10816

FILE COPY

NUS CORPORATION
SUPERFUND DIVISION

INTERNAL CORRESPONDENCE

C-583-7-4-10

TO: ED TAYLOR

DATE: JULY 5, 1984

FROM: HANS-PETER KRAHN HPK

COPIES: FILE

SUBJECT: CAMBRIDGE ANALYTICAL DATA VALIDATION FOR INTERSTATE/WOBURN
Samples: A 2749 - A 2757
Case No. 2660
TDD No. F1-8303-07A
Job No. 3425-03
0300.01

Superfund Records Center
SITE: Wells G+H
BREAK: 5.23
OTHER: 531618

SDMS DocID 531618

The organic analytical data from Cambridge Analytical Associates (Case 2660) has been reviewed in accordance with Region I FIT Standard Operating Procedure No. 4 to insure the validity of the data presented. This evaluation for samples A 2749 through A2757 was based on Level I analysis considering the following parameters:

- data completeness
- laboratory and field blanks
- laboratory and field duplicates
- surrogate spikes
- matrix spikes
- spectral performance
- holding times

The data package contained all the pertinent information requested to accurately assess the accuracy and precision of the samples sent for analysis with only one exception: standard reference spectra was not provided. The sample spectra was therefore matched by the reviewer with the same compounds from the EPA/NIH Mass Spectral Data Base where the match was found to be satisfactory. No contaminants were found to be above the contractual detection limits in either the reagent or blind EPA lab blank. Methylene chloride and acetone were found in trace levels, and toluene also was present at a low concentration in the blind blank. The blind field blank was contaminated with chloroform and acetone and, therefore, those compounds should be rejected. Methylene chloride, toluene, and trichloroethylene were found in trace quantities below the method detection limits and are not found at higher levels in the samples so no action should be taken. The laboratory sample precision was of good quality, with no duplicate results exceeding the contractual criteria. The field duplicates were too low to be meaningful. A few of the surrogate spikes for toluene-d_8 were outside the acceptable range, but the recoveries were close and would not justify taking any action. The matrix spikes all had very good recoveries. Holding times were also met.

C-583-7-4-10

MEMO TO: ED TAYLOR
JULY 5, 1984 - PAGE TWO

Listed below is a summary of the recommendations for this case (No. 2660):

Compound	Action
acetone	R
chloroform	R

R = Rejected

I hereby acknowledge receipt and approval of the NUS/FIT Level I data validation for TDD F1-8303-07A (Case 2660) from Cambridge Analytical Associates.

Edward L Taylor

Deputy Project Officer
Regional Sample Control Center

HPK/tao

cc: D. Smith
R. DiNitto
J. Morin
A. DeMarco

TDD: 8303-07A
JOB# 3425-03

NUS CORPORATION
SUPERFUND DIVISION

C-583-74-10 **PROJECT NOTES**

TO: Ed Taylor

DATE: 28 June 1984

FROM: H-P. Krahn

COPIES: File

SUBJECT: ~~Interstate~~ Cambridge Analytical Data Validation for Interstate / Woburn

REFERENCE: Case # 2660

TDD # F1 - 8303-07A

JOB # 3425-03

The organic analytical data from Cambridge Analytical Associates (Case 2660) has been reviewed in accordance with Region I SFF Standard Operating Procedure #4 to insure the validity of the data presented. This evaluation for samples A 2749 through A2757 was based on Level I analysis considering the following parameters:

data completeness
laboratory + field blanks
lab + field duplicates
surrogate spikes
matrix spikes
spectral performance
holding times

The data package contained all the pertinent information requested to accurately assess the accuracy + precision of the samples sent for analysis with only one exception: standard reference spectra was not provided. The sample spectra was therefore matched by the reviewer with the same compounds from the EPA/NIH Mass Spectral Data Base where the match was found to be satisfactory. ~~The the laboratory blanks were found to be free of all contaminants and the~~ No contaminants were found to be above the contractual detection limits in either the reagent or blind EPA lab blank. Methylene Chloride and acetone were found in trace levels, and toluene also was present at a very low concentration in the blind blank. The blind field blank was ~~however~~ contaminated with chloroform

NUS 443A 58 1182

R? A?

and acetone, + therefore ~~causing that~~ those compounds should ~~to~~ be rejected. Methylene chloride, toluene, and trichloroethene were found in trace quantities below the method detection limits so no action should be taken. The laboratory sample precision was of good quality, with no duplicate results ~~being~~ exceeding the contractual criteria. The field duplicates were too low to be meaningful. ~~For~~ ~~two~~ A few of the surrogate spikes for Toluene-d_8 were outside the acceptable range, but the recoveries were close and would not justify ~~any~~ taking any action. The matrix spikes all had very good recoveries. Holding times were also met.

and are not found at higher levels in samples.

Listed below is a summary of the recommendations for this case (No. 2660):

Compound	Action
acetone	R
chloroform	R

R = rejected

I hereby acknowledge receipt and approval of the NUS/FIT Level 1 data validation for TDD FI-8303-07A (Case 2660) from Cambridge Analytical Associates.

Deputy Project Officer
Regional Sample Control Center

cc: D. Smith
R. DeWitto
J. Morin
A. DeMarco

NUS 443B 58 1182

Cambridge Analytical Associates
222 Arsenal Street / Watertown, Massachusetts 02172 / (617)923-9376

F.I.I.

June 1, 1984

Interstate
Joanne Morin.

Ms. Leslie Braun
US Environmental Protection Agency
CLP Sample Management Office
VIAR & Co.
300 Lee Street
Alexandria, VA 22314

Dear Leslie:

Enclosed please find the results of our analysis of samples received as case number 2660. These analyses were performed as part of our contract number 68-01-6791.

The samples were analyzed for volatile organics only. There were no unusual problems encountered during the analysis.

Please note that we elected not to screen the samples by GC/FID prior to analysis.

If you should have any questions, please feel free to call.

Sincerely,

Scott Drew

Scott R. Drew
Senior Scientist

Enclosure
mjk

DELIVERABLES INDEX

CASE # 2660

CONTRACTOR CAMBRIDGE ANALYTICAL ASSOCIATES CONTRACT # 68-01-6791

NOTE: VOLATILE ORGANICS ONLY

	SECTION TITLE
I	NARRATIVE Contains: Case #, Contract #, summary of any QC, samp: , shipment and analytical problems, documentation of any internal dec: ion tree process used.
II	QC SUMMARY *A. Surrogate % recovery summary form. *B. Reagent blank summary form. *C. Matrix spike duplicate/recovery form *D. Instrument tune & performance summary form
III	SAMPLE DATA PACKET A. Sample Data in increasing SMO # order: 1) HSL results. 2) GC/MS tentative ID sheet, even if none found. 3) Raw data (VOA, ~~A/B/N, Pest, Dioxin~~) i. Chromatogram(s) ii. Data System printout iii. HSL spectra with standard (dual display) iv. GC/MS library search spectra v. Quantitation/calculation of tentative ID conc itration
IV	STANDARDS PACKET A. Cross-reference table (lab's internal). B. VOA standards chromatograms and data system printc :. ~~C. A/B/N standards chromatograms and data system pri uts.~~ ~~D. Pesticide standards chromatograms and data system ·iutouts.~~ ~~E. Dioxin standards chromatograms and data system pri :outs.~~ *F. Internal standard verification data sheet. ~~*G. FSCC initial calibration data.~~ *H. Calibration check. I. Current list of lab detection limits.

*Designates new form.

cont.

	SECTION TITLE
V	RAW QC DATA PACKET ~~A. DFTPP~~ ~~*1) GC/MS performance standard form.~~ ~~2) Bar graph spectrum.~~ ~~3) M/Z listing.~~ B. BFB *1) GC/MS performance standard form. 2) Bar graph spectrum. 3) M/Z listing. C. Chromatography Check Data 1) Benzidine EICP's. 2) Pentachlorophenol EICP's/calculations. 3) GC/EC column check. D. Blank Data(in order VOA, A/B/N, Pesticide, Dioxin) 1) Chromatograms. 2) Data system printout. E. Matrix Spike Data(in order VOA, A/B/N, Pesticide) 1) Chromatograms. 2) Data system printout. F. Matrix Spike Duplicate Data(in order VOA, A/B/N, Pesticide) 1) Chromatograms. 2) Data system printout.
VI	SAMPLE PREPARATION PACKET A. Sample control sheet (lab's internal). B. Screen data(in order VOA, A/B/N, pesticide) 1) GC/FID chromatograms. 2) GC screen data sheets.

*Designates new form.

WATER SURROGATE PERCENT RECOVERY SUMMARY

CASE NO. 2660
LOW LEVEL X
WATER X
QC REPORT NO. 011

CONTRACTOR Cambridge Analytical
MED. LEVEL

CONTRACT NO. 68-01-6791
HIGH LEVEL
OTHER (Specify)

[------- Volatile --------][---------- Semi-Volatile ----------][Pesticide][Dioxin]

SMO Traffic No.	D_8 Toluene (84-114)	BFB (63-127)**	D_4-1,2 Dichloro Ethane (90-130)**	D_5 Nitro Benzene (42-131)	2-Fluoro Biphenyl (50-154)	D_{14} p-Ter Phenyl (54-118)**		D_5 Phenol (15-90)	2-Fluoro Phenol (25-115)	2,4,6-Tribromo Phenol (47-123)**	Dibutyl Chlor-endate (67-114)**	1,2,3,4 TCDD (26-104)
A2749	97	96	82 *									
A2750	93	90	84 *									
A2751	94	93	80 *									
A2752	92	90	79 *									
A2753	91	86	81 *									
A2754	78 *	84	85 *									
A2755	80 *	93	88 *									
A2756	83 *	87	85 *									
A2757	75 *	86	93									
Blank	109	125	78 *									
MS	91	89	82 *									
MSD	105	103	74 *									

*Asterisked values are outside of QC limits.
**Advisory Limits.

Comments:

Volatiles: 15 out of 36; outside of QC limits
Semi-Volatiles: ___ out of ___; outside of QC limits
Pesticides: ___ out of ___; outside of QC limits
Dioxin: ___ out of ___; outside of QC limits

Date Limit Set 12/82
Revision Due 6/83

FORM III

00003

REAGENT BLANK SUMMARY

CASE NO. 2660
LOW LEVEL X
WATER X
QC REPORT NO. 011

CONTRACTOR Cambridge Analytical
MED. LEVEL
SOIL/SED.

CONTRACT NO. 68-01-6791
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) ug/Kg ug/l

FRACTION	CAS NUMBER	COMPOUND	CONCENTRATION	CONTRACT DETECTION LIMITS	COMMENTS
VOLATILES:	75-09-2	Methylene Chloride	2.3	5	Airborne or Meoh
	67-64-1	Acetone	3.1	5	Airborne or Meoh
File I.D. CLPVOA32					
Instrument I.D. OWA					
SEMI-VOLATILES:					
File I.D.					
Instrument I.D.					
PESTICIDES:					
File I.D.					
Instrument I.D.					

FORM IV

00004

MATRIX SPIKE DUPLICATE/RECOVERY

CASE NO. 2660
LOW LEVEL X
WATER X
QC REPORT NO. 011

CONTRACTOR Cambridge Analytical
MED. LEVEL
SOIL/SED.

CONTRACT NO. 68-01-6791
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) ug/Kg (ug/l)

FRACTION	COMPOUND	CONC. SPIKE ADDED	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY	COMMENTS
VOA SMO # A2749	1,1-Dichloroethylene	25	11.9	48*	13.2	53	10.3	<15%	51-151	
	Trichloroethylene	25	21.9	88	22.4	90	2.3	<15%	74-128	
	Chlorobenzene	25	22.7	91	26.6	106	15.8*	<15%	67-131	
	Toluene	25	25.1	100	26.6	106	5.8	<15%	58-132	
	Benzene	25	25.0	100	26.3	105	5.1	<15%	56-132	
B/N SMO #	1,2,4-Trichlorobenzene							<50%	38-108	
	Acenaphthene							<50%	57-115	
	2,4-Dinitrotoluene							<50%	43-113	
	Di-N-Butylphthalate							<50%	13-113	
	Pyrene							<50%	25-137	
	N-Nitrosodi-N-Propylamine							<50%	34-114	
	1,4-Dichlorobenzene							<50%	33-103	
ACID SMO #	Pentachlorophenol							<40%	19-123	
	Phenol							<40%	23- 81	
	2-Chlorophenol							<40%	33-107	
	P-Chloro-M-Cresol							<40%	32-108	
	4-Nitrophenol							<40%	15- 93	
PEST SMO #	Lindane							<40%	87-107	
	Heptachlor							<40%	43-125	
	Aldrin							<40%	45-109	
	Dieldrin							<40%	56-122	
	Endrin							<40%	89-101	
	p,p-DDT							<40%	82-102	

*Asterisked values are outside QC limits.

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

RECOVERY: VOAs 1 out of 10; outside QC limits
B/N ___ out of ___; outside QC limits
ACID ___ out of ___; outside QC limits
PEST ___ out of ___; outside QC limits

*Date Limits Set 12/82
Revision Due 6/83

FORM V

00005

Cambridge Analytical Associates

SAMPLE DATA PACKET

P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

A2749

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-434
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

ET 7/24/84

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U RET
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	EL ~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	EL ~~5U~~ 5K
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	EL ~~5U~~ 5K RET
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

December 1983

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2749

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: ____)	Estimated Concentration (ug/l or ug/kg)
1.	NONE DETECTED	VOA			
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/82

FORM II (continued)

A2750

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-435
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

ET 7/24/84

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U Q
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	~~50~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	~~50~~ 5K R
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2750

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: ____)	Estimated Concentration (ug/L or ug/kg)
1.	NONE DETECTED	VOA			
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/82

FORM II (continued)

P.O. Box 370, Alexandria, Virginia 22313 - 703/557-2490

A2751

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-436
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

EL 7/24/84

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U Q
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	EL ~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	EL ~~5U~~ 5KA
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

December 1983

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2751

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: ____)	Estimated Concentration (ug/L or ug/kg)
1.	NONE DETECTED	VOA			
2.					
3.					
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6/82

FORM II (continued)

P.O. Box 818, Alexandria, Virginia 22313 • 703/557-2490

2752

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-437
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

EL 7/24/84

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U Q
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	EL ~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	EL ~~5U~~ 5K
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	EL ~~5U~~ 8BR
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2752

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: PURITY)	Estimated Concentration (ug/L or ug/kg)
1.	3-Methoxy-3 Methyl-2-Butanone	VOA	211	91.4 %	5
2.					
3.					
4.					
5.					
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FORM II (continued)

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A2753

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-438
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

ET 7/24/84

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U R
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	B ~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	B ~~5U~~ 5K
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2753

Laboratory Name: Cambridge Analytical Case No.: 2660

QC Report No.: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: _____)	Estimated Concentration (ug/L or ug/kg)
1.	NONE DETECTED	VOA			
2.					
3.					
4.					
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FORM II (continued)

P.O. Box 818, Alexandria, Virginia 22313 • 703/557-2490

A2754

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-439
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: Scott Drew
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

E1 3/24/84

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U R
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	E ~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	E ~~5U~~ 5KR
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

December 1983

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2754

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: ____)	Estimated Concentration (ug/L or ug/kg)
1.	NONE DETECTED	VOA			
2.					
3.					
4.					
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6/22

FORM II (continued)

P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

A2755

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402 - 440
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	EJ 7/24/84 100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	EJ ~~5U~~ 19B
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	EJ ~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	EJ ~~5U~~ 5K
(87V)	79-01-6	trichloroethene	EJ ~~5U~~ 5K
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	EJ ~~5U~~ 11BR
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

December 1983

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number A2755

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: ____)	Estimated Concentration (ug/L or ug/kg)
1.	NONE DETECTED	VOA			
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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16.					
17.					
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20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/82

FORM II (continued)

P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

2756

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-441
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5UR
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	CL ~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	CL ~~5U~~ 5KR
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

EJ 7/24/84

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2756

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: _____)	Estimated Concentration (ug/L or ug/kg)
1.		NONE DETECTED	VOA			
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
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29.						
30.						

6/82

FORM II (continued)

P.O. Box 818, Alexandria, Virginia 22313 • 703/557-2490

A2757

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Cambridge Analytical Associates
Case No: 2660
Lab Sample ID No: 8402-442
QC Report No: 011
Sample Matrix: Water
Contract No.: 68-01-6791
Data Release Authorized By: [signature]
Date Sample Received: 5/3/84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: —
DATE ANALYZED: 5/5/84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR: 5:1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	1U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	5U R
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	trans-1,2-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	5U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	~~5U~~ 5K
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	—
(50V)	75-71-8	dichlorodifluoromethane	—
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	10U
	67-64-1	acetone	~~5U~~ 5R
	78-93-3	2-butanone	5U
	75-15-0	carbondisulfide	1U
	519-78-6	2-hexanone	5U
	108-10-1	4-methyl-2-pentanone	5U
	100-42-5	styrene	5U
	108-05-4	vinyl acetate	5U
	1330-20-7	total xylenes	5U

E1 9/23/84

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

NOT ANALYZED

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	
(90P)	60-57-1	dieldrin	
(91P)	57-74-9	chlordane	
(92P)	50-29-3	4,4'-DDT	
(93P)	72-55-9	4,4'-DDE	
(94P)	72-54-8	4,4'-DDD	
(95P)	115-29-7	α-endosulfan	
(96P)	115-29-7	β-endosulfan	
(97P)	1031-07-8	endosulfan sulfate	
(98P)	72-20-8	endrin	
(99P)	7421-93-4	endrin aldehyde	
(100P)	76-44-8	heptachlor	
(101P)	1024-57-3	heptachlor epoxide	
(102P)	319-84-6	α-BHC	
(103P)	319-85-7	β-BHC	
(104P)	319-86-8	δ-BHC	
(105P)	58-89-9	γ-BHC (lindane)	
(106P)	53469-21-9	PCB-1242	
(107P)	11097-69-1	PCB-1254	
(108P)	11104-28-2	PCB-1221	
(109P)	11141-16-5	PCB-1232	
(110P)	12672-29-6	PCB-1248	
(111P)	11096-82-5	PCB-1260	
(112P)	12674-11-2	PCB-1016	
(113P)	8001-35-2	toxaphene	

DIOXINS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: A2757

Laboratory Name: Cambridge Analytical Case No: 2660

QC Report No: 011

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: ____)	Estimated Concentration (ug/L or ug/kg)
1.	NONE DETECTED	VOA			
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/82

FORM II (continued)

Cambridge Analytical Associates

Cambridge Analytical Associates, Inc.

KEY TO VOLATILE ORGANICS ANALYSIS

PEAK LABELING

Case Number: 2660

Peak Label	Peak Identity
IS 1	bromochloromethane
IS 2	1-bromo-2-chloropropane
IS 3	1,4-dichlorobutane
SS 1	d_4-1,2-dichloroethane
SS 2	d_8-toluene
SS 3	4-bromofluorobenzene

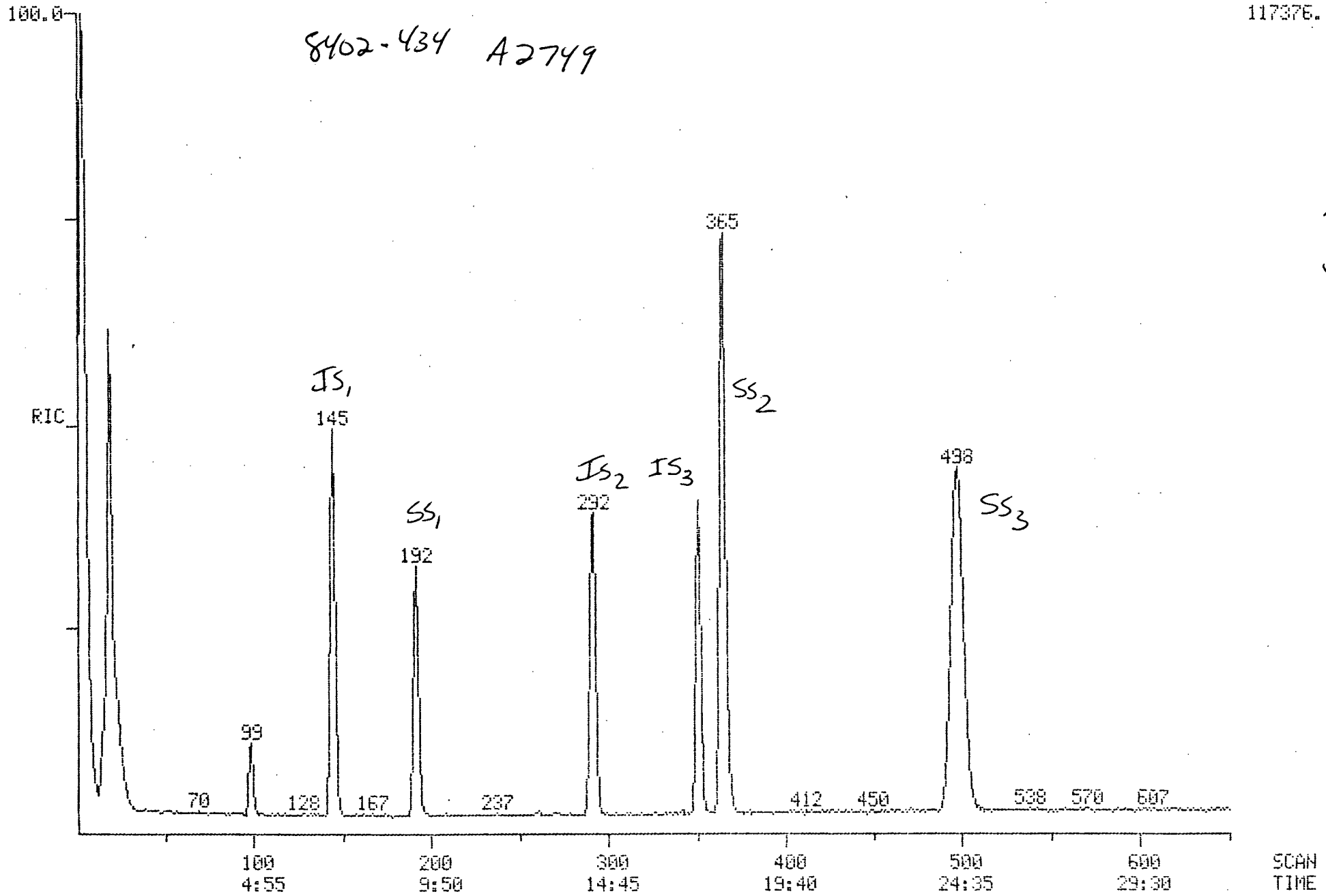
RIC
05/05/84 12:04:00
SAMPLE:

CASE2660

8402-434 A2749

DATA: CLPVOA23 SCANS 1 TO 650

00026



A2749 (184)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA23

DATA: CLPVOA23.TI
05/05/84 12:04:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	145	7:08	1	1.000	A BB	39589.	50.000 UG/L	11.51
2	NOT FOUND								
3	NOT FOUND								

A2749 (2 84)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
4	NOT	FOUND									
5	NOT	FOUND									
6	84	99	4:52	1	0.683	A BB	6918.	2.918	UG/L	0.67	BLK
7	NOT	FOUND									
8	NOT	FOUND									
9	NOT	FOUND									
10	NOT	FOUND									
11	NOT	FOUND									
12	102	192	9:26	1	1.324	A BB	5412.	82.419	PRCNT	18.98	✓
13	NOT	FOUND									
14	NOT	FOUND									
15	NOT	FOUND									
16	NOT	FOUND									
17	NOT	FOUND									
18	43	105	5:10	1	0.724	A BB	552.	3.540	UG/L	0.82	BLK
19	NOT	FOUND									
20	NOT	FOUND									
21	77	291	14:18	21	1.000	A BB	62414.	50.000	UG/L	11.51	
22	NOT	FOUND									
23	NOT	FOUND									
24	NOT	FOUND									
25	NOT	FOUND									
26	NOT	FOUND									
27	NOT	FOUND									
28	NOT	FOUND									
29	55	351	17:15	29	1.000	A BB	60354.	50.000	UG/L	11.51	
30	NOT	FOUND									
31	NOT	FOUND									
32	NOT	FOUND									
33	NOT	FOUND									
34	NOT	FOUND									
35	100	364	17:54	29	1.037	A BB	92320.	96.720	PRCNT	22.27	✓
36	92	368	18:06	29	1.048	A BB	4474.	2.434	UG/L	0.56	BLK
37	NOT	FOUND									
38	NOT	FOUND									
39	95	498	24:29	29	1.419	A BB	94882.	96.230	PRCNT	22.16	✓
40	NOT	FOUND									
41	NOT	FOUND									

A2749 (384)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 726 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	145	981	912	1	1	1	0
6	100	99	970	752	6	1	1	0
12	194	192	998	748	12	1	1	0
18	107	105	760	68	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 8985 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

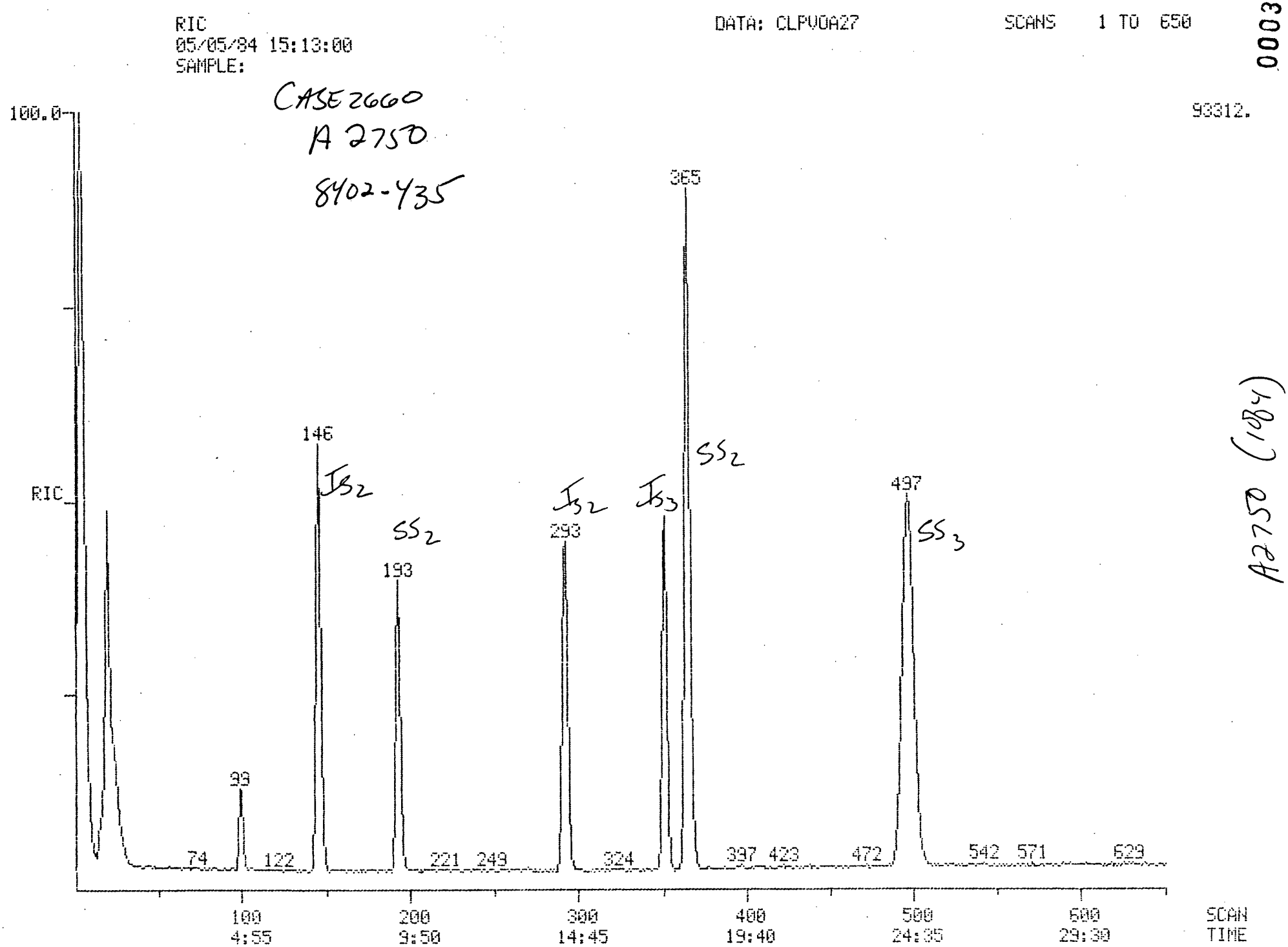
EPORT NTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	294	291	980	487	1	1	1	0

E INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -50 % OF THE LAST STANDARD RUN
MPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

PORT TRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	351	992	505	1	1	1	0
COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTIT								
32	320	319	504	82	4	1	0	0
35	365	364	971	848	7	1	1	0
36	368	368	902	372	8	1	1	0
39	496	498	987	828	11	1	1	0

MBER OF COMPOUNDS IDENTIFIED 10
TA PROCESSING OF CLPVOA23 COMPLETED ON 5/05/84 13:12:19

A2749(484)


RIC
05/05/84 15:13:00
SAMPLE:
DATA: CLPVOA27
SCANS 1 TO 650
CASE 2660
A 2750
8402-435
100.0
93312.
RIC
146
IS2
SS2
193
293
IS2
IS3
365
SS2
497
SS3
99
74
122
221
249
324
397
423
472
542
571
629
100
4:55
200
9:50
300
14:45
400
19:40
500
24:35
600
29:30
SCAN
TIME
A2750 (1084)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA27

DATA: CLPVOA27.TI
05/05/84 15:13:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	146	7:11	1	1.000	A BB	36900.	50.000 UG/L	11.77
2	NOT FOUND								
3	NOT FOUND								

A2750 (284)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
4	NOT	FOUND									
5	NOT	FOUND									
6	84	99	4:52	1	0.678	A BB	6704.	3.034	UG/L	0.71	BCK
7	NOT	FOUND									
8	NOT	FOUND									
9	NOT	FOUND									
10	NOT	FOUND									
11	NOT	FOUND									
12	102	193	9:29	1	1.322	A BB	5167.	84.422	PRCNT	19.87	✓
13	NOT	FOUND									
14	NOT	FOUND									
15	NOT	FOUND									
16	NOT	FOUND									
17	NOT	FOUND									
18	43	106	5:13	1	0.726	A BB	583.	4.012	UG/L	0.94	BCK
19	NOT	FOUND									
20	NOT	FOUND									
21	77	293	14:24	21	1.000	A BB	57636.	50.000	UG/L	11.77	
22	NOT	FOUND									
23	NOT	FOUND									
24	NOT	FOUND									
25	NOT	FOUND									
26	NOT	FOUND									
27	NOT	FOUND									
28	NOT	FOUND									
29	55	352	17:18	29	1.000	A BB	59016.	50.000	UG/L	11.77	
30	NOT	FOUND									
31	NOT	FOUND									
32	NOT	FOUND									
33	NOT	FOUND									
34	NOT	FOUND									
35	100	365	17:57	29	1.037	A BB	86768.	92.964	PRCNT	21.88	✓
36	NOT	FOUND									
37	NOT	FOUND									
38	NOT	FOUND									
39	95	497	24:26	29	1.412	A BB	87224.	90.470	PRCNT	21.29	✓
40	NOT	FOUND									
41	NOT	FOUND									

A2750 (3/84)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 670 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	146	986	918	1	1	1	0
6	100	99	970	772	6	1	1	0
12	194	193	997	768	12	1	1	0
18	107	106	760	73	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 8289 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	294	293	977	482	1	1	1	0

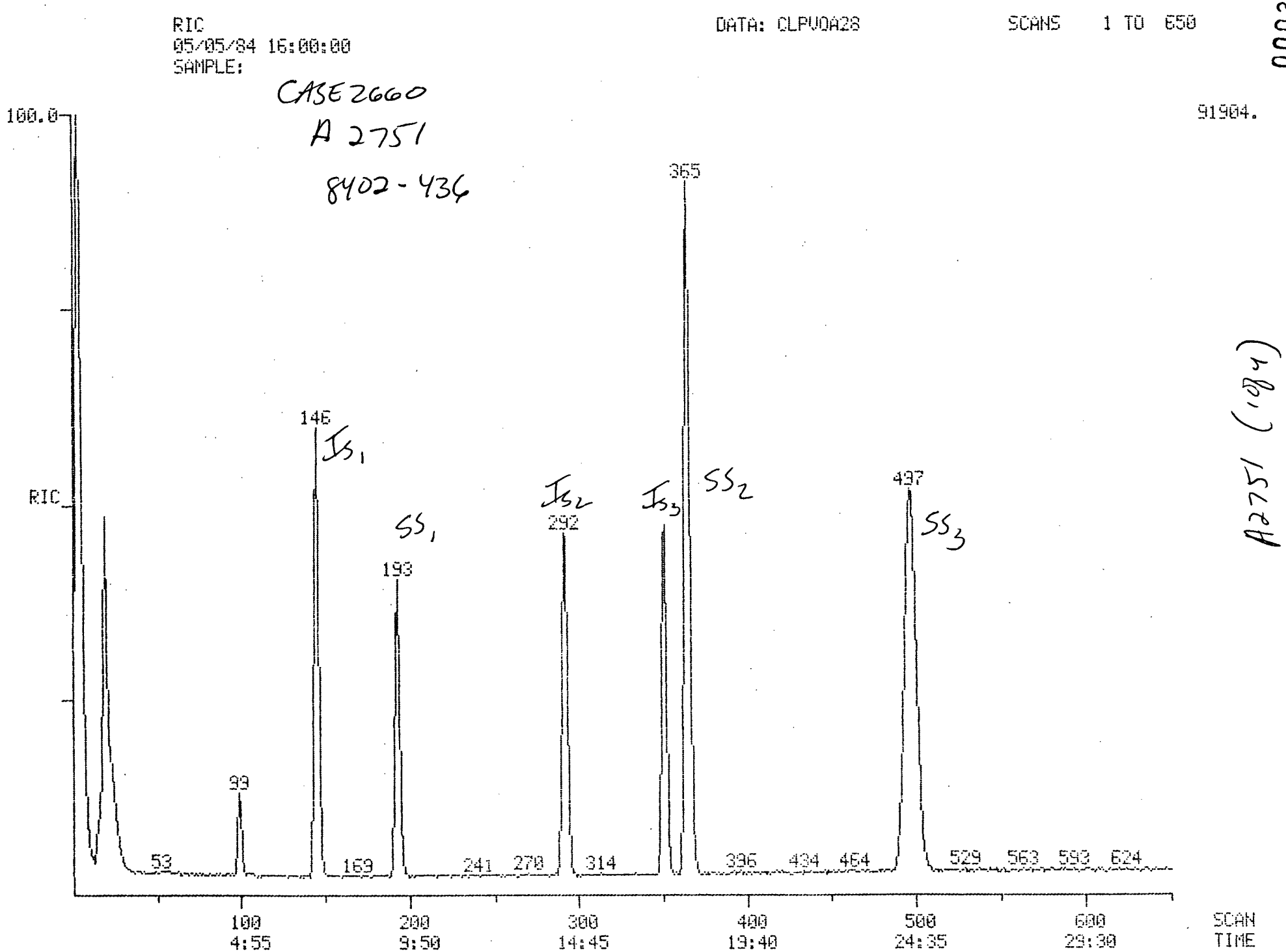
THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -51 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	352	986	508	1	1	1	0
35	365	365	972	848	7	1	1	0
39	496	497	987	836	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF CLPVOA27 COMPLETED ON 5/05/84 16:19:27

A2750 (4 of 4)

00034


RIC
05/05/84 16:00:00
SAMPLE:
DATA: CLPVOA28
SCANS 1 TO 650
CASE 2660
A 2751
8402-436
100.0
91904.
RIC
146
Is1
SS1
193
Is2
292
Is3
365
SS2
497
SS3
99
53
169
241
270
314
396
434
464
529
563
593
624
100
4:55
200
9:50
300
14:45
400
19:40
500
24:35
600
29:30
SCAN
TIME
A2751 (1984)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA28

DATA: CLPVOA28.TI
05/05/84 16:00:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	146	7:11	1	1.000	A BB	36916.	50.000 UG/L	11.83
2	NOT FOUND								
3	NOT FOUND								

A2757 (2 of 4)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
4	NOT	FOUND									
5	NOT	FOUND									
6	84	99	4:52	1	0.678	A BB	6381.	2.887	UG/L	0.68	BLK
7	NOT	FOUND									
8	NOT	FOUND									
9	NOT	FOUND									
10	NOT	FOUND									
11	NOT	FOUND									
12	102	193	9:29	1	1.322	A BB	4906.	80.123	PRCNT	18.96	✓
13	NOT	FOUND									
14	NOT	FOUND									
15	NOT	FOUND									
16	NOT	FOUND									
17	NOT	FOUND									
18	43	106	5:13	1	0.726	A BB	367.	2.524	UG/L	0.60	BLK
19	NOT	FOUND									
20	NOT	FOUND									
21	77	292	14:21	21	1.000	A BB	58406.	50.000	UG/L	11.83	
22	NOT	FOUND									
23	NOT	FOUND									
24	NOT	FOUND									
25	NOT	FOUND									
26	NOT	FOUND									
27	NOT	FOUND									
28	NOT	FOUND									
29	55	352	17:18	29	1.000	A BB	58277.	50.000	UG/L	11.83	
30	NOT	FOUND									
31	NOT	FOUND									
32	NOT	FOUND									
33	NOT	FOUND									
34	NOT	FOUND									
35	100	365	17:57	29	1.037	A BB	86737.	94.110	PRCNT	22.27	✓
36	NOT	FOUND									
37	NOT	FOUND									
38	NOT	FOUND									
39	95	498	24:29	29	1.415	A BB	88409.	92.861	PRCNT	21.98	✓
40	NOT	FOUND									
41	NOT	FOUND									

A2757 (3of4)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 671 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	146	985	915	1	1	1	0
6	100	99	969	766	6	1	1	0
12	194	193	997	752	12	1	1	0
18	107	106	760	37	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 8401 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	294	292	973	491	1	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -52 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	352	993	507	1	1	1	0
35	365	365	970	846	7	1	1	0
39	496	497	990	837	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF CLPVOA28 COMPLETED ON 5/05/84 17:06:41

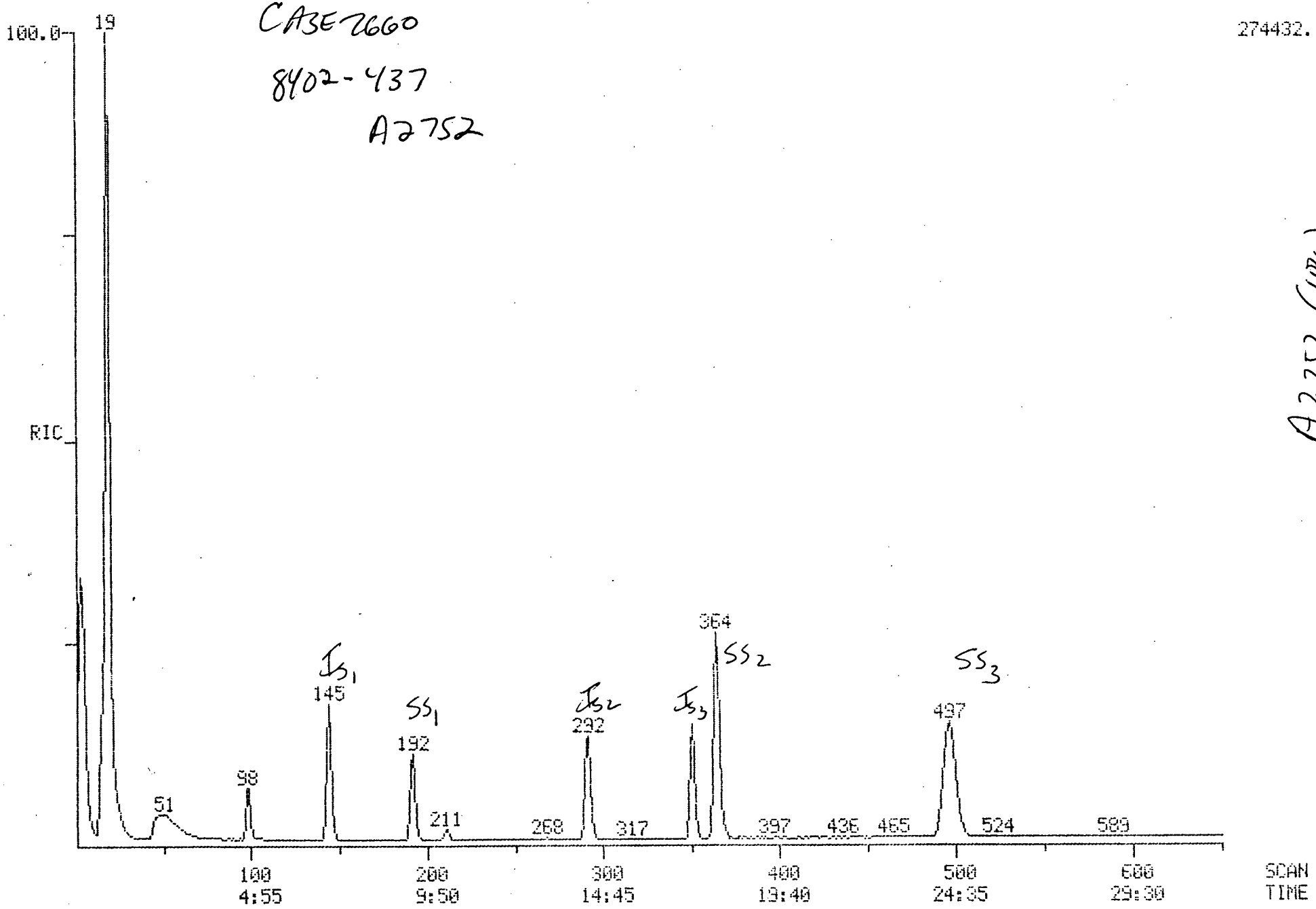
A2757 (484)

RIC
05/05/84 16:47:00
SAMPLE:

CASE 2660
8402-437
A2752

DATA: CLPVOA29 SCANS 1 TO 650

00038



A2752 (1984)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA29

DATA: CLPVOA29.TI
05/05/84 16:47:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	145	7:08	1	1.000	A BB	32366.	50.000 UG/L	11.51
2	NOT FOUND								
3	NOT FOUND								

A2752(284)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
4	NOT	FOUND									
5	NOT	FOUND									
6	84	98	4:49	1	0.676	A BB	11813.	6.095	UG/L	1.40	BLK
7	NOT	FOUND									
8	NOT	FOUND									
9	NOT	FOUND									
10	NOT	FOUND									
11	NOT	FOUND									
12	102	192	9:26	1	1.324	A BB	4242.	79.018	PRCNT	18.19	✓
13	NOT	FOUND									
14	NOT	FOUND									
15	NOT	FOUND									
16	NOT	FOUND									
17	NOT	FOUND									
18	43	105	5:10	1	0.724	A BB	1688.	13.242	UG/L	3.05	BLK
19	NOT	FOUND									
20	NOT	FOUND									
21	77	292	14:21	21	1.000	A BB	49904.	50.000	UG/L	11.51	
22	NOT	FOUND									
23	NOT	FOUND									
24	NOT	FOUND									
25	NOT	FOUND									
26	NOT	FOUND									
27	NOT	FOUND									
28	NOT	FOUND									
29	55	351	17:15	29	1.000	A BB	51853.	50.000	UG/L	11.51	
30	NOT	FOUND									
31	NOT	FOUND									
32	NOT	FOUND									
33	NOT	FOUND									
34	NOT	FOUND									
35	100	364	17:54	29	1.037	A BB	75771.	92.396	PRCNT	21.27	✓
36	92	367	18:03	29	1.046	A BB	5360.	3.394	UG/L	0.78	BLK
37	NOT	FOUND									
38	NOT	FOUND									
39	95	497	24:26	29	1.416	A BB	76377.	90.162	PRCNT	20.76	✓
40	NOT	FOUND									
41	NOT	FOUND									

A2752 (3of4)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 575 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	145	984	911	1	1	1	0
6	100	98	991	865	6	1	1	0
12	194	192	997	756	12	1	1	0
18	107	105	761	159	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7164 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	294	292	984	472	1	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -57 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	351	991	508	1	1	1	0
35	365	364	969	852	7	1	1	0
36	368	367	852	264	8	1	1	0
39	496	497	989	843	11	1	1	0

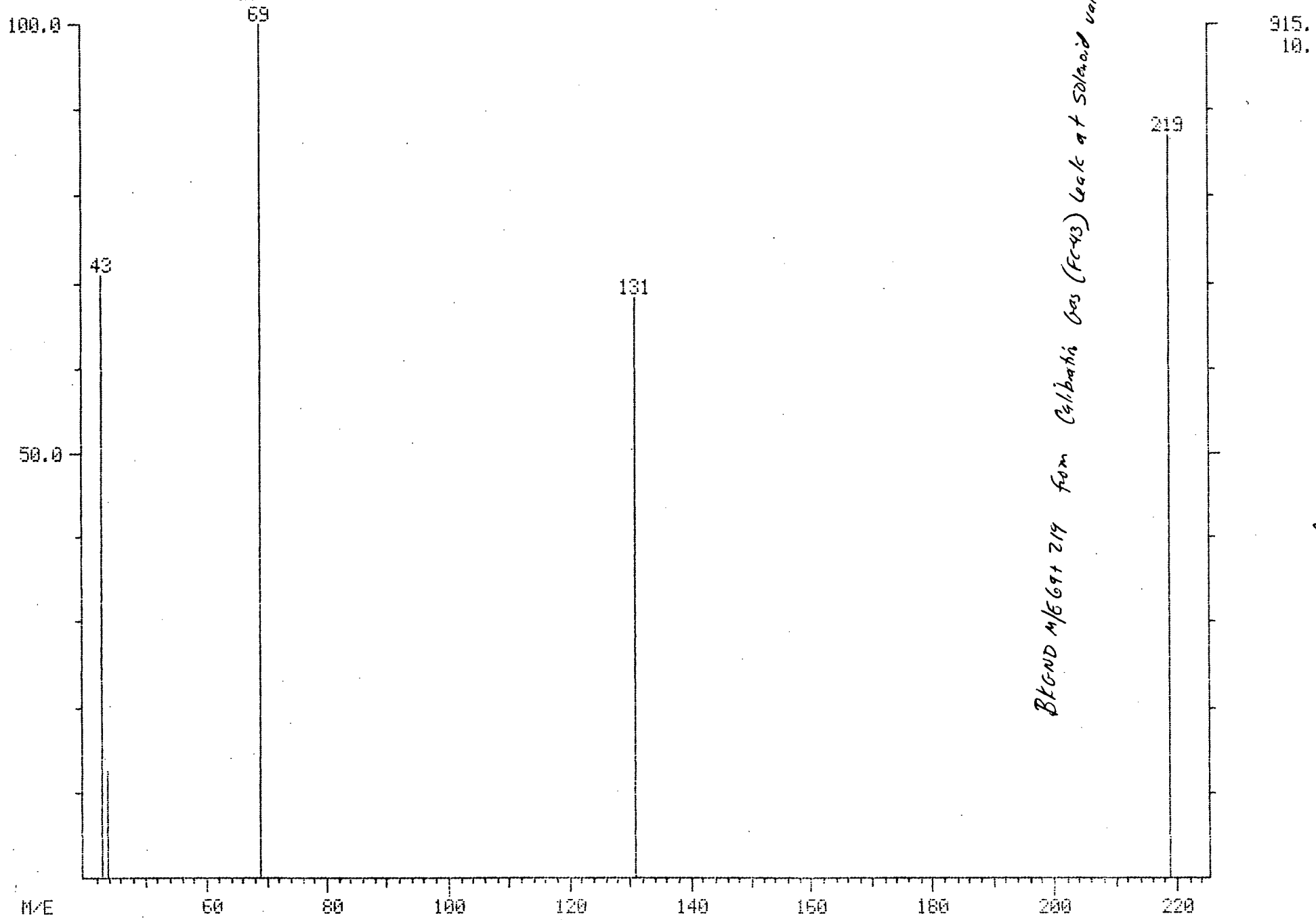
NUMBER OF COMPOUNDS IDENTIFIED 9
DATA PROCESSING OF CLPVOA29 COMPLETED ON 5/05/84 17:53:50

A2752 (4/84)

MASS SPECTRUM
05/05/84 16:47:00 + 5:10
SAMPLE:

DATA: CLPVOA29 #105

BASE M/E: 69
RIC: 3100.



BKGND M/E 69+ 219 from Calibration Gas (FC-43) leak at solenoid valve.

00042

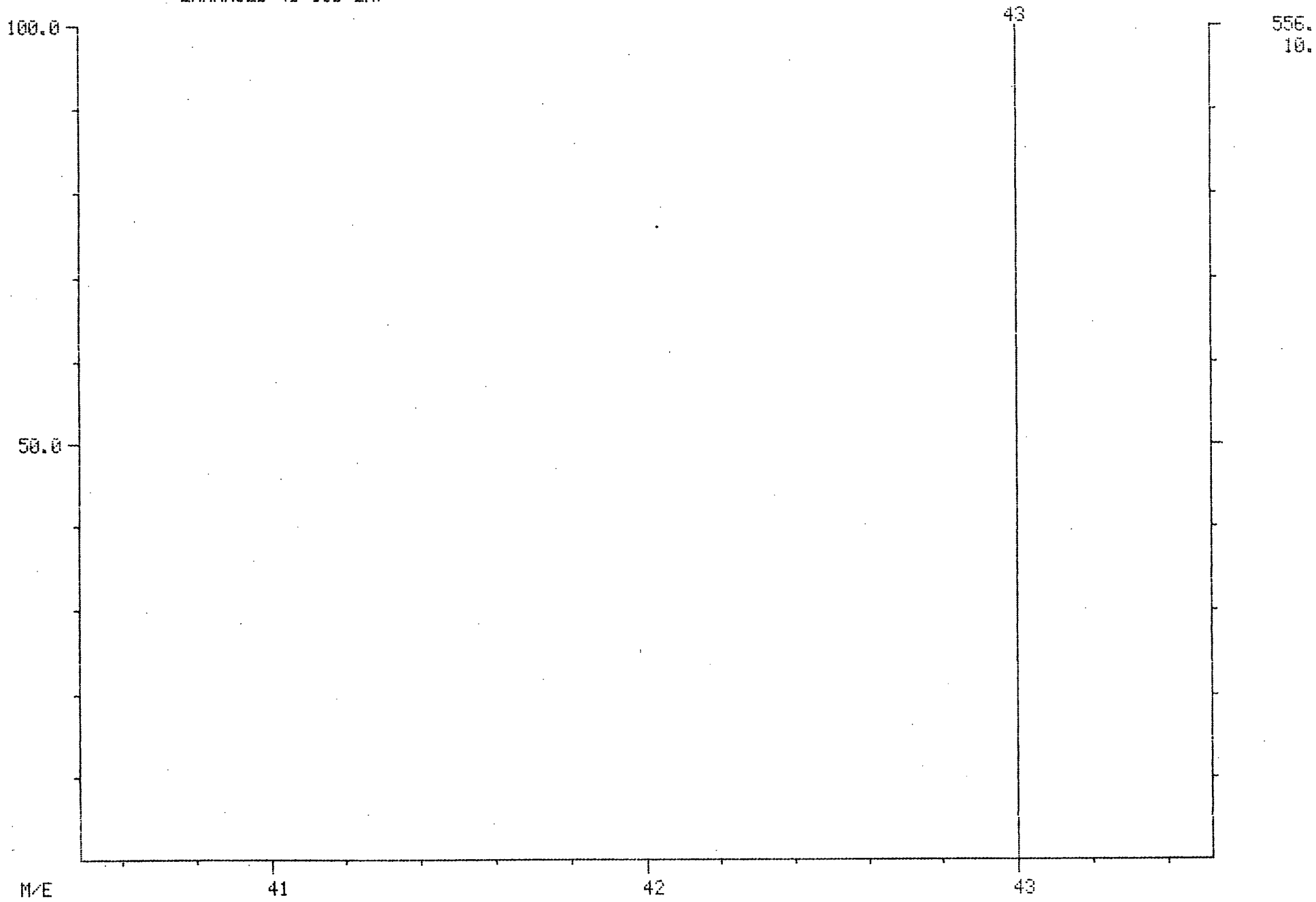
A2752 - Acetone

MASS SPECTRUM
05/05/84 16:47:00 + 5:10
SAMPLE:
ENHANCED (S 15B 2N)

DATA: CLPVOA29 #105

BASE M/E: 43
RIC: 556.

00043

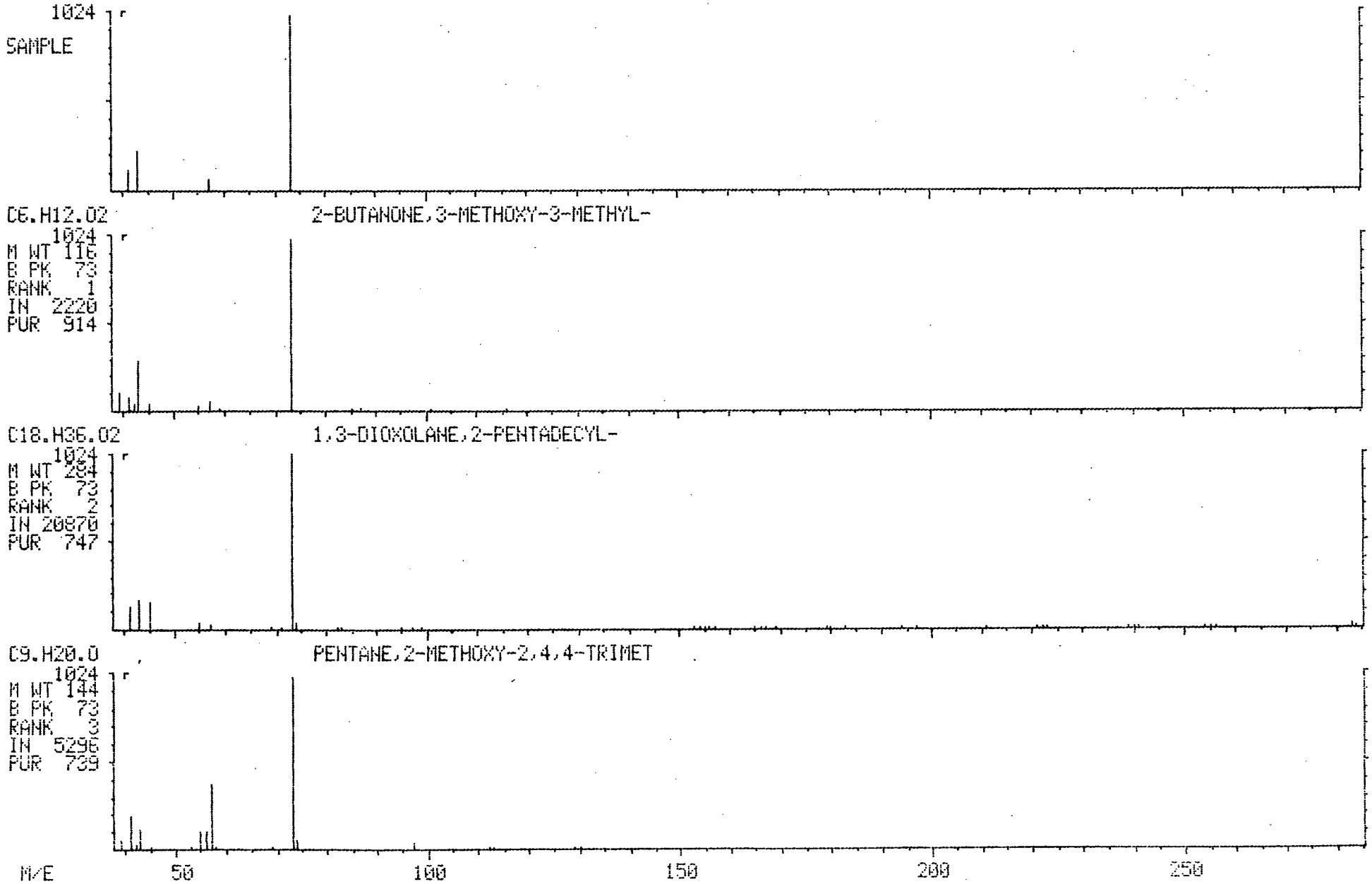


A2752- Acetone

LIBRARY SEARCH
05/05/84 16:47:00 + 10:22
SAMPLE:
ENHANCED (S 15B 2N 0T)

DATA: CLPVOA29 # 211

BASE M/E: 73
RIC: 3367.



A2752 - Tentative ID cpd.

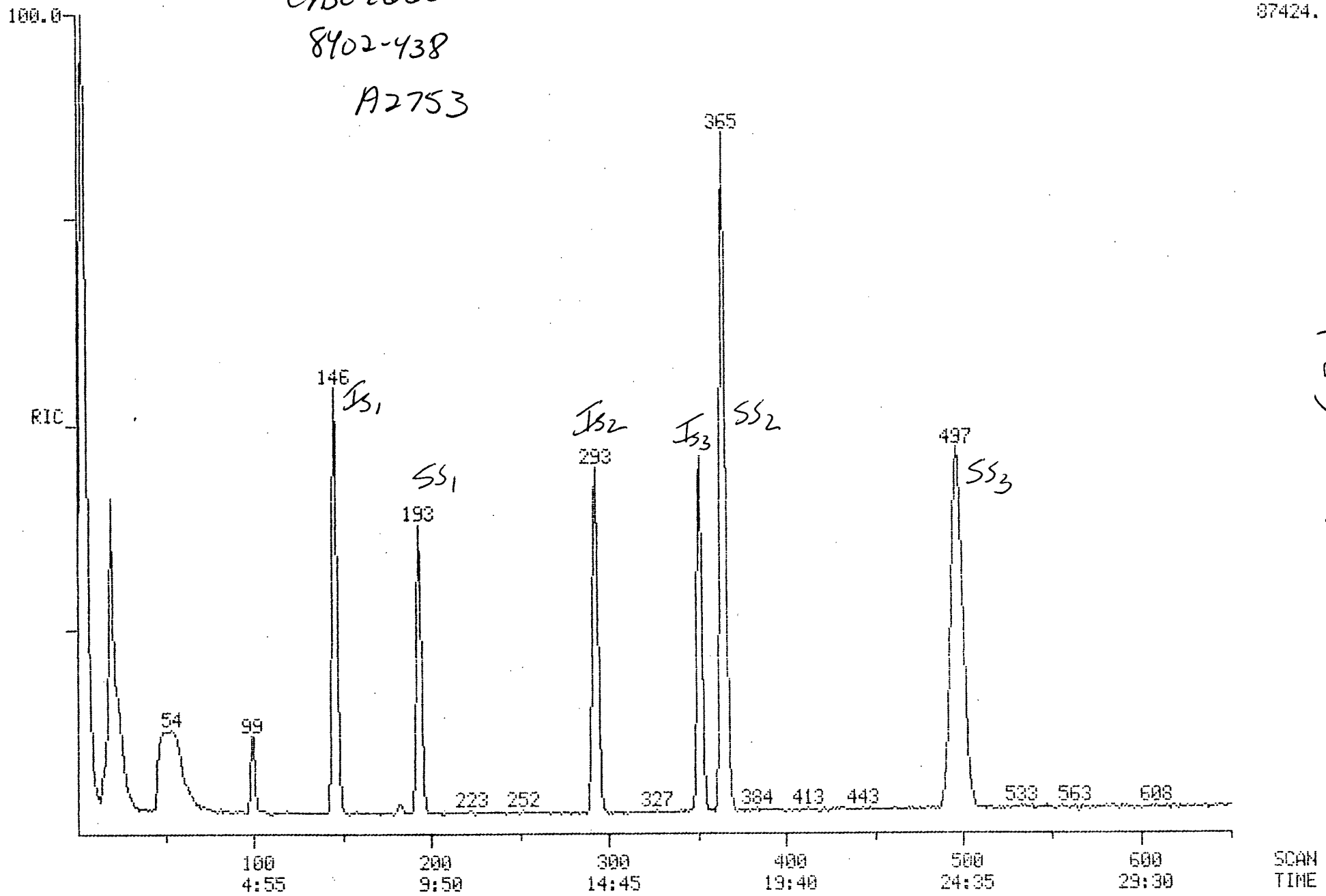
000044

RIC
05/05/84 17:34:00
SAMPLE:

CASE 2660
8402-438
A2753

DATA: CLPVOA30 SCANS 1 TO 650

00045



A2753 (1084)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA30

DATA: CLPVOA30.TI
05/05/84 17:34:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	146	7:11	1	1.000	A BB	33022.	50.000 UG/L	12.07
2	NOT FOUND								
3	NOT FOUND								

A2753 (284)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT	
4	NOT	FOUND								
5	NOT	FOUND								
6	84	100	4:55	1	0.685	A BB	6072.	3.071 UG/L	0.74	BLK
7	NOT	FOUND								
8	NOT	FOUND								
9	NOT	FOUND								
10	NOT	FOUND								
11	NOT	FOUND								
12	102	193	9:29	1	1.322	A BB	4457.	81.374 PRCNT	19.65	✓
13	NOT	FOUND								
14	NOT	FOUND								
15	NOT	FOUND								
16	NOT	FOUND								
17	NOT	FOUND								
18	43	106	5:13	1	0.726	A BB	305.	2.345 UG/L	0.57	BLK
19	NOT	FOUND								
20	NOT	FOUND								
21	77	293	14:24	21	1.000	A BB	52572.	50.000 UG/L	12.07	
22	NOT	FOUND								
23	NOT	FOUND								
24	NOT	FOUND								
25	NOT	FOUND								
26	NOT	FOUND								
27	NOT	FOUND								
28	NOT	FOUND								
29	55	352	17:18	29	1.000	A BB	53385.	50.000 UG/L	12.07	
30	NOT	FOUND								
31	NOT	FOUND								
32	NOT	FOUND								
33	NOT	FOUND								
34	NOT	FOUND								
35	100	365	17:57	29	1.037	A BB	77145.	91.372 PRCNT	22.06	✓
36	NOT	FOUND								
37	NOT	FOUND								
38	NOT	FOUND								
39	95	497	24:26	29	1.412	A BB	75012.	86.010 PRCNT	20.77	✓
40	NOT	FOUND								
41	NOT	FOUND								

A2753 (384)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 589 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	146	980	909	1	1	1	0
6	100	100	964	772	6	1	1	0
12	194	193	1000	765	12	1	1	0
18	107	106	759	50	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7552 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

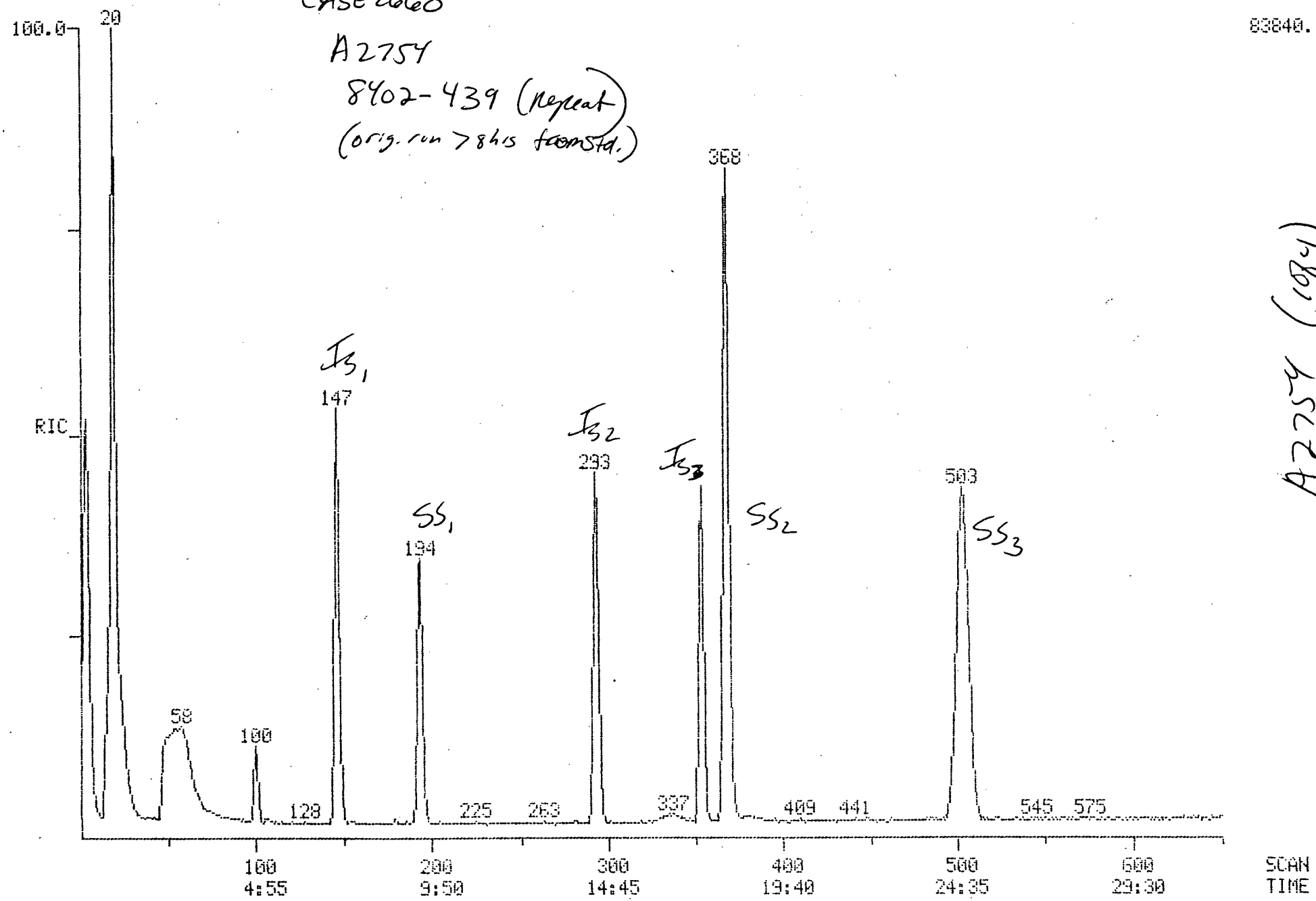
REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	294	293	977	484	1	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -56 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	352	988	513	1	1	1	0
35	365	365	970	850	7	1	1	0
39	496	497	989	833	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF CLPVOA30 COMPLETED ON 5/05/84 18:40:22

A2753 (4/84)


RIC
05/05/84 23:59:00
SAMPLE:
DATA: CLPVOA36
SCANS 1 TO 650
CASE 2660
A2754
8402-439 (repeat)
(orig. run > 8 hrs from std.)
100.0
RIC
83840.
20
58
100
128
147
194
225
263
293
337
368
409
441
503
545
575
IS1
SS1
IS2
IS3
SS2
SS3
100
4:55
200
9:50
300
14:45
400
19:40
500
24:35
600
29:30
SCAN
TIME

A2754 (1984)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA36

DATA: CLPVOA36.TI
05/05/84 23:59:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	147	7:14	1	1.000	A BB	30641.	50.000 UG/L	12.38
2	NOT FOUND								
3	NOT FOUND								

A2754 (294)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
4	NOT	FOUND									
5	NOT	FOUND									
6	84	100	4:55	1	0.680	A BB	5344.	2.363	UG/L	0.59	BLK
7	NOT	FOUND									
8	NOT	FOUND									
9	NOT	FOUND									
10	NOT	FOUND									
11	NOT	FOUND									
12	102	193	9:29	1	1.313	A BB	3845.	84.751	PRCNT	20.98	✓
13	NOT	FOUND									
14	NOT	FOUND									
15	NOT	FOUND									
16	NOT	FOUND									
17	NOT	FOUND									
18	43	107	5:16	1	0.728	A BB	684.	5.475	UG/L	1.36	BLK
19	NOT	FOUND									
20	NOT	FOUND									
21	77	293	14:24	21	1.000	A BB	50534.	50.000	UG/L	12.38	
22	NOT	FOUND									
23	NOT	FOUND									
24	NOT	FOUND									
25	NOT	FOUND									
26	NOT	FOUND									
27	NOT	FOUND									
28	NOT	FOUND									
29	55	354	17:24	29	1.000	A BB	49832.	50.000	UG/L	12.38	
30	NOT	FOUND									
31	NOT	FOUND									
32	NOT	FOUND									
33	NOT	FOUND									
34	NOT	FOUND									
35	100	368	18:06	29	1.040	A BB	74861.	77.755	PRCNT	19.25	✓
36	NOT	FOUND									
37	NOT	FOUND									
38	NOT	FOUND									
39	95	503	24:44	29	1.421	A BB	68413.	83.569	PRCNT	20.69	✓
40	NOT	FOUND									
41	NOT	FOUND									

A2754 (384)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 539 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	148	147	986	932	1	1	1	0
6	101	100	961	796	6	1	1	0
12	195	194	996	773	12	1	1	0
18	108	107	760	111	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7255 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	295	293	974	494	1	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -59 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	355	354	984	528	1	1	1	0
35	368	368	970	855	7	1	1	0
39	506	503	989	863	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF CLPVOA36 COMPLETED ON 5/06/84 0:41:18

A2754 (484)

RIC
05/05/84 21:43:00
SAMPLE:

DATA: CLPVOA33

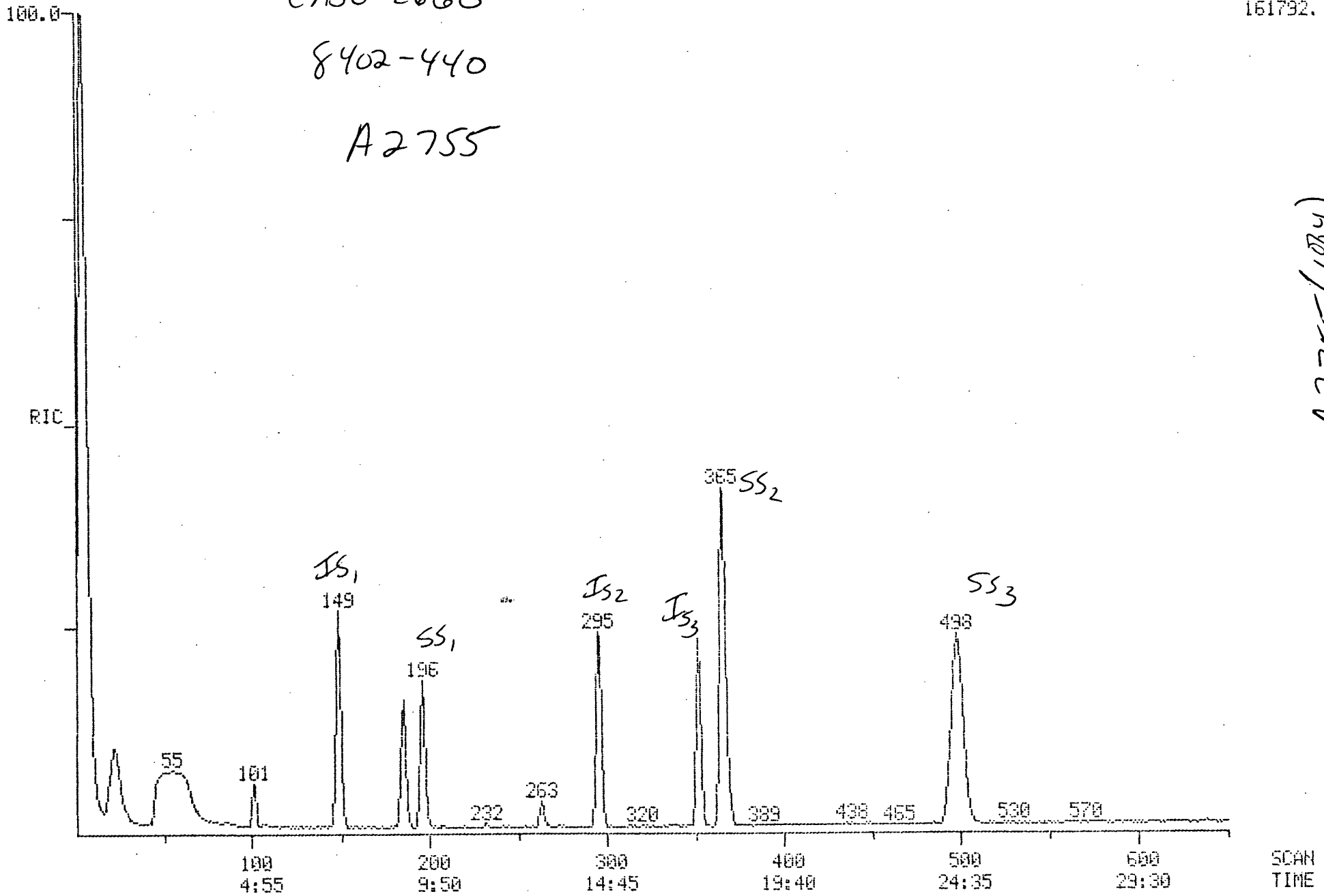
SCANS 1 TO 650

00053

CASE 2660

8402-440

A2755



A2755 (184)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA33

DATA: CLPVOA33.TI
05/05/84 21:49:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	149	7:20	1	1.000	A BB	31639.	50.000 UG/L	11.00
2	NOT FOUND								
3	NOT FOUND								

A2755 (284)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT	
4	NOT	FOUND								
5	NOT	FOUND								
6	84	101	4:58	1	0.678	A BB	5692.	2.437 UG/L	0.54	BLK
7	NOT	FOUND								
8	NOT	FOUND								
9	NOT	FOUND								
10	NOT	FOUND								
11	83	186	9:09	1	1.248	A BB	39651.	18.773 UG/L	4.13	
12	102	196	9:38	1	1.315	A BB	4134.	88.247 PRCNT	19.41	✓
13	NOT	FOUND								
14	NOT	FOUND								
15	NOT	FOUND								
16	NOT	FOUND								
17	NOT	FOUND								
18	43	108	5:19	1	0.725	A BB	2097.	16.256 UG/L	3.58	BLK
19	NOT	FOUND								
20	NOT	FOUND								
21	77	295	14:30	21	1.000	A BB	51163.	50.000 UG/L	11.00	
22	NOT	FOUND								
23	NOT	FOUND								
24	130	263	12:56	21	0.892	A BB	3458.	2.652 UG/L	0.58	
25	NOT	FOUND								
26	NOT	FOUND								
27	NOT	FOUND								
28	NOT	FOUND								
29	55	352	17:18	29	1.000	A BB	48435.	50.000 UG/L	11.00	
30	NOT	FOUND								
31	NOT	FOUND								
32	NOT	FOUND								
33	NOT	FOUND								
34	NOT	FOUND								
35	100	365	17:57	29	1.037	A BB	74612.	79.732 PRCNT	17.54	✓
36	92	369	18:09	29	1.048	A BB	7339.	3.666 UG/L	0.81	BLK
37	NOT	FOUND								
38	NOT	FOUND								
39	95	498	24:29	29	1.415	A BB	73859.	92.824 PRCNT	20.42	✓
40	NOT	FOUND								
41	NOT	FOUND								

A2755 (384)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 560 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	148	149	980	922	1	1	1	0
6	101	101	967	806	6	1	1	0
11	184	186	979	909	11	1	1	0
12	195	196	1000	790	12	1	1	0
18	108	108	759	246	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7347 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	295	295	971	519	1	1	1	0
24	262	263	887	683	4	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -60 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	355	352	989	525	1	1	1	0
35	368	365	964	865	7	1	1	0
36	372	368	954	315 ?	8	1	1	0
COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTIT								
37	395	368	943	14	9	1	0	0
39	506	498	987	854	11	1	1	0

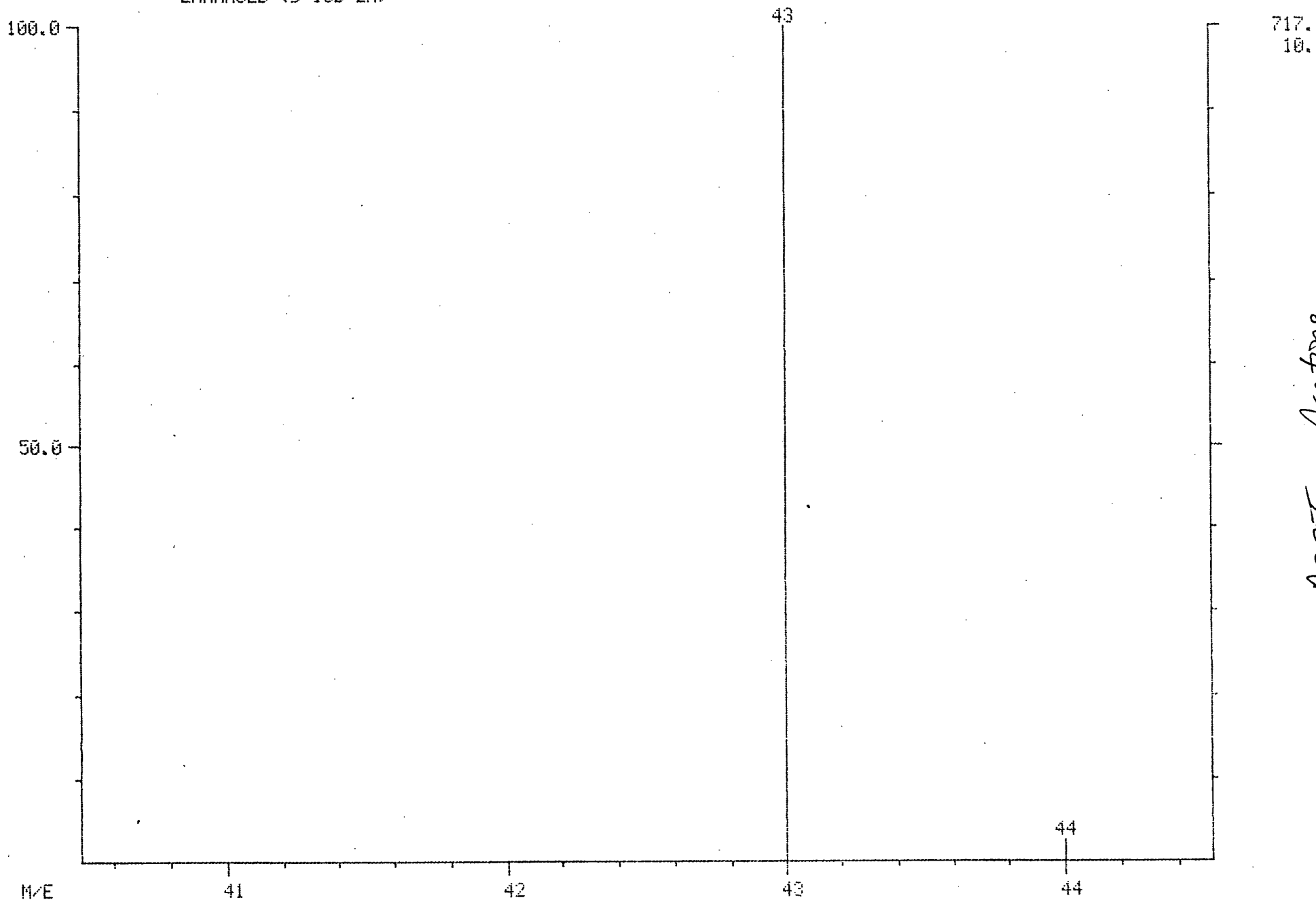
NUMBER OF COMPOUNDS IDENTIFIED 12
DATA PROCESSING OF CLPVOA33 COMPLETED ON 5/05/84 22:53:56

A2755 (484)

MASS SPECTRUM
05/05/84 21:49:00 + 5:19
SAMPLE:
ENHANCED (S 15B 2N)

DATA: CLPVOA33 #108

BASE M/E: 43
RIC: 736.



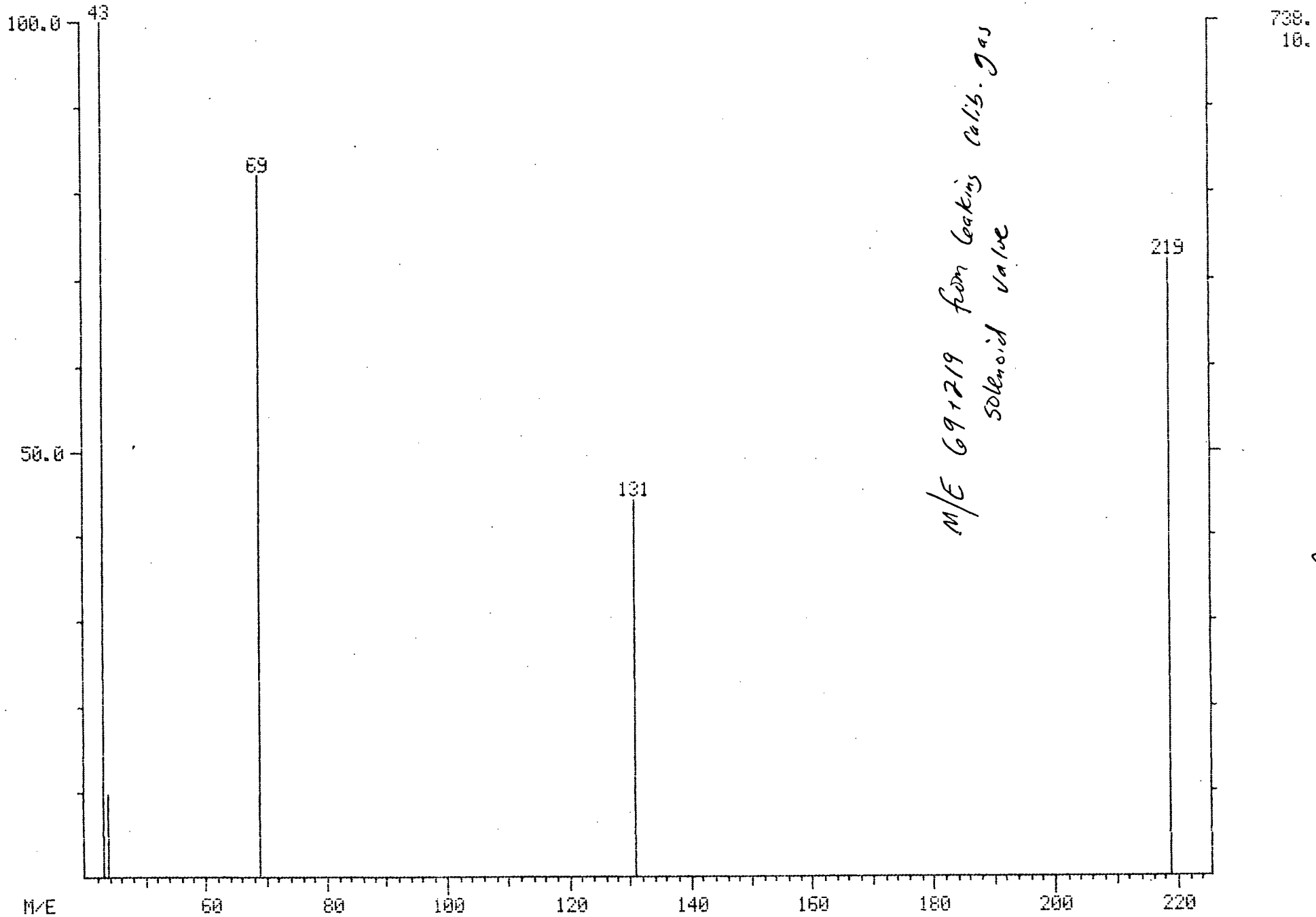
A2755 - Acetone

00057

MASS SPECTRUM
05/05/84 21:49:00 + 5:19
SAMPLE:

DATA: CLPVOA33 #108

BASE M/E: 43
RIC: 2276.



M/E 69+219 from leaking calib. gas solenoid valve

A2755- Acetone

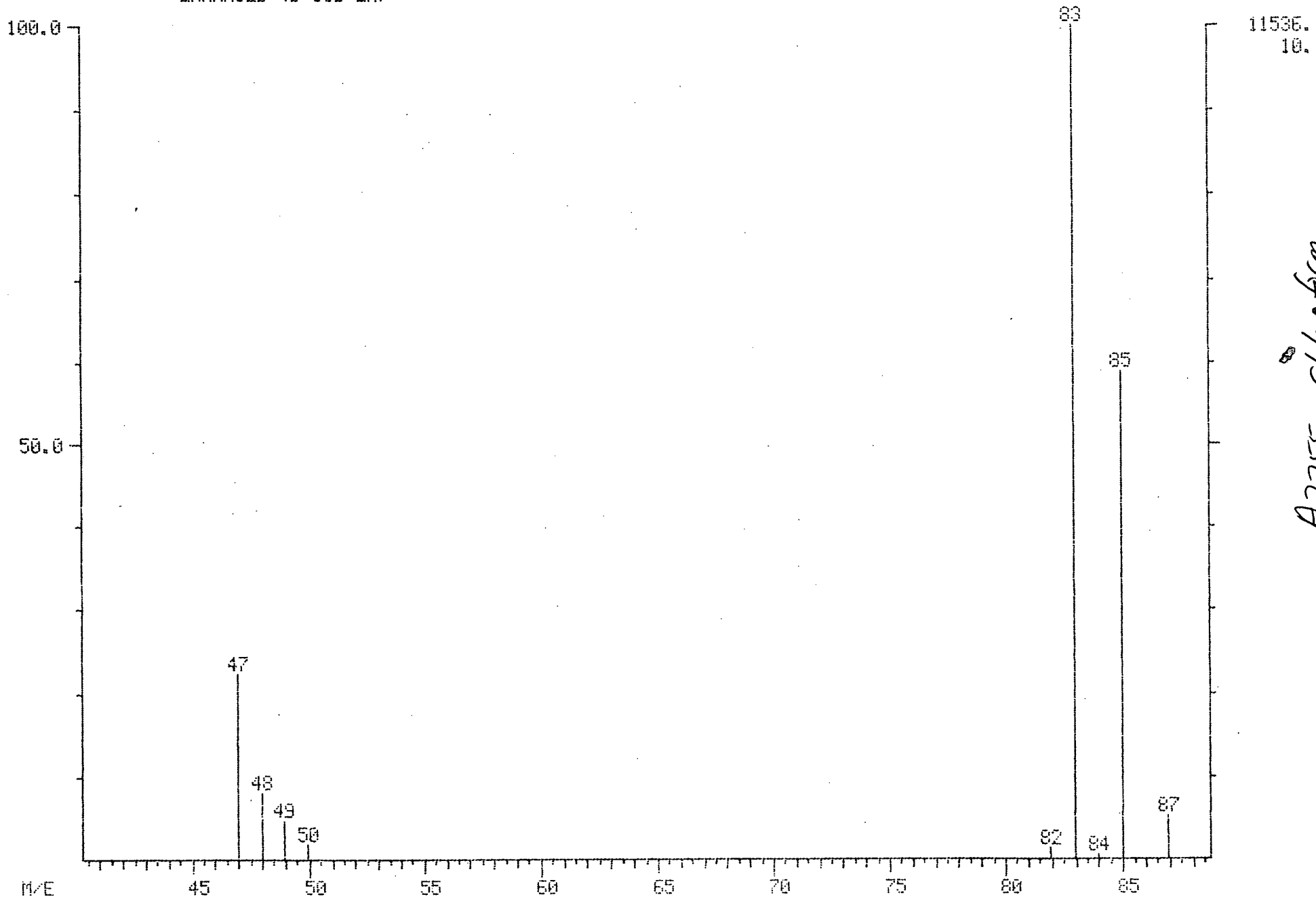
00058

MASS SPECTRUM
05/05/84 21:49:00 + 9:09
SAMPLE:
ENHANCED (S 15B 2N)

DATA: CLPVOA33 #186

BASE M/E: 83
RIC: 23392.

00059

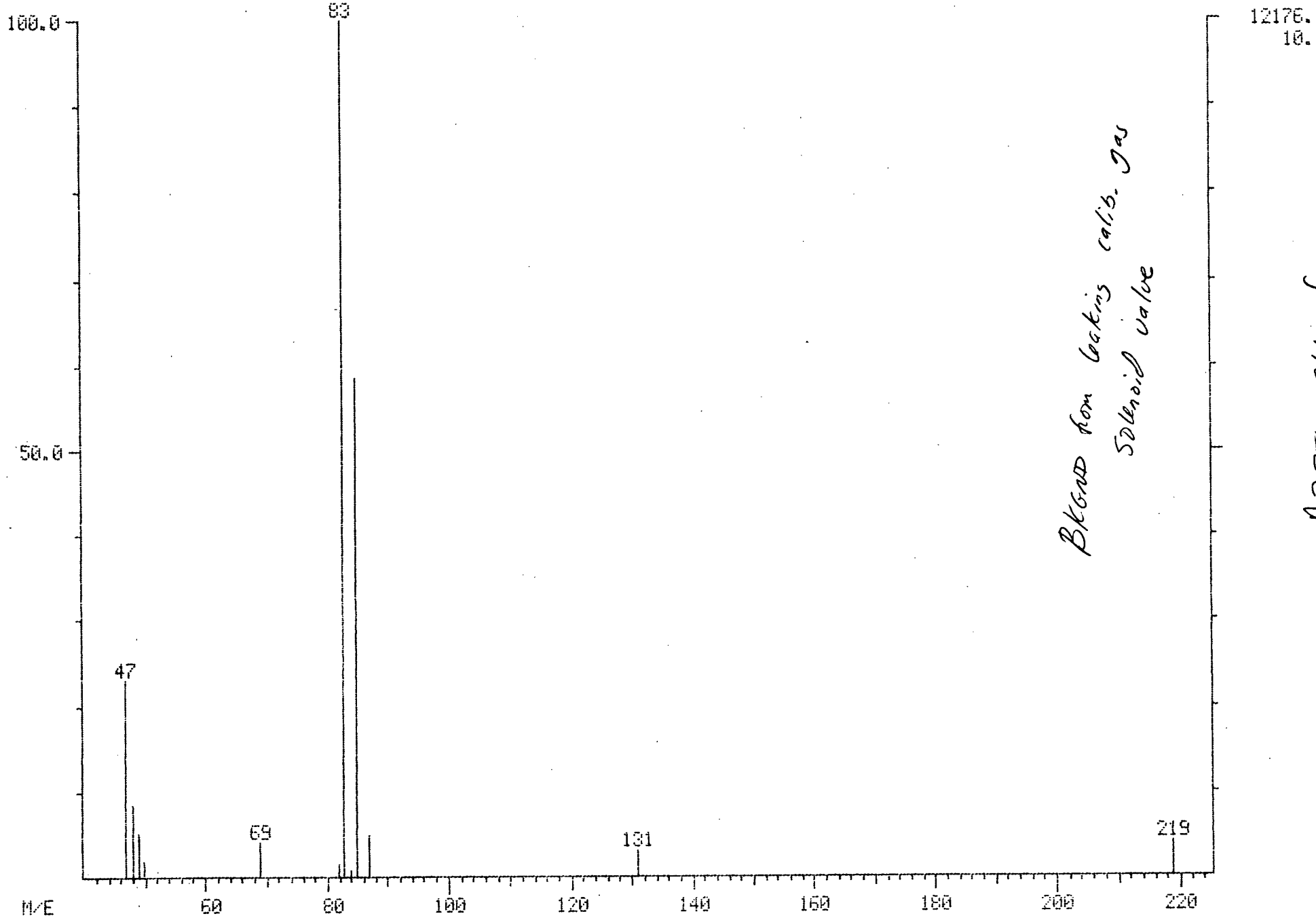


A2755- Chloroform

MASS SPECTRUM
05/05/84 21:49:00 + 9:09
SAMPLE:

DATA: CLPVOA33 #186

BASE M/E: 83
RIC: 26240.



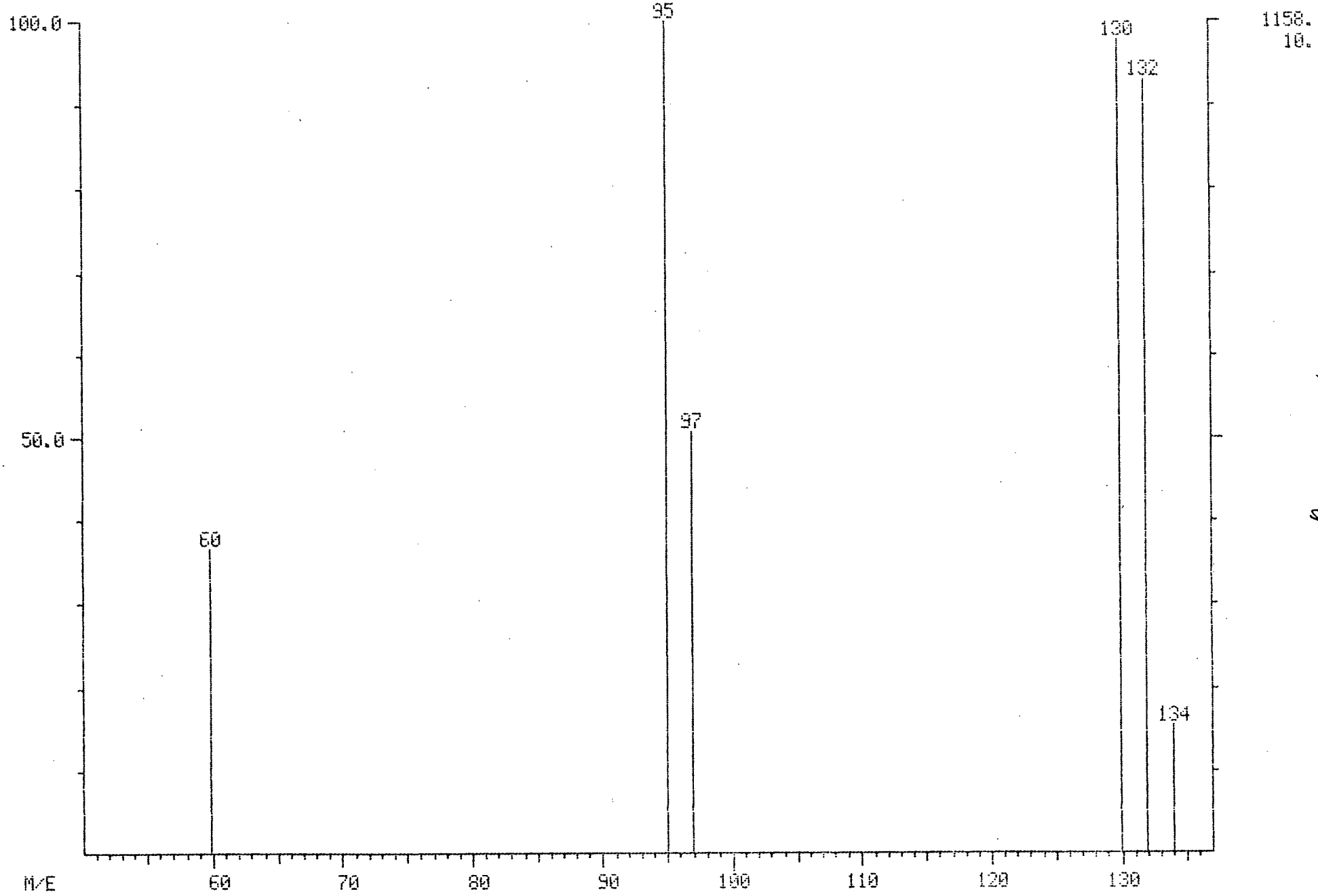
BKGND from Gates calib. Gas
Solenoid valve

A2755- Chloroform

MASS SPECTRUM
05/05/84 21:49:00 + 12:56
SAMPLE:
ENHANCED (S 15B 2N)

DATA: CLPVOA33 #263

BASE M/E: 95
RIC: 4560.



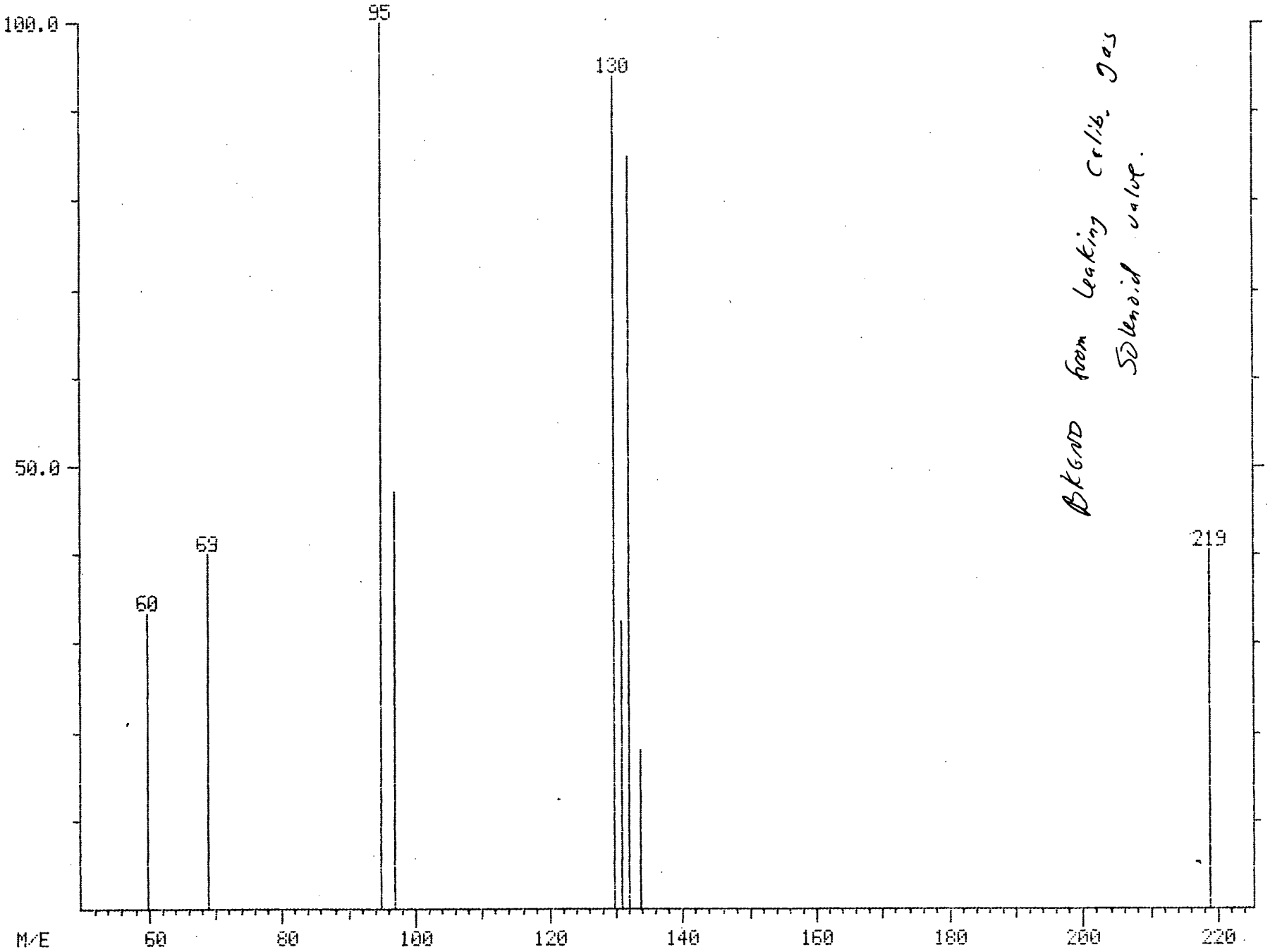
A2755- Trichloroethylene

00061

MASS SPECTRUM
05/05/84 21:49:00 + 12:56
SAMPLE:

DATA: CLPVOA33 #263

BASE M/E: 95
RIC: 6504.



BKGND from leaking Calib. Gas Solenoid valve.

A2755- Trichloroethylene

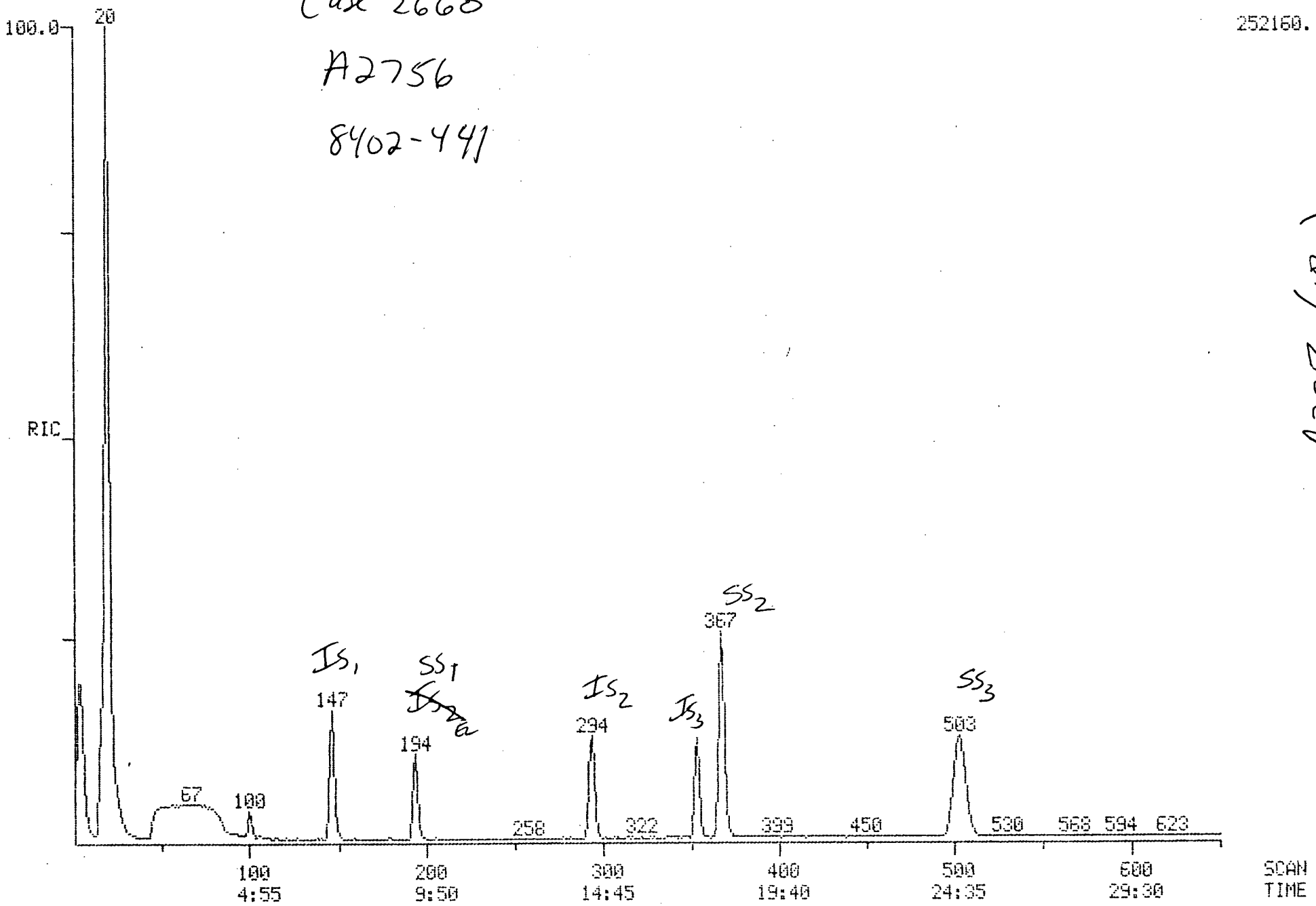
00062

RIC
05/05/84 22:32:00
SAMPLE:

Case 2660
A2756
8402-441

DATA: CLPVOA34 SCANS 1 TO 650

00063



A2756 (184)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA34

DATA: CLPVOA34.TI
05/05/84 22:32:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	147	7:14	1	1.000	A BB	28267.	50.000 UG/L	12.09
2	NOT FOUND								
3	NOT FOUND								

A2756 (294)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
4	NOT	FOUND									
5	NOT	FOUND									
6	84	100	4:55	1	0.680	A BB	4698.	2.252	UG/L	0.54	BLK
7	NOT	FOUND									
8	NOT	FOUND									
9	NOT	FOUND									
10	NOT	FOUND									
11	NOT	FOUND									
12	102	194	9:32	1	1.320	A BB	3570.	85.298	PRCNT	20.62	✓
13	NOT	FOUND									
14	NOT	FOUND									
15	NOT	FOUND									
16	NOT	FOUND									
17	NOT	FOUND									
18	43	106	5:13	1	0.721	A BB	637.	5.527	UG/L	1.34	BLK
19	NOT	FOUND									
20	NOT	FOUND									
21	77	294	14:27	21	1.000	A BB	46072.	50.000	UG/L	12.09	
22	NOT	FOUND									
23	NOT	FOUND									
24	NOT	FOUND									
25	NOT	FOUND									
26	NOT	FOUND									
27	NOT	FOUND									
28	NOT	FOUND									
29	55	354	17:24	29	1.000	A BB	43147.	50.000	UG/L	12.09	
30	NOT	FOUND									
31	NOT	FOUND									
32	NOT	FOUND									
33	NOT	FOUND									
34	NOT	FOUND									
35	100	367	18:03	29	1.037	A BB	69347.	83.188	PRCNT	20.11	✓
36	NOT	FOUND									
37	NOT	FOUND									
38	NOT	FOUND									
39	95	503	24:44	29	1.421	A BB	61986.	87.449	PRCNT	21.14	✓
40	NOT	FOUND									
41	NOT	FOUND									

A2756 (384)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 490 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	148	147	982	922	1	1	1	0
6	101	100	963	737	6	1	1	0
12	195	194	996	778	12	1	1	0
18	108	106	763	76	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 6606 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	295	294	974	493	1	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -64 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	355	354	979	514	1	1	1	0
35	368	367	968	865	7	1	1	0
39	506	503	989	854	11	1	1	0

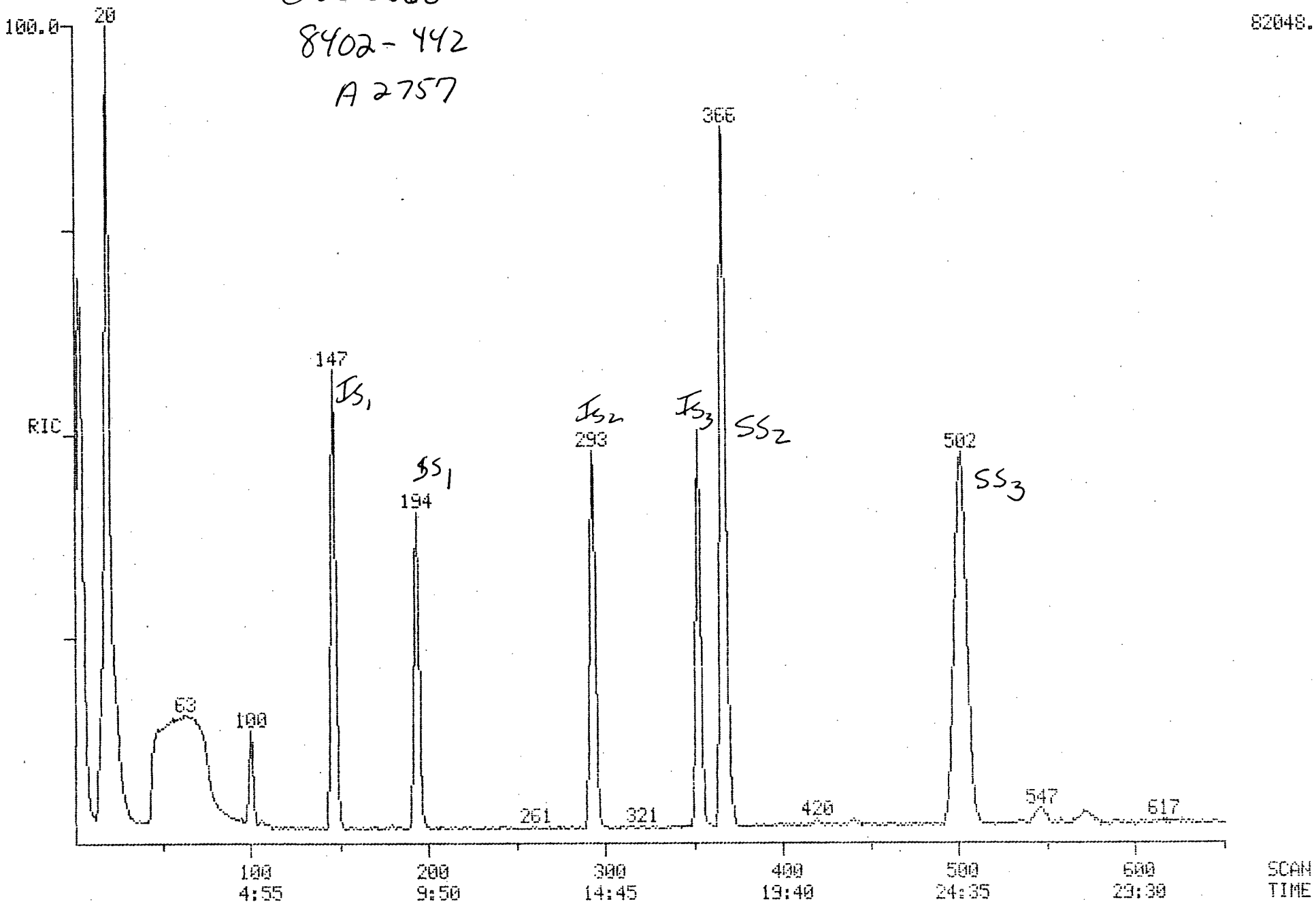
NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF CLPVOA34 COMPLETED ON 5/05/84 23:36:34

A2756 (4/84)

RIC
05/05/84 23:17:00
SAMPLE: Case 2660
8402-442
A2757

DATA: CLPVOA35 SCANS 1 TO 650

00067



A2757 (10/84)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA35

DATA: CLPVOA35.TI
05/05/84 23:17:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	147	7:14	1	1.000	A BB	33001.	50.000 UG/L	12.22
2	NOT FOUND								
3	NOT FOUND								

A2757 (2084)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT	
4	NOT	FOUND								
5	NOT	FOUND								
6	84	100	4:55	1	0.680	A BB	6071.	2.492 UG/L	0.61	BLK
7	NOT	FOUND								
8	NOT	FOUND								
9	NOT	FOUND								
10	NOT	FOUND								
11	NOT	FOUND								
12	102	194	9:32	1	1.320	A BB	4550.	93.119 PRCNT	22.76	✓
13	NOT	FOUND								
14	NOT	FOUND								
15	NOT	FOUND								
16	NOT	FOUND								
17	NOT	FOUND								
18	43	107	5:16	1	0.728	A BB	311.	2.311 UG/L	0.56	BLK
19	NOT	FOUND								
20	NOT	FOUND								
21	77	293	14:24	21	1.000	A BB	53958.	50.000 UG/L	12.22	
22	NOT	FOUND								
23	NOT	FOUND								
24	NOT	FOUND								
25	NOT	FOUND								
26	NOT	FOUND								
27	NOT	FOUND								
28	NOT	FOUND								
29	55	353	17:21	29	1.000	A BB	53818.	50.000 UG/L	12.22	
30	NOT	FOUND								
31	NOT	FOUND								
32	NOT	FOUND								
33	NOT	FOUND								
34	NOT	FOUND								
35	100	366	18:00	29	1.037	A BB	78622.	75.613 PRCNT	18.48	✓
36	NOT	FOUND								
37	NOT	FOUND								
38	NOT	FOUND								
39	95	502	24:41	29	1.422	A BB	75704.	85.626 PRCNT	20.93	✓
40	NOT	FOUND								
41	NOT	FOUND								

A2757 (384)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 589 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	148	147	983	928	1	1	1	0
6	101	100	981	788	6	1	1	0
12	195	194	996	772	12	1	1	0
18	108	107	761	65	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7754 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	295	293	973	493	1	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -55 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	355	353	987	517	1	1	1	0
35	368	366	970	866	7	1	1	0
39	506	502	987	850	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF CLPVOA35 COMPLETED ON 5/06/84 0:18:47

A2757 (484)

Cambridge Analytical Associates

STANDARDS PACKET

CASE 2660

CROSS REFERENCE TABLE FOR (X) VOA ANALYSIS ( ) BNA ANALYSIS

Cambridge Analytical

SMO #	CAA I.D.	MATRIX	SAMPLE FILE	SAMPLE DATE	SAMPLE TIME	TUNE REFERENCE FILE	TUNE REFERENCE TIME	TUNE REFERENCE DIFF.	SHIFT STANDARD FILE	SHIFT STANDARD TIME	SHIFT STANDARD DIFF.	DATE OF 3 PT CURVE
A2749	8402-434	W	CLPVOA 23	5/5	12:04	BFBDI	10:42	<8	[redacted] 12	9:48	<8	5/5
A2750	2-435	↓	↓ 27	↓	15:13	↓	↓	<8	CLPSTD 12	9:49	<8	
A2751	2-436		28		16:00			<8	↓	↓	<8	
A2752	2-437		29		16:47			<8			<8	
A2753	2-438		30		17:34	↓	↓	<8	↓	↓	<8	
A2754	2-439		36		23:57	BFBDI	19:46	<8	CLPSTD 13	20:09	<8	
A2755	2-440		33		21:49	↓	↓	<8	↓	↓	<8	
A2756	2-441		34		22:32			<8			<8	
A2757	2-442	↓	↓	↓		↓			↓	↓		

QUALITY CONTROL SAMPLES

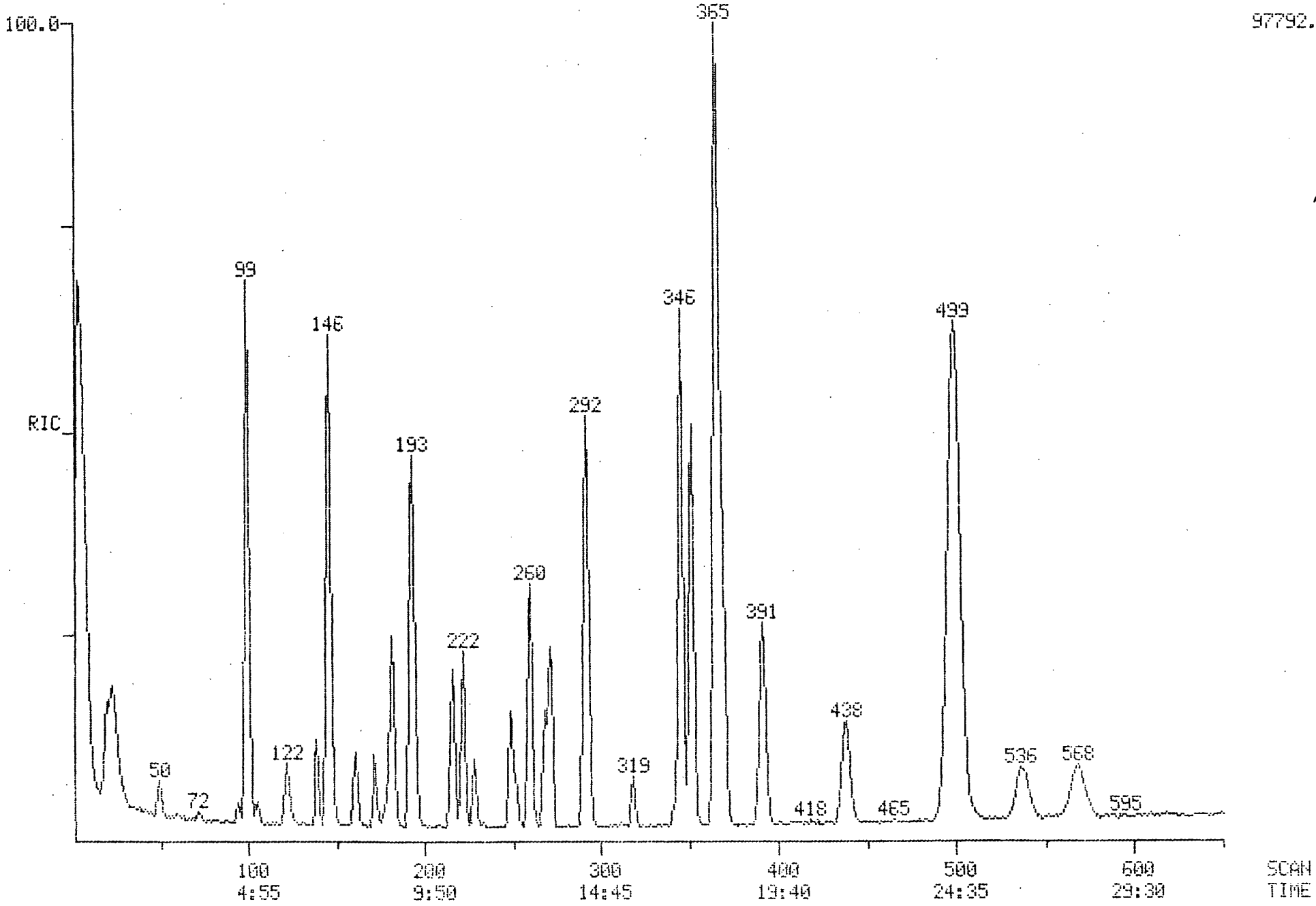
Blank	—	W	CLPVOA 32	5/5	21:01	BFBDI	19:46	<8	CLPSTD 13	20:09	<8	
A2754 MS	8402-434 MS	↓	↓ 24	↓	12:52	BFBDI	10:42	<8	CLPSTD 12	9:48	<8	
A2759 MSD	2-434 MSD	↓	↓ 25	↓	13:39	↓	↓	<8	↓	9:48	<8	

INITIAL CALIBRATION FILE REFERENCES

DATE	LOW LEVEL	MED. LEVEL	HIGH LEVEL
5/5	CLPSTD 10	CLPSTD 11	CLPSTD 12

ADDITIONAL COMMENTS All Samples quantified against Applicable 100 ppb stds.

000072



00073

20 ppb STD (1988)

QUANTITATION REPORT FILE: CLPSTD10

DATA: CLPSTD10.TI
05/05/84 8:05:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	146	7:11	1	1.000	A BB	43990.	50.000 UG/L	5.05
2	NOT FOUND								
3	94	50	2:27	1	0.342	A BB	3719.	20.000 UG/L	2.02

20 PPB VOASTD (2 of 8)

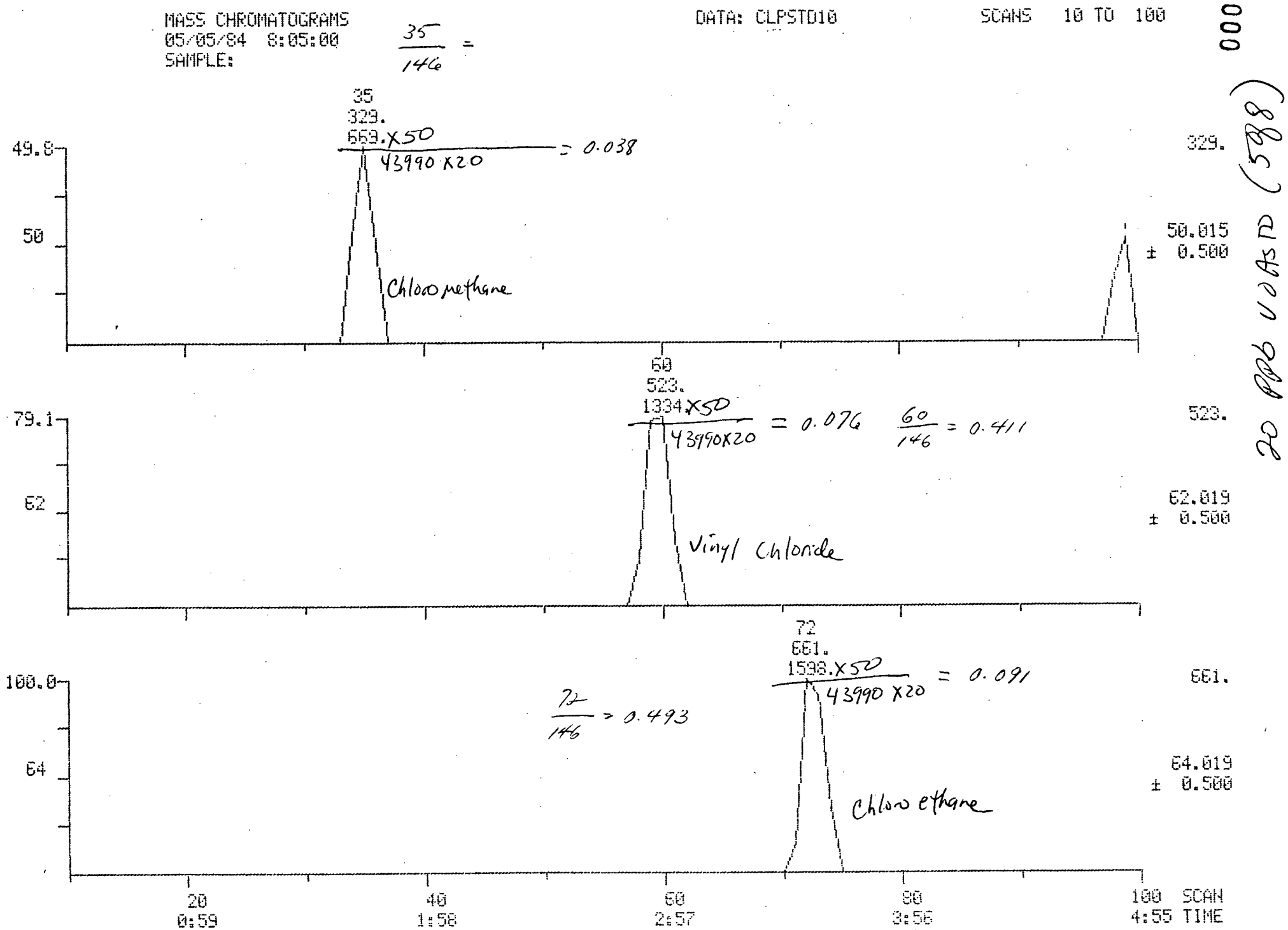
NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
4	NOT FOUND								
5	NOT FOUND								
6	84	99	4:52	1	0.678	A BB	44537.	20.000 UG/L	2.02
7	76	122	6:00	1	0.836	A BB	18999.	20.000 UG/L	2.02
8	96	139	6:50	1	0.952	A BB	6627.	20.000 UG/L	2.02
9	63	161	7:55	1	1.103	A BB	17334.	20.000 UG/L	2.02
10	96	172	8:27	1	1.178	A BB	6964.	20.000 UG/L	2.02
11	83	182	8:57	1	1.247	A BB	31175.	20.000 UG/L	2.02
12	102	193	9:29	1	1.322	A BB	6840.	100.000 PRCNT	10.10
13	62	194	9:32	1	1.329	A BB	19898.	20.000 UG/L	2.02
14	97	216	10:37	1	1.479	A BB	25842.	20.000 UG/L	2.02
15	117	222	10:55	1	1.521	A VB	21210.	20.000 UG/L	2.02
16	83	228	11:13	1	1.562	A BB	10607.	20.000 UG/L	2.02
17	NOT FOUND								
18	43	106	5:13	1	0.726	A BB	6092.	20.000 UG/L	2.02
19	NOT FOUND								
20	NOT FOUND								
21	77	292	14:21	21	1.000	A BB	63937.	50.000 UG/L	5.05
22	63	249	12:15	21	0.853	A BB	8962.	20.000 UG/L	2.02
23	75	252	12:23	21	0.863	A BB	10402.	20.000 UG/L	2.02
24	130	260	12:47	21	0.890	A BB	18884.	20.000 UG/L	2.02
25	78	268	13:11	21	0.918	A BB	25849.	20.000 UG/L	2.02
26	97	272	13:22	21	0.932	A BB	11541.	20.000 UG/L	2.02
27	75	271	13:19	21	0.928	A BB	7992.	20.000 UG/L	2.02
28	129	270	13:16	21	0.925	A BB	3379.	20.000 UG/L	2.02
29	55	352	17:18	29	1.000	A BB	63036.	50.000 UG/L	5.05
30	43	319	15:41	29	0.906	A BB	8316.	20.000 UG/L	2.02
31	NOT FOUND								
32	43	319	15:41	29	0.906	A BB	8316.	20.000 UG/L	2.02
33	164	346	17:01	29	0.983	A BB	20330.	20.000 UG/L	2.02
34	83	346	17:01	29	0.983	A BB	17860.	20.000 UG/L	2.02
35	100	365	17:57	29	1.037	A BB	100218.	100.000 PRCNT	10.10
36	92	368	18:06	29	1.045	A BB	34866.	20.000 UG/L	2.02
37	112	391	19:13	29	1.111	A BB	46184.	20.000 UG/L	2.02
38	106	438	21:32	29	1.244	A BB	12228.	20.000 UG/L	2.02
39	95	499	24:32	29	1.418	A BB	119360.	100.000 PRCNT	10.10
40	NOT FOUND								
41	106	567	27:53	29	1.611	A BB	13909.	20.000 UG/L	2.02

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R. FAC	R. FAC(L)	RATIO
1	7:11	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:55		0.260			40.00		0.095	
3	2:27	1.00	0.342	1.00	20.00	20.00	0.211	0.211	1.00
4	3:06		0.423			40.00		0.246	
5	3:44		0.510			40.00		0.184	
6	4:52	1.00	0.678	1.00	20.00	20.00	2.531	2.531	1.00
7	6:00	1.00	0.836	1.00	20.00	20.00	1.080	1.080	1.00
8	6:50	1.00	0.952	1.00	20.00	20.00	0.377	0.377	1.00
9	7:55	1.00	1.103	1.00	20.00	20.00	0.985	0.985	1.00
10	8:27	1.00	1.178	1.00	20.00	20.00	0.396	0.396	1.00
11	8:57	1.00	1.247	1.00	20.00	20.00	1.772	1.772	1.00
12	9:29	1.00	1.322	1.00	100.00	100.00	0.078	0.078	1.00
13	9:32	1.00	1.329	1.00	20.00	20.00	1.131	1.131	1.00
14	10:37	1.00	1.479	1.00	20.00	20.00	1.469	1.469	1.00
15	10:55	1.00	1.521	1.00	20.00	20.00	1.205	1.205	1.00
16	11:13	1.00	1.562	1.00	20.00	20.00	0.603	0.603	1.00

20 PPB VOASD (388)

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R. FAC	R. FAC(L)	RATIO
17	9:35		1.309			40.00		0.230	
18	5:13	1.00	0.726	1.00	20.00	20.00	0.346	0.346	1.00
19	6:47		0.836			500.00		2.771	
20	6:29		0.943			100.00		0.014	
21	14:21	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
22	12:15	1.00	0.853	1.00	20.00	20.00	0.350	0.350	1.00
23	12:23	1.00	0.863	1.00	20.00	20.00	0.407	0.407	1.00
24	12:47	1.00	0.890	1.00	20.00	20.00	0.738	0.738	1.00
25	13:11	1.00	0.918	1.00	20.00	20.00	1.011	1.011	1.00
26	13:22	1.00	0.932	1.00	20.00	20.00	0.451	0.451	1.00
27	13:19	1.00	0.928	1.00	20.00	20.00	0.312	0.312	1.00
28	13:16	1.00	0.925	1.00	20.00	20.00	0.132	0.132	1.00
29	17:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
30	15:41	1.00	0.906	1.00	20.00	20.00	0.330	0.330	1.00
31	15:38		0.891			40.00		0.110	
32	15:41	1.00	0.906	1.00	20.00	20.00	0.330	0.330	1.00
33	17:01	1.00	0.983	1.00	20.00	20.00	0.806	0.806	1.00
34	17:01	1.00	0.983	1.00	20.00	20.00	0.708	0.708	1.00
35	17:57	1.00	1.037	1.00	100.00	100.00	0.795	0.795	1.00
36	18:06	1.00	1.045	1.00	20.00	20.00	1.383	1.383	1.00
37	19:13	1.00	1.111	1.00	20.00	20.00	1.832	1.832	1.00
38	21:32	1.00	1.244	1.00	20.00	20.00	0.485	0.485	1.00
39	24:32	1.00	1.418	1.00	100.00	100.00	0.947	0.947	1.00
40	26:39		1.527			40.00		1.648	
41	27:53	1.00	1.611	1.00	20.00	20.00	0.552	0.552	1.00

20 ppb VOASD (4 of 8)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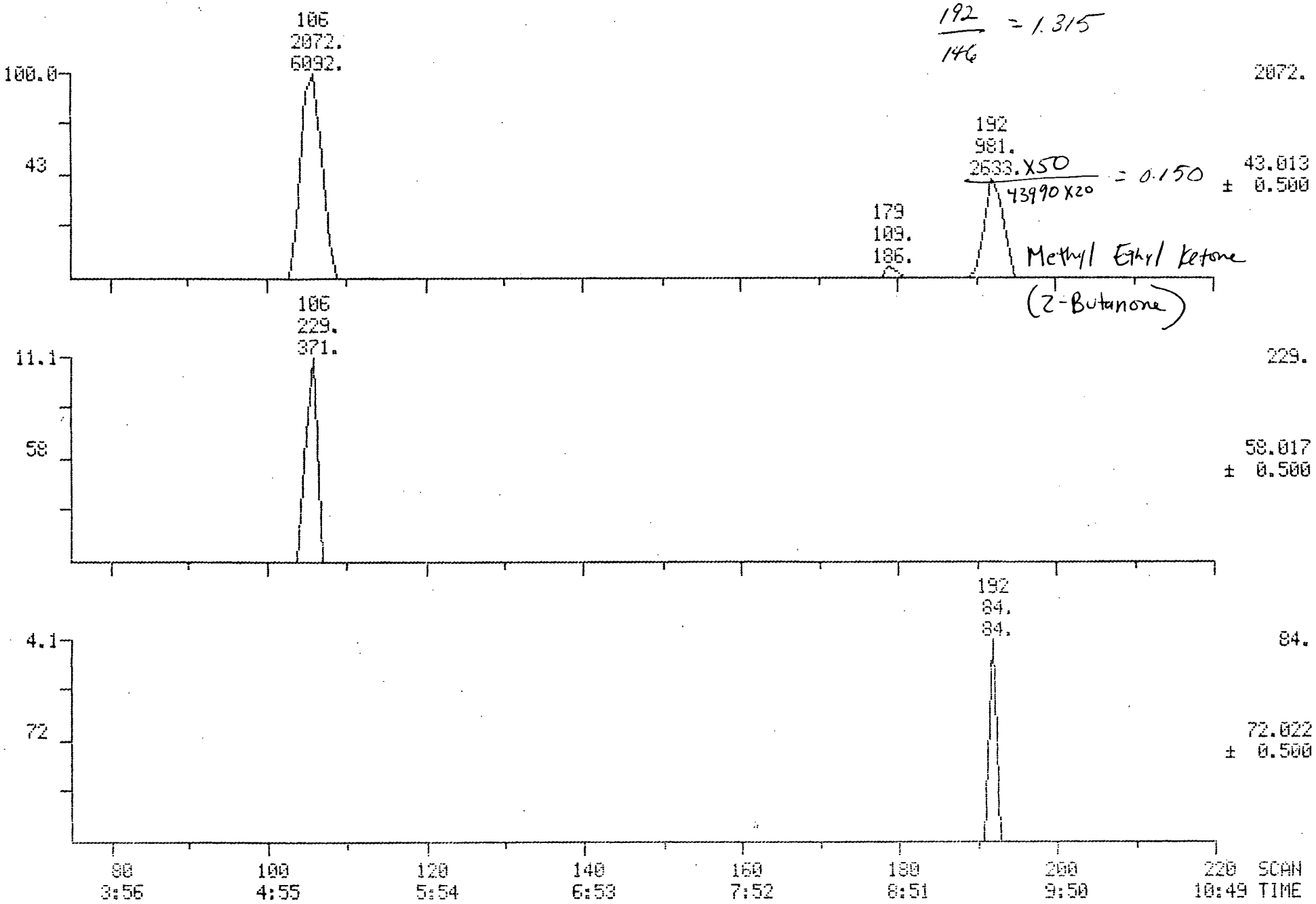
05/05/84 8:05:00
SAMPLE:
35/146 =
DATA: CLPSTD10
SCANS 10 TO 100
35
329.
669.X50
43990 X20
= 0.038
Chloromethane
49.8
50
329.
50.015
± 0.500
60
523.
1334.X50
43990X20
= 0.076
60/146 = 0.411
Vinyl Chloride
79.1
62
523.
62.019
± 0.500
72
661.
1598.X50
43990 X20
= 0.091
72/146 = 0.493
Chloro ethane
100.0
64
661.
64.019
± 0.500
20
0:59
40
1:58
60
2:57
80
3:56
100 SCAN
4:55 TIME
20 ppb VOAs TD (598)
00077

MASS CHROMATOGRAMS
05/05/84 8:05:00
SAMPLE:

DATA: CLPSTD10

SCANS 75 TO 220



$\frac{192}{146} = 1.315$

$\frac{2633 \times 50}{43990 \times 20} = 0.150$

Methyl Ethyl Ketone
(2-Butanone)

20 PPB VOAD (688)

00078

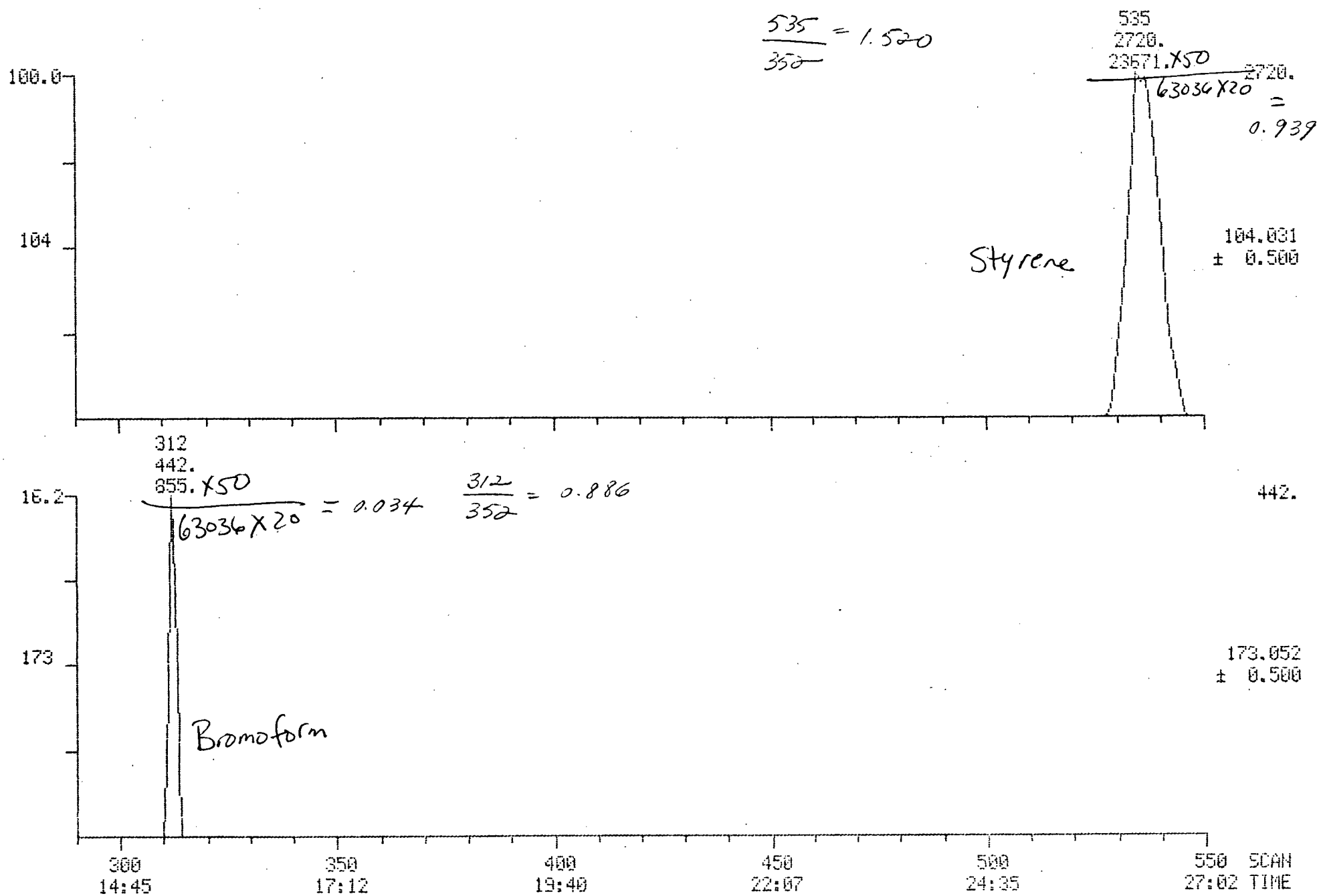
MASS CHROMATOGRAMS
05/05/84 8:05:00
SAMPLE:

DATA: CLPSTD10

SCANS 290 TO 550

00079

20 PPB VOASTD (798)



UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 62 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	149	146	982	922	1	1	1	0
3	53	50	977	557	3	1	1	0
6	103	99	991	941	6	1	1	0
7	126	122	959	729	7	1	1	0
8	143	139	978	807	8	1	1	0
9	164	161	981	774	9	1	1	0
10	175	172	939	754	10	1	1	0
11	186	182	971	878	11	1	1	0
12	196	193	997	670	12	1	1	0
13	197	194	968	367	13	1	1	0
14	219	216	898	821	14	1	1	0
15	225	222	960	878	15	1	1	0
16	234	228	914	732	16	1	1	0
18	110	106	965	481	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 9206 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
21	296	292	988	484	1	2	1	0
22	252	249	944	829	2	1	1	0
23	255	252	892	655	3	1	1	0
24	263	260	977	870	4	1	1	0
25	271	268	963	793	5	1	1	0
26	275	271	973	575	6	1	1	0
27	275	271	980	170	7	1	1	0
28	278	270	947	159	8	1	1	0

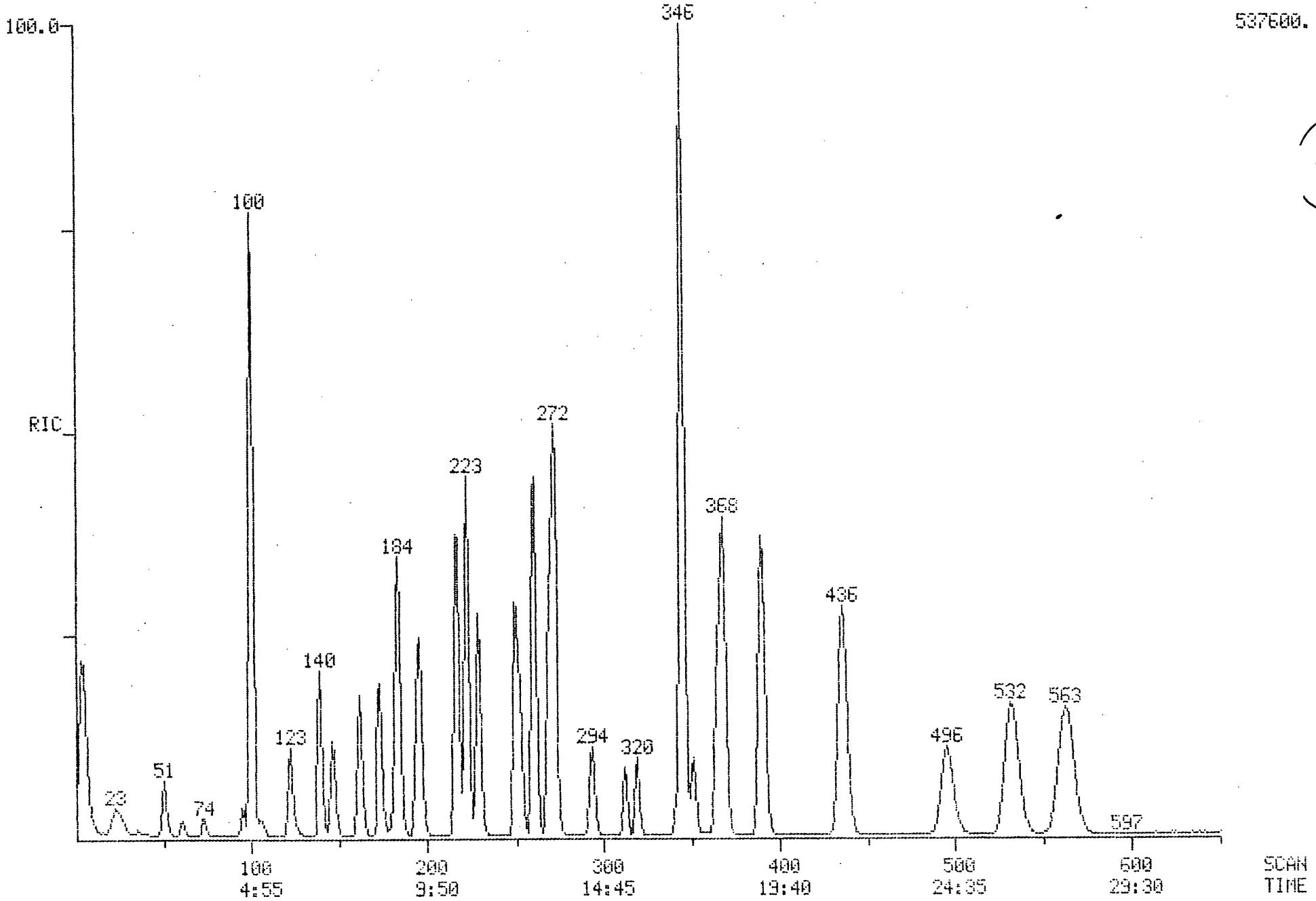
THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -48 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	355	352	989	503	1	1	1	0
30	322	319	986	719	2	1	1	0
32	322	319	784	433	4	1	1	0
33	349	346	994	677	5	1	1	0
34	349	346	998	147	6	1	1	0
35	368	365	970	846	7	1	1	0
36	371	368	970	637	8	1	1	0
						**		
37	394	391	1000	112	9	2	1	0
38	442	438	955	786	10	1	1	0
39	503	499	989	843	11	1	1	0
COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTIT								
40	542	537	938	628	12	1	0	0
41	573	568	871	577	13	1	1	0

00080

NUMBER OF COMPOUNDS IDENTIFIED 34
DATA PROCESSING OF CLPSTD10 COMPLETED ON 5/05/84 8:42:14

20ppb STD (898)



100 ppb VOASTD (1086)

00081

QUANTITATION REPORT FILE: CLPSTD11

DATA: CLPSTD11.TI
05/05/84 8:55:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	147	7:14	1	1.000	A BB	47635.	50.000 UG/L	1.33
2	50	36	1:46	1	0.245	A BB	5911.	100.000 UG/L	2.67
3	94	51	2:30	1	0.347	A BB	39341.	100.000 UG/L	2.67

100 ppb VOASTD (286)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
4	62	61	3:00	1	0.415	A BB	19936.	100.000	UG/L	2.67
5	64	74	3:38	1	0.503	A BB	19894.	100.000	UG/L	2.67
6	84	100	4:55	1	0.680	A BB	285229.	100.000	UG/L	2.67
7	76	123	6:03	1	0.837	A BB	160225.	100.000	UG/L	2.67
8	96	140	6:53	1	0.952	A BB	71464.	100.000	UG/L	2.67
9	63	162	7:58	1	1.102	A BB	166016.	100.000	UG/L	2.67
10	96	174	8:33	1	1.184	A BB	82237.	100.000	UG/L	2.67
11	83	184	9:03	1	1.252	A BB	282025.	100.000	UG/L	2.67
12	102	194	9:32	1	1.320	A BB	7901.	100.000	PRCNT	2.67
13	62	196	9:38	1	1.333	A BB	198495.	100.000	UG/L	2.67
14	97	217	10:40	1	1.476	A BB	256383.	100.000	UG/L	2.67
15	117	223	10:58	1	1.517	A VB	242219.	100.000	UG/L	2.67
16	83	229	11:16	1	1.558	A BB	180259.	100.000	UG/L	2.67
17	43	194	9:32	1	1.320	A BB	25753.	100.000	UG/L	2.67
18	43	107	5:16	1	0.728	A BB	18761.	100.000	UG/L	2.67
19	NOT FOUND									
20	NOT FOUND									
21	77	294	14:27	21	1.000	A BB	72889.	50.000	UG/L	1.33
22	63	250	12:17	21	0.850	A BB	95726.	100.000	UG/L	2.67
23	75	253	12:26	21	0.861	A BB	131105.	100.000	UG/L	2.67
24	130	260	12:47	21	0.884	A BB	159783.	100.000	UG/L	2.67
25	78	269	13:14	21	0.915	A BB	253244.	100.000	UG/L	2.67
26	97	273	13:25	21	0.929	A BB	103045.	100.000	UG/L	2.67
27	75	273	13:25	21	0.929	A BB	111586.	100.000	UG/L	2.67
28	129	271	13:19	21	0.922	A BB	97208.	100.000	UG/L	2.67
29	55	352	17:18	29	1.000	A BB	69876.	50.000	UG/L	1.33
30	43	320	15:44	29	0.909	A BB	72165.	100.000	UG/L	2.67
31	173	313	15:23	29	0.889	A BB	49112.	100.000	UG/L	2.67
32	43	320	15:44	29	0.909	A BB	72165.	100.000	UG/L	2.67
33	164	346	17:01	29	0.983	A BB	173795.	100.000	UG/L	2.67
34	83	346	17:01	29	0.983	A BB	152473.	100.000	UG/L	2.67
35	100	365	17:57	29	1.037	A BB	110510.	100.000	PRCNT	2.67
36	92	368	18:06	29	1.045	A BB	212806.	100.000	UG/L	2.67
37	112	390	19:10	29	1.108	A BB	347002.	100.000	UG/L	2.67
38	106	436	21:26	29	1.239	A BB	160572.	100.000	UG/L	2.67
39	95	496	24:23	29	1.409	A BB	114155.	100.000	PRCNT	2.67
40	104	532	26:09	29	1.511	A BB	285832.	100.000	UG/L	2.67
41	106	563	27:41	29	1.599	A BB	191174.	100.000	UG/L	2.67

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
1	7:14	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:46	1.00	0.245	1.00	100.00	100.00	0.062	0.062	1.00
3	2:30	1.00	0.347	1.00	100.00	100.00	0.413	0.413	1.00
4	3:00	1.00	0.415	1.00	100.00	100.00	0.209	0.209	1.00
5	3:38	1.00	0.503	1.00	100.00	100.00	0.209	0.209	1.00
6	4:55	1.00	0.680	1.00	100.00	100.00	2.994	2.994	1.00
7	6:03	1.00	0.837	1.00	100.00	100.00	1.682	1.682	1.00
8	6:53	1.00	0.952	1.00	100.00	100.00	0.750	0.750	1.00
9	7:58	1.00	1.102	1.00	100.00	100.00	1.743	1.743	1.00
10	8:33	1.00	1.184	1.00	100.00	100.00	0.863	0.863	1.00
11	9:03	1.00	1.252	1.00	100.00	100.00	2.960	2.960	1.00
12	9:32	1.00	1.320	1.00	100.00	100.00	0.083	0.083	1.00
13	9:38	1.00	1.333	1.00	100.00	100.00	2.083	2.083	1.00
14	10:40	1.00	1.476	1.00	100.00	100.00	2.691	2.691	1.00
15	10:58	1.00	1.517	1.00	100.00	100.00	2.542	2.542	1.00
16	11:16	1.00	1.558	1.00	100.00	100.00	1.892	1.892	1.00

100ppb VOASTD (3&6)

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R. FAC	R. FAC(L)	RATIO
17	9:32	1.00	1.320	1.00	100.00	100.00	0.270	0.270	1.00
18	5:16	1.00	0.728	1.00	100.00	100.00	0.197	0.197	1.00
19	6:47		0.836			500.00		2.771	
20	6:29		0.943			100.00		0.014	
21	14:27	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
22	12:17	1.00	0.850	1.00	100.00	100.00	0.657	0.657	1.00
23	12:26	1.00	0.861	1.00	100.00	100.00	0.899	0.899	1.00
24	12:47	1.00	0.884	1.00	100.00	100.00	1.096	1.096	1.00
25	13:14	1.00	0.915	1.00	100.00	100.00	1.737	1.737	1.00
26	13:25	1.00	0.929	1.00	100.00	100.00	0.707	0.707	1.00
27	13:25	1.00	0.929	1.00	100.00	100.00	0.765	0.765	1.00
28	13:19	1.00	0.922	1.00	100.00	100.00	0.667	0.667	1.00
29	17:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
30	15:44	1.00	0.909	1.00	100.00	100.00	0.516	0.516	1.00
31	15:23	1.00	0.889	1.00	100.00	100.00	0.351	0.351	1.00
32	15:44	1.00	0.909	1.00	100.00	100.00	0.516	0.516	1.00
33	17:01	1.00	0.983	1.00	100.00	100.00	1.244	1.244	1.00
34	17:01	1.00	0.983	1.00	100.00	100.00	1.091	1.091	1.00
35	17:57	1.00	1.037	1.00	100.00	100.00	0.791	0.791	1.00
36	18:06	1.00	1.045	1.00	100.00	100.00	1.523	1.523	1.00
37	19:10	1.00	1.108	1.00	100.00	100.00	2.483	2.483	1.00
38	21:26	1.00	1.239	1.00	100.00	100.00	1.149	1.149	1.00
39	24:23	1.00	1.409	1.00	100.00	100.00	0.817	0.817	1.00
40	26:09	1.00	1.511	1.00	100.00	100.00	2.045	2.045	1.00
41	27:41	1.00	1.599	1.00	100.00	100.00	1.368	1.368	1.00

100 ppb VOASTD (486)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 75 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	146	147	981	916	1	1	1	0
2	39	36	908	404	2	1	1	0
3	50	51	984	871	3	1	1	0
4	63	61	983	722	4	1	1	0
5	76	74	990	773	5	1	1	0
6	99	100	995	953	6	1	1	0
7	122	123	986	933	7	1	1	0
8	139	140	994	909	8	1	1	0
9	161	162	994	888	9	1	1	0
10	172	174	990	933	10	1	1	0
11	182	184	991	919	11	1	1	0
12	193	194	995	411	12	1	1	0
13	194	196	980	783	13	1	1	0
14	216	217	972	922	14	1	1	0
						**		
15	222	223	984	958	15	2	1	0
16	228	229	985	907	16	1	1	0
17	195	194	980	181	17	1	1	0
						**		
18	106	107	976	549	18	2	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 10509 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
21	292	294	990	439	1	2	1	0
22	249	250	979	907	2	1	1	0
23	252	253	966	771	3	1	1	0
24	260	261	990	880	4	1	1	0
25	268	269	990	774	5	1	1	0
26	272	273	992	506	6	1	1	0
27	271	272	994	203	7	1	1	0
28	270	271	1000	238	8	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -42 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
29	352	352	990	503	1	2	1	0
30	319	320	993	904	2	1	1	0
31	318	313	944	835	3	1	1	0
32	319	320	790	527	4	1	1	0
33	346	346	994	626	5	1	1	0
34	346	346	1000	143	6	1	1	0
35	365	365	979	718	7	1	1	0
36	368	368	990	851	8	1	1	0
						**		
37	391	390	1000	144	9	2	1	0
38	438	436	991	866	10	1	1	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11	1	1	0

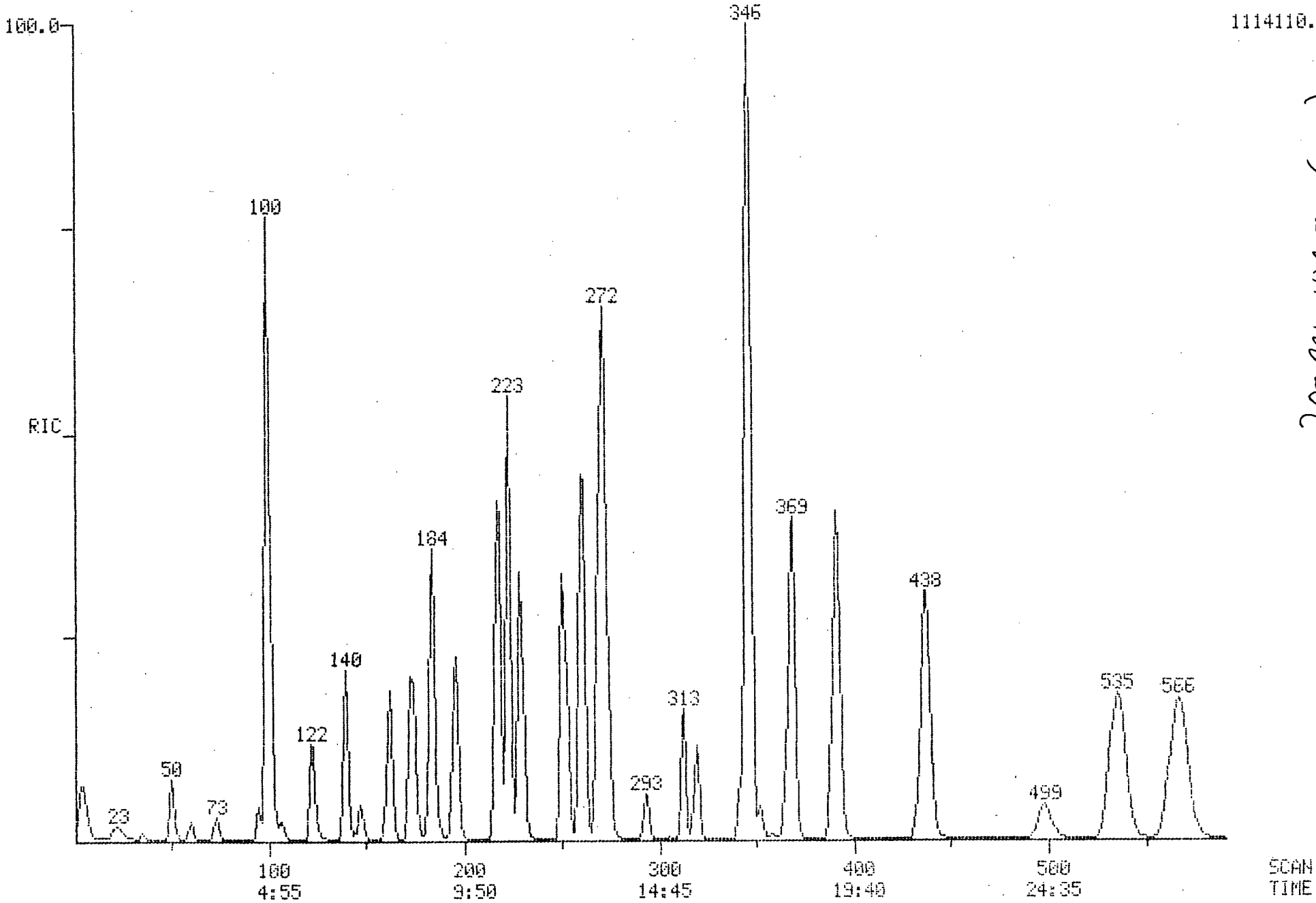
100 ppb
VOASTD
(5 of 6)

00085

40	542	532	985	849	12	1	1	0
41	567	563	985	850	13	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 39
DATA PROCESSING OF CLPSTD11 COMPLETED ON 5/05/84 9:37:16

100PPB VOASTD
(686)



200 ppb VOASTD (186)

00087

QUANTITATION REPORT FILE: CLPSTD12

DATA: CLPSTD12.TI
05/05/84 9:48:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	147	7:14	1	1.000	A BB	34782.	50.000 UG/L	0.49
2	50	35	1:43	1	0.238	A BB	13476.	312.228 UG/L	3.05
3	94	50	2:27	1	0.340	A BB	87051.	303.040 UG/L	2.96

200PPB VOASTD (2of6)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
4	62	60	2:57	1	0.408	A BB	46378.	318.600	UG/L	3.12
5	64	73	3:35	1	0.497	A BB	43885.	302.110	UG/L	2.96
6	84	100	4:55	1	0.680	A BV	592502.	284.491	UG/L	2.78
7	76	122	6:00	1	0.830	A BB	373400.	319.166	UG/L	3.12
8	96	140	6:53	1	0.952	A BB	151121.	289.607	UG/L	2.83
9	63	162	7:58	1	1.102	A BV	344775.	284.418	UG/L	2.78
10	96	173	8:30	1	1.177	A BB	179339.	298.661	UG/L	2.92
11	83	184	9:03	1	1.252	A BB	592522.	287.732	UG/L	2.82
12	102	194	9:32	1	1.320	A BB	6530.	113.189	PRCNT	1.11
13	62	196	9:38	1	1.333	A BB	417177.	287.834	UG/L	2.82
14	97	217	10:40	1	1.476	A BB	565083.	301.853	UG/L	2.95
15	117	223	10:58	1	1.517	A VB	604231.	341.638	UG/L	3.34
16	83	229	11:16	1	1.558	A BB	433463.	329.327	UG/L	3.22
17	43	194	9:32	1	1.320	A BB	64813.	344.672	UG/L	3.37
18	43	107	5:16	1	0.728	A BB	45560.	332.583	UG/L	3.25
19	NOT	FOUND								
20	NOT	FOUND								
21	77	293	14:24	21	1.000	A BB	61262.	50.000	UG/L	0.49
22	63	250	12:17	21	0.853	A BB	211872.	263.339	UG/L	2.58
23	75	253	12:26	21	0.863	A BB	295364.	268.046	UG/L	2.62
24	130	260	12:47	21	0.887	A BV	326481.	243.107	UG/L	2.38
25	78	269	13:14	21	0.918	A BB	572215.	268.838	UG/L	2.63
26	97	273	13:25	21	0.932	A BB	234543.	270.812	UG/L	2.65
27	75	272	13:22	21	0.928	A BB	292578.	311.963	UG/L	3.05
28	129	271	13:19	21	0.925	A BB	275681.	337.424	UG/L	3.30
29	55	352	17:18	29	1.000	A BV	58240.	50.000	UG/L	0.49
30	43	319	15:41	29	0.906	A BB	173263.	288.062	UG/L	2.82
31	173	313	15:23	29	0.889	A BB	180651.	441.326	UG/L	4.32
32	43	319	15:41	29	0.906	A BB	173263.	288.062	UG/L	2.82
33	164	346	17:01	29	0.983	A BB	358919.	247.780	UG/L	2.42
34	83	346	17:01	29	0.983	A BB	333036.	262.062	UG/L	2.56
35	100	365	17:57	29	1.037	A BB	103966.	112.875	PRCNT	1.10
36	92	369	18:09	29	1.048	A BB	438438.	247.190	UG/L	2.42
37	112	391	19:13	29	1.111	A BB	766082.	264.880	UG/L	2.59
38	106	437	21:29	29	1.241	A BB	360207.	269.147	UG/L	2.63
39	95	499	24:32	29	1.418	A BB	90102.	94.700	PRCNT	0.93
40	104	535	26:18	29	1.520	A BB	646001.	271.163	UG/L	2.65
41	106	566	27:50	29	1.608	A BB	429306.	269.428	UG/L	2.64

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R.FAC	R.FAC(L)	RATIO
1	7:14	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:46	0.97	0.245	0.97	312.23	200.00	0.097	0.062	1.56
3	2:30	0.98	0.347	0.98	303.04	200.00	0.626	0.413	1.52
4	3:00	0.98	0.415	0.98	318.60	200.00	0.333	0.209	1.59
5	3:38	0.99	0.503	0.99	302.11	200.00	0.315	0.209	1.51
6	4:55	1.00	0.680	1.00	284.49	200.00	4.259	2.994	1.42
7	6:03	0.99	0.837	0.99	319.17	200.00	2.684	1.682	1.60
8	6:53	1.00	0.952	1.00	289.61	200.00	1.086	0.750	1.45
9	7:58	1.00	1.102	1.00	284.42	200.00	2.478	1.743	1.42
10	8:33	0.99	1.184	0.99	298.66	200.00	1.289	0.863	1.49
11	9:03	1.00	1.252	1.00	287.73	200.00	4.259	2.960	1.44
12	9:32	1.00	1.320	1.00	113.19	100.00	0.094	0.083	1.13
13	9:38	1.00	1.333	1.00	287.83	200.00	2.999	2.083	1.44
14	10:40	1.00	1.476	1.00	301.85	200.00	4.062	2.691	1.51
15	10:58	1.00	1.517	1.00	341.64	200.00	4.343	2.542	1.71
16	11:16	1.00	1.558	1.00	329.33	200.00	3.116	1.892	1.65

200 ppb VOASTD (386)

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R. FAC	R. FAC(L)	RATIO
17	9:32	1.00	1.320	1.00	344.67	200.00	0.466	0.270	1.72
18	5:16	1.00	0.728	1.00	332.58	200.00	0.327	0.197	1.66
19	6:47		0.836			500.00		2.771	
20	6:29		0.943			100.00		0.014	
21	14:27	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
22	12:17	1.00	0.850	1.00	263.34	200.00	0.865	0.657	1.32
23	12:26	1.00	0.861	1.00	268.05	200.00	1.205	0.899	1.34
24	12:47	1.00	0.884	1.00	243.11	200.00	1.332	1.096	1.22
25	13:14	1.00	0.915	1.00	268.84	200.00	2.335	1.737	1.34
26	13:25	1.00	0.929	1.00	270.81	200.00	0.957	0.707	1.35
27	13:25	1.00	0.929	1.00	311.96	200.00	1.194	0.765	1.56
28	13:19	1.00	0.922	1.00	337.42	200.00	1.125	0.667	1.69
29	17:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
30	15:44	1.00	0.909	1.00	288.06	200.00	0.744	0.516	1.44
31	15:23	1.00	0.889	1.00	441.33	200.00	0.775	0.351	2.21
32	15:44	1.00	0.909	1.00	288.06	200.00	0.744	0.516	1.44
33	17:01	1.00	0.983	1.00	247.78	200.00	1.541	1.244	1.24
34	17:01	1.00	0.983	1.00	262.06	200.00	1.430	1.091	1.31
35	17:57	1.00	1.037	1.00	112.87	100.00	0.893	0.791	1.13
36	18:06	1.00	1.045	1.00	247.19	200.00	1.882	1.523	1.24
37	19:10	1.00	1.108	1.00	264.88	200.00	3.288	2.483	1.32
38	21:26	1.00	1.239	1.00	269.15	200.00	1.546	1.149	1.35
39	24:23	1.01	1.409	1.01	94.70	100.00	0.774	0.817	0.95
40	26:09	1.01	1.511	1.01	271.16	200.00	2.773	2.045	1.36
41	27:41	1.01	1.599	1.01	269.43	200.00	1.843	1.368	1.35

200 PPB UOASD (486)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 626 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	147	982	905	1	1	1	0
2	36	35	985	667	2	1	1	0
3	51	50	989	912	3	1	1	0
4	61	60	992	853	4	1	1	0
5	74	73	995	839	5	1	1	0
6	100	100	996	951	6	1	1	0
7	123	122	989	950	7	1	1	0
8	140	140	996	905	8	1	1	0
9	162	162	996	874	9	1	1	0
10	174	173	989	936	10	1	1	0
11	184	184	993	918	11	1	1	0
12	194	194	998	207	12	1	1	0
13	196	196	971	841	13	1	1	0
14	217	217	971	918	14	1	1	0
						**		
15	223	217	989	112	15	2	1	0
16	229	229	988	903	16	1	1	0
17	194	194	992	226	17	1	1	0
						**		
18	107	107	983	648	18	2	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 8817 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
21	294	293	999	383	1	2	1	0
22	250	250	980	902	2	1	1	0
23	253	253	970	773	3	1	1	0
24	260	260	993	864	4	1	1	0
25	269	269	991	689	5	1	1	0
26	273	273	996	487	6	1	1	0
27	273	272	995	213	7	1	1	0
28	271	271	997	233	8	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -52 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
29	352	352	988	471	1	3	1	0
30	320	319	991	903	2	1	1	0
31	313	313	966	845	3	1	1	0
32	320	319	789	515	4	1	1	0
33	346	346	995	604	5	1	1	0
34	346	346	1000	140	6	1	1	0
35	365	365	974	717	7	1	1	0
36	368	369	992	869	8	1	1	0
						**		
37	390	391	1000	149	9	2	1	0
38	436	437	988	859	10	1	1	0

200ppb
VOASTD
(5%)

00091

40	532	535	991	850	12	1	1	0
41	563	566	992	847	13	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 39
DATA PROCESSING OF CLPSTD12 COMPLETED ON 5/05/84 10:26:43

200 PPB VOASTD (6of6)

QUANTITATION REPORT FILE: CLPSTD13

DATA: CLPSTD13.TI
05/05/84 20:09:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	148	7:17	1	1.000	A BB	29717.	50.000 UG/L	1.17
2	NOT FOUND								
3	94	51	2:30	1	0.345	A BB	30996.	126.294 UG/L	2.97

100ppb STD (297)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
4	62	61	3:00	1	0.412	A BB	13628.	109.576	UG/L	2.57
5	64	74	3:38	1	0.500	A BB	13125.	105.754	UG/L	2.48
6	84	101	4:58	1	0.682	A BB	219339.	123.266	UG/L	2.90
7	76	124	6:06	1	0.838	A BB	119154.	119.206	UG/L	2.80
8	96	141	6:56	1	0.953	A BB	46513.	104.330	UG/L	2.45
9	63	163	8:01	1	1.101	A BB	105890.	102.241	UG/L	2.40
10	96	174	8:33	1	1.176	A BB	59400.	115.782	UG/L	2.72
11	83	184	9:03	1	1.243	A BB	198384.	112.756	UG/L	2.65
12	102	195	9:35	1	1.318	A BB	4400.	89.267	PRCNT	2.10
13	62	197	9:41	1	1.331	A BB	134243.	108.409	UG/L	2.55
14	97	219	10:46	1	1.480	A BB	197590.	123.537	UG/L	2.90
15	117	225	11:04	1	1.520	A VB	203472.	134.654	UG/L	3.16
16	83	231	11:21	1	1.561	A BB	140784.	125.192	UG/L	2.94
17	43	195	9:35	1	1.318	A BB	13661.	85.031	UG/L	2.00
18	43	108	5:19	1	0.730	A BB	12116.	103.520	UG/L	2.43
19	NOT FOUND									
20	NOT FOUND									
21	77	295	14:30	21	1.000	A BB	45246.	50.000	UG/L	1.17
22	63	252	12:23	21	0.854	A BB	59574.	100.256	UG/L	2.36
23	75	255	12:32	21	0.864	A BB	95954.	117.903	UG/L	2.77
24	130	262	12:53	21	0.888	A BB	115329.	116.276	UG/L	2.73
25	78	271	13:19	21	0.919	A BB	181225.	115.282	UG/L	2.71
26	97	274	13:28	21	0.929	A BB	73871.	115.486	UG/L	2.71
27	75	274	13:28	21	0.929	A BB	89032.	128.534	UG/L	3.02
28	129	273	13:25	21	0.925	A BB	100236.	166.113	UG/L	3.90
29	55	355	17:27	29	1.000	A BB	37984.	50.000	UG/L	1.17
30	43	322	15:50	29	0.907	A BB	41377.	105.477	UG/L	2.48
31	173	315	15:29	29	0.887	A BB	59007.	221.026	UG/L	5.19
32	43	322	15:50	29	0.907	A BB	41377.	105.477	UG/L	2.48
33	164	349	17:10	29	0.983	A BB	137904.	145.971	UG/L	3.43
34	83	349	17:10	29	0.983	A BB	103851.	125.298	UG/L	2.94
35	100	368	18:06	29	1.037	A BB	73387.	122.164	PRCNT	2.87
36	92	372	18:17	29	1.048	A BB	156979.	135.702	UG/L	3.19
37	112	395	19:25	29	1.113	A BB	255284.	135.338	UG/L	3.18
38	106	443	21:47	29	1.248	A BB	110822.	126.965	UG/L	2.98
39	95	506	24:53	29	1.425	A BB	62400.	100.559	PRCNT	2.36
40	104	544	26:45	29	1.532	A BB	207020.	133.238	UG/L	3.13
41	NOT FOUND									

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(I)	R.FAC	R.FAC(L)	RATIO
1	7:14	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	1:46		0.245			200.00		0.062	
3	2:30	1.00	0.347	0.99	126.29	100.00	0.522	0.413	1.26
4	3:00	1.00	0.415	0.99	109.58	100.00	0.229	0.209	1.10
5	3:38	1.00	0.503	0.99	105.75	100.00	0.221	0.209	1.06
6	4:55	1.01	0.680	1.00	123.27	100.00	3.690	2.994	1.23
7	6:03	1.01	0.837	1.00	119.21	100.00	2.005	1.682	1.19
8	6:53	1.01	0.952	1.00	104.33	100.00	0.783	0.750	1.04
9	7:58	1.01	1.102	1.00	102.24	100.00	1.782	1.743	1.02
10	8:33	1.00	1.184	0.99	115.78	100.00	0.999	0.863	1.16
11	9:03	1.00	1.252	0.99	112.76	100.00	3.338	2.960	1.13
12	9:32	1.01	1.320	1.00	89.27	100.00	0.074	0.083	0.89
13	9:38	1.01	1.333	1.00	108.41	100.00	2.259	2.083	1.08
14	10:40	1.01	1.476	1.00	123.54	100.00	3.325	2.691	1.24
15	10:58	1.01	1.517	1.00	134.65	100.00	3.423	2.542	1.35
16	11:16	1.01	1.558	1.00	125.19	100.00	2.369	1.892	1.25

100 ppb SD (3 of 7)

NO	RET(L)	RATIO	RRT(L)	RATIO	AMNT	AMNT(L)	R. FAC	R. FAC(L)	RATIO
17	9:32	1.01	1.320	1.00	85.03	100.00	0.230	0.270	0.85
18	5:16	1.01	0.728	1.00	103.52	100.00	0.204	0.197	1.04
19	6:47		0.836			500.00		2.771	
20	6:29		0.943			100.00		0.014	
21	14:27	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
22	12:17	1.01	0.850	1.00	100.26	100.00	0.658	0.657	1.00
23	12:26	1.01	0.861	1.00	117.90	100.00	1.060	0.899	1.18
24	12:47	1.01	0.884	1.00	116.28	100.00	1.274	1.096	1.16
25	13:14	1.01	0.915	1.00	115.28	100.00	2.003	1.737	1.15
26	13:25	1.00	0.929	1.00	115.49	100.00	0.816	0.707	1.15
27	13:25	1.00	0.929	1.00	128.53	100.00	0.984	0.765	1.29
28	13:19	1.01	0.922	1.00	166.11	100.00	1.108	0.667	1.66
29	17:18	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
30	15:44	1.01	0.909	1.00	105.48	100.00	0.545	0.516	1.05
31	15:23	1.01	0.889	1.00	221.03	100.00	0.777	0.351	2.21
32	15:44	1.01	0.909	1.00	105.48	100.00	0.545	0.516	1.05
33	17:01	1.01	0.983	1.00	145.97	100.00	1.815	1.244	1.46
34	17:01	1.01	0.983	1.00	125.30	100.00	1.367	1.091	1.25
35	17:57	1.01	1.037	1.00	122.16	100.00	0.966	0.791	1.22
36	18:06	1.01	1.045	1.00	135.70	100.00	2.066	1.523	1.36
37	19:10	1.01	1.108	1.00	135.34	100.00	3.360	2.483	1.35
38	21:26	1.02	1.239	1.01	126.96	100.00	1.459	1.149	1.27
39	24:23	1.02	1.409	1.01	100.56	100.00	0.821	0.817	1.01
40	26:09	1.02	1.511	1.01	133.24	100.00	2.725	2.045	1.33
41	27:41		1.599			200.00		1.368	

100ppb STD (497)

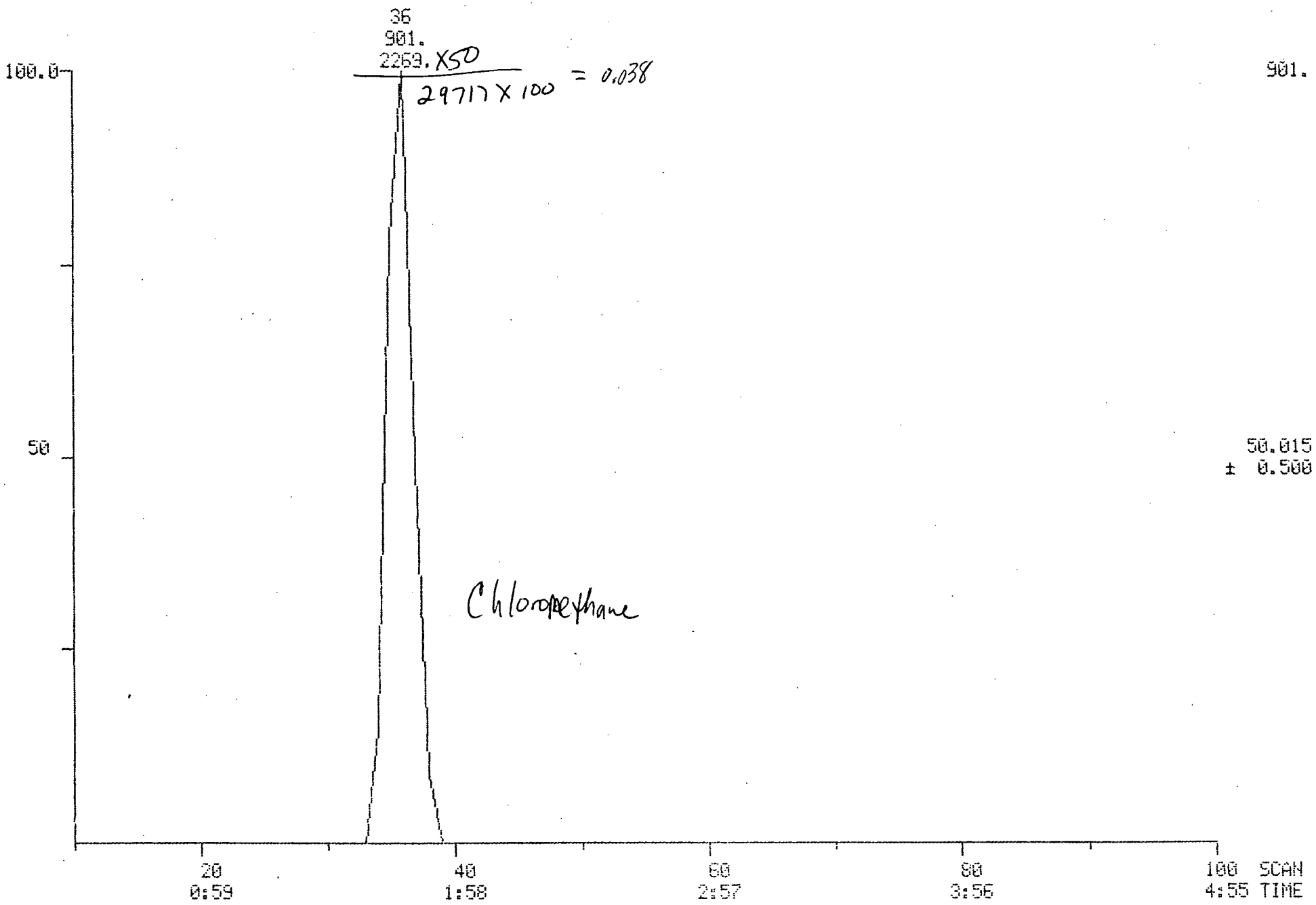
MASS CHROMATOGRAM
05/05/84 20:09:00
SAMPLE:

DATA: CLPSTD13

SCANS 10 TO 100

00097

100ppb STD (587)



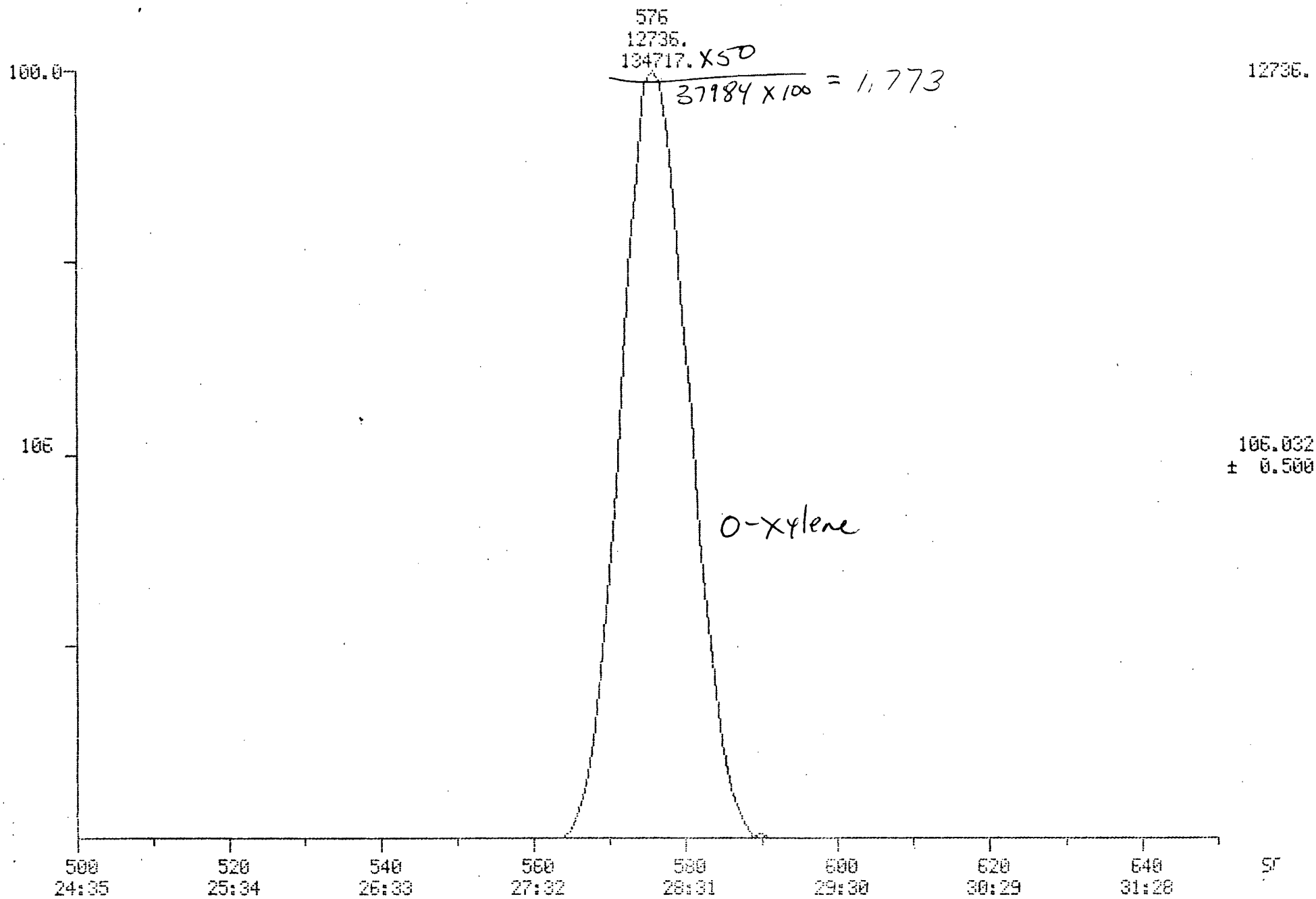
MASS CHROMATOGRAM
05/05/84 20:09:00
SAMPLE:

DATA: CLPSTD13

SCANS 500 TO 650

00098

100ppb STD (697)



UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 520 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	148	975	925	1	1	1	0
3	51	51	981	816	3	1	1	0
4	61	61	984	643	4	1	1	0
5	74	74	983	769	5	1	1	0
6	100	101	993	956	6	1	1	0
7	123	124	985	942	7	1	1	0
8	140	141	992	918	8	1	1	0
9	162	163	995	898	9	1	1	0
10	174	174	982	936	10	1	1	0
11	184	184	984	921	11	1	1	0
12	194	195	996	399	12	1	1	0
13	196	197	971	813	13	1	1	0
14	217	219	965	922	14	1	1	0
						**		
15	223	225	983	967	15	2	1	0
16	229	231	978	920	16	1	1	0
17	194	195	932	152	17	1	1	0
18	107	108	968	595	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 6486 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
21	294	295	989	465	1	2	1	0
22	250	252	973	910	2	1	1	0
23	253	255	951	804	3	1	1	0
24	260	262	982	886	4	1	1	0
25	269	271	985	626	5	1	1	0
26	273	274	987	433	6	1	1	0
27	273	274	995	218	7	1	1	0
28	271	273	998	257	8	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -69 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	355	988	541	1	1	1	0
30	320	322	992	916	2	1	1	0
31	313	315	938	849	3	1	1	0
32	320	322	787	535	4	1	1	0
33	346	349	996	664	5	1	1	0
34	346	349	999	131	6	1	1	0
35	365	368	963	831	7	1	1	0
36	368	372	982	880	8	1	1	0
						**		
37	390	395	998	135	9	2	1	0
38	436	443	984	889	10	1	1	0
39	496	506	986	885	11	1	1	0
40	532	544	975	872	12	1	1	0

COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTIT

100ppb STD
(787)

00099

VOA GC/MS SHIFT QUALITY CONTROL REPORT

INSTRUMENT: OWA DATE: 5/5/84 SHIFT: PM OPERATOR: [illegible]

A.L.S. Position	File name	Water or Soil	IS-1 Area Bromochloromethane	SS-1 % D-4 1,2-Dichloroethane	IS-2 Area ~~B-6 Benzene~~ 1-Bromo-2-Chloro Propane	IS-3 Area 1,4-Dichlorobutane	SS-2 % D-8 Toluene	SS-3 % 4-Bromofluorobenzene	STATUS
10	2752 CLPVOA 29	W	32366	79	49904	51853	92	90	
1	2753 30		33022	81	52572	53385	91	86	
2	2754 31		32839	77	51117	52778	91	87	>8hrs from std.
1	CLPSTD 13		29717	100	45246	37984	100	100	
2	BLK CLPVOA 32		30086	78	45864	33278	109	125	
3	2755 33		31639	88	51163	48435	80	93	
4	2756 34		28267	85	46072	43147	83	87	
5	2757 35		33001	93	53958	53818	76	86	
6	2754 36		30641	85	50534	49832	78	84	

VOA GC/MS SHIFT QUALITY CONTROL REPORT

INSTRUMENT: OWA DATE: 5/5/84 SHIFT: Am OPERATOR: [illegible]

A.L.S. Position	File name	Water or Soil	IS-1 Area Bromochloromethane	SS-1 % D-4 1,2-Dichloroethane	IS-2 Area ~~B-6 Benzene~~ 1-Bromo-2-Chloro Propane	IS-3 Area 1,4-Dichlorobutane	SS-2 % D-8 Toluene	SS-3 % 4-Bromofluorobenzene	STATUS
10	CLPSTD 10	W	43990	100	63937	63036	100	100	
1	11		47635	100	72889	69876	100	100	
2	12		34782	100	61262	58240	100	100	
3	BLK CLPVOA 22		6076	50	9435	12083	90	134	Leak
4	2741 23		39589	82	62414	60354	97	96	
5	2749MS 24		32758	82	51961	53883	91	89	
6	2749MSD 25		32529	74	51393	47569	105	103	
7	2749MS3 26		33951	78	52939	54299	94	91	
8	A2750 27		36900	84	57636	59016	93	90	
9	2751 28		36916	80	58406	58277	94	93	

00101

2660 Initial Calibration Data - Volatile HSL Compounds

Case No. ~~2260a~~ Contractor Cambridge Analytical Contract No. 68-01-6791

Instrument Identifier OWA Calibration Date 5/5/84

Minimum $\overline{RF}$ for SPCC is ~~0.050~~ 0.3

COMPOUND	$\overline{RRT}$	RF_{20}	RF_{100}	RF_{200}	$\overline{RF}$	SPCC
chloromethane	0.241	0.038	0.062	0.097	0.066	*
bromomethane	0.343	0.211	0.413	0.626	0.417	
dichlorodifluoromethane						
vinyl chloride	0.411	0.076	0.209	0.333	0.206	
chloroethane	0.499	0.091	0.209	0.315	0.205	
methylene chloride	0.679	2.531	2.994	4.259	3.261	
trichlorofluoromethane						
ethene, 1,1-dichloro	0.952	0.377	0.750	1.086	0.738	
ethane, 1,1-dichloro-	1.102	0.985	1.743	2.478	1.735	*
1,2-trans-dichloroethene	1.180	0.396	0.863	1.289	0.849	
chloroform	1.250	1.772	2.960	4.259	2.997	
ethane, 1,2-dichloro-	1.332	1.131	2.083	2.999	2.071	
ethane, 1,1,1-trichloro-	1.477	1.469	2.691	4.062	2.741	
carbontetrachloride	1.518	1.205	2.542	4.343	2.697	
bromodichloromethane	1.559	0.603	1.892	3.116	1.870	
propane, 1,2-dichloro-	0.851	0.350	0.657	0.865	0.624	
1,3-trans-dichloropropene	0.862	0.407	0.899	1.205	0.837	
trichloroethylene	0.887	0.738	1.096	1.332	1.055	
chlorodibromomethane	0.924	0.132	0.667	1.125	0.641	
benzene	0.917	1.011	1.737	2.335	1.694	
ethane, 1,1,2-trichloro-	0.931	0.451	0.707	0.957	0.705	
1,3-cis-dichloropropene	0.928	0.312	0.765	1.194	0.757	
2-chloroethyl vinyl ether						*
bromoform	0.888	0.034	0.351	0.775	0.387	*
ethane, 1,1,2,2-tetrachloro-	0.983	0.708	1.091	1.430	1.076	*
ethene, tetrachloro-	0.983	0.806	1.244	1.541	1.197	
toluene	1.040	1.383	1.523	1.882	1.596	
chlorobenzene	1.110	1.832	2.483	3.288	2.534	
ethylbenzene	1.241	0.485	1.149	1.546	1.060	
acetone	0.727	0.346	0.197	0.327	0.290	
2-butanone	1.318	0.150	0.270	0.466	0.295	
carbondisulfide	0.834	1.080	1.682	2.684	1.815	
2-hexanone	0.907	0.330	0.516	0.744	0.530	
4-methyl-2-pentanone	0.907	0.330	0.516	0.744	0.530	
styrene	1.517	0.939	2.045	2.773	1.919	
vinyl acetate						
o-xylene	1.606	0.552	1.368	1.843	1.254	

$\overline{RRT}$ - Average Relative Retention Time

RF - Response Factor (subscript is the amount of nanograms)

$\overline{RF}$ - Average Response Factor

SPCC - System Performance Check Compounds (those compounds flagged with an *)

FORM IX (continued)

Calibration Check - Volatile HSL Compounds

Case No. 2660 Contractor Cambridge Analytical Contract No. 68-01-6791

Instrument Identifier OWA Calibration Date 5/5/84

Standard File CLPSTD 13 Date 5/5/84 Time 20:09

Maximum % D for CCC is 20 Minimum RF for SPCC is 0.300

COMPOUND	$\overline{RF}$	RF	% D	CCC	SPCC	
chloromethane	0.066	0.038	42.4		**	
bromomethane	0.417	0.522	25.2			
dichlorodifluoromethane						
vinyl chloride	0.206	0.229	11.2	*		
chloroethane	0.205	0.221	7.8			
methylene chloride	3.261	3.690	13.2			
trichlorofluoromethane						
ethene, 1,1-dichloro	0.738	0.783	6.1	*		
ethane, 1,1-dichloro-	1.735	1.782	2.7		**	
1,2-trans-dichloroethene	0.849	0.999	17.7			
chloroform	2.997	3.338	11.4	*		
ethane, 1,2-dichloro-	2.071	2.259	9.1			
ethane, 1,1,1-trichloro-	2.741	3.325	21.3			
carbontetrachloride	2.697	3.423	26.9			
bromodichloromethane	1.870	2.369	26.7			
propane, 1,2-dichloro-	0.624	0.658	5.4	*		
1,3-trans-dichloropropene	0.837	1.069	26.6			
trichloroethylene	1.055	1.274	20.8			
chlorodibromomethane	0.641	1.108	72.8			
benzene	1.694	2.003	18.2			
ethane, 1,1,2-trichloro-	0.705	0.816	15.7			
1,3-cis-dichloropropene	0.757	0.984	30.0			
2-chloroethyl vinyl ether					**	
bromoform	0.387	0.777	100.8		**	
ethane, 1,1,2,2-tetrachloro-	1.076	1.367	27.0		**	
ethene, tetrachloro-	1.197	1.815	51.6			
toluene	1.596	2.066	29.4	*		
chlorobenzene	2.534	3.360	32.6		**	
ethylbenzene	1.060	1.459	37.6			
acetone	0.290	0.204	29.6			
2-butanone	0.295	0.230	22.0			
carbondisulfide	1.815	2.005	10.5			
2-hexanone	0.530	0.545	2.8			
4-methyl-2-pentanone	0.530	0.545	2.8			
styrene	1.918	2.725	42.0			
vinyl acetate						
o-xylene	1.254	1.773	41.4			

$\overline{RF}$ - Average Response Factor from initial calibration Form VII

RF - Response Factor from daily standard file

% D - Percent Difference

CCC - Calibration Check Compounds (those compounds flagged with an *)

SPCC- System Performance Check Compounds (those compounds flagged with **)

FORM X (continued)

Cambridge Analytical Associates

RAW QC PACKET

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene

CASE NO. 2660 CONTRACTOR Cambridge Anal. CONTRACT NO. 68-01-6791

INSTRUMENT ID OWA DATE 5/5/84 TIME 10:42

RUN NUMBER BFBDI QC REPORT NO. 011 ANALYST EAR

TUNE CHECK:

m/e	Ion Abundance Criteria	% Relative Abundance
50	15 - 40% of the base peak	19
75	30 - 60% of the base peak	60
95	Base peak, 100% relative abundance	100
96	5 - 9% of the base peak	5
173	Less than 1% of the base peak	—
174	Greater than 50% of the base peak	72
175	5 - 9% of mass 174	4 (6)[1]
176	Greater than 95%, but less than 101% of 174	70 (99)[1]
177	5 - 9% of mass 176	3 (5)[2]

[1]Value in parenthesis is % of mass 174.
[2]Value in parenthesis is % of mass 176.

Comments:

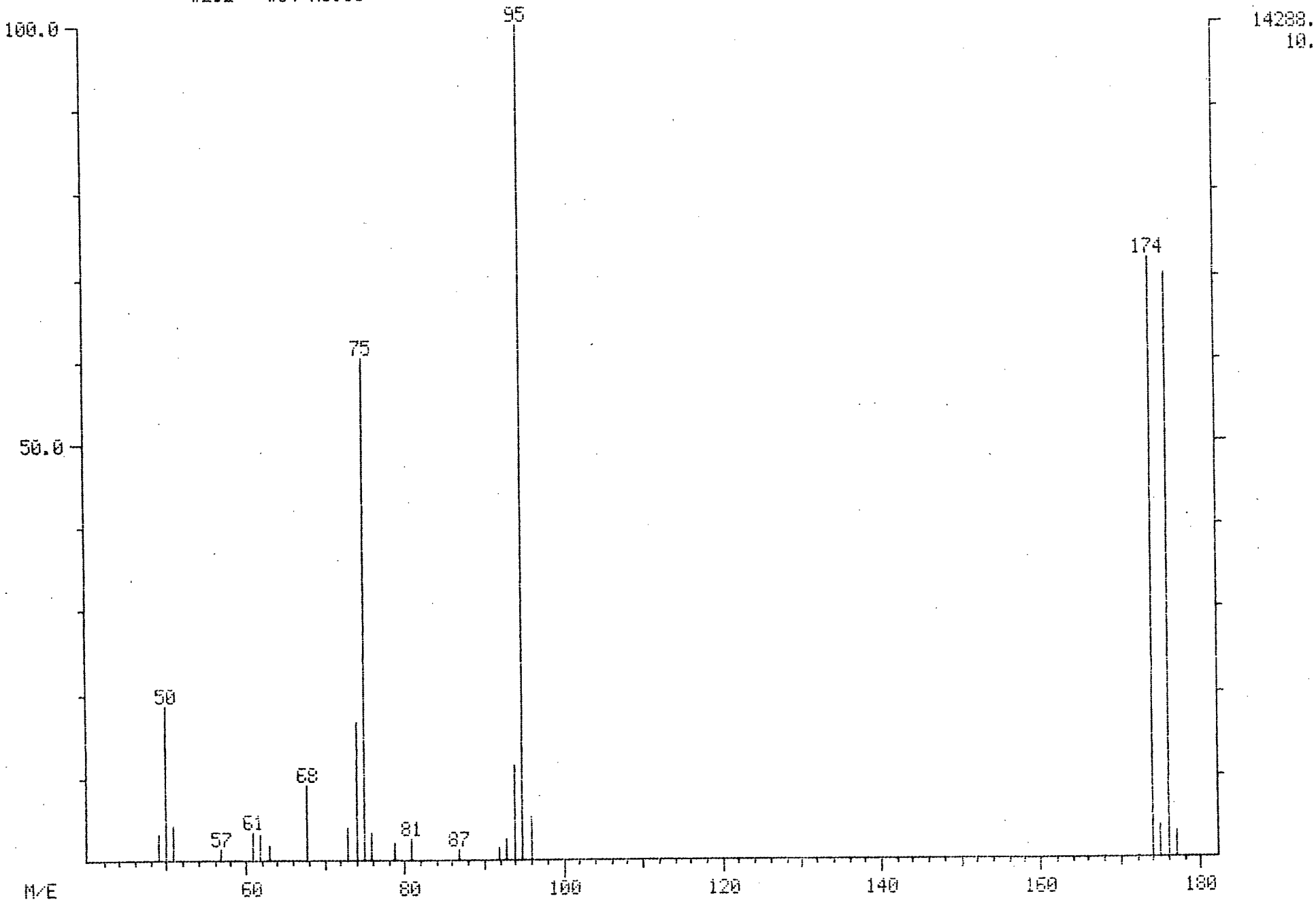
FORM VI

Revision Date 1/83

MASS SPECTRUM
05/05/84 10:42:00 + 10:25
SAMPLE:
#212 - #54 X3.05

DATA: BFBDI #212

BASE M/E: 95
RIC: 58048.



00100

MASS LIST DATA: BFBDI # 212 BASE M/E: 95
05/05/84 10:42:00 + 10:25 RIC: 58048.
SAMPLE:
#212 - #54 X3.05

49 0.00 MINIMA MIN INTEN: 0. MAX INTEN: 14288.
177 # 0 MAXIMA

MASS	% RA
49	3.18
50	18.62
51	4.26
57	1.29
61	3.30
62	3.14
63	1.85
68	9.13
73	3.93
74	16.77
75	60.47
76	3.48
79	2.07
81	2.51
87	1.29
92	1.47
93	2.72
94	11.55
95	100.00
96	5.21
174	71.89
175	4.02
176	70.21
177	3.18

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene

CASE NO. 2660 CONTRACTOR Cambridge Anal. CONTRACT NO. 68-01-6791

INSTRUMENT ID OWA DATE 5/5/84 TIME 19:46

RUN NUMBER BFBDI1 QC REPORT NO. 011 ANALYST EC

TUNE CHECK:

m/e	Ion Abundance Criteria	% Relative Abundance
50	15 - 40% of the base peak	20
75	30 - 60% of the base peak	60
95	Base peak, 100% relative abundance	100
96	5 - 9% of the base peak	5
173	Less than 1% of the base peak	—
174	Greater than 50% of the base peak	86
175	5 - 9% of mass 174	5 (5)[1]
176	Greater than 95%, but less than 101% of 174	86 (100)[1]
177	5 - 9% of mass 176	4 (5)[2]

[1]Value in parenthesis is % of mass 174.
[2]Value in parenthesis is % of mass 176.

Comments:

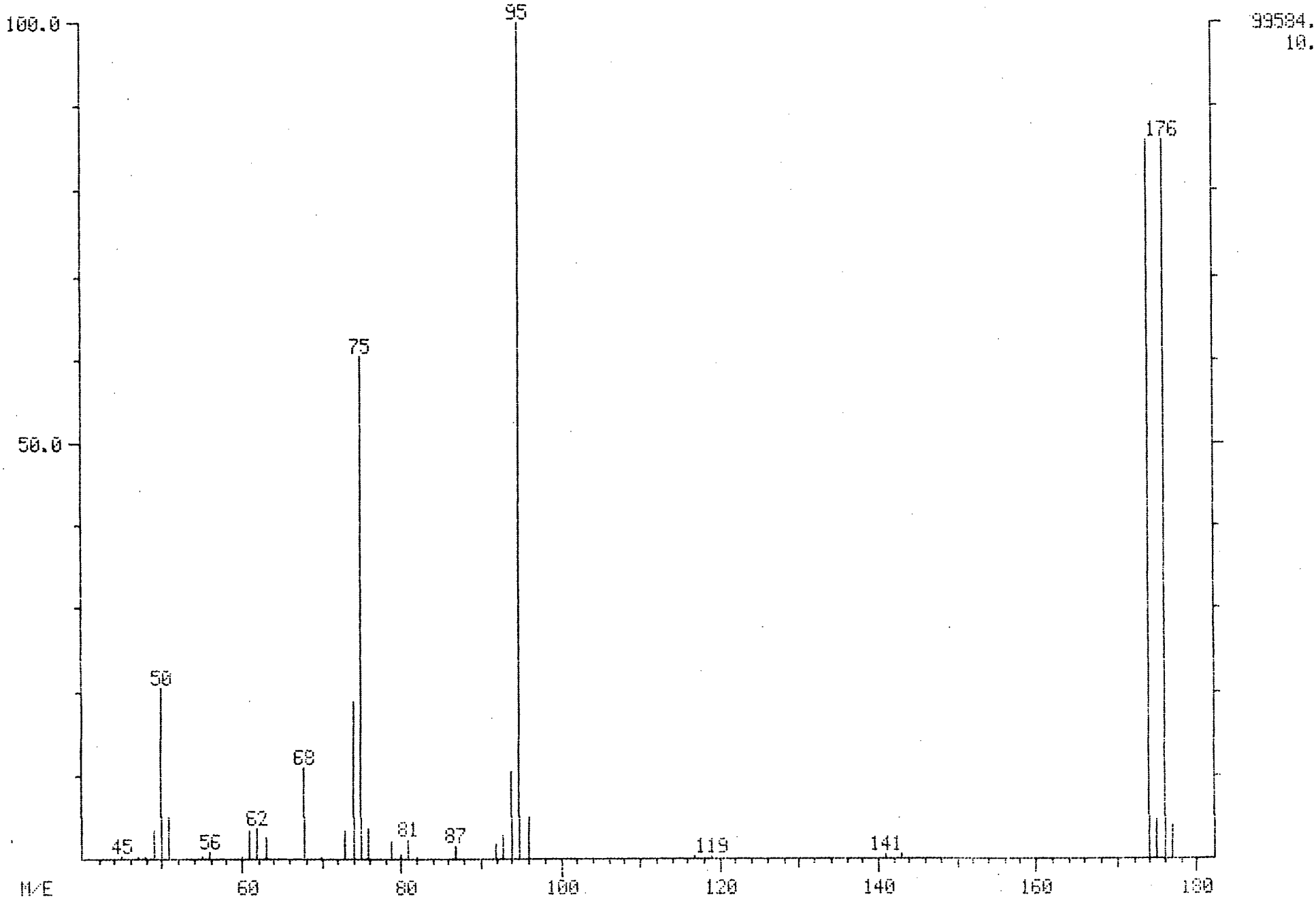
FORM VI

Revision Date 1/83

MASS SPECTRUM
05/05/84 19:46:00 + 10:19
SAMPLE:
#210 - #127 X*35.

DATA: BFBDI1 #210

BASE M/E: 95
RIC: 445440.



00100

MASS LIST DATA: BFBDI1 # 210 BASE M/E: 95
05/05/84 19:46:00 + 10:19 RIC: 445440.
SAMPLE:
#210 - #127 X*35.

41 0.00 MINIMA MIN INTEN: 0. MAX INTEN: 99584.
177 # 0 MAXIMA
MASS % RA

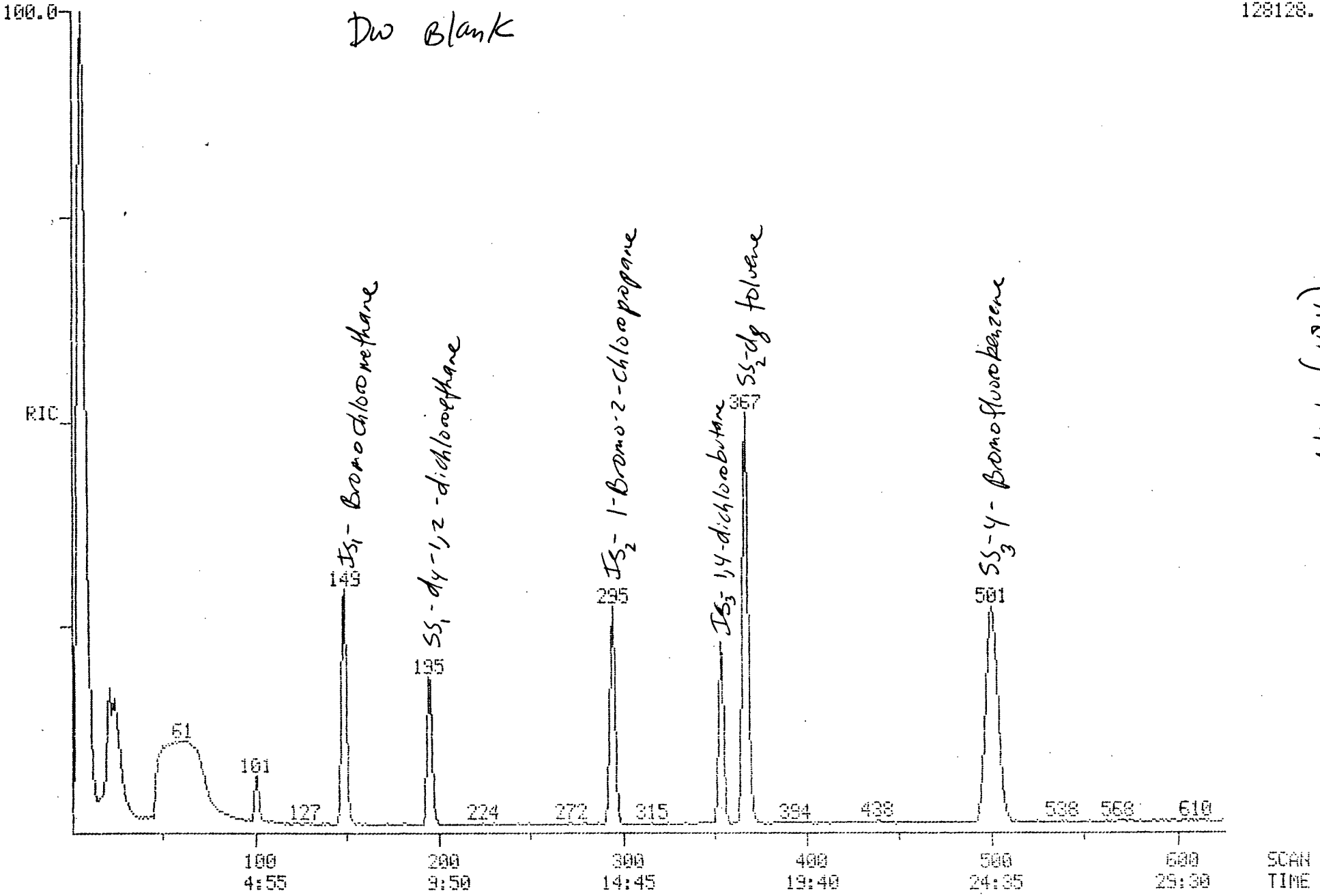
MASS	% RA
41	0.08
45	0.38
47	0.27
48	0.19
49	3.31
50	20.31
51	4.99
55	0.15
56	0.88
60	0.33
61	3.45
62	3.68
63	2.60
68	10.89
70	0.35
72	0.10
73	3.43
74	18.77
75	60.41
76	3.69
79	2.19
80	0.51
81	2.30
82	0.38
87	1.53
92	1.88
93	2.90
94	10.54
95	100.00
96	4.96
117	0.21
119	0.37
141	0.46
143	0.41
174	85.86
175	4.60
176	85.99
177	3.94

RIC
05/05/84 21:01:00
SAMPLE:

Case 2660
DW Blank

DATA: CLPVOA32 SCANS 1 TO 625

128128.



VOA blank (184)

00111

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA32

DATA: CLPVOA32.TI
05/05/84 21:01:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	148	7:17	1	1.000	A BB	30086.	50.000 UG/L	10.70
2	NOT FOUND								
3	NOT FOUND								

VOAblank (294)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT	
4	NOT	FOUND								
5	NOT	FOUND								
6	84	101	4:58	1	0.682	A BB	5272.	2.374 UG/L	0.51	BLK
7	NOT	FOUND								
8	NOT	FOUND								
9	NOT	FOUND								
10	NOT	FOUND								
11	NOT	FOUND								
12	102	195	9:35	1	1.318	A BB	3475.	78.009 PRCNT	16.69	✓
13	NOT	FOUND								
14	NOT	FOUND								
15	NOT	FOUND								
16	NOT	FOUND								
17	NOT	FOUND								
18	43	108	5:19	1	0.730	A BB	382.	3.114 UG/L	0.67	BLK
19	NOT	FOUND								
20	NOT	FOUND								
21	77	295	14:30	21	1.000	A BB	45864.	50.000 UG/L	10.70	
22	NOT	FOUND								
23	NOT	FOUND								
24	NOT	FOUND								
25	NOT	FOUND								
26	NOT	FOUND								
27	NOT	FOUND								
28	NOT	FOUND								
29	55	353	17:21	29	1.000	A BB	33278.	50.000 UG/L	10.70	
30	NOT	FOUND								
31	NOT	FOUND								
32	NOT	FOUND								
33	NOT	FOUND								
34	NOT	FOUND								
35	100	367	18:03	29	1.040	A BB	70082.	109.001 PRCNT	23.32	✓
36	NOT	FOUND								
37	NOT	FOUND								
38	NOT	FOUND								
39	95	501	24:38	29	1.419	A BB	68245.	124.832 PRCNT	26.71	✓
40	NOT	FOUND								
41	NOT	FOUND								

VOAblank (3of4)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 528 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	148	149	978	916	1	1	1	0
6	101	101	956	742	6	1	1	0
12	195	195	1000	796	12	1	1	0
18	108	108	762	73	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 6575 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
21	295	295	974	500	1	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -73 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	355	353	987	520	1	1	1	0
35	368	367	967	863	7	1	1	0
39	506	501	984	861	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF CLPVOA32 COMPLETED ON 5/05/84 21:32:16

VOAblank (4084)

RIC
05/05/84 12:52:00
SAMPLE:

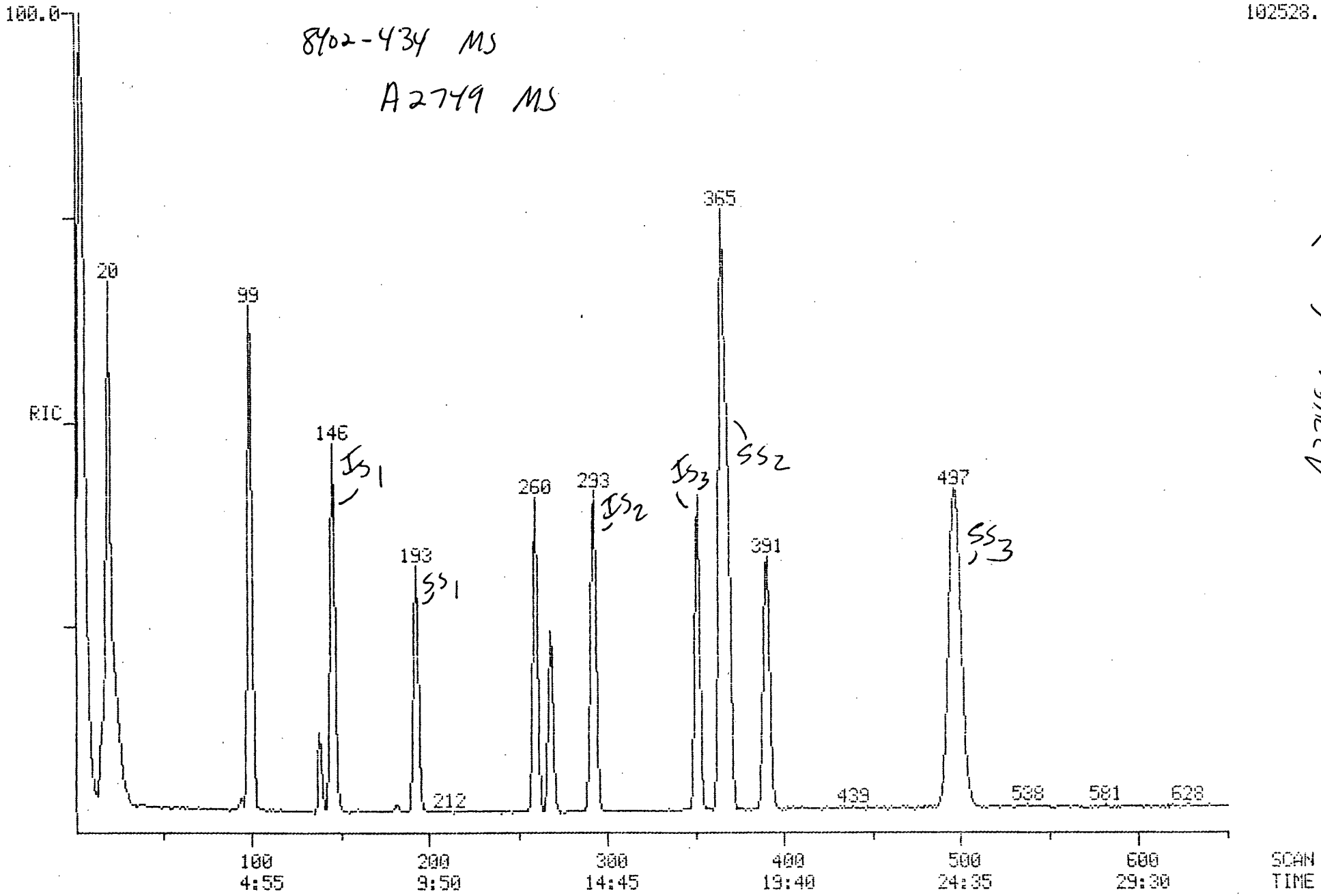
CASE2660

8402-434 MS

A2749 MS

DATA: CLPVOA24 SCANS 1 TO 650

00115



A2749MS (1984)

FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: CLPVOA24

DATA: CLPVOA24.TI
05/05/84 12:52:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	BROMOCHLOROMETHANE (INTERNAL STANDARD)
2	CHLOROMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLOROETHANE
6	METHYLENE CHLORIDE
7	CARBON DISULFIDE
8	1,1 DICHLOROETHYLENE
9	1,1 DICHLOROETHANE
10	TRANS 1,2 DICHLOROETHYLENE
11	CHLOROFORM
12	D4-1,2 DICHLOROETHANE (SURROGATE STANDARD)
13	1,2 DICHLOROETHANE
14	1,1,1 TRICHLOROETHANE
15	CARBON TETRACHLORIDE
16	BROMODICHLOROMETHANE
17	2-BUTANONE (MEK)
18	ACETONE
19	ACRYLONITRILE
20	ACROLEIN
21	1-BROMO-2-CHLOROPROPANE (INTERNAL STANDARD)
22	1,2 DICHLOROPROPANE
23	TRANS 1,3-DICHLOROPROPENE
24	TRICHLOROETHYLENE
25	BENZENE
26	1,1,2-TRICHLOROETHANE
27	CIS 1,3-DICHLOROPROPENE
28	DIBROMOCHLOROMETHANE
29	1,4 DICHLOROBUTANE (INTERNAL STANDARD)
30	4-METHYL 2-PENTANONE (MIBK)
31	BROMOFORM
32	2-HEXANONE (MPK)
33	TETRACHLOROETHYLENE
34	1,1,2,2 TETRACHLOROETHANE
35	D8-TOLUENE (SURROGATE STANDARD)
36	TOLUENE
37	CHLOROBENZENE
38	ETHYLBENZENE
39	4-BROMOFLUOROBENZENE (SURROGATE STANDARD)
40	STYRENE
41	O-XYLENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT
1	130	146	7:11	1	1.000	A BB	32758.	50.000 UG/L	9.08
2	NOT FOUND								
3	NOT FOUND								

A2789MS(294)

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT	
4	NOT FOUND									
5	NOT FOUND									
6	84	99	4:52	1	0.678	A BB	44971.	22.927 UG/L	4.16	BK
7	NOT FOUND									
8	96	139	6:50	1	0.952	A BB	5847.	11.897 UG/L	2.16	
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	102	193	9:29	1	1.322	A BB	4472.	82.305 PRCNT	14.95	✓
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	43	106	5:13	1	0.726	A BB	782.	6.061 UG/L	1.10	BK
19	NOT FOUND									
20	NOT FOUND									
21	77	293	14:24	21	1.000	A BB	51961.	50.000 UG/L	9.08	
22	NOT FOUND									
23	NOT FOUND									
24	130	260	12:47	21	0.887	A BB	24930.	21.886 UG/L	3.98	
25	78	268	13:11	21	0.915	A BB	45119.	24.992 UG/L	4.54	
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	55	352	17:18	29	1.000	A BB	53883.	50.000 UG/L	9.08	
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	100	365	17:57	29	1.037	A BB	77621.	91.086 PRCNT	16.54	✓
36	92	368	18:06	29	1.045	A BB	45118.	27.494 UG/L	4.99	
37	112	391	19:13	29	1.111	A BB	60753.	22.704 UG/L	4.12	
38	NOT FOUND									
39	95	498	24:29	29	1.415	A BB	78557.	89.242 PRCNT	16.21	✓
40	NOT FOUND									
41	NOT FOUND									

A2749 MS(384)

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 584 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	146	983	908	1	1	1	0
6	100	99	992	935	6	1	1	0
8	140	139	983	754	8	1	1	0
12	194	193	996	754	12	1	1	0
18	107	106	761	83	18	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7463 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

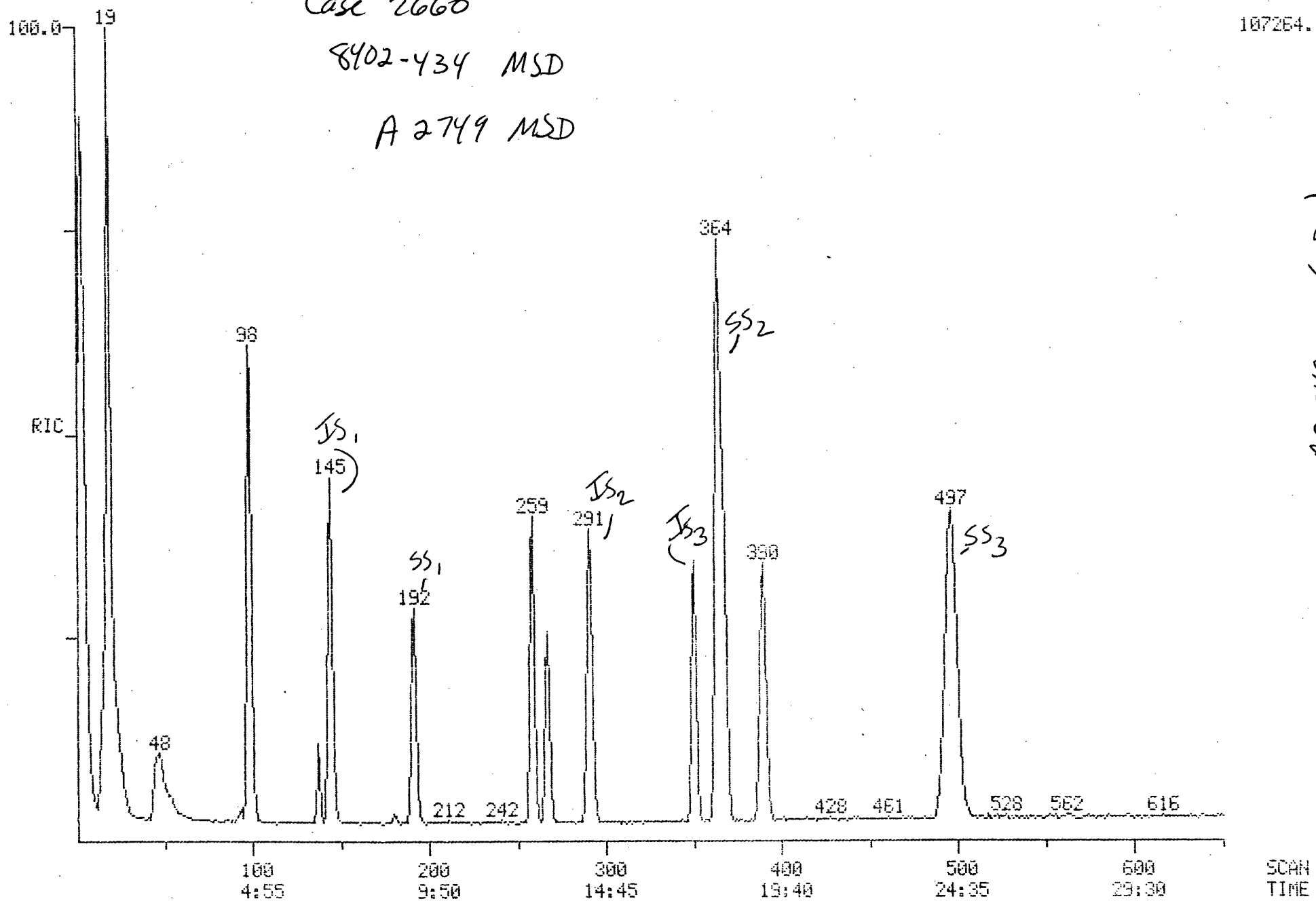
REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
21	294	293	985	446 -	1	2	1	0
24	260	260	979	864	4	1	1	0
25	269	268	973	837	5	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -55 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	352	982	509	1	1	1	0
35	365	365	972	822	7	1	1	0
36	368	368	972	764	8	1	1	0
						**		
37	390	391	998	130 -	9	2	1	0
39	496	497	988	831	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 13
DATA PROCESSING OF CLPVOA24 COMPLETED ON 5/05/84 14:00:35

A2749MS (40/4)



A2749MSD (1084)

100.0

19

RIC
05/05/84 13:39:00
SAMPLE:

Case 2660
8402-434 MSD
A2749 MSD

DATA: CLPVOA25

SCANS 1 TO 650

107264.

00119

REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
1	0.676	A BB	45465.	23.342	UG/L	4.07	BLK
1	0.952	A BB	6418.	13.151	UG/L	2.29	
1	1.324	A BB	4004.	74.211	PRCNT	12.95	✓
21	1.000	A BB	51393.	50.000	UG/L	8.72	
21	0.890	A BB	25234.	22.398	UG/L	3.91	
21	0.918	A BB	47042.	26.345	UG/L	4.60	
29	1.000	A BB	47569.	50.000	UG/L	8.72	
29	1.037	A BB	79058.	105.087	PRCNT	18.33	✓
29	1.046	A BB	41985.	28.981	UG/L	5.06	
29	1.111	A BB	62725.	26.553	UG/L	4.63	
29	1.416	A BB	80158.	103.147	PRCNT	17.99	✓

A2749MSD (384)

00121

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 579 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUX

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	147	145	986	908	1	1	1	0
6	100	98	995	944	6	1	1	0
8	140	138	981	763	8	1	1	0
12	194	192	996	752	12	1	1	0
COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTIT								
18	107	105	755	29	18	1	0	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 7380 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUY

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
						**		
21	294	291	984	474	1	2	1	0
24	260	259	983	873	4	1	1	0
25	269	267	975	853	5	1	1	0

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -61 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUZ

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
29	352	351	985	502	1	1	1	0
35	365	364	970	824	7	1	1	0
36	368	367	975	756	8	1	1	0
						**		
37	390	390	1000	129	9	2	1	0
39	496	497	991	828	11	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 13
DATA PROCESSING OF CLPVOA25 COMPLETED ON 5/05/84 14:47:41

A2749MSD (4/84)

INTERSTATE - WOBURN
TDD: 8303-07A
JOB# 3425-03

REGIONAL REVIEW OF UNCONTROLLED HAZARDOUS WASTE SITE CONTRACT
LABORATORY DATA PACKAGE

TO: U.S. Environmental Protection Agency
Sample Management Office (SMO)
P.O. Box 818
Alexandria, Virginia 22313

The hardcopied (laboratory name) Cambridge Analytical Assoc. data package received at Region I has been reviewed and the quality assurance and performance data summarized. The data reviewed included:

Case No.	SMO Sample No.	SMO Sample No.	SMO Sample No.
26660	A2749	A2750	A2751
	A2752	A2753	A2754
	A2755	A2756	A2757

Contract No. 68-01-6791 requires that specific analytical work be done and that associated reports be provided by the contractor to the Regions, EMSL-LV, and SMO. The general criteria used to determine the performance were based on an examination of:

- Data completeness
- Spectra matching quality
- Surrogate spike results
- Matrix spike results
- Duplicate analysis results
- Blank analysis results
- DFTPP and BFB performance results

The data review forms for each of the above review items are contained within the body of this memo.

Comments: Chloroform, ~~Methylene Chloride~~, ~~Toluene~~ and Acetone should be rejected due to blank contamination. Also, although some surrogate spikes exceeded the limits for recovery, these limits are only advisory at this time and should not justify using this as a basis for rejecting data.

I. DATA COMPLETENESS CHECKLIST

✓ Organics analysis data sheets

____ Base/neutral - sample chromatograms

____ Acid - sample chromatograms

✓ VOA - sample chromatograms

____ Pesticide - sample chromatograms

✓ Sample spectra - priority pollutants and non-priority pollutants

____ Library reference spectra

✓ Blank analysis data

✓ Duplicate analysis: one duplicate analysis of sample A2749 was reported as required by contract.

✓ Spike data

____ DFTPP criteria forms, spectra and listings

✓ BFB criteria forms, spectra and listings

____ Base/neutral - standard reference spectra and chromatograms

____ Acid - standard reference spectra and chromatograms

✓ VOA - standard reference spectra and chromatograms

____ Pesticide - standard chromatogram

____ Base/neutral sensitivity test

____ Acid sensitivity test

____ Tailing factor data

Remarks: Standard reference spectra or library reference was missing

PRIORITY POLLUTANT VOLATILES	D.L.	EPA LAB WATER BLANK	Well 2D	Well 2D	Well 2S	Well 2M	Well 3A	Field Blank	Well 3C	Well 3B			
		A 2749	A 2750	A 2751	A 2752	A 2753	A 2754	A 2755	A 2756	A 2757			
acrolein	100												
acrylonitrile	100												
benzene	5												
carbon tetrachloride	5												
chlorobenzene	5												
1,2-dichloroethane	1												
1,1,1-trichloroethane	5												
1,1-dichloroethane	5												
1,1,2-trichloroethane	5												
1,1,2,2-tetrachloroethane	10												
chloroethane	10												
2-chloroethylvinyl ether	10												
chloroform	5												
1,1-dichloroethane	5							19					
trans-1,2-dichloroethane	5												
1,2-dichloropropane	10												
trans-1,3-dichloropropene	5												
cis-1,3-dichloropropene	5												
ethylbenzene	5												
methylene chloride	5	K	K	K	K	K	K	K	K	K			
chlormethane	10												
bromomethane	10												
bromoform	10												
bromodichloromethane	5												
fluorotrichloromethane													
dichlorodifluoromethane													
chlorodibromomethane	5												
tetrachloroethene	5												
toluene	5	K			K			K					
trichloroethene	5							K					
vinyl chloride	10												
NON-PRIORITY POLLUTANT VOLATILES													
acetone	5	K	K	K	8 B	K	K	11 B	K	K			
2-butanone	5												
carbondisulfide	1												
2-hexanone													
4-methyl-2-pentanone	5												
styrene	5												
vinyl acetate	5												
total-xylene	5												

BASE/NEUTRAL COMPOUNDS

acenaphthene											
benzidine											
1,2,4-trichlorobenzene											
hexachlorobenzene											
hexachlorethane											
bis(2-chloroethyl)ether											
2-chloronaphthalene											
1,2-dichlorobenzene											
1,3-dichlorobenzene											
1,4-dichlorobenzene											
3,3'-dichlorobenzidine											
2,4-dinitrotoluene											
2.6-dinitrotoluene											
1,2-diphenylhydrazine											
fluoranthene											
4-chlorophenyl phenyl ether											
4-bromophenyl phenyl ether											
bis (2-chloroisopropyl) ether											
bis (2-chloroethoxy) methane											
hexachlorobutadiene											
hexachlorocyclopentadiene											
isophorone											
napthalene											
nitrobenzene											
N-nitrosodiphenylamine											
N-nitrosodl-n-propylamine											
bis (2-ethylhexyl) phthalate											
benzyl butyl phthalate											
di-n-butyl phthalate											
di-n-octyl phthalate											
diethyl phthalate											
dimethyl phthalate											
benzo(a)anthracene											
benzo(a)pyrene											
benzo(b)fluoranthene											
benzo(k)fluoranthene											
chrysene											
acenaphthy'ene											
anthracene											
benzo(ghi)perylene											
fluorene											
phenanthrene											
dibenzo(a,h)anthracene											
indenol(1,23-cd)pyrene											
pyrene											

NON-PRIORITY POLLUTANT BASE/NEUTRAL COMPOUNDS												
aniline												
benzyl alcohol												
4-chloroaniline												
dibenzofuran												
2-methylnaphtalene												
2-nitroaniline												
3-nitroaniline												
4-nitroaniline												
PRIORITY POLLUTANT ACID COMPOUNDS												
2,4,6-trichlorophenol												
p-chloro-m-cresol												
2-chlorophenol												
2,4-dichloophenol												
2,4-dimethylphenol												
2-nitrophenol												
4-nitrophenol												
2,4-dinitrophenol												
4,6-dinitro-2-methylphenol												
pentachlorophenol												
phenol												
NON-PRIORITY POLLUTANT ACID COMPOUNDS												
benzoic acid												
2-methylphenol												
4-methylphenol												
2,4,5-trichlorophenol												

PRIORITY POLLUTANT
PESTICIDES

aldrin											
dieldrin											
chlorodane											
4,4'-DDT											
4,4'-DDE											
4,4'-DDD											
-endosulfan											
-endosulfan											
endosulfan sulfate											
endrin											
endrin aldehyde											
heptachlor											
heptachlor epoxide											
BHC-Alpha											
BHC-Beta											
BHC-Delta											
BHC-Gamma											
PCB-1242											
PCB-1254											
PCB-1221											
PCB-1232											
PCB-1248											
PCB-1260											
PCB-1016											
toxaphene											

DIOXINS											
2,3,7,8-tetrachlorodibenzo-p-dioxin											

TENTATIVELY IDENTIFIED COMPOUNDS µg/l

COMPOUND	FRACTION	A2749	A2750	A2751	A2752	A2753	A2754	A2755	A2756	A2757
3-Methoxy-3 Methyl,1-2 Butanone	VOA				5J 91.4%					

II. SPECTRA MATCHING QUALITY

_____ The spectra were examined and found to be of good matching quality.

_____ The spectra were examined and found to be of poor matching quality due to:

Specified Hazardous Substances List (HSL) Compounds Detected:

Sample No.	Compound Name	Comments

Tentatively Identified Compounds Detected:

Sample No.	Compound Name	Comments

Remarks: Didn't find std. spectra for specific compounds in phase but spectra matched well w/ EPA/NIH Mass Spectral Data Base

III. SURROGATE SPIKES

The recoveries of the surrogate spiking compounds were reviewed. The average recovery results, standard deviations, etc., are listed below. Asterisked values may indicate quality control problems.

Fraction	Surrogate Compound	Acceptable Range (%)	Average Recovery (%)	± Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)	Number Out of Control	Total Number of Samples
VOA	Benzene-d_6	70 - 130						
VOA	Toluene-d_8	70 - 130 84 - 114	87%	7.6	75%	97%	4	9
Acid	Phenol-d_5	30 - 100						
Acid	2-fluorophenol	30 - 100						
B/N	Nitrobenzene-d_5	40 - 120						
B/N	2-fluorobiphenyl	40 - 120						
VOA	BFB	63 - 127*	89%	3.8	84%	96%	0	9
VOA	D_4-1,2 Dichloro Ethane	90 - 130*	84%	4.1	79%	93%	8	9

Remarks: * Advisory Limit Data suspect due to 44% of samples for Toluene out of control. Also, although the limits are advisory, all but one sample for DCE was out of control. For this compound, even the QA surrogates were out.

IV. MATRIX SPIKE RESULTS

The matrix spike results (MSR) for each parameter group were evaluated. The parameters that were reported are listed below along with the MSR guidelines and amount of spike added. A double asterisk (**) indicates outliers.

Compound	Acceptable Range (%)	Average Recovery (%)	± Standard Deviation	Number Out of Control	Total Number	Outliers
Volatiles						
Chlorobenzene	60 - 150	99%	7.5	0	2	
Toluene	40 - 190	103%	3	0	2	
Benzene	70 - 200	102%	2.5	0	2	
Base/Neutrals						
1,2,4-trichlorobenzene	50 - 200					
Acenaphthene	35 - 200					
2,4-dinitrotoluene	25 - 200					
Di-n-butylphthalate	50 - 180					
Pyrene	50 - 150					
N-nitrosodi-n-propylamine	20 - 100					
1,4-dichlorobenzene	15 - 200					
Acids						
Pentachlorophenol	40 - 140					
Phenol	50 - 200					
2-chlorophenol	40 - 150					
p-chloro-m-cresol	40 - 120					
4-nitrophenol	90 - 200					
Pesticides						
Heptachlor	70 - 150					
Aldrin	80 - 150					
Dieldrin	85 - 150					

**Not within specified criteria.

Remarks: _____

V. DUPLICATE ANALYSIS RESULTS

The relative percent difference (RPD) for each parameter group was evaluated. The duplicate analysis RPD acceptance criteria should be:

Fraction	Maximum Acceptable Percent Difference
Volatile	15%
Base/Neutral	50%
Acid	40%

The RPDs exceeding the maximum acceptable percent difference were:

Fraction	Compound	Actual RPD	Concentration Sample	Concentration Duplicate
Volatile	Chlorobenzene	15.8	22.7	26.6
Base/Neutral				
Acid				

Each duplicate analysis was examined in reference to compounds detected in each analysis. Those compounds which were not common to each analysis for the duplicate sample are listed below:

Fraction	Sample No.	Compound	Concentration

Remarks: My calculations give me a RPD of 7.9. In either case, this isn't something of great consequence.

VI. BLANK ANALYSIS RESULTS

The blank analysis was reviewed. The contaminants in the blank are listed below:

Fraction	Compound	Concentration	D.L
VOA	Methylene Chloride	2.3	5
VOA	Acetone	3.1	5

Remarks: The compounds are below the contract detection limits. The ~~EPA~~ blind blank also was below the contract detection limits.

The field blank contained the highest levels of all compounds.

VII. DFTPP AND BFB PERFORMANCE RESULTS

_____ The DFTPP performance results were reviewed and found to be within the specified criteria.

✓ The BFB performance results were reviewed and found to be within the specified criteria.

The (DFTPP/BFB) performance result(s) was/were reviewed and the following abundances were found to fall outside the specified criteria:

Compound	m/z	Required Abundance	Actual Abundance

The (DFTPP/BFB) performance results which were found to be outside of the contractually required tuning requirements do not have an adverse technical impact on the data.

Remarks: _____

VIII. CHROMATOGRAPHY CHECKS

Type of Column: Packed Column _____ Fused Silica Capillary Column (FSCC) _____

Packed Column Chromatography Check

Tailing Factors	Acceptance Windows	Actual
Benzidine	Less than 3	_____
Pentachlorophenol	Less than 5	_____

FSCC Chromatography Check

50-ng benzidine detectable? Yes _____ No _____

Pentachlorophenol response factor? Yes _____ No _____

Remarks: _____

IX. STANDARDS

General shape of the total ion chromatogram:

	Acids	Base/ Neutrals	Volatiles	Pesticides
Peak Shape			A	
Interferences				
Background				

Area Response

4-nitrophenol	
2,4-dinitrophenol	
Pentachlorophenol	
Benzidine	
Hexachlorocyclopentadiene	
Nitrobenzene	
Isophorone	
Dinitrotoluenes	

Remarks: _____

Reviewer's Name: _____

FTS Telephone No.: _____

Commercial Telephone No.: _____

X. CALIBRATION VERIFICATION - O P T I O N A L

(Improper calibration should be reported under Comments Section on the Introduction Page.)

Calibration verified at least once each 8-hour shift: Yes _____ No _____

Mean percent change less than 20% for:

		% Change
Base/Neutral Fraction:	Acenaphthene	_____
	1,4-dichlorobenzene	_____
	Hexachlorobutadiene	_____
	2-chloronaphthalene	_____
	N-nitrosodiphenylamine	_____
	Di-n-octylphthalate	_____
	Fluoranthene	_____
	Benzo(a)pyrene	_____
	Mean	_____

Date of: Calibration _____
Verification _____
Analysis _____

Acid Fraction:	P-chloro-m-cresol	_____
	2,4-dichlorophenol	_____
	2-nitrophenol	_____
	Phenol	_____
	Pentachlorophenol	_____
	Mean	_____

Date of: Calibration _____
Verification _____
Analysis _____

Volatile Fraction:	1,1-dichloroethylene	_____
	Chloroform	_____
	1,2-dichloropropane	_____
	Toluene	_____
	Ethylbenzene	_____
	Mean	_____

Date of: Calibration _____
Verification _____
Analysis _____

Instrument found to be in calibration during analysis: Yes _____ No _____

Remarks: _____

TABLE 1

SAMPLE SUMMARY, INTERSTATE/WOBURN

May 1, 1984

Station NUS	Location ERT	Sample Number	Date	Time	Medium	Organic Traffic Number	Well* Depth	Water* level	Material	Comments
Well 2D	Well IUS2A	76854	5/1/84	1140	Groundwater	A2750	89	4.68	Bedrock	
Well 2D	Well IUS2A	76855	5/1/84	1140	Groundwater	A2751	89	4.68	Bedrock	Replicate
Well 2M	Well IUS2B	76857	5/1/84	1320	Groundwater	A2753	55	3.40	Till	
Well 2S	Well IUS2C	76856	5/1/84	1150	Groundwater	A2752	20	2.78	Sand	
Well 3A	Well IUS3A	76858	5/1/84	1632	Groundwater	A2754	62	4.00	Bedrock	
Well 3B	Well IUS3B	76861	5/1/84	1750	Groundwater	A2757	45	4.60	Till	
Well 3C	Well IUS3C	76860	5/1/84	1718	Groundwater	A2756	24	4.70	Sand	
Blank	EPA Lab	76853	5/1/84	0915	Water	A2749				
Blank	Field	76859	5/1/84	1654	Water	A2755			Bedrock	Thru Pump

* Depth below ground surface. Surface elevations have not been surveyed at this time.

LEVEL I DATA VALIDATION SUMMARY-ORGANIC DATA

Date:

Subject: Review of Region I Contract Data; SMO Case No. 2660 SAS No. _____
Site Name Interstate/Woburn Contract Lab Cambridge Analytical
Contract No 68-01-6791
SMO Traffic Nos. A-2749 → A2757
Region IV SAD Nos: _____
Low Level ✓ Med. Level __ High Level __ Soil/Sed. __ Water __ Waste __

I. Data Completeness VOA P B/N __ ACID __ PEST __ TCDD __

A - Acceptable - All items delivered.

P - Provisional - Some items not essential for review are missing.

U - Unacceptable - Some items essential for review are missing.

REMARKS: Std. reference spectra was missing

II. Spectral Performance Criteria VOA (BFB) A B/N/A (DFTPP) __

A - Acceptable - All criteria met, spectra of good quality.

P - Provisional - All criteria not met, spectra of reasonable quality; data useable for limited purposes.

U - Unacceptable - Criterial not met, spectra of poor quality, data unuseable.

REMARKS:

Contract Lab Cambridge Analytical SMO Case No. 2660

III. Blank Analysis: VOA P B/N __ACID __PEST __TCDD __

A - Acceptable - No contaminants above minimum detection limit, no interference with sample results.

P - Provisional - Contaminants present but minimal interference with sample results.

U - Unacceptable - Gross contamination, too much interference to use data for certain components or the entire fraction.

REMARKS: some contaminants present and compounds therefore rejected – acetone + chloroform

IV. Surrogate Spike Results: VOA P B/N __ACID __PEST __ TCDD __

Note: Sample data flagged on individual basis.

A. Individual sample flagging criteria.

Acceptable - All surrogate recoveries within criteria.

Suspect - Any surrogate recoveries, outside criteria and/or recoveries of <10% substantiated as a matrix effect.

Invalid - Any recoveries of <10% that are unsubstantiated as a matrix effect.

REMARKS Toluene-d8 just outside acceptable limit

B. Case Summary VOA P

A - Acceptable - <10% of samples reported as suspect

P - Provisional - >10% but <50% of samples reported as suspect

U - Unacceptable - >50% of samples reported as suspect and/or any samples reported as invalid.

VOA	15	of	36	Samples Suspect;	0	Invalid
B/N	__	of	__	Samples Suspect;	__	Invalid
ACID	__	of	__	Samples Suspect;	__	Invalid
PEST	__	of	__	Samples Suspect;	__	Invalid
TCDD	__	of	__	Samples Suspect;	__	Invalid

One compound consistently ~ 5% lower than limit of 80%

Contract Lab Cambridge Analytical Case No. 26060

REMARKS:

V. Matrix Spike Results: VOA A B/N __ACID __PEST __TCDD __

Note: No action taken on Matrix Spike results alone.

A - Acceptable - <10% of compounds outside criteria

P - Provisional - >10% but <50% of compounds outside criteria.

U - Unacceptable - >50% of compounds outside criteria and/or any recoveries of <10%.

VOA	1	of	10	Compounds outside criteria; No. <10%	A
B/N	__	of	__	Compounds outside criteria; No. <10%	__
ACID	__	of	__	Compounds outside criteria; No. <10%	__
PEST	__	of	__	Compounds outside criteria; No. <10%	__
TCDD	__	of	__	Compounds outside criteria; No. <10%	__

REMARKS: 1,1-Dichloroethane 48% Rec.

VI. Duplicate Spike Results: VOA P B/N __ACID __PEST __TCDD __

A - Acceptable - <10% of compounds outside criteria.

P - Provisional - >10% but <50% of compounds outside criteria.

U - Unacceptable - >10% of compounds outside criteria.

VOA	1	of	5	Compounds outside criteria
B/N	__	of	__	Compounds outside criteria
ACID	__	of	__	Compounds outside criteria
PEST	__	of	__	Compounds outside criteria
TCDD	__	of	__	Compounds outside criteria

REMARKS: Chlorobenzene 15.8 RPD

Contract Lab Cambridge Analytical Case No. 26660

VIII. Blind Blank Results: VOA A B/N __ACID __PEST __TCDD __

No blank submitted __ Blank submitted-See Remarks __

A - Acceptable - No compounds found, compounds found but identified in lab blanks; refer to lab blank criteria for action.

P - Provisional - Minor contaminants found inconsistent with Lab blank and also found in samples; use blind blank as blank for case and tread as lab blank with minot contamination.

U - Unacceptable - Gross contamination inconsistent with lab blank and also found in samples; use blind blank as blank for case and treat as lab blank with gross contamination.

REMARKS: Acetone + Chloroform found at levels above all others - therefore rejected.

IX. Split Sample Results: VOA A B/N __ACID __PEST __TCDD __

No split sample __ Split sample-See Remarks ✓ Replicate samples __

A - Acceptable - At a concentration of greater than 10 times the minimum detection limit, the same compounds were identified in the two samples with minor differences in concentration.

P - Provisional - At a concentration of greater than 10 times the minimum detection limit, the same compounds were identified in the two samples with major differences in concentration. These discrepancies could cause the data to be useful only for limited purposes.

U - Unacceptable - At a concentration of greater than 10 times the minimum detection limit, differences were found in compound identifications in the two samples. These discrepancies could cause the results for this fraction to be used for limited purposed or unuseable.

Too low for use in precision calculations

Contract Lab CAA Case No. 2660

REMARKS:

X. Holding Times: VOA A B/N __ACID __PEST __TCDD __

A - Acceptable - All holding times within specified limits.

P - Provisional - Holding times not met is some cases, data useable for limited purposes.

U - Unacceptable - Holding times not met. The data unuseable or used for limited purposes.

REMARKS: