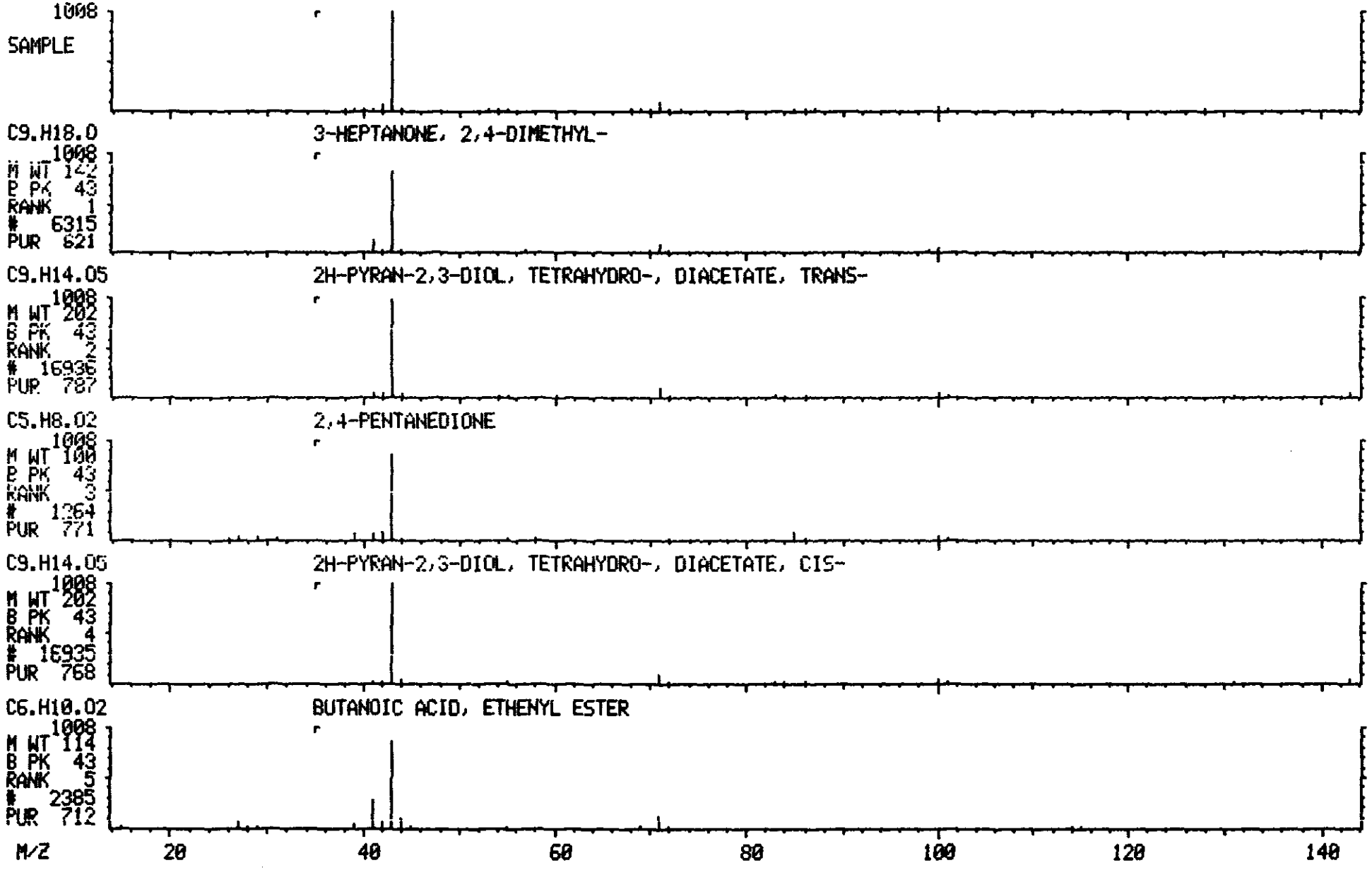
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 1:04:00 + 8:49
SAMPLE: CLP,VERSCOM,2536,3,L,5,16414,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15@ 2N 0T)

DATA: T2632 # 529
CALI: T2632 # 2

BASE M/Z: 43
RIC: 123903.

100120



Library Search Data: T2632 # 585 Base m/z: 43
05/17/90 1:04:00 + 9:45 Cali: T2632 # 2 RIC: 109951
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
99 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	1590	1,2-ETHANEDIOL, MONOACETATE
2	2875	BUTANOIC ACID, 3-HYDROXY-, METHYL ESTER
3	6936	HEXANOIC ACID, HYDROXY-, METHYL ESTER
4	6867	1,2-ETHANEDIOL, DIACETATE
5	604	2,3-BUTANEDIONE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C4.H8.O3	104	43	691	954	691
2	C5.H10.O3	118	43	610	747	691
3	C7.H14.O3	146	43	594	719	713
4	C6.H10.O4	146	43	588	811	674
5	C4.H6.O2	86	43	580	954	587

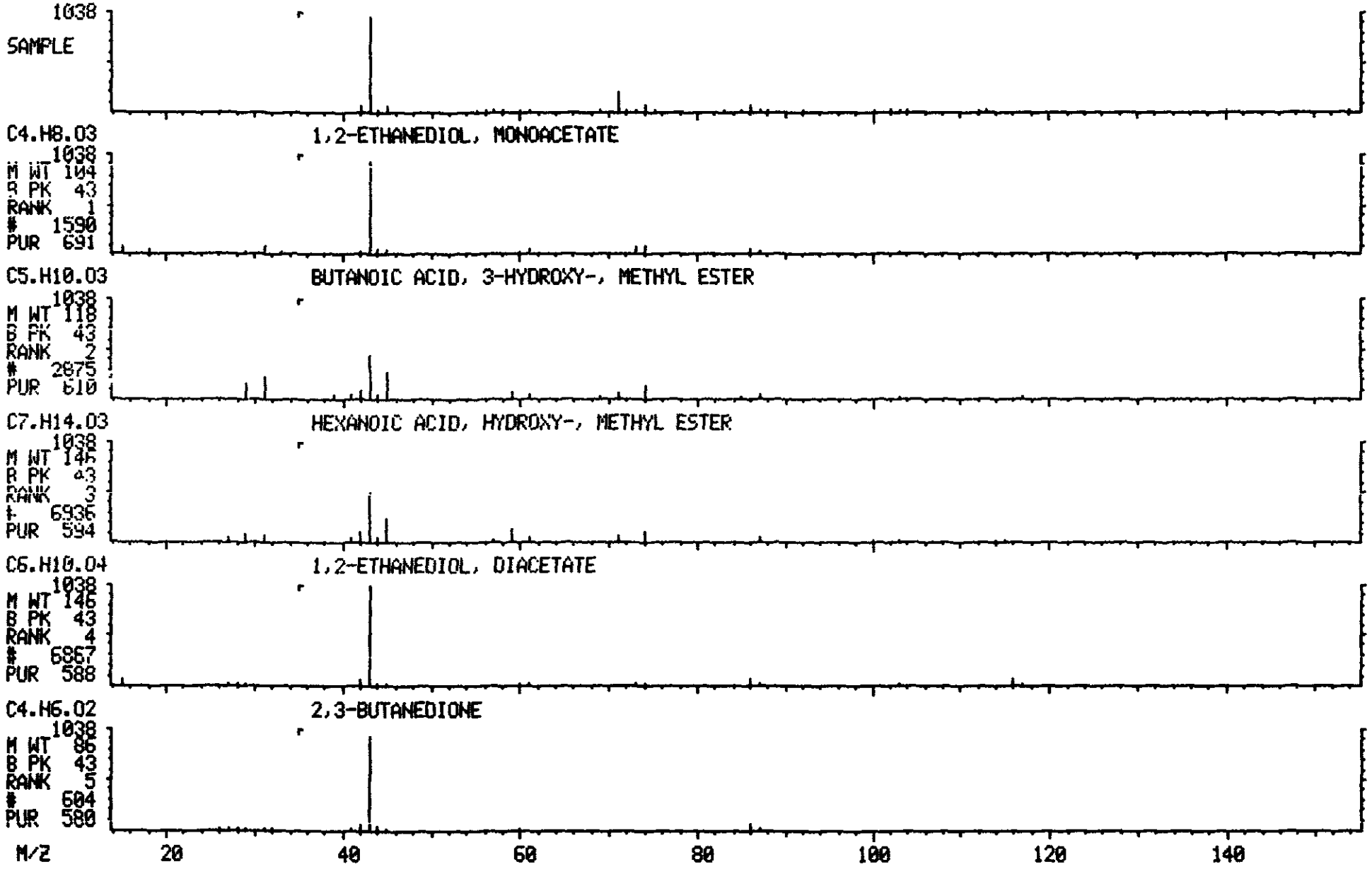
Rank	Ret.Time	B.P.Int.	US Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	542-59-6
2	—	—	—	—	1487-49-6
3	—	—	—	—	59942-11-9
4	—	—	—	—	111-55-7
5	—	—	—	—	431-03-8

LIBRARY SEARCH
05/17/90 1:04:00 + 9:45
SAMPLE: CLP,VERSCOM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30@8C/MIN
ENHANCED (S 156 2N 0T)

DATA: T2632 # 585
CALI: T2632 # 2

BASE M/Z: 43
RIC: 109951.

100122



Library Search Data: T2632 #1322 Base m/z: 43
05/17/90 1:04:00 + 22:02 Cali: T2632 # 2 RIC: 22751 ORIGINAL (Red)
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
127 matched at least 3 of the 16 largest peaks in the unknown

Rank	In.	Name
1	31758	PHENOL, 2,4,6-TRIBROMO-
2	32118	STANNANE, TRIMETHYL(PENTAFLUOROPHENYL)-
3	32110	ANTHRACENE, 9,10-DIHYDRO-9,10-DIPHENYL-
4	31800	DCPA (VAN)
5	32107	DIACENAPHTHO[1,2-B:1',2'-D]THIOPHENE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C6.H3.O.BR3	328	330	730	940	757
2	C9.H9.F5.SN	332	43	312	500	507
3	C26.H20	332	332	305	437	431
4	C10.H6.O4.CL4	330	332	284	558	418
5	C24.H12.S	332	332	279	434	474

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	118-79-6
2	—	—	—	—	1015-53-8
3	—	—	—	—	803-58-7
4	—	—	—	—	1861-32-1
5	—	—	—	—	203-42-9

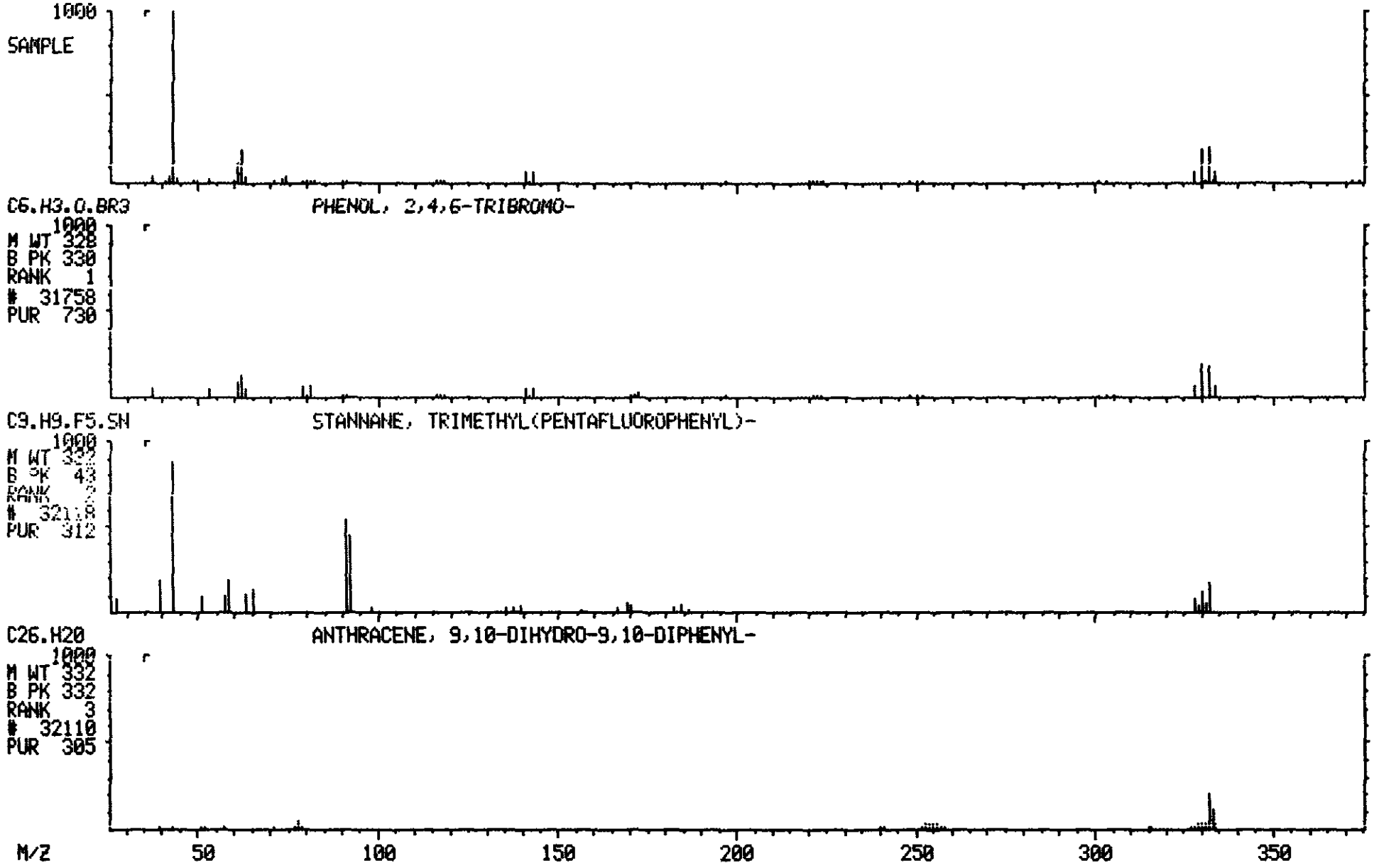
ORIGINAL (Red)

100124

LIBRARY SEARCH
05/17/90 1:04:00 + 22:02
SAMPLE: CLP,VERSCOM,2536,3,L,S,16414,6,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 #1322
CALI: T2632 # 2

BASE M/Z: 43
RIC: 22751.



Library Search Data: T2632 #2042 Base m/z: 59
05/17/90 1:04:00 + 34:02 Cali: T2632 # 2 RIC: 30591.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL
(Red)

42223 spectra in LIBRARYNR searched for maximum PURITY
88 matched at least 7 of the 16 largest peaks in the unknown

Rank	In.	Name
1	27222	9-OCTADECENAMIDE, (Z)-
2	1394	PENTANAMIDE
3	3737	ETHANONE, 1-(3-ETHYLCYCLOBUTYL)-
4	4048	CYCLOPENTANEMETHANOL, .ALPHA.,.ALPHA.-DIMETHYL-
5	11424	CYCLOOCTANEMETHANOL, .ALPHA.,.ALPHA.-DIMETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C18.H35.O.N	281	59	544	856	621
2	C5.H11.O.N	101	59	433	824	453
3	C8.H14.O	126	43	419	711	425
	C8.H16.O	128	59	410	849	449
	C11.H22.O	170	59	404	845	431

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	301-02-0
2	—	—	—	—	626-97-1
3	—	—	—	—	56335-71-8
4	—	—	—	—	1462-06-2
5	—	—	—	—	16624-06-9

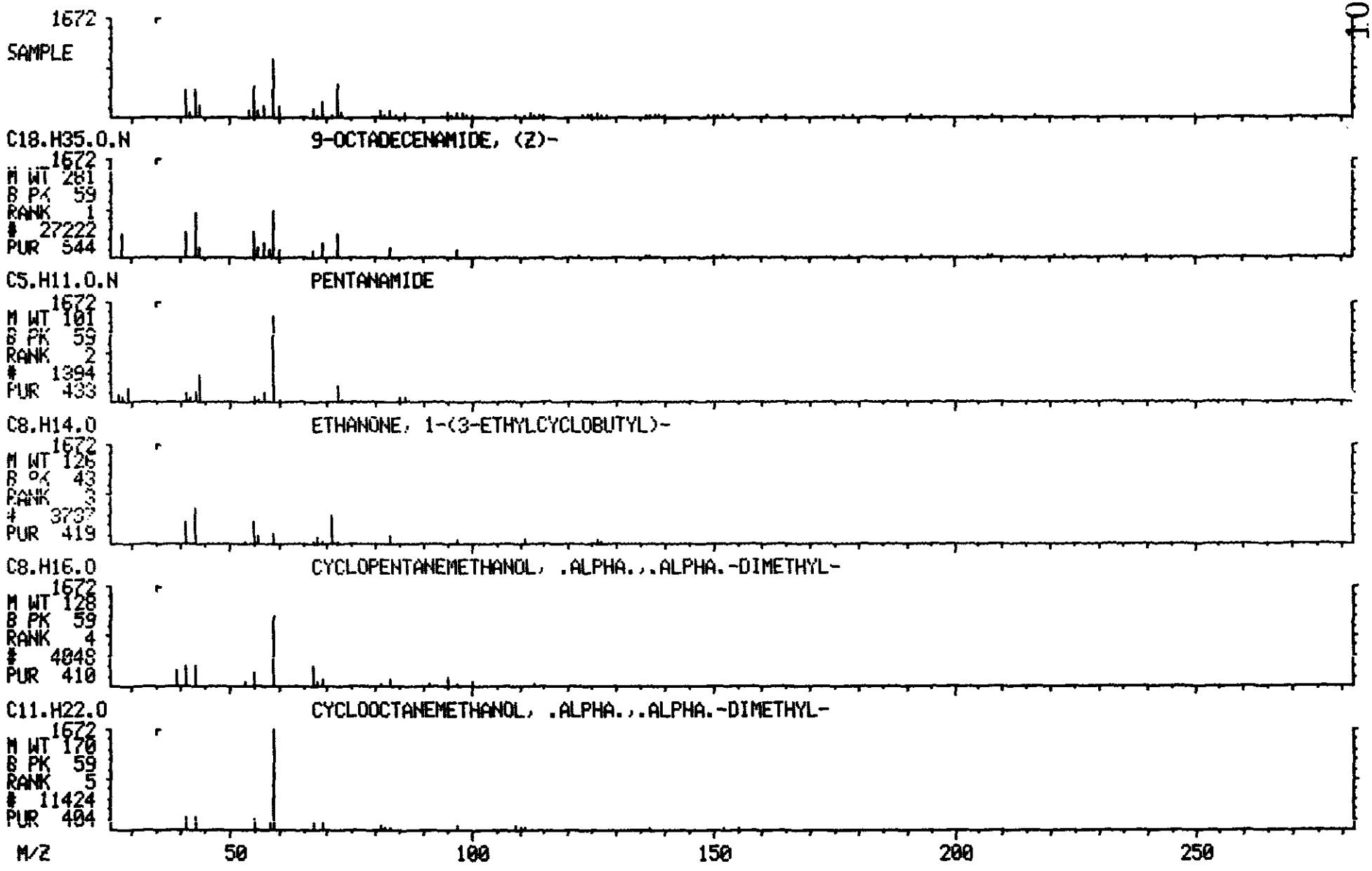
ORIGINAL (Red)

LIBRARY SEARCH
05/17/90 1:04:00 + 34:02
SAMPLE: CLP,VERSCOM,2526,3,L,S,16414,B,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 #2042
CALI: T2632 # 2

BASE M/Z: 59
RIC: 30591.

100126



Library Search Data: T2632 #2096 Base m/z: 69
05/17/90 1:04:00 + 34:56 Cali: T2632 # 2 RIC: 17439
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
291 matched at least 6 of the 16 largest peaks in the unknown

Rank	In.	Name
1	38122	D:A-FRIEDOOLEANAN-28-AL, 3-OXO-
2	19928	2,6,10-DODECATRIEN-1-OL, 3,7,11-TRIMETHYL-
3	25570	2,5-FURANDIONE, 3-(DODECENYL)DIHYDRO-
4	36822	SQUALENE
5	17550	CYCLOHEXANE, 1,1,2-TRIMETHYL-3,5-BIS(1-METHYLETHENYL)-, (2.ALPHA.,3*

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C30.H48.O2	440	137	437	853	487
2	C15.H26.O	222	69	435	898	416
3	C16.H26.O3	266	55	396	830	454
4	C30.H50	410	69	395	742	510
5	C15.H26	206	41	394	877	430

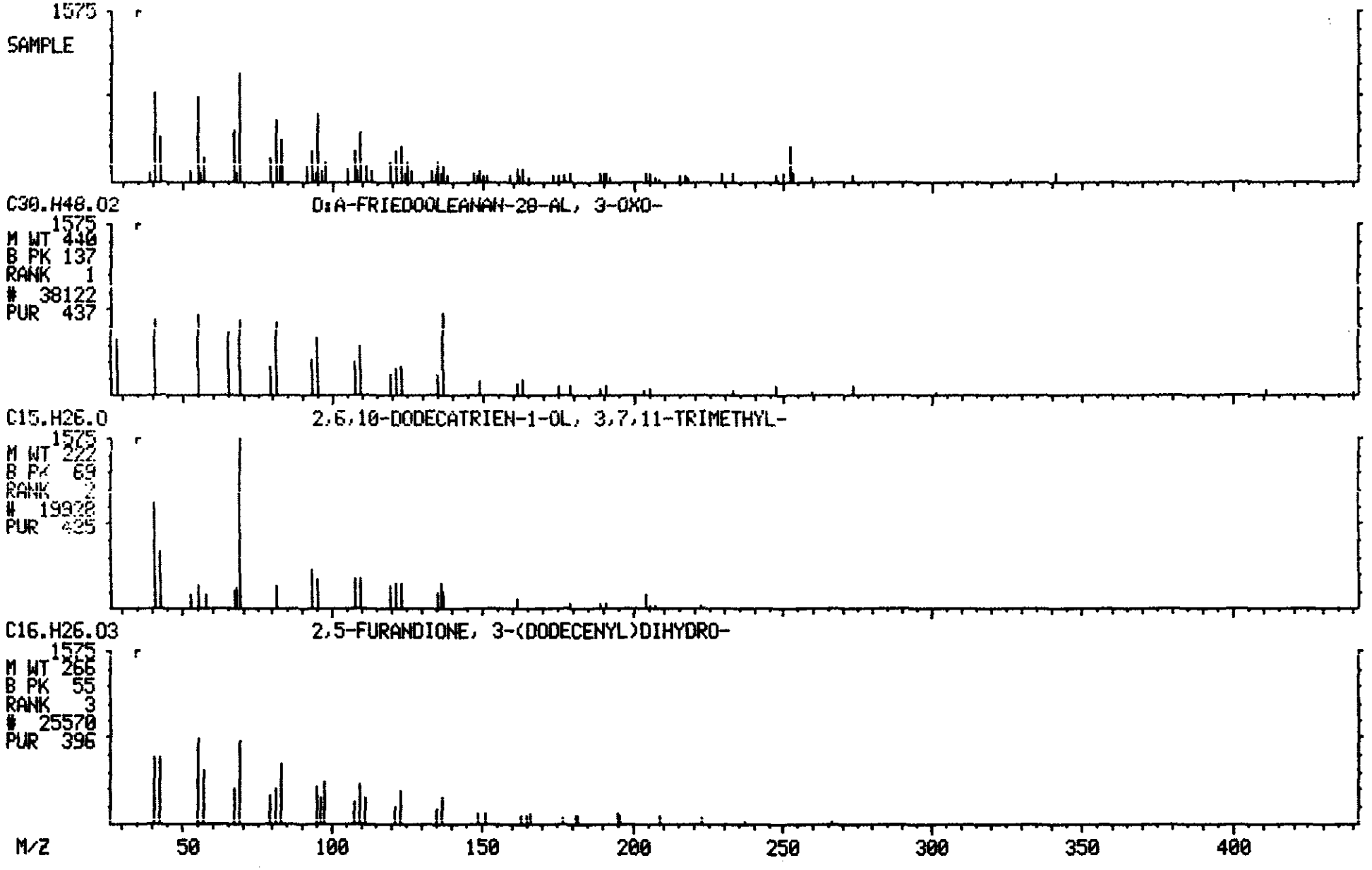
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	14440-40-5
2	—	—	—	—	4602-84-0
3	—	—	—	—	25377-73-5
4	—	—	—	—	7683-64-9
5	—	—	—	—	62337-97-7

LIBRARY SEARCH
05/17/90 1:04:00 + 34:56
SAMPLE: CLP,VERSCDM,2536,3,L,5,16414,6,,420.1 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2632 #2096
CALI: T2632 # 2

BASE M/Z: 69
RIC: 17439.

100128



ORIGINAL (Red)

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        >>>>INTERNAL STANDARD RIC REPORT<<<<
*****************************INTERNAL STANDARD#1*****************RIC
Mass List                        Data: T2632 # 536          Base m/z:   150
05/17/90  1:04:00 +  8:56        Cali: T2632 #   2          RIC:      98816.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*****************************INTERNAL STANDARD#2*****************RIC
Mass List                        Data: T2632 # 755          Base m/z:   136
05/17/90  1:04:00 + 12:35        Cali: T2632 #   2          RIC:     126336.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*****************************INTERNAL STANDARD#3*****************RIC
Mass List                        Data: T2632 #1087          Base m/z:   164
05/17/90  1:04:00 + 18:07        Cali: T2632 #   2          RIC:     109416.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*****************************INTERNAL STANDARD#4*****************RIC
Mass List                        Data: T2632 #1370          Base m/z:   188
05/17/90  1:04:00 + 22:50        Cali: T2632 #   2          RIC:     148736.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*****************************INTERNAL STANDARD#5*****************RIC
Mass List                        Data: T2632 #1888          Base m/z:   240
05/17/90  1:04:00 + 31:28        Cali: T2632 #   2          RIC:     161792.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
*****************************INTERNAL STANDARD#6*****************RIC
Mass List                        Data: T2632 #2187          Base m/z:   264
05/17/90  1:04:00 + 36:27        Cali: T2632 #   2          RIC:     100352.
Sample: CLP,VERSCDM,2536,3,L,S,16414,B,,420.1 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                         *   0  Maxima
     ANALYST: CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO CONTAMINATION
```

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

5 ORIGINAL (Red)

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16422

Sample wt/vol: 1.2 (g/mL) G Lab File ID: T2599

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 50 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/16/90

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	33000	U
111-44-4	bis(2-Chloroethyl)ether	33000	U
95-57-8	2-Chlorophenol	33000	U
541-73-1	1,3-Dichlorobenzene	33000	U
106-46-7	1,4-Dichlorobenzene	33000	U
100-51-6	Benzyl alcohol	33000	U
95-50-1	1,2-Dichlorobenzene	33000	U
95-48-7	2-Methylphenol	33000	U
108-60-1	bis(2-Chloroisopropyl)ether	33000	U
106-44-5	4-Methylphenol	33000	U
621-64-7	N-Nitroso-di-n-propylamine	33000	U
67-72-1	Hexachloroethane	33000	U
98-95-3	Nitrobenzene	33000	U
78-59-1	Isophorone	33000	U
88-75-5	2-Nitrophenol	33000	U
105-67-9	2,4-Dimethylphenol	33000	U
65-85-0	Benzoic Acid	160000	U
111-91-1	bis(2-Chloroethoxy)methane	33000	U
120-83-2	2,4-Dichlorophenol	33000	U
120-82-1	1,2,4-Trichlorobenzene	33000	U
91-20-3	Naphthalene	33000	U
106-47-8	4-Chloroaniline	33000	U
87-68-3	Hexachlorobutadiene	33000	U
59-50-7	4-Chloro-3-methylphenol	33000	U
91-57-6	2-Methylnaphthalene	33000	U
77-47-4	Hexachlorocyclopentadiene	33000	U
88-06-2	2,4,6-Trichlorophenol	33000	U
95-95-4	2,4,5-Trichlorophenol	160000	U
91-58-7	2-Chloronaphthalene	33000	U
88-74-4	2-Nitroaniline	160000	U
131-11-3	Dimethylphthalate	33000	U
208-96-8	Acenaphthylene	33000	U
606-20-2	2,6-Dinitrotoluene	33000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

5 ORIGINAL (BASE)

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16422

Sample wt/vol: 1.2 (g/mL) G Lab File ID: T2599

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 50 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/16/90

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	160000	U
83-32-9	Acenaphthene	33000	U
51-28-5	2,4-Dinitrophenol	160000	U
100-02-7	4-Nitrophenol	160000	U
132-64-9	Dibenzofuran	33000	U
121-14-2	2,4-Dinitrotoluene	33000	U
84-66-2	Diethylphthalate	33000	U
7005-72-3	4-Chlorophenyl-phenylether	33000	U
86-73-7	Fluorene	33000	U
100-01-6	4-Nitroaniline	160000	U
534-52-1	4,6-Dinitro-2-methylphenol	160000	U
86-30-6	N-nitrosodiphenylamine (1)	33000	U
101-55-3	4-Bromophenyl-phenylether	33000	U
118-74-1	Hexachlorobenzene	33000	U
87-86-5	Pentachlorophenol	160000	U
85-01-8	Phenanthrene	87000	
120-12-7	Anthracene	33000	
84-74-2	Di-n-butylphthalate	33000	U
206-44-0	Fluoranthene	120000	
129-00-0	Pyrene	93000	
85-68-7	Butylbenzylphthalate	33000	U
91-94-1	3,3'-Dichlorobenzidine	66000	U
56-55-3	Benzo(a)anthracene	63000	
218-01-9	Chrysene	76000	
117-81-7	bis(2-Ethylhexyl)phthalate	33000	U
117-84-0	Di-n-octyl phthalate	33000	U
205-99-2	Benzo(b)fluoranthene	58000	
207-08-9	Benzo(k)fluoranthene	48000	
50-32-8	Benzo(a)pyrene	53000	
193-39-5	Indeno(1,2,3-cd)pyrene	36000	
53-70-3	Dibenz(a,h)anthracene	33000	U
191-24-2	Benzo(g,h,i)perylene	31000	J

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

5

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16422

Sample wt/vol: 1.2 (g/mL) G Lab File ID: T2599

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 50 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/16/90

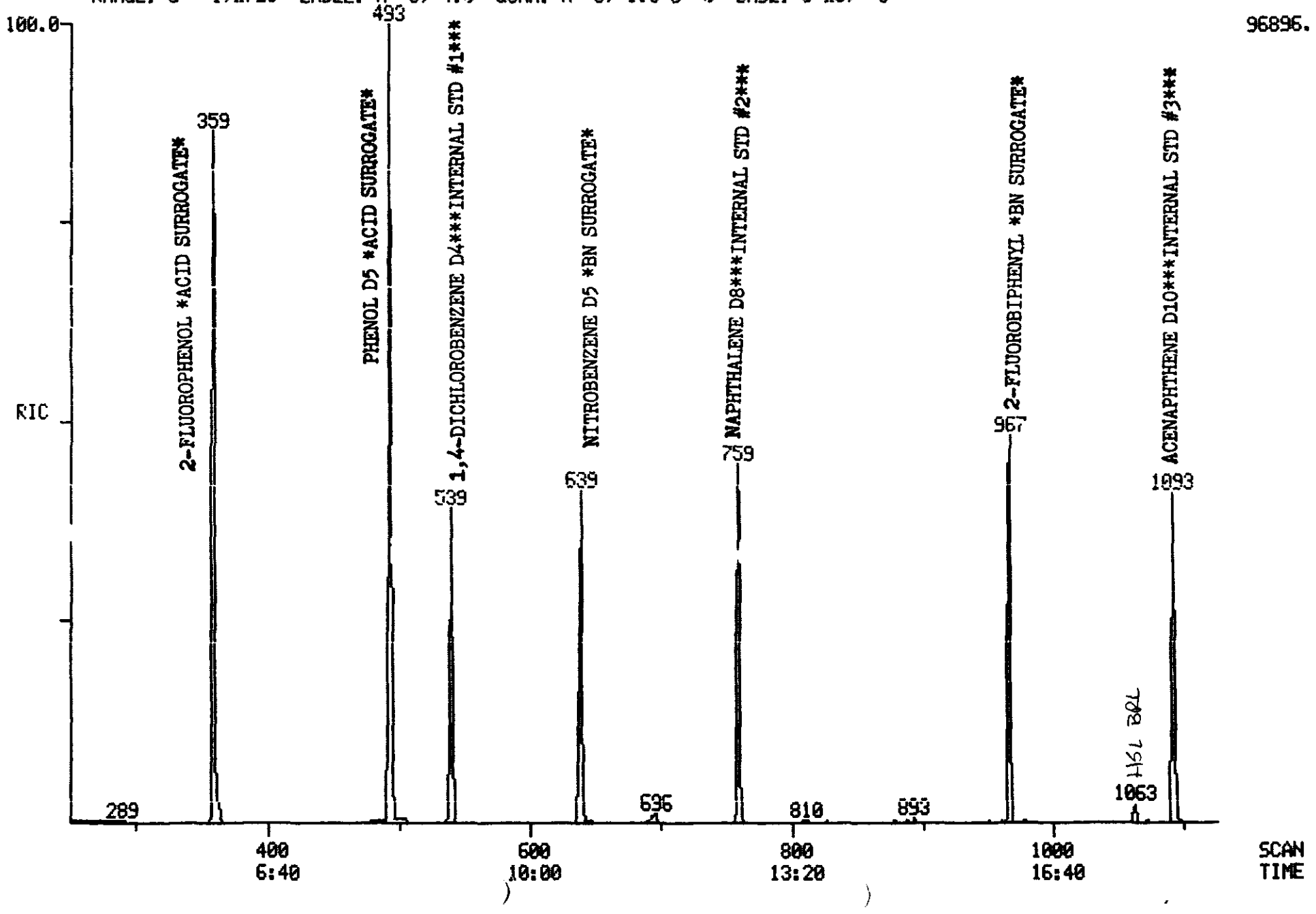
GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 1.00

Number TICs found: 9

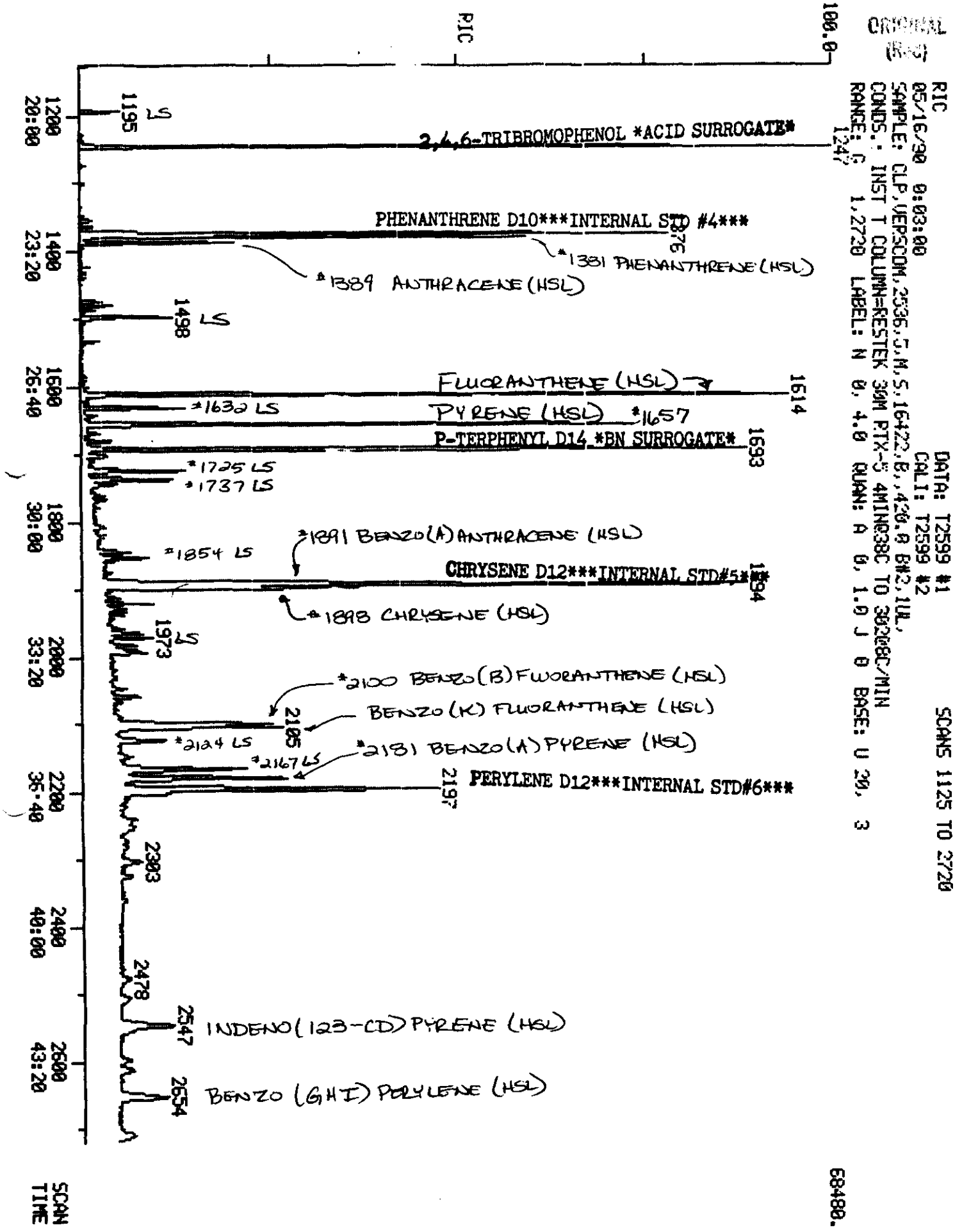
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK POLYAROMATIC HYDROCARBON	19.92	13000	J
2.	UNK POLYAROMATIC HYDROCARBON	24.97	20000	J
3.	UNK POLYAROMATIC HYDROCARBON	27.21	20000	J
4.	UNK POLYAROMATIC HYDROCARBON	28.76	20000	J
5.	UNK POLYAROMATIC HYDROCARBON	28.96	17000	J
6.	UNK POLYAROMATIC HYDROCARBON	30.91	10000	J
7.	UNKNOWN SILOXANE	32.89	6700	J
8.	UNK POLYAROMATIC HYDROCARBON	35.41	17000	J
9.	UNK POLYAROMATIC HYDROCARBON	36.12	50000	J

RIC DATA: T2599 #1 SCANS 250 TO 1125
05/16/90 0:03:00 CALI: T2599 #2
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: C 1,2720 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



100133


RIC
05/16/90 0:03:00
SAMPLE: CLP,VEPSCOM,2536,5,M,5,16422,B,,420,0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: C 1,2720 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: T2599 #1
CALI: T2599 #2
SCANS 1125 TO 2720
RIC
100.0
1200 20:00
1400 23:20
1600 26:40
1800 30:00
2000 33:20
2200 36:40
2400 40:00
2600 43:20
SCAN TIME
68480.
1195 LS
2,4,6-TRIBROMOPHENOL *ACID SURROGATE*
1247
PHENANTHRENE D10***INTERNAL STD #4***
1376
*1381 PHENANTHRENE (HSL)
*1389 ANTHRACENE (HSL)
1498 LS
FLUORANTHENE (HSL)
1614
*1632 LS
PYRENE (HSL) *1657
P-TERPHENYL D14 *BN SURROGATE*
1693
*1725 LS
*1737 LS
*1891 BENZO(A)ANTHRACENE (HSL)
*1854 LS
CHRYSENE D12***INTERNAL STD#5***
1894
*1898 CHRYSENE (HSL)
1973 LS
*2100 BENZO(B)FLUORANTHENE (HSL)
BENZO(K) FLUORANTHENE (HSL)
2105
*2124 LS
*2181 BENZO(A)PYRENE (HSL)
*2167 LS
PERYLENE D12***INTERNAL STD#6***
2197
2303
2478
2547 INDENO(123-CD)PYRENE (HSL)
2654 BENZO (GHI) PERYLENE (HSL)

100134

Quantitation Report File: T2599

Data: T2599.TI
05/16/90 0:03:00
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	C330 2-CHLOROPHENOL
3	C315 PHENOL
4	C325 BIS (2-CHLOROETHYL) ETHER
5	C335 1,3-DICHLOROBENZENE
6	C340 1,4-DICHLOROBENZENE
7	C350 1,2-DICHLOROBENZENE
8	C345 BENZYL ALCOHOL
9	C360 BIS (2-CHLOROISOPROPYL) ETHER
10	C355 2-METHYLPHENOL
11	C375 HEXACHLOROETHANE
12	C365 4-METHYLPHENOL
13	C370 N-NITROSO-DI-N-PROPYLAMINE
14	CS50 2-FLUOROPHENOL**ACID SURR.**
15	CS45 PHENOL-D5**ACID SURR.**
16	CI40 NAPHTHALENE-D8**INT. STD.#2**
17	C410 NITROBENZENE
18	C415 ISOPHORONE
19	C420 2-NITROPHENOL
20	C425 2,4-DIMETHYLPHENOL
21	C435 BIS (2-CHLOROETHOXY) METHANE
22	C440 2,4-DICHLOROPHENOL
23	C445 1,2,4-TRICHLOROBENZENE
24	C450 NAPHTHALENE
25	C430 BENZOIC ACID
26	C455 4-CHLOROANILINE
27	C460 HEXACHLOROBUTADIENE
28	C465 4-CHLORO-3-METHYLPHENOL
29	C470 2-METHYLNAPHTHALENE
30	CS20 NITROBENZENE-D5**BN SURR.**
31	CI50 ACENAPHTHENE-D10**INT. STD.#3**
32	C510 HEXACHLOROCYCLOPENTADIENE
33	C515 2,4,6-TRICHLOROPHENOL
34	C520 2,4,5-TRICHLOROPHENOL
35	C525 2-CHLORONAPHTHALENE
36	C530 2-NITROANILINE
37	C540 ACENAPHTHYLENE
38	C535 DIMETHYL PHTHALATE
39	C544 2,6-DINITROTOLUENE
40	C550 ACENAPHTHENE
41	C545 3-NITROANILINE
42	C555 2,4-DINITROPHENOL
43	C565 DIBENZOFURAN
44	C560 4-NITROPHENOL
45	C570 2,4-DINITROTOLUENE
46	C590 FLUORENE
47	C585 4-CHLOROPHENYL-PHENYLETHER

✓ 5/22/90

All IS areas + Surrogate recoveries are compliant.
5-16-90.

11 HSL's detected

9 LS.

100135

T2599

No	Name
48	C580 DIETHYLPHTHALATE
49	C595 4-NITROANILINE
50	C610 4,6-DINITRO-2-METHYLPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	539	8:59	1	1.000	A BB	9676.	40.000 NG/UL	4.74
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	NOT FOUND								
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	112	359	5:59	1	0.666	A BB	28128.	95.413 NG*A1	11.30
15	99	493	8:13	1	0.915	A BB	35918.	82.028 NG*A2	9.71
16	136	759	12:39	16	1.000	A BB	29529.	40.000 NG/UL	4.74
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	128	763	12:43	16	1.005	A BB	531.	BRL ~~0.529 NG~~	0.06
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	82	639	10:39	16	0.842	A BB	24170.	40.360 NG*B1	4.78
31	164	1093	18:13	31	1.000	A BB	22874.	40.000 NG/UL	4.74
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	152	1063	17:43	31	0.973	A BB	2778.	BRL ~~2.430 NG~~	0.29
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	168	1128	18:48	31	1.032	A BB	1380.	BRL ~~1.309 NG~~	0.15
44	NOT FOUND								
45	NOT FOUND								
46	166	1195	19:55	31	1.093	A BB	3075.	~~3.673 NG~~	0.43
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

T2599

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	8:59	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	8:31		0.948						
3	8:14		0.917						
4	8:27		0.941						
5	8:52		0.987						
6	9:01		1.004						
7	9:32		1.061						
8	9:28		1.054						
9	9:54		1.102						
10	9:49		1.093						
11	10:20		1.150						
12	10:14		1.139						
13	10:18		1.147						
14	5:58	1.00	0.664	1.00	95.41	50.00	2.326	1.219	1.91
15	8:12	1.00	0.913	1.00	82.03	50.00	2.970	1.810	1.64
16	12:39	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
17	10:42		0.846						
18	11:21		0.897						
19	11:36		0.917						
20	11:46		0.930						
21	12:05		0.955						
22	12:17		0.971						
23	12:32		0.991						
24	12:42	1.00	1.004	1.00	0.53	50.00	0.014	1.360	0.01
25	12:08		0.959						
26	13:01		1.029						
27	13:15		1.047						
28	14:32		1.149						
29	14:50		1.173						
30	10:38	1.00	0.841	1.00	40.36	50.00	0.655	0.811	0.81
31	18:12	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
32	15:32		0.853						
33	15:51		0.871						
34	15:57		0.876						
35	16:22		0.899						
36	16:54		0.929						
37	17:43	1.00	0.973	1.00	2.43	50.00	0.097	1.999	0.05
38	17:37		0.968						
39	17:51		0.981						
40	18:19		1.006						
41	18:15		1.003						
42	18:33		1.019						
43	18:49	1.00	1.034	1.00	1.31	50.00	0.048	1.844	0.03
44	18:49		1.034						
45	19:04		1.048						
46	19:55	1.00	1.094	1.00	3.67	50.00	0.108	1.464	0.07
47	19:58		1.097						
48	19:53		1.092						
49	20:15		1.113						
50	20:20		1.117						

Quantitation Report File: T2599

ORIGINAL (Red)

Data: T2599.TI
05/16/90 0:03:00
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
51	C615 N-NITROSODIPHENYLAMINE
52	C625 4-BROMOPHENYL-PHENYLETHER
53	C630 HEXACHLOROBENZENE
54	CS25 2-FLUOROBIPHENYL**BN SURR.**
55	CI60 PHENANTHRENE-D10**INT. STD.#4**
56	C635 PENTACHLOROPHENOL
57	C640 PHENANTHRENE
58	C645 ANTHRACENE
59	C650 DI-N-BUTYLPHTHALATE
60	C655 FLUORANTHENE
61	C715 PYRENE
62	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
63	CI70 CHRYSENE-D12**INT. STD.#5**
64	C720 BUTYLBENZYLPHTHALATE
65	C730 BENZO(A)ANTHRACENE
66	C740 CHRYSENE
67	C725 3,3'-DICHLOROBENZIDINE
68	C741 BIS(2-ETHYLHEXYL)PHTHALATE
69	CS30 P-TERPHENYL-D14**BN SURR.**
70	CI75 PERYLENE-D12**INT. STD.#6**
71	C760 DI-N-OCTYL PHTHALATE
72	C765 BENZO(B)FLUORANTHENE
73	C770 BENZO(K)FLUORANTHENE
74	C775 BENZO(A)PYRENE
75	C780 INDENO(1,2,3-CD)PYRENE
76	C785 DIBENZ(A,H)ANTHRACENE
77	C790 BENZO(G,H,I)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	172	967	16:07	31	0.885	A BB	31215.	42.177 NG*B2	4.99
55	188	1376	22:56	55	1.000	A BB	57031.	40.000 NG/UL	4.74
56	NOT FOUND								
57	178	1381	23:01	55	1.004	A BV	39033.	25.148 NG	2.98
58	178	1389	23:09	55	1.009	A VB	14742.	9.448 NG	1.12
59	149	1507	25:07	55	1.095	A BB	490.	BRL ~~0.203 NG~~	0.02
60	202	1614	26:54	55	1.173	A BB	71449.	39.210 NG	4.64
61	202	1657	27:37	63	0.875	A VB	53435.	27.834 NG.	3.30
62	330	1247	20:47	31	1.141	A BB	17615.	88.239 NG*A3	10.45
63	240	1894	31:34	63	1.000	A BB	57669.	40.000 NG/UL	4.74
64	NOT FOUND								
65	228	1891	31:31	63	0.998	A BV	27553.	18.386 NG	2.18
66	228	1898	31:38	63	1.002	A VB	25502.	22.149 NG	2.62

T2599

ORIGINAL (Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
67	NOT FOUND								
68	149	1910	31:50	63	1.008	A BB	188.	~~0.111 NG~~	0.
69	244	1693	28:13	63	0.894	A BB	52818.	39.858 NG*B3	4.72
70	264	2197	36:37	70	1.000	A BB	54362.	40.000 NG/UL	4.74
71	NOT FOUND								
72	252	2100	35:00	70	0.956	A VV	24632.	14.725 NG	1.74
73	252	2105	35:05	70	0.958	A VB	19977.	14.723 NG	1.74
74	252	2181	36:21	70	0.993	A VB	22481.	15.328 NG	1.82
75	276	2546	42:26	70	1.159	A BB	14163.	11.361 NG	1.35
76	NOT FOUND								
77	276	2654	44:14	70	1.208	A BB	12460.	10.024 NG	1.19

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	20:25		1.122						
52	21:32		1.183						
53	21:56		1.205						
54	16:06	1.00	0.885	1.00	42.18	50.00	1.092	1.294	0.84
55	22:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
56	22:33		0.983						
57	23:01	1.00	1.004	1.00	25.15	50.00	0.548	1.089	0.50
58	23:09	1.00	1.009	1.00	9.45	50.00	0.207	1.094	0.19
59	25:08	1.00	1.096	1.00	0.20	50.00	0.007	1.691	0.00
60	26:54	1.00	1.173	1.00	39.21	50.00	1.002	1.278	0.78
61	27:37	1.00	0.875	1.00	27.83	50.00	0.741	1.332	0.56
62	20:47	1.00	1.142	1.00	88.24	50.00	0.616	0.349	1.76
63	31:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
64	29:59		0.950						
65	31:31	1.00	0.998	1.00	18.39	50.00	0.382	1.039	0.37
66	31:39	1.00	1.003	1.00	22.15	50.00	0.354	0.799	0.44
67	31:33		0.999						
68	31:50	1.00	1.008	1.00	0.11	50.00	0.003	1.172	0.00
69	28:13	1.00	0.894	1.00	39.86	50.00	0.733	0.919	0.80
70	36:37	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
71	33:41		0.920						
72	35:02	1.00	0.957	1.00	14.73	50.00	0.362	1.231	0.29
73	35:08	1.00	0.959	1.00	14.72	50.00	0.294	0.998	0.29
74	36:22	1.00	0.993	1.00	15.33	50.00	0.331	1.079	0.31
75	42:30	1.00	1.161	1.00	11.36	50.00	0.208	0.917	0.23
76	42:41		1.166						
77	44:19	1.00	1.210	1.00	10.02	50.00	0.183	0.915	0.20

Quantitation Report File: QCREF

Data: T2599.TI
05/16/90 0:03:00
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@6C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.0

ORIGINAL (Red)

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
10	CS20 NITROBENZENE-D5**BN SURR.**
11	CS25 2-FLUOROBIPHENYL**BN SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**

Scan	Time	Area(Hght)		Amount		Name
539	8:59	9676.		40.000	NG/UL	CI30 1,4-DICHLOROBENZENE-D4
759	12:39	29529.	90	40.000	NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1093	18:13	22874.		40.000	NG/UL	CI50 ACENAPHTHENE-D10**INT.
1376	22:56	57031.	Rec.	40.000	NG/UL	CI60 PHENANTHRENE-D10**INT.
1894	31:34	57669.		40.000	NG/UL	CI70 CHRYSENE-D12**INT. STD.
2197	36:37	54362.		40.000	NG/UL	CI75 PERYLENE-D12**INT. STD.
359	5:59	28128.	95	95.413	NG*A1	CS50 2-FLUOROPHENOL**ACID SU
493	8:13	35918.	82	82.028	NG*A2	CS45 PHENOL-D5**ACID SURR.**
1247	20:47	17615.	88	88.239	NG*A3	CS55 2,4,6,-TRIBROMOPHENOL**
639	10:39	24170.	81	40.360	NG*B1	CS20 NITROBENZENE-D5**BN SUR
967	16:07	31215.	84	42.177	NG*B2	CS25 2-FLUOROBIPHENYL**BN SU
1693	28:13	52818.	80	39.858	NG*B3	CS30 P-TERPHENYL-D14**BN SUR

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:59	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	12:39	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	18:12	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	22:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	31:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	36:37	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	5:58	1.00	0.664	1.00	95.41	50.00	2.326	1.219	1.91
8	8:12	1.00	0.913	1.00	82.03	50.00	2.970	1.810	1.64
9	20:47	1.00	1.142	1.00	88.24	50.00	0.616	0.349	1.76
10	10:38	1.00	0.841	1.00	40.36	50.00	0.655	0.811	0.81
11	16:06	1.00	0.885	1.00	42.18	50.00	1.092	1.294	0.84
12	28:13	1.00	0.894	1.00	39.86	50.00	0.733	0.919	0.80

Quantitation Report File: ISREF

ORIGINAL (Red)

Data: T2598.TI
05/15/90 22:57:00
Sample: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: ---

Data: T2599.TI
05/16/90 0:03:00
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: TS Acct. No.: 420.0

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
3	CI40 NAPHTHALENE-D8**INT. STD. #2**
4	CI40 NAPHTHALENE-D8**INT. STD. #2**
5	CI50 ACENAPHTHENE-D10**INT. STD. #3**
6	CI50 ACENAPHTHENE-D10**INT. STD. #3**
7	CI60 PHENANTHRENE-D10**INT. STD. #4**
8	CI60 PHENANTHRENE-D10**INT. STD. #4**
9	CI70 CHRYSENE-D12**INT. STD. #5**
10	CI70 CHRYSENE-D12**INT. STD. #5**
11	CI75 PERYLENE-D12**INT. STD. #6**
12	CI75 PERYLENE-D12**INT. STD. #6**

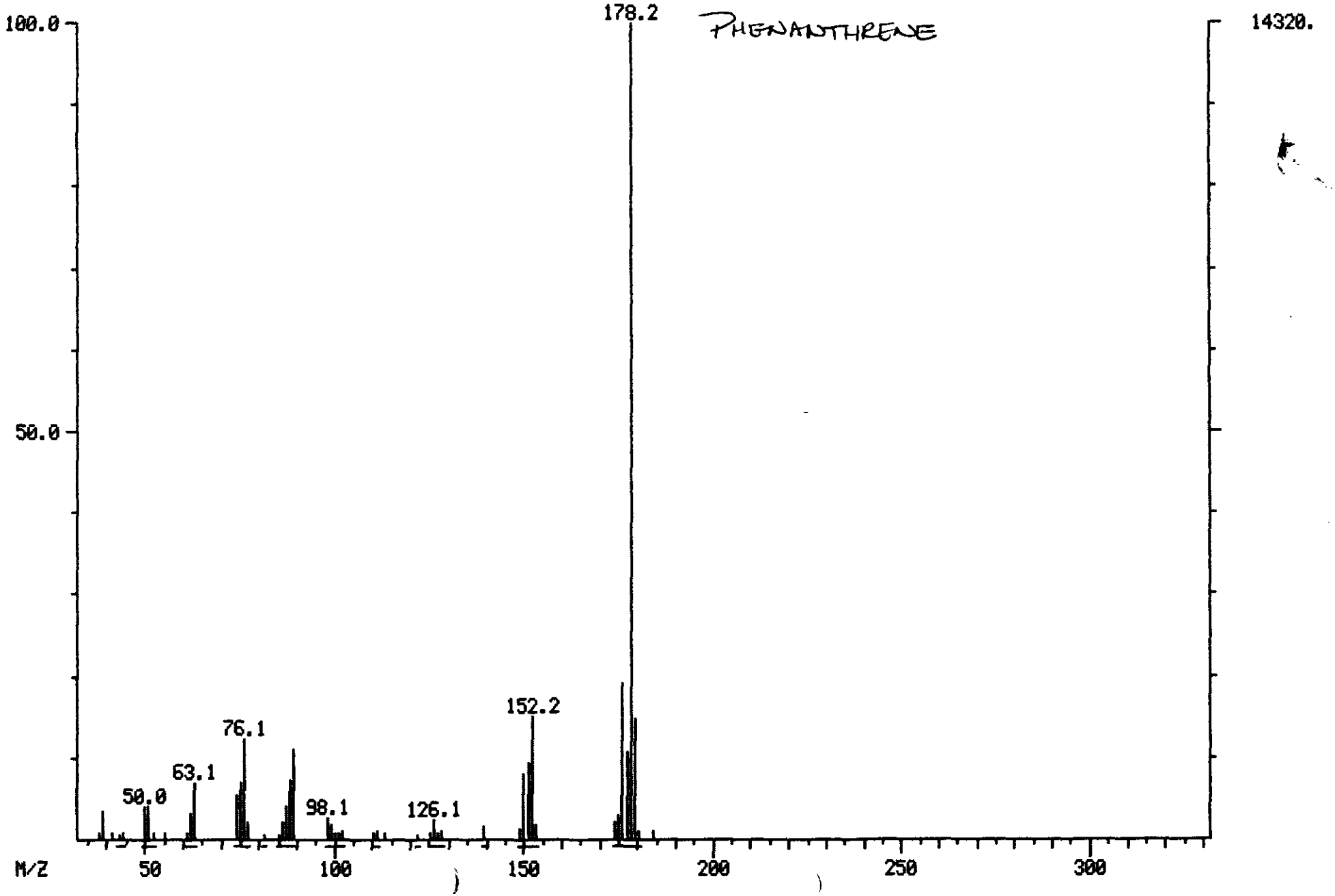
Scan	Time	Area(Hght)	Amount	Name
539	8:59	8002.	40.000 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
539	8:59	9676.	48.368 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
759	12:39	27483.	40.000 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
759	12:39	29529.	42.978 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1092	18:12	21537.	40.000 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1093	18:13	22874.	42.483 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1376	22:56	48429.	40.000 NG/UL	CI60 PHENANTHRENE-D10**INT.
1376	22:56	57031.	47.105 NG/UL	CI60 PHENANTHRENE-D10**INT.
1894	31:34	47266.	40.000 NG/UL	CI70 CHRYSENE-D12**INT. STD.
1894	31:34	57669.	48.804 NG/UL	CI70 CHRYSENE-D12**INT. STD.
2197	36:37	39233.	40.000 NG/UL	CI75 PERYLENE-D12**INT. STD.
2197	36:37	54362.	55.425 NG/UL	CI75 PERYLENE-D12**INT. STD.

MASS SPECTRUM
05/16/90 0:03:00 + 23:01
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C570 2,4-DINITROTOLUENE~~

DATA: T2599 #1381
CALI: T2599 #2

BASE M/Z: 178
RIC: 40576.

100142



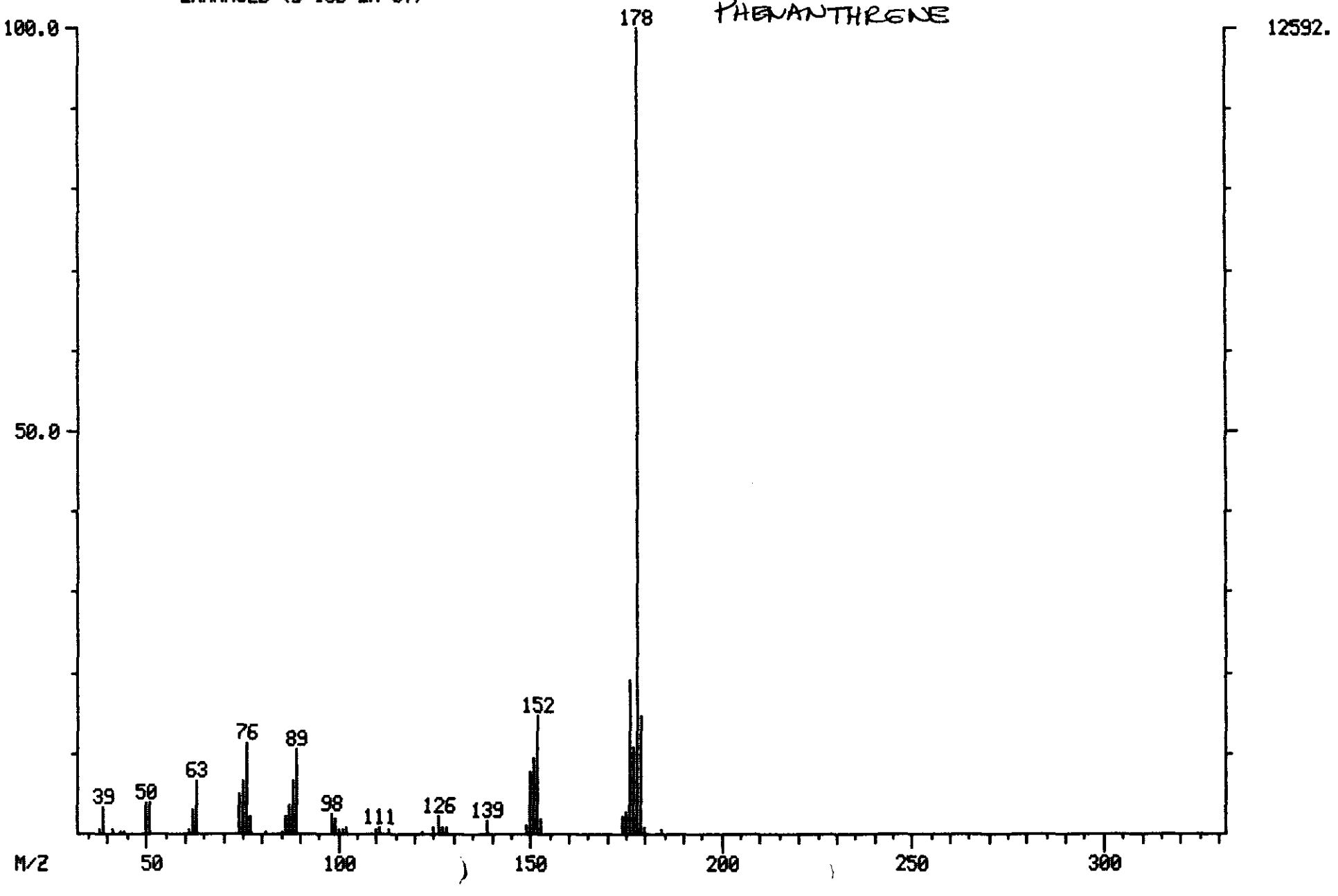
MASS SPECTRUM
05/16/90 0:03:00 + 23:01
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~0070 2,4-DINITROTOLUENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1381
CALI: T2599 #2

BASE M/Z: 178
RIC: 34368.

100143

PHENANTHRENE

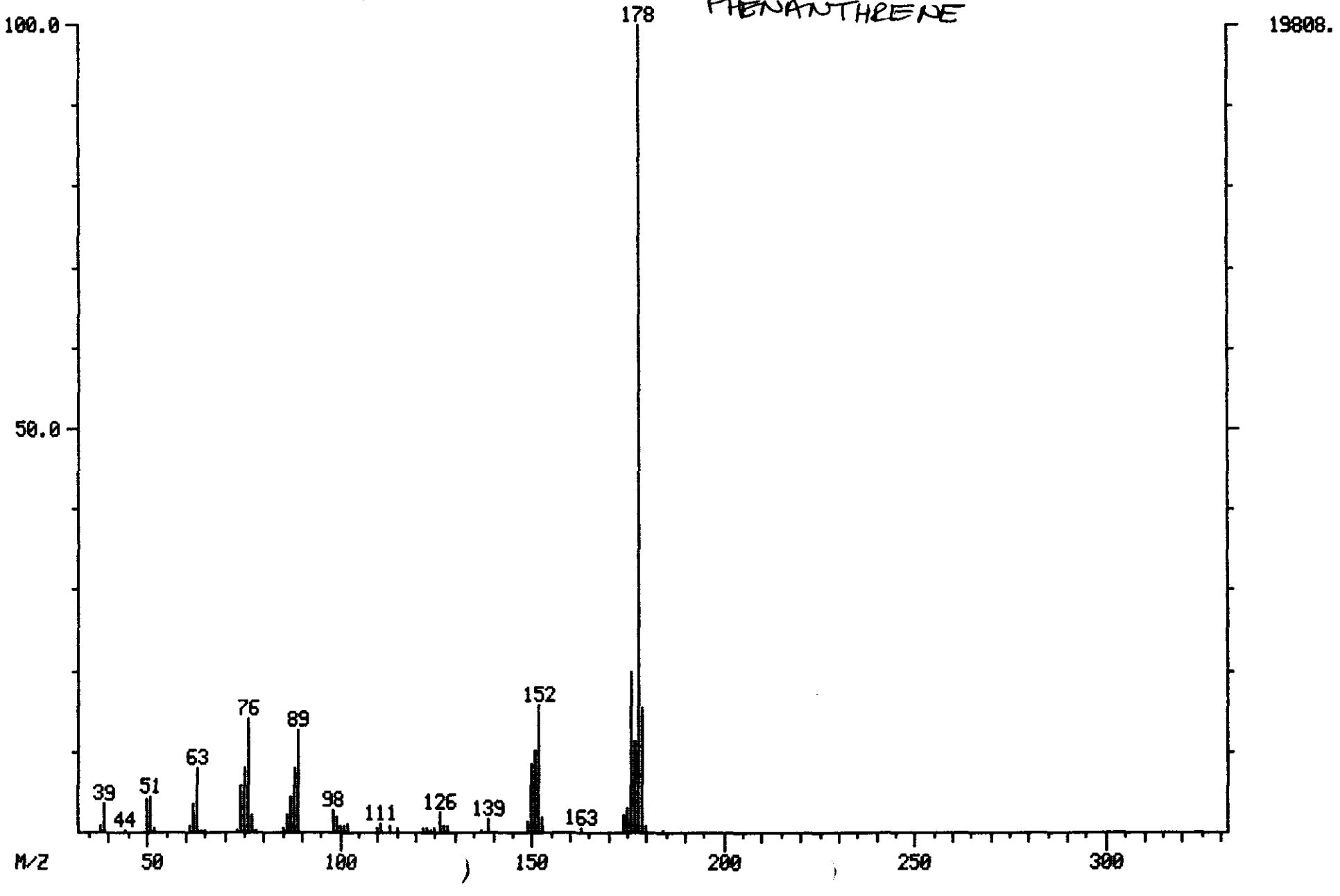


MASS SPECTRUM
05/15/90 22:57:00 + 23:01
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~0570 2,4-DINITROTOLUENE~~ PHENANTHRENE
ENHANCED (S 15B 2N 0T)

DATA: T2598 #1381
CALI: T2598 #2

BASE M/Z: 178
RIC: 58496.

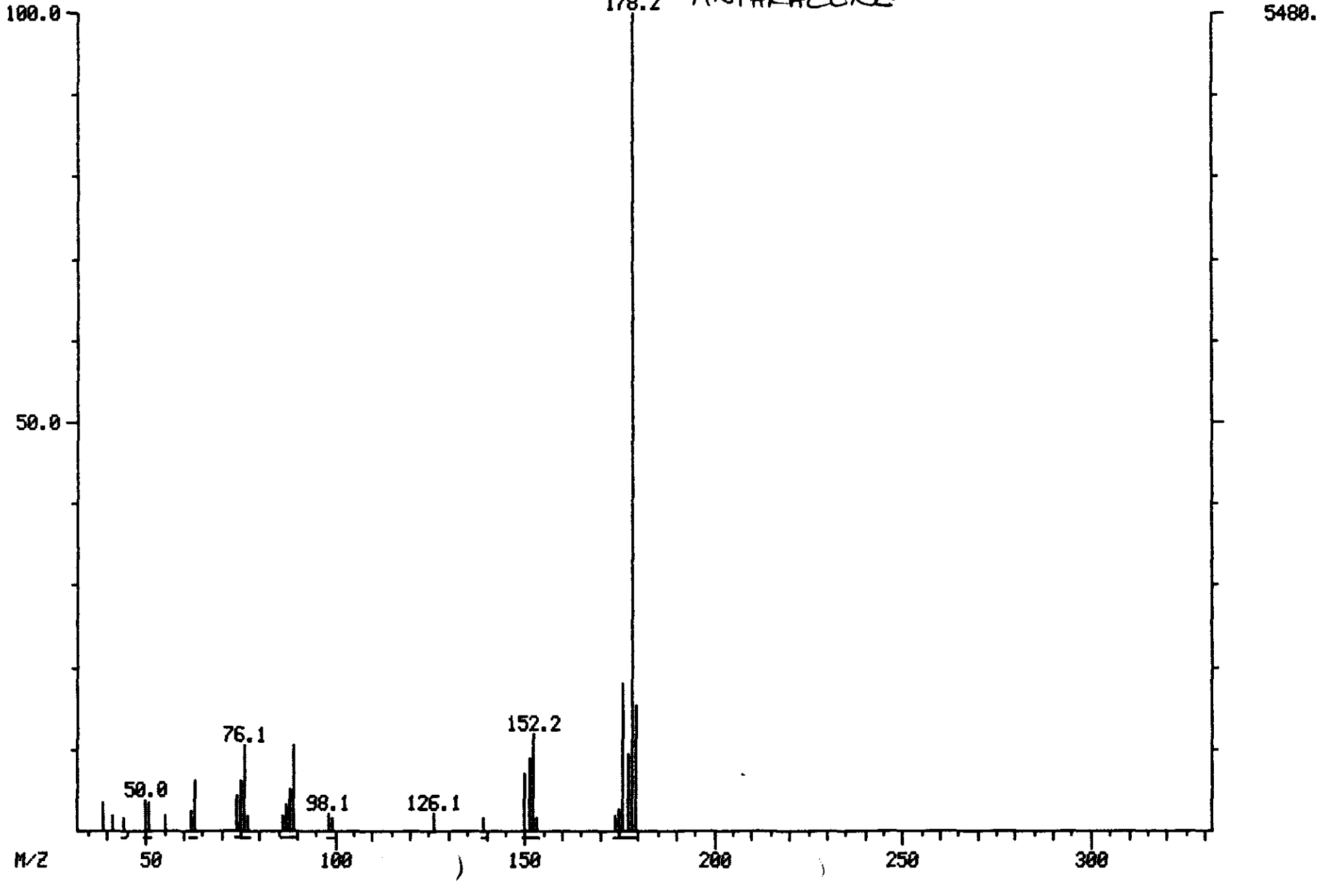
1001144



MASS SPECTRUM
05/16/90 0:03:00 + 23:09
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C600 FLUORENE~~ ANTHRACENE

DATA: T2599 #1389
CALI: T2599 #2

BASE M/Z: 178
RIC: 13872.



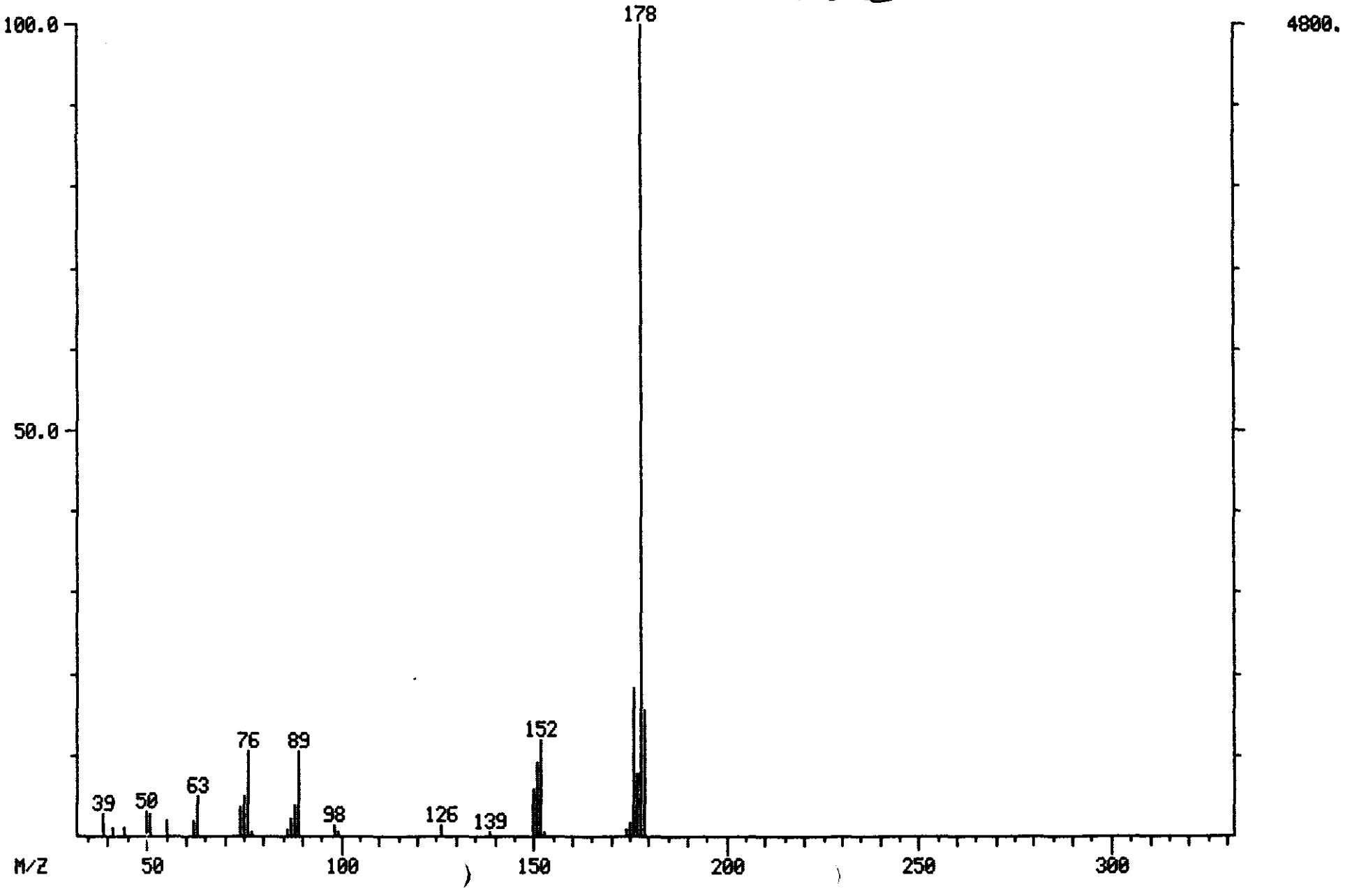
ORIGINAL (Red)

100146

MASS SPECTRUM
05/16/90 0:03:00 + 23:09
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: ~~6590 FLUORENE~~ ANTHRACENE
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1389
CALI: T2599 #2

BASE M/Z: 178
RIC: 11152.

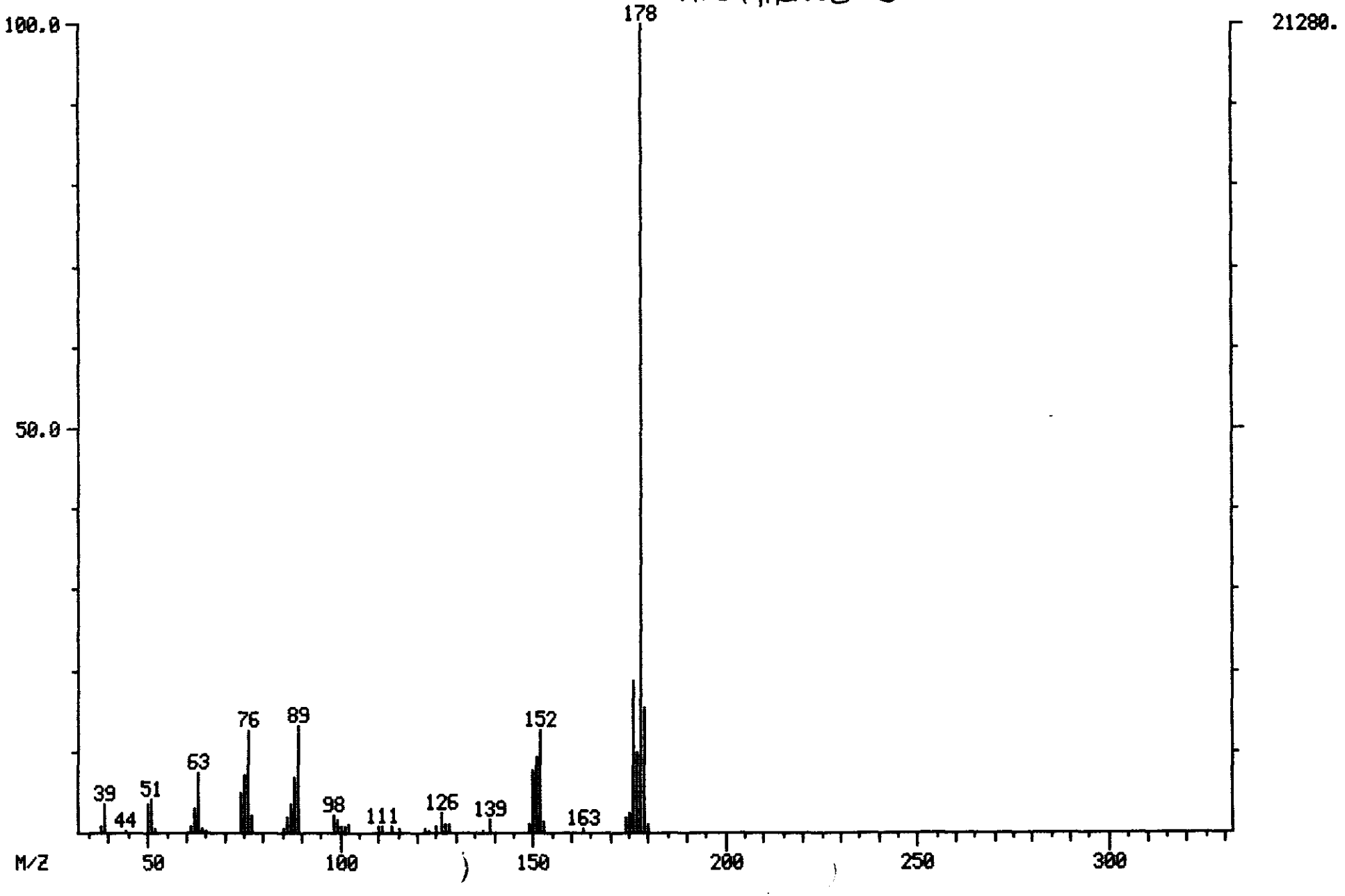


MASS SPECTRUM
05/15/90 22:57:00 + 23:09
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C590 FLUORENE~~ ANTHRACENE
ENHANCED (S 15B 2N 0T)

DATA: T2598 #1389
CALI: T2598 #2

BASE M/Z: 178
RIC: 59136.

1001147

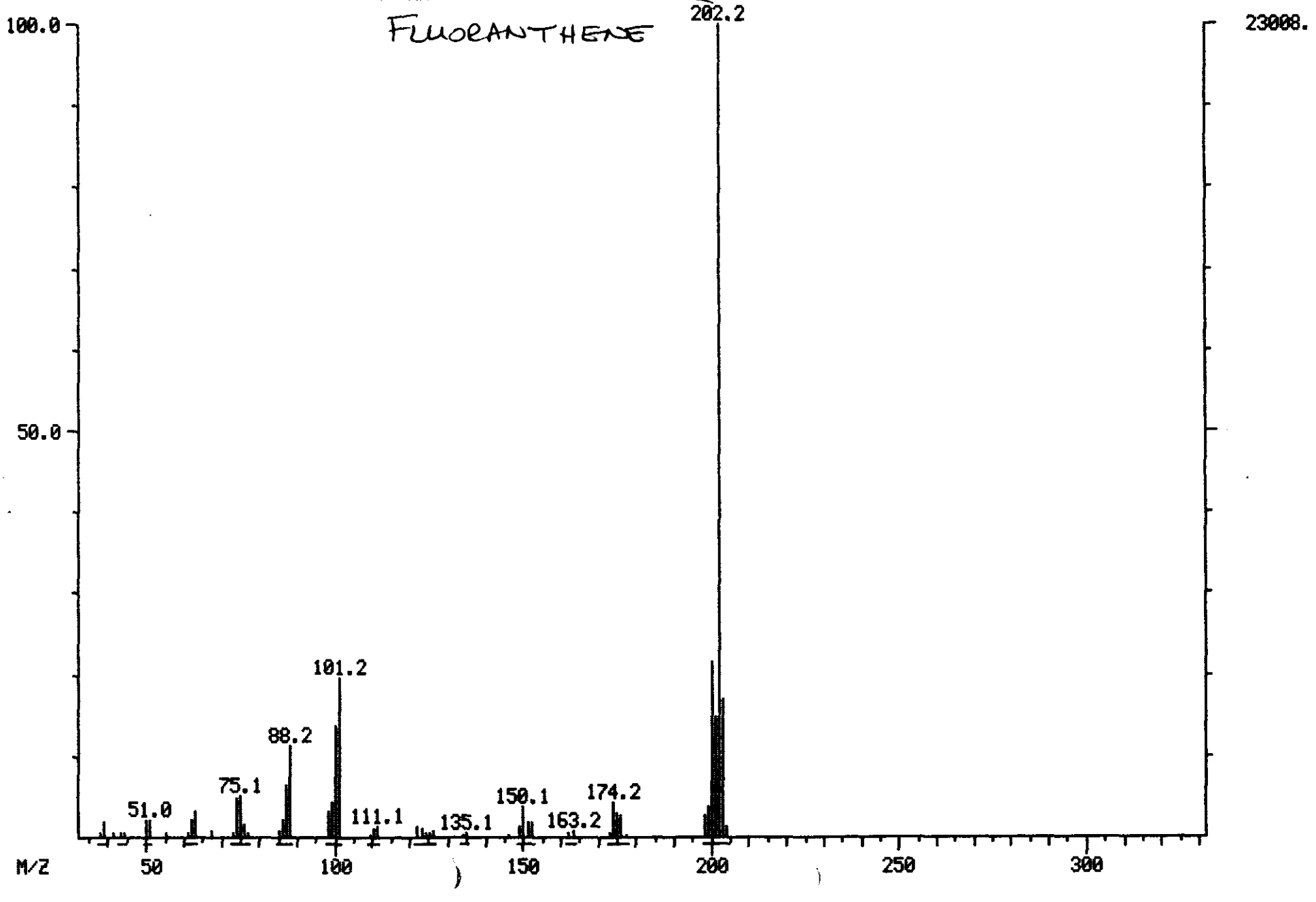


MASS SPECTRUM
05/16/90 0:03:00 + 26:54
SAMPLE: CLP,VERSCOM,2536,5,M,5,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30200C/MIN
** NAME: ~~C500 DIETHYLPHTHALATE~~ FLUORANTHENE

DATA: T2599 #1614
CALI: T2599 #2

BASE M/Z: 202
RIC: 64576.

100148



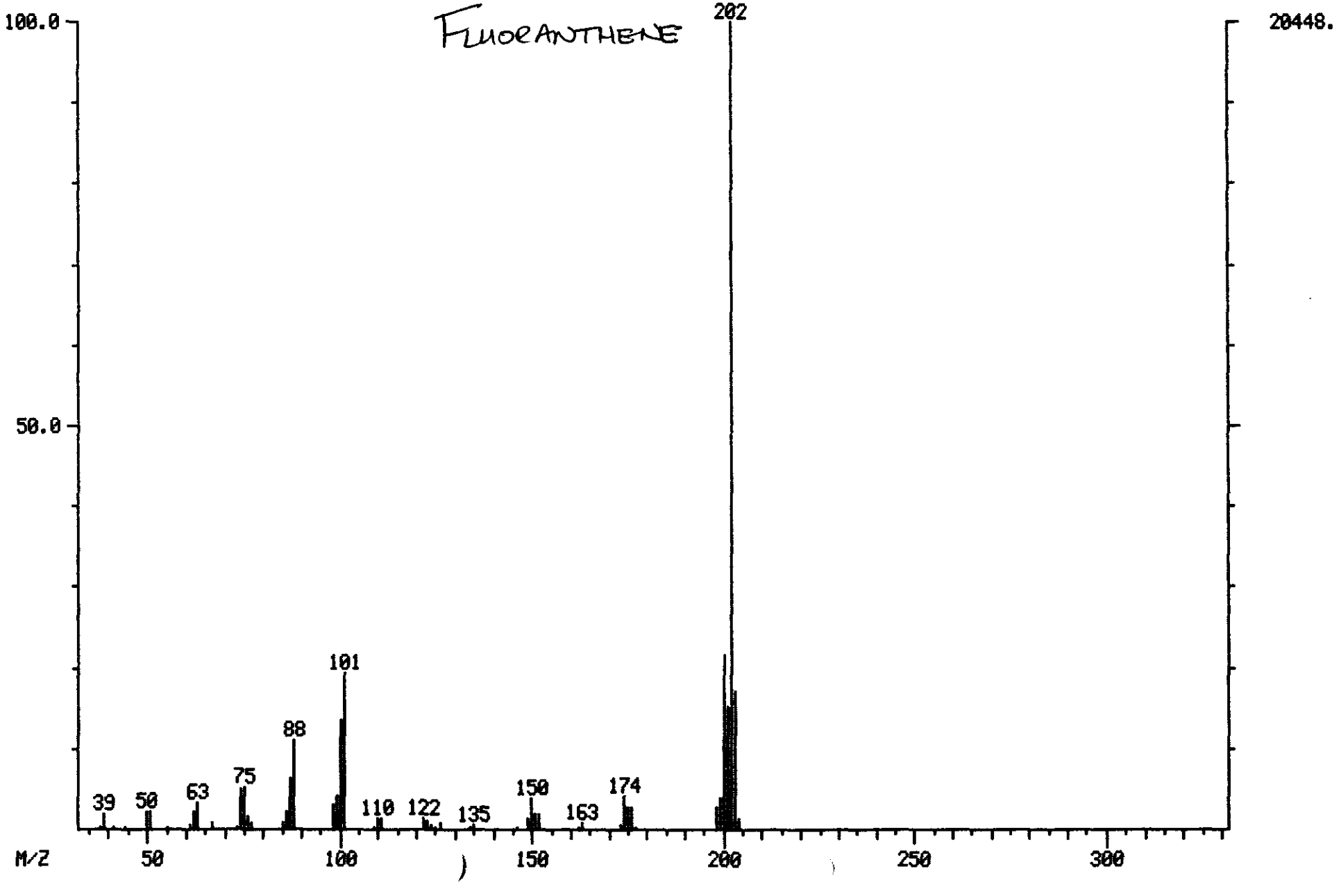
100149

MASS SPECTRUM
05/16/90 0:03:00 + 26:54
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C500 DIETHYLPHTHALATE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1614
CALI: T2599 #2

BASE M/Z: 202
RIC: 56832.

FLUORANTHENE



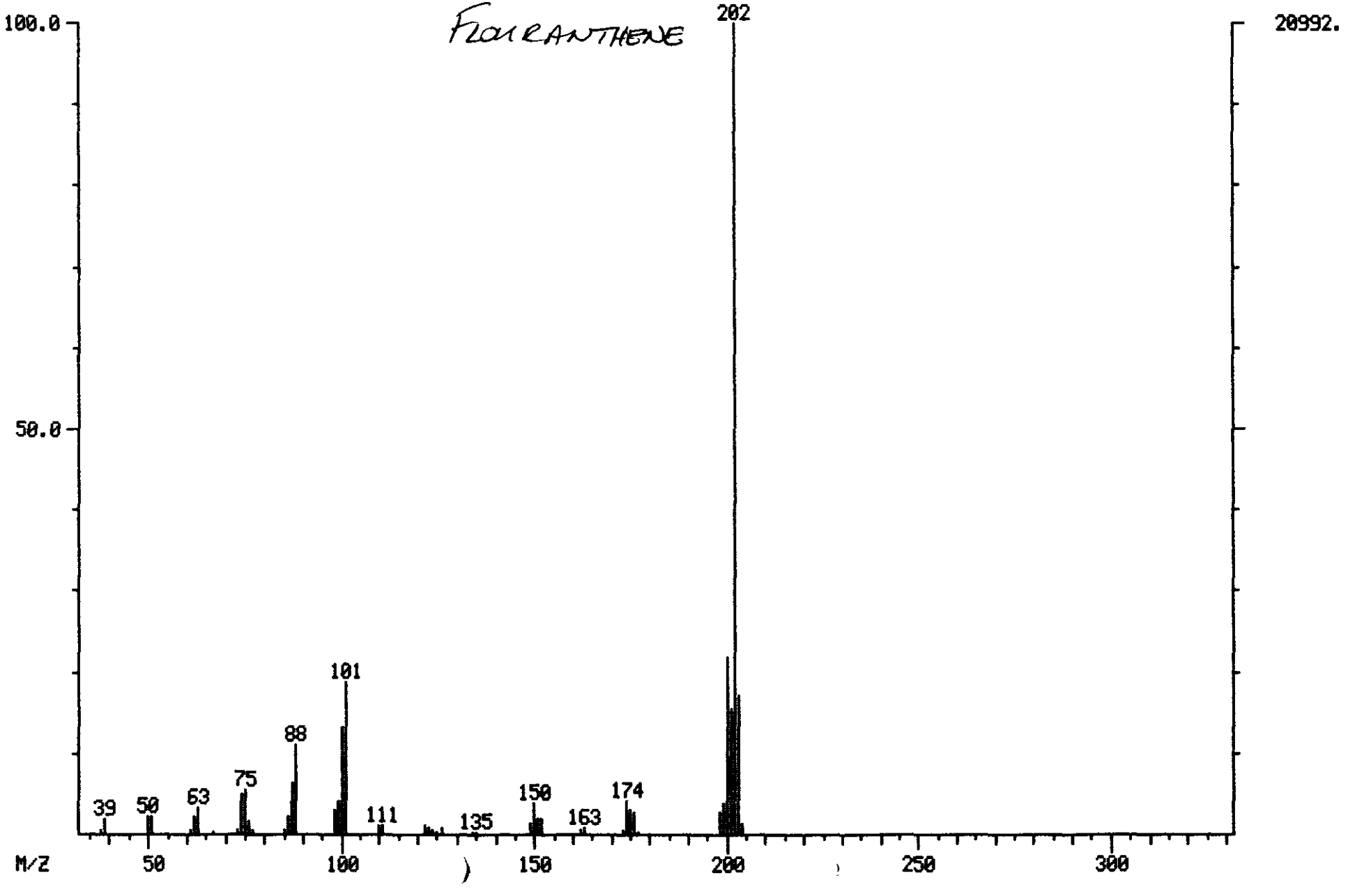
MASS SPECTRUM
05/15/90 22:57:00 + 26:54
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C500 DIETHYLPHTHALATE~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #1614
CALI: T2598 #2

BASE M/Z: 202
RIC: 58048.

100150

FLUORANTHENE



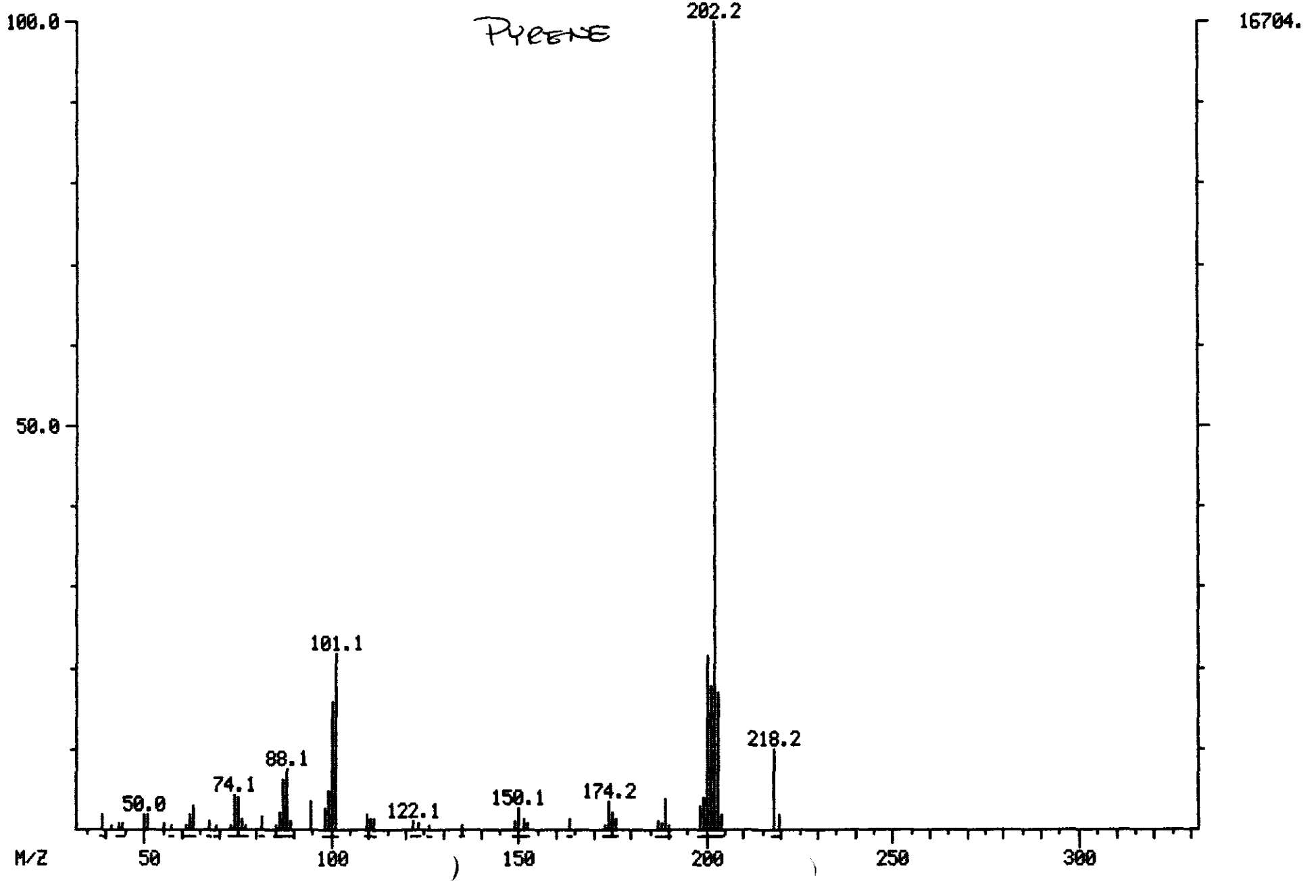
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 27:37
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C595 ~~4-NITROANILINE~~ PYRENE

DATA: T2599 #1657
CALI: T2599 #2

BASE M/Z: 202
RIC: 50368.

100151



ORIGINAL (Red)

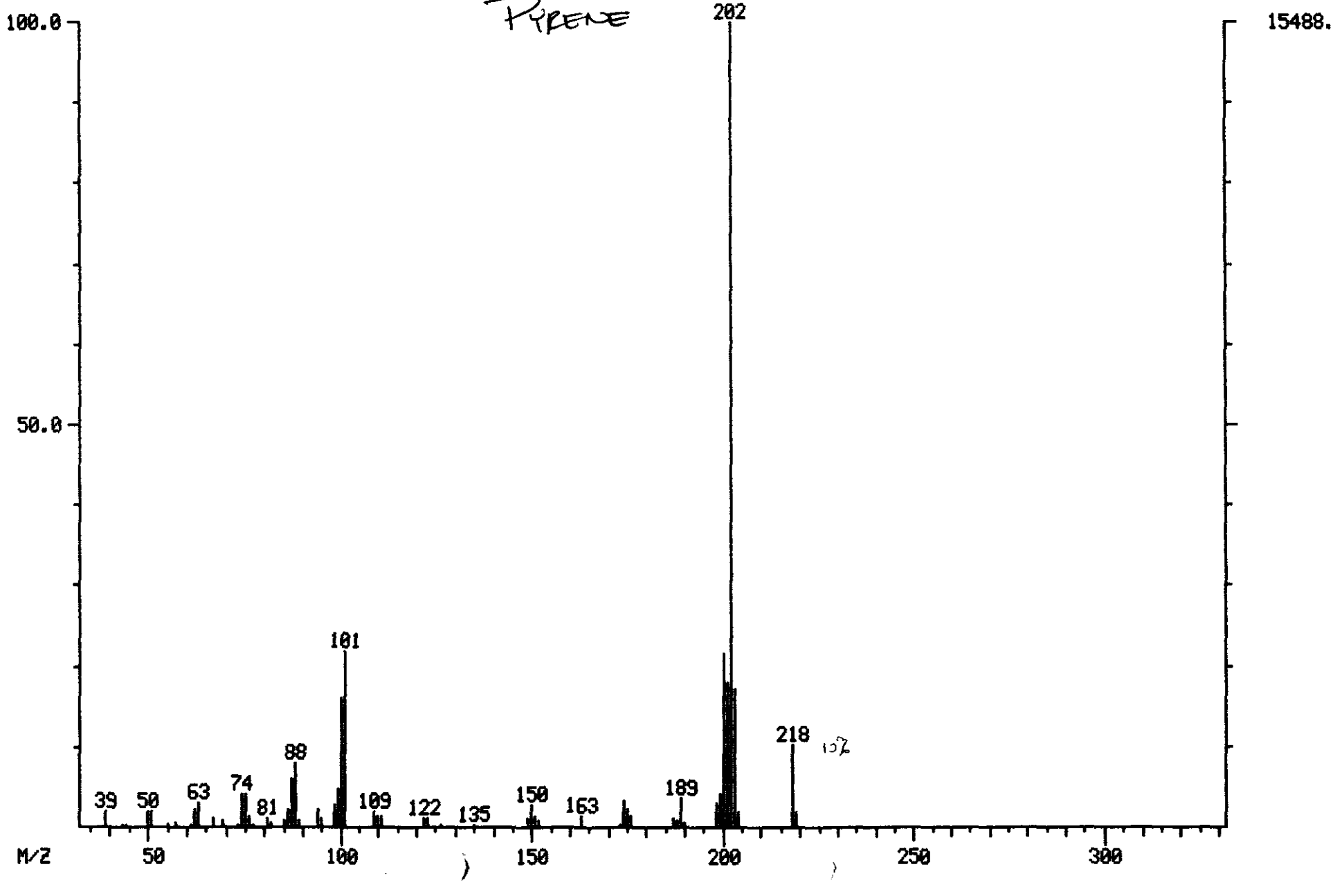
MASS SPECTRUM
05/16/90 0:03:00 + 27:37
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~CS05 4-NITROANILINE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1657
CALI: T2599 #2

BASE M/Z: 202
RIC: 46464.

100152

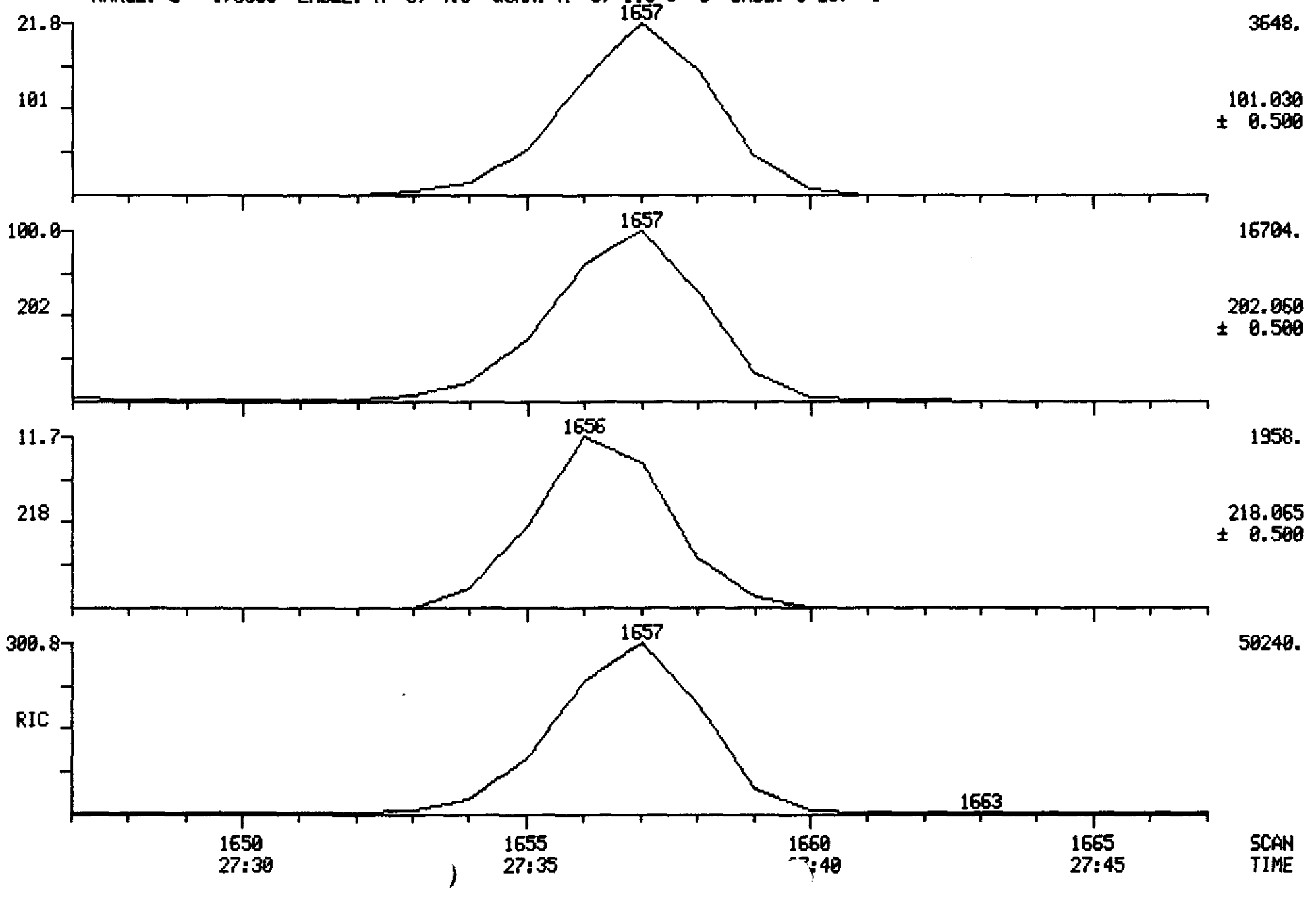
PYRENE



ORIGINAL (Red)

RIC+MASS CHROMATOGRAMS DATA: T2599 #1657 SCANS 1647 TO 1667
05/16/90 0:03:00 CALI: T2599 #2
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
RANGE: G 1,3500 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

100153



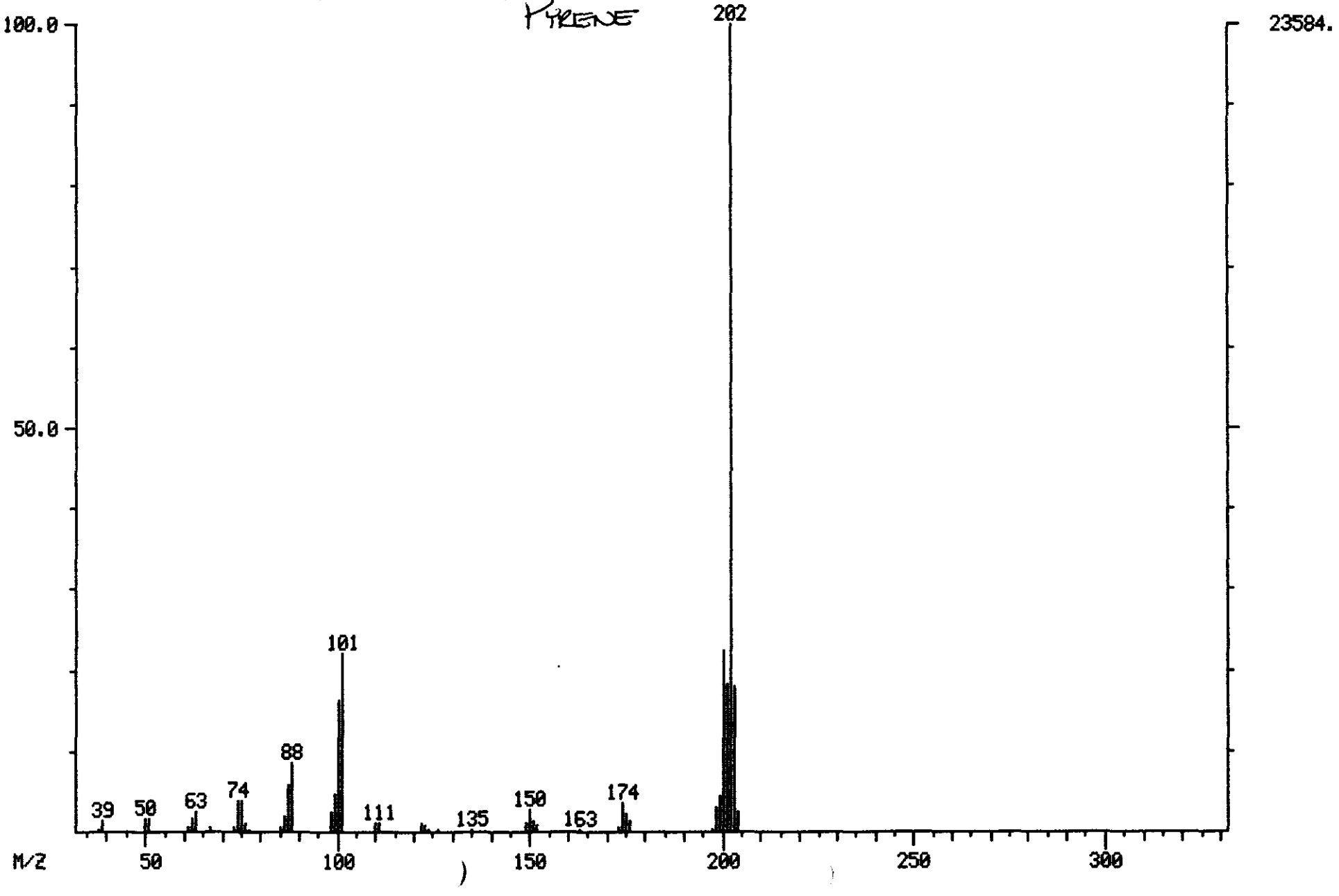
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 22:57:00 + 27:37
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30200C/MIN
** NAME: ~~G595 4-NITROANILINE~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #1657
CALI: T2598 #2

BASE M/Z: 202
RIC: 63872.

100154



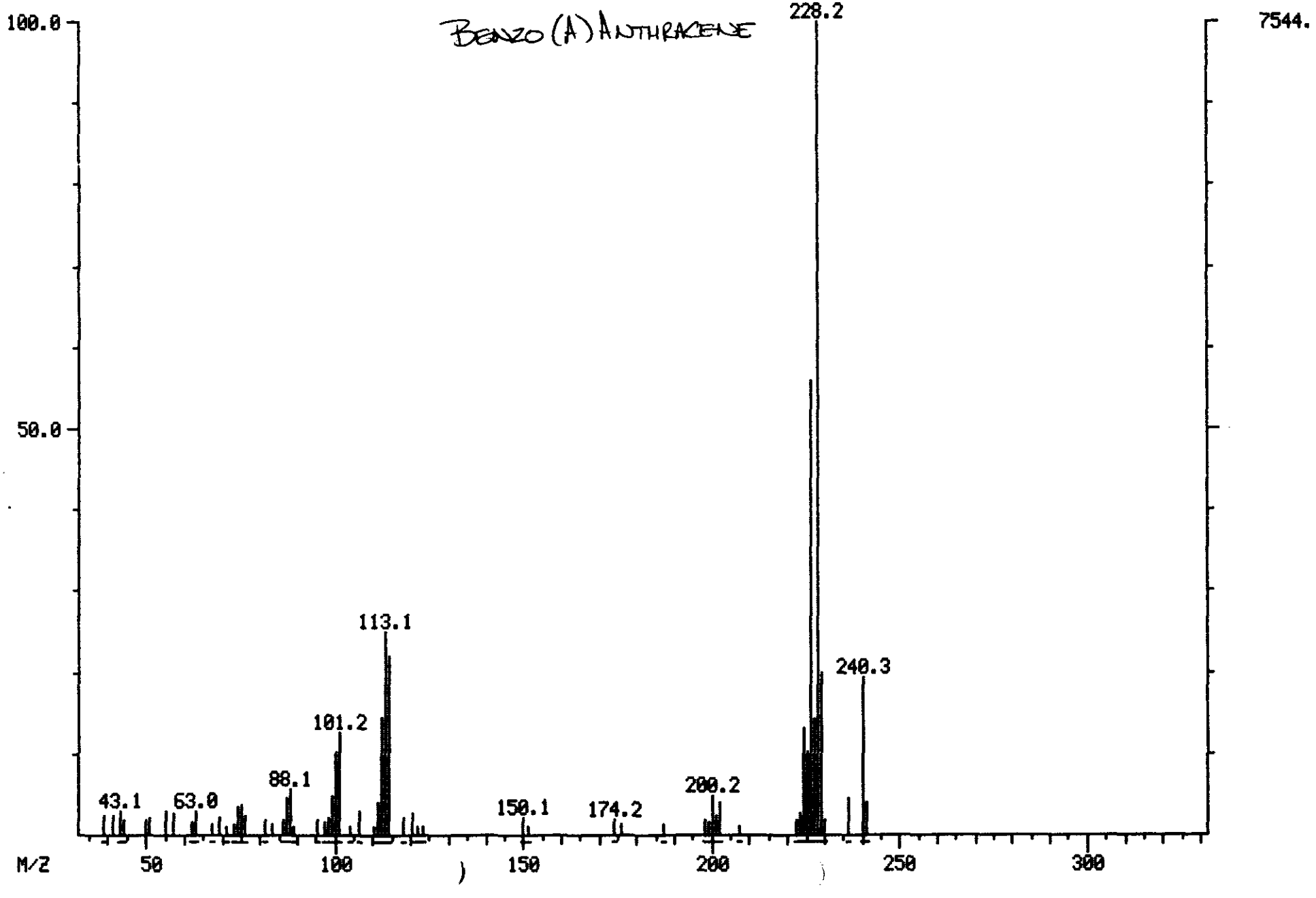
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 31:31
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C615 N-NITROSODIPHENYLAMINE~~

DATA: T2599 #1891
CALI: T2599 #2

BASE M/Z: 228
RIC: 33216.

1001155



ORIGINAL (Red)

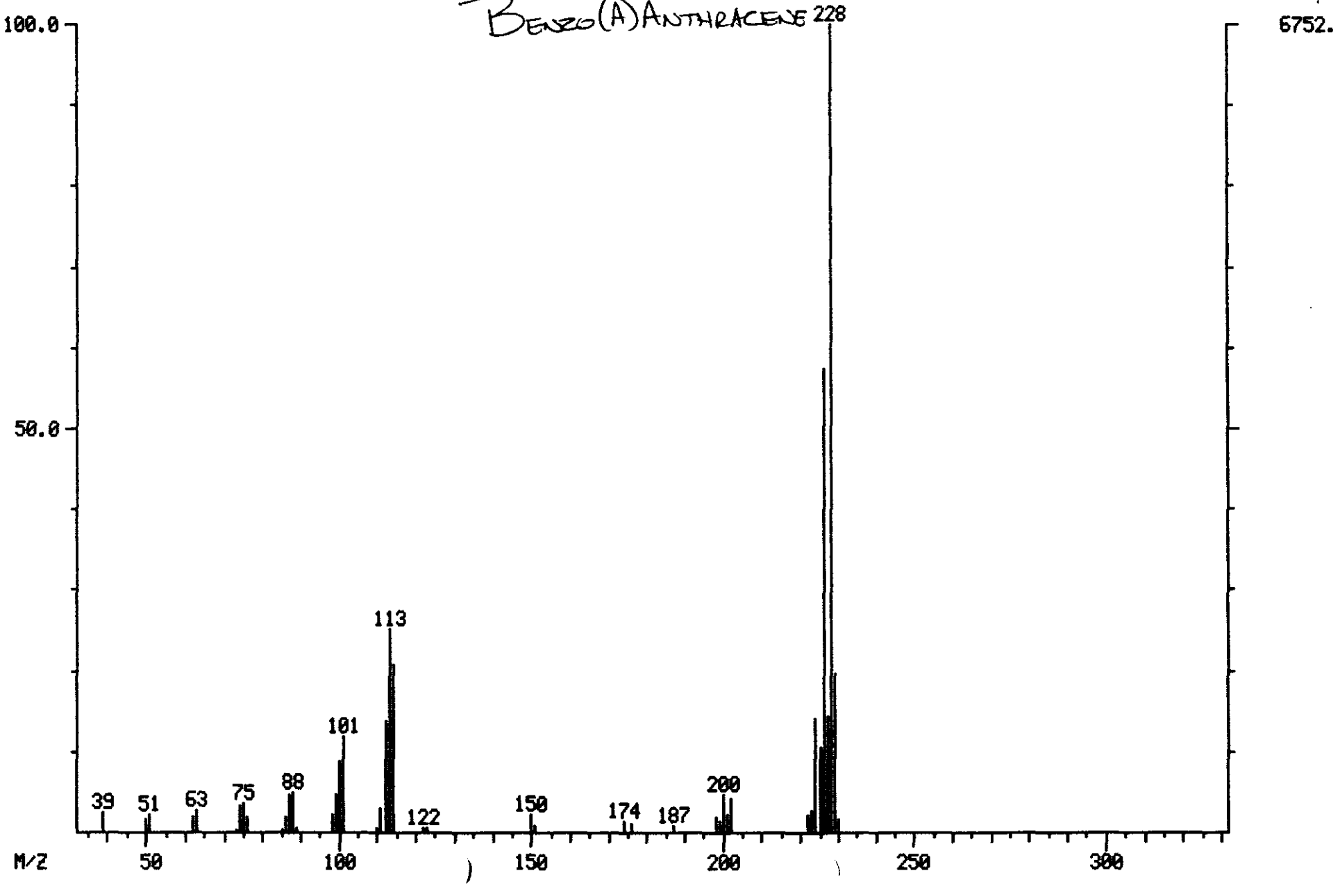
MASS SPECTRUM
05/16/90 0:03:00 + 31:31
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C6H5-N-NITROSODIPHENYLAMINE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1891
CALI: T2599 #2

BASE M/Z: 228
RIC: 24992.

100156

BENZO(A)ANTHRACENE



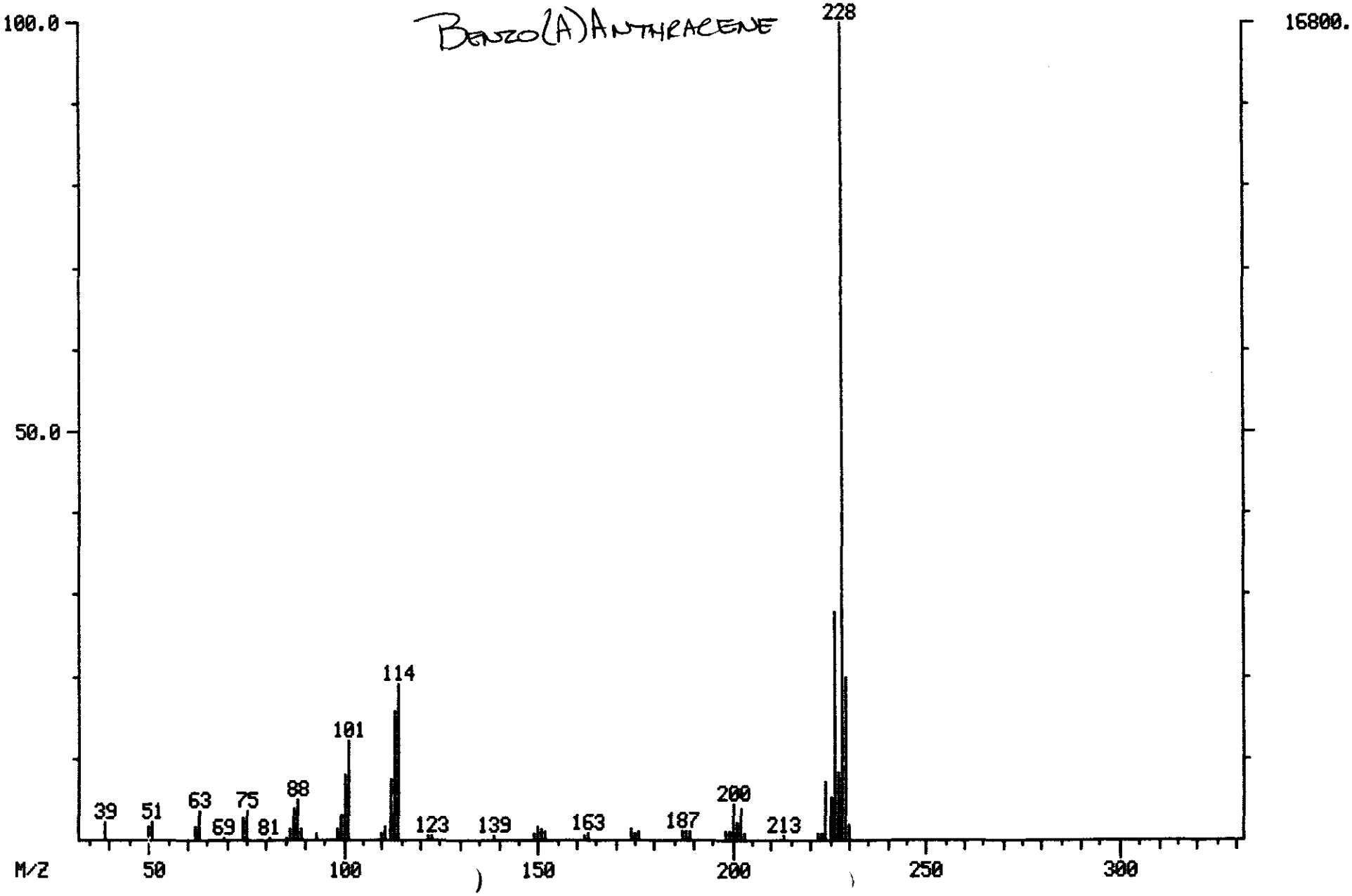
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 22:57:00 + 31:31
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~G515 N-NITROSODIPHENYLAMINE~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #1891
CALI: T2598 #2

BASE M/Z: 228
RIC: 50624.

100157



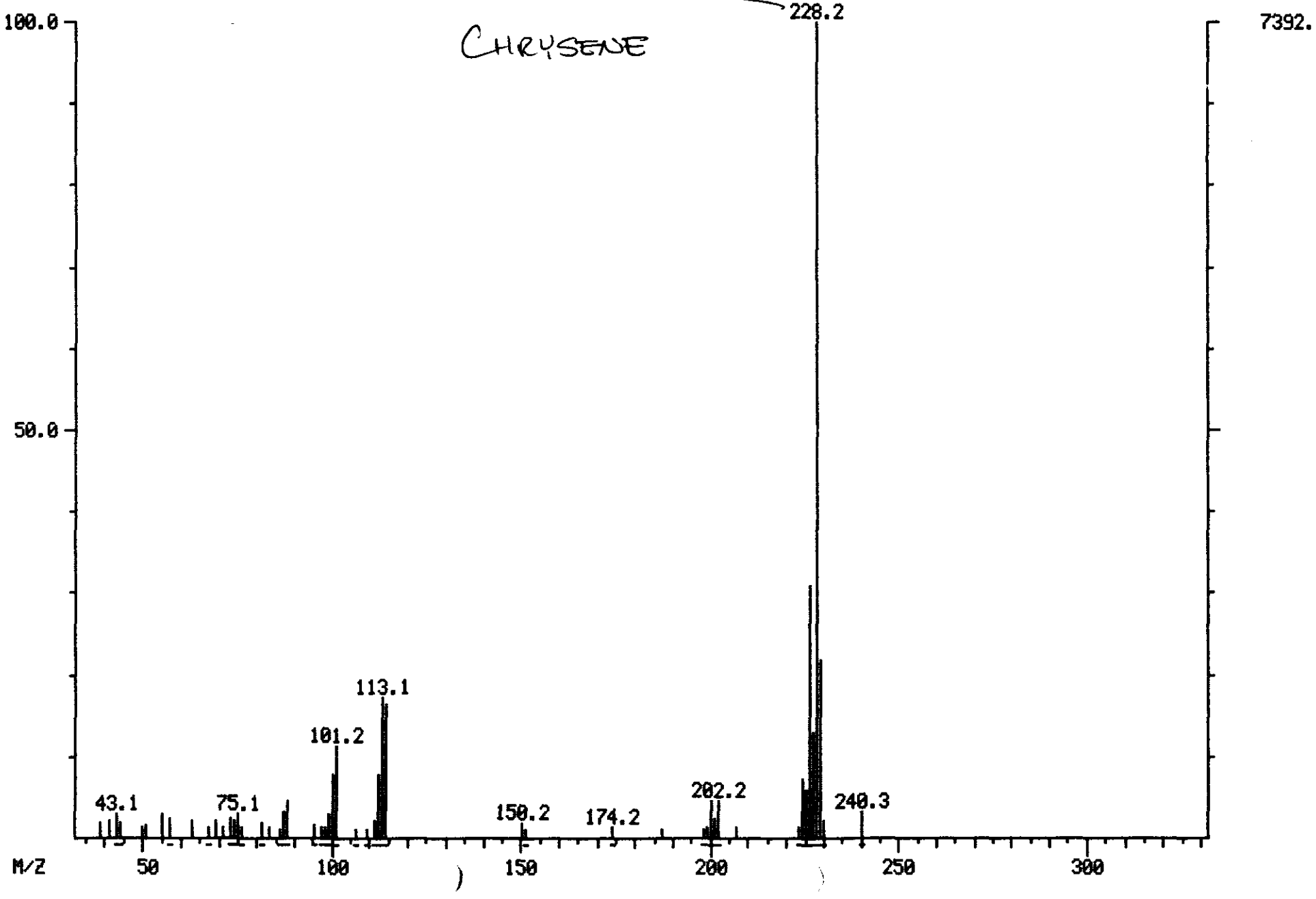
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 31:38
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~CG25 4-BROMOPHENYL-PHENYLETHER~~

DATA: T2599 #1898
CALI: T2599 #2

BASE M/Z: 228
RIC: 24000.

100158



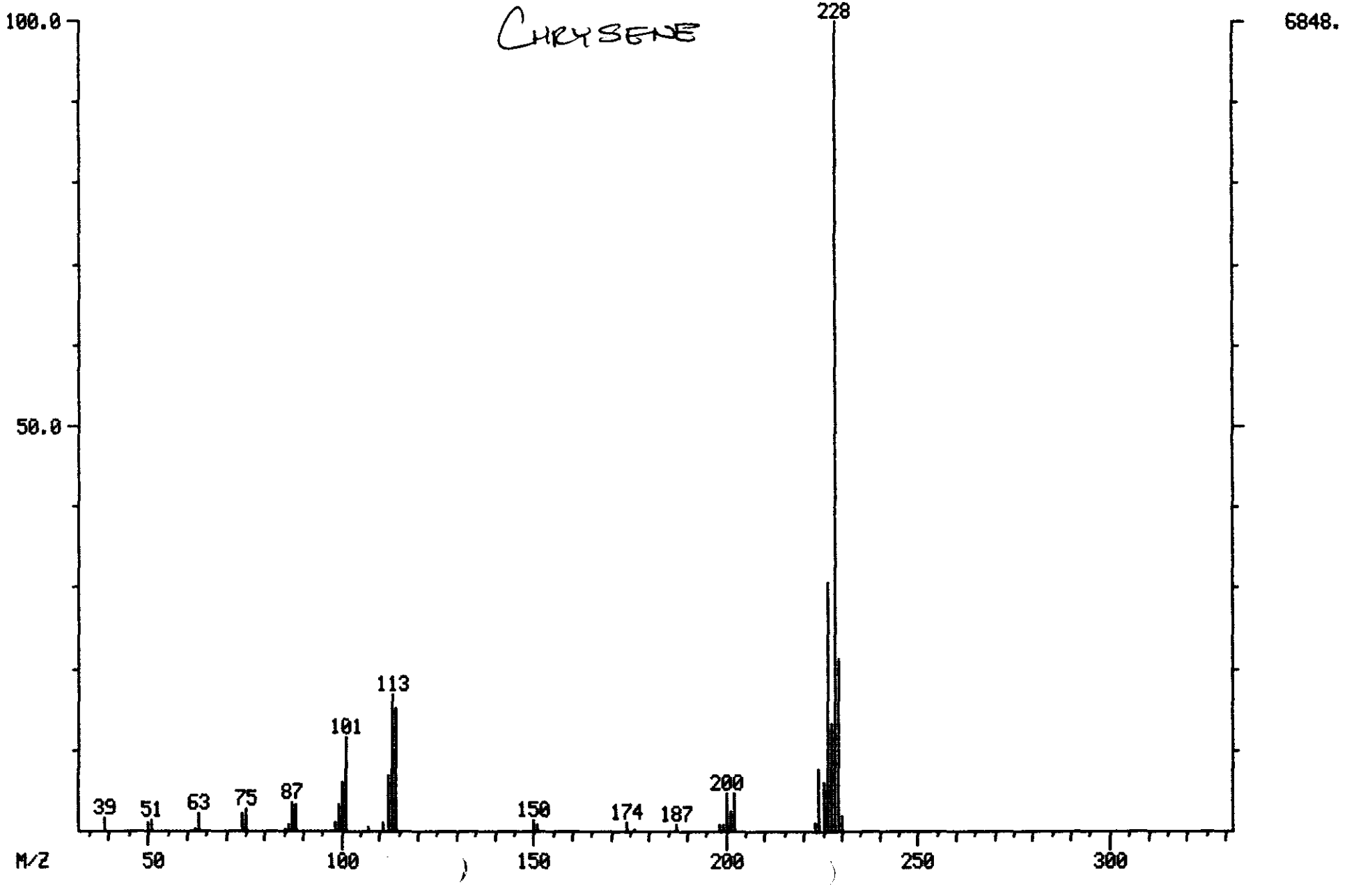
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 31:38
SAMPLE: CLP,VERSCOM,2536,5,M,5,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C625 4-BROMOPHENYL-PHENYLETHER~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1898
CALI: T2599 #2

BASE M/Z: 228
RIC: 19360.

100159



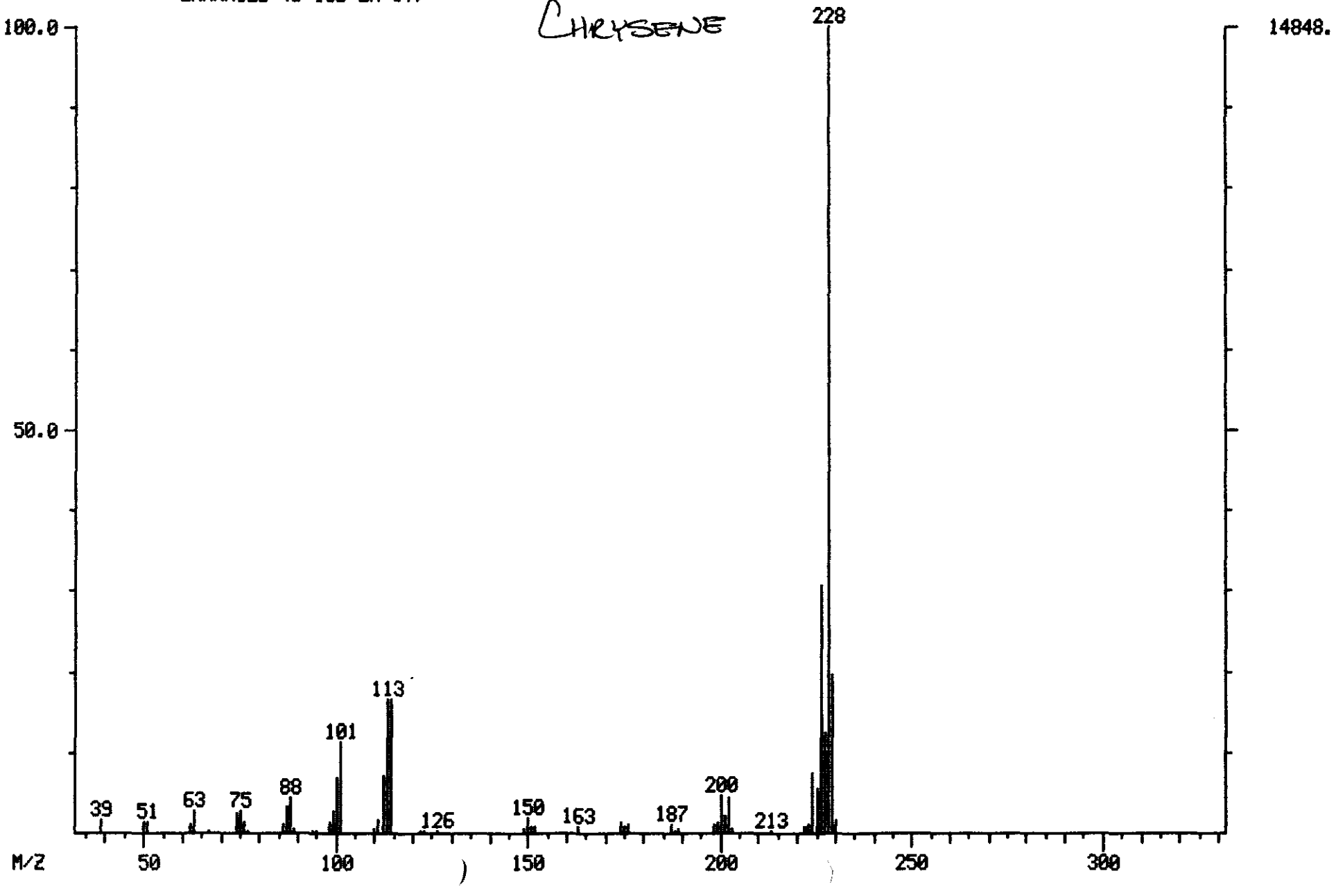
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 22:57:00 + 31:39
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30200C/MIN
** NAME: C625 ~~4-BROMOPHENYL-PHENYLETHER~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #1899
CALI: T2598 #2

BASE M/Z: 228
RIC: 43968.

100160

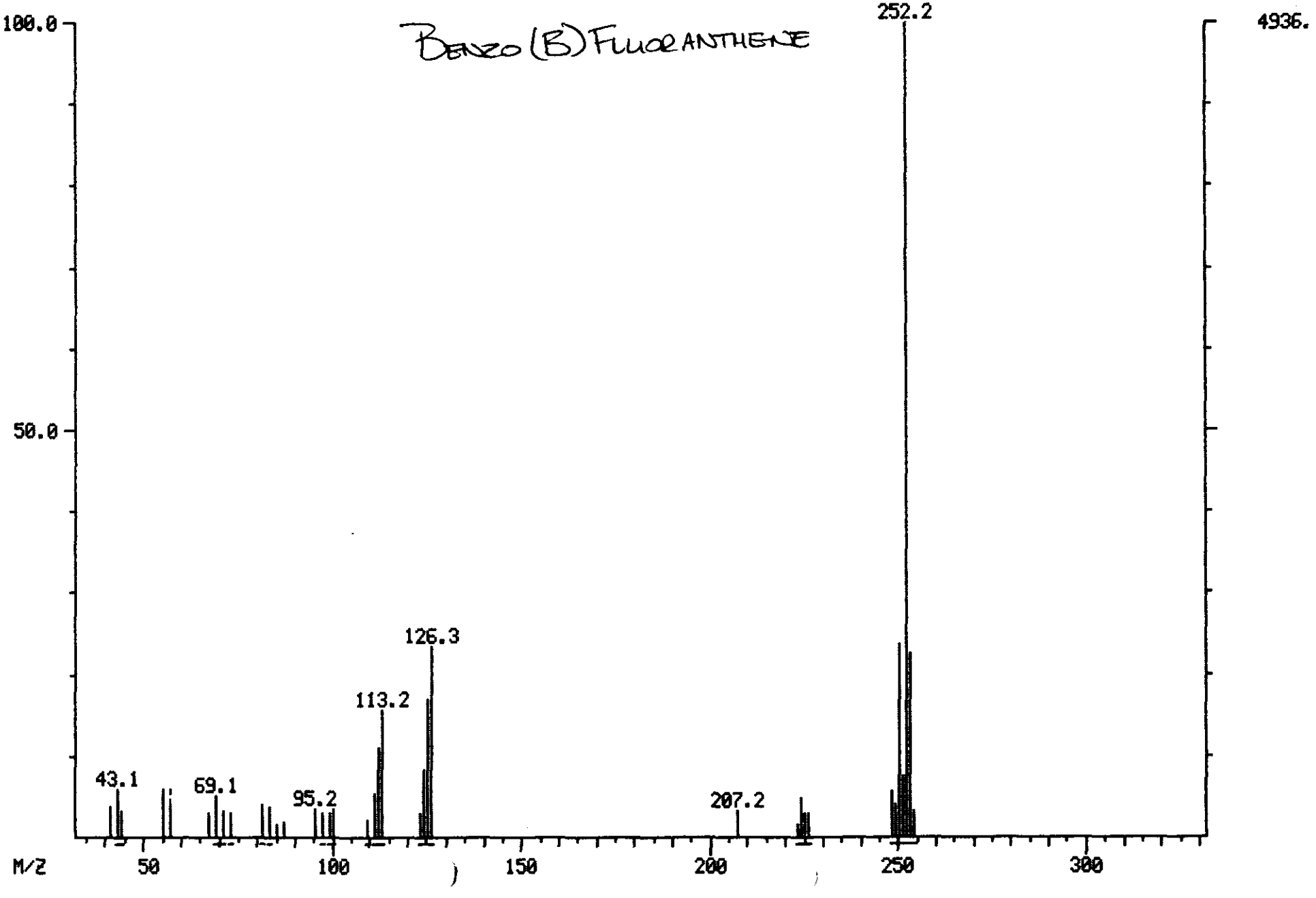


MASS SPECTRUM
05/16/90 0:03:00 + 35:00
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30200C/MIN
** NAME: ~~C545 ANTHRACENE~~

DATA: T2599 #2100
CALI: T2599 #2

BASE M/Z: 252
RIC: 16384.

100151



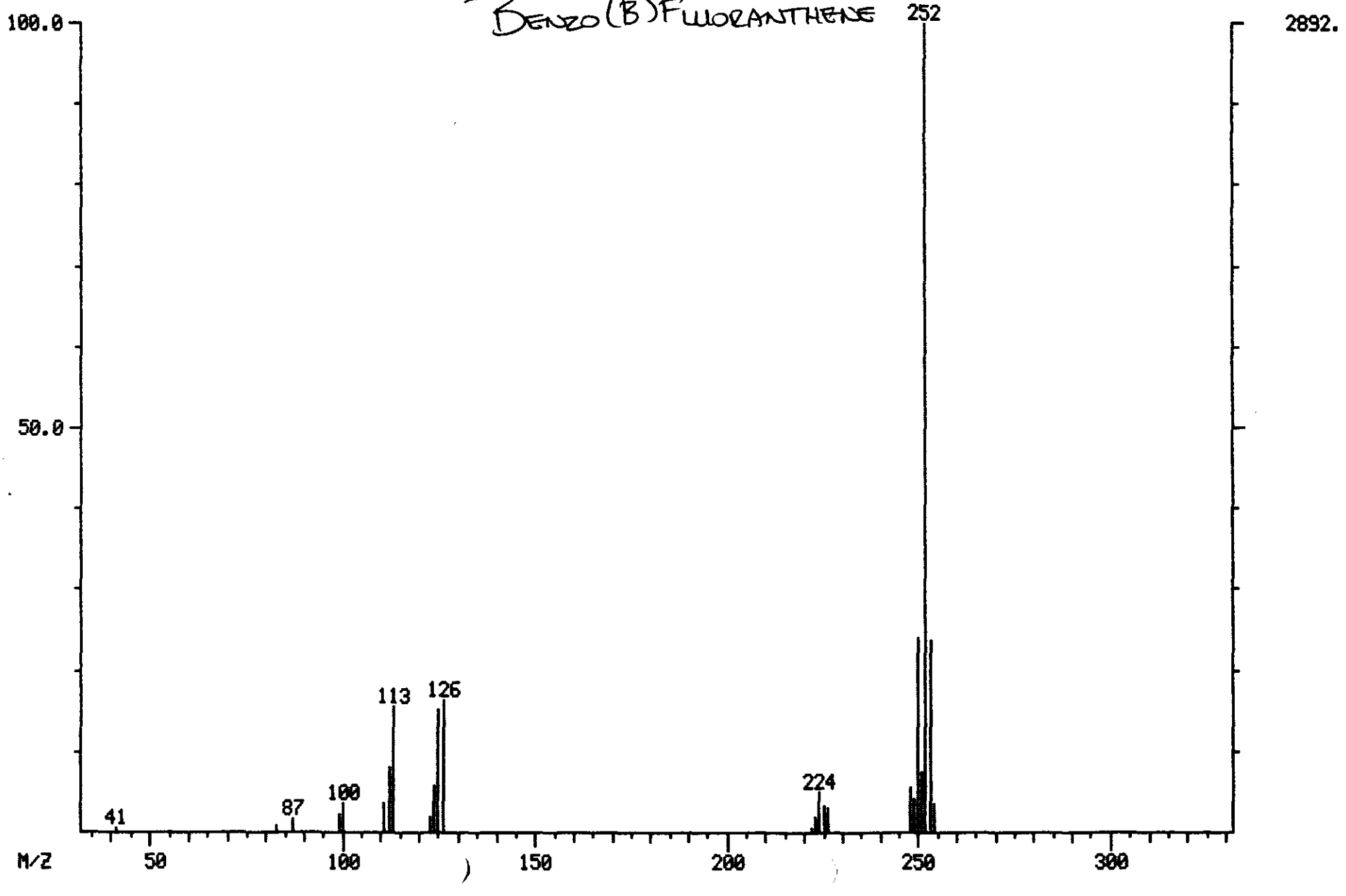
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 35:00
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C645 ANTHRACENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #2100
CALI: T2599 #2

BASE M/Z: 252
RIC: 7456.

100162



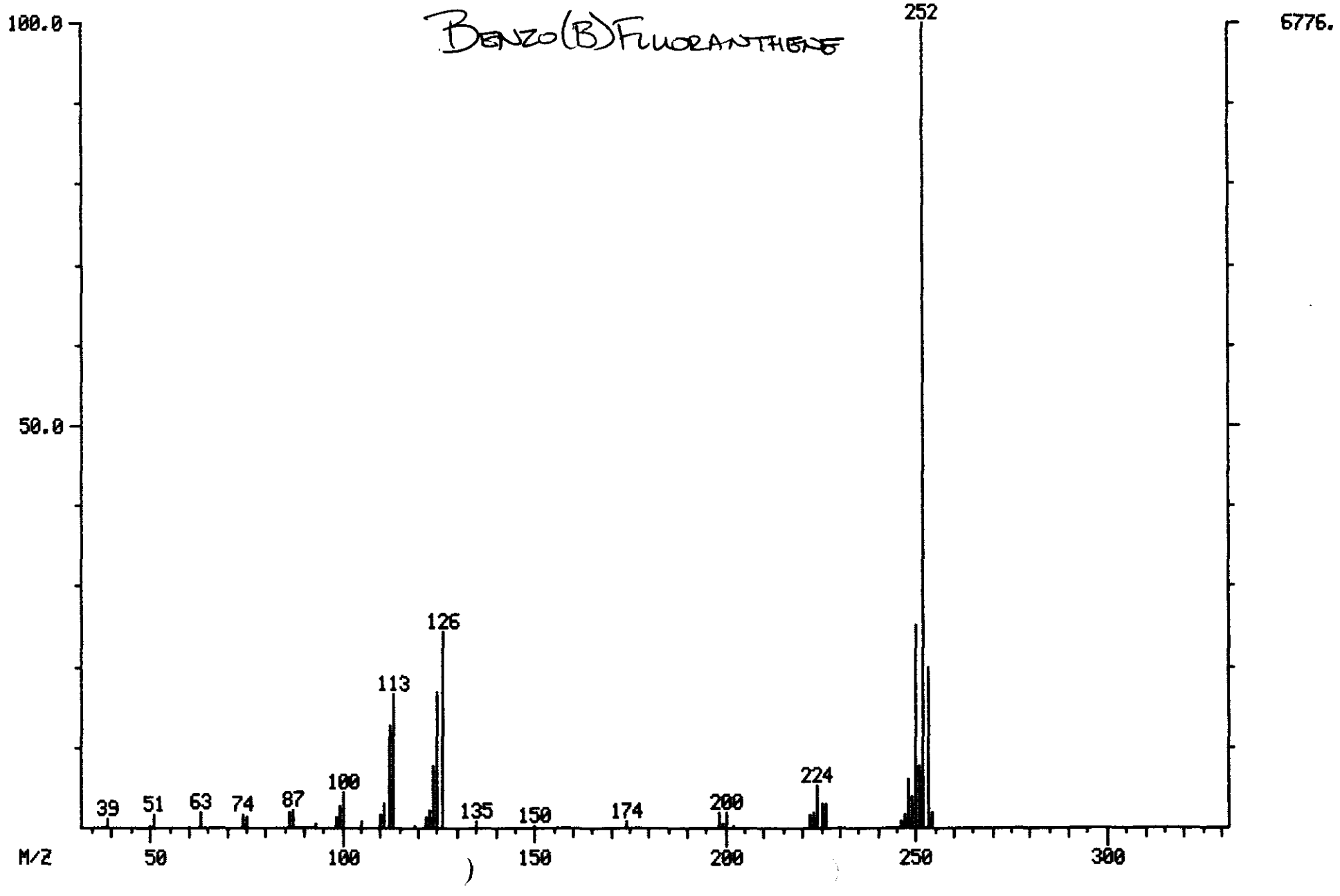
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 22:57:00 + 35:02
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C645 ANTHRACENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #2102
CALI: T2598 #2

BASE M/Z: 252
RIC: 20160.

100163



ORIGINAL (Red)

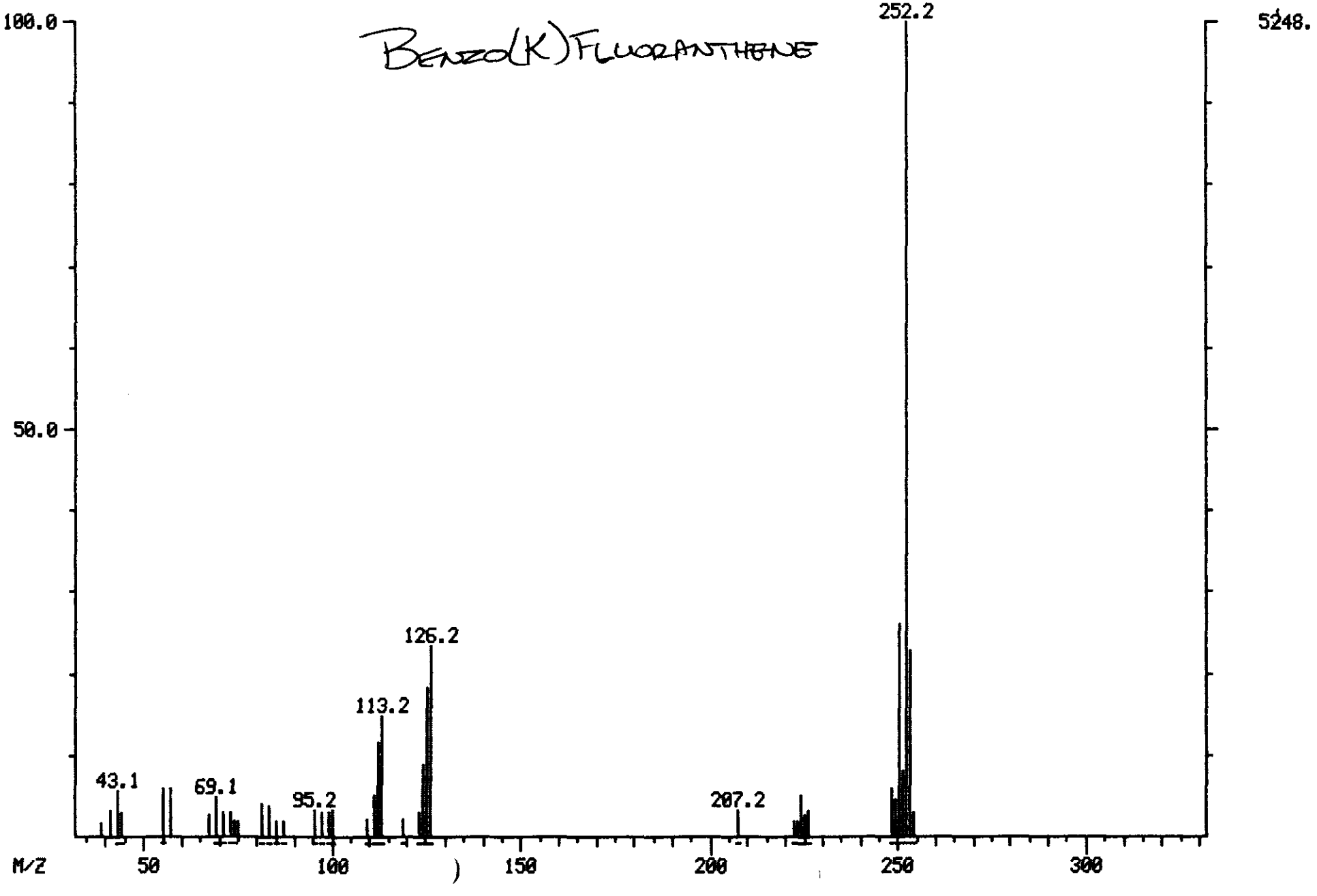
MASS SPECTRUM
05/16/90 0:03:00 + 35:05
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C650 DI-N-BUTYLPHTHALATE~~

DATA: T2599 #2105
CALI: T2599 #2

BASE M/Z: 252
RIC: 18144.

100164

BENZO(K)FLUORANTHENE



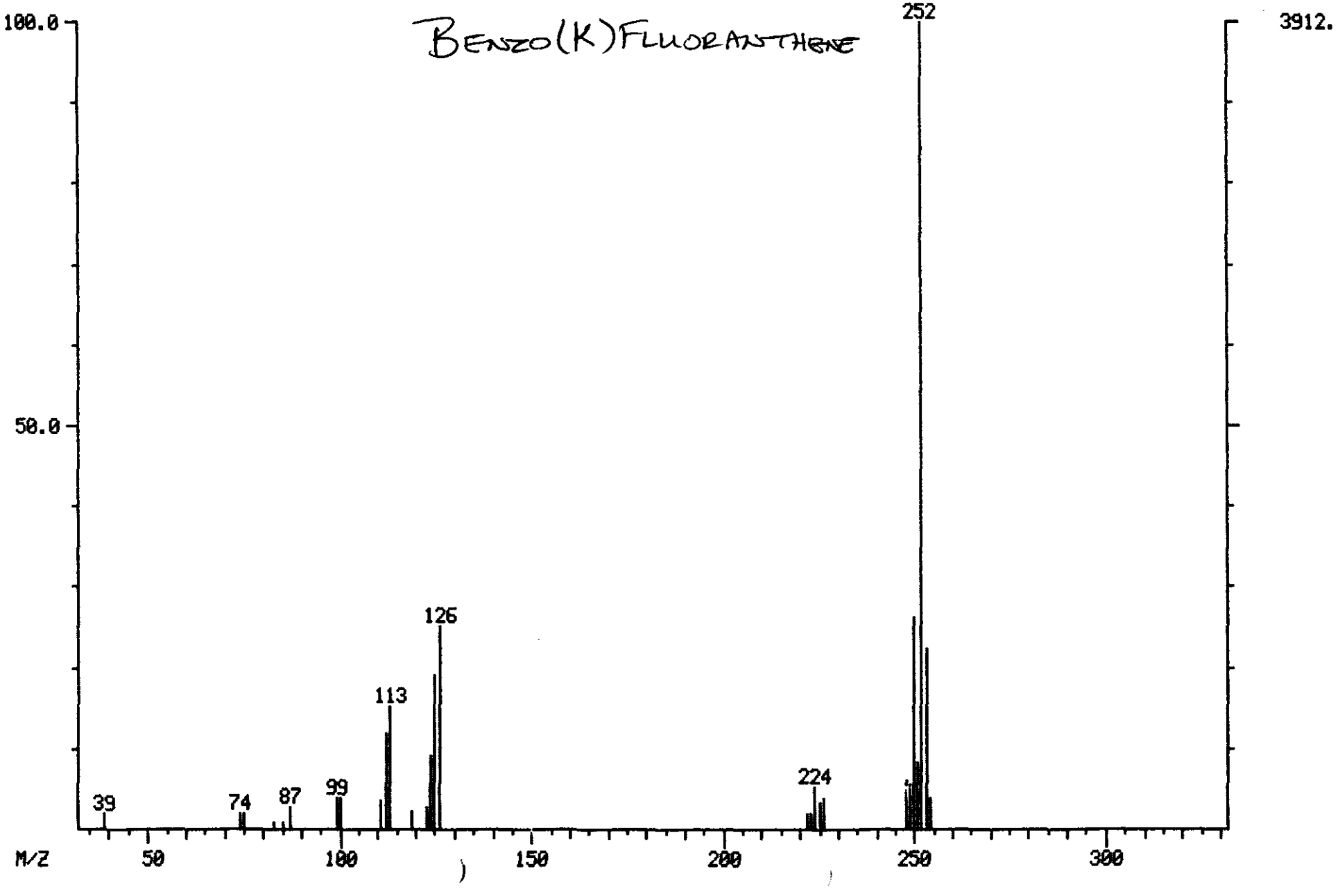
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 35:05
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C650 DI-N-BUTYLPHTHALATE
ENHANCED (S 15B 2N 0T)

DATA: T2599 #2105
CALI: T2599 #2

BASE M/Z: 252
RIC: 11584.

100135



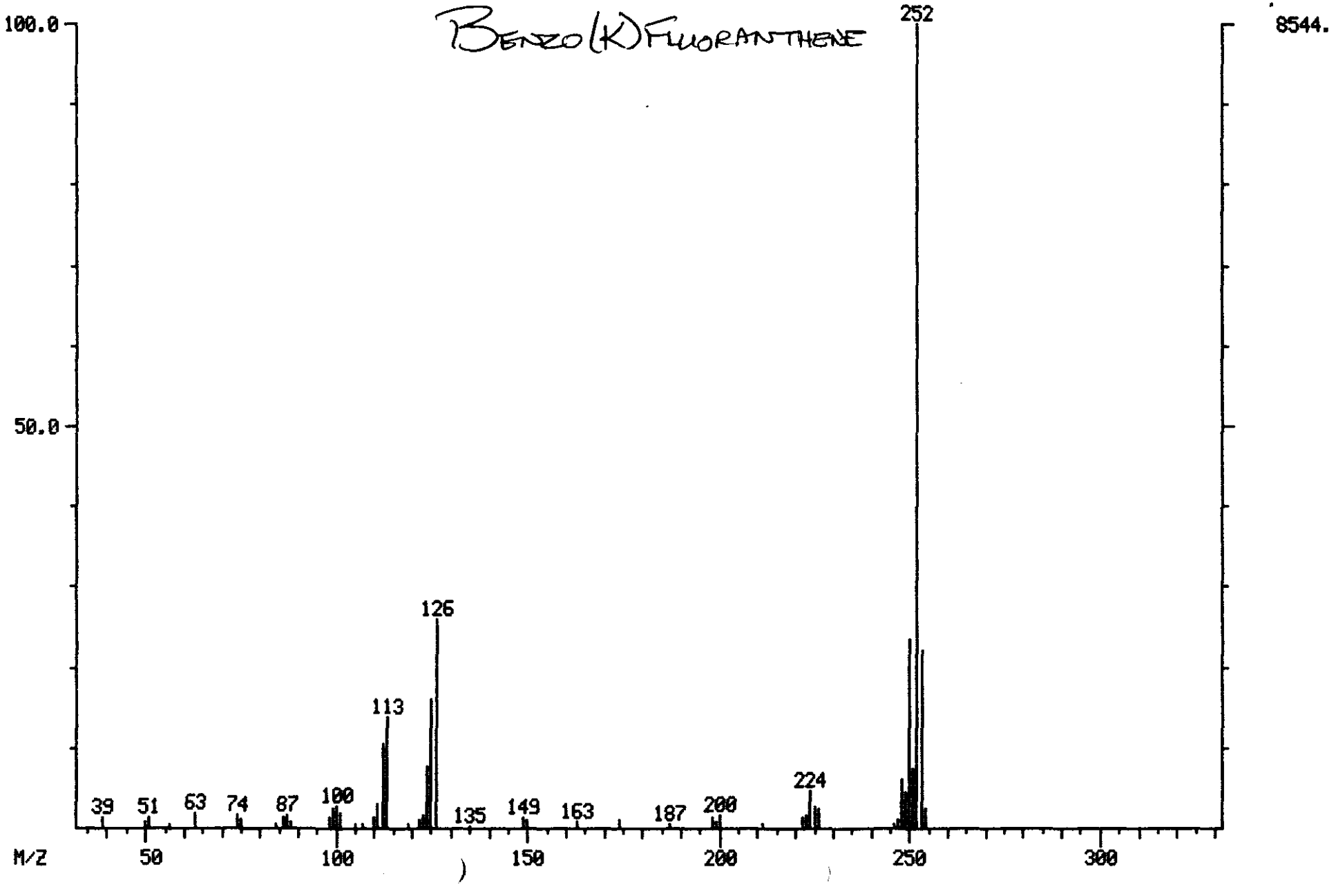
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 22:57:00 + 35:08
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C650 DI-N-BUTYLPHTHALATE
ENHANCED (S 15B 2N 0T)

DATA: T2598 #2108
CALI: T2598 #2

BASE M/Z: 252
RIC: 25184.

100166



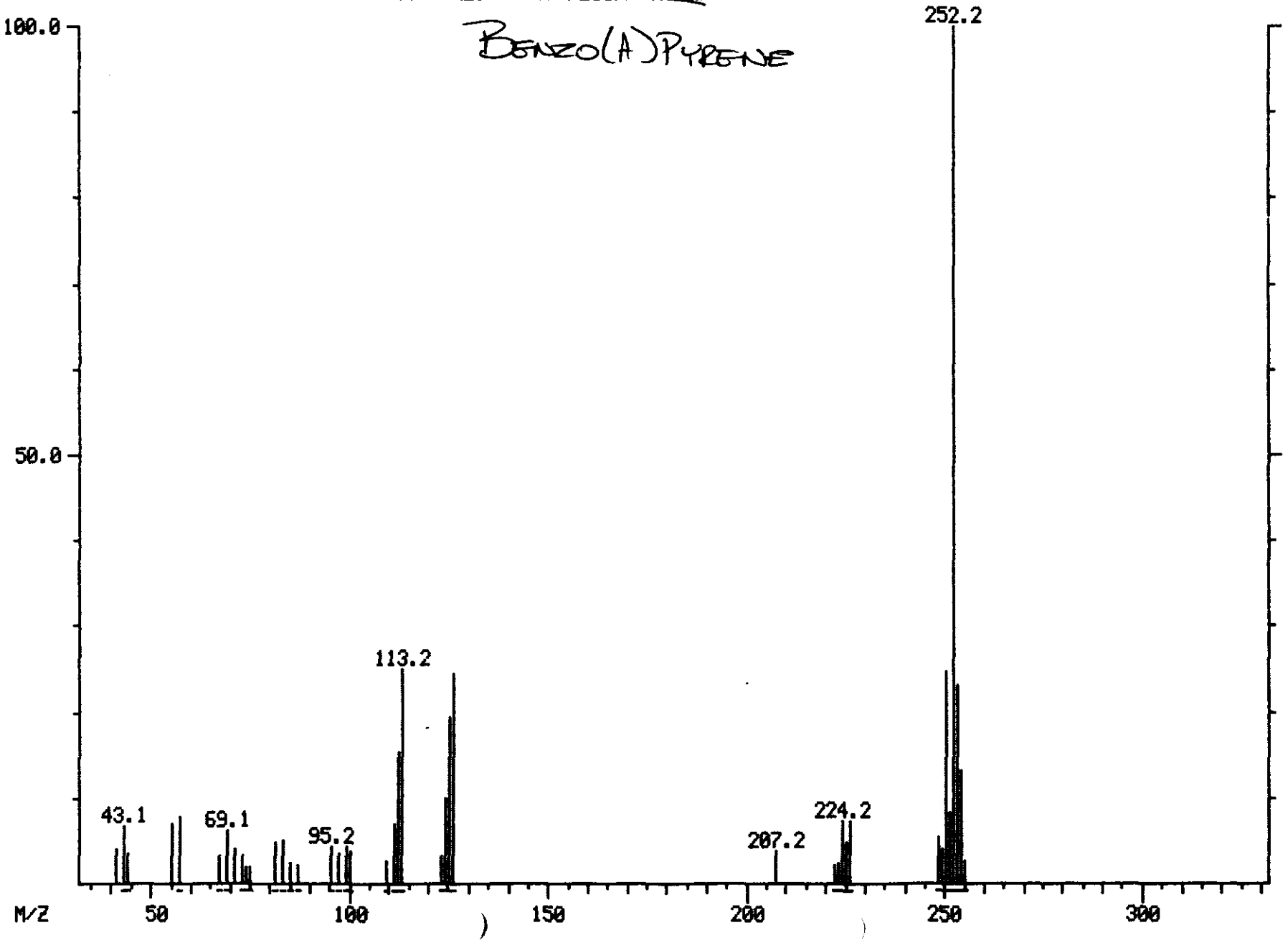
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 36:21
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C855-FLUORANTHENE~~

DATA: T2599 #2181
CALI: T2599 #2

BASE M/Z: 252
RIC: 18368.

100167



ORIGINAL (Red)

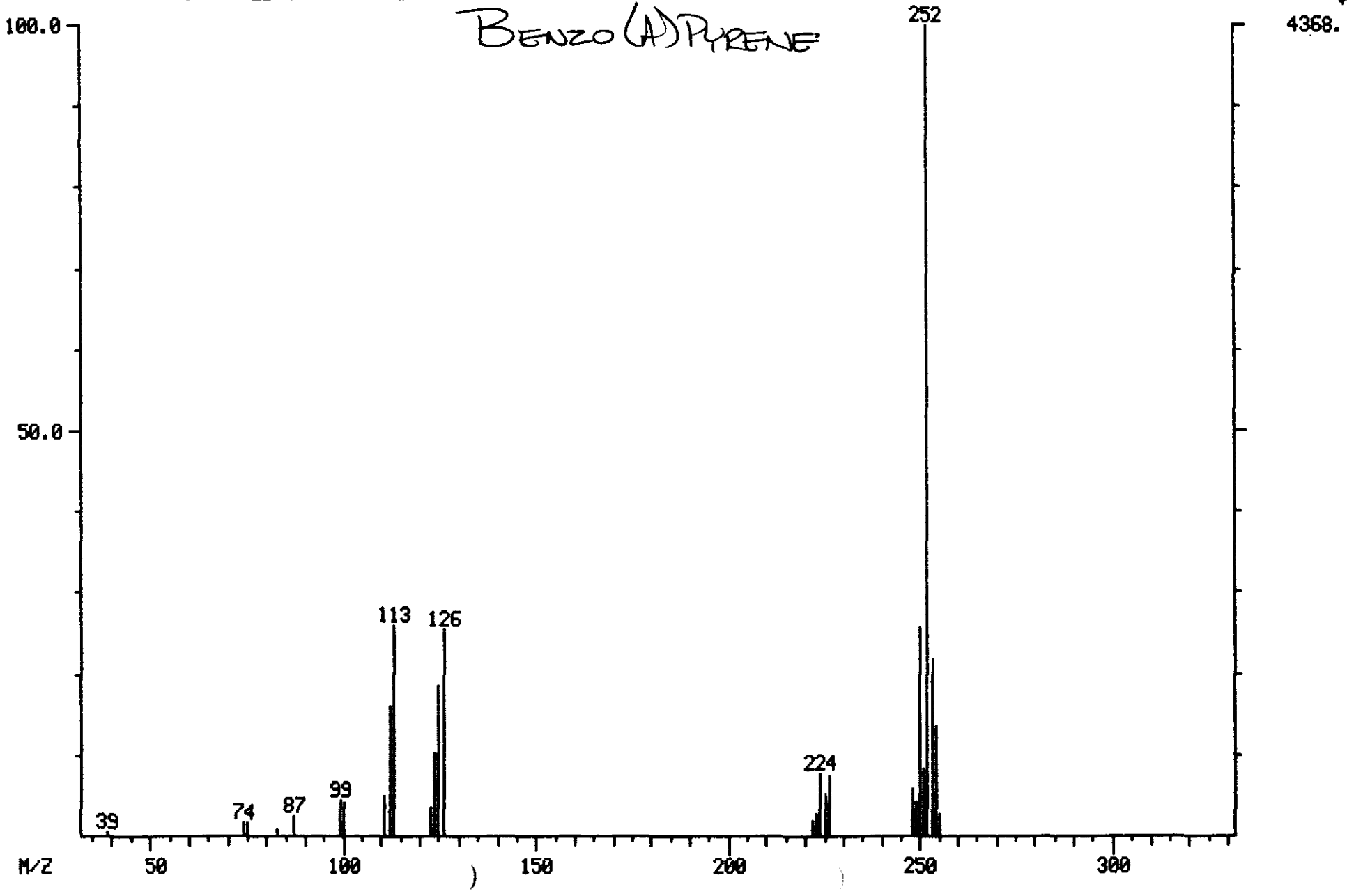
MASS SPECTRUM
05/16/90 0:03:00 + 36:21
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~CG55 FLUORANTHENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #2181
CALI: T2599 #2

BASE M/Z: 252
RIC: 14304.

100168

BENZO(A)PYRENE



ORIGINAL (Red)

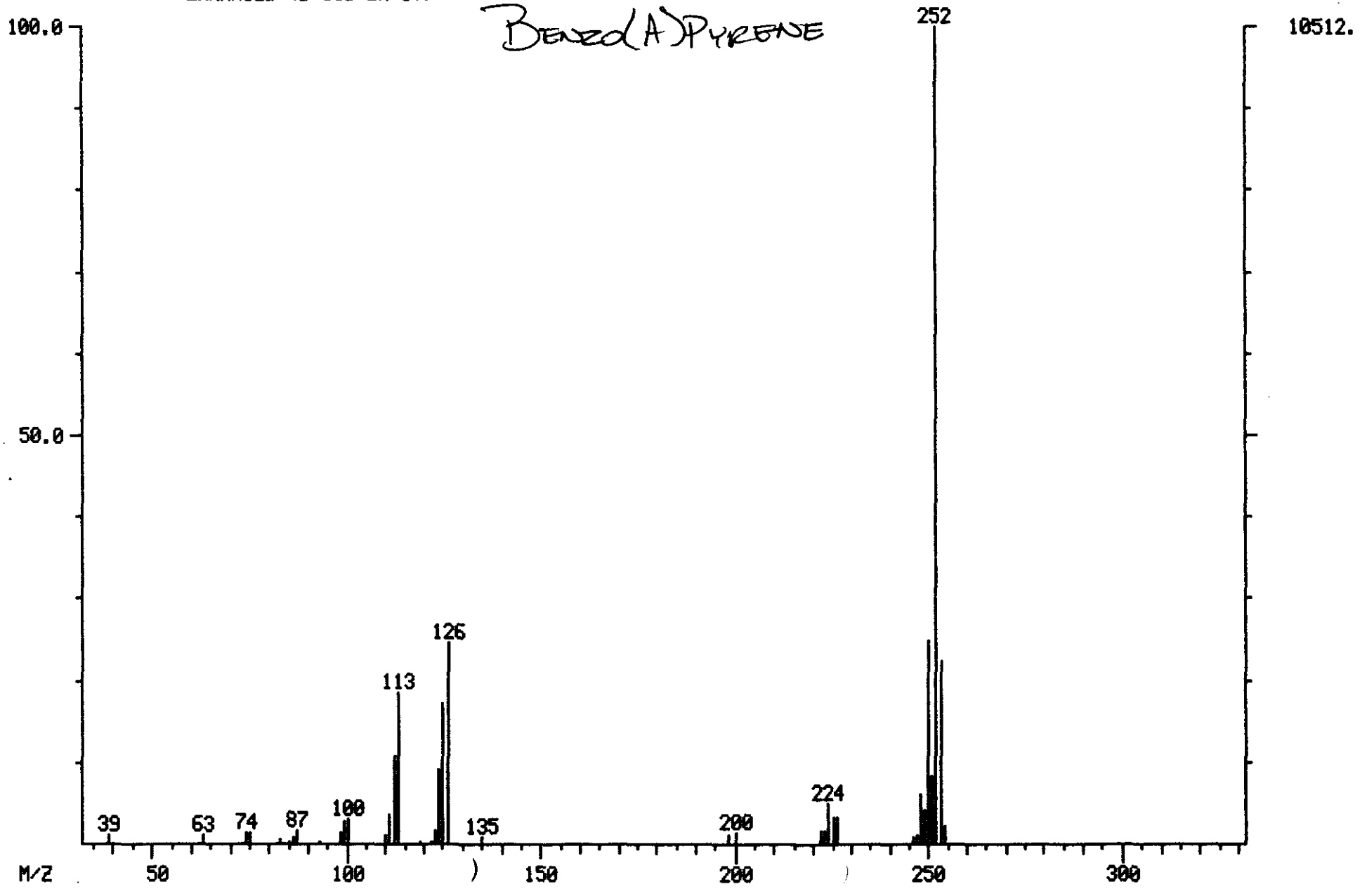
100169

MASS SPECTRUM
05/15/90 22:57:00 + 36:22
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~2655 FLUORANTHENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #2182
CALI: T2598 #2

BASE M/Z: 252
RIC: 30592.

BENZO(A)PYRENE



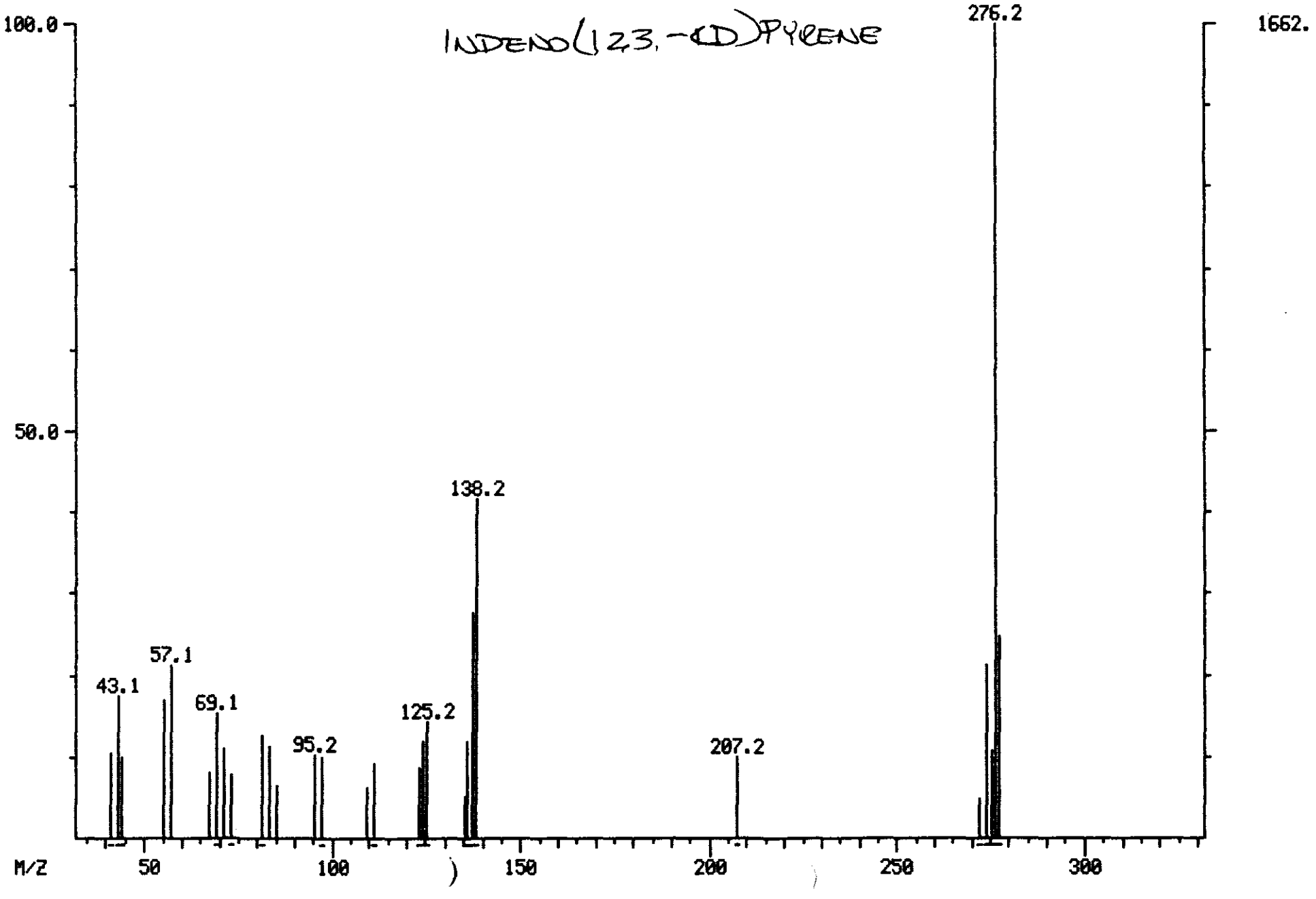
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 42:26
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C715 PYRENE~~

DATA: T2599 #2546
CALI: T2599 #2

BASE M/Z: 276
RIC: 7920.

1001170



ORIGINAL (Red)

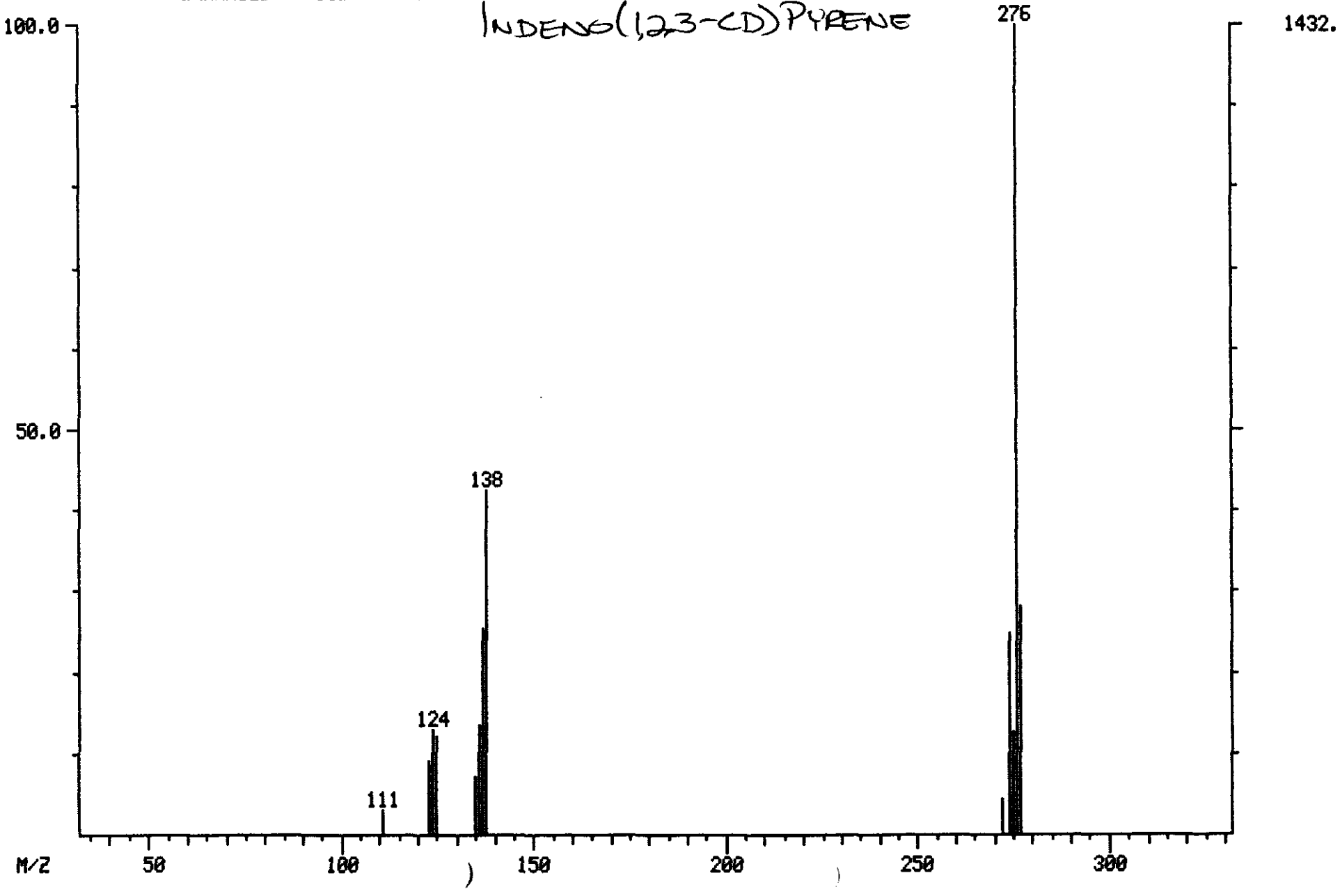
MASS SPECTRUM
05/16/90 0:03:00 + 42:26
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C715 PYRENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #2546
CALI: T2599 #2

BASE M/Z: 276
RIC: 4248.

100171

INDENO(1,2,3-CD)PYRENE



ORIGINAL (Red)

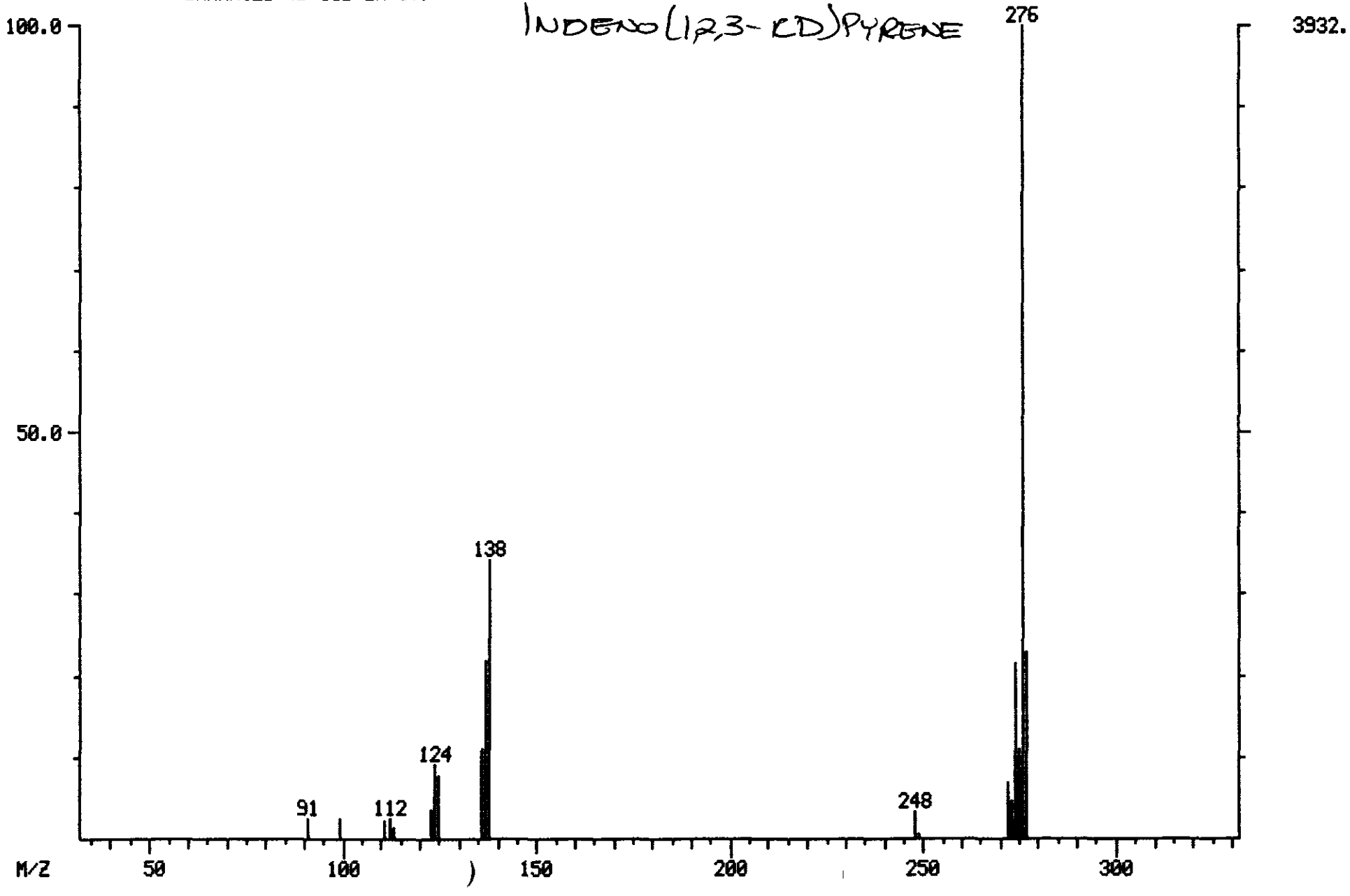
100172

MASS SPECTRUM
05/15/90 22:57:00 + 42:30
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30200C/MIN
** NAME: ~~C715 PYRENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #2550
CALI: T2598 #2

BASE M/Z: 276
RIC: 10608.

INDENO(1,2,3-CD)PYRENE



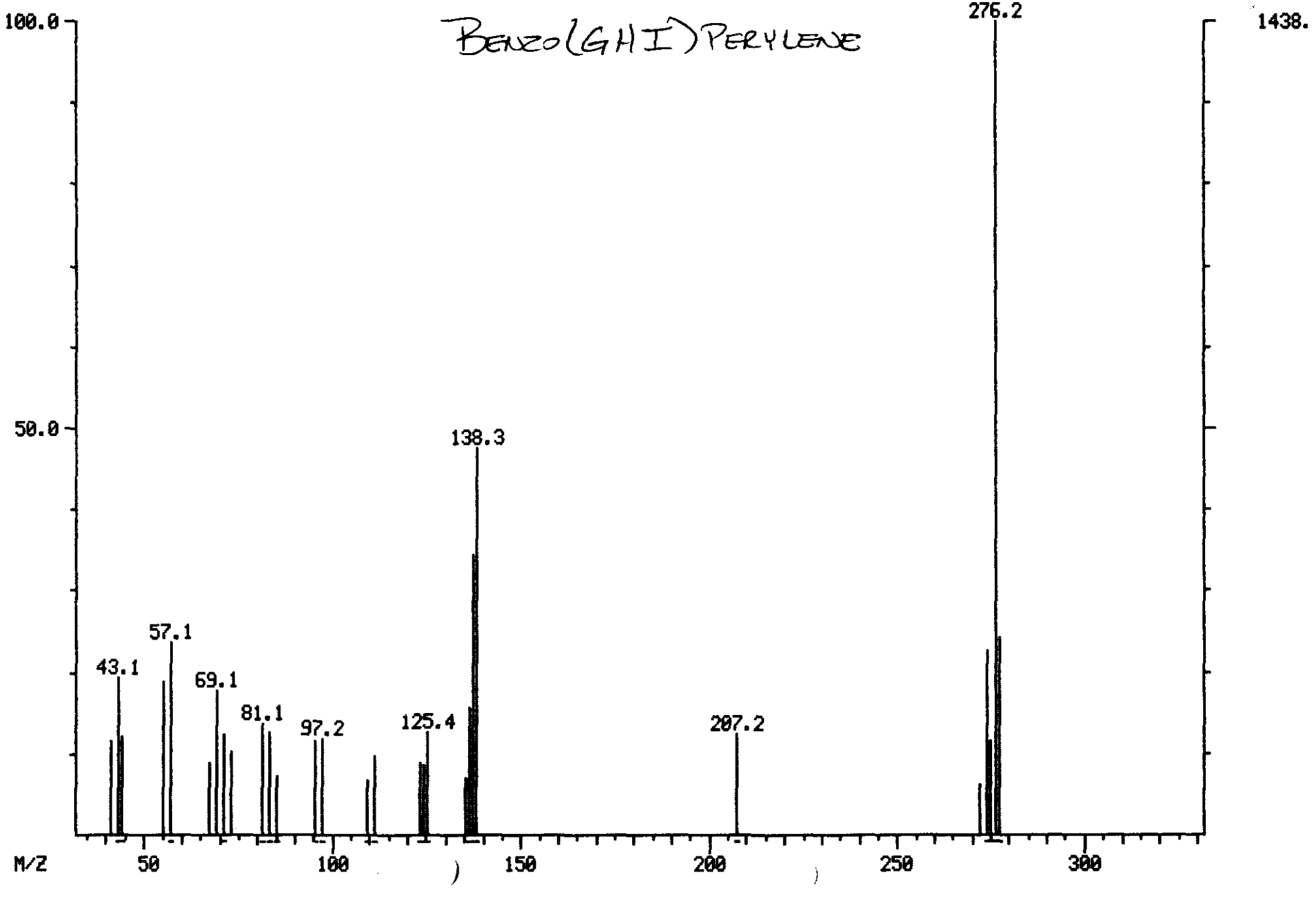
ORIGINAL (Red)

MASS SPECTRUM
05/16/90 0:03:00 + 44:14
SAMPLE: CLP,VERSCOM,2536,5,M,5,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C730 BENZO(A)ANTHRACENE~~

DATA: T2599 #2654
CALI: T2599 #2

BASE M/Z: 276
RIC: 7488.

100173



ORIGINAL (Red)

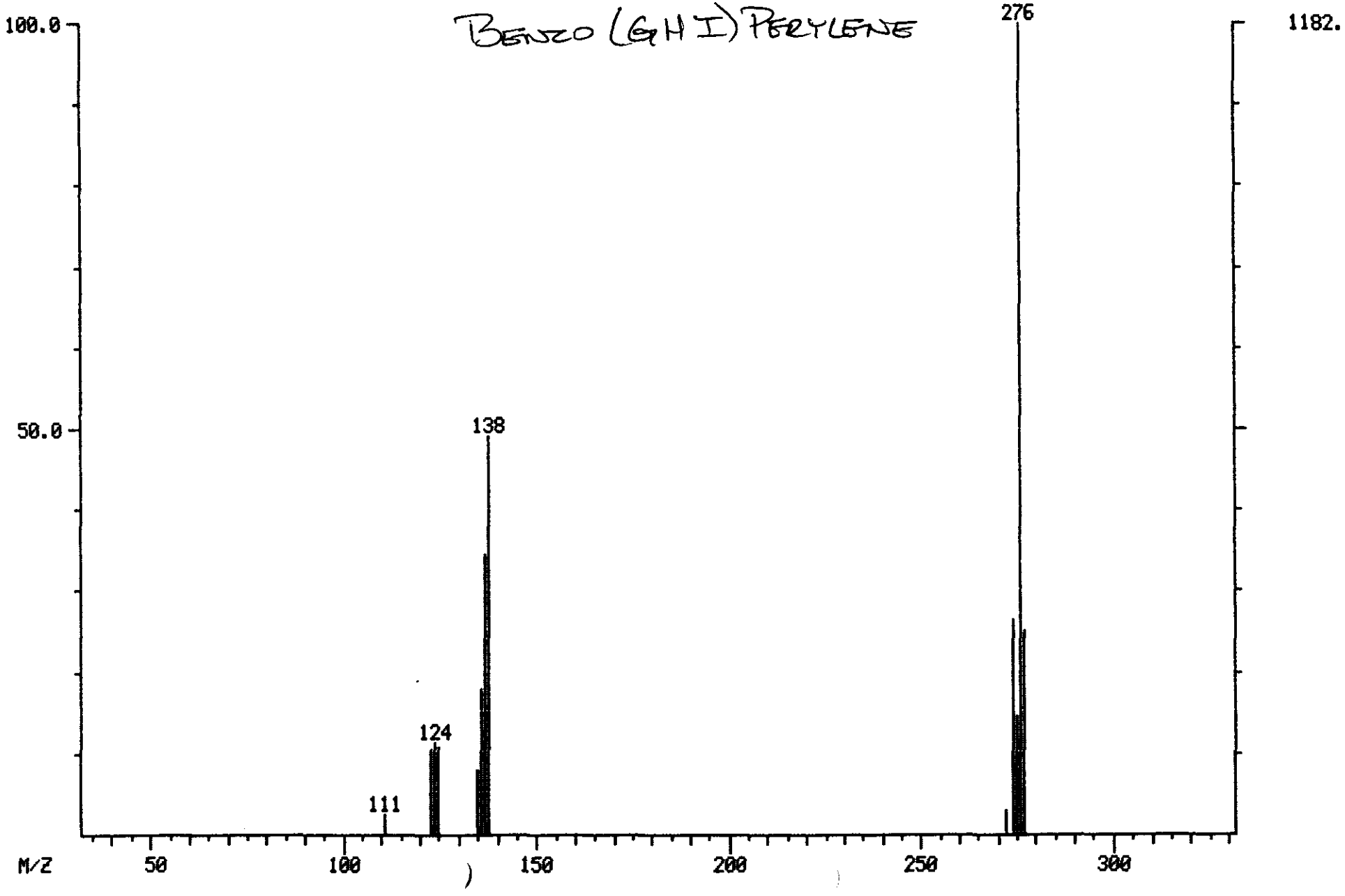
MASS SPECTRUM
05/16/90 0:03:00 + 44:14
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C230 BENZO(A)ANTHRACENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2599 #2654
CALI: T2599 #2

BASE M/Z: 276
RIC: 3716.

100174

BENZO (GHI) PERYLENE



ORIGINAL (Red)

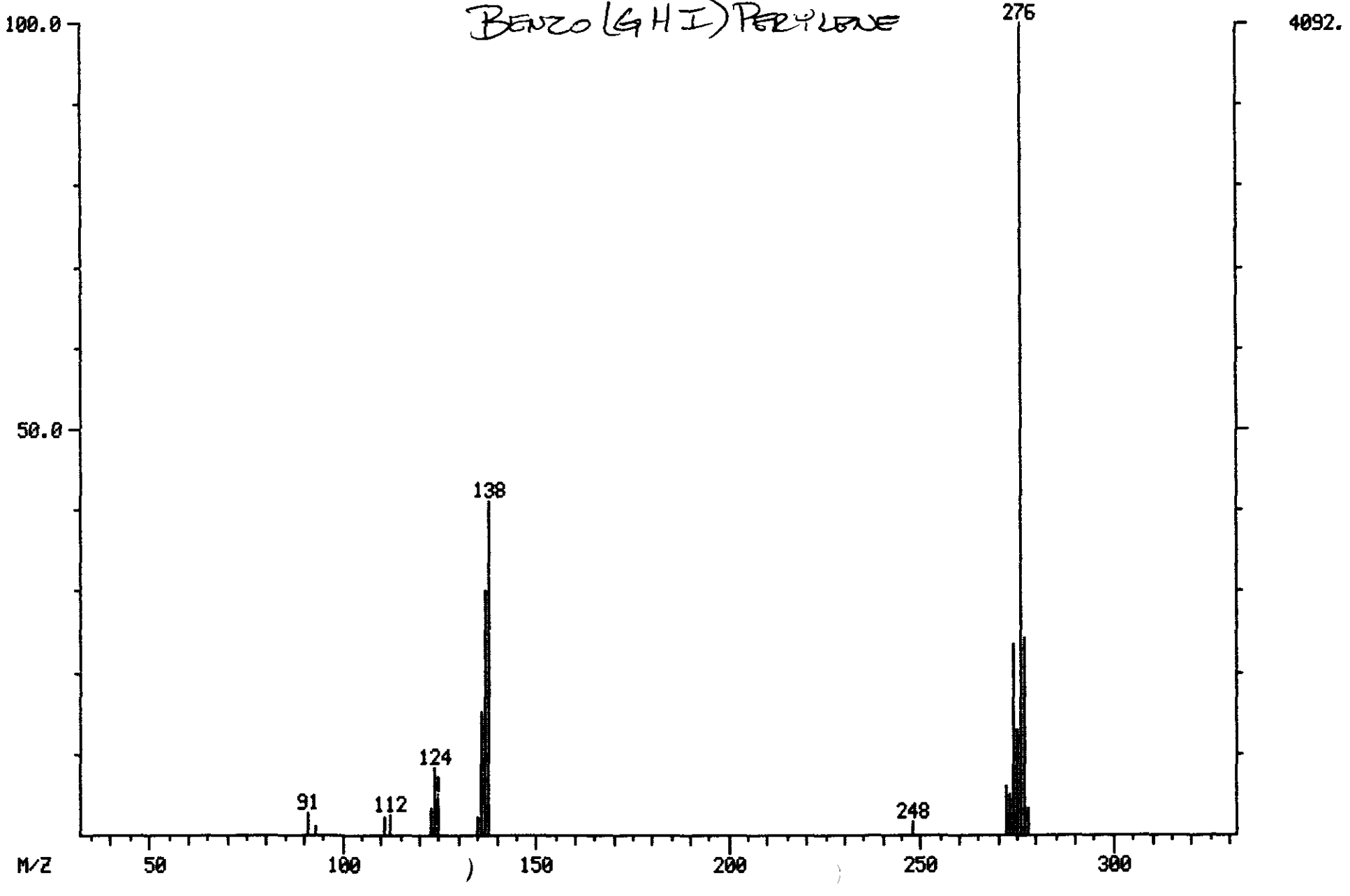
MASS SPECTRUM
05/15/90 22:57:00 + 44:19
SAMPLE: CLP,,,SSTD50,,,22658,B,CC50,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: ~~C20 BENZO(A)ANTHRACENE~~
ENHANCED (S 15B 2N 0T)

DATA: T2598 #2659
CALI: T2598 #2

BASE M/Z: 276
RIC: 12016.

100175

BENZO (GHI) PERYLENE



ORIGINAL (Red)

Library Search Data: T2599 #1195 Base m/z: 166
05/16/90 0:03:00 + 19:55 Cali: T2599 # 2 RIC: 3071.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
249 matched at least 4 of the 13 largest peaks in the unknown

PAH

Rank	In.	Name
1	10634	9H-FLUORENE
2	10635	1H-PHENALENE
3	18153	9H-FLUORENE-9-CARBOXYLIC ACID
4	15441	BENZENE, 1,1'-(DIAZOMETHYLENE)BIS-
5	10785	BENZALDEHYDE, 2,4-DIHYDROXY-3,6-DIMETHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C13.H10	166	166	899	917	973
2	C13.H10	166	165	890	901	953
[illegible]	C14.H10.O2	210	166	851	896	946
[illegible]	C13.H10.N2	194	165	759	806	929
5	C9.H10.O3	166	165	696	817	826

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	86-73-7
2	—	—	—	—	203-80-5
3	—	—	—	—	1989-33-9
4	—	—	—	—	883-40-9
5	—	—	—	—	34883-14-2

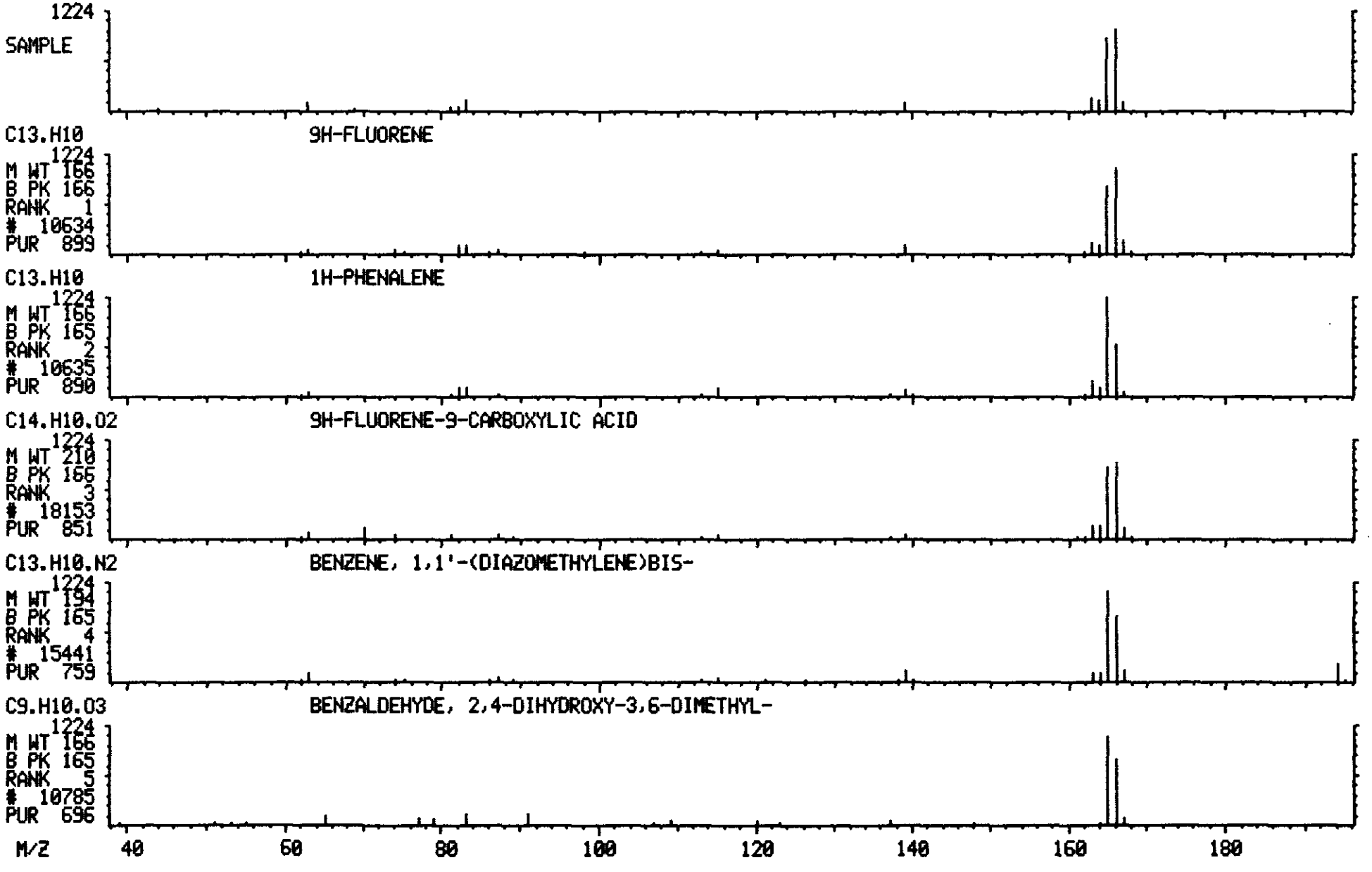
ORIGINAL (Red)

LIBRARY SEARCH
05/16/90 0:03:00 + 19:55
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1195
CALI: T2599 # 2

BASE M/Z: 166
RIC: 3071.

100177



Library Search Data: T2599 #1498 Base m/z: 190
05/16/90 0:03:00 + 24:58 Cali: T2599 # 2 RIC: 7431.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
56 matched at least 5 of the 16 largest peaks in the unknown

PAH

Rank	In.	Name
1	14848	4H-CYCLOPENTA[DEF]PHENANTHRENE
2	15139	PHENANTHRENE, 4-METHYL-
3	14963	9H-FLUORENE-2-CARBONITRILE
4	14873	BENZALDEHYDE, 3,5-DICHLORO-2-HYDROXY-
5	15136	ANTHRACENE, 1-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C15.H10	190	190	755	800	887
2	C15.H12	192	192	611	619	680
3	C14.H9.N	191	191	573	637	645
	C7.H4.O2.CL2	190	190	566	734	739
5	C15.H12	192	192	564	579	640

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	203-64-5
2	—	—	—	—	832-64-4
3	—	—	—	—	2523-48-0
4	—	—	—	—	90-60-8
5	—	—	—	—	610-48-0

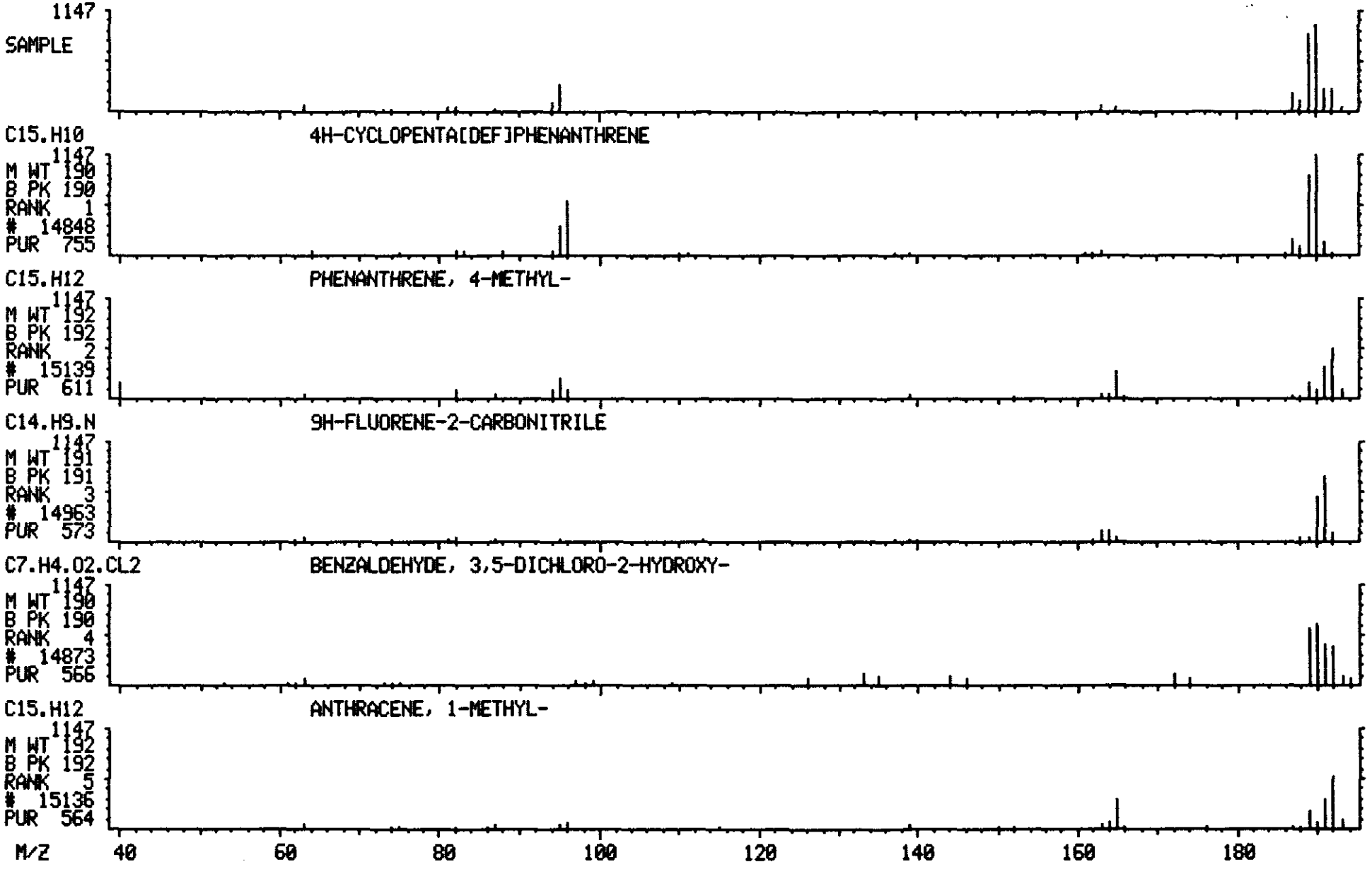
ORIGINAL (Red)

100179

LIBRARY SEARCH
05/16/90 0:03:00 + 24:58
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1498
CALI: T2599 # 2

BASE M/Z: 190
RIC: 7431.



Library Search Data: T2599 #1632 Base m/z: 202
05/16/90 0:03:00 + 27:12 Cali: T2599 # 2 RIC: 7847.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
149 matched at least 4 of the 16 largest peaks in the unknown

PAH

Rank	In.	Name
1	16888	PYRENE
2	16889	FLUORANTHENE
3	16890	BENZENE, 1,1'-(1,3-BUTADIYNE-1,4-DIYL)BIS-
4	17253	2,3-DIHYDROFLUORANTHENE
5	17254	3,10B-DIHYDROFLUORANTHENE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C16.H10	202	202	954	964	983
2	C16.H10	202	202	948	957	983
3	C16.H10	202	202	905	923	972
	C16.H12	204	202	697	768	849
5	C16.H12	204	202	683	771	820

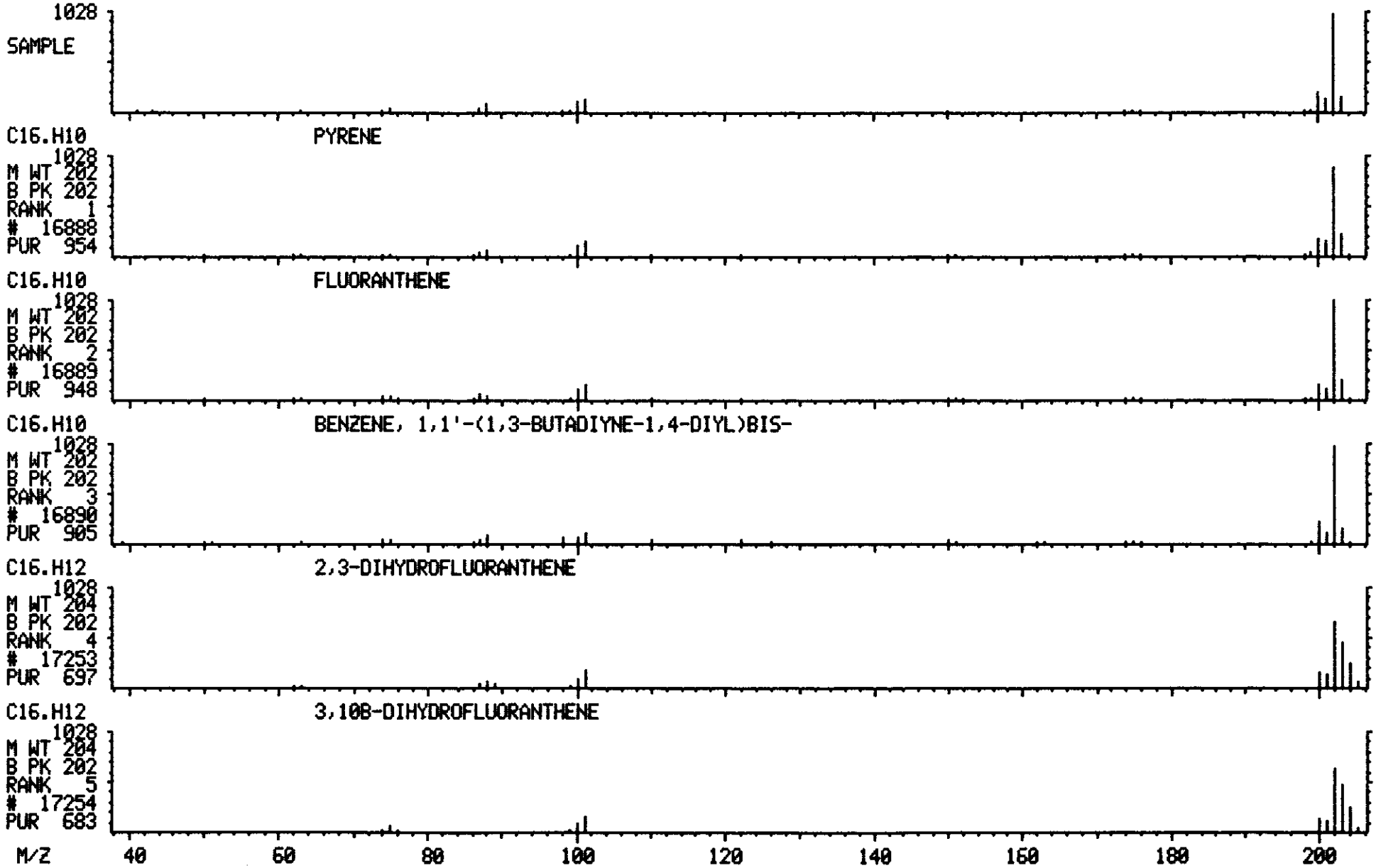
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	129-00-0
2	—	—	—	—	206-44-0
3	—	—	—	—	886-66-8
4	—	—	—	—	30339-87-8
5	—	—	—	—	37980-07-7

LIBRARY SEARCH
05/16/90 0:03:00 + 27:12
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1632
CALI: T2599 # 2

BASE M/Z: 202
RIC: 7847.

100181



ORIGINAL (Red)

Library Search Data: T2599 #1725 Base m/z: 216
05/16/90 0:03:00 + 28:45 Cali: T2599 # 2 RIC: 7879.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
59 matched at least 5 of the 16 largest peaks in the unknown

PAH

Rank	In.	Name
1	19072	11H-BENZO[A]FLUORENE
2	19075	PYRENE, 4-METHYL-
3	19076	PYRENE, 2-METHYL-
4	19073	11H-BENZO[B]FLUORENE
5	19074	PYRENE, 1-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C17.H12	216	216	920	935	968
2	C17.H12	216	216	886	907	946
[illegible]	C17.H12	216	216	882	903	951
[illegible]	C17.H12	216	216	868	893	957
5	C17.H12	216	216	861	886	960

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	238-84-6
2	—	—	—	—	3353-12-6
3	—	—	—	—	3442-78-2
4	—	—	—	—	243-17-4
5	—	—	—	—	2381-21-7

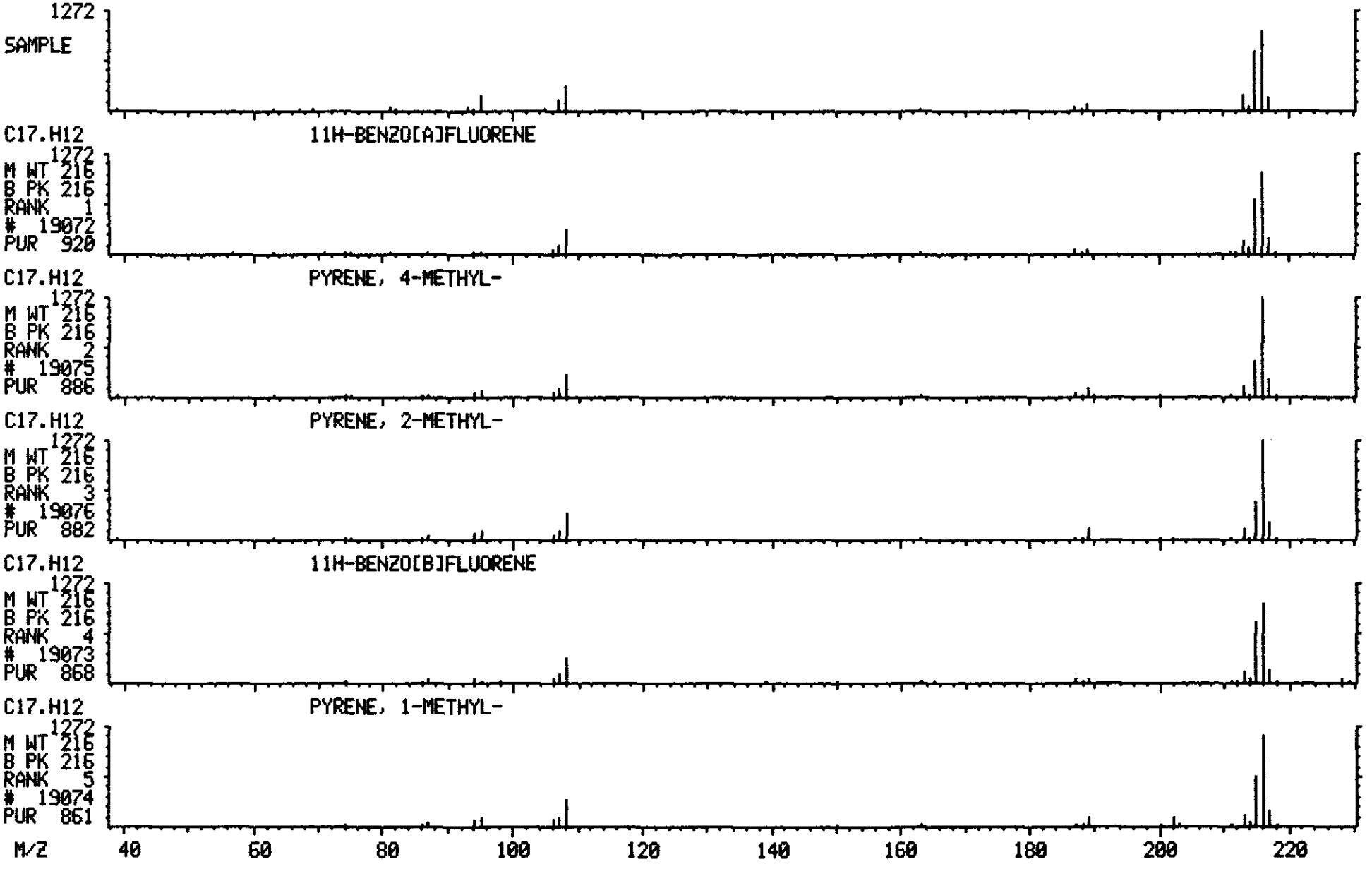
ORIGINAL (Red)

LIBRARY SEARCH
05/16/90 0:03:00 + 28:45
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1725
CALI: T2599 # 2

BASE M/Z: 216
RIC: 7879.

100183



Library Search Data: T2599 #1737 Base m/z: 216
05/16/90 0:03:00 + 28:57 Cali: T2599 # 2 RIC: 6527.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
272 matched at least 4 of the 16 largest peaks in the unknown

PAH

Rank	In.	Name
1	19072	11H-BENZO[A]FLUORENE
2	19076	PYRENE, 2-METHYL-
3	19073	11H-BENZO[B]FLUORENE
4	19075	PYRENE, 4-METHYL-
5	19074	PYRENE, 1-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C17.H12	216	216	921	925	978
2	C17.H12	216	216	881	889	953
3	C17.H12	216	216	877	889	971
	C17.H12	216	216	876	884	949
5	C17.H12	216	216	869	881	969

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	238-84-6
2	—	—	—	—	3442-78-2
3	—	—	—	—	243-17-4
4	—	—	—	—	3353-12-6
5	—	—	—	—	2381-21-7

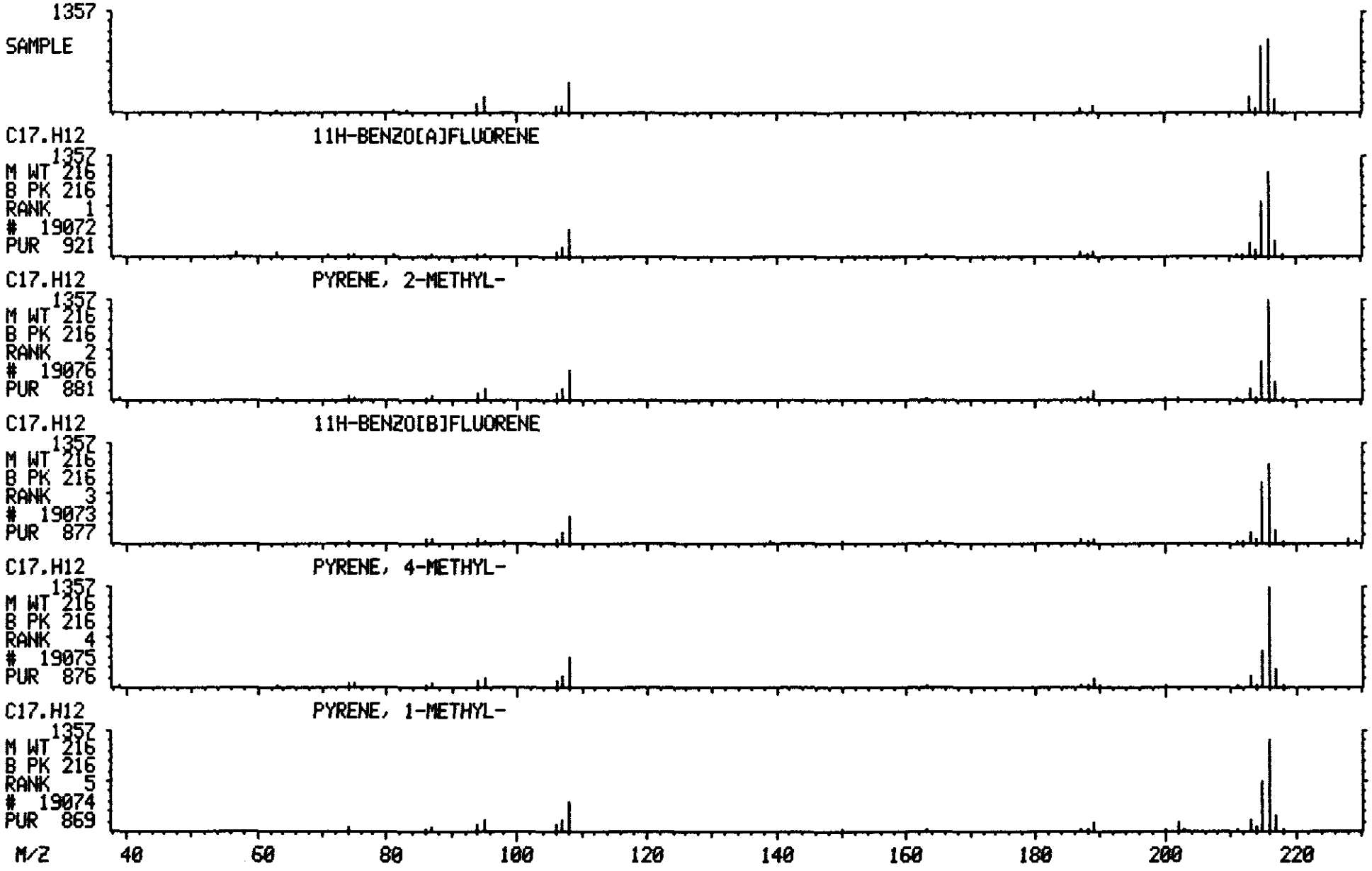
ORIGINAL (Red)

LIBRARY SEARCH
05/16/90 0:03:00 + 28:57
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1737
CALI: T2599 # 2

BASE M/Z: 216
RIC: 6527.

100185



Library Search Data: T2599 #1854 Base m/z: 226 ORIGINAL (Red)
05/16/90 0:03:00 + 30:54 Cali: T2599 # 2 RIC: 3955.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30200C/MIN
Enhanced (S 15B 2N OT)

42223 spectra in LIBRARYNB searched for maximum PURITY
107 matched at least 4 of the 15 largest peaks in the unknown

PAH

Rank	In.	Name
1	20644	BENZO[GHI]FLUORANTHENE
2	20645	CYCLOPENTA[CD]PYRENE
3	20927	BENZO[C]PHENANTHRENE
4	20323	BENZENE, 2-BROMO-1,4-DICHLORO-
5	20324	BENZENE, 4-BROMO-1,2-DICHLORO-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C18.H10	226	226	778	818	873
2	C18.H10	226	226	734	837	797
3	C18.H12	228	228	718	741	813
	C6.H3.CL2.BR	224	226	632	658	827
5	C6.H3.CL2.BR	224	226	609	635	813

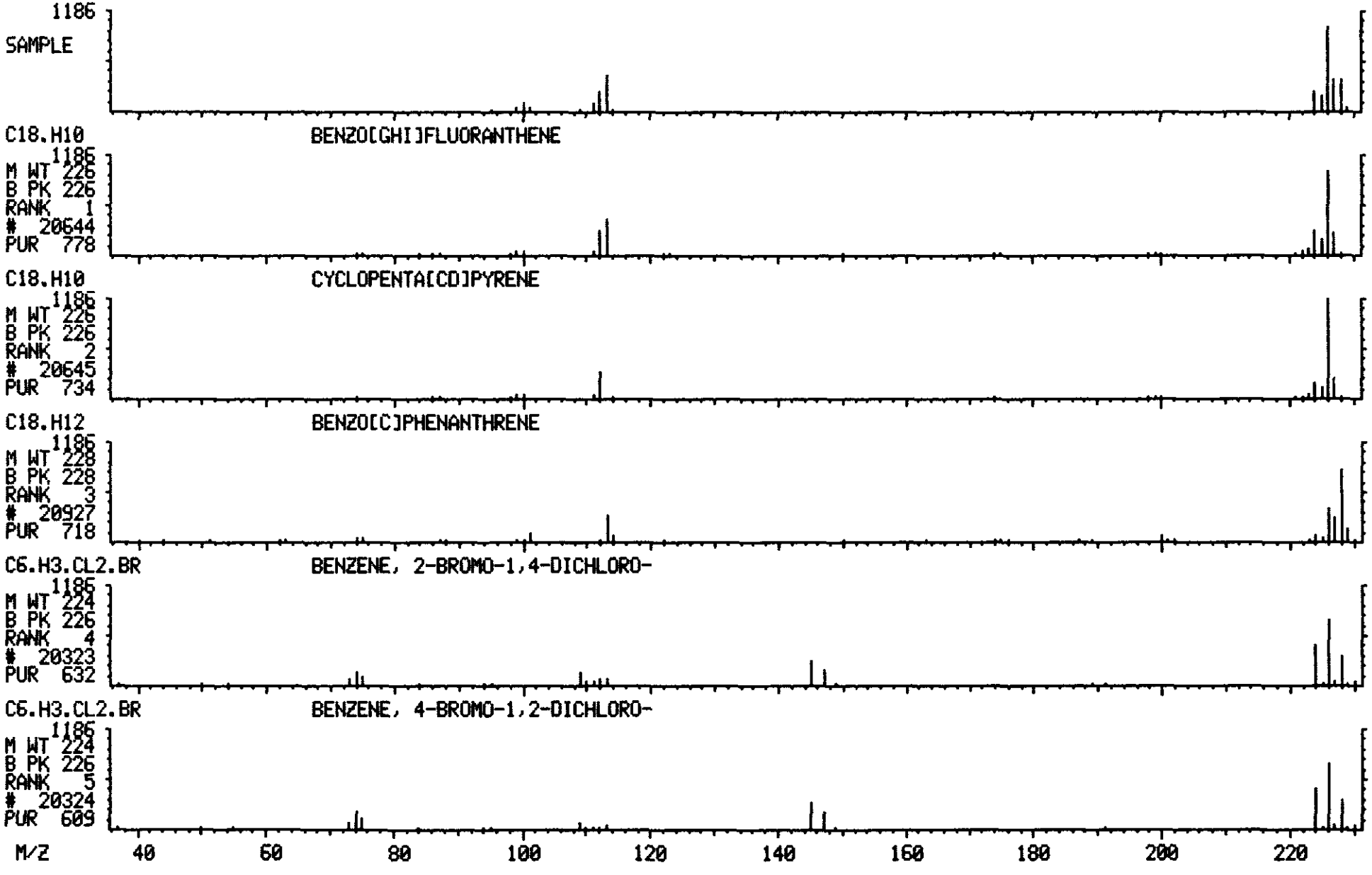
Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	203-12-3
2	—	—	—	—	27208-37-3
3	—	—	—	—	195-19-7
4	—	—	—	—	1435-50-3
5	—	—	—	—	18282-59-2

LIBRARY SEARCH
05/16/90 0:03:00 + 30:54
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1854
CALI: T2599 # 2

BASE M/Z: 226
RIC: 3955.

100187



Library Search Data: T2599 #1973 Base m/z: 73
05/16/90 0:03:00 + 32:53 Cali: T2599 # 2 RIC: 3183.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (R-3)

42223 spectra in LIBRARYNB searched for maximum PURITY
152 matched at least 4 of the 16 largest peaks in the unknown

siloxane

Rank	In.	Name
1	38743	HEXASILOXANE, TETRADECAMETHYL-
2	22733	BENZ[A]ANTHRACENE, 7-METHYL-
3	22738	CHRYSENE, 3-METHYL-
4	22731	BENZ[A]ANTHRACENE, 2-METHYL-
5	22730	BENZ[A]ANTHRACENE, 3-METHYL-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C14.H42.O5.SI6	458	73	307	566	531
2	C19.H14	242	242	297	823	356
3	C19.H14	242	242	290	803	354
	C19.H14	242	242	290	802	352
5	C19.H14	242	242	288	798	351

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	107-52-8
2	—	—	—	—	2541-69-7
3	—	—	—	—	3351-31-3
4	—	—	—	—	2498-76-2
5	—	—	—	—	2498-75-1

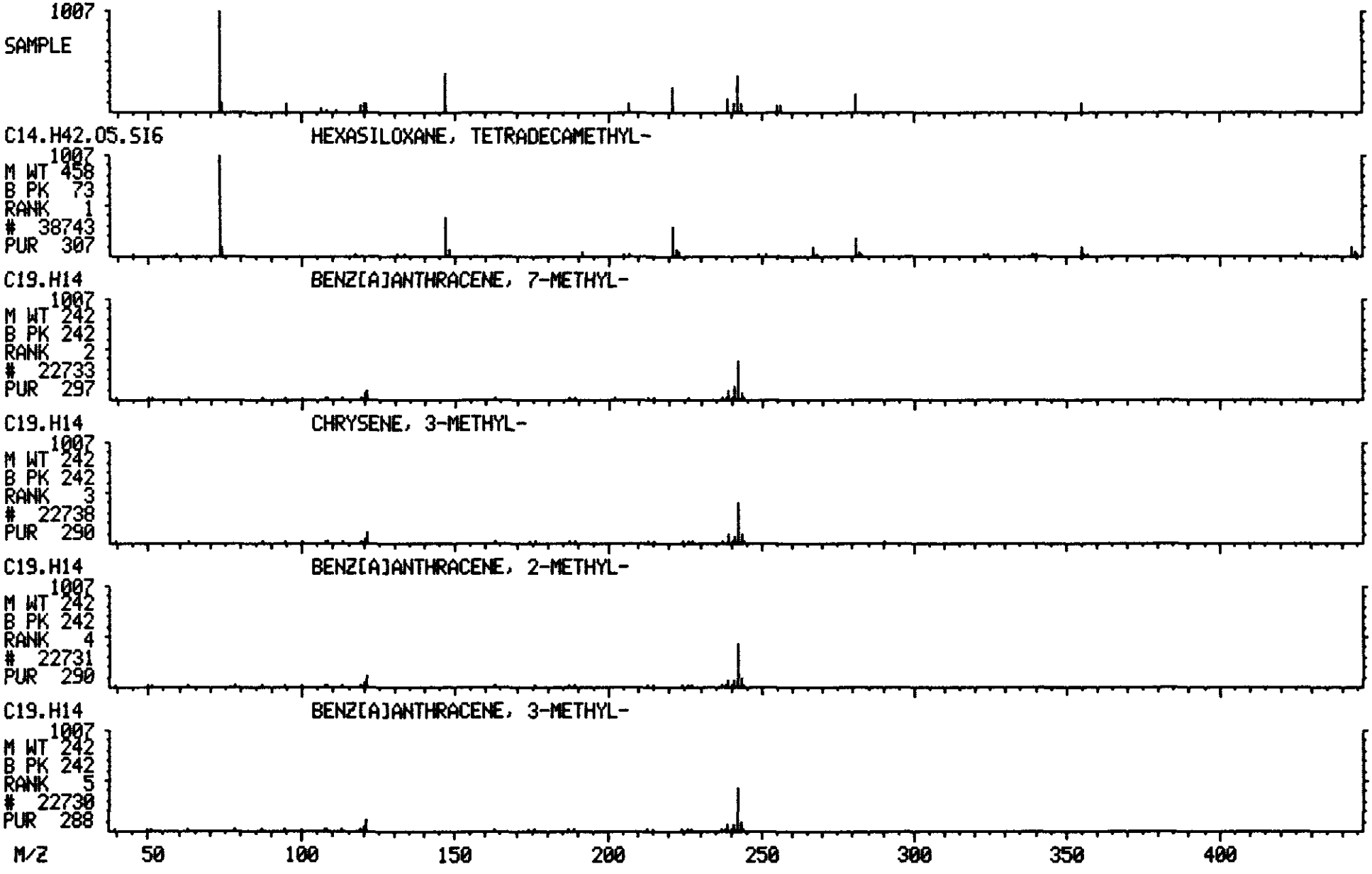
ORIGINAL (Red)

LIBRARY SEARCH
05/16/90 0:03:00 + 32:53
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #1973
CALI: T2599 # 2

BASE M/Z: 73
RIC: 3183.

100189



Library Search Data: T2599 #2124 Base m/z: 252
05/16/90 0:03:00 + 35:24 Cali: T2599 # 2 RIC: 3199.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
87 matched at least 4 of the 12 largest peaks in the unknown

PAH

Rank	In.	Name
1	23961	BENZO[A]PYRENE
2	23964	BENZO[J]FLUORANTHENE
3	23962	BENZO[E]PYRENE
4	23966	BENZO[K]FLUORANTHENE
5	23965	BENZ[E]ACEPHENANTHRYLENE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C20.H12	252	252	859	876	963
2	C20.H12	252	252	847	863	970
3	C20.H12	252	252	846	862	974
	C20.H12	252	252	840	856	966
5	C20.H12	252	252	835	850	967

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	50-32-8
2	—	—	—	—	205-82-3
3	—	—	—	—	192-97-2
4	—	—	—	—	207-08-9
5	—	—	—	—	205-99-2

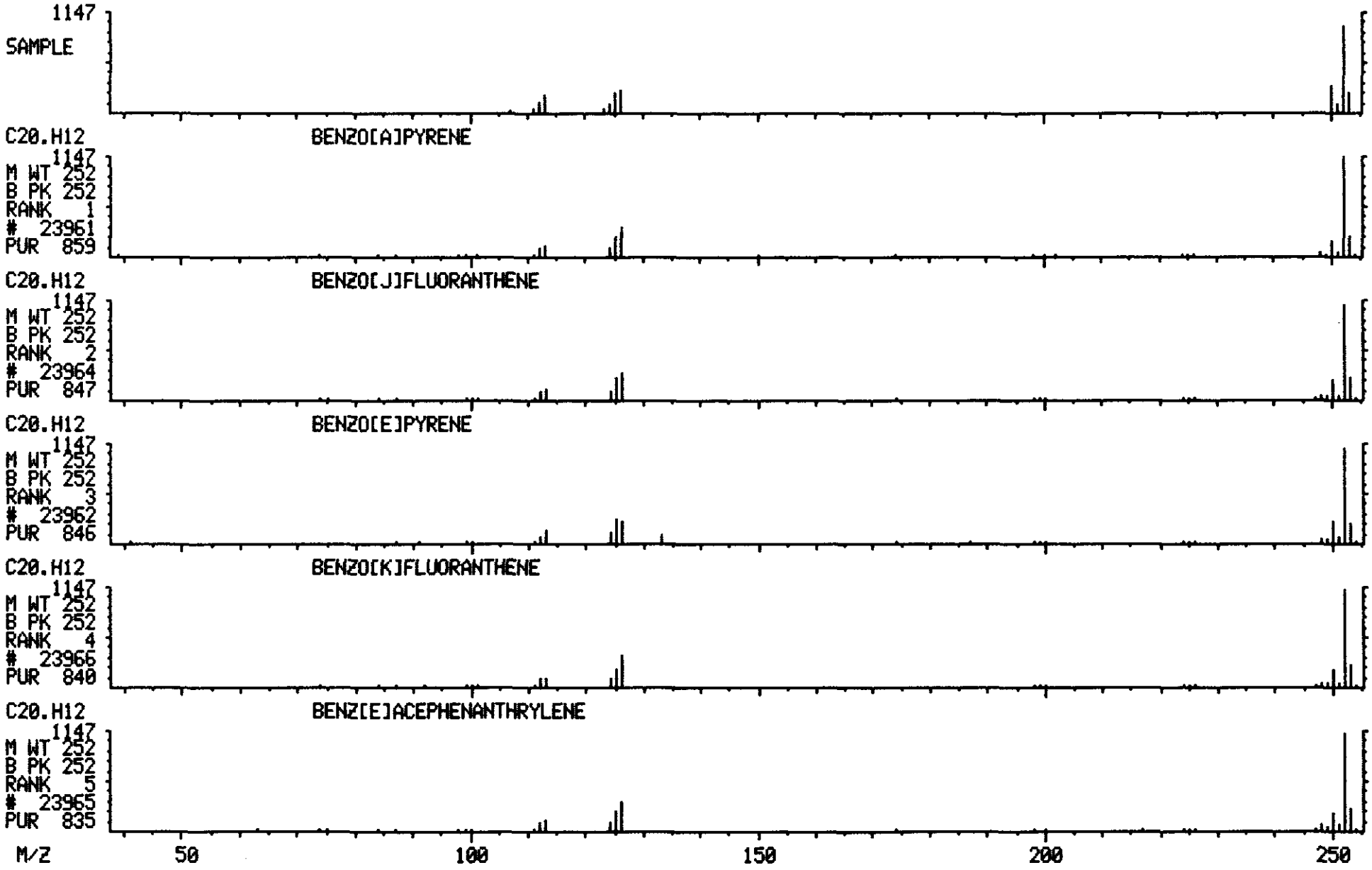
ORIGINAL (Red)

100191

LIBRARY SEARCH
05/16/90 0:03:00 + 35:24
SAMPLE: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #2124
CALI: T2599 # 2

BASE M/Z: 252
RIC: 3199.



Library Search Data: T2599 #2167 Base m/z: 252
05/16/90 0:03:00 + 36:07 Cali: T2599 # 2 RIC: 10447.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
112 matched at least 4 of the 16 largest peaks in the unknown

PAH

Rank	In.	Name
1	23964	BENZO[J]FLUORANTHENE
2	23966	BENZO[K]FLUORANTHENE
3	23965	BENZ[E]ACEPHENANTHRYLENE
4	23962	BENZO[E]PYRENE
5	23961	BENZO[A]PYRENE

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C20.H12	252	252	768	943	804
2	C20.H12	252	252	759	934	796
3	C20.H12	252	252	757	929	799
	C20.H12	252	252	753	932	801
5	C20.H12	252	252	752	927	792

Rank	Ret.Time	B.P.Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	205-82-3
2	—	—	—	—	207-08-9
3	—	—	—	—	205-99-2
4	—	—	—	—	192-97-2
5	—	—	—	—	50-32-8

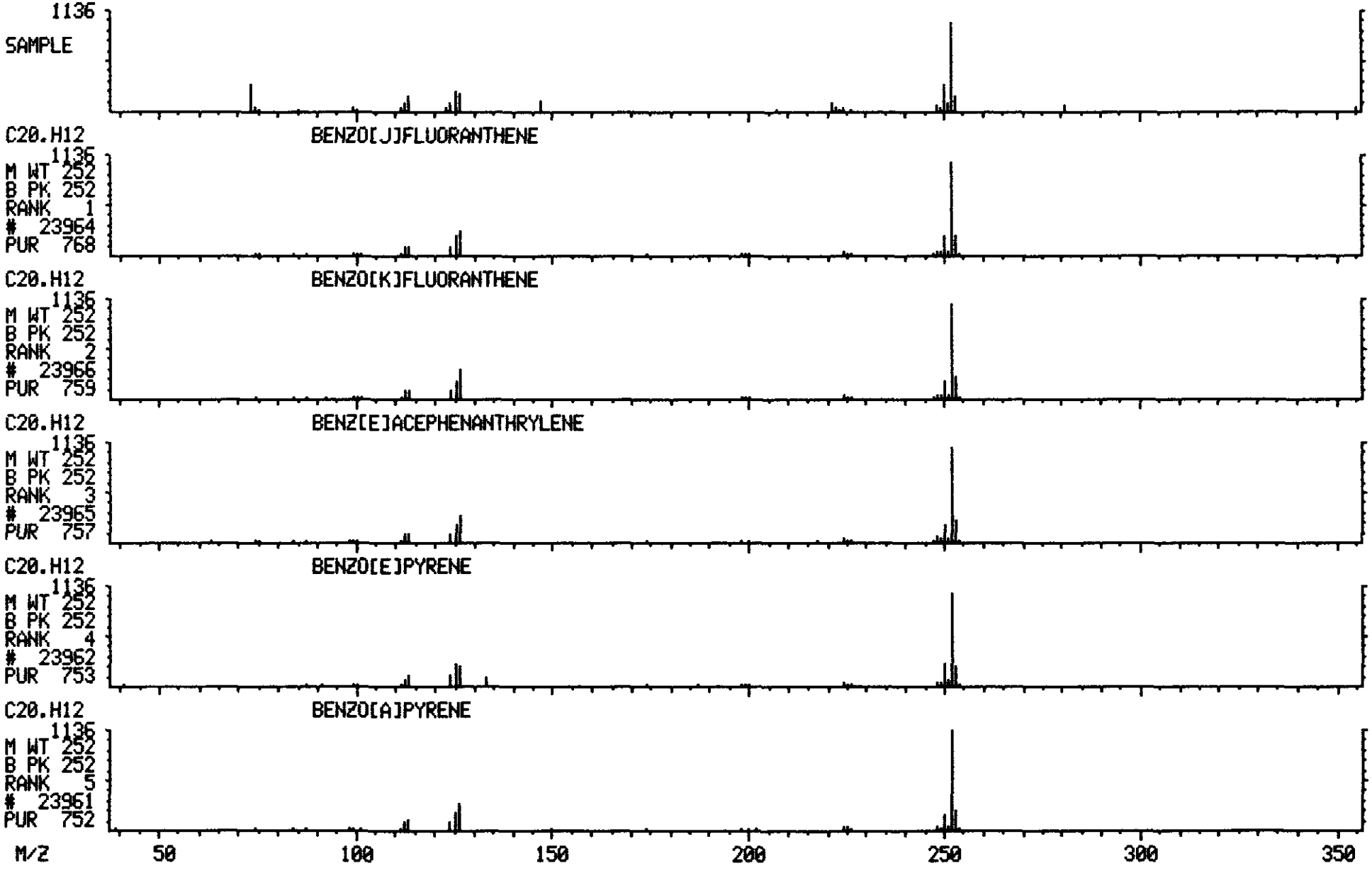
ORIGINAL (Red)

LIBRARY SEARCH
05/16/90 0:03:00 + 36:07
SAMPLE: CLP,VERSCOM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
ENHANCED (S 15B 2N 0T)

DATA: T2599 #2167
CALI: T2599 # 2

BASE M/Z: 252
RIC: 10447.

100193



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                    >>>>INTERNAL STANDARD RIC REPORT<<<<
*****************************INTERNAL STANDARD#1*****************RIC
Mass List                        Data: T2599 # 539          Base m/z:  150
05/16/90  0:03:00 + 8:59         Cali: T2599 #   2          RIC:     33536.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     35        0.00    0.00        0. Minima      Min inten:       0.
     30                         #   0  Maxima
*****************************INTERNAL STANDARD#2*****************RIC
Mass List                        Data: T2599 # 759          Base m/z:  136
05/16/90  0:03:00 + 12:39        Cali: T2599 #   2          RIC:     39104.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         #   0  Maxima
*****************************INTERNAL STANDARD#3*****************RIC
 ass List                        Data: T2599 #1093          Base m/z:  164
05/16/90  0:03:00 + 18:13        Cali: T2599 #   2          RIC:     34752.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     38        0.00    0.00        0. Minima      Min inten:       0.
     30                         #   0  Maxima
*****************************INTERNAL STANDARD#4*****************RIC
 lass List                       Data: T2599 #1376          Base m/z:  188
05/16/90  0:03:00 + 22:56        Cali: T2599 #   2          RIC:     50624.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                         #   0  Maxima
*****************************INTERNAL STANDARD#5*****************RIC
Mass List                        Data: T2599 #1894          Base m/z:  240
05/16/90  0:03:00 + 31:34        Cali: T2599 #   2          RIC:     52928.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     40        0.00    0.00        0. Minima      Min inten:       0.
     30                         #   0  Maxima
*****************************INTERNAL STANDARD#6*****************RIC
Mass List                        Data: T2599 #2197          Base m/z:  264
05/16/90  0:03:00 + 36:37        Cali: T2599 #   2          RIC:     28160.
Sample: CLP,VERSCDM,2536,5,M,S,16422,B,,420.0 B#2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

     42        0.00    0.00        0. Minima      Min inten:       0.
     30                         #   0  Maxima
```

ANALYST: CHECK BASE M/Z AND RIC AMOUNT TO INSURE NO CONTAMINATION

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

6 ORIGINAL (Rev)

La. Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16423

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T2594

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 51 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 0.98

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	40000	U
111-44-4	bis(2-Chloroethyl)ether	40000	U
95-57-8	2-Chlorophenol	40000	U
541-73-1	1,3-Dichlorobenzene	40000	U
106-46-7	1,4-Dichlorobenzene	40000	U
100-51-6	Benzyl alcohol	40000	U
95-50-1	1,2-Dichlorobenzene	40000	U
95-48-7	2-Methylphenol	40000	U
108-60-1	bis(2-Chloroisopropyl)ether	40000	U
106-44-5	4-Methylphenol	40000	U
621-64-7	N-Nitroso-di-n-propylamine	40000	U
67-72-1	Hexachloroethane	40000	U
98-95-3	Nitrobenzene	40000	U
78-59-1	Isophorone	40000	U
88-75-5	2-Nitrophenol	40000	U
105-67-9	2,4-Dimethylphenol	40000	U
65-85-0	Benzoic Acid	190000	U
111-91-1	bis(2-Chloroethoxy)methane	40000	U
120-83-2	2,4-Dichlorophenol	40000	U
120-82-1	1,2,4-Trichlorobenzene	40000	U
91-20-3	Naphthalene	22000	J
106-47-8	4-Chloroaniline	40000	U
87-68-3	Hexachlorobutadiene	40000	U
59-50-7	4-Chloro-3-methylphenol	40000	U
91-57-6	2-Methylnaphthalene	40000	U
77-47-4	Hexachlorocyclopentadiene	40000	U
88-06-2	2,4,6-Trichlorophenol	40000	U
95-95-4	2,4,5-Trichlorophenol	190000	U
91-58-7	2-Chloronaphthalene	40000	U
88-74-4	2-Nitroaniline	190000	U
131-11-3	Dimethylphthalate	40000	U
208-96-8	Acenaphthylene	13000	J
606-20-2	2,6-Dinitrotoluene	40000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

6 ORIGINAL (Red)

La. Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16423

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T2594

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 51 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 0.98

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	190000	U
83-32-9	Acenaphthene	40000	U
51-28-5	2,4-Dinitrophenol	190000	U
100-02-7	4-Nitrophenol	190000	U
132-64-9	Dibenzofuran	16000	J
121-14-2	2,4-Dinitrotoluene	40000	U
84-66-2	Diethylphthalate	40000	U
7005-72-3	4-Chlorophenyl-phenylether	40000	U
86-73-7	Fluorene	29000	J
100-01-6	4-Nitroaniline	190000	U
534-52-1	4,6-Dinitro-2-methylphenol	190000	U
86-30-6	N-nitrosodiphenylamine (1)	40000	U
101-55-3	4-Bromophenyl-phenylether	40000	U
118-74-1	Hexachlorobenzene	40000	U
87-86-5	Pentachlorophenol	190000	U
85-01-8	Phenanthrene	100000	
120-12-7	Anthracene	21000	J
84-74-2	Di-n-butylphthalate	40000	U
206-44-0	Fluoranthene	120000	
129-00-0	Pyrene	77000	X
85-68-7	Butylbenzylphthalate	40000	U
91-94-1	3,3'-Dichlorobenzidine	79000	U
56-55-3	Benzo(a)anthracene	51000	
218-01-9	Chrysene	71000	
117-81-7	bis(2-Ethylhexyl)phthalate	40000	U
117-84-0	Di-n-octyl phthalate	40000	U
205-99-2	Benzo(b)fluoranthene	57000	
207-08-9	Benzo(k)fluoranthene	55000	
50-32-8	Benzo(a)pyrene	50000	
193-39-5	Indeno(1,2,3-cd)pyrene	44000	
53-70-3	Dibenz(a,h)anthracene	40000	U
191-24-2	Benzo(g,h,i)perylene	38000	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

6 ORIGINAL (Red)

La Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 2536 SAS No.: _____ SDG No.: B2

Matrix: (soil/water) SOIL Lab Sample ID: 16423

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T2594

Level: (low/med) MED Date Received: 04/19/90

% Moisture: not dec. 51 dec. ____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 0.98

Number TICs found: 8

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

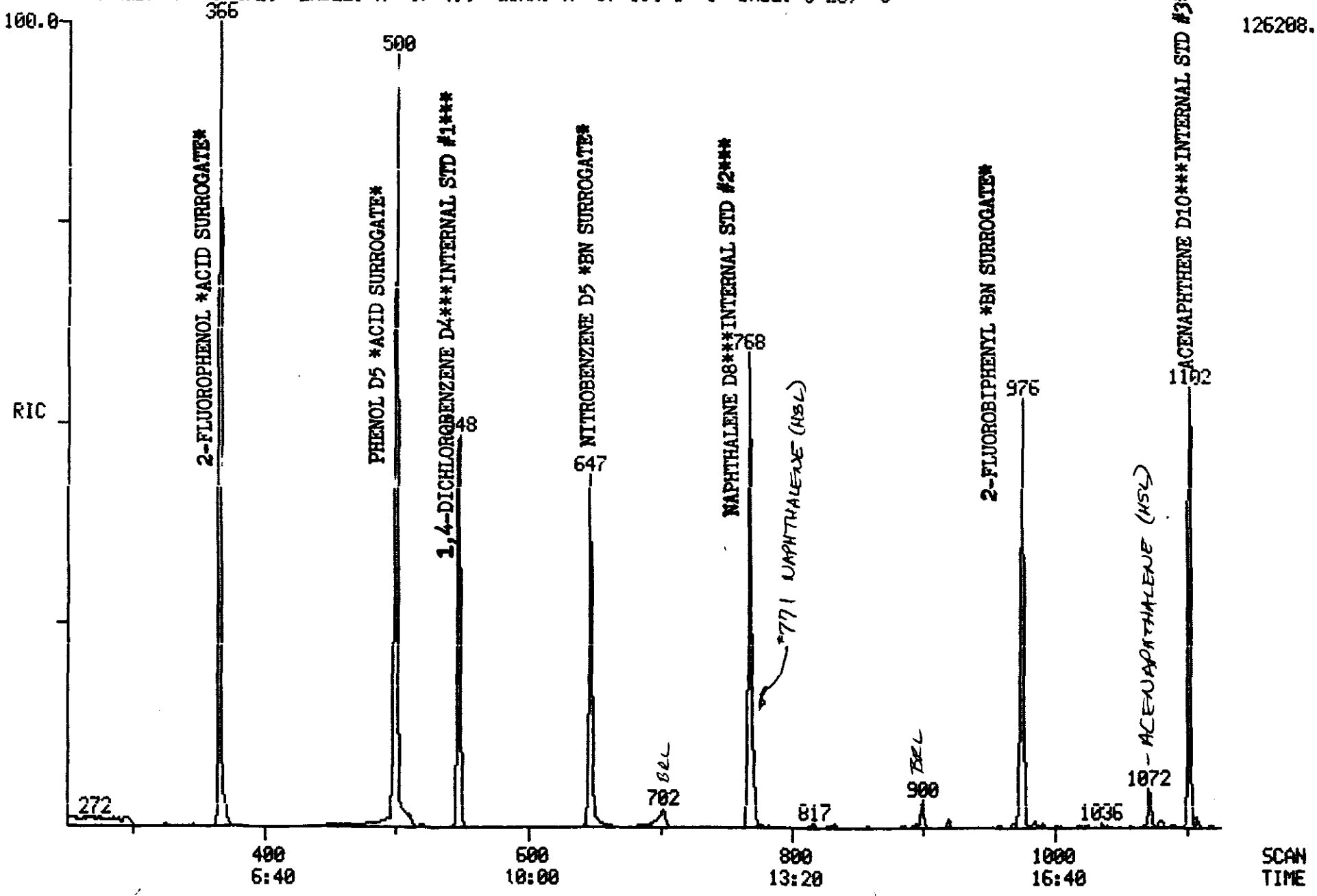
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN SILOXANE	11.70	4000	J
2.	UNKNOWN	23.94	16000	J
3.	UNK POLYAROMATIC HYDROCARBON	25.16	20000	J
4.	UNKNOWN KETONE	25.86	12000	J
5.	UNK POLYAROMATIC HYDROCARBON	28.96	16000	J
6.	UNK POLYAROMATIC HYDROCARBON	32.96	8000	J
7.	UNKNOWN	34.37	24000	J
8.	UNK POLYAROMATIC HYDROCARBON	36.46	40000	J

RIC
05/15/90 19:46:00
SAMPLE: CLP,VERSCDM,2536,6,M,5,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
RANGE: G 1.2720 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: T2594 #1
CALI: T2594 #2

SCANS 250 TO 1125

100198

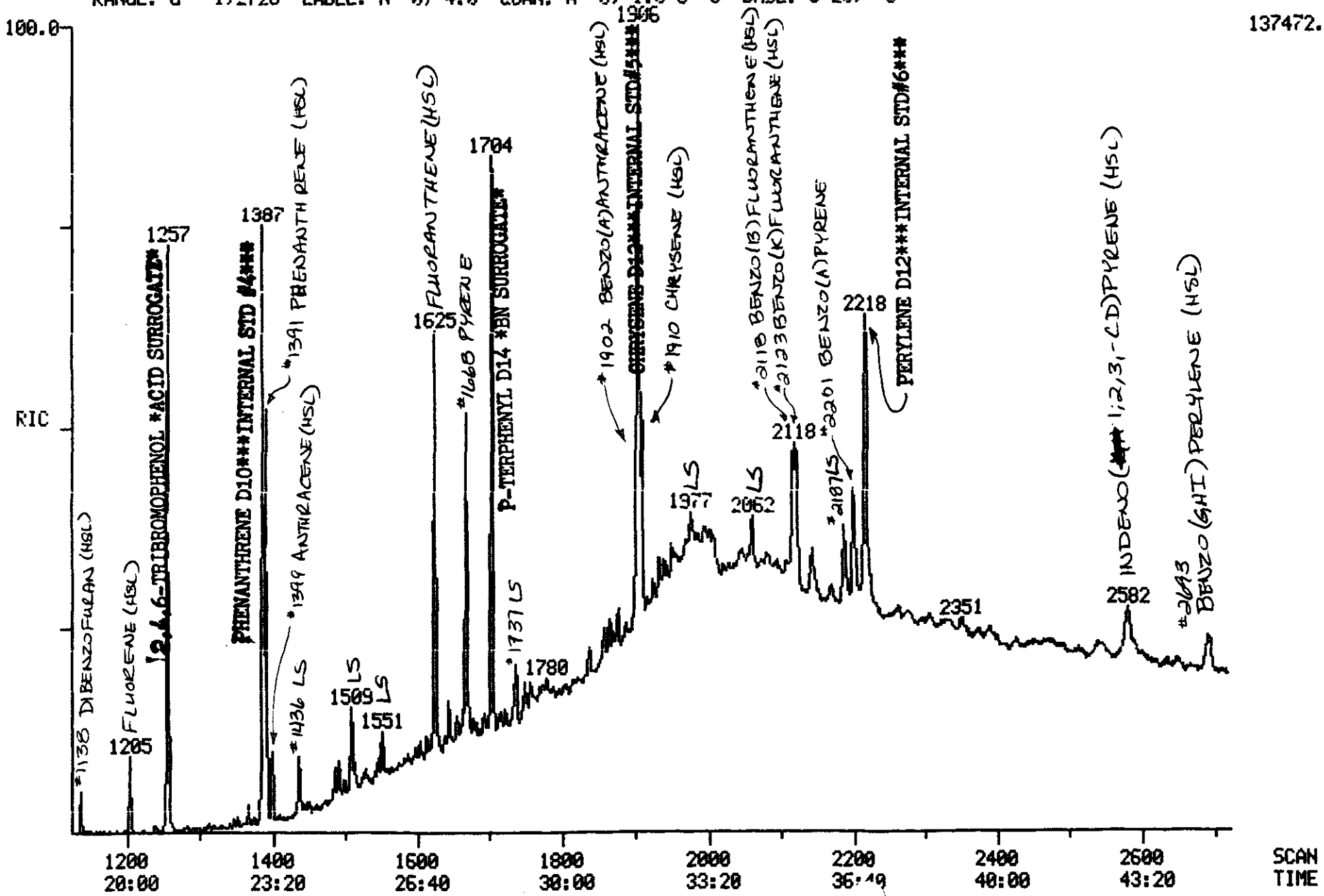


RIC
05/15/90 19:46:00
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
RANGE: C 1,2720 LABEL: N 0, 4.0 CUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: T2594 #1
CALI: T2594 #2

SCANS 1125 TO 2720

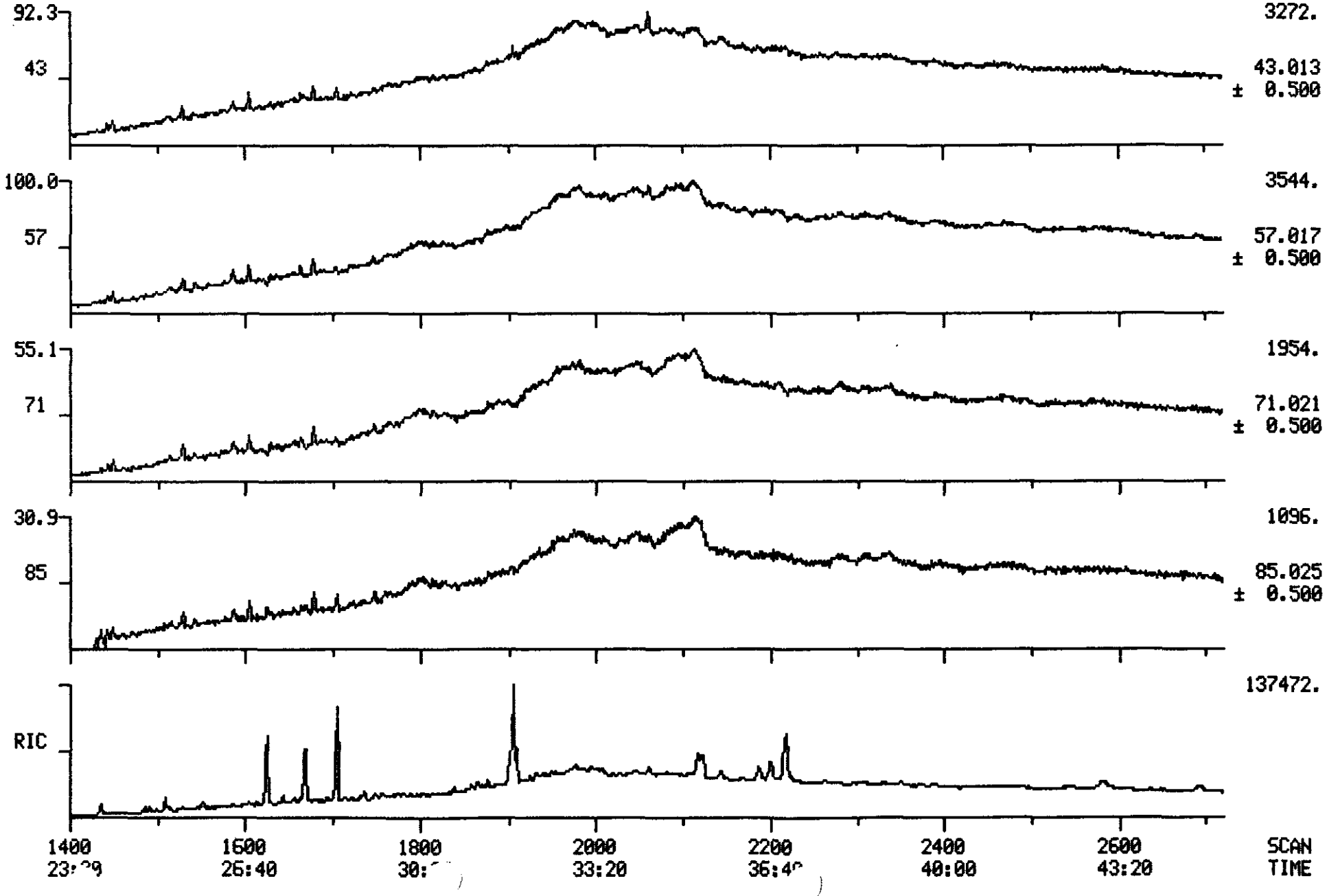
100199



RIC+MASS CHROMATOGRAMS DATA: T2594 #1977 SCANS 1400 TO 2720
05/15/90 19:46:00 CALI: T2594 #2
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
RANGE: G 1,2720 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

2

100200



Quantitation Report File: T2594

Data: T2594.TI
05/15/90 19:46:00
Sample: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

ORIGINAL (Red)

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	C330 2-CHLOROPHENOL
3	C315 PHENOL
4	C325 BIS (2-CHLOROETHYL) ETHER
5	C335 1,3-DICHLOROBENZENE
6	C340 1,4-DICHLOROBENZENE
7	C350 1,2-DICHLOROBENZENE
8	C345 BENZYL ALCOHOL
9	C360 BIS (2-CHLOROISOPROPYL) ETHER
10	C355 2-METHYLPHENOL
11	C375 HEXACHLOROETHANE
12	C365 4-METHYLPHENOL
13	C370 N-NITROSO-DI-N-PROPYLAMINE
14	CS50 2-FLUOROPHENOL**ACID SURR.**
15	CS45 PHENOL-D5**ACID SURR.**
16	CI40 NAPHTHALENE-D8**INT. STD.#2**
17	C410 NITROBENZENE
18	C415 ISOPHORONE
19	C420 2-NITROPHENOL
20	C425 2,4-DIMETHYLPHENOL
21	C435 BIS (2-CHLOROETHOXY) METHANE
22	C440 2,4-DICHLOROPHENOL
23	C445 1,2,4-TRICHLOROBENZENE
24	C450 NAPHTHALENE
25	C430 BENZOIC ACID
26	C455 4-CHLOROANILINE
27	C460 HEXACHLOROBUTADIENE
28	C465 4-CHLORO-3-METHYLPHENOL
29	C470 2-METHYLNAPHTHALENE
30	CS20 NITROBENZENE-D5**BN SURR.**
31	CI50 ACENAPHTHENE-D10**INT. STD.#3**
32	C510 HEXACHLOROCYCLOPENTADIENE
33	C515 2,4,6-TRICHLOROPHENOL
34	C520 2,4,5-TRICHLOROPHENOL
35	C525 2-CHLORONAPHTHALENE
36	C530 2-NITROANILINE
37	C540 ACENAPHTHYLENE
38	C535 DIMETHYL PHTHALATE
39	C544 2,6-DINITROTOLUENE
40	C550 ACENAPHTHENE
41	C545 3-NITROANILINE
42	C555 2,4-DINITROPHENOL
43	C565 DIBENZOFURAN
44	C560 4-NITROPHENOL
45	C570 2,4-DINITROTOLUENE
46	C590 FLUORENE
47	C585 4-CHLOROPHENYL-PHENYLETHER

✓ 5/22/90

All surrogate recoveries and IS areas Compliant.

15 HSL's detected
1 of 15 tentative

7 LIBR SRCHS

Ready for Forms

T2594

No	Name
48	C580 DIETHYLPHTHALATE
49	C595 4-NITROANILINE
50	C610 4,6-DINITRO-2-METHYLPHENOL

ORIGINAL (Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)		Amount	%Tot
1	152	547	9:07	1	1.000	A BB	15740.		40.000 NG/UL	4.79
2	NOT FOUND									
3	NOT FOUND									
4	NOT FOUND									
5	NOT FOUND									
6	NOT FOUND									
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	112	366	6:06	1	0.669	A BB	40040.		96.326 NG*A1	11.53
15	99	500	8:20	1	0.914	A BB	52446.		86.494 NG*A2	10.35
16	136	768	12:48	16	1.000	A BB	47362.		40.000 NG/UL	4.79
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	128	771	12:51	16	1.004	A BB	8606.		5.430 NG	0.65
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	142	900	15:00	16	1.172	A BB	1876.	BRL	~~1.822 NG~~	0.22
30	82	647	10:47	16	0.842	A BB	36865.		43.400 NG*B1	5.20
31	164	1102	18:22	31	1.000	A BB	40672.		40.000 NG/UL	4.79
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	152	1072	17:52	31	0.973	A BB	6589.		3.214 NG	0.38
38	NOT FOUND									
39	NOT FOUND									
40	153	1108	18:28	31	1.005	A BB	1186.	BRL	~~0.920 NG~~	0.11
41	NOT FOUND									
42	NOT FOUND									
43	168	1138	18:58	31	1.033	A BB	7421.		4.063 NG	0.49
44	NOT FOUND									
45	NOT FOUND									
46	166	1205	20:05	31	1.093	A BB	10574.		7.299 NG	0.87
47	NOT FOUND									
48	NOT FOUND									
49	NOT FOUND									
50	NOT FOUND									

T2594

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	9:05	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	8:37		0.949						
3	8:20		0.917						
4	8:33		0.941						
5	8:59		0.989						
6	9:08		1.006						
7	9:38		1.061						
8	9:34		1.053						
9	10:00		1.101						
10	9:55		1.092						
11	10:27		1.150						
12	10:20		1.138						
13	10:25		1.147						
14	6:03	1.01	0.666	1.00	96.33	50.00	2.035	1.056	1.93
15	8:18	1.00	0.914	1.00	86.49	50.00	2.666	1.541	1.73
16	12:46	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
17	10:48		0.846						
18	11:28		0.898						
19	11:43		0.918						
20	11:52		0.930						
21	12:12		0.956						
22	12:24		0.971						
23	12:38		0.990						
24	12:49	1.00	1.004	1.00	5.43	50.00	0.145	1.339	0.11
25	12:14		0.958						
26	13:07		1.027						
27	13:22		1.047						
28	14:38		1.146						
29	14:57	1.00	1.171	1.00	1.82	50.00	0.032	0.870	0.04
30	10:45	1.00	0.842	1.00	43.40	50.00	0.623	0.717	0.87
31	18:20	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
32	15:39		0.854						
33	15:57		0.870						
34	16:04		0.876						
35	16:29		0.899						
36	17:01		0.928						
37	17:50	1.00	0.973	1.00	3.21	50.00	0.130	2.016	0.06
38	17:43		0.966						
39	17:58		0.980						
40	18:26	1.00	1.005	1.00	0.92	50.00	0.023	1.268	0.02
41	18:22		1.002						
42	18:40		1.018						
43	18:56	1.00	1.033	1.00	4.06	50.00	0.146	1.796	0.08
44	18:56		1.033						
45	19:11		1.046						
46	20:03	1.00	1.094	1.00	7.30	50.00	0.208	1.425	0.15
47	20:05		1.095						
48	20:00		1.091						
49	20:21		1.110						
50	20:27		1.115						

Quantitation Report File: T2594

ORIGINAL (Red)

Data: T2594.TI
05/15/90 19:46:00
Sample: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
51	C615 N-NITROSODIPHENYLAMINE
52	C625 4-BROMOPHENYL-PHENYLETHER
53	C630 HEXACHLOROBENZENE
54	CS25 2-FLUOROBIPHENYL**BN SURR.**
55	CI60 PHENANTHRENE-D10**INT. STD.#4**
56	C635 PENTACHLOROPHENOL
57	C640 PHENANTHRENE
58	C645 ANTHRACENE
59	C650 DI-N-BUTYLPHTHALATE
60	C655 FLUORANTHENE
61	C715 PYRENE T
62	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
63	CI70 CHRYSENE-D12**INT. STD.#5**
64	C720 BUTYLBENZYLPHTHALATE
65	C730 BENZO(A)ANTHRACENE
66	C740 CHRYSENE
67	C725 3,3'-DICHLOROBENZIDINE
68	C741 BIS(2-ETHYLHEXYL)PHTHALATE
69	CS30 P-TERPHENYL-D14**BN SURR.**
70	CI75 PERYLENE-D12**INT. STD.#6**
71	C760 DI-N-OCTYL PHTHALATE
72	C765 BENZO(B)FLUORANTHENE
73	C770 BENZO(K)FLUORANTHENE
74	C775 BENZO(A)PYRENE
75	C780 INDENO(1,2,3-CD)PYRENE
76	C785 DIBENZ(A,H)ANTHRACENE
77	C790 BENZO(G,H,I)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	172	975	16:15	31	0.885	A BB	49582.	38.042 NG*B2	4.55
55	188	1387	23:07	55	1.000	A BB	105456.	40.000 NG/UL	4.79
56	NOT FOUND								
57	178	1391	23:11	55	1.003	A BV	73096.	25.226 NG	3.02
58	178	1399	23:19	55	1.009	A VV	14789.	5.160 NG	0.62
59	149	1517	25:17	55	1.094	A BB	1426.	BRL ~~0.319 NG~~	0.04
60	202	1625	27:05	55	1.172	A BB	88973.	29.081 NG	3.48
61	202	1668	27:48	63	0.875	A VB	63725.	19.196 NG. T	2.30
62	330	1257	20:57	31	1.141	A BB	29849.	93.722 NG*A3	11.22
63	240	1906	31:46	63	1.000	A BB	100928.	40.000 NG/UL	4.79
64	NOT FOUND								
65	228	1902	31:42	63	0.998	A BV	32721.	12.787 NG	1.53
66	228	1910	31:50	63	1.002	A VB	33871.	~~17.846 NG~~	2.14

T2594

ORIGINAL (Red)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)		Amount	%Tot
67	NOT FOUND									
68	149	1920	32:00	63	1.007	A VB	438.	BRL	~~0.159 NG~~	0.02
69	244	1704	28:24	63	0.894	A BB	87891.		40.296 NG*B3	4.82
70	264	2218	36:58	70	1.000	A BB	91191.		40.000 NG/UL	4.79
71	149	2033	33:53	70	0.917	A BB	203.	BRL	~~0.042 NG~~	0.00
72	252	2118	35:18	70	0.955	A BV	37261.		14.166 NG	1.70
73	252	2123	35:23	70	0.957	A VB	31450.		13.813 NG	1.65
74	252	2201	36:41	70	0.992	A VB	30437.		12.500 NG	1.50
75	276	2582	43:02	70	1.164	A BB	21917.		10.958 NG	1.31
76	278	2592	43:12	70	1.169	A BV	7237.	NC	~~3.681 NG~~	0.4[illegible]
77	276	2693	44:53	70	1.214	A BB	19461.		9.522 NG	1.14

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	20:32		1.120						
52	21:39		1.181						
53	22:03		1.203						
54	16:13	1.00	0.885	1.00	38.04	50.00	0.975	1.282	0.76
55	23:04	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
56	22:40		0.983						
57	23:08	1.00	1.003	1.00	25.23	50.00	0.555	1.099	0.50
58	23:17	1.00	1.009	1.00	5.16	50.00	0.112	1.087	0.10
59	25:14	1.00	1.094	1.00	0.32	50.00	0.011	1.695	0.01
60	27:01	1.00	1.171	1.00	29.08	50.00	0.675	1.160	0.58
61	27:45	1.00	0.875	1.00	19.20	50.00	0.505	1.316	0.38
62	20:54	1.00	1.140	1.00	93.72	50.00	0.587	0.313	1.87
63	31:42	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
64	30:07		0.950						
65	31:39	1.00	0.998	1.00	12.79	50.00	0.259	1.014	0.26
66	31:47	1.00	1.003	1.00	17.85	50.00	0.268	0.752	0.36
67	31:40		0.999						
68	31:57	1.00	1.008	1.00	0.16	50.00	0.003	1.094	0.00
69	28:21	1.00	0.894	1.00	40.30	50.00	0.697	0.864	0.81
70	36:51	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
71	33:49	1.00	0.918	1.00	0.04	50.00	0.002	2.143	0.00
72	35:13	1.00	0.956	1.00	14.17	50.00	0.327	1.154	0.28
73	35:19	1.00	0.958	1.00	13.81	50.00	0.276	0.999	0.28
74	36:36	1.00	0.993	1.00	12.50	50.00	0.267	1.068	0.25
75	42:54	1.00	1.164	1.00	10.96	50.00	0.192	0.877	0.22
76	43:04	1.00	1.169	1.00	3.68	50.00	0.063	0.862	0.07
77	44:45	1.00	1.214	1.00	9.52	50.00	0.171	0.896	0.19

Quantitation Report File: QCREF

ORIGINAL
(Red)

Data: T2594.TI
05/15/90 19:46:00
Sample: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI40 NAPHTHALENE-D8**INT. STD.#2**
3	CI50 ACENAPHTHENE-D10**INT. STD.#3**
4	CI60 PHENANTHRENE-D10**INT. STD.#4**
5	CI70 CHRYSENE-D12**INT. STD.#5**
6	CI75 PERYLENE-D12**INT. STD.#6**
7	CS50 2-FLUOROPHENOL**ACID SURR.**
8	CS45 PHENOL-D5**ACID SURR.**
9	CS55 2,4,6,-TRIBROMOPHENOL**ACID SURR.**
10	CS20 NITROBENZENE-D5**BN SURR.**
11	CS25 2-FLUOROBIPHENYL**BN SURR.**
12	CS30 P-TERPHENYL-D14**BN SURR.**

Scan	Time	Area(Hght)		Amount		Name
547	9:07	15740.		40.000	NG/UL	CI30 1,4-DICHLOROBENZENE-D4
768	12:48	47362.		40.000	NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1102	18:22	40672.		40.000	NG/UL	CI50 ACENAPHTHENE-D10**INT.
1387	23:07	105456.		40.000	NG/UL	CI60 PHENANTHRENE-D10**INT.
1906	31:46	100928.		40.000	NG/UL	CI70 CHRYSENE-D12**INT. STD.
2218	36:58	91191.		40.000	NG/UL	CI75 PERYLENE-D12**INT. STD.
366	6:06	40040.	96	96.326	NG*A1	CS50 2-FLUOROPHENOL**ACID SU
500	8:20	52446.	86	86.494	NG*A2	CS45 PHENOL-D5**ACID SURR.**
1257	20:57	29849.	94	93.722	NG*A3	CS55 2,4,6,-TRIBROMOPHENOL**
647	10:47	36865.	87	43.400	NG*B1	CS20 NITROBENZENE-D5**BN SUR
975	16:15	49582.	76	38.042	NG*B2	CS25 2-FLUOROBIPHENYL**BN SU
1704	28:24	87891.	81	40.296	NG*B3	CS30 P-TERPHENYL-D14**BN SUR

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	9:05	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	12:46	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	18:20	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	23:04	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	31:42	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	36:51	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	6:03	1.01	0.666	1.00	96.33	50.00	2.035	1.056	1.93
8	8:18	1.00	0.914	1.00	86.49	50.00	2.666	1.541	1.73
9	20:54	1.00	1.140	1.00	93.72	50.00	0.587	0.313	1.87
10	10:45	1.00	0.842	1.00	43.40	50.00	0.623	0.717	0.87
11	16:13	1.00	0.885	1.00	38.04	50.00	0.975	1.282	0.76
12	28:21	1.00	0.894	1.00	40.30	50.00	0.697	0.864	0.81

Quantitation Report File: ISREF

ORIGINAL
(Red)

Data: T2583.TI
05/15/90 9:42:00
Sample: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: -

Data: T2594.TI
05/15/90 19:46:00
Sample: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Formula: --- Instrument: T Weight: 0.003
Submitted by: VERSAR Analyst: SJD Acct. No.: 420.1

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
2	CI30 1,4-DICHLOROBENZENE-D4 **INT. STD. #1**
3	CI40 NAPHTHALENE-D8**INT. STD.#2**
4	CI40 NAPHTHALENE-D8**INT. STD.#2**
5	CI50 ACENAPHTHENE-D10**INT. STD.#3**
6	CI50 ACENAPHTHENE-D10**INT. STD.#3**
7	CI60 PHENANTHRENE-D10**INT. STD.#4**
8	CI60 PHENANTHRENE-D10**INT. STD.#4**
9	CI70 CHRYSENE-D12**INT. STD.#5**
10	CI70 CHRYSENE-D12**INT. STD.#5**
11	CI75 PERYLENE-D12**INT. STD.#6**
12	CI75 PERYLENE-D12**INT. STD.#6**

Scan	Time	Area(Hght)	Amount	Name
545	9:05	15588.	40.000 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
547	9:07	15740.	40.390 NG/UL	CI30 1,4-DICHLOROBENZENE-D4
766	12:46	52356.	40.000 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
768	12:48	47362.	36.185 NG/UL	CI40 NAPHTHALENE-D8**INT. ST
1100	18:20	40125.	40.000 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1102	18:22	40672.	40.545 NG/UL	CI50 ACENAPHTHENE-D10**INT.
1384	23:04	81463.	40.000 NG/UL	CI60 PHENANTHRENE-D10**INT.
1387	23:07	105456.	51.781 NG/UL	CI60 PHENANTHRENE-D10**INT.
1902	31:42	72781.	40.000 NG/UL	CI70 CHRYSENE-D12**INT. STD.
1906	31:46	100928.	55.469 NG/UL	CI70 CHRYSENE-D12**INT. STD.
2211	36:51	61203.	40.000 NG/UL	CI75 PERYLENE-D12**INT. STD.
2218	36:58	91191.	59.599 NG/UL	CI75 PERYLENE-D12**INT. STD.

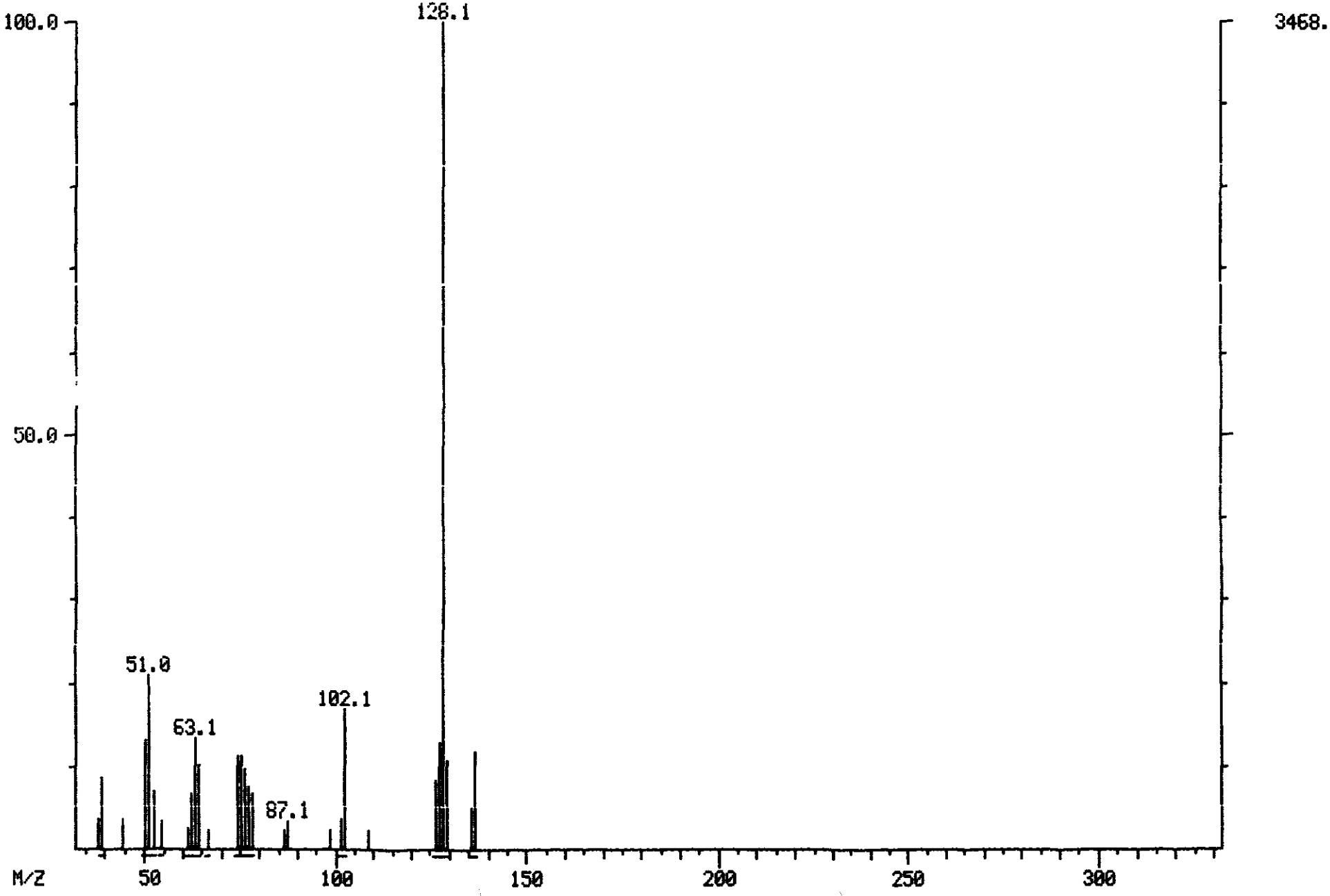
MASS SPECTRUM
05/15/90 19:46:00 + 12:51
SAMPLE: CLP,VERSCDM,2556,6,M,S,16423,6,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C450 NAPHTHALENE

DATA: T2594 #771
CALI: T2594 #2

BASE M/Z: 128
RIC: 11232.

ORIGINAL (Red)

100208

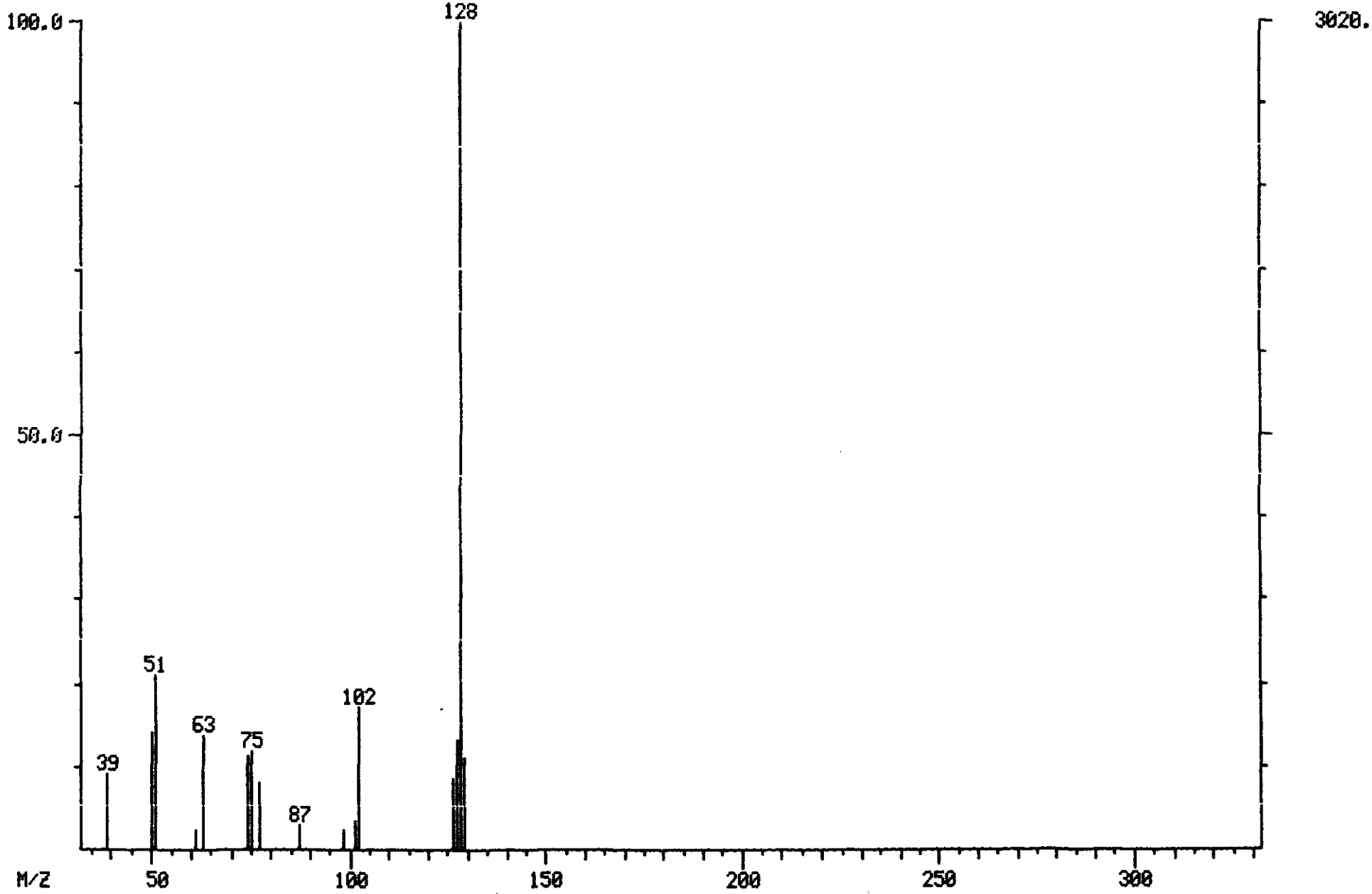


ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 12:51
SAMPLE: CLP,VERSCOM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C450 NAPHTHALENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #771
CALI: T2594 #2

BASE M/Z: 128
RIC: 7576.



100209

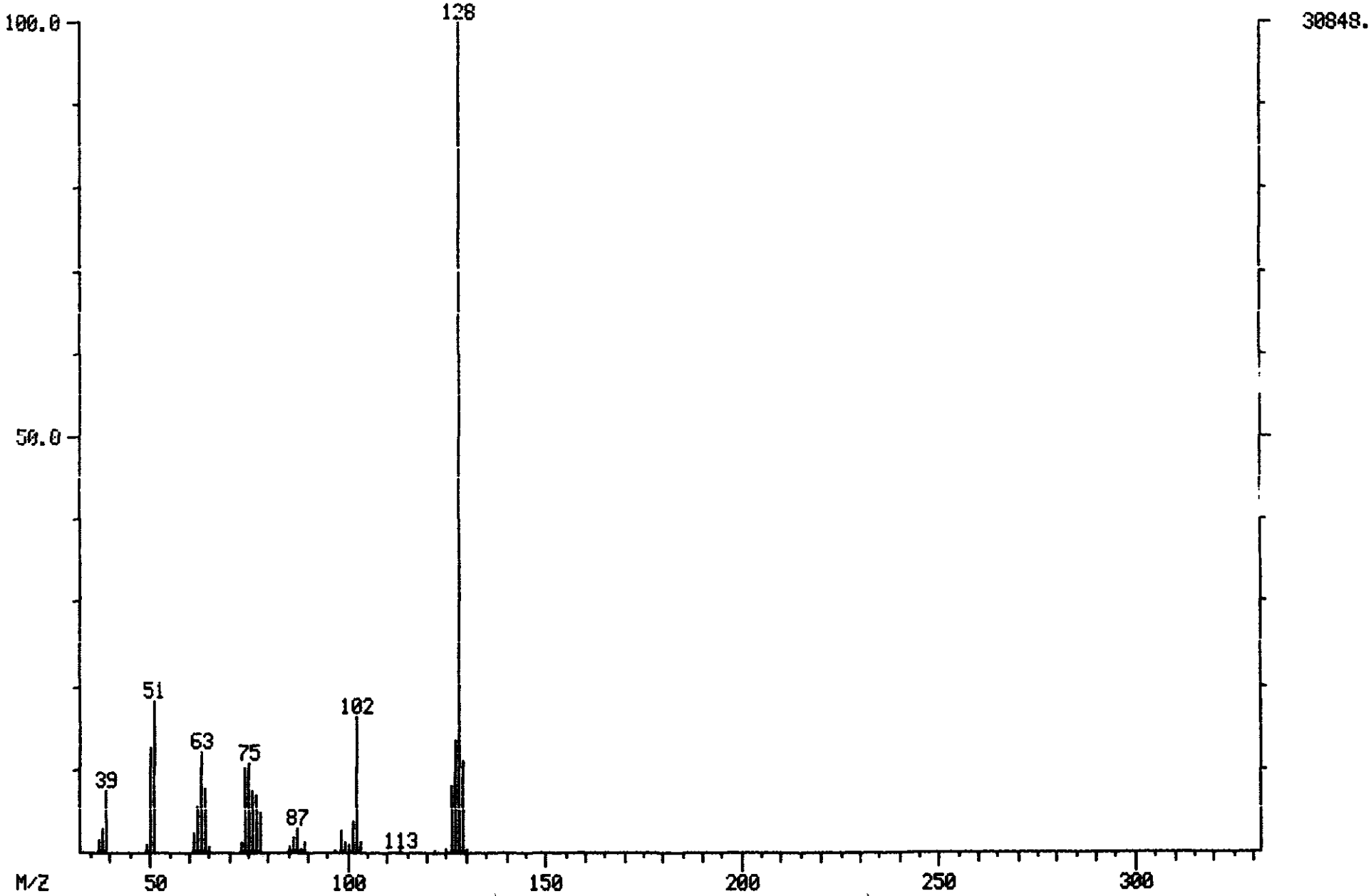
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 12:49
SAMPLE: CLP,,,SSTD 50,,,22658,6,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C450 NAPHTHALENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #769
CALI: T2563 #2

BASE M/Z: 128
RIC: 87424.

100210



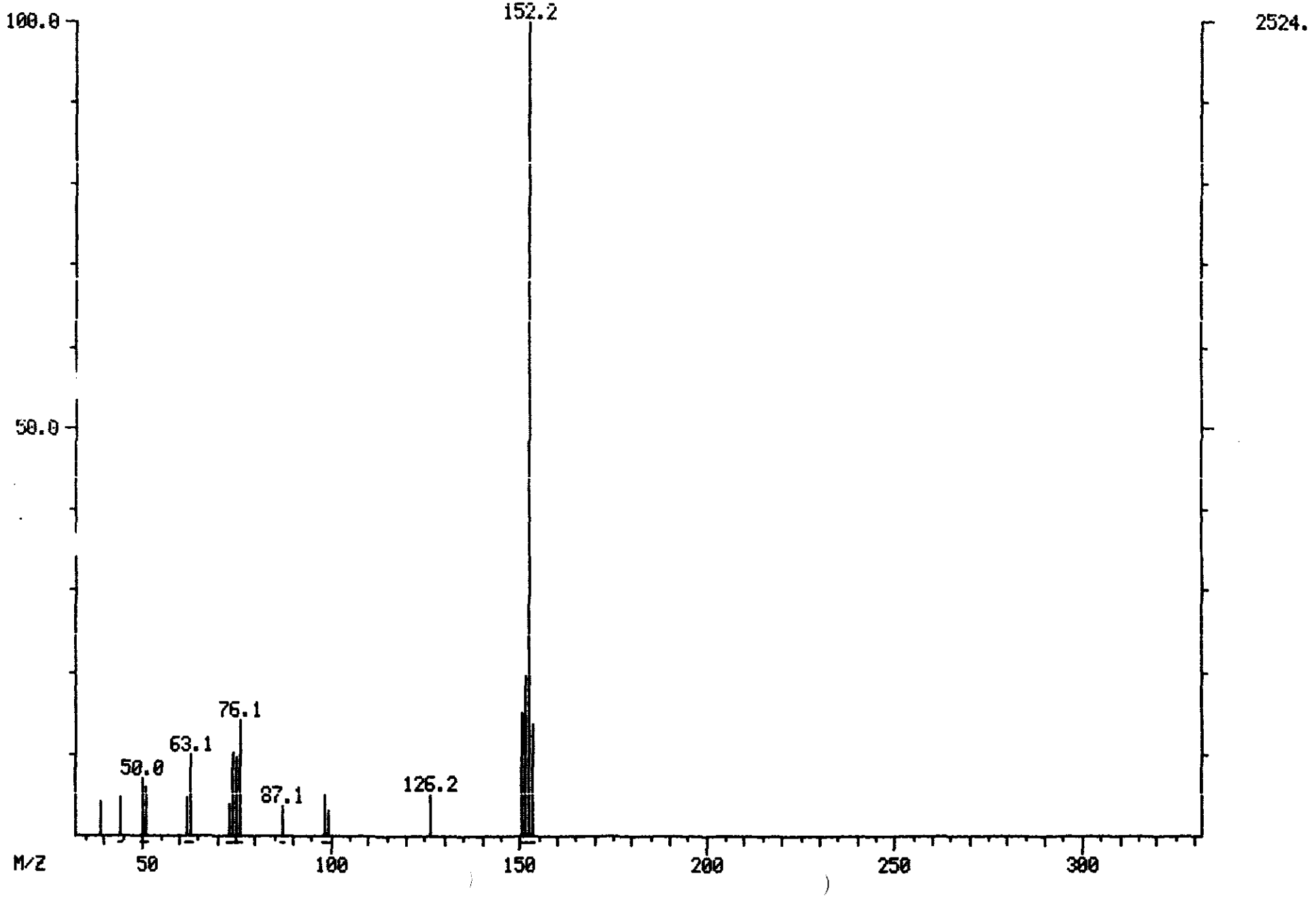
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 17:52
SAMPLE: CLP,VERSCDM,2536,6,M,5,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302C@8C/MIN
** NAME: C540 ACENAPHTHYLENE

DATA: T2594 #1072
CALI: T2594 #2

BASE M/Z: 152
RIC: 6072.

100211



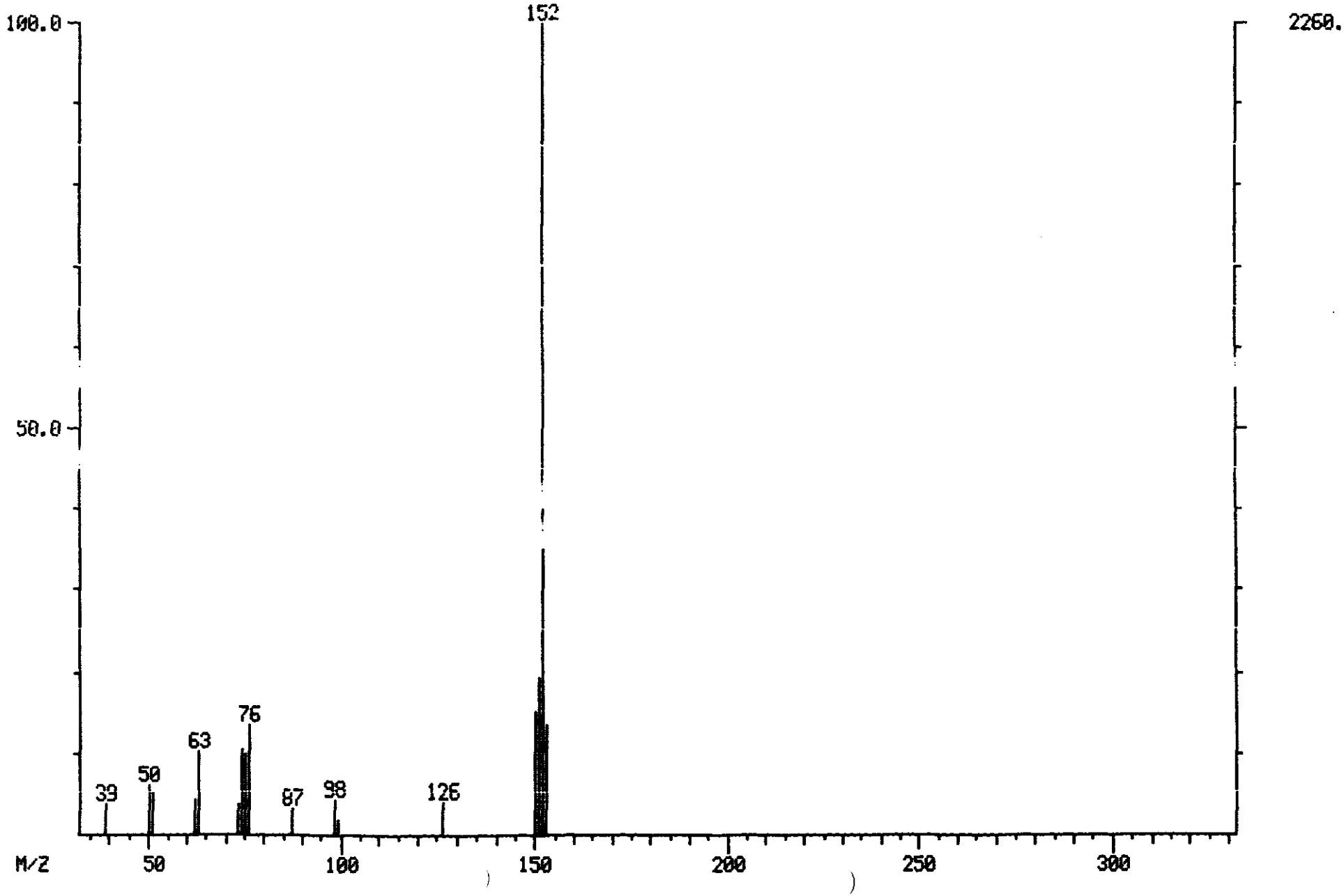
100212

ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 17:52
SAMPLE: CLP,VERSCOM,2536,6,M,5,16423,6,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C540 ACENAPHTHYLENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1072
CALI: T2594 #2

BASE M/Z: 152
RIC: 5192.



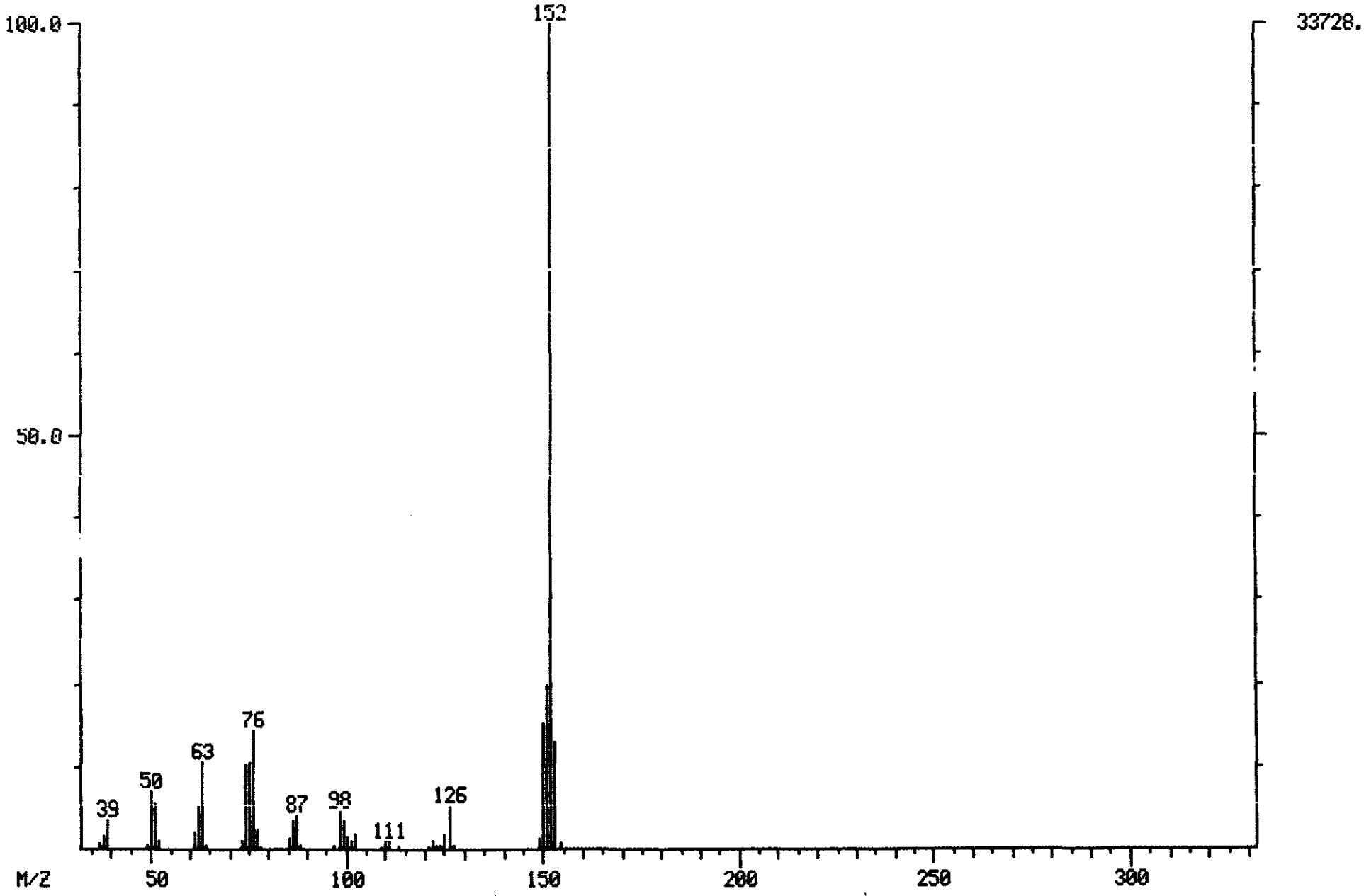
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 17:50
SAMPLE: CLP,,,SSTD 50,,,22659,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C540 ACENAPHTHYLENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1070
CALI: T2583 #2

BASE M/Z: 152
RIC: 89216.

100213



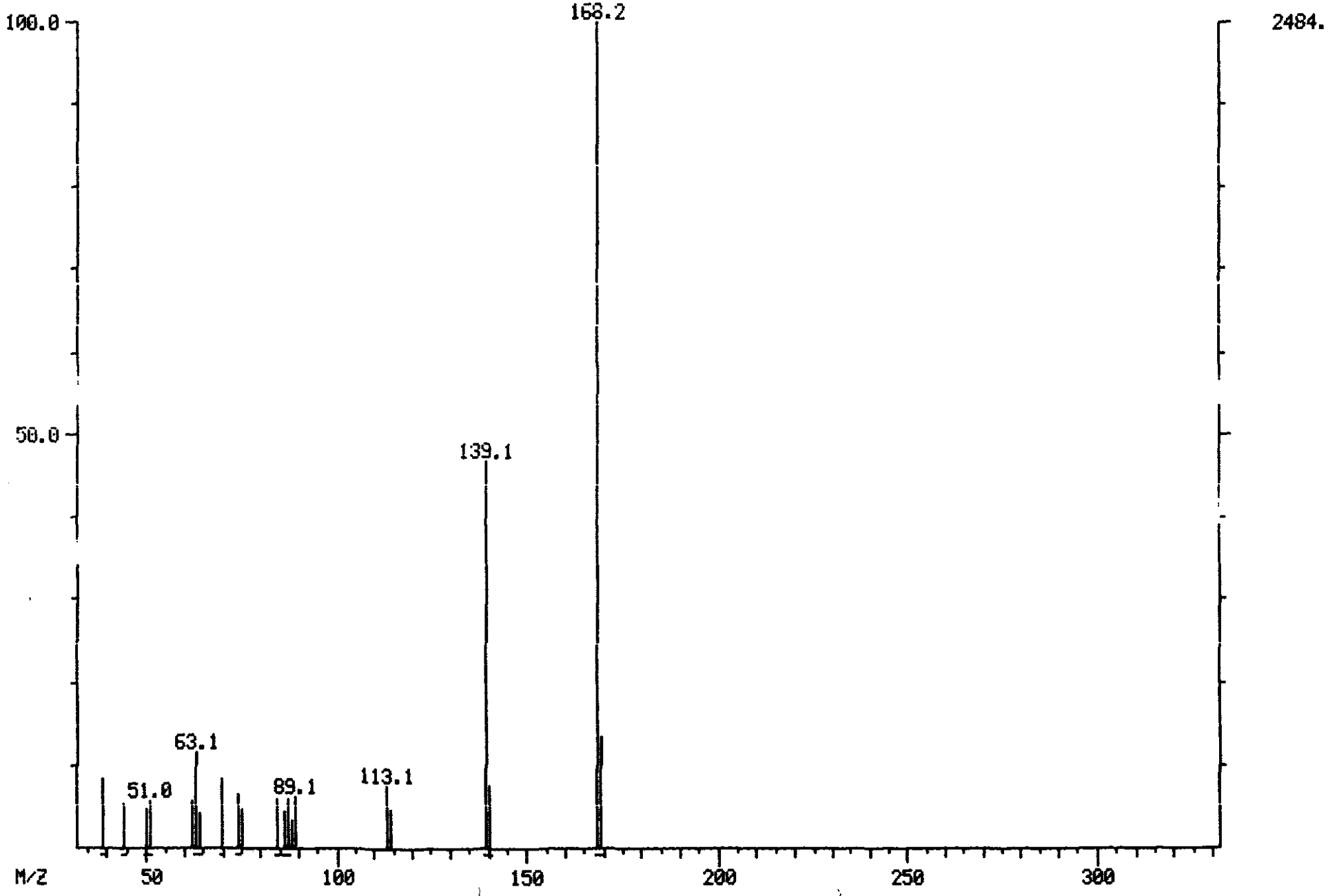
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 18:58
SAMPLE· CLP,VERSCOM,2536,6,M,5,16423,B,,420.1,2,1UL,
CONDS.· INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C565 DIBENZOFURAN

DATA: T2594 #1138
CALI: T2594 #2

BASE M/Z: 168
RIC: 6752.

100214



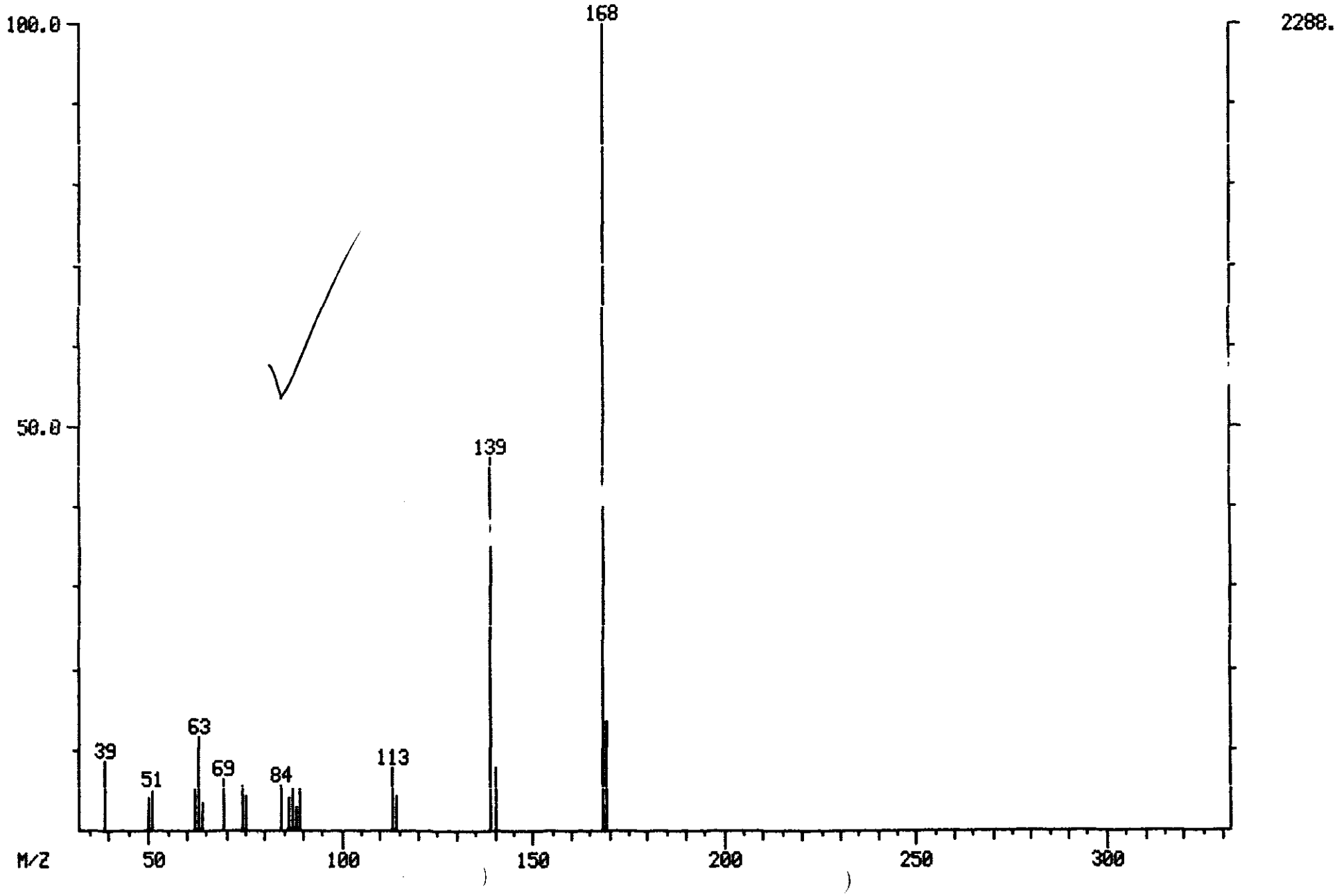
100215

ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 18:58
SAMPLE: CLP,VERSCOM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C565 DIBENZOFURAN
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1138
CALI: T2594 #2

BASE M/Z: 168
RIC: 5896.



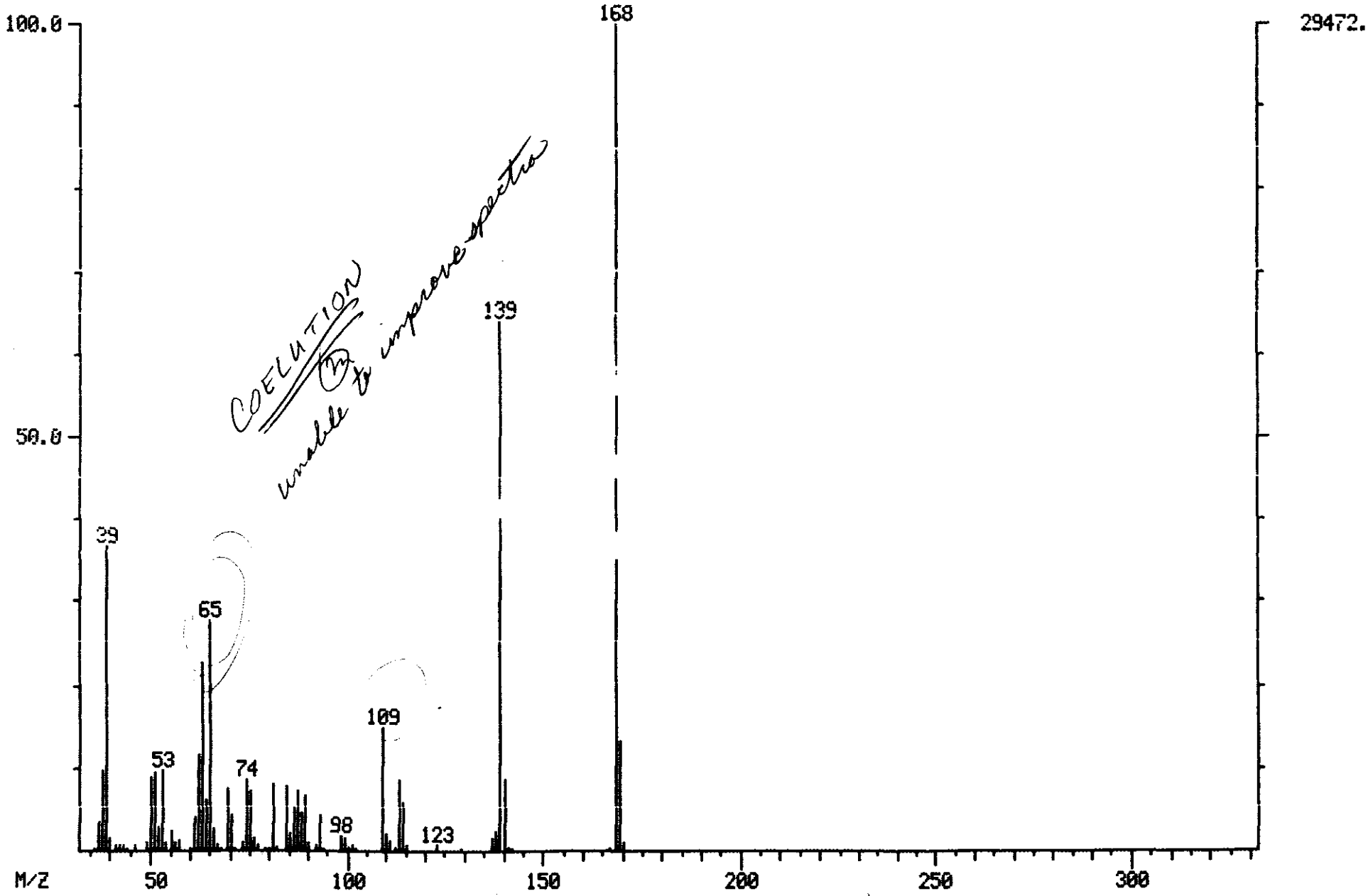
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 18:56
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C565 DIBENZOFURAN
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1136
CALI: T2583 #2

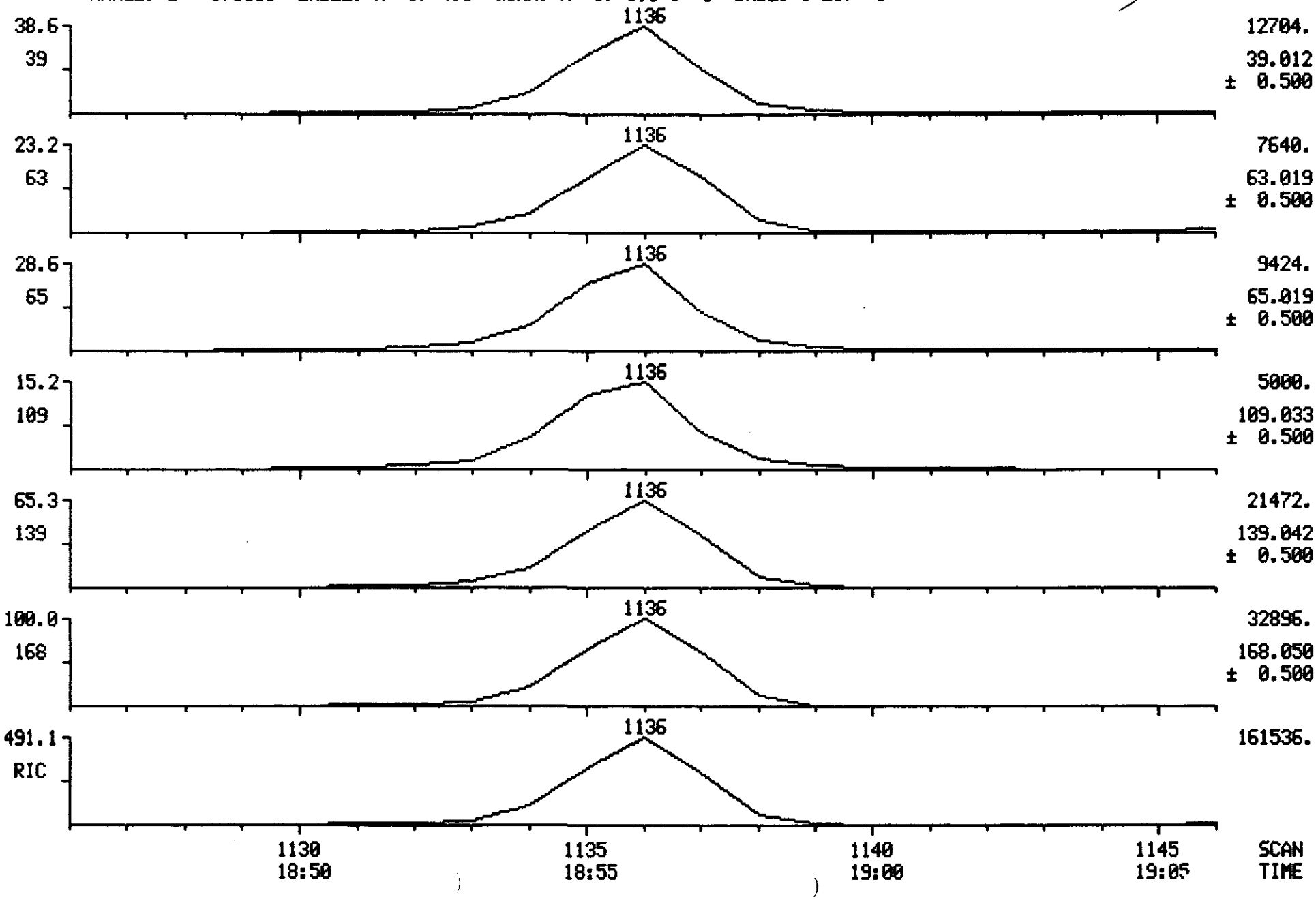
BASE M/Z: 168
RIC: 142336.

100216



ORIGINAL (Red)

RIC+MASS CHROMATOGRAMS DATA: T2583 #1 SCANS 1126 TO 1146
05/15/90 9:42:00 CALI: T2583 #2
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
RANGE: G 1,3500 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



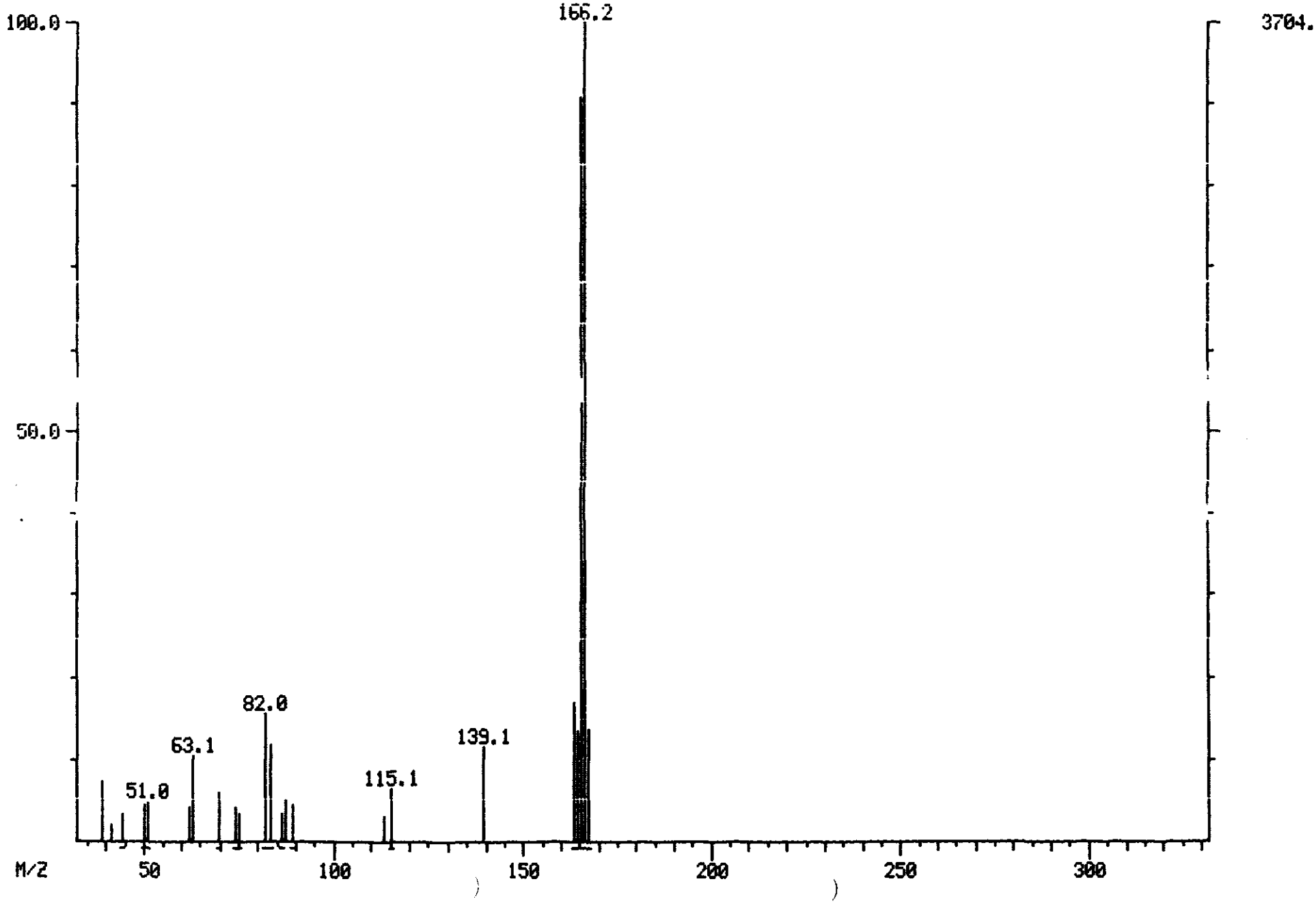
100217

ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 20:05
SAMPLE: CLP,VERSCDM,2536,6,M,5,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C590 FLUORENE

DATA: T2594 #1205
CALI: T2594 #2

BASE M/Z: 166
RIC: 12912.



100218

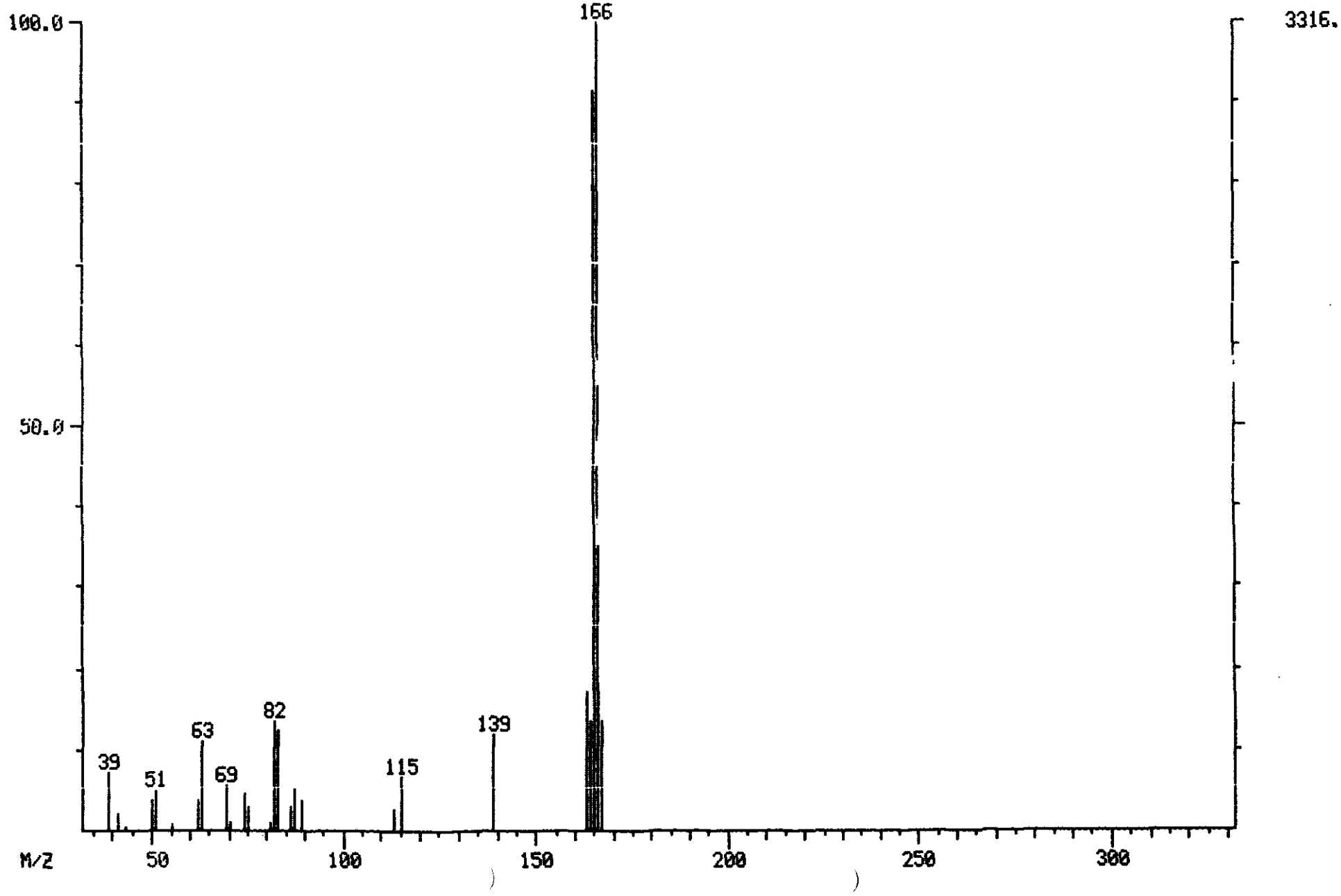
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 20:05
SAMPLE: CLP,VERSCOM,2526,G,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C590 FLUORENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1205
CALI: T2594 #2

BASE M/Z: 166
RIC: 11440.

100219



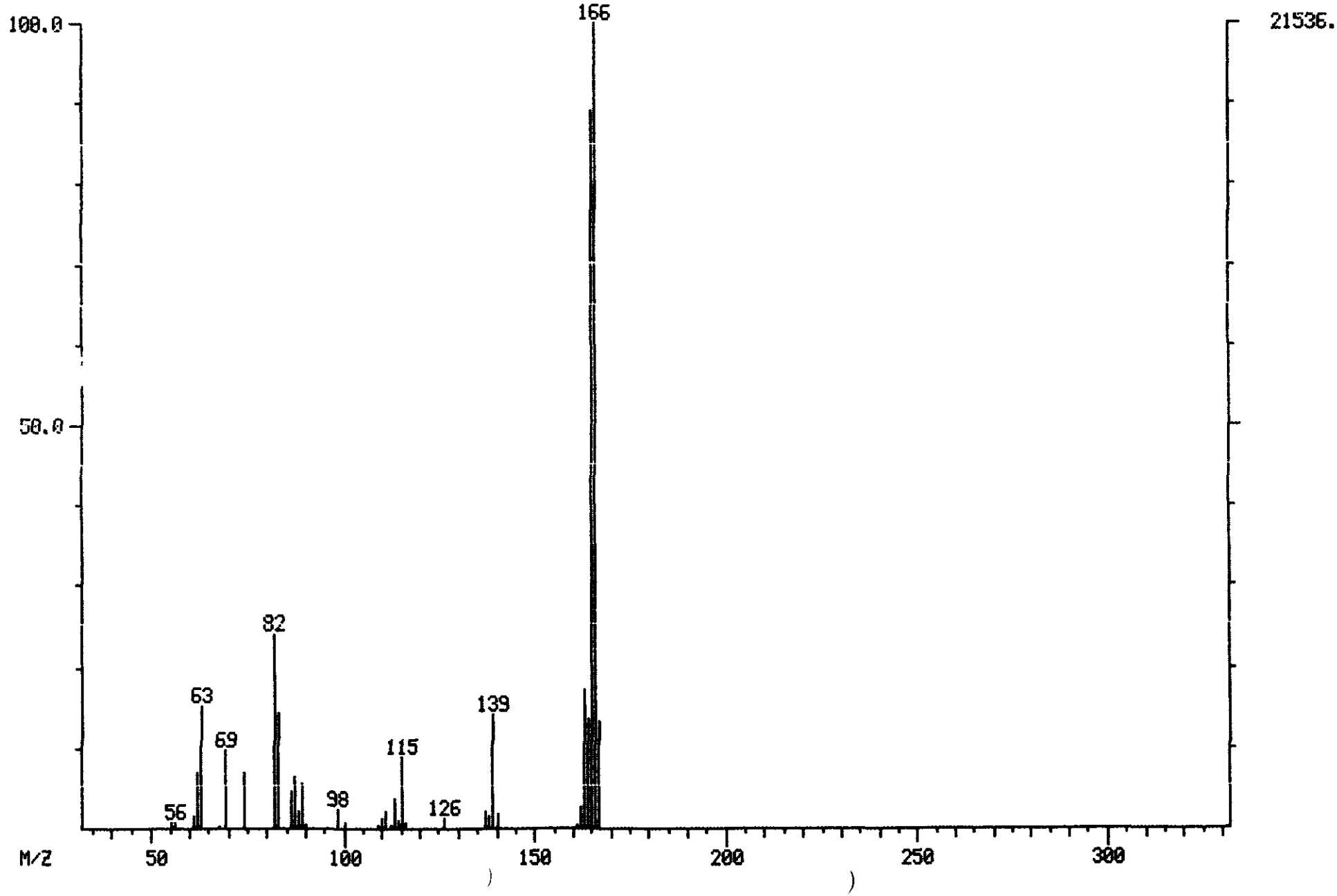
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 20:03
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
** NAME: C590 FLUORENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1203
CALI: T2583 #2

BASE M/Z: 166
RIC: 81792.

100220



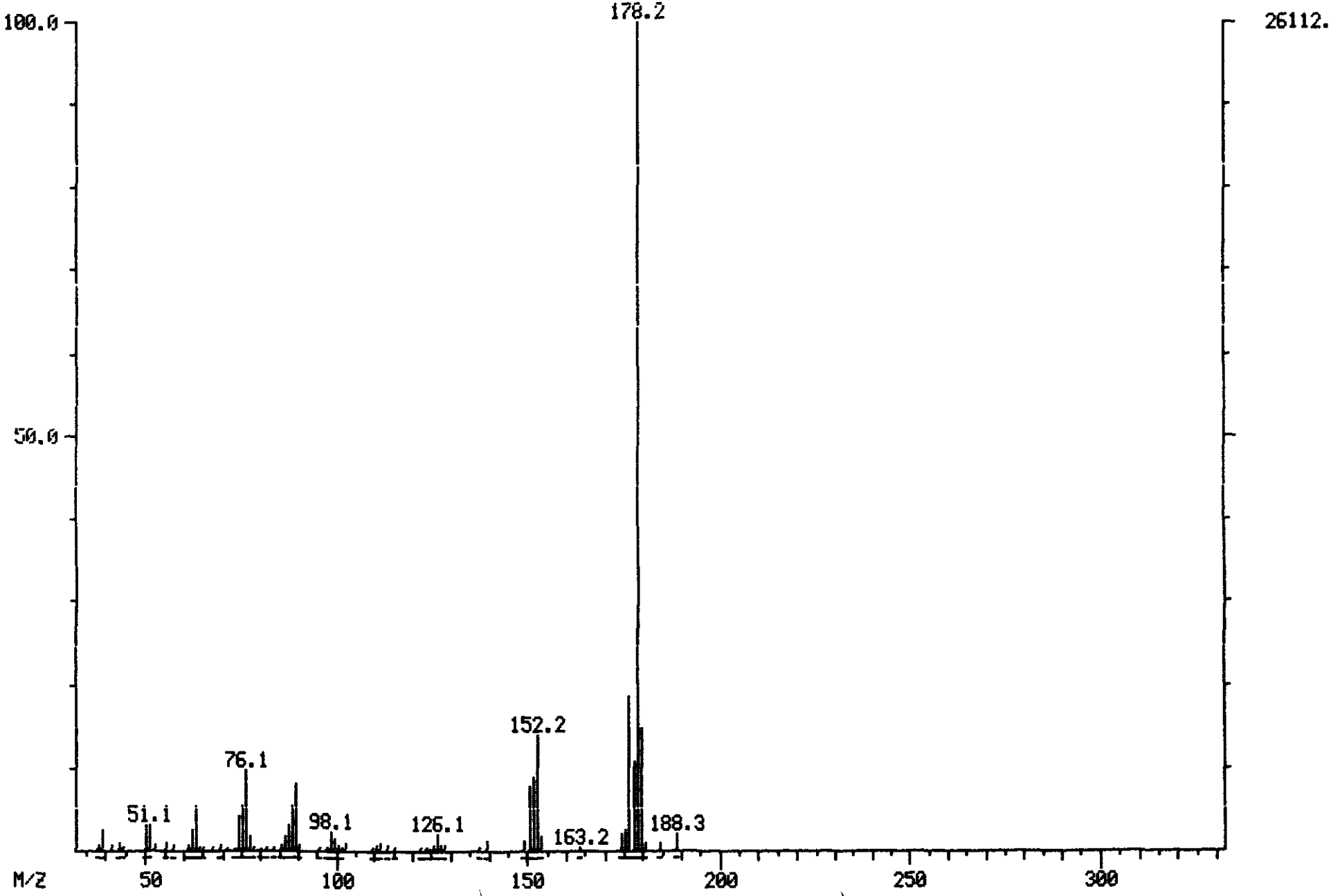
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 23:11
SAMPLE: CLP,VERSCOM,2536,E,M,S,16423,B,,420.1,2,1UL,
CONDS.· INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C640 PHENANTHRENE

DATA: T2594 #1391
CALI: T2594 #2

BASE M/Z: 178
RIC: 72064.

100221



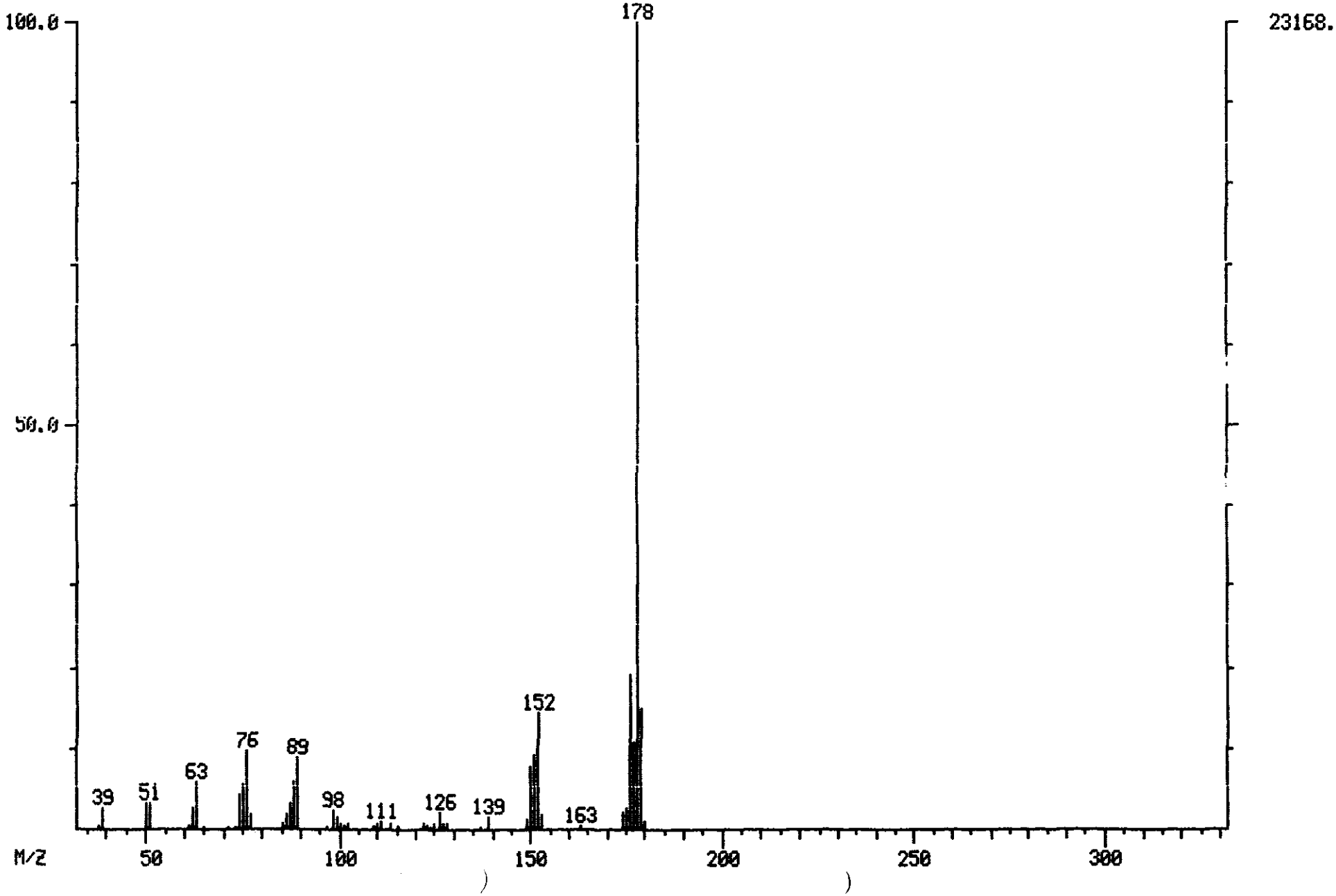
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 23:11
SAMPLE: CLP,VERSCOM,2536,6,M,5,16423,6,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302C@8C/MIN
** NAME: C640 PHENANTHRENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1391
CALI: T2594 #2

BASE M/Z: 178
RIC: 61888.

100222



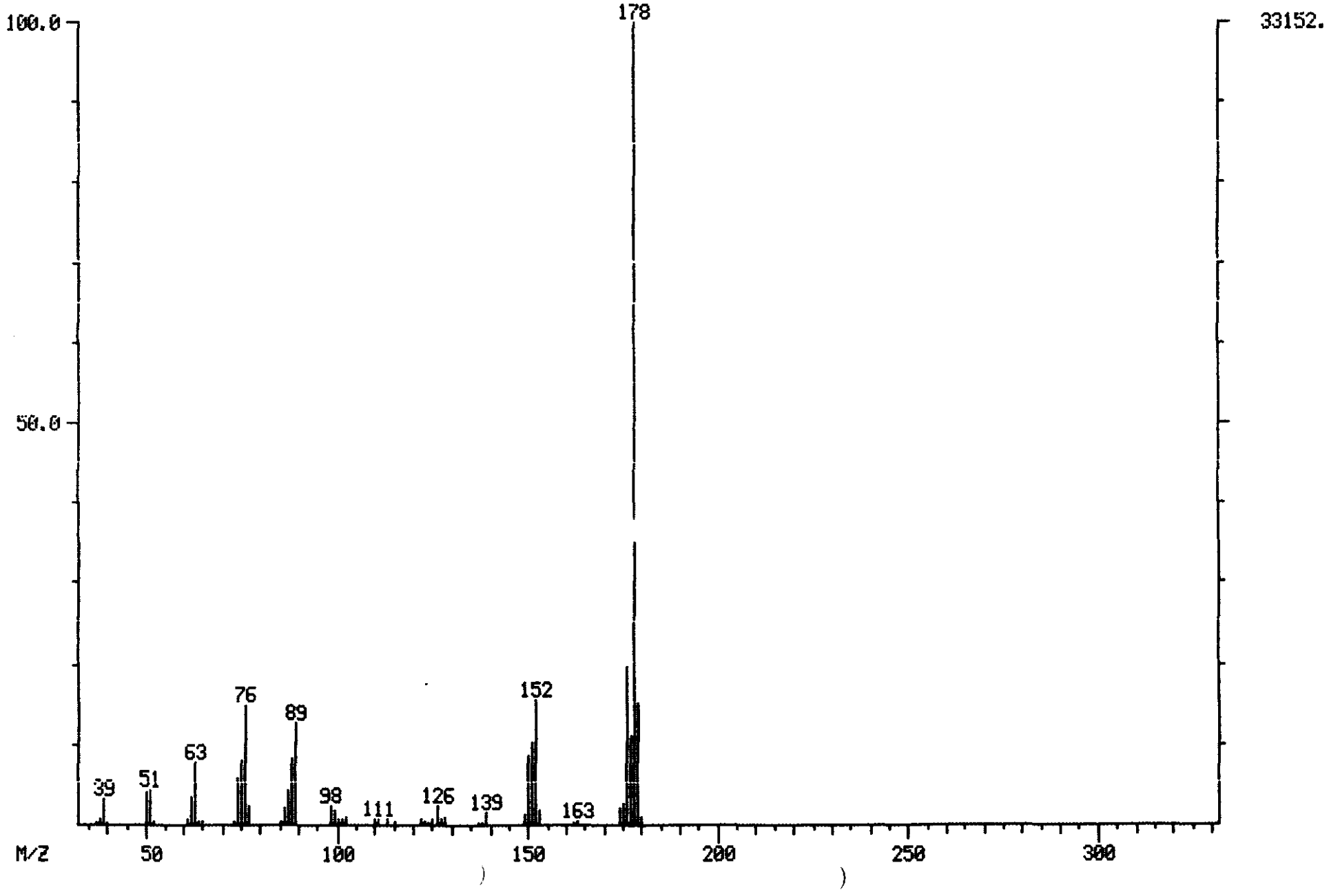
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 23:06
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=PESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C640 PHENANTHRENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1388
CALI: T2583 #2

BASE M/Z: 178
RIC: 98816.

100223



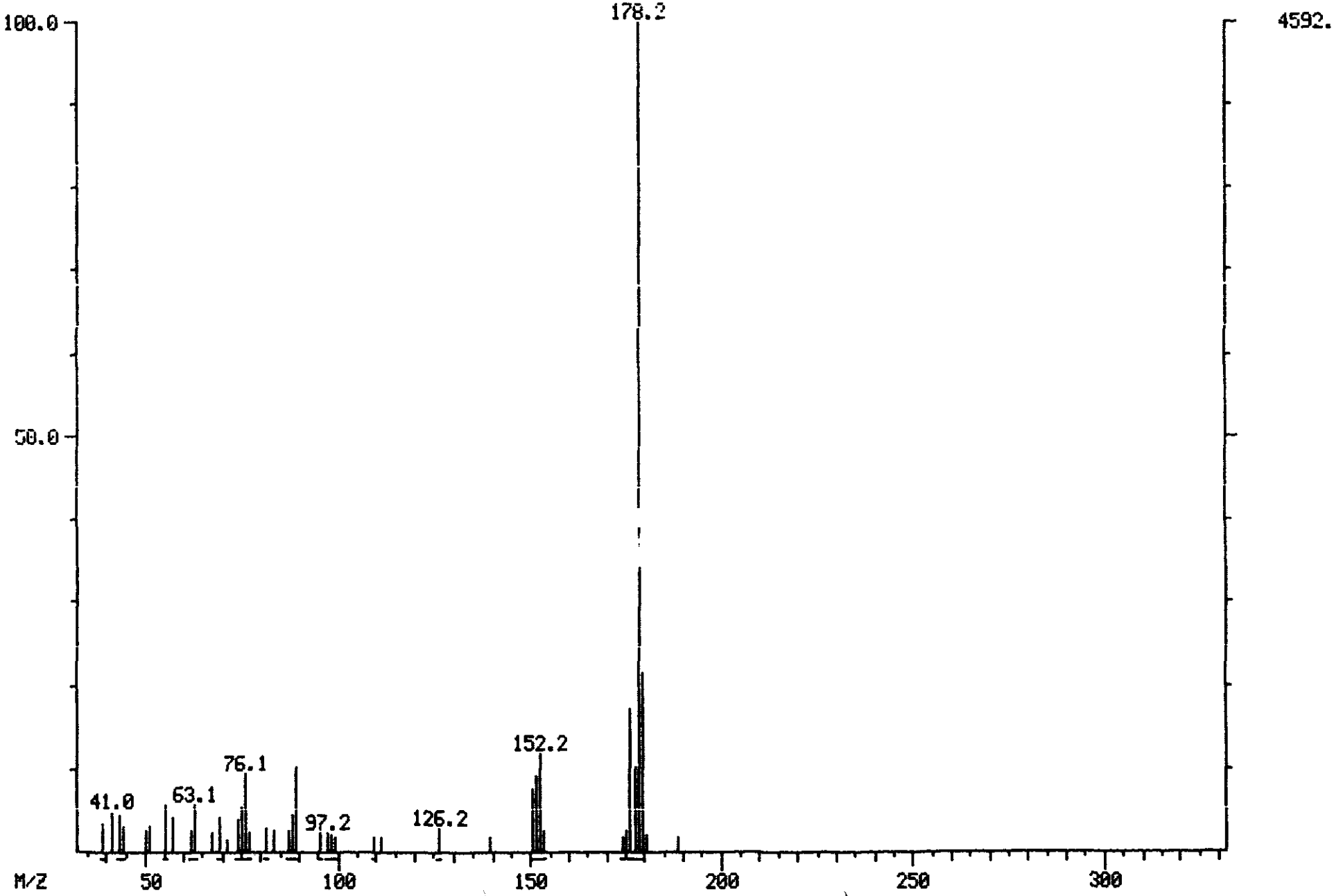
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 23:19
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C645 ANTHRACENE

DATA: T2594 #1399
CALI: T2594 #2

BASE M/Z: 178
RIC: 13792.

100224



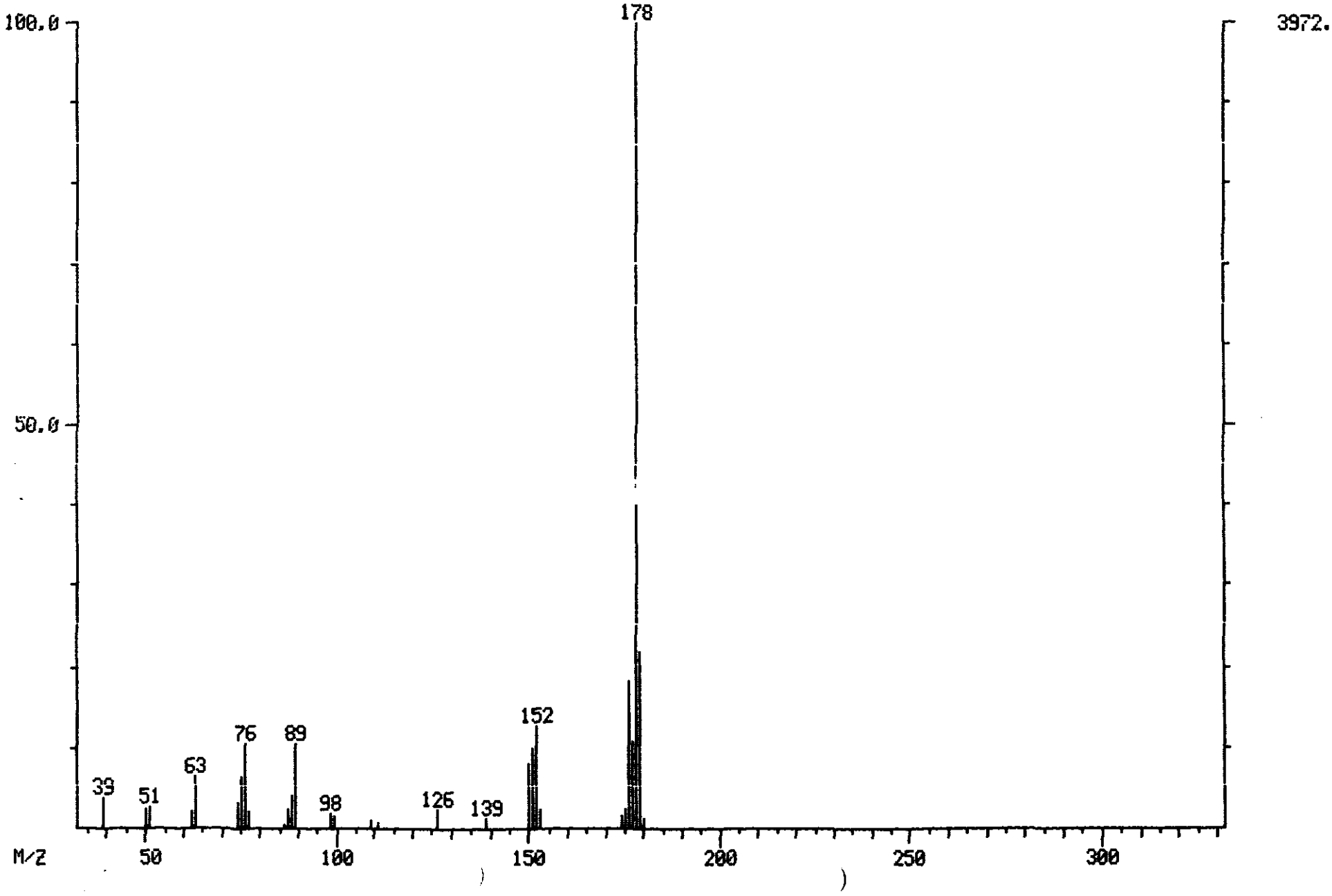
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 23:19
SAMPLE: CLP,VERSCOM,2536,6,M,S,16420,6,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
** NAME: C645 ANTHRACENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1399
CALI: T2594 #2

BASE M/Z: 178
RIC: 10176.

100225



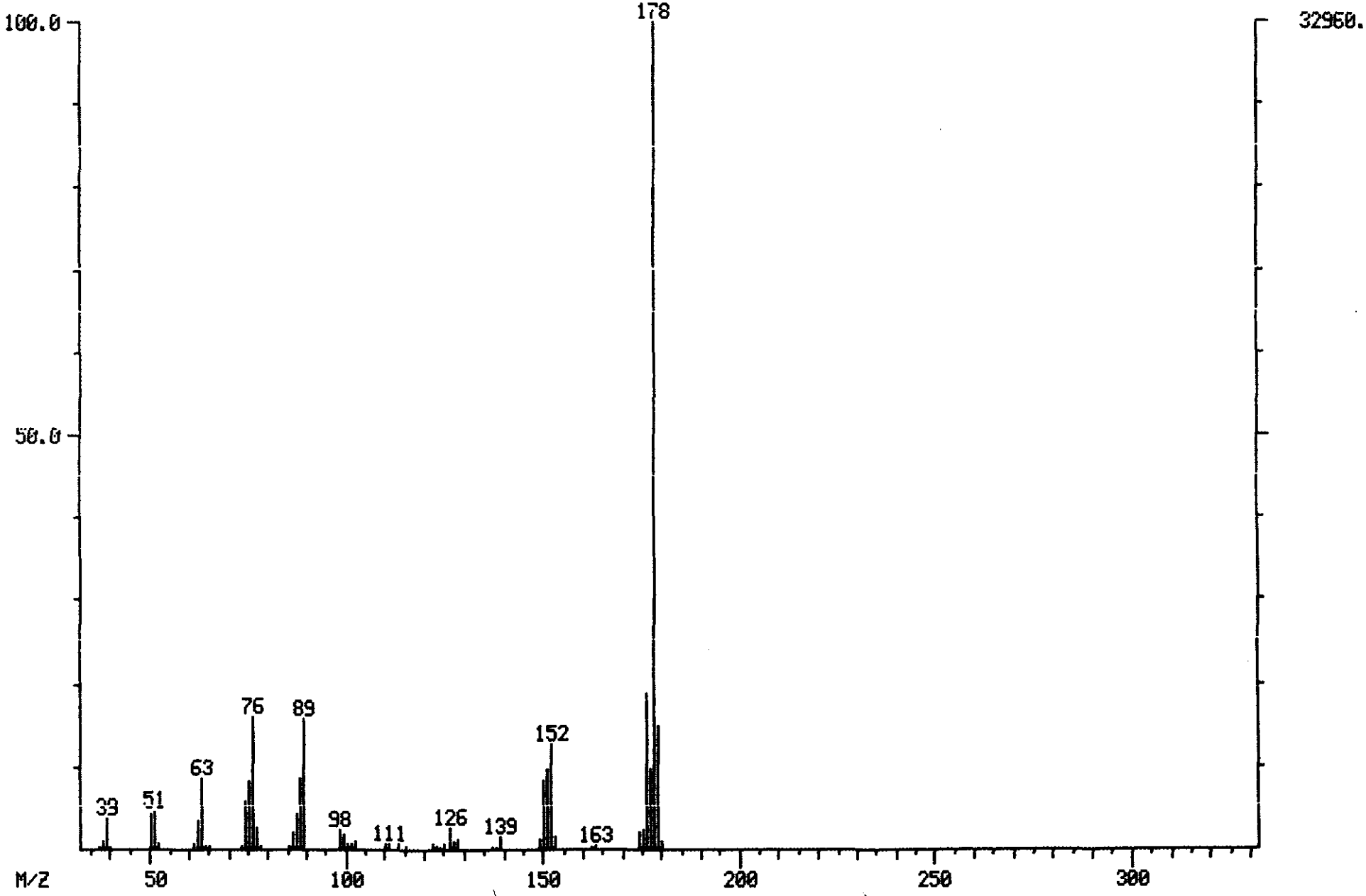
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 23:17
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C645 ANTHRACENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1397
CALI: T2583 #2

BASE M/Z: 178
RIC: 98688.

100226

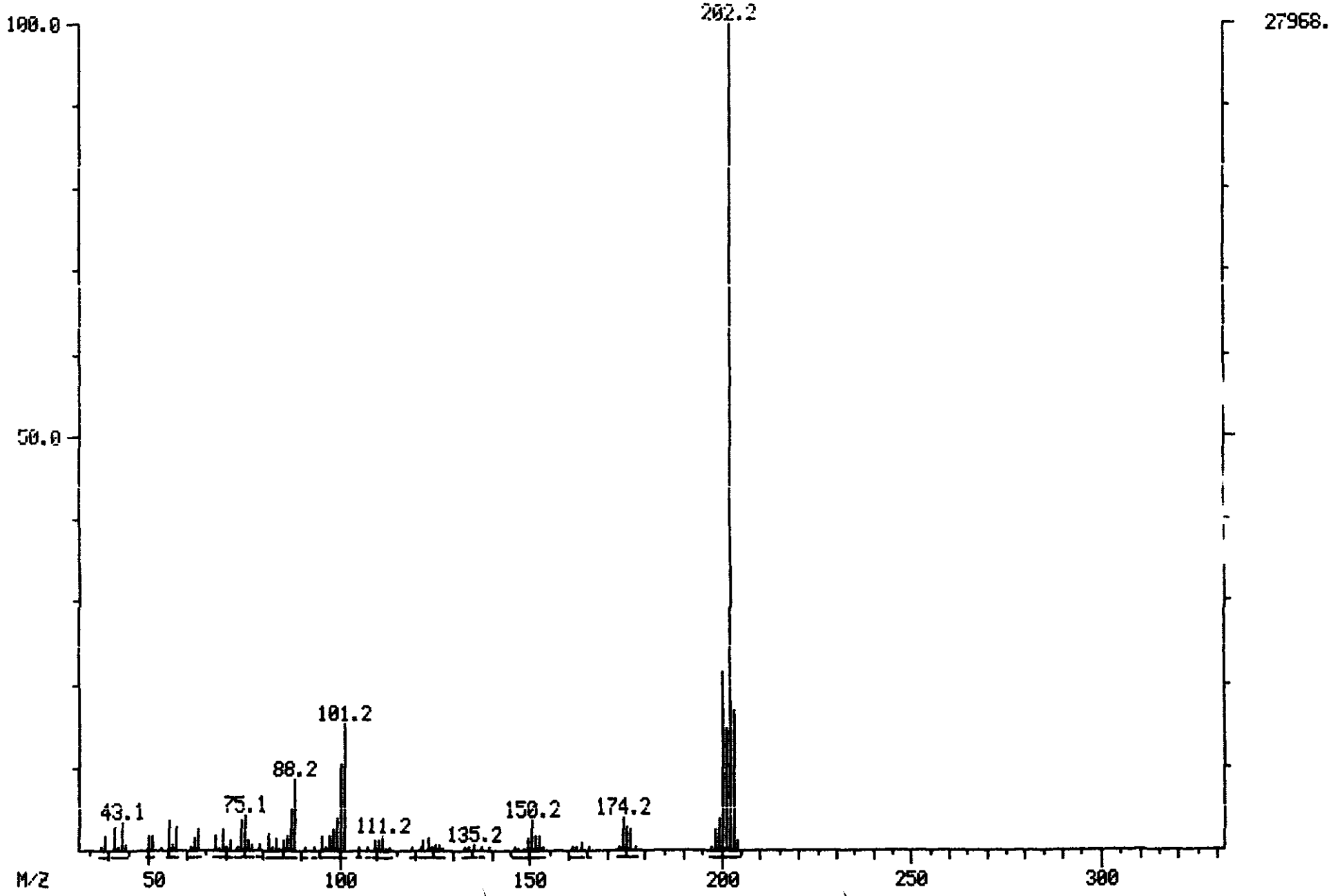


MASS SPECTRUM
05/15/90 19:46:00 + 27:05
SAMPLE: CL2,VERSCOM,2536,6,M,S,16425,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C655 FLUORANTHENE

DATA: T2594 #1625
CALI: T2594 #2

BASE M/Z: 202
RIC: 85760.

100227

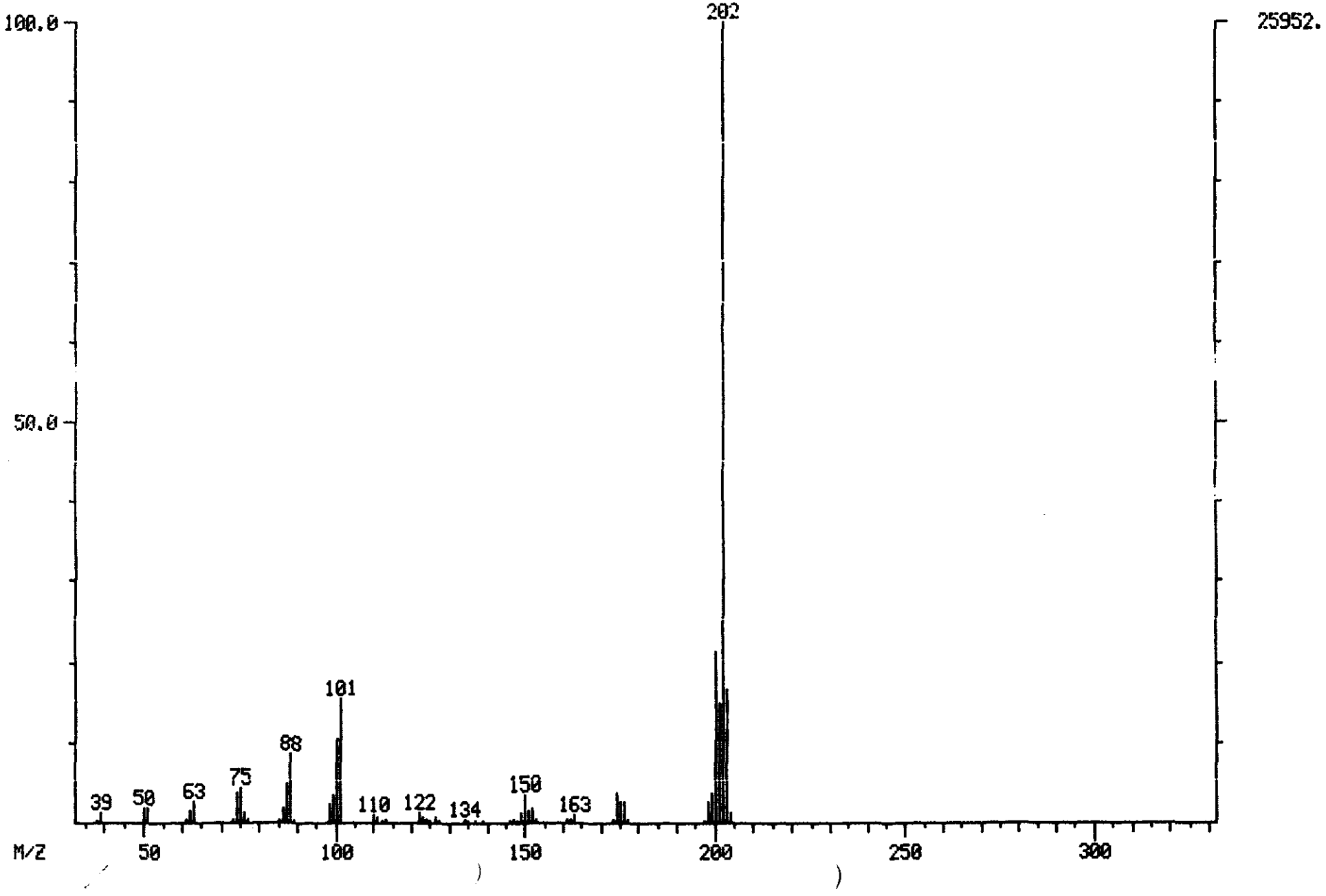


MASS SPECTRUM
05/15/90 19:46:00 + 27:05
SAMPLE: CLP,VERSCOM,2536,6,M,S,16425,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C655 FLUORANTHENE
ENHANCED (S 150 2N 0T)

DATA: T2594 #1625
CALI: T2594 #2

BASE M/Z: 202
RIC: 67712.

100228

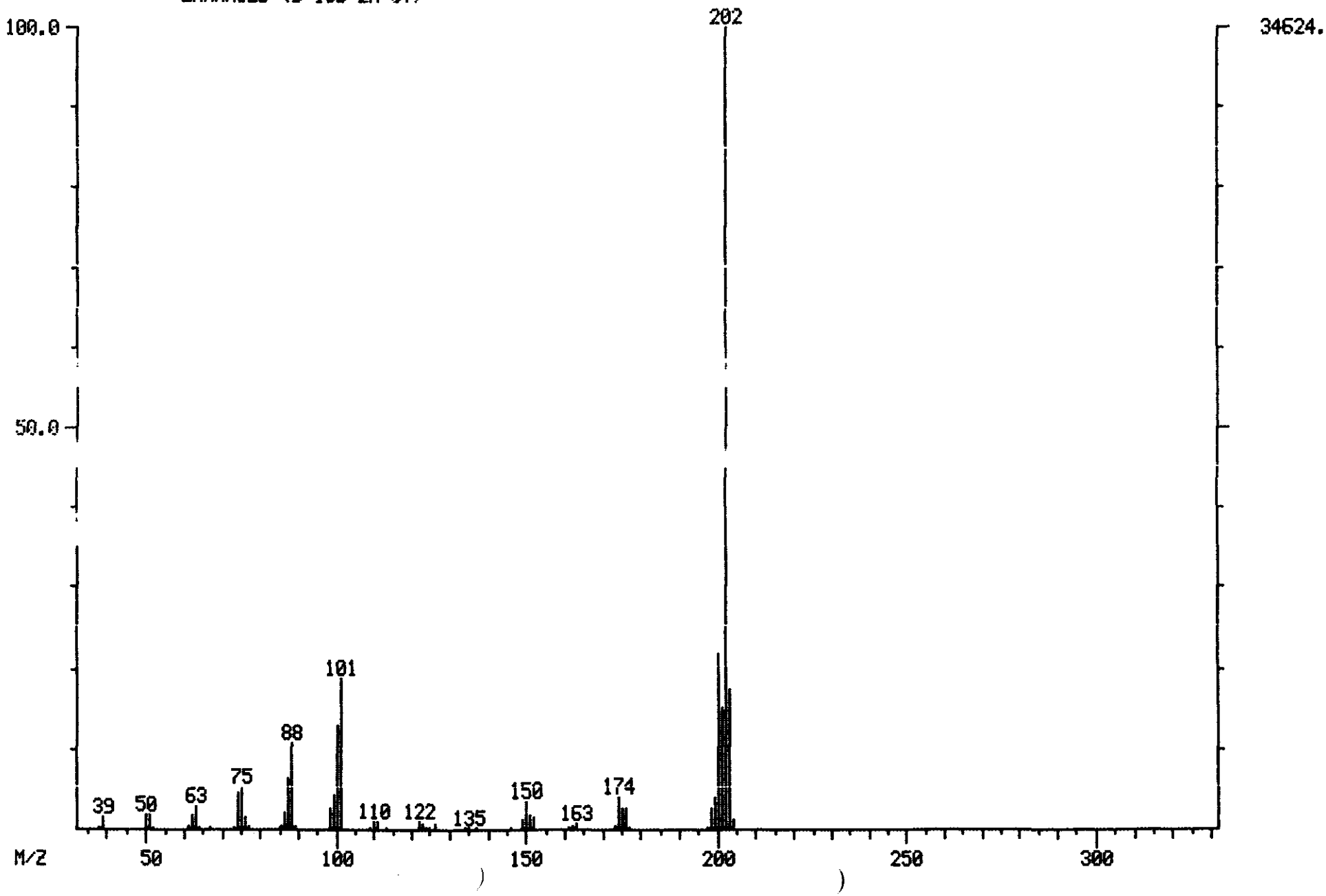


MASS SPECTRUM
05/15/90 9:42:00 + 27:01
SAMPLE: CLP,,,SSTD 50,,,22658,6,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
** NAME: C655 FLUORANTHENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1621
CALI: T2583 #2

BASE M/Z: 202
RIC: 95360.

100229



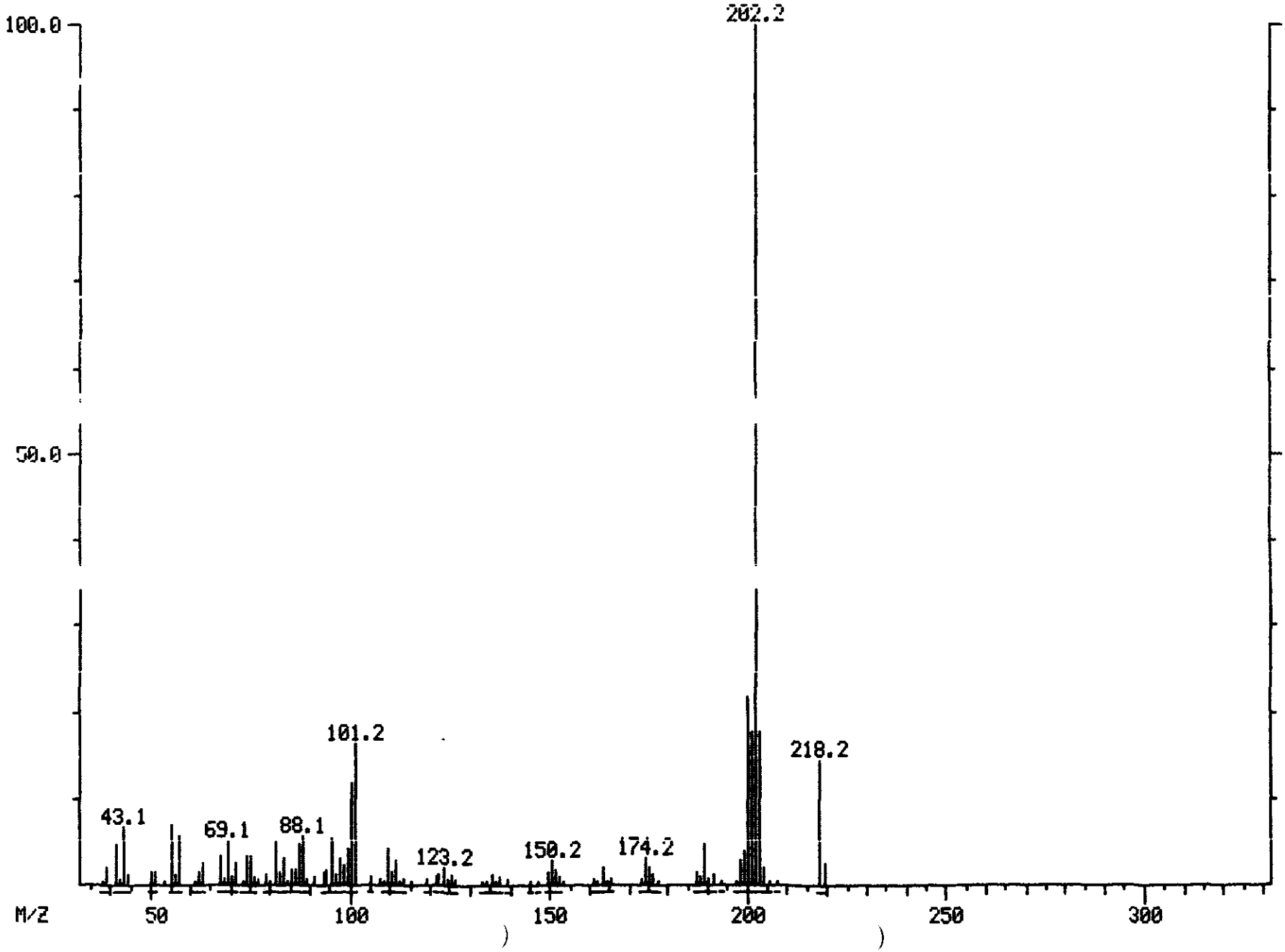
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 27:48
SAMPLE: CLP,VERSCOM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C715 PYRENE

DATA: T2594 #1668
CALI: T2594 #2

BASE M/Z: 202
RIC: 71424.

100230

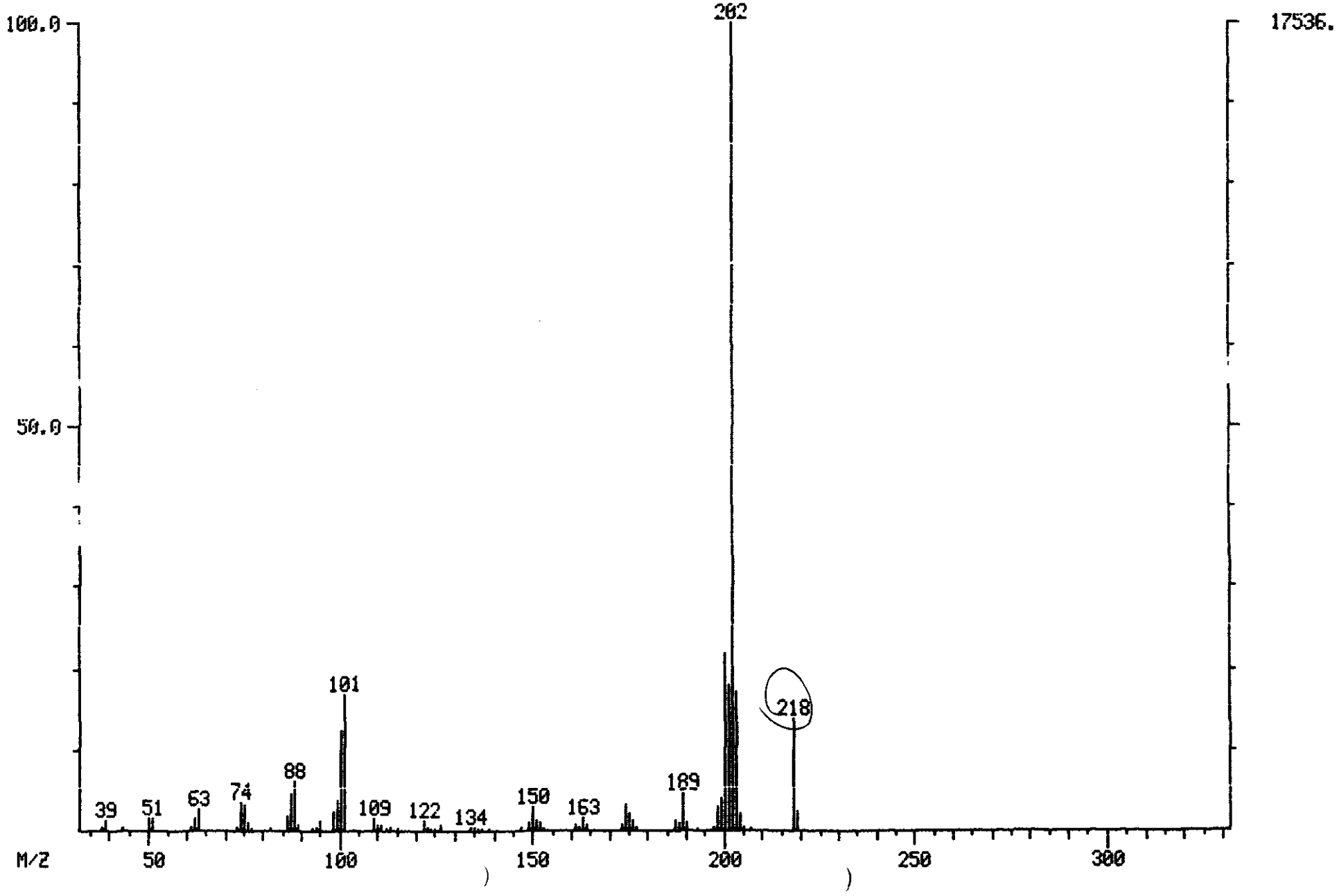


100231

MASS SPECTRUM
05/15/90 19:46:00 + 27:46
SAMPLE: CLP,VERSCOM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C715 PYRENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1668
CALI: T2594 #2

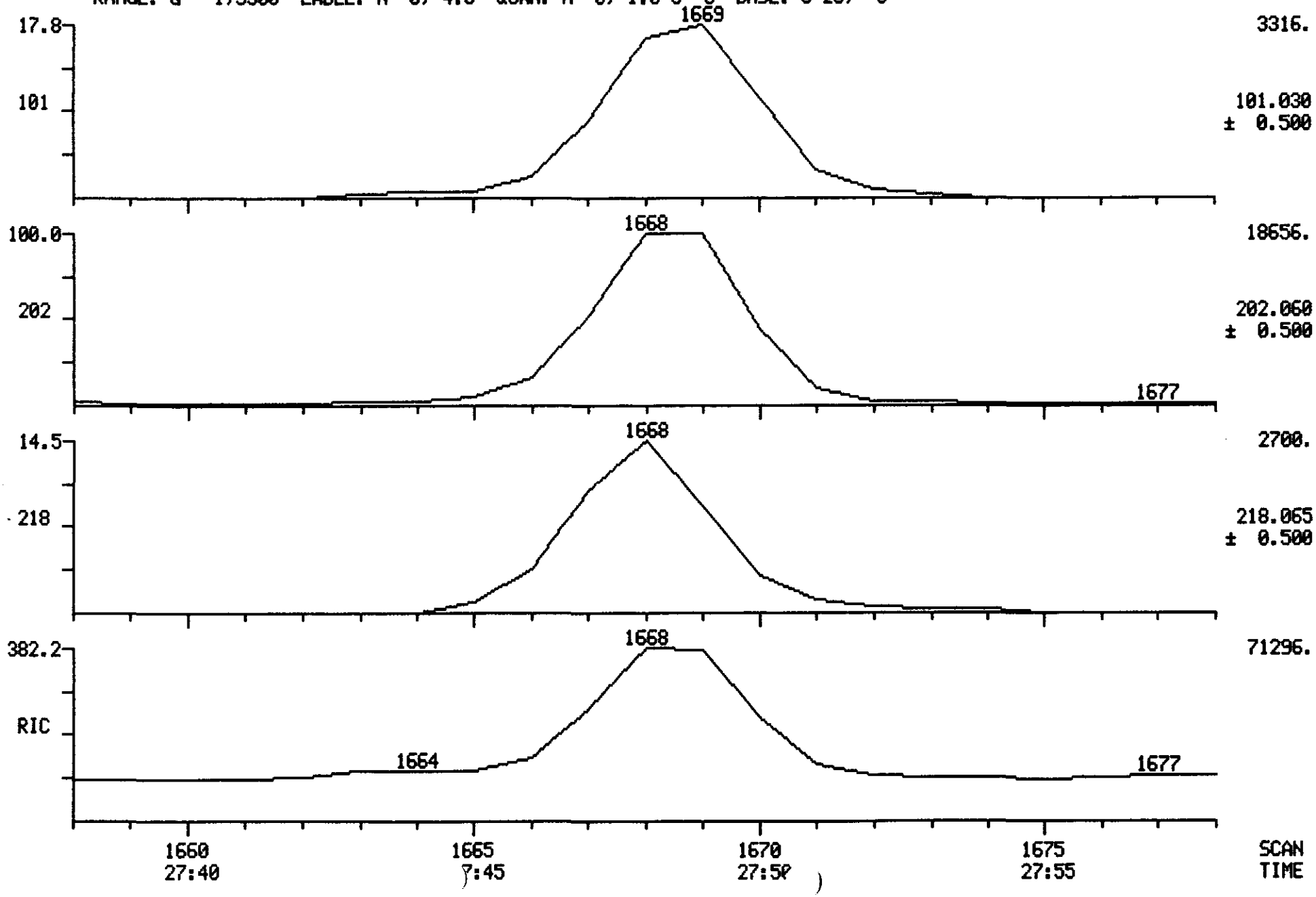
BASE M/Z: 202
RIC: 51328.



ORIGINAL (Red)

RIC+MASS CHROMATOGRAMS DATA: T2594 #1 SCANS 1658 TO 1678
05/15/90 19:46:00 CALI: T2594 #2
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
RANGE: G 1,3500 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

100232



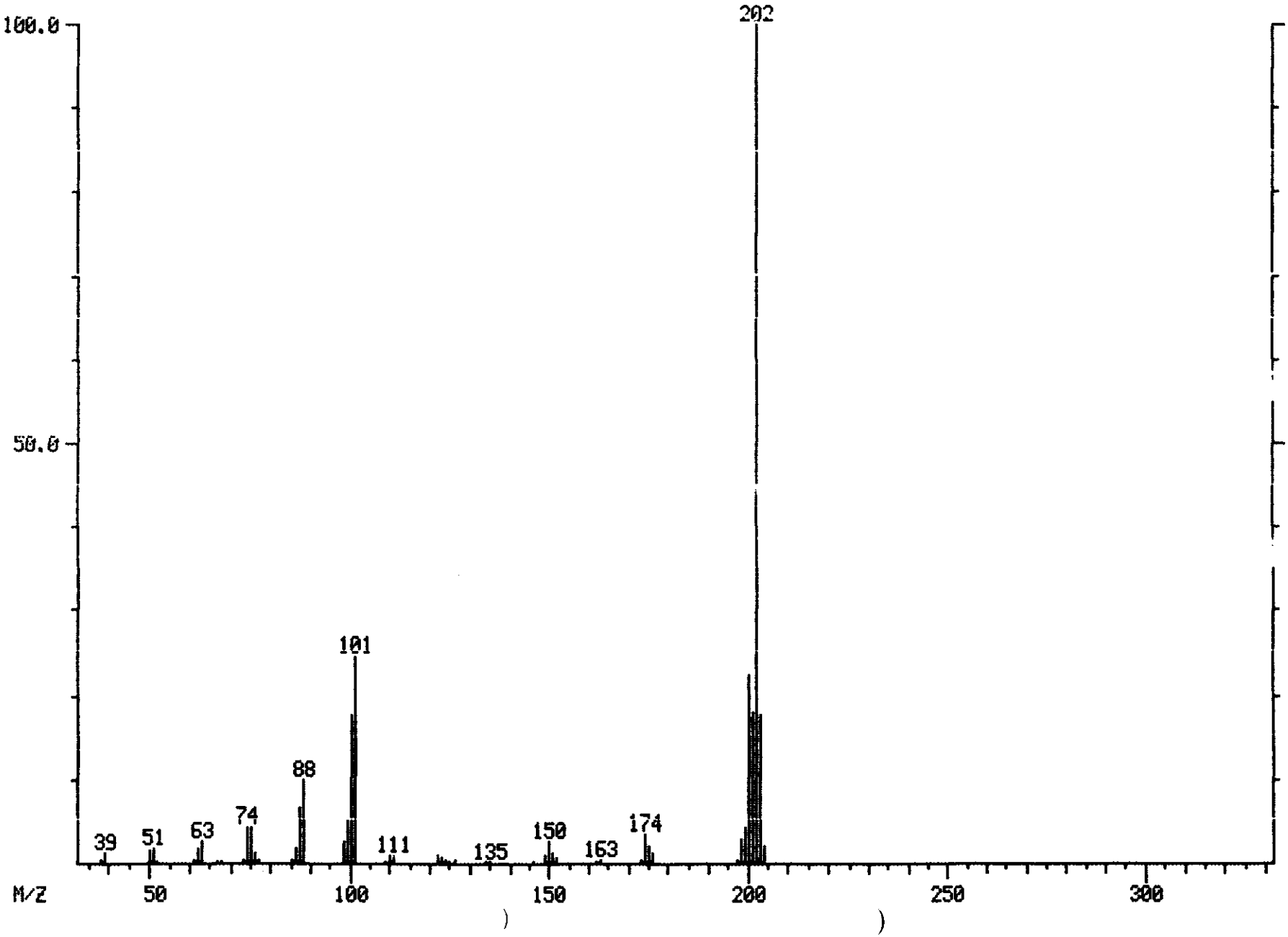
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 27:45
SAMPLE: CLP,,,SSTD 50,,,22653,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C715 PYRENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1665
CALI: T2583 #2

BASE M/Z: 202
RIC: 98048.

100233

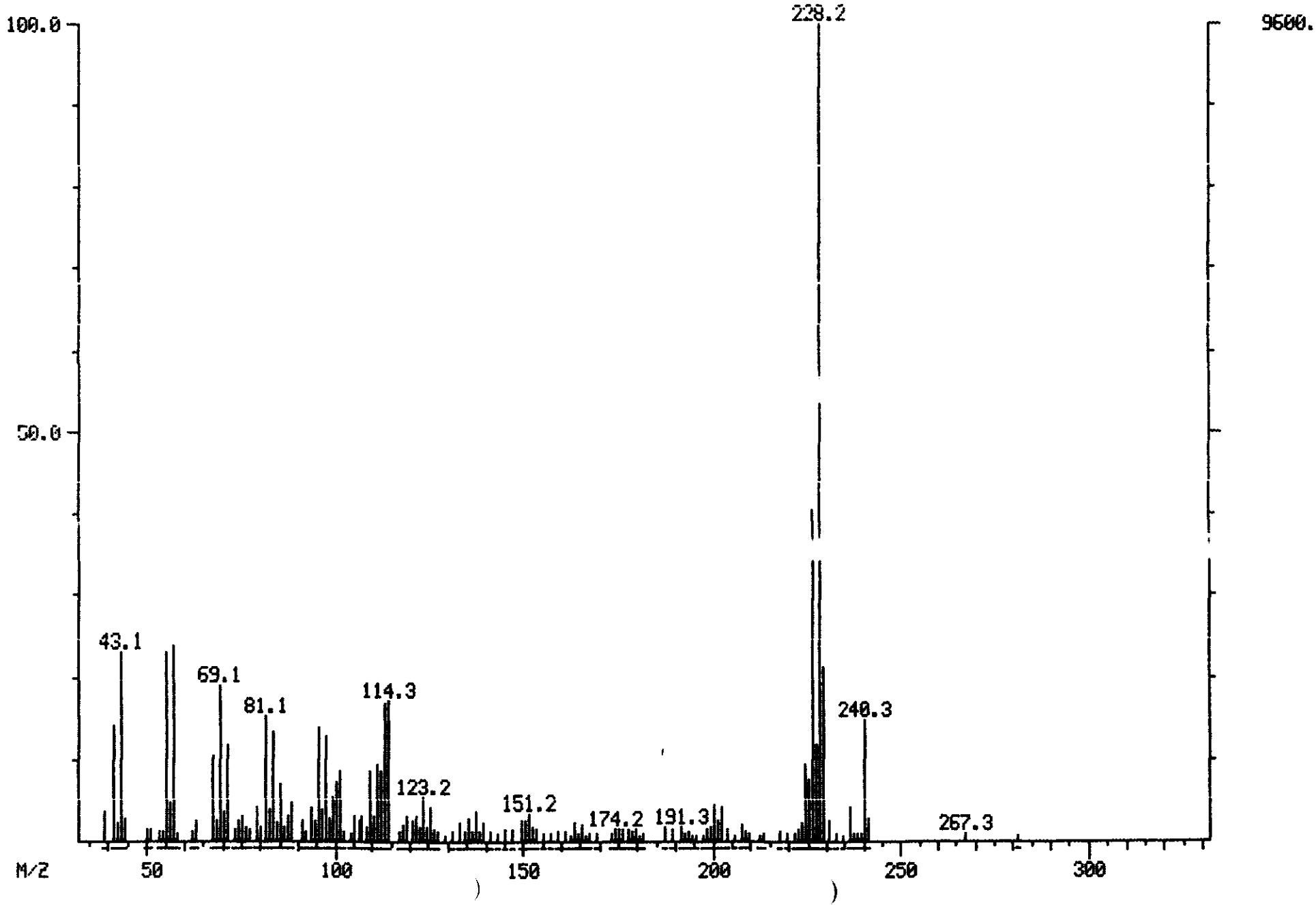


MASS SPECTRUM
05/15/90 19:46:00 + 31:42
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C730 BENZO(A)ANTHRACENE

DATA: T2594 #1902
CALI: T2594 #2

BASE M/Z: 228
RIC: 69760.

100234



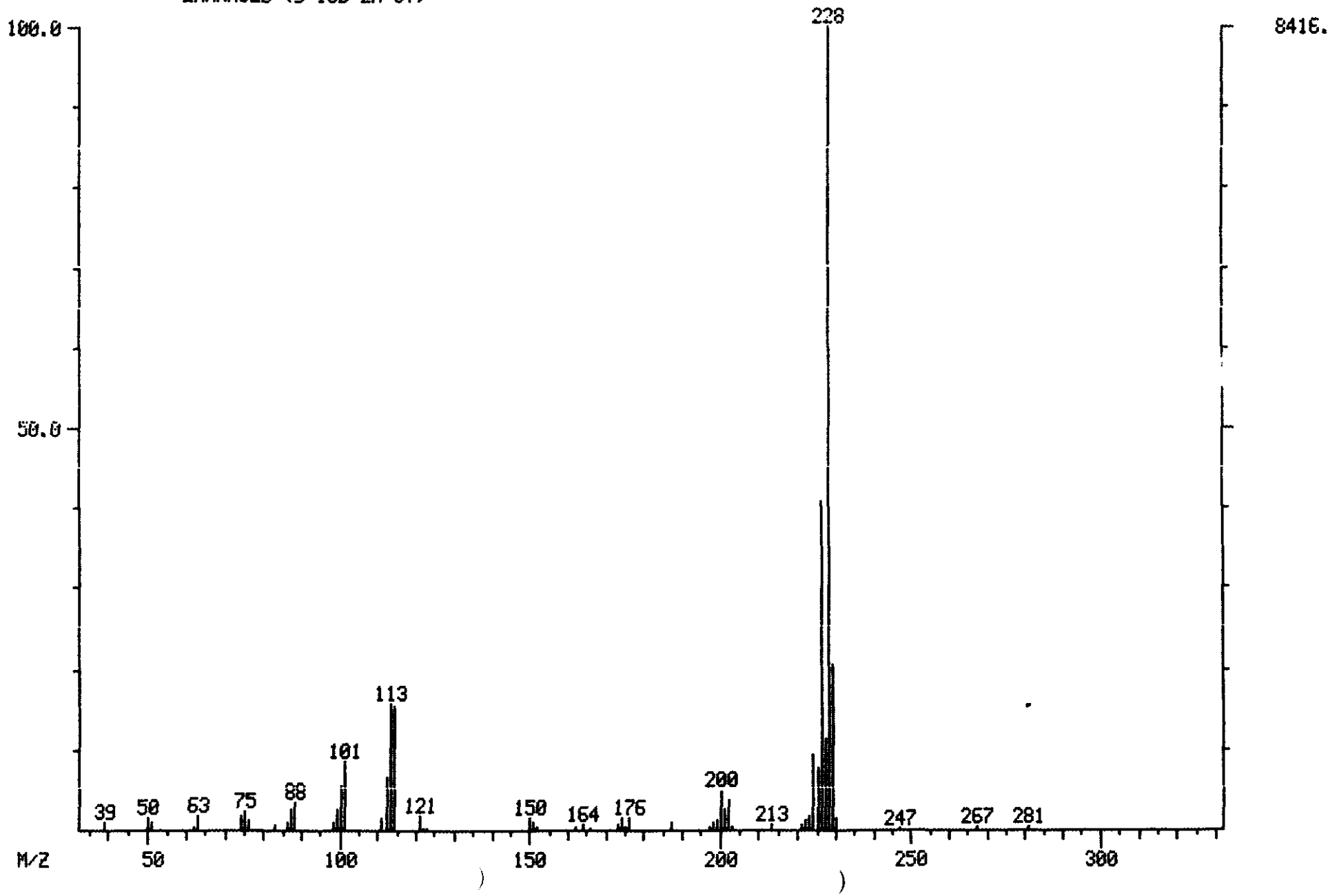
100235

ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 31:42
SAMPLE: CLP,VERSCOM,2526,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C730 BENZO(A)ANTHRACENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1902
CALI: T2594 #2

BASE M/Z: 228
RIC: 25696.



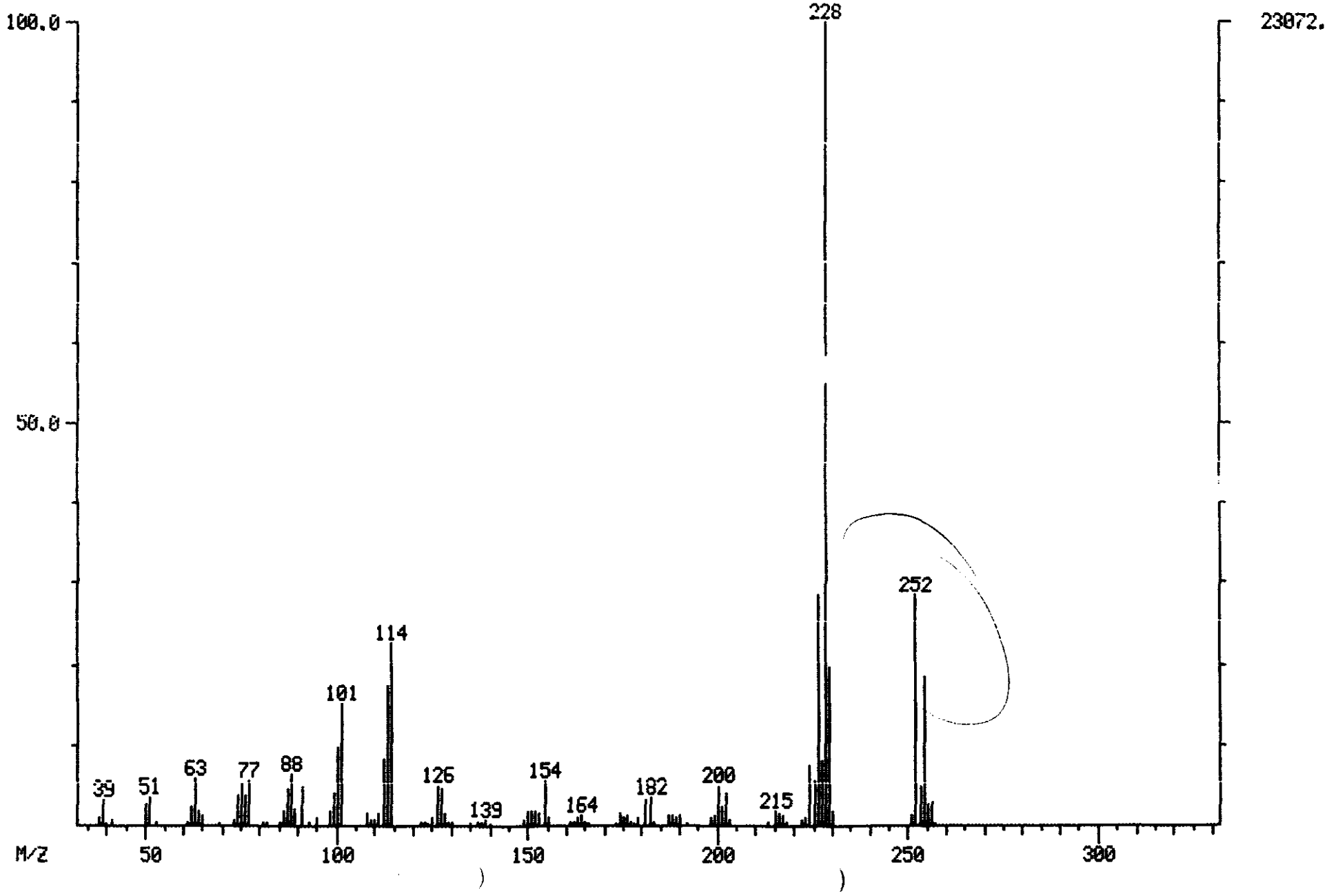
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 31:39
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=PESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
** NAME: C730 BENZO(A)ANTHRACENE
ENHANCED (5 15B 2N 0T)

DATA: T2583 #1899
CALI: T2583 #2

BASE M/Z: 228
RIC: 106880.

100236



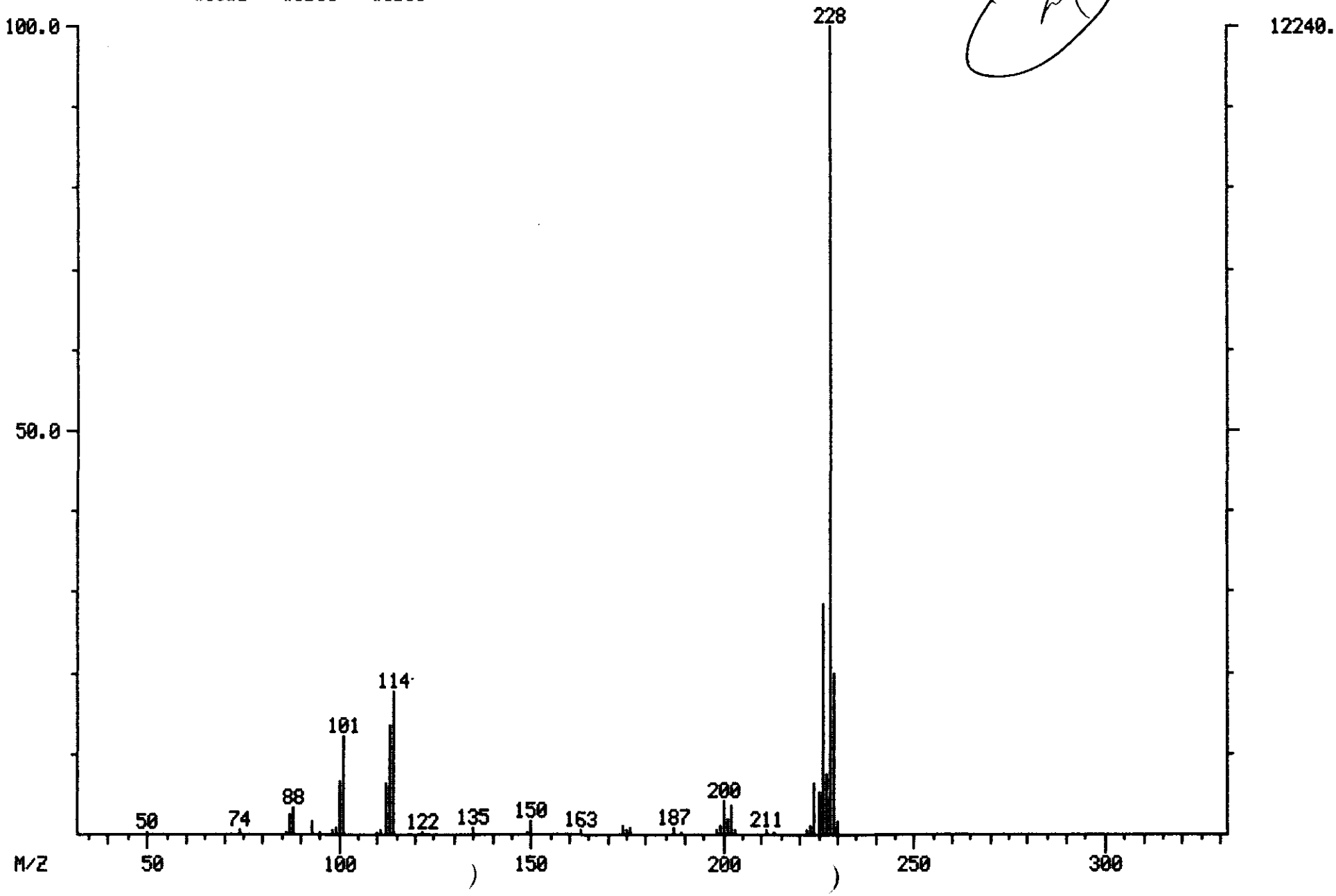
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 31:39
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C730 BENZO(A)ANTHRACENE
#1899 - #1900 - #1900

DATA: T2583 #1899
CALI: T2583 #2

BASE M/Z: 228
RIC: 31680.

100237



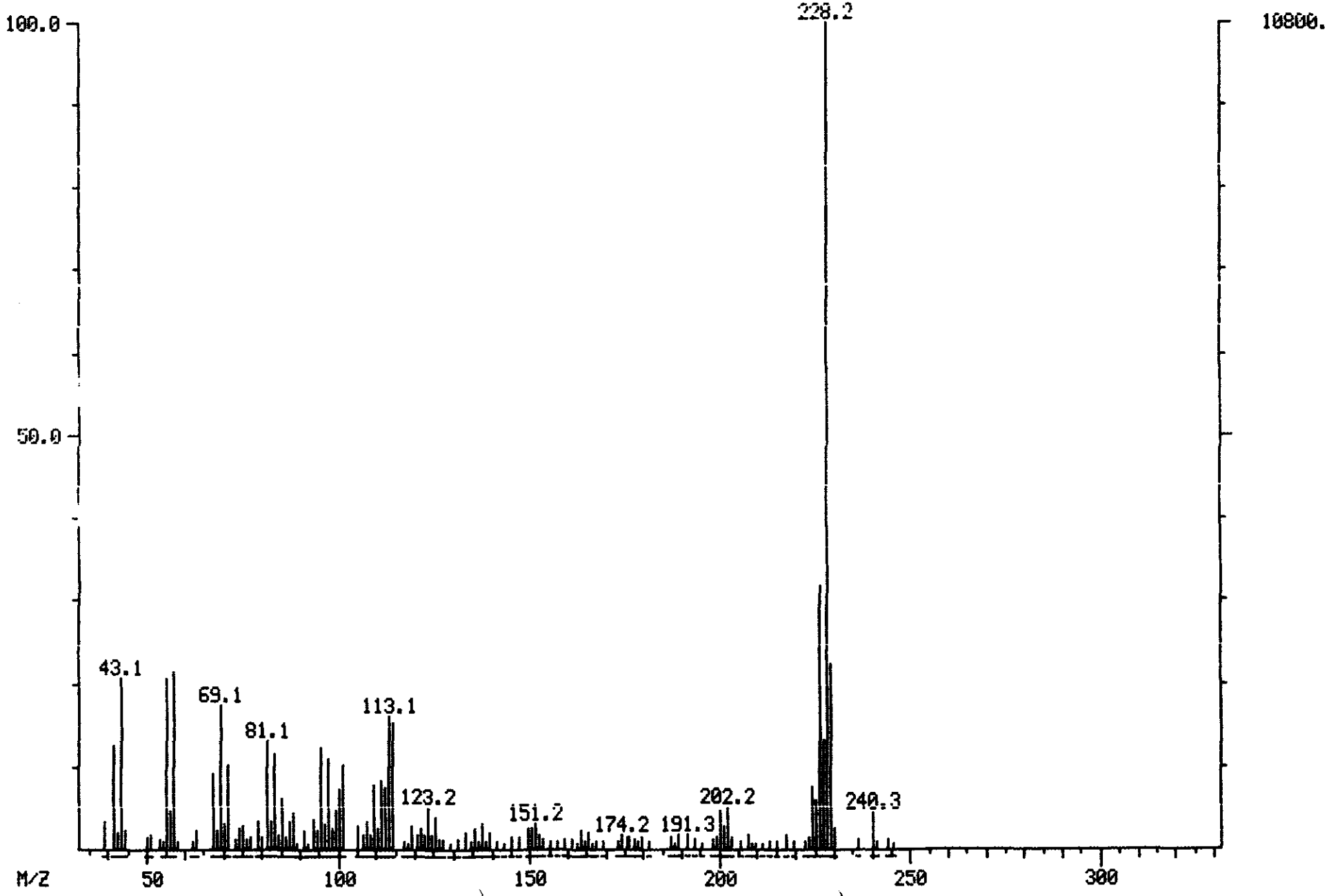
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 31:50
SAMPLE: CLP,VERSCOM,2536,6,M,5,16423,B,,420,1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C740 CHRYSENE

DATA: T2594 #1910
CALI: T2594 #2

BASE M/Z: 228
RIC: 70144.

100238



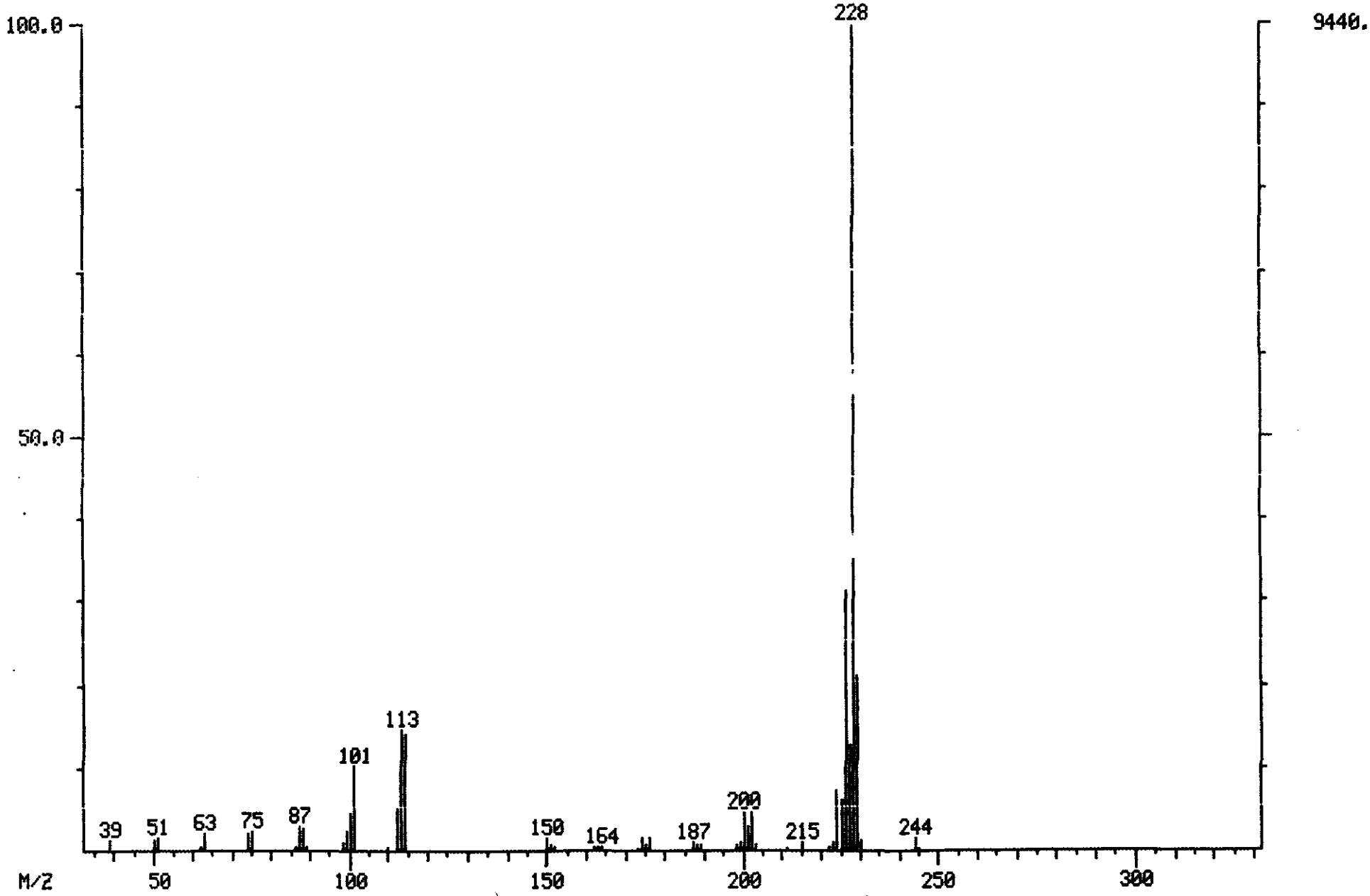
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 31:50
SAMPLE: CLP,VERSCOM,2556,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
** NAME: C740 CHRYSENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #1910
CALI: T2594 #2

BASE M/Z: 228
RIC: 26764.

100239



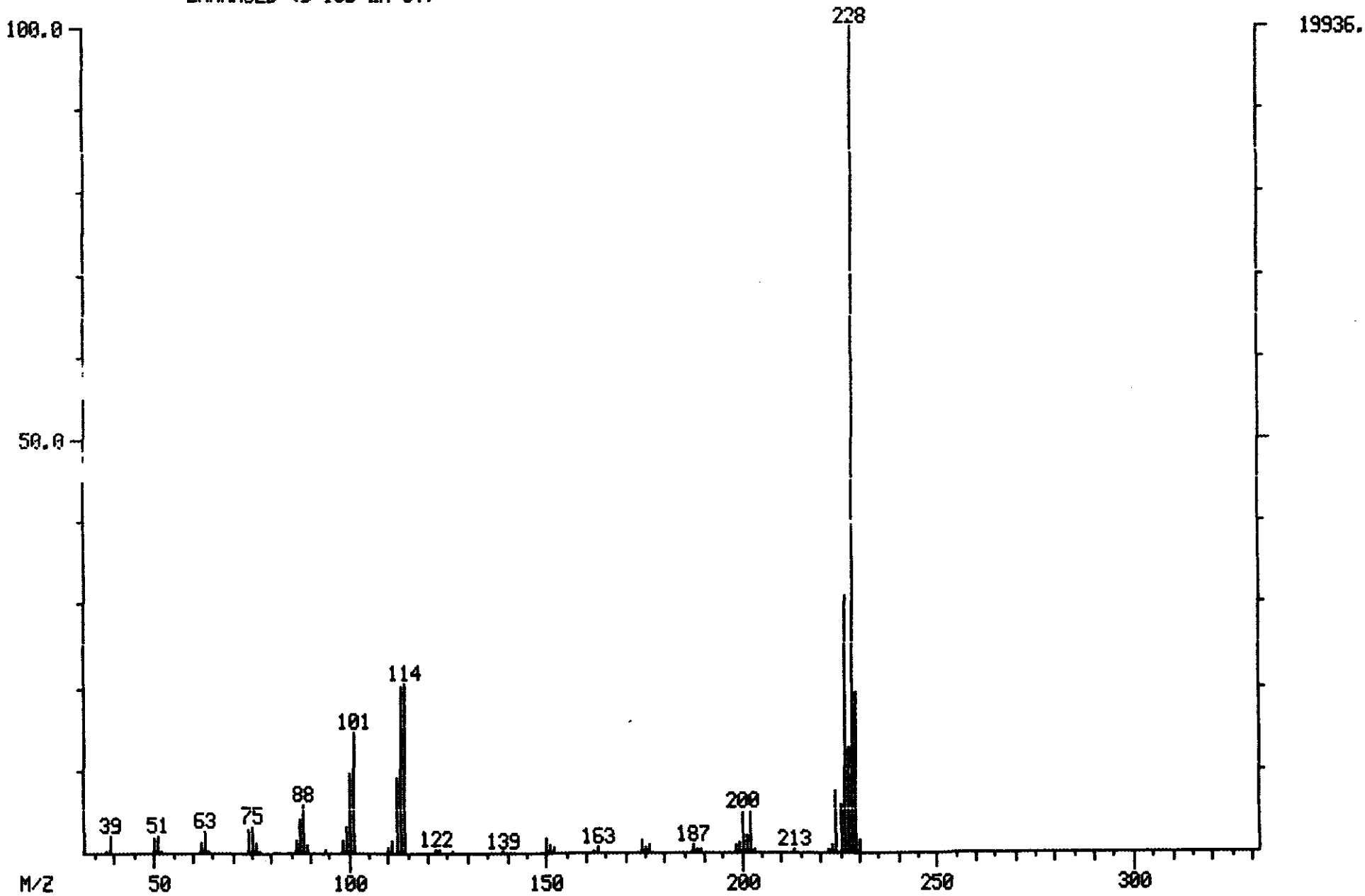
ORIGINAL (Red)

100240

MASS SPECTRUM
05/15/90 9:42:00 + 31:47
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C740 CHRYSENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #1907
CALI: T2583 #2

BASE M/Z: 228
RIC: 64192.



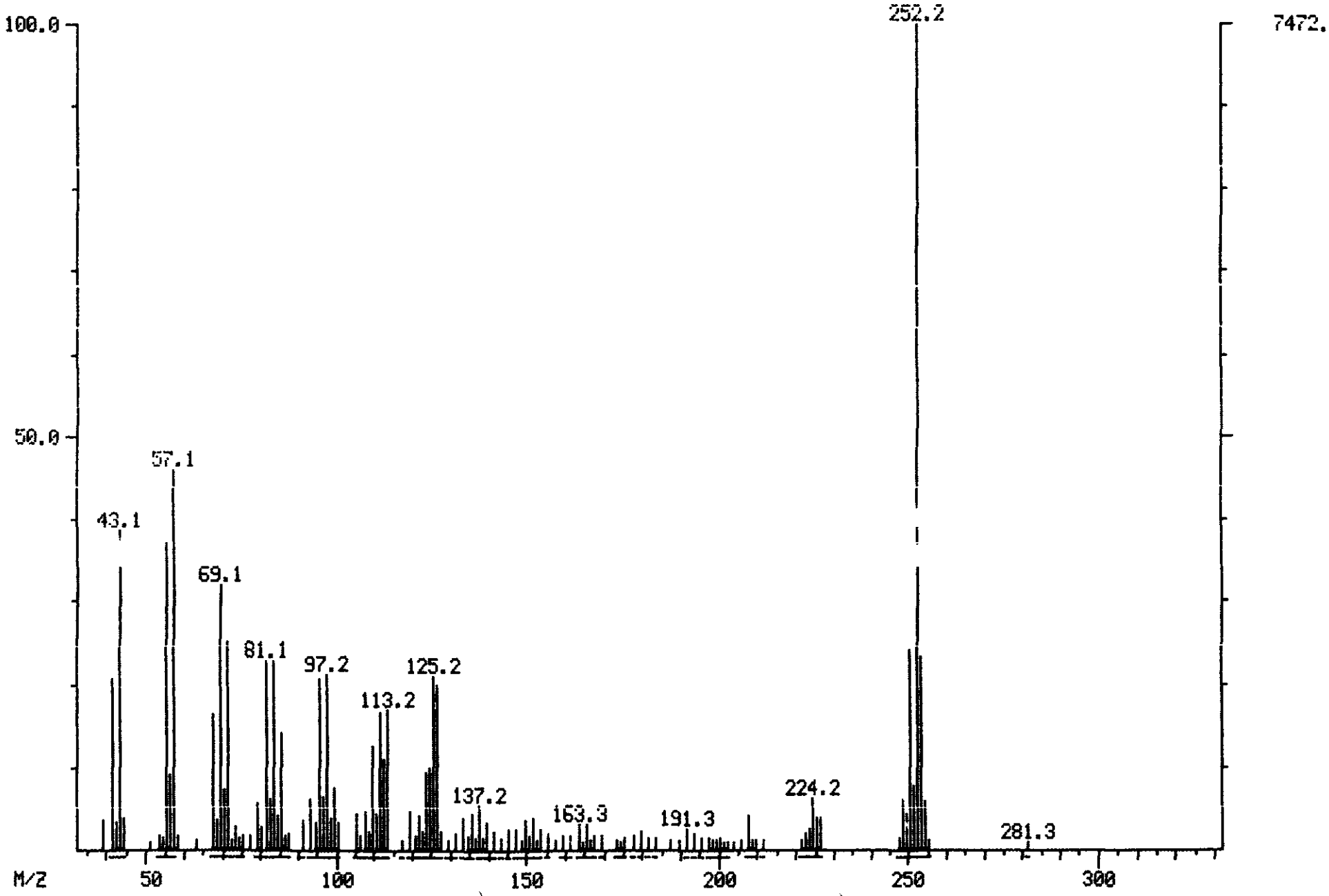
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 35:18
SAMPLE: CLP,VERSCDM,2536,G,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C765 BENZO(B)FLUORANTHENE

DATA: T2594 #2118
CALI: T2594 #2

BASE M/Z: 252
RIC: 66304.

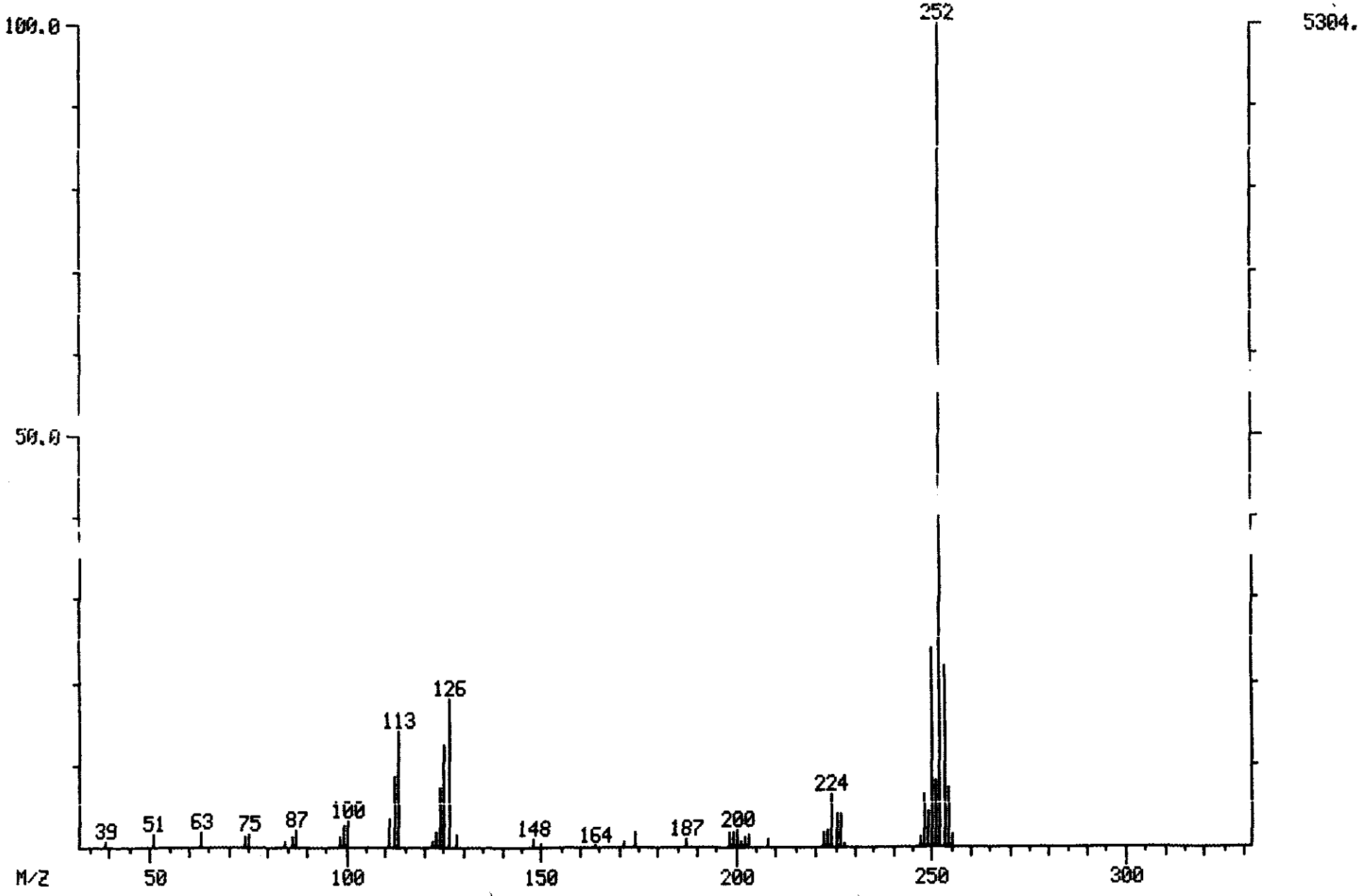
100241



MASS SPECTRUM
05/15/90 19:46:00 + 35:18
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,E,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C765 BENZO(B)FLUORANTHENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #2118
CALI: T2594 #2

BASE M/Z: 252
RIC: 15600.



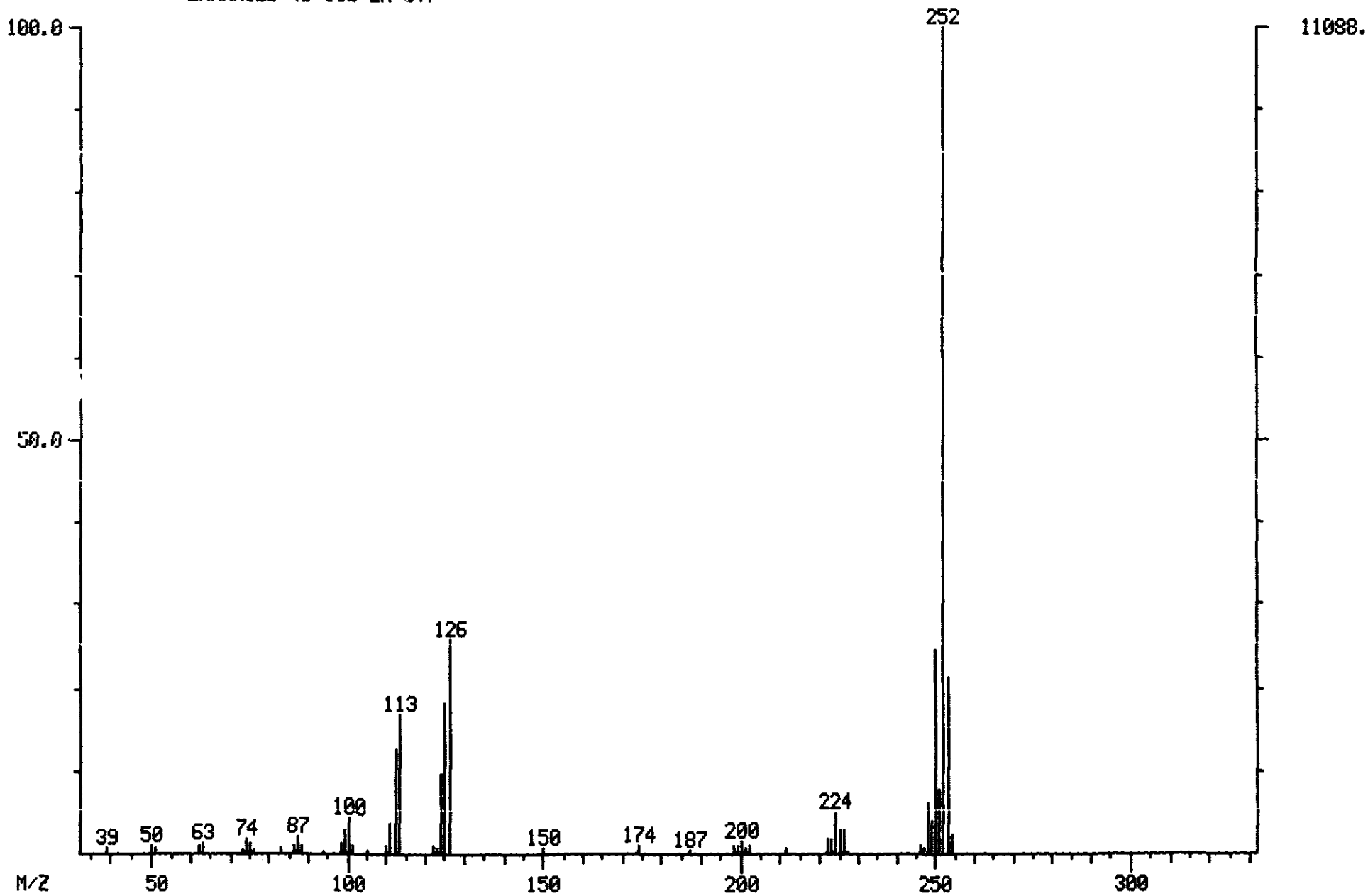
100242

MASS SPECTRUM
05/15/90 9:42:00 + 35:13
SAMPLE: CLP,,,SSTD 50,,,22659,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C765 BENZO(B)FLUORANTHENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #2113
CALI: T2583 #2

BASE M/Z: 252
RIC: 34368.

100243

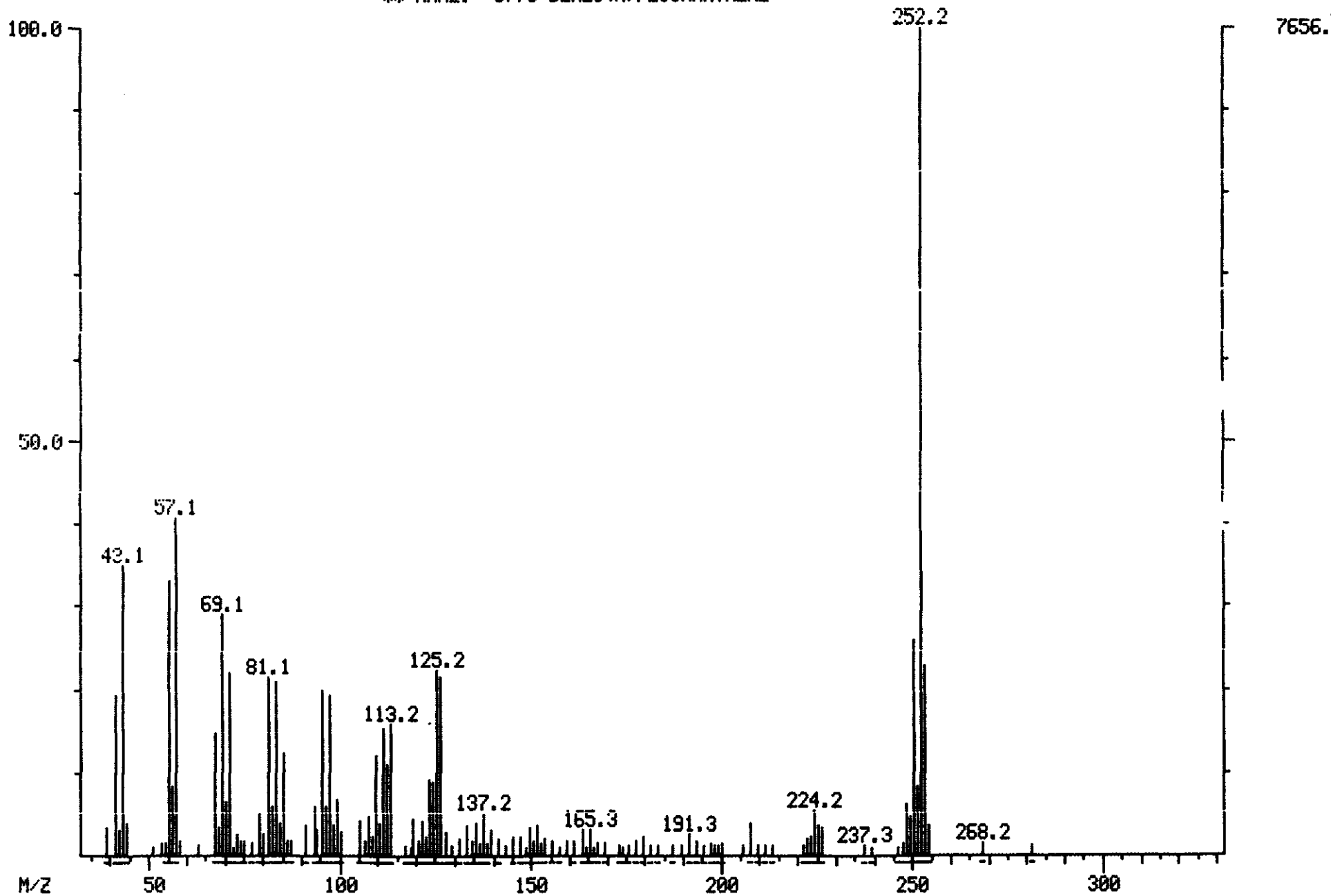


MASS SPECTRUM
05/15/90 19:46:00 + 35:23
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C770 BENZO(K)FLUORANTHENE

DATA: T2594 #2123
CALI: T2594 #2

BASE M/Z: 252
RIC: 64576.

100244

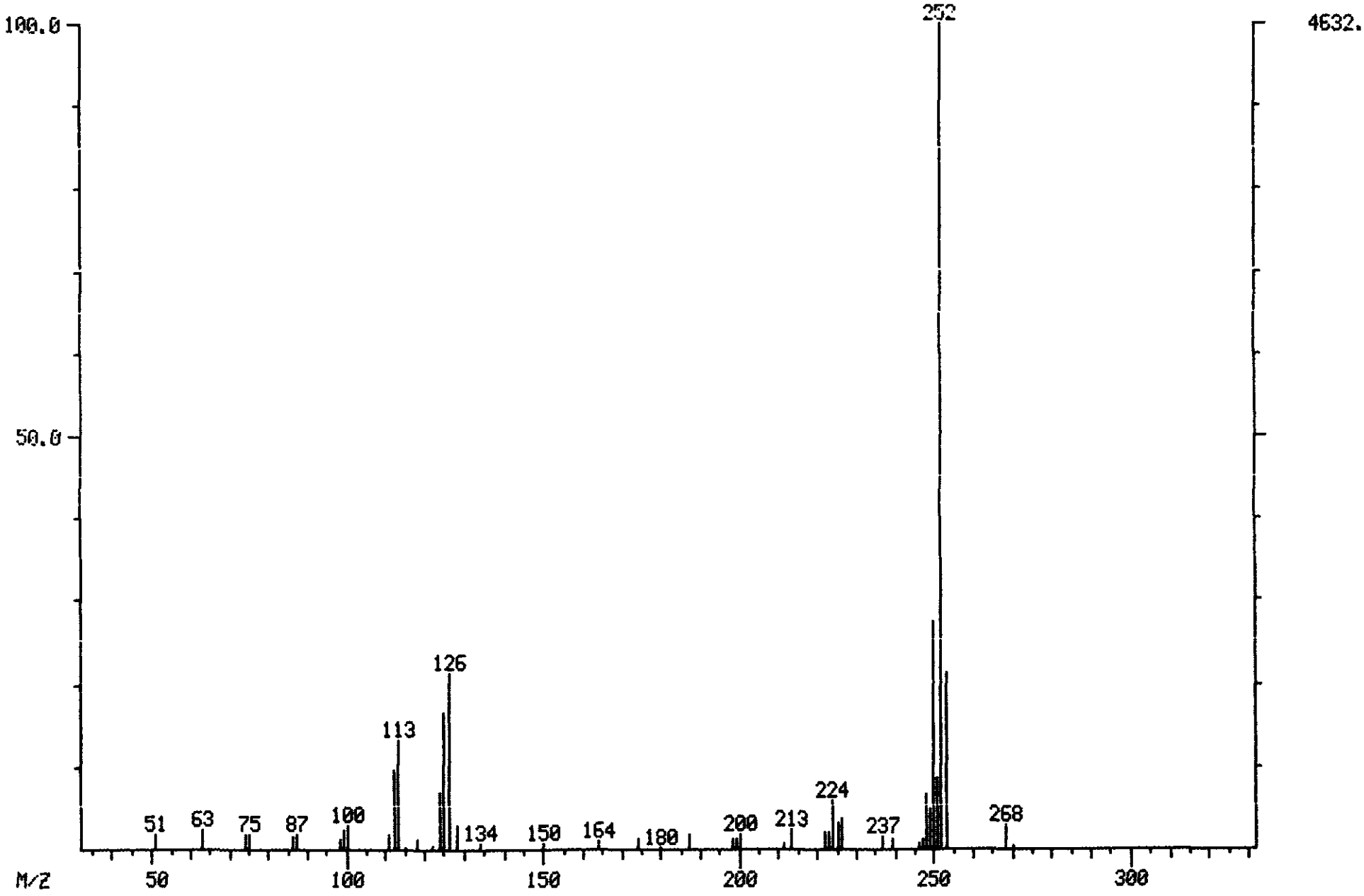


MASS SPECTRUM
05/15/90 19:46:00 + 35:23
SAMPLE: CLP,VEPSCDM,2536,6,M,5,16423,6,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C770 BENZO(K)FLUORANTHENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #2123
CALI: T2594 #2

BASE M/Z: 252
RIC: 14064.

100245

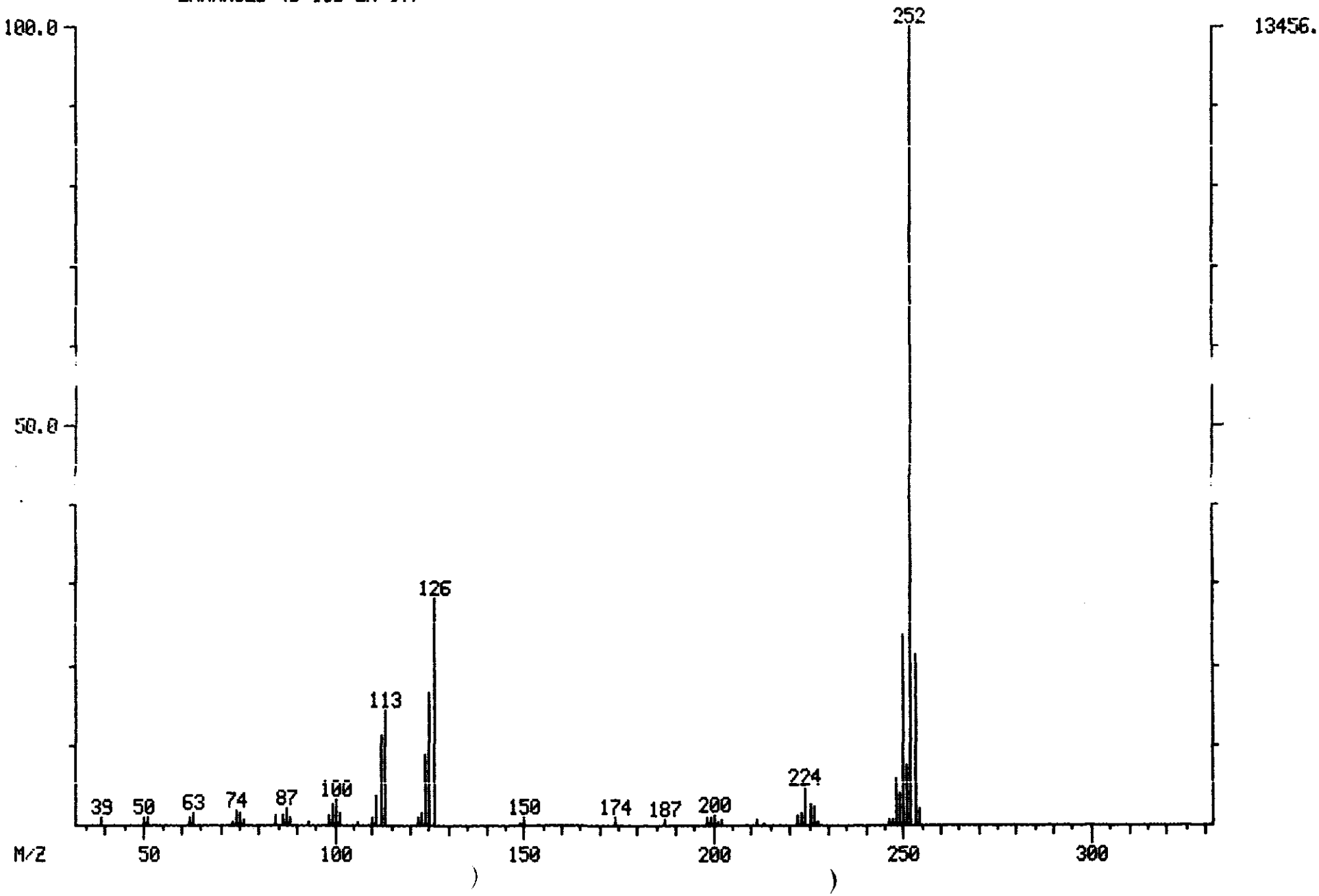


MASS SPECTRUM
05/15/90 9:42:00 + 35:19
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 302C8C/MIN
** NAME: C770 BENZO(K)FLUORANTHENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #2119
CALI: T2583 #2

BASE M/Z: 252
RIC: 40896.

100246

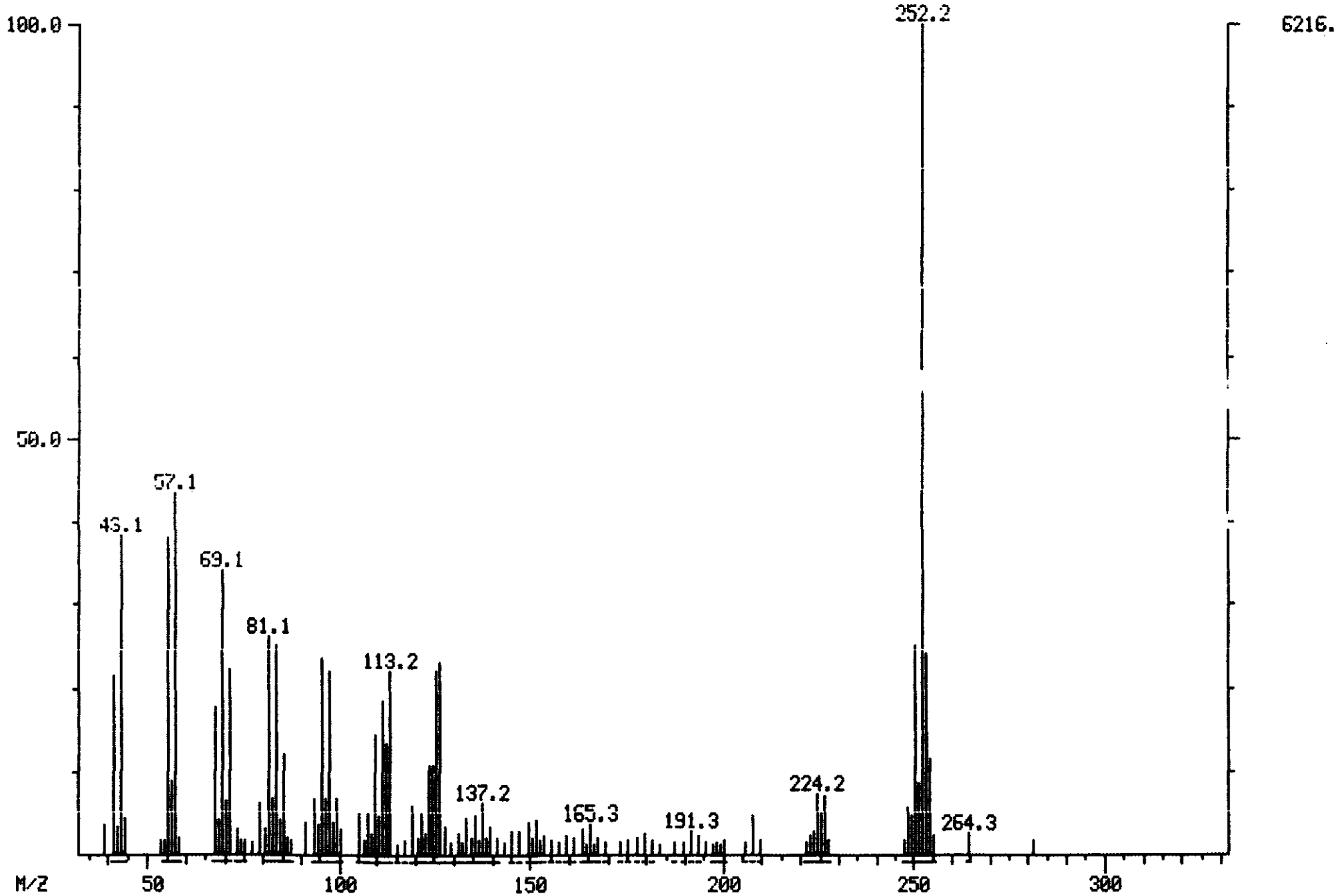


ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 36:41
SAMPLE: CLP,VERSCOM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C775 BENZO(A)PYRENE

DATA: T2594 #2201
CALI: T2594 #2

BASE M/Z: 252
RIC: 58432.



100247

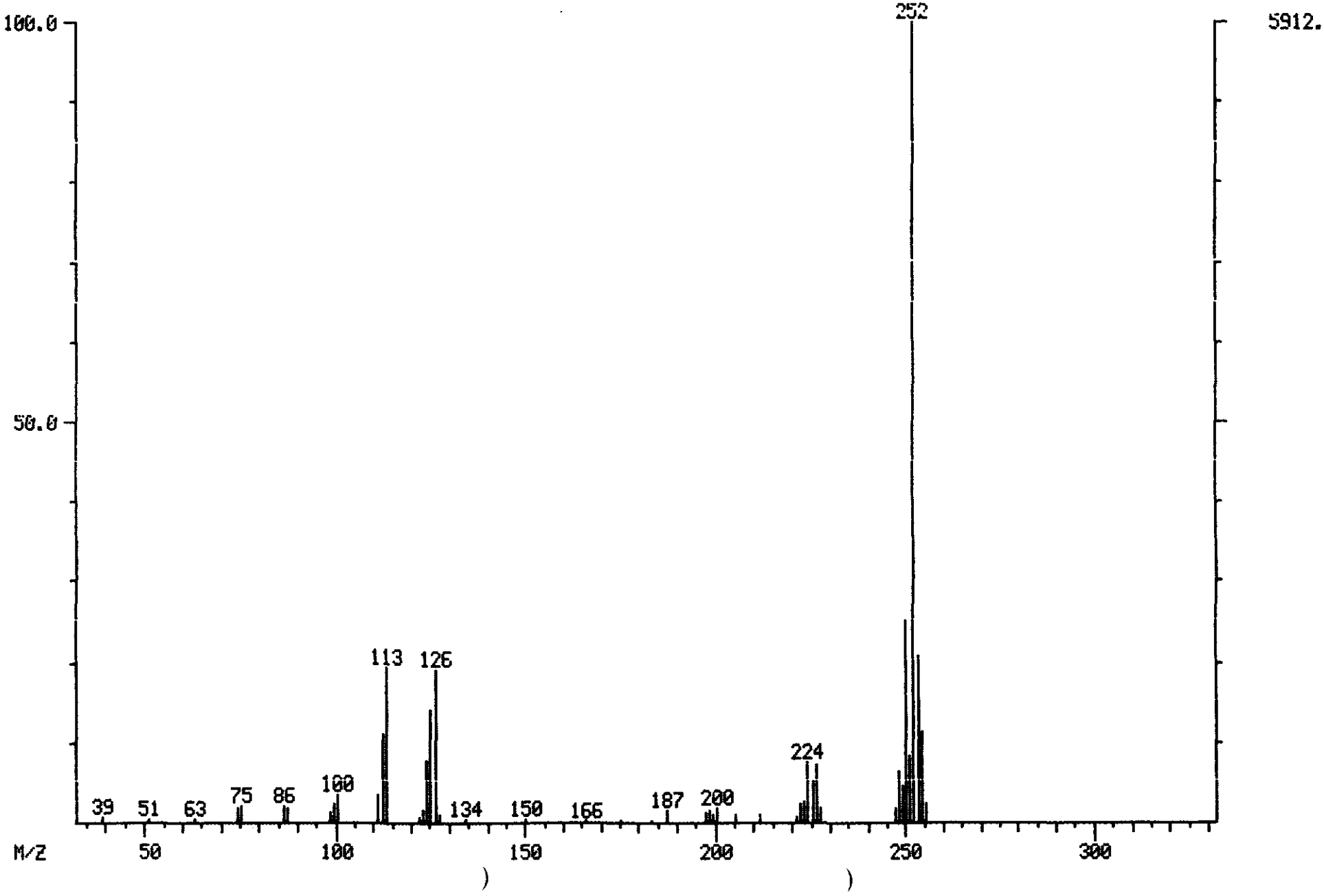
ORIGINAL (Red)

100248

MASS SPECTRUM
05/15/90 19:46:00 + 36:41
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C775 BENZO(A)PYRENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #2201
CALI: T2594 #2

BASE M/Z: 252
RIC: 18752.



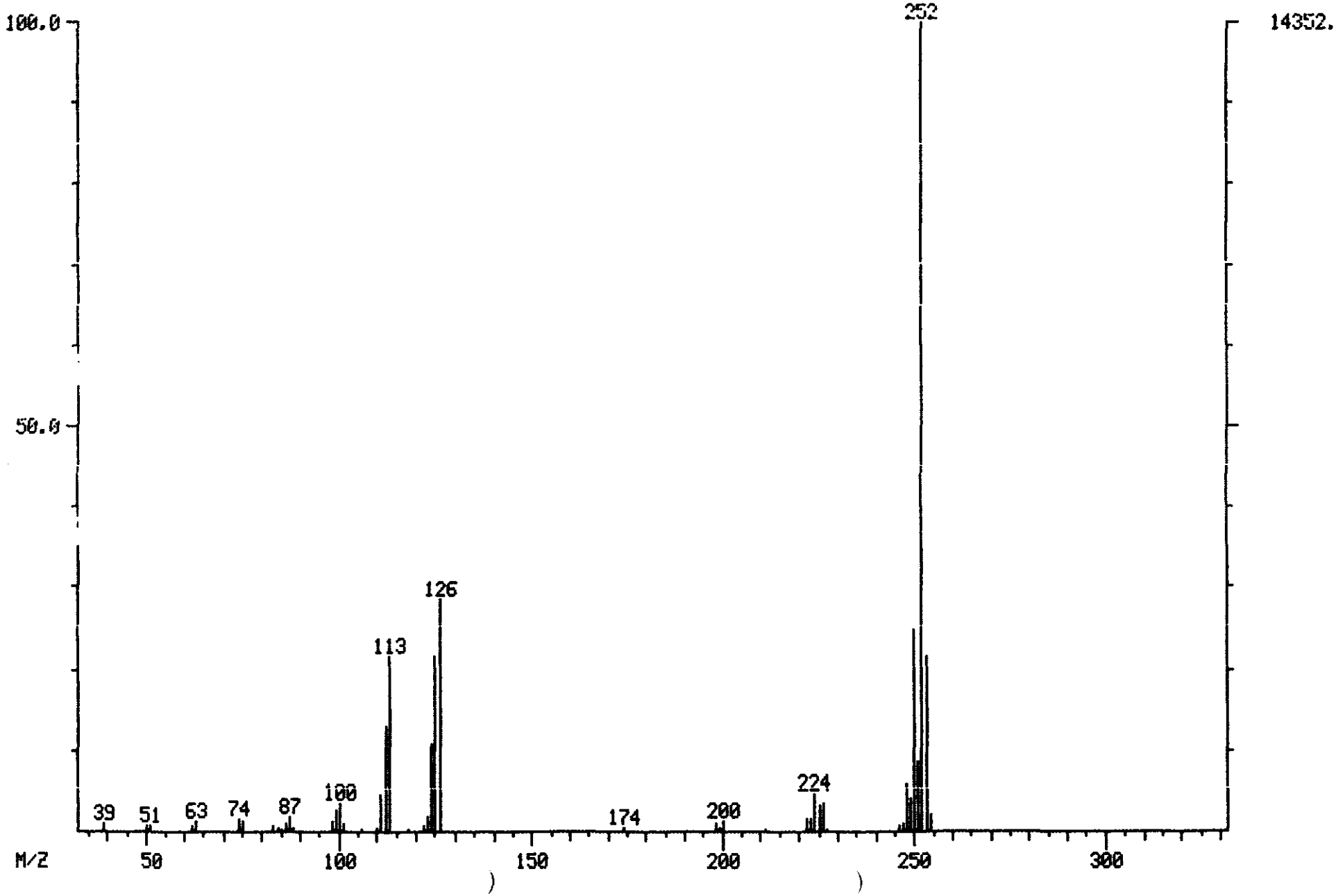
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 36:36
SAMPLE: CLP,,,SSTD 50,,,22650,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
** NAME: C775 BENZO(A)PYRENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #2196
CALI: T2583 #2

BASE M/Z: 252
RIC: 45056.

100249



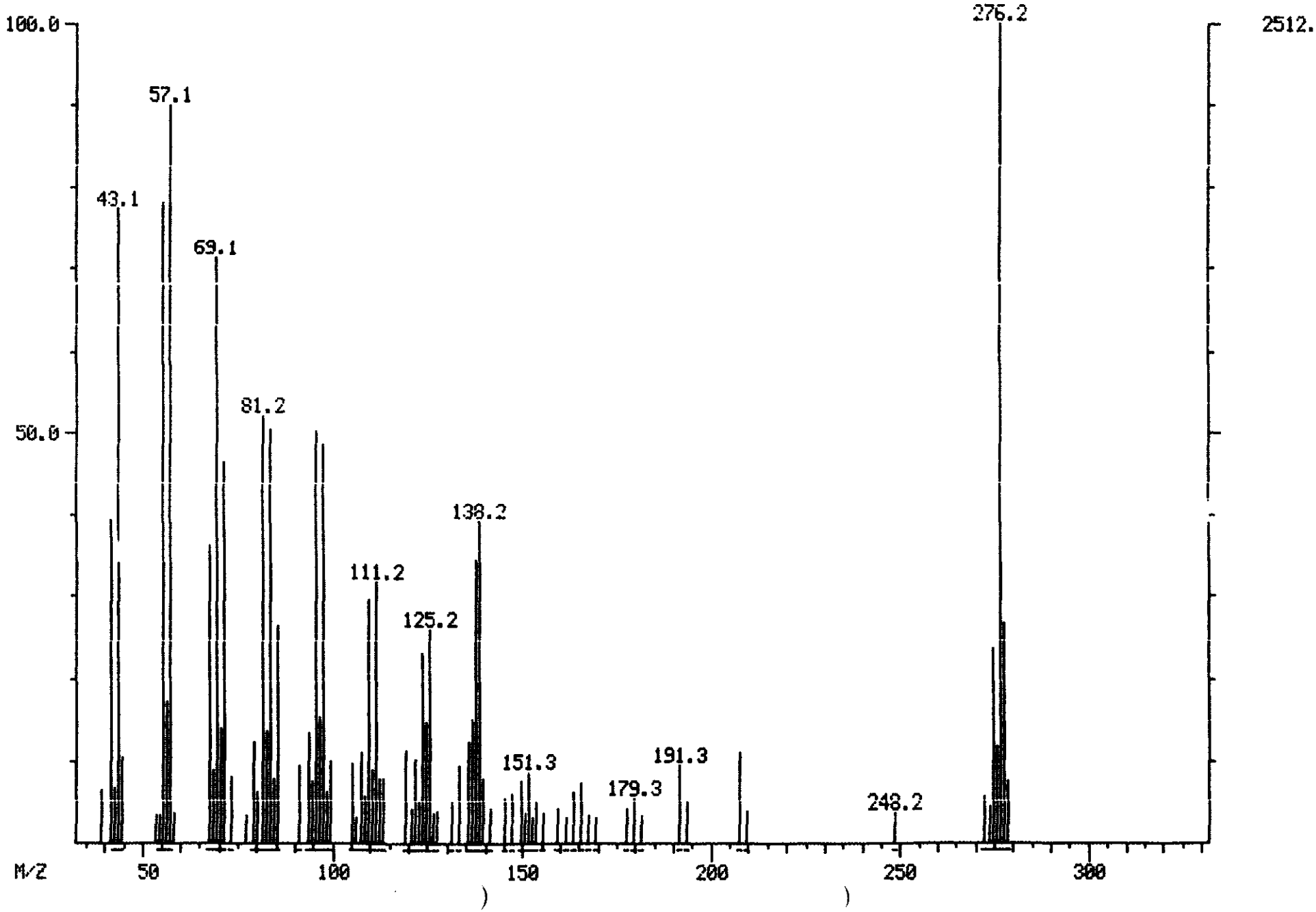
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 43:02
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C780 INDENO(1,2,3-CD)PYRENE

DATA: T2594 #2582
CALI: T2594 #2

BASE M/Z: 276
RIC: 37696.

100250

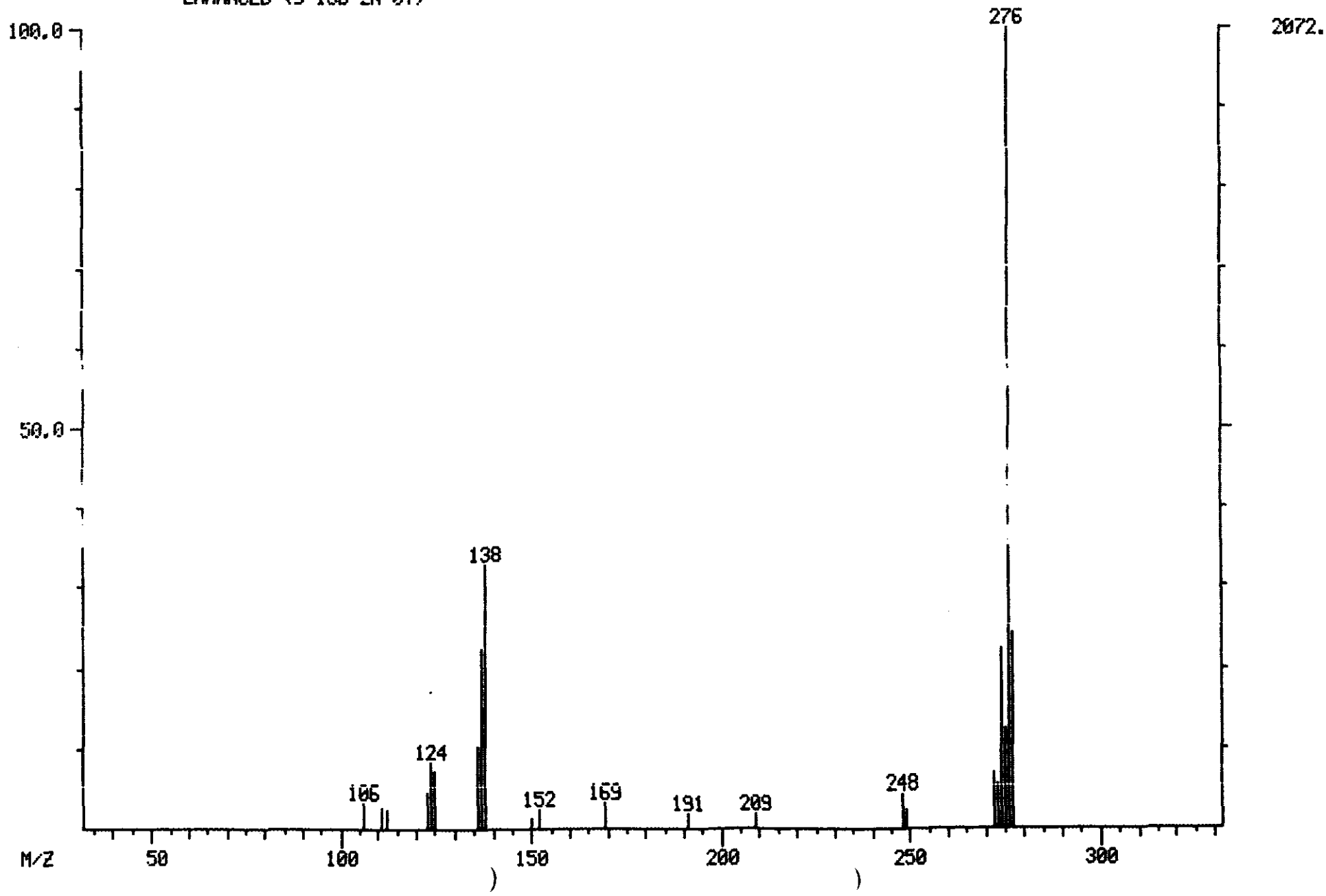


MASS SPECTRUM
05/15/90 19:46:00 + 43:02
SAMPLE: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C780 INDENO(1,2,3-CD)PYRENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #2582
CALI: T2594 #2

BASE M/Z: 276
RIC: 5888.

100251



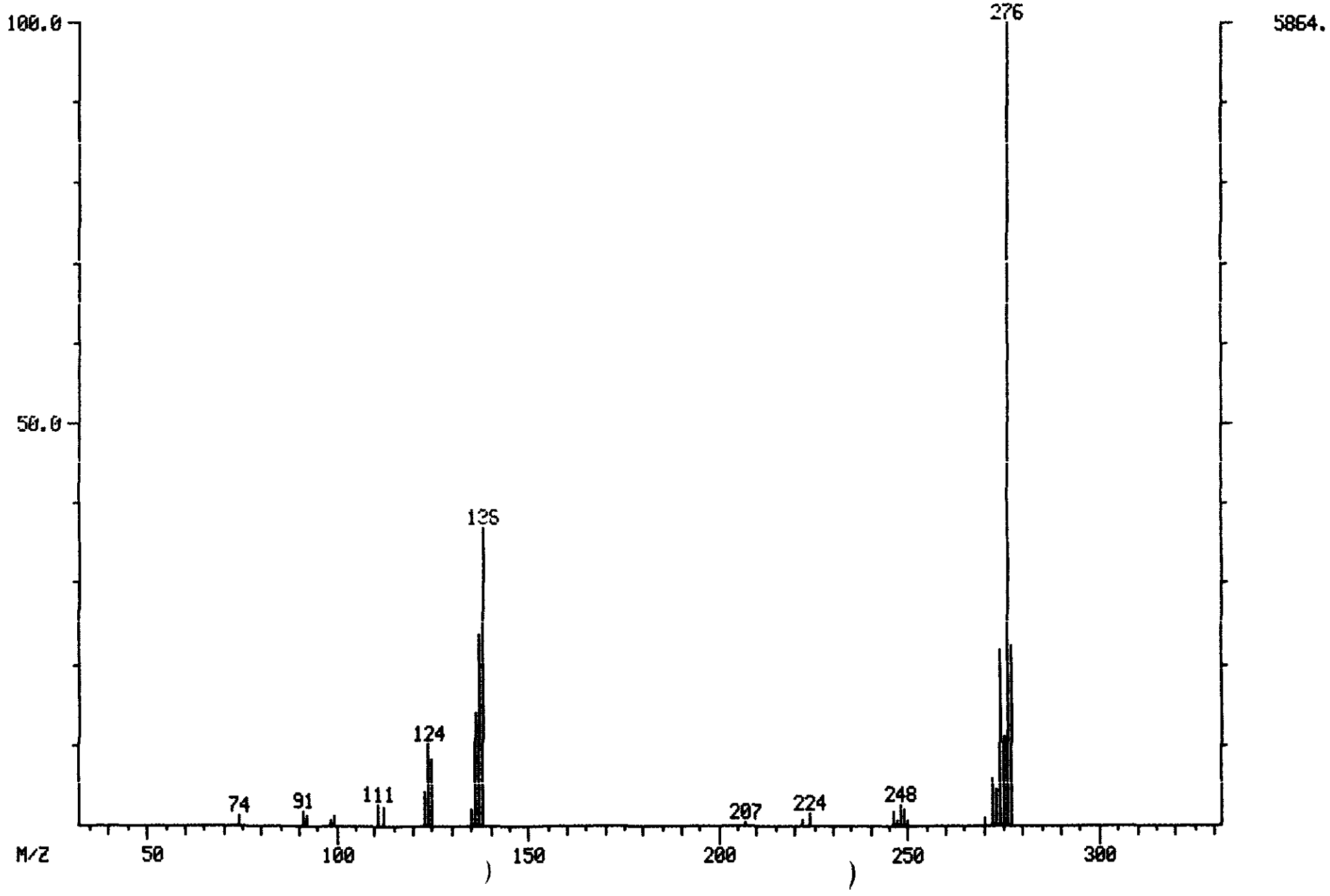
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 42:54
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 302C8C/MIN
** NAME: C790 INDENO(1,2,3-CD)PYRENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #2574
CALI: T2583 #2

BASE M/Z: 276
RIC: 17120.

100252



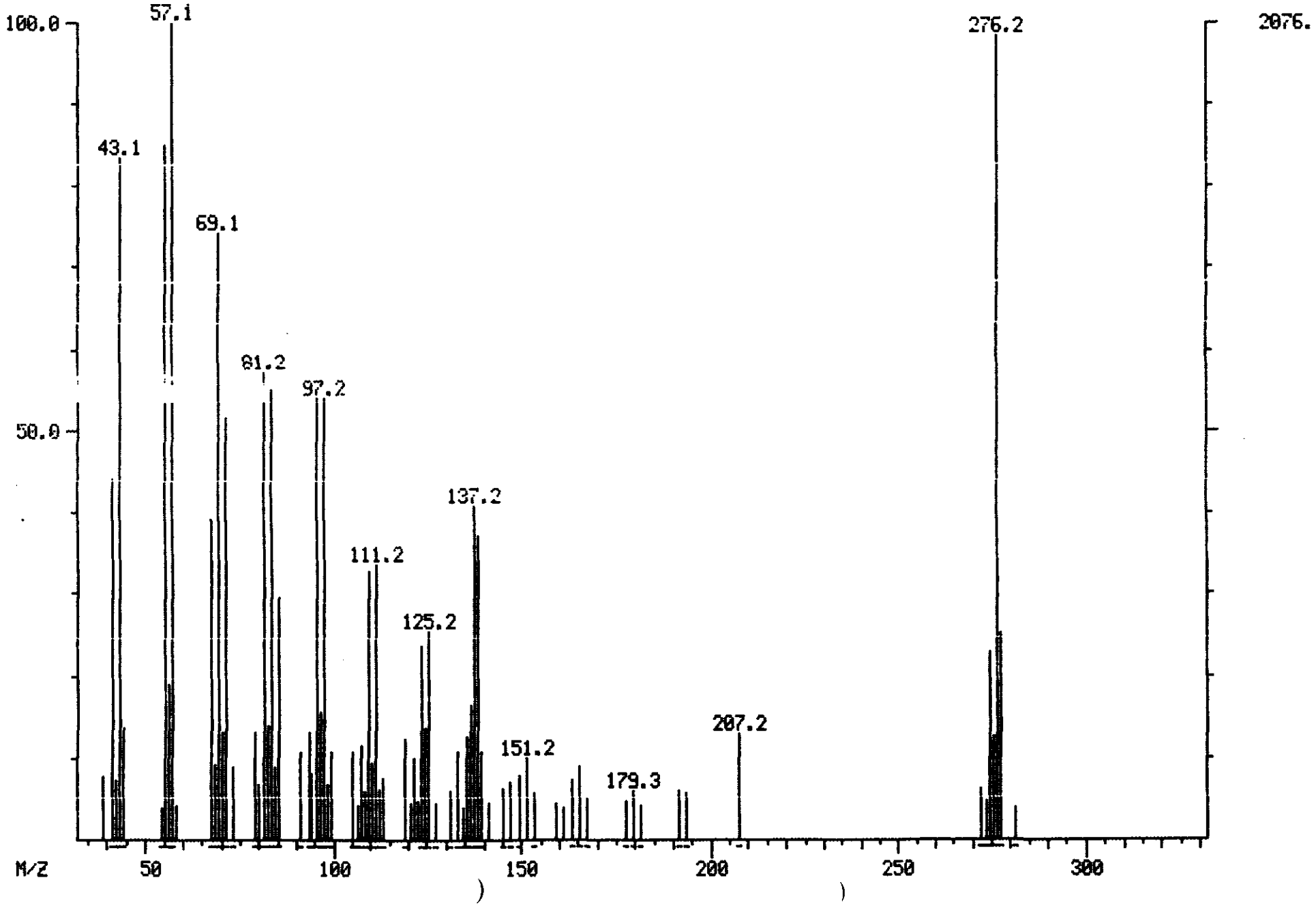
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 44:53
SAMPLE: CLP,VERSCOM,2536,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C790 BENZO(G,H,I)PERYLENE

DATA: T2594 #2693
CALI: T2594 #2

BASE M/Z: 57
RIC: 32608.

100253



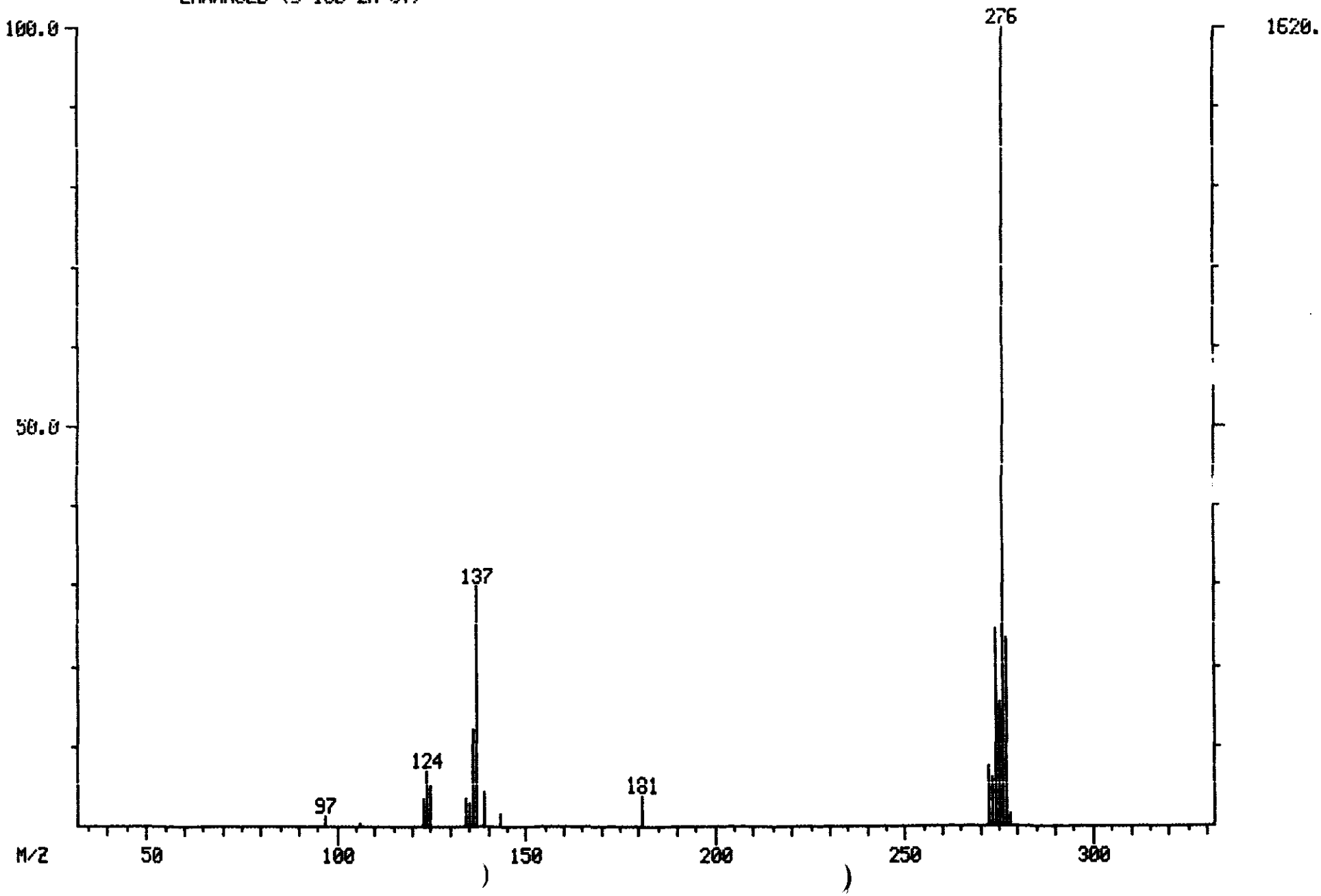
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 19:46:00 + 44:53
SAMPLE: CLP,VERSCDM,2526,6,M,S,16423,B,,420.1,2,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN038C TO 30208C/MIN
** NAME: C790 BENZO(G,H,I)PERYLENE
ENHANCED (S 15B 2N 0T)

DATA: T2594 #2693
CALI: T2594 #2

BASE M/Z: 276
RIC: 4128.

100254



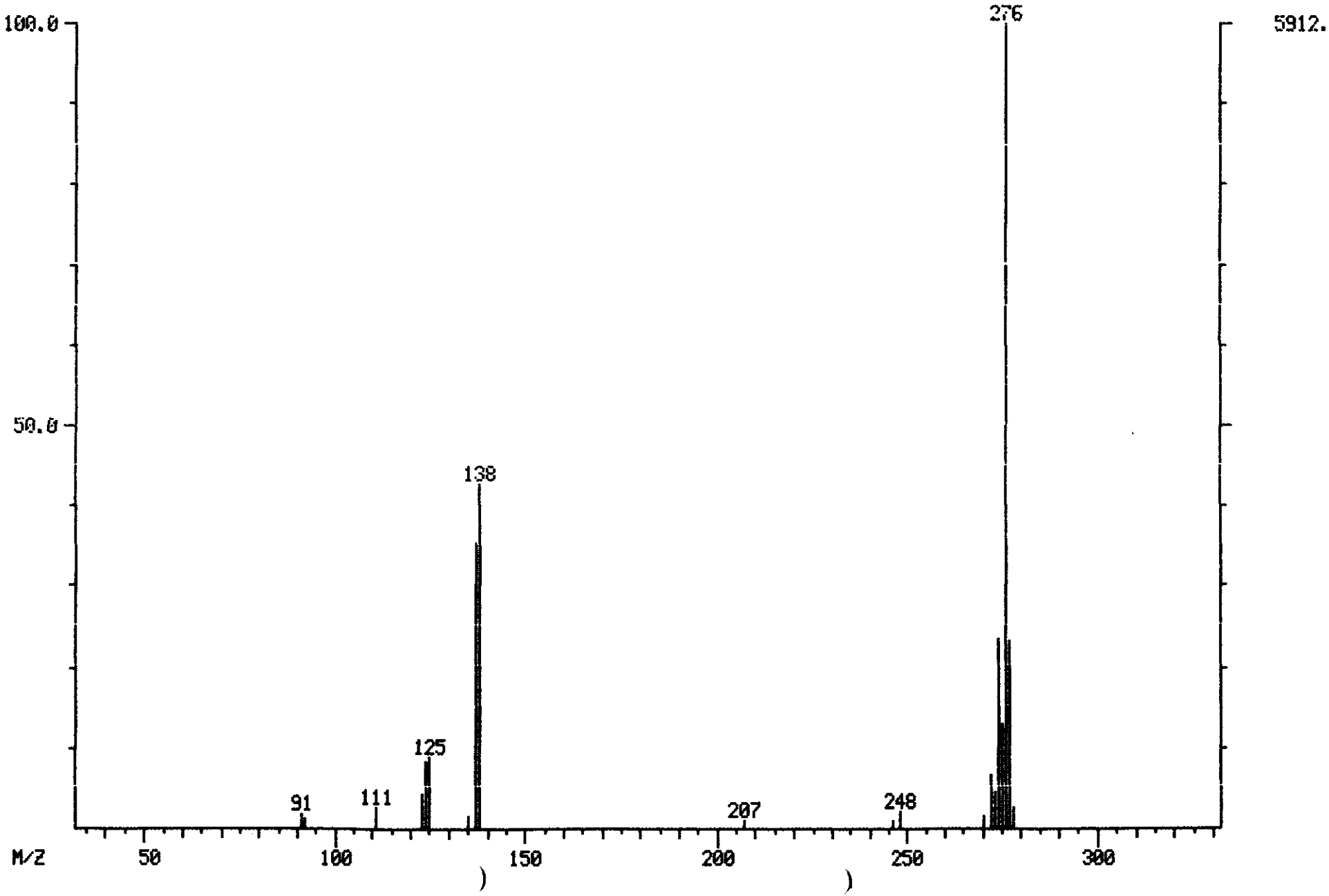
ORIGINAL (Red)

MASS SPECTRUM
05/15/90 9:42:00 + 44:45
SAMPLE: CLP,,,SSTD 50,,,22658,B,CC-050,,1UL,
CONDS.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 30208C/MIN
** NAME: C790 BENZO(G,H,I)PERYLENE
ENHANCED (S 15B 2N 0T)

DATA: T2583 #2685
CALI: T2583 #2

BASE M/Z: 276
RIC: 17056.

100255



Library Search Data: T2594 # 702 Base m/z: 73
05/15/90 19:46:00 + 11:42 Cali: T2594 # 2 RIC: 2167
Sample: CLP,VERSCDM,2536,6,M,S,16423,B,,420.1,2,1UL,
Conds.: INST T COLUMN=RESTEK 30M RTX-5 4MIN@38C TO 302@8C/MIN
Enhanced (S 15B 2N OT)

ORIGINAL (Red)

42223 spectra in LIBRARYNB searched for maximum PURITY
165 matched at least 3 of the 8 largest peaks in the unknown

Siloxane

Rank	In.	Name
1	34650	CYCLOPENTASILOXANE, DECAMETHYL-
2	34667	BENZOIC ACID, 2,4-BIS[(TRIMETHYLSILYL)OXY]-, TRIMETHYLSILYL ESTER
3	34666	BENZOIC ACID, 2,5-BIS(TRIMETHYLSILOXY)-, TRIMETHYLSILYL ESTER
4	40810	BENZENEETHANAMINE, N-[(PENTAFLUOROPHENYL)METHYLENE]-.BETA.,3,4-TRIS*
5	36250	PHENETHYLAMINE, N-METHYL-.BETA.,3,4-TRIS(TRIMETHYLSILOXY)-

Rank	Formula	M.Wt	B.Pk	Purity	Fit	RFit
1	C10.H30.O5.SI5	370	73	716	778	919
2	C16.H30.O4.SI3	370	73	646	646	877
3	C16.H30.O4.SI3	370	73	594	594	812
4	C24.H34.O3.N.F5.SI3	563	73	593	639	748
5	C18.H37.O3.N.SI3	399	355	532	532	721

Rank	Ret. Time	B.P. Int.	US.Par.1	US.Par.2	C.A.S. #
1	—	—	—	—	541-02-6
2	—	—	—	—	10586-16-0
3	—	—	—	—	3618-20-0
4	—	—	—	—	55429-13-5
5	—	—	—	—	10538-85-9