153728

Pesticides & PCB's

Lab ID#: 8907G520
8907G528

Sample ID: A15B(6-9)
A15C (4.5-9)
A16C(2-5)
A13B (4.5-6)
A14C (8.5-10.5)

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES INC
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7530

September 11, 1989

Mr. Chris Bade
Avendt Group, Inc.
432 North Saginaw Street
Flint, MI 48502

Dear Mr. Bade:

Please find enclosed the Appendix IX Pesticide/ PCB reports for the samples submitted to Weston/Gulf Coast Laboratories for analyses. The samples were analyzed at Weston/Lionville Analytics. They were identified with our batch numbers 8907G520, 8907G528, 8907G580, 8907G611, 8907G645, 8907G660, 8907G709. If you have any questions, please contact Sheryl Johnson or Lynn Gifford at our laboratories.

Sincerely,

WESTON/GULF COAST LABORATORIES

Donald Gipple

Donald Gipple
Project Director

DG/lg

Enclosures

Roy F. Weston, Inc. - Lionville Laboratory
PEST/PCB ANALYTICAL DATA PACKAGE FOR
AVENDT GROUP

DATE RECEIVED: 07/13/89 RFW LOT # :8907G520

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
A15B 6-9	001	S	89LE0659	07/07/89	07/25/89	08/16/89
A15C 4.5-9	005	S	89LE0659	07/07/89	07/25/89	08/16/89
LAB QC:						
PBLK	MB2	S	89LE0659	N/A	07/25/89	08/16/89

PAGE

INTRO:

Traffic Reports..... 1
Data Summary..... 3

I. Case Narrative..... 5

II. QC Summary..... 9
A. Surrogate % Recovery Summary (Form II)
B. Matrix Spike/Matrix Spike Duplicate (Form III)
C. Reagent Blank Summary (Form IV)

III. Sample Data Package..... 13
A. Sample Data in order of analysis
1. Tabulated Results (Form I)
2. Raw Data in Order by:
a. 2250/2401 Column
b. SP2100 Column

IV. Standards Data Package..... 28
A. Pesticide/PCB standards
1. Form VIII
2. Form IX
3. Form X (if applicable)
4. Instrument Conditions
5. Chromatograms:
a. 2250/2401 Column
b. SP2100 Column

V. Raw QC Data Package..... 143
A. Blank Data
1. Tabulated Results (Form I)
2. Raw Data:
a. 2250/2401 Column
b. SP2100 Column
B. Matrix Spike Data
1. Tabulated Results (Form I)
2. Raw Data
a. 2250/2401 Column
b. SP2100 Column
C. Matrix Spike Duplicate Data
1. Tabulated Results (Form I)
2. Raw Data
a. 2250/2401 Column
b. SP2100 Column

TRAFFIC REPORTS

Custody Transfer Record/Lab Work Request

WESTON

Reference 8907L979 (organics)

WESTON Analytics Use Only
8907G520

Client: Avendt Group, Inc
Work Order: 7/10/89
Date Rec'd: 7/11/89 Date Due: 8/1/89
RFW Contact: Don Gipple
Client Contact/Phone: Rod Miller

Refrigerator#	C	W	SD	W					
#/Type Container	1/G	1/G	G	1/G					
Volume	32oz	32oz	[illegible]	32oz					
Preservative	Cool	Cool	Cool	Cool					
ANALYSES REQUESTED	PCB	% Solid	[illegible]	HSL Metals	EPTOX	RCRA EP	HOGE	Pest EP 0608	

WA Use Only Lab ID	Client ID/Description	Matrix	Date Collected								
001	A15b 10-9	S	7/7/89		✓		✓				
002	13-16	↓	↓	✓	✓		✓	✓			
003	13-16 EPTOX	W	↓						✓	✓	✓
004	16-19	S	↓	✓	✓						
005	A15c 4.5-9	S	7/10/89		✓		✓	✓			
006	EPTOX	W	↓						✓	✓	✓
007	A15c 9.5-14.5	S		✓	✓						
008	14.5-17.5	↓	↓	↓	↓						
009	A21d 4-9										
010	9-14										
011	14-19	↓	↓	↓	↓						

0608 J Line 1/19 added per McCarkhuff

Circled Samples only

Matrix:
S - Soil, SE - Sediment, SO - Solid
W - Water, O - Oil, A - Air, WI - Wipe
DS - Drum Solids, DL - Drum Liquids, F - Fish, X - Other

Special Instructions: QC + Del. = CLP

MSC Appix = 625N, 624N, 8080P, 8270P, 1CNTE, 1HS

Item/Reason	Relinquished by	Received by	Date	Time	Item/Reason	Relinquished by	Received by	Date	Time
		Patt. Anderson	7/11	1545					
	Patt. Anderson	[illegible]							
	[illegible]	Pathouse	7/18/89	9:30					
CN	[illegible]	[illegible]	7/19	800					
Cy Grotti	[illegible]	[illegible]	7/19	400					
VOA-Soil	[illegible]	[illegible] Bergen	7/21/89	11:03					

NO D/F or metals per McCarkhuff.

WESTON Analytics Use Only

Samples Were:
1 Shipped or Hand-Delivered (Shipped) NOTES: UPS
2 Ambient or Chilled (Chilled) NOTES:
3 Received Broken/Leaking (Improperly Sealed) Y (N) NOTES:
4 Properly Preserved (Y) N NOTES:
5 Received Within Holding Times (Y) N NOTES:

COC Tape Was:
1 Present on Outer Package (Y) N
2 Unbroken on Outer Package (Y) N
3 Present on Sample Y (N)
4 Unbroken on Sample Y N
NOTES:

COC Record Was:
1 Present Upon Receipt of Samples Y N

Discrepancies Between Sample Labels and COC Record? Y N
NOTES:

RFW 21-21-001/A-7/88

7-115

DATA SUMMARY

Roy F. Weston, Inc. - Lionville Laboratory

Pesticide/PCBs by GC, Appendix IX List

Report Date: 08/21/89 16:38

RFW Batch Number: 8907G520 Client: AVENDT GROUP Work Order: 5610-01-01-0001 Page: 1

	Cust ID:	A15B 6-9		A15C 4.5-9		PBLK		A16 C2-5		A16 C2-5		A16 C2-5	
Sample Information	RFW#:	001		005		89LE0659-MB2		709-020		709-020 MS		709-020 MSD	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	D.F.:	5.00		250		0.500		50.0		50.0		50.0	
	Units:	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Surrogate: Di-n-butylchlorendate		97	%	D	%	51	%	D	%	D	%	D	%
			fl		fl		fl		fl		fl		fl
Alpha-BHC		85	U	2500	U	4.0	U	1100	U	1200	U	1300	U
Beta-BHC		85	U	2500	U	4.0	U	1100	U	1200	U	1300	U
Delta-BHC		85	U	2500	U	4.0	U	1100	U	1200	U	1300	U
gamma-BHC (Lindane)		85	U	2500	U	4.0	U	1100	U	D	%	D	%
Heptachlor		85	U	2500	U	4.0	U	1100	U	D	%	D	%
Aldrin		85	U	2500	U	4.0	U	1100	U	D	%	D	%
Heptachlor epoxide		85	U	2500	U	4.0	U	1100	U	1200	U	1300	U
Endosulfan I		85	U	2500	U	4.0	U	1100	U	1200	U	1300	U
Dieldrin		170	U	4900	U	8.0	U	2200	U	D	%	D	%
4,4'-DDE		170	U	4900	U	8.0	U	2200	U	2400	U	2600	U
Endrin		170	U	4900	U	8.0	U	2200	U	D	%	D	%
Endosulfan II		170	U	4900	U	8.0	U	2200	U	2400	U	2600	U
4,4'-DDD		170	U	4900	U	8.0	U	2200	U	2400	U	2600	U
Endosulfan sulfate		170	U	4900	U	8.0	U	2200	U	2400	U	2600	U
4,4'-DDT		170	U	4900	U	8.0	U	2200	U	D	%	D	%
Methoxychlor		850	U	25000	U	40	U	11000	U	12000	U	13000	U
Endrin aldehyde		170	U	4900	U	8.0	U	2200	U	2400	U	2600	U
Kepone		170	U	4900	U	8.0	U	2200	U	2400	U	2600	U
alpha-Chlordane		850	U	25000	U	40	U	11000	U	12000	U	13000	U
gamma-Chlordane		850	U	25000	U	40	U	11000	U	12000	U	13000	U
Toxaphene		1700	U	49000	U	80	U	22000	U	24000	U	26000	U
Aroclor-1016		850	U	25000	U	40	U	11000	U	12000	U	13000	U
Aroclor-1221		850	U	25000	U	40	U	11000	U	12000	U	13000	U
Aroclor-1232		3700		300000		40	U	11000	U	12000	U	13000	U
Aroclor-1242		850	U	25000	U	40	U	11000	U	12000	U	13000	U
Aroclor-1248		850	U	25000	U	40	U	9000	J	9900	J	14000	
Aroclor-1254		940	J	68000		80	U	22000	U	24000	U	26000	U
Aroclor-1260		1700	U	49000	U	80	U	22000	U	24000	U	26000	U
Isodrin		170	U	4900	U	8.0	U	2200	U	2400	U	2600	U

I CASE NARRATIVE

ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: AVENDT GROUP SAMPLES RECEIVED: 07-13-89
RFW #: 8907G520, PESTICIDE/PCB
W.O.#: 5610-01-01

NARRATIVE

The set of samples consisted of two soil samples collected on 07-07-89.

The samples were extracted on 07-25-89 and analyzed according to criteria set forth in the Contract Laboratory Program for Pesticides/PCB's on 08-16-89.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analysis:

1. Linearity and breakdown criteria are met for the primary column except for DDT. The DDT standard curve was not determined since no DDT compounds were detected in the samples.

2. The 15% criteria for continuing calibration are met for all compounds on at least one column for standards analyzed prior to the sample extracts.

3. Extraction holding time was exceeded by 2 days.

4. Retention time criteria are exceeded for the following compounds:

Compound	Column	Date/Time of analysis	
Aroclor 1254	2250/2401	08-17-89	@ 16:05
		08-17-89	@ 19:57

5. During the initial calibration of 2250/2401 column, a very small retention time window (± 0.02) minutes was established. Retention time of aroclor 1254 in continuing calibration standards was well within a 10% retention time window. There is no impact on this data since pattern recognition is used to identify PCB's.

6. The MS/MSD samples associated with this batch are from RFW # 8907G709. MS/MSD recoveries could not be obtained due to dilution required for analysis.

7. All obtainable surrogate recoveries are within EPA QC limits.

WESTON
8907G520

8. The following extracted samples required dilution because they contained high levels of both target and on non target compounds.

Sample ID	Dilution Factor
A15B 6-9	10
A15C 4-5-9	500

9. An apparent mixture of PCB's was found in samples. Weathering of the soil sample and the amount of each aroclor present in the soil can effect the relative ratio of peak size. A combination of aroclor 1232 and aroclor 1254 produced the best fit of peak height ratios versus PCB standards for samples.

10. The DBC surrogate was inadvertently omitted when preparing standards of aroclor 1232, aroclor 1254 and kepone/isodrin.

Carter Nulton, Ph.D.
Vice President/Laboratory Manager
Lionville Analytical Laboratory

8-25-89
DATE

WESTON

GLOSSARY OF PEST/PCB DATA

DATA QUALIFIERS

U - Indicates that the compounds was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).

J - Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.

E - Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

I - Interference.

ABBREVIATIONS

BS - Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.

BSD - Indicates blank spike duplicate.

MS - Indicates matrix spike.

MSD - Indicates matrix spike duplicate.

DL - Indicates that recoveries were not obtained because the extract had to be diluted for analysis.

NA - Not applicable.

DF - Dilution factor.

NR - Not required.

II QC SUMMARY

A. Surrogate % Recovery (Form II)
B. Matrix Spike/Matrix Spike Duplicate (Form III)
C. Reagent Blank (Form IV)

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP Level:(low/med)LOW

RFW Lot No.: 8907G520

	CLIENT SAMPLE NO.	S1 (DBC)#	OTHER
01	A15B 6-9	97	
02	A15C 4.5-9	D	
03	PBLKLE0659-MB2	51	

ADVISORY QC LIMITS
(20-150)

S1 (DBC) = Di-n-butylchlorendate

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

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 5160-01-01-0001

Case No.: AVENDT GROUP RFW Lot No.: 8907G709-020

MATRIX Spike - Sample No.: A16 C2-5 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	81.3	0	0	D	46-127
Heptachlor	81.3	434	524	D	35-130
Aldrin	81.3	0	0	D	34-132
Dieldrin	203	0	0	D	31-134
Endrin	203	0	0	D	42-139
4,4'-DDT	203	0	910	D	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
gamma-BHC (Lindane)	86.8	0	D	0	50	46-127
Heptachlor	86.8	692	D	0	31	35-130
Aldrin	86.8	0	D	0	43	34-132
Dieldrin	217	0	D	0	38	31-134
Endrin	217	0	D	0	45	42-139
4,4'-DDT	217	1130	D	0	50	23-134

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

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP

Lab Sample ID: 89LE0659-MB2 Lab File ID: 08158913 .14

Matrix:(Soil/Water) SOIL Level:(low/med) LOW

Date Extracted: 07/25/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed (1): 08/16/89 Date Analyzed (2): 08/16/89

Time Analyzed (1): 0211 Time Analyzed (2): 0206

Instrument ID (1): 13 Instrument ID (2): 14

GC Column ID (1): 2250/2401 GC Column ID (2): SP2100

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A15B 6-9	8907G520-001	08/16/89	08/16/89
02	A15C 4.5-9	8907G520-005	08/16/89	08/16/89
03	PBLKLE0659-MB2	89LE0659-MB2	08/16/89	08/16/89

COMMENTS:

III SAMPLE DATA

A. Sample Data in order of analysis
   1. Tabulated Results (Form I)
   2. Raw Date in Order By:
      a. 2250/2401 Column
      b. SP2100 Column

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO. 14

A15B 6-9

Lab Name: Roy F. Weston,Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G520-001

Sample wt/vol: 32.4 (g/mL) G Lab File ID: 08158913.25

Level: (low/med) LOW Date Received: 07/13/89

% Moisture: not dec. 56 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 5.00

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	85	U
319-85-7	Beta-BHC	85	U
319-86-8	Delta-BHC	85	U
58-89-9	gamma-BHC (Lindane)	85	U
76-44-8	Heptachlor	85	U
309-00-2	Aldrin	85	U
1024-57-3	Heptachlor epoxide	85	U
959-98-8	Endosulfan I	85	U
60-57-1	Dieldrin	170	U
72-55-9	4,4'-DDE	170	U
72-20-8	Endrin	170	U
33213-65-9	Endosulfan II	170	U
72-54-8	4,4'-DDD	170	U
1031-07-8	Endosulfan sulfate	170	U
50-29-3	4,4'-DDT	170	U
72-43-5	Methoxychlor	850	U
7421934	Endrin aldehyde	170	U
143500	Kepone	170	U
5103-71-9	alpha-Chlordane	850	U
5103-74-2	gamma-Chlordane	850	U
8001-35-2	Toxaphene	1700	U
12674-11-2	Aroclor-1016	850	U
11104-28-2	Aroclor-1221	850	U
11141-16-5	Aroclor-1232	3700	
53469-21-9	Aroclor-1242	850	U
12672-29-6	Aroclor-1248	850	U
11097-69-1	Aroclor-1254	940	J
11096-82-5	Aroclor-1260	1700	U
465-73-6	Isodrin	170	U

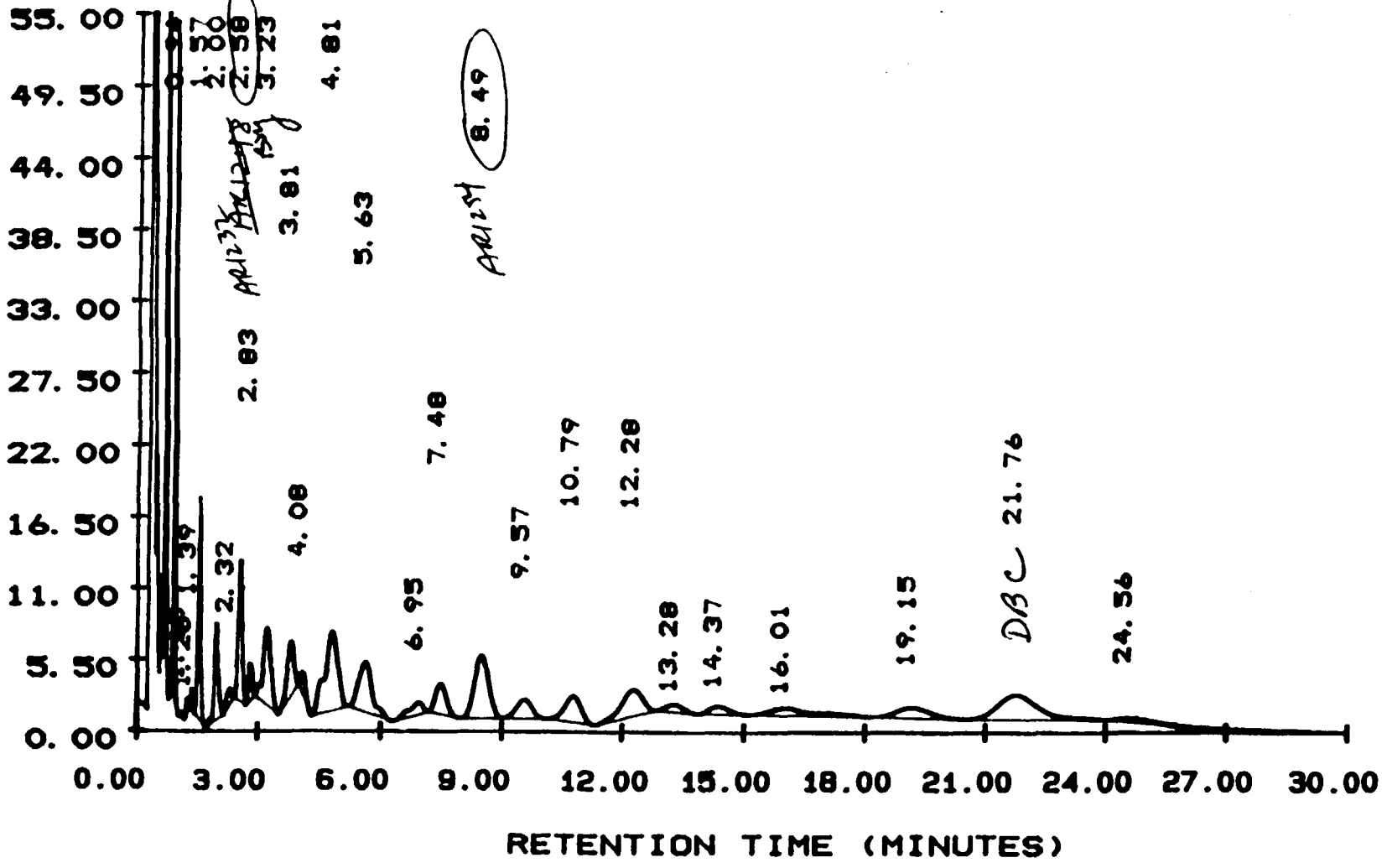
1

8907G520-001

SAMPLE NO. : 08158913 . 25 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/16/89 08:16:33

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 56415. START TIME: 0.00

Y MINIMUM: 4966. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 08:47:00

EXTERNAL STANDARD

SAMPLE: 08158913 .25 INST:13 VIAL:F0 SEQ NUMBER:025
TEST : 0608N DATE-TIME INJECTED : 08/16/89 08:16:33
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 08:47:00
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A15B 6-9 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G520-001 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 10.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	1765663	379292	V	0.940		
002	16602	3565	V	1.126		
003	30338	5745	V	1.281		
004	49896	12416	V	1.389		
005	818822	141797	V	1.571		
				1.701	ALPHA-BHC	
006	473825	64536	V	2.001		
				2.146	GAMMA-BHC	
007	94319	11202	V	2.322		
				2.436	BETA-BHC	
008	710575	98568	V	2.581		
				2.626	HEPTACHLOR	
009	177289	26331	V	2.831	DELTA-BHC	0.063
				3.169	ALDRIN	
010	735385	55456	V	3.230		
011	444407	38306	V	3.813		
012	120082	15246	V	4.084		
				4.733	HEPT. EPOXIDE	
013	1284167	56884	V	4.810		
				5.235	G. CHLORDANE	
014	836024	36224	V	5.630		
				5.721	A. CHLORDANE	
				5.945	ENDOSULFAN I	
				6.787	4,4'-DDE	
015	215654	8541	V	6.947		
				7.261	DIELDRIN	
016	419755	21924	V	7.478		
017	1111199	45080	V	8.494		
				8.812	ENDRIN	
018	374902	13744	V	9.572		
				10.357	4,4'-DDD	
019	538419	18760	V	10.790	ENDOSULFAN II	~~0.091~~ *
020	696329	18660	V	12.285	4,4'-DDT	~~0.153~~ *
021	166858	5517	V	13.283		
				13.864	ENDRIN ALDEHYDE	
022	196467	5811	V	14.370		
023	420836	5410	V	16.013		
				16.847	ENDO. SULFATE	
024	438833	7413	V	19.153		
25	1222941	17658	V	21.764	DBC	0.193 *
				23.701	METHOXYCHLOR	
026	145911	2302		24.556		

By from PCB peaks

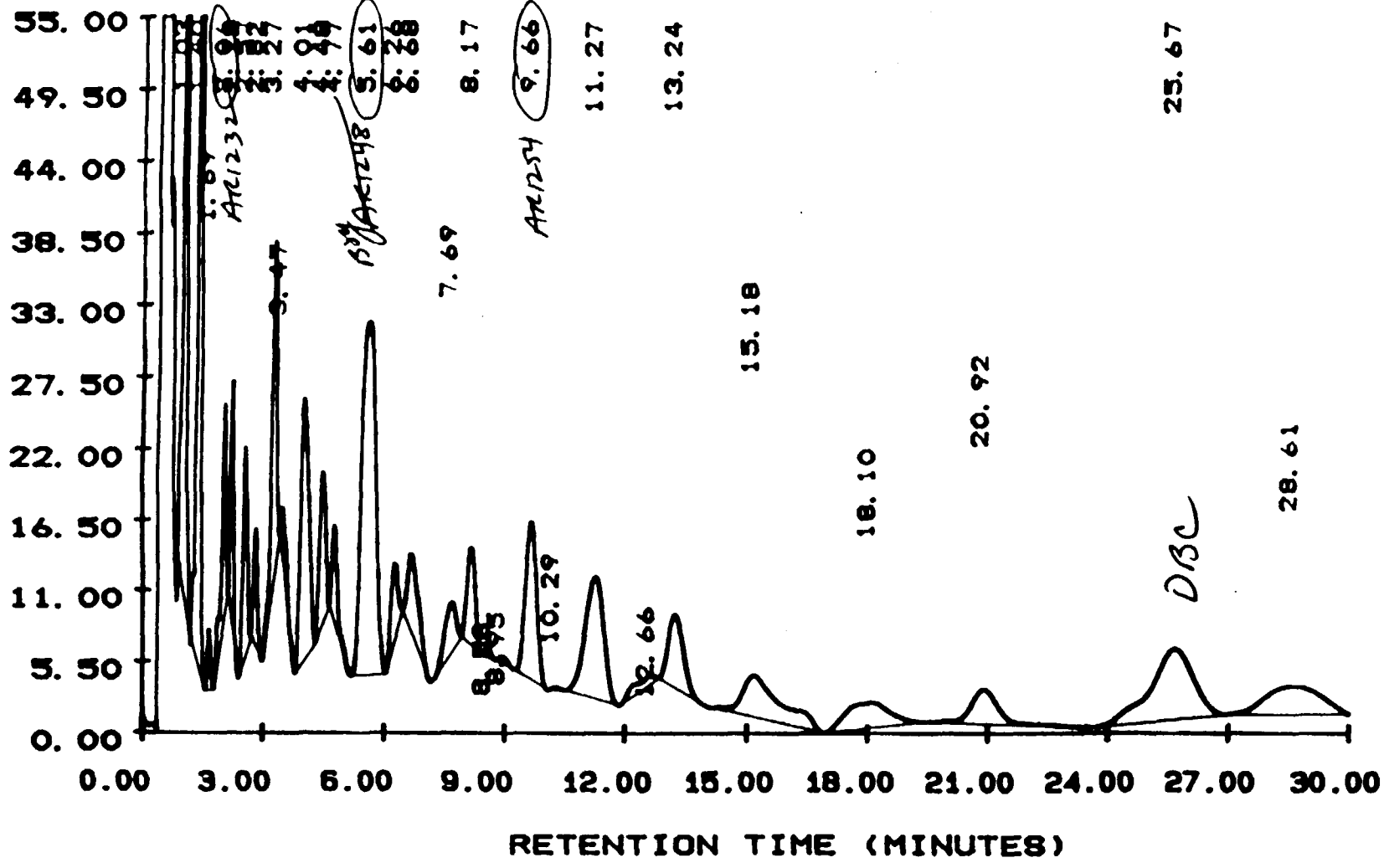
522068	2.581	AROCHLOR-1248	~~1.795~~ *	
150844	8.494	AROCHLOR-1254	1.328 *	Better fit
272061	2.581	AROCHLOR-1232	5.259 *	

8907G520-001

SAMPLE NO. : 08158914 .25 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 08:20:08

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58033. START TIME: 0.00

Y MINIMUM: 6389. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 08:50:39

EXTERNAL STANDARD

SAMPLE: 08158914 .25 INST:14 VIAL:F0 SEQ NUMBER:025
TEST : 0608N DATE-TIME INJECTED : 08/16/89 08:20:08
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 08:50:39
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A15B 6-9 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G520-001
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 10.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	5261295	808167	V	1.027		
002	5825713	891114	V	1.401		
003	243264	41003	V	1.690		
004	1078543	143143	V	2.056	ALPHA-BHC	0.119
				2.162	BETA-BHC	
005	920761	164424	V	2.240		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	1131525	148980	V	2.571		
007	560962	82836	V	2.824		
008	1911157	235018	V	3.268		
009	335722	34316	V	3.465		
				3.739	HEPTACHLOR	
010	2693551	189948	V	4.014		
011	1157595	111252	V	4.475		
				4.592	ALDRIN	
012	641862	70444	V	4.765		
013	6152437	255283	V	5.614	HEPT. EPOXIDE	0.776
014	637823	55536	V	6.264	G. CHLORDANE	7.047
015	1051701	56971	V	6.676		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	702489	35604	V	7.691		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	1016036	71034	V	8.169		
018	65712	6846	V	8.577		
				8.888	ENDRIN	
019	67874	5147	V	8.947	ENDOSULFAN II	0.083
020	2191305	114560	V	9.664		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
021	29868	2250	V	10.288		
022	2826477	88180	V	11.267		
				11.539	ENDO. SULFATE	
023	291986	6122	V	12.656	4,4'-DDT	0.022
024	1340433	52464	V	13.237		
				14.742	ENDRIN KETONE	
025	2016771	30087	V	15.181		
026	1401161	18209	V	18.104		
				18.766	METHOXYCHLOR	
027	1201907	24905	V	20.918		
028	3755649	50851	V	25.668	DBC	6.270

029	1935233	20164	28.611				
	434466		2.056	AROCHLOR-1232	4.018	*	Better fit
	534405		9.664	AROCHLOR-1254	1.010	*	
	1223309		5.614	AROCHLOR-1248	1.724	*	

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO. 21

A15C 4.5-9

Lab Name: Roy F. Weston,Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G520-005

Sample wt/vol: 31.6 (g/mL) G Lab File ID: 08158913.26

Level: (low/med) LOW Date Received: 07/13/89

% Moisture: not dec. 23 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 250

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

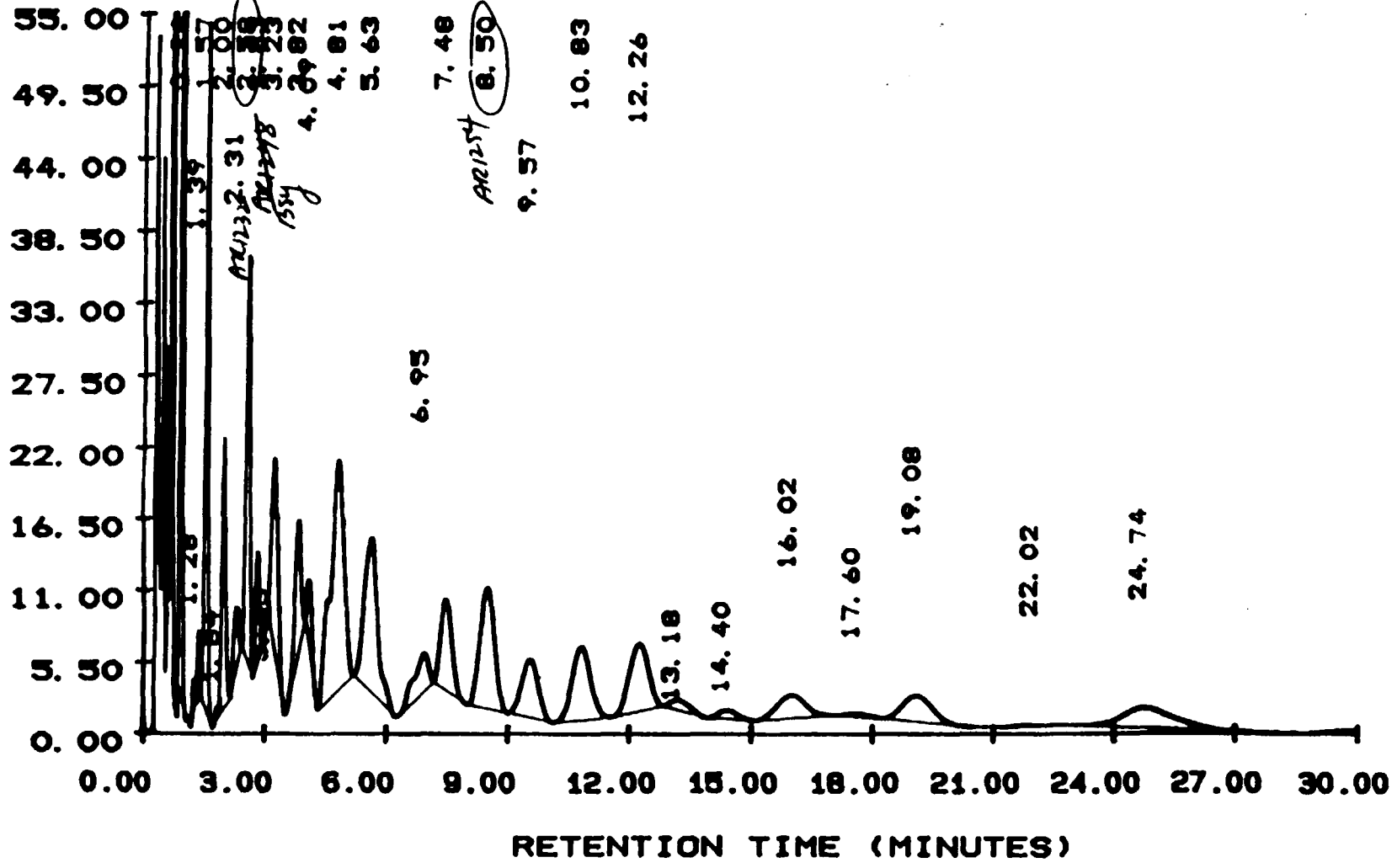
CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	2500	U
319-85-7	Beta-BHC	2500	U
319-86-8	Delta-BHC	2500	U
58-89-9	gamma-BHC (Lindane)	2500	U
76-44-8	Heptachlor	2500	U
309-00-2	Aldrin	2500	U
1024-57-3	Heptachlor epoxide	2500	U
959-98-8	Endosulfan I	2500	U
60-57-1	Dieldrin	4900	U
72-55-9	4,4'-DDE	4900	U
72-20-8	Endrin	4900	U
33213-65-9	Endosulfan II	4900	U
72-54-8	4,4'-DDD	4900	U
1031-07-8	Endosulfan sulfate	4900	U
50-29-3	4,4'-DDT	4900	U
72-43-5	Methoxychlor	25000	U
7421934	Endrin aldehyde	4900	U
143500	Kepone	4900	U
5103-71-9	alpha-Chlordane	25000	U
5103-74-2	gamma-Chlordane	25000	U
8001-35-2	Toxaphene	49000	U
12674-11-2	Aroclor-1016	25000	U
11104-28-2	Aroclor-1221	25000	U
11141-16-5	Aroclor-1232	300000	
53469-21-9	Aroclor-1242	25000	U
12672-29-6	Aroclor-1248	25000	U
11097-69-1	Aroclor-1254	68000	
11096-82-5	Aroclor-1260	49000	U
465-73-6	Isodrin	4900	U

8907G520-005

SAMPLE NO. : 08158913 . 26 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/16/89 08:50:25

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57263. START TIME: 0.00

Y MINIMUM: 6850. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 09:20:52

EXTERNAL STANDARD

SAMPLE: 08158913 .26 INST:13 VIAL:F0 SEQ NUMBER:026
TEST : 0608N DATE-TIME INJECTED : 08/16/89 08:50:25
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 09:20:52
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A15C 4.5-9 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G520-005 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR :500.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	4083719	833751	V	0.942		
002	56730	13549	V	1.276		
003	173389	39856	V	1.392		
004	2472525	427636	V	1.572		
				1.701	ALPHA-BHC	
005	26176	5521	V	1.841		
006	1215207	178167	V	2.000		
				2.146	GAMMA-BHC	
007	348952	41753	V	2.314		
				2.436	BETA-BHC	
008	1984431	274279	V	2.581		
				2.626	HEPTACHLOR	
009	504830	74863	V	2.831	DELTA-BHC	8.911
010	60461	9696	V	3.032		
				3.169	ALDRIN	
011	1490473	135285	V	3.229		
012	932181	91032	V	3.825		
013	384730	46900	V	4.086		
				4.733	HEPT. EPOXIDE	
014	3709677	161051	V	4.810		
				5.235	G. CHLORDANE	
015	2474395	107814	V	5.631		
				5.721	A. CHLORDANE	
				5.945	ENDOSULFAN I	
				6.787	4,4'-DDE	
016	688483	26530	V	6.948		
				7.261	DIELDRIN	
017	1219165	63739	V	7.475		
018	2109869	84641	V	8.500		
				8.812	ENDRIN	
019	1154295	41229	V	9.567		
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
020	1618663	51631	V	10.828		
021	1534705	47257	V	12.257		
				12.454	4,4'-DDT	
022	228712	6779	V	13.175		
				13.864	ENDRIN ALDEHYDE	
023	200950	6211	V	14.404		
024	803094	16187	V	16.016		
				16.847	ENDO. SULFATE	
025	85569	2423	V	17.599		
026	940675	18403	V	19.077		

027	44133	820 V	22.024	DBC	0.447	Diluted out
			23.701	METHOXYCHLOR		
028	1281421	13984	24.743			
	375032		8.500	AROCHLOR-1254	~~137.073~~ *	
	1425855		2.581	AROCHLOR-1248	~~245.078~~ *	
	375032		8.500	AROCHLOR-1254	165.147 *	Better fit
	764094		2.581	AROCHLOR-1232	738.502 *	

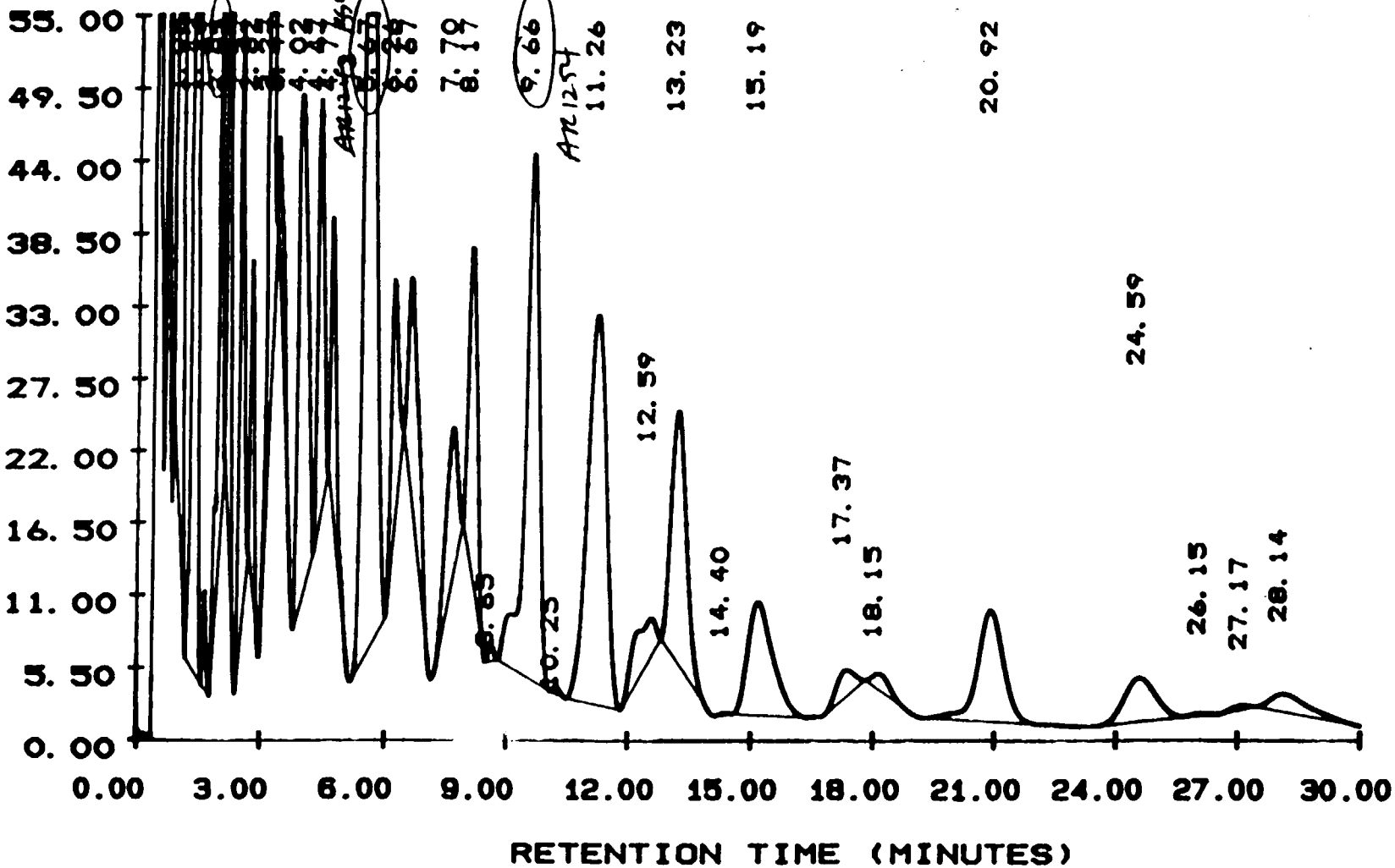
2

8907G520-005

SAMPLE NO. : 08158914 . 26 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 08:53:47

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58117. START TIME: 0.00

Y MINIMUM: 6573. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 09:24:16

EXTERNAL STANDARD

SAMPLE: 08158914 .26 INST:14 VIAL:FO SEQ NUMBER:026
TEST : 0608N DATE-TIME INJECTED : 08/16/89 08:53:47
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 09:24:16
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A15C 4.5-9 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G520-005
SAMPLE WT : % MOISTURE : DILUTION FACTOR :500.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	8301823	797891	V	1.045		
002	9477643	890768	V	1.429		
003	390106	66589	V	1.690		
004	2977575	394393	V	2.054	ALPHA-BHC	16.452
				2.162	BETA-BHC	
005	4116889	685617	V	2.244		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	3149155	411302	V	2.571		
007	1499835	227504	V	2.821		
008	5282295	639508	V	3.267		
009	1085003	102732	V	3.467		
				3.739	HEPTACHLOR	
010	5649443	355835	V	4.016		
011	2987351	291866	V	4.470		
				4.592	ALDRIN	
012	2023719	215564	V	4.765		
				5.553	HEPT. EPOXIDE	
013	13473179	657432	V	5.666		
014	1950115	169462	V	6.264	G. CHLORDANE	1075.125
015	3010611	162528	V	6.671		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	2047239	105371	V	7.699		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	3586597	236008	V	8.170		
018	104371	10957	V	8.652		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
019	8689319	374482	V	9.662		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
020	58388	5180	V	10.250		
021	8929997	278163	V	11.264		
				11.539	ENDO. SULFATE	
022	1197443	25470	V	12.592		
				12.826	4,4'-DDT	
023	4705991	180782	V	13.235		
024	21614	1610	V	14.400		
				14.742	ENDRIN KETONE	
025	3382835	80537	V	15.190		
026	575022	18057	V	17.373		

027	347048	11561 V	18.148		
			18.766	METHOXYCHLOR	
028	3600155	79026 V	20.919		
029	1661355	31088 V	24.589		
			25.624	DBC	
030	36766	1349 V	26.155		
031	80111	2420 V	27.170		
032	845797	12727	28.138		

1204923	2.054	AROCHLOR-1232	557.193 *
1687943	9.662	AROCHLOR-1254	159.461 *
3106223	5.666	AROCHLOR-1248	~~218.697 *~~

Better fit

IV STANDARD DATA

A. Pesticide/PCB Standards
   1. Form VIII
   2. Form IX
   3. Form X (if applicable)
   4. Chromatograms:
      a. 2250/2401 Column
      b. SP2100 Column

8D

PESTICIDE EVALUATION STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913

RFW Lot No.: 8907G520

Instrument ID: 13 GC Column ID: 2250/2401

Dates of Analyses: 08/15/89 to 08/17/89

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (</= 10.0%)	
ALDRIN	2058197	2275035	2490637	9.5	
ENDRIN	679195	709709	772173	6.6	
4,4'-DDT	423752	469074	521053	10.3	(1)
DBC	326567	324373	334232	1.6	

(1) If > 10.0% RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

		DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
	INITIAL					
01	EVAL MIX B	08/16/89	0636	0.0	1.7	
02	EVAL MIX B	08/17/89	1138	0.0	2.2	

(2) See Form Instructions.

8D

PESTICIDE EVALUATION STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914

RFW Lot No.: 8907G520

Instrument ID: 14 GC Column ID: SP2100

Dates of Analyses: 08/15/89 to 08/17/89

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (</= 10.0%)	
ALDRIN	3961885	4667485	5616695	17.5	
ENDRIN	1964585	2207035	2560427	13.4	
4,4'-DDT	953172	1171459	1469251	21.6	(1)
DBC	895698	952724	1066013	8.9	

(1) If > 10.0% RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

		DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
	INITIAL					
01	EVAL MIX B	08/16/89	0640			1.7
02	EVAL MIX B	08/17/89	1321			1.7

(2) See Form Instructions.

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913

Instrument ID: 13 GC Column ID: 2250/2401

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	17-43	08/15/89	1703	0.0	
02	EVALB	19-43	08/15/89	1735	0.0	
03	EVALC	18-43	08/15/89	1808	0.0	
04	INDA	13-45	08/15/89	1841	0.0	
05	INDB	13-46	08/15/89	1914	-0.1	
06	TOXAPH	19-36	08/15/89	1948	-0.3	
07	AR1660	12-117	08/15/89	2021	0.0	
08	AR1221	01-129	08/15/89	2055	-0.1	
09	AR1232	02-124	08/15/89	2128	-1.4	
10	AR1242	03-120	08/15/89	2201	-0.1	
11	AR1248	03-121	08/15/89	2235	-0.1	
12	AR1254	01-130	08/15/89	2308		*
13	ZZZZZ	KEPONE/ISODRIN	08/16/89	0131	-1.1	
14	PBLKLE0659	89LE0659-MB2	08/16/89	0211	-0.4	
15	ZZZZZ	8907G709-020	08/16/89	0244		*
16	ZZZZZ	8907G709-020S	08/16/89	0318		*
17	ZZZZZ	HEXANE	08/16/89	0352		
18	ZZZZZ	8907G709-020T	08/16/89	0424		*
19	ZZZZZ	HEXANE	08/16/89	0458		
20	ZZZZZ	8907G709-001	08/16/89	0530		*
21	ZZZZZ	HEXANE	08/16/89	0604		
22	EVALB	19-43	08/16/89	0636	-0.2	
23	ZZZZZ	8907G709-017	08/16/89	0709		*
24	ZZZZZ	8907G709-005	08/16/89	0742		*
25	A15B 6-9	8907G520-001	08/16/89	0816	-0.2	
26	A15C 4.5-9	8907G520-005	08/16/89	0850	-1.4	
27	ZZZZZ	HEXANE	08/16/89	0924		
28	ZZZZZ	8907G528-001	08/16/89	0956	-0.3	
29	ZZZZZ	HEXANE	08/16/89	1030		
30	ZZZZZ	HEXANE	08/16/89	1102		
31	AR1254	01-130	08/16/89	1135	-0.8	
32	ZZZZZ	8907G528-010	08/16/89	1208	-0.3	
33	ZZZZZ	HEXANE	08/16/89	1242		
34	ZZZZZ	89LE0658-MB2	08/16/89	1314	-0.2	
35	ZZZZZ	8907L095-005	08/16/89	1348	-0.2	
36	ZZZZZ	8907L095-005S	08/16/89	1421	-0.3	
37	ZZZZZ	8907L095-005T	08/17/89	1025	-0.4	
38	ZZZZZ	HEXANE	08/17/89	1058	-0.8	

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913

Instrument ID: 13 GC Column ID: 2250/2401

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
39	EVALB	19-43	08/17/89	1138	-0.3	
40	ZZZZZ	8907L095-001	08/17/89	1211	-0.4	
41	ZZZZZ	8907L095-002	08/17/89	1245	-0.4	
42	ZZZZZ	8907L095-003	08/17/89	1318	-0.4	
43	ZZZZZ	8907L095-004	08/17/89	1351	-0.6	
44	ZZZZZ	HEXANE	08/17/89	1424		
45	ZZZZZ	8907L129-001	08/17/89	1459	-0.5	
46	ZZZZZ	HEXANE	08/17/89	1533	-0.7	
47	AR1254	01-130	08/17/89	1605		*
48	ZZZZZ	8907L129-002	08/17/89	1639	-0.5	
49	ZZZZZ	8907L129-003	08/17/89	1712	-0.5	
50	ZZZZZ	8907L129-004	08/17/89	1745	-0.5	
51	ZZZZZ	8907L129-005	08/17/89	1818	-0.5	
52	ZZZZZ	HEXANE	08/17/89	1852		
53	ZZZZZ	KEPONE/ISODRIN	08/17/89	1924	-1.0	
54	AR1254	01-130	08/17/89	1957		*
55	INDA	13-45	08/17/89	2030	-0.4	
56	INDB	13-56	08/17/89	2103	-0.5	

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914

Instrument ID: 14 GC Column ID: SP2100

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	17-43	08/15/89	1627	0.0	
02	EVALB	19-43	08/15/89	1700	0.0	
03	EVALC	18-43	08/15/89	1733	0.0	
04	INDA	13-45	08/15/[illegible]	1805	0.0	
05	INDB	13-46	08/15/[illegible]	1838	0.0	
06	TOXAPH	19-36	08/15/[illegible]	1912	0.0	
07	AR1660	12-117	08/15/[illegible]	1945	0.1	
08	AR1221	01-129	08/15/89	2019	0.0	
09	AR1232	02-124	08/15/89	2052		*
10	AR1242	03-120	08/15/89	2125	0.0	
11	AR1248	03-121	08/15/89	2158	0.0	
12	AR1254	01-130	08/15/89	2231		*
13	ZZZZZ	KEPONE/ISODRIN	08/16/89	0133		*
14	PBLKLE0659	89LE0659-MB2	08/16/89	0206	-0.4	
15	ZZZZZ	8907G709-020	08/16/89	0247		*
16	ZZZZZ	8907G709-020S	08/16/89	0321		*
17	ZZZZZ	HEXANE	08/16/89	0355		
18	ZZZZZ	8907G709-020T	08/16/89	0427		*
19	ZZZZZ	HEXANE	08/16/89	0501		
20	ZZZZZ	8907G709-001	08/16/89	0533		*
21	ZZZZZ	HEXANE	08/16/89	0607		
22	EVALB	19-43	08/16/89	0640	0.0	
23	ZZZZZ	8907G709-017	08/16/89	0712		*
24	ZZZZZ	8907G709-005	08/16/89	0746		*
25	A15B 6-9	8907G520-001	08/16/89	0820	-0.2	
26	A15C 4.5-9	8907G520-005	08/16/89	0853		*
27	ZZZZZ	HEXANE	08/16/89	0927		
28	ZZZZZ	8907G528-001	08/16/89	1000		*
29	ZZZZZ	HEXANE	08/16/89	1033		
30	ZZZZZ	HEXANE	08/16/89	1106		
31	AR1254	01-130	08/16/89	1138		*
32	ZZZZZ	8907G528-010	08/16/89	1211	-0.6	
33	ZZZZZ	HEXANE	08/16/89	1245		
34	ZZZZZ	89LE0658-MB2	08/16/89	1317	-0.1	
35	ZZZZZ	8907L095-005	08/16/89	1350	-0.2	
36	ZZZZZ	8907L095-005S	08/17/89	1141	-0.3	
37	ZZZZZ	8907L095-005T	08/17/89	1215	-0.2	
38	ZZZZZ	HEXANE	08/17/89	1248		

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914

Instrument ID: 14 GC Column ID: SP2100

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
39	EVALB	19-43	08/17/89	1321	-0.2	
40	ZZZZZ	8907L095-001	08/17/89	1354	-0.2	
41	ZZZZZ	8907L095-002	08/17/89	1437	-0.2	
42	ZZZZZ	8907L095-003	08/17/89	1546	-0.4	
43	ZZZZZ	8907L095-004	08/17/89	1619	0.2	
44	ZZZZZ	HEXANE	08/17/89	1652		
45	ZZZZZ	8907L129-001	08/17/89	1725	-0.4	
46	ZZZZZ	HEXANE	08/17/89	1758		
47	AR1254	01-130	08/17/89	1830		*
48	ZZZZZ	8907L129-002	08/17/89	1904	-0.5	
49	ZZZZZ	8907L129-003	08/17/89	1937	-0.4	
50	ZZZZZ	8907L129-004	08/17/89	2010	-0.5	
51	ZZZZZ	8907L129-005	08/17/89	2042	-0.4	
52	ZZZZZ	HEXANE	08/17/89	2115		
53	ZZZZZ	KEPONE/ISODRIN	08/17/89	2148		*
54	AR1254	01-130	08/17/89	2221		*
55	INDA	13-45	08/17/89	2254	-0.2	
56	INDB	13-56	08/17/89	2327	-0.2	

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.31

RFW Lot No.: 8907G520

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/16/89
TIME OF ANALYSIS 1135
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585				
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720	8.51	516012	Y	1.3
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.47

RFW Lot No.: 8907G520

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 1605
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585				
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720	8.54	478722	Y	8.4
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.54

RFW Lot No.: 8907G520

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 1957
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585				
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720	8.54	479451	Y	8.3
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.55

RFW Lot No.: 8907G520

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2030
EPA SAMPLE NO. (STANDARD) INDA 13-45

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135	2.15	2548691	Y	8.4
Heptachlor	2.63	2.61	2.65	3092577	2.64	2944311	Y	4.8
Aldrin	3.17	3.15	3.19	2069585	3.18	1895743	Y	8.4
Heptachlor epoxide	4.73	4.69	4.77	1650697	4.75	1577007	Y	4.5
Endosulfan I	5.94	5.92	5.98	1193055	5.97	1099561	Y	7.8
Dieldrin	7.26	7.21	7.31	842208	7.29	790858	Y	6.1
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415	10.68	642723	Y	6.4
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833	12.51	346006	Y	15.2
Methoxychlor	23.70	23.50	23.90	152242	23.80	132483	Y	13.0
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720				
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.56

RFW Lot No.: 8907G520

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2103
EPA SAMPLE NO. (STANDARD) INDB 13-56

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787	1.71	3224659	Y	9.1
Beta-BHC	2.44	2.41	2.47	1544555	2.45	1433093	Y	7.2
Delta-BHC	2.84	2.82	2.86	1495373	2.85	1354759	Y	9.4
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585	3.18	2072731	Y	0.2
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101	6.82	922851	Y	8.[illegible]
Endrin	8.81	8.75	8.87	655127	8.84	683792	Y	4.4
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373	10.40	413114	Y	9.5
Endosulfan sulfate	16.85	16.75	16.95	414803	16.91	395659	Y	4.6
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057	5.74	791497	Y	12.5
gamma-Chlordane	5.24	5.18	5.28	1811369	5.26	1640121	Y	9.5
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720				
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.31

RFW Lot No.: 8907G520

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/16/89
TIME OF ANALYSIS 1138
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381				
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811	9.67	2026681	N	1.8
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.47

RFW Lot No.: 8907G520

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 1830
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381				
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811	9.68	1873881	N	5.9
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.54

RFW Lot No.: 8907G520

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89	DATE OF ANALYSIS 08/17/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231	TIME OF ANALYSIS 2221
	EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381				
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811	9.69	1925353	N	3.3
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.55

RFW Lot No.: 8907G520

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2254
EPA SAMPLE NO. (STANDARD) INDA 13-45

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083	2.37	4232539	N	0.3
Heptachlor	3.74	3.72	3.76	5982227	3.74	5996289	N	0.2
Aldrin	4.59	4.57	4.61	4099381	4.60	4001205	N	2.4
Heptachlor epoxide	5.55	5.52	5.58	4220527	5.56	4191279	N	0.7
Endosulfan I	6.87	6.84	6.90	3076563	6.88	3042137	N	1.1
Dieldrin	7.98	7.96	8.00	2285015	7.99	2269881	N	0.[illegible]
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799	9.07	2459043	N	2.6
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279	12.85	946707	N	1.9
Methoxychlor	18.77	18.71	18.83	636859	18.81	653381	N	2.6
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811				
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.56

RFW Lot No.: 8907G520

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2327
EPA SAMPLE NO. (STANDARD) INDB 13-56

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067	2.03	2246627	N	4.8
Beta-BHC	2.16	2.14	2.18	3301833	2.17	3967531	N	20.2
Delta-BHC	2.42	2.40	2.44	2420125	2.43	2685683	N	11.0
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381	4.60	3945543	N	3.8
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151	7.89	2888053	N	4.8
Endrin	8.89	8.86	8.92	1981273	8.91	1811159	N	8.6
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611	9.87	1245459	N	3.4
Endosulfan sulfate	11.54	11.49	11.59	1259645	11.56	1382475	N	9.8
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091	14.77	1325299	N	9.2
alpha-Chlordane	6.98	6.95	7.01	2597551	6.99	2487845	N	4.2
gamma-Chlordane	6.32	6.30	6.36	5068145	6.34	4909741	N	3.1
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811				
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

10

PESTICIDE/PCB IDENTIFICATION

CLIENT SAMPLE NO.

A15B 6-9

Lab Name: Roy F. Weston,Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

GC Column ID (1): 2250/2401 GC Column ID (2): SP2100

Instrument ID (1): 13 Instrument ID (2): 14

Lab Sample ID: 8907G520-001 GC Sample ID: 08158914.25

Lab File ID: _____ (only if confirmed by GCMS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor-1254	Column 1 8.49	8.48	8.52	Y	N
02	Column 2 9.66	9.62	9.72	N	N
03 Aroclor-1232	Column 1 2.58	2.56	2.60	Y	N
04	Column 2 2.06	2.04	2.08	N	N

Comments:

10

PESTICIDE/PCB IDENTIFICATION

CLIENT SAMPLE NO.

A15C 4.5-9

Lab Name: Roy F. Weston, Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

GC Column ID (1): 2250/2401 GC Column ID (2): SP2100

Instrument ID (1): 13 Instrument ID (2): 14

Lab Sample ID: 8907G520-005 GC Sample ID: 08158914.26

Lab File ID: _____ (only if confirmed by GCMS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor-1254	Column 1 8.50	8.48	8.52	Y	N
02	Column 2 9.66	9.62	9.72	N	N
03 Aroclor-1232	Column 1 2.58	2.56	2.60	Y	N
04	Column 2 2.05	2.04	2.08	N	N

Comments:

Roy F. Weston, Inc. -Lionville Laboratory

PEST/PCB STANDARD CONCENTRATIONS

EVALUATION MIXES

	EVALA 17-43		EVALB 19-43		EVALC 18-43	
	(ng/ul)	(ng/inj)	(ng/ul)	(ng/inj)	(ng/ul)	(ng/inj)
ALDRIN	0.01464	0.0435	0.0293	0.0878	0.0488	0.1464
ENDRIN	0.02163	0.0649	0.0433	0.1298	0.0721	0.2163
DDT	0.04140	0.1242	0.0828	0.2484	0.1380	0.4140
DBC	0.03084	0.0925	0.0617	0.1850	0.1028	0.3084

INDIVIDUAL MIXES

	INDA 13-45			INDB 13-46	
	(ng/ul)	(ng/inj)		(ng/ul)	(ng/inj)
LINDANE	0.0084	0.025	ALPHA-BHC	0.0084	0.025
HEPTACHLOR	0.0167	0.05	BETA-BHC	0.0166	0.05
ALDRIN	0.0166	0.05	DELTA-BHC	0.0166	0.05
HEPT. EPOXIDE	0.0167	0.05	ALDRIN	0.0166	0.05
ENDOSULFAN I	0.0167	0.05	G.-CHLORDANE	0.0166	0.05
DIELDRIN	0.0167	0.05	A.-CHLORDANE	0.0167	0.05
ENDOSULFAN II	0.0333	0.10	4,4'-DDE	0.0166	0.05
4,4'-DDT	0.0333	0.10	ENDRIN	0.0167	0.05
ENDRIN ALDEHYDE	0.0333	0.10	4,4'-DDD	0.0333	0.10
METHOXYCHLOR	0.1666	0.50	ENDO. SULFATE	0.0334	0.10
DBC	0.0833	0.25	ENDRIN KETONE	0.0333	0.10
			DBC	0.0833	0.25

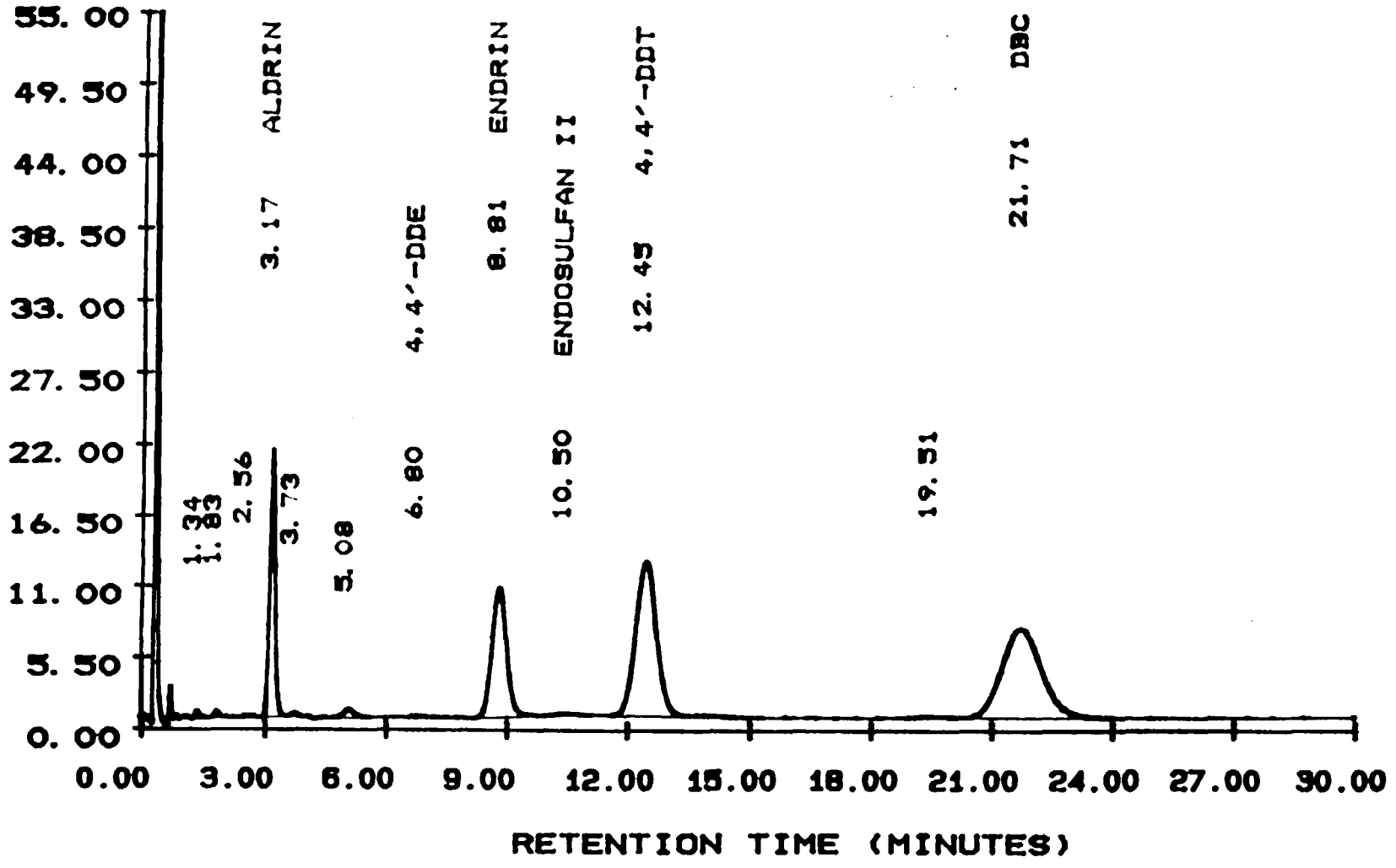
MULTIRESPONSE COMPOUNDS

		(ng/ul)	(ng/inj)
TOXAPHENE	19-36	0.8	2.4
AROCHLOR 1016	12-117	0.2	0.6
AROCHLOR 1221	01-129	1.034	3.11
AROCHLOR 1232	02-124	0.65	1.95
AROCHLOR 1242	03-120	0.26	0.78
AROCHLOR 1248	03-121	0.25	0.75
AROCHLOR 1254	01-130	0.28	0.84
AROCHLOR 1260	12-117	0.25	0.75

Revised 8/09/89

EVALA 17-43

SAMPLE NO. : 08158913 .01 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/15/89 17:03:18
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 31068.
Y MINIMUM: 6688.

START TIME: 0.00
END TIME: 30.00

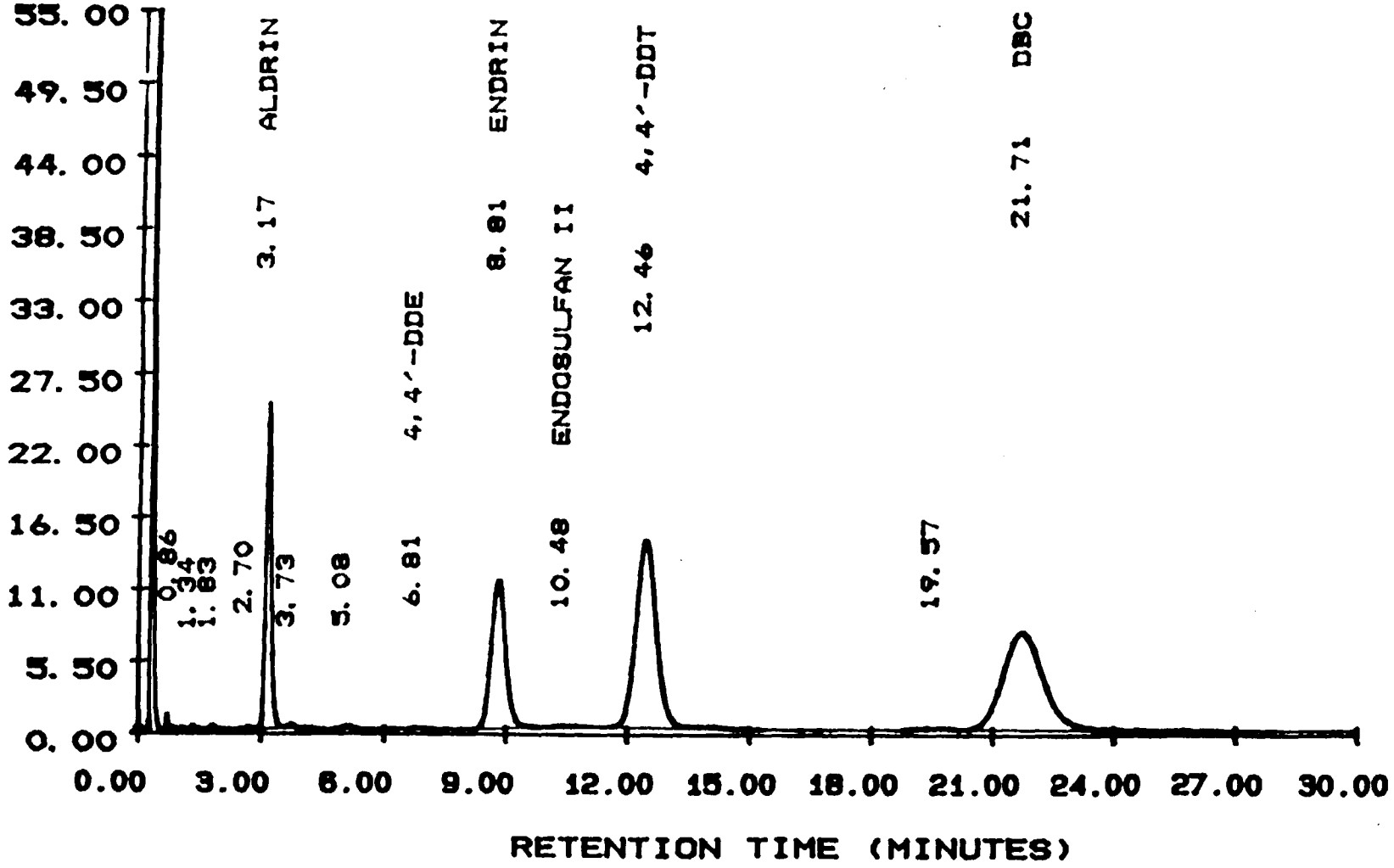
EXTERNAL STANDARD

SAMPLE: 08158913 .01 INST:13 VIAL:FO SEQ NUMBER:001
TEST : DATE-TIME INJECTED : 08/15/89 17:03:18
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:51:39
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALA 17-43 * : CONFIRMED ON COLUMN SP210
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	16710	2240	V	1.342			
				1.701	ALPHA-BHC		
002	20906	2180	V	1.828			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
003	11271	708	V	2.558			
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
004	839386	90396	V	3.168	ALDRIN	0.015	*
005	22075	1441	V	3.727			
				4.733	HEPT. EPOXIDE		
006	68789	3071	V	5.077			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
007	30882	509	V	6.800	4,4'-DDE	0.000	
				7.261	DIELDRIN		
008	1104899	44073	V	8.807	ENDRIN	0.022	*
				10.357	4,4'-DDD		*
009	17935	575	V	10.501	ENDOSULFAN II	0.000	
010	1869979	52630	V	12.449	4,4'-DDT	0.043	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
011	24433	513	V	19.508			
012	2063847	30214		21.713	DBC	0.033	*
				23.701	METHOXYCHLOR		

EVALB 19-43

SAMPLE NO. : 08158913 .02 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/15/89 17:35:58
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 51750. START TIME: 0.00
Y MINIMUM: 6796. END TIME: 30.00

EXTERNAL STANDARD

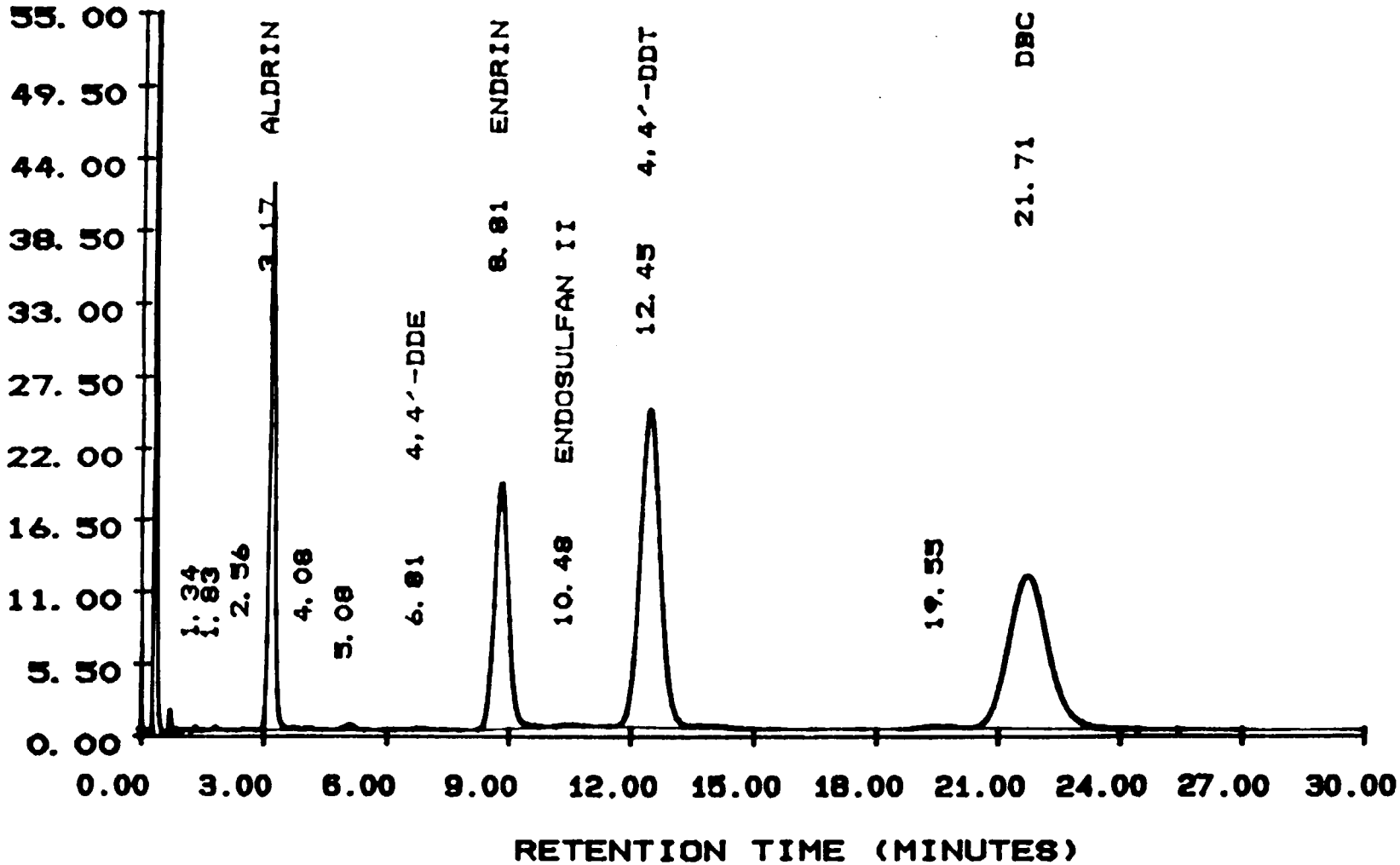
SAMPLE: 08158913 .02 INST:13 VIAL:FO SEQ NUMBER:002
TEST : DATE-TIME INJECTED : 08/15/89 17:35:58
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:51:59
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALB 19-43 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	-89	598	V	0.860			
002	19098	2394	V	1.341			
				1.701	ALPHA-BHC		
003	21580	2353	V	1.829			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
004	17893	1321	V	2.704			
				2.839	DELTA-BHC		
005	1821165	199839	V	3.170	ALDRIN	0.032	*
006	20558	2148	V	3.728			
				4.733	HEPT. EPOXIDE		
007	36866	2085	V	5.079			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	26730	805	V	6.814	4,4'-DDE	0.000	
				7.261	DIELDRIN		
009	2258331	92106	V	8.810	ENDRIN	0.047	*
				10.357	4,4'-DDD		*
010	40099	992	V	10.478	ENDOSULFAN II	0.000	
011	4060979	116518	V	12.456	4,4'-DDT	0.095	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
012	48925	992	V	19.575			
013	4092417	60022		21.715	DBC	0.066	*
				23.701	METHOXYCHLOR		

EVALC 18-43

SAMPLE NO. : 08158913 .03
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/15/89 18:08:39
PAGE NO. : 01



Y MAXIMUM: 55694.
Y MINIMUM: 6643.

START TIME: 0.00
END TIME: 30.00

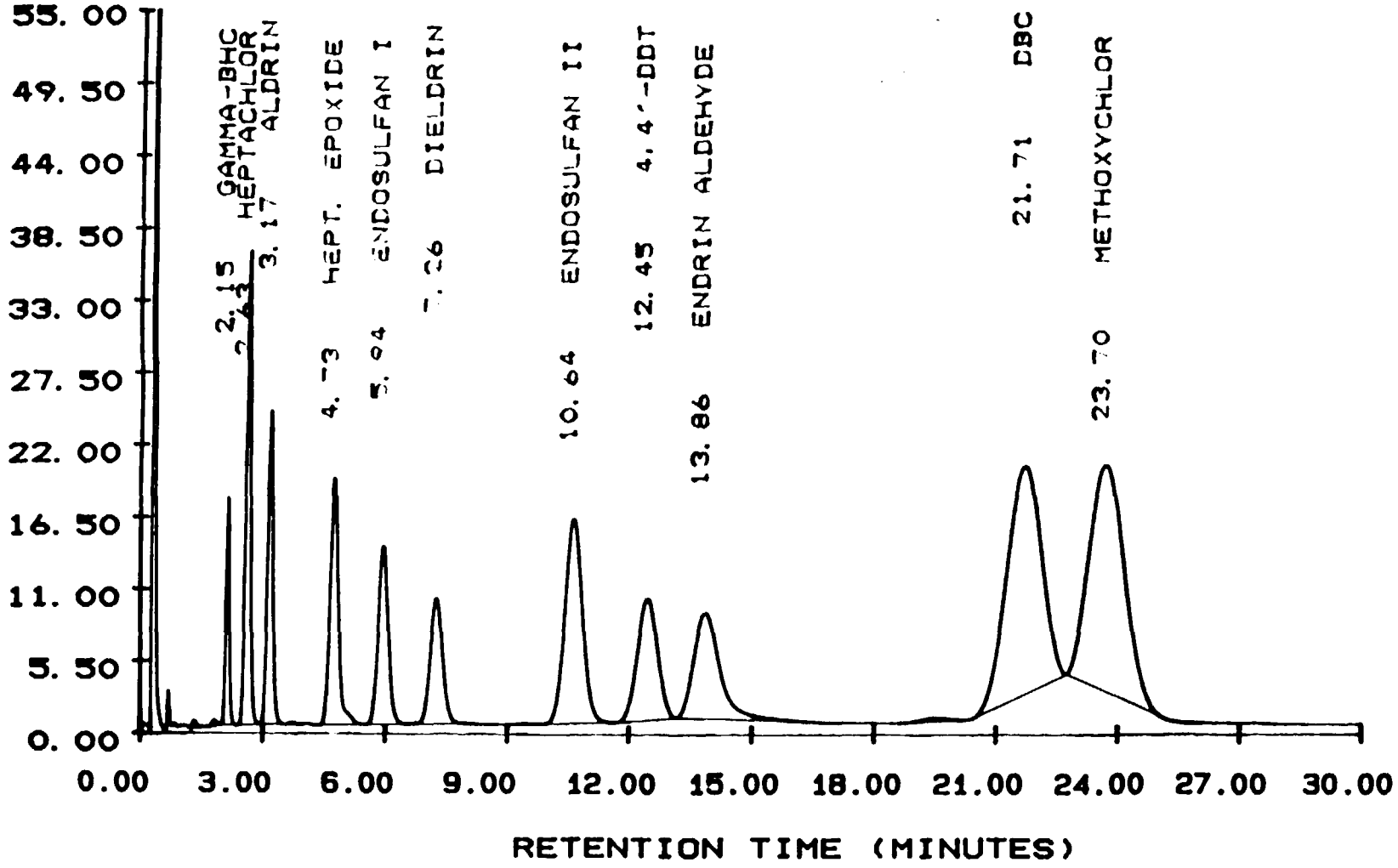
EXTERNAL STANDARD

SAMPLE: 08158913 .03 INST:13 VIAL:FO SEQ NUMBER:003
TEST : DATE-TIME INJECTED : 08/15/89 18:08:39
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:52:19
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALC 18-43 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	16026	2181	V	1.340			
				1.701	ALPHA-BHC		
002	20748	2283	V	1.828			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
003	10598	715	V	2.558			
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
004	3329319	364629	V	3.169	ALDRIN	0.059	*
005	10615	1034	V	4.077			
				4.733	HEPT. EPOXIDE		
006	61465	3545	V	5.078			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
007	41015	1250	V	6.812	4,4'-DDE	0.000	
				7.261	DIELDRIN		
008	4012559	167021	V	8.810	ENDRIN	0.085	*
				10.357	4,4'-DDD		*
009	56873	1429	V	10.485	ENDOSULFAN II	0.001	
010	7389837	215716		12.453	4,4'-DDT	0.176	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
011	80809	1652	V	19.551			
012	6922061	103077		21.713	DBC	0.112	*
				23.701	METHOXYCHLOR		

INDA 13-45

SAMPLE NO. : 08158913 .04 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/15/89 18:41:26
METHOD NO. : 13A / 13A PAGE NO. : 01



Y MAXIMUM: 30985. START TIME: 0.00
Y MINIMUM: 6743. END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

SAMPLE: 08158913 .04 INST:13 VIAL:F0 SEQ NUMBER:004
TEST : DATE-TIME INJECTED : 08/15/89 18:41:26
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 19:11:52
METHOD: 13A / 13A REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: INDA 13-45 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

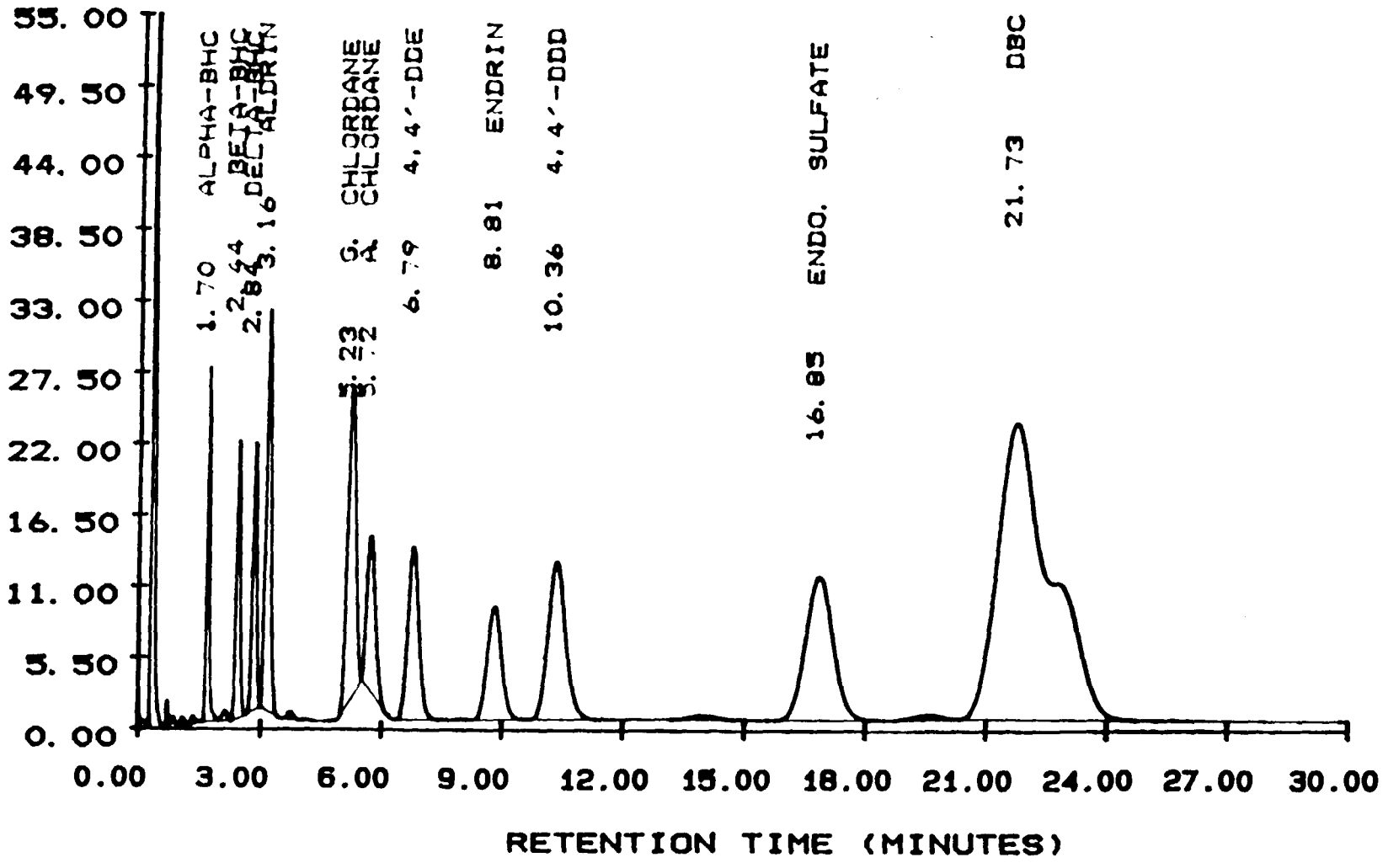
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
003	437664	70135	V	2.146	GAMMA-BHC	0.008	*
004	1255515	154938	V	2.626	HEPTACHLOR	0.017	*
005	947865	103065	V	3.169	ALDRIN	0.017	*
007	1174861	82700	V	4.733	HEPT. EPOXIDE	0.017	*
008	1014292	59772	V	5.945	ENDOSULFAN I	0.017	*
009	882241	42195	V	7.2[illegible]	DIELDRIN	0.017	*
010	2043743	68573	V	10.6[illegible]	ENDOSULFAN II	0.033	*
011	1376307	40743	V	12.4[illegible]	4,4'-DDT	0.033	*
012	1563137	35469		13.864	ENDRIN ALDEHYDE	0.033	*
014	4492363	76330	V	21.712	DBC	0.083	*
015	4610017	76091		23.701	METHOXYCHLOR	0.167	*

INDB 13-46

SAMPLE NO. : 08158913 .05 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 19:14:29

METHOD NO. : 13B / 13B PAGE NO. : 01



Y MAXIMUM: 27530. START TIME: 0.00

Y MINIMUM: 6816. END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

SAMPLE: 08158913 .05
TEST :
COLLECTION TIME : 29.98
METHOD: 13B / 13B REV #: 00119
CLIENT ID:
CLIENT:
LAB ID: INDB 13-46
SAMPLE WT : % MOISTURE :

INST:13 VIAL:F0 SEQ NUMBER:005
DATE-TIME INJECTED : 08/15/89 19:14:29
DATE-TIME PROCESSED : 08/16/89 00:39:00
ANALYST: YATES SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP210
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
004	493465	88365	V	1.701	ALPHA-BHC	0.008	*
006	539942	76919	V	2.436	BETA-BHC	0.017	*
007	553958	74470	V	2.839	DELTA-BHC	0.017	*
008	1038198	114376	V	3.164	ALDRIN	0.017	*
010	1260207	90206	V	5.235	G. CHLORDANE	0.017	*
011	675063	45343	V	5.[illegible]21	A. CHLORDANE	0.017	*
012	959322	49954	V	6.[illegible]37	4,4'-DDE	0.017	*
013	814442	32822	V	8.[illegible]12	ENDRIN	0.017	*
014	1383949	45729		10.357	4,4'-DDD	0.033	*
016	1972143	41563	V	16.847	ENDO. SULFATE	0.033	*
018	7770739	85894		21.734	DBC	0.083	*

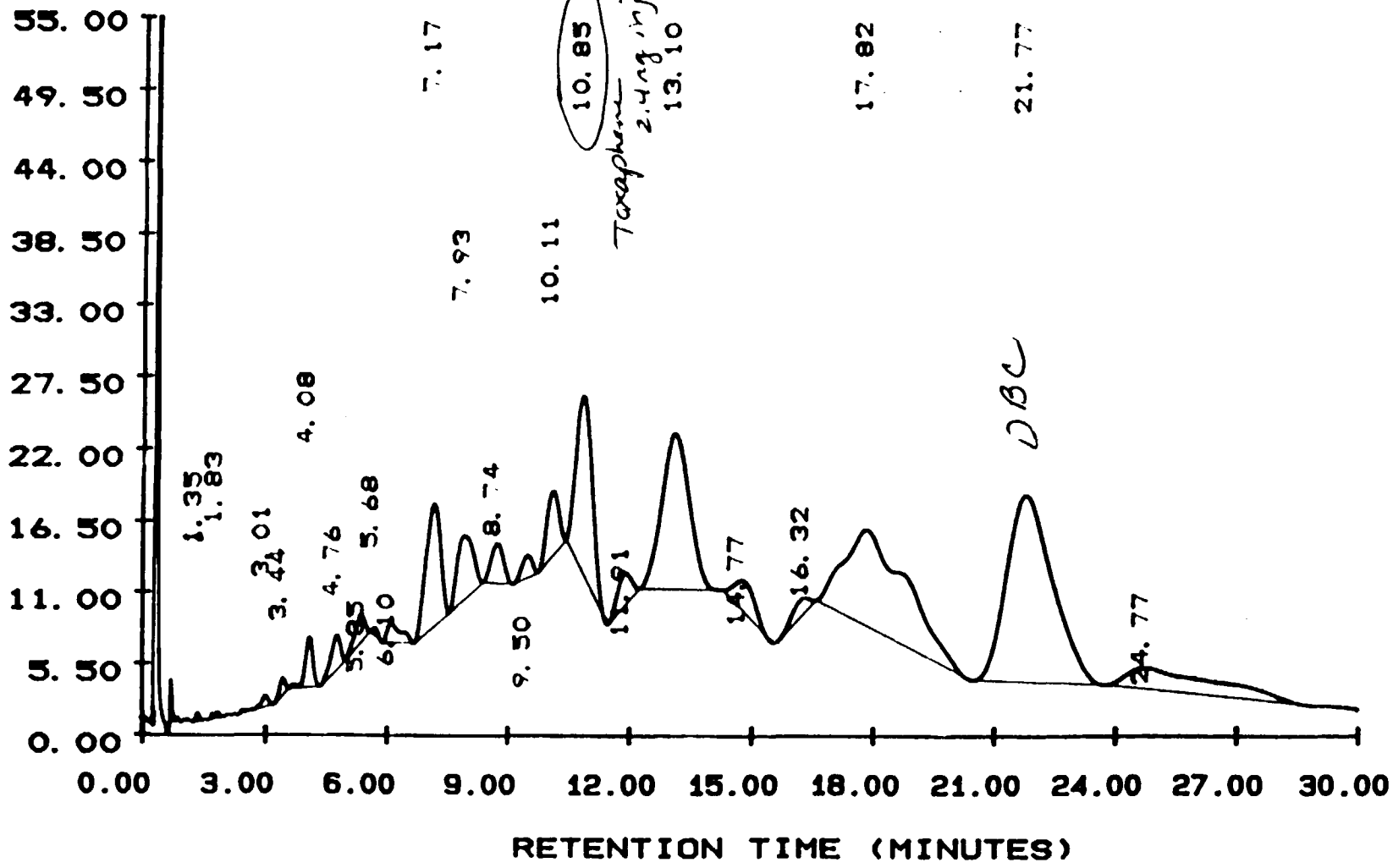
5

TOXAPH 19-36

SAMPLE NO. : 08158913 .06 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 19:48:08

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 26551. START TIME: 0.00

Y MINIMUM: 6627. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .06 INST:13 VIAL:F0 SEQ NUMBER:006
TEST : DATE-TIME INJECTED : 08/15/89 19:48:08
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 20:18:33
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: TOXAPH 19-36 * : CONFIRMED ON COLUMN SP21C
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

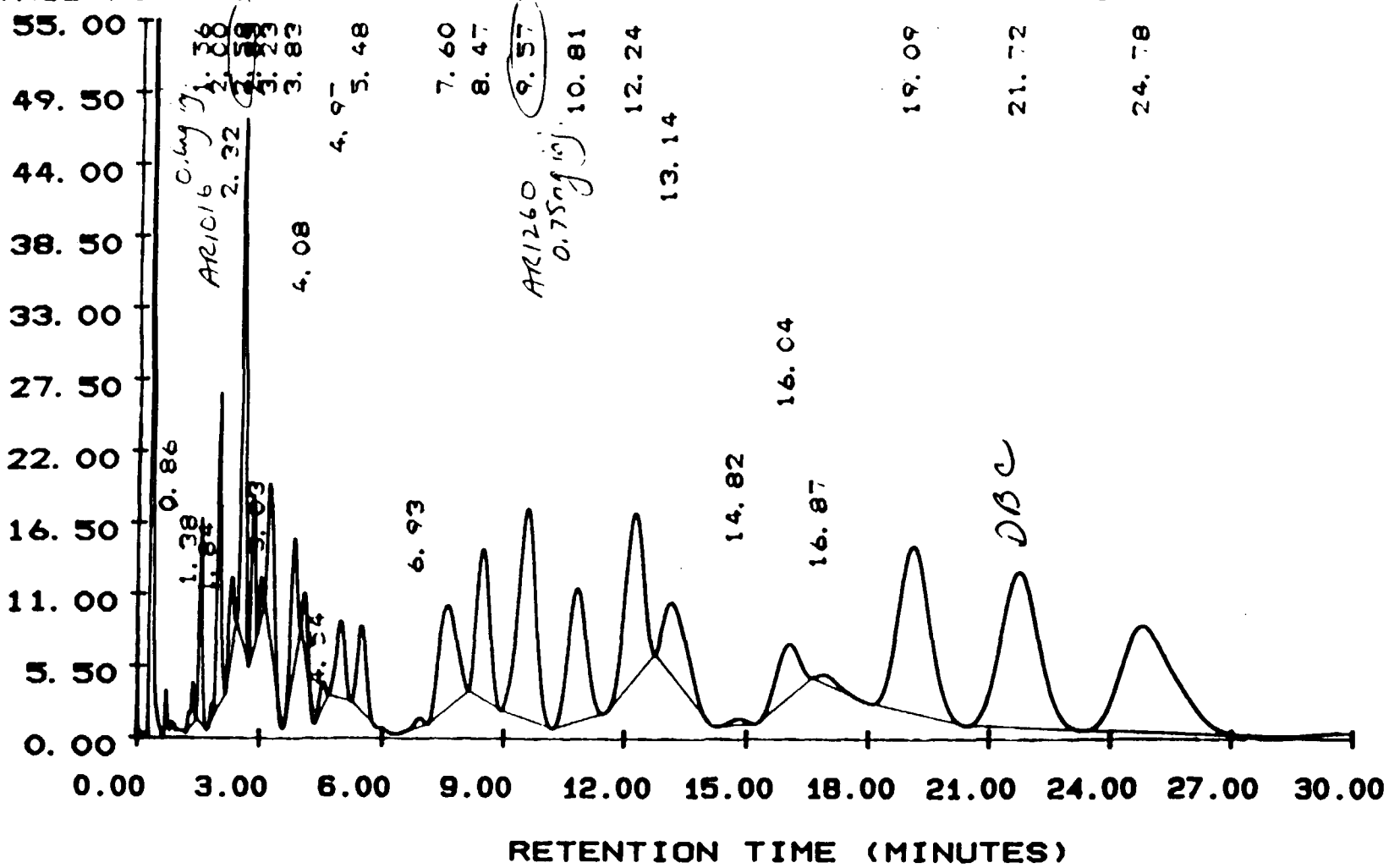
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	14952	2191	V	1.346			
				1.727	ALPHA-BHC		
002	21094	1638	V	1.832			
				2.146	GAMMA-BHC		
				2.474	BETA-BHC		
				2.626	HEPTACHLOR		
				2.884	DELTA-BHC		
003	51422	3112	V	3.011			
				3.169	ALDRIN		
004	44878	4342	V	3.440			
005	182399	13820	V	4.077			
006	154655	9574	V	4.755	HEPT. EPOXIDE	0.002	
007	129608	7452	V	5.354	G. CHLORDANE	0.001	*
008	20336	2298	V	5.683			
				5.809	A. CHLORDANE		
				5.945	ENDOSULFAN I		
009	139556	5581	V	6.103			
				6.890	4,4'-DDE		
010	858081	34228	V	7.167	DIELDRIN	0.014	
011	488872	17792	V	7.927			
012	237495	11308	V	8.740	ENDRIN	0.006	
013	112134	6208	V	9.496			
014	360934	17638	V	10.114			
				10.516	4,4 -DDD		
				10.636	ENDOSULFAN II		
015	1387733	49495	V	10.850			
016	211430	8480	V	11.914			
				12.454	4,4'-DDT		
017	2026075	43071	V	13.105			
				13.864	ENDRIN ALDEHYDE		
018	315770	8785	V	14.773			
019	137549	3663	V	16.322			
				17.111	ENDO. SULFATE		
020	2996635	27062	V	17.821			
021	4094759	52062	V	21.775	DBC	0.057	
				23.701	METHOXYCHLOR		
022	1000499	6078		24.772			
	96989			10.850	~~AROCHLOR-XAPH~~ TOXAPHENE	0.800	*

CWS 8/22/89

AR1660 12-117

SAMPLE NO. : 08158913 .07
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/15/89 20:21:46
PAGE NO. : 01



Y MAXIMUM: 29163.
Y MINIMUM: 6897.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .07 INST:13 VIAL:FO SEQ NUMBER:007
TEST : DATE-TIME INJECTED : 08/15/89 20:21:46
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 20:52:10
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1660 12-11 * : CONFIRMED ON COLUMN SP21C
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	867	890	V	0.859		
002	74605	10569	V	1.376		
003	338406	57451	V	1.564		
				1.727	ALPHA-BHC	
004	18941	3453	V	1.837		
005	595836	90446	V	2.000		
				2.146	GAMMA-BHC	
006	186050	22620	V	2.317		
				2.474	BETA-BHC	
007	1131671	157041	V	2.579		
				2.626	HEPTACHLOR	
008	313366	46598	V	2.828		
				2.884	DELTA-BHC	
009	60257	11622	V	3.028		
				3.169	ALDRIN	
010	525836	48671	V	3.234		
011	404495	39503	V	3.827		
012	159834	19667	V	4.083		
013	74092	7519	V	4.543		
				4.733	HEPT. EPOXIDE	
014	353217	23995	V	4.968		
				5.316	G. CHLORDANE	
015	393731	26598	V	5.479		
				5.809	A. CHLORDANE	
				5.945	ENDOSULFAN I	
016	41346	2736	V	6.927	4,4'-DDE	0.001
				7.261	DIELDRIN	
017	963642	31732	V	7.603		
018	1020655	46718	V	8.467		
				8.812	ENDRIN	
019	1954029	65547	V	9.568		
				10.516	4,4'-DDD	
				10.636	ENDOSULFAN II	
020	1282669	41104	V	10.815		
021	1577823	51370	V	12.237		
				12.454	4,4'-DDT	
022	901792	22460	V	13.138		
				13.864	ENDRIN ALDEHYDE	
023	53178	1863	V	14.819		
024	615594	16139	V	16.044		
025	94218	2628	V	16.874	ENDO. SULFATE	0.002
026	2763591	51700	V	19.085		
027	3123873	48114	V	21.723	DBC	0.053
				23.701	METHOXYCHLOR	
028	3008999	32905		24.783		

028	3008999	32905	23.701 24.783	METHOXYCHLOR		
	887650		2.579	AROCHLOR-1016	0.200	*
	483215		9.568	AROCHLOR-1260	0.250	*
	887650		2.579	AROCHLOR-1016	0.200	*

AR1221 01-129

SAMPLE NO. : 08158913 .08

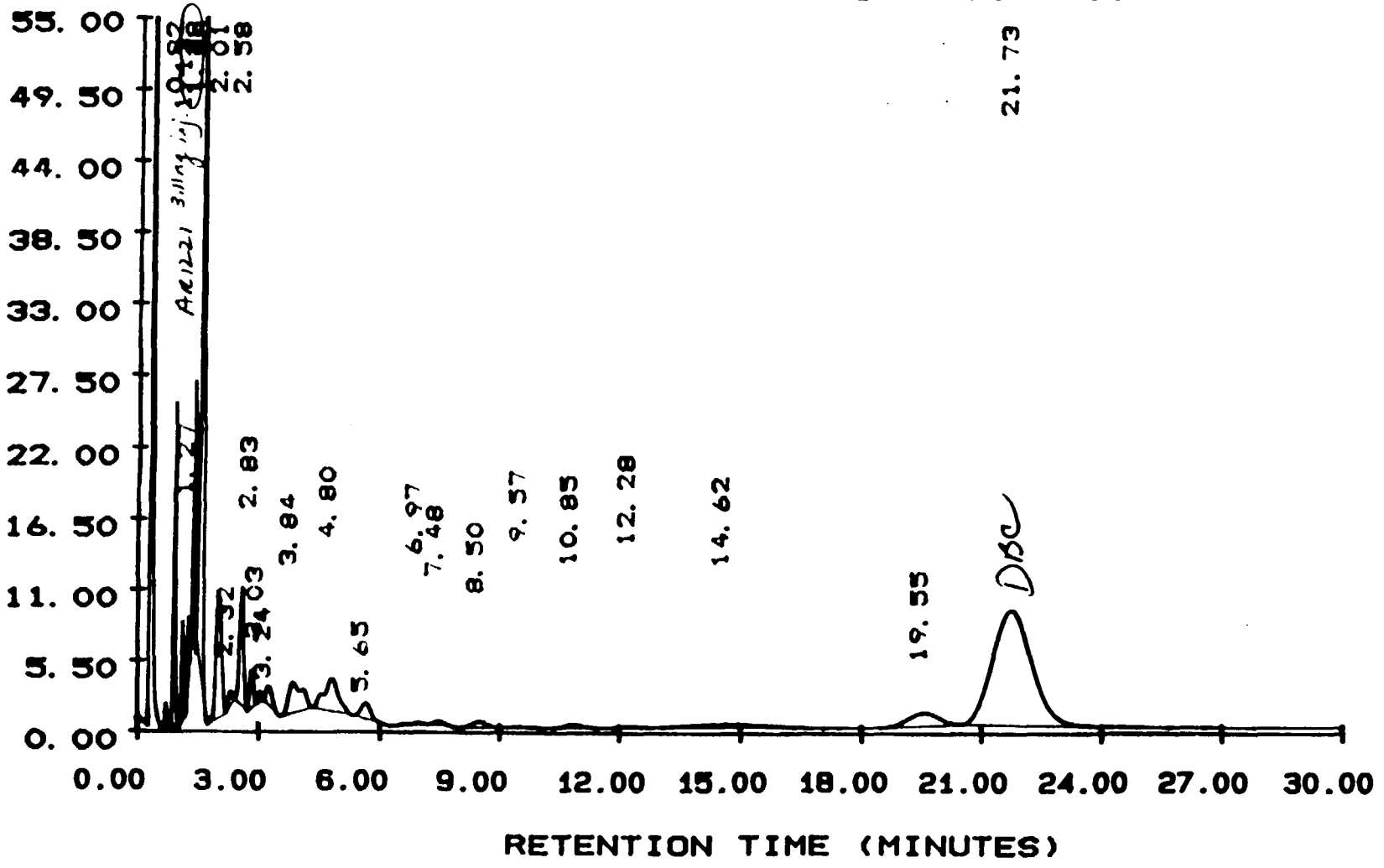
TEST NO. :

METHOD NO. : 13 / 13

INSTRUMENT: 13

DATE TIME: 08/15/89 20:55:26

PAGE NO. : 01



Y MAXIMUM: 34089.

Y MINIMUM: 6581.

START TIME: 0.00

END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .08 INST:13 VIAL:F0 SEQ NUMBER:008
TEST : DATE-TIME INJECTED : 08/15/89 20:55:26
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 21:25:52
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1221 01-12 * : CONFIRMED ON COLUMN SP210C
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

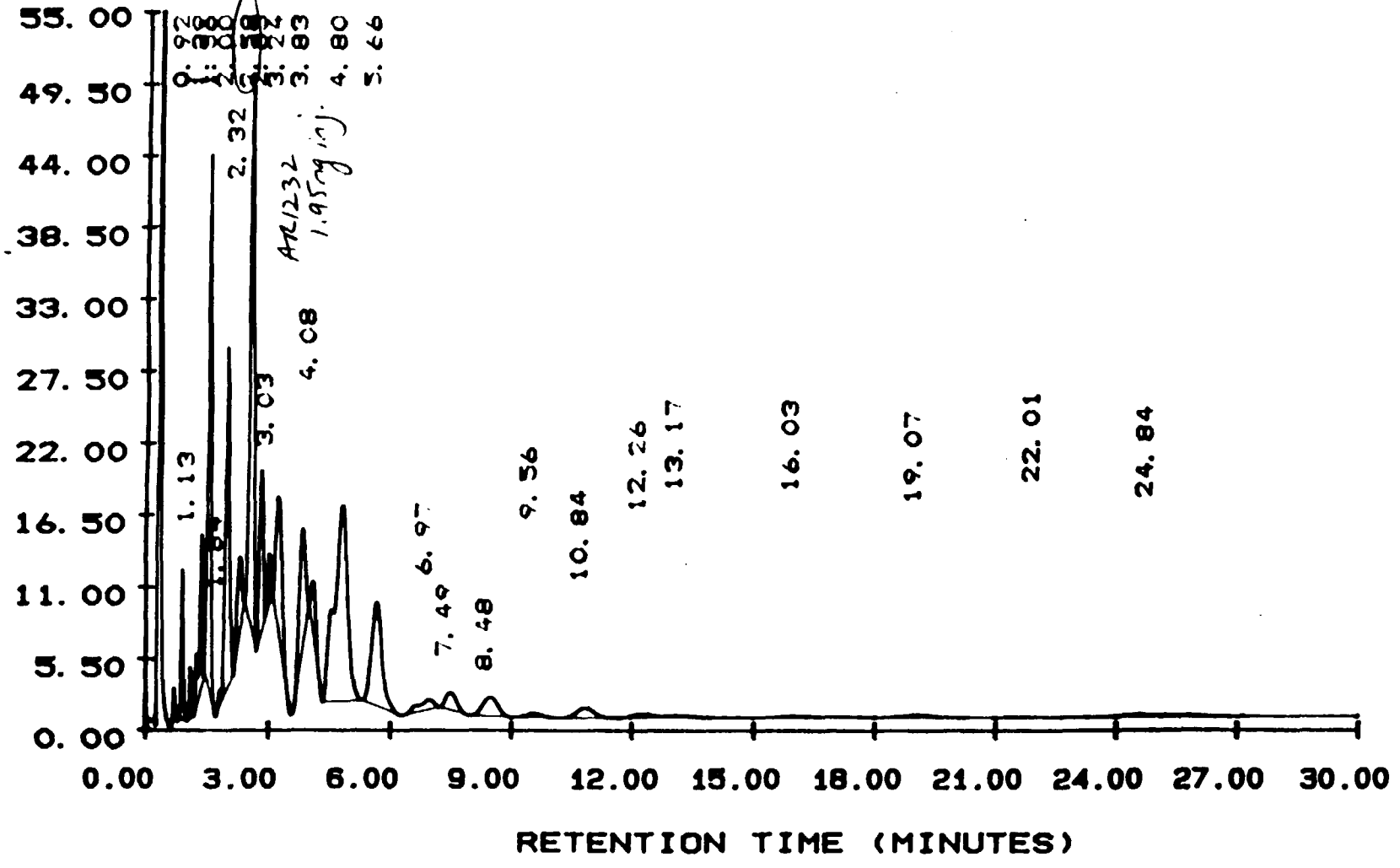
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	436558	90721	V	0.917			
002	132019	29291	V	1.127			
003	71865	14499	V	1.272			
004	357233	80842	V	1.384			
005	1542767	255585	V	1.563			
				1.727	ALPHA-BHC		
006	457370	47231	V	2.011			
				2.146	GAMMA-BHC		
007	35154	4954	V	2.320			
				2.474	BETA-BHC		
008	322162	44155	V	2.581			
				2.626	HEPTACHLOR		
009	94307	14002	V	2.829			
				2.884	DELTA-BHC		
010	22398	4183	V	3.027			
				3.169	ALDRIN		
011	74624	7378	V	3.241			
012	270944	11785	V	3.842			
013	313740	12885	V	4.801	HEPT. EPOXIDE	0.003	
				5.316	G. CHLORDANE		
014	106157	6308	V	5.650			
				5.809	A. CHLORDANE		
				5.945	ENDOSULFAN I		
015	25298	898	V	6.966	4,4'-DDE	0.000	
				7.261	DIELDRIN		
016	32298	1781	V	7.475			
017	61402	2413	V	8.503			
				8.812	ENDRIN		
018	12326	408	V	9.569			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
019	42174	1343	V	10.845			
020	17689	551	V	12.276	4,4'-DDT	0.000	
				13.864	ENDRIN ALDEHYDE		
021	169946	1374		14.617			
				17.111	ENDO. SULFATE		
022	269670	5025	V	19.555			
023	2986483	44399		21.731	DBC	0.048	
				23.701	METHOXYCHLOR		
	193745			1.563	AROCHLOR-1221	1.034	*

AR1232 02-124

SAMPLE NO. : 08158913 .09 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 21:28:35

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 28547. START TIME: 0.00

Y MINIMUM: 6721. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/15/89 21:59:00

EXTERNAL STANDARD

SAMPLE: 08158913 .09 INST:13 VIAL:FO SEQ NUMBER:009
TEST : DATE-TIME INJECTED : 08/15/89 21:28:35
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 21:59:00
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1232 02-12 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

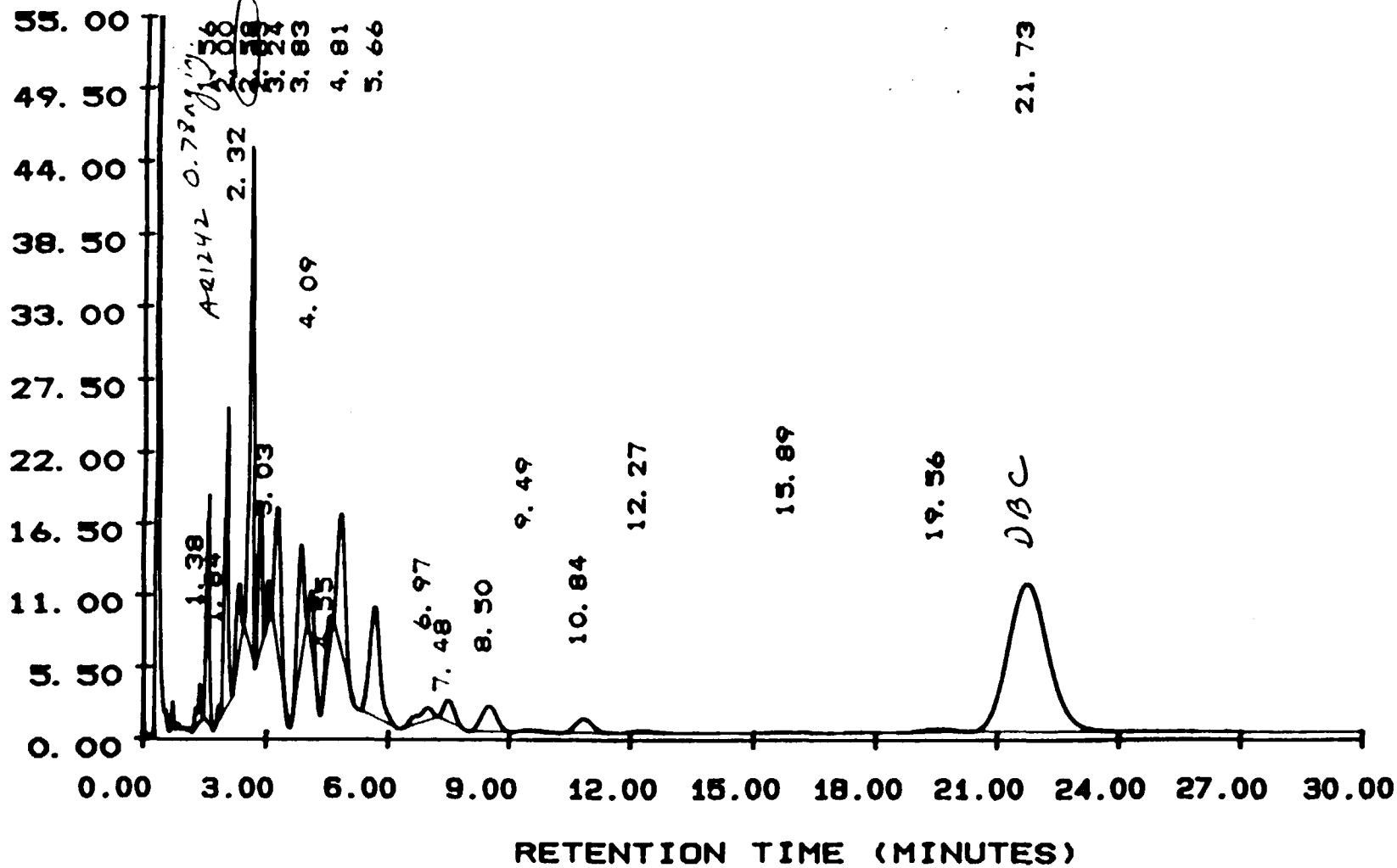
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	165504	34569	V	0.918		
002	54744	12025	V	1.128		
003	244957	37868	V	1.385		
004	883035	147111	V	1.564		
				1.727	ALPHA-BHC	
005	18150	3385	V	1.839		
006	693834	96960	V	2.002		
				2.146	GAMMA-BHC	
007	177103	22451	V	2.319		
				2.474	BETA-BHC	
008	1151091	158408	V	2.581		
				2.626	HEPTACHLOR	
009	320222	47827	V	2.829		
				2.884	DELTA-BHC	
010	76397	14399	V	3.028		
				3.169	ALDRIN	
011	429574	40388	V	3.237		
012	369873	35860	V	3.834		
013	131101	16356	V	4.084		
				4.733	HEPT. EPOXIDE	
014	1338267	59593	V	4.804		
				5.316	G. CHLORDANE	
015	565533	31697	V	5.663		
				5.809	A. CHLORDANE	
				5.945	ENDOSULFAN I	
016	86517	2933	V	6.966	4,4'-DDE	0.001
				7.261	DIELDRIN	
017	103124	5433	V	7.491		
018	152435	5865	V	8.484		
				8.812	ENDRIN	
019	36163	1254	V	9.557		
				10.516	4,4'-DDD	
				10.636	ENDOSULFAN II	
020	95926	3153	V	10.838		
021	31938	1037	V	12.264		
				12.454	4,4'-DDT	
022	14980	402	V	13.171		
				13.864	ENDRIN ALDEHYDE	
023	30451	430		16.034		
				17.111	ENDO. SULFATE	
024	40218	784	V	19.073		
025	9142	153	V	22.011	DBC	0.000 no DBC in std. soln.
				23.701	METHOXYCHLOR	

026	60352	625	24.843			
	353990		2.581	AROCHLOR-1232	0.650	*
	353990		2.581	AROCHLOR-1232	0.650	*

AR1242 03-120

SAMPLE NO. : 08158913 . 10
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/15/89 22:01:47
PAGE NO. : 01



Y MAXIMUM: 31519.
Y MINIMUM: 6876.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .10 INST:13 VIAL:FO SEQ NUMBER:010
TEST : DATE-TIME INJECTED : 08/15/89 22:01:47
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 22:32:13
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1242 03-12 * : CONFIRMED ON COLUMN SP210
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

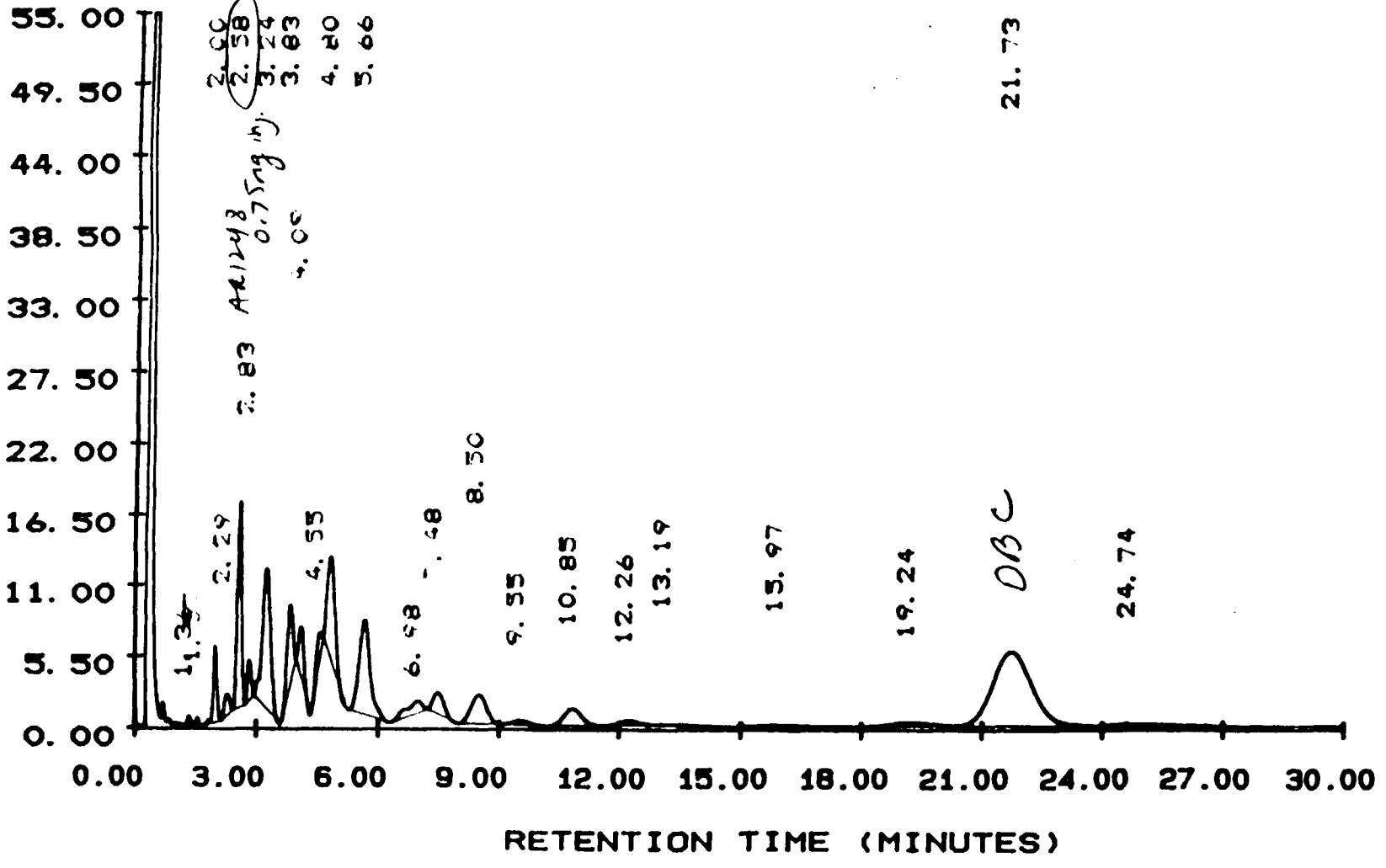
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	75427	10306	V	1.383			
002	417168	70602	V	1.565			
				1.727	ALPHA-BHC		
003	22266	4042	V	1.835			
004	641463	96458	V	2.001			
				2.146	GAMMA-BHC		
005	196807	24174	V	2.318			
				2.474	BETA-BHC		
006	1196429	164626	V	2.581			
				2.626	HEPTACHLOR		
007	331803	49442	V	2.829			
				2.884	DELTA-BHC		
008	70686	13466	V	3.029			
				3.169	ALDRIN		
009	518023	47341	V	3.239			
010	409818	39887	V	3.833			
011	160510	19829	V	4.085			
012	99502	8852	V	4.552			
				4.733	HEPT. EPOXIDE		
013	621598	47247	V	4.806			
				5.316	G. CHLORDANE		
014	677857	37861	V	5.662			
				5.809	A. CHLORDANE		
				5.945	ENDOSULFAN I		
015	120374	4199	V	6.974	4,4'-DDE	0.001	
				7.261	DIELDRIN		
016	136926	7424	V	7.479			
017	232585	8781	V	8.498			
				8.812	ENDRIN		
018	26241	726	V	9.489			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
019	143099	4781	V	10.844			
020	32553	844		12.268	4,4'-DDT	0.001	
				13.864	ENDRIN ALDEHYDE		
021	18883	312	V	15.885			
				17.111	ENDO. SULFATE		
022	59542	1181	V	19.558			
023	3435507	50444		21.733	DBC	0.055	
				23.701	METHOXYCHLOR		
	765983			2.581	AROCHLOR-1242	0.260	*

AR1248 03-121

SAMPLE NO. : 08158913 . 11 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 22:35:02

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57276. START TIME: 0.00

Y MINIMUM: 6870. END TIME: 30.00

EXTERNAL STANDARD

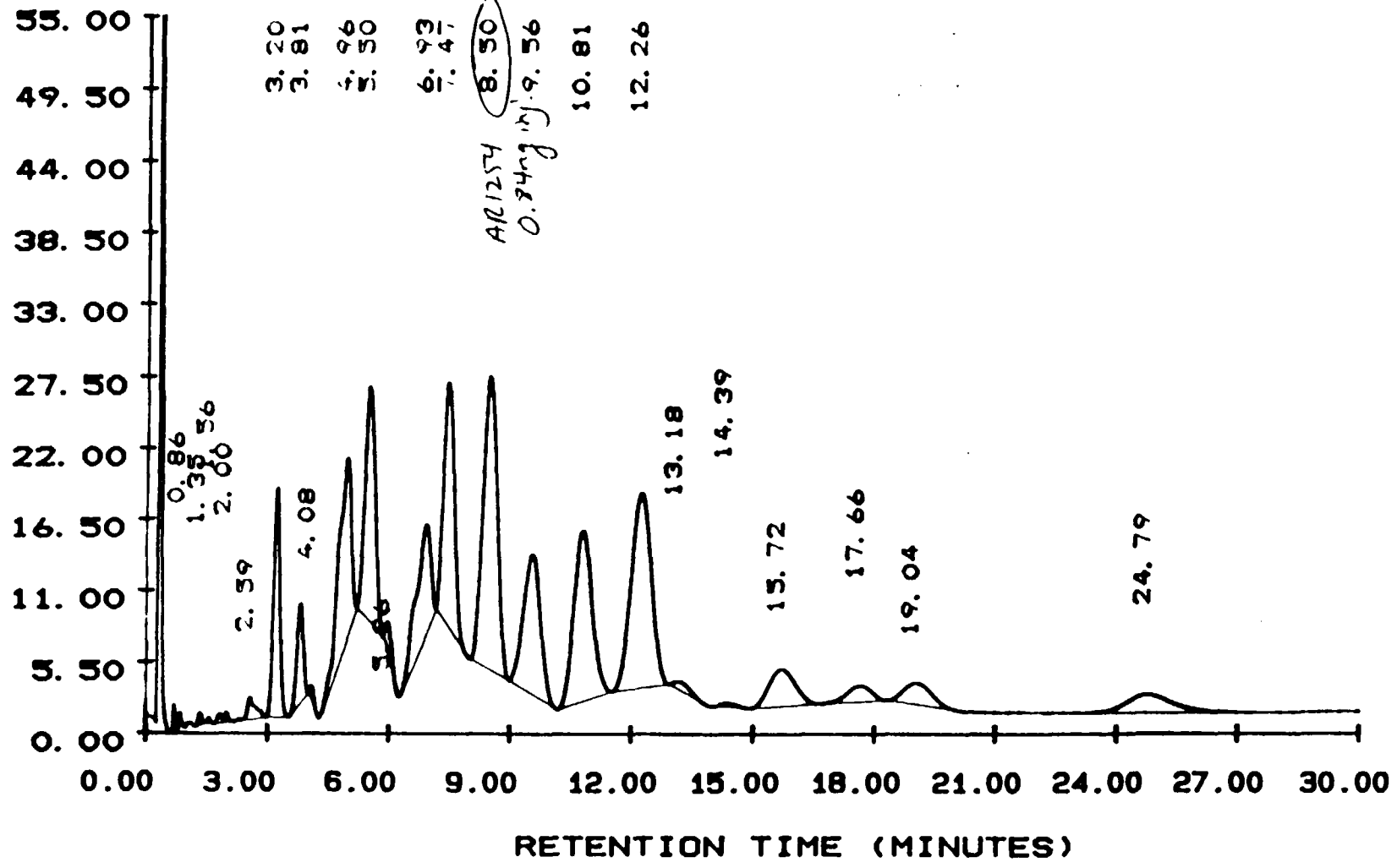
SAMPLE: 08158913 .11 INST:13 VIAL:FO SEQ NUMBER:011
TEST : DATE-TIME INJECTED : 08/15/89 22:35:02
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 23:05:28
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1248 03-12 * : CONFIRMED ON COLUMN SP210
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	31320	5602	V	1.361			
002	23718	4581	V	1.567			
				1.727	ALPHA-BHC		
003	333158	49610	V	2.000			
				2.146	GAMMA-BHC		
004	126490	14756	V	2.293			
				2.474	BETA-BHC		
005	1051921	140831	V	2.581			
				2.626	HEPTACHLOR		
006	176970	26780	V	2.831			
				2.884	DELTA-BHC		
				3.169	ALDRIN		
007	1358363	97907	V	3.241			
008	527580	53814	V	3.827			
009	312040	36149	V	4.085			
010	172099	14982	V	4.552			
				4.733	HEPT. EPOXIDE		
011	978221	73839	V	4.804			
				5.316	G. CHLORDANE		
012	1259721	66505	V	5.658			
				5.809	A. CHLORDANE		
				5.945	ENDOSULFAN I		
013	247741	8314	V	6.983	4,4'-DDE	0.003	*
				7.261	DIELDRIN		
014	274314	15186	V	7.477			
015	537938	20603	V	8.504			
				8.812	ENDRIN		
016	92967	3193	V	9.547			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
017	361251	11854	V	10.845			
018	100246	3154	V	12.258			
				12.454	4,4'-DDT		
019	22373	608	V	13.189			
				13.864	ENDRIN ALDEHYDE		
020	65626	907	V	15.973			
				17.111	ENDO. SULFATE		
021	160882	2677	V	19.236			
022	3475559	51829	V	21.730	DBC	0.057	
				23.701	METHOXYCHLOR		
023	101274	1233		24.741			
	774965			2.581	AROCHLOR-1248	0.250	*

AR1254 01-130

SAMPLE NO. : 08158913 . 12
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/15/89 23:08:21
PAGE NO. : 01



Y MAXIMUM: 23268.
Y MINIMUM: 6630.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .12 INST:13 VIAL:FO SEQ NUMBER:012
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE :

DATE-TIME INJECTED : 08/15/89 23:08:21
DATE-TIME PROCESSED : 08/15/89 23:38:48
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP210
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	6941	2000	V	0.857			
002	14931	2530	V	1.352			
003	6658	1261	V	1.564			
				1.727	ALPHA-BHC		
004	32932	2270	V	2.000			
				2.146	GAMMA-BHC		
				2.474	BETA-BHC		
005	74581	4998	V	2.585			
				2.626	HEPTACHLOR		
				2.884	DELTA-BHC		
006	569884	52968	V	3.205	ALDRIN	0.009	*
007	247102	22801	V	3.806			
008	20820	3325	V	4.077			
				4.733	HEPT. EPOXIDE		
009	894981	41561	V	4.958			
				5.316	G. CHLORDANE		
010	952141	54697	V	5.498			
				5.809	A. CHLORDANE		
011	74055	7350	V	5.964	ENDOSULFAN I	0.002	
012	637340	24906	V	6.933	4,4'-DDE	0.009	*
				7.261	DIELDRIN		
013	1062357	56672	V	7.465			
014	1665979	68236	V	8.504			
				8.812	ENDRIN		
015	944461	32549	V	9.561			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
016	1229745	39529	V	10.814			
017	1548483	45166	V	12.255			
				12.454	4,4'-DDT		
018	56516	1844	V	13.178			
				13.864	ENDRIN ALDEHYDE		
019	26214	980	V	14.393			
020	392026	8708	V	15.719			
				17.111	ENDO. SULFATE		
021	158618	3769	V	17.662			
022	245273	5087	V	19.043			
				21.712	DBC		
				23.701	METHOXYCHLOR		
023	359859	4364		24.790			
	522720			8.504	AROCHLOR-1254	0.280	*

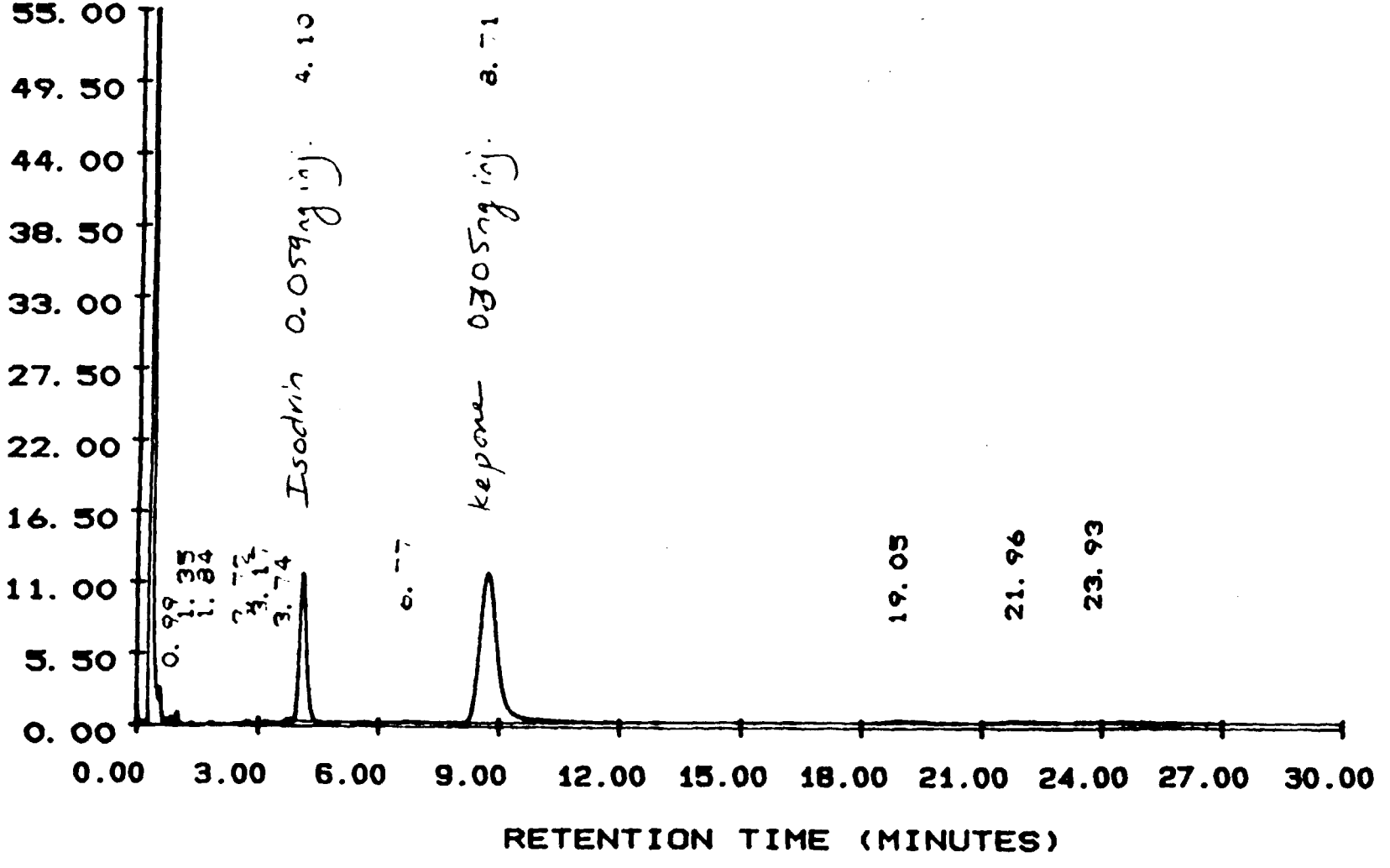
no DBC in std sol'n

KEPONE/ISODRIN

SAMPLE NO. : 08158913 . 13 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/16/89 01:31:09

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57218. START TIME: 0.00

Y MINIMUM: 6747. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .13 INST:13 VIAL:FO SEQ NUMBER:013
TEST : DATE-TIME INJECTED : 08/16/89 01:31:09
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 02:01:39
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: KEPONE/ISODR std 10-47 * : CONFIRMED ON COLUMN SP21C
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

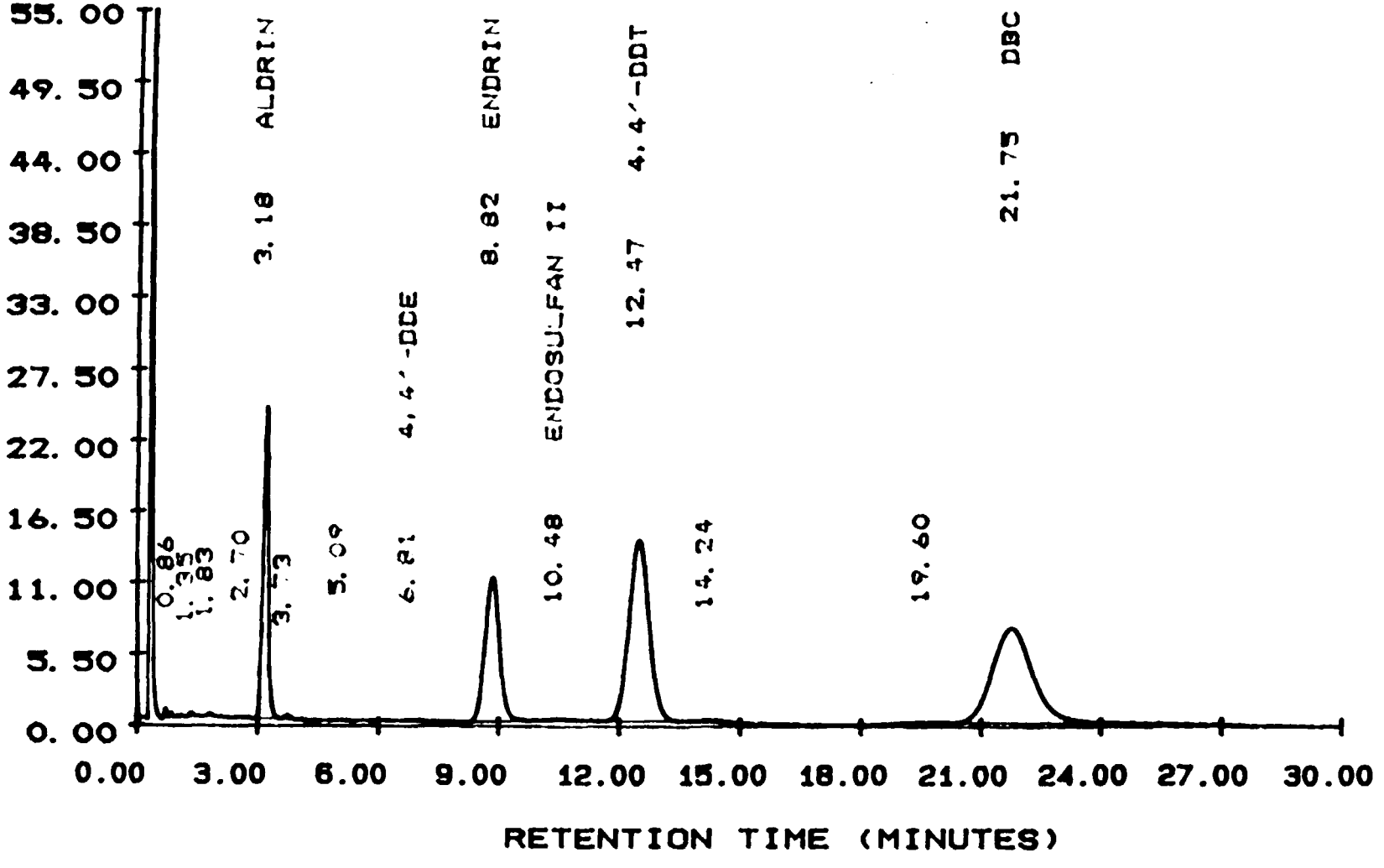
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	17764	4976	V	0.985			
002	11942	1714	V	1.352			
				1.701	ALPHA-BHC		
003	14982	1667	V	1.835			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
004	22401	1865	V	2.715			
				2.839	DELTA-BHC		
005	11658	1282	V	3.174	ALDRIN	0.000	
006	18502	2098	V	3.740			
007	1224239	103593	V	4.095	Isodrin	0.0198	
				4.733	HEPT. EPOXIDE		
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	30390	784	V	6.774	4,4'-DDE	0.000	no
				7.261	DIELDRIN		
009	3257447	104900		8.713	~~ENDRIN~~ 5ng kepone	0.053 0.101 ng/ul	
				10.357	4,4'-DDD		
				10.636	ENDOSULFAN II		
				12.454	4,4'-DDT		
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
010	100351	1735	V	19.048			no DBC in
011	79834	1337	V	21.960	DBC	0.001	std. sol'n
012	46940	649		23.928	METHOXYCHLOR	0.001 *	

EVALB 19-43

SAMPLE NO. : 08158913 .22 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/16/89 06:36:30

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 51064. START TIME: 0.00

Y MINIMUM: 6579. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .22
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00114
CLIENT ID:
CLIENT:
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE :

INST:13 VIAL:FO SEQ NUMBER:022
DATE-TIME INJECTED : 08/16/89 06:36:30
DATE-TIME PROCESSED : 08/16/89 07:06:50
ANALYST: YATES SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP2100
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	4335	1289	V	0.859			
002	24434	2275	V	1.350			
				1.701	ALPHA-BHC		
003	19554	1986	V	1.828			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
004	11367	849	V	2.700			
				2.839	DELTA-BHC		
005	1764135	191016	V	3.175	ALDRIN	0.031	*
006	30286	2388	V	3.732			
				4.733	HEPT. EPOXIDE		
007	20223	477	V	5.088			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	41980	893	V	6.813	4,4'-DDE	0.000	
				7.261	DIELDRIN		
009	2202323	89281	V	8.824	ENDRIN	0.045	*
				10.357	4,4'-DDD		*
010	39356	990	V	10.484	ENDOSULFAN II	0.000	
011	3836041	112119	V	12.474	4,4'-DDT	0.092	*
				13.864	ENDRIN ALDEHYDE		
012	58999	1303	V	14.241			
				16.847	ENDO. SULFATE		
013	45420	917	V	19.599			
014	4077223	58583		21.748	DBC	0.064	*
				23.701	METHOXYCHLOR		

AR1254 01-130

SAMPLE NO. : 08158913 .31

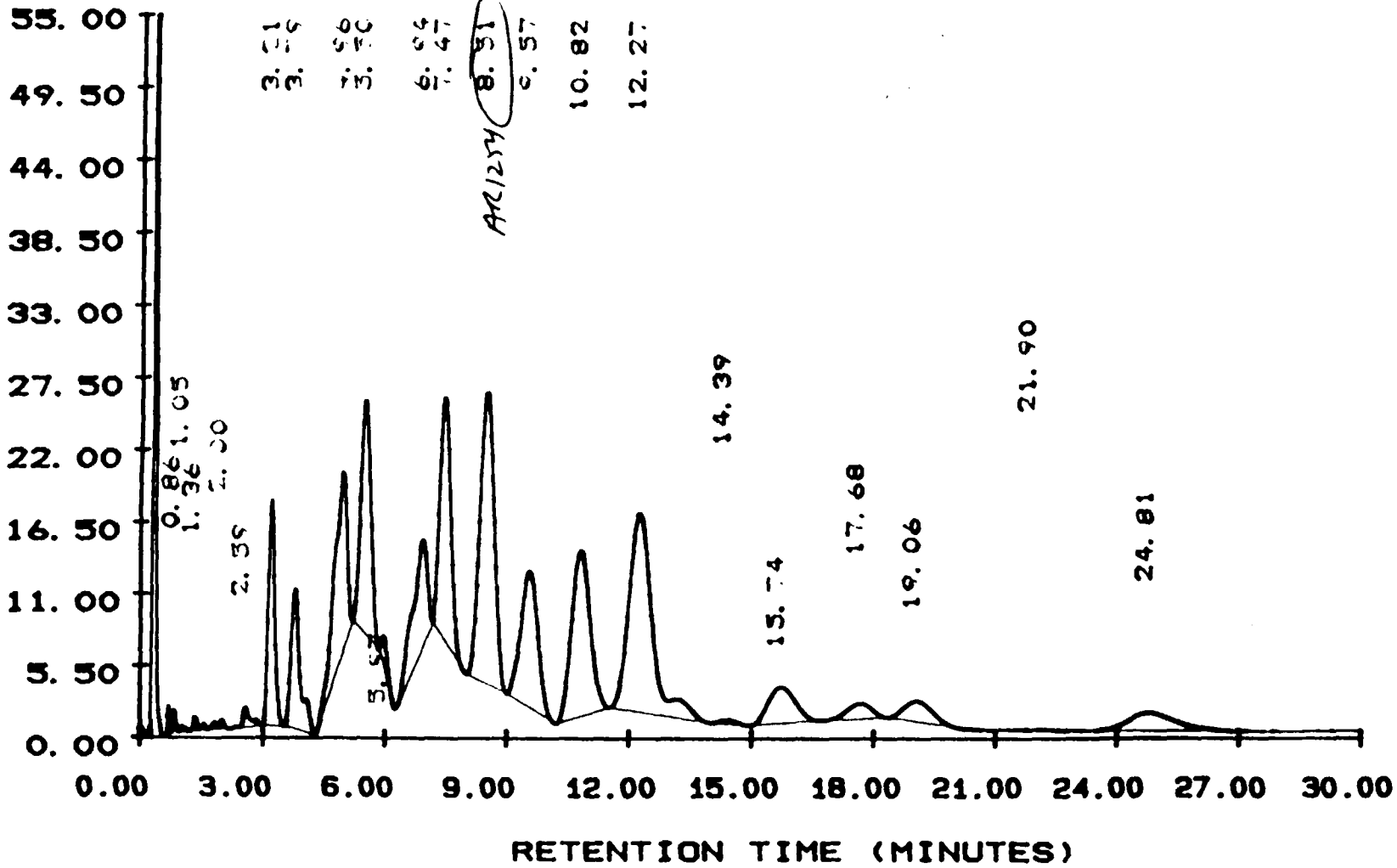
TEST NO. :

METHOD NO. : 13 / 13

INSTRUMENT: 13

DATE TIME: 08/16/89 11:35:08

PAGE NO. : 01



Y MAXIMUM: 23207.

Y MINIMUM: 6889.

START TIME: 0.00

END TIME: 30.00

EXTERNAL STANDARD

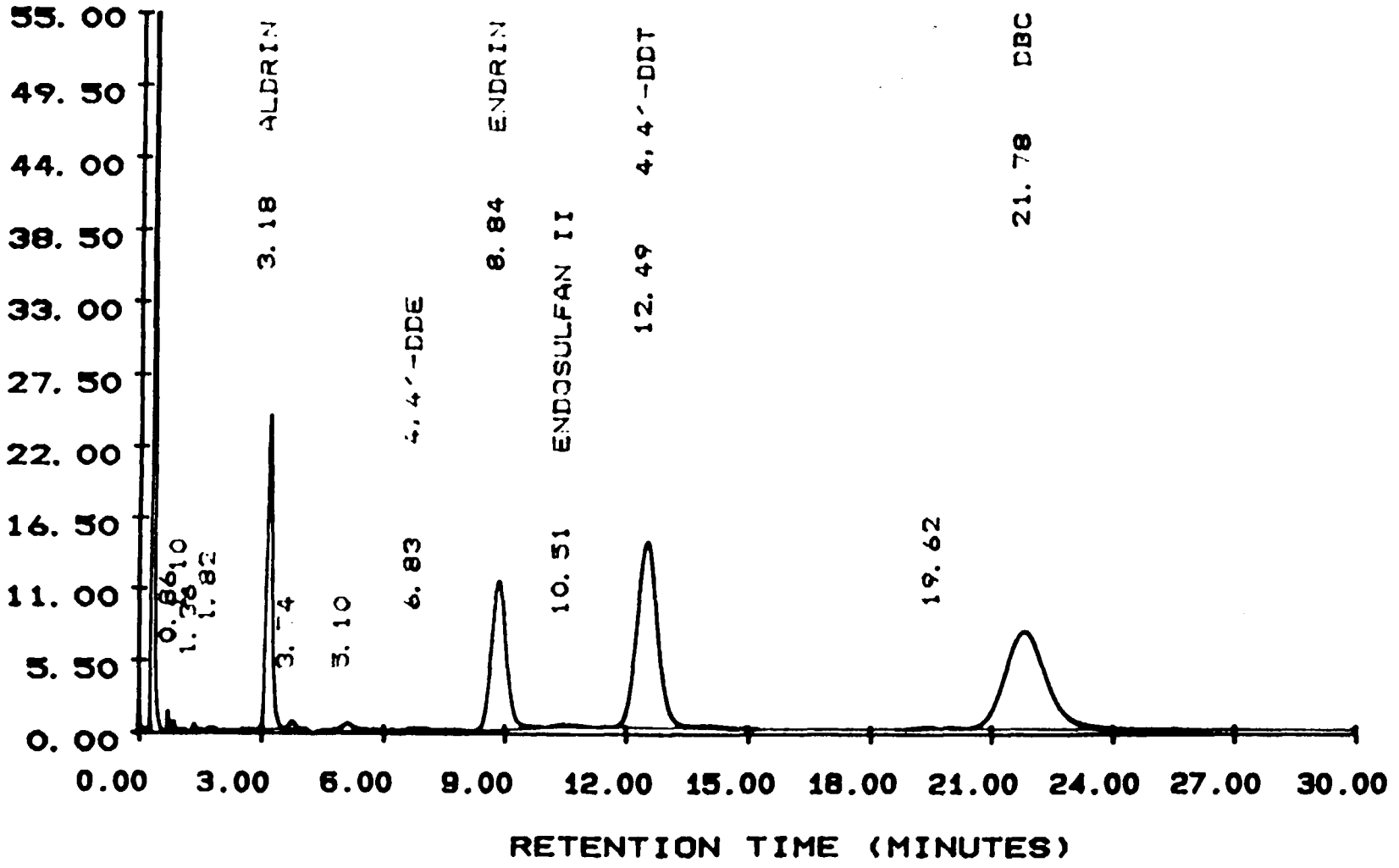
SAMPLE: 08158913 .31
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE :

INST:13 VIAL:F0 SEQ NUMBER:031
DATE-TIME INJECTED : 08/16/89 11:35:08
DATE-TIME PROCESSED : 08/16/89 12:05:52
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP210
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	10051	2866	V	0.856			
002	9523	1071	V	1.048			
003	28393	3017	V	1.358			
				1.701	ALPHA-BHC		
004	29906	2053	V	2.004			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
005	55967	4405	V	2.585			
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
006	550003	50908	V	3.207	ALDRIN	0.008	
007	497459	31692	V	3.790			
				4.733	HEPT. EPOXIDE		
008	869018	40216	V	4.962			
				5.235	G. CHLORDANE		
009	922622	52703	V	5.503			
				5.721	A. CHLORDANE		
010	71582	6866	V	5.968	ENDOSULFAN I	0.002	
				6.787	4,4'-DDE		
011	604759	23819	V	6.938			
				7.261	DIELDRIN		
012	1033268	55055	V	7.471			
013	1609287	65817	V	8.512			
				8.812	ENDRIN		
014	893794	30848	V	9.570			
				10.357	4,4'-DDD		
				10.636	ENDOSULFAN II		
015	1167041	37558	V	10.825			
016	1778695	44834	V	12.266			
				12.454	4,4'-DDT		
				13.864	ENDRIN ALDEHYDE		
017	27417	993	V	14.392			
018	373332	8205	V	15.737			
				16.847	ENDO. SULFATE		
019	146906	3476	V	17.679			
020	227214	4699	V	19.063			
021	12924	236	V	21.897	DBC	0.000	no DBC in std. sol'n
				23.701	METHOXYCHLOR		
022	335475	4067		24.814			
	516012			8.512	AROCHLOR-1254	0.276	*
	516012			8.512	AROCHLOR-1254	0.276	*

EVALB 19-43

SAMPLE NO. : 08158913 .39 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/17/89 11:38:57
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 51385. START TIME: 0.00
Y MINIMUM: 6795. END TIME: 30.00

EXTERNAL STANDARD

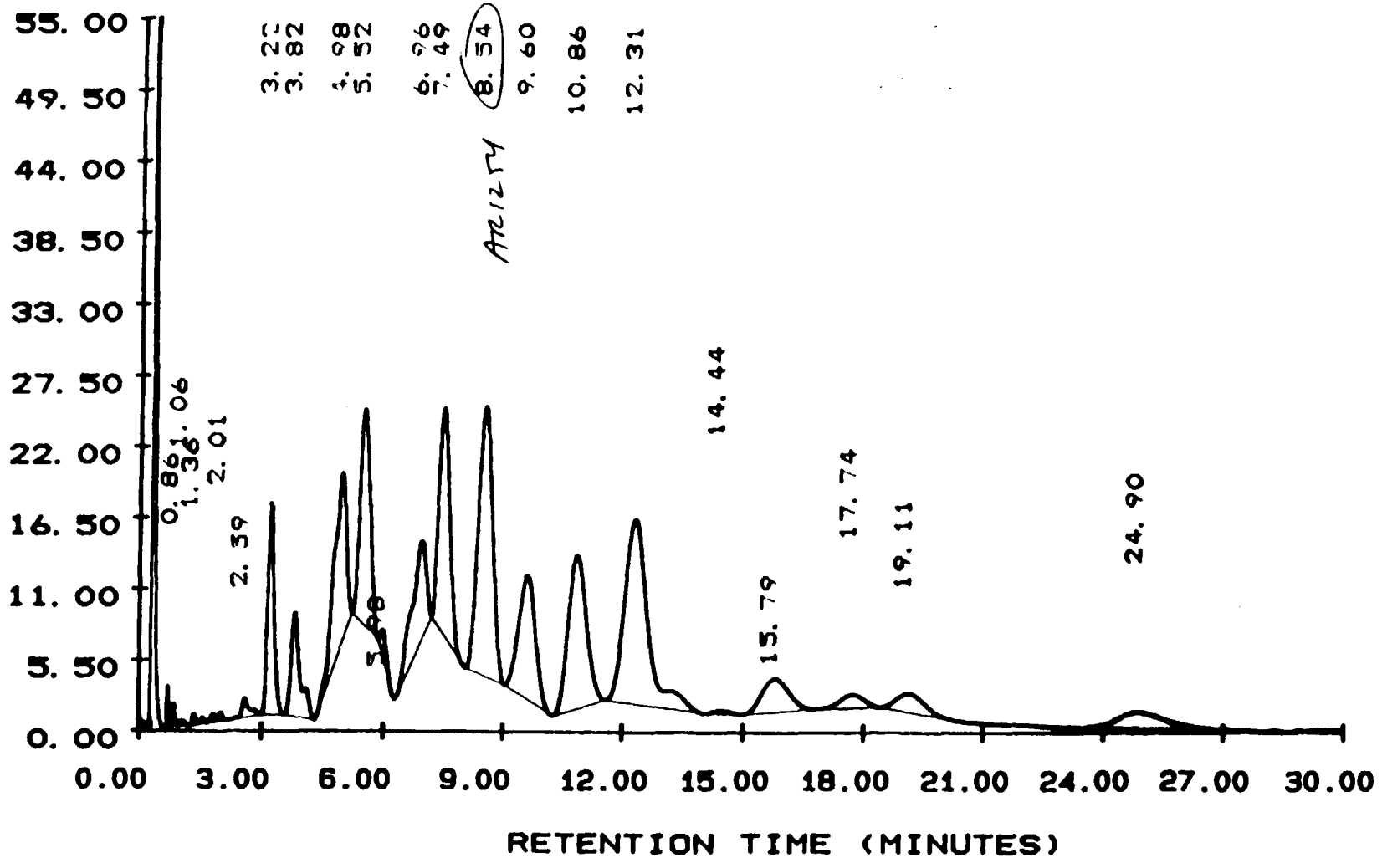
SAMPLE: 08158913 .39 INST:13 VIAL:FO SEQ NUMBER:039
TEST : DATE-TIME INJECTED : 08/17/89 11:38:57
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 12:09:21
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALB 19-43 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	10203	3237	V	0.856			
002	10829	1177	V	1.101			
003	29728	4068	V	1.362			
				1.701	ALPHA-BHC		
004	28606	1988	V	1.819			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
005	1831295	191811	V	3.179	ALDRIN	0.031	*
006	75732	4829	V	3.739			
				4.733	HEPT. EPOXIDE		
007	152567	4806	V	5.095			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	90678	1111	V	6.826	4,4'-DDE	0.000	
				7.261	DIELDRIN		
009	2312091	91640	V	8.838	ENDRIN	0.047	*
				10.357	4,4'-DDD		*
010	53670	1480	V	10.508	ENDOSULFAN II	0.001	
011	4070363	114541		12.495	4,4'-DDT	0.094	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
012	44309	902	V	19.620			
013	4165505	59502		21.781	DBC	0.065	*
				23.701	METHOXYCHLOR		

AR1254 01-130

SAMPLE NO. : 08158913 .47
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/17/89 16:05:52
PAGE NO. : 01



Y MAXIMUM: 23150.
Y MINIMUM: 6851.

START TIME: 0.00
END TIME: 30.00

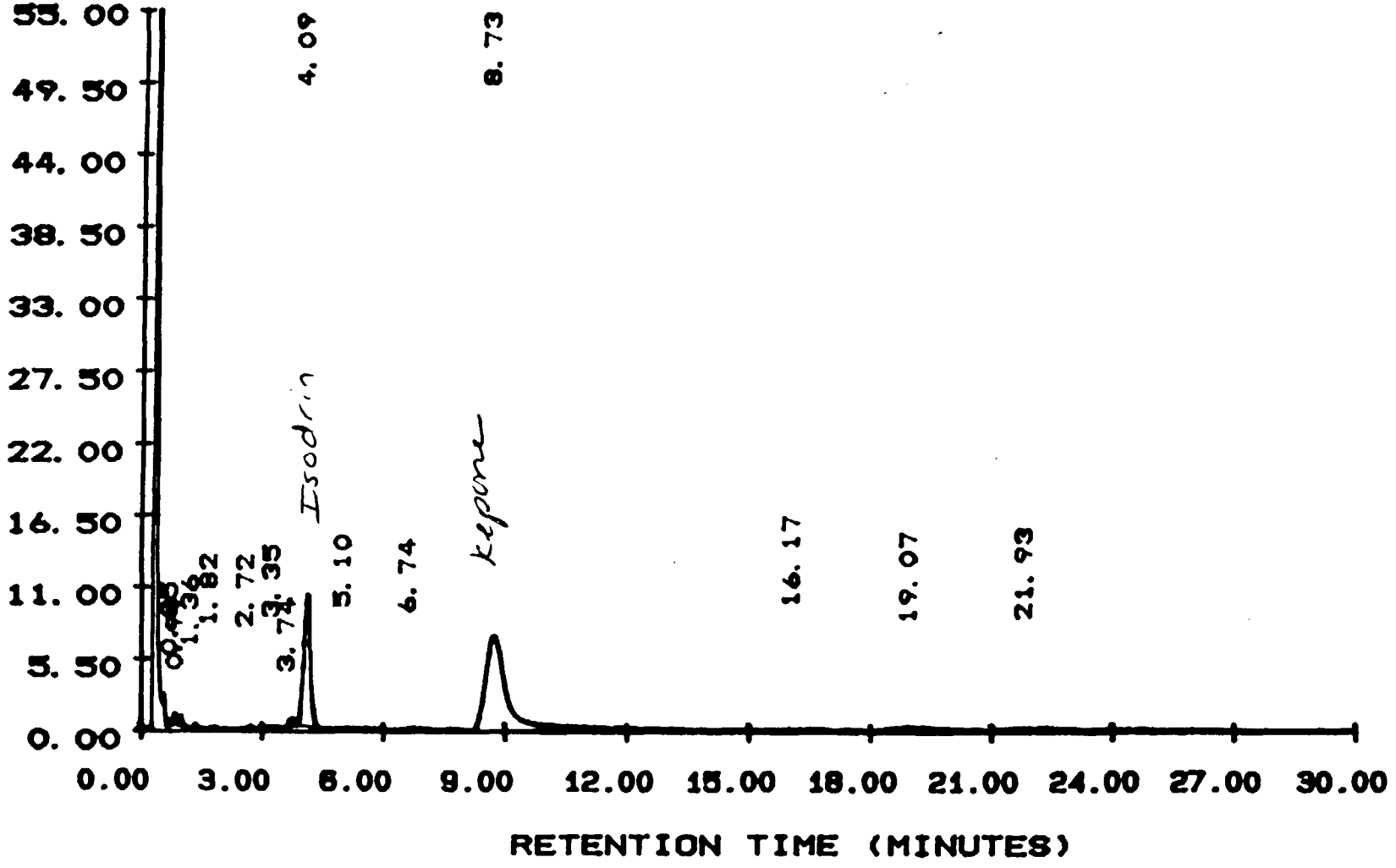
EXTERNAL STANDARD

SAMPLE: 08158913 .47 INST:13 VIAL:FO SEQ NUMBER:047
TEST : DATE-TIME INJECTED : 08/17/89 16:05:52
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 16:36:19
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1254 01-13 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	9306	2847	V	0.857		
002	10022	1106	V	1.055		
003	25607	2497	V	1.356		
				1.701	ALPHA-BHC	
004	29718	1918	V	2.010		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
005	55567	4278	V	2.592	HEPTACHLOR	0.000
				2.839	DELTA-BHC	
006	527142	48298	V	3.216	ALDRIN	0.008
007	370217	23670	V	3.818		
				4.733	HEPT. EPOXIDE	
008	825983	38368	V	4.977		
				5.235	G. CHLORDANE	
009	871486	49682	V	5.520		
				5.721	A. CHLORDANE	
010	60345	6106	V	5.981	ENDOSULFAN I	0.002
				6.787	4,4'-DDE	
011	563151	22320	V	6.959		
				7.261	DIELDRIN	
012	991322	51981	V	7.494		
013	1536243	61940	V	8.539		
				8.812	ENDRIN	
014	822236	28416	V	9.600		
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
015	1113191	35199	V	10.860		
016	1711437	42252	V	12.309	4,4'-DDT	0.035
				13.864	ENDRIN ALDEHYDE	
017	21962	795	V	14.442		
018	356466	7673	V	15.794		
				16.847	ENDO. SULFATE	
019	133254	3141	V	17.741		
020	212583	4278		19.109		
				21.712	DBC	no DBC in std
				23.701	METHOXYCHLOR	
021	306022	3692		24.902		
	478722			8.539	AROCHLOR-1254	0.256 *

KEPONE/ISODRIN

SAMPLE NO. : 08158913 . 53 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/17/89 19:24:33
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57271. START TIME: 0.00
Y MINIMUM: 6892. END TIME: 30.00

EXTERNAL STANDARD

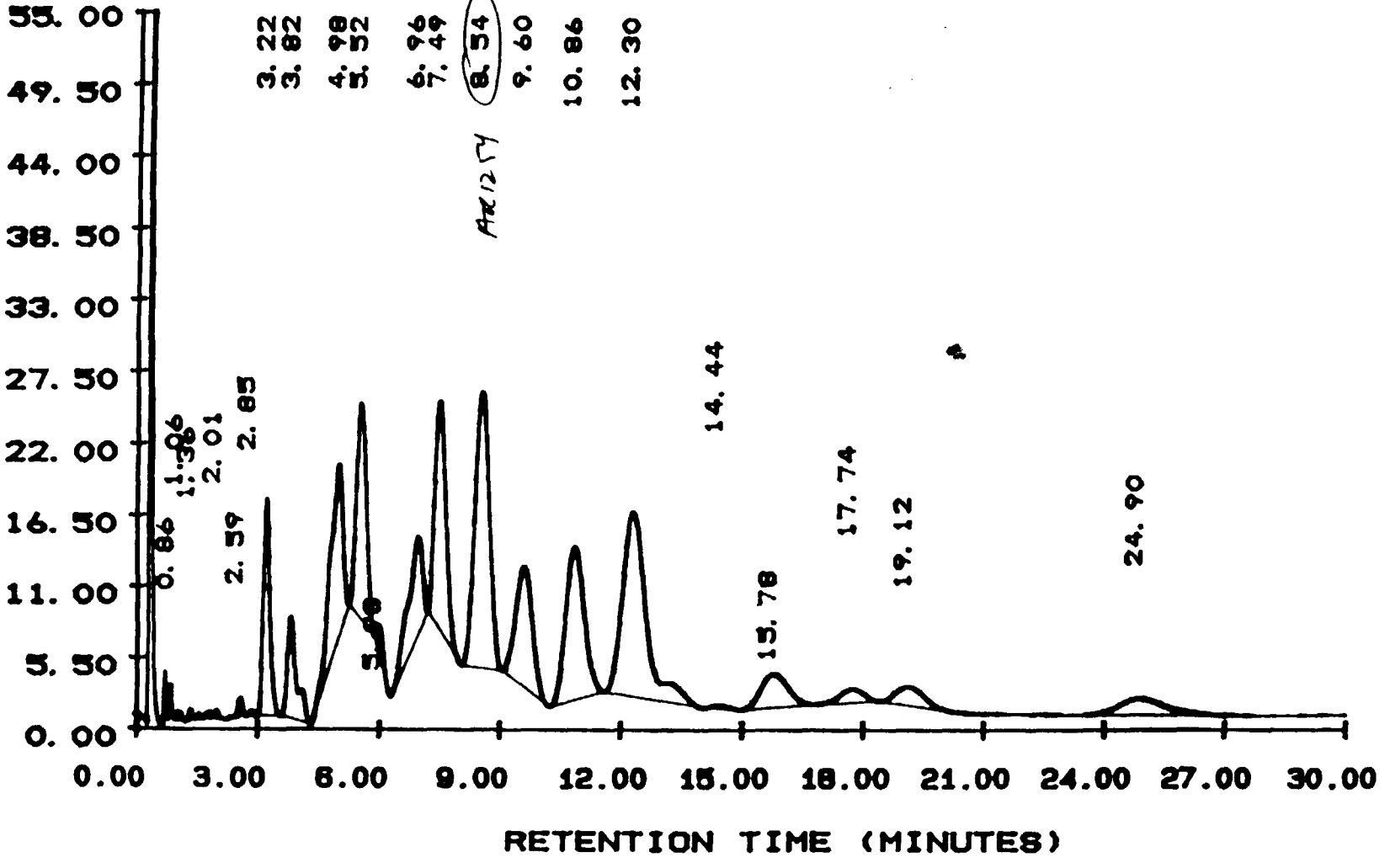
SAMPLE: 08158913 .53
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00114
CLIENT ID:
CLIENT:
LAB ID: KEPONE/ISODR 10-47
SAMPLE WT : % MOISTURE :

INST:13 VIAL:FO SEQ NUMBER:053
DATE-TIME INJECTED : 08/17/89 19:24:33
DATE-TIME PROCESSED : 08/17/89 19:55:00
ANALYST: YATES SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP2100
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	14221	3809	V	0.850		
002	21719	4826	V	0.988		
003	19727	3296	V	1.361		
				1.701	ALPHA-BHC	
004	26406	1802	V	1.819		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
				2.626	HEPTACHLOR	
005	24474	1837	V	2.715		
				2.839	DELTA-BHC	
				3.169	ALDRIN	
006	19602	1183	V	3.347		
007	45978	4950	V	3.737		
008	1038226	90984	V	4.093	Isodrin	0.0198 ng/ul inj.
				4.733	HEPT. EPOXIDE	
009	14868	436	V	5.104		
				5.235	G. CHLORDANE	
				5.721	A. CHLORDANE	
				5.945	ENDOSULFAN I	
010	72174	775	V	6.740	4,4'-DDE	0.000
				7.261	DIELDRIN	
011	2414913	66155		8.725	~~ENDRIN~~ BN kepone	~~0.034~~ BN 0.1016 ng/ul
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
				12.454	4,4'-DDT	
				13.864	ENDRIN ALDEHYDE	
012	16337	332	V	16.172		
				16.847	ENDO. SULFATE	
013	86974	1505	V	19.074		
014	90470	1216		21.934	DBC	0.001 *
				23.701	METHOXYCHLOR	

AR1254 01-130

SAMPLE NO. : 08158913 .54 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/17/89 19:57:07
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 23077. START TIME: 0.00
Y MINIMUM: 6764. END TIME: 30.00

EXTERNAL STANDARD

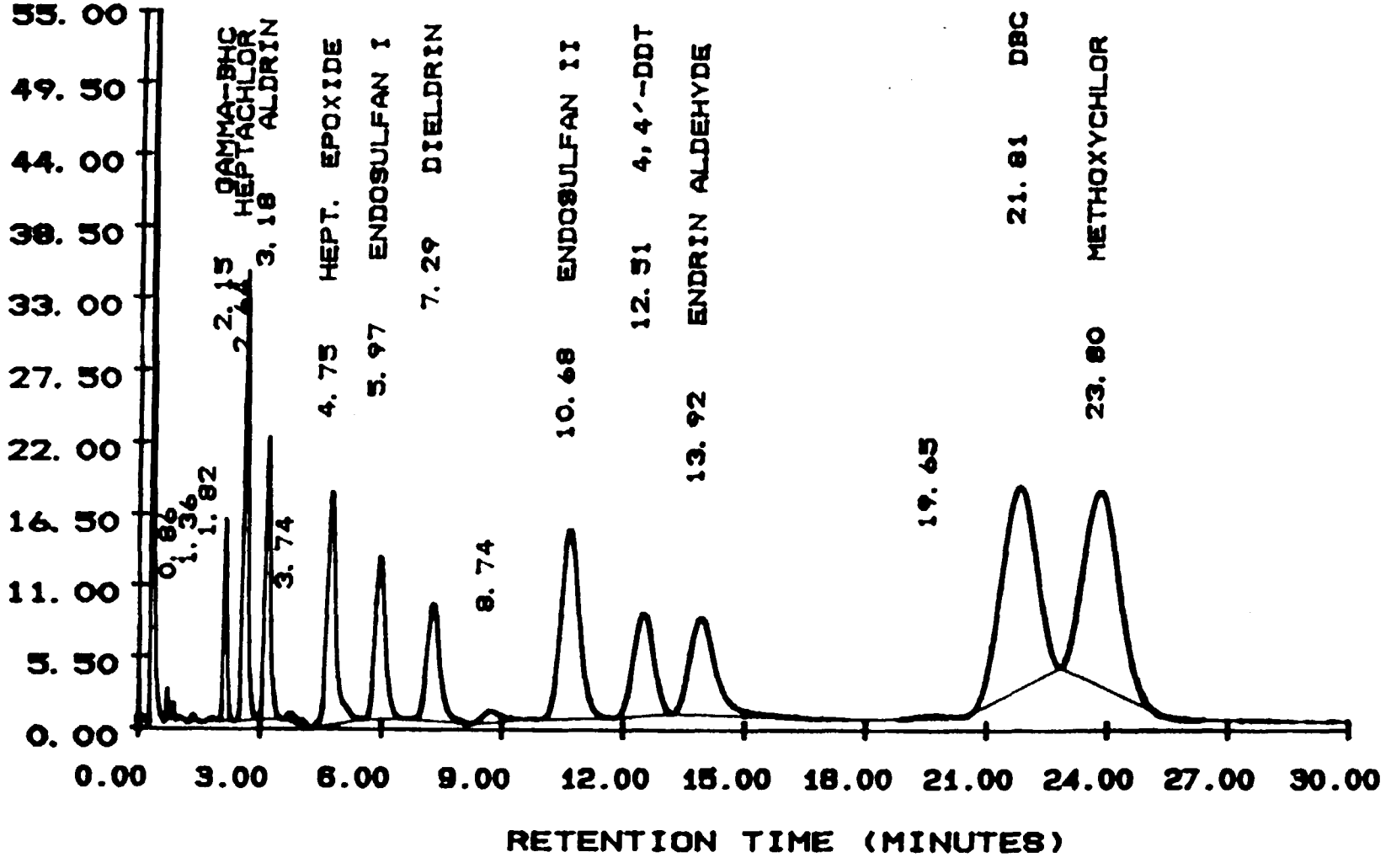
SAMPLE: 08158913 .54
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE :

INST:13 VIAL:FO SEQ NUMBER:054
DATE-TIME INJECTED : 08/17/89 19:57:07
DATE-TIME PROCESSED : 08/17/89 20:27:32
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP21
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	13453	4309	V	0.856		
002	16440	1961	V	1.060		
003	14086	2257	V	1.358		
				1.701	ALPHA-BHC	
004	35473	1872	V	2.006		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
005	34617	4178	V	2.588	HEPTACHLOR	0.000
006	7826	1113	V	2.849	DELTA-BHC	0.000
007	553626	49143	V	3.216	ALDRIN	0.008
008	354586	23034	V	3.822		
				4.733	HEPT. EPOXIDE	
009	860497	39566	V	4.979		
				5.235	G. CHLORDANE	
010	850410	49086	V	5.518		
				5.721	A. CHLORDANE	
011	59260	6132	V	5.978	ENDOSULFAN I	0.002
				6.787	4,4'-DDE	
012	562372	22137	V	6.957		
				7.261	DIELDRIN	
013	1000796	52068	V	7.491		
014	1589151	63030	V	8.544		
				8.812	ENDRIN	
015	783999	27539	V	9.596		
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
016	1105595	34941	V	10.856		
017	1714007	42195	V	12.303	4,4'-DDT	0.034
				13.864	ENDRIN ALDEHYDE	
018	19418	738	V	14.445		
019	349478	7600	V	15.782		
				16.847	ENDO. SULFATE	
020	130019	3086	V	17.740		
021	209758	4253	V	19.124		
				21.712	DBC	no DBC in std
				23.701	METHOXYCHLOR	
022	317184	3741		24.897		
	479451			8.544	AROCHLOR-1254	0.257 *

INDA 13-45

SAMPLE NO. : 08158913 .55 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/17/89 20:30:34
METHOD NO. : 13A / 13A PAGE NO. : 01



Y MAXIMUM: 31059. START TIME: 0.00
Y MINIMUM: 6730. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .55 INST:13 VIAL:FO SEQ NUMBER:055
TEST : DATE-TIME INJECTED : 08/17/89 20:30:34
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 21:01:01
METHOD: 13A / 13A REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: INDA 13-45
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

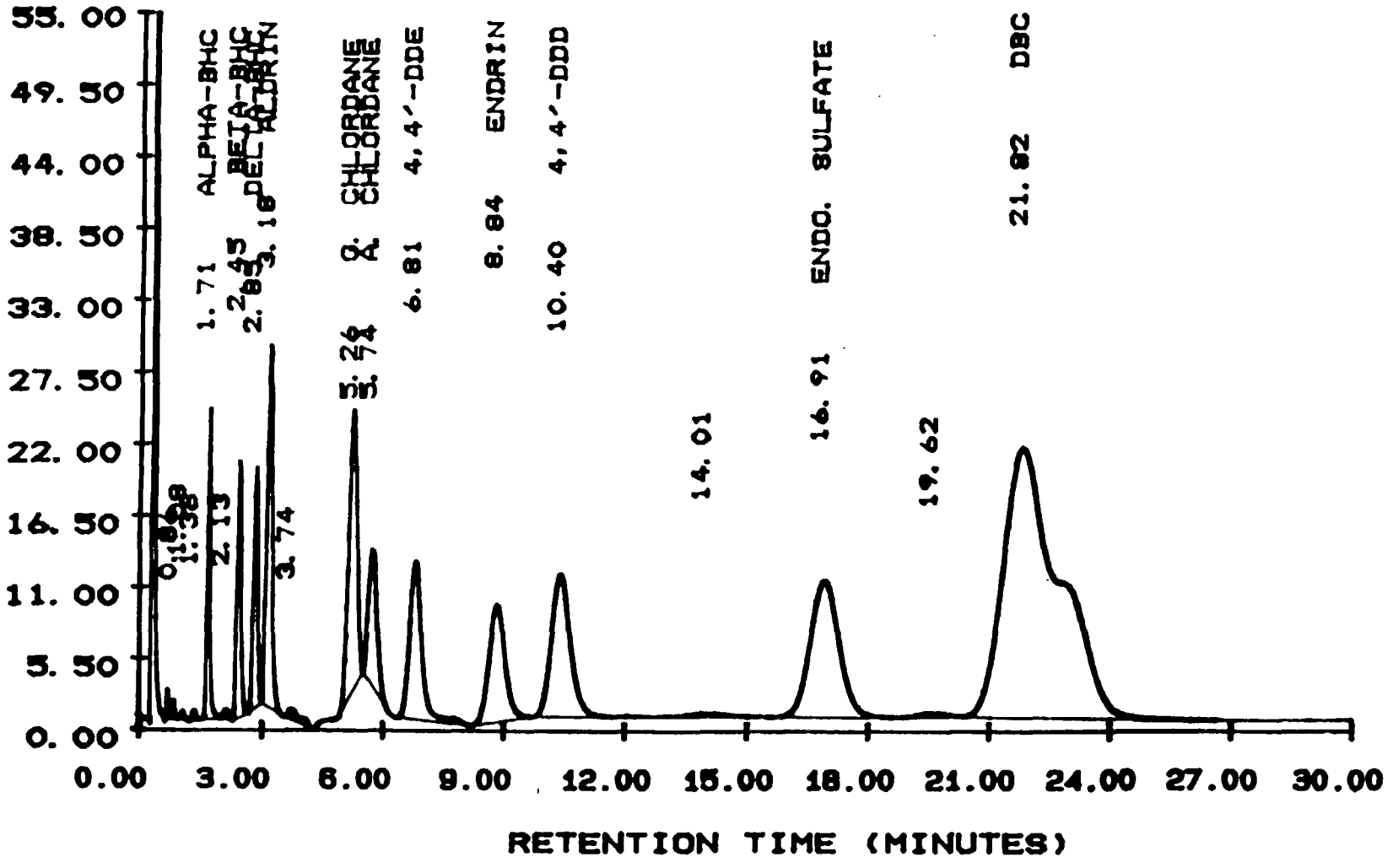
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	6494	2744	V	0.856		
002	15798	2303	V	1.357		
003	13971	1327	V	1.825		
004	418995	64227	V	2.154	GAMMA-BHC	0.008
005	1211507	147510	V	2.636	HEPTACHLOR	0.016
006	910161	94408	V	3.182	ALDRIN	0.015
007	61585	3044	V	3.743		
008	1233703	79008	V	4.752	HEPT. EPOXIDE	0.016
009	969574	55088	V	5.970	ENDOSULFAN I	0.015
010	886926	39622	V	7.290	DIELDRIN	0.016
011	134801	3801	V	8.739		
012	1998359	64208	V	10.681	ENDOSULFAN II	0.031
013	1186779	34566	V	12.506	4,4'-DDT	0.028
014	1458599	32615	V	13.919	ENDRIN ALDEHYDE	0.031
015	44265	955	V	19.649		
016	4106671	68658	V	21.808	DBC	0.075
017	4054719	66215		23.802	METHOXYCHLOR	0.145

INDB 13-56

SAMPLE NO. : 08158913 .56 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/17/89 21:03:38

METHOD NO. : 13B / 13B PAGE NO. : 01



Y MAXIMUM: 27495. START TIME: 0.00

Y MINIMUM: 6701. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .56 INST:13 VIAL:F0 SEQ NUMBER:056
TEST : DATE-TIME INJECTED : 08/17/89 21:03:38
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 21:34:02
METHOD: 13B / 13B REV #: 00119 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: INDB 13-56
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

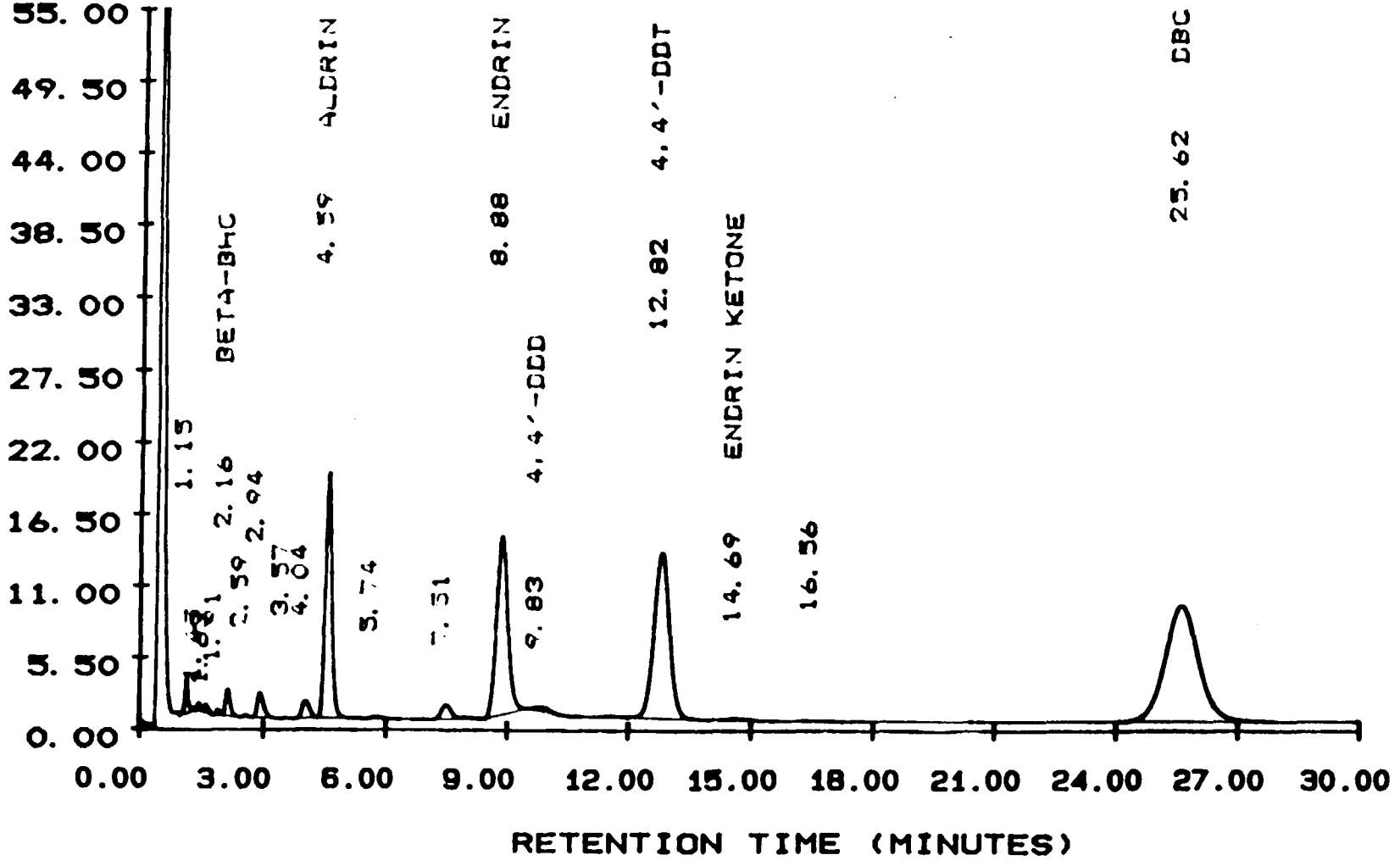
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	10747	3248	V	0.856		
002	18253	2566	V	1.076		
003	19123	2847	V	1.360		
004	467579	80294	V	1.707	ALPHA-BHC	0.008
005	25886	2849	V	2.133		
006	518246	71368	V	2.447	BETA-BHC	0.015
007	503418	67467	V	2.851	DELTA-BHC	0.015
008	974018	103222	V	3.176	ALDRIN	0.015
009	61932	3227	V	3.740		
010	1182209	81678	V	5.256	G. CHLORDANE	0.015
011	596973	39654	V	5.743	A. CHLORDANE	0.015
012	997763	45958	V	6.815	4,4'-DDE	0.015
013	931866	34258	V	8.841	ENDRIN	0.017
014	1321687	41394	V	10.404	4,4'-DDD	0.030
015	63770	924	V	14.010		
016	1955763	39645	V	16.911	ENDO. SULFATE	0.032
017	54018	1122	V	19.623		
018	7464295	78326		21.817	DBC	0.076

EVALA 17-43

SAMPLE NO. : 08158914 .01 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 16:27:34

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58044.

Y MINIMUM: 6612.

START TIME: 0.00

END TIME: 30.00

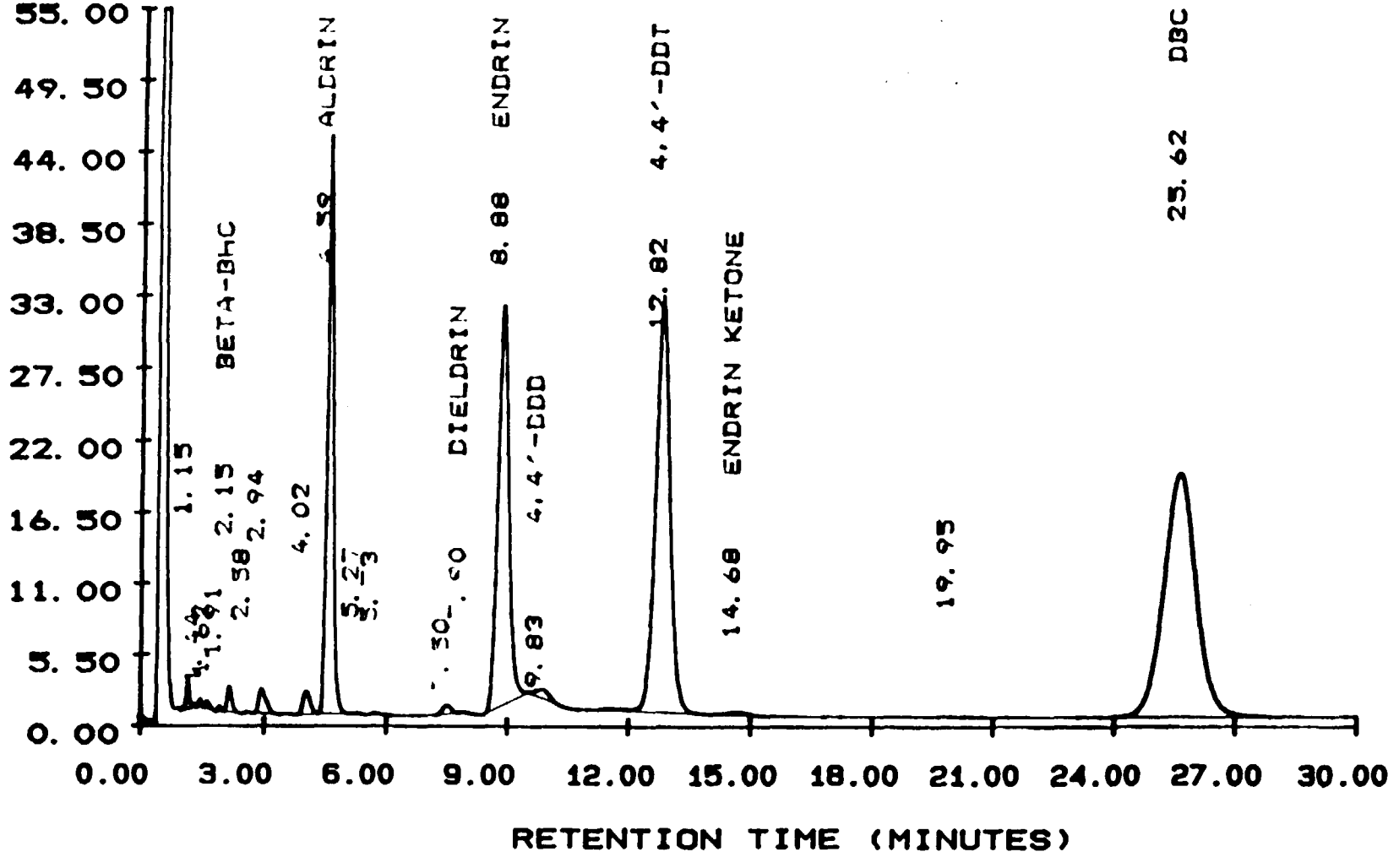
EXTERNAL STANDARD

SAMPLE: 08158914 .01 INST:14 VIAL:F0 SEQ NUMBER:001
TEST : DATE-TIME INJECTED : 08/15/89 16:27:34
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:53:38
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALA 17-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	138922	21402	V	1.154		
002	27670	5416	V	1.452		
003	41064	5708	V	1.625		
004	25408	4120	V	1.914		
				2.031	ALPHA-BHC	
005	150464	18751	V	2.158	BETA-BHC	0.005
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	12109	1604	V	2.586		
007	192075	17751	V	2.940		
008	7654	712	V	3.571		
				3.739	HEPTACHLOR	
009	155008	12403	V	4.044		
010	1916607	174006	V	4.590	ALDRIN	0.799
				5.553	HEPT. EPOXIDE	
011	30628	1867	V	5.744		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
012	206870	10416	V	7.507		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
013	2468241	127482	V	8.881	ENDRIN	0.014
				9.055	ENDOSULFAN II	
014	75384	3008	V	9.833	4,4'-DDD	0.011
				10.000	ENDRIN ALDEHYDE	
				11.539	ENDO. SULFATE	
015	3139115	118384	V	12.823	4,4'-DDT	0.042
016	36307	1198	V	14.688	ENDRIN KETONE	0.002
017	19225	378		16.559		
				18.766	METHOXYCHLOR	
018	4794843	82870		25.619	DBC	1.022

EVALB 19-43

SAMPLE NO. : 08158914 .02 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/15/89 17:00:21
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58132.
Y MINIMUM: 6611.

START TIME: 0.00
END TIME: 30.00

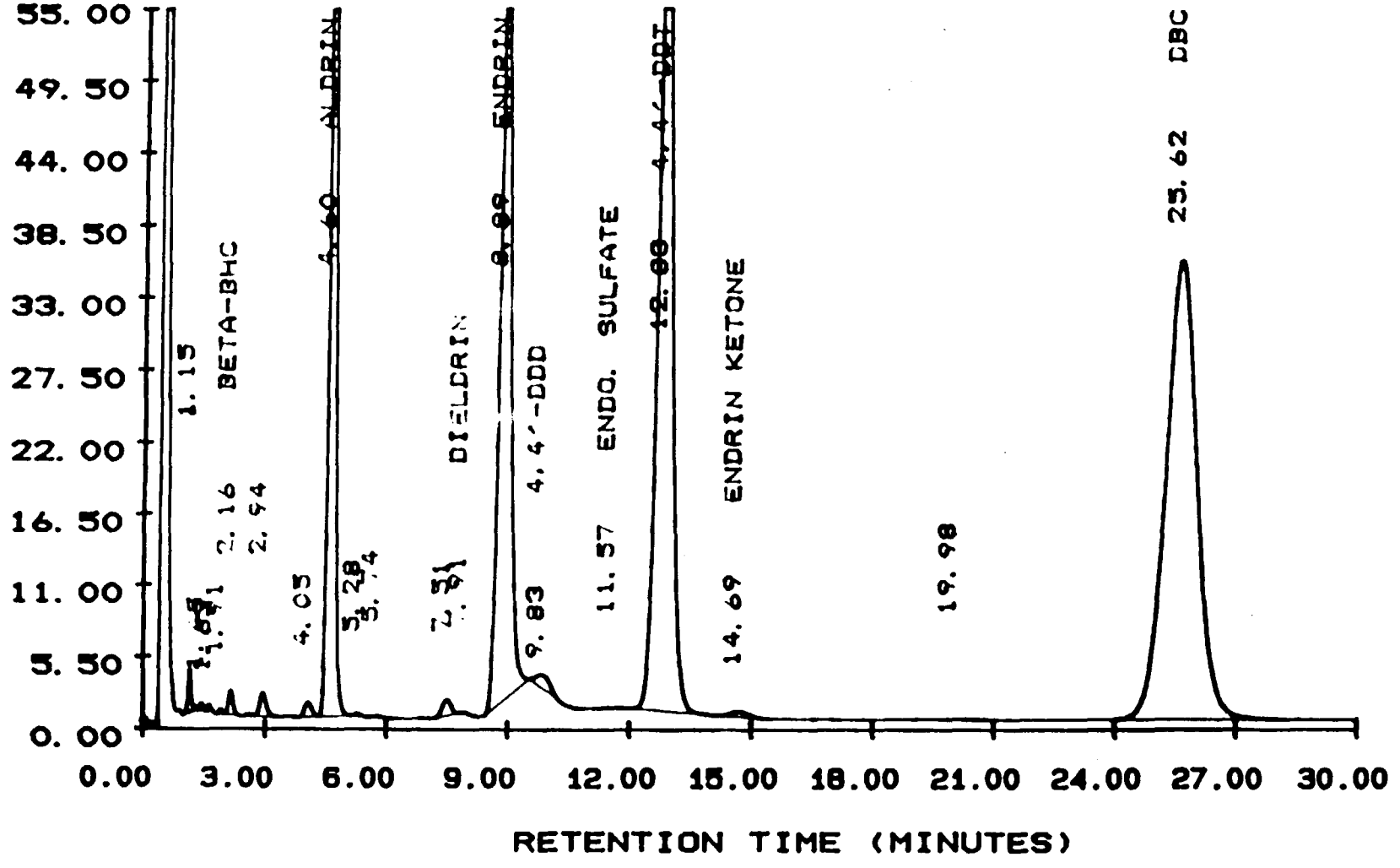
EXTERNAL STANDARD

SAMPLE: 08158914 .02 INST:14 VIAL:FO SEQ NUMBER:002
TEST : DATE-TIME INJECTED : 08/15/89 17:00:21
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:54:14
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	124461	19589	V	1.150		
002	29412	5785	V	1.442		
003	39754	5270	V	1.619		
004	24282	3903	V	1.908		
				2.031	ALPHA-BHC	
005	143693	18147	V	2.151	BETA-BHC	0.005
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	9414	1226	V	2.583		
007	216323	17694	V	2.937		
				3.739	HEPTACHLOR	
008	202782	16743	V	4.025		
009	4304235	409992	V	4.587	ALDRIN	1.883
010	11018	1080	V	5.265		
				5.553	HEPT. EPOXIDE	
011	20958	1379	V	5.729		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
012	93193	6255	V	7.500		
				7.876	4,4'-DDE	
013	14482	1088	V	7.902	DIELDRIN	0.001
014	5390203	286429	V	8.876	ENDRIN	0.032
				9.055	ENDOSULFAN II	
015	150442	6022	V	9.829	4,4'-DDD	0.023
				10.000	ENDRIN ALDEHYDE	
				11.539	ENDO. SULFATE	
016	7342759	290990	V	12.820	4,4'-DDT	0.104
017	75971	2465	V	14.677	ENDRIN KETONE	0.003
				18.766	METHOXYCHLOR	
018	32410	414		19.954		
019	9822555	176292		25.616	DBC	2.174

EVALC 18-43

SAMPLE NO. : 08158914 .03 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/15/89 17:33:06
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58128. START TIME: 0.00
Y MINIMUM: 6592. END TIME: 30.00

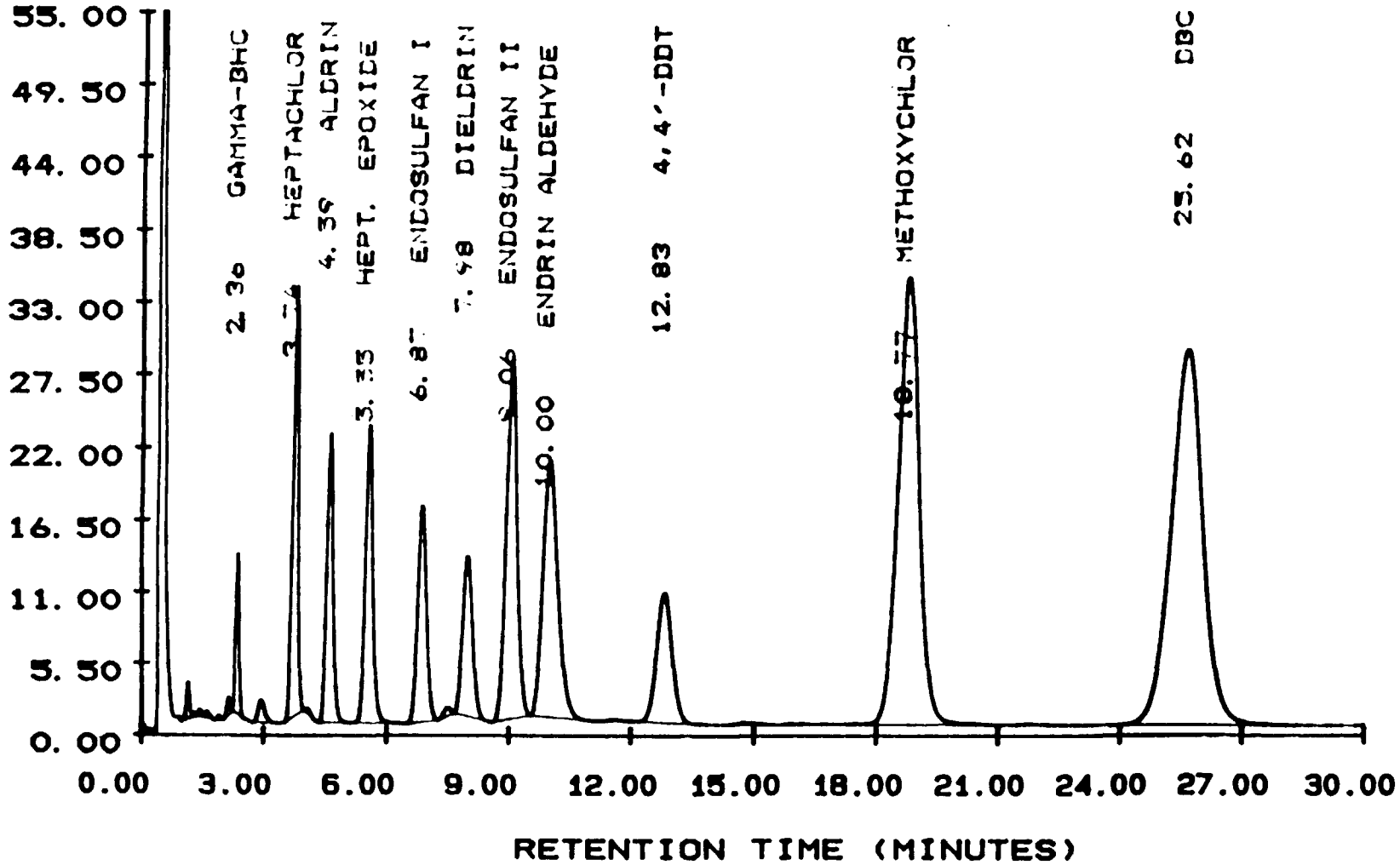
EXTERNAL STANDARD

SAMPLE: 08158914 .03 INST:14 VIAL:FO SEQ NUMBER:003
TEST : DATE-TIME INJECTED : 08/15/89 17:33:06
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:54:50
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALC 18-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	168274	26682	V	1.155		
002	23907	4636	V	1.450		
003	35240	4881	V	1.626		
004	21926	3554	V	1.914		
				2.031	ALPHA-BHC	
005	133184	16812	V	2.158	BETA-BHC	0.005
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	205478	16861	V	2.941		
				3.739	HEPTACHLOR	
007	126810	10211	V	4.049		
008	8362011	822284	V	4.597	ALDRIN	3.777
009	19993	1952	V	5.277		
				5.553	HEPT. EPOXIDE	
010	17542	1225	V	5.738		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
011	169278	11248	V	7.509		
				7.876	4,4'-DDE	
012	19633	1555	V	7.911	DIELDRIN	0.002
013	10133579	553820	V	8.887	ENDRIN	0.061
				9.055	ENDOSULFAN II	
014	238888	9429	V	9.834	4,4'-DDD	0.036
				10.000	ENDRIN ALDEHYDE	
015	13684	602	V	11.571	ENDO. SULFATE	0.001
016	14676839	608270	V	12.831	4,4'-DDT	0.218
017	130555	4303		14.694	ENDRIN KETONE	0.006
				18.766	METHOXYCHLOR	
018	40122	577		19.984		
019	17711664	328758		25.622	DBC	4.054

INDA 13-45

SAMPLE NO. : 08158914 .04 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/15/89 18:05:51
METHOD NO. : 14A / 14A PAGE NO. : 01



Y MAXIMUM: 58023. START TIME: 0.00
Y MINIMUM: 6597. END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

SAMPLE: 08158914 .04 INST:14 VIAL:F0 SEQ NUMBER:004
TEST : DATE-TIME INJECTED : 08/15/89 18:05:51
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:41:16
METHOD: 14A / 14A REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDA 13-45
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

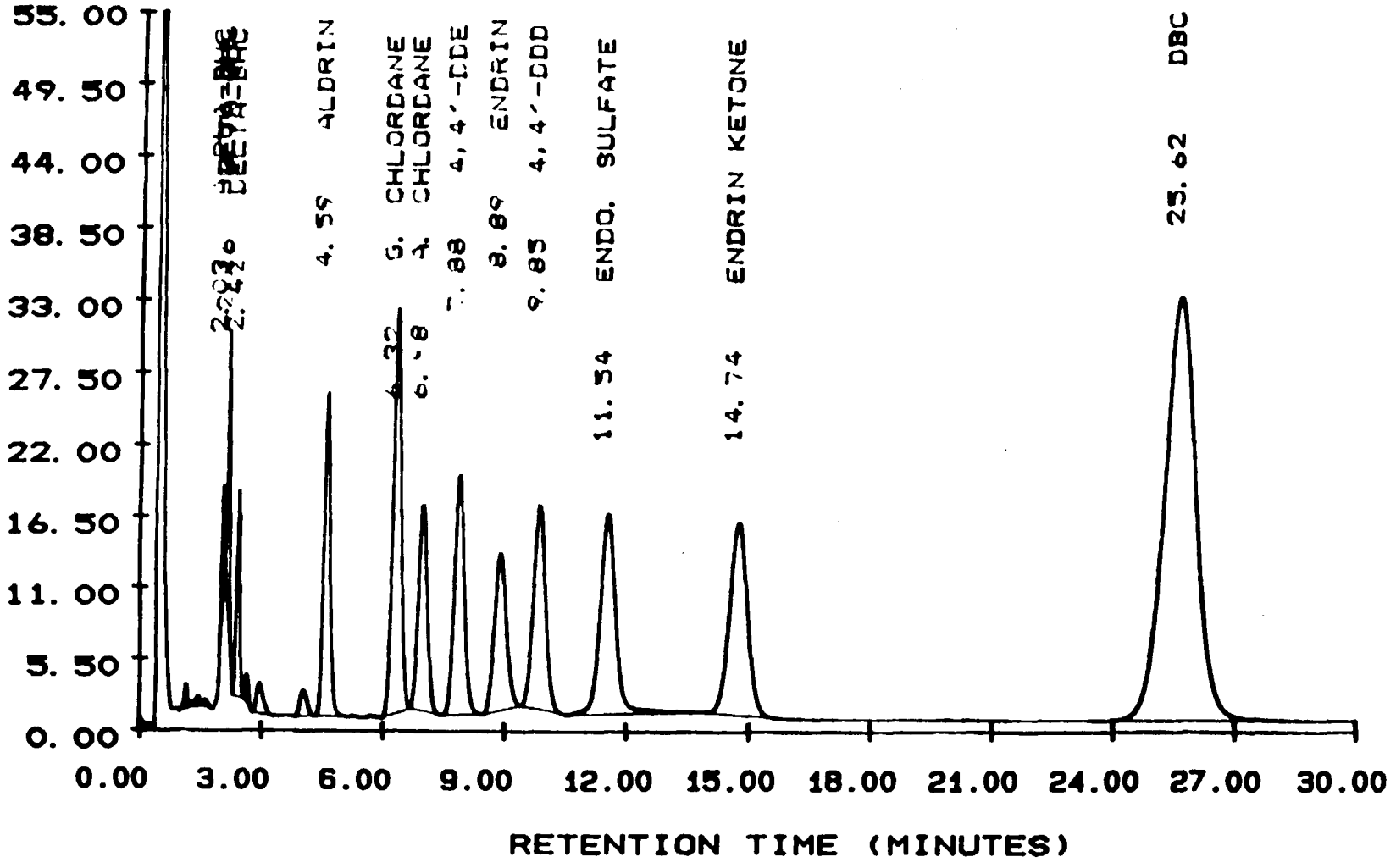
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
006	657170	106951	V	2.363	GAMMA-BHC	0.008
008	2689407	299709	V	3.739	HEPTACHLOR	0.017
010	2209313	204149	V	4.592	ALDRIN	0.017
011	2719821	211448	V	5.553	HEPT. EPOXIDE	0.017
012	2296045	154135	V	6.866	ENDOSULFAN I	0.017
014	1928803	114479	V	7.979	DIELDRIN	0.017
015	4711675	252885	V	9.055	ENDOSULFAN II	0.033
016	4666157	181081	V	10.000	ENDRIN ALDEHYDE	0.033
018	2411149	92835	V	12.826	4,4'-DDT	0.033
020	11564753	318302	V	18.766	METHOXYCHLOR	0.167
022	14470093	267117		25.624	DBC	0.083

INDB 13-46

SAMPLE NO. : 08158914 .05 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 18:38:55

METHOD NO. : 14B / 14B PAGE NO. : 01



Y MAXIMUM: 51849. START TIME: 0.00

Y MINIMUM: 6595. END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

SAMPLE: 08158914 .05 INST:14 VIAL:FO SEQ NUMBER:005
TEST : DATE-TIME INJECTED : 08/15/89 18:38:55
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:47:58
METHOD: 14B / 14B REV #: 00115 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDB 13-46
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

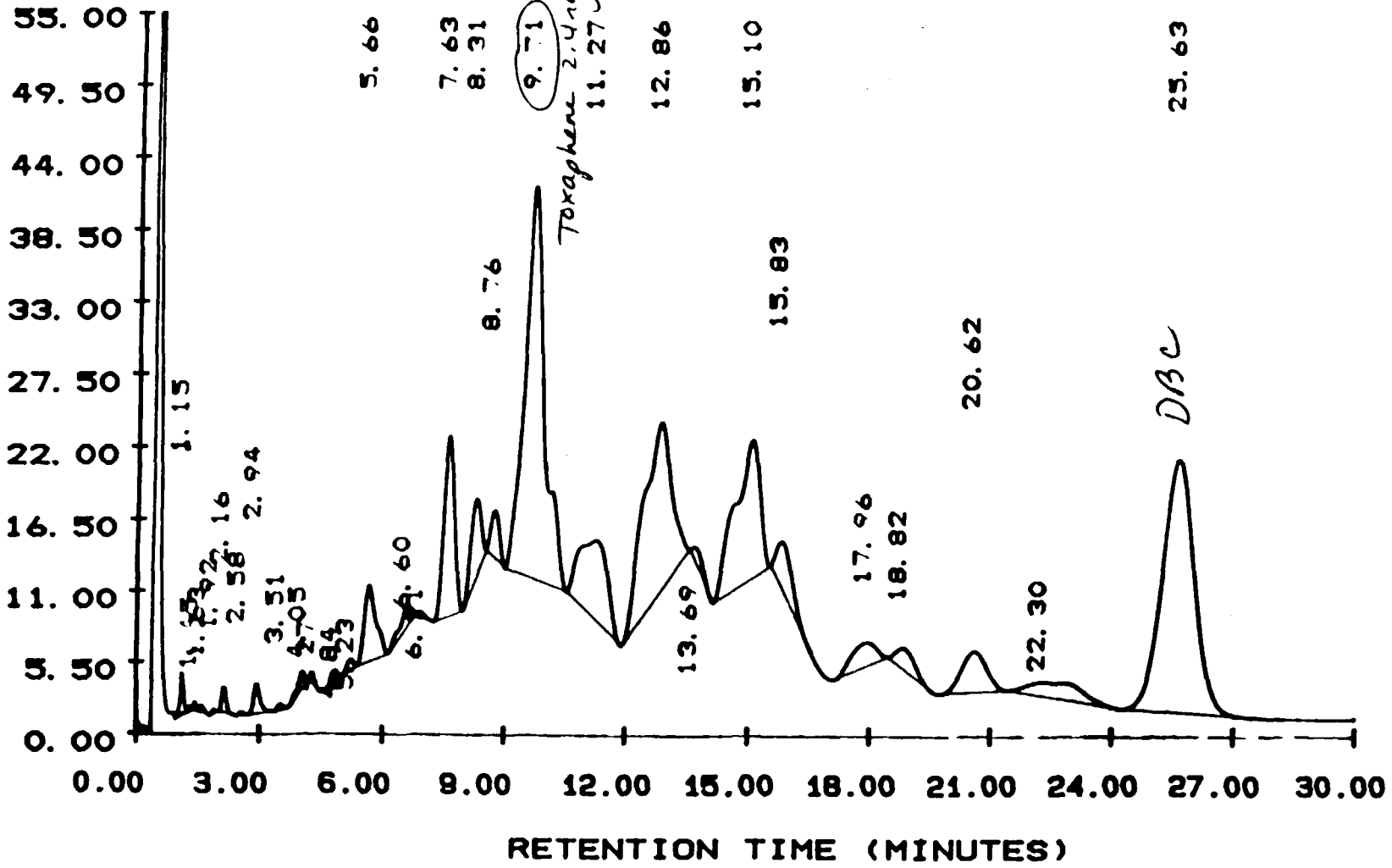
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
004	298449	58766	V	2.031	ALPHA-BHC	0.008
005	797885	164432	V	2.162	BETA-BHC	0.017
006	728947	120522	V	2.422	DELTA-BHC	0.017
010	2207351	202236	V	4.592	ALDRIN	0.017
012	3482331	253914	V	6.325	G. CHLORDANE	0.017
013	1991015	130137	V	6.978	A. CHLORDANE	0.017
014	2541499	151000	V	7.876	4,4'-DDE	0.017
015	2001307	99262	V	8.888	ENDRIN	0.017
016	2656499	129219	V	9.852	4,4'-DDD	0.033
017	3337549	126216	V	11.539	ENDO. SULFATE	0.033
018	3685215	121652	V	14.742	ENDRIN KETONE	0.033
020	14419827	265796		25.620	DBC	0.083

102

TOXAPH 19-36

SAMPLE NO. : 08158914 . 06
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/15/89 19:12:02
PAGE NO. : 01



Y MAXIMUM: 49134.
Y MINIMUM: 6596.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:06:43

EXTERNAL STANDARD

SAMPLE: 08158914 .06
TEST :
COLLECTION TIME : 29.98
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: TOXAPH 19-36
SAMPLE WT : % MOISTURE :

INST:14 VIAL:FO SEQ NUMBER:006
DATE-TIME INJECTED : 08/15/89 19:12:02
DATE-TIME PROCESSED : 08/18/89 17:06:43
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: SP2100
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	148506	21356	V	1.151		
002	23821	4660	V	1.452		
003	29387	4047	V	1.626		
004	16735	2364	V	1.918		
				2.031	ALPHA-BHC	
005	108162	14816	V	2.158	BETA-BHC	0.001
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	15106	1938	V	2.579		
007	187072	17458	V	2.939		
008	28047	3101	V	3.511		
				3.739	HEPTACHLOR	
009	116787	9183	V	4.050		
010	40586	6063	V	4.269		
				4.592	ALDRIN	
011	82596	6782	V	4.836		
012	70074	5889	V	5.228		
				5.553	HEPT. EPOXIDE	
013	880916	45319	V	5.657		
				6.325	G. CHLORDANE	
014	218688	12261	V	6.601		
				6.866	ENDOSULFAN I	
015	54922	3976	V	6.908	A. CHLORDANE	0.001
016	1887539	106177	V	7.629		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	789229	45212	V	8.312		
018	405180	28644	V	8.755		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
019	7729805	230825	V	9.713	4,4'-DDD	0.060
				10.000	ENDRIN ALDEHYDE	
020	2299841	48475	V	11.267		
				11.539	ENDO. SULFATE	
021	4766541	98920	V	12.858	4,4'-DDT	0.035
022	172141	8299	V	13.689		
				14.742	ENDRIN KETONE	
023	3446915	81093	V	15.097		
024	791934	28799	V	15.826		
025	606513	13753	V	17.956		
026	420507	12742	V	18.819	METHOXYCHLOR	0.007
027	1037824	24085	V	20.615		
028	887014	8602	V	22.297		

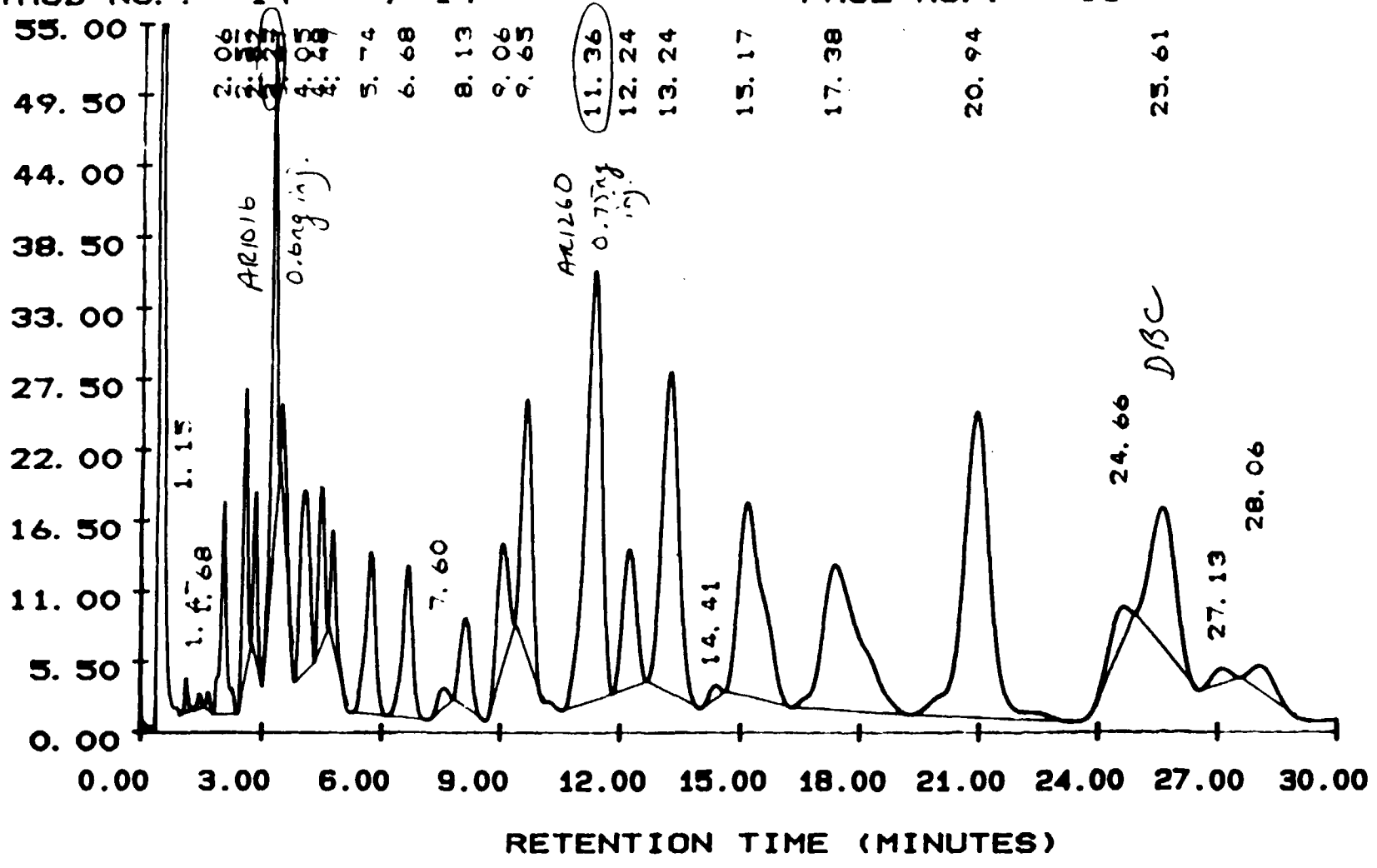
029	8248065	150277	25.631	DBC	0.047	
	307312		9 :3	~~AROCHLOR 1242~~ TOXAPHENE (WS 8/28/89	0.800	*

AR1660 12-117

SAMPLE NO. : 08158914 .07 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 19:45:36

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58123. START TIME: 0.00

Y MINIMUM: 6584. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:06:59

EXTERNAL STANDARD

SAMPLE: 08158914 .07 INST:14 VIAL:FO SEQ NUMBER:007
TEST : DATE-TIME INJECTED : 08/15/89 19:45:36
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/18/89 17:06:59
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1660 12-11
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	134558	21923	V	1.154		
002	66455	10325	V	1.470		
003	81653	12735	V	1.683		
004	1492443	147212	V	2.059	ALPHA-BHC	0.021
				2.162	BETA-BHC	
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
005	1552115	204141	V	2.573		
006	810430	118244	V	2.824		
007	2858791	351592	V	3.269		
008	701573	65871	V	3.471		
				3.739	HEPTACHLOR	
009	2181531	133115	V	4.054		
010	1178225	114893	V	4.479		
				4.592	ALDRIN	
011	792334	85271	V	4.768		
				5.553	HEPT. EPOXIDE	
012	2053595	118804	V	5.744		
				6.325	G. CHLORDANE	
013	1955201	111465	V	6.675		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	261733	13221	V	7.598		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
015	1248281	65191	V	8.128		
				8.888	ENDRIN	
016	1700049	89838	V	9.064	ENDOSULFAN II	0.012
017	3412429	186783	V	9.648		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
018	8566875	312427	V	11.356		
				11.539	ENDO. SULFATE	
019	2356703	101336	V	12.242		
				12.82[illegible]	4,4'-DDT	
020	6679723	233975	V	13.24[illegible]		
021	172758	9024	V	14.41[illegible]		
				14.742	ENDRIN KETONE	
022	5936731	141825	V	15.172		
023	6854055	106344	V	17.375		
				18.766	METHOXYCHLOR	
024	10520167	222538	V	20.939		
025	866842	22304	V	24.657		

026	4358503	102132	V	25.606	DBC	0.032
027	350100	10923	V	27.129		
028	772109	18869		28.056		

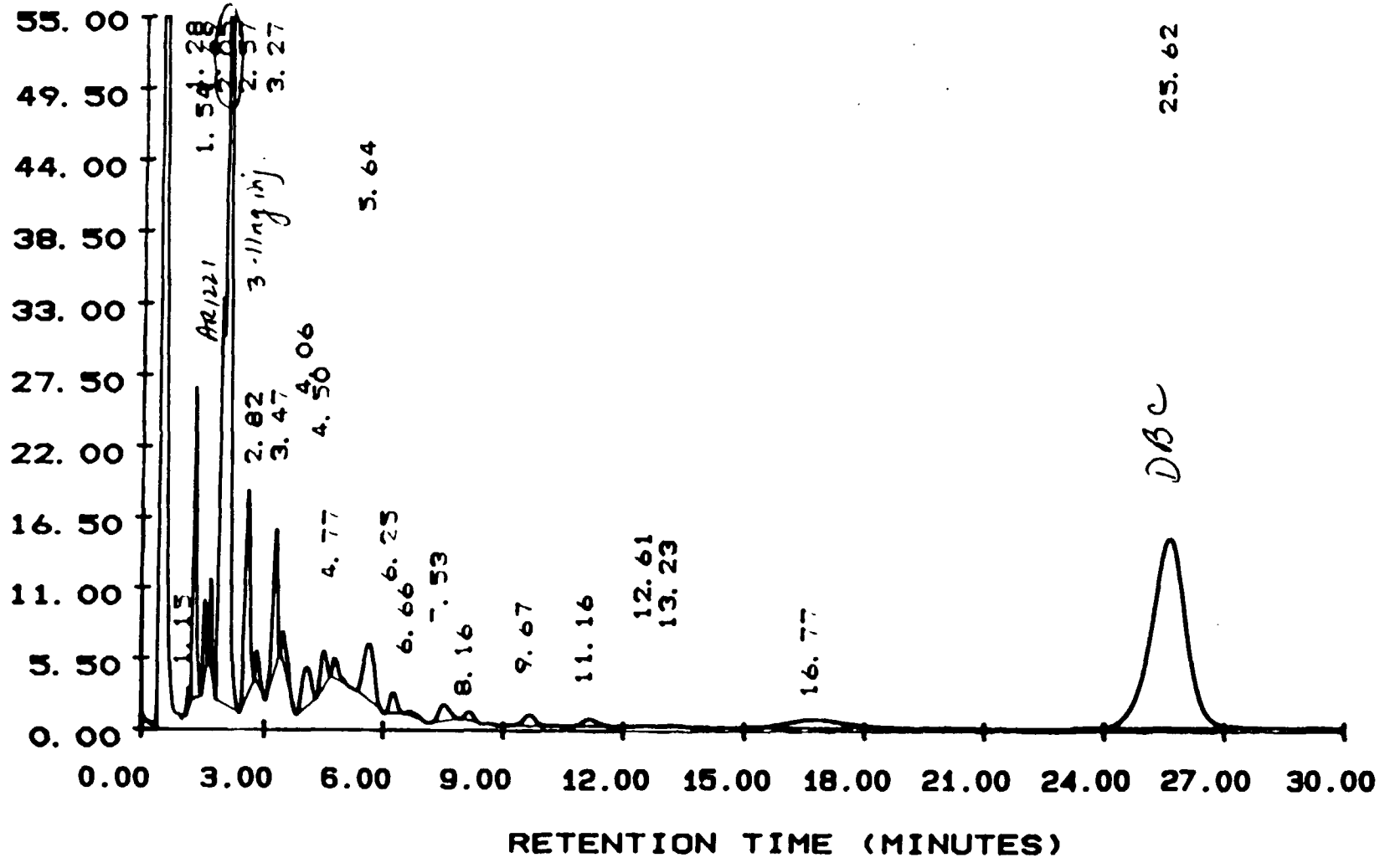
2268443	3.269	AROCHLOR-1016	0.200 *
2095629	11.356	AROCHLOR-1260	0.250 *

AR1221 01-129

SAMPLE NO. : 08158914 .08 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 20:19:12

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 57992. START TIME: 0.00

Y MINIMUM: 6293. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:07:16

EXTERNAL STANDARD

SAMPLE: 08158914 .08 INST:14 VIAL:FO SEQ NUMBER:008
TEST : DATE-TIME INJECTED : 08/15/89 20:19:12
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/18/89 17:07:16
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1221 01-12
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	41021	8529	V	1.145		
002	1211571	203249	V	1.284		
003	248420	45634	V	1.539		
004	319075	63245	V	1.686		
005	7512243	708846	V	2.054	ALPHA-BHC	0.100
				2.162	BETA-BHC	
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	1252855	146374	V	2.571		
007	152914	23374	V	2.821		
008	791599	97419	V	3.266		
009	230320	23633	V	3.465		
				3.739	HEPTACHLOR	
010	433254	28399	V	4.062		
011	267128	25253	V	4.498		
				4.592	ALDRIN	
012	159048	14899	V	4.769		
013	746968	41538	V	5.635	HEPT. EPOXIDE	0.003
014	179782	14826	V	6.249	G. CHLORDANE	0.001
015	56166	3065	V	6.664		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	224192	11808	V	7.528		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	93400	6508	V	8.159		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	189143	8148	V	9.666		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	146813	5273	V	11.159		
				11.539	ENDO. SULFATE	
020	12548	595	V	12.608		
				12.826	4,4'-DDT	
021	31007	1241	V	13.235		
				14.742	ENDRIN KETONE	
022	701197	6167		16.768		
				18.766	METHOXYCHLOR	
023	8316583	137820		25.615	DBC	0.043
	446031			2.054	AROCHLOR-1221	1.034 *

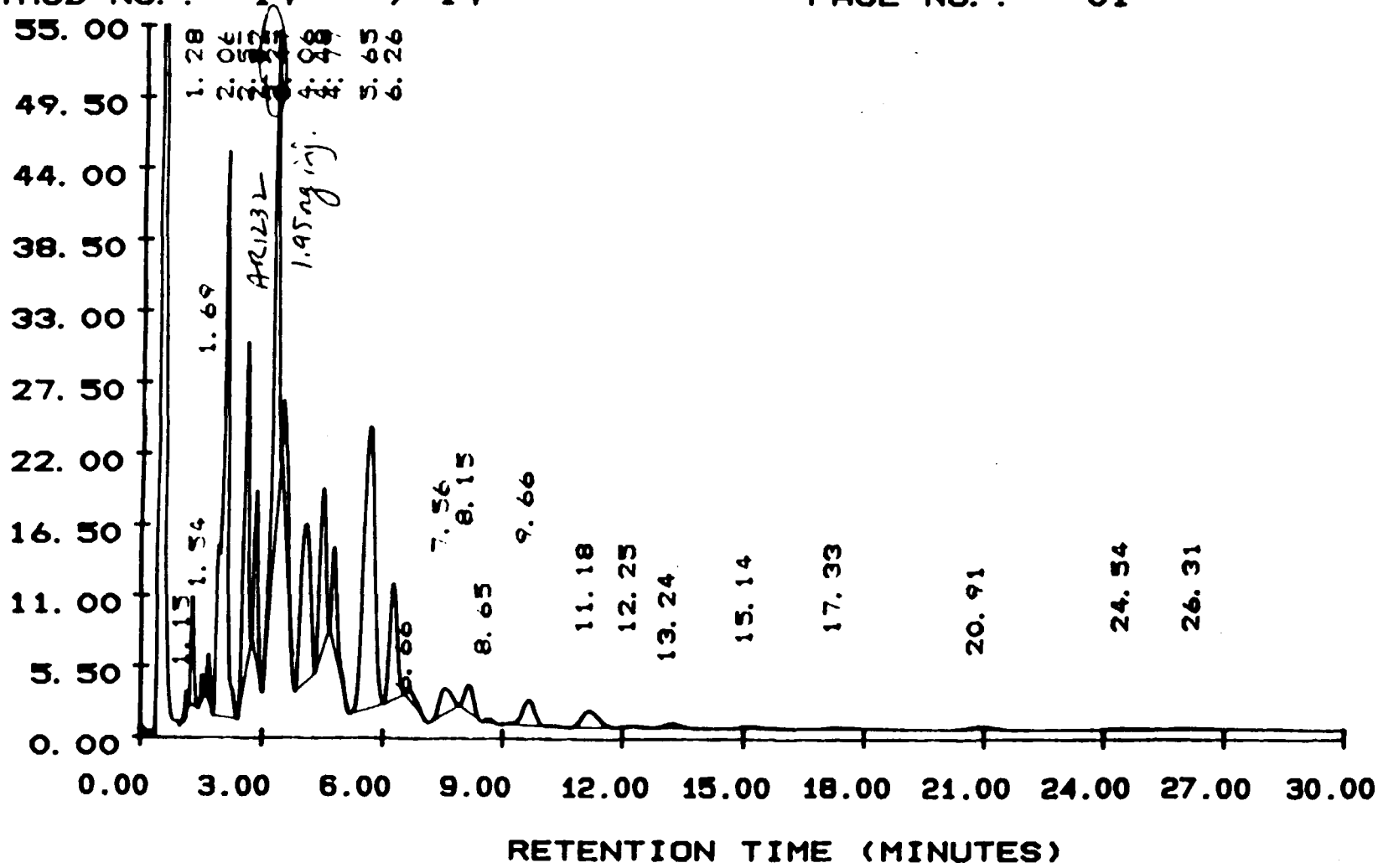
11

AR1232 02-124

SAMPLE NO. : 08158914 .09 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 20:52:17

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58128. START TIME: 0.00

Y MINIMUM: 6597. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/15/89 21:22:42

EXTERNAL STANDARD

SAMPLE: 08158914 .09
TEST :
COLLECTION TIME : 29.98
METHOD: 14 / 14 REV #: 00111 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1232 02-12
SAMPLE WT : % MOISTURE :

INST:14 VIAL:FO SEQ NUMBER:009
DATE-TIME INJECTED : 08/15/89 20:52:17
DATE-TIME PROCESSED : 08/15/89 21:22:42
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: SP2100
DILUTION FACTOR : 1.0000

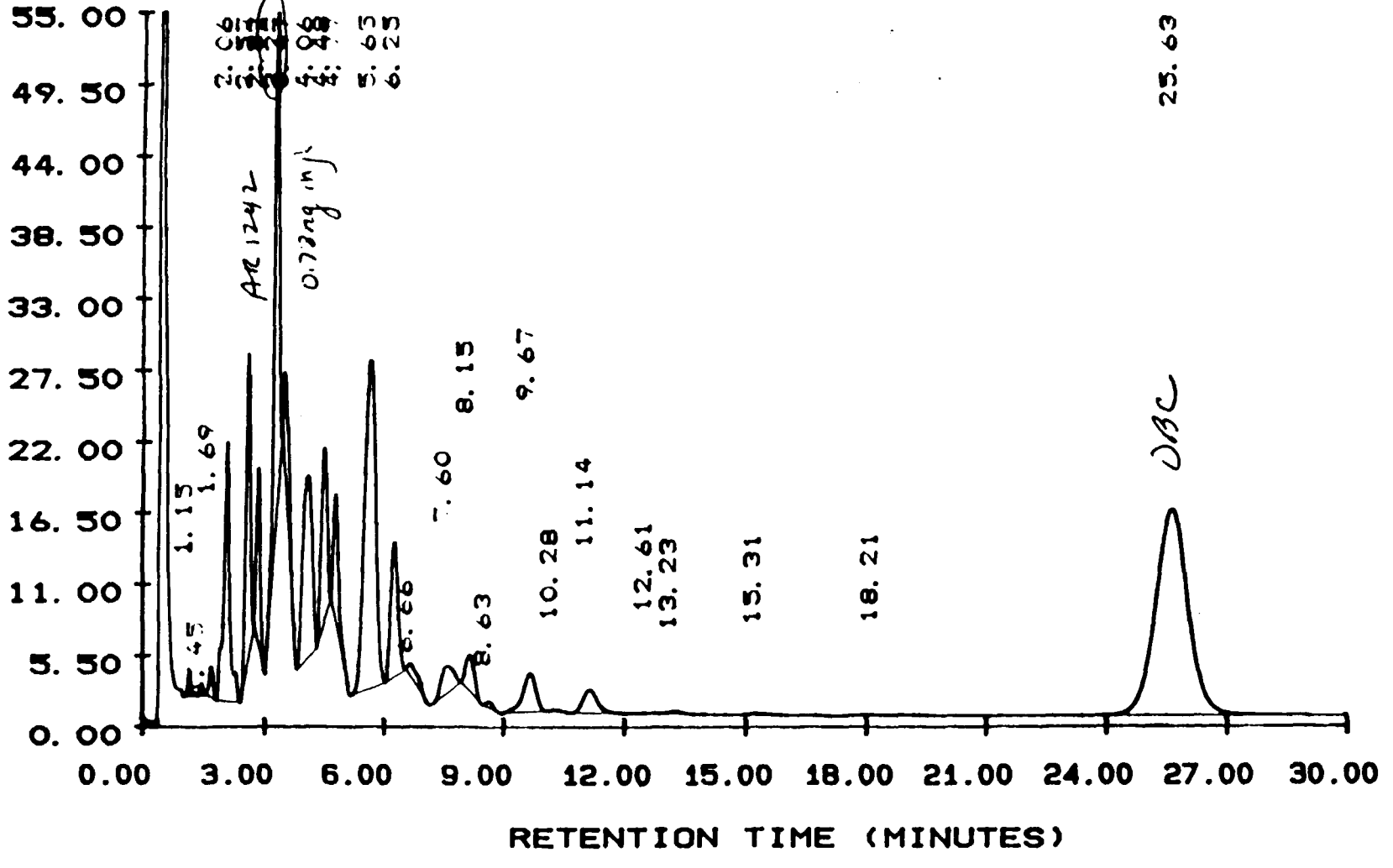
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	41929	9397	V	1.151		
002	400049	72762	V	1.285		
003	75056	15085	V	1.541		
004	163683	31953	V	1.686		
				1.805	ALPHA-BHC	
				1.991	GAMMA-BHC	
005	3979035	387928	V	2.056	BETA-BHC	0.110
				2.422	DELTA-BHC	
006	1835659	235652	V	2.572		
007	797852	118329	V	2.823		
				3.216	HEPTACHLOR	
008	2898267	354246	V	3.268		
009	739690	68096	V	3.470		
010	1861085	115034	V	4.059	ALDRIN	0.528
011	1216689	116031	V	4.485		
012	674235	74489	V	4.766		
				4.919	HEPT. EPOXIDE	
013	3861133	204246	V	5.648		
				5.742	G. CHLORDANE	
				6.153	ENDOSULFAN I	
014	1066543	83802	V	6.255	A. CHLORDANE	0.194
015	124263	7629	V	6.660		
				7.288	DIELDRIN	
016	368019	17873	V	7.562		
				7.757	4,4'-DDE	
				7.876	ENDRIN	
017	292691	19803	V	8.153		
				8.448	ENDOSULFAN II	
018	34573	2833	V	8.654		
				9.342	ENDRIN ALDEHYDE	
				9.436	4,4'-DDD	
019	409576	18507	V	9.665		
				10.926	ENDO. SULFATE	
020	348266	11982	V	11.178		
021	30029	1295	V	12.246		
				12.826	4,4'-DDT	
022	91191	3383	V	13.236		
				14.196	ENDRIN KETONE	
023	92166	2037	V	15.144		
024	86545	1272	V	17.333		
				20.343	METHOXYCHLOR	
025	125748	2757	V	20.914		
026	57803	1086	V	24.540		

027	131200	1040	26.306			
			29.000	DBC	no	DBC in std. sol'n
	903856		2.056	AROCHLOR-1232	0.650 *	

AR1242 03-120

SAMPLE NO. : 08158914 . 10
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/15/89 21:25:22
PAGE NO. : 01



Y MAXIMUM: 58128.
Y MINIMUM: 6603.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:07:34

EXTERNAL STANDARD

SAMPLE: 08158914 .10
TEST :
COLLECTION TIME : 29.98
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1242 03-12
SAMPLE WT : % MOISTURE :

INST:14 VIAL:F0 SEQ NUMBER:010
DATE-TIME INJECTED : 08/15/89 21:25:22
DATE-TIME PROCESSED : 08/18/89 17:07:34
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: SP2100
DILUTION FACTOR : 1.0000

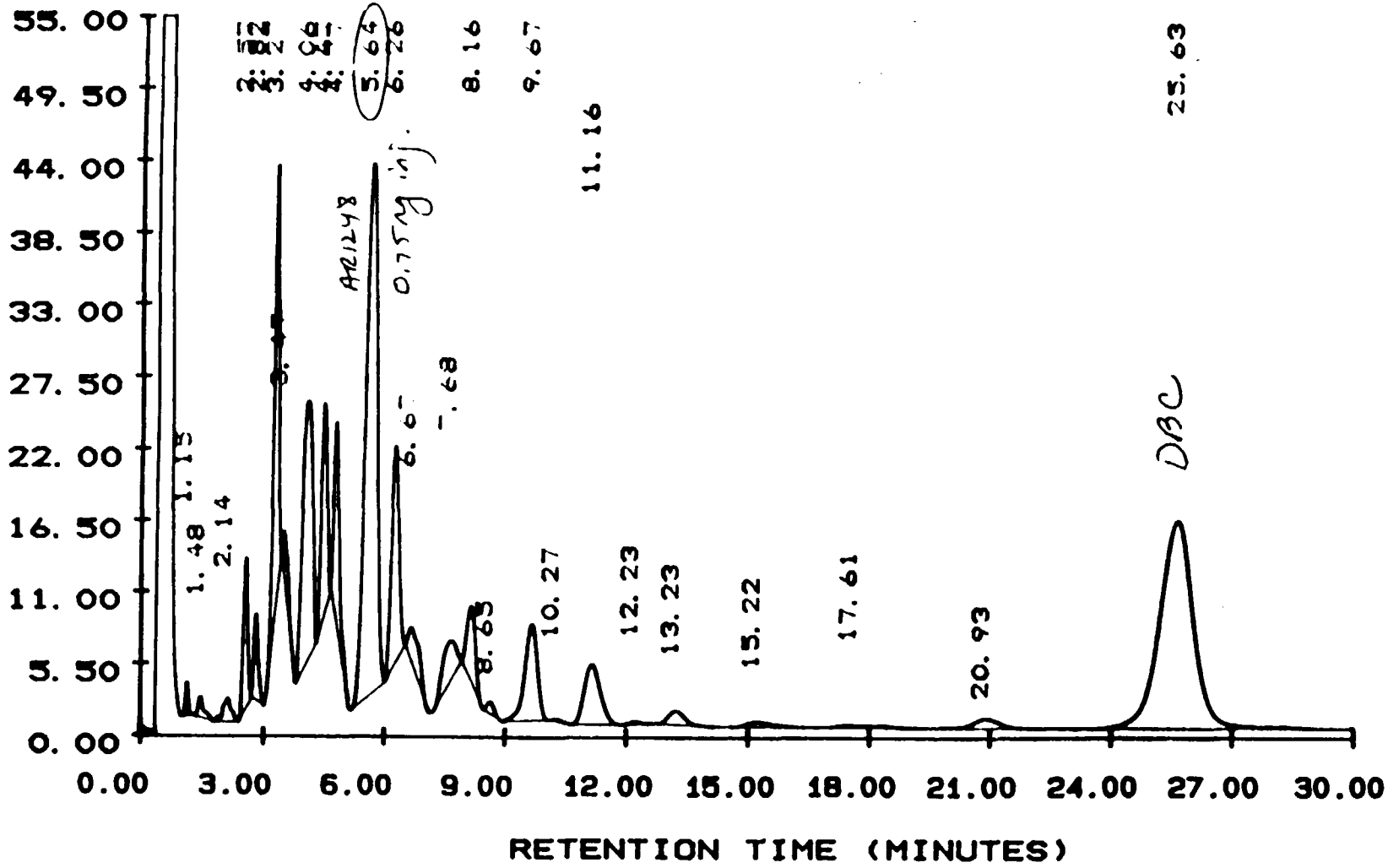
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	95828	16703	V	1.148		
002	36745	6497	V	1.447		
003	138988	21044	V	1.685		
004	1820711	177766	V	2.057	ALPHA-BHC	0.025
				2.162	BETA-BHC	
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
005	1641151	216158	V	2.572		
006	834958	122797	V	2.822		
007	2988519	365472	V	3.268		
008	749245	69760	V	3.470		
				3.739	HEPTACHLOR	
009	2150359	131814	V	4.061		
010	1288643	123757	V	4.484		
				4.592	ALDRIN	
011	831639	91714	V	4.766		
				5.553	HEPT. EPOXIDE	
012	4569441	236975	V	5.649		
013	1218649	96399	V	6.254	G. CHLORDANE	0.006
014	177777	9717	V	6.660		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
015	425739	19110	V	7.603		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
016	386509	26962	V	8.153		
017	52998	4467	V	8.633		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	631923	27884	V	9.667		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	20490	1190	V	10.278		
020	433576	17214	V	11.140		
				11.539	ENDO. SULFATE	
021	11092	576	V	12.608		
				12.826	4,4'-DDT	
022	46554	1878	V	13.231		
				14.742	ENDRIN KETONE	
023	110513	1485	V	15.312		
024	191731	1392		18.215		
				18.766	METHOXYCHLOR	
025	8402611	148522		25.627	DBC	0.046

2093093	3.268	AROCHLOR-1242	0.260	*

AR1248 03-121

SAMPLE NO. : 08158914 . 11
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/15/89 21:58:29
PAGE NO. : 01



Y MAXIMUM: 58134.
Y MINIMUM: 6609.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:08:14

EXTERNAL STANDARD

SAMPLE: 08158914 .11 INST:14 VIAL:F0 SEQ NUMBER:011
TEST : DATE-TIME INJECTED : 08/15/89 21:58:29
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/18/89 17:08:14
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1248 03-12
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	117448	20944	V	1.154		
002	142516	14294	V	1.477		
				2.031	ALPHA-BHC	
003	243406	16393	V	2.142	BETA-BHC	0.002
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
004	792142	104662	V	2.569		
005	442445	58821	V	2.825		
006	2477189	311454	V	3.270		
007	319258	29419	V	3.473		
				3.739	HEPTACHLOR	
008	3153071	188123	V	4.065		
009	1538119	153229	V	4.472		
				4.592	ALDRIN	
010	1366339	140728	V	4.767		
				5.553	HEPT. EPOXIDE	
011	7498779	380857	V	5.644		
012	1961237	155956	V	6.257	G. CHLORDANE	0.010
013	513814	23753	V	6.674		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	651554	26378	V	7.681		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
015	767278	53370	V	8.162		
016	105211	8864	V	8.648		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
017	1478701	68765	V	9.672		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
018	27314	1832	V	10.272		
019	1163857	43111	V	11.161		
				11.539	ENDO. SULFATE	
020	39148	1735	V	12.225		
				12.826	4,4'-DDT	
021	285243	10150	V	13.235		
				14.742	ENDRIN KETONE	
022	184438	3990	V	15.223		
023	170838	2048	V	17.610		
				18.766	METHOXYCHLOR	
024	347405	7175	V	20.926		
025	8685069	148842		25.627	DBC	0.046

2154621	5.644	AROCHLOR-1248	0.250 *

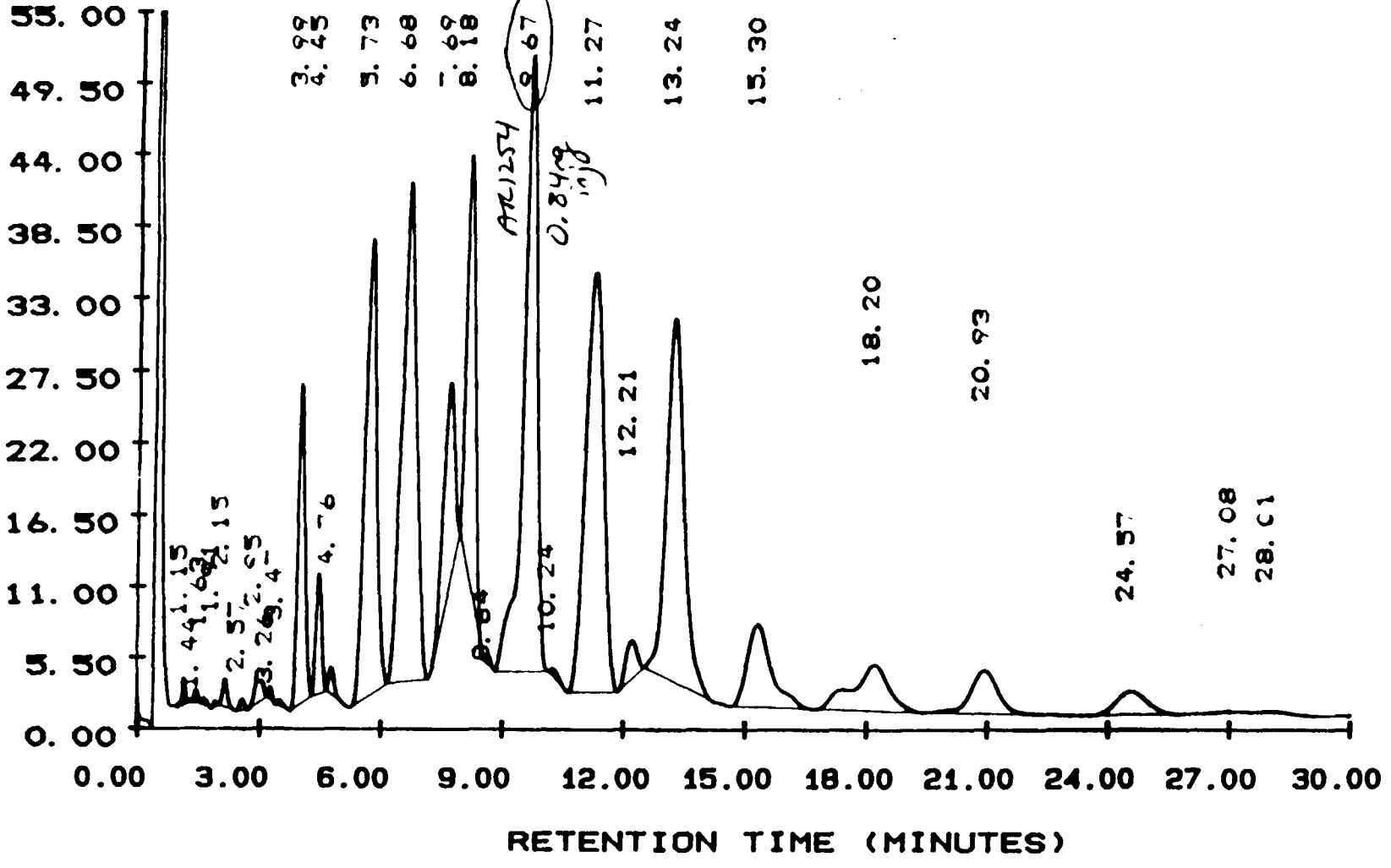
1

AR1254 01-130

SAMPLE NO. : 08158914 . 12 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 22:31:47

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 40933. START TIME: 0.00

Y MINIMUM: 6578. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/15/89 23:02:13

EXTERNAL STANDARD

SAMPLE: 08158914 .12
TEST :
COLLECTION TIME : 29.98
METHOD: 14 / 14 REV #: 00111 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE :

INST:14 VIAL:FO SEQ NUMBER:012
DATE-TIME INJECTED : 08/15/89 22:31:47
DATE-TIME PROCESSED : 08/15/89 23:02:13
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: SP2100
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	60014	10472	V	1.150		
002	41190	6220	V	1.443		
003	26732	3267	V	1.629		
				1.805	ALPHA-BHC	
004	14160	2562	V	1.914		
				1.991	GAMMA-BHC	
				2.031	BETA-BHC	
005	108439	12821	V	2.154		
				2.422	DELTA-BHC	
006	40580	5392	V	2.572		
007	156654	10953	V	2.955		
008	34394	5936	V	3.256	HEPTACHLOR	0.001
009	27125	2903	V	3.472		
010	1823169	152623	V	3.987	ALDRIN	0.701
011	566626	57484	V	4.447		
012	117591	12937	V	4.762		
				4.919	HEPT. EPOXIDE	
013	4301779	217342	V	5.732	G. CHLORDANE	2.758
				6.153	ENDOSULFAN I	
				6.204	A. CHLORDANE	
014	5798785	237775	V	6.675		
				7.288	DIELDRIN	
015	1762931	93921	V	7.695	4,4'-DDE	0.015
				7.876	ENDRIN	
016	3144121	204471	V	8.180		
				8.448	ENDOSULFAN II	
017	37735	4801	V	8.643		
				9.342	ENDRIN ALDEHYDE	
				9.436	4,4'-DDD	
018	6851465	294302	V	9.669		
019	51550	3523	V	10.237		
				10.926	ENDO. SULFATE	
020	6198989	200556	V	11.270		
021	347855	18068	V	12.210		
				12.826	4,4'-DDT	
022	5265017	173759	V	13.242		
				14.196	ENDRIN KETONE	
023	1639739	40047	V	15.304		
024	1415165	22414	V	18.197		
				20.343	METHOXYCHLOR	
025	998989	20833	V	20.929		
026	597314	11236	V	24.569		
027	29306	806	V	27.077		

no DBC in std

028	44042	996	28.009			
			29.000	DBC		
	1990811		9.669	AROCHLOR-1254	0.280	*

12.

KEPONE/ISODRIN

SAMPLE NO. : 08158914 . 13

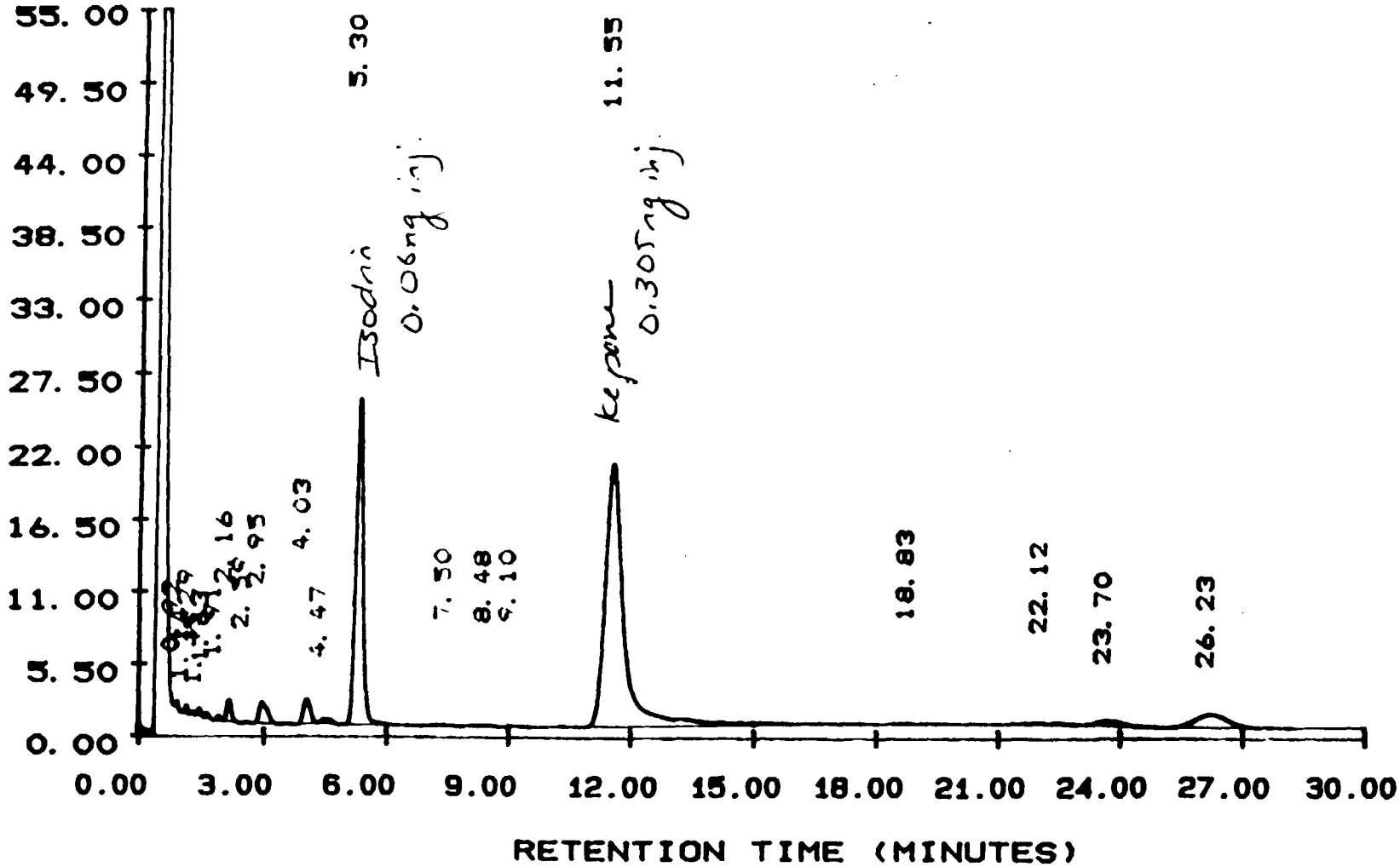
TEST NO. :

METHOD NO. : 14 / 14

INSTRUMENT: 14

DATE TIME: 08/16/89 01:33:33

PAGE NO. : 01



Y MAXIMUM: 58134.

Y MINIMUM: 6617.

START TIME: 0.00

END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .13 INST:14 VIAL:FO SEQ NUMBER:013
TEST : DATE-TIME INJECTED : 08/16/89 01:33:33
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 02:04:02
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: KEPONE/ISODR
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

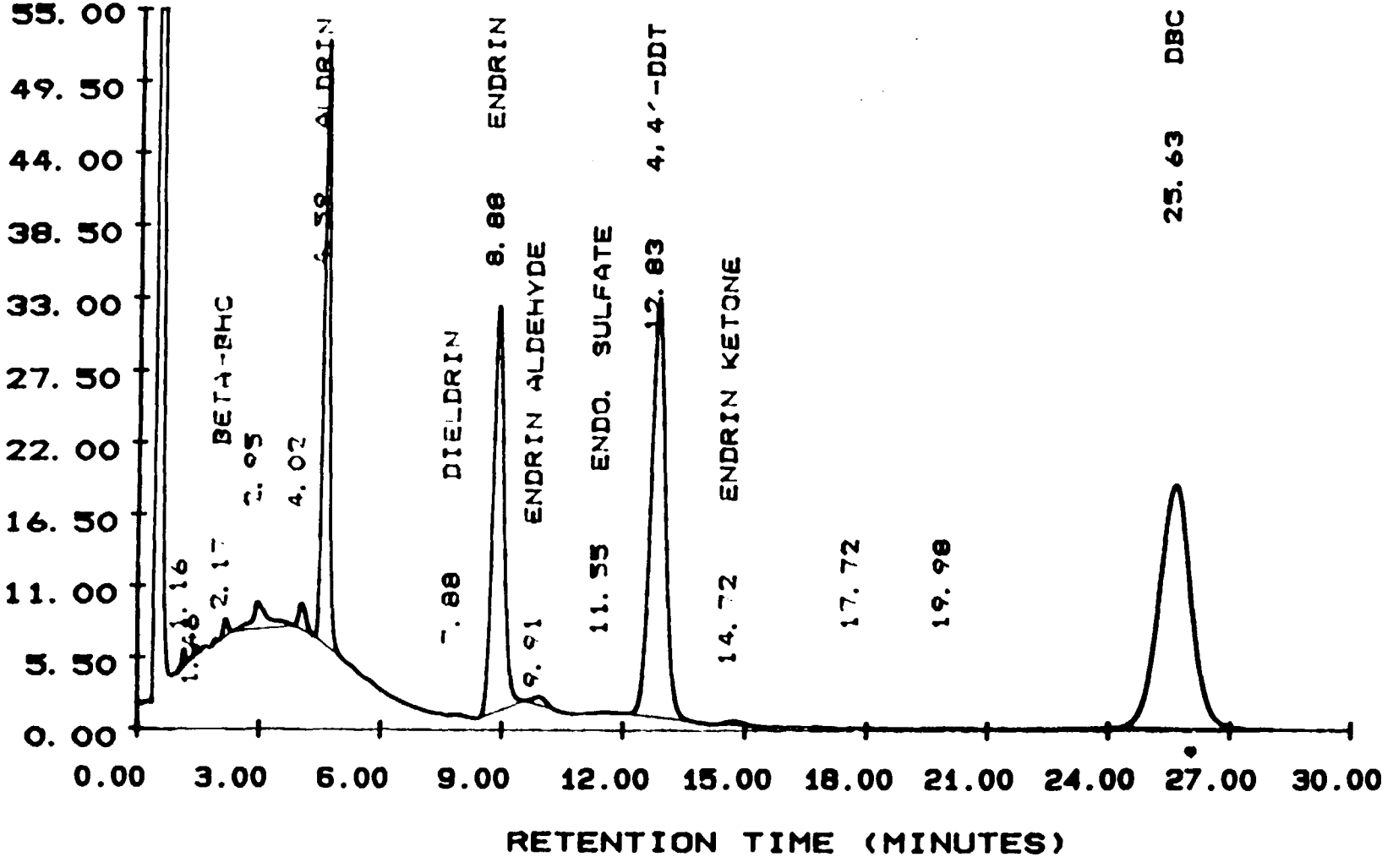
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	5996	2932	V	0.916		
002	21014	4978	V	1.144		
003	9655	2192	V	1.290		
004	28164	5314	V	1.453		
005	25341	3715	V	1.629		
006	20621	3334	V	1.915		
				2.031	ALPHA-BHC	
007	121838	15216	V	2.161	BETA-BHC	0.004
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
008	9433	1288	V	2.589		
009	209377	14984	V	2.954		
				3.739	HEPTACHLOR	
010	209062	17547	V	4.032	Kepone	
011	60570	3371	V	4.473		
				4.592	ALDRIN	
012	2783261	230890	V	5.301	Isodrin	0.0198
				5.553	HEPT. EPOXIDE	
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
013	16660	606	V	7.502		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
014	21662	766	V	8.483		
				8.888	ENDRIN	
015	15036	670	V	9.095	ENDOSULFAN II	0.001
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
016	6194483	187343	V	11.548	~~ENDO. SULFATE~~ Kepone ~~0.291~~ 0.1016 mg/ul	
				12.826	4,4'-DDT	
				14.742	ENDRIN KETONE	
017	35942	550	V	18.830	METHOXYCHLOR	0.003
018	97877	1417	V	22.119		
019	158194	3593	V	23.701		
				25.624	DBC	
020	527322	9370		26.229		

EVALB 19-43

SAMPLE NO. : 08158914 .22 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 06:40:19

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 57552. START TIME: 0.00

Y MINIMUM: 5318. END TIME: 30.00

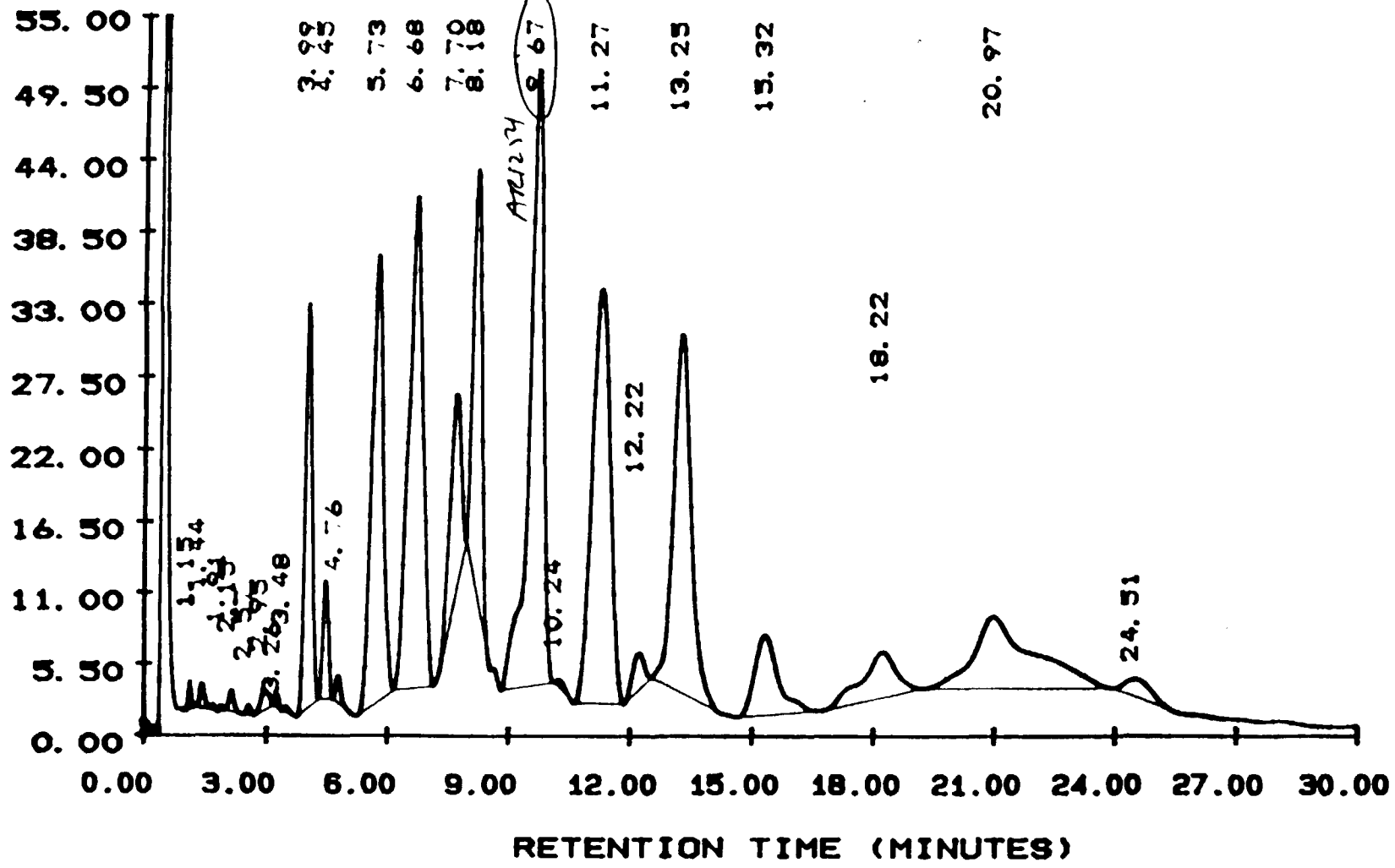
EXTERNAL STANDARD

SAMPLE: 08158914 .22 INST:14 VIAL:FO SEQ NUMBER:022
TEST : DATE-TIME INJECTED : 08/16/89 06:40:19
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 07:10:45
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	62450	10136	V	1.158		
002	45406	6130	V	1.461		
				2.031	ALPHA-BHC	
003	108812	11722	V	2.168	BETA-BHC	0.003
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
004	516410	19266	V	2.954		
				3.739	HEPTACHLOR	
005	226702	19122	V	4.022		
006	4596337	433719	V	4.594	ALDRIN	1.992
				5.553	HEPT. EPOXIDE	
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
				7.876	4,4'-DDE	
007	22588	1394	V	7.880	DIELDRIN	0.002
008	5515229	293611	V	8.883	ENDRIN	0.032
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
009	147002	6089	V	9.907	ENDRIN ALDEHYDE	0.014
010	18849	695	V	11.547	ENDO. SULFATE	0.001
011	7494317	300674	V	12.829	4,4'-DDT	0.108
012	81382	2891	V	14.715	ENDRIN KETONE	0.004
013	11327	263	V	17.717		
				18.766	METHOXYCHLOR	
014	12905	269		19.979		
015	9780545	177651		25.626	DBC	2.191

AR1254 01-130

SAMPLE NO. : 08158914 . 31 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/16/89 11:38:35
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 41158. START TIME: 0.00
Y MINIMUM: 6584. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 12:09:04

EXTERNAL STANDARD

SAMPLE: 08158914 .31 INST:14 VIAL:F0 SEQ NUMBER:031
TEST : DATE-TIME INJECTED : 08/16/89 11:38:35
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 12:09:04
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	62417	11185	V	1.152		
002	121097	12062	V	1.439		
003	14926	2760	V	1.908		
				2.031	ALPHA-BHC	
004	84442	9993	V	2.155	BETA-BHC	0.003
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
005	31375	4547	V	2.572		
006	128189	9117	V	2.949		
007	37541	6103	V	3.260		
008	25852	2792	V	3.476		
				3.739	HEPTACHLOR	
009	2287437	193571	V	3.995		
010	554086	56825	V	4.448		
				4.592	ALDRIN	
011	119126	12993	V	4.764		
				5.553	HEPT. EPOXIDE	
012	4249927	214614	V	5.735		
				6.325	G. CHLORDANE	
013	5745169	235592	V	6.678		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	1748495	93577	V	7.698		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
015	3147763	203844	V	8.184		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
016	6945541	294801	V	9.673		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
017	53419	3960	V	10.241		
018	6151143	198871	V	11.275		
				11.539	ENDO. SULFATE	
019	339555	17732	V	12.217		
				12.826	4,4'-DDT	
020	5196571	172016	V	13.249		
				14.742	ENDRIN KETONE	
021	1550845	38700	V	15.317		
022	1305899	21975	V	18.221		
				18.766	METHOXYCHLOR	
023	3587227	34696	V	20.973		
024	398099	8634		24.510		

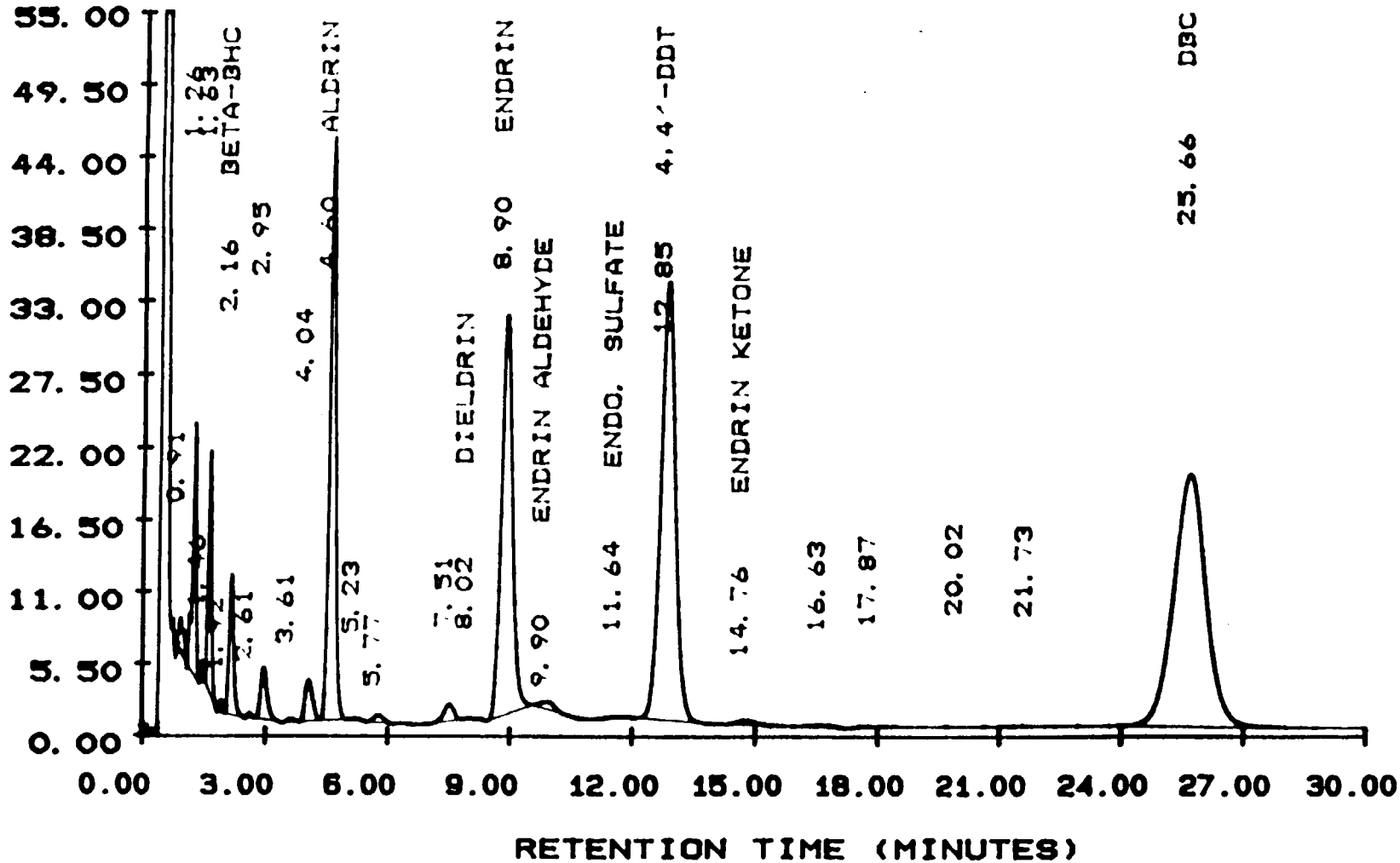
	25.624	DBC	no DBC in std
2026681	9.673	AROCHLOR-1254	0.285 *

EVALB 19-43

SAMPLE NO. : 08158914 .39 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/17/89 13:21:02

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58144. START TIME: 0.00

Y MINIMUM: 6633. END TIME: 30.00

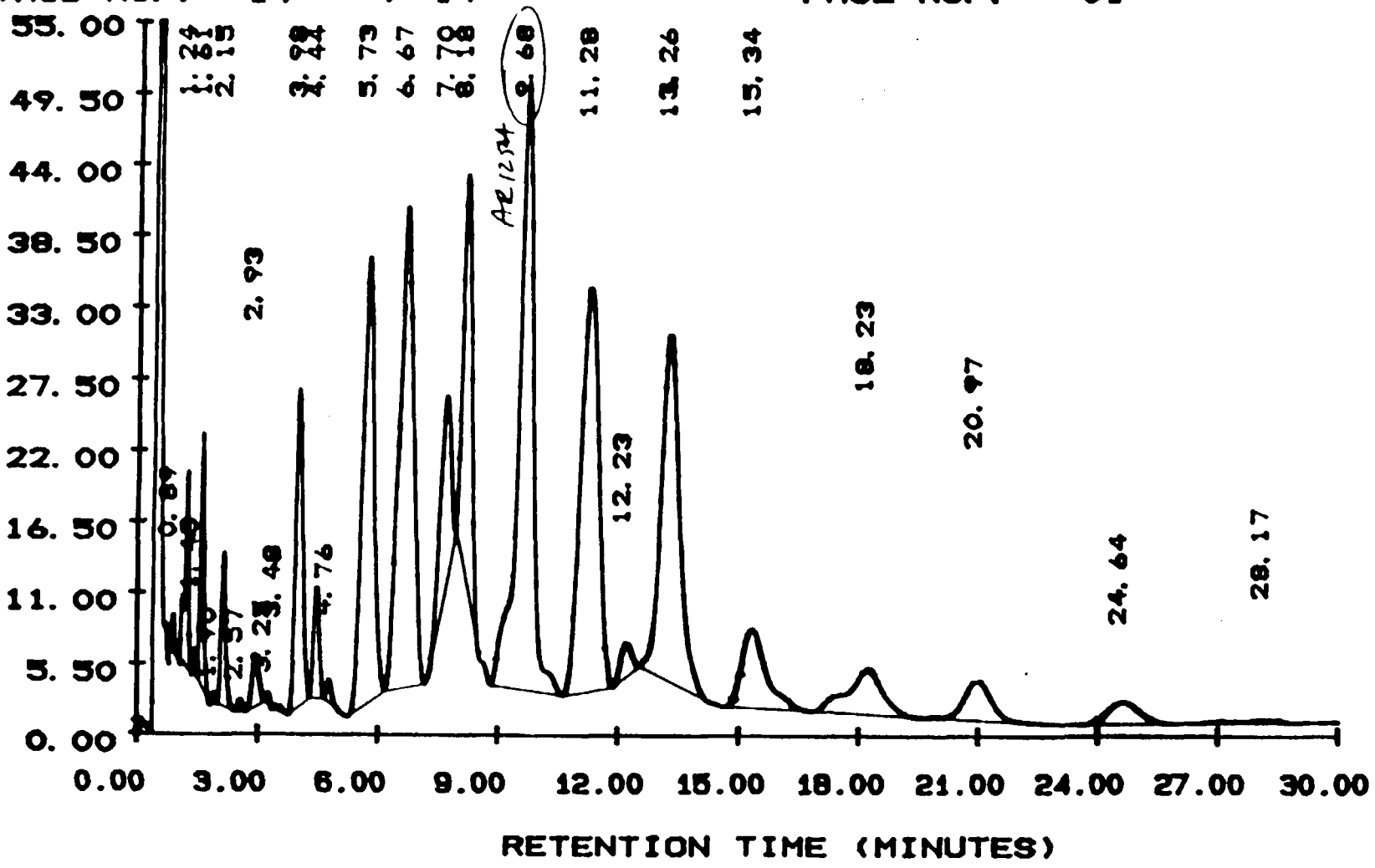
EXTERNAL STANDARD

SAMPLE: 08158914 .39 INST:14 VIAL:F0 SEQ NUMBER:039
TEST : DATE-TIME INJECTED : 08/17/89 13:21:02
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 13:51:28
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	200967	21022	V	0.913		
002	1086575	157346	V	1.258		
003	65775	13530	V	1.458		
004	1003631	159790	V	1.627		
005	54332	8989	V	1.921		
				2.031	ALPHA-BHC	
006	757698	96524	V	2.164	BETA-BHC	0.027
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	24513	3593	V	2.612		
008	400691	37082	V	2.949		
009	29510	2385	V	3.610		
				3.739	HEPTACHLOR	
010	370227	29539	V	4.039		
011	4237683	409657	V	4.600	ALDRIN	1.882
012	22291	1583	V	5.227		
				5.553	HEPT. EPOXIDE	
013	91269	5387	V	5.769		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	205830	12107	V	7.510		
				7.876	4,4'-DDE	
015	37363	1281	V	8.018	DIELDRIN	0.001
016	5318663	283104	V	8.896	ENDRIN	0.031
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
017	131850	5400	V	9.897	ENDRIN ALDEHYDE	0.012
018	48257	1478	V	11.639	ENDO. SULFATE	0.002
019	7681671	311120	V	12.845	4,4'-DDT	0.112
020	105097	3294	V	14.756	ENDRIN KETONE	0.004
021	57342	1462	V	16.631		
022	49700	1079	V	17.873		
				18.766	METHOXYCHLOR	
023	9951	233	V	20.017		
024	28324	383	V	21.728		
025	9968653	180819		25.658	DBC	2.230

AR1254 01-130

SAMPLE NO. : 08158914 .47 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/17/89 18:30:42
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 39842.
Y MINIMUM: 6630.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .47 INST:14 VIAL:FO SEQ NUMBER:047
TEST :
COLLECTION TIME : 29.98
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE :

DATE-TIME INJECTED : 08/17/89 18:30:42
DATE-TIME PROCESSED : 08/17/89 19:01:09
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: SP2100
DILUTION FACTOR : 1.0000

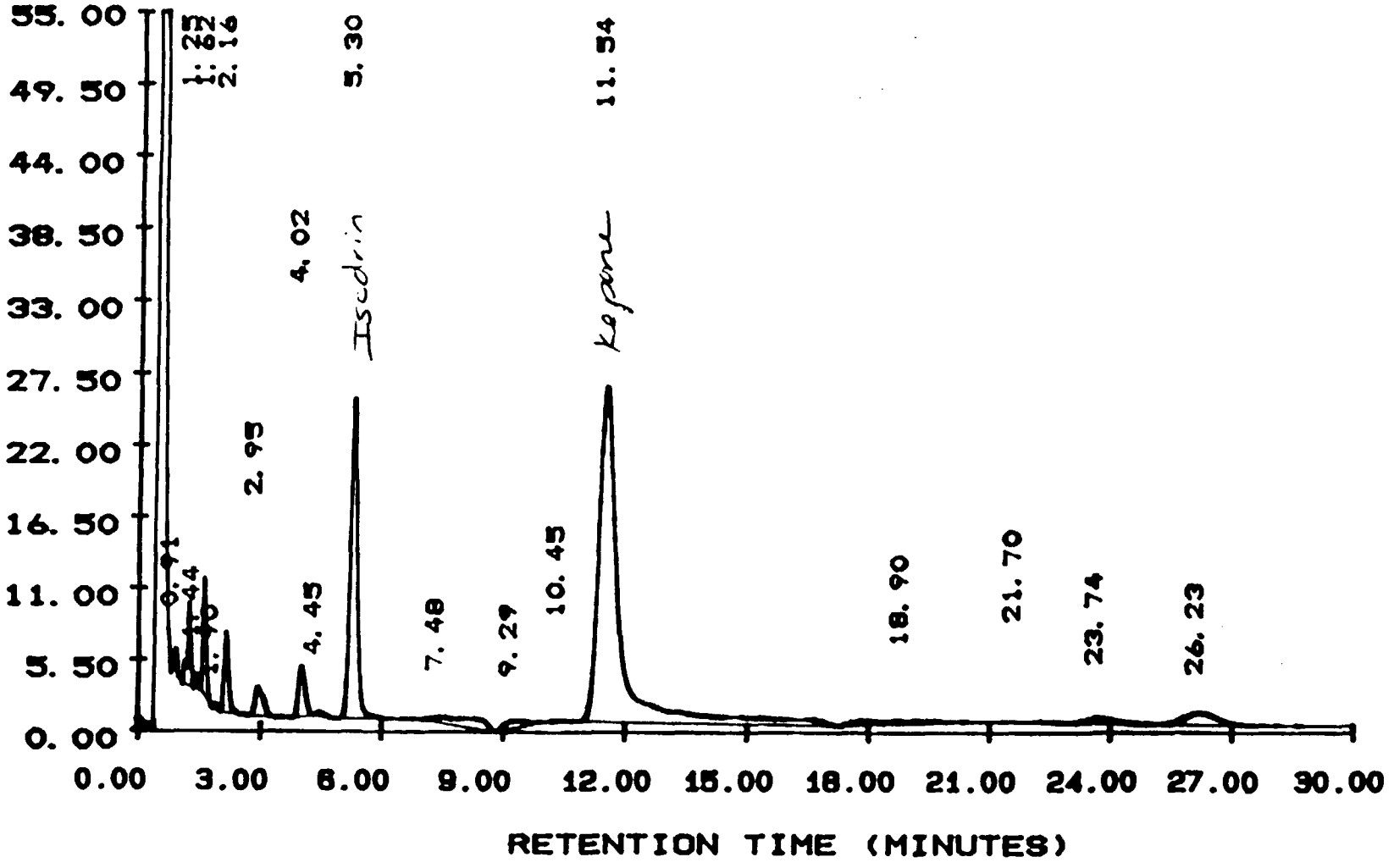
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	98864	14345	V	0.893		
002	613594	84264	V	1.243		
003	57766	11920	V	1.434		
004	722274	110202	V	1.611		
005	31080	5523	V	1.904		
				2.031	ALPHA-BHC	
006	559763	69568	V	2.147	BETA-BHC	0.020
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	40198	5569	V	2.568		
008	274873	24440	V	2.934		
009	28440	5225	V	3.247		
010	30758	2626	V	3.476		
				3.739	HEPTACHLOR	
011	1799505	148073	V	3.982		
012	510026	51395	V	4.439		
				4.592	ALDRIN	
013	96714	10728	V	4.755		
				5.553	HEPT. EPOXIDE	
014	4128223	207044	V	5.727		
				6.325	G. CHLORDANE	
015	5481299	223098	V	6.673		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	1639101	86648	V	7.696		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	2987771	189608	V	8.183		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	7213535	282591	V	9.676		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	5878367	187408	V	11.283		
				11.539	ENDO. SULFATE	
020	289231	15041	V	12.225		
				12.826	4,4'-DDT	
021	5063639	161075	V	13.262		
				14.742	ENDRIN KETONE	
022	1571337	37119	V	15.335		
023	1310683	21179	V	18.230		
				18.766	METHOXYCHLOR	
024	898957	18652	V	20.971		
025	573024	10419	V	24.637		
				25.624	DBC	
026	144666	1649		28.172		

no DBC in std

1873881	9.676	AROCHLOR-1254	0.264	*

KEPONE/ISODRIN

SAMPLE NO. : 08158914 .53 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/17/89 21:48:23
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58100. START TIME: 0.00
Y MINIMUM: 6540. END TIME: 30.00

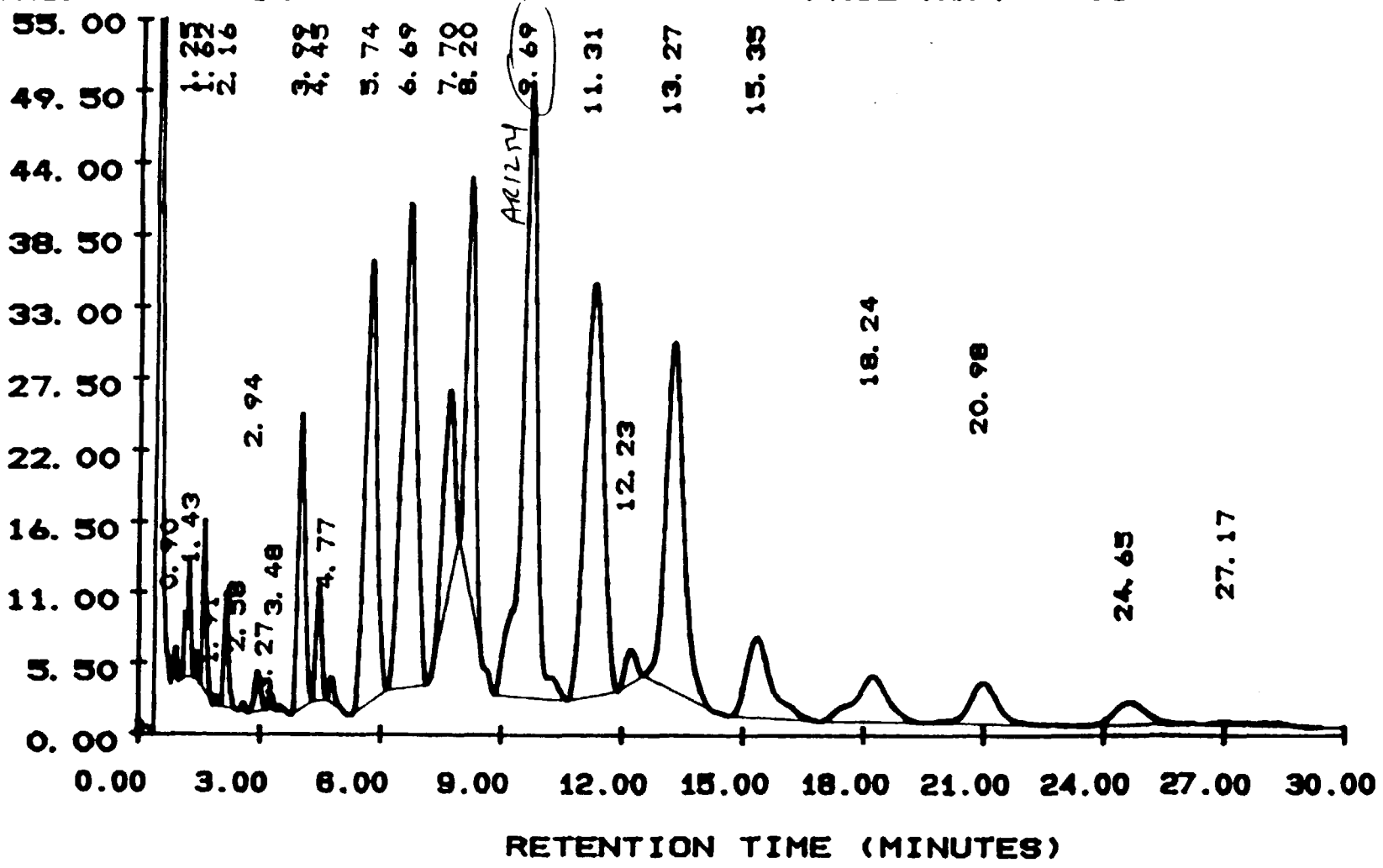
EXTERNAL STANDARD

SAMPLE: 08158914 .53 INST:14 VIAL:FO SEQ NUMBER:053
TEST : DATE-TIME INJECTED : 08/17/89 21:48:23
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 22:18:49
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: KEPONE/ISODR 10-47
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	55932	13203	V	0.909		
002	361990	53294	V	1.252		
003	55204	10935	V	1.442		
004	499324	77787	V	1.620		
005	26740	4906	V	1.905		
				2.031	ALPHA-BHC	
006	468555	56978	V	2.158	BETA-BHC	0.016
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	296546	21311	V	2.946		
				3.739	HEPTACHLOR	
008	416761	36441	V	4.018		
009	43866	3305	V	4.449		
				4.592	ALDRIN	
010	2799481	228836	V	5.299	Isodrin	
				5.553	HEPT. EPOXIDE	
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
011	478505	4426	V	7.477		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
012	211242	4794	V	9.288		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
013	11981	516	V	10.448	Kepone	
014	8711079	241550	V	11.537	~~ENDO. SULFATE~~ 135y	~~0.375~~ 85y
				12.826	4,4'-DDT	
				14.742	ENDRIN KETONE	
015	367898	2542	V	18.895	METHOXYCHLOR	0.012
016	59022	771	V	21.702		
017	185689	3873	V	23.741		
				25.624	DBC	
018	480144	8456		26.225		

AR1254 01-130

SAMPLE NO. : 08158914 .54 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/17/89 22:21:03
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 40691.
Y MINIMUM: 6656.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .54 INST:14 VIAL:F0 SEQ NUMBER:054
TEST : DATE-TIME INJECTED : 08/17/89 22:21:03
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 22:51:27
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	62984	12081	V	0.905		
002	429918	50419	V	1.252		
003	65990	13289	V	1.434		
004	514198	77607	V	1.623		
005	26432	4883	V	1.910		
				2.031	ALPHA-BHC	
006	422822	53536	V	2.160	BETA-BHC	0.015
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	28675	4239	V	2.577		
008	193862	18932	V	2.941		
009	49397	7122	V	3.265		
010	24738	2463	V	3.480		
				3.739	HEPTACHLOR	
011	1685351	140577	V	3.994		
012	538456	54381	V	4.454		
				4.592	ALDRIN	
013	111867	12139	V	4.771		
				5.553	HEPT. EPOXIDE	
014	4169473	209860	V	5.743		
				6.325	G. CHLORDANE	
015	5604411	229864	V	6.689		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	1835383	91439	V	7.704		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	3088877	198312	V	8.198		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	7425009	292478	V	9.691		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	6261387	196230	V	11.309		
				11.539	ENDO. SULFATE	
020	296110	15869	V	12.235		
				12.826	4,4'-DDT	
021	5094781	165876	V	13.274		
				14.742	ENDRIN KETONE	
022	1633865	38279	V	15.345		
023	1273439	21766	V	18.241		
				18.766	METHOXYCHLOR	
024	966643	19580	V	20.981		
025	574198	10647	V	24.647		
				25.624	DBC	
026	196659	1616		27.169		

no DBC in std.

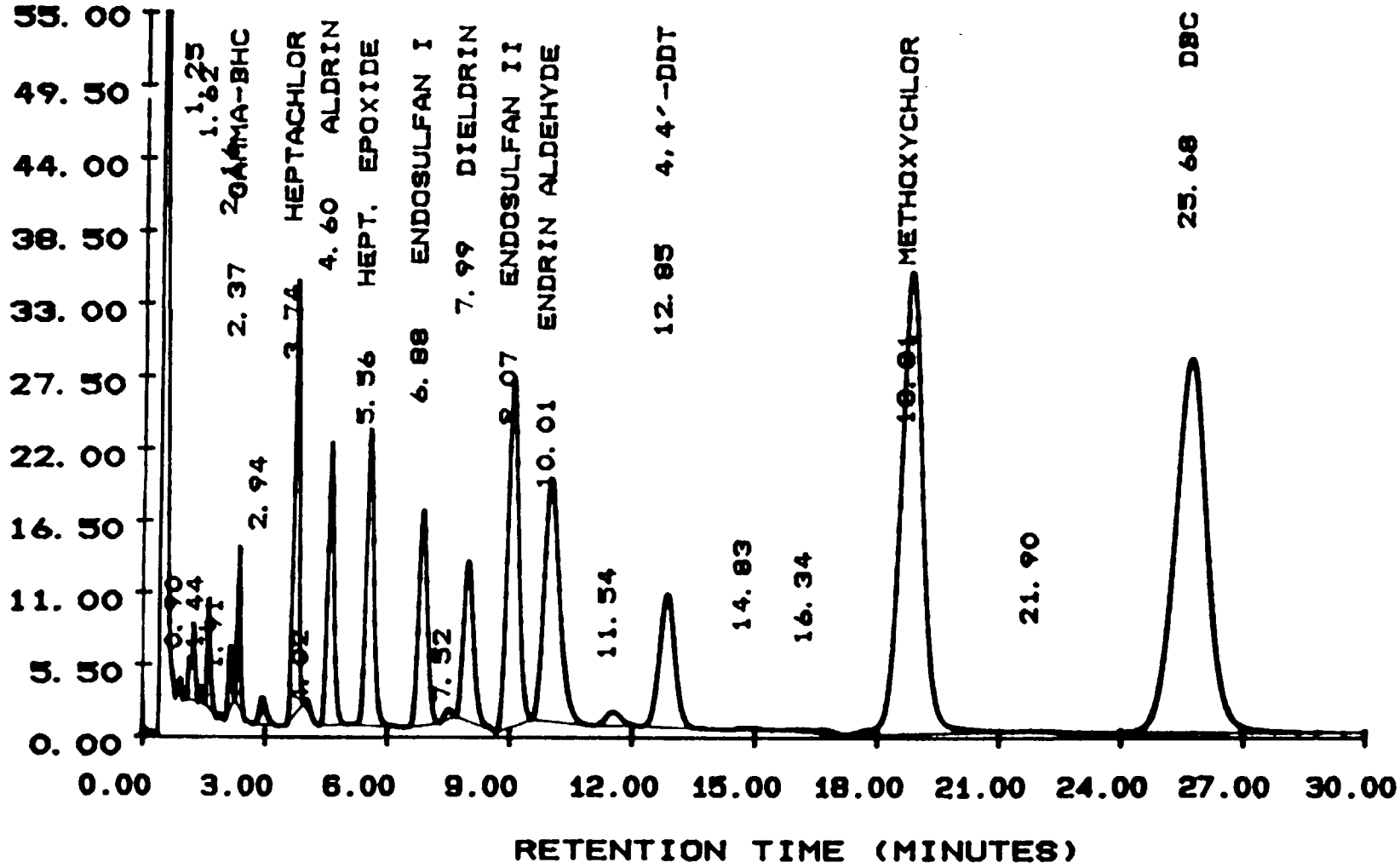
1925353	9.691	AROCHLOR-1254	0.271	*

INDA 13-45

SAMPLE NO. : 08158914 .55 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/17/89 22:54:25

METHOD NO. : 14A / 14A PAGE NO. : 01



Y MAXIMUM: 58001. START TIME: 0.00

Y MINIMUM: 6614. END TIME: 30.00

EXTERNAL STANDARD

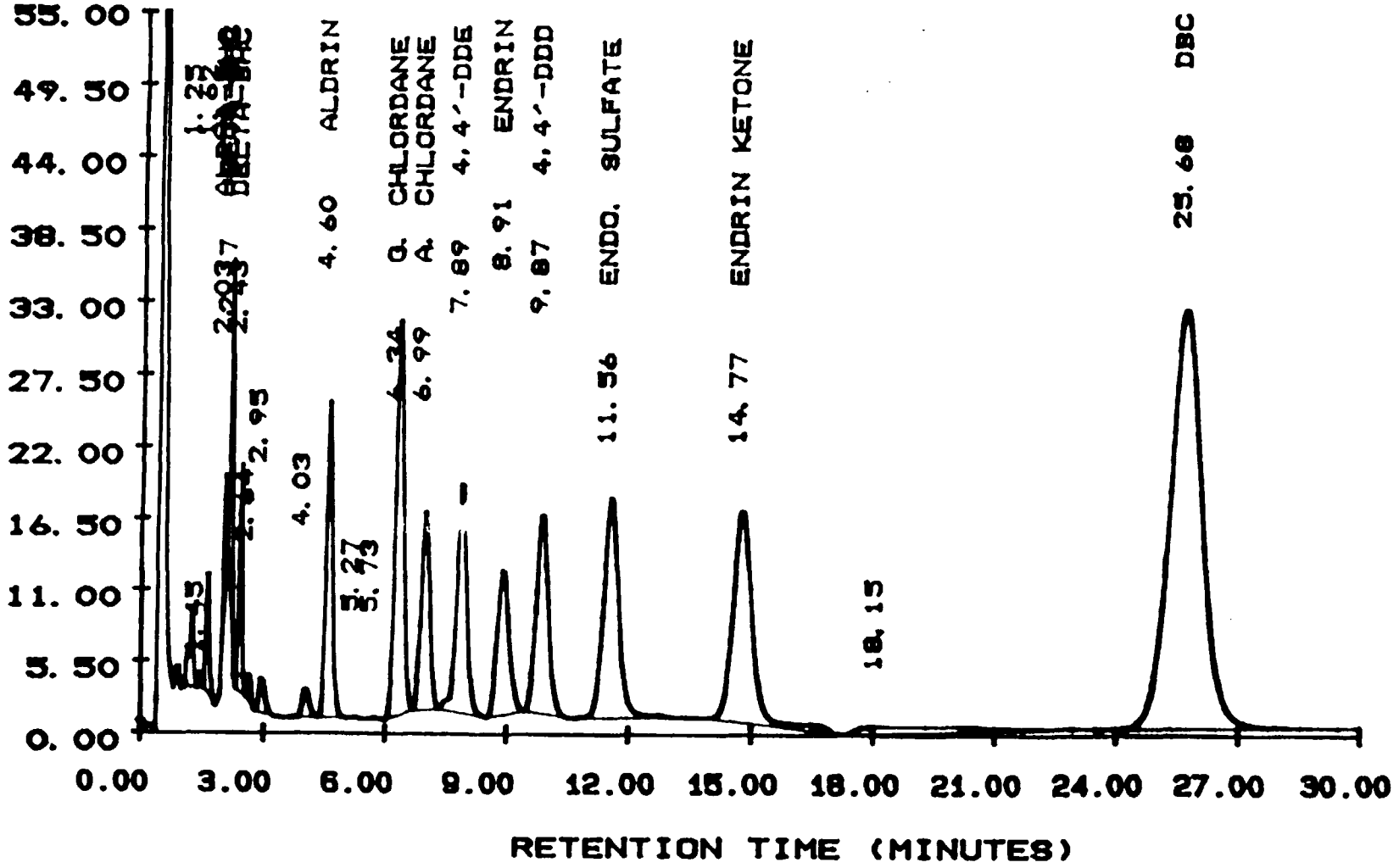
SAMPLE: 08158914 .55 INST:14 VIAL:F0 SEQ NUMBER:055
TEST : DATE-TIME INJECTED : 08/17/89 22:54:25
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 23:24:50
METHOD: 14A / 14A REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDA 13-45
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	50890	10602	V	0.904		
002	417758	48333	V	1.253		
003	51916	10588	V	1.442		
004	482056	74182	V	1.624		
005	23611	4144	V	1.913		
006	270387	41380	V	2.161		
007	644390	106660	V	2.366	GAMMA-BHC	0.008
008	222094	19154	V	2.943		
009	2663911	300414	V	3.745	HEPTACHLOR	0.017
010	43495	6445	V	4.019		
011	2163383	199260	V	4.600	ALDRIN	0.016
012	2733515	209983	V	5.563	HEPT. EPOXIDE	0.017
013	2272909	152411	V	6.879	ENDOSULFAN I	0.017
014	83789	6875	V	7.517		
015	1973549	113721	V	7.993	DIELDRIN	0.017
016	4549709	246396	V	9.073	ENDOSULFAN II	0.033
017	4539863	172711	V	10.007	ENDRIN ALDEHYDE	0.032
018	264422	9879	V	11.538		
019	2469371	94576	V	12.852	4,4'-DDT	0.034
020	41740	1303	V	14.834		
021	138209	2199	V	16.336		
022	12244289	326560	V	18.807	METHOXYCHLOR	0.171
023	32913	745	V	21.895		
024	14500135	265935		25.682	DBC	0.083

INDB 13-56

SAMPLE NO. : 08158914 .56
TEST NO. :
METHOD NO. : 14B / 14B

INSTRUMENT: 14
DATE TIME: 08/17/89 23:27:40
PAGE NO. : 01



Y MAXIMUM: 51592.
Y MINIMUM: 6573.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .56 INST:14 VIAL:FO SEQ NUMBER:056
TEST : DATE-TIME INJECTED : 08/17/89 23:27:40
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 23:58:18
METHOD: 14B / 14B REV #: 00115 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDB 13-56
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	363152	44269	V	1.254		
002	48399	9484	V	1.446		
003	462728	71688	V	1.624		
004	279114	55941	V	2.034	ALPHA-BHC	0.008
005	1025744	197583	V	2.166	BETA-BHC	0.020
006	811187	133747	V	2.426	DELTA-BHC	0.018
007	95718	16596	V	2.641		
008	213030	21579	V	2.954		
009	211622	17582	V	4.028		
010	2145965	196488	V	4.599	ALDRIN	0.016
011	9511	922	V	5.271		
012	14131	973	V	5.734		
013	3441831	245978	V	6.337	G. CHLORDANE	0.016
014	1880193	124641	V	6.991	A. CHLORDANE	0.016
015	2516231	143825	V	7.891	4,4'-DDE	0.016
016	1828025	90739	V	8.912	ENDRIN	0.015
017	2588663	124795	V	9.872	4,4'-DDD	0.032
018	3591347	138524	V	11.561	ENDO. SULFATE	0.037
019	4422785	132795	V	14.773	ENDRIN KETONE	0.036
020	842880	4563		18.145		
021	14429107	261957		25.680	DBC	0.082

RAW QC DATA

A. BLANK DATA
B. MATRIX SPIKE DATA
C. MATRIX SPIKE DUPLICATE DATA

V RAW QC DATA

A. Blank Data
   1. Tabulated Results (Form I)
   2. Pesticide/PCB Raw Data in Order by:
      a. 2250/2401 Column
      b. SP2100 Column

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO. 145

PBLK

Lab Name: Roy F. Weston,Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 89LE0659-MB2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 08158913.14

Level: (low/med) LOW Date Received: 07/25/89

% Moisture: not dec. 0 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

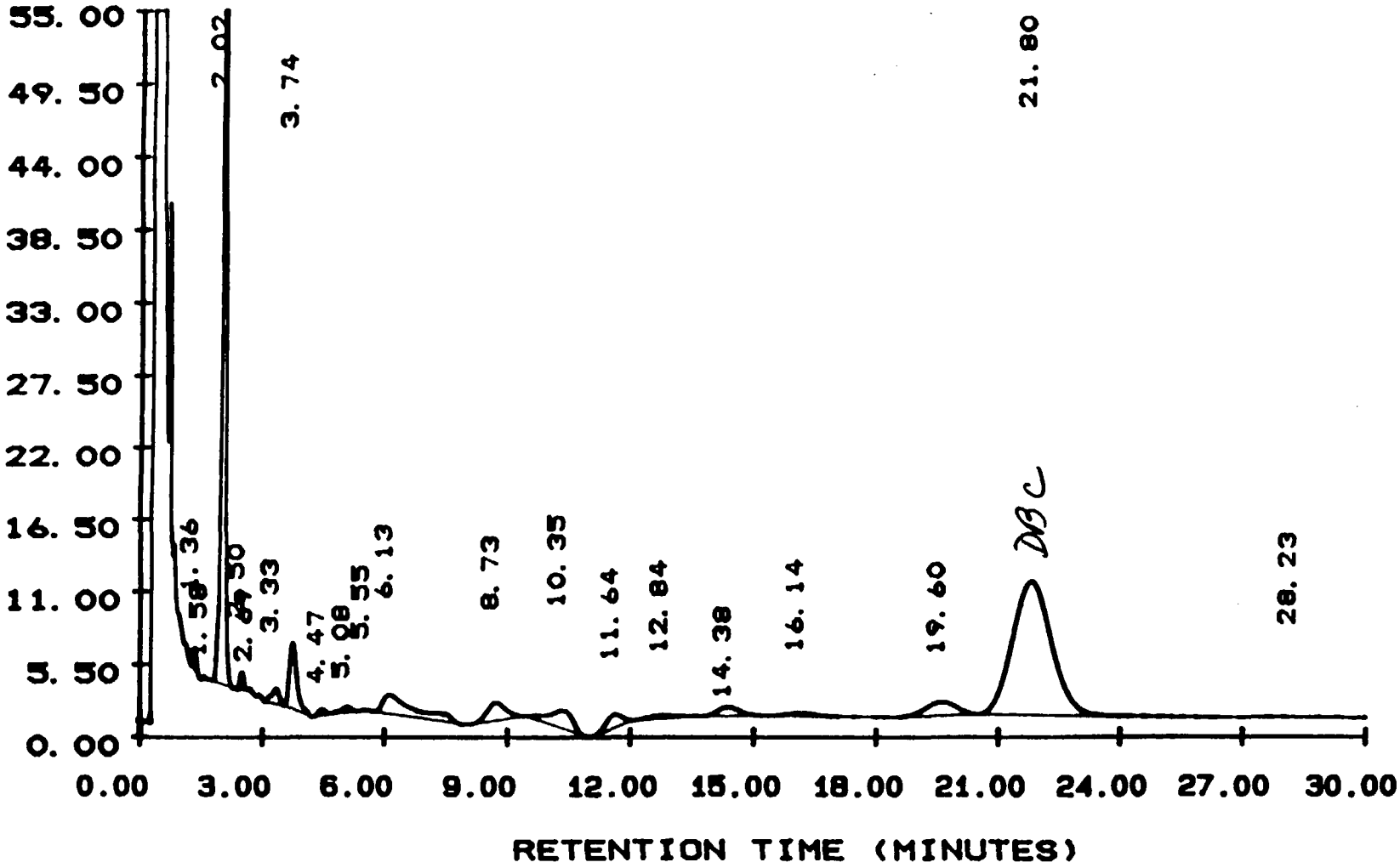
GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 0.500

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	4.0	U
319-85-7	Beta-BHC	4.0	U
319-86-8	Delta-BHC	4.0	U
58-89-9	gamma-BHC (Lindane)	4.0	U
76-44-8	Heptachlor	4.0	U
309-00-2	Aldrin	4.0	U
1024-57-3	Heptachlor epoxide	4.0	U
959-98-8	Endosulfan I	4.0	U
60-57-1	Dieldrin	8.0	U
72-55-9	4,4'-DDE	8.0	U
72-20-8	Endrin	8.0	U
33213-65-9	Endosulfan II	8.0	U
72-54-8	4,4'-DDD	8.0	U
1031-07-8	Endosulfan sulfate	8.0	U
50-29-3	4,4'-DDT	8.0	U
72-43-5	Methoxychlor	40	U
7421934	Endrin aldehyde	8.0	U
143500	Kepone	8.0	U
5103-71-9	alpha-Chlordane	40	U
5103-74-2	gamma-Chlordane	40	U
8001-35-2	Toxaphene	80	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	80	U
11096-82-5	Aroclor-1260	80	U
465-73-6	Isodrin	8.0	U

89LE0659-MB2

SAMPLE NO. : 08158913 . 14 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/16/89 02:11:06
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 56862. START TIME: 0.00
Y MINIMUM: 5922. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 02:41:35

EXTERNAL STANDARD

SAMPLE: 08158913 .14 INST:13 VIAL:FO SEQ NUMBER:014
TEST : 0608N DATE-TIME INJECTED : 08/16/89 02:11:06
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 02:41:35
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: PBLK SAMPLE VOL: 3.0 ul
CLIENT: LAB COLUMN TYPE: 2250/2401
LAB ID: 89LE0659-MB2 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

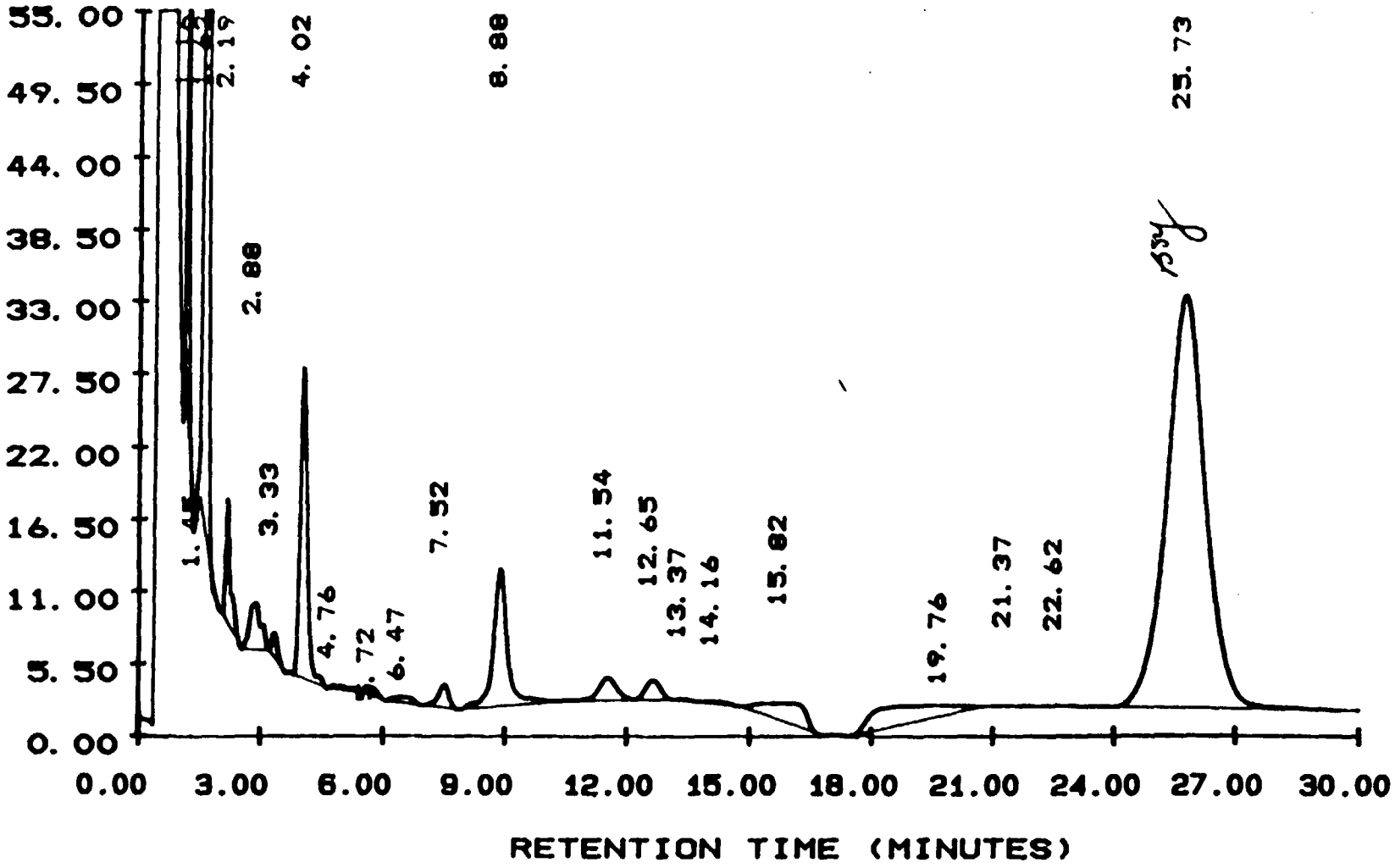
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	65549	13844	V	1.359		
002	18906	2555	V	1.582		
				1.701	ALPHA-BHC	
003	4344183	662151	V	2.022		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
004	77230	12081	V	2.498		
				2.626	HEPTACHLOR	
005	28609	2880	V	2.690		
				2.839	DELTA-BHC	
				3.169	ALDRIN	
006	146875	11007	V	3.333		
007	599370	46412	V	3.739		
008	56736	4434	V	4.470		
				4.733	HEPT. EPOXIDE	
009	73306	4051	V	5.079		
				5.235	G. CHLORDANE	
010	18770	1288	V	5.550		
				5.721	A. CHLORDANE	
				5.945	ENDOSULFAN I	
011	766085	13432	V	6.127		
				6.787	4,4'-DDE	
				7.261	DIELDRIN	
012	413738	12620	V	8.725	ENDRIN	~~0.006~~ B24 * outside RTW
013	523121	12765	V	10.349	4,4'-DDD	0.010
				10.636	ENDOSULFAN II	
014	260826	9021	V	11.644		
				12.454	4,4'-DDT	
015	114012	2303	V	12.835		
				13.864	ENDRIN ALDEHYDE	
016	242322	6347	V	14.375		
017	93698	2205	V	16.144		
				16.847	ENDO. SULFATE	
018	508489	9437	V	19.598		
019	6215195	93331		21.796	DBC	0.102 *
				23.701	METHOXYCHLOR	
020	37489	400		28.232		

89LE0659-MB2

SAMPLE NO. : 08158914 . 14 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 02:06:10

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 57791. START TIME: 0.00

Y MINIMUM: 5856. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 02:36:40

EXTERNAL STANDARD

SAMPLE: 08158914 .14 INST:14 VIAL:F0 SEQ NUMBER:014
TEST : 0608N DATE-TIME INJECTED : 08/16/89 02:06:10
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 02:36:40
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: PBLK SAMPLE VOL: 3.0 ul
CLIENT: LAB COLUMN TYPE: SP2100
LAB ID: 89LE0659-MB2
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	1799159	360032	V	1.165		
002	104338	15581	V	1.446		
003	7486745	799700	V	1.621		
				2.031	ALPHA-BHC	
004	701958	82323	V	2.189	BETA-BHC	0.023
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
005	649170	33712	V	2.875		
006	161610	17948	V	3.334		
				3.739	HEPTACHLOR	
007	2692547	221708	V	4.020		
				4.592	ALDRIN	
008	103687	2614	V	4.758		
				5.553	HEPT. EPOXIDE	
009	101978	6070	V	5.723		
				6.325	G. CHLORDANE	
010	147162	4156	V	6.470		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
011	311731	16667	V	7.516		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
012	2362383	98332	V	8.883	ENDRIN	0.011
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
013	502054	16140	V	11.537	ENDO. SULFATE	0.025
014	362211	14209	V	12.649	4,4'-DDT	0.005
015	22221	1193	V	13.370		
016	57731	1772	V	14.165		
				14.742	ENDRIN KETONE	
017	978410	12876	V	15.820		
				18.766	METHOXYCHLOR	
018	1602547	7191	V	19.760		
019	14560	379	V	21.372		
020	30599	631	V	22.622		
021	19643760	294701		25.727	DBC	3.634

V RAW QC DATA

B. Matrix Spike Data
   1. Tabulated Results (Form I)
   2. Pesticide/PCB Raw Data in Order by:
      a. 2250/2401 Column
      b. SP2100 Column

C. Matrix Spike Duplicate Data
   1. Tabulated Results (Form I)
   2. Pesticide/PCB Raw Data in Order by:
      a. 2250/2401 Column
      b. SP2100 Column

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

A16 C2-5MS

Lab Name: Roy F. Weston, Inc. Work Order: 510-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G709-020 MS

Sample wt/vol: 34.6 (g/mL) G Lab File ID: 08158913.16

Level: (low/med) LOW Date Received: 07/21/89

% Moisture: not dec. 72 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 50.0

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	1200	U
319-85-7	Beta-BHC	1200	U
319-86-8	Delta-BHC	1200	U
58-89-9	gamma-BHC (Lindane)		S
76-44-8	Heptachlor		S
309-00-2	Aldrin		S
1024-57-3	Heptachlor epoxide	1200	U
959-98-8	Endosulfan I	1200	U
60-57-1	Dieldrin		S
72-55-9	4,4'-DDE	2400	U
72-20-8	Endrin		S
33213-65-9	Endosulfan II	2400	U
72-54-8	4,4'-DDD	2400	U
1031-07-8	Endosulfan sulfate	2400	U
50-29-3	4,4'-DDT		S
72-43-5	Methoxychlor	12000	U
7421934	Endrin aldehyde	2400	U
143500	Kepone	2400	U
5103-71-9	alpha-Chlordane	12000	U
5103-74-2	gamma-Chlordane	12000	U
8001-35-2	Toxaphene	24000	U
12674-11-2	Aroclor-1016	12000	U
11104-28-2	Aroclor-1221	12000	U
11141-16-5	Aroclor-1232	12000	U
53469-21-9	Aroclor-1242	12000	U
12672-29-6	Aroclor-1248	9900	J
11097-69-1	Aroclor-1254	24000	U
11096-82-5	Aroclor-1260	24000	U
465-73-6	Isodrin	2400	U

S: SPIKE COMPOUND

8907G709-020S

SAMPLE NO. : 08158913 . 16

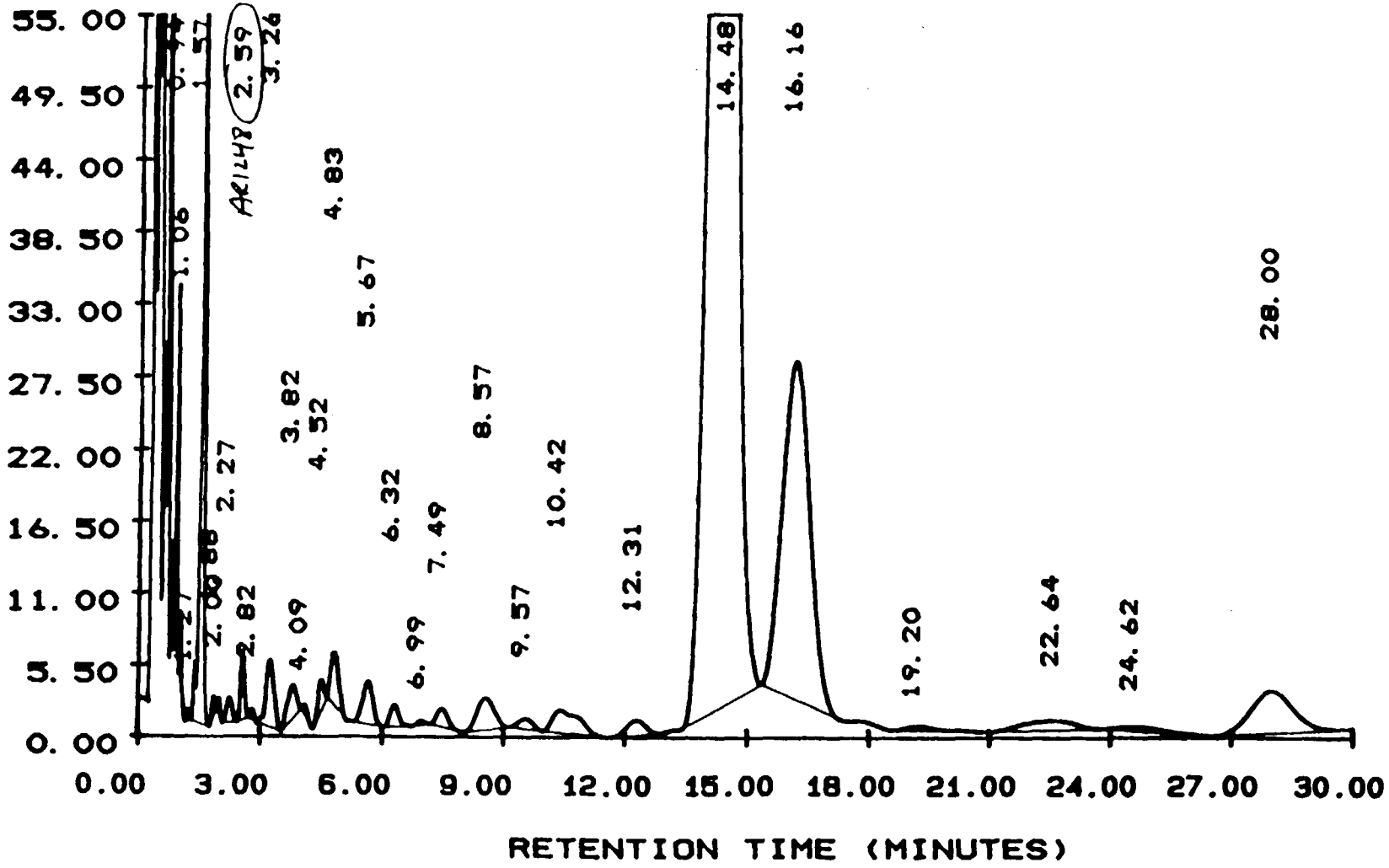
TEST NO. :

METHOD NO. : 13 / 13

INSTRUMENT: 13

DATE TIME: 08/16/89 03:18:39

PAGE NO. : 01



Y MAXIMUM: 56085.

Y MINIMUM: 4203.

START TIME: 0.00

END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 03:49:06

EXTERNAL STANDARD

SAMPLE: 08158913 .16 INST:13 VIAL:F0 SEQ NUMBER:016
TEST : 0608NS DATE-TIME INJECTED : 08/16/89 03:18:39
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 03:49:06
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G709-020MS * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : ~~20.0000~~ 100.00
BSJ 8/17/89

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	763374	192604	V	0.940		
002	129912	34705	V	1.063		
003	31714	7174	V	1.269		
004	3334875	486732	V	1.574		
				1.701	ALPHA-BHC	
005	63050	11645	V	1.884		
006	32215	8373	V	2.002		
				2.146	GAMMA-BHC	
007	172512	18128	V	2.271		
				2.436	BETA-BHC	
008	326272	47759	V	2.592	HEPTACHLOR	0.103
009	48710	7645	V	2.817	DELTA-BHC	0.036
				3.169	ALDRIN	
010	655190	48924	V	3.255		
011	367873	23132	V	3.821		
012	44518	6663	V	4.085		
013	211513	21178	V	4.516		
				4.733	HEPT. EPOXIDE	
014	518257	39044	V	4.827		
				5.235	G. CHLORDANE	
015	553966	31375	V	5.670	A. CHLORDANE	~~0.260~~ BSJ * PCB peak
				5.945	ENDOSULFAN I	
016	242656	16076	V	6.318		
				6.787	4,4'-DDE	
017	40083	2969	V	6.992		
				7.261	DIELDRIN	
018	262090	13697	V	7.494		
019	692549	23574	V	8.569		
				8.812	ENDRIN	
020	191672	7758	V	9.571		
021	781527	16938	V	10.424	4,4'-DDD	0.262
				10.636	ENDOSULFAN II	
022	349035	10959	V	12.312	4,4'-DDT	0.179
				13.864	ENDRIN ALDEHYDE	
023	47264672	918904	V	14.485		
024	11442841	242543	V	16.158		
				16.847	ENDO. SULFATE	
025	194856	3592	V	19.204		
				21.712	DBC	
026	644407	7110	V	22.642		
				23.701	METHOXYCHLOR	
027	225228	3017	V	24.619		
028	2226251	30585		27.998		

All spike compounds diluted out

Diluted out

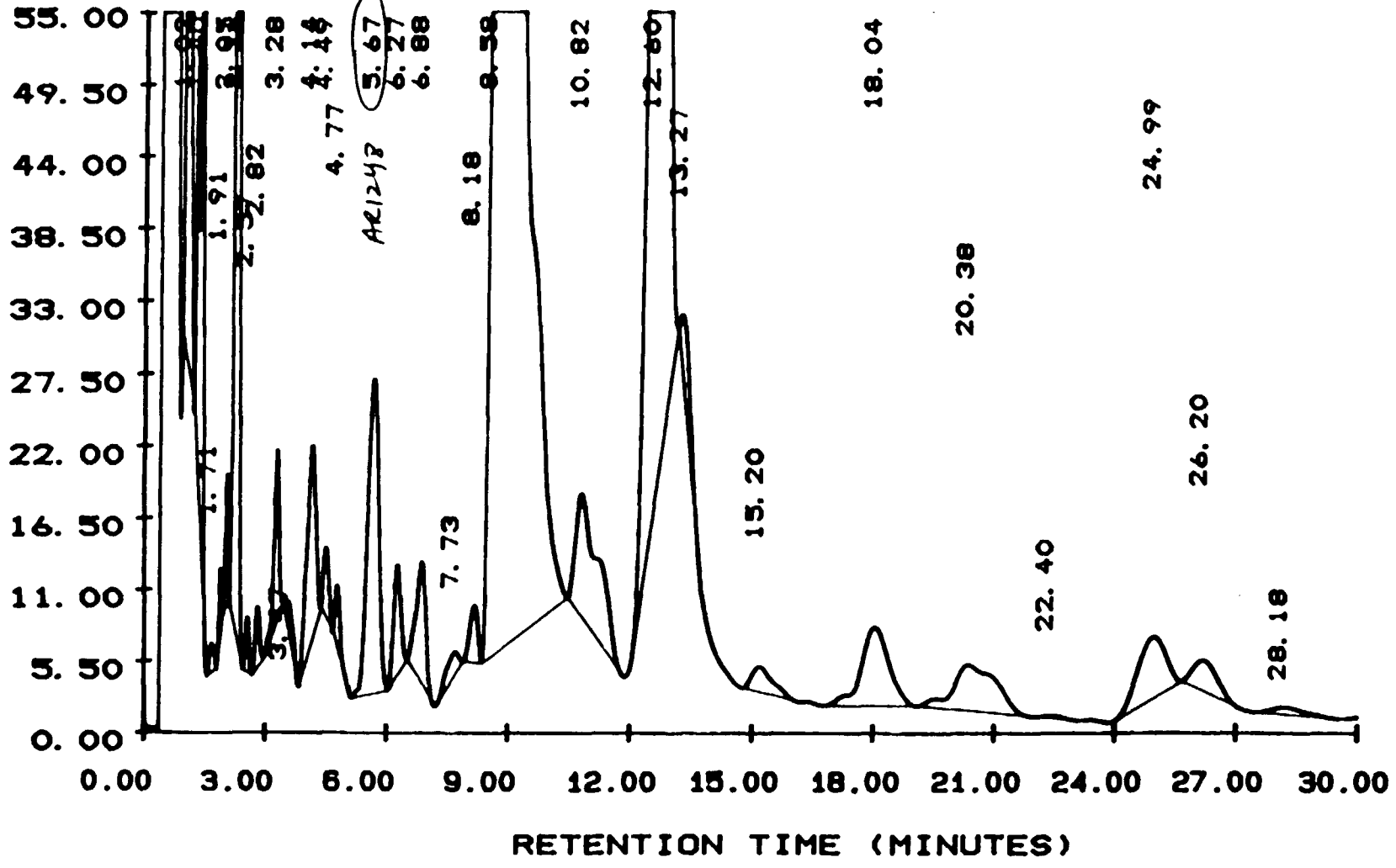
283887 2.592 AROCHLOR-1248 1.952 * X 5 = 9.760

compensate for DF error

8907G709-020S

SAMPLE NO. : 08158914 . 16
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/16/89 03:21:09
PAGE NO. : 01



Y MAXIMUM: 58236.
Y MINIMUM: 6845.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 03:51:36

EXTERNAL STANDARD

SAMPLE: 08158914 .16 INST:14 VIAL:F0 SEQ NUMBER:016
TEST : 0608NS DATE-TIME INJECTED : 08/16/89 03:21:09
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 03:51:36
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G709-020MS
SAMPLE WT : % MOISTURE : DILUTION FACTOR : ~~20.0000~~ 100.00 BRY 8/18/89

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	5746269	670403	V	1.024		
002	4854375	670407	V	1.397		
003	170023	20130	V	1.711		
004	198528	39589	V	1.914		
005	418871	84307	V	2.054	ALPHA-BHC	0.141
				2.162	BETA-BHC	
006	7440833	863481	V	2.261		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	234644	37747	V	2.572		
008	314694	41386	V	2.822		
009	976878	119304	V	3.276		
010	283543	9821	V	3.469		
				3.739	HEPTACHLOR	
011	2093817	138176	V	4.141		
012	457685	50431	V	4.492		
				4.592	ALDRIN	
013	376281	44314	V	4.773		
				5.553	HEPT. EPOXIDE	
014	4351107	224856	V	5.674		
015	968398	78032	V	6.272	G. CHLORDANE	19.803
				6.866	ENDOSULFAN I	
016	1460139	86749	V	6.881	A. CHLORDANE	4.008
017	370891	14958	V	7.725		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
018	546214	40802	V	8.181		
019	52525488	879758	V	8.576		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
020	3532315	88839	V	10.817		
				11.539	ENDO. SULFATE	
021	26765152	765773	V	12.595		
				12.826	4,4'-DDT	
022	847006	42613	V	13.269		
				14.742	ENDRIN KETONE	
023	673191	18491	V	15.200		
024	2713395	56548	V	18.045		
				18.766	METHOXYCHLOR	
025	2504027	32960	V	20.376		
026	58733	1766	V	22.403		

027	2110217	43291 V	24.990			
			25.624	DBC	Diluted out	
028	916766	22325 V	26.204			
029	303886	5325	28.184			
	1033397		5.674	AROCHLOR-1248	2.398 * x5 =	11.990

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

A16 C2-5MSD

Lab Name: Roy F. Weston, Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G709-020 MSD

Sample wt/vol: 32.4 (g/mL) G Lab File ID: 08158913.18

Level: (low/med) LOW Date Received: 07/21/89

% Moisture: not dec. 72 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 50.0

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	1300	U
319-85-7	Beta-BHC	1300	U
319-86-8	Delta-BHC	1300	U
58-89-9	gamma-BHC (Lindane)		S
76-44-8	Heptachlor		S
309-00-2	Aldrin		S
1024-57-3	Heptachlor epoxide	1300	U
959-98-8	Endosulfan I	1300	U
60-57-1	Dieldrin		S
72-55-9	4,4'-DDE	2600	U
72-20-8	Endrin		S
33213-65-9	Endosulfan II	2600	U
72-54-8	4,4'-DDD	2600	U
1031-07-8	Endosulfan sulfate	2600	U
50-29-3	4,4'-DDT		S
72-43-5	Methoxychlor	13000	U
7421934	Endrin aldehyde	2600	U
143500	Kepone	2600	U
5103-71-9	alpha-Chlordane	13000	U
5103-74-2	gamma-Chlordane	13000	U
8001-35-2	Toxaphene	26000	U
12674-11-2	Aroclor-1016	13000	U
11104-28-2	Aroclor-1221	13000	U
11141-16-5	Aroclor-1232	13000	U
53469-21-9	Aroclor-1242	13000	U
12672-29-6	Aroclor-1248	14000	
11097-69-1	Aroclor-1254	26000	U
11096-82-5	Aroclor-1260	26000	U
465-73-6	Isodrin	2600	U

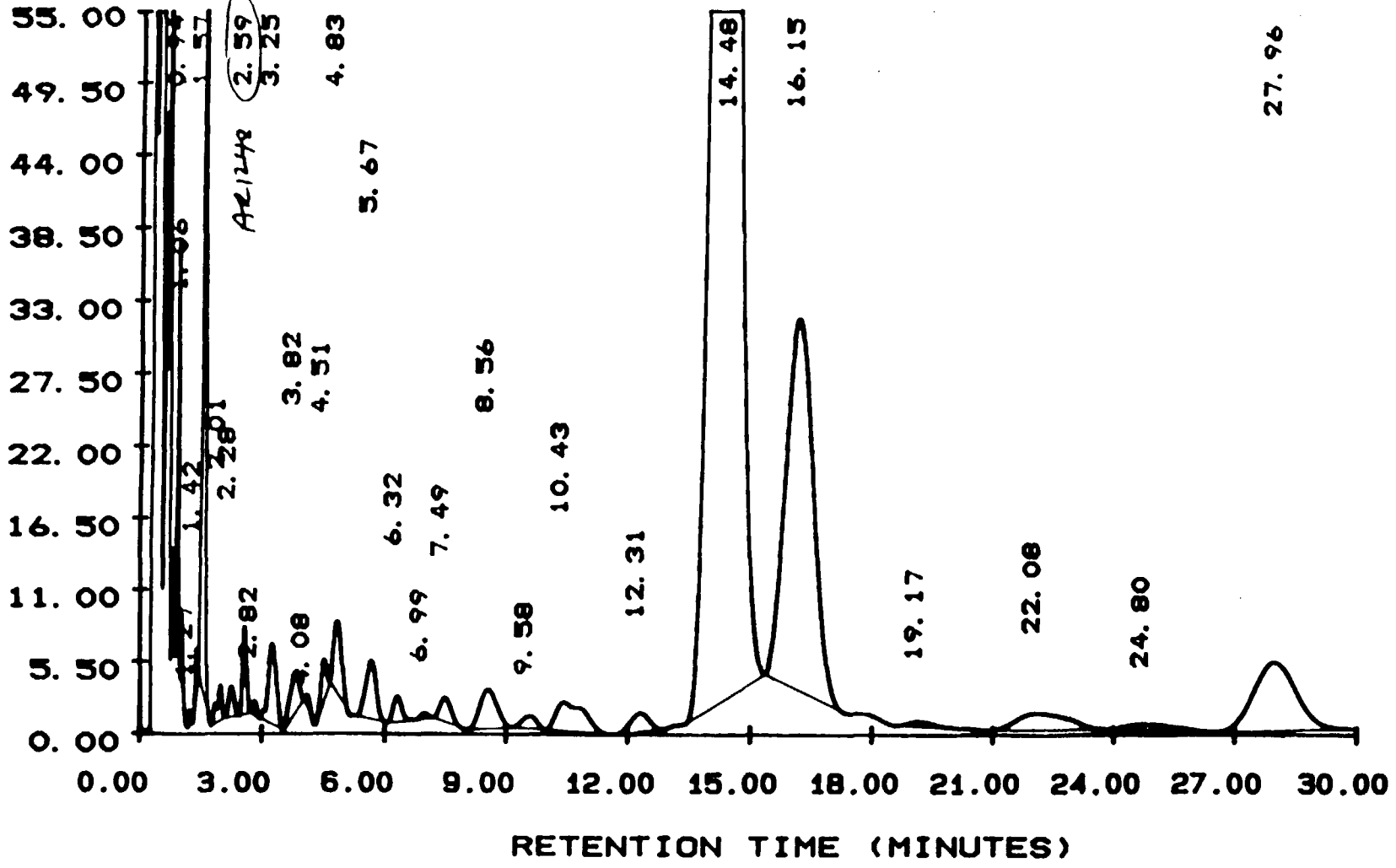
S: SPIKE COMPOUND

8907G709-020T

SAMPLE NO. : 08158913 . 18 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/16/89 04:24:54

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57246. START TIME: 0.00

Y MINIMUM: 6787. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 04:55:22

EXTERNAL STANDARD

SAMPLE: 08158913 .18 INST:13 VIAL:F0 SEQ NUMBER:018
TEST : 0608NT DATE-TIME INJECTED : 08/16/89 04:24:54
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 04:55:22
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G709-020MSD * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR :100.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	850241	213077	V	0.941		
002	135676	35475	V	1.063		
003	40198	8515	V	1.270		
004	97876	18641	V	1.418		
005	3201279	525955	V	1.575		
				1.701	ALPHA-BHC	
006	220288	23102	V	2.005		
				2.146	GAMMA-BHC	
007	188858	20973	V	2.276		
				2.436	BETA-BHC	
008	406270	59074	V	2.590	HEPTACHLOR	0.637
009	62527	9790	V	2.823	DELTA-BHC	0.233
				3.169	ALDRIN	
010	758416	56338	V	3.253		
011	425212	27640	V	3.823		
012	53731	7946	V	4.082		
013	275812	27034	V	4.514		
				4.733	HEPT. EPOXIDE	
014	681105	51435	V	4.826		
				5.235	G. CHLORDANE	
015	722231	40986	V	5.670	A. CHLORDANE	~~1.569~~ * BSY
				5.945	ENDOSULFAN I	
016	266137	17879	V	6.317		
				6.787	4,4'-DDE	
017	53357	3900	V	6.990		
				7.261	DIELDRIN	
018	326030	17023	V	7.491		
019	787540	27203	V	8.556		
				8.812	ENDRIN	
020	214560	8746	V	9.576		
021	974385	20018	V	10.428	4,4'-DDD	1.548
				10.636	ENDOSULFAN II	
022	404153	12682	V	12.312	4,4'-DDT	1.037
				13.864	ENDRIN ALDEHYDE	
023	46575712	890635	V	14.485		
024	12255073	259374	V	16.152		
				16.847	ENDO. SULFATE	
025	172630	3777	V	19.172		
				21.712	DBC	
026	1038103	11678	V	22.080		
				23.701	METHOXYCHLOR	
027	346682	4322	V	24.797		
028	3455067	47712		27.962		

All spike compounds diluted out. BSY

PCB peak

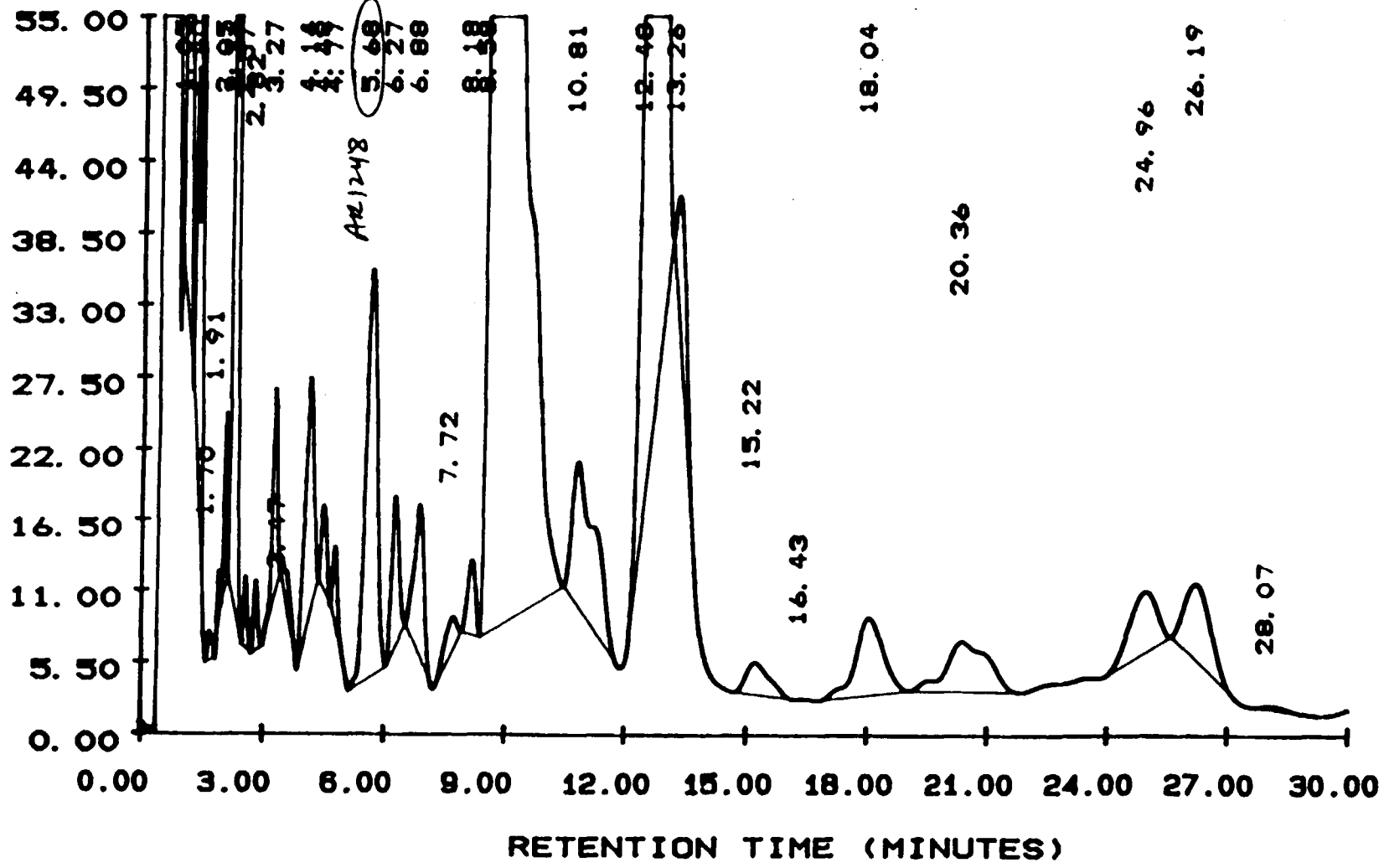
Diluted out

368415	2.590	AROCHLOR-1248	12.665	*

8907G709-020T

SAMPLE NO. : 08158914 . 18
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/16/89 04:27:42
PAGE NO. : 01



Y MAXIMUM: 58088.
Y MINIMUM: 6515.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 04:58:09

EXTERNAL STANDARD

SAMPLE: 08158914 .18 INST:14 VIAL:F0 SEQ NUMBER:018
TEST : 0608NT DATE-TIME INJECTED : 08/16/89 04:27:42
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 04:58:09
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G709-020MSD
SAMPLE WT : % MOISTURE : DILUTION FACTOR :100.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	5566553	629885	V	1.045		
002	4926221	705661	V	1.397		
003	157400	19890	V	1.704		
004	150382	29671	V	1.910		
005	577017	112902	V	2.054	ALPHA-BHC	0.942
				2.162	BETA-BHC	
006	7753997	846235	V	2.261		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	316166	49911	V	2.570		
008	341962	47933	V	2.820		
009	1149279	144529	V	3.275		
010	372035	16134	V	3.469		
				3.739	HEPTACHLOR	
011	2508347	171719	V	4.138		
012	580131	62761	V	4.492		
				4.592	ALDRIN	
013	479003	56664	V	4.772		
				5.553	HEPT. EPOXIDE	
014	5677615	292788	V	5.675		
015	1345767	108811	V	6.271	G. CHLORDANE	138.068
				6.866	ENDOSULFAN I	
016	1859037	110709	V	6.880	A. CHLORDANE	25.578
017	505564	22418	V	7.721		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
018	720330	53932	V	8.178		
019	52408256	864541	V	8.576		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
020	4318447	105134	V	10.815		
				11.539	ENDO. SULFATE	
021	25957872	754074	V	12.480		
				12.826	4,4'-DDT	
022	1714155	91668	V	13.263		
				14.742	ENDRIN KETONE	
023	947981	23400	V	15.217		
024	13787	864	V	16.432		
025	2661367	55644	V	18.045		
				18.766	METHOXYCHLOR	
026	2668979	36002	V	20.364		

027	2066415	43362 V	24.956		
			25.624	DBC	
028	2478843	54883 V	26.187		
029	121014	2891	28.068		

DL

1318731	5.675	AROCHLOR-1248	15.301	*

Roy F. Weston, Inc. - Lionville Laboratory
PEST/PCB ANALYTICAL DATA PACKAGE FOR
AVENDT GROUP

DATE RECEIVED: 07/13/89 RFW LOT # :8907G528

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
A13B4.5-6	001	S	89LE0659	07/11/89	07/25/89	08/16/89
A14C8.5-10.5	010	S	89LE0659	07/11/89	07/25/89	08/16/89
LAB QC:						
PBLK	MB2	S	89LE0659	N/A	07/25/89	08/16/89

PAGE

INTRO:

Traffic Reports..... 2
Data Summary..... 4

I. Case Narrative..... 6

II. QC Summary..... 10
A. Surrogate % Recovery Summary (Form II)
B. Matrix Spike/Matrix Spike Duplicate (Form III)
C. Reagent Blank Summary (Form IV)

III. Sample Data Package..... 14
A. Sample Data in order of analysis
1. Tabulated Results (Form I)
2. Raw Data in Order by:
a. 2250/2401 Column
b. SP2100 Column

IV. Standards Data Package..... 29
A. Pesticide/PCB standards
1. Form VIII
2. Form IX
3. Form X (if applicable)
4. Instrument Conditions
5. Chromatograms:
a. 2250/2401 Column
b. SP2100 Column

V. Raw QC Data Package..... 14
A. Blank Data
1. Tabulated Results (Form I)
2. Raw Data:
a. 2250/2401 Column
b. SP2100 Column
B. Matrix Spike Data
1. Tabulated Results (Form I)
2. Raw Data
a. 2250/2401 Column
b. SP2100 Column
C. Matrix Spike Duplicate Data
1. Tabulated Results (Form I)
2. Raw Data
a. 2250/2401 Column
b. SP2100 Column

TRAFFIC REPORTS

Green Yel

WESTON

Custody Transfer Record/Lab Work Request

Reference 89071979 (organics)

WESTON Analytics Use Only
89076528

Client: Arendt Group Inc.
Work Order: 5610-01-01 0001
Date Rec'd: 7/12/89 Date Due: 8/2/89
RFW Contact: Don Gipple
Client Contact/Phone: Rod Miller

Refrigerator#			60	W	W	→			→	C	
#/Type Container			[redacted]	1/G	1/G	→			→	1/G	
Volume			[redacted]	2oz	32oz	—	—	—	→	32oz	
Preservative			[redacted]	Cool	Cool	—	—	—	→		
ANALYSES REQUESTED →			[redacted]	% Solids	NSL Metals	TEPTO	VOGE	OGOBE	RCRA EP	PCB	
WA Use Only Lab ID	Client ID/Description	Matrix	Date Collected								
001	A13b 4.5-6	S	7/11/89	✓	✓	✓	✓				
002	EPTOX	W					✓	✓	✓		
003	A13b 6-9.5	S			✓					✓	
004	9.5-12				✓					✓	
005	A14B 4.0-8.5				✓	✓	✓	✓		✓	
006	EPTOX	W					✓	✓	✓		
007	A14B 8.5-13	S			✓					✓	
008	A14C 4.0-8.5				✓	✓	✓			✓	
009	EPTOX	W					✓	✓	✓		
010	A14C 8.5-10.5	S			✓	✓		OGOSN			
011	A14C 13.5-16.5				✓					✓	
012	A22a 9-14				✓		✓			✓	
013	EPTOX	W							✓		
014	A22a 19-22	S			✓					✓	
015	A22a 24-28				✓	Circled samples only					

Matrix: W - Water, S - Soil, SE - Sediment, SO - Solid, O - Oil, A - Air, WI - Wipe, DS - Drum Solids, DL - Drum Liquids, F - Fish, X - Other

Special Instructions: Logged for QC + Del = CLP MSC Appix only = 1,2,3SN, 1,2,4N, OHB6P, OOPP, ICNTO, SFD

Item/Reason	Relinquished by	Received by	Date	Time	Item/Reason	Relinquished by	Received by	Date	Time
		Patti Andreson	7/12	935	VOA Soil	[illegible]	[illegible]	7/19/89	1105
	Patti Andreson				VOA Soil	[illegible]	[illegible]	7/19/89	1206
	[illegible]	P Albright	7/14	930	[illegible]	[illegible]			
SFD	[illegible]	D Clark	7/17	8:30					
CN	[illegible]	KEBC	7/19	800					
CN STOPPER	KEBC	[illegible]	7/19	930					

WESTON Analytics Use Only

Samples Were: 1 Shipped or Hand Delivered
NOTES: 1

2 Ambient or Chilled
NOTES:

3 Received Broken/Leaking (Improperly Sealed) Y N
NOTES:

4 Properly Preserved Y N
NOTES:

5 Received Within Holding Times Y N
NOTES:

COC Tape Was:
1 Present on Outer Package Y
2 Unbroken on Outer Package Y
3 Present on Sample Y N
4 Unbroken on Sample Y N
NOTES:

COC Record Was:
1 Present Upon Receipt of Samples Y N

Discrepancies Between Sample Labels and COC Record? Y N
NOTES:

NO D/F or metals per M Carkhuff.

RFW 21-21-001/A-7/88

7-115

DATA SUMMARY

Roy F. Weston, Inc. - Lionville Laboratory

Pesticide/PCBs by GC, Appendix IX List

RFW Batch Number: 8907G528 Client: AVENDT GROUP Work Order: 5610-01-01-0001 Report Date: 08/21/89 16:43 Page: 1

Cust ID:	A13B4.5-6	A14C8.5-10.5	PBLK	A16 C2-5	A16 C2-5	A16 C2-5
Sample Information RFW#:	001	010	89LE0659-MB2	709-020	709-020 MS	709-020 MSD
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
D.F.:	100	2.50	0.500	50.0	50.0	50.0
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate: Di-n-butylchlorendate	D % fl	83 % fl	51 % fl	D % fl	D % fl	D % fl
Alpha-BHC	2200 U	24 U	4.0 U	1100 U	1200 U	1300 U
Beta-BHC	2200 U	24 U	4.0 U	1100 U	1200 U	1300 U
Delta-BHC	2200 U	24 U	4.0 U	1100 U	1200 U	1300 U
gamma-BHC (Lindane)	2200 U	24 U	4.0 U	1100 U	D %	D %
Heptachlor	2200 U	24 U	4.0 U	1100 U	D %	D %
Aldrin	2200 U	24 U	4.0 U	1100 U	D %	D %
Heptachlor epoxide	2200 U	24 U	4.0 U	1100 U	1200 U	1300 U
Endosulfan I	2200 U	24 U	4.0 U	1100 U	1200 U	1300 U
Dieldrin	4400 U	47 U	8.0 U	2200 U	D %	D %
4,4'-DDE	4400 U	47 U	8.0 U	2200 U	2400 U	2600 U
Endrin	4400 U	47 U	8.0 U	2200 U	D %	D %
Endosulfan II	4400 U	47 U	8.0 U	2200 U	2400 U	2600 U
4,4'-DDD	4400 U	47 U	8.0 U	2200 U	2400 U	2600 U
Endosulfan sulfate	4400 U	47 U	8.0 U	2200 U	2400 U	2600 U
4,4'-DDT	4400 U	47 U	8.0 U	2200 U	D %	D %
Methoxychlor	22000 U	240 U	40 U	11000 U	12000 U	13000 U
Endrin aldehyde	4400 U	47 U	8.0 U	2200 U	2400 U	2600 U
Kepone	4400 U	47 U	8.0 U	2200 U	2400 U	2600 U
alpha-Chlordane	22000 U	240 U	40 U	11000 U	12000 U	13000 U
gamma-Chlordane	22000 U	240 U	40 U	11000 U	12000 U	13000 U
Toxaphene	44000 U	470 U	80 U	22000 U	24000 U	26000 U
Aroclor-1016	22000 U	240 U	40 U	11000 U	12000 U	13000 U
Aroclor-1221	22000 U	240 U	40 U	11000 U	12000 U	13000 U
Aroclor-1232	340000	1700	40 U	11000 U	12000 U	13000 U
Aroclor-1242	22000 U	240 U	40 U	11000 U	12000 U	13000 U
Aroclor-1248	22000 U	240 U	40 U	9000 J	9900 J	14000
Aroclor-1254	100000	520	80 U	22000 U	24000 U	26000 U
Aroclor-1260	44000 U	470 U	80 U	22000 U	24000 U	26000 U
Isodrin	4400 U	47 U	8.0 U	2200 U	2400 U	2600 U

I CASE NARRATIVE

ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: AVENDT GROUP SAMPLES RECEIVED: 07-13-89
RFW #: 8907G528, PESTICIDE/PCB
W.O.#: 5610-01-01

NARRATIVE

The set of samples consisted of two soil samples collected on 07-11,89.

The samples were extracted on 07-25-89 and analyzed according to criteria set forth in the Contract Laboratory Program for Pesticides/PCB's on 08-16-89.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analysis:

1. Linearity and breakdown criteria are met for the primary column except for DDT compound. The standard curve has not been determined, because no DDT compound was detected in the samples.

2. The 15% criteria for continuing calibration are met for all compounds on at least one column for standards analyzed prior to the sample extracts.

3. Extraction holding time was exceeded by 2 days.

4. Retention time criteria are exceeded for the following compounds:

Compound	Column	Date/Time of analysis	
Aroclor 1254	2250/2401	08-17-89	@ 16:05
		08-17-89	@ 19:57

5. During initial calibration of this 2250/2401 column, a very small retention time window of ± 0.02 minutes was established. Retention time of aroclor 1254 in continuing calibration standards was well within a 10% retention time window. There is no impact on this case since pattern recognition is used to identify PCB's.

6. The matrix spike/spike duplicate associated with this batch are from batch B907G709. MS/MSD recoveries could not be obtained due to dilution required for analysis.

7. All obtainable surrogate recoveries are within EPA QC limits.

WESTON

8. The following extracted samples required dilution because they contained high levels of both target and on non target compounds.

Sample ID	Dilution Factor
A13B4.5 5-6	200
A14C8.5 - 10.5	5

9. An apparent mixture of PCB's was found in all samples. Weathering of the soil sample and the amount of each aroclor present in the soil can effect the relative ratio of peak size. A combination of aroclor 1232 and aroclor 1254 produced the best fit of peak height ratios versus PCB standards for samples.

10. The DBC surrogate was inadvertently omitted when preparing standards of aroclor 1232, aroclor 1254 and kepone/isodrin.

Carter Nulton, Ph.D.
Vice President/Laboratory Manager
Lionville Analytical Laboratory

8-25-89
DATE

WESTON

GLOSSARY OF PEST/PCB DATA

DATA QUALIFIERS

U - Indicates that the compounds was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).

J - Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.

E - Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

I - Interference.

ABBREVIATIONS

BS - Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.

BSD - Indicates blank spike duplicate.

MS - Indicates matrix spike.

MSD - Indicates matrix spike duplicate.

DL - Indicates that recoveries were not obtained because the extract had to be diluted for analysis.

NA - Not applicable.

DF - Dilution factor.

NR - Not required.

II QC SUMMARY

A. Surrogate % Recovery (Form II)
B. Matrix Spike/Matrix Spike Duplicate (Form III)
C. Reagent Blank (Form IV)

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP

RFW Lot No.: 8907G528

	CLIENT SAMPLE NO.	S1 (DBC)#	OTHER
01	A13B4.5-6	D	
02	A14C8.5-10.5	83	
03	PBLKLE0659-MB2	51	

ADVISORY QC LIMITS

S1 (DBC) = Di-n-butylchlorendate (20-150)

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

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 5160-01-01-0001

Case No.: AVENDT GROUP RFW Lot No.: 8907G709-020

MATRIX Spike - Sample No.: A16 C2-5 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	81.3	0	0	D	46-127
Heptachlor	81.3	434	524	D	35-130
Aldrin	81.3	0	0	D	34-132
Dieldrin	203	0	0	D	31-134
Endrin	203	0	0	D	42-139
4,4'-DDT	203	0	910	D	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
gamma-BHC (Lindane)	86.8	0	D	0	50	46-127
Heptachlor	86.8	692	D	0	31	35-130
Aldrin	86.8	0	D	0	43	34-132
Dieldrin	217	0	D	0	38	31-134
Endrin	217	0	D	0	45	42-139
4,4'-DDT	217	1130	D	0	50	23-134

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

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP

Lab Sample ID: 89LE0659-MB2 Lab File ID: 08158913 .14

Matrix:(Soil/Water) SOIL Level:(low/med) LOW

Date Extracted: 07/25/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed (1): 08/16/89 Date Analyzed (2): 08/16/89

Time Analyzed (1): 0211 Time Analyzed (2): 0206

Instrument ID (1): 13 Instrument ID (2): 14

GC Column ID (1): 2250/2401 GC Column ID (2): SP2100

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A13B4.5-6	8907G528-001	08/16/89	08/16/89
02	A14C8.5-10.5	8907G528-010	08/16/89	08/16/89
03	PBLKLE0659-MB2	89LE0659-MB2	08/16/89	08/16/89

COMMENTS:

III SAMPLE DATA

A. Sample Data in order of analysis
   1. Tabulated Results (Form I)
   2. Raw Date in Order By:
      a. 2250/2401 Column
      b. SP2100 Column

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO. 15

A13B4.5-6

Lab Name: Roy F. Weston, Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G528-001

Sample wt/vol: 32.0 (g/mL) G Lab File ID: 08158913.28

Level: (low/med) LOW Date Received: 07/13/89

% Moisture: not dec. 66 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

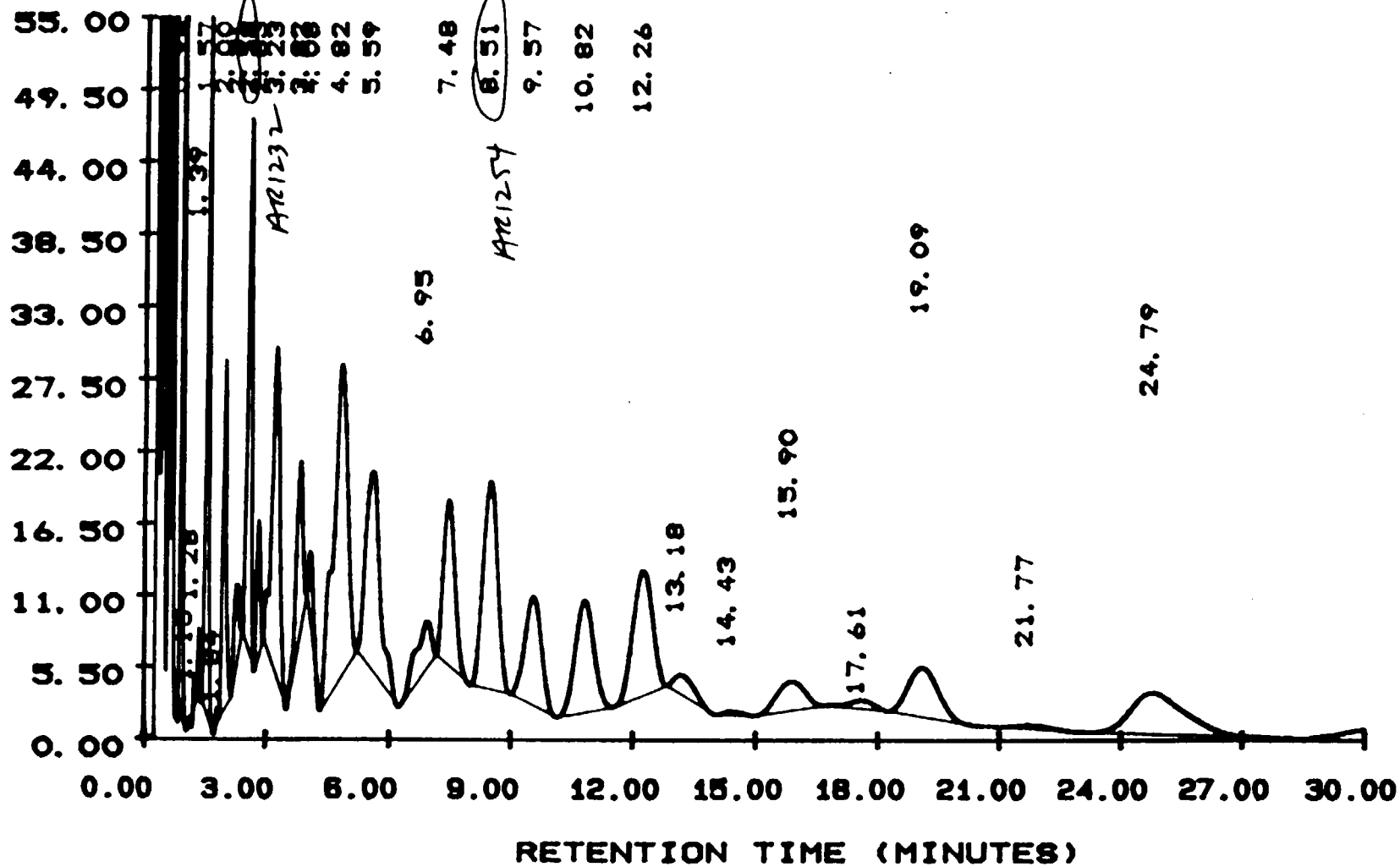
GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 100

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	2200	U
319-85-7	Beta-BHC	2200	U
319-86-8	Delta-BHC	2200	U
58-89-9	gamma-BHC (Lindane)	2200	U
76-44-8	Heptachlor	2200	U
309-00-2	Aldrin	2200	U
1024-57-3	Heptachlor epoxide	2200	U
959-98-8	Endosulfan I	2200	U
60-57-1	Dieldrin	4400	U
72-55-9	4,4'-DDE	4400	U
72-20-8	Endrin	4400	U
33213-65-9	Endosulfan II	4400	U
72-54-8	4,4'-DDD	4400	U
1031-07-8	Endosulfan sulfate	4400	U
50-29-3	4,4'-DDT	4400	U
72-43-5	Methoxychlor	22000	U
7421934	Endrin aldehyde	4400	U
143500	Kepone	4400	U
5103-71-9	alpha-Chlordane	22000	U
5103-74-2	gamma-Chlordane	22000	U
8001-35-2	Toxaphene	44000	U
12674-11-2	Aroclor-1016	22000	U
11104-28-2	Aroclor-1221	22000	U
11141-16-5	Aroclor-1232	340000	
53469-21-9	Aroclor-1242	22000	U
12672-29-6	Aroclor-1248	22000	U
11097-69-1	Aroclor-1254	100000	
11096-82-5	Aroclor-1260	44000	U
465-73-6	Isodrin	4400	U

8907G528-001

SAMPLE NO. : 08158913 . 28 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/16/89 09:56:38
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57290. START TIME: 0.00
Y MINIMUM: 6911. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 10:27:13

EXTERNAL STANDARD

SAMPLE: 08158913 .28 INST:13 VIAL:F0 SEQ NUMBER:028
TEST : 0608N DATE-TIME INJECTED : 08/16/89 09:56:38
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 10:27:13
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A13B4.5-6 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G528-001 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR :200.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	3178935	680169	V	0.941		
002	21216	5187	V	1.147		
003	53210	14293	V	1.276		
004	173719	40947	V	1.388		
005	2652071	456455	V	1.571		
				1.701	ALPHA-BHC	
006	32000	6605	V	1.840		
007	1530741	228410	V	2.000		
				2.146	GAMMA-BHC	
008	425587	51090	V	2.313		
				2.436	BETA-BHC	
009	2614461	358690	V	2.581		
				2.626	HEPTACHLOR	
010	614785	91895	V	2.831	DELTA-BHC	4.375
				3.169	ALDRIN	
011	3013699	228825	V	3.231		
012	1256093	118093	V	3.825		
013	440544	55204	V	4.083		
				4.733	HEPT. EPOXIDE	
014	5094043	218852	V	4.820		
				5.235	G. CHLORDANE	
015	3466469	141367	V	5.591		
				5.721	A. CHLORDANE	
				5.945	ENDOSULFAN I	
				6.787	4,4'-DDE	
016	895966	32362	V	6.949		
				7.261	DIELDRIN	
017	2294621	116886	V	7.475		
018	3623809	146427	V	8.505		
				8.812	ENDRIN	
019	2170321	77094	V	9.570		
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
020	2466819	78669	V	10.825		
021	2867993	87525	V	12.258		
				12.454	4,4'-DDT	
022	478389	13496	V	13.175		
				13.864	ENDRIN ALDEHYDE	
023	73136	2707	V	14.431		
024	956278	20072	V	15.905		
				16.847	ENDO. SULFATE	
025	262676	5986	V	17.606		
026	1759847	34328	V	19.085		

027	137732	2582 V	21.773	DBC	0.563	
			23.701	METHOXYCHLOR		
028	2659291	28755	24.786			
	809917		8.505	AROCHLOR-1254	118.408	*
	641623		8.505	AROCHLOR-1254	113.016	*
	965915		2.581	AROCHLOR-1232	373.425	*
	1617235		2.581	AROCHLOR-1248	122.314	*

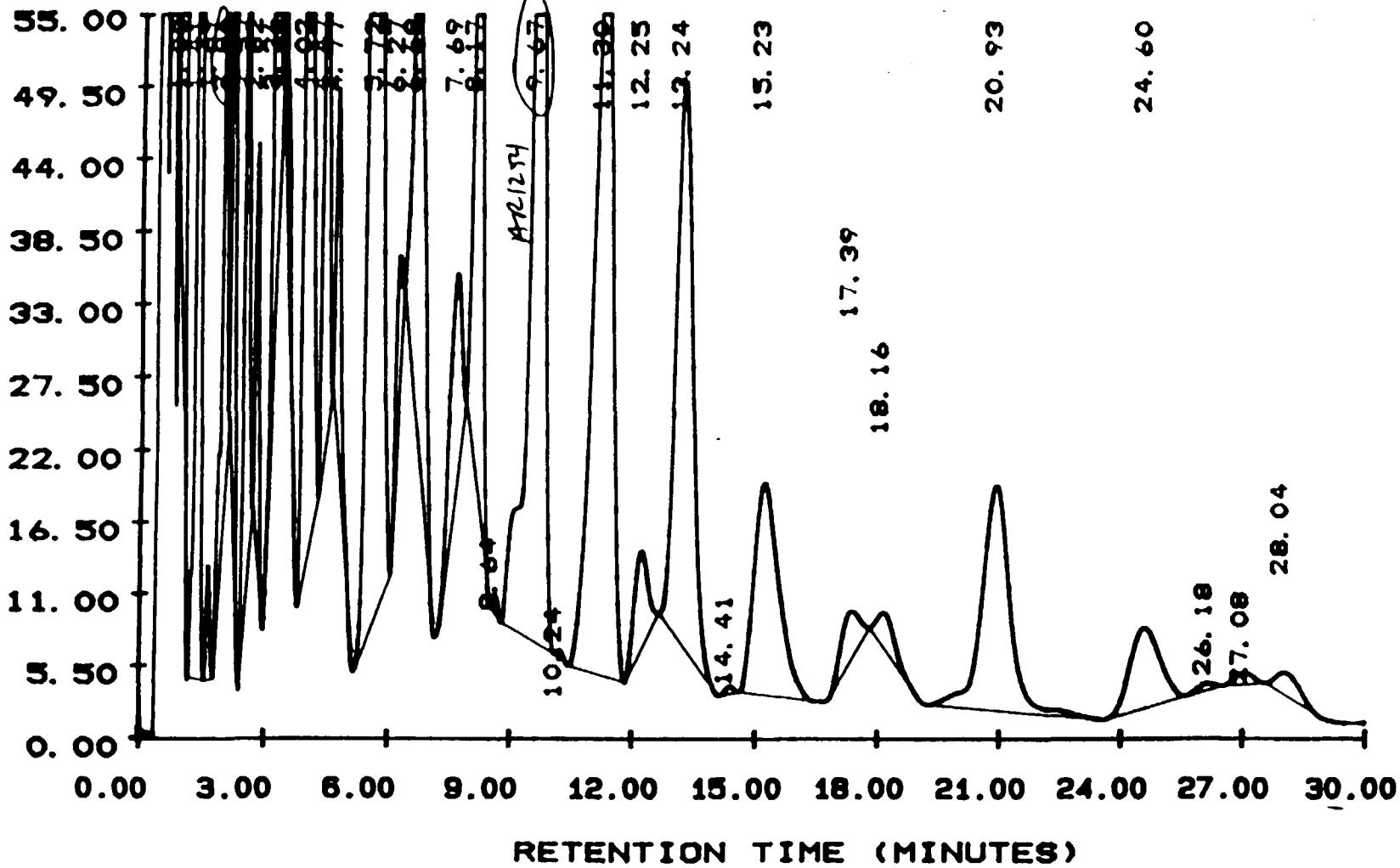
Better fit

8907G528-001

SAMPLE NO. : 08158914 . 28 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 10:00:03

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58124. START TIME: 0.00

Y MINIMUM: 6585. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 10:30:29

EXTERNAL STANDARD

SAMPLE: 08158914 .28 INST:14 VIAL:F0 SEQ NUMBER:028
TEST : 0608N DATE-TIME INJECTED : 08/16/89 10:00:03
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 10:30:29
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A13B4.5-6 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G528-001
SAMPLE WT : % MOISTURE : DILUTION FACTOR :200.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	6206247	675574	V	1.003		
002	8059511	895347	V	1.408		
003	461504	76782	V	1.692		
004	3652161	483749	V	2.055	ALPHA-BHC	8.072
				2.162	BETA-BHC	
005	4117389	685107	V	2.245		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	4047539	532224	V	2.572		
007	1841355	282729	V	2.822		
008	5935615	593470	V	3.264		
009	1370051	125674	V	3.467		
				3.739	HEPTACHLOR	
010	8296723	518351	V	4.024		
011	3941723	386344	V	4.471		
				4.592	ALDRIN	
012	2415491	261644	V	4.765		
				5.553	HEPT. EPOXIDE	
013	19538688	846366	V	5.717		
014	923438	79618	V	6.273	G. CHLORDANE	202.050
015	7461985	356290	V	6.676		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	2879283	144271	V	7.695		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	7140589	458609	V	8.174		
018	114257	13494	V	8.635		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
019	17138416	706746	V	9.666		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
020	63898	6042	V	10.240		
021	17058896	522117	V	11.296		
				11.539	ENDO. SULFATE	
022	1579187	69345	V	12.246		
				12.826	4,4'-DDT	
023	11406427	401466	V	13.242		
024	78208	5083	V	14.406		
				14.742	ENDRIN KETONE	
025	6347195	151973	V	15.229		
026	1072883	34225	V	17.386		

027	786741	26031 V	18.158	
			18.766	METHOXYCHLOR
028	7752307	161523 V	20.926	
029	2912887	56823 V	24.604	
			25.624	DBC
030	133939	4357 V	26.180	
031	254374	8180 V	27.080	
032	656673	16007	28.039	

4888321	9.666	AROCHLOR-1254	142.400	*
1343477	2.055	AROCHLOR-1232	248.506	*
3581057	5.717	AROCHLOR-1248	100.943	*

Better fit

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO. 22

A14C8.5-10.5

Lab Name: Roy F. Weston, Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G528-010

Sample wt/vol: 31.9 (g/mL) G Lab File ID: 08158913.32

Level: (low/med) LOW Date Received: 07/13/89

% Moisture: not dec. 20 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 2.50

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	24	U
319-85-7	Beta-BHC	24	U
319-86-8	Delta-BHC	24	U
58-89-9	gamma-BHC (Lindane)	24	U
76-44-8	Heptachlor	24	U
309-00-2	Aldrin	24	U
1024-57-3	Heptachlor epoxide	24	U
959-98-8	Endosulfan I	24	U
60-57-1	Dieldrin	47	U
72-55-9	4,4'-DDE	47	U
72-20-8	Endrin	47	U
33213-65-9	Endosulfan II	47	U
72-54-8	4,4'-DDD	47	U
1031-07-8	Endosulfan sulfate	47	U
50-29-3	4,4'-DDT	47	U
72-43-5	Methoxychlor	240	U
7421934	Endrin aldehyde	47	U
143500	Kepone	47	U
5103-71-9	alpha-Chlordane	240	U
5103-74-2	gamma-Chlordane	240	U
8001-35-2	Toxaphene	470	U
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	1700	
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	520	
11096-82-5	Aroclor-1260	470	U
465-73-6	Isodrin	47	U

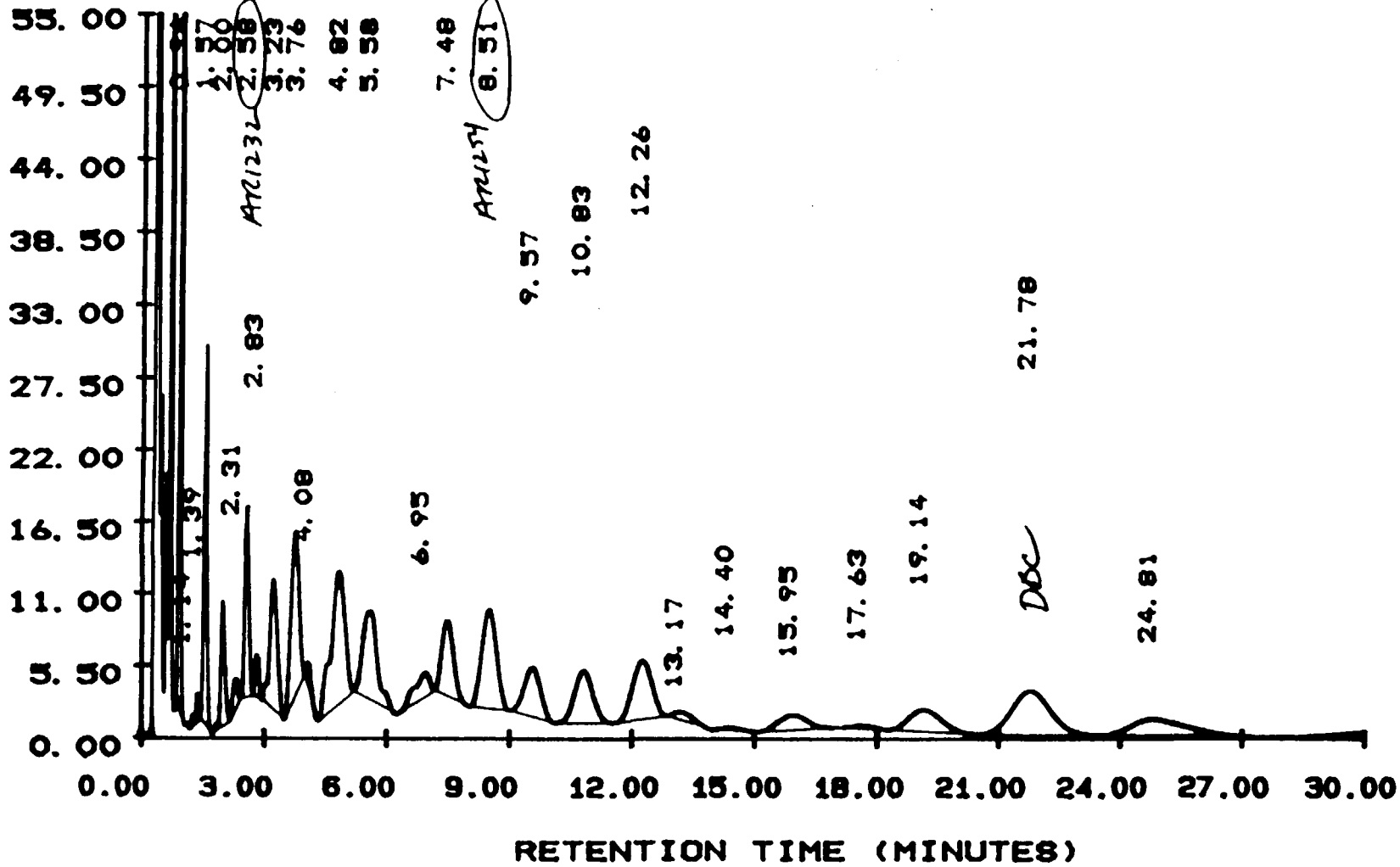
23

8907G528-010

SAMPLE NO. : 08158913 . 32 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/16/89 12:08:31

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57286. START TIME: 0.00

Y MINIMUM: 6899. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 12:38:57

EXTERNAL STANDARD

SAMPLE: 08158913 .32 INST:13 VIAL:F0 SEQ NUMBER:032
TEST : 0608N DATE-TIME INJECTED : 08/16/89 12:08:31
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 12:38:57
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A14C8.5-10.5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G528-010 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 5.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	3017503	644821	V	0.942			
002	12686	2713	V	1.135			
003	119636	17113	V	1.389			
004	1341595	234497	V	1.574			
				1.701	ALPHA-BHC		
005	582810	81283	V	2.003			
				2.146	GAMMA-BHC		
006	163022	20278	V	2.313			
				2.436	BETA-BHC		
007	936461	129135	V	2.583			
				2.626	HEPTACHLOR		
008	185554	29165	V	2.829	DELTA-BHC	0.035	
				3.169	ALDRIN		
009	1177015	91351	V	3.231			
010	1527223	111848	V	3.764			
011	132490	18362	V	4.078			
				4.733	HEPT. EPOXIDE		
012	2142891	92814	V	4.821			
				5.235	G. CHLORDANE		
013	1511527	61906	V	5.581			
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
				6.787	4,4'-DDE		
014	446928	16853	V	6.949			
				7.261	DIELDRIN		
015	1039826	53052	V	7.478			
016	1742301	69936	V	8.509			
				8.812	ENDRIN		
017	970506	34952	V	9.573			
				10.357	4,4'-DDD		
				10.636	ENDOSULFAN II		
018	1150787	36728	V	10.826			
019	1335481	40900	V	12.263			
				12.454	4,4'-DDT		
020	190086	5647	V	13.168			
				13.864	ENDRIN ALDEHYDE		
021	60650	2066	V	14.396			
022	515646	10303	V	15.955			
				16.847	ENDO. SULFATE		
023	84047	2339	V	17.635			
024	852366	15326	V	19.141			
025	2026291	30468	V	21.783	DBC	0.166	*
				23.701	METHOXYCHLOR		

026	1026291	11384	24.810			
	374199		8.509	AROCHLOR-1254	~~1.368~~ *	BSY
	821152		2.583	AROCHLOR-1248	1.411 *	
	300501		8.509	AROCHLOR-1254	1.323 *	Better fit
	435442		2.583	AROCHLOR-1232	4.209 *	

26

8907G528-010

SAMPLE NO. : 08158914 .32

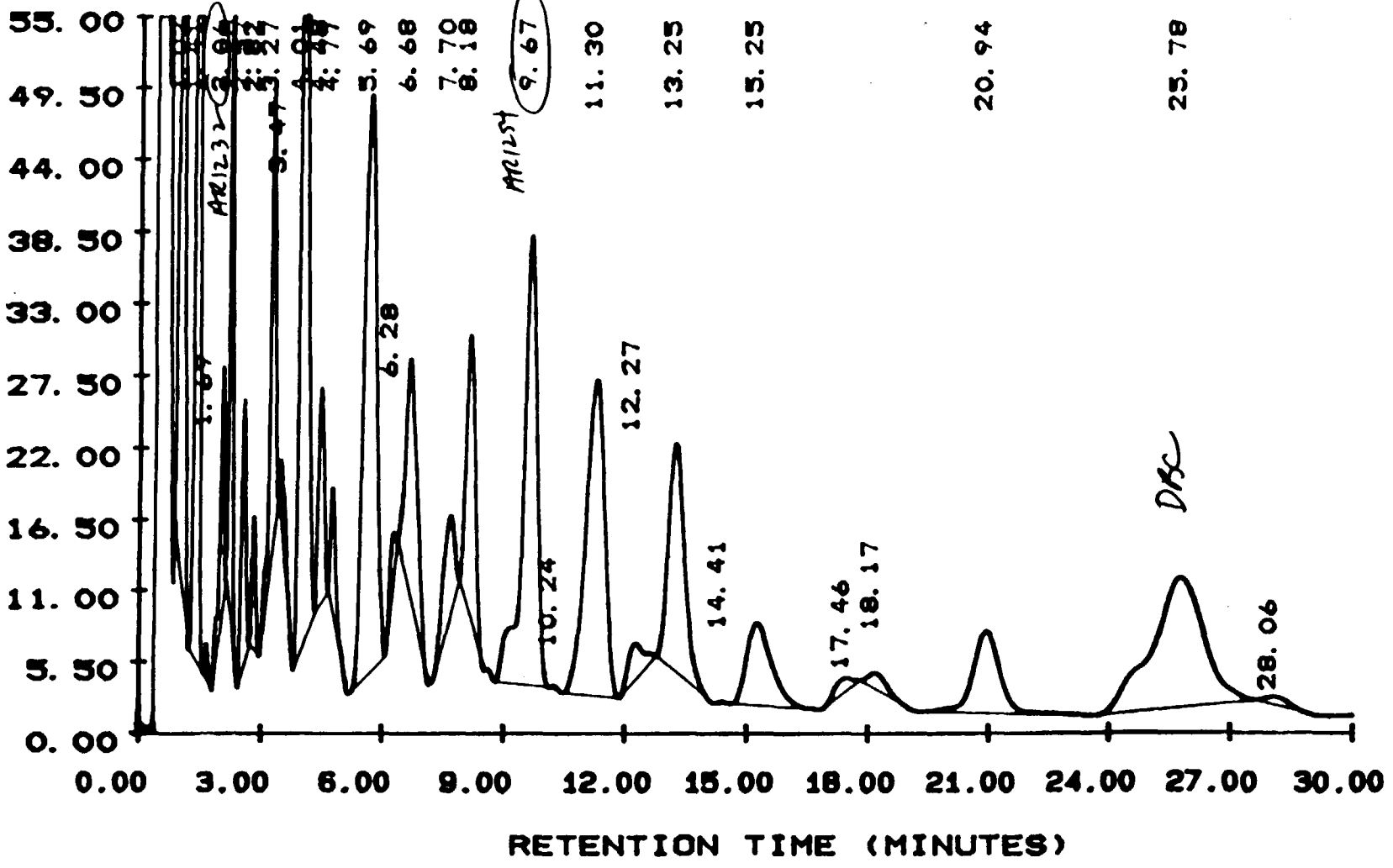
TEST NO. :

METHOD NO. : 14 / 14

INSTRUMENT: 14

DATE TIME: 08/16/89 12:11:52

PAGE NO. : 01



Y MAXIMUM: 58112.

Y MINIMUM: 6561.

START TIME: 0.00

END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 12:42:18

EXTERNAL STANDARD

SAMPLE: 08158914 .32 INST:14 VIAL:FO SEQ NUMBER:032
TEST : 0608N DATE-TIME INJECTED : 08/16/89 12:11:52
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 12:42:18
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A14C8.5-10.5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G528-010
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 5.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	7365407	828285	V	1.024		
002	7619303	886015	V	1.408		
003	147878	26360	V	1.687		
004	1142913	160445	V	2.057	ALPHA-BHC	0.067
				2.162	BETA-BHC	
005	2640777	438194	V	2.246		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	1407467	186825	V	2.574		
007	611834	93136	V	2.825		
008	2685101	321315	V	3.271		
009	525261	44516	V	3.471		
				3.739	HEPTACHLOR	
010	8135873	610228	V	4.013		
011	1553459	154118	V	4.475		
				4.592	ALDRIN	
012	821310	93409	V	4.768		
				5.553	HEPT. EPOXIDE	
013	8763483	414810	V	5.691		
014	322840	30013	V	6.281	G. CHLORDANE	1.904
015	3486131	172763	V	6.683		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	1402263	71147	V	7.697		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	3177195	205379	V	8.181		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	7763079	323814	V	9.674		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	25101	2659	V	10.243		
020	7344257	227423	V	11.301		
				11.539	ENDO. SULFATE	
021	688027	26034	V	12.268		
				12.826	4,4'-DDT	
022	4545871	164994	V	13.251		
023	16858	1332	V	14.406		
				14.742	ENDRIN KETONE	
024	2548151	59795	V	15.246		
025	300730	8823	V	17.456		
026	382878	11658	V	18.174		

			18.766	METHOXYCHLOR		
027	2794971	59085 V	20.944			
028	8299431	93692 V	25.777	DBC	5.776	
029	234751	5827	28.058			
	1952531		9.674	AROCHLOR-1254	1.570	*
	532954		2.057	AROCHLOR-1232	2.465	*
	2165191		5.691	AROCHLOR-1248	1.526	*

Better fit

IV STANDARD DATA

A. Pesticide/PCB Standards
   1. Form VIII
   2. Form IX
   3. Form X (if applicable)
   4. Chromatograms:
      a. 2250/2401 Column
      b. SP2100 Column

8D

PESTICIDE EVALUATION STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913

RFW Lot No.: 8907G528

Instrument ID: 13 GC Column ID: 2250/2401

Dates of Analyses: 08/15/89 to 08/17/89

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (</= 10.0%)	
ALDRIN	2058197	2275035	2490637	9.5	
ENDRIN	679195	709709	772173	6.6	
4,4'-DDT	423752	469074	521053	10.3	(1)
DBC	326567	324373	334232	1.6	

(1) If > 10.0% RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

		DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
	INITIAL					
01	EVAL MIX B	08/16/89	0636	0.0	1.7	
02	EVAL MIX B	08/17/89	1138	0.0	2.2	

(2) See Form Instructions.

8D
PESTICIDE EVALUATION STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914

RFW Lot No.: 8907G528

Instrument ID: 14 GC Column ID: SP2100

Dates of Analyses: 08/15/89 to 08/17/89

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (</= 10.0%)	
ALDRIN	3961885	4667485	5616695	17.5	
ENDRIN	1964585	2207035	2560427	13.4	
4,4'-DDT	953172	1171459	1469251	21.6	(1)
DBC	895698	952724	1066013	8.9	

(1) If > 10.0% RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

		DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
	INITIAL					
01	EVAL MIX B	08/16/89	0640			1.7
02	EVAL MIX B	08/17/89	1321			1.7

(2) See Form Instructions.

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913

Instrument ID: 13 GC Column ID: 2250/2401

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	17-43	08/15/89	1703	0.0	
02	EVALB	19-43	08/15/89	1735	0.0	
03	EVALC	18-43	08/15/89	1808	0.0	
04	INDA	13-45	08/15/89	1841	0.0	
05	INDB	13-46	08/15/89	1914	-0.1	
06	TOXAPH	19-36	08/15/89	1948	-0.3	
07	AR1660	12-117	08/15/89	2021	0.0	
08	AR1221	01-129	08/15/89	2055	-0.1	
09	AR1232	02-124	08/15/89	2128	-1.4	
10	AR1242	03-120	08/15/89	2201	-0.1	
11	AR1248	03-121	08/15/89	2235	-0.1	
12	AR1254	01-130	08/15/89	2308		*
13	ZZZZZ	KEPONE/ISODRIN	08/16/89	0131	-1.1	
14	PBLKLE0659	89LE0659-MB2	08/16/89	0211	-0.4	
15	ZZZZZ	8907G709-020	08/16/89	0244		*
16	ZZZZZ	8907G709-020S	08/16/89	0318		*
17	ZZZZZ	HEXANE	08/16/89	0352		
18	ZZZZZ	8907G709-020T	08/16/89	0424		*
19	ZZZZZ	HEXANE	08/16/89	0458		
20	ZZZZZ	8907G709-001	08/16/89	0530		*
21	ZZZZZ	HEXANE	08/16/89	0604		
22	EVALB	19-43	08/16/89	0636	-0.2	
23	ZZZZZ	8907G709-017	08/16/89	0709		*
24	ZZZZZ	8907G709-005	08/16/89	0742		*
25	ZZZZZ	8907G520-001	08/16/89	0816	-0.2	
26	ZZZZZ	8907G520-005	08/16/89	0850	-1.4	
27	ZZZZZ	HEXANE	08/16/89	0924		
28	A13B4.5-6	8907G528-001	08/16/89	0956	-0.3	
29	ZZZZZ	HEXANE	08/16/89	1030		
30	ZZZZZ	HEXANE	08/16/89	1102		
31	AR1254	01-130	08/16/89	1135	-0.8	
32	A14C8.5-10.5	8907G528-010	08/16/89	1208	-0.3	
33	ZZZZZ	HEXANE	08/16/89	1242		
34	ZZZZZ	89LE0658-MB2	08/16/89	1314	-0.2	
35	ZZZZZ	8907L095-005	08/16/89	1348	-0.2	
36	ZZZZZ	8907L095-005S	08/16/89	1421	-0.3	
37	ZZZZZ	8907L095-005T	08/17/89	1025	-0.4	
38	ZZZZZ	HEXANE	08/17/89	1058	-0.8	

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913

Instrument ID: 13 GC Column ID: 2250/2401

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
39	EVALB	19-43	08/17/89	1138	-0.3	
40	ZZZZZ	8907L095-001	08/17/89	1211	-0.4	
41	ZZZZZ	8907L095-002	08/17/89	1245	-0.4	
42	ZZZZZ	8907L095-003	08/17/89	1318	-0.4	
43	ZZZZZ	8907L095-004	08/17/89	1351	-0.6	
44	ZZZZZ	HEXANE	08/17/89	1424		
45	ZZZZZ	8907L129-001	08/17/89	1459	-0.5	
46	ZZZZZ	HEXANE	08/17/89	1533	-0.7	
47	AR1254	01-130	08/17/89	1605		*
48	ZZZZZ	8907L129-002	08/17/89	1639	-0.5	
49	ZZZZZ	8907L129-003	08/17/89	1712	-0.5	
50	ZZZZZ	8907L129-004	08/17/89	1745	-0.5	
51	ZZZZZ	8907L129-005	08/17/89	1818	-0.5	
52	ZZZZZ	HEXANE	08/17/89	1852		
53	ZZZZZ	KEPONE/ISODRIN	08/17/89	1924	-1.0	
54	AR1254	01-130	08/17/89	1957		*
55	INDA	13-45	08/17/89	2030	-0.4	
56	INDB	13-56	08/17/89	2103	-0.5	

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914

Instrument ID: 14 GC Column ID: SP2100

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	17-43	08/15/89	1627	0.0	
02	EVALB	19-43	08/15/89	1700	0.0	
03	EVALC	18-43	08/15/89	1733	0.0	
04	INDA	13-45	08/15/89	1805	0.0	
05	INDB	13-46	08/15/89	1838	0.0	
06	TOXAPH	19-36	08/15/89	1912	0.0	
07	AR1660	12-117	08/15/89	1945	0.1	
08	AR1221	01-129	08/15/89	2019	0.0	
09	AR1232	02-124	08/15/89	2052		*
10	AR1242	03-120	08/15/89	2125	0.0	
11	AR1248	03-121	08/15/89	2158	0.0	
12	AR1254	01-130	08/15/89	2231		*
13	ZZZZZ	KEPONE/ISODRIN	08/16/89	0133		*
14	PBLKLE0659	89LE0659-MB2	08/16/89	0206	-0.4	
15	ZZZZZ	8907G709-020	08/16/89	0247		*
16	ZZZZZ	8907G709-020S	08/16/89	0321		*
17	ZZZZZ	HEXANE	08/16/89	0355		
18	ZZZZZ	8907G709-020T	08/16/89	0427		*
19	ZZZZZ	HEXANE	08/16/89	0501		
20	ZZZZZ	8907G709-001	08/16/89	0533		*
21	ZZZZZ	HEXANE	08/16/89	0607		
22	EVALB	19-43	08/16/89	0640	0.0	
23	ZZZZZ	8907G709-017	08/16/89	0712		*
24	ZZZZZ	8907G709-005	08/16/89	0746		*
25	ZZZZZ	8907G520-001	08/16/89	0820	-0.2	
26	ZZZZZ	8907G520-005	08/16/89	0853		*
27	ZZZZZ	HEXANE	08/16/89	0927		
28	A13B4.5-6	8907G528-001	08/16/89	1000		*
29	ZZZZZ	HEXANE	08/16/89	1033		
30	ZZZZZ	HEXANE	08/16/89	1106		
31	AR1254	01-130	08/16/89	1138		*
32	A14C8.5-10.5	8907G528-010	08/16/89	1211	-0.6	
33	ZZZZZ	HEXANE	08/16/89	1245		
34	ZZZZZ	89LE0658-MB2	08/16/89	1317	-0.1	
35	ZZZZZ	8907L095-005	08/16/89	1350	-0.2	
36	ZZZZZ	8907L095-005S	08/17/89	1141	-0.3	
37	ZZZZZ	8907L095-005T	08/17/89	1215	-0.2	
38	ZZZZZ	HEXANE	08/17/89	1248		

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

8E

PESTICIDE EVALUATION STANDARD SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914

Instrument ID: 14 GC Column ID: SP2100

Dates of Analyses: 08/15/89 to 08/17/89

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
39	EVALB	19-43	08/17/89	1321	-0.2	
40	ZZZZZ	8907L095-001	08/17/89	1354	-0.2	
41	ZZZZZ	8907L095-002	08/17/89	1437	-0.2	
42	ZZZZZ	8907L095-003	08/17/89	1546	-0.4	
43	ZZZZZ	8907L095-004	08/17/89	1619	0.2	
44	ZZZZZ	HEXANE	08/17/89	1652		
45	ZZZZZ	8907L129-001	08/17/89	1725	-0.4	
46	ZZZZZ	HEXANE	08/17/89	1758		
47	AR1254	01-130	08/17/89	1830		*
48	ZZZZZ	8907L129-002	08/17/89	1904	-0.5	
49	ZZZZZ	8907L129-003	08/17/89	1937	-0.4	
50	ZZZZZ	8907L129-004	08/17/89	2010	-0.5	
51	ZZZZZ	8907L129-005	08/17/89	2042	-0.4	
52	ZZZZZ	HEXANE	08/17/89	2115		
53	ZZZZZ	KEPONE/ISODRIN	08/17/89	2148		*
54	AR1254	01-130	08/17/89	2221		*
55	INDA	13-45	08/17/89	2254	-0.2	
56	INDB	13-56	08/17/89	2327	-0.2	

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.31

RFW Lot No.: 8907G528

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/16/89
TIME OF ANALYSIS 1135
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585				
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720	8.51	516012	Y	1.3
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.47

RFW Lot No.: 8907G528

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 1605
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585				
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720	8.54	478722	Y	8.4
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.54

RFW Lot No.: 8907G528

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 1957
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND		RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	[illegible]	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585				
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720	8.54	479451	Y	8.3
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.55

RFW Lot No.: 8907G528

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2030
EPA SAMPLE NO. (STANDARD) INDA 13-45

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787				
Beta-BHC	2.44	2.41	2.47	1544555				
Delta-BHC	2.84	2.82	2.86	1495373				
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135	2.15	2548691	Y	8.4
Heptachlor	2.63	2.61	2.65	3092577	2.64	2944311	Y	4.8
Aldrin	3.17	3.15	3.19	2069585	3.18	1895743	Y	8.4
Heptachlor epoxide	4.73	4.69	4.77	1650697	4.75	1577007	Y	4.5
Endosulfan I	5.94	5.92	5.98	1193055	5.97	1099561	Y	7.8
Dieldrin	7.26	7.21	7.31	842208	7.29	790858	Y	6.1
4,4'-DDE	6.79	6.74	6.84	1003101				
Endrin	8.81	8.75	8.87	655127				
Endosulfan II	10.64	10.58	10.70	686415	10.68	642723	Y	6.4
4,4'-DDD	10.36	10.28	10.44	456373				
Endosulfan sulfate	16.85	16.75	16.95	414803				
4,4'-DDT	12.45	12.37	12.53	407833	12.51	346006	Y	15.2
Methoxychlor	23.70	23.50	23.90	152242	23.80	132483	Y	13.0
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057				
gamma-Chlordane	5.24	5.18	5.28	1811369				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720				
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158913.56

RFW Lot No.: 8907G528

Instrument ID: 13 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1841 TO: 2308

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2103
EPA SAMPLE NO. (STANDARD) INDB 13-56

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	1.70	1.68	1.72	3548787	1.7	3224659	Y	9.1
Beta-BHC	2.44	2.41	2.47	1544555	2.45	1433093	Y	7.2
Delta-BHC	2.84	2.82	2.86	1495373	2.85	1354759	Y	9.4
gamma-BHC (Lindane)	2.15	2.13	2.17	2783135				
Heptachlor	2.63	2.61	2.65	3092577				
Aldrin	3.17	3.15	3.19	2069585	3.18	2072731	Y	0.2
Heptachlor epoxide	4.73	4.69	4.77	1650697				
Endosulfan I	5.94	5.92	5.98	1193055				
Dieldrin	7.26	7.21	7.31	842208				
4,4'-DDE	6.79	6.74	6.84	1003101	6.82	922851	Y	8.0
Endrin	8.81	8.75	8.87	655127	8.84	683792	Y	4.4
Endosulfan II	10.64	10.58	10.70	686415				
4,4'-DDD	10.36	10.28	10.44	456373	10.40	413114	Y	9.5
Endosulfan sulfate	16.85	16.75	16.95	414803	16.91	395659	Y	4.6
4,4'-DDT	12.45	12.37	12.53	407833				
Methoxychlor	23.70	23.50	23.90	152242				
	******	******	******	COELUTES *				
alpha-Chlordane	5.72	5.67	5.77	905057	5.74	791497	Y	12.5
gamma-Chlordane	5.24	5.18	5.28	1811369	5.26	1640121	Y	9.5
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	2.58	2.56	2.60	887650				
Aroclor-1221	1.56	1.54	1.58	193745				
Aroclor-1232	2.58	2.56	2.60	353990				
Aroclor-1242	2.58	2.56	2.60	765983				
Aroclor-1248	2.58	2.56	2.60	774965				
Aroclor-1254	8.50	8.48	8.52	522720				
Aroclor-1260	9.57	9.55	9.59	483215				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.31

RFW Lot No.: 8907G528

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89	DATE OF ANALYSIS 08/16/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231	TIME OF ANALYSIS 1138
	EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381				
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811	9.67	2026681	N	1.8
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.47

RFW Lot No.: 8907G528

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 1830
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381				
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811	9.68	1873881	N	5.9
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.54

RFW Lot No.: 8907G528

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2221
EPA SAMPLE NO. (STANDARD) AR1254 01-1

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381				
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811	9.69	1925353	N	3.3
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.55

RFW Lot No.: 8907G528

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2254
EPA SAMPLE NO. (STANDARD) INDA 13-45

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067				
Beta-BHC	2.16	2.14	2.18	3301833				
Delta-BHC	2.42	2.40	2.44	2420125				
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083	2.37	4232539	N	0.3
Heptachlor	3.74	3.72	3.76	5982227	3.74	5996289	N	0.2
Aldrin	4.59	4.57	4.61	4099381	4.60	4001205	N	2.4
Heptachlor epoxide	5.55	5.52	5.58	4220527	5.56	4191279	N	0.7
Endosulfan I	6.87	6.84	6.90	3076563	6.88	3042137	N	1.1
Dieldrin	7.98	7.96	8.00	2285015	7.99	2269881	N	0.
4,4'-DDE	7.88	7.86	7.90	3032151				
Endrin	8.89	8.86	8.92	1981273				
Endosulfan II	9.06	9.04	9.08	2523799	9.07	2459043	N	2.6
4,4'-DDD	9.85	9.82	9.88	1289611				
Endosulfan sulfate	11.54	11.49	11.59	1259645				
4,4'-DDT	12.83	12.80	12.86	929279	12.85	946707	N	1.9
Methoxychlor	18.77	18.71	18.83	636859	18.81	653381	N	2.6
	14.74	14.69	14.79	1214091				
alpha-Chlordane	6.98	6.95	7.01	2597551				
gamma-Chlordane	6.32	6.30	6.36	5068145				
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811				
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9

PESTICIDE/PCB STANDARD SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 5610-01-01-0001

Case No.: AVENDT GROUP GC Sample ID: 08158914.56

RFW Lot No.: 8907G528

Instrument ID: 14 GC Column ID: SP2100

DATE(S) OF ANALYSIS FROM: 08/15/89 TO: 08/15/89
TIME(S) OF ANALYSIS FROM: 1805 TO: 2231

DATE OF ANALYSIS 08/17/89
TIME OF ANALYSIS 2327
EPA SAMPLE NO. (STANDARD) INDB 13-56

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
Alpha-BHC	2.03	2.01	2.05	2360067	2.03	2246627	N	4.8
Beta-BHC	2.16	2.14	2.18	3301833	2.17	3967531	N	20.2
Delta-BHC	2.42	2.40	2.44	2420125	2.43	2685683	N	11.0
gamma-BHC (Lindane)	2.36	2.34	2.38	4244083				
Heptachlor	3.74	3.72	3.76	5982227				
Aldrin	4.59	4.57	4.61	4099381	4.60	3945543	N	3.8
Heptachlor epoxide	5.55	5.52	5.58	4220527				
Endosulfan I	6.87	6.84	6.90	3076563				
Dieldrin	7.98	7.96	8.00	2285015				
4,4'-DDE	7.88	7.86	7.90	3032151	7.89	2888053	N	4.8
Endrin	8.89	8.86	8.92	1981273	8.91	1811159	N	8.6
Endosulfan II	9.06	9.04	9.08	2523799				
4,4'-DDD	9.85	9.82	9.88	1289611	9.87	1245459	N	3.4
Endosulfan sulfate	11.54	11.49	11.59	1259645	11.56	1382475	N	9.8
4,4'-DDT	12.83	12.80	12.86	929279				
Methoxychlor	18.77	18.71	18.83	636859				
	14.74	14.69	14.79	1214091	14.77	1325299	N	9.2
alpha-Chlordane	6.98	6.95	7.01	2597551	6.99	2487845	N	4.2
gamma-Chlordane	6.32	6.30	6.36	5068145	6.34	4909741	N	3.1
Toxaphene	******	******	******	COELUTES *				
Aroclor-1016	3.27	3.25	3.29	2268443				
Aroclor-1221	2.05	2.03	2.07	438413				
Aroclor-1232	2.06	2.04	2.08	903856				
Aroclor-1242	3.27	3.25	3.29	2003657				
Aroclor-1248	5.64	5.62	5.66	2083461				
Aroclor-1254	9.67	9.62	9.72	1990811				
Aroclor-1260	11.36	11.31	11.41	2008709				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

10

PESTICIDE/PCB IDENTIFICATION

CLIENT SAMPLE NO.

A13B4.5-6

Lab Name: Roy F. Weston,Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

GC Column ID (1): 2250/2401 GC Column ID (2): SP2100

Instrument ID (1): 13 Instrument ID (2): 14

Lab Sample ID: 8907G528-001 GC Sample ID: 08158914.28

Lab File ID: _____ (only if confirmed by GCMS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor-1254	Column 1 8.50	8.48	8.52	Y	N
02	Column 2 9.67	9.62	9.72	N	N
03 Aroclor-1232	Column 1 2.58	2.56	2.60	Y	N
04	Column 2 2.06	2.04	2.08	N	N

Comments:

10

PESTICIDE/PCB IDENTIFICATION

CLIENT SAMPLE NO.

A14C8.5-10.5

Lab Name: Roy F. Weston,Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

GC Column ID (1): 2250/2401 GC Column ID (2): SP2100

Instrument ID (1): 13 Instrument ID (2): 14

Lab Sample ID: 8907G528-010 GC Sample ID: 08158914.32

Lab File ID: _____ (only if confirmed by GCMS)

PESTICIDE/PCB	RETENTION TIME	RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
01 Aroclor-1254	Column 1 8.51	8.48	8.52	Y	N
02	Column 2 9.67	9.62	9.72	N	N
03 Aroclor-1232	Column 1 2.58	2.56	2.60	Y	N
04	Column 2 2.06	2.04	2.08	N	N

Comments:

Roy F. Weston, Inc. -Lionville Laboratory

PEST/PCB STANDARD CONCENTRATIONS

EVALUATION MIXES

	EVALA 17-43		EVALB 19-43		EVALC 18-43	
	(ng/ul)	(ng/inj)	(ng/ul)	(ng/inj)	(ng/ul)	(ng/inj)
ALDRIN	0.01464	0.0435	0.0293	0.0878	0.0488	0.1464
ENDRIN	0.02163	0.0649	0.0433	0.1298	0.0721	0.2163
DDT	0.04140	0.1242	0.0828	0.2484	0.1380	0.4140
DBC	0.03084	0.0925	0.0617	0.1850	0.1028	0.3084

INDIVIDUAL MIXES

	INDA 13-45			INDB 13-46	
	(ng/ul)	(ng/inj)		(ng/ul)	(ng/inj)
LINDANE	0.0084	0.025	ALPHA-BHC	0.0084	0.025
HEPTACHLOR	0.0167	0.05	BETA-BHC	0.0166	0.05
ALDRIN	0.0166	0.05	DELTA-BHC	0.0166	0.05
HEPT. EPOXIDE	0.0167	0.05	ALDRIN	0.0166	0.05
ENDOSULFAN I	0.0167	0.05	G.-CHLORDANE	0.0166	0.05
DIELDRIN	0.0167	0.05	A.-CHLORDANE	0.0167	0.05
ENDOSULFAN II	0.0333	0.10	4,4'-DDE	0.0166	0.05
4,4'-DDT	0.0333	0.10	ENDRIN	0.0167	0.05
ENDRIN ALDEHYDE	0.0333	0.10	4,4'-DDD	0.0333	0.10
METHOXYCHLOR	0.1666	0.50	ENDO. SULFATE	0.0334	0.10
DBC	0.0833	0.25	ENDRIN KETONE	0.0333	0.10
			DBC	0.0833	0.25

MULTIRESPONSE COMPOUNDS

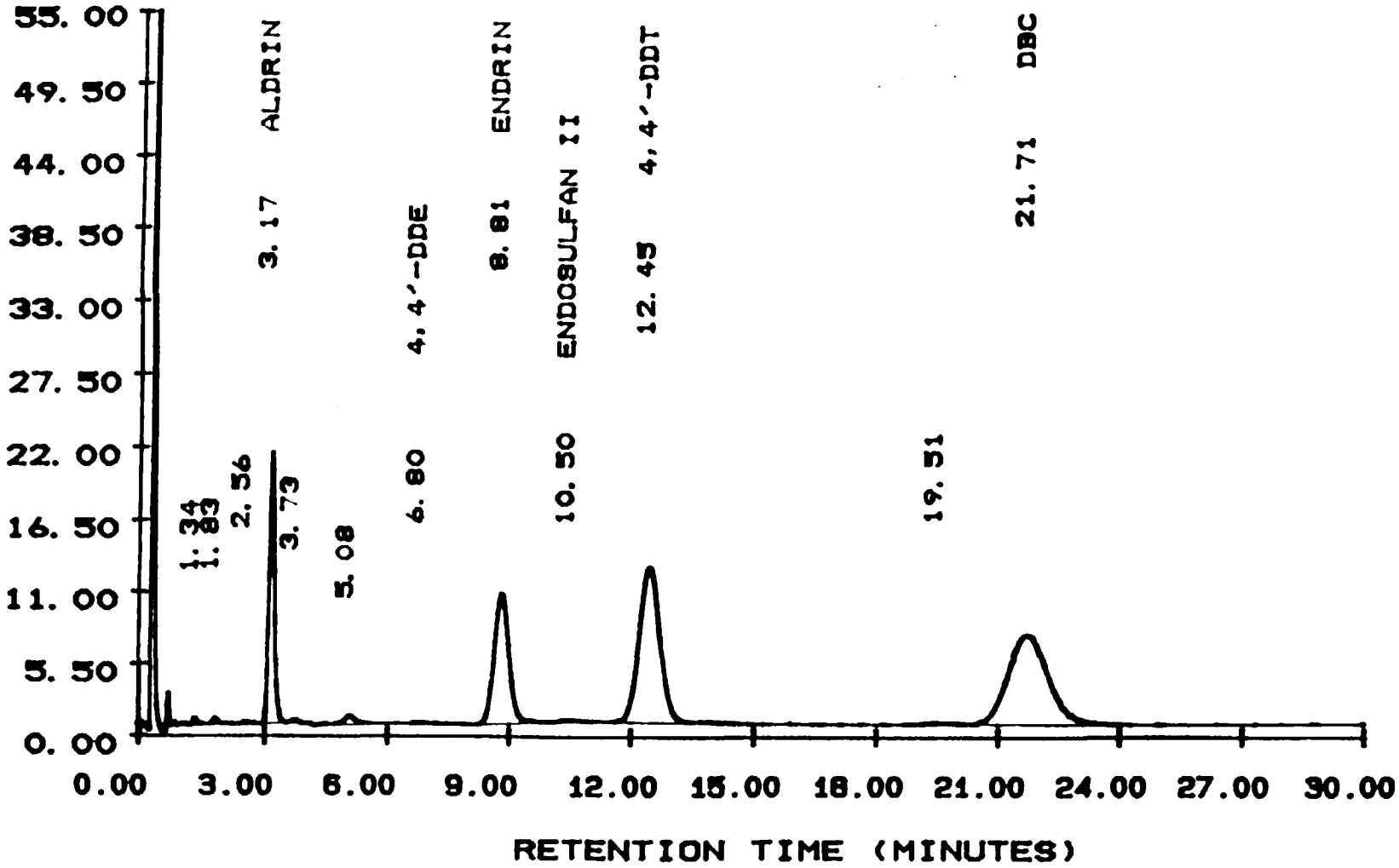
		(ng/ul)	(ng/inj)
TOXAPHENE	19-36	0.8	2.4
AROCHLOR 1016	12-117	0.2	0.6
AROCHLOR 1221	01-129	1.034	3.11
AROCHLOR 1232	02-124	0.65	1.95
AROCHLOR 1242	03-120	0.26	0.78
AROCHLOR 1248	03-121	0.25	0.75
AROCHLOR 1254	01-130	0.28	0.84
AROCHLOR 1260	12-117	0.25	0.75

Revised 8/09/89

EVALA 17-43

SAMPLE NO. : 08158913 .01
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/15/89 17:03:18
PAGE NO. : 01



Y MAXIMUM: 31068.
Y MINIMUM: 6688.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

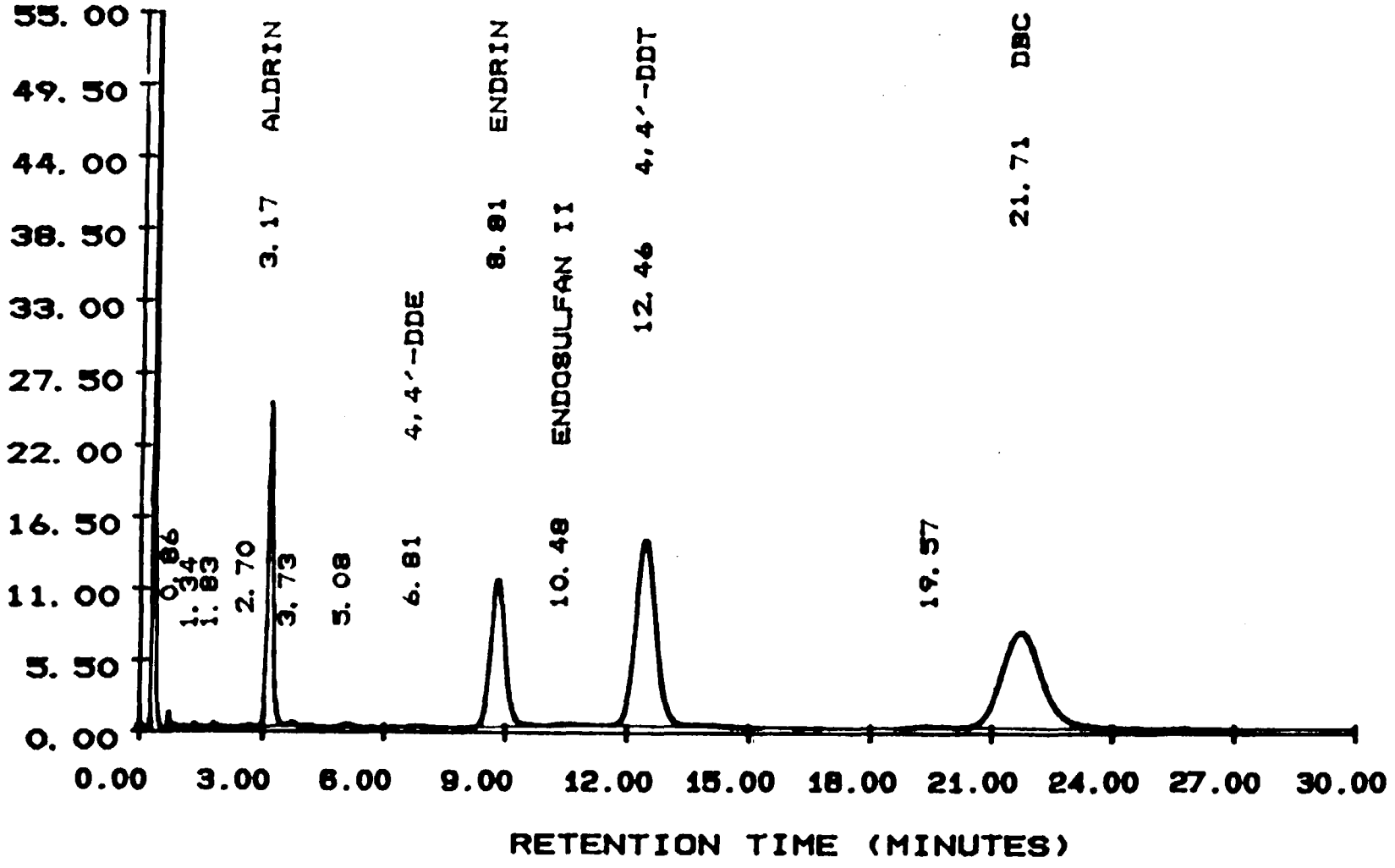
SAMPLE: 08158913 .01 INST:13 VIAL:FO SEQ NUMBER:001
TEST : DATE-TIME INJECTED : 08/15/89 17:03:18
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:51:39
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALA 17-43 * : CONFIRMED ON COLUMN SP210
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	16710	2240	V	1.342			
				1.701	ALPHA-BHC		
002	20906	2180	V	1.828			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
003	11271	708	V	2.558			
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
004	839386	90396	V	3.168	ALDRIN	0.015	*
005	22075	1441	V	3.727			
				4.733	HEPT. EPOXIDE		
006	68789	3071	V	5.077			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
007	30882	509	V	6.800	4,4'-DDE	0.000	
				7.261	DIELDRIN		
008	1104899	44073	V	8.807	ENDRIN	0.022	*
				10.357	4,4'-DDD		*
009	17935	575	V	10.501	ENDOSULFAN II	0.000	
010	1869979	52630	V	12.449	4,4'-DDT	0.043	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
011	24433	513	V	19.508			
012	2063847	30214		21.713	DBC	0.033	*
				23.701	METHOXYCHLOR		

EVALB 19-43

SAMPLE NO. : 08158913 .02
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/15/89 17:35:58
PAGE NO. : 01



Y MAXIMUM: 51750.
Y MINIMUM: 6796.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

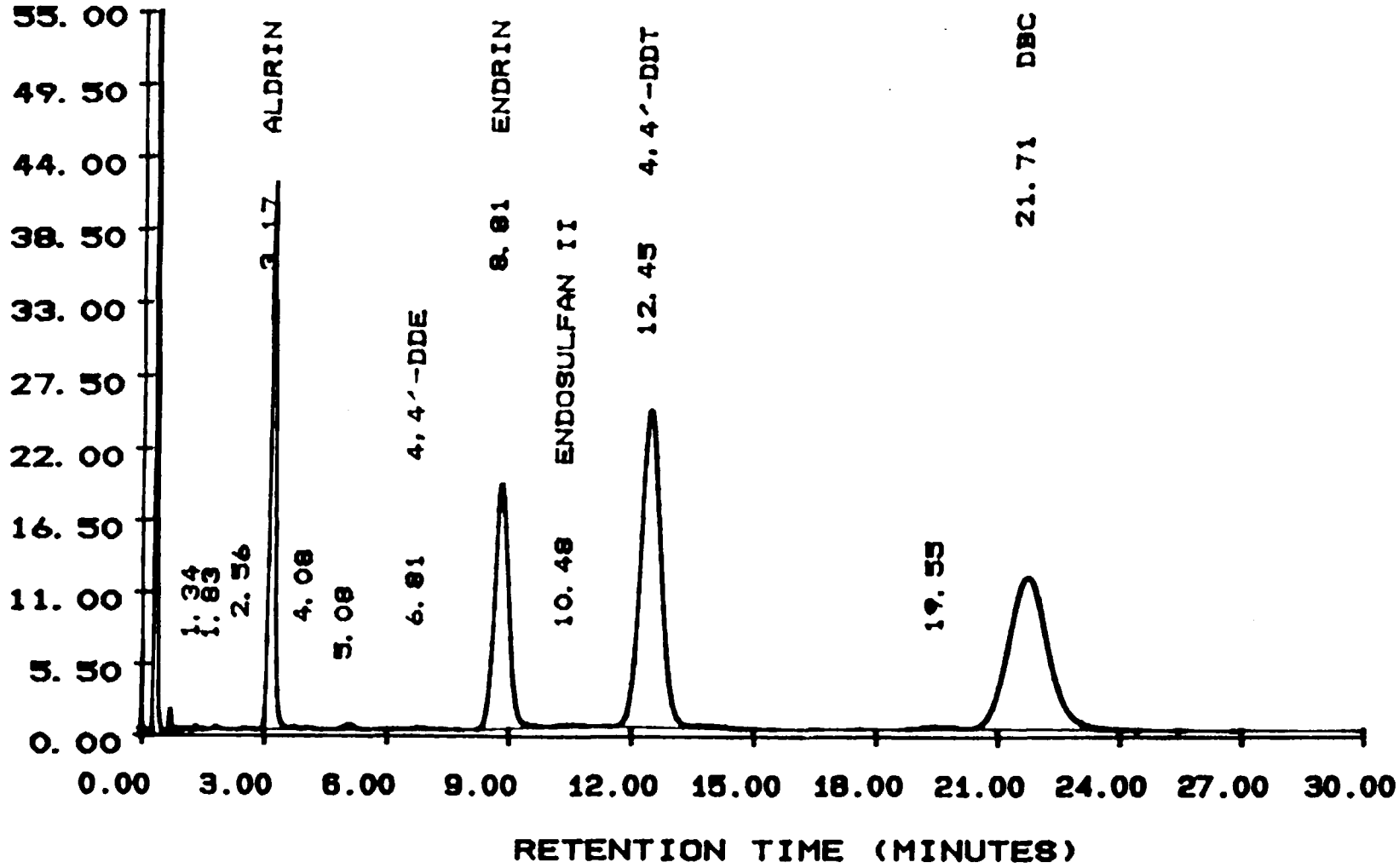
SAMPLE: 08158913 .02 INST:13 VIAL:FO SEQ NUMBER:002
TEST : DATE-TIME INJECTED : 08/15/89 17:35:58
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:51:59
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALB 19-43 * : CONFIRMED ON COLUMN SP210(
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	-89	598	V	0.860			
002	19098	2394	V	1.341			
				1.701	ALPHA-BHC		
003	21580	2353	V	1.829			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
004	17893	1321	V	2.704			
				2.839	DELTA-BHC		
005	1821165	199839	V	3.170	ALDRIN	0.032	*
006	20558	2148	V	3.728			
				4.733	HEPT. EPOXIDE		
007	36866	2085	V	5.079			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	26730	805	V	6.814	4,4'-DDE	0.000	
				7.261	DIELDRIN		
009	2258331	92106	V	8.810	ENDRIN	0.047	*
				10.357	4,4'-DDD		*
010	40099	992	V	10.478	ENDOSULFAN II	0.000	
011	4060979	116518	V	12.456	4,4'-DDT	0.095	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
012	48925	992	V	19.575			
013	4092417	60022		21.715	DBC	0.066	*
				23.701	METHOXYCHLOR		

EVALC 18-43

SAMPLE NO. : 08158913 .03
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/15/89 18:08:39
PAGE NO. : 01



Y MAXIMUM: 55694.
Y MINIMUM: 6643.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .03 INST:13 VIAL:F0 SEQ NUMBER:003
TEST : DATE-TIME INJECTED : 08/15/89 18:08:39
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:52:19
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALC 18-43 * : CONFIRMED ON COLUMN SP210(
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

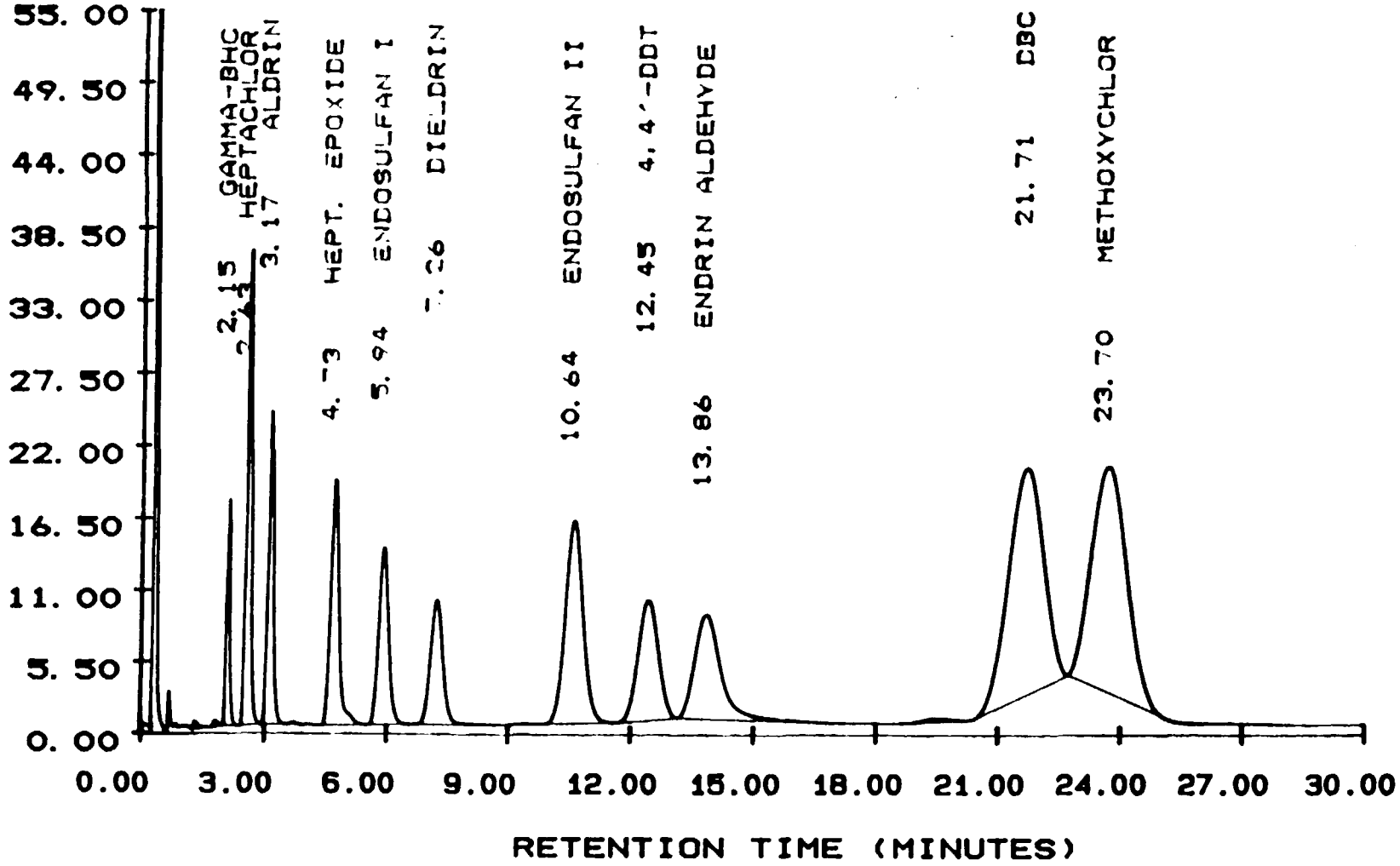
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	16026	2181	V	1.340			
				1.701	ALPHA-BHC		
002	20748	2283	V	1.828			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
003	10598	715	V	2.558			
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
004	3329319	364629	V	3.169	ALDRIN	0.059	*
005	10615	1034	V	4.077			
				4.733	HEPT. EPOXIDE		
006	61465	3545	V	5.078			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
007	41015	1250	V	6.812	4,4'-DDE	0.000	
				7.261	DIELDRIN		
008	4012559	167021	V	8.810	ENDRIN	0.085	*
				10.357	4,4'-DDD		*
009	56873	1429	V	10.485	ENDOSULFAN II	0.001	
010	7389837	215716		12.453	4,4'-DDT	0.176	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
011	80809	1652	V	19.551			
012	6922061	103077		21.713	DBC	0.112	*
				23.701	METHOXYCHLOR		

INDA 13-45

SAMPLE NO. : 08158913 .04 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 18:41:26

METHOD NO. : 13A / 13A PAGE NO. : 01



Y MAXIMUM: 30985. START TIME: 0.00

Y MINIMUM: 6743. END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

SAMPLE: 08158913 .04 INST:13 VIAL:F0 SEQ NUMBER:004
TEST : DATE-TIME INJECTED : 08/15/89 18:41:26
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 19:11:52
METHOD: 13A / 13A REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: INDA 13-45 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

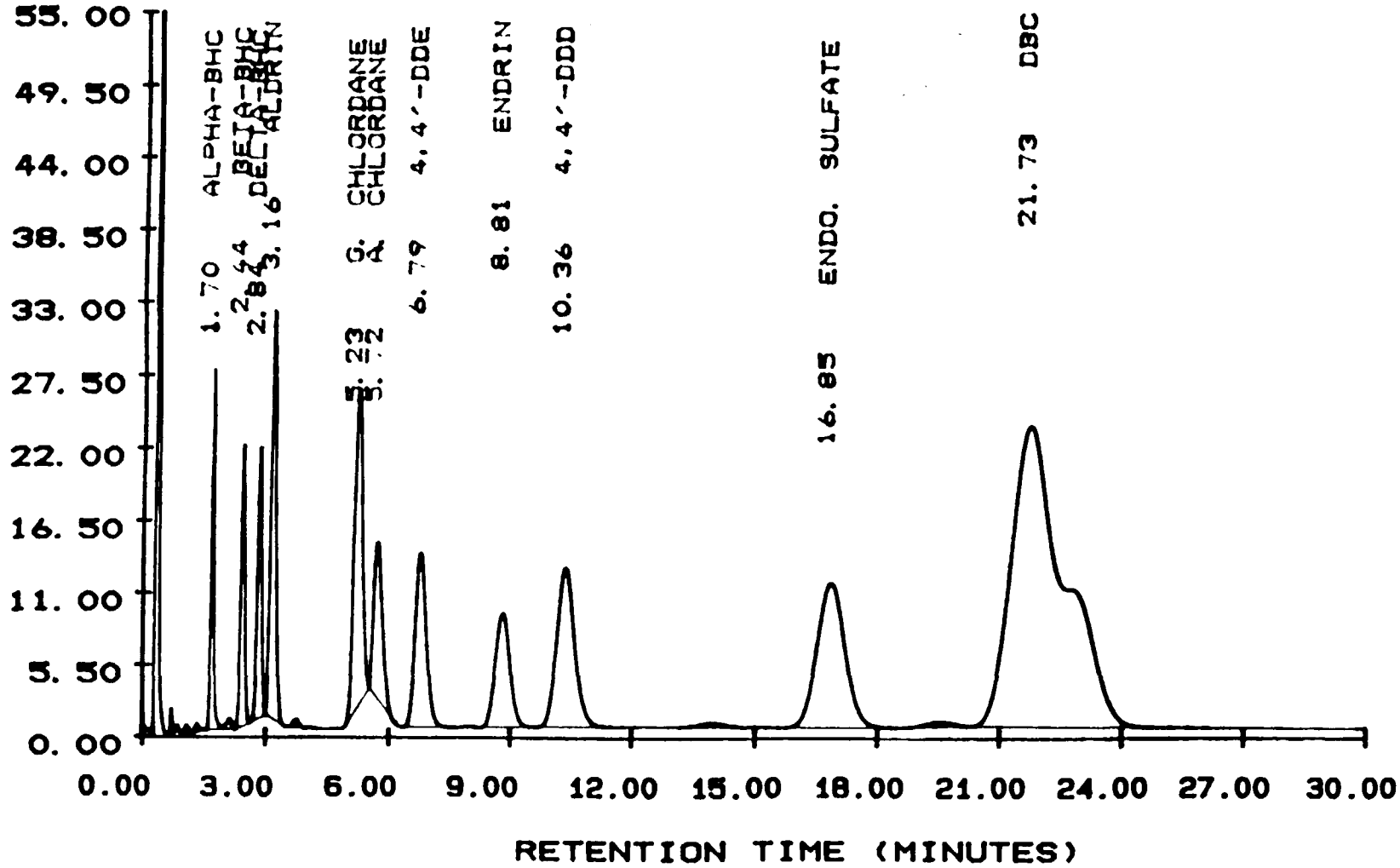
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
003	437664	70135	V	2.146	GAMMA-BHC	0.008	*
004	1255515	154938	V	2.626	HEPTACHLOR	0.017	*
005	947865	103065	V	3.169	ALDRIN	0.017	*
007	1174861	82700	V	4.733	HEPT. EPOXIDE	0.017	*
008	1014292	59772	V	5.945	ENDOSULFAN I	0.017	*
009	882241	42195	V	7.261	DIELDRIN	0.017	*
010	2043743	68573	V	10.636	ENDOSULFAN II	0.033	*
011	1376307	40743	V	12.454	4,4'-DDT	0.033	*
012	1563137	35469		13.864	ENDRIN ALDEHYDE	0.033	*
014	4492363	76330	V	21.712	DBC	0.083	*
015	4610017	76091		23.701	METHOXYCHLOR	0.167	*

INDB 13-46

SAMPLE NO. : 08158913 .05 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 19:14:29

METHOD NO. : 13B / 13B PAGE NO. : 01



Y MAXIMUM: 27530. START TIME: 0.00

Y MINIMUM: 6816. END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

SAMPLE: 08158913 .05 INST:13 VIAL:FO SEQ NUMBER:005
TEST : DATE-TIME INJECTED : 08/15/89 19:14:29
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:39:00
METHOD: 13B / 13B REV #: 00119 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: INDB 13-46 * : CONFIRMED ON COLUMN SP21(
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
004	493465	88365	V	1.701	ALPHA-BHC	0.008	*
006	539942	76919	V	2.436	BETA-BHC	0.017	*
007	553958	74470	V	2.839	DELTA-BHC	0.017	*
008	1038198	114376	V	3.164	ALDRIN	0.017	*
010	1260207	90206	V	5.235	G. CHLORDANE	0.017	*
011	675063	45343	V	5.721	A. CHLORDANE	0.017	*
012	959322	49954	V	6.787	4,4'-DDE	0.017	*
013	814442	32822	V	8.812	ENDRIN	0.017	*
014	1383949	45729		10.357	4,4'-DDD	0.033	*
016	1972143	41563	V	16.847	ENDO. SULFATE	0.033	*
018	7770739	85894		21.734	DBC	0.083	*

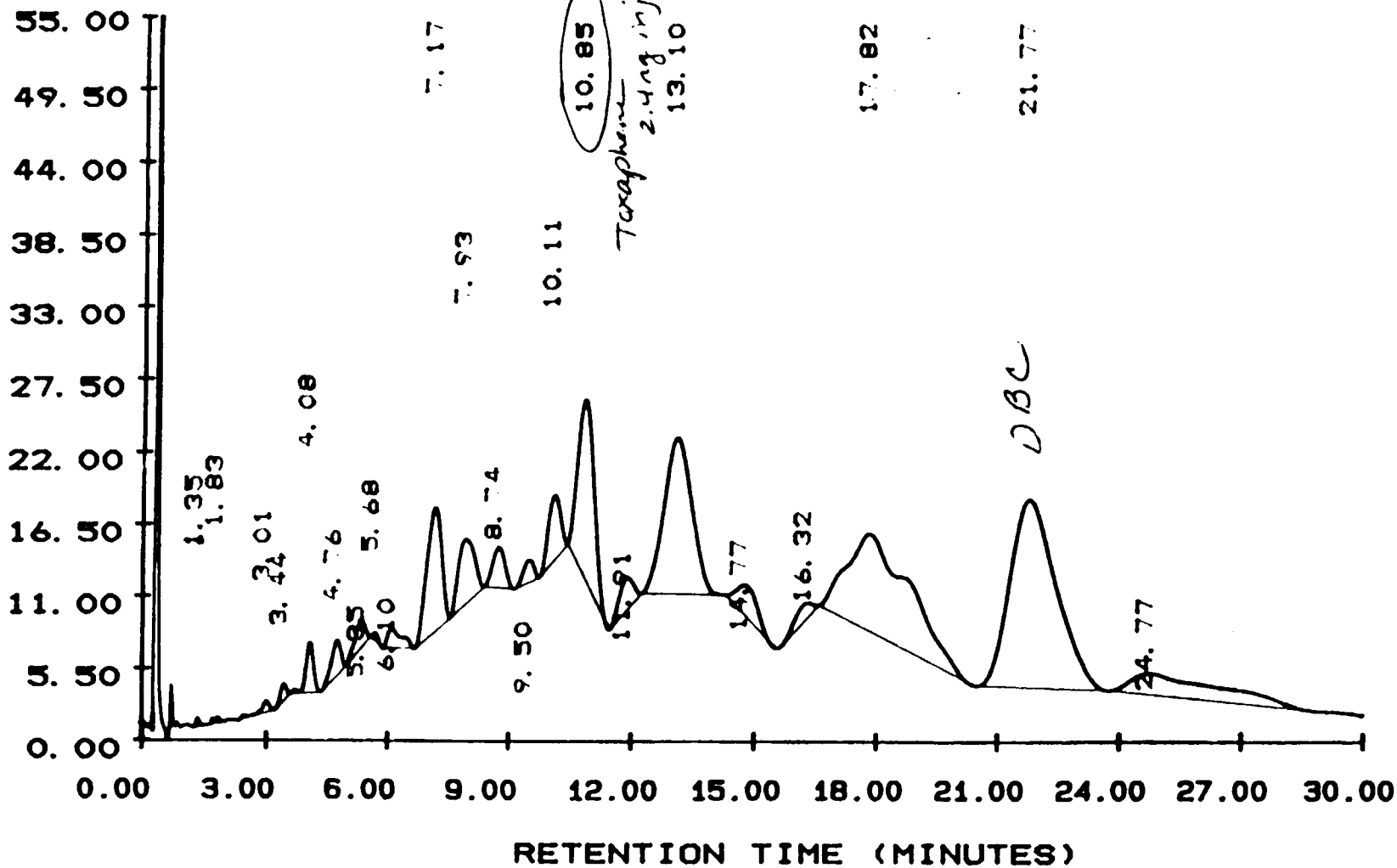
59

TOXAPH 19-36

SAMPLE NO. : 08158913 . 06 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 19:48:08

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 26551. START TIME: 0.00

Y MINIMUM: 6627. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .06 INST:13 VIAL:FO SEQ NUMBER:006
TEST : DATE-TIME INJECTED : 08/15/89 19:48:08
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 20:18:33
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: TOXAPH 19-36 * : CONFIRMED ON COLUMN SP21C
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	14952	2191	V	1.346			
				1.727	ALPHA-BHC		
002	21094	1638	V	1.832			
				2.146	GAMMA-BHC		
				2.474	BETA-BHC		
				2.626	HEPTACHLOR		
				2.884	DELTA-BHC		
003	51422	311[illegible]		3.011			
				3.169	ALDRIN		
004	44878	43[illegible]		3.440			
005	182399	1382	[illegible]	4.077			
006	154655	957[illegible]	V	4.755	HEPT. EPOXIDE	0.002	
007	129608	7452	V	5.354	G. CHLORDANE	0.001	*
008	20336	2298	V	5.683			
				5.809	A. CHLORDANE		
				5.945	ENDOSULFAN I		
009	139556	5581	V	6.103			
				6.890	4,4'-DDE		
010	858081	34228	V	7.167	DIELDRIN	0.014	
011	488872	17792	V	7.927			
012	237495	11308	V	8.740	ENDRIN	0.006	
013	112134	6208	V	9.496			
014	360934	17638	V	10.114			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
015	1387733	49495	V	10.850			
016	211430	8480	V	11.914			
				12.454	4,4'-DDT		
017	2026075	43071	V	13.105			
				13.864	ENDRIN ALDEHYDE		
018	315770	8785	V	14.773			
019	137549	3663	V	16.322			
				17.111	ENDO. SULFATE		
020	2996635	27062	V	17.821			
021	4094759	52062	V	21.775	DBC	0.057	
				23.701	METHOXYCHLOR		
022	1000499	6078		24.772			
	96989			10.850	~~AROCHLOR-XAPH~~	0.800	*

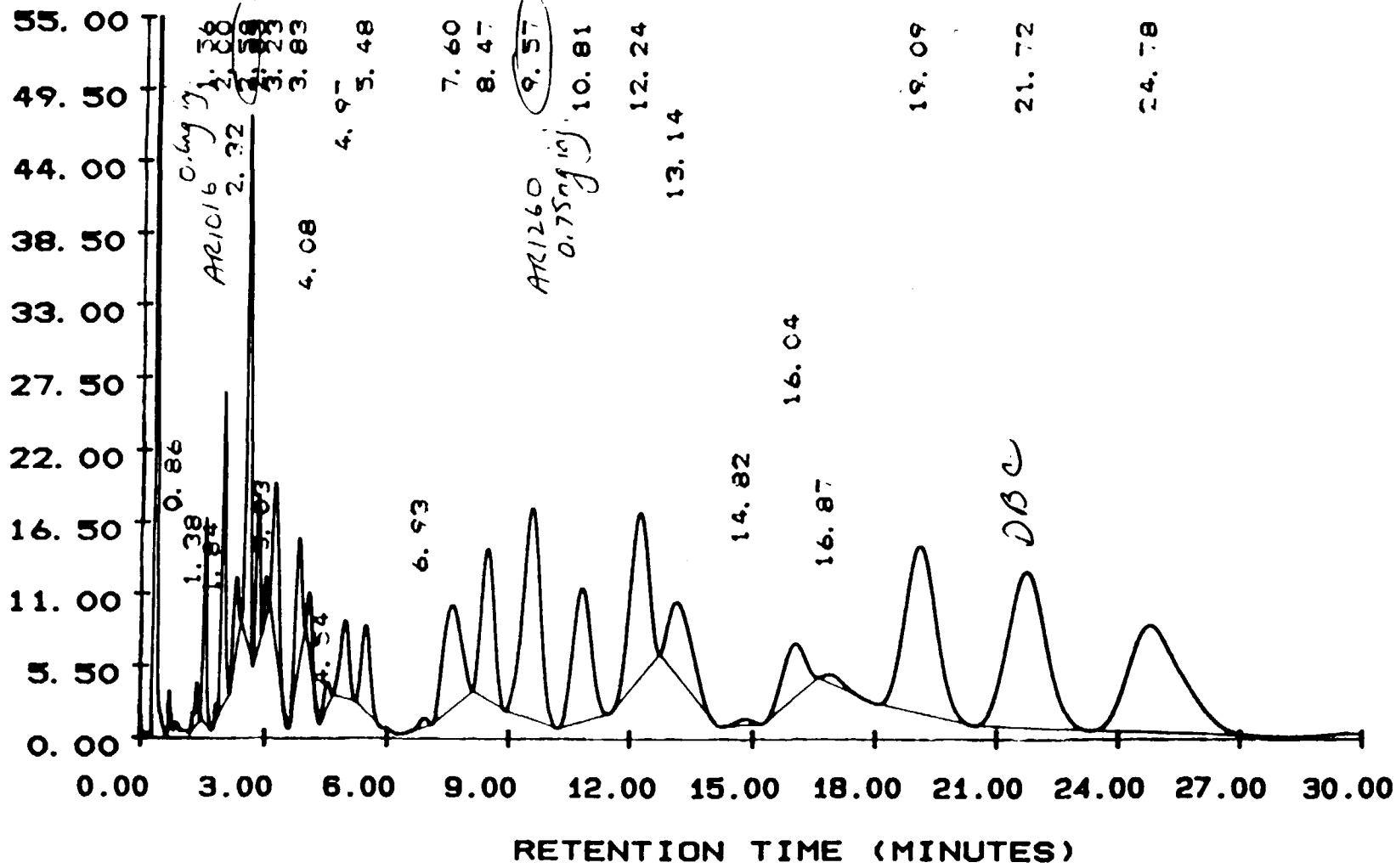
TOXAPHENE
CWS 8/22/89

AR1660 12-117

SAMPLE NO. : 08158913 .07 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 20:21:46

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 29163. START TIME: 0.00

Y MINIMUM: 6897. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .07 INST:13 VIAL:FO SEQ NUMBER:007
TEST : DATE-TIME INJECTED : 08/15/89 20:21:46
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 20:52:10
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1660 12-11 * : CONFIRMED ON COLUMN SP21(
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	867	890	V	0.859		
002	74605	10569	V	1.376		
003	338406	57451	V	1.564		
				1.727	ALPHA-BHC	
004	18941	3453	V	1.837		
005	595836	90446	V	2.000		
				2.146	GAMMA-BHC	
006	186050	22620	V	2.317		
				2.474	BETA-BHC	
007	1131671	157041	V	2.579		
				2.626	HEPTACHLOR	
008	313366	46598	V	2.828		
				2.884	DELTA-BHC	
009	60257	11622	V	3.028		
				3.169	ALDRIN	
010	525836	48671	V	3.234		
011	404495	39503	V	3.827		
012	159834	19667	V	4.083		
013	74092	7519	V	4.543		
				4.733	HEPT. EPOXIDE	
014	353217	23995	V	4.968		
				5.316	G. CHLORDANE	
015	393731	[illegible]598	V	5.479		
				5.809	A. CHLORDANE	
				5.945	ENDOSULFAN I	
016	41346	[illegible]36	V	6.927	4,4'-DDE	0.001
				7.261	DIELDRIN	
017	963642	31732	V	7.603		
018	1020655	46718	V	8.467		
				8.812	ENDRIN	
019	1954029	65547	V	9.568		
				10.516	4,4'-DDD	
				10.636	ENDOSULFAN II	
020	1282669	41104	V	10.815		
021	1577823	51370	V	12.237		
				12.454	4,4'-DDT	
022	901792	22460	V	13.138		
				13.864	ENDRIN ALDEHYDE	
023	53178	1863	V	14.819		
024	615594	16139	V	16.044		
025	94218	2628	V	16.874	ENDO. SULFATE	0.002
026	2763591	51700	V	19.085		
027	3123873	48114	V	21.723	DBC	0.053
				23.701	METHOXYCHLOR	
028	3008999	32905		24.783		

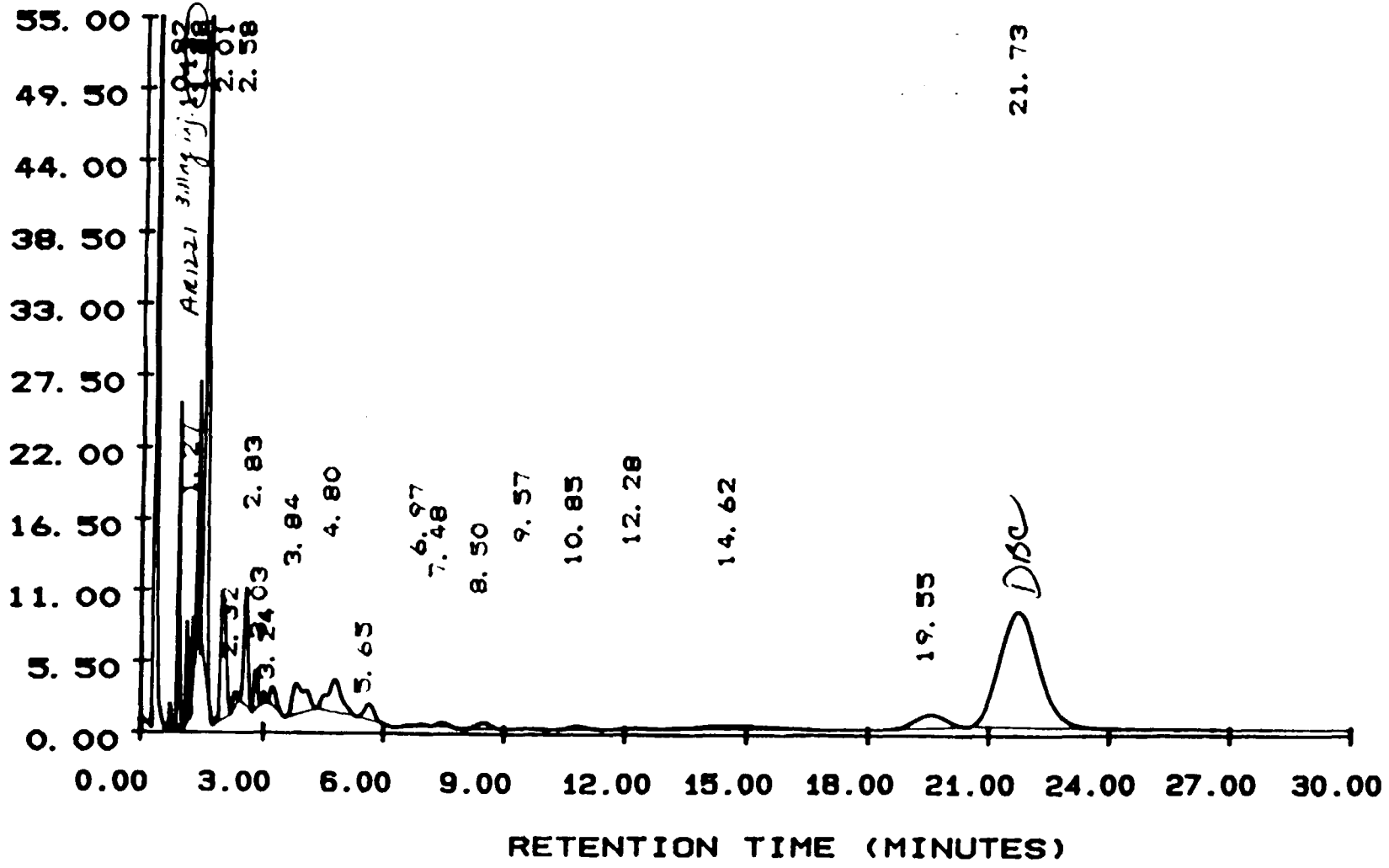
028	3008999	32905	23.701 24.783	METHOXYCHLOR		
	887650		2.579	AROCHLOR-1016	0.200	*
	483215		9.568	AROCHLOR-1260	0.250	*
	887650		2.579	AROCHLOR-1016	0.200	*

AR1221 01-129

SAMPLE NO. : 08158913 .08 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 20:55:26

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 34089. START TIME: 0.00

Y MINIMUM: 6581. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .08
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00113
CLIENT ID:
CLIENT:
LAB ID: AR1221 01-12
SAMPLE WT : % MOISTURE :

INST:13 VIAL:F0 SEQ NUMBER:008
DATE-TIME INJECTED : 08/15/89 20:55:26
DATE-TIME PROCESSED : 08/15/89 21:25:52
ANALYST: YATES SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP21
DILUTION FACTOR : 1.0000

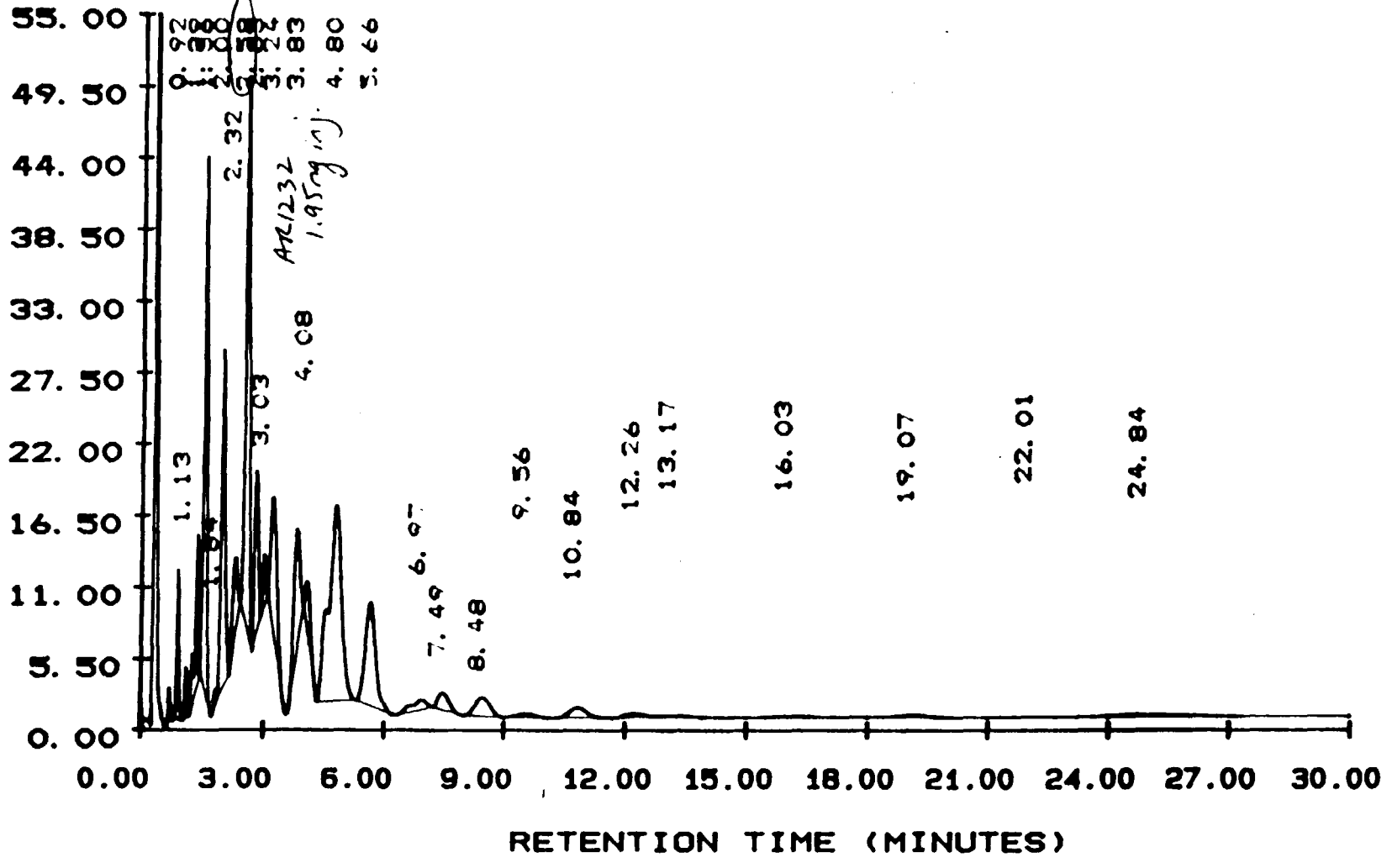
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	436558	90721	V	0.917		
002	132019	29291	V	1.127		
003	71865	14499	V	1.272		
004	357233	80842	V	1.384		
005	1542767	255585	V	1.563		
				1.727	ALPHA-BHC	
006	457370	47231	V	2.011		
				2.146	GAMMA-BHC	
007	35154	4954	V	2.320		
				2.474	BETA-BHC	
008	322162	44155	V	2.581		
				2.626	HEPTACHLOR	
009	94307	14002	V	2.829		
				2.884	DELTA-BHC	
010	22398	4183	V	3.027		
				3.169	ALDRIN	
011	74624	7378	V	3.241		
012	270944	11785	V	3.842		
013	313740	12885	V	4.801	HEPT. EPOXIDE	0.003
				5.316	G. CHLORDANE	
014	106157	6308	V	5.650		
				5.809	A. CHLORDANE	
				5.945	ENDOSULFAN I	
015	25298	898	V	6.966	4,4'-DDE	0.000
				7.261	DIELDRIN	
016	32298	1781	V	7.475		
017	61402	2413	V	8.503		
				8.812	ENDRIN	
018	12326	408	V	9.569		
				10.516	4,4'-DDD	
				10.636	ENDOSULFAN II	
019	42174	1343	V	10.845		
020	17689	551	V	12.276	4,4'-DDT	0.000
				13.864	ENDRIN ALDEHYDE	
021	169946	1374		14.617		
				17.111	ENDO. SULFATE	
022	269670	5025	V	19.555		
023	2986483	44399		21.731	DBC	0.048
				23.701	METHOXYCHLOR	
	193745			1.563	AROCHLOR-1221	1.034 *

AR1232 02-124

SAMPLE NO. : 08158913 .09 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 21:28:35

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 28547. START TIME: 0.00

Y MINIMUM: 6721. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/15/89 21:59:00

EXTERNAL STANDARD

SAMPLE: 08158913 .09
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1232 02-12
SAMPLE WT : % MOISTURE :

INST:13 VIAL:FO SEQ NUMBER:009
DATE-TIME INJECTED : 08/15/89 21:28:35
DATE-TIME PROCESSED : 08/15/89 21:59:00
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP2100
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	165504	34569	V	0.918		
002	54744	12025	V	1.128		
003	244957	37868	V	1.385		
004	883035	147111	V	1.564		
				1.727	ALPHA-BHC	
005	18150	3385	V	1.839		
006	693834	96960	V	2.002		
				2.146	GAMMA-BHC	
007	177103	22451	V	2.319		
				2.474	BETA-BHC	
008	1151091	158408	V	2.581		
				2.626	HEPTACHLOR	
009	320222	47827	V	2.829		
				2.884	DELTA-BHC	
010	76397	14399	V	3.028		
				3.169	ALDRIN	
011	429574	40388	V	3.237		
012	369873	35860	V	3.834		
013	131101	16356	V	4.084		
				4.733	HEPT. EPOXIDE	
014	1338267	59593	V	4.804		
				5.316	G. CHLORDANE	
015	565533	31697	V	5.663		
				5.809	A. CHLORDANE	
				5.945	ENDOSULFAN I	
016	86517	2933	V	6.966	4,4'-DDE	0.001
				7.261	DIELDRIN	
017	103124	5433	V	7.491		
018	152435	5865	V	8.484		
				8.812	ENDRIN	
019	36163	1254	V	9.557		
				10.516	4,4'-DDD	
				10.636	ENDOSULFAN II	
020	95926	3153	V	10.838		
021	31938	1037	V	12.264		
				12.454	4,4'-DDT	
022	14980	402	V	13.171		
				13.864	ENDRIN ALDEHYDE	
023	30451	430		16.034		
				17.111	ENDO. SULFATE	
024	40218	784	V	19.073		
025	9142	153	V	22.011	DBC	0.000
				23.701	METHOXYCHLOR	

no DBC in std. soln.

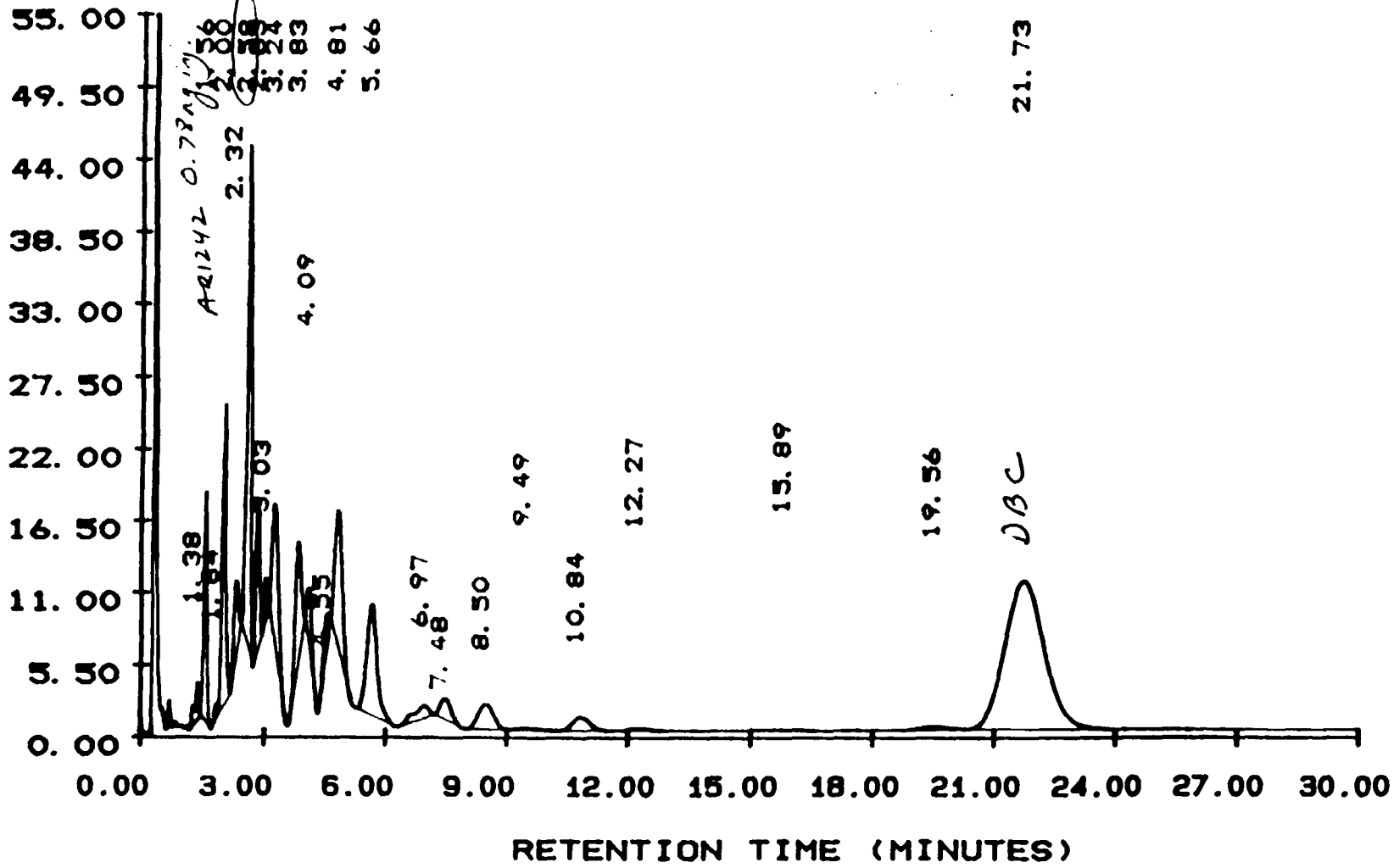
026	60352	625	24.843			
	353990		2.581	AROCHLOR-1232	0.650	*
	353990		2.581	AROCHLOR-1232	0.650	*

AR1242 03-120

SAMPLE NO. : 08158913 .10 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 22:01:47

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 31519. START TIME: 0.00

Y MINIMUM: 6876. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .10 INST:13 VIAL:FO SEQ NUMBER:010
TEST : DATE-TIME INJECTED : 08/15/89 22:01:47
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 22:32:13
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1242 03-12 * : CONFIRMED ON COLUMN SP210C
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

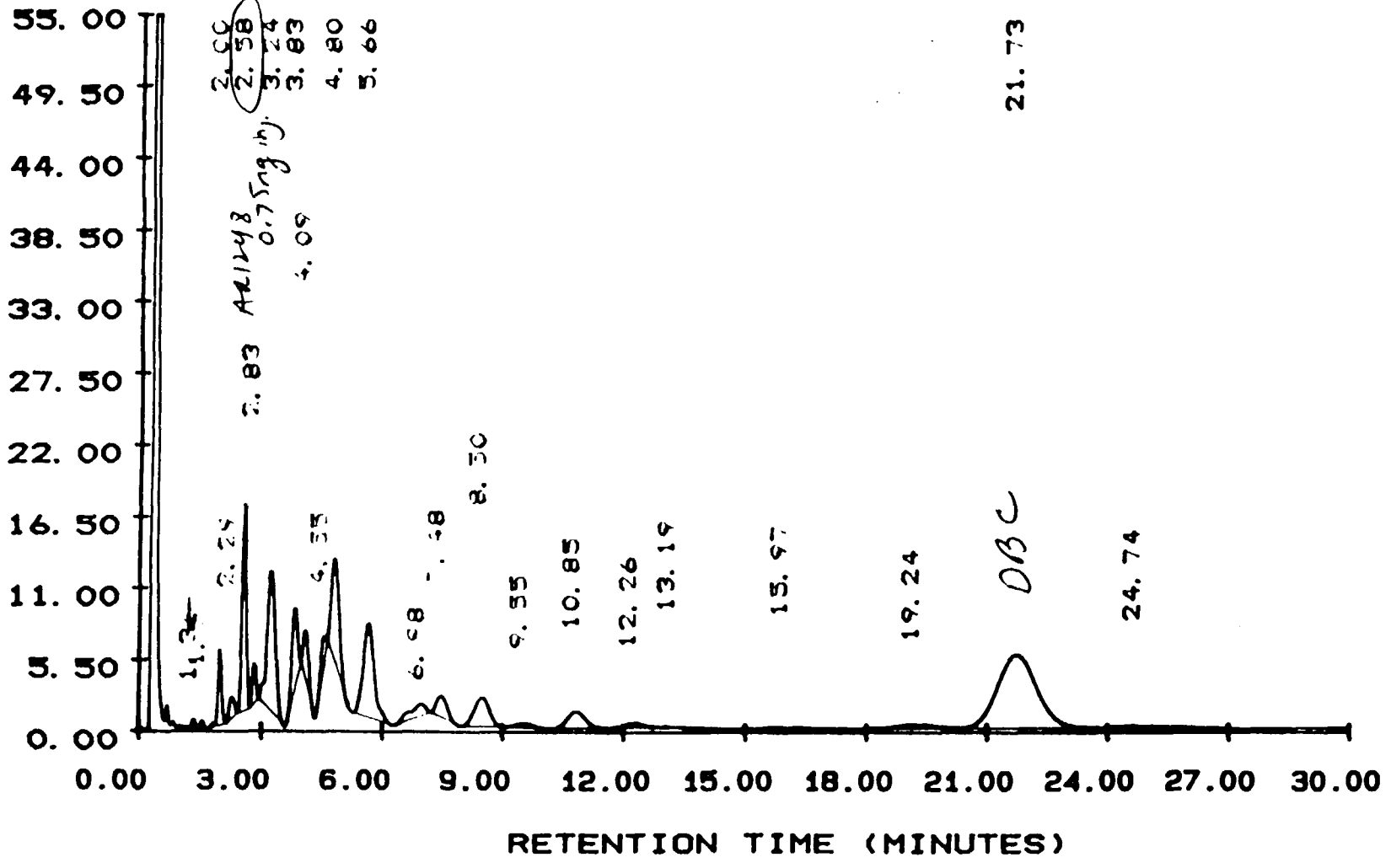
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	75427	10306	V	1.383			
002	417168	70602	V	1.565			
				1.727	ALPHA-BHC		
003	22266	4042	V	1.835			
004	641463	96458	V	2.001			
				2.146	GAMMA-BHC		
005	196807	24174	V	2.318			
				2.474	BETA-BHC		
006	1196429	164626	V	2.581			
				2.626	HEPTACHLOR		
007	331803	49442	V	2.829			
				2.884	DELTA-BHC		
008	70686	13466	V	3.029			
				3.169	ALDRIN		
009	518023	47341	V	3.239			
010	409818	39887	V	3.833			
011	160510	19829	V	4.085			
012	99502	8852	V	4.552			
				4.733	HEPT. EPOXIDE		
013	621598	47247	V	4.806			
				5.316	G. CHLORDANE		
014	677857	37861	V	5.662			
				5.809	A. CHLORDANE		
				5.945	ENDOSULFAN I		
015	120374	4199	V	6.974	4,4'-DDE	0.001	
				7.261	DIELDRIN		
016	136926	7424	V	7.479			
017	232585	8781	V	8.498			
				8.812	ENDRIN		
018	26241	726	V	9.489			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
019	143099	4781	V	10.844			
020	32553	844		12.268	4,4'-DDT	0.001	
				13.864	ENDRIN ALDEHYDE		
021	18883	312	V	15.885			
				17.111	ENDO. SULFATE		
022	59542	1181	V	19.558			
023	3435507	50444		21.733	DBC	0.055	
				23.701	METHOXYCHLOR		
	765983			2.581	AROCHLOR-1242	0.260	*

AR1248 03-121

SAMPLE NO. : 08158913 . 11 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 22:35:02

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57276. START TIME: 0.00

Y MINIMUM: 6870. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .11 INST:13 VIAL:F0 SEQ NUMBER:011
TEST : DATE-TIME INJECTED : 08/15/89 22:35:02
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 23:05:28
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1248 03-12 * : CONFIRMED ON COLUMN SP210
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	31320	5602	V	1.361			
002	23718	4581	V	1.567			
				1.727	ALPHA-BHC		
003	333158	49610	V	2.000			
				2.146	GAMMA-BHC		
004	126490	14756	V	2.293			
				2.474	BETA-BHC		
005	1051921	140831	V	2.581			
				2.626	HEPTACHLOR		
006	176970	26780	V	2.831			
				2.884	DELTA-BHC		
				3.169	ALDRIN		
007	1358363	97907	V	3.241			
008	527580	53814	V	3.827			
009	312040	36149	V	4.085			
010	172099	14982	V	4.552			
				4.733	HEPT. EPOXIDE		
011	978221	73839	V	4.804			
				5.316	G. CHLORDANE		
012	1259721	66505	V	5.658			
				5.809	A. CHLORDANE		
				5.945	ENDOSULFAN I		
013	247741	8314	V	6.983	4,4'-DDE	0.003	*
				7.261	DIELDRIN		
014	274314	15186	V	7.477			
015	537938	20603	V	8.504			
				8.812	ENDRIN		
016	92967	3193	V	9.547			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
017	361251	11854	V	10.845			
018	100246	3154	V	12.258			
				12.454	4,4'-DDT		
019	22373	608	V	13.189			
				13.864	ENDRIN ALDEHYDE		
020	65626	907	V	15.973			
				17.111	ENDO. SULFATE		
021	160882	2677	V	19.236			
022	3475559	51829	V	21.730	DBC	0.057	
				23.701	METHOXYCHLOR		
023	101274	1233		24.741			
	774965			2.581	AROCHLOR-1248	0.250	*

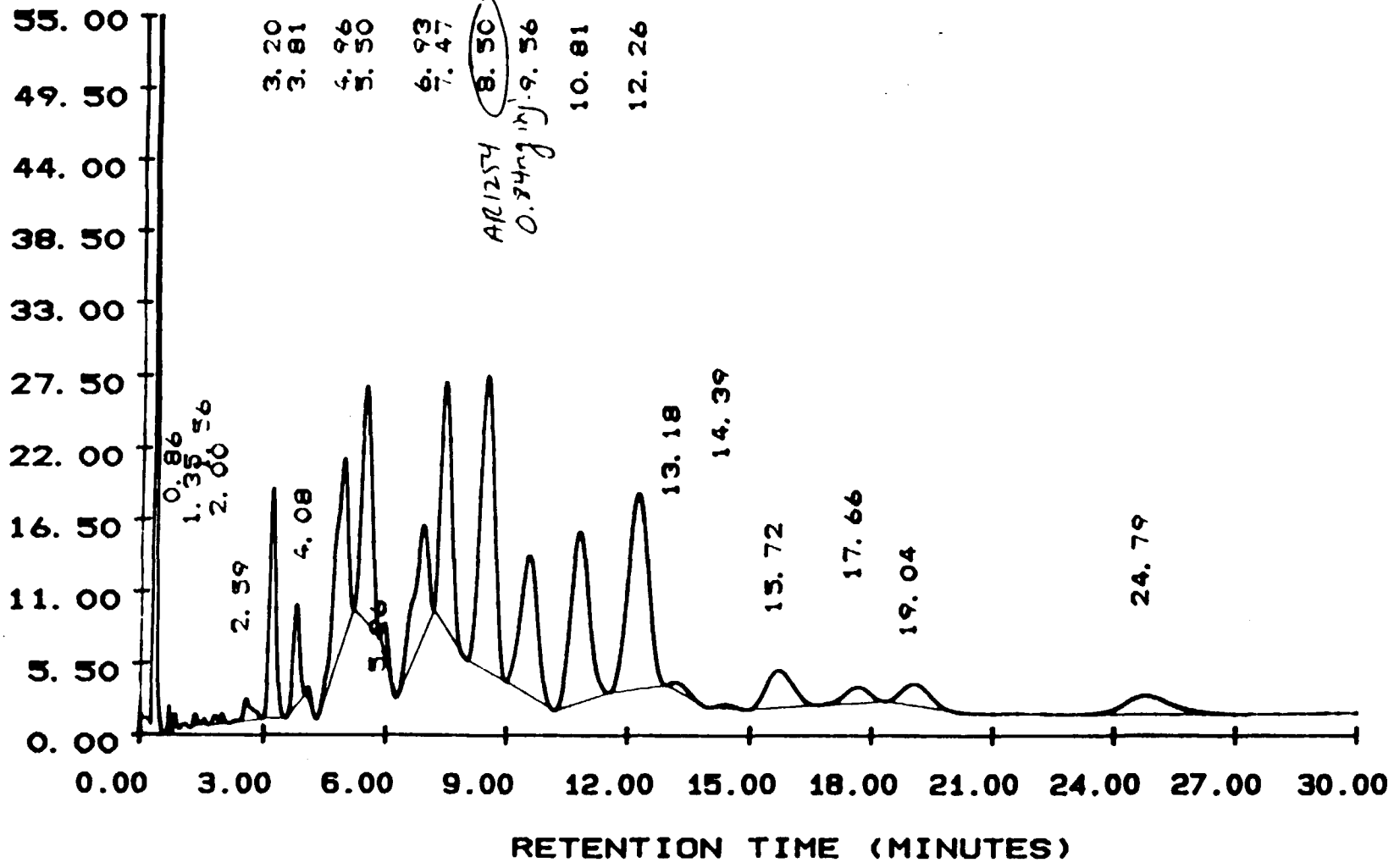
73

AR1254 01-130

SAMPLE NO. : 08158913 . 12 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/15/89 23:08:21

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 23268. START TIME: 0.00

Y MINIMUM: 6630. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .12 INST:13 VIAL:FO SEQ NUMBER:012
TEST : DATE-TIME INJECTED : 08/15/89 23:08:21
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 23:38:48
METHOD: 13 / 13 REV #: 00113 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1254 01-13 * : CONFIRMED ON COLUMN SP210(
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	6941	2000	V	0.857			
002	14931	2530	V	1.352			
003	6658	1261	V	1.564			
				1.727	ALPHA-BHC		
004	32932	2270	V	2.000			
				2.146	GAMMA-BHC		
				2.474	BETA-BHC		
005	74581	4998	V	2.585			
				2.626	HEPTACHLOR		
				2.884	DELTA-BHC		
006	569884	52968	V	3.205	ALDRIN	0.009	*
007	247102	22801	V	3.806			
008	20820	3325	V	4.077			
				4.733	HEPT. EPOXIDE		
009	894981	41561	V	4.958			
				5.316	G. CHLORDANE		
010	952141	54697	V	5.498			
				5.809	A. CHLORDANE		
011	74055	7350	V	5.964	ENDOSULFAN I	0.002	
012	637340	24906	V	6.933	4,4'-DDE	0.009	*
				7.261	DIELDRIN		
013	1062357	56672	V	7.465			
014	1665979	68236	V	8.504			
				8.812	ENDRIN		
015	944461	32549	V	9.561			
				10.516	4,4'-DDD		
				10.636	ENDOSULFAN II		
016	1229745	39529	V	10.814			
017	1548483	45166	V	12.255			
				12.454	4,4'-DDT		
018	56516	1844	V	13.178			
				13.864	ENDRIN ALDEHYDE		
019	26214	980	V	14.393			
020	392026	8708	V	15.719			
				17.111	ENDO. SULFATE		
021	158618	3769	V	17.662			
022	245273	5087	V	19.043			
				21.712	DBC		
				23.701	METHOXYCHLOR		
023	359859	4364		24.790			
	522720			8.504	AROCHLOR-1254	0.280	*

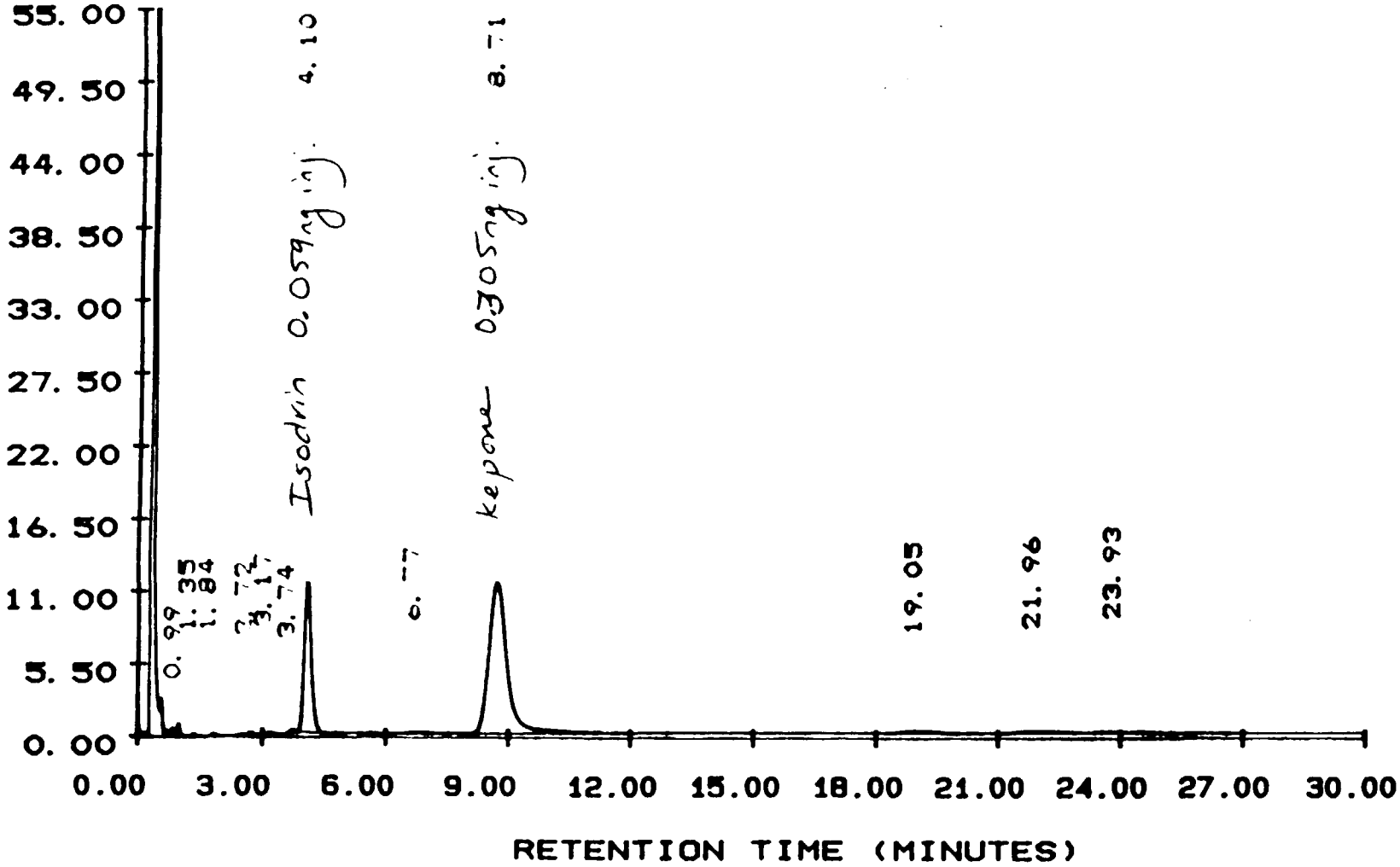
no DBC in std sol'n

KEPONE/ISODRIN

SAMPLE NO. : 08158913 . 13 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/16/89 01:31:09

METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57218. START TIME: 0.00

Y MINIMUM: 6747. END TIME: 30.00

EXTERNAL STANDARD

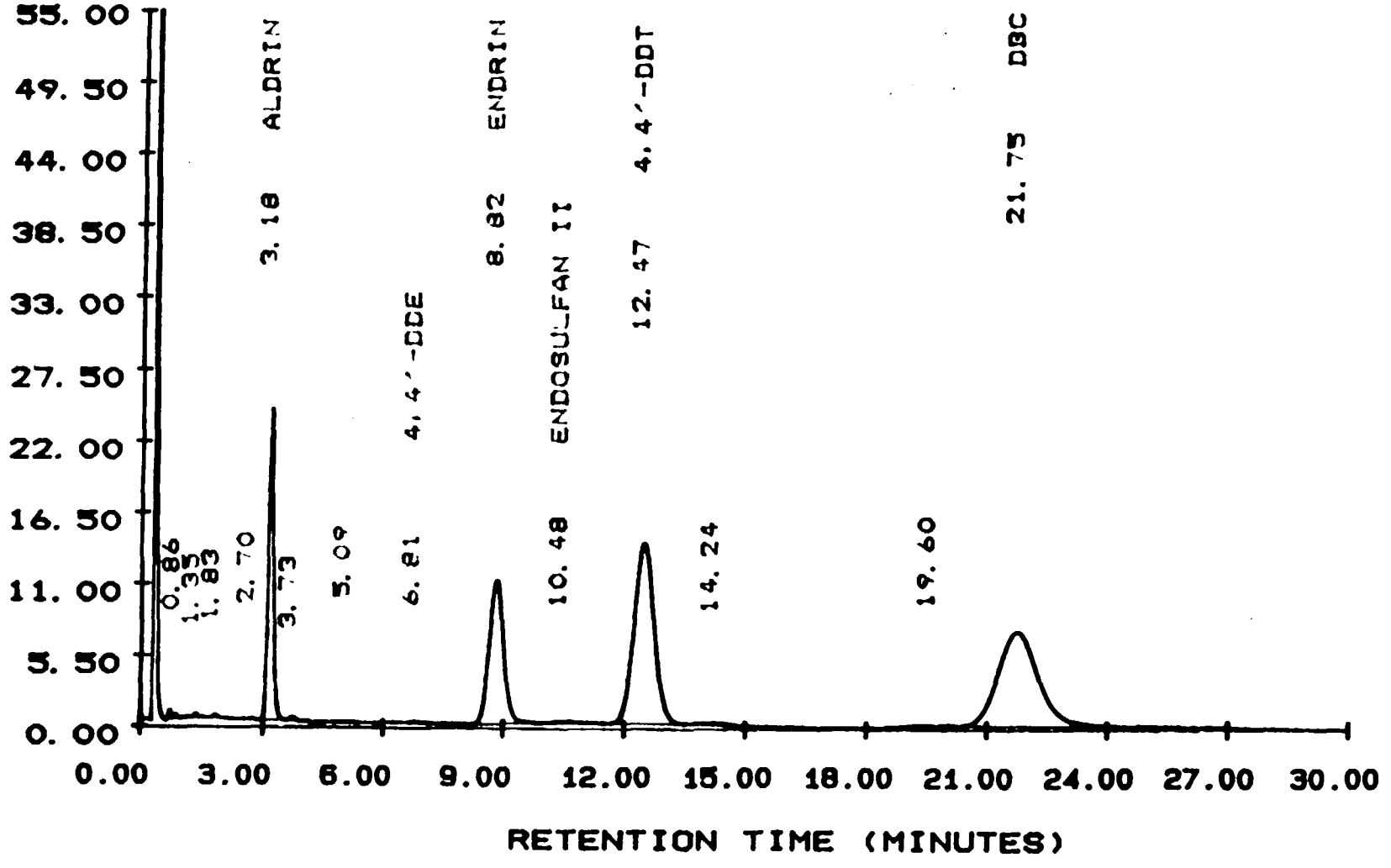
SAMPLE: 08158913 .13 INST:13 VIAL:FO SEQ NUMBER:013
TEST : DATE-TIME INJECTED : 08/16/89 01:31:09
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 02:01:39
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: KEPONE/ISODR std 10-47 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	17764	4976	V	0.985			
002	11942	1714	V	1.352			
				1.701	ALPHA-BHC		
003	14982	1667	V	1.835			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
004	22401	1865	V	2.715			
				2.839	DELTA-BHC		
005	11058	1282	V	3.174	ALDRIN	0.000	
006	18502	2098	V	3.740			
007	1224239	103593	V	4.095	Isodrin	0.0198	
				4.733	HEPT. EPOXIDE		
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	30390	784	V	6.774	4,4'-DDE	0.000	no
				7.261	DIELDRIN		
009	3257447	104900		8.713	~~ENDRIN~~ 3ng kepone	0.053 0.01 0ng/ul	
				10.357	4,4'-DDD		
				10.636	ENDOSULFAN II		
				12.454	4,4'-DDT		
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
010	100351	1735	V	19.048			no DBC in
011	79834	1337	V	21.960	DBC	0.001	std. sol'n
012	46940	649		23.928	METHOXYCHLOR	0.001 *	

EVALB 19-43

SAMPLE NO. : 08158913 . 22
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/16/89 06:36:30
PAGE NO. : 01



Y MAXIMUM: 51064.
Y MINIMUM: 6579.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .22
TEST :
COLLECTION TIME : 29.98
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE :

INST:13 VIAL:FO SEQ NUMBER:022
DATE-TIME INJECTED : 08/16/89 06:36:30
DATE-TIME PROCESSED : 08/16/89 07:06:50
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
* : CONFIRMED ON COLUMN SP210
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	4335	1289	V	0.859			
002	24434	2275	V	1.350			
				1.701	ALPHA-BHC		
003	19554	1986	V	1.828			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
004	11367	849	V	2.700			
				2.839	DELTA-BHC		
005	1764135	191016	V	3.175	ALDRIN	0.031	*
006	30286	2388	V	3.732			
				4.733	HEPT. EPOXIDE		
007	20223	477	V	5.088			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	41980	893	V	6.813	4,4'-DDE	0.000	
				7.261	DIELDRIN		
009	2202323	89281	V	8.824	ENDRIN	0.045	*
				10.357	4,4'-DDD		*
010	39356	990	V	10.484	ENDOSULFAN II	0.000	
011	3836041	112119	V	12.474	4,4'-DDT	0.092	*
				13.864	ENDRIN ALDEHYDE		
012	58999	1303	V	14.241			
				16.847	ENDO. SULFATE		
013	45420	917	V	19.599			
014	4077223	58583		21.748	DBC	0.064	*
				23.701	METHOXYCHLOR		

AR1254 01-130

SAMPLE NO. : 08158913 . 31

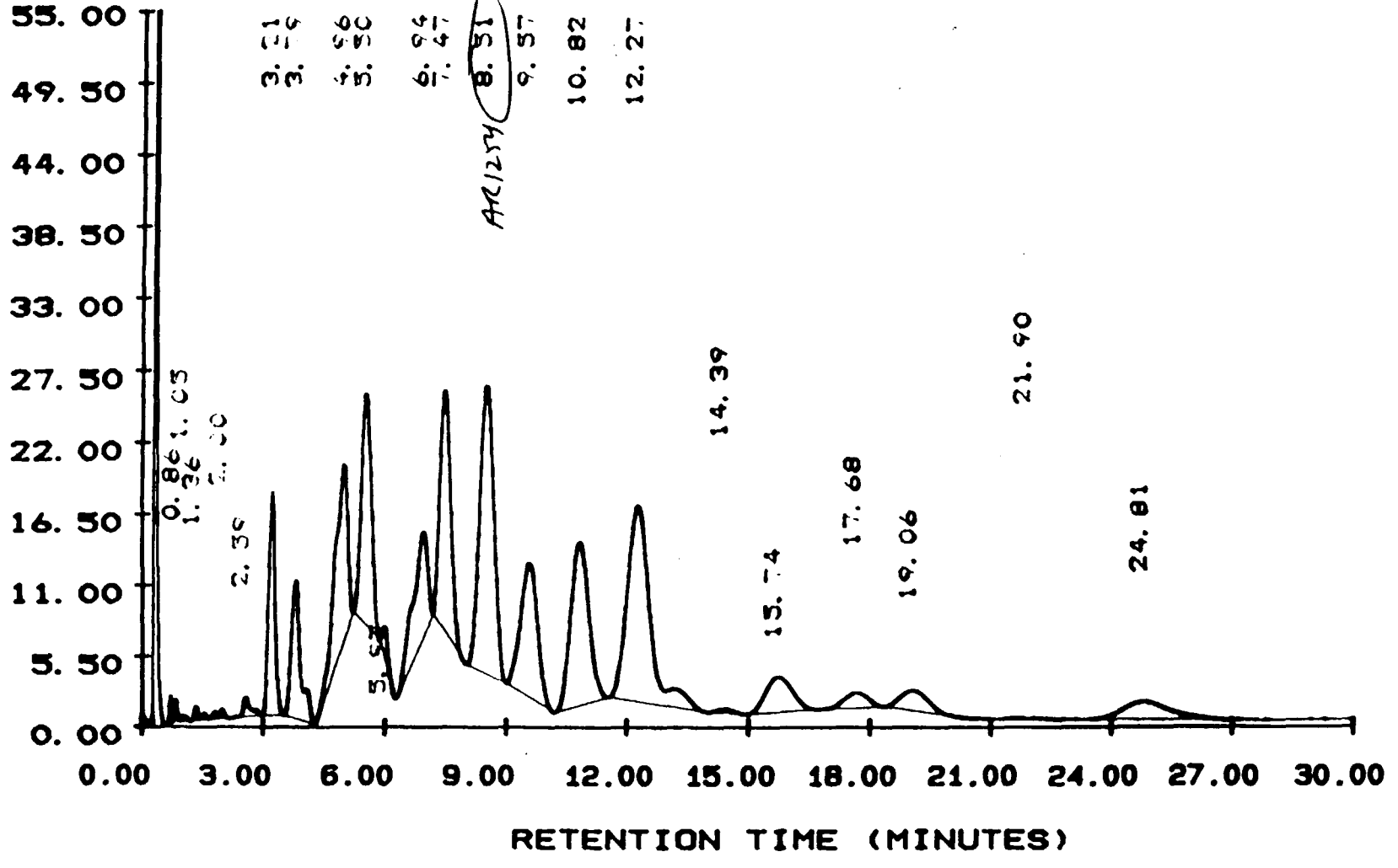
TEST NO. :

METHOD NO. : 13 / 13

INSTRUMENT: 13

DATE TIME: 08/16/89 11:35:08

PAGE NO. : 01



Y MAXIMUM: 23207.

Y MINIMUM: 6889.

START TIME: 0.00

END TIME: 30.00

EXTERNAL STANDARD

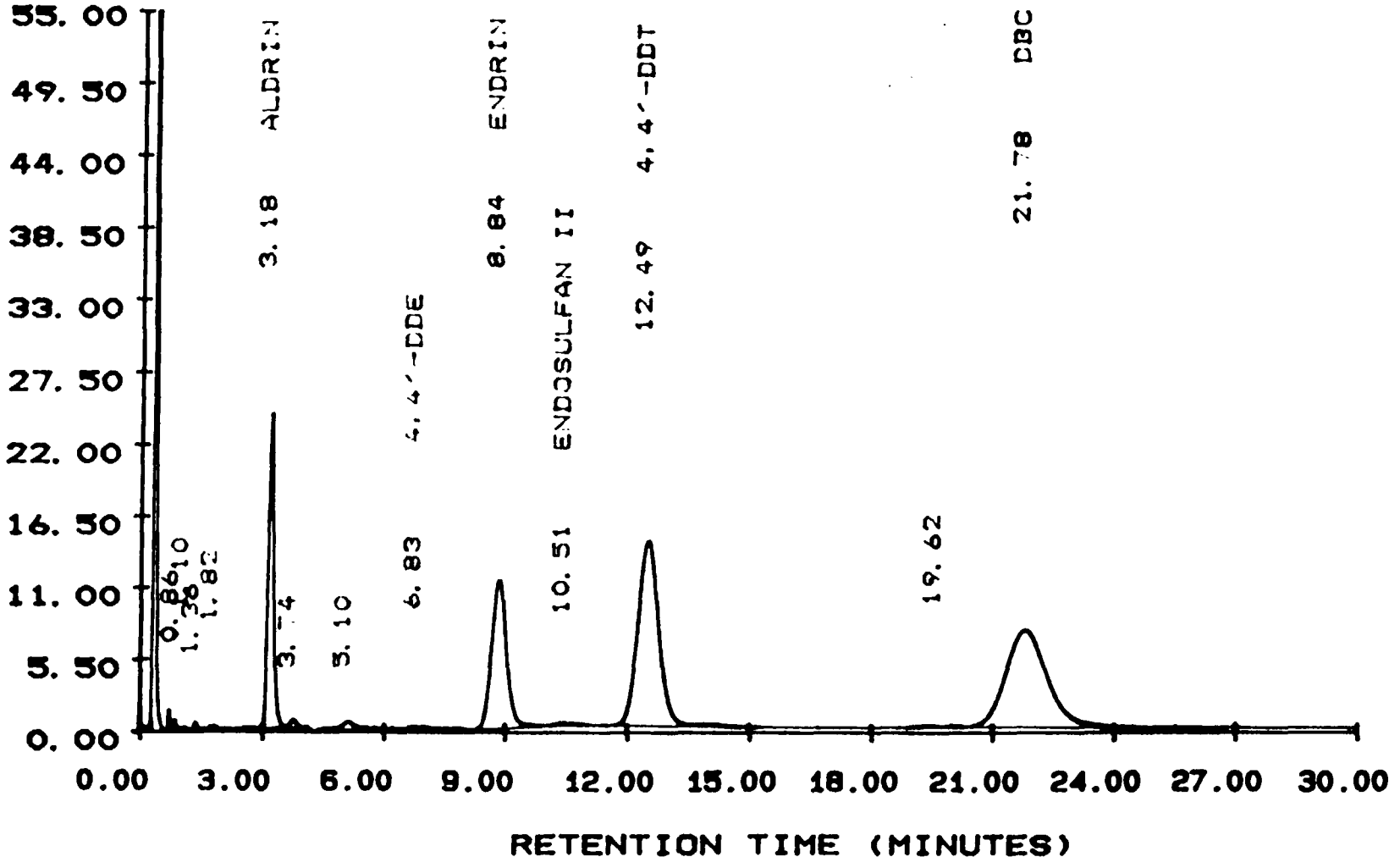
SAMPLE: 08158913 .31 INST:13 VIAL:FO SEQ NUMBER:031
TEST : DATE-TIME INJECTED : 08/16/89 11:35:08
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 12:05:52
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1254 01-13 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	10051	2866	V	0.856			
002	9523	1071	V	1.048			
003	28393	3017	V	1.358			
				1.701	ALPHA-BHC		
004	29906	2053	V	2.004			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
005	55967	4405	V	2.585			
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
006	550003	50908	V	3.207	ALDRIN	0.008	
007	497459	31692	V	3.790			
				4.733	HEPT. EPOXIDE		
008	869018	40216	V	4.962			
				5.235	G. CHLORDANE		
009	922622	52703	V	5.503			
				5.721	A. CHLORDANE		
010	71582	6866	V	5.968	ENDOSULFAN I	0.002	
				6.787	4,4'-DDE		
011	604759	23819	V	6.938			
				7.261	DIELDRIN		
012	1033268	55055	V	7.471			
013	1609287	65817	V	8.512			
				8.812	ENDRIN		
014	893794	30848	V	9.570			
				10.357	4,4'-DDD		
				10.636	ENDOSULFAN II		
015	1167041	37558	V	10.825			
016	1778695	44834	V	12.266			
				12.454	4,4'-DDT		
				13.864	ENDRIN ALDEHYDE		
017	27417	993	V	14.392			
018	373332	8205	V	15.737			
				16.847	ENDO. SULFATE		
019	146906	3476	V	17.679			
020	227214	4699	V	19.063			
021	12924	236	V	21.897	DBC	0.000	no DBC in std. sol'n
				23.701	METHOXYCHLOR		
022	335475	4067		24.814			
	516012			8.512	AROCHLOR-1254	0.276	*
	516012			8.512	AROCHLOR-1254	0.276	*

EVALB 19-43

SAMPLE NO. : 08158913 .39
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/17/89 11:38:57
PAGE NO. : 01



Y MAXIMUM: 51385.
Y MINIMUM: 6795.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .39 INST:13 VIAL:FO SEQ NUMBER:039
TEST : DATE-TIME INJECTED : 08/17/89 11:38:57
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 12:09:21
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: EVALB 19-43 * : CONFIRMED ON COLUMN SP210
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL	
001	10203	3237	V	0.856			
002	10829	1177	V	1.101			
003	29728	4068	V	1.362			
				1.701	ALPHA-BHC		
004	28606	1988	V	1.819			
				2.146	GAMMA-BHC		
				2.436	BETA-BHC		
				2.626	HEPTACHLOR		
				2.839	DELTA-BHC		
005	1831295	191811	V	3.179	ALDRIN	0.031	*
006	75732	4829	V	3.739			
				4.733	HEPT. EPOXIDE		
007	152567	4806	V	5.095			
				5.235	G. CHLORDANE		
				5.721	A. CHLORDANE		
				5.945	ENDOSULFAN I		
008	90678	1111	V	6.826	4,4'-DDE	0.000	
				7.261	DIELDRIN		
009	2312091	91640	V	8.838	ENDRIN	0.047	*
				10.357	4,4'-DDD		*
010	53670	1480	V	10.508	ENDOSULFAN II	0.001	
011	4070363	114541		12.495	4,4'-DDT	0.094	*
				13.864	ENDRIN ALDEHYDE		
				16.847	ENDO. SULFATE		
012	44309	902	V	19.620			
013	4165505	59502	-	21.781	DBC	0.065	*
				23.701	METHOXYCHLOR		

AR1254 01-130

SAMPLE NO. : 08158913 .47

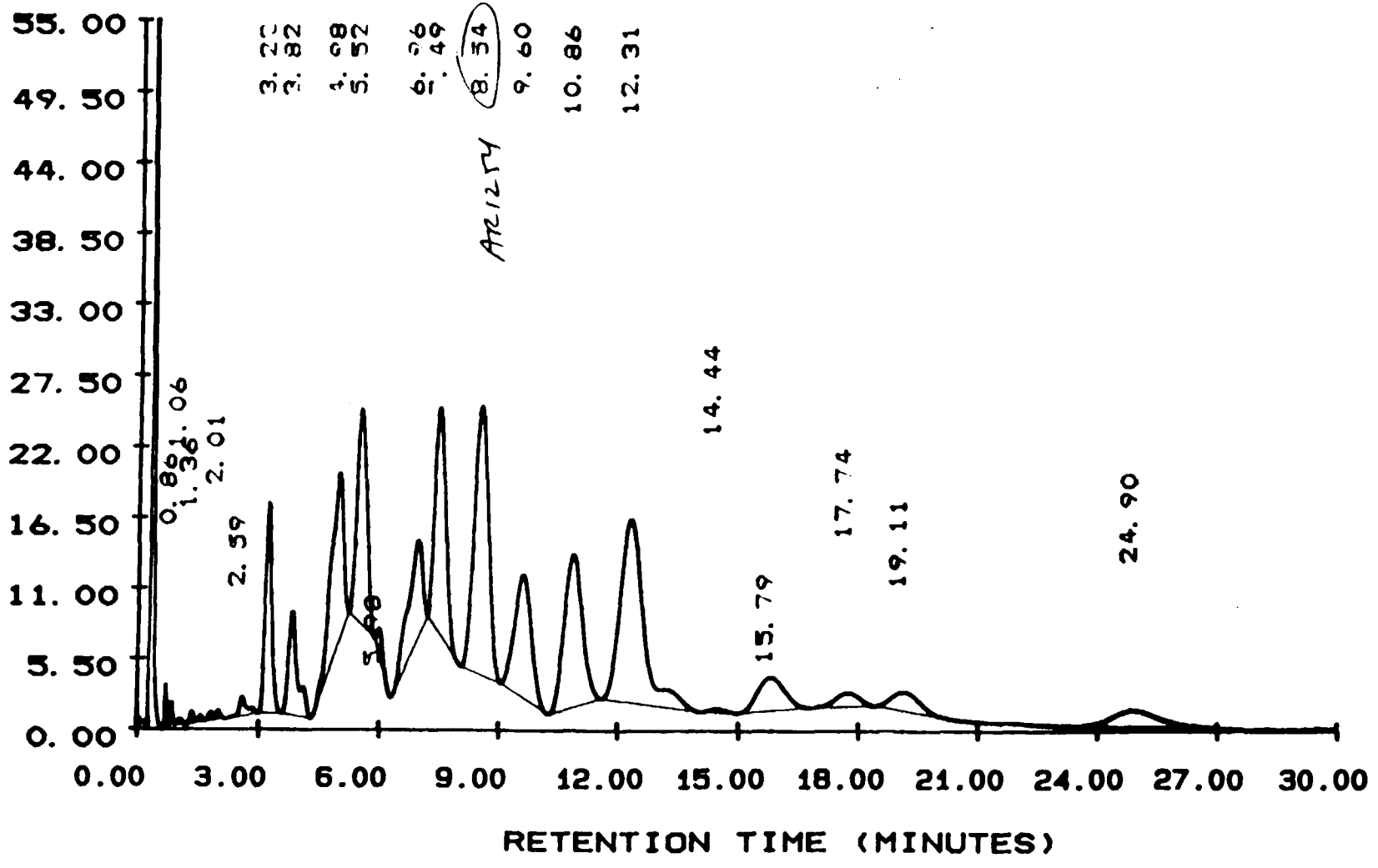
TEST NO. :

METHOD NO. : 13 / 13

INSTRUMENT: 13

DATE TIME: 08/17/89 16:05:52

PAGE NO. : 01



Y MAXIMUM: 23150.

Y MINIMUM: 6851.

START TIME: 0.00

END TIME: 30.00

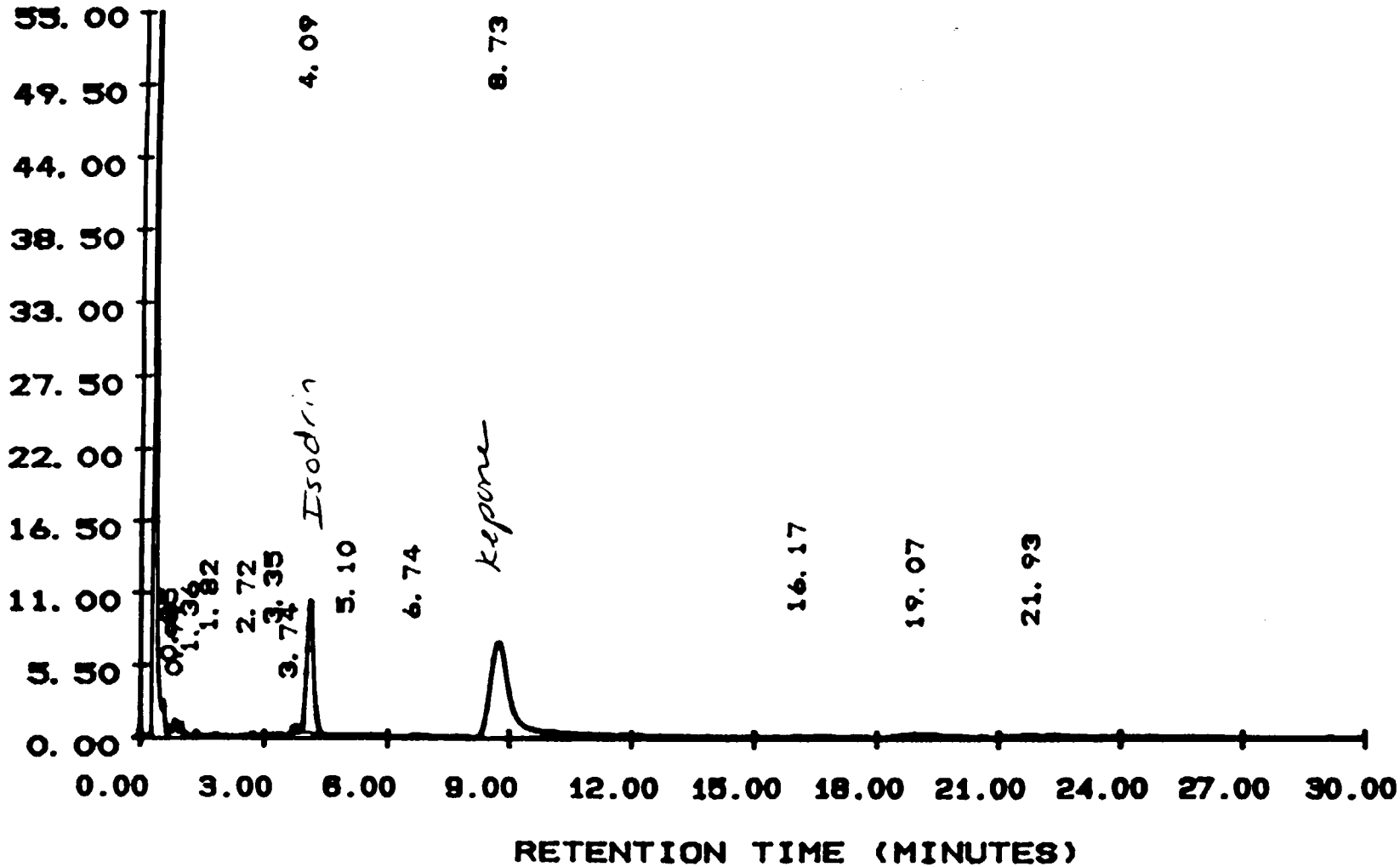
EXTERNAL STANDARD

SAMPLE: 08158913 .47 INST:13 VIAL:FO SEQ NUMBER:047
TEST : DATE-TIME INJECTED : 08/17/89 16:05:52
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 16:36:19
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1254 01-13 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	9306	2847	V	0.857		
002	10022	1106	V	1.055		
003	25607	2497	V	1.356		
				1.701	ALPHA-BHC	
004	29718	1918	V	2.010		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
005	55567	4278	V	2.592	HEPTACHLOR	0.000
				2.839	DELTA-BHC	
006	527142	48298	V	3.216	ALDRIN	0.008
007	370217	23670	V	3.818		
				4.733	HEPT. EPOXIDE	
008	825983	38368	V	4.977		
				5.235	G. CHLORDANE	
009	871486	49682	V	5.520		
				5.721	A. CHLORDANE	
010	60345	6106	V	5.981	ENDOSULFAN I	0.002
				6.787	4,4'-DDE	
011	563151	22320	V	6.959		
				7.261	DIELDRIN	
012	991322	51981	V	7.494		
013	1536243	61940	V	8.539		
				8.812	ENDRIN	
014	822236	28416	V	9.600		
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
015	1113191	35199	V	10.860		
016	1711437	42252	V	12.309	4,4'-DDT	0.035
				13.864	ENDRIN ALDEHYDE	
017	21962	795	V	14.442		
018	356466	7673	V	15.794		
				16.847	ENDO. SULFATE	
019	133254	3141	V	17.741		
020	212583	4278		19.109		
				21.712	DBC	no DBC in std
				23.701	METHOXYCHLOR	
021	306022	3692		24.902		
	478722			8.539	AROCHLOR-1254	0.256 *

KEPONE/ISODRIN

SAMPLE NO. : 08158913 .53 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/17/89 19:24:33
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 57271. START TIME: 0.00
Y MINIMUM: 6892. END TIME: 30.00

EXTERNAL STANDARD

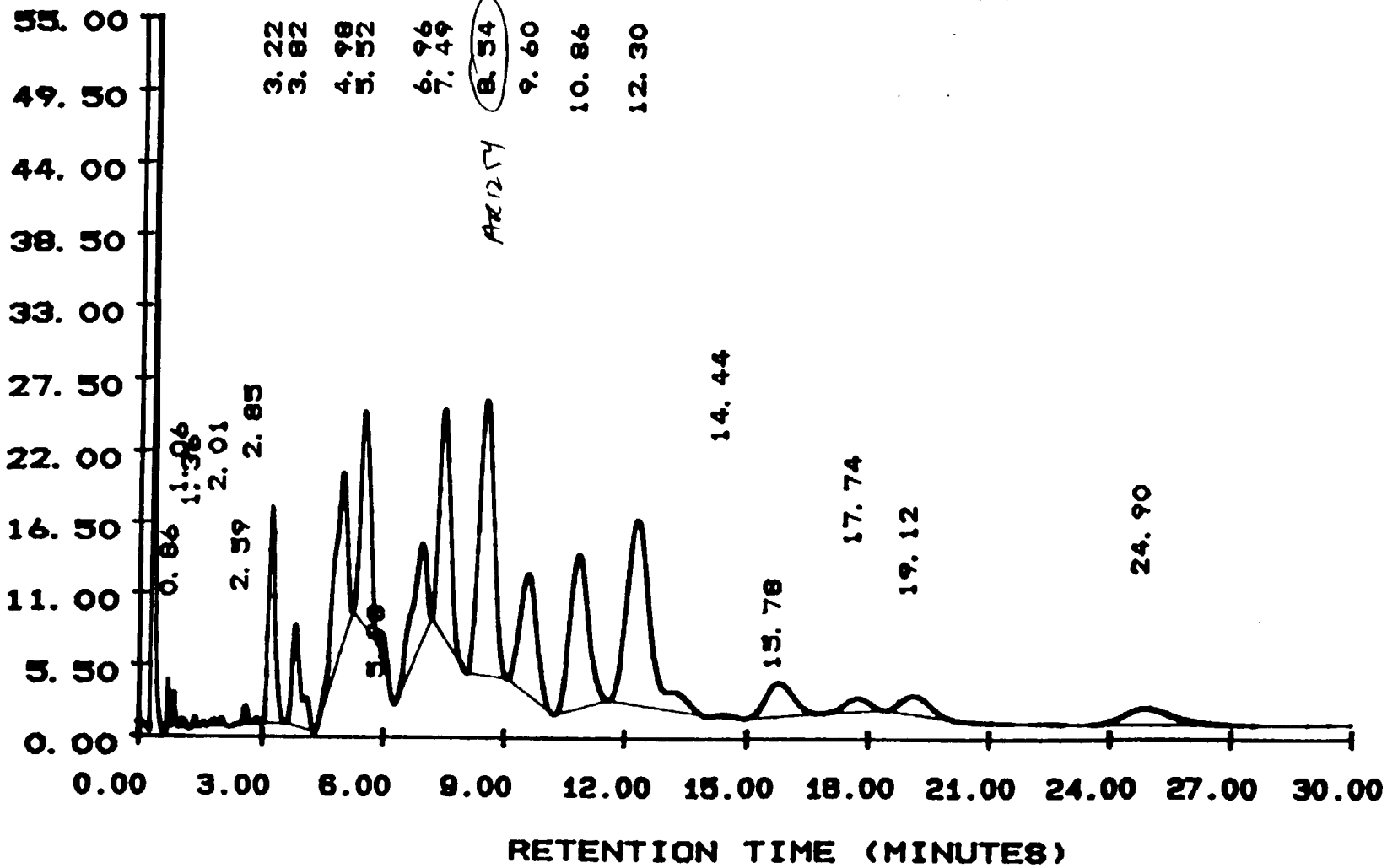
SAMPLE: 08158913 .53 INST:13 VIAL:FO SEQ NUMBER:053
TEST : DATE-TIME INJECTED : 08/17/89 19:24:33
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 19:55:00
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: KEPONE/ISODR 10-47 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	14221	3809	V	0.850		
002	21719	4826	V	0.988		
003	19727	3296	V	1.361		
				1.701	ALPHA-BHC	
004	26406	1802	V	1.819		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
				2.626	HEPTACHLOR	
005	24474	1837	V	2.715		
				2.839	DELTA-BHC	
				3.169	ALDRIN	
006	19602	1183	V	3.347		
007	45978	4950	V	3.737		
008	1038226	90984	V	4.093	Isodrin	0.0198 ng/uL inj.
				4.733	HEPT. EPOXIDE	
009	14868	436	V	5.104		
				5.235	G. CHLORDANE	
				5.721	A. CHLORDANE	
				5.945	ENDOSULFAN I	
010	72174	775	V	6.740	4,4'-DDE	0.000
				7.261	DIELDRIN	
011	2414913	66155		8.725	~~ENDRIN~~ Kepone	~~0.034~~ Bry 0.1016 ng/uL
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
				12.454	4,4'-DDT	
				13.864	ENDRIN ALDEHYDE	
012	16337	332	V	16.172		
				16.847	ENDO. SULFATE	
013	86974	1505	V	19.074		
014	90470	1216		21.934	DBC	0.001 *
				23.701	METHOXYCHLOR	

AR1254 01-130

SAMPLE NO. : 08158913 .54
TEST NO. :
METHOD NO. : 13 / 13

INSTRUMENT: 13
DATE TIME: 08/17/89 19:57:07
PAGE NO. : 01



Y MAXIMUM: 23077.
Y MINIMUM: 6764.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .54 INST:13 VIAL:FO SEQ NUMBER:054
TEST : DATE-TIME INJECTED : 08/17/89 19:57:07
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 20:27:32
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: AR1254 01-13 * : CONFIRMED ON COLUMN SP210C
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	13453	4309	V	0.856		
002	16440	1961	V	1.060		
003	14086	2257	V	1.358		
				1.701	ALPHA-BHC	
004	35473	1872	V	2.006		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
005	34617	4178	V	2.588	HEPTACHLOR	0.000
006	7826	1113	V	2.849	DELTA-BHC	0.000
007	553626	49143	V	3.216	ALDRIN	0.008
008	354586	23034	V	3.822		
				4.733	HEPT. EPOXIDE	
009	860497	39566	V	4.979		
				5.235	G. CHLORDANE	
010	850410	49086	V	5.518		
				5.721	A. CHLORDANE	
011	59260	6132	V	5.978	ENDOSULFAN I	0.002
				6.787	4,4'-DDE	
012	562372	22137	V	6.957		
				7.261	DIELDRIN	
013	1000796	52068	V	7.491		
014	1589151	63030	V	8.544		
				8.812	ENDRIN	
015	783999	27539	V	9.596		
				10.357	4,4'-DDD	
				10.636	ENDOSULFAN II	
016	1105595	34941	V	10.856		
017	1714007	42195	V	12.303	4,4'-DDT	0.034
				13.864	ENDRIN ALDEHYDE	
018	19418	738	V	14.445		
019	349478	7600	V	15.782		
				16.847	ENDO. SULFATE	
020	130019	3086	V	17.740		
021	209758	4253	V	19.124		
				21.712	DBC	
				23.701	METHOXYCHLOR	
022	317184	3741		24.897		
	479451			8.544	AROCHLOR-1254	0.257 *

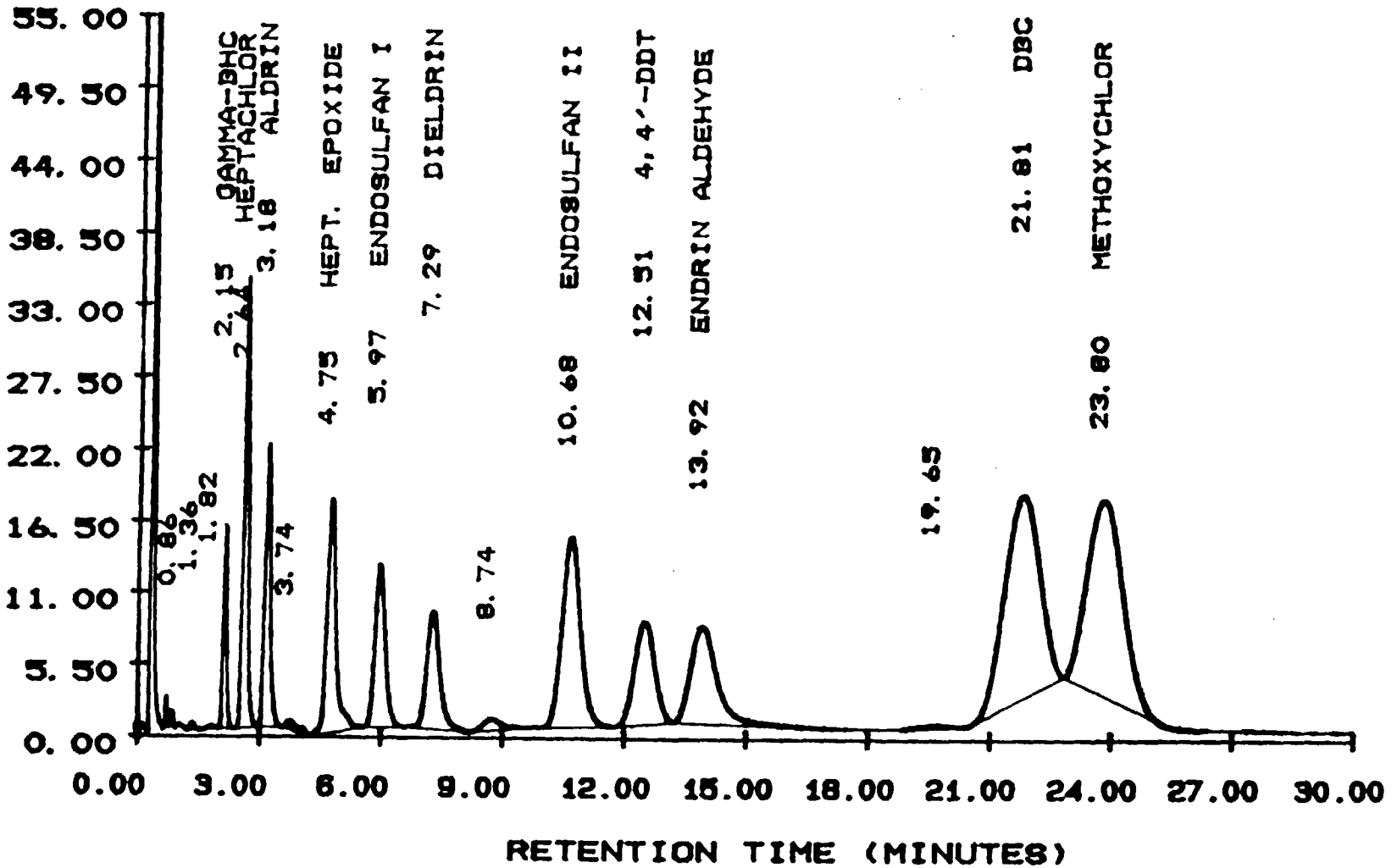
no DBC in std

INDA 13-45

SAMPLE NO. : 08158913 .55 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/17/89 20:30:34

METHOD NO. : 13A / 13A PAGE NO. : 01



Y MAXIMUM: 31059. START TIME: 0.00

Y MINIMUM: 6730. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .55 INST:13 VIAL:FO SEQ NUMBER:055
TEST : DATE-TIME INJECTED : 08/17/89 20:30:34
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 21:01:01
METHOD: 13A / 13A REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: 2250/2401
LAB ID: INDA 13-45
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

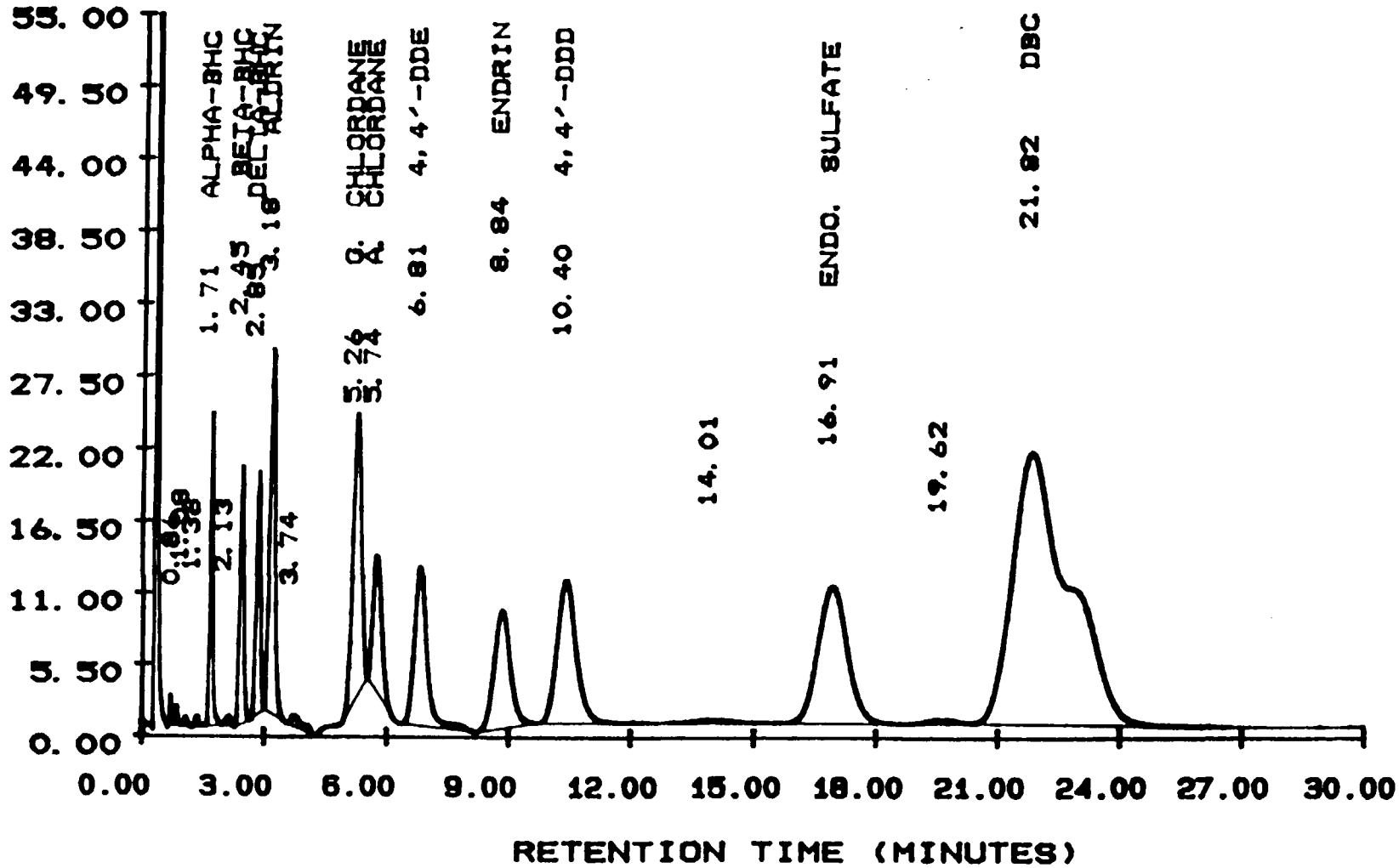
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	6494	2744	V	0.856		
002	15798	2303	V	1.357		
003	13971	1327	V	1.825		
004	418995	64227	V	2.154	GAMMA-BHC	0.008
005	1211507	147510	V	2.636	HEPTACHLOR	0.016
006	910161	94408	V	3.182	ALDRIN	0.015
007	61585	3044	V	3.743		
008	1233703	79008	V	4.752	HEPT. EPOXIDE	0.016
009	969574	55088	V	5.970	ENDOSULFAN I	0.015
010	886926	39622	V	7.290	DIELDRIN	0.016
011	134801	3801	V	8.739		
012	1998359	64208	V	10.681	ENDOSULFAN II	0.031
013	1186779	34566	V	12.506	4,4'-DDT	0.028
014	1458599	32615	V	13.919	ENDRIN ALDEHYDE	0.031
015	44265	955	V	19.649		
016	4106671	68658	V	21.808	DBC	0.075
017	4054719	66215		23.802	METHOXYCHLOR	0.145

INDB 13-56

SAMPLE NO. : 08158913 .56 INSTRUMENT: 13

TEST NO. : DATE TIME: 08/17/89 21:03:38

METHOD NO. : 13B / 13B PAGE NO. : 01



Y MAXIMUM: 27495. START TIME: 0.00

Y MINIMUM: 6701. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158913 .56
TEST :
COLLECTION TIME : 29.98
METHOD: 13B / 13B REV #: 00119
CLIENT ID:
CLIENT:
LAB ID: INDB 13-56
SAMPLE WT : % MOISTURE :

INST:13 VIAL:FO SEQ NUMBER:056
DATE-TIME INJECTED : 08/17/89 21:03:38
DATE-TIME PROCESSED : 08/17/89 21:34:02
ANALYST: YATES SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: 2250/2401
DILUTION FACTOR : 1.0000

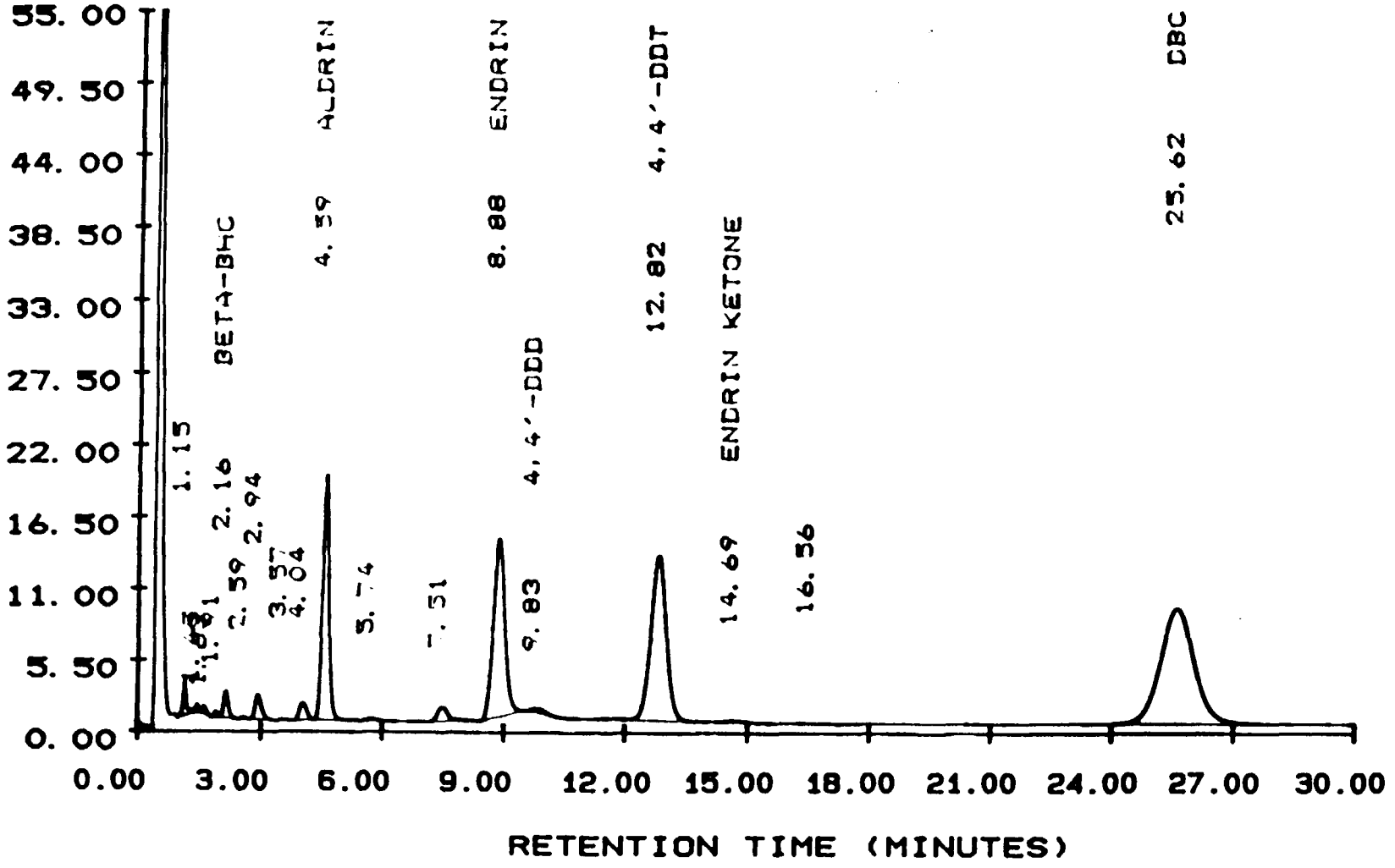
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	10747	3248	V	0.856		
002	18253	2566	V	1.076		
003	19123	2847	V	1.360		
004	467579	80294	V	1.707	ALPHA-BHC	0.008
005	25886	2849	V	2.133		
006	518246	71368	V	2.447	BETA-BHC	0.015
007	503418	67467	V	2.851	DELTA-BHC	0.015
008	974018	103222	V	3.176	ALDRIN	0.015
009	61932	3227	V	3.740		
010	1182209	81678	V	5.256	G. CHLORDANE	0.015
011	596973	39654	V	5.743	A. CHLORDANE	0.015
012	997763	45958	V	6.815	4,4'-DDE	0.015
013	931866	34258	V	8.841	ENDRIN	0.017
014	1321687	41394	V	10.404	4,4'-DDD	0.030
015	63770	924	V	14.010		
016	1955763	39645	V	16.911	ENDO. SULFATE	0.032
017	54018	1122	V	19.623		
018	7464295	78326		21.817	DBC	0.076

EVALA 17-43

SAMPLE NO. : 08158914 .01 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 16:27:34

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58044. START TIME: 0.00

Y MINIMUM: 6612. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .01 INST:14 VIAL:FO SEQ NUMBER:001
TEST :
DATE-TIME INJECTED : 08/15/89 16:27:34
COLLECTION TIME : 29.98
DATE-TIME PROCESSED : 08/16/89 00:53:38
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID:
SAMPLE VOL: 3.0 ul
CLIENT:
COLUMN TYPE: SP2100
LAB ID: EVALA 17-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

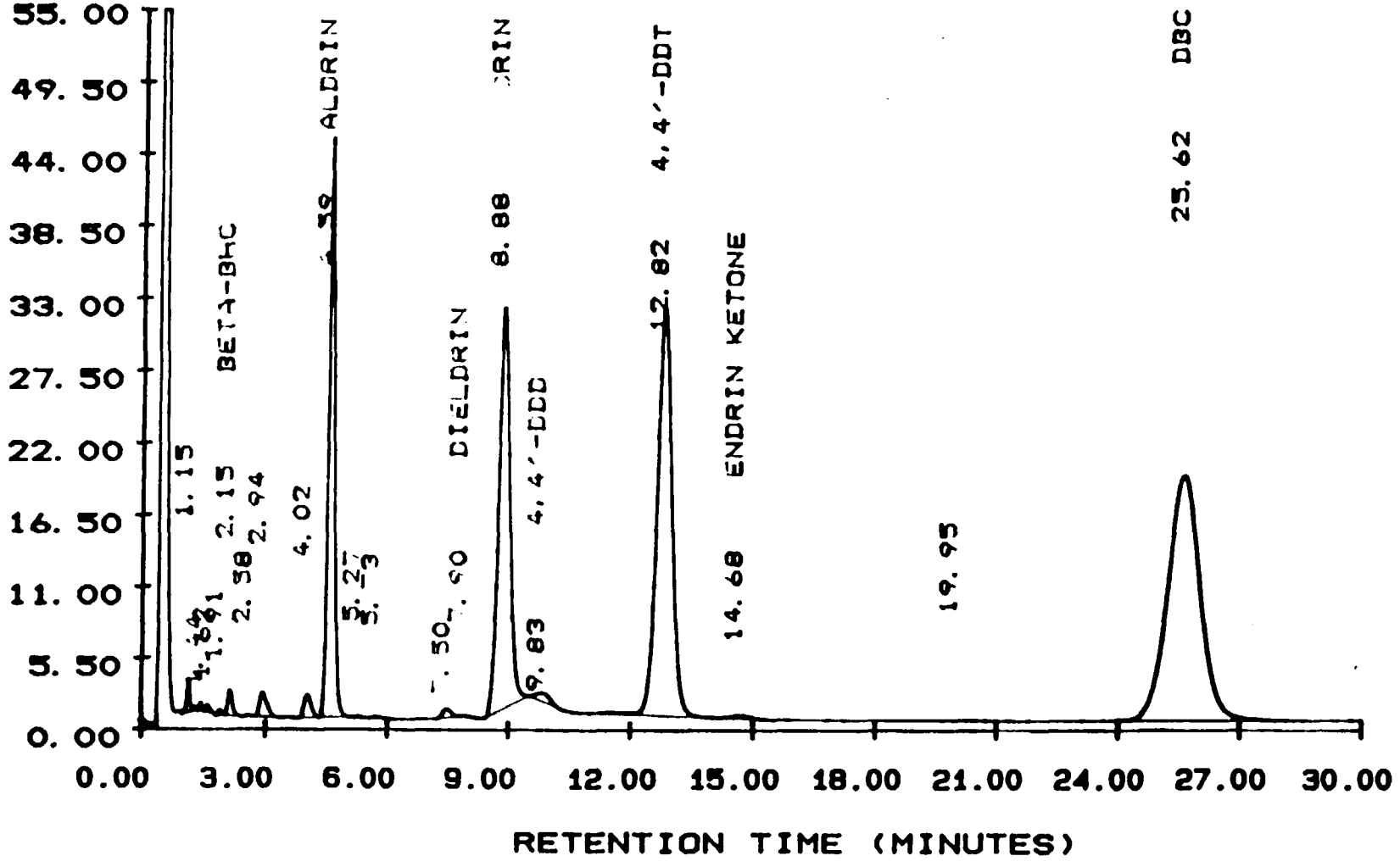
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	138922	21402	V	1.154		
002	27670	5416	V	1.452		
003	41064	5708	V	1.625		
004	25408	4120	V	1.914		
				2.031	ALPHA-BHC	
005	150464	18751	V	2.158	BETA-BHC	0.005
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	12109	1604	V	2.586		
007	192075	17751	V	2.940		
008	7654	712	V	3.571		
				3.739	HEPTACHLOR	
009	155008	12403	V	4.044		
010	1916607	174006	V	4.590	ALDRIN	0.799
				5.553	HEPT. EPOXIDE	
011	30628	1867	V	5.744		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
012	206870	10416	V	7.507		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
013	2468241	127482	V	8.881	ENDRIN	0.014
				9.055	ENDOSULFAN II	
014	75384	3008	V	9.833	4,4'-DDD	0.011
				10.000	ENDRIN ALDEHYDE	
				11.539	ENDO. SULFATE	
015	3139115	118384	V	12.823	4,4'-DDT	0.042
016	36307	1198	V	14.688	ENDRIN KETONE	0.002
017	19225	378		16.559		
				18.766	METHOXYCHLOR	
018	4794843	82870		25.619	DBC	1.022

EVALB 19-43

SAMPLE NO. : 08158914 .02 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 17:00:21

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58132. START TIME: 0.00

Y MINIMUM: 6611. END TIME: 30.00

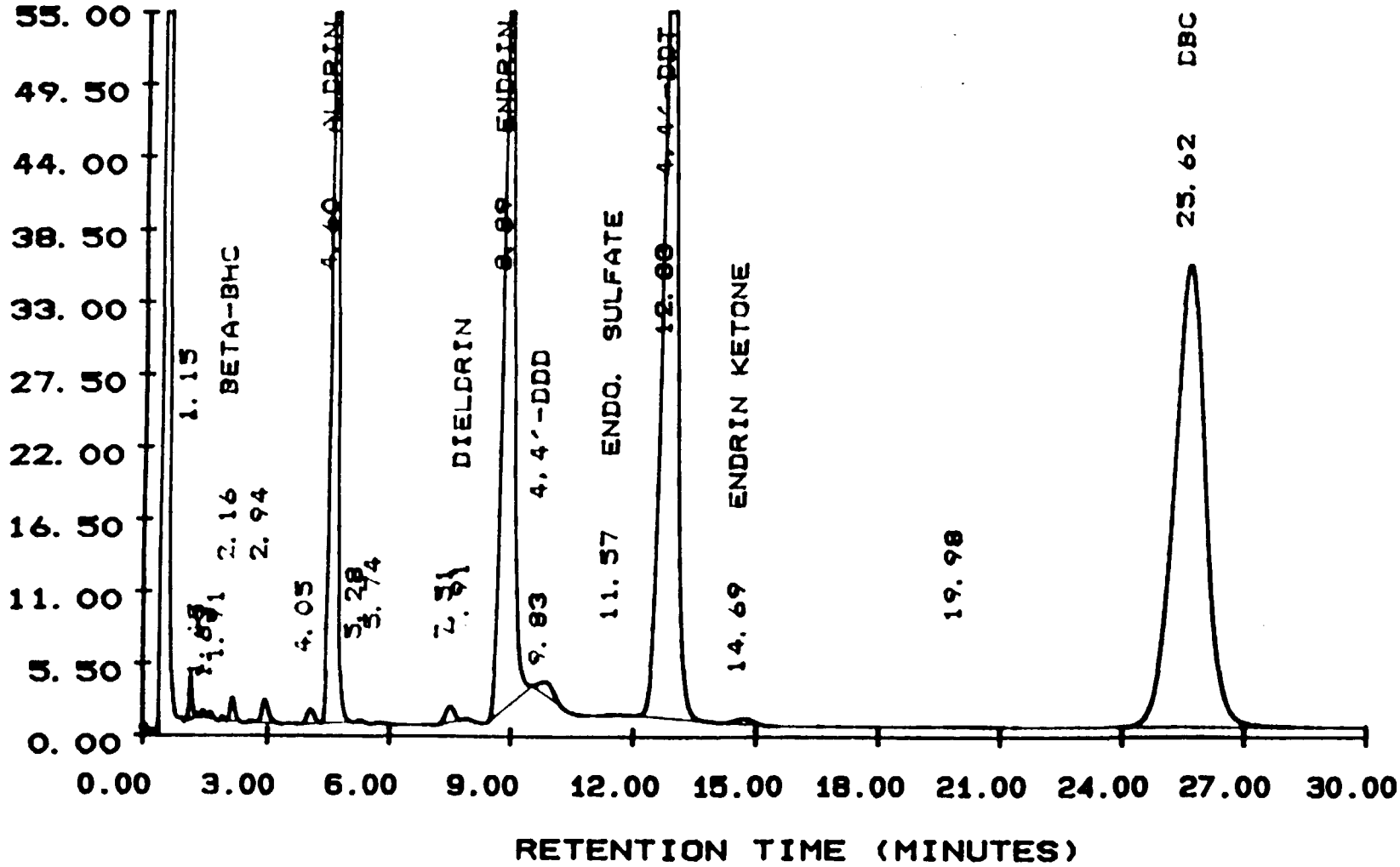
EXTERNAL STANDARD

SAMPLE: 08158914 .02 INST:14 VIAL:FO SEQ NUMBER:002
TEST : DATE-TIME INJECTED : 08/15/89 17:00:21
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:54:14
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	124461	19589	V	1.150		
002	29412	5785	V	1.442		
003	39754	5270	V	1.619		
004	24282	3903	V	1.908		
				2.031	ALPHA-BHC	
005	143693	18147	V	2.151	BETA-BHC	0.005
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	9414	1226	V	2.583		
007	216323	17694	V	2.937		
				3.739	HEPTACHLOR	
008	202782	16743	V	4.025		
009	4304235	409992	V	4.587	ALDRIN	1.883
010	11018	1080	V	5.265		
				5.553	HEPT. EPOXIDE	
011	20958	1379	V	5.729		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
012	93193	6255	V	7.500		
				7.876	4,4'-DDE	
013	14482	1088	V	7.902	DIELDRIN	0.001
014	5390203	286429	V	8.876	ENDRIN	0.032
				9.055	ENDOSULFAN II	
015	150442	6022	V	9.829	4,4'-DDD	0.023
				10.000	ENDRIN ALDEHYDE	
				11.539	ENDO. SULFATE	
016	7342759	290990	V	12.820	4,4'-DDT	0.104
017	75971	2465	V	14.677	ENDRIN KETONE	0.003
				18.766	METHOXYCHLOR	
018	32410	414		19.954		
019	9822555	176292		25.616	DBC	2.174

EVALC 18-43

SAMPLE NO. : 08158914 .03 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/15/89 17:33:06
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58128. START TIME: 0.00
Y MINIMUM: 6592. END TIME: 30.00

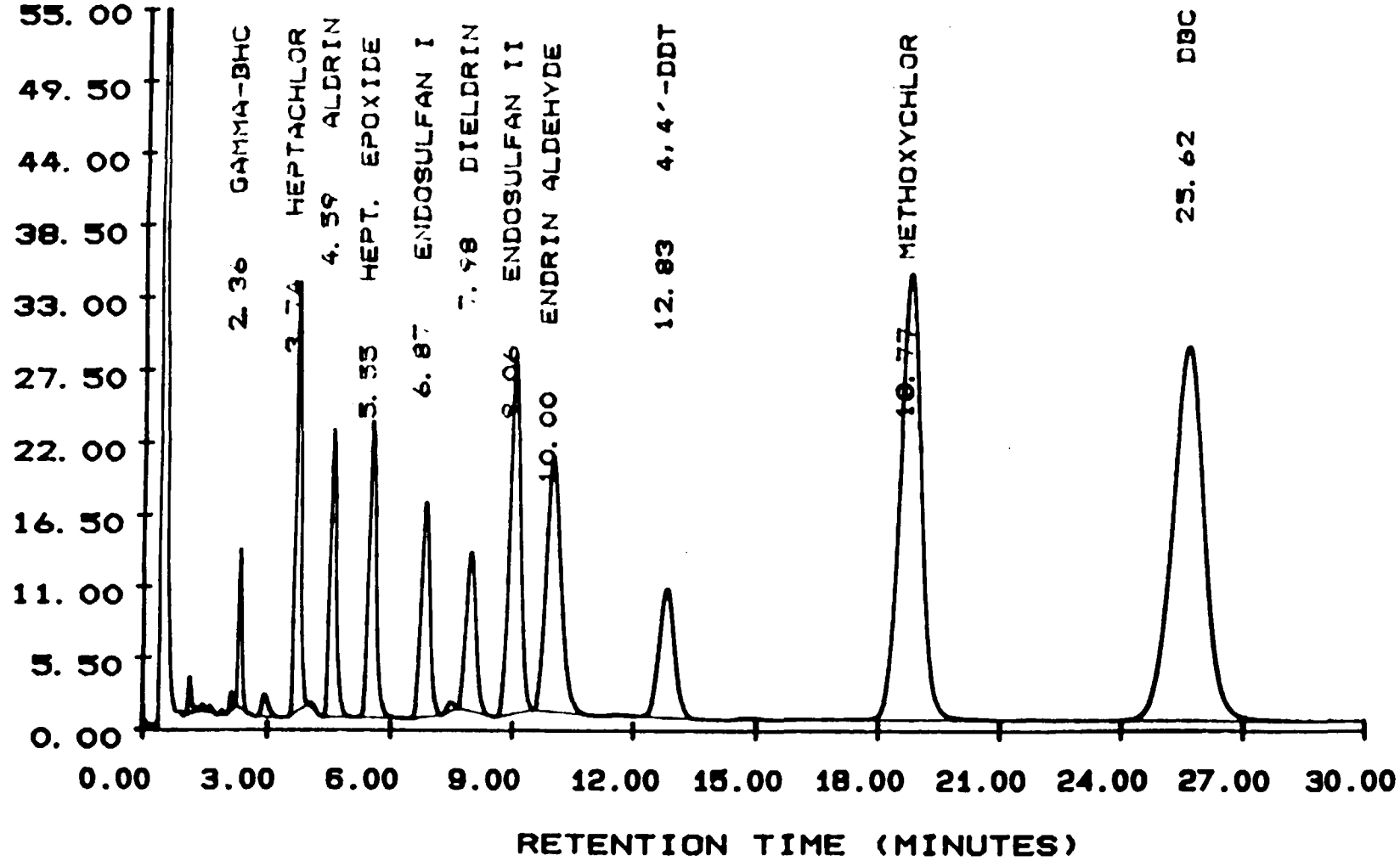
EXTERNAL STANDARD

SAMPLE: 08158914 .03 INST:14 VIAL:FO SEQ NUMBER:003
TEST : DATE-TIME INJECTED : 08/15/89 17:33:06
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:54:50
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALC 18-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	168274	26682	V	1.155		
002	23907	4636	V	1.450		
003	35240	4881	V	1.626		
004	21926	3554	V	1.914		
				2.031	ALPHA-BHC	
005	133184	16812	V	2.158	BETA-BHC	0.005
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	205478	16861	V	2.941		
				3.739	HEPTACHLOR	
007	126810	10211	V	4.049		
008	8362011	822284	V	4.597	ALDRIN	3.777
009	19993	1952	V	5.277		
				5.553	HEPT. EPOXIDE	
010	17542	1225	V	5.738		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
011	169278	11248	V	7.509		
				7.876	4,4'-DDE	
012	19633	1555	V	7.911	DIELDRIN	0.002
013	10133579	553820	V	8.887	ENDRIN	0.061
				9.055	ENDOSULFAN II	
014	238888	9429	V	9.834	4,4'-DDD	0.036
				10.000	ENDRIN ALDEHYDE	
015	13684	602	V	11.571	ENDO. SULFATE	0.001
016	14676839	608270	V	12.831	4,4'-DDT	0.218
017	130555	4303		14.694	ENDRIN KETONE	0.006
				18.766	METHOXYCHLOR	
018	40122	577		19.984		
019	17711664	328758		25.622	DBC	4.054

INDA 13-45

SAMPLE NO. : 08158914 .04 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/15/89 18:05:51
METHOD NO. : 14A / 14A PAGE NO. : 01



Y MAXIMUM: 58023. START TIME: 0.00
Y MINIMUM: 6597. END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

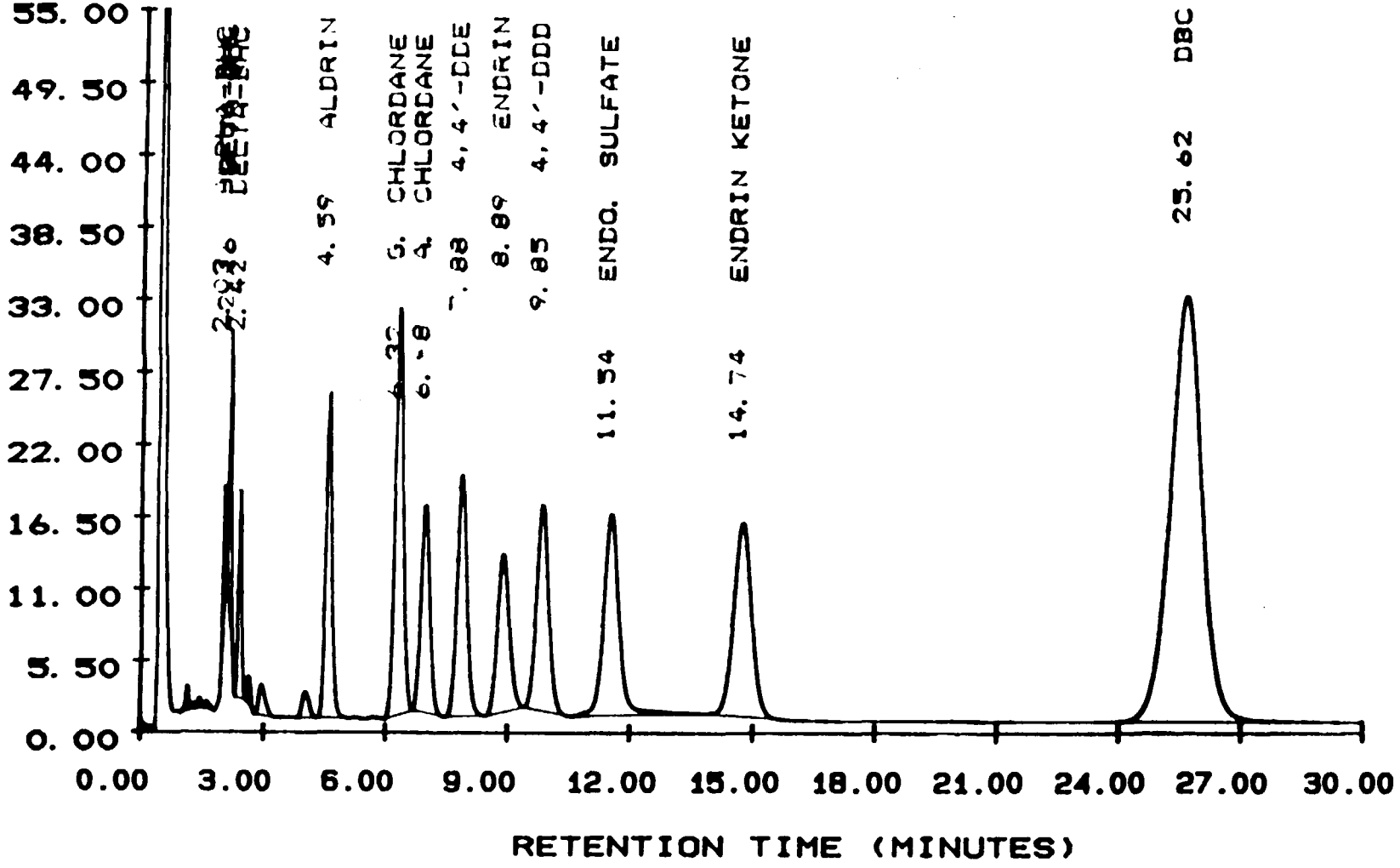
SAMPLE: 08158914 .04 INST:14 VIAL:FO SEQ NUMBER:004
TEST : DATE-TIME INJECTED : 08/15/89 18:05:51
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:41:16
METHOD: 14A / 14A REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDA 13-45
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
006	657170	106951	V	2.363	GAMMA-BHC	0.008
008	2689407	299709	V	3.739	HEPTACHLOR	0.017
010	2209313	204149	V	4.592	ALDRIN	0.017
011	2719821	211448	V	5.553	HEPT. EPOXIDE	0.017
012	2296045	154135	V	6.866	ENDOSULFAN I	0.017
014	1928803	114479	V	7.979	DIELDRIN	0.017
015	4711675	252885	V	9.055	ENDOSULFAN II	0.033
016	4666157	181081	V	10.000	ENDRIN ALDEHYDE	0.033
018	2411149	92835	V	12.826	4,4'-DDT	0.033
020	11564753	318302	V	18.766	METHOXYCHLOR	0.167
022	14470093	267117		25.624	DBC	0.083

INDB 13-46

SAMPLE NO. : 08158914 .05
TEST NO. :
METHOD NO. : 14B / 14B

INSTRUMENT: 14
DATE TIME: 08/15/89 18:38:55
PAGE NO. : 01



Y MAXIMUM: 51849.
Y MINIMUM: 6595.

START TIME: 0.00
END TIME: 30.00

CALIBRATION EXTERNAL STANDARD (HEIGHT)

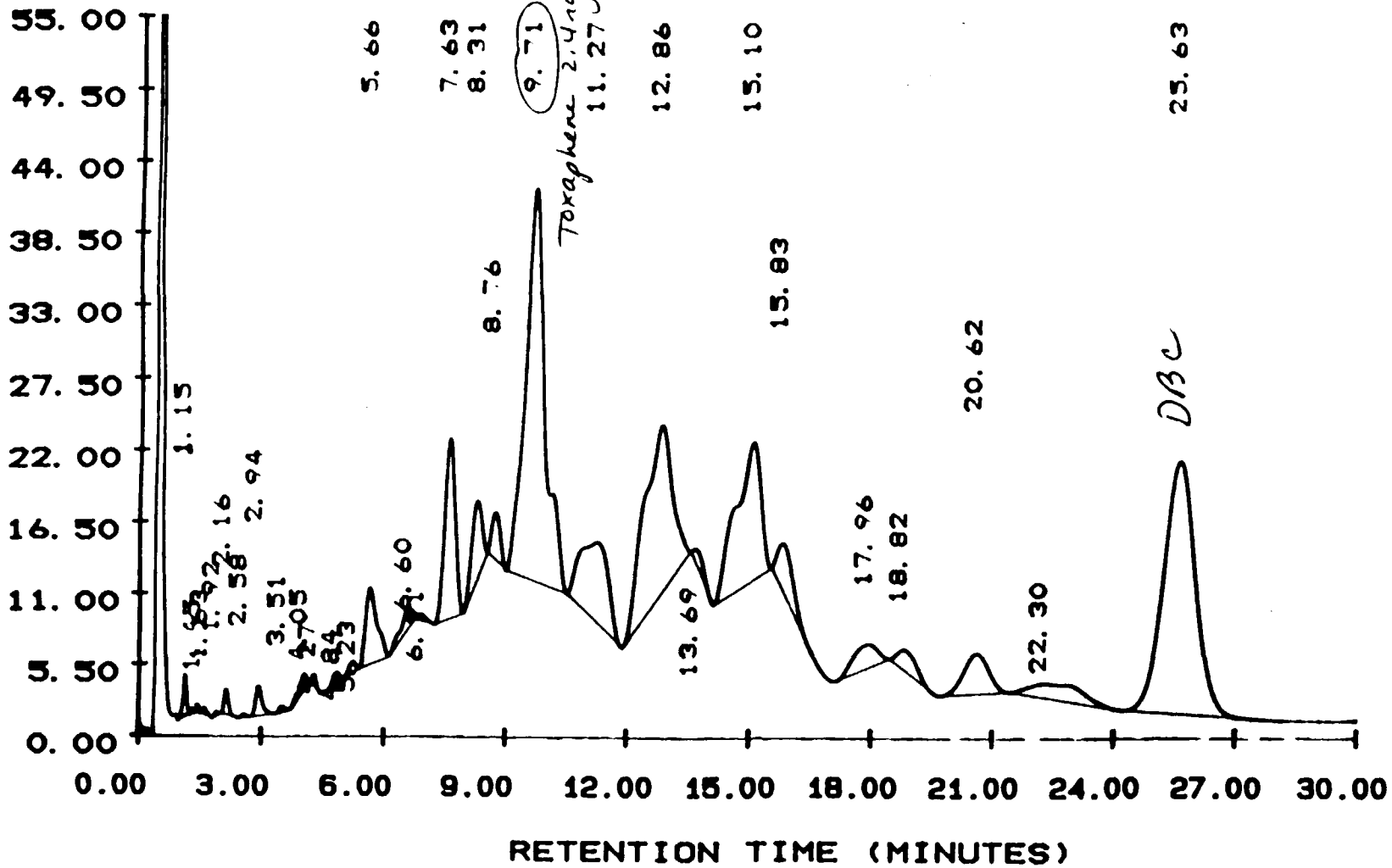
SAMPLE: 08158914 .05 INST:14 VIAL:FO SEQ NUMBER:005
TEST : DATE-TIME INJECTED : 08/15/89 18:38:55
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 00:47:58
METHOD: 14B / 14B REV #: 00115 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDB 13-46
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
004	298449	58766	V	2.031	ALPHA-BHC	0.008
005	797885	164432	V	2.162	BETA-BHC	0.017
006	728947	120522	V	2.422	DELTA-BHC	0.017
010	2207351	202236	V	4.592	ALDRIN	0.017
012	3482331	253914	V	6.325	G. CHLORDANE	0.017
013	1991015	130137	V	6.978	A. CHLORDANE	0.017
014	2541499	151000	V	7.876	4,4'-DDE	0.017
015	2001307	99262	V	8.888	ENDRIN	0.017
016	2656499	129219	V	9.852	4,4'-DDD	0.033
017	3337549	126216	V	11.539	ENDO. SULFATE	0.033
018	3685215	121652	V	14.742	ENDRIN KETONE	0.033
020	14419827	265796		25.620	DBC	0.083

TOXAPH 19-36

SAMPLE NO. : 08158914 . 06
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/15/89 19:12:02
PAGE NO. : 01



Y MAXIMUM: 49134.
Y MINIMUM: 6596.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:06:43

EXTERNAL STANDARD

SAMPLE: 08158914 .06 INST:14 VIAL:FO SEQ NUMBER:006
TEST : DATE-TIME INJECTED : 08/15/89 19:12:02
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/18/89 17:06:43
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: TOXAPH 19-36
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	148506	21356	V	1.151		
002	23821	4660	V	1.452		
003	29387	4047	V	1.626		
004	16735	2364	V	1.918		
				2.031	ALPHA-BHC	
005	108162	14816	V	2.158	BETA-BHC	0.001
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	15106	1938	V	2.579		
007	187072	17458	V	2.939		
008	28047	3101	V	3.511		
				3.739	HEPTACHLOR	
009	116787	9183	V	4.050		
010	40586	6063	V	4.269		
				4.592	ALDRIN	
011	82596	6782	V	4.836		
012	70074	5889	V	5.228		
				5.553	HEPT. EPOXIDE	
013	880916	45319	V	5.657		
				6.325	G. CHLORDANE	
014	218688	12261	V	6.601		
				6.866	ENDOSULFAN I	
015	54922	3976	V	6.908	A. CHLORDANE	0.001
016	1887539	106177	V	7.629		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	789229	45212	V	8.312		
018	405180	28644	V	8.755		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
019	7729805	230825	V	9.713	4,4'-DDD	0.060
				10.000	ENDRIN ALDEHYDE	
020	2299841	48475	V	11.267		
				11.539	ENDO. SULFATE	
021	4766541	98920	V	12.858	4,4'-DDT	0.035
022	172141	8299	V	13.689		
				14.742	ENDRIN KETONE	
023	3446915	81093	V	15.097		
024	791934	28799	V	15.826		
025	606513	13753	V	17.956		
026	420507	12742	V	18.819	METHOXYCHLOR	0.007
027	1037824	24085	V	20.615		
028	887014	8602	V	22.297		

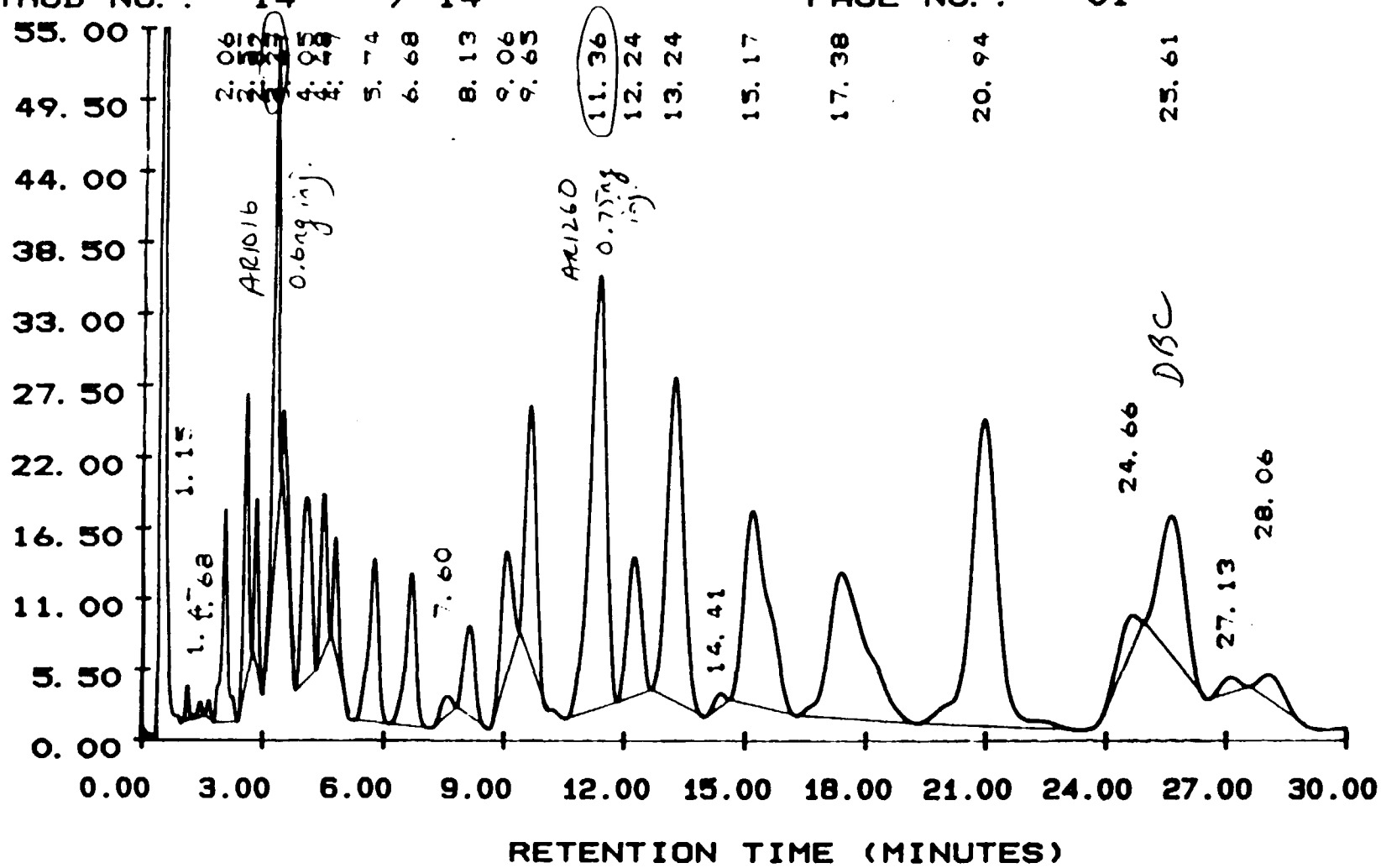
029	8248065	150277	25.631	DBC	0.047	
	307312		9.713	~~AROCHLOR-XAPH~~ TOXAPHENE rws 8/22/89	0.800	*

AR1660 12-117

SAMPLE NO. : 08158914 .07 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 19:45:36

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58123. START TIME: 0.00

Y MINIMUM: 6584. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:06:59

EXTERNAL STANDARD

SAMPLE: 08158914 .07 INST:14 VIAL:FO SEQ NUMBER:007
TEST : DATE-TIME INJECTED : 08/15/89 19:45:36
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/18/89 17:06:59
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1660 12-11
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	134558	21923	V	1.154		
002	66455	10325	V	1.470		
003	81653	12735	V	1.683		
004	1492443	147212	V	2.059	ALPHA-BHC	0.021
				2.162	BETA-BHC	
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
005	1552115	204141	V	2.573		
006	810430	118244	V	2.824		
007	2858791	351592	V	3.269		
008	701573	65871	V	3.471		
				3.739	HEPTACHLOR	
009	2181531	133115	V	4.054		
010	1178225	114893	V	4.479		
				4.592	ALDRIN	
011	792334	85271	V	4.768		
				5.553	HEPT. EPOXIDE	
012	2053595	118804	V	5.744		
				6.325	G. CHLORDANE	
013	1955201	111465	V	6.675		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	261733	13221	V	7.598		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
015	1248281	65191	V	8.128		
				8.888	ENDRIN	
016	1700049	89838	V	9.064	ENDOSULFAN II	0.012
017	3412429	186783	V	9.648		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
018	8566875	312427	V	11.356		
				11.539	ENDO. SULFATE	
019	2356703	101336	V	12.242		
				12.826	4,4'-DDT	
020	6679723	233975	V	13.245		
021	172758	9024	V	14.410		
				14.742	ENDRIN KETONE	
022	5936731	141825	V	15.172		
023	6854055	106344	V	17.375		
				18.766	METHOXYCHLOR	
024	10520167	222538	V	20.939		
025	866842	22304	V	24.657		

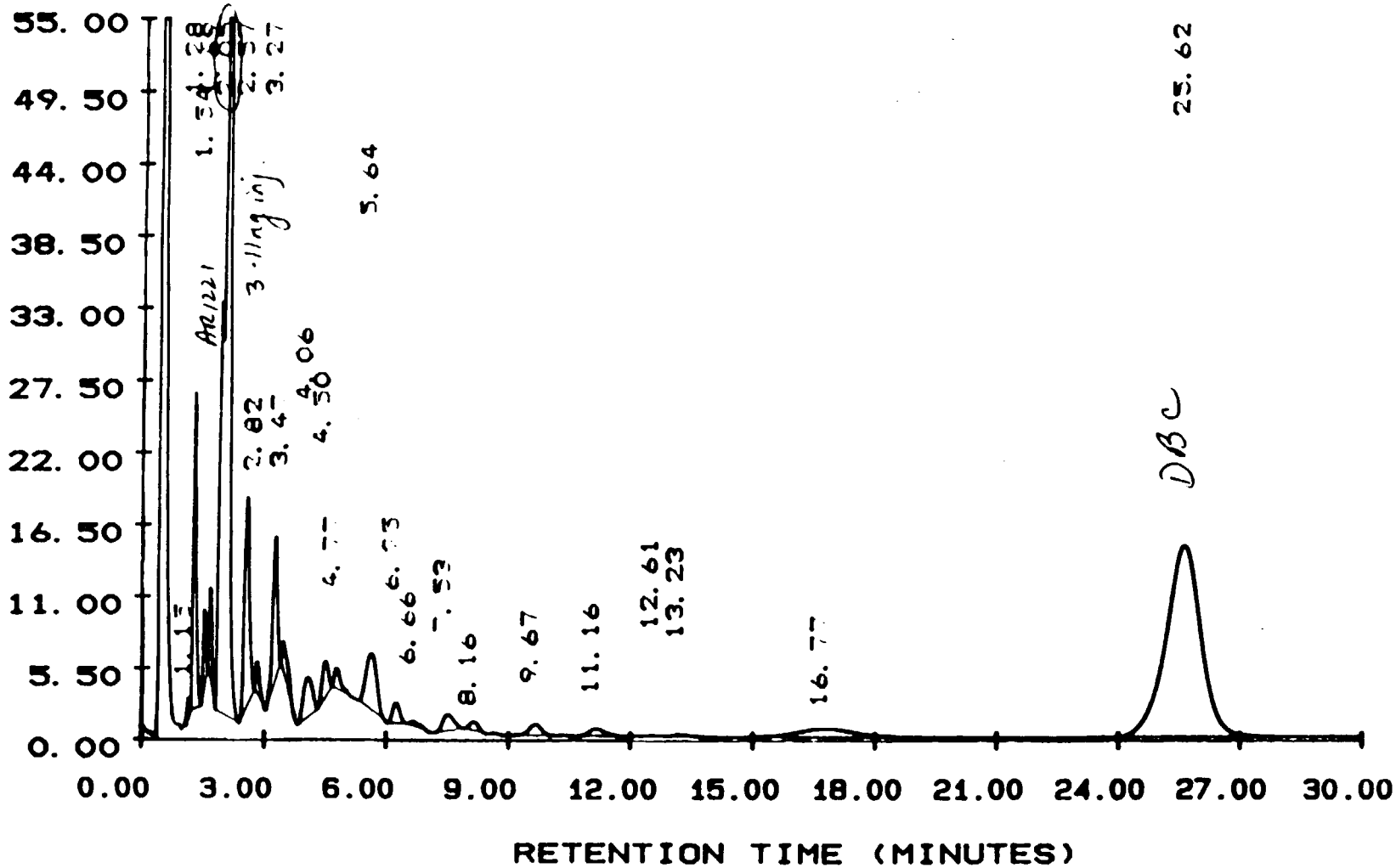
026	4358503	102132 V	25.606	DBC	0.032	
027	350100	10923 V	27.129			
028	772109	18869	28.056			
	2268443		3.269	AROCHLOR-1016	0.200	*
	2095629		11.356	AROCHLOR-1260	0.250	*

AR1221 01-129

SAMPLE NO. : 08158914 .08 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 20:19:12

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 57992. START TIME: 0.00

Y MINIMUM: 6293. END TIME: 30.00

026	4358503	102132 V	25.606	DBC	0.032	
027	350100	10923 V	27.129			
028	772109	18869	28.056			

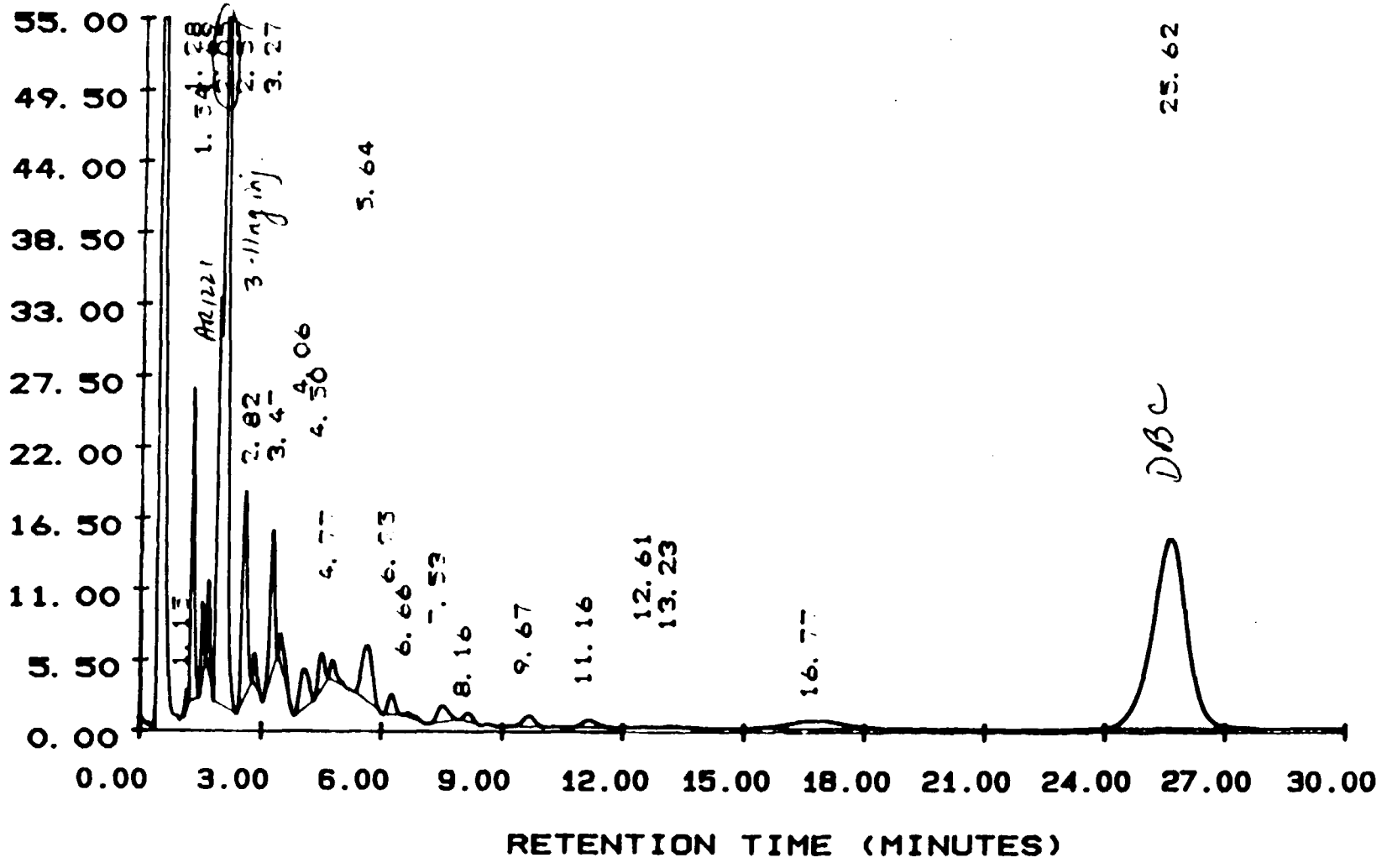
2268443	3.269	AROCHLOR-1016	0.200	*
2095629	11.356	AROCHLOR-1260	0.250	*

AR1221 01-129

SAMPLE NO. : 08158914 . 08 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/15/89 20:19:12

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 57992. START TIME: 0.00

Y MINIMUM: 6293. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:07:16

EXTERNAL STANDARD

SAMPLE: 08158914 .08 INST:14 VIAL:F0 SEQ NUMBER:008
TEST : DATE-TIME INJECTED : 08/15/89 20:19:12
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/18/89 17:07:16
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1221 01-12
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	41021	8529	V	1.145		
002	1211571	203249	V	1.284		
003	248420	45634	V	1.539		
004	319075	63245	V	1.686		
005	7512243	708846	V	2.054	ALPHA-BHC	0.100
				2.162	BETA-BHC	
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
006	1252855	146374	V	2.571		
007	152914	23374	V	2.821		
008	791599	97419	V	3.266		
009	230320	23633	V	3.465		
				3.739	HEPTACHLOR	
010	433254	28399	V	4.062		
011	267128	25253	V	4.498		
				4.592	ALDRIN	
012	159048	14899	V	4.769		
013	746968	41538	V	5.635	HEPT. EPOXIDE	0.003
014	179782	14826	V	6.249	G. CHLORDANE	0.001
015	56166	3065	V	6.664		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	224192	11808	V	7.528		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	93400	6508	V	8.159		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	189143	8148	V	9.666		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	146813	5273	V	11.159		
				11.539	ENDO. SULFATE	
020	12548	595	V	12.608		
				12.826	4,4'-DDT	
021	31007	1241	V	13.235		
				14.742	ENDRIN KETONE	
022	701197	6167		16.768		
				18.766	METHOXYCHLOR	
023	8316583	137820		25.615	DBC	0.043
	446031			2.054	AROCHLOR-1221	1.034 *

11

AR1232 02-124

SAMPLE NO. : 08158914 .09

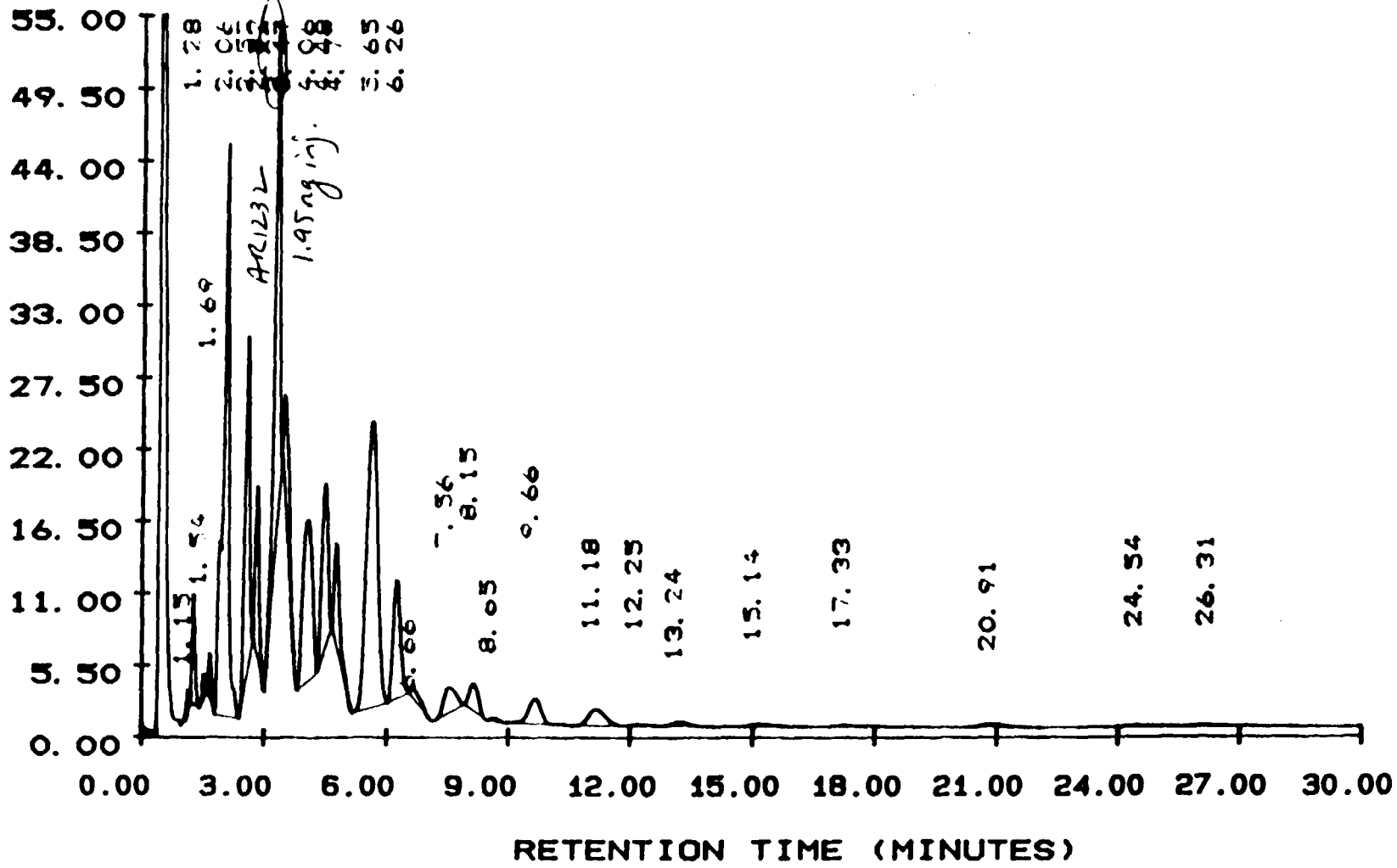
TEST NO. :

METHOD NO. : 14 / 14

INSTRUMENT: 14

DATE TIME: 08/15/89 20:52:17

PAGE NO. : 01



Y MAXIMUM: 58128.

Y MINIMUM: 6597.

START TIME: 0.00

END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/15/89 21:22:42

EXTERNAL STANDARD

SAMPLE: 08158914 .09 INST:14 VIAL:FO SEQ NUMBER:009
TEST : DATE-TIME INJECTED : 08/15/89 20:52:17
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 21:22:42
METHOD: 14 / 14 REV #: 00111 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1232 02-12
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

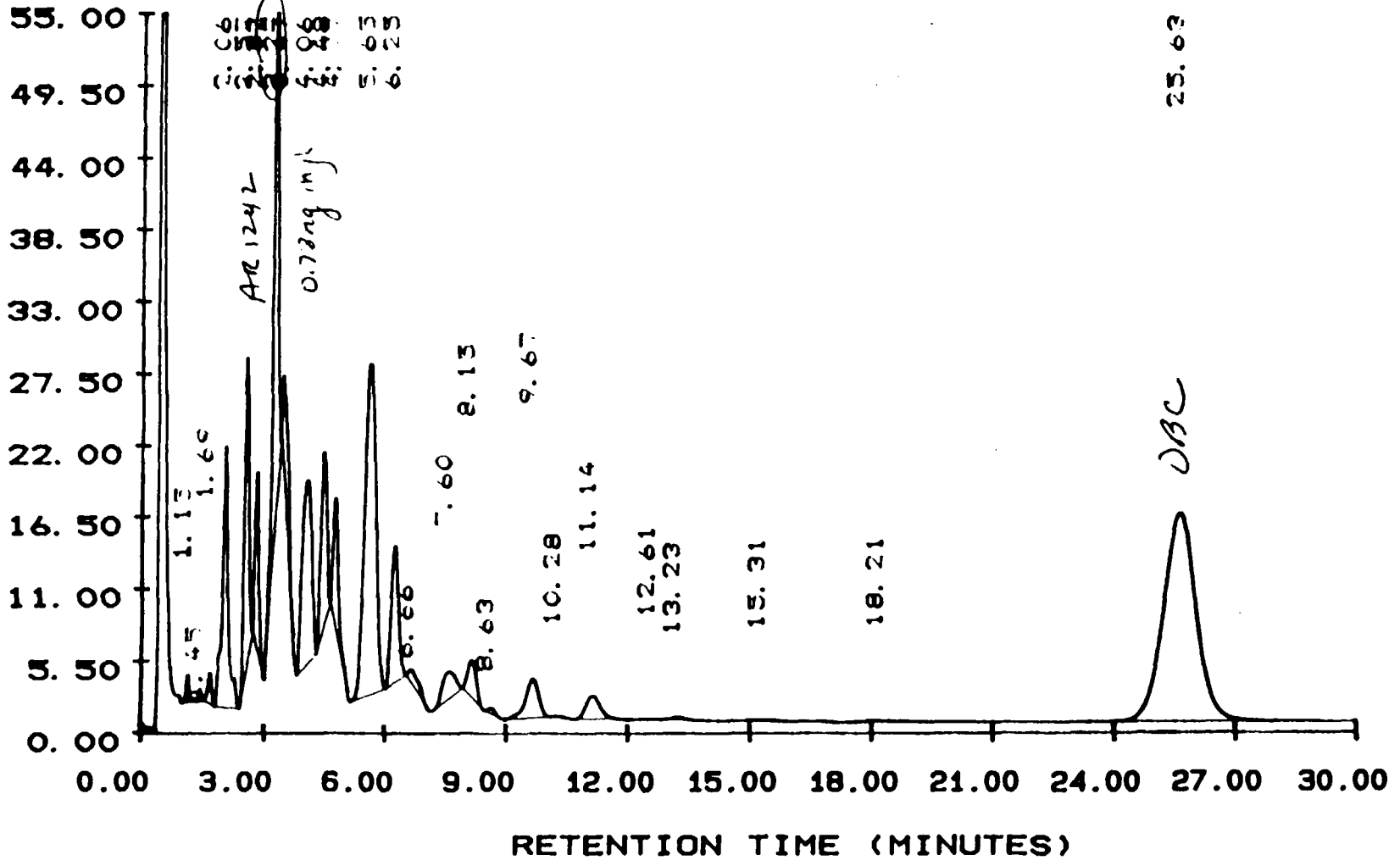
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	41929	9397	V	1.151		
002	400049	72762	V	1.285		
003	75056	15085	V	1.541		
004	163683	31953	V	1.686		
				1.805	ALPHA-BHC	
				1.991	GAMMA-BHC	
005	3979035	387928	V	2.056	BETA-BHC	0.110
				2.422	DELTA-BHC	
006	1835659	235652	V	2.572		
007	797852	118329	V	2.823		
				3.216	HEPTACHLOR	
008	2898267	354246	V	3.268		
009	739690	68096	V	3.470		
010	1861085	115034	V	4.059	ALDRIN	0.528
011	1216689	116031	V	4.485		
012	674235	74489	V	4.766		
				4.919	HEPT. EPOXIDE	
013	3861133	204246	V	5.648		
				5.742	G. CHLORDANE	
				6.153	ENDOSULFAN I	
014	1066543	83802	V	6.255	A. CHLORDANE	0.194
015	124263	7629	V	6.660		
				7.288	DIELDRIN	
016	368019	17873	V	7.562		
				7.757	4,4'-DDE	
				7.876	ENDRIN	
017	292691	19803	V	8.153		
				8.448	ENDOSULFAN II	
018	34573	2833	V	8.654		
				9.342	ENDRIN ALDEHYDE	
				9.436	4,4'-DDD	
019	409576	18507	V	9.665		
				10.926	ENDO. SULFATE	
020	348266	11982	V	11.178		
021	30029	1295	V	12.246		
				12.826	4,4'-DDT	
022	91191	3383	V	13.236		
				14.196	ENDRIN KETONE	
023	92166	2037	V	15.144		
024	86545	1272	V	17.333		
				20.343	METHOXYCHLOR	
025	125748	2757	V	20.914		
026	57803	1086	V	24.540		

027	131200	1040	26.306			
			29.000	DBC	no	DBC in std. soln
	903856		2.056	AROCHLOR-1232	0.650 *	

AR1242 03-120

SAMPLE NO. : 08158914 . 10
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/15/89 21:25:22
PAGE NO. : 01



Y MAXIMUM: 58128.
Y MINIMUM: 6603.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:07:34

EXTERNAL STANDARD

SAMPLE: 08158914 .10 INST:14 VIAL:F0 SEQ NUMBER:010
TEST : DATE-TIME INJECTED : 08/15/89 21:25:22
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/18/89 17:07:34
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1242 03-12
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

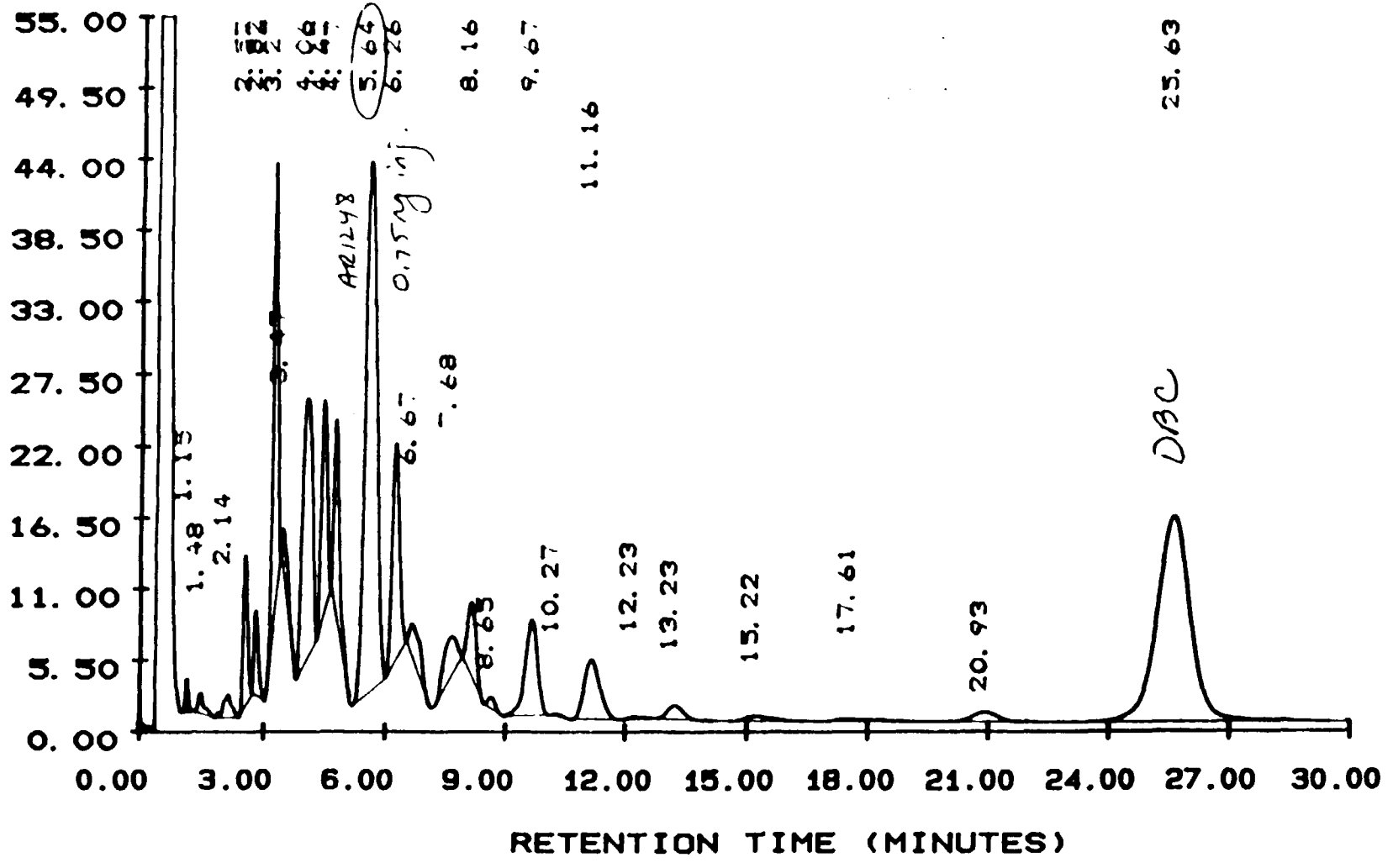
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	95828	16703	V	1.148		
002	36745	6497	V	1.447		
003	138988	21044	V	1.68[illegible]		
004	1820711	177766	V	2.0[illegible]	ALPHA-BHC	0.025
				2.1[illegible]	BETA-BHC	
				2.3[illegible]	GAMMA-BHC	
				2.42[illegible]	DELTA-BHC	
005	1641151	216158	V	2.572		
006	834958	122797	V	2.822		
007	2988519	365472	V	3.268		
008	749245	69760	V	3.470		
				3.739	HEPTACHLOR	
009	2150359	131814	V	4.061		
010	1288643	123757	V	4.484		
				4.592	ALDRIN	
011	831639	91714	V	4.766		
				5.553	HEPT. EPOXIDE	
012	4569441	236975	V	5.649		
013	1218649	96399	V	6.254	G. CHLORDANE	0.006
014	177777	9717	V	6.660		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
015	425739	19110	V	7.603		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
016	386509	26962	V	8.153		
017	52998	4467	V	8.633		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	631923	27884	V	9.667		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	20490	1190	V	10.278		
020	433576	17214	V	11.140		
				11.539	ENDO. SULFATE	
021	11092	576	V	12.608		
				12.826	4,4'-DDT	
022	46554	1878	V	13.231		
				14.742	ENDRIN KETONE	
023	110513	1485	V	15.312		
024	191731	1392		18.215		
				18.766	METHOXYCHLOR	
025	8402611	148522		25.627	DBC	0.046

2093093	3.268	AROCHLOR-1242	0.260	*

AR1248 03-121

SAMPLE NO. : 08158914 . 11
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/15/89 21:58:29
PAGE NO. : 01



Y MAXIMUM: 58134.
Y MINIMUM: 6609.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/18/89 17:08:14

EXTERNAL STANDARD

SAMPLE: 08158914 .11
TEST :
COLLECTION TIME : 29.98
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES
CLIENT ID:
CLIENT:
LAB ID: AR1248 03-12
SAMPLE WT : % MOISTURE :

INST:14 VIAL:F0 SEQ NUMBER:011
DATE-TIME INJECTED : 08/15/89 21:58:29
DATE-TIME PROCESSED : 08/18/89 17:08:14
SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: SP2100
DILUTION FACTOR : 1.0000

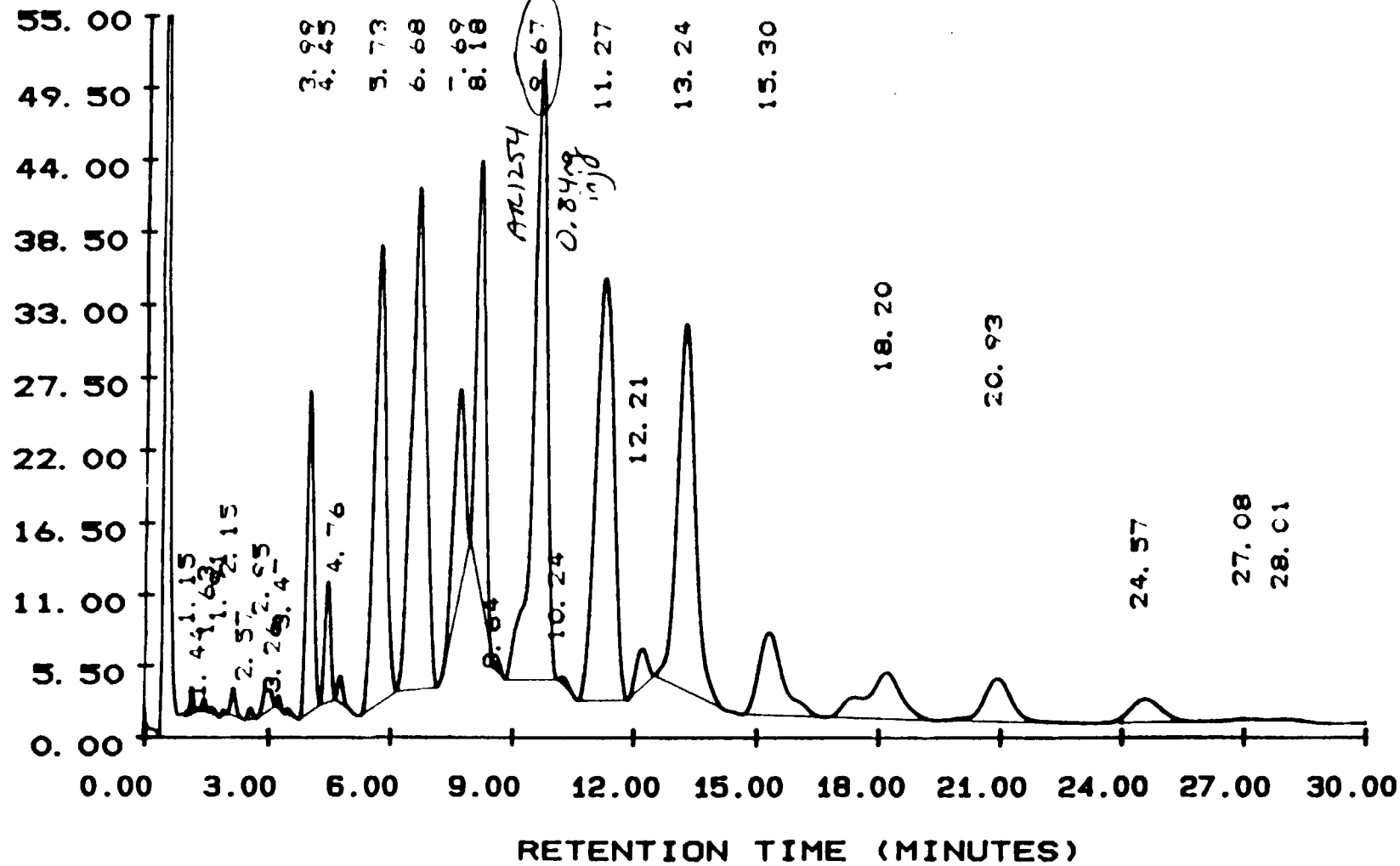
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	117448	20944	V	1.154		
002	142516	14294	V	1.477		
				2.031	ALPHA-BHC	
003	243406	16393	V	2.142	BETA-BHC	0.002
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
004	792142	104662	V	2.569		
005	442445	58821	V	2.825		
006	2477189	311454	V	3.270		
007	319258	29419	V	3.473		
				3.739	HEPTACHLOR	
008	3153071	188123	V	4.065		
009	1538119	153229	V	4.472		
				4.592	ALDRIN	
010	1366339	140728	V	4.767		
				5.553	HEPT. EPOXIDE	
011	7498779	380857	V	5.644		
012	1961237	155956	V	6.257	G. CHLORDANE	0.010
013	513814	23753	V	6.674		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	651554	26378	V	7.681		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
015	767278	53370	V	8.162		
016	105211	8864	V	8.648		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
017	1478701	68765	V	9.672		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
018	27314	1832	V	10.272		
019	1163857	43111	V	11.161		
				11.539	ENDO. SULFATE	
020	39148	1735	V	12.225		
				12.826	4,4'-DDT	
021	285243	10150	V	13.235		
				14.742	ENDRIN KETONE	
022	184438	3990	V	15.223		
023	170838	2048	V	17.610		
				18.766	METHOXYCHLOR	
024	347405	7175	V	20.926		
025	8685069	148842		25.627	DBC	0.046

2154621	5.644	AROCHLOR-1248	0.250	*

AR1254 01-130

SAMPLE NO. : 08158914 . 12
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/15/89 22:31:47
PAGE NO. : 01



Y MAXIMUM: 40933.
Y MINIMUM: 6578.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/15/89 23:02:13

EXTERNAL STANDARD

SAMPLE: 08158914 .12 INST:14 VIAL:F0 SEQ NUMBER:012
TEST : DATE-TIME INJECTED : 08/15/89 22:31:47
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/15/89 23:02:13
METHOD: 14 / 14 REV #: 00111 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	60014	10472	V	1.150		
002	41190	6220	V	1.443		
003	26732	3267	V	1.629		
				1.805	ALPHA-BHC	
004	14160	2562	V	1.914		
				1.991	GAMMA-BHC	
				2.031	BETA-BHC	
005	108439	12821	V	2.154		
				2.422	DELTA-BHC	
006	40580	5392	V	2.572		
007	156654	10953	V	2.955		
008	34394	5936	V	3.256	HEPTACHLOR	0.001
009	27125	2903	V	3.472		
010	1823169	152623	V	3.987	ALDRIN	0.701
011	566626	57484	V	4.447		
012	117591	12937	V	4.762		
				4.919	HEPT. EPOXIDE	
013	4301779	217342	V	5.732	G. CHLORDANE	2.758
				6.153	ENDOSULFAN I	
				6.204	A. CHLORDANE	
014	5798785	237775	V	6.675		
				7.288	DIELDRIN	
015	1762931	93921	V	7.695	4,4'-DDE	0.015
				7.876	ENDRIN	
016	3144121	204471	V	8.180		
				8.448	ENDOSULFAN II	
017	37735	4801	V	8.643		
				9.342	ENDRIN ALDEHYDE	
				9.436	4,4'-DDD	
018	6851465	294302	V	9.669		
019	51550	3523	V	10.237		
				10.926	ENDO. SULFATE	
020	6198989	200556	V	11.270		
021	347855	18068	V	12.210		
				12.826	4,4'-DDT	
022	5265017	173759	V	13.242		
				14.196	ENDRIN KETONE	
023	1639739	40047	V	15.304		
024	1415165	22414	V	18.197		
				20.343	METHOXYCHLOR	
025	998989	20833	V	20.929		
026	597314	11236	V	24.569		
027	29306	806	V	27.077		

no DBC in std.

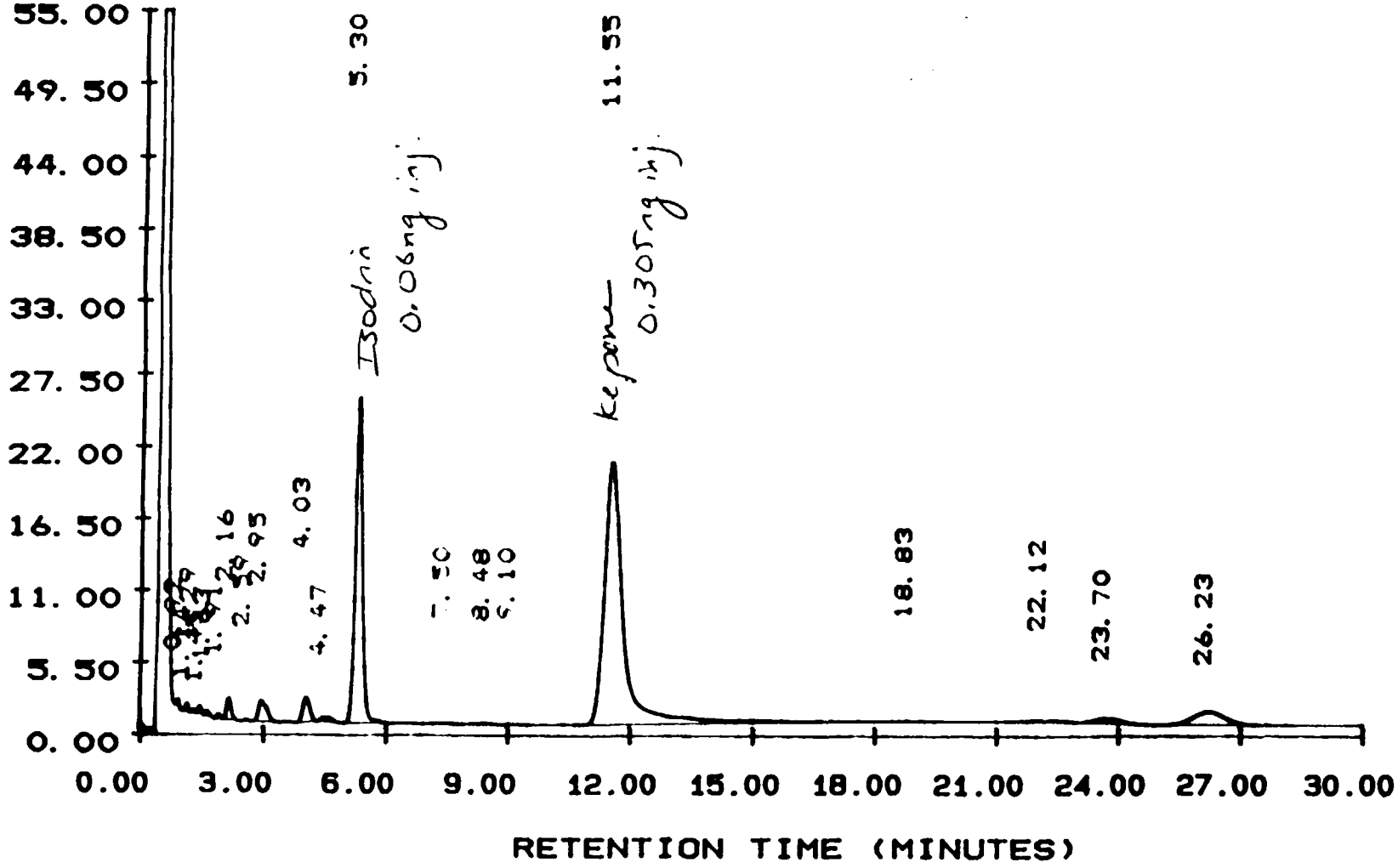
028	44042	996	28.009			
			29.000	DBC		
	1990811		9.669	AROCHLOR-1254	0.280	*

KEPONE/ISODRIN

SAMPLE NO. : 08158914 . 13 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 01:33:33

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58134. START TIME: 0.00

Y MINIMUM: 6617. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .13
TEST :
COLLECTION TIME : 29.98
METHOD: 14 / 14 REV #: 00112
CLIENT ID:
CLIENT:
LAB ID: KEPONE/ISODR
SAMPLE WT : % MOISTURE :

INST:14 VIAL:FO SEQ NUMBER:013
DATE-TIME INJECTED : 08/16/89 01:33:33
DATE-TIME PROCESSED : 08/16/89 02:04:02
ANALYST: YATES SAMP RATE: 0.78
SAMPLE VOL: 3.0 ul
COLUMN TYPE: SP2100
DILUTION FACTOR : 1.0000

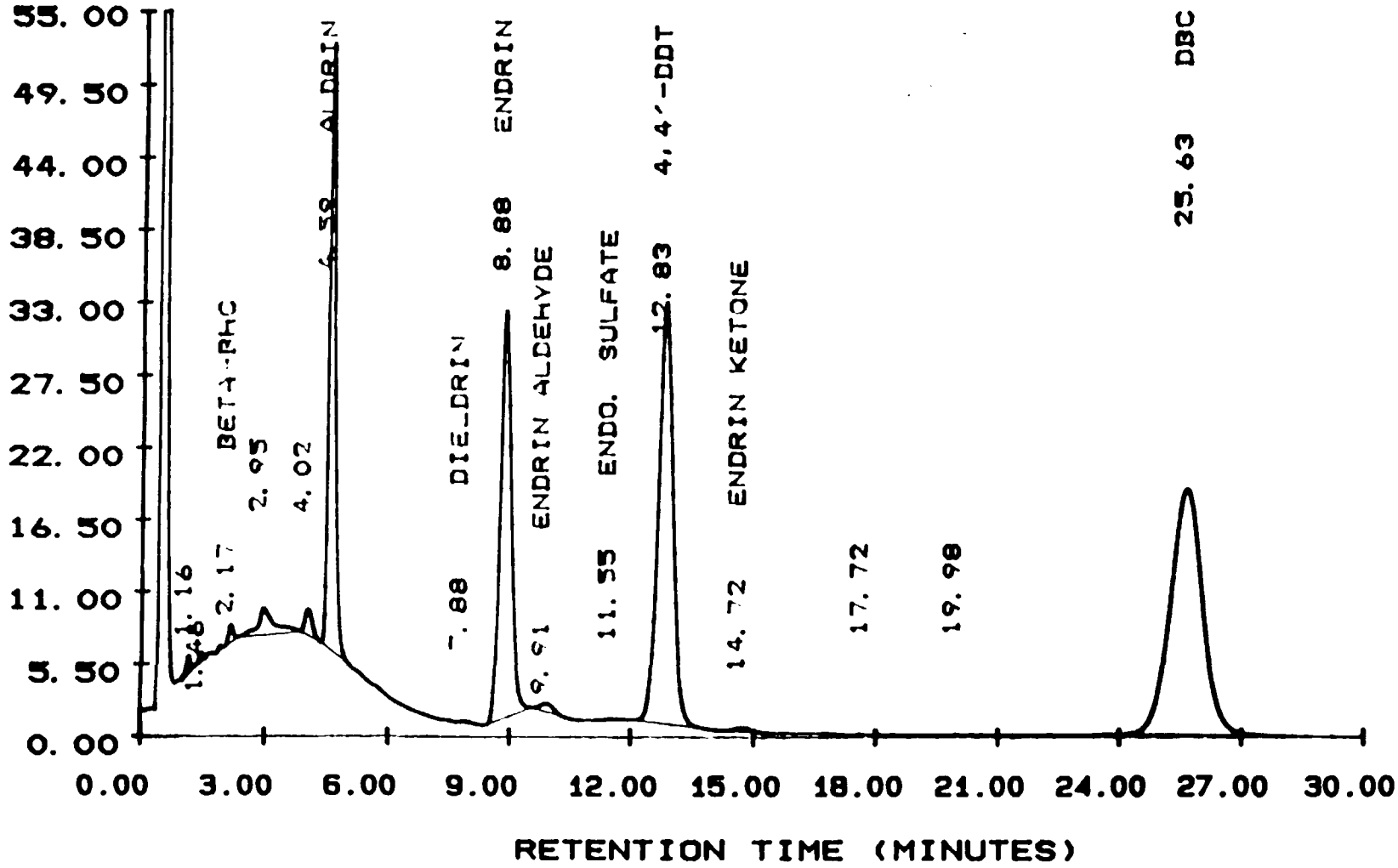
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	5996	2932	V	0.916		
002	21014	4978	V	1.144		
003	9655	2192	V	1.290		
004	28164	5314	V	1.453		
005	25341	3715	V	1.629		
006	20621	3334	V	1.915		
				2.031	ALPHA-BHC	
007	121838	15216	V	2.161	BETA-BHC	0.004
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
008	9433	1288	V	2.589		
009	209377	14984	V	2.954		
				3.739	HEPTACHLOR	
010	209062	17547	V	4.032	* Bry	
011	60570	3371	V	4.473		
				4.592	ALDRIN	
012	2783261	230890	V	5.301	Isodrin	0.0192
				5.553	HEPT. EPOXIDE	
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
013	16660	606	V	7.502		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
014	21662	766	V	8.483		
				8.888	ENDRIN	
015	15036	670	V	9.095	ENDOSULFAN II	0.001
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
016	6194483	187343	V	11.548	~~ENDO. SULFATE~~ Bry Kepone ~~0.291~~ Bry 0.1016 ng/ul	
				12.826	4,4'-DDT	
				14.742	ENDRIN KETONE	
017	35942	550	V	18.830	METHOXYCHLOR	0.003
018	97877	1417	V	22.119		
019	158194	3593	V	23.701		
				25.624	DBC	
020	527322	9370		26.229		

EVALB 19-43

SAMPLE NO. : 08158914 .22 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 06:40:19

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 57552. START TIME: 0.00

Y MINIMUM: 5318. END TIME: 30.00

EXTERNAL STANDARD

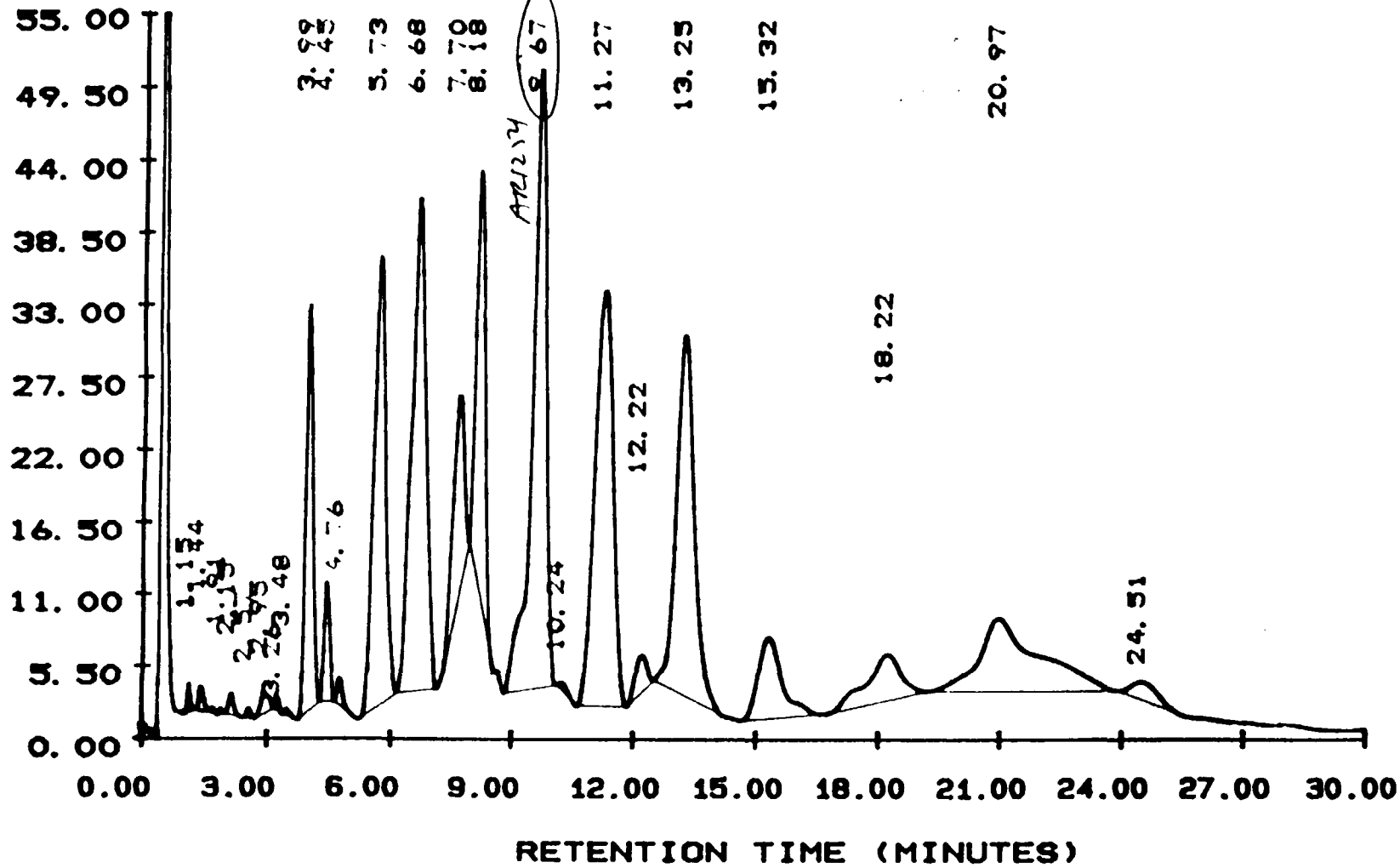
SAMPLE: 08158914 .22 INST:14 VIAL:FO SEQ NUMBER:022
TEST : DATE-TIME INJECTED : 08/16/89 06:40:19
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 07:10:45
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	62450	10136	V	1.158		
002	45406	6130	V	1.461		
				2.031	ALPHA-BHC	
003	108812	11722	V	2.168	BETA-BHC	0.003
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
004	516410	19266	V	2.954		
				3.739	HEPTACHLOR	
005	226702	19122	V	4.022		
006	4596337	433719	V	4.594	ALDRIN	1.992
				5.553	HEPT. EPOXIDE	
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
				7.876	4,4'-DDE	
007	22588	1394	V	7.880	DIELDRIN	0.002
008	5515229	293611	V	8.883	ENDRIN	0.032
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
009	147002	6089	V	9.907	ENDRIN ALDEHYDE	0.014
010	18849	695	V	11.547	ENDO. SULFATE	0.001
011	7494317	300674	V	12.829	4,4'-DDT	0.108
012	81382	2891	V	14.715	ENDRIN KETONE	0.004
013	11327	263	V	17.717		
				18.766	METHOXYCHLOR	
014	12905	269		19.979		
015	9780545	177651		25.626	DBC	2.191

AR1254 01-130

SAMPLE NO. : 08158914 . 31
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/16/89 11:38:35
PAGE NO. : 01



Y MAXIMUM: 41158.
Y MINIMUM: 6584.

START TIME: 0.00
END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 12:09:04

EXTERNAL STANDARD

SAMPLE: 08158914 .31 INST:14 VIAL:F0 SEQ NUMBER:031
TEST : DATE-TIME INJECTED : 08/16/89 11:38:35
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 12:09:04
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

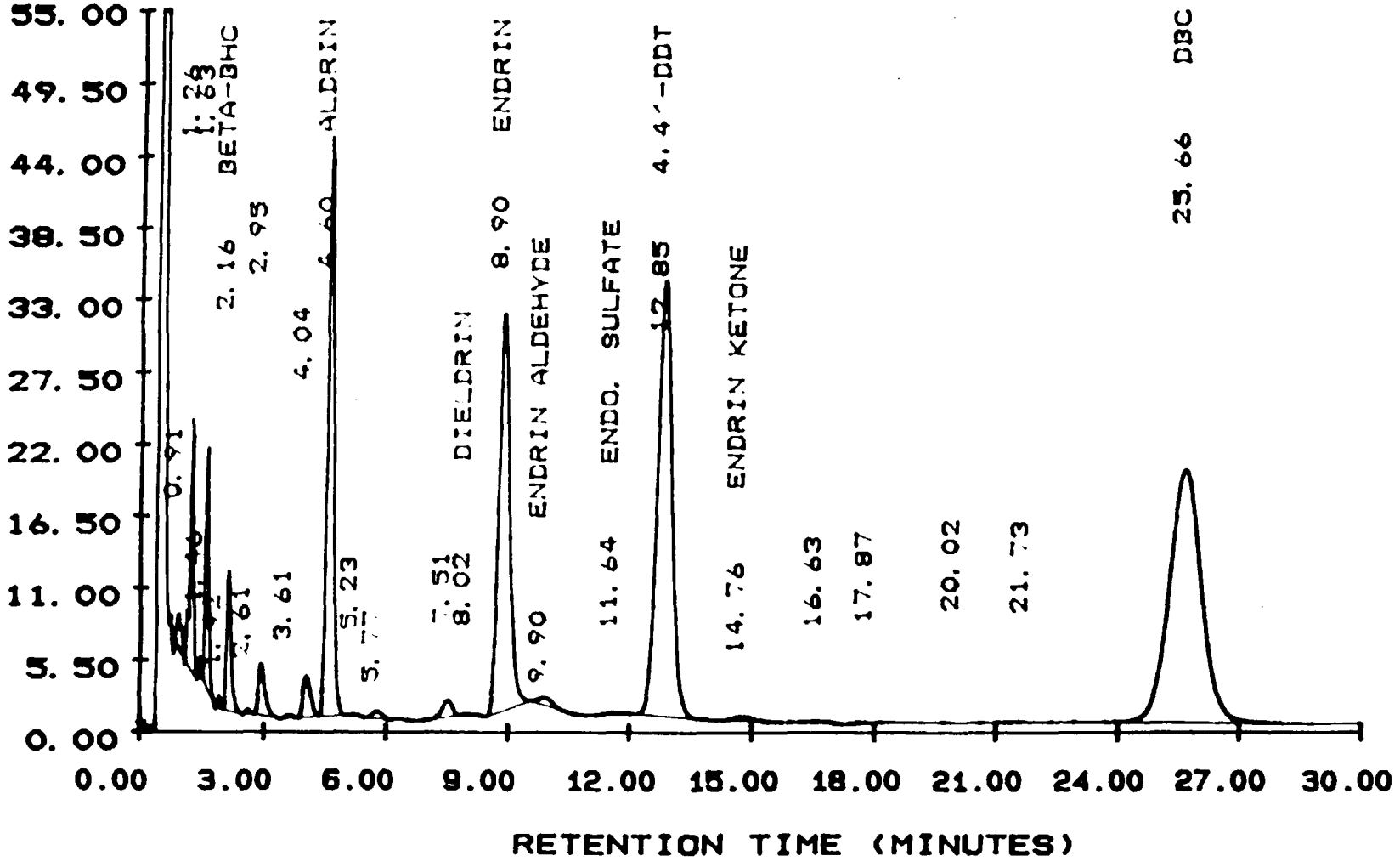
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	62417	11185	V	1.152		
002	121097	12062	V	1.439		
003	14926	2760	V	1.908		
				2.031	ALPHA-BHC	
004	84442	9993	V	2.155	BETA-BHC	0.003
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
005	31375	4547	V	2.572		
006	128189	9117	V	2.949		
007	37541	6103	V	3.260		
008	25852	2792	V	3.476		
				3.739	HEPTACHLOR	
009	2287437	193571	V	3.995		
010	554086	56825	V	4.448		
				4.592	ALDRIN	
011	119126	12993	V	4.764		
				5.553	HEPT. EPOXIDE	
012	4249927	214614	V	5.735		
				6.325	G. CHLORDANE	
013	5745169	235592	V	6.678		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	1748495	93577	V	7.698		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
015	3147763	203844	V	8.184		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
016	6945541	294801	V	9.673		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
017	53419	3960	V	10.241		
018	6151143	198871	V	11.275		
				11.539	ENDO. SULFATE	
019	339555	17732	V	12.217		
				12.826	4,4'-DDT	
020	5196571	172016	V	13.249		
				14.742	ENDRIN KETONE	
021	1550845	38700	V	15.317		
022	1305899	21975	V	18.221		
				18.766	METHOXYCHLOR	
023	3587227	34696	V	20.973		
024	398099	8634		24.510		

	25.624	DBC	no DBC in std
2026681	9.673	AROCHLOR-1254	0.285 *

EVALB 19-43

SAMPLE NO. : 08158914 .39
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/17/89 13:21:02
PAGE NO. : 01



Y MAXIMUM: 58144.
Y MINIMUM: 6633.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

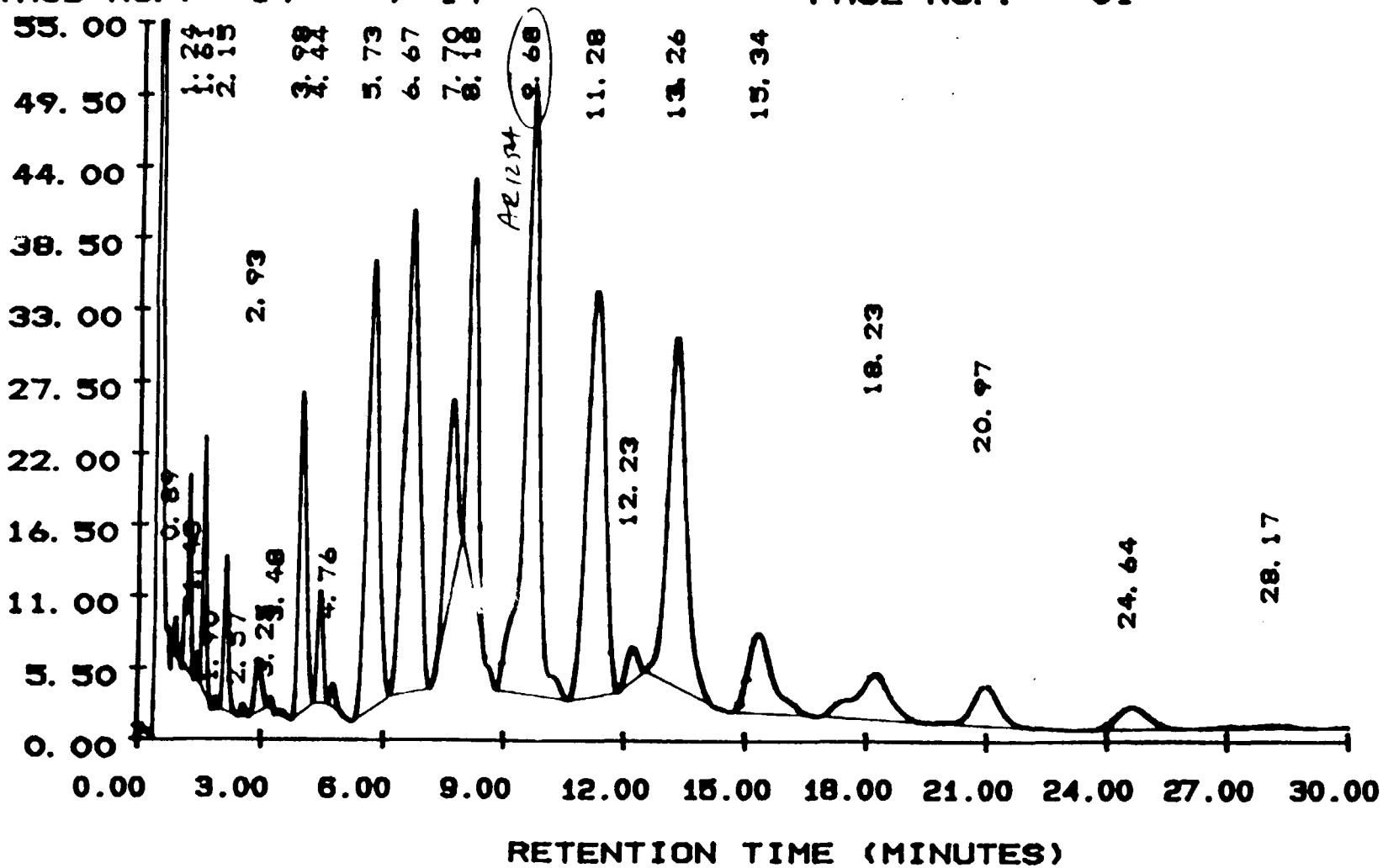
SAMPLE: 08158914 .39 INST:14 VIAL:F0 SEQ NUMBER:039
TEST : DATE-TIME INJECTED : 08/17/89 13:21:02
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 13:51:28
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: EVALB 19-43
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	200967	21022	V	0.913		
002	1086575	157346	V	1.258		
003	65775	13530	V	1.458		
004	1003631	159790	V	1.627		
005	54332	8989	V	1.921		
				2.031	ALPHA-BHC	
006	757698	96524	V	2.164	BETA-BHC	0.027
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	24913	3593	V	2.612		
008	400691	37082	V	2.949		
009	29510	2385	V	3.610		
				3.739	HEPTACHLOR	
010	370227	29539	V	4.039		
011	4237683	409657	V	4.600	ALDRIN	1.882
012	22291	1583	V	5.227		
				5.553	HEPT. EPOXIDE	
013	91269	5387	V	5.769		
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
014	205830	12107	V	7.510		
				7.876	4,4'-DDE	
015	37363	1281	V	8.018	DIELDRIN	0.001
016	5318663	283104	V	8.896	ENDRIN	0.031
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
017	131850	5400	V	9.897	ENDRIN ALDEHYDE	0.012
018	48257	1478	V	11.639	ENDO. SULFATE	0.002
019	7681671	311120	V	12.845	4,4'-DDT	0.112
020	105097	3294	V	14.756	ENDRIN KETONE	0.004
021	57342	1462	V	16.631		
022	49700	1079	V	17.873		
				18.766	METHOXYCHLOR	
023	9951	233	V	20.017		
024	28324	383	V	21.728		
025	9968653	180819		25.658	DBC	2.230

AR1254 01-130

SAMPLE NO. : 08158914 . 47
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/17/89 18:30:42
PAGE NO. : 01



Y MAXIMUM: 39842.
Y MINIMUM: 6630.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .47 INST:14 VIAL:FO SEQ NUMBER:047
TEST : DATE-TIME INJECTED : 08/17/89 18:30:42
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 19:01:09
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	98864	14345	V	0.893		
002	613594	84264	V	1.243		
003	57766	11920	V	1.434		
004	722274	110202	V	1.611		
005	31080	5523	V	1.904		
				2.031	ALPHA-BHC	
006	559763	69568	V	2.147	BETA-BHC	0.020
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	40198	5569	V	2.568		
008	274873	24440	V	2.934		
009	28440	5225	V	3.247		
010	30758	2626	V	3.476		
				3.739	HEPTACHLOR	
011	1799505	148073	V	3.982		
012	510026	51395	V	4.439		
				4.592	ALDRIN	
013	96714	10728	V	4.755		
				5.553	HEPT. EPOXIDE	
014	4128223	207044	V	5.727		
				6.325	G. CHLORDANE	
015	5481299	223098	V	6.673		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	1639101	86648	V	7.696		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	2987771	189608	V	8.183		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	7213535	282591	V	9.676		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	5878367	187408	V	11.283		
				11.539	ENDO. SULFATE	
020	289231	15041	V	12.225		
				12.826	4,4'-DDT	
021	5063639	161075	V	13.262		
				14.742	ENDRIN KETONE	
022	1571337	37119	V	15.335		
023	1310683	21179	V	18.230		
				18.766	METHOXYCHLOR	
024	898957	18652	V	20.971		
025	573024	10419	V	24.637		
				25.624	DBC	
026	144666	1649		28.172		

no DBC in std

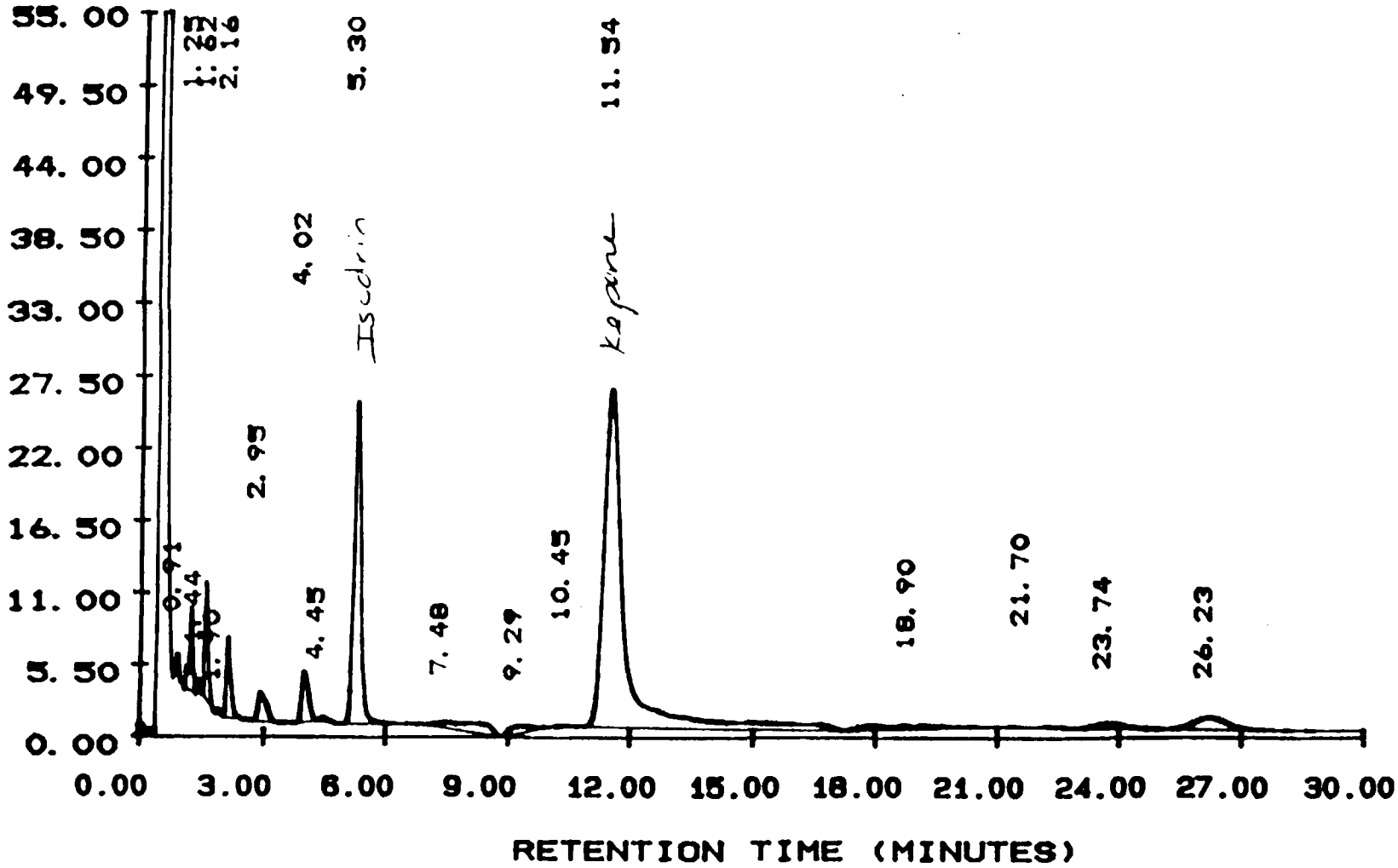
1873881	9.676	AROCHLOR-1254	0.264	*

KEPONE/ISODRIN

SAMPLE NO. : 08158914 .53 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/17/89 21:48:23

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 58100. START TIME: 0.00

Y MINIMUM: 6540. END TIME: 30.00

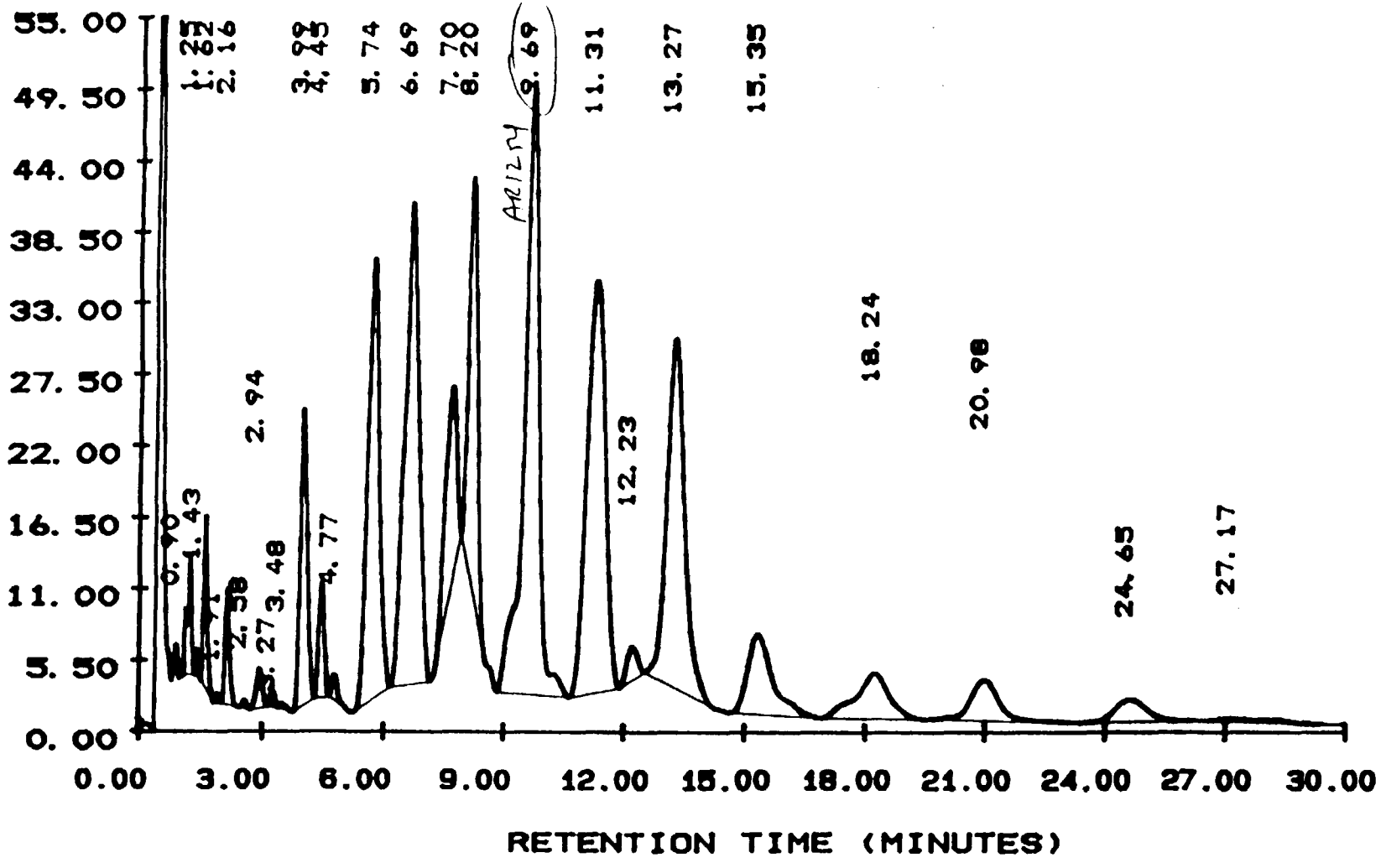
EXTERNAL STANDARD

SAMPLE: 08158914 .53 INST:14 VIAL:FO SEQ NUMBER:053
TEST : DATE-TIME INJECTED : 08/17/89 21:48:23
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 22:18:49
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: KEPONE/ISODR 10-47
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	55932	13203	V	0.909		
002	361990	53294	V	1.252		
003	55204	10935	V	1.442		
004	499324	77787	V	1.620		
005	26740	4906	V	1.905		
				2.031	ALPHA-BHC	
006	468555	56978	V	2.158	BETA-BHC	0.016
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	296946	21311	V	2.946		
				3.739	HEPTACHLOR	
008	416761	36441	V	4.018		
009	43866	3305	V	4.449		
				4.592	ALDRIN	
010	2799481	228836	V	5.299	Isodrin	
				5.553	HEPT. EPOXIDE	
				6.325	G. CHLORDANE	
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
011	478505	4426	V	7.477		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
012	211242	4794	V	9.288		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
013	11981	516	V	10.448	Kepone	
014	8711079	241550	V	11.537	~~ENDO. SULFATE~~ 135y	~~0.375~~ 85y
				12.826	4,4'-DDT	
				14.742	ENDRIN KETONE	
015	367898	2542	V	18.895	METHOXYCHLOR	0.012
016	59022	771	V	21.702		
017	185689	3873	V	23.741		
				25.624	DBC	
018	480144	8456		26.225		

AR1254 01-130

SAMPLE NO. : 08158914 .54 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/17/89 22:21:03
METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 40691. START TIME: 0.00
Y MINIMUM: 6656. END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .54 INST:14 VIAL:F0 SEQ NUMBER:054
TEST : DATE-TIME INJECTED : 08/17/89 22:21:03
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 22:51:27
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: AR1254 01-13
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

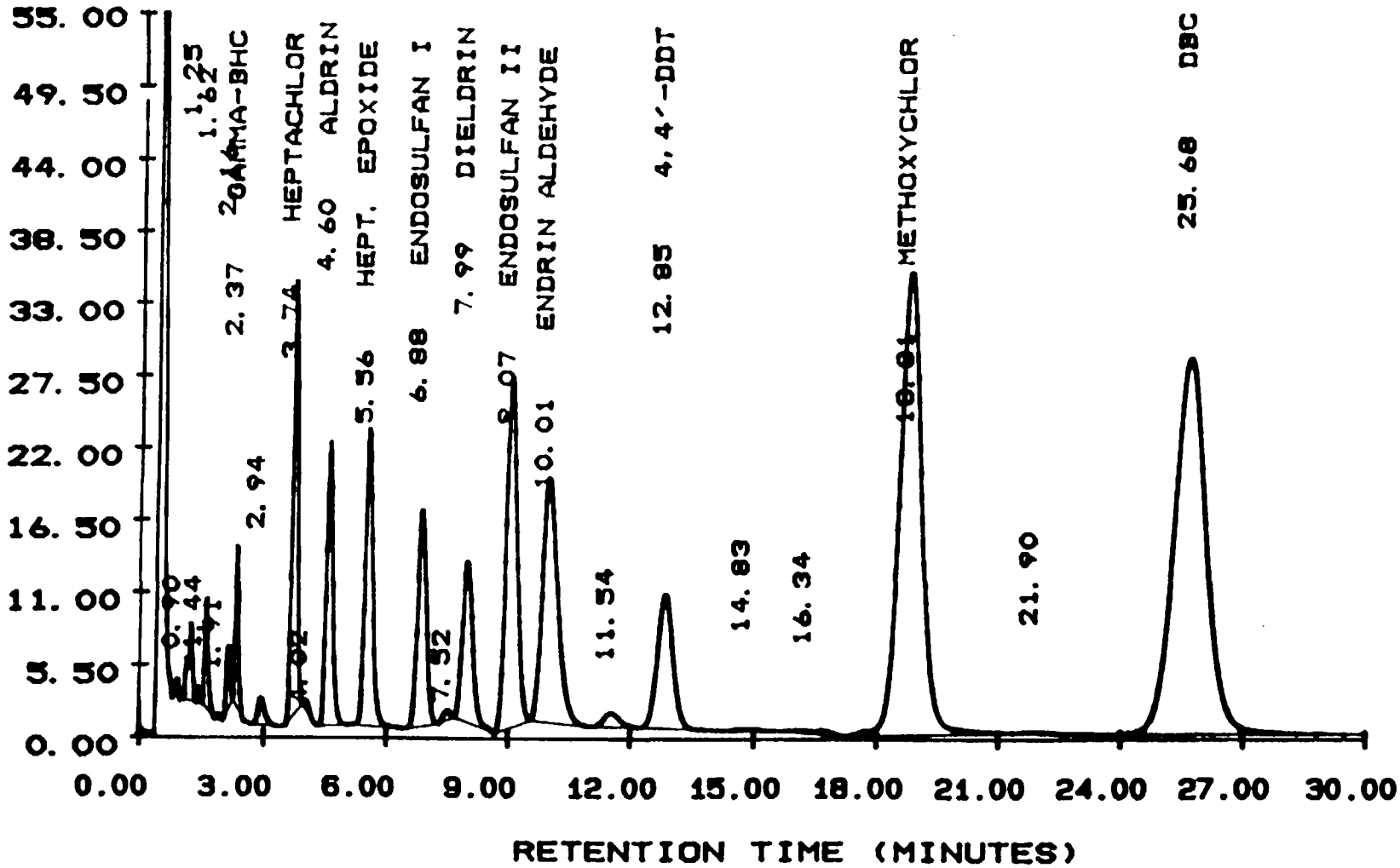
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	62984	12081	V	0.905		
002	429918	50419	V	1.252		
003	65990	13289	V	1.434		
004	514198	77607	V	1.623		
005	26432	4883	V	1.910		
				2.031	ALPHA-BHC	
006	422822	53536	V	2.160	BETA-BHC	0.015
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	28075	4239	V	2.577		
008	193862	18932	V	2.941		
009	49397	7122	V	3.265		
010	24738	2463	V	3.480		
				3.739	HEPTACHLOR	
011	1685351	140577	V	3.994		
012	538456	54381	V	4.454		
				4.592	ALDRIN	
013	111867	12139	V	4.771		
				5.553	HEPT. EPOXIDE	
014	4169473	209860	V	5.743		
				6.325	G. CHLORDANE	
015	5604411	229864	V	6.689		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
016	1835383	91439	V	7.704		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
017	3088877	198312	V	8.198		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
018	7425009	292478	V	9.691		
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
019	6261387	196230	V	11.309		
				11.539	ENDO. SULFATE	
020	296110	15869	V	12.235		
				12.826	4,4'-DDT	
021	5094781	165876	V	13.274		
				14.742	ENDRIN KETONE	
022	1633865	38279	V	15.345		
023	1273439	21766	V	18.241		
				18.766	METHOXYCHLOR	
024	966643	19580	V	20.981		
025	574198	10647	V	24.647		
				25.624	DBC	
026	196659	1616		27.169		

no DBC in std

1925353	9.691	AROCHLOR-1254	0.271	*

INDA 13-45

SAMPLE NO. : 08158914 .55 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/17/89 22:54:25
METHOD NO. : 14A / 14A PAGE NO. : 01



Y MAXIMUM: 58001.
Y MINIMUM: 6614.

START TIME: 0.00
END TIME: 30.00

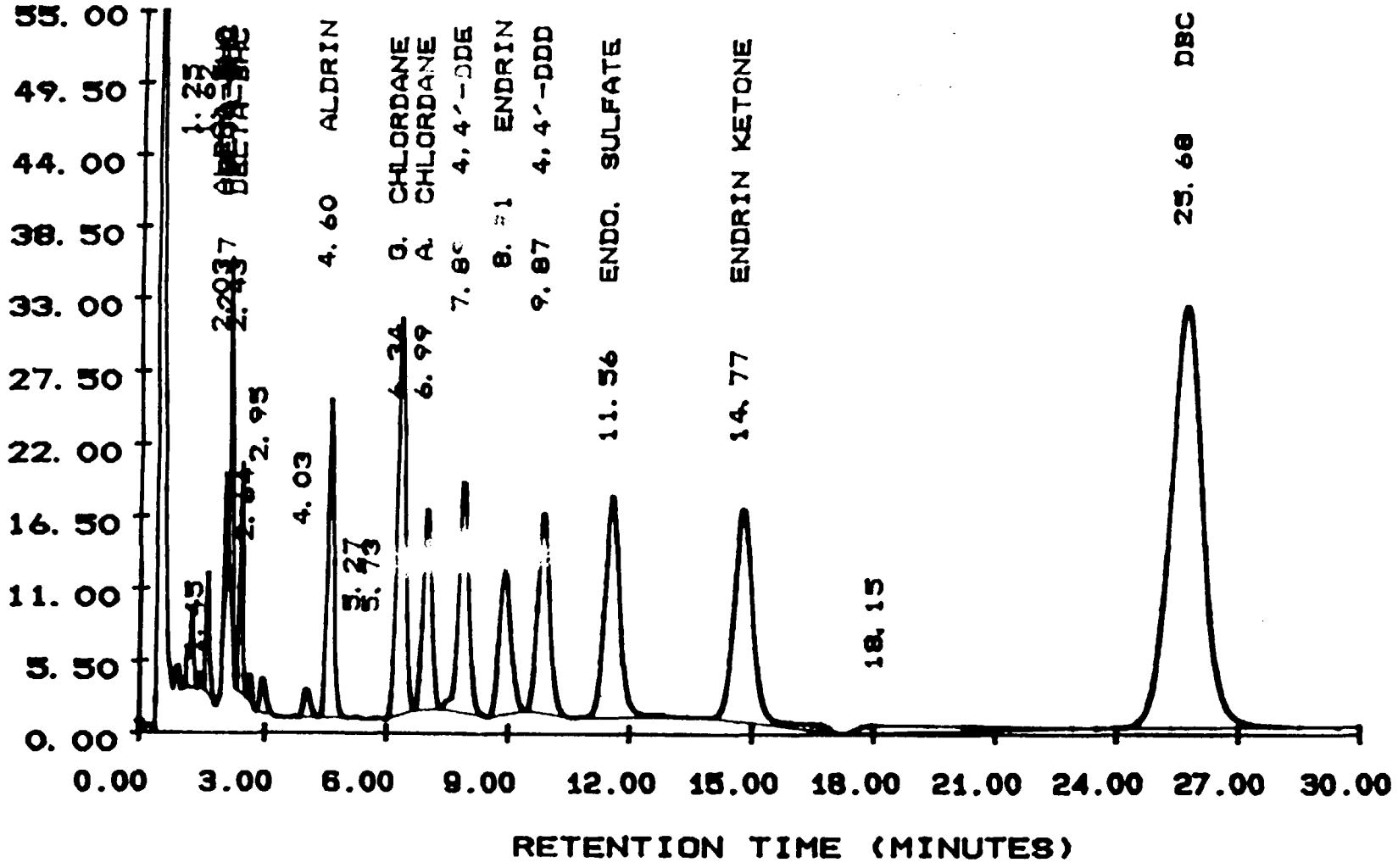
EXTERNAL STANDARD

SAMPLE: 08158914 .55 INST:14 VIAL:F0 SEQ NUMBER:055
TEST : DATE-TIME INJECTED : 08/17/89 22:54:25
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 23:24:50
METHOD: 14A / 14A REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDA 13-45
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	50890	10602	V	0.904		
002	417758	48333	V	1.253		
003	51916	10588	V	1.442		
004	482056	74182	V	1.624		
005	23611	4144	V	1.913		
006	270387	41380	V	2.161		
007	644390	106660	V	2.366	GAMMA-BHC	0.008
008	222094	19154	V	2.943		
009	2663911	300414	V	3.745	HEPTACHLOR	0.017
010	43495	6445	V	4.019		
011	2163383	199260	V	4.600	ALDRIN	0.016
012	2733515	209983	V	5.563	HEPT. EPOXIDE	0.017
013	2272909	152411	V	6.879	ENDOSULFAN I	0.017
014	83789	6875	V	7.517		
015	1973549	113721	V	7.993	DIELDRIN	0.017
016	4549709	246396	V	9.073	ENDOSULFAN II	0.033
017	4539863	172711	V	10.007	ENDRIN ALDEHYDE	0.032
018	264422	9879	V	11.538		
019	2469371	94576	V	12.852	4,4'-DDT	0.034
020	41740	1303	V	14.834		
021	138209	2199	V	16.336		
022	12244289	326560	V	18.807	METHOXYCHLOR	0.171
023	32913	745	V	21.895		
024	14500135	265935		25.682	DBC	0.083

INDB 13-56

SAMPLE NO. : 08158914 .56 INSTRUMENT: 14
TEST NO. : DATE TIME: 08/17/89 23:27:40
METHOD NO. : 14B / 14B PAGE NO. : 01



Y MAXIMUM: 51592.
Y MINIMUM: 6573.

START TIME: 0.00
END TIME: 30.00

EXTERNAL STANDARD

SAMPLE: 08158914 .56 INST:14 VIAL:F0 SEQ NUMBER:056
TEST : DATE-TIME INJECTED : 08/17/89 23:27:40
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/17/89 23:58:18
METHOD: 14B / 14B REV #: 00115 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: SAMPLE VOL: 3.0 ul
CLIENT: COLUMN TYPE: SP2100
LAB ID: INDB 13-56
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	363152	44269	V	1.254		
002	48399	9484	V	1.446		
003	462728	71688	V	1.624		
004	279114	55941	V	2.034	ALPHA-BHC	0.008
005	1025744	197583	V	2.166	BETA-BHC	0.020
006	811187	133747	V	2.426	DELTA-BHC	0.018
007	95718	16596	V	2.641		
008	213030	21579	V	2.954		
009	211622	17582	V	4.028		
010	2145965	196488	V	4.599	ALDRIN	0.016
011	9511	922	V	5.271		
012	14131	973	V	5.734		
013	3441831	245978	V	6.337	G. CHLORDANE	0.016
014	1880193	124641	V	6.991	A. CHLORDANE	0.016
015	2516231	143825	V	7.891	4,4'-DDE	0.016
016	1828025	90739	V	8.912	ENDRIN	0.015
017	2588663	124795	V	9.872	4,4'-DDD	0.032
018	3591347	138524	V	11.561	ENDO. SULFATE	0.037
019	4422785	132795	V	14.773	ENDRIN KETONE	0.036
020	842880	4563		18.145		
021	14429107	261957		25.680	DBC	0.082

RAW QC DATA

A. BLANK DATA
B. MATRIX SPIKE DATA
C. MATRIX SPIKE DUPLICATE DATA

V RAW QC DATA

A. Blank Data
   1. Tabulated Results (Form I)
   2. Pesticide/PCB Raw Data in Order by:
      a. 2250/2401 Column
      b. SP2100 Column

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

PBLK

Lab Name: Roy F. Weston, Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 89LE0659-MB2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 08158913.14

Level: (low/med) LOW Date Received: 07/25/89

% Moisture: not dec. 0 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

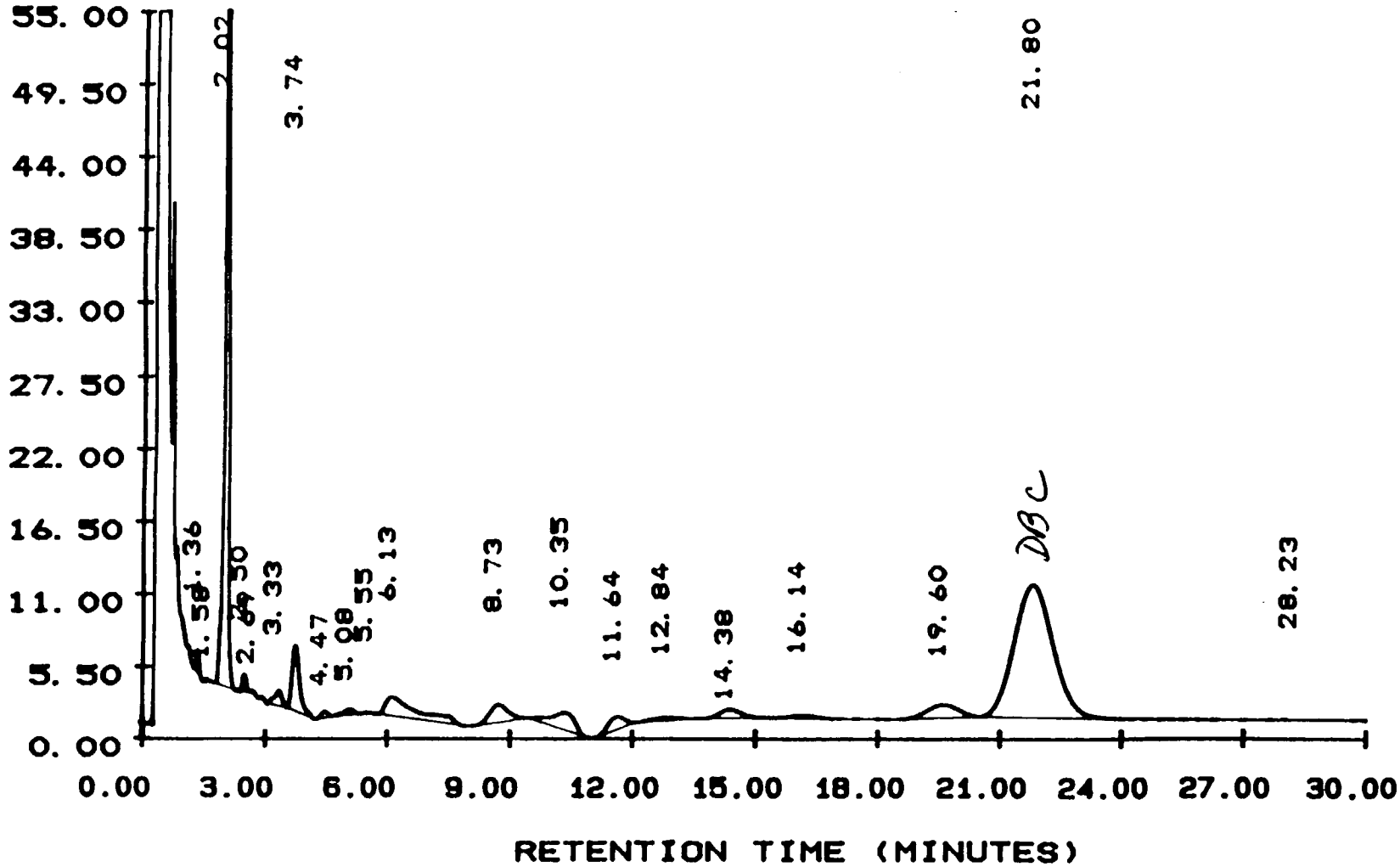
GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 0.500

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	4.0	U
319-85-7	Beta-BHC	4.0	U
319-86-8	Delta-BHC	4.0	U
58-89-9	gamma-BHC (Lindane)	4.0	U
76-44-8	Heptachlor	4.0	U
309-00-2	Aldrin	4.0	U
1024-57-3	Heptachlor epoxide	4.0	U
959-98-8	Endosulfan I	4.0	U
60-57-1	Dieldrin	8.0	U
72-55-9	4,4'-DDE	8.0	U
72-20-8	Endrin	8.0	U
33213-65-9	Endosulfan II	8.0	U
72-54-8	4,4'-DDD	8.0	U
1031-07-8	Endosulfan sulfate	8.0	U
50-29-3	4,4'-DDT	8.0	U
72-43-5	Methoxychlor	40	U
7421934	Endrin aldehyde	8.0	U
143500	Kepone	8.0	U
5103-71-9	alpha-Chlordane	40	U
5103-74-2	gamma-Chlordane	40	U
8001-35-2	Toxaphene	80	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	80	U
11096-82-5	Aroclor-1260	80	U
465-73-6	Isodrin	8.0	U

89LE0659-MB2

SAMPLE NO. : 08158913 . 14 INSTRUMENT: 13
TEST NO. : DATE TIME: 08/16/89 02:11:06
METHOD NO. : 13 / 13 PAGE NO. : 01



Y MAXIMUM: 56862. START TIME: 0.00
Y MINIMUM: 5922. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 02:41:35

EXTERNAL STANDARD

SAMPLE: 08158913 .14 INST:13 VIAL:F0 SEQ NUMBER:014
TEST : 0608N DATE-TIME INJECTED : 08/16/89 02:11:06
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 02:41:35
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: PBLK SAMPLE VOL: 3.0 ul
CLIENT: LAB COLUMN TYPE: 2250/2401
LAB ID: 89LE0659-MB2 * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

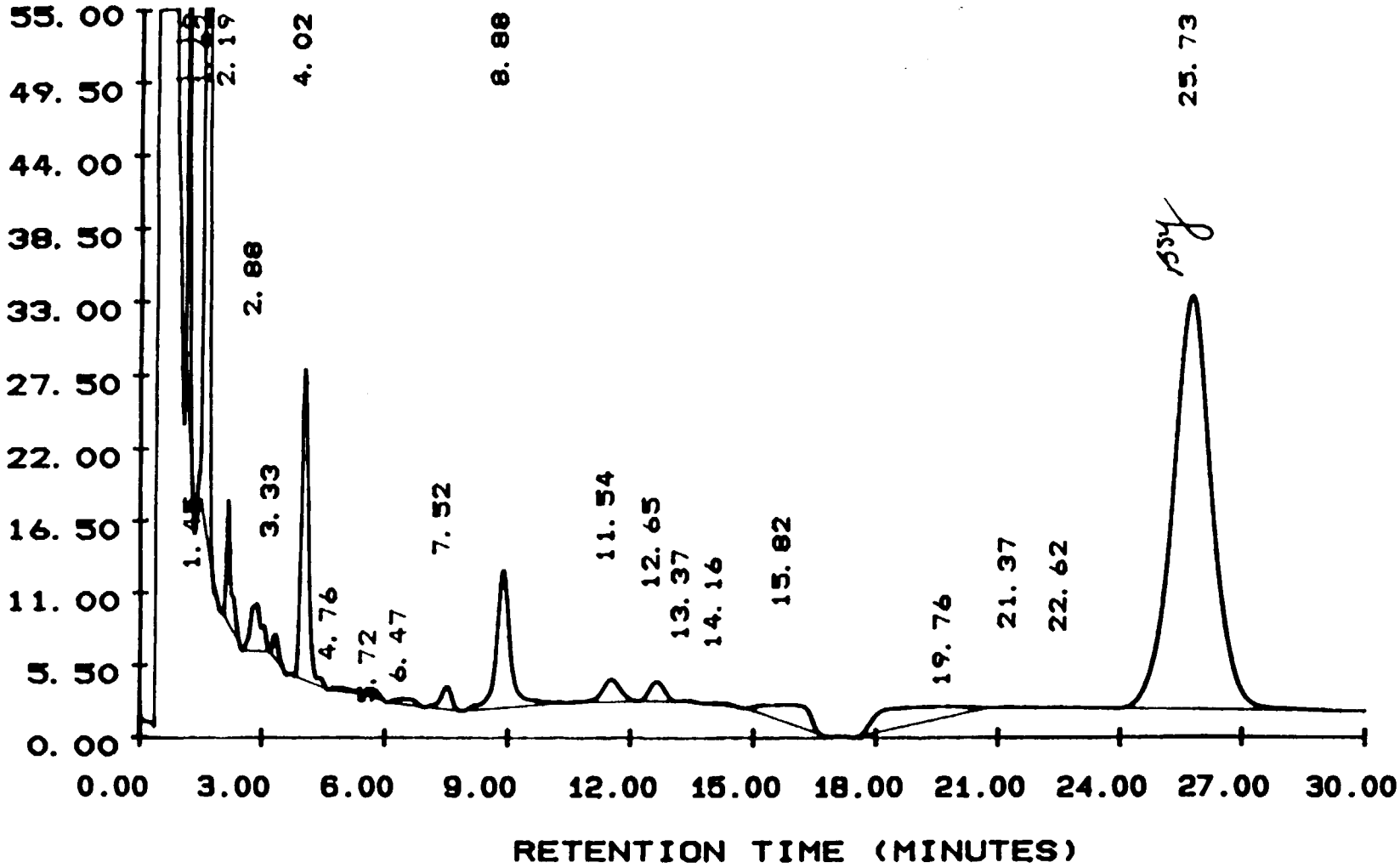
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	65549	13844	V	1.359		
002	18906	2555	V	1.582		
				1.701	ALPHA-BHC	
003	4344183	662151	V	2.022		
				2.146	GAMMA-BHC	
				2.436	BETA-BHC	
004	77230	12081	V	2.498		
				2.626	HEPTACHLOR	
005	28609	2880	V	2.690		
				2.839	DELTA-BHC	
				3.169	ALDRIN	
006	146875	11007	V	3.333		
007	599370	46412	V	3.739		
008	56736	4434	V	4.470		
				4.733	HEPT. EPOXIDE	
009	73306	4051	V	5.079		
				5.235	G. CHLORDANE	
010	18770	1288	V	5.550		
				5.721	A. CHLORDANE	
				5.945	ENDOSULFAN I	
011	766085	13432	V	6.127		
				6.787	4,4'-DDE	
				7.261	DIELDRIN	
012	413738	12620	V	8.725	ENDRIN	~~0.006~~ 0.34 * on Bkd KTW
013	523121	12765	V	10.349	4,4'-DDD	0.010
				10.636	ENDOSULFAN II	
014	260826	9021	V	11.644		
				12.454	4,4'-DDT	
015	114012	2303	V	12.835		
				13.864	ENDRIN ALDEHYDE	
016	242322	6347	V	14.375		
017	93698	2205	V	16.144		
				16.847	ENDO. SULFATE	
018	508489	9437	V	19.598		
019	6215195	93331		21.796	DBC	0.102 *
				23.701	METHOXYCHLOR	
020	37489	400		28.232		

89LE0659-MB2

SAMPLE NO. : 08158914 . 14 INSTRUMENT: 14

TEST NO. : DATE TIME: 08/16/89 02:06:10

METHOD NO. : 14 / 14 PAGE NO. : 01



Y MAXIMUM: 57791. START TIME: 0.00

Y MINIMUM: 5856. END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 02:36:40

EXTERNAL STANDARD

SAMPLE: 08158914 .14 INST:14 VIAL:FO SEQ NUMBER:014
TEST : 0608N DATE-TIME INJECTED : 08/16/89 02:06:10
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 02:36:40
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: PBLK SAMPLE VOL: 3.0 ul
CLIENT: LAB COLUMN TYPE: SP2100
LAB ID: 89LE0659-MB2
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	1799159	360032	V	1.165		
002	104338	15581	V	1.446		
003	7486745	799700	V	1.621		
				2.031	ALPHA-BHC	
004	701958	82323	V	2.189	BETA-BHC	0.023
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
005	649170	33712	V	2.875		
006	161610	17948	V	3.334		
				3.739	HEPTACHLOR	
007	2692547	221708	V	4.020		
				4.592	ALDRIN	
008	103687	2614	V	4.758		
				5.553	HEPT. EPOXIDE	
009	101978	6070	V	5.723		
				6.325	G. CHLORDANE	
010	147162	4156	V	6.470		
				6.866	ENDOSULFAN I	
				6.978	A. CHLORDANE	
011	311731	16667	V	7.516		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
012	2362383	98332	V	8.883	ENDRIN	0.011
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
013	502054	16140	V	11.537	ENDO. SULFATE	0.025
014	362211	14209	V	12.649	4,4'-DDT	0.005
015	22221	1193	V	13.370		
016	57731	1772	V	14.165		
				14.742	ENDRIN KETONE	
017	978410	12876	V	15.820		
				18.766	METHOXYCHLOR	
018	1602547	7191	V	19.760		
019	14560	379	V	21.372		
020	30599	631	V	22.622		
021	19643760	294701		25.727	DBC	3.634

V RAW QC DATA

B. Matrix Spike Data
   1. Tabulated Results (Form I)
   2. Pesticide/PCB Raw Data in Order by:
      a. 2250/2401 Column
      b. SP2100 Column
C. Matrix Spike Duplicate Data
   1. Tabulated Results (Form I)
   2. Pesticide/PCB Raw Data in Order by:
      a. 2250/2401 Column
      b. SP2100 Column

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

A16 C2-5MS

Lab Name: Roy F. Weston,Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G709-020 MS

Sample wt/vol: 34.6 (g/mL) G Lab File ID: 08158913.16

Level: (low/med) LOW Date Received: 07/21/89

% Moisture: not dec. 72 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 50.0

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	1200	U
319-85-7	Beta-BHC	1200	U
319-86-8	Delta-BHC	1200	U
58-89-9	gamma-BHC (Lindane)		S
76-44-8	Heptachlor		S
309-00-2	Aldrin		S
1024-57-3	Heptachlor epoxide	1200	U
959-98-8	Endosulfan I	1200	U
60-57-1	Dieldrin		S
72-55-9	4,4'-DDE	2400	U
72-20-8	Endrin		S
33213-65-9	Endosulfan II	2400	U
72-54-8	4,4'-DDD	2400	U
1031-07-8	Endosulfan sulfate	2400	U
50-29-3	4,4'-DDT		S
72-43-5	Methoxychlor	12000	U
7421934	Endrin aldehyde	2400	U
143500	Kepone	2400	U
5103-71-9	alpha-Chlordane	12000	U
5103-74-2	gamma-Chlordane	12000	U
8001-35-2	Toxaphene	24000	U
12674-11-2	Aroclor-1016	12000	U
11104-28-2	Aroclor-1221	12000	U
11141-16-5	Aroclor-1232	12000	U
53469-21-9	Aroclor-1242	12000	U
12672-29-6	Aroclor-1248	9900	J
11097-69-1	Aroclor-1254	24000	U
11096-82-5	Aroclor-1260	24000	U
465-73-6	Isodrin	2400	U

S: SPIKE COMPOUND FORM 1 PEST 12/88 Rev.

15.

8907G709-020S

SAMPLE NO. : 08158913 . 16

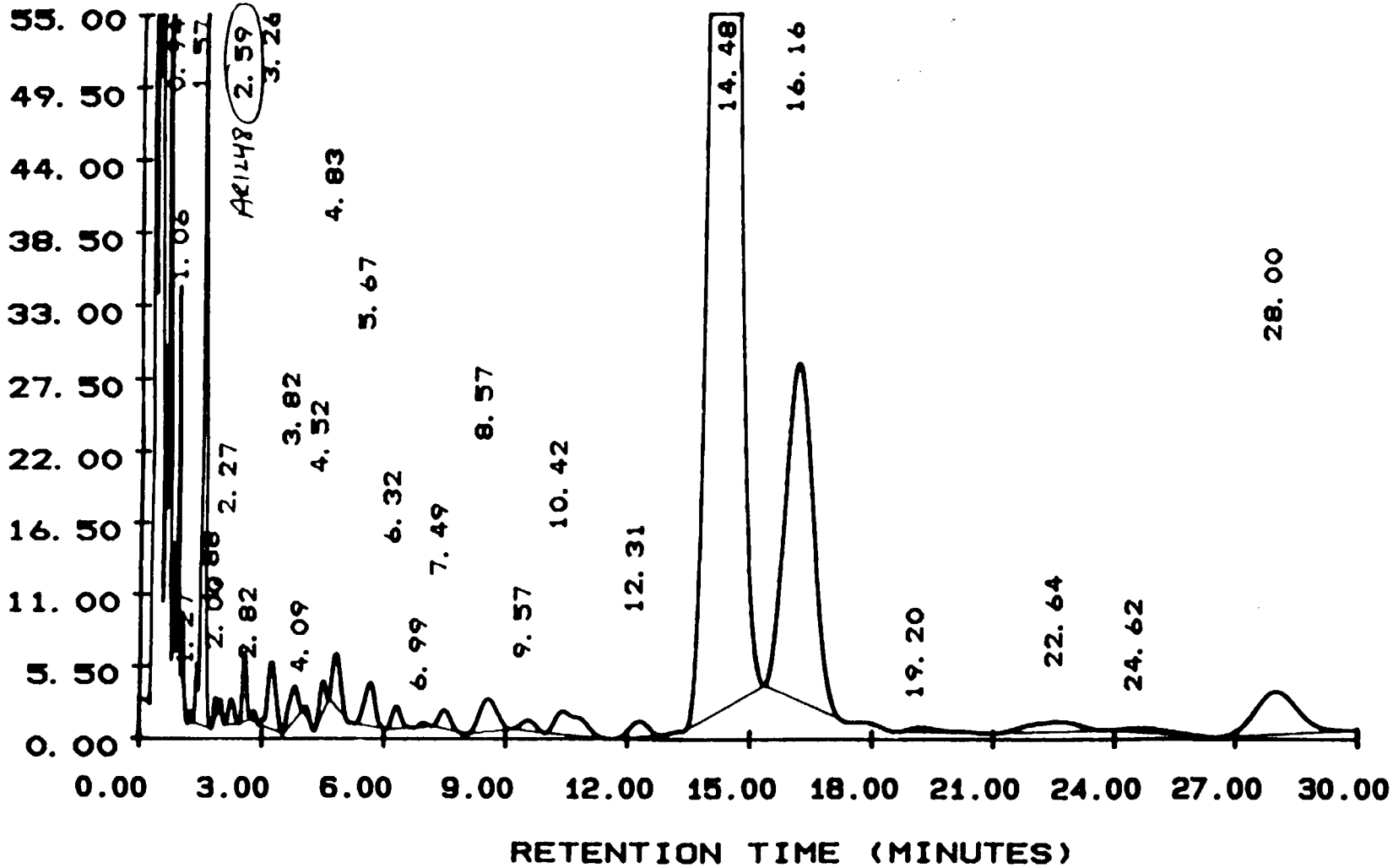
TEST NO. :

METHOD NO. : 13 / 13

INSTRUMENT: 13

DATE TIME: 08/16/89 03:18:39

PAGE NO. : 01



Y MAXIMUM: 56085.

Y MINIMUM: 4203.

START TIME: 0.00

END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 03:49:06

EXTERNAL STANDARD

SAMPLE: 08158913 .16 INST:13 VIAL:F0 SEQ NUMBER:016
TEST : 0608NS DATE-TIME INJECTED : 08/16/89 03:18:39
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 03:49:06
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G709-020MS * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR : ~~20.0000~~ 100.00
BSY 8/17/89

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	763374	192604	V	0.940		
002	129912	34705	V	1.063		
003	31714	7174	V	1.269		
004	3334875	486732	V	1.574		
				1.701	ALPHA-BHC	
005	63050	11645	V	1.884		
006	32215	8373	V	2.002		
				2.146	GAMMA-BHC	
007	172512	18128	V	2.271		
				2.436	BETA-BHC	
008	326272	47759	V	2.592	HEPTACHLOR	0.103
009	48710	7645	V	2.817	DELTA-BHC	0.036
				3.169	ALDRIN	
010	655190	48924	V	3.255		
011	367873	23132	V	3.821		
012	44518	6663	V	4.085		
013	211513	21178	V	4.516		
				4.733	HEPT. EPOXIDE	
014	518257	39044	V	4.827		
				5.235	G. CHLORDANE	
015	553966	31375	V	5.670	A. CHLORDANE	~~0.240~~ * PCB peak BSY
				5.945	ENDOSULFAN I	
016	242656	16076	V	6.318		
				6.787	4,4'-DDE	
017	40083	2969	V	6.992		
				7.261	DIELDRIN	
018	262090	13697	V	7.494		
019	692549	23574	V	8.569		
				8.812	ENDRIN	
020	191672	7758	V	9.571		
021	781527	16938	V	10.424	4,4'-DDD	0.262
				10.636	ENDOSULFAN II	
022	349035	10959	V	12.312	4,4'-DDT	0.179
				13.864	ENDRIN ALDEHYDE	
023	47264672	918904	V	14.485		
024	11442841	242543	V	16.158		
				16.847	ENDO. SULFATE	
025	194856	3592	V	19.204		
				21.712	DBC	
026	644407	7110	V	22.642		
				23.701	METHOXYCHLOR	
027	225228	3017	V	24.619		
028	2226251	30585		27.998		

All spike compounds diluted out

Diluted out

283887	2.592	AROCHLOR-1248	1.952 *	X 5 compensate for DF error =9.760

8907G709-020S

SAMPLE NO. : 08158914 . 16

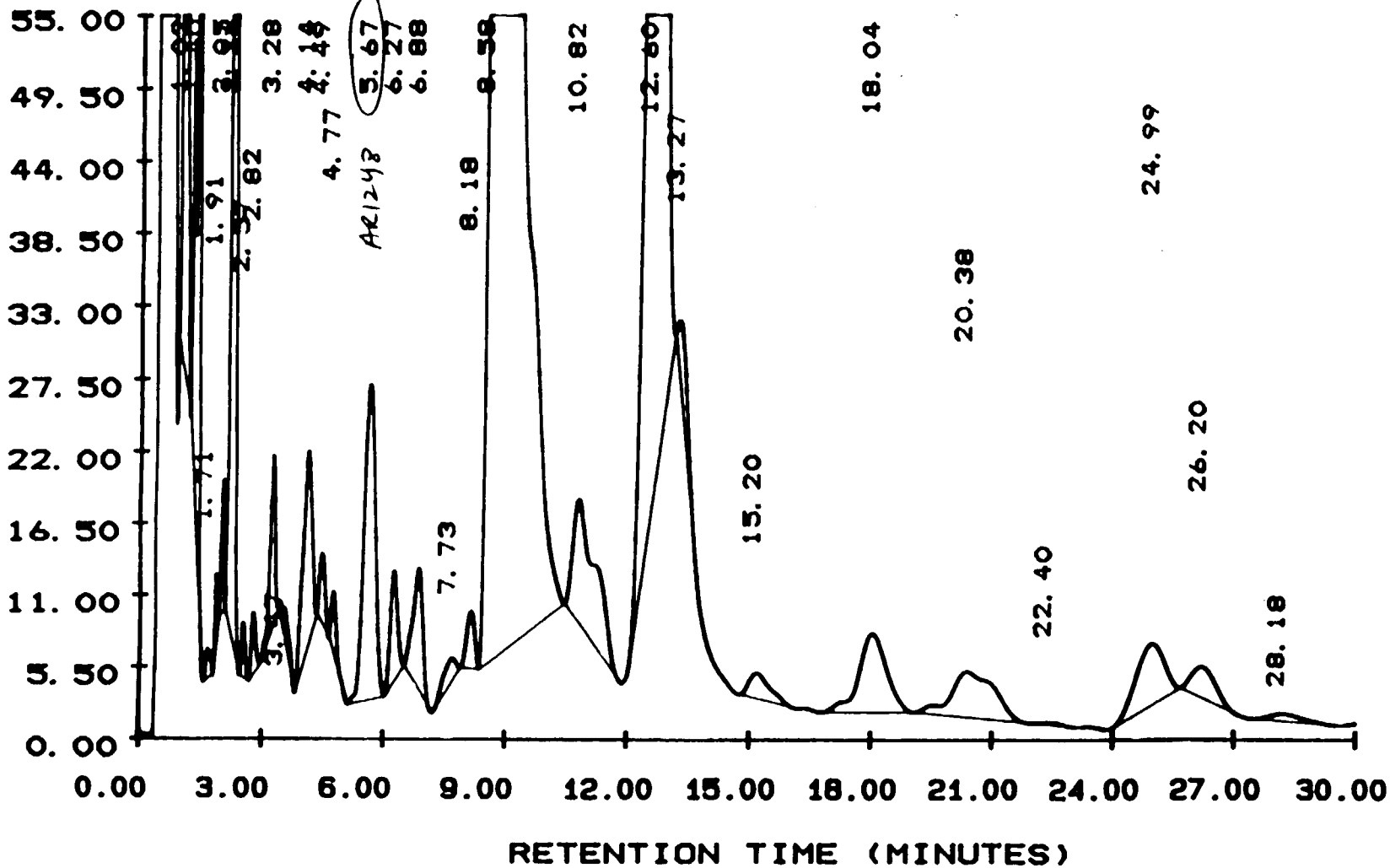
TEST NO. :

METHOD NO. : 14 / 14

INSTRUMENT: 14

DATE TIME: 08/16/89 03:21:09

PAGE NO. : 01



Y MAXIMUM: 58236.

Y MINIMUM: 6845.

START TIME: 0.00

END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 03:51:36

EXTERNAL STANDARD

SAMPLE: 08158914 .16 INST:14 VIAL:F0 SEQ NUMBER:016
TEST : 0608NS DATE-TIME INJECTED : 08/16/89 03:21:09
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 03:51:36
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G709-020MS
SAMPLE WT : % MOISTURE : DILUTION FACTOR : ~~20.0000~~ 100.00 BRY 8/18/89

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	5746269	670403	V	1.024		
002	4854375	670407	V	1.397		
003	170023	20130	V	1.711		
004	198528	39589	V	1.914		
005	418871	84307	V	2.054	ALPHA-BHC	0.141
				2.162	BETA-BHC	
006	7440833	863481	V	2.261		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	234644	37747	V	2.572		
008	314694	41386	V	2.822		
009	976878	119304	V	3.276		
010	283543	9821	V	3.469		
				3.739	HEPTACHLOR	
011	2093817	138176	V	4.141		
012	457685	50431	V	4.492		
				4.592	ALDRIN	
013	376281	44314	V	4.773		
				5.553	HEPT. EPOXIDE	
014	4351107	224856	V	5.674		
015	968398	78032	V	6.272	G. CHLORDANE	19.803
				6.866	ENDOSULFAN I	
016	1460139	86749	V	6.881	A. CHLORDANE	4.008
017	370891	14958	V	7.725		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
018	546214	40802	V	8.181		
019	52525488	879758	V	8.576		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
020	3532315	88839	V	10.817		
				11.539	ENDO. SULFATE	
021	26765152	765773	V	12.595		
				12.826	4,4'-DDT	
022	847006	42613	V	13.269		
				14.742	ENDRIN KETONE	
023	673191	18491	V	15.200		
024	2713395	56548	V	18.045		
				18.766	METHOXYCHLOR	
025	2504027	32960	V	20.376		
026	58733	1766	V	22.403		

027	2110217	43291 V	24.990			
			25.624	DBC		Diluted out
028	916766	22325 V	26.204			
029	303886	5325	28.184			
	1033397		5.674	AROCHLOR-1248	2.398	* x5 = 11.990

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

A16 C2-5MSD

Lab Name: Roy F. Weston, Inc. Work Order: 5610-01-01-0001

Client: AVENDT GROUP

Matrix: SOIL Lab Sample ID: 8907G709-020 MSD

Sample wt/vol: 32.4 (g/mL) G Lab File ID: 08158913.18

Level: (low/med) LOW Date Received: 07/21/89

% Moisture: not dec. 72 dec. Date Extracted: 07/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/16/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 50.0

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	1300	U
319-85-7	Beta-BHC	1300	U
319-86-8	Delta-BHC	1300	U
58-89-9	gamma-BHC (Lindane)		S
76-44-8	Heptachlor		S
309-00-2	Aldrin		S
1024-57-3	Heptachlor epoxide	1300	U
959-98-8	Endosulfan I	1300	U
60-57-1	Dieldrin		S
72-55-9	4,4'-DDE	2600	U
72-20-8	Endrin		S
33213-65-9	Endosulfan II	2600	U
72-54-8	4,4'-DDD	2600	U
1031-07-8	Endosulfan sulfate	2600	U
50-29-3	4,4'-DDT		S
72-43-5	Methoxychlor	13000	U
7421934	Endrin aldehyde	2600	U
143500	Kepone	2600	U
5103-71-9	alpha-Chlordane	13000	U
5103-74-2	gamma-Chlordane	13000	U
8001-35-2	Toxaphene	26000	U
12674-11-2	Aroclor-1016	13000	U
11104-28-2	Aroclor-1221	13000	U
11141-16-5	Aroclor-1232	13000	U
53469-21-9	Aroclor-1242	13000	U
12672-29-6	Aroclor-1248	14000	
11097-69-1	Aroclor-1254	26000	U
11096-82-5	Aroclor-1260	26000	U
465-73-6	Isodrin	2600	U

S: SPIKE COMPOUND

8907G709-020T

SAMPLE NO. : 08158913 . 18

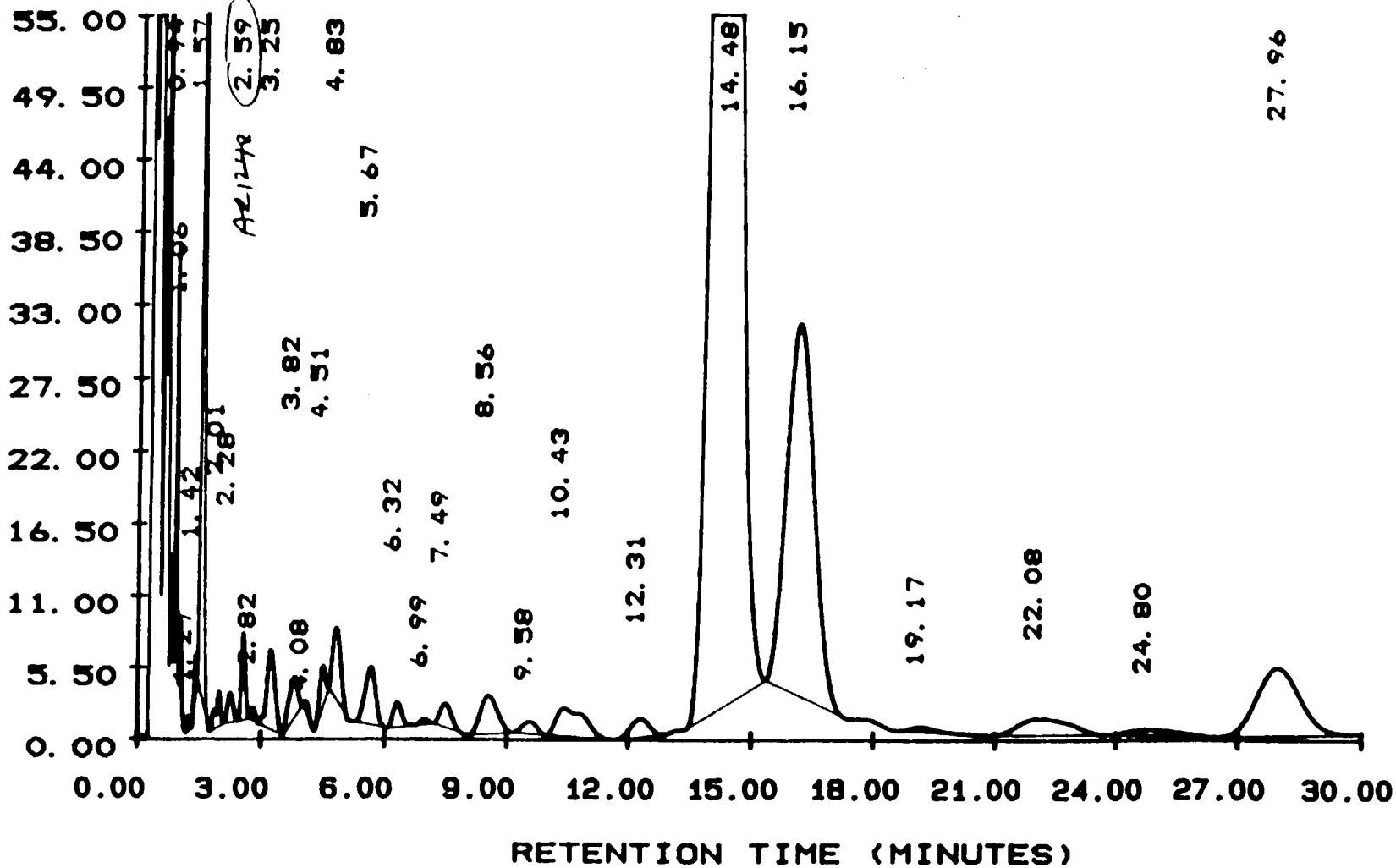
TEST NO. :

METHOD NO. : 13 / 13

INSTRUMENT: 13

DATE TIME: 08/16/89 04:24:54

PAGE NO. : 01



Y MAXIMUM: 57246.

Y MINIMUM: 6787.

START TIME: 0.00

END TIME: 30.00

Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 04:55:22

EXTERNAL STANDARD

SAMPLE: 08158913 .18 INST:13 VIAL:F0 SEQ NUMBER:018
TEST : 0608NT DATE-TIME INJECTED : 08/16/89 04:24:54
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 04:55:22
METHOD: 13 / 13 REV #: 00114 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: 2250/2401
LAB ID: 8907G709-020MSD * : CONFIRMED ON COLUMN SP2100
SAMPLE WT : % MOISTURE : DILUTION FACTOR :100.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	850241	213077	V	0.941		
002	135676	35475	V	1.063		
003	40198	8515	V	1.270		
004	97876	18641	V	1.418		
005	3201279	525955	V	1.575		
				1.701	ALPHA-BHC	
006	220288	23102	V	2.005		
				2.146	GAMMA-BHC	
007	188858	20973	V	2.276		
				2.436	BETA-BHC	
008	406270	59074	V	2.590	HEPTACHLOR	0.637
009	62527	9790	V	2.823	DELTA-BHC	0.233
				3.169	ALDRIN	
010	758416	56338	V	3.253		
011	425212	27640	V	3.823		
012	53731	7946	V	4.082		
013	275812	27034	V	4.514		
				4.733	HEPT. EPOXIDE	
014	681105	51435	V	4.826		
				5.235	G. CHLORDANE	
015	722231	40986	V	5.670	A. CHLORDANE	~~1.569~~ * BSY
				5.945	ENDOSULFAN I	
016	266137	17879	V	6.317		
				6.787	4,4'-DDE	
017	53357	3900	V	6.990		
				7.261	DIELDRIN	
018	326030	17023	V	7.491		
019	787540	27203	V	8.556		
				8.812	ENDRIN	
020	214560	8746	V	9.576		
021	974385	20018	V	10.428	4,4'-DDD	1.548
				10.636	ENDOSULFAN II	
022	404153	12682	V	12.312	4,4'-DDT	1.037
				13.864	ENDRIN ALDEHYDE	
023	46575712	890635	V	14.485		
024	12255073	259374	V	16.152		
				16.847	ENDO. SULFATE	
025	172630	3777	V	19.172		
				21.712	DBC	
026	1038103	11678	V	22.080		
				23.701	METHOXYCHLOR	
027	346682	4322	V	24.797		
028	3455067	47712		27.962		

All spike compounds diluted out. BSY

PCB peak

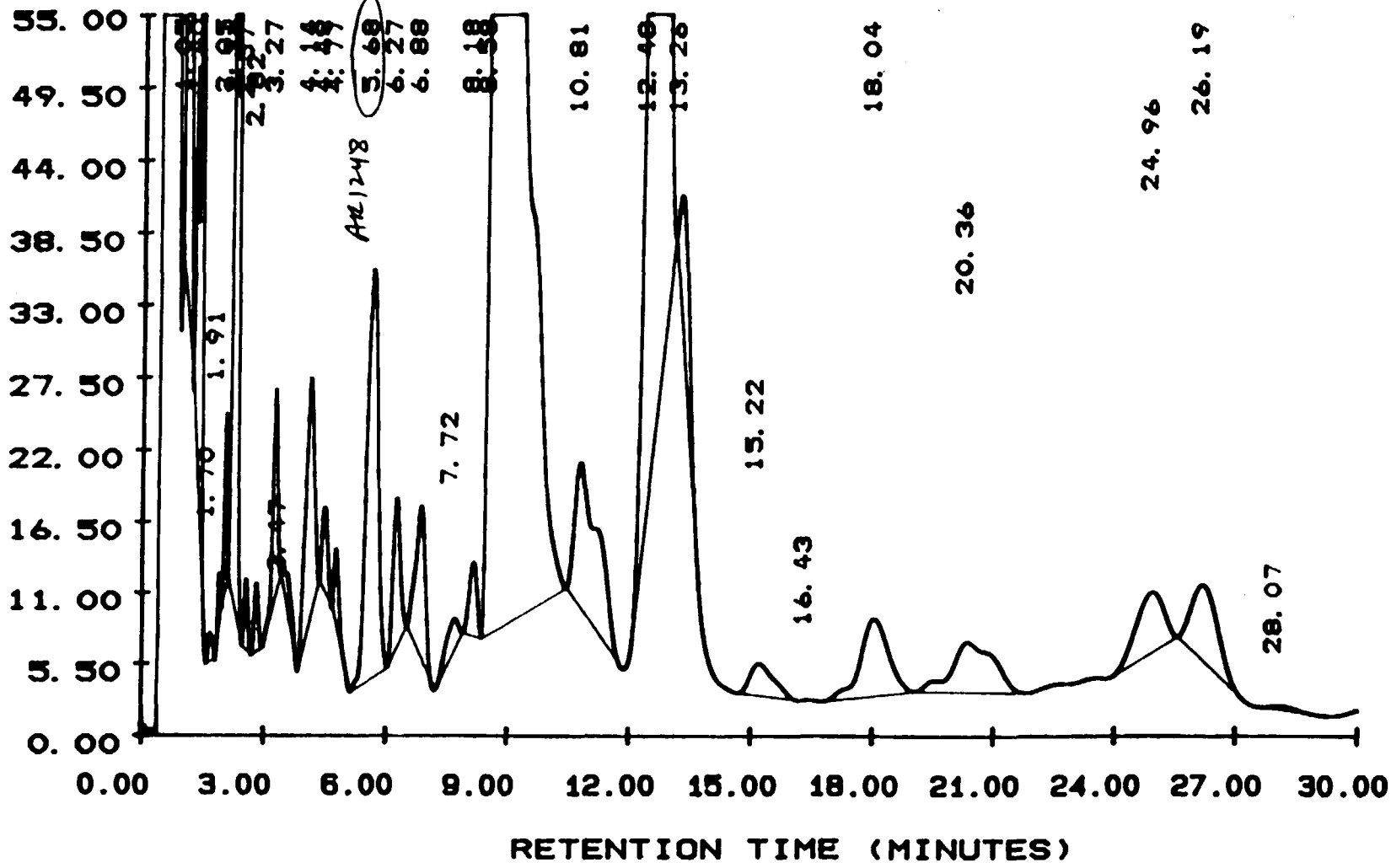
Diluted out

368415	2.590	AROCHLOR-1248	12.665	*

8907G709-020T

SAMPLE NO. : 08158914 . 18
TEST NO. :
METHOD NO. : 14 / 14

INSTRUMENT: 14
DATE TIME: 08/16/89 04:27:42
PAGE NO. : 01



Y MAXIMUM: 58088.
Y MINIMUM: 6515.

START TIME: 0.00
END TIME: 30.00

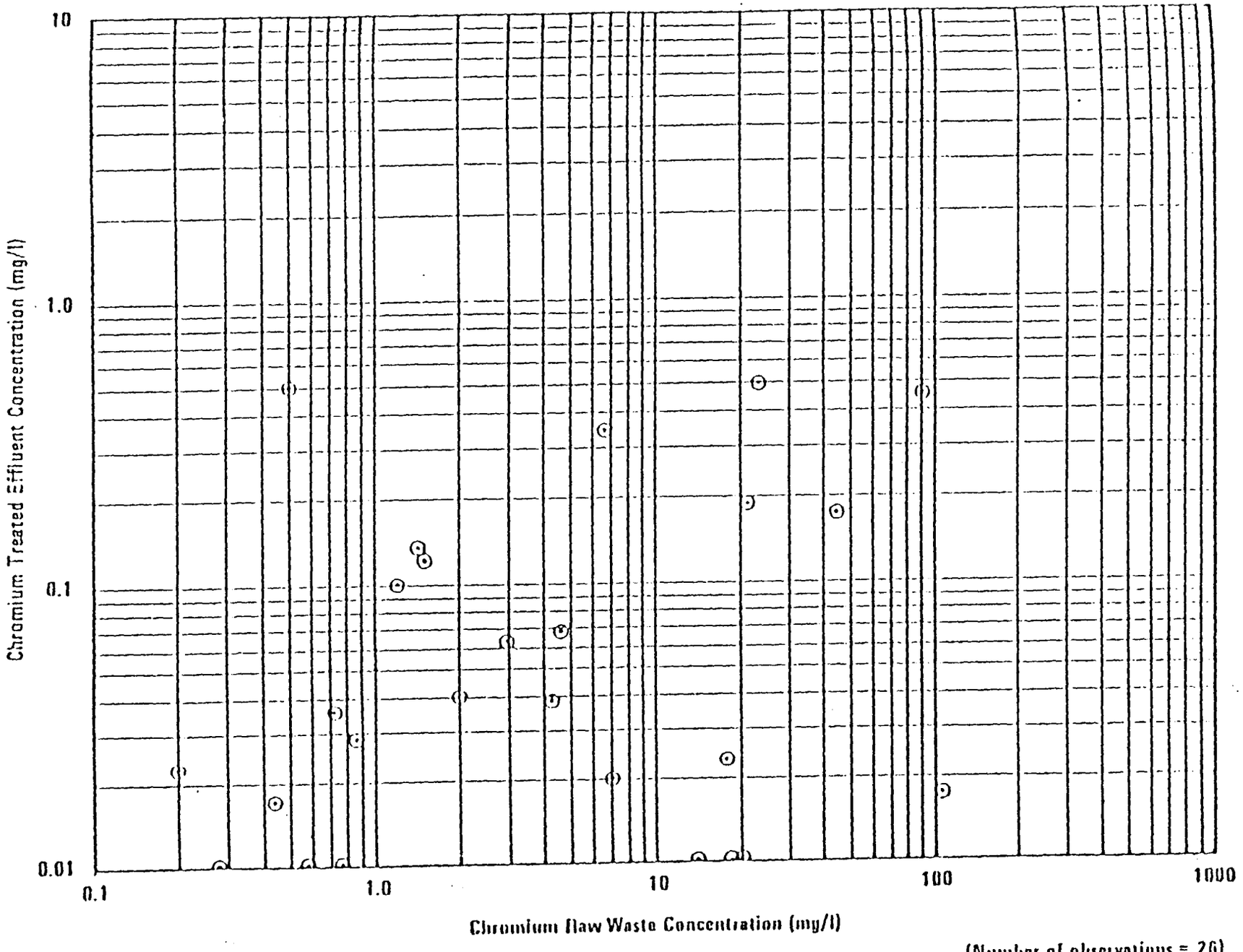
Roy F. Weston, Inc. - Lionville Laboratory 08/16/89 04:58:09

EXTERNAL STANDARD

SAMPLE: 08158914 .18 INST:14 VIAL:F0 SEQ NUMBER:018
TEST : 0608NT DATE-TIME INJECTED : 08/16/89 04:27:42
COLLECTION TIME : 29.98 DATE-TIME PROCESSED : 08/16/89 04:58:09
METHOD: 14 / 14 REV #: 00112 ANALYST: YATES SAMP RATE: 0.78
CLIENT ID: A16 C2-5 SAMPLE VOL: 3.0 ul
CLIENT: AVENDT GROUP COLUMN TYPE: SP2100
LAB ID: 8907G709-020MSD
SAMPLE WT : % MOISTURE : DILUTION FACTOR :100.0000

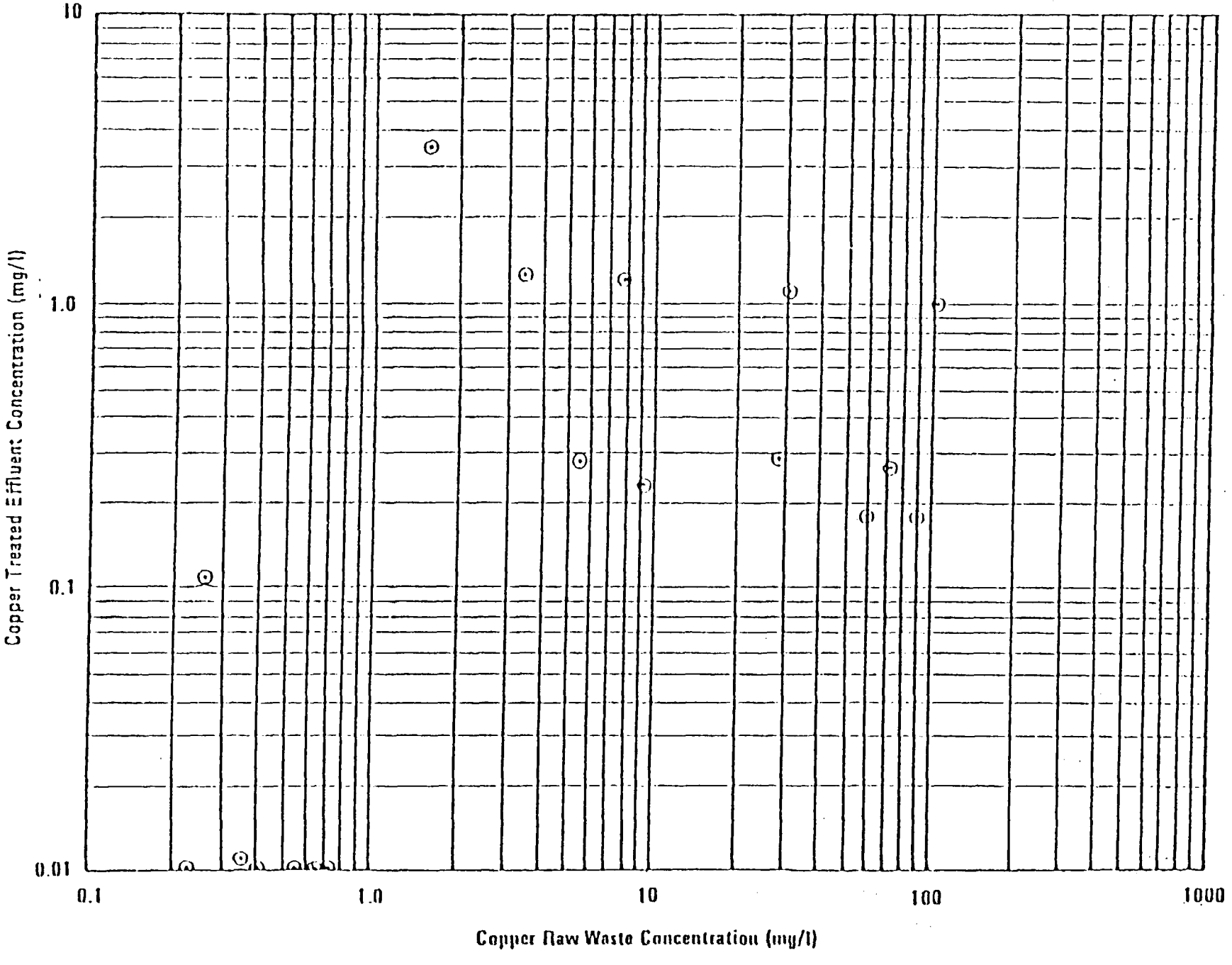
PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	COMPONENT NAME	HEIGHT CONC NG/UL
001	5566553	629885	V	1.045		
002	4926221	705661	V	1.397		
003	157400	19890	V	1.704		
004	150382	29671	V	1.910		
005	577017	112902	V	2.054	ALPHA-BHC	0.942
				2.162	BETA-BHC	
006	7753997	846235	V	2.261		
				2.363	GAMMA-BHC	
				2.422	DELTA-BHC	
007	316166	49911	V	2.570		
008	341962	47933	V	2.820		
009	1149279	144529	V	3.275		
010	372035	16134	V	3.469		
				3.739	HEPTACHLOR	
011	2508347	171719	V	4.138		
012	580131	62761	V	4.492		
				4.592	ALDRIN	
013	479003	56664	V	4.772		
				5.553	HEPT. EPOXIDE	
014	5677615	292788	V	5.675		
015	1345767	108811	V	6.271	G. CHLORDANE	138.068
				6.866	ENDOSULFAN I	
016	1859037	110709	V	6.880	A. CHLORDANE	25.578
017	505564	22418	V	7.721		
				7.876	4,4'-DDE	
				7.979	DIELDRIN	
018	720330	53932	V	8.178		
019	52408256	864541	V	8.576		
				8.888	ENDRIN	
				9.055	ENDOSULFAN II	
				9.852	4,4'-DDD	
				10.000	ENDRIN ALDEHYDE	
020	4318447	105134	V	10.815		
				11.539	ENDO. SULFATE	
021	25957872	754074	V	12.480		
				12.826	4,4'-DDT	
022	1714155	91668	V	13.263		
				14.742	ENDRIN KETONE	
023	947981	23400	V	15.217		
024	13787	864	V	16.432		
025	2661367	55644	V	18.045		
				18.766	METHOXYCHLOR	
026	2668979	36002	V	20.364		

HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS
CADMIUM



(Number of observations = 26)

FIGURE VII – 12



(Number of observations = 19)

FIGURE VII-13
HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS

C07708

HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS

COPPER

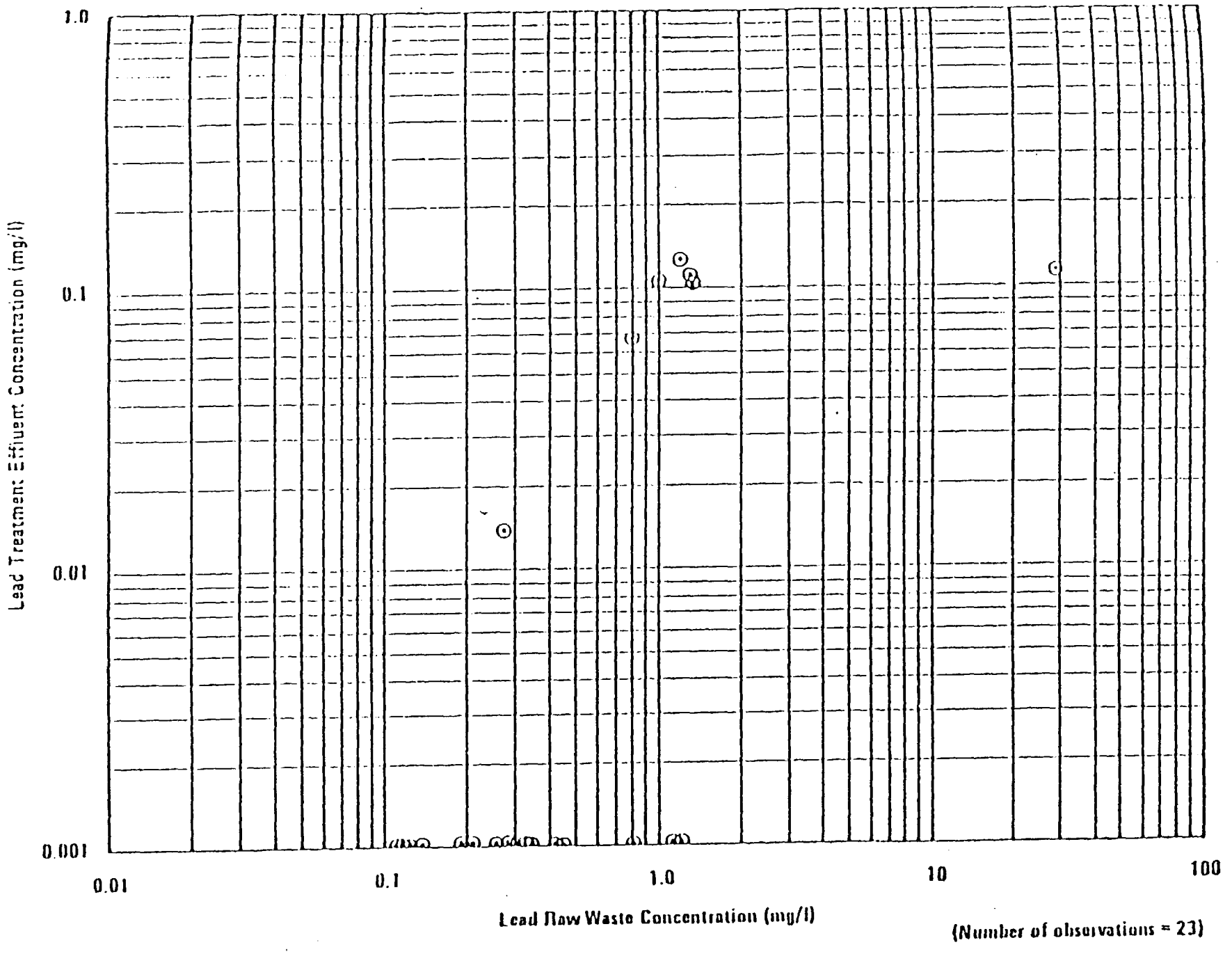


FIGURE VII – 14

HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS

C07709

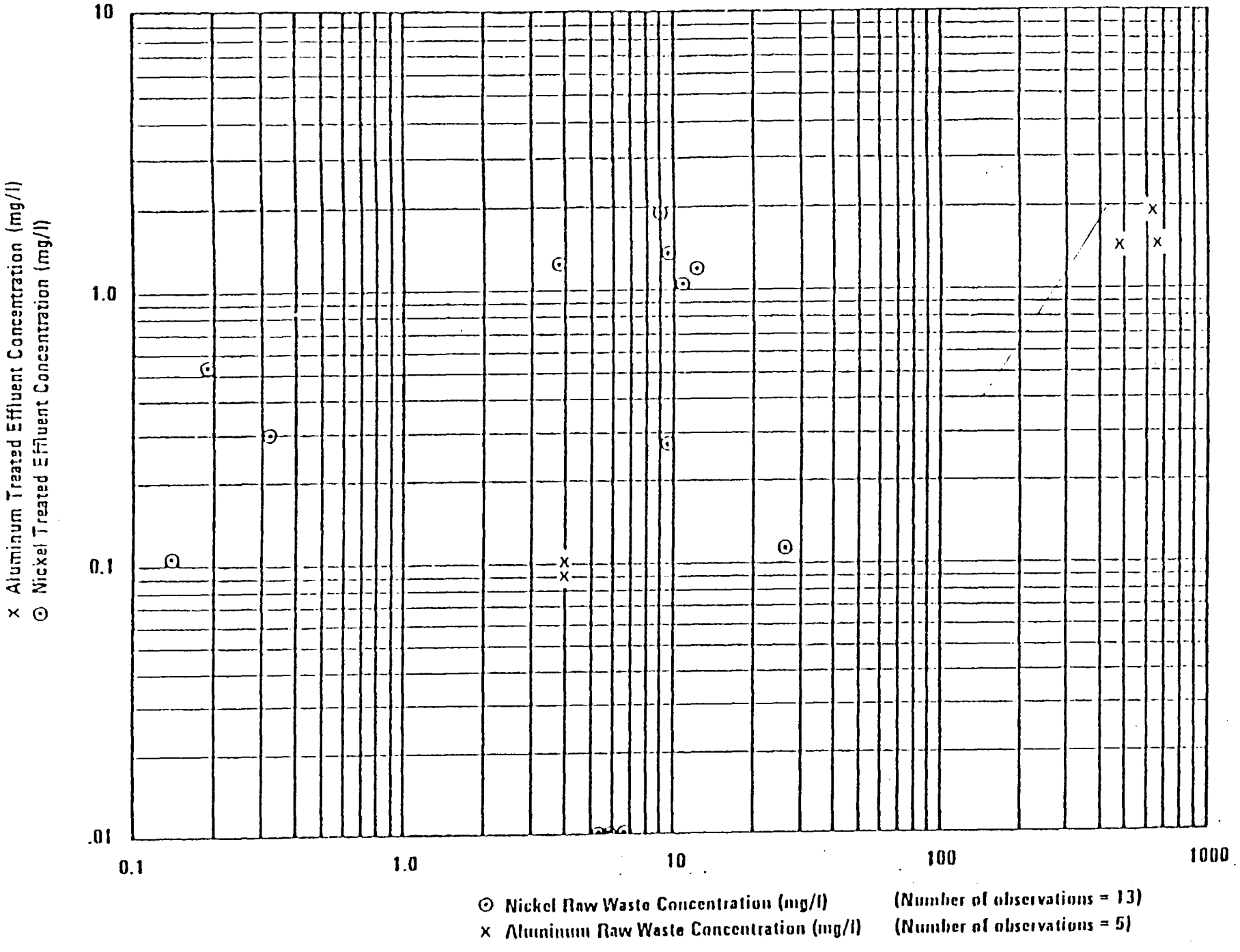
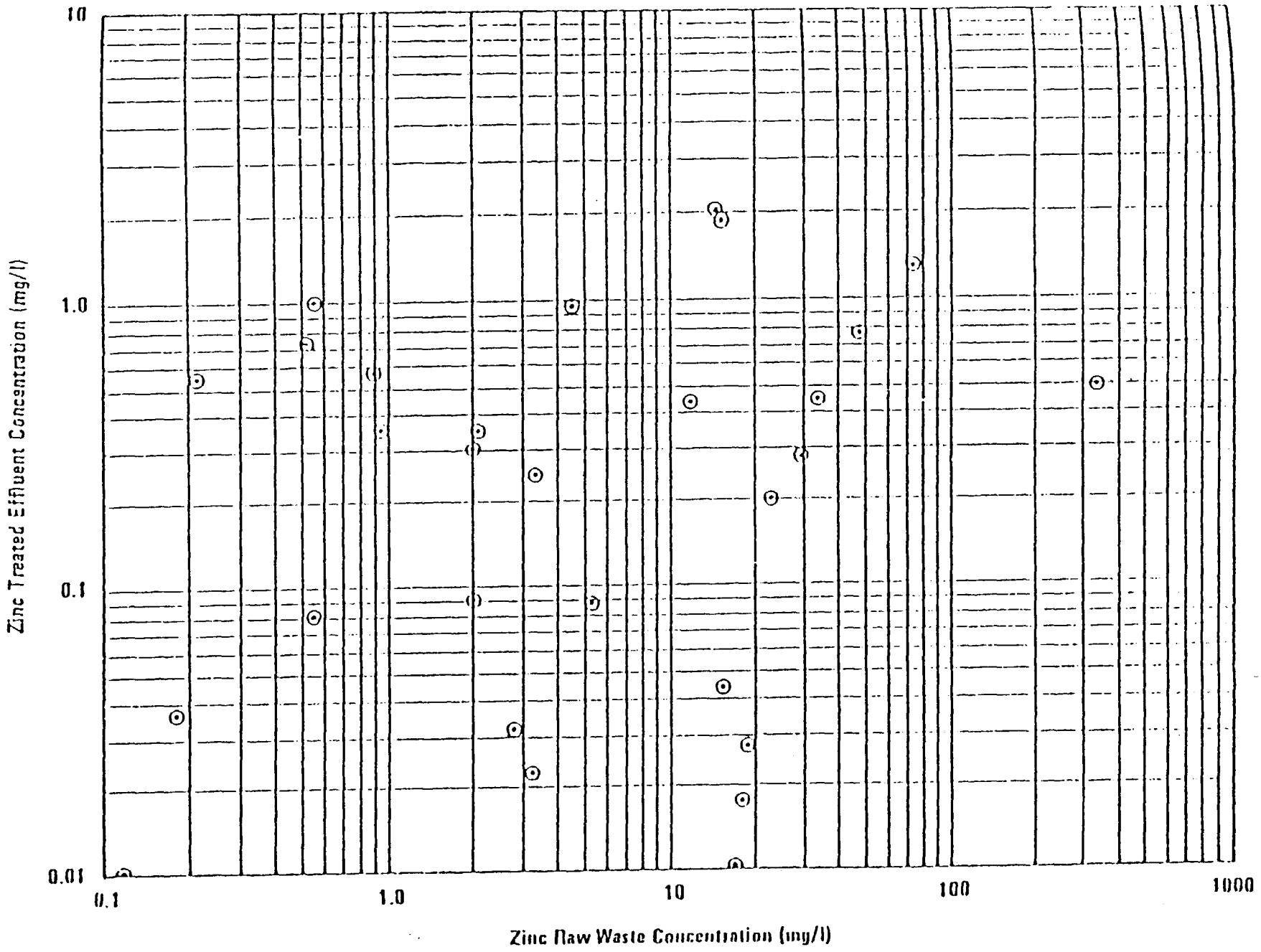


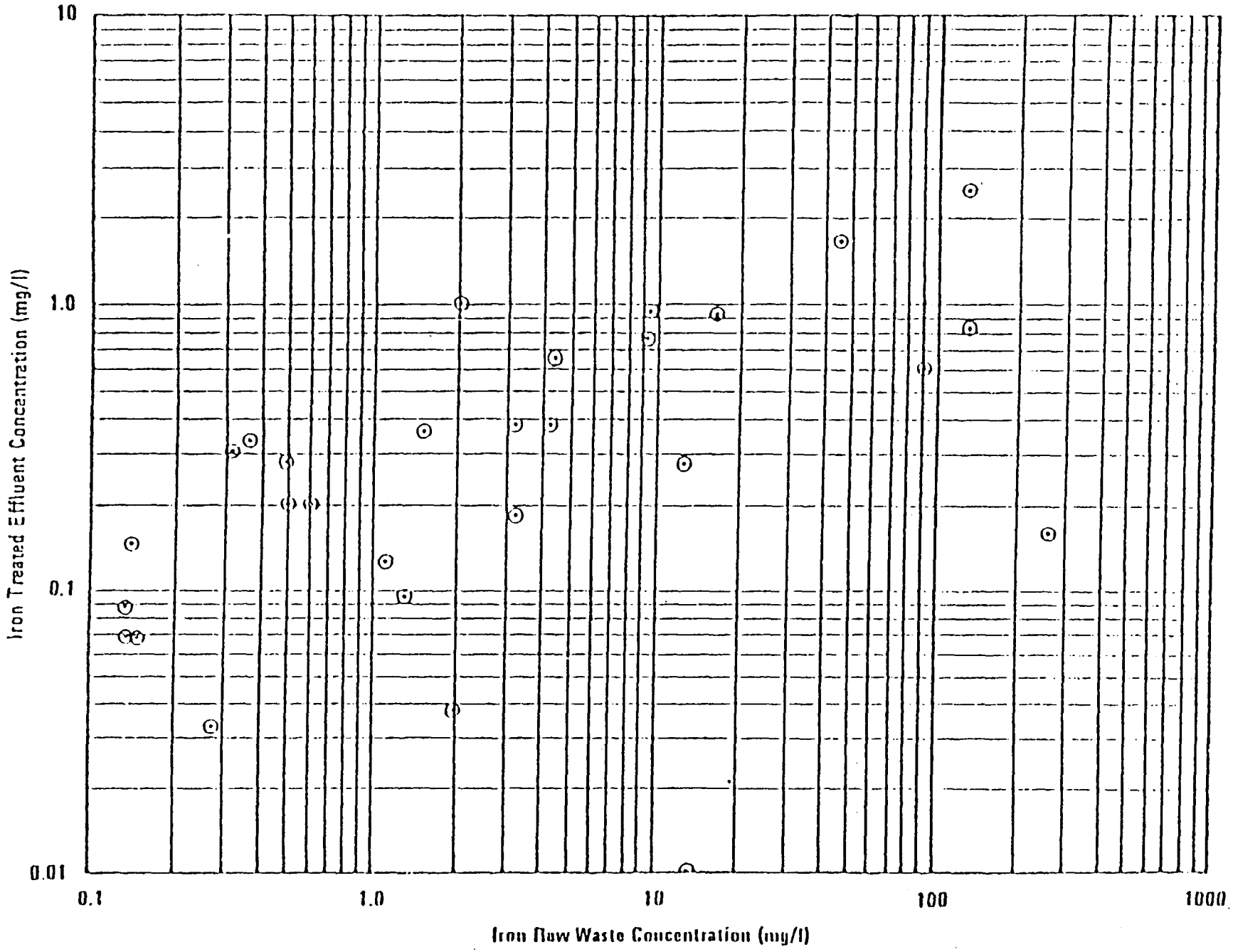
FIGURE VII-15
HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS

C07710



(Number of observations = 29)

FIGURE VII-16
HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS

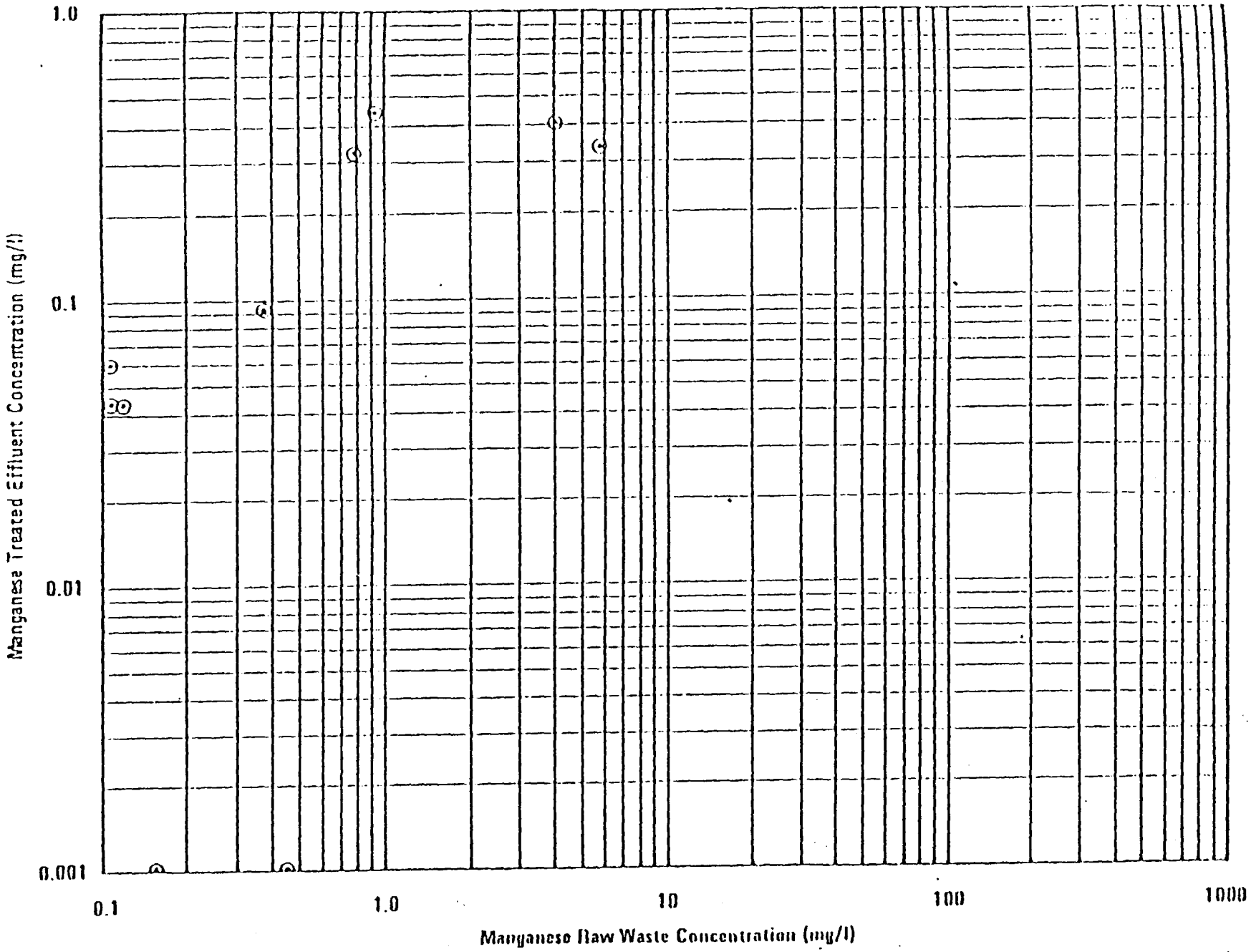


(Number of observations = 29)

FIGURE VII – 17
HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS
IRON

C07712

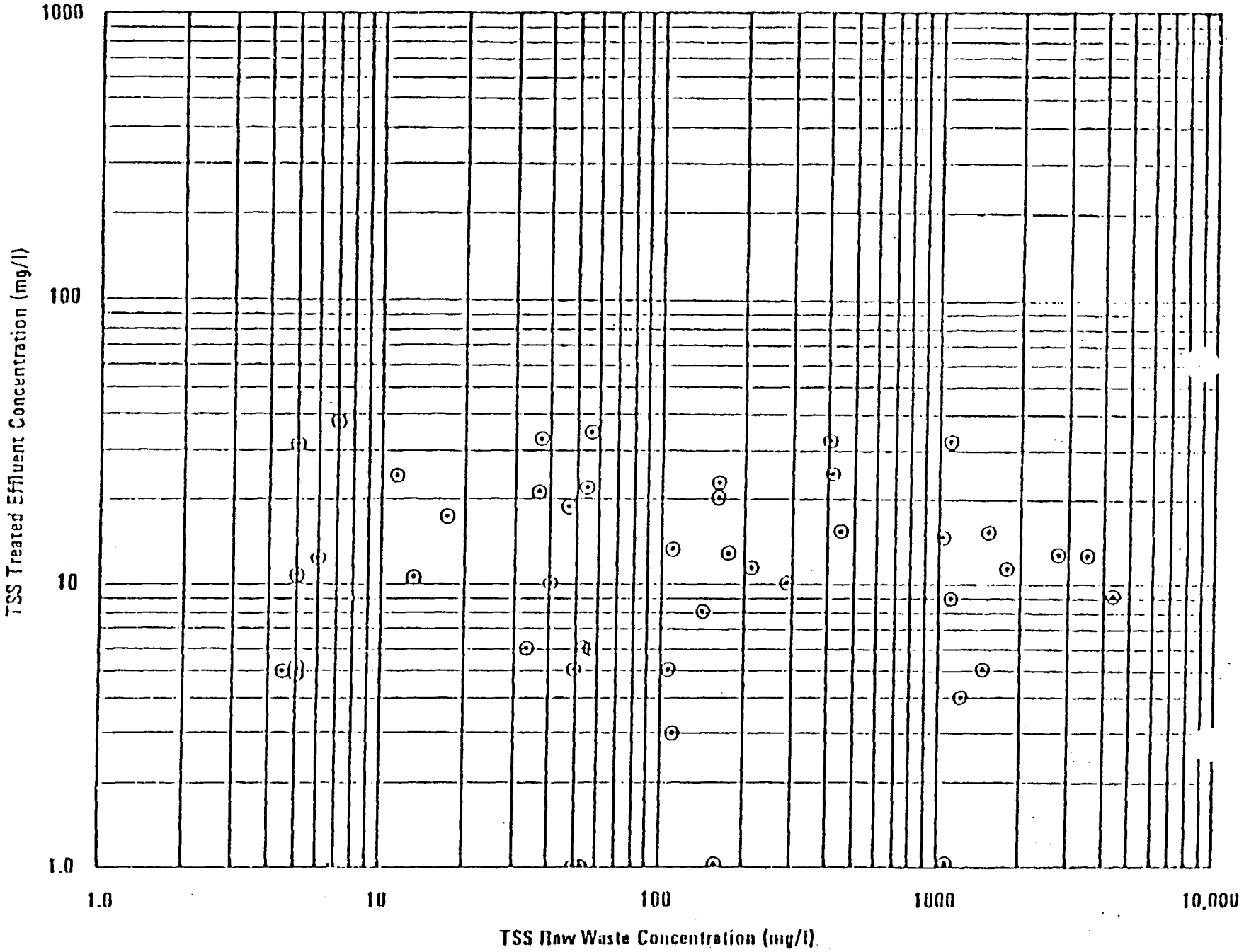
HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS
IRON



(Number of observations = 10)

FIGURE VII-18

C0713



(Number of observations = 46)

FIGURE VII – 19
HYDROXIDE PRECIPITATION SEDIMENTATION EFFECTIVENESS
TSS

C07714

CERRO COPPER PRODUCTS CO.
P.O. Box 66800
St. Louis, MO 63166-6800
618/337-6000

N,
12/27/90

Village

December 26, 1990

Village of Sauget
c/o American Bottoms Regional
Wastewater Treatment Facility
#1 American Bottoms Road
Sauget, IL 62201
Attn: Pretreatment Coordinator

RE: Cerro Copper Products - November 1990 Monitoring Summary, REVISED

Dear Sir:

Enclosed please find a revised summary of monitoring results for sampling performed on November 28-29, 1990 at Cerro Copper Products Company plant's two (2) outfalls and weekly flows from Location 50 (Main Tube Mill). This is submitted pursuant to Part 2, Paragraph 5, of the Wastewater Permit Number 108.

If you should have any questions, please contact my office at 618-337-6000.

Very truly yours,

CERRO COPPER PRODUCTS CO.

John W. Staples

John W. Staples
Environmental Engineer

JWS/pp
Enclosures

bcc: P. Tandler
J. M. Grana
S. Franzetti, Esq.
File

MONITORING REPORT - NOVEMBER, 1990

SAMPLING DATE: November 28-29, 1990

Sampling Location	East Outfall	West Outfall
24-Hr. flow (Gal)*	134,292	30,000
Pollutant Concentration (mg/L)		
24-hr. Composite		
Mercury	0.0068	0.0006
Individual Grabs		
Cyanide	0.012	0.009
	0.014	0.014
	0.016	0.006
	0.010	0.008

* Maximum and Average Daily Flows are obtained by the Village of Sauget.

LOCATION 50 - MAIN TUBE MILL

Week of	Meter Reading	Gallons Total
November 5	76460	21,320
November 12	97780	28,520
November 19	126300	34,420
November 26	160720	63,730

Environmental Analysis, Inc.
3278 N. Lindbergh Blvd. · Florissant, MO 63033 · 314-921-4488

REPORT NO : 41382
DATE : 12/13/90

CERRO COPPER PROD.

RESULTS OF ANALYSIS

LOG NUMBER	SAMPLE DESCRIPTION	TEST NAME	RESULTS OF ANALYSIS	UNITS OF EXPRESSION
121000018	C12 11/28/90 c	Mercury	0.0068	mg Hg/l
121000019	G12-1 11/28/90 c	Cyanide	0.012	mg CN/l
121000020	G12-2 11/28/90 c	Cyanide	0.014	mg CN/l
121000021	G12-3 11/29/90 c	Cyanide	0.016	mg CN/l
121000022	G12-4 11/29/90 c	Cyanide	0.010	mg CN/l
121000023	C21 11/28/90 c	Mercury	0.0006	mg Hg/l
121000024	G21-1 11/28/90 c	Cyanide	0.009	mg CN/l
121000025	G21-2 11/28/90 c	Cyanide	0.014	mg CN/l
121000026	G21-3 11/29/90 c	Cyanide	0.006	mg CN/l
121000027	G21-4 11/29/90 c	Cyanide	0.008	mg CN/l

C05114

RECEIVED
DEC 19 1990
E & E AFFAIRS

Environmental Analysis, Inc.
3278 N. Lindbergh Blvd. · Florissant, MO 63033 · 314-921-4488

PAGE NO : 1
REPORT NO : 41382
DATE : 12/13/90
P.O. NO. : 92302

MR. JOHN STAPLES
CERRO COPPER PROD.
P.O. BOX 66800
ST. LOUIS MO 63166

REPORT OF ANALYSIS

SUBJECT : Analysis of water/wastewater/waste samples in accordance with EPA 600; Methods for Chemical Analysis of Water and Wastes, 1983.

LOG NUMBER	SAMPLE DESCRIPTION
121001 8	C12 11/28/90 C
121001 9	G12-1 11/28/90 C
121002 0	G12-2 11/28/90 C
121002 1	G12-3 11/29/90 C
121002 2	G12-4 11/29/90 C
121002 3	C21 11/28/90 C
121002 4	G21-1 11/28/90 C
121002 5	G21-2 11/28/90 C
121002 6	G21-3 11/29/90 C
121002 7	G21-4 11/29/90 C

RESULTS OF ANALYSIS APPEAR ON FOLLOWING PAGES

RESPECTFULLY SUBMITTED

R. H. FERRIS

C05115

CHAIN OF CUSTODY - WASTEWATER SAMPLES
CERRO COPPER PRODUCTS- SAUGET, ILLINOIS

SAMPLE LOCATION/ID: OUTFALL 12 - EAST OUTFALL SAMPLING DATE: 11/28/90

SAMPLE TYPE	COMPOSITE	GRAB SAMPLES			
SAMPLE I.D.	C-12	G12-1	G12-2	G12-3	G12-4
DATE ON	11/28/90	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX
TIME ON	12:48 p	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX
DATE OFF	11/29/90	11/28/90	11/28/90	11/29/90	11/29/90
TIME OFF	1:35p	12:48p	5:10p	8:15a	1:35p
FLOW ON	15571231	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX
FLOW OFF	15705523	15571231	15596401	15,677,662	15,705,523
TOTAL FLOW	134292	0	25,170	81,261	27,861
SAMPLER	JWS	JWS	JWS	JWS	JWS

SAMPLE TRANSPORTATION

SAMPLE CARRIER: [illegible] (sign) DATE: 11-30 TIME: 8:25 A

SAMPLES REC'D By Lab: [illegible] (sign) DATE: 11-30-90 TIME: [illegible]

LABORATORY WORK

LABORATORY: Environmental Analysis PHONE: 314/921-4488
ADDRESS: 3278 N. Lindbergh
Florissant, Missouri 63033 CONTACT: Chris Segafredo

COMPOSITE SAMPLES ANALYSIS (X)

PARAMETER	DATE	TIME	ANALYST
X Mercury	12-6	12:19	G.S.

GRAB SAMPLES ANALYSIS (X)

PARAMETER	DATE	TIME	ANALYST
X Cyanide	12-12-90	0755	TWWeis

Comments: 1. ALL ANALYSIS IS TO BE PERFORMED IN ACCORDANCE WITH 40 CFR 136.
2. All parameters (X)'d should be analyzed.

Analysis Requested by: John Staples (618) 337-6000 REQ. #: 92302

Copy Distribution of Chain-of-Custody
Goldenrod: Sampler's Copy Pink: Transporter leaves @ Cerro after signing
Yellow: Lab's Copy White: Lab returns to Cerro after analysis

C05116

CHAIN OF CUSTODY - WASTEWATER SAMPLES
CERRO COPPER PRODUCTS- SAUGET, ILLINOIS

SAMPLE LOCATION/ID: OUTFALL 21 - WEST OUTFALL SAMPLING DATE: 11/28/90

SAMPLE TYPE	COMPOSITE	GRAB SAMPLES			
SAMPLE I.D.	C-21	G21-1	G21-2	G21-3	G21-4
DATE ON	11/28/90	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX
TIME ON	1:00p	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX
DATE OFF	11/29/90	11/28/90	11/28/90	11/29/90	11/29/90
TIME OFF	1:25p	1:00p	5:26p	8:30a	1:25p
FLOW ON	122000	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX
FLOW OFF	152000	122000	131000	146000	152000
TOTAL FLOW	30,000	0	9000	15000	6000
SAMPLER	JWA	JWA	JWA	JWA	JWA

SAMPLE TRANSPORTATION

SAMPLE CARRIER: [illegible] (sign) DATE: [illegible] TIME: [illegible]

SAMPLES REC'D By Lab: [illegible] (sign) DATE: [illegible] TIME: [illegible]

LABORATORY WORK

LABORATORY: Environmental Analysis PHONE: 314/921-4488
ADDRESS: 3278 N. Lindbergh
Florissant, Missouri 63033 CONTACT: Chris Segafredo

COMPOSITE SAMPLES ANALYSIS (X)

PARAMETER	DATE	TIME	ANALYST
X Mercury	12-6	12:19	G.S.

GRAB SAMPLES ANALYSIS (X)

PARAMETER	DATE	TIME	ANALYST
X Cyanide	12-12-90	0755	[illegible]

Comments: 1. ALL ANALYSIS IS TO BE PERFORMED IN ACCORDANCE WITH 40 CFR 136.
2. All parameters (X)'d should be analyzed.

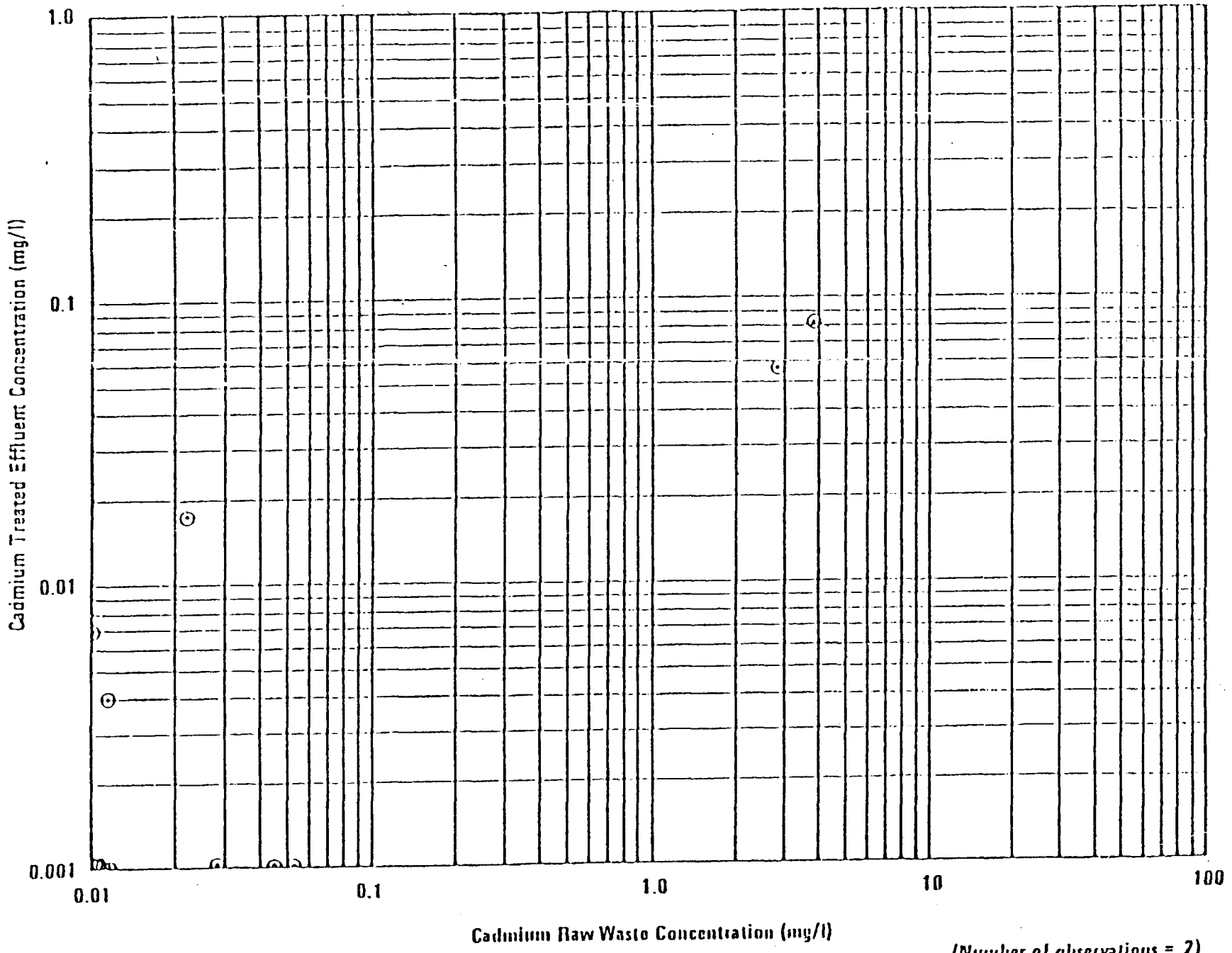
Analysis Requested by: John Staples (618) 337-6000 (Req. #: 92302)

Copy Distribution of Chain-of-Custody
Goldenrod: Sampler's Copy Pink: Transporter leaves @ Cerro after signing
Yellow: Lab's Copy White: Lab returns to Cerro after analysis

C05117

027	2066415	43362 V	24.956			
			25.624	DBC		
028	2478843	54883 V	26.187			
029	121014	2891	28.068			
	1318731		5.675	AROCHLOR-1248	15.301	*

DL



(Number of observations = 2)

Data points with a raw waste concentration less than 0.1 mg/l were not included in treatment effectiveness calculations.

FIGURE VII – 11

EXHIBIT VI
318

C07706