

**U.S. Environmental Protection Agency Region V**  
**Superfund Document Management System (SDMS)**

**Lab Data Reference Sheet**

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I. Unscannable item due to format

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Resolution / Contrast

QUALITY CONTROL SHEET  
TOXIC ORGANICS SECTION: BASE/NEUTRAL/ACIDIC

STUDY NAME SKINNER

STUDY NUMBER SF-3453

DATE 9-11-86

ACTIVITY NUMBER C51100  
ANALYST L.J. SCHMIDT

FRN	SAMPLE NUMBER	MATRIX	AMOUNT (ml)	DILUTIONS	FINAL VOL. (AFT. DIL)	INTERNAL STDS. (b.p. areas) Conc.: ug/ml		
						D4-4,4-D <sub>2</sub> B	D10-Phen	D12-Perr
LS351	LAB BLANK	Water	1000	None	1ml			
353	TOXSTD 501PB	-	-	-				
355	MATSTD	-	-	-				
365	SF-3453 86RA01 \$44	Water	2420	None	↓			
366	" \$45		2420	1:10	10 ml			
367	" \$46		2420	None	1ml			
368	" \$47		2420					
369	" \$48		2420					
370	" D48		2420					
371	" \$49		2420					
372	" \$53		2420					
373	" R53		2420					
374	" \$44MS		1000					
375	" \$44MSD	▼	1000	▼	▼			

MS Conditions

Mass Range: 45 to 445

Scan cycle: \_\_\_\_\_

High Voltage: \_\_\_\_\_

Operator: L.J. SCHMIDT

COMMENTS: \_\_\_\_\_



>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.300	400	406	415	10704	39169	39169	100.00	100.000

Sum of corrected areas: 39169.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.708	1549	1555	1563	12166	43184	43184	100.00	100.000

Sum of corrected areas: 43184.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.403	2508	2514	2515	366	1264	1264	99.99	51.445
2	39.446	2515	2517	2520	269	2086	774	61.23	31.502
3	39.631	2529	2530	2531	92	132	132	10.44	5.372
4	39.660	2531	2532	2535	84	205	205	16.22	8.344
5	39.717	2535	2536	2538	52	82	82	6.49	3.337

Sum of corrected areas: 2457.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.403	2508	2514	2515	366	1264	1264	99.99	51.445
2	39.446	2515	2517	2520	269	2086	774	61.23	31.502
3	39.631	2529	2530	2531	92	132	132	10.44	5.372
4	39.660	2531	2532	2535	84	205	205	16.22	8.344
5	39.717	2535	2536	2538	52	82	82	6.49	3.337

Sum of corrected areas: 2457.



>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.271	398	404	417	13635	44523	44523	100.00	100.000

Sum of corrected areas: 44523.

>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.695	1549	1554	1562	6547	23099	23099	100.00	100.000

Sum of corrected areas: 23099.

>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.427	2503	2515	2527	1627	15460	15460	100.00	100.000

Sum of corrected areas: 15460.

>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.427	2503	2515	2527	1627	15460	15460	100.00	100.000

Sum of corrected areas: 15460.

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>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.286	400	405	416	10121	37513	37513	100.00	85.728
2	19.513	1116	1121	1125	2161	6245	6245	16.65	14.272

Sum of corrected areas: 43758.

>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.698	1548	1554	1562	12015	41415	41415	100.00	100.000

Sum of corrected areas: 41415.

>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.414	2502	2514	2525	1361	12531	12531	100.00	100.000

Sum of corrected areas: 12531.

>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.414	2502	2514	2525	1361	12531	12531	100.00	100.000

Sum of corrected areas: 12531.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.343	404	409	416	10237	36036	36036	100.00	83.955
2	19.526	1117	1122	1126	2456	6887	6887	19.11	16.045

Sum of corrected areas: 42923.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.694	1549	1554	1564	9691	33610	33610	100.00	100.000

Sum of corrected areas: 33610.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.375	2503	2512	2513	609	3231	3231	99.99	100.000

Sum of corrected areas: 3231.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.375	2503	2512	2513	609	3231	3231	99.99	100.000

Sum of corrected areas: 3231.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.313	400	406	418	10330	34502	34502	100.00	87.937
2	19.509	1114	1120	1123	1867	4733	4733	13.72	12.063

Sum of corrected areas: 39235.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.692	1547	1553	1565	8030	28179	28179	100.00	100.000

Sum of corrected areas: 28179.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.371	2501	2511	2522	594	5058	5058	99.99	100.000

Sum of corrected areas: 5058.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.371	2501	2511	2522	594	5058	5058	99.99	100.000

Sum of corrected areas: 5058.

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
 151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.319	399	404	416	8079	28399	28399	100.00	76.537
2	19.504	1111	1116	1119	1325	3821	3821	13.45	10.298
3	23.449	1388	1392	1396	1826	4885	4885	17.20	13.165

Sum of corrected areas: 37105.

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
 187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.678	1543	1548	1556	4277	14870	14870	99.99	100.000

Sum of corrected areas: 14870.

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
 263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.436	2509	2511	2513	61	173	173	99.90	42.195
2	39.493	2513	2515	2517	47	103	103	59.48	25.122
3	39.551	2518	2519	2520	57	48	48	27.72	11.707
4	39.579	2520	2521	2523	31	47	47	27.14	11.463
5	39.622	2523	2524	2525	46	39	39	22.52	9.512

Sum of corrected areas: 410.

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
 263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.436	2509	2511	2513	61	173	173	99.90	42.195
2	39.493	2513	2515	2517	47	103	103	59.48	25.122
3	39.551	2518	2519	2520	57	48	48	27.72	11.707
4	39.579	2520	2521	2523	31	47	47	27.14	11.463
5	39.622	2523	2524	2525	46	39	39	22.52	9.512

Sum of corrected areas: 410.

>LS373 SF-3453 86RA01R53 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.285	400	405	416	7581	27643	27643	100.00	71.128
2	19.498	1115	1120	1125	1216	4036	4036	14.60	10.385
3	20.113	1159	1163	1172	1754	7185	7185	25.99	18.488
Sum of corrected areas:							38864.		

>LS373 SF-3453 86RA01R53 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.683	1548	1553	1561	7364	25442	25442	100.00	100.000
Sum of corrected areas:							25442.		

>LS373 SF-3453 86RA01R53 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.304	2506	2507	2508	57	48	48	7.41	3.333
2	39.404	2508	2514	2515	174	647	647	99.86	44.931
3	39.433	2515	2516	2517	185	260	260	40.13	18.056
4	39.475	2517	2519	2521	134	312	312	48.16	21.667
5	39.518	2521	2522	2526	65	173	173	26.70	12.014
Sum of corrected areas:							1440.		

>LS373 SF-3453 86RA01R53 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.304	2506	2507	2508	57	48	48	7.41	3.333
2	39.404	2508	2514	2515	174	647	647	99.86	44.931
3	39.433	2515	2516	2517	185	260	260	40.13	18.056
4	39.475	2517	2519	2521	134	312	312	48.16	21.667
5	39.518	2521	2522	2526	65	173	173	26.70	12.014
Sum of corrected areas:							1440.		

>LS374 SF-3453 86RA01S44MS 9-11-86 1000,1:50  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.313	401	407	417	8506	28492	28492	100.00	82.823
2	21.623	1265	1269	1276	2004	5909	5909	20.74	17.177

Sum of corrected areas: 34401.

>LS374 SF-3453 86RA01S44MS 9-11-86 1000,1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.693	1548	1554	1563	7656	26524	26524	100.00	100.000

Sum of corrected areas: 26524.

>LS374 SF-3453 86RA01S44MS 9-11-86 1000,1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.407	1530	1534	1538	410	1330	1330	100.00	59.243
2	25.507	1540	1541	1544	66	134	134	10.08	5.969
3	25.579	1545	1546	1549	62	85	85	6.39	3.786
4	39.357	2504	2511	2512	145	590	590	44.36	26.281
5	39.385	2512	2513	2515	53	424	106	7.97	4.722

Sum of corrected areas: 2245.

>LS374 SF-3453 86RA01S44MS 9-11-86 1000,1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.407	1530	1534	1538	410	1330	1330	100.00	59.243
2	25.507	1540	1541	1544	66	134	134	10.08	5.969
3	25.579	1545	1546	1549	62	85	85	6.39	3.786
4	39.357	2504	2511	2512	145	590	590	44.36	26.281
5	39.385	2512	2513	2515	53	424	106	7.97	4.722

Sum of corrected areas: 2245.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.299	400	406	418	9492	31477	31477	100.00	93.442
2	21.622	1265	1269	1275	717	2209	2209	7.02	6.558

Sum of corrected areas: 33686.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.678	1547	1553	1561	11217	37987	37987	100.00	100.000

Sum of corrected areas: 37987.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.392	1530	1533	1543	455	2124	2124	36.13	26.543
2	39.372	2501	2512	2526	579	5878	5878	100.00	73.457

Sum of corrected areas: 8002.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.392	1530	1533	1543	455	2124	2124	36.13	26.543
2	39.372	2501	2512	2526	579	5878	5878	100.00	73.457

Sum of corrected areas: 8002.



>LS376 SF3453 86RA01S44MSS 9-11-86 1000,1:50  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.313	402	407	419	8390	31032	31032	100.00	94.532
2	19.494	1115	1120	1124	608	1795	1795	5.78	5.468

Sum of corrected areas: 32827.

>LS376 SF3453 86RA01S44MSS 9-11-86 1000,1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.690	1548	1554	1567	9913	33739	33739	100.00	100.000

Sum of corrected areas: 33739.

>LS376 SF3453 86RA01S44MSS 9-11-86 1000,1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	21.564	1262	1265	1269	842	2260	2260	44.85	28.385
2	23.820	1418	1423	1425	232	664	664	13.18	8.340
3	39.369	2499	2512	2513	873	5038	5038	99.99	63.276

Sum of corrected areas: 7962.

>LS376 SF3453 86RA01S44MSS 9-11-86 1000,1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	21.564	1262	1265	1269	842	2260	2260	44.85	28.385
2	23.820	1418	1423	1425	232	664	664	13.18	8.340
3	39.369	2499	2512	2513	873	5038	5038	99.99	63.276

Sum of corrected areas: 7962.

>LS377 SF3453 86RA01S44MSSD9-11-86 1000.1:50  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.298	399	406	415	9172	32751	32751	100.00	100.000

Sum of corrected areas: 32751.

>LS377 SF3453 86RA01S44MSSD9-11-86 1000.1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.675	1548	1553	1562	9231	31836	31836	100.00	100.000

Sum of corrected areas: 31836.

>LS377 SF3453 86RA01S44MSSD9-11-86 1000.1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	21.563	1262	1265	1267	61	159	159	33.55	12.297
2	23.789	1419	1421	1425	89	261	261	55.07	20.186
3	39.296	2502	2507	2508	154	473	473	99.80	36.582
4	39.339	2508	2510	2511	212	699	337	71.11	26.063
5	39.610	2527	2529	2530	44	63	63	13.29	4.872

Sum of corrected areas: 1293.

>LS377 SF3453 86RA01S44MSSD9-11-86 1000.1:50  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	21.563	1262	1265	1267	61	159	159	33.55	12.297
2	23.789	1419	1421	1425	89	261	261	55.07	20.186
3	39.296	2502	2507	2508	154	473	473	99.80	36.582
4	39.339	2508	2510	2511	212	699	337	71.11	26.063
5	39.610	2527	2529	2530	44	63	63	13.29	4.872

Sum of corrected areas: 1293.

>LS378 SF-3453 86RA01S47 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.314	402	407	416	9303	32381	32381	100.00	85.605
2	19.510	1116	1121	1125	1855	5445	5445	16.82	14.395

Sum of corrected areas: 37826.

>LS378 SF-3453 86RA01S47 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.693	1549	1554	1563	9277	33473	33473	100.00	100.000

Sum of corrected areas: 33473.

>LS378 SF-3453 86RA01S47 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.330	2499	2509	2510	1245	5141	5141	68.39	40.618
2	39.373	2510	2512	2524	1408	7516	7516	99.99	59.382

Sum of corrected areas: 12657.

>LS378 SF-3453 86RA01S47 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.330	2499	2509	2510	1245	5141	5141	68.39	40.618
2	39.373	2510	2512	2524	1408	7516	7516	99.99	59.382

Sum of corrected areas: 12657.

>LS358 SF-3453 86RA01S47 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.315	400	406	415	9307	33857	33857	100.00	85.357
2	19.505	1114	1119	1124	1980	5808	5808	17.15	14.643

Sum of corrected areas: 39665.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.688	1546	1552	1559	12313	42664	42664	100.00	100.000

Sum of corrected areas: 42664.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.414	2498	2513	2527	1383	13503	13503	100.00	100.000

Sum of corrected areas: 13503.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.414	2498	2513	2527	1383	13503	13503	100.00	100.000

Sum of corrected areas: 13503.

>LS371 SF-3453 86RA01S49 9-11-86 2420,1:100  
151.71 152.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.348	404	409	417	11574	39040	39040	100.00	88.774
2	19.548	1118	1123	1128	1675	4937	4937	12.65	11.226

Sum of corrected areas: 43977.

>LS371 SF-3453 86RA01S49 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.718	1550	1555	1561	5630	17852	17852	100.00	100.000

Sum of corrected areas: 17852.

>LS371 SF-3453 86RA01S49 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.315	2506	2507	2509	38	95	95	17.17	7.618
2	39.400	2509	2513	2514	143	423	423	76.46	33.921
3	39.443	2514	2516	2521	143	553	553	99.96	44.346
4	39.529	2521	2522	2525	55	121	121	21.87	9.703
5	39.672	2530	2532	2534	28	55	55	9.94	4.411

Sum of corrected areas: 1247.

>LS371 SF-3453 86RA01S49 9-11-86 2420,1:100  
263.71 264.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	39.315	2506	2507	2509	38	95	95	17.17	7.618
2	39.400	2509	2513	2514	143	423	423	76.46	33.921
3	39.443	2514	2516	2521	143	553	553	99.96	44.346
4	39.529	2521	2522	2525	55	121	121	21.87	9.703
5	39.672	2530	2532	2534	28	55	55	9.94	4.411

Sum of corrected areas: 1247.

QUALITY CONTROL SHEET  
 TOXIC ORGANICS SECTION: BASE/NEUTRAL/ACIDIC

STUDY NAME SKINNER ACTIVITY NUMBER CS1100 DATE 9-11-86  
 STUDY NUMBER SF-3453 MATRIX WATER ANALYST L. J. SCHMIDT

SURROGATE SPIKE PERCENT RECOVERY

FRN	SAMPLE NUMBER	2,4,6-TSPD PHENOL	2-FLUORO- PHENOL	2,4,6- TSPD PHENOL	2,4,6- TSPD PHENOL	D5-NITRO- BENZENE	2-FLUORO BIPHENYL	D-14- TERPHENYL
LS 351	LAB BLANK	24	34	75	67	76	97	
353	TOXSTD 50PPB	100	100	100	100	100	100	
365	SF-3453 86RA01 \$44	13	12	9.2*	11	8.0*	6.9*	
366	" \$45**	28	40	23	68	47	50	
367	" \$46	39	42	99	79	86	119	
368	" \$47	39	47	78	68	79	138***	
369	" \$48**	42	48	91	92	96	73	
370	" \$48	52	62	114***	99	93	108	
371	" \$49**	22	38	37	72	60	32	
372	" \$53**	42	43	38	71	65	25***	
373	" R53	31	47	92	83	92	83	
374	" \$44MS	37	40	57	78	54	104	
375	" \$44MSD	22	43	86	0*	4.7*	121	
376	" \$44MSS	21	11	30	74	60	94	
377	" \$44MSSD	0*	0*	49	0*	.5*	78	
* \$44 appears to exhibit a matrix effect for both surrogates and matrix spike. Recoveries are low and erratic; no clear pattern.								
** The recoveries calculated based on first internal standard, as D10 exhibited poor chromatographic response for these runs.								
*** Just outside limits, probably statistical artifact.								

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.71	1555	43184	50.10	% REC.	97
2) 2-FLUOROPHENOL	5.48	139	67926	21.78	% REC.	12100
3) D5-PHENOL	8.37	341	57019	25.74	% REC.	13100
4) D5-NITROBENZENE	11.86	585	30987	22.64	% REC.	1181
5) 2-FLUOROBIPHENYL	10.51	1121	15559	15.95	% REC.	8097
6) 2,4,6-TRIBROMOPHENOL	23.90	1428	12837	18.31	% REC.	92100
7) D11-TERPHENYL	20.96	1853	1368	13.81	% REC.	69100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS366::AQ  
 Data File: >LS366::D4  
 Name: SF-3453 86RA01945  
 Misc: 0-11-86 2420,10:100  
 Quant Rev: 4  
 Quant Time: 860912 10:57  
 Injected at: 860912 07:17  
 Dilution Factor: 1.00

BTL#16

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:49

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.70	1554	20000	50.10	% REC.	96
2) 2-FLUOROPHENOL	5.47	138	25130	27.14	% REC.	100
3) D5-PHENOL	8.26	340	14378	12.08	% REC.	100
4) D5-NITROBENZENE	11.81	582	21378	20.20	% REC.	83
5) 2-FLUOROBIPHENYL	10.50	1120	10580	20.23	% REC.	96
6) 2,4,6-TRIBROMOPHENOL	23.88	1427	3748	10.00	% REC.	100
7) D11-TERPHENYL	20.97	1853	1146	21.83	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS367::AQ  
 Data File: >LS367::D4  
 Name: SF-3453 86RA01946  
 Misc: 0-11-86 2420,1:100  
 Quant Rev: 4  
 Quant Time: 860912 10:57  
 Injected at: 860912 08:30  
 Dilution Factor: 1.00

BTL#17

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:40

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.70	1554	41415	50.10	% REC.	98
2) 2-FLUOROPHENOL	5.48	139	222910	84.79	% REC.	42100
3) D5-PHENOL	8.37	341	146001	68.72	% REC.	37100
4) D5-NITROBENZENE	11.90	588	208679	158.98	% REC.	7785
5) 2-FLUOROBIPHENYL	10.51	1121	161607	172.71	% REC.	8605
6) 2,4,6-TRIBROMOPHENOL	23.91	1429	133412	198.47	% REC.	99100
7) D11-TERPHENYL	20.97	1853	22699	238.92	% REC.	100

\* Compound is ISTD

Operator ID: NL  
Output File: \LS370:00  
Data File: >LS370:05  
Name: SF-3453 86R001048  
Misc: 0-11-86 2420,1:100

Quant Rev: 1  
Quant Time: 860012 14:08  
Injected at: 860012 12:11  
Dilution Factor: 1.00

QUANT REPORT

\* Compound is ISID

Compound	R.T. Scan#	Area	Conc	Units
1) *D10-PHENANTHRENE	25.89 1554	33610	50.10	% REC. 07
2) 2-FLUOROPHENOL	5.47 128	245486	115.02	% REC. 00
3) D5-PHENOL	8.41 844	176234	102.27	% REC. 00
4) D5-NITROBENZENE	11.94 554	238180	271.00	% REC. 00
5) 2-FLUOROBIPHENYL	10.53 1122	175730	231.43	% REC. 05
6) 2,4,6-TRIBROMOPHENOL	23.01 1420	140008	210.80	% REC. 00
7) D14-TERPHENYL	20.05 1852	13642	176.94	% REC. 100

Operator ID: NL  
Output File: \LS360:00  
Data File: >LS360:05  
Name: SF-3453 86R001548  
Misc: 0-11-86 2420,1:100

Quant Rev: 1  
Quant Time: 860012 14:08  
Injected at: 860012 10:58  
Dilution Factor: 1.00

QUANT REPORT

\* Compound is ISID

Compound	R.T. Scan#	Area	Conc	Units
1) *D10-PHENANTHRENE	25.75 1500	51404	50.10	% REC. 07
2) 2-FLUOROPHENOL	5.52 136	326292	100.00	% REC. 100
3) D5-PHENOL	8.40 327	263697	100.00	% REC. 100
4) D5-NITROBENZENE	11.88 557	162025	100.00	% REC. 86
5) 2-FLUOROBIPHENYL	10.54 1075	116140	100.00	% REC. 04
6) 2,4,6-TRIBROMOPHENOL	23.05 1383	83435	100.00	% REC. 100
7) D14-TERPHENYL	20.00 1806	11702	100.00	% REC. 100

Operator ID: NL  
Output File: \LS353:00  
Data File: >LS353:04  
Name: TOXSID 50PPM  
Misc: 0-11-86

Quant Rev: 1  
Quant Time: 860012 14:07  
Injected at: 860011 15:23  
Dilution Factor: 1.00

QUANT REPORT

BTL#20

BTL#10

BTL# 3



QUANT REPORT

Operator ID: NL  
Output File: \LS365::AQ  
Data File: \LS365::D1  
Name: SF-3453 86RN01544  
Misc: 0-11-86 2420,1:100

Quant Rev: 4      Quant Time: 860912 10:57  
                  Injected at: 860912 06:04  
                  Dilution Factor: 1.00

BT#15

ID File: QNSK13::SK  
Title: SURROGATE SPIKE % RECOVERY  
Last Calibration: 860912 10:40

ID File: QASK13::SK  
Title: SURROGATE SPIKE % RECOVERY  
Last Calibration: 860012 10:10

2

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.60	1553	28170	50.10	% REC.	96
2) 2-FLUOROPHENOL	5.15	136	218144	121.06	% REC.	62 100
3) 05-PHENOL	8.38	341	149014	103.71	% REC.	52 100
4) 05-NITROBENZENE	11.01	588	177175	198.37	% REC.	77 80
5) 2-FLUOROBIPHENYL	10.51	1120	118100	185.51	% REC.	93 96
6) 2,4,6-TRIBROMOPHENOL	23.80	1427	104433	228.33	% REC.	114 100
7) D14-TERPHENYL	20.04	1851	14000	216.58	% REC.	108 100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS373::AQ  
 Data File: >LS373::D5  
 Name: SF-3453 86RA01R53  
 Misc: 9-11-86 2120,1:100

Quant Rev: 4      Quant Time: 860915 09:20  
 Injected at: 860912 15:52  
 Dilution Factor: 1.00

BTL#23

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:49

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.68	1553	25442	50.10	% REC.	99
2) 2-FLUOROPHENOL	5.45	137	152673	94.54	% REC.	47 100
3) D5-PHENOL	8.36	340	81345	62.33	% REC.	31 100
4) D5-NITROBENZENE	11.87	586	134267	166.50	% REC.	83 88
5) 2-FLUOROBIPHENYL	19.50	1120	105802	184.06	% REC.	92 95
6) 2,4,6-TRIBROMOPHENOL	23.88	1427	76157	184.42	% REC.	92 100
7) D14-TERPHENYL	29.04	1851	9705	166.20	% REC.	83 100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS374::AQ  
 Data File: >LS374::D5  
 Name: SF-3453 86RA01S44MS  
 Misc: 9-11-86 1000 1:50

Quant Rev: 4      Quant Time: 860915 09:22  
 Injected at: 860912 17:05  
 Dilution Factor: 1.00

BTL#24

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:40

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.69	1554	26524	50.10	% REC.	97
2) 2-FLUOROPHENOL	5.45	137	67680	40.20	% REC.	100
3) D5-PHENOL	8.37	341	50620	37.20	% REC.	100
4) D5-NITROBENZENE	11.87	586	64510	76.75	% REC.	84
5) 2-FLUOROBIPHENYL	10.50	1120	32142	53.64	% REC.	95
6) 2,4,6-TRIBROMOPHENOL	23.88	1427	24616	57.18	% REC.	100
7) D14-TERPHENYL	29.95	1852	6347	104.31	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS375::AQ  
 Data File: >LS375::D5  
 Name: SF-3453 86RA01S44MSD  
 Misc: 9-11-86 1000,1:50

Quant Rev: 4      Quant Time: 860915 09:24  
 Injected at: 860912 18:18  
 Dilution Factor: 1.00

BTL#25

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:40

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.68	1553	37987	50.10	% REC.	97
2) 2-FLUOROPHENOL	5.44	136	102993	42.71	% REC.	100
3) D5-PHENOL	8.36	340	42144	21.63	% REC.	100
5) 2-FLUOROBIPHENYL	10.48	1119	4060	4.73	% REC.	87
6) 2,4,6-TRIBROMOPHENOL	23.88	1427	53074	86.08	% REC.	100
7) D14-TERPHENYL	29.93	1851	10538	120.93	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS376::AQ  
 Data File: >LS376::D5  
 Name: SF3453 86RA01S44MSS  
 Misc: 9-11-86 1000,1:50

Quant Rev: 4      Quant Time: 860915 09:25  
 Injected at: 860912 19:32  
 Dilution Factor: 1.00

BTL#26

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:40

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.69	1554	33730	50.10	% REC.	97
2) 2-FLUOROPHENOL	5.45	137	24279	11.34	% REC.	100
3) D5-PHENOL	8.37	341	36945	21.35	% REC.	100
4) D5-NITROBENZENE	11.88	587	78730	73.62	% REC.	82
5) 2-FLUOROBIPHENYL	10.49	1120	45453	50.63	% REC.	94
6) 2,4,6-TRIBROMOPHENOL	23.86	1426	16545	30.21	% REC.	100

\* Compound is ISTD

## QUANT REPORT

Operator ID: AL Quant Rev: 4 Quant Time: 860915 09:36  
 Output File: ^LS363::AQ Injected at: 860912 03:37  
 Data File: >LS363::D4 Dilution Factor: 1.00  
 Name: SF-3354 86R501S06  
 Misc: 0-11-86 2350,1:100 BTL#13

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:49

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.73	1556	40375	50.10	% REC.	98
2) 2-FLUOROPHENOL	5.50	140	217120	84.72	% REC.	100
3) D5-PHENOL	8.36	340	147043	70.00	% REC.	100
4) D5-NITROBENZENE	11.80	587	214040	167.07	% REC.	89
5) 2-FLUOROBIPHENYL	19.53	1122	170035	186.10	% REC.	96
6) 2,4,6-TRIBROMOPHENOL	23.03	1430	127637	194.77	% REC.	100
7) D14-TERPHENYL	20.08	1854	13372	144.38	% REC.	100

\* Compound is ISTD

## QUANT REPORT

Operator ID: AL Quant Rev: 4 Quant Time: 860915 09:38  
 Output File: ^LS353::AQ Injected at: 860911 15:23  
 Data File: >LS353::D4 Dilution Factor: 1.00  
 Name: TOXSTD 50PPM  
 Misc: 0-11-86 BTL# 3

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860912 10:49

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D10-PHENANTHRENE	25.75	1509	51404	50.10	% REC.	97
2) 2-FLUOROPHENOL	5.52	136	326292	100.00	% REC.	100
3) D5-PHENOL	8.40	327	263697	100.00	% REC.	100
4) D5-NITROBENZENE	11.88	557	162925	100.00	% REC.	86
5) 2-FLUOROBIPHENYL	19.54	1075	116140	100.00	% REC.	94
6) 2,4,6-TRIBROMOPHENOL	23.05	1393	83435	100.00	% REC.	100
7) D14-TERPHENYL	20.09	1806	11792	100.00	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS353::AQ  
 Data File: >LS353::D2  
 Name: TOXSTD 50PPM  
 Misc: 9-11-86

Quant Rev: 1      Quant Time: 860910 14:48  
 Injected at: 860911 15:23  
 Dilution Factor: 1.00

BTL# 3

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860910 14:47

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D1-1,4-DICHLORO BENZENE	9.30	384	45648	50.10	% REC.	100
2) 2-FLUOROPHENOL	5.52	136	326292	100.00	% REC.	100
3) D5-PHENOL	8.40	327	263697	100.00	% REC.	100
4) D5-NITROBENZENE	11.88	557	162925	100.00	% REC.	86
5) 2-FLUOROBIPHENYL	19.54	1075	116140	100.00	% REC.	94
6) 2,4,6-TRIBROMOPHENOL	23.95	1383	83435	100.00	% REC.	100
7) D14-TERPHENYL	29.09	1806	11792	100.00	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS366::AQ  
 Data File: >LS366::D2  
 Name: SF-3453 86R001S45  
 Misc: 9-11-86 2420,10:100

Quant Rev: 1      Quant Time: 860910 14:48  
 Injected at: 860912 07:17  
 Dilution Factor: 1.00

BTL#16

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860910 14:47

$\frac{x10}{2}$

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D1-1,4-DICHLORO BENZENE	9.27	404	44523	50.10	% REC.	100
2) 2-FLUOROPHENOL	5.47	138	25130	40 7.90	% REC.	100
3) D5-PHENOL	8.36	340	14318	28 5.57	% REC.	100
4) D5-NITROBENZENE	11.81	582	21378	98 13.45	% REC.	83
5) 2-FLUOROBIPHENYL	19.50	1120	10560	47 0.32	% REC.	96
6) 2,4,6-TRIBROMOPHENOL	23.88	1427	3748	23 4.61	% REC.	100
7) D14-TERPHENYL	29.07	1853	1146	50 0.06	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: AL

Quant Rev: 1      Quant Time: 860919 14:49

Output File: ^LS369::AQ  
Data File: >LS369::D3  
Name: SF-3453 86RA01948  
Misc: 9-11-86 2420,1:100

Injected at: 860912 10:58  
Dilution Factor: 1.00

BTL#19

ID File: QASK13::SK  
Title: SURROGATE SPIKE % RECOVERY  
Last Calibration: 860919 14:47

÷2

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLORO BENZENE	9.34	400	36036	50.10	% REC.	100
2) 2-FLUOROPHENOL	5.47	138	245486	95.30	% REC.	48 100
3) D5-PHENOL	8.41	344	176234	84.66	% REC.	92 100
4) D5-NITROBENZENE	11.04	591	236480	183.86	% REC.	42 87
5) 2-FLUOROBIPHENYL	19.53	1122	175739	191.68	% REC.	96 95
6) 2,4,6-TRIBROMOPHENOL	23.91	1429	119908	182.05	% REC.	91 100
7) D14-TERPHENYL	29.95	1852	13642	146.55	% REC.	73 100

\* Compound is ISTD

#### QUANT REPORT

Operator ID: AL  
Output File: ^LS371::AQ  
Data File: >LS371::D3  
Name: SF-3453 86RA01949  
Misc: 9-11-86 2420,1:100

Quant Rev: 4 Quant Time: 860919 14:50  
Injected at: 860912 13:25  
Dilution Factor: 1.00

BTL#21

ID File: QASK13::SK  
Title: SURROGATE SPIKE % RECOVERY  
Last Calibration: 860919 14:47

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLORO BENZENE	9.35	400	39040	50.10	% REC.	100
2) 2-FLUOROPHENOL	5.49	139	211737	75.88	% REC.	38 100
3) D5-PHENOL	8.42	344	122849	54.47	% REC.	22 100
4) D5-NITROBENZENE	11.05	591	200706	144.04	% REC.	72 88
5) 2-FLUOROBIPHENYL	19.53	1122	129655	130.53	% REC.	60 97
6) 2,4,6-TRIBROMOPHENOL	23.92	1429	52787	73.98	% REC.	37 100
7) D14-TERPHENYL	29.07	1853	6214	61.62	% REC.	32 100

\* Compound is ISTD

#### QUANT REPORT

Operator ID: AL  
Output File: ^LS372::AQ  
Data File: >LS372::D3  
Name: SF-3453 86RA01953  
Misc: 9-11-86 2420,1:100

Quant Rev: 4 Quant Time: 860919 14:51  
Injected at: 860912 14:38  
Dilution Factor: 1.00

BTL#22

ID File: QASK13::SK  
Title: SURROGATE SPIKE % RECOVERY  
Last Calibration: 860919 14:47

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLORO BENZENE	9.32	404	28399	50.10	% REC.	100
2) 2-FLUOROPHENOL	5.47	138	176234	95.30	% REC.	48 100

2)	2-FLUOROPHENOL	5.11	193	112071	85.18	% REC.	100
3)	05-PHENOL	8.46	341	130355	84.04	% REC.	42 100
4)	05-NITROBENZENE	11.01	585	143166	141.24	% REC.	71 83
5)	2-FLUOROBIPHENYL	10.50	1116	94039	130.15	% REC.	65 07
6)	2,4,6-TRIBROMOPHENOL	23.98	1422	30560	76.21	% REC.	38 100
7)	014-TERPHENYL	20.04	1846	3719	50.60	% REC.	25 100

\* Compound is ISTD



>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.675	1548	1553	1562	9231	31836	<u>31836</u>	100.00	100.000
Sum of corrected areas:							31836.		

>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
111.71 112.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.876	1423	1427	1432	331	1100	1100	100.00	63.146
2	33.184	2076	2079	2081	193	473	473	43.00	27.153
3	33.227	2081	2082	2084	144	169	169	15.36	9.701
Sum of corrected areas:							1742.		

>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
98.71 99.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.255	402	403	404	63	54	54	11.09	7.849
2	11.269	543	544	546	23	33	33	6.78	4.797
3	23.804	1421	1422	1424	48	72	72	14.79	10.465
4	25.918	1567	1570	1573	187	486	486	99.85	70.640
5	29.928	1850	1851	1852	51	43	43	8.83	6.250
Sum of corrected areas:							688.		

>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
81.71 82.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.010	801	806	811	879	3653	<del>3653</del>	52.10	34.255
2	21.534	1256	1263	1267	2012	7011	<del>7011</del>	99.99	65.745
Sum of corrected areas:							10664.		

>LS353 TOXSTD 50PPM 9-11-86  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	16.085	835	840	844	3126	9571	9571	18.62	15.697
2	25.751	1503	1509	1517	14597	51404	<u>51404</u>	100.00	84.303

Sum of corrected areas: 60975.

>LS353 TOXSTD 50PPM 9-11-86  
111.71 112.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.523	131	136	155	81384	326292	<u>326292</u>	100.00	100.000

Sum of corrected areas: 326292.

>LS353 TOXSTD 50PPM 9-11-86  
98.71 99.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.400	319	327	338	46736	263697	<u>263697</u>	100.00	100.000

Sum of corrected areas: 263697.

>LS353 TOXSTD 50PPM 9-11-86  
81.71 82.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	11.883	547	557	566	28304	162925	<u>162925</u>	100.00	45.366
2	13.118	632	641	653	35016	160989	<u>160989</u>	98.81	44.827
3	21.602	1213	1219	1225	3172	10727	10727	6.58	2.987
4	23.190	1322	1330	1334	10285	24492	24492	15.03	6.820

Sum of corrected areas: 359133.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.708	1549	1555	1563	12166	43184	43184	100.00	100.000

Sum of corrected areas: 43184.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
111.71 112.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.483	135	139	154	21224	67926	67926	100.00	100.000

Sum of corrected areas: 67926.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
98.71 99.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.371	336	341	360	13213	57019	57019	100.00	100.000

Sum of corrected areas: 57019.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
81.71 82.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	11.857	578	585	597	7780	30987	30987	100.00	68.493
2	15.042	803	808	814	1398	5292	5292	17.08	11.697
3	21.568	1259	1265	1270	2911	8962	8962	28.92	19.809

Sum of corrected areas: 45241.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.688	1546	1552	1559	12313	42664	42664	100.00	100.000

Sum of corrected areas: 42664.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
111.71 112.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.470	132	137	152	86312	252688	252688	100.00	100.000

Sum of corrected areas: 252688.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
98.71 99.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.385	335	341	357	44454	170765	170765	100.00	100.000

Sum of corrected areas: 170765.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
81.71 82.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	11.915	578	588	596	38112	183622	183622	100.00	100.000

Sum of corrected areas: 183622.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.694	1549	1554	1564	9691	33610	33610	100.00	100.000

Sum of corrected areas: 33610.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
111.71 112.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.470	133	138	161	85608	245486	245486	100.00	100.000

Sum of corrected areas: 245486.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
98.71 99.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.414	338	344	366	44176	176234	176234	100.00	100.000

Sum of corrected areas: 176234.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
171.71 172.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	19.526	1115	1122	1131	59800	175739	<u>175739</u>	100.00	100.000

Sum of corrected areas: 175739.

2317 ÷ 2 = 1157

>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.675	1548	1553	1562	9231	31836	31836	100.00	100.000

Sum of corrected areas: 31836.

>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
171.71 172.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	19.493	1117	1120	1121	219	344	344	25.58	19.391
2	19.521	1121	1122	1123	101	86	86	6.40	4.848
3	23.861	1422	1426	1432	423	1344	1344	99.95	75.761

Sum of corrected areas: 1774.

>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
329.71 330.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.861	1421	1426	1437	7380	25107	25107	100.00	100.000

Sum of corrected areas: 25107.

>LS377 SF3453 86RA01S44MSSD9-11-86 1000,1:50  
243.71 244.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	29.928	1847	1851	1857	1691	5712	5712	99.98	100.000

Sum of corrected areas: 5712.

>LS353 TOXSTD 50PPM 9-11-86  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	16.085	835	840	844	3126	9571	9571	18.62	15.697
2	25.751	1503	1509	1517	14597	51404	<u>51404</u>	100.00	84.303
Sum of corrected areas:							60975.		

>LS353 TOXSTD 50PPM 9-11-86  
171.71 172.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	19.544	1069	1075	1081	40320	116140	<u>116140</u>	100.00	100.000
Sum of corrected areas:							116140.		

>LS353 TOXSTD 50PPM 9-11-86  
329.71 330.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.949	1377	1383	1392	29160	83475	<u>83475</u>	100.00	100.000
Sum of corrected areas:							83475.		

>LS353 TOXSTD 50PPM 9-11-86  
243.71 244.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	29.994	1801	1806	1814	3392	11792	<u>11792</u>	99.99	100.000
Sum of corrected areas:							11792.		

QUANT REPORT

Operator ID: AL  
 Output File: ^LS368::AQ  
 Data File: >LS368::D2  
 Name: SF-3453 86R001S47  
 Misc: 9-11-86 2420,1:100

Quant Rev: 1      Quant Time: 860918 15:10  
 Injected at: 860912 09:44  
 Dilution Factor: 1.00

BTL#18

ID File: QASK13::SK  
 Title: SURROGATE SPIKE % RECOVERY  
 Last Calibration: 860918 14:47

÷2

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*D10-PHENANTHRENE	25.69	1552	42664	50.10	% REC.	98
2)	2-FLUOROPHENOL	5.47	137	252688	93.31	% REC.	97 100
3)	D5-PHENOL	8.39	311	170765	78.02	% REC.	97 100
4)	D5-NITROBENZENE	11.92	588	183622	135.79	% REC.	98 90
5)	2-FLUOROBIPHENYL	19.50	1119	152753	158.17	% REC.	97 95
6)	2,4,6-TRIBROMOPHENOL	23.90	1427	108367	156.19	% REC.	97 100
7)	D14-TERPHENYL	29.94	1850	27081	276.70	% REC.	98 100

\* Compound is ISTD



Matrix Spike Percent Recovery  
BNA Organic Analysis

Study Number SF-3453

Compounds	Sample # 86RA01\$44MS	Sample # 86RA01\$44MSD	RSD %
Phenol	70	27	90
2-Chlorophenol	114	64	56
Benzyl Alcohol	18	0*	200
p-chloro-m-cresol	55	42	27
4-Nitrophenol	0*	11	200
Pentachlorophenol	100	75	29
1,4-Dichlorobenzene	78	0*	200
1,2,4-Trichlorobenzene	63	0*	200
Acenaphthene	80	19	<del>192</del> 124
Dibenzofuran	106	35	101
2,4-Dinitrotoluene	120	67	56
Pyrene	<del>100</del> 105	82	25
4-Chloroaniline	101**	1.9*	192
Di-n-butylphthalate	116	74	44
N-Nitrosodipropylamine	99	0*	200
** Slightly over limits, probably statistical artifact.			

\*\$44 APPEARS TO EXHIBIT A MATRIX EFFECT FOR BOTH MATRIX SPIKE AND SURROGATES. RECOVERIES ARE LOW AND ERRATIC, NO CLEAR PATTERN.

QUANT REPORT

Operator ID: AL  
Output File: ALS355:NO  
Data File: XLS355:D1  
Name: MATSTD  
Misc: 0-11-86

Quant Rev: 4  
Dilution Factor:  
Quant Time: 860915 10:33  
Injected at: 860911 17:50  
1.00

BTL# 5

ID File: GASK12::SK  
Title: COPIED FROM GASK4: T2 IS 280  
Last Calibration: 860912 15:25

Compound	R.T.	Scan#	Area	Conc	Units	g
1) *D10-PHENANTHRENE	25.74	1557	62530	50.10	% REC.	96
2) PHENDL	8.44	346	56421	100.00	% REC.	100
3) 2-CHLOROPHENDL	8.66	361	70020	100.00	% REC.	93
4) 1,4-DICHLOROBENZENE	0.37	411	37211	100.00	% REC.	96
5) BENZYL ALCOHOL	10.13	464	12088	100.00	% REC.	86
6) N-NITROSODIPROPYL AMINE	11.40	550	47868	100.00	% REC.	96
7) 1,2,4-TRICHLOROBENZENE	14.03	800	31633	100.00	% REC.	91
8) 4-CHLORDANILINE	15.72	855	30317	100.00	% REC.	100
9) 4-CHLORD-3-METHYLPHENDL	17.03	1010	10650	100.00	% REC.	85
10) ACENAPHTHENE	21.68	1273	30150	100.00	% REC.	91
11) DIBENZOFURAN	22.16	1306	50949	100.00	% REC.	100
12) 2,4-DINITROTOLUENE	22.41	1324	17824	100.00	% REC.	97
13) 4-NITROPHENDL	22.34	1319	13121	100.00	% REC.	88
14) PENTACHLOROPHENDL	25.46	1537	6891	100.00	% REC.	85
15) DI-N-BUTYLPHTHALATE	27.56	1684	33128	100.00	% REC.	90
16) PYRENE	29.51	1821	18519	100.00	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: NL  
Output File: ALS374:NO  
Data File: XLS374:DS  
Name: SF-3453 86R001541MS  
Misc: 0-11-86 1000,1:50

Quant Rev: 4  
Dilution Factor:  
Quant Time: 860915 10:37  
Injected at: 860912 17:05  
1.00

BTL#24

ID File: GASK12::SK  
Title: COPIED FROM GASK4: T2 IS 280  
Last Calibration: 860912 15:25

Compound	R.T.	Scan#	Area	Conc	Units	g
1) *D10-PHENANTHRENE	25.60	1554	26524	50.10	% REC.	96
2) PHENDL	8.44	344	16883	70.54	% REC.	100
3) 2-CHLOROPHENDL	8.66	361	33001	114.44	% REC.	92
4) 1,4-DICHLOROBENZENE	0.37	411	12319	78.05	% REC.	91
5) BENZYL ALCOHOL	10.16	466	912	17.79	% REC.	71
6) N-NITROSODIPROPYL AMINE	11.17	558	20192	95.45	% REC.	97
7) 1,2,4-TRICHLOROBENZENE	14.88	797	9311	63.38	% REC.	91
8) 4-CHLORDANILINE	15.68	853	16911	101.40	% REC.	100
9) 4-CHLORD-3-METHYLPHENDL	17.03	1010	4588	55.02	% REC.	90
10) ACENAPHTHENE	21.62	1269	13255	79.82	% REC.	86
11) DIBENZOFURAN	22.44	1303	22969	106.90	% REC.	100

ID	Compound	R.T.	Scan#	Area	Conc	Units	REC.
12)	2,4-DINITROTDLUENE	22.37	1321	9075	120.03	% REC.	89
14)	PENTACHLOROPHENOL	25.41	1534	2033	100.34	% REC.	87
15)	DI-N-BUTYLPHTHALATE	27.51	1681	16315	116.10	% REC.	90
16)	PYRENE	29.46	1818	8206	104.46	% REC.	100

\* Compound is ISTD

QUANT REPORT

Operator ID: NL  
 Output File: \LS375::QG  
 Data File: \LS375::ID5  
 Name: SF-3453 86RA01S44MSD  
 Misc: 0-11-86 1000.1:50  
 Quant Rev: 4  
 Dilution Factor: 1.00  
 Quant Time: 860915 10:38  
 Injected at: 860912 18:18  
 BTL#25

ID File: QASK12::SK  
 Title: COPIED FROM QASK4: T2 IS 280  
 Last Calibration: 860912 15:25

ID	Compound	R.T.	Scan#	Area	Conc	Units	REC.
1)	*D10-PHENANTHRENE	25.68	1553	37087	50.10	% REC.	96
2)	PHENOL	8.41	344	9163	26.73	% REC.	100
3)	2-CHLOROPHENOL	8.64	360	27307	64.20	% REC.	91
8)	4-CHLORANILINE	15.73	856	448	1.88	% REC.	80
9)	4-CHLORO-3-METHYLPHENOL	17.01	1009	4960	41.61	% REC.	80
10)	ACENAPHTHENE	21.62	1269	4532	19.06	% REC.	87
11)	DIBENZOFURAN	22.11	1303	11038	35.66	% REC.	100
12)	2,4-DINITROTDLUENE	22.36	1321	7230	66.95	% REC.	90
13)	4-NITROPHENOL	22.36	1321	850	10.78	% REC.	81
14)	PENTACHLOROPHENOL	25.30	1533	3146	75.15	% REC.	75
15)	DI-N-BUTYLPHTHALATE	27.50	1681	14028	74.18	% REC.	97
16)	PYRENE	29.46	1818	9254	82.26	% REC.	100

\* Compound is ISTD

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.678	1547	1553	1561	11217	37987	37987	100.00	100.000

Sum of corrected areas: 37987.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
126.71 127.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.726	853	856	857	169	448	448	66.46	32.535
2	15.883	865	867	868	38	62	62	9.20	4.503
3	15.925	868	870	872	44	90	90	13.35	6.536
4	21.622	1268	1269	1272	48	103	103	15.28	7.480
5	23.135	1373	1375	1379	311	674	674	99.99	48.947

Sum of corrected areas: 1377.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
152.71 153.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.299	401	406	413	699	2437	2437	53.76	33.494
2	21.622	1264	1269	1275	1397	4532	4532	99.98	62.287
3	23.878	1423	1427	1432	114	307	307	6.77	4.219

Sum of corrected areas: 7276.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
138.71 139.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	22.107	1298	1303	1310	1855	3365	3365	100.00	68.186
2	22.364	1315	1321	1322	230	859	859	25.53	17.406
3	22.579	1335	1336	1339	85	196	196	5.82	3.972
4	22.650	1339	1341	1345	69	209	209	6.21	4.235
5	23.878	1423	1427	1431	77	306	306	9.09	6.201

Sum of corrected areas: 4935.

>LS355 MATSTD 9-11-86  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.744	1551	1557	1564	18925	62743	62530	100.00	100.000

Sum of corrected areas: 62530.

>LS355 MATSTD 9-11-86  
126.71 127.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.716	849	855	867	9550	39317	39317	100.00	100.000

Sum of corrected areas: 39317.

>LS355 MATSTD 9-11-86  
152.71 153.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.314	402	407	414	851	3369	3369	8.61	7.924
2	21.685	1267	1273	1279	12394	39150	39150	100.00	92.076

Sum of corrected areas: 42519.

>LS355 MATSTD 9-11-86  
138.71 139.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	22.156	1301	1306	1312	4953	15529	15529	100.00	54.202
2	22.342	1314	1319	1333	1875	13121	13121	84.49	45.798

Sum of corrected areas: 28650.

>LS374                      SF-3453 86RA01S44MS 9-11-86 1000,1:50  
 187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.693	1548	1554	1563	7656	26524	26524	100.00	100.000
Sum of corrected areas:							26524.		

>LS374                      SF-3453 86RA01S44MS 9-11-86 1000,1:50  
 78.71 79.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.313	403	407	412	207	753	<del>753</del>	59.00	16.246
2	10.156	463	466	469	243	912	<del>912</del>	71.46	19.676
3	10.556	492	494	499	163	709	709	55.55	15.297
4	21.537	1261	1263	1264	947	1276	1276	99.98	27.530
5	23.894	1424	1428	1433	266	985	985	77.18	21.251
Sum of corrected areas:							4635.		

>LS374                      SF-3453 86RA01S44MS 9-11-86 1000,1:50  
 69.71 70.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.370	337	341	353	1301	5828	<del>5828</del>	28.86	16.838
2	11.471	553	558	569	5544	20192	<del>20192</del>	100.00	58.336
3	11.871	580	586	591	2023	7179	<del>7179</del>	35.55	20.741
4	23.894	1423	1428	1433	465	1414	1414	7.00	4.085
Sum of corrected areas:							34613.		

>LS374                      SF-3453 86RA01S44MS 9-11-86 1000,1:50  
 145.71 146.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.370	406	411	418	3833	12319	<del>12319</del>	100.00	90.448
2	19.496	1116	1120	1123	518	1301	<del>1301</del>	10.56	9.552
Sum of corrected areas:							13620.		

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
187.71 188.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.678	1547	1553	1561	11217	37987	37987	100.00	100.000

Sum of corrected areas: 37987.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
78.71 79.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.299	403	406	413	275	849	849	56.51	24.752
2	15.026	805	807	810	107	309	309	20.57	9.009
3	17.939	1007	1011	1013	101	390	390	25.96	11.370
4	22.379	1318	1322	1324	109	380	380	25.29	11.079
5	23.878	1422	1427	1433	400	1502	1502	99.97	43.790

Sum of corrected areas: 3430.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
69.71 70.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.355	337	340	351	1149	4872	4872	47.08	26.939
2	23.893	1422	1428	1433	816	2864	2864	27.67	15.836
3	33.202	2075	2080	2089	2726	10349	10349	100.00	57.224

Sum of corrected areas: 18085.

>LS375 SF-3453 86RA01S44MSD9-11-86 1000,1:50  
145.71 146.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	19.466	1115	1118	1119	54	73	73	30.62	13.012
2	19.495	1119	1120	1124	50	91	91	38.17	16.221
3	21.521	1260	1262	1263	86	128	128	53.69	22.816
4	25.692	1551	1554	1555	110	238	238	99.83	42.424
5	35.901	2267	2269	2270	20	31	31	13.00	5.526

Sum of corrected areas: 561.

>LS355 MATSTD  
187.71 188.7

9-11-86

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.744	1551	1557	1564	18925	62743	62530	100.00	100.000

Sum of corrected areas: 62530.

>LS355 MATSTD  
78.71 79.7

9-11-86

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.314	402	407	412	254	1014	1014	8.39	5.383
2	10.129	461	464	472	2999	12088	12088	99.99	64.168
3	17.914	1007	1009	1019	419	2209	2209	18.27	11.726
4	22.428	1321	1325	1328	308	1047	1047	8.66	5.558
5	23.956	1427	1432	1436	681	2480	2480	20.51	13.165

Sum of corrected areas: 18838.

>LS355 MATSTD  
69.71 70.7

9-11-86

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.399	337	343	352	5646	25427	25427	53.12	27.374
2	11.487	552	559	566	12299	47868	47868	100.00	51.534
3	11.901	580	588	594	3413	14410	14410	30.10	15.513
4	23.942	1425	1431	1437	1394	5182	5182	10.83	5.579

Sum of corrected areas: 92887.

>LS355 MATSTD  
145.71 146.7

9-11-86

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.372	406	411	420	11079	37211	37211	100.00	89.743
2	19.543	1118	1123	1126	1406	4253	4253	11.43	10.257

Sum of corrected areas: 41464.



QUALITY CONTROL SHEET  
 TOXIC ORGANIC SECTION: BASE/NEUTRAL/ACIDIC

STUDY NAME SKINNER

ACTIVITY NUMBER C51100 ANALYST L.J. SCHMIDT

STUDY NUMBER SF-3453

SUMMARY: BLANKS DATA  
 COMPOUNDS DETECTED

#	FRN	DATE	BLANK TYPE	COMPOUNDS DETECTED	ESTIMATED CONCENTRATION ( PPB )	STD USED
1.	LS351	9-11-86	LAB	Bis (2-Ethylhexyl) Phthalate	<del>8.4</del> 68	DIO-Phenanthrene
				7-Oxabicyclo [4.1.0] heptane	8.4	
				Propionic Acid, 2-methyl-, 1-(1,1-dimethylethyl)-2-methyl-1	32	
2.	LS373	9-11-86	86PA01 R53	Benzaldehyde, 4-hydroxy-3-methoxy-	8.2	"
3.						
4.						



ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC DATA FORM:

SF 3354

Group #:

Data Set: SF 3453

Sample Type: WATER

ISTD-Conc.:

Sample #	Sample Amount	Final Volume	Solvent Extract.	Dilution with Hexane			Vol. Conc. Extr.	Volume to	
				1 st.	2 nd.	3 rd.		Pest.	Toxic
86RS01 \$01	2440ml	1.0ml	Chyllon K60XB					-	
86RS01 D01	2420ml							-	
86RS01 \$02	2420ml							-	
86RS01 \$03	2420ml							-	
86RS01 \$04	2420ml							-	
86RS01 \$05	2420ml							-	
86RS01 R04	2450ml							-	
86RS01 \$06	2350ml							-	
86RS01 \$07	2420ml							-	
86RA01 \$44	2420ml	1.0ml						-	
86RA01 \$45	2420ml	10.0ml						-	
86RA01 \$46	2420ml	1.0ml						-	
86RA01 \$47	2420ml							-	
86RA01 \$48	2420ml							-	

Date Extracted: 8/26/86

Chemist: K. G. Ginter

Toxic Ext. Received by Gen. Org. Ext. " "

Analytical Condition:

GC Conditions:

1.95%

Column 1) 3X-2100 on Supercoport 10 x 1/8" 2) 1.5% SP-2250/ SP-2401 "

MS Conditions:

Mass Range: \_\_\_\_\_ to \_\_\_\_\_

T1 \_\_\_\_\_ Hold \_\_\_\_\_ Min.

Scan Cycle: \_\_\_\_\_

T2 \_\_\_\_\_ Min.

High Voltage: \_\_\_\_\_

Rate: \_\_\_\_\_ C

Confirmation: \_\_\_\_\_

Carrier Gas: \_\_\_\_\_; Flow rate: \_\_\_\_\_

Operator & Date: \_\_\_\_\_

GC Operator & Date: \_\_\_\_\_

Sample Clean-up and Remarks: 100 ul of L9 Surrogates were added to all samp<sup>s</sup> and 50 ul to the method blank and matrix spike duplicate. 50 ul of 18 surrogates were added to the special matrix spike and matrix spike

\* Lost 100 ml of \$03 after the Surrogates were added.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE: 10-9-86  
SUBJECT: Precision and Accuracy of Analyses for Data Set SF 3453  
Site: SKINNER  
FROM: Steve Parker, *SP*  
CRL QC Coordinator  
TO: Data User: \_\_\_\_\_

The Region V Central Regional Laboratory has completed its analyses of 9 (number) WATER (matrix type) samples for the parameters listed on the attached sheet. The discrete values reported on the result forms should be considered to be of the precision and accuracy levels listed.

PRECISION is a measure of reproducibility or the closeness with which individual measurements of the same property, under similar conditions agree with each other. It is expressed as the relative percent difference (RPD) or the absolute concentration difference (R') between duplicate analyses. The limit acceptable at the time of analysis is stated. QC data within these limits indicate that the analysis was in control for that set of data.

ACCURACY is a measure of the closeness of an individual measurement to the expected value. It can be expressed as percent recovery of a known spike or standard concentration, or as percent bias which is the deviation from the true value. The limits applicable at the time of analysis are stated. A 95% confidence interval means that 95% of the time, percent recovery will fall between those limits.

Attachment

**TRANSMITTED BY**  
*[Signature]*  
OCT 09 1986  
U.S. EPA CENTRAL  
REGIONAL LAB

ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC DATA FORM:

Form # 4

Group #: \_\_\_\_\_

SF 3354  
Data Set: SF 3453

Sample Type: WATER  
ISTD-Conc.: \_\_\_\_\_

Sample #	Sample Amount	Final Volume	Solvent Extract.	Dilution with Hexane			Vol. Conc. Extr.	Volume to	
				1 st.	2 nd.	3 rd.		Pest.	Toxic
86 RA01 \$49	2420ml	1.0 ml	CH <sub>2</sub> Cl <sub>2</sub> x60% x7						
86 RA01 \$53	2420ml								
86 RA01 R53	2420ml								
\$44 MAT SPK	1,000ml		CH <sub>2</sub> Cl <sub>2</sub> x10x7						
\$44 MAT SPK DUP	1,000ml								
\$44 Special MAT SPK	1,000ml								
\$44 Special MAT SPK DUP	1,000ml								
METHOD Blank	1,000ml								
86 RA01 P48	2420ml								

Date Extracted: 8/28/86 Chemist: K. G. Guter Toxic Ext. Received by Gen. Org. Ext. " "

Analytical Condition:

GC Conditions: /1.95%  
 Column 1) 3X-2100 on Supercoport 10 x 1/8" MS Conditions:  
 2) 1.5% SP-2250/ SP-2401 " Mass Range: \_\_\_\_\_ to \_\_\_\_\_  
 T1 \_\_\_\_\_ Hold \_\_\_\_\_ Min. Scan Cycle: \_\_\_\_\_  
 T2 \_\_\_\_\_ Min. High Voltage: \_\_\_\_\_  
 Rate: \_\_\_\_\_ C Confirmation: \_\_\_\_\_  
 Carrier Gas: \_\_\_\_\_; Flow rate: \_\_\_\_\_ Operator & Date: \_\_\_\_\_  
 GC Operator & Date: \_\_\_\_\_

Sample Clean-up and Remarks: 5ml of acid waxy matrix spike was added and 5ml of base waxy matrix spike was added to the special spike + dup.

P.T.O.

Speeial spk In Skimmer Sample

#1289	HEXACHLORONORBORADIENE	64.1 $\mu\text{g}/\text{mL}$	229, 231
#1280	OCTACHLOROCYCLOPENTENE	62.0 $\mu\text{g}/\text{mL}$	340, 342
#1278	HEPTACHLORONORBORENE	81.0 $\mu\text{g}/\text{mL}$	272
V20	CHLORDIENE	72.0 $\mu\text{g}/\text{mL}$	326, 301 66, 101

365-373

GC/MS TUNING AND MASS CALIBRATION  
Decafluorotriphenylphosphine (DFTPP)

USEPA REGION 5: CENTRAL REGIONAL LAB

DATA SET NO.: SF-3453

Instrument ID: #1

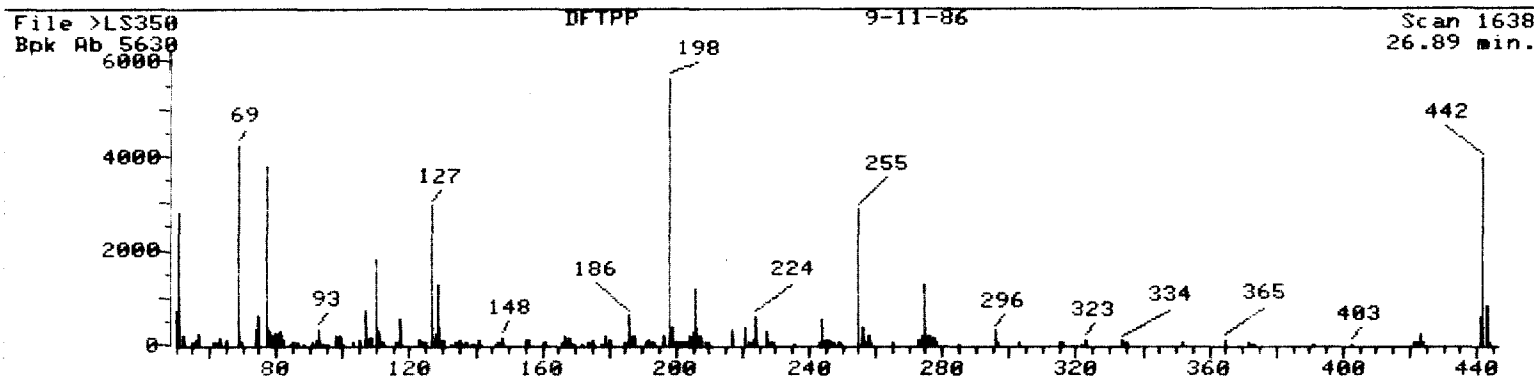
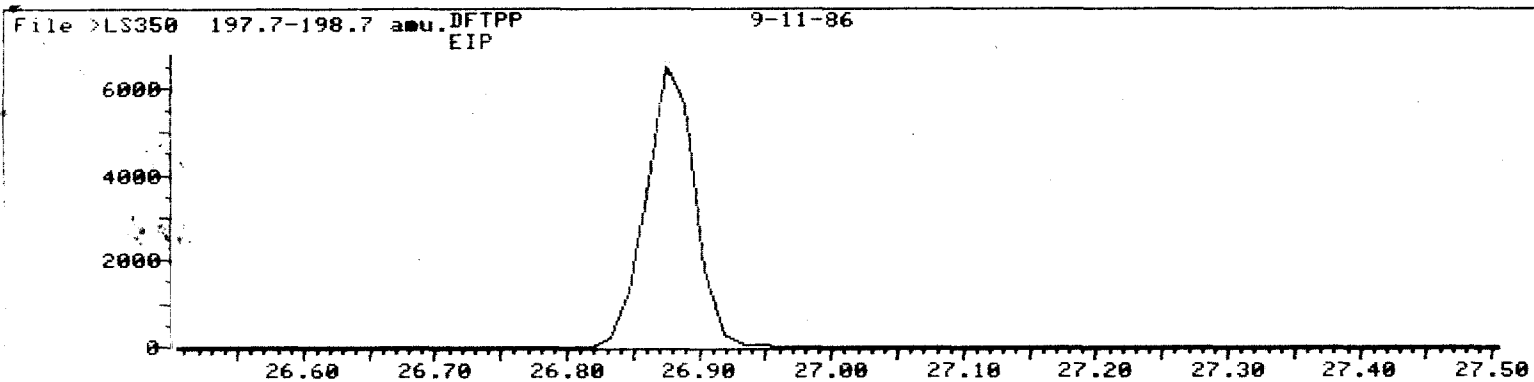
Date / Time: 9/11/86 10:34

Lab ID: XLS350::03

Data Release Authorized By: SKM

m/z	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.15 OK
68	less than 2.0% of mass 69	0.00 OK (0.00) #1
69	mass 69 relative abundance	75.08
70	less than 2.0% of mass 69	.87 OK (1.159) #1
127	40.0 - 60.0% of mass 198	52.33 OK
157	less than 1.0% of mass 198	0.00 OK
198	base peak, 100% relative abundance	100.00 OK
199	5.0 - 9.0% of mass 198	6.86 OK
275	10.0 - 30.0% of mass 198	22.56 OK
365	greater than 1.00% of mass 198	1.99 OK
441	present, but less than mass 443	10.43 OK
442	greater than 40.0% of mass 198	70.27 OK
443	17.0 - 23.0% of mass 442	14.56 OK (20.73) #2





:TAB

>LS350 DFTPP 9-11-86  
1638 NRM BIG

File: >LS350 Scan #: 1638 Retn. time: 26.89

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
50.00	12.88	92.00	1.49	147.05	1.26	198.95	6.86	257.95	3.06
51.00	49.15	92.90	5.83	147.95	2.70	199.95	.94	264.95	1.05
52.00	3.64	97.90	3.32	154.95	1.37	201.45	.87	272.95	1.65
56.00	1.97	98.90	3.16	155.80	1.33	203.95	3.02	273.95	3.09
57.00	3.93	104.95	1.44	159.95	1.10	205.05	4.67	274.95	22.56
62.90	2.26	106.95	12.98	160.95	1.17	205.95	20.52	275.95	3.25
65.00	1.51	108.05	2.79	166.05	.96	207.05	3.16	276.95	2.34
68.90	75.08	109.95	31.62	166.95	3.53	216.95	5.44	295.95	5.33
69.90	.87	110.95	4.58	167.95	2.82	220.95	6.41	302.95	1.08
73.90	5.90	116.05	.94	173.80	1.14	221.95	1.03	315.00	.94
74.90	11.23	116.95	10.04	174.95	1.31	222.95	1.65	323.00	1.90
77.00	66.82	122.95	1.49	178.95	2.93	223.95	10.66	334.00	1.37
78.00	4.90	127.05	52.33	179.95	1.92	226.95	4.69	365.00	1.99
78.90	3.52	128.05	3.75	184.95	1.24	228.95	.92	371.90	1.21
79.90	3.94	128.95	22.68	186.05	11.24	243.05	1.03	421.00	.99
80.90	4.67	129.95	1.99	187.05	3.53	243.95	9.66	422.90	3.80
81.90	1.37	133.95	.82	191.80	1.37	244.95	1.69	441.00	10.43
84.90	.98	135.05	1.79	192.95	.91	245.95	2.08	442.00	70.27
86.00	1.21	137.05	1.05	195.95	3.21	254.95	51.08	443.00	14.56
90.75	.87	140.95	2.02	197.95	100.00	255.95	6.50	444.00	1.23

:AL,,1

SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S44

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	2.0 U
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	1.0 U
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROBUTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	(30) U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

THIS SAMPLE EXHIBITED UNUSUAL MATRIX EFFECTS.

*Sefer* 10-9-86

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S44

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

CODES: U --- COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.  
THE VALUE REPORTED IS THE METHOD DETECTION  
LIMIT FOR REAGENT WATER.

SLC - SUSPECTED LABORATORY CONTAMINANT  
SFC - SUSPECTED FIELD CONTAMINANT

\* THESE TWO PARAMETERS ARE REPORTED AS A TOTAL.  
\*\* THESE TWO PARAMETERS ARE REPORTED AS A TOTAL.  
\*\*\* THESE TWO PARAMETERS ARE REPORTED AS A TOTAL.

VALUES IN PARENTHESES ARE ESTIMATES. ACTUAL VALUES  
ARE BEING DETERMINED AT THIS TIME.

SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S45

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	2.0 U
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	1.0 U
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROBUTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	(30) U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S45

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	
52. 129-00-0	PYRENE	2.0 1.7
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

CODES: U --- COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.  
THE VALUE REPORTED IS THE METHOD DETECTION  
LIMIT FOR REAGENT WATER.

SLC - SUSPECTED LABORATORY CONTAMINANT

SFC - SUSPECTED FIELD CONTAMINANT

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CENTRAL REGIONAL LABORATORY  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
536 SOUTH CLARK  
CHICAGO, ILLINOIS 60605

312/353-8370

ORGANICS ANALYSIS DATA SHEET  
=====

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S45

ACTIVITY CODE: C51100

TENTATIVELY IDENTIFIED COMPOUNDS  
=====

CONCENTRATION(UG/L)  
=====

BENZALDEHYDE

50

SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S46

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	2.0 U
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	1.0 U
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROBUTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	(30) U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S46

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUDRANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

CODES: U --- COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.  
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 LIMIT FOR REAGENT WATER.

SLC - SUSPECTED LABORATORY CONTAMINANT

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SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S47

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	2.0 U
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	1.0 U
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROBUTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	(30) U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S47

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

CODES: U --- COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.  
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 LIMIT FOR REAGENT WATER.

SLC - SUSPECTED LABORATORY CONTAMINANT

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SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S48

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	2.0 U
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	1.0 U
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROCYCLOPENTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	(30) U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S48

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

CODES: U --- COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.  
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SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01D48

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	2.0 U
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	1.0 U
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 20-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 20-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROBUTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	(30) U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-53-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01D48

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

CODES: U --- COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.  
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 LIMIT FOR REAGENT WATER.

SLC - SUSPECTED LABORATORY CONTAMINANT  
 SFC - SUSPECTED FIELD CONTAMINANT

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SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S49

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	2.0 U
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	1.0 U
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROBUTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	(30) U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S49

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

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CENTRAL REGIONAL LABORATORY  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
536 SOUTH CLARK  
CHICAGO, ILLINOIS 60605

312/353-8370

ORGANICS ANALYSIS DATA SHEET  
=====

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S49

ACTIVITY CODE: C51100

TENTATIVELY IDENTIFIED COMPOUNDS  
=====

CONCENTRATION(UG/L)  
=====

BENZALDEHYDE

200

SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S53

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5 U
2. 108-95-2	PHENOL	140
3. 95-57-8	2-CHLOROPHENOL	2.0 U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0 U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0 U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5 U
7. 100-51-6	BENZYL ALCOHOL	2.0 U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5 U
9. 95-48-7	2-METHYLPHENOL	1.0 U
10. 67-72-1	HEXACHLOROETHANE	2.0 U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5 U
12. 98-95-3	NITROBENZENE	2.5 U
13. 106-44-5	4-METHYLPHENOL	210
14. 78-59-1	ISOPHORONE	2.5 U
15. 88-75-5	2-NITROPHENOL	2.0 U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0 U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5 U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0 U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0 U
20. 91-20-3	NAPHTHALENE	2.0 U
21. 106-47-8	4-CHLOROANILINE	2.0 U
22. 87-68-3	HEXACHLOROBUTADIENE	2.5 U
23. 65-85-0	BENZOIC ACID	45
24. 91-57-6	2-METHYLNAPHTHALENE	2.0 U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5 U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0 U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5 U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5 U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5 U
30. 208-96-8	ACENAPHTHYLENE	1.5 U
31. 131-11-3	DIMETHYL PHTHALATE	1.5 U
32. 606-20-2	2,6-DINITROTOLUENE	1.0 U
33. 83-32-9	ACENAPHTHENE	1.5 U
34. 99-09-2	3-NITROANILINE	2.5 U
35. 132-64-9	DIBENZOFURAN	1.0 U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S53

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
46. 118-74-1	HEXACHLOROBENZENE	1.5 U
47. 87-86-5	PENTACHLOROPHENOL	2.0 U
48. 85-01-8	PHENANTHRENE	1.0 U
49. 120-12-7	ANTHRACENE	2.5 U
50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
63. 191-24-2	BENZO(GHI)PERYLENE	4.0 U
64. 88-74-4	2-NITROANILINE	1.0 U

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
536 SOUTH CLARK  
CHICAGO, ILLINOIS 60605

312/353-8370

ORGANICS ANALYSIS DATA SHEET  
=====

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01S53

ACTIVITY CODE: C51100

TENTATIVELY IDENTIFIED COMPOUNDS  
=====

CONCENTRATION(UG/L)  
=====

ISOVALERIC ACID	17
PENTANOIC ACID	31
BUTANOIC ACID, 2-METHYL-	150
HYDROCARBONS(#375,427,450,524,608)	160
UNKNOWN(#507)	25
UNKNOWN(#879)	37
BENZENEACETIC ACID	240
BENZENEPROPANOIC ACID(#1101)	300
1-H-INDOLE, 2-METHYL-(#1144)	25
1,3-BENZENEDIOL, MONOACETATE	27

SEMIVOLATILES ORGANIC ANALYSIS DATA SHEET

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01R53

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)	
1. 111-44-4	BIS(2-CHLOROETHYL)ETHER	1.5	U
2. 108-95-2	PHENOL	2.0	U
3. 95-57-8	2-CHLOROPHENOL	2.0	U
4. 541-73-1	1,3-DICHLOROBENZENE	2.0	U
5. 106-46-7	1,4-DICHLOROBENZENE	2.0	U
6. 95-50-1	1,2-DICHLOROBENZENE	2.5	U
7. 100-51-6	BENZYL ALCOHOL	2.0	U
8. 39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	2.5	U
9. 95-48-7	2-METHYLPHENOL	1.0	U
10. 67-72-1	HEXACHLOROETHANE	2.0	U
11. 621-64-7	N-NITROSODIPROPYLAMINE	1.5	U
12. 98-95-3	NITROBENZENE	2.5	U
13. 106-44-5	4-METHYLPHENOL	1.0	U
14. 78-59-1	ISOPHORONE	2.5	U
15. 88-75-5	2-NITROPHENOL	2.0	U
16. 105-67-9	2,4-DIMETHYLPHENOL	2.0	U
17. 111-91-1	BIS(2-CHLOROETHOXY)METHANE	2.5	U
18. 120-83-2	2,4-DICHLOROPHENOL	2.0	U
19. 120-82-1	1,2,4-TRICHLOROBENZENE	2.0	U
20. 91-20-3	NAPHTHALENE	2.0	U
21. 106-47-8	4-CHLOROANILINE	2.0	U
22. 87-68-3	HEXACHLOROBTADIENE	2.5	U
23. 65-85-0	BENZOIC ACID	(30)	U
24. 91-57-6	2-METHYLNAPHTHALENE	2.0	U
25. 59-50-7	4-CHLORO-3-CRESOL	1.5	U
26. 77-47-4	HEXACHLOROCYCLOPENTADIENE	2.0	U
27. 88-06-2	2,4,6-TRICHLOROPHENOL	1.5	U
28. 95-95-4	2,4,5-TRICHLOROPHENOL	1.5	U
29. 91-58-7	2-CHLORONAPHTHALENE	1.5	U
30. 208-96-8	ACENAPHTHYLENE	1.5	U
31. 131-11-3	DIMETHYL PHTHALATE	1.5	U
32. 606-20-2	2,6-DINITROTOLUENE	1.0	U
33. 83-32-9	ACENAPHTHENE	1.5	U
34. 99-09-2	3-NITROANILINE	2.5	U
35. 132-64-9	DIBENZOFURAN	1.0	U

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01R53

ACTIVITY CODE: C51100

CAS #	COMPOUND	CONCENTRATION (UG/L)
36. 51-28-5	2,4-DINITROPHENOL	(15) U
37. 121-14-2	2,4-DINITROTOLUENE	1.0 U
38. 86-73-7	FLUORENE	1.0 U
39. 100-02-7	4-NITROPHENOL	1.5 U
40. 7005-72-3	4-CHLOROPHENYLPHENYL ETHER	1.0 U
41. 84-66-2	DIETHYL PHTHALATE	1.0 U
42. 534-52-1	4,6-DINITRO-2-METHYLPHENOL	(15) U
43. 86-30-6	N-NITROSODIPHENYLAMINE *	1.5 U
122-39-4	DIPHENYLAMINE *	
44. 100-01-6	4-NITROANILINE	3.0 U
45. 101-55-3	4-BROMOPHENYLPHENYL ETHER	1.5 U
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48. 85-01-8	PHENANTHRENE	1.0 U
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50. 84-74-2	DI-N-BUTYL PHTHALATE	2.0 U
51. 206-44-0	FLUORANTHENE	1.5 U
52. 129-00-0	PYRENE	1.5 U
53. 85-68-7	BUTYLBENZYL PHTHALATE	3.5 U
54. 218-01-9	CHRYSENE **	1.5 U
55. 56-55-3	BENZO(A)ANTHRACENE **	
56. 117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1.0 U
57. 117-84-0	DI-N-OCTYL PHTHALATE	1.5 U
58. 205-99-2	BENZO(B)FLUORANTHENE ***	1.5 U
59. 207-08-9	BENZO(K)FLUORANTHENE ***	
60. 50-32-8	BENZO(A)PYRENE	2.0 U
61. 193-39-5	INDENO(1,2,3-CD)PYRENE	3.5 U
62. 53-70-3	DIBENZO(A,H)ANTHRACENE	2.5 U
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CHICAGO, ILLINOIS 60605

312/353-8370

ORGANICS ANALYSIS DATA SHEET  
=====

STUDY NAME: SKINNER

STUDY NUMBER: SF-3453

LAB SAMPLE I.D. NO: 86RA01R53

ACTIVITY CODE: C51100

TENTATIVELY IDENTIFIED COMPOUNDS  
=====

CONCENTRATION(UG/L)  
=====

BENZALDEHYDE, 4-HYDROXY-3-METHOXY-

8.2

1-H-INDOLE, 2-METHYL-(#1144)

25

1,3-BENZENEDIOL, MONOACETATE

27

**CDM**

environmental engineers, scientists,  
planners, & management consultants

CAMP DRESSER & MCKEE INC.

11 East Adams Street, Suite 1100  
Chicago, Illinois 60603  
312 786-1313

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MAY 05 1986

CENTRAL REGIONAL LAB.  
CHICAGO, ILL. 60603

May 2, 1986

Mr. Curtis Ross  
Director, Central Regional Laboratory  
U.S. Environmental Protection Agency  
536 South Clark St. (5SCRL)  
Chicago, IL 60604

Project: Rem 11 - EPA Contract No. 68-01-6939

Document No.: 130-R11-EP-CPBG-1

Subject: Special Pesticide Analysis for Residential Samples  
to be collected from the Skinner Landfill Site

Dear Mr. Ross:

Existing information on the residential wells in the area of the Skinner Landfill Site indicates the need for requesting special analyses from the CRL. This request is being made with the concurrence of the Site Manager, Mike Bort and the EPA Remedial Project Manager, Gene Wong.

The special services requested consist of analysis of 12 residential water samples for the compounds listed in Table I, using the GC/EC method and the GC/MS method. It is requested that all the compounds be analyzed initially by GC/EC. Any samples where compounds are found in quantities greater than the requested detection limit for the GC/~~MS~~<sup>EC</sup> method, should then be analyzed using GC/MS.

It is our understanding that these procedures are not standard for some of the compounds and some of the analyses may not be feasible. Any input that you can provide us as to the feasibility of our requests, will be greatly appreciated.

The requested date for submission of these samples for analysis is May 19, 1986. The QC level of effort should conform to the requirements in Table II. In addition, it is requested that the following compounds be added to the calibration standards and used for spiking the matrix spike duplicate in both methods of analysis:

- Hexachloronorboradiene -
- Octachlorocyclopentene -
- Heptachloronorborene -
- Chlordene -



Page 2

May 2, 1986

Curtis Ross

Subject: Skinner Landfill Site

These samples are also being analyzed for volatile organics, base/neutral/acid compounds, pesticide/PCB's, ICP metals, mercury, cyanide, furnace metals, alkalinity, chloride, sulfate, ammonia and nitrate-nitrite by the methods specified in the QAPP.

If you have any questions, please call me.

Very truly yours,



Wendy T. Dewar  
Sampling and Analytical Coordinator

WTD/bcz

Enclosures

cc: Gene Wong, EPA  
Mike Bort, Weston  
Evonne Flynn, CRL  
Jun Yoshitani, CDM  
Steve Parker, QC - CRL  
Dennis Wesolowski, CPM - CRL

TABLE I

<u>Compound</u>	<u>Requested Detection Limit for GC/FC ug/l</u>	<u>Requested Detection Limit for GC/MS ug/l</u>
*Hexachlorobenzene <del>3926</del>	.05	1.5
*Hexachlorocyclopentadiene <del>2595</del>	.1	2.0
Hexachlorobutadiene <del>2281</del>	.05	1.0
Hexachloronorboradiene	.05	1.0
Octachlorocyclopentene	.05	1.0
Heptachloronorborene	.05	1.0
Chlordene <del>1266</del>	.05	1.0

\*Compounds currently analyzed for by CRL in the Acid/Base/Neutral fraction.

TABLE II

## QC LEVEL OF EFFORT FOR CRL ANALYTICAL SERVICES

<u>Method of Analysis</u>	<u>Lab Blanks</u>	<u>Spikes or Surrogates/Spikes</u>	<u>Lab Duplicates</u>	<u>Matrix Spike Duplicate</u>
GC/MS	One per set of samples or a minimum of 1 in 10	Surrogates added to each sample and matrix spikes added to one sample per set	NR	One per set of samples or a minimum of 1 in 10
GC/EC	One per set of samples or a minimum of 1 in 10	One spike per set of samples or a minimum of 1 in 10	One per set of samples or a minimum of 10	One per set of samples or a minimum of 1 in 10



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
ENVIRONMENTAL SERVICES DIVISION  
536 SOUTH CLARK STREET  
CHICAGO, ILLINOIS 60605

24 JUL 1985

Ms. Wendy T. Dewar  
Sampling and Analytical Coordinator  
Camp Dresser and McKee, Inc.  
11 East Adams Street, Suite 1100  
Chicago, Illinois 60603

Re: Special pesticide analysis for residential samples from the Skinner  
Landfill site.

Dear Ms. Dewar:

We have evaluated by GC/EC chromatography the compounds requested to be  
determined in the analysis of residential water samples from the Skinner  
Landfill site.

The following tables are attached:

Table I: Compounds chromatographed, retention times, and method detection  
Limits

Table II: Chromatographic conditions

Table III: Special compounds and related pesticides

If GC/EC analysis indicates quantifiable quantities, of heptachloronorborene or  
octachlorocyclopentene, samples will be analyzed by GC/MS to determine which  
compounds are present.

The possible interferences are (1) Technical chlordane in excess of .14ug/liter,  
(2) Toxaphene in excess of .24ug/liter and (3) Aroclor 1221, Aroclor 1232, Aroclor  
1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260 in excess of .65ug/liter. If  
these components are present in the sample, we will do additional column chrom-  
atography in order to provide reliable quantitation.

If you have any questions please call me at (312) 353-9065.

Sincerely,

A handwritten signature in black ink, appearing to read "Yvonne H. Flynn".

Yvonne H. Flynn, Chief  
Organic Lab Section

Attachments

TABLE I  
COMPOUNDS CHROMATOGRAPHED

COMPOUNDS	Capillary GC Retention Times (mins)		Method Detection Limits In Reagent Water (ug/Liter)
	SPB-5	DB-17	
Hexachlorobutadiene	4.37	4.26	(0.005)*
Hexachlorocyclopentene	5.34	5.29	(0.020)*
Hexachloronorborene	6.68	7.10	(0.010)*
Heptachloronorborene			
Octachlorocyclopentene	8.32	8.95	(0.020)*
Hexachlorobenzene	9.27	9.99	(0.05)
Chlorodene	10.39	11.44	(0.020)*
$\alpha$ - Chlorodene	12.18	13.84	(0.020)*
$\beta$ - Chlorodene	13.32	16.19	(0.020)*
$\gamma$ - Chlordene	13.41	16.00	(0.020)*
MIREX	41.29	47.28	Internal Standard
Lindane	9.85	11.87	0.005
Heptachlor	11.95	13.26	0.030
Aldrin	13.27	14.93	0.005
Heptachlor Epoxide	15.09	18.63	0.005
Endosulfan-I	17.16	21.66	0.010
Dieldrin	18.93	24.97	0.010
Endrin	20.65	29.73	0.010
Endosulfan-2	21.49	32.85	0.010
PP-DDT	26.51	38.56	0.020
Methoxychlor	36.09	47.92	0.020
$\alpha$ - BHC	9.06	10.50	0.010
$\beta$ - BHC	9.70	12.15	0.005
$\gamma$ - BHC	10.49	13.81	0.005
PP-DDE	18.81	24.48	0.005
Endrin Aldehyde	22.44	39.44	0.030
PP-DDD	23.36	32.8	0.020
Endosulfan Sulfate	24.90	41.78	0.10
Endrin Ketone	32.09	47.87	0.030
Dibutylchlorendate	42.22	45.35	0.025

\* Since compounds are intermediates or derivative of standard pesticides, method detection limits are estimated from method detection limits of these standard compounds.

The above compounds were chromatographed on a Perkin-Elmer SIGMA 2000 Gas Chromatograph. See Table II for GC/EC conditions.

TABLE II  
CHROMATOGRAPHIC CONDITIONS

Column One: SPB-5, 30 Meters x 0.25mm

Column Two: DB-17, 30 meters x 0.25mm

Injection Port: 270°C

Detectors: 320°C

OVEN: 110°C for 1 mins  
20°C/min for 4 mins  
190°C for one mins  
5°C/min for 4 mins  
210°C for 30 min  
10°C/min for 5 mins  
260°C for 10 mins

TABLE III

INTERMEDIATE/DERIVATIVE	PESTICIDE
Hexachlorobutadiene	Aldrin
Hexachlorocyclopentene	Chlordane
Hexachloronorbornadiene	Endrin
Heptachloronorbornene	Heptachlor
Octachlorocyclopentene	Chlordane
Chlordene	Chlordane
$\alpha$ - Chlordene	Chlordane
$\beta$ - Chlordene	Chlordane
$\gamma$ - Chlordene	Chlordane

CENTRAL REGIONAL LABORATORY  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
536 SOUTH CLARK ST.  
CHICAGO, ILLINOIS 60505

312/353-8370

B/N/A ORGANIC ANALYSIS SHEET

Study Name: SKINNER Study Number: SF-3453

Lab Sample I.D. No.: 86RA01845 Activity Number: CS1100

INSTD = 66317  
(#155#)

TENTATIVELY IDENTIFIED COMPOUNDS

ESTIMATED  
CONCENTRATION:  
( P/B )

		ESTIMATED CONCENTRATION: ( P/B )
1.	<u>Benzaldehyde (#296)</u> <u>158978</u>	<u>50</u>
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

0 - Compound was analyzed for, but not detected. The value is the minimum detection limit for the sample analyzed.  
-SC - Suspected contaminant  
-E - Estimated Value  
N.A. - This compound was not analyzed for using an external standard automatic quantification program. However, manual peak identification indicates that the compound is not present above the minimum detection limit of the method.



CENTRAL REGIONAL LABORATORY  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
536 SOUTH CLARK ST.  
CHICAGO, ILLINOIS 60605

312/353-8370

B/W/A ORGANIC ANALYSIS SHEET

Study Name: SKINNER Study Number: SF-3453

Lab Sample I.D. No.: 86RA01#49 Activity Number: CS1100

INSTD = 50649  
(#1555)

TENTATIVELY IDENTIFIED COMPOUNDS

ESTIMATED  
CONCENTRATION:  
( PPB )

		ESTIMATED CONCENTRATION: ( PPB )
1.	<u>Benzaldehyde (#301)</u>	<u>492665</u>
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

- 0 - Compound was analyzed for, but not detected. The value is the minimum detection limit for the sample analyzed.
- SC - Suspected contaminant
- CONES: 3 - Estimated Value
- N.A. - This compound was not analyzed for using an external standard automatic quantification program. However, manual peak identification indicates that the compound is not present above the minimum detection limit of the method.

B/N/A ORGANIC ANALYSIS SHEET

Study Name: SKINNER Study Number: SF-3453

Lab Sample I.D. No.: 86RA01\$53 Activity Number: CS1100

INSTD = 44154  
 (#1549)

TENTATIVELY IDENTIFIED COMPOUNDS

ESTIMATED  
 CONCENTRATION  
 ( PPB )

1.	<del>Unknown (#108) is Valeric acid</del> 36124	17
2.	Pentanoic Acid (#169) 65381	31
3.	Butanoic acid, 2-methyl- (#193) 312077	150
4.	Hydrocarbons (#375, 427, 450, 524, 608) <del>91199, 35535, 37198</del> 36709, 131072	160
5.	Unknown (#507) 53022	25
6.	Unknown (#879) 78593	37
7.	Benzeneacetic acid (#979) 503632	240
8.	Benzene propanoic acid (#1101) 630993	300
9.	1-H-Indole, 2-methyl- (#1144) 53501	25
10.	1,3-Benzenediol, monoacetate (#1392) 57698	27
11.		
12.		
13.		
14.		
15.		

- - Compound was analyzed for, but not detected. The value is the minimum detection limit for the sample analyzed.  
 SC - Suspected contaminant  
 J - Estimated Value  
 N.A. - This compound was not analyzed for using an external standard automatic quantification program. However, manual peak identification indicates that the compound is not present above the minimum detection limit of the method.

CENTRAL REGIONAL LABORATORY  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
536 SOUTH CLARK ST.  
CHICAGO, ILLINOIS 60605

312/353-8370

B/N/A ORGANIC ANALYSIS SHEET

Study Name: SKINNER Study Number: SF-3453

Lab Sample I.D. No.: 86RAD1R53 Activity Number: CS1100

INSTD = 73226

(#1553)

TENTATIVELY IDENTIFIED COMPOUNDS

ESTIMATED  
CONCENTRATION:  
(PPB)

		ESTIMATED CONCENTRATION: (PPB)
1.	<u>Benzaldehyde, 4-hydroxy-3-methoxy-(#1163)-29198</u>	<u>8.2</u>
2.	-----	-----
3.	-----	-----
4.	-----	-----
5.	-----	-----
6.	-----	-----
7.	-----	-----
8.	-----	-----
9.	-----	-----
10.	-----	-----
11.	-----	-----
12.	-----	-----
13.	-----	-----
14.	-----	-----
15.	-----	-----

- 0 - Compound was analyzed for, but not detected. The value is the minimum detection limit for the sample analyzed.
- SC - Suspected contaminant
- 3 - Estimated Value
- BLA - This compound was not analyzed for using an external standard automatic quantification program. However, manual peak identification indicates that the compound is not present above the minimum detection limit of the method.

QUANT REPORT

Operator ID: AL  
Output File: ALS3531::AQ  
Data File: >ALS3531::D1  
Name: LAB BLANK  
Misc: 0-11-86 1000,1:50

Quant Rev: 4  
Dilution Factor:  
Quant Time: 860912 13:16  
Injected at: 860911 12:56  
Dilution Factor: 1.00

BTL# 1

ID File: QASK11::SK  
Title: COPY FROM QASK2: T2 IS 280  
Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	g
1) *D4-1,4-DICHLOROBENZENE	0.32	407	36292	50.60	PPB	97
<del>14) N-NITROBIS(2-PROPYL)AMINE</del>	11.92	589	13100	<del>42.43</del>	<del>PPB</del>	60
15) *D10-PHENANTHRENE	25.74	1557	57392	50.10	PPB	96
<del>16) DIMETHYLANILINE</del>	23.94	1431	1405	<del>25.97</del>	<del>PPB</del>	100
<del>17) BIS(2-ETHYLHEXYL)DUTUALANE</del>	33.28	2085	16740	<del>107.10</del>	<del>PPB</del>	97

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
Output File: ALS3533::AQ  
Data File: >ALS3533::D1  
Name: TOXSTD 50PPM  
Misc: 0-11-86

Quant Rev: 4  
Dilution Factor:  
Quant Time: 860912 13:21  
Injected at: 860911 15:23  
Dilution Factor: 1.00

BTL# 3

ID File: QASK11::SK  
Title: COPY FROM QASK2: T2 IS 280  
Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	g
1) *D4-1,4-DICHLOROBENZENE	0.30	384	45648	50.60	PPB	92
2) ANILINE	8.64	342	113262	50.00	PPB	100
3) PHENOL	8.44	330	114855	50.00	PPB	100
4) BIS(2-CHLOROETHYL)ETHER	8.64	342	113262	50.00	PPB	100
5) 2-CHLOROPHENOL	8.65	343	24492	50.00	PPB	95
6) 1,3-DICHLOROBENZENE	9.13	373	83473	50.00	PPB	94
7) 1,4-DICHLOROBENZENE	9.13	373	83473	50.00	PPB	94
8) 1,2-DICHLOROBENZENE	10.09	438	75761	50.00	PPB	99
9) BENZYL ALCOHOL	10.11	441	30017	50.00	PPB	88
10) 2-METHYLPHENOL	10.82	486	75004	50.00	PPB	92
11) BIS(2-CHLOROISOPROPYL)ETHER	10.83	487	19839	50.00	PPB	99
12) HEXACHLORETHANE	11.37	523	34613	50.00	PPB	94
13) 4-METHYLPHENOL	11.54	533	90309	50.00	PPB	93
14) N-NITROSODIPROPYL AMINE	11.53	532	66283	50.00	PPB	98
15) *D10-PHENANTHRENE	25.75	1509	51404	50.10	PPB	95
16) NITROBENZENE	11.98	564	85083	50.00	PPB	93
17) ISOPHORONE	13.12	641	160989	50.00	PPB	97
18) 2-NITROPHENOL	13.43	661	36045	50.00	PPB	76
19) 2,4-DIMETHYLPHENOL	13.96	698	59313	50.00	PPB	92
20) BIS(2-CHLOROETHOXY)METHANE	14.43	729	103569	50.00	PPB	97
21) 2,4-DICHLOROPHENOL	14.64	743	46684	50.00	PPB	94
22) BENZOIC ACID	13.97	699	1676	50.00	PPB	100
23) 1,2,4-TRICHLOROBENZENE	14.92	768	56298	50.00	PPB	99

25)	4-CHLORDANIL LINE	15.771	814	771126	50.00	PPB	95
26)	HEXACHLORO BUTADIENE	16.08	840	30690	50.00	PPB	89
27)	4-CHLORO-3-METHYLPHENOL	17.92	963	41638	50.00	PPB	90
28)	2-METHYLNAPHTHALENE	18.05	971	134332	50.00	PPB	96
29)	HEXACHLOROCYCLOPENTADIENE	18.90	1030	29156	50.00	PPB	95
30)	2,4,6-TRICHLOROPHENOL	19.27	1056	25987	50.00	PPB	91
31)	2,4,5-TRICHLOROPHENOL	19.27	1056	25987	50.00	PPB	97
32)	2-CHLORDNAPHTHALENE	10.76	1090	01347	50.00	PPB	97
33)	2-NITRDANILINE	20.34	1131	26152	50.00	PPB	87
34)	ACENAPHTHYLENE	21.10	1184	128271	50.00	PPB	99
35)	DIMETHYL PHTHALATE	21.12	1185	76749	50.00	PPB	96
36)	2,6-DINITROTOLUENE	21.30	1198	16768	50.00	PPB	92
37)	ACENAPHTHENE	21.69	1225	82587	50.00	PPB	93
39)	2,4-DINITROPHENOL	21.96	1244	35333	50.00	PPB	100
40)	DIBENZOFURAN	22.17	1259	97470	50.00	PPB	96
41)	2,4-DINITROTOLUENE	22.43	1277	15995	50.00	PPB	61
42)	4-NITROPHENOL	22.39	1274	6185	50.00	PPB	91
43)	FLUORENE	23.18	1329	71101	50.00	PPB	97
44)	DIETHYL PHTHALATE	23.22	1332	50840	50.00	PPB	91
45)	4-NITROANILINE	23.48	1350	62229	50.00	PPB	100
46)	2-METHYL-4,6-DINITROPHENOL	23.58	1357	4578	50.00	PPB	95
47)	4-CHLORDROPHENYL PHENYL ETHER	23.25	1334	31276	50.00	PPB	97

Compound	R.T.	Scan#	Area	Conc	Units	g	
48)	DIPHENYLAMINE	23.25	1334	2480	50.00	PPB	100
49)	1,2-DIPHENYLHYDRAZINE	23.60	1365	211157	50.00	PPB	91
50)	4-BROMOPHENYLPHENYL ETHER	24.59	1428	17218	50.00	PPB	91
51)	HEXACHLOROBENZENE	24.92	1451	19986	50.00	PPB	87
52)	PENTACHLOROPHENOL	25.46	1489	5040	50.00	PPB	92
53)	PHENANTHRENE	25.81	1513	58913	50.00	PPB	98
54)	ANTHRACENE	25.81	1513	58913	50.00	PPB	93
55)	DI-N-BUTYL PHTHALATE	27.57	1636	46429	50.00	PPB	98
56)	FLUORANTHENE	28.95	1733	28167	50.00	PPB	99
57)	PYRENE	28.95	1733	28167	50.00	PPB	99
58)	*D12-PERYLENE	39.55	2474	8016	50.00	PPB	99
59)	BUTYL BENZYL PHTHALATE	31.39	1904	8697	50.00	PPB	100
60)	BENZD(A)ANTHRACENE	32.85	2006	15537	50.00	PPB	97
61)	CHRYSENE	32.85	2006	15537	50.00	PPB	05
62)	BIS(2-ETHYLHEXYL)PHTHALATE	33.27	2035	11001	50.00	PPB	98
64)	BENZD(B)FLUORANTHENE	37.39	2323	9864	50.00	PPB	86
65)	BENZD(K)FLUORANTHENE	37.39	2323	9864	50.00	PPB	86
66)	BENZD(A)PYRENE	39.18	2448	14163	50.00	PPB	69
68)	DIBENZD(A,H)ANTHRACENE	48.32	3088	7649	50.00	PPB	97

\* Compound is ISTD

None = 3M

QUANT REPORT

Operator ID: AL  
 Quant Rev: 4  
 Output File: ALS365::AQ  
 Data File: >LS365::D4  
 Name: SF-3453 96RA01514  
 Misc: 0-11-86 2420,1:100  
 Quant Time: 860912 13:25  
 Injected at: 860912 06:04  
 Dilution Factor: 1.00

BTL#15

ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	g
----------	------	-------	------	------	-------	---



Operator ID: AL  
 Output File: ^LS369::AQ  
 Data File: >LS369::D5  
 Name: SF-3453 86RA01S48  
 Misc: 9-11-86 2420,1:100

Quant Rev: 4 Quant Time: 860912 13:38  
 Injected at: 860912 10:58  
 Dilution Factor: 1.00

BTL#19

ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,1-DICHLOROBENZENE	9.34	409	36036	50.60	PPB	96
<del>3) PHENOL</del>	<del>8.44</del>	<del>346</del>	<del>3706</del>	<del>4.44</del>	<del>PPB</del>	<del>100</del>
14) N-NITROSODIPROPYL AMINE	11.94	591	26819	49.54	PPB	60
15) *D10-PHENANTHRENE	25.69	1554	33610	50.10	PPB	96
<del>19) FLUORENE</del>	<del>23.91</del>	<del>1429</del>	<del>4970</del>	<del>5.35</del>	<del>PPB</del>	<del>83</del>
<del>40) DIPHENYLAMINE</del>	<del>23.91</del>	<del>1429</del>	<del>1898</del>	<del>58.53</del>	<del>PPB</del>	<del>100</del>
58) *D12-PERYLENE	39.37	2512	3231	50.90	PPB	79
62) BIS(2-ETHYLHEXYL)PHTHALATE	33.20	2080	24672	279.24	PPB	98

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS370::AQ  
 Data File: >LS370::D5  
 Name: SF-3453 86RA01D48  
 Misc: 9-11-86 2420,1:100

Quant Rev: 4 Quant Time: 860912 13:51  
 Injected at: 860912 12:11  
 Dilution Factor: 1.00

BTL#20

ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,1-DICHLOROBENZENE	9.31	406	34502	50.60	PPB	98
<del>3) PHENOL</del>	<del>8.43</del>	<del>344</del>	<del>1935</del>	<del>4.44</del>	<del>PPB</del>	<del>100</del>
14) N-NITROSODIPROPYL AMINE	11.91	588	19549	49.54	PPB	60
15) *D10-PHENANTHRENE	25.69	1553	28179	50.10	PPB	95
<del>19) FLUORENE</del>	<del>23.91</del>	<del>1428</del>	<del>4257</del>	<del>5.48</del>	<del>PPB</del>	<del>72</del>
<del>40) DIPHENYLAMINE</del>	<del>23.91</del>	<del>1428</del>	<del>1957</del>	<del>74.97</del>	<del>PPB</del>	<del>100</del>
58) *D12-PERYLENE	39.37	2511	5058	50.90	PPB	90
62) BIS(2-ETHYLHEXYL)PHTHALATE	33.20	2079	9304	67.27	PPB	94

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS371::AQ  
 Data File: >LS371::D5  
 Name: SF-3453 86RA01549  
 Misc: 9-11-86 2420,1:100

Quant Rev: 4      Quant Time: 860915 10:41  
 Injected at: 860912 13:25  
 Dilution Factor: 1.00

BTL#21

ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLOROBENZENE	9.35	409	39040	50.60	PPB	92
<del>3) PHENOL</del>	<del>8.45</del>	<del>346</del>	<del>3265</del>	<del>1.08</del>	<del>PPB</del>	<del>100</del>
<del>14) N-NITROBIS(2-PROPYL)AMINE</del>	<del>11.95</del>	<del>591</del>	<del>22505</del>	<del>18.85</del>	<del>PPB</del>	<del>61</del>
15) *D10-PHENANTHRENE	25.72	1555	17852	50.10	PPB	98
<del>13) FLUORENE</del>	<del>23.92</del>	<del>1429</del>	<del>2323</del>	<del>1.79</del>	<del>PPB</del>	<del>82</del>
<del>48) DIPHENYLAMINE</del>	<del>23.93</del>	<del>1430</del>	<del>1092</del>	<del>68.39</del>	<del>PPB</del>	<del>100</del>
<del>62) BIS(2-ETHYLHEXYL)PHTHALATE</del>	<del>33.23</del>	<del>2081</del>	<del>5924</del>	<del>5924.00</del>	<del>COUNTS</del>	<del>92</del>

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS372::AQ  
 Data File: >LS372::D5  
 Name: SF-3453 86RA01553  
 Misc: 9-11-86 2420,1:100

Quant Rev: 4      Quant Time: 860915 10:46  
 Injected at: 860912 14:38  
 Dilution Factor: 1.00

BTL#22

ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLOROBENZENE	9.32	404	28399	50.60	PPB	97
3) PHENOL	8.53	349	496698	347.56	PPB	✓ 100
13) 4-METHYL PHENOL	11.65	567	568666	506.08	PPB	✓ 94
15) *D10-PHENANTHRENE	25.68	1548	14870	50.10	PPB	95
22) BENZOIC ACID	14.61	774	2829	25.79	PPB	✓ 100
<del>13) FLUORENE</del>	<del>23.89</del>	<del>1423</del>	<del>1761</del>	<del>1.48</del>	<del>PPB</del>	<del>75</del>
<del>62) BIS(2-ETHYLHEXYL)PHTHALATE</del>	<del>33.20</del>	<del>2074</del>	<del>5267</del>	<del>5267.00</del>	<del>COUNTS</del>	<del>96</del>

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS373::AQ  
 Data File: >LS373::D5  
 Name: SF-3453 86RA01553  
 Misc: 9-11-86 2420,1:100

Quant Rev: 4      Quant Time: 860915 10:51  
 Injected at: 860912 15:52  
 Dilution Factor: 1.00

BTL#23



ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLOROBENZENE	9.29	405	27643	50.60	PPB	97
<del>3) PHENOL</del>	8.40	343	1139	<del>1.82</del>	<del>PPB</del>	100
<del>14) N-NITROSDIPROPYL AMINE</del>	11.87	586	<del>15451</del>	<del>19.25</del>	<del>PPB</del>	62
15) *D10-PHENANTHRENE	25.68	1553	25442	50.10	PPB	98
<del>20) BIS(2-CHLOROETHOXY)METHANE</del>	15.34	829	960	<del>.94</del>	<del>PPB</del>	75
<del>43) FLUORENE</del>	23.90	1428	3261	<del>1.63</del>	<del>PPB</del>	92
<del>40) DIBENZYLAMINE</del>	23.90	1428	1305	<del>53.16</del>	<del>PPB</del>	100
<del>62) BIS(2-ETHYLHEXYL)PHTHALATE</del>	33.19	2079	3633	<del>3633.00</del>	<del>COUNTS</del>	90

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS374::AQ  
 Data File: >LS374::D5  
 Name: SF-3453 86RA01S44MS  
 Misc: 9-11-86 1000,1:50

Quant Rev: 1 Quant Time: 860915 10:59  
 Injected at: 860912 17:05  
 Dilution Factor: 1.00

BTL#24

ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860912 12:05

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLOROBENZENE	9.31	407	28492	50.60	PPB	96
3) PHENOL	8.41	344	16883	11.78	PPB	100
5) 2-CHLOROPHENOL	8.66	361	10639	34.80	PPB	94
6) 1,3-DICHLOROBENZENE	9.37	411	12319	11.82	PPB	92
7) 1,4-DICHLOROBENZENE	9.37	411	12319	11.82	PPB	90
9) BENZYL ALCOHOL	10.16	466	912	2.36	PPB	68
<del>14) N-NITROSDIPROPYL AMINE</del>	11.47	558	20192	<del>24.40</del>	<del>PPB</del>	95
15) *D10-PHENANTHRENE	25.60	1554	26524	50.10	PPB	96
23) 1,2,4-TRICHLOROBENZENE	14.88	797	9311	16.03	PPB	97
25) 4-CHLOROANILINE	15.68	853	16911	23.04	PPB	97
27) 4-CHLORO-3-METHYLPHENOL	17.93	1010	4588	10.68	PPB	71
37) ACENAPHTHENE	21.62	1269	13255	15.55	PPB	86
40) DIBENZOFURAN	22.11	1303	22968	22.83	PPB	97
41) 2,4-DINITROTOLUENE	22.37	1321	9075	54.98	PPB	57
<del>43) FLUORENE</del>	23.88	1427	970	<del>1.32</del>	<del>PPB</del>	93
52) PENTACHLOROPHENOL	25.41	1534	2933	56.39	PPB	88
55) DI-N-BUTYLPHthalate	27.51	1681	16315	34.05	PPB	97
56) FLUORANTHENE	29.46	1818	8206	28.23	PPB	94
57) PYRENE	29.46	1818	8206	28.23	PPB	97
<del>62) BIS(2-ETHYLHEXYL)PHTHALATE</del>	33.20	2080	2110	<del>2110.00</del>	<del>COUNTS</del>	97

\* Compound is ISTD

QUANT REPORT

Operator ID: AL  
 Output File: ^LS375::AQ  
 Data File: >LS375::D5  
 Name: SF-3453 86RA01S44MSD

Quant Rev: 1 Quant Time: 860915 11:03  
 Injected at: 860912 18:18  
 Dilution Factor: 1.00



QUANT REPORT

Operator ID: AL  
 Output File: ^LS368::AQ  
 Data File: >LS368::D2  
 Name: SF-3453 86RA01S47  
 Misc: 0-11-86 2420,1:100

Quant Rev: 4      Quant Time: 860918 11:38  
 Injected at: 860912 00:44  
 Dilution Factor: 1.00

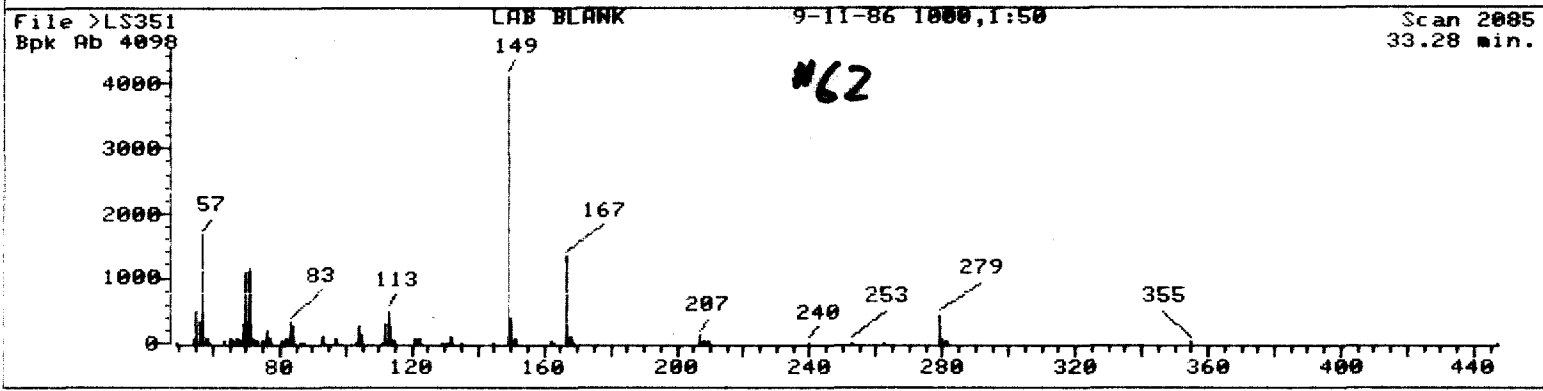
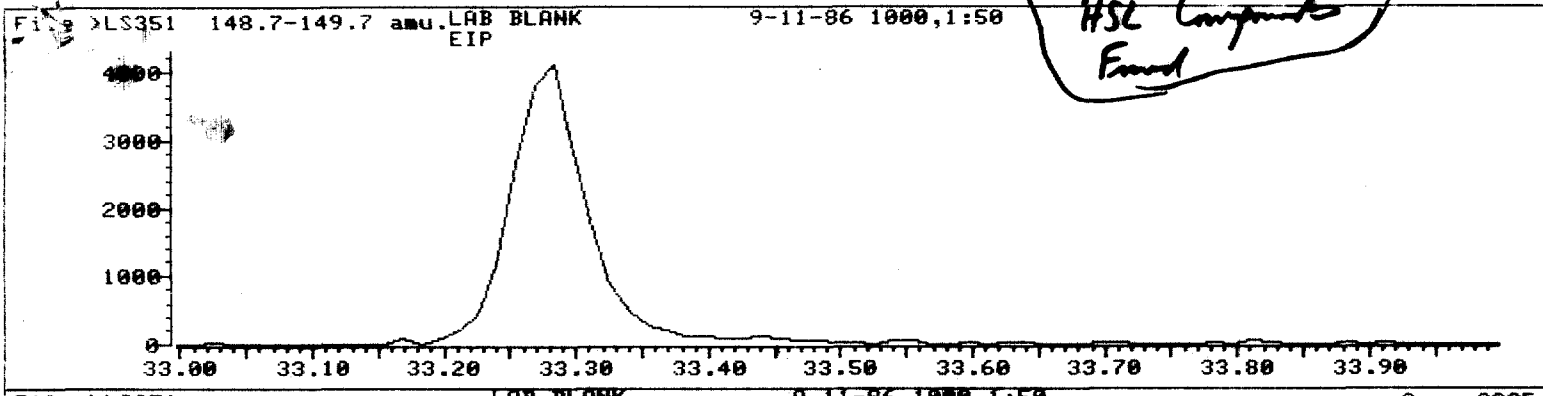
BTL#18

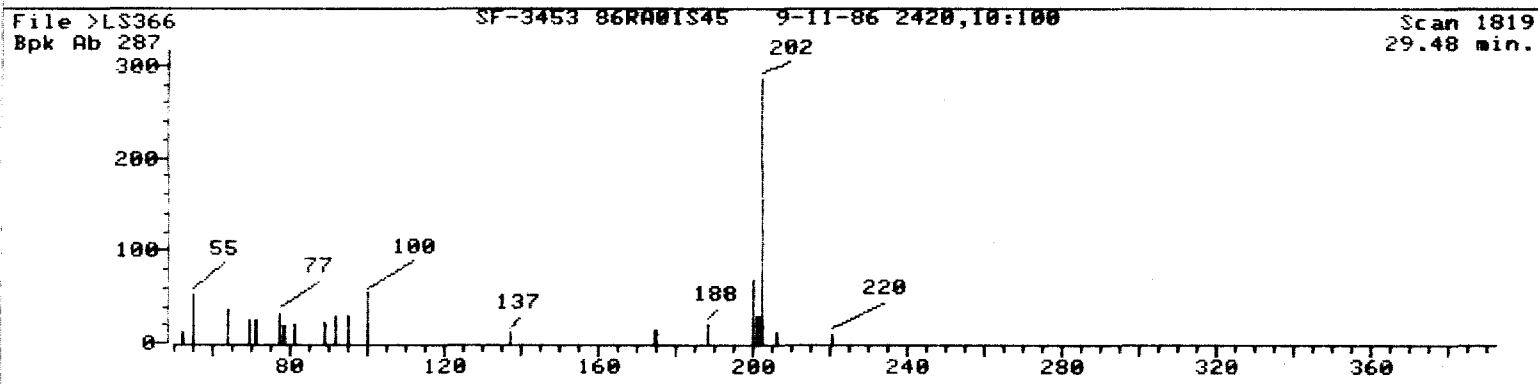
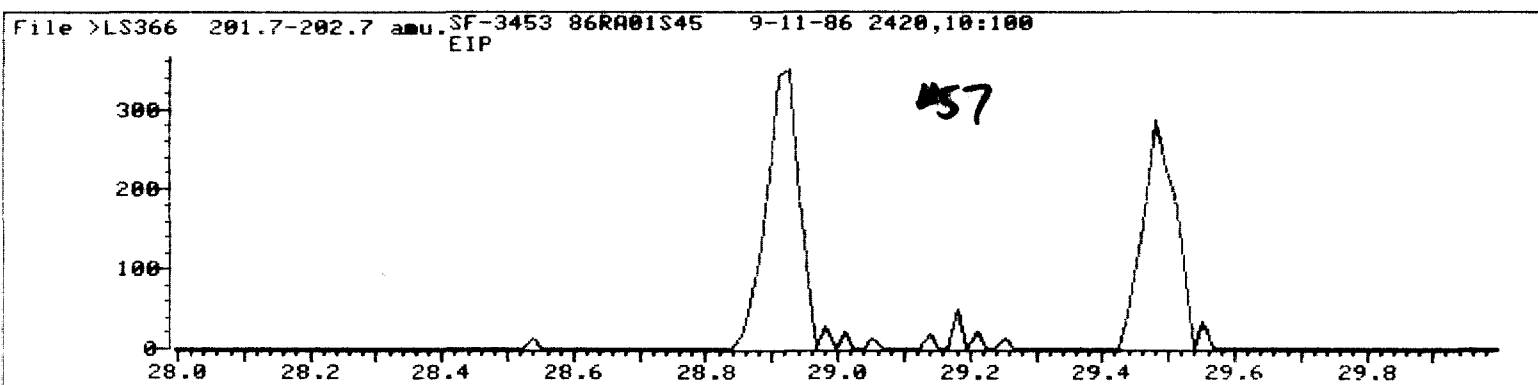
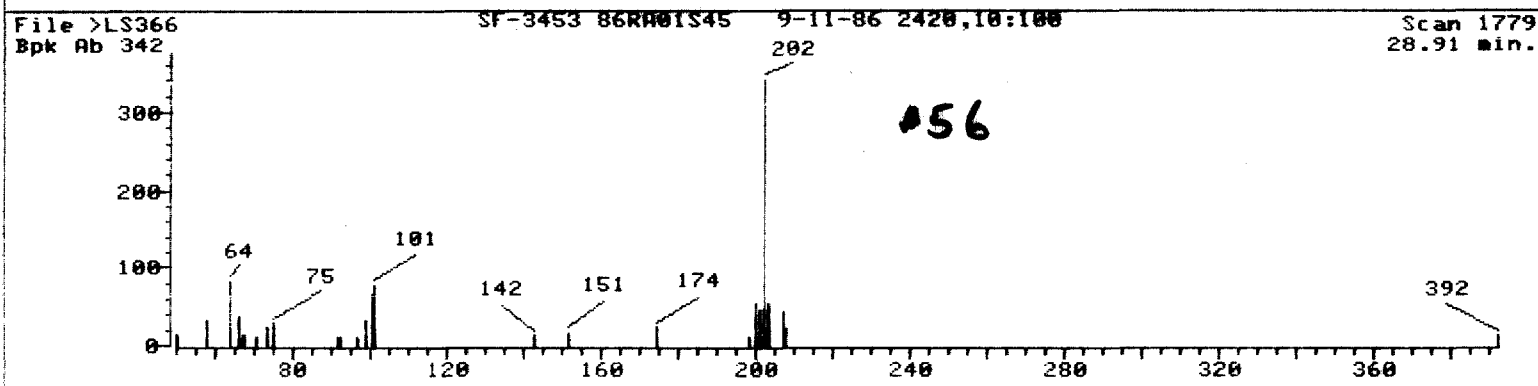
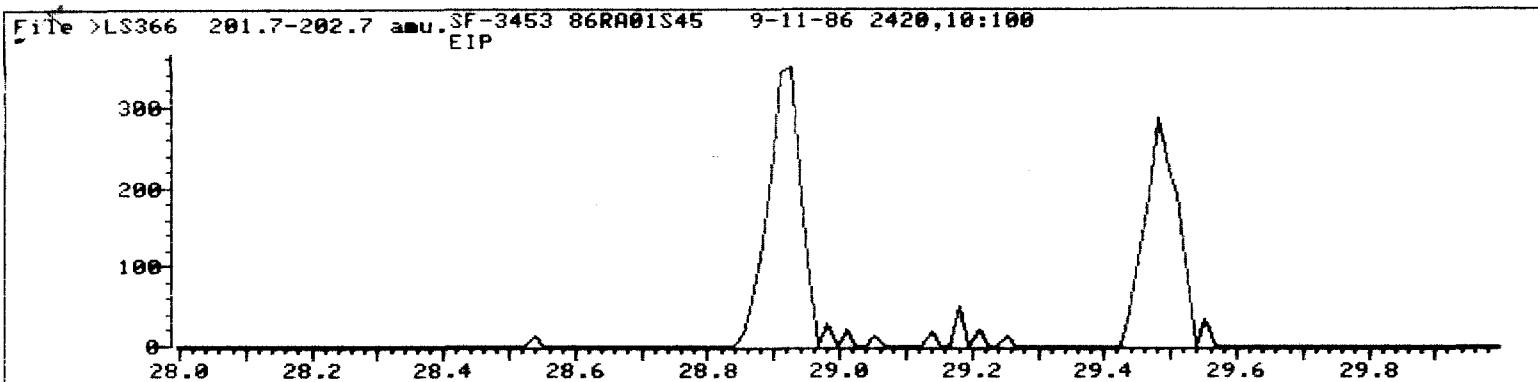
ID File: QASK11::SK  
 Title: COPY FROM QASK2: T2 IS 280  
 Last Calibration: 860918 11:32

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *D4-1,4-DICHLOROBENZENE	0.31	406	33857	50.60	PPB	95
<del>9) PHENOL</del>	8.43	344	1361	<del>0.80</del>	<del>PPB</del>	100
<del>14) N-NITROSODIPROPYL AMINE</del>	11.92	588	20141	<del>20.40</del>	<del>PPB</del>	60
15) *D10-PHENANTHRENE	25.60	1552	42664	50.10	PPB	97
<del>12) FLUORENE</del>	23.92	1428	4869	<del>1.10</del>	<del>PPB</del>	91
<del>40) DIPHENYLAMINE</del>	23.92	1428	2072	<del>50.00</del>	<del>PPB</del>	100
58) *D12-PERYLENE	30.41	2513	13503	50.00	PPB	95
<del>62) BISK2 ETHYLHEXYL PHTHALATE</del>	33.21	2079	52539	<del>112.20</del>	<del>PPB</del>	94

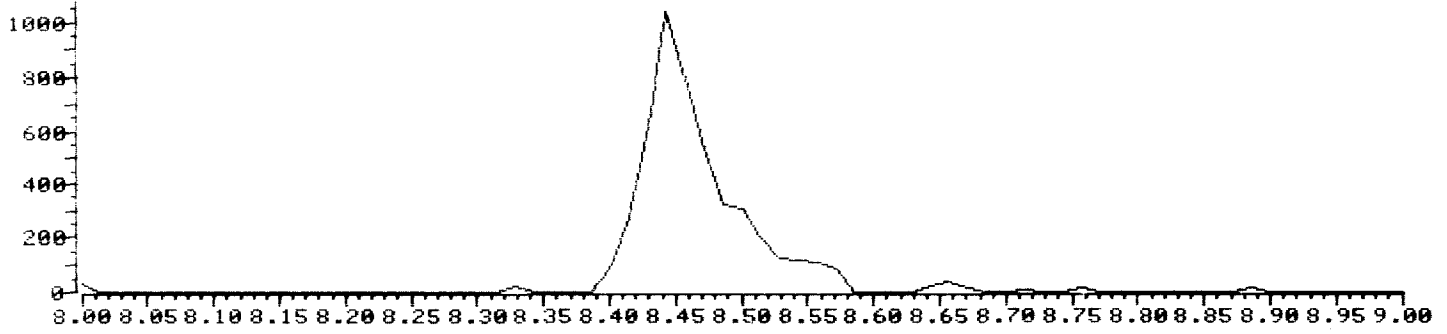
\* Compound is ISTD

Typical spectra of  
HSL Compounds  
Found





File >LS369 93.7-94.7 au. SF-3453 86RA01S48 9-11-86 2420,1:100  
EIP

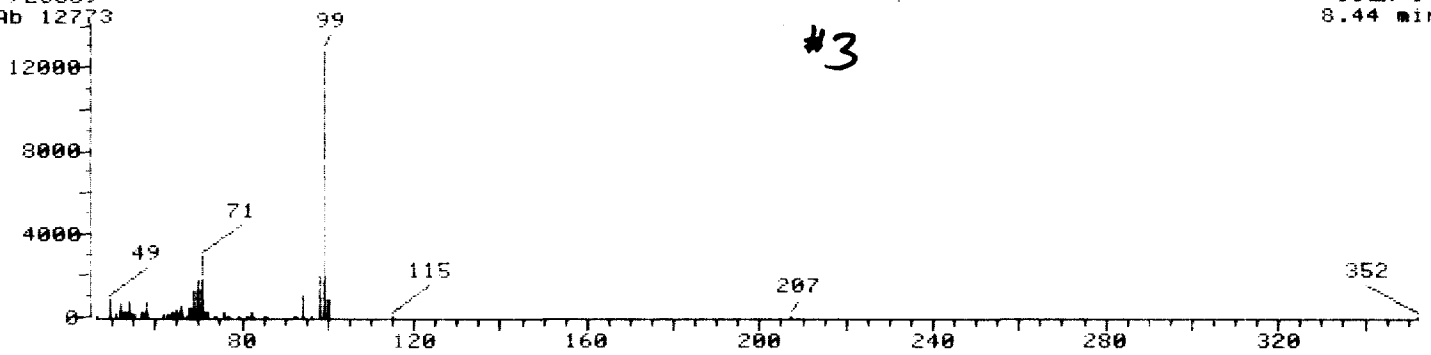


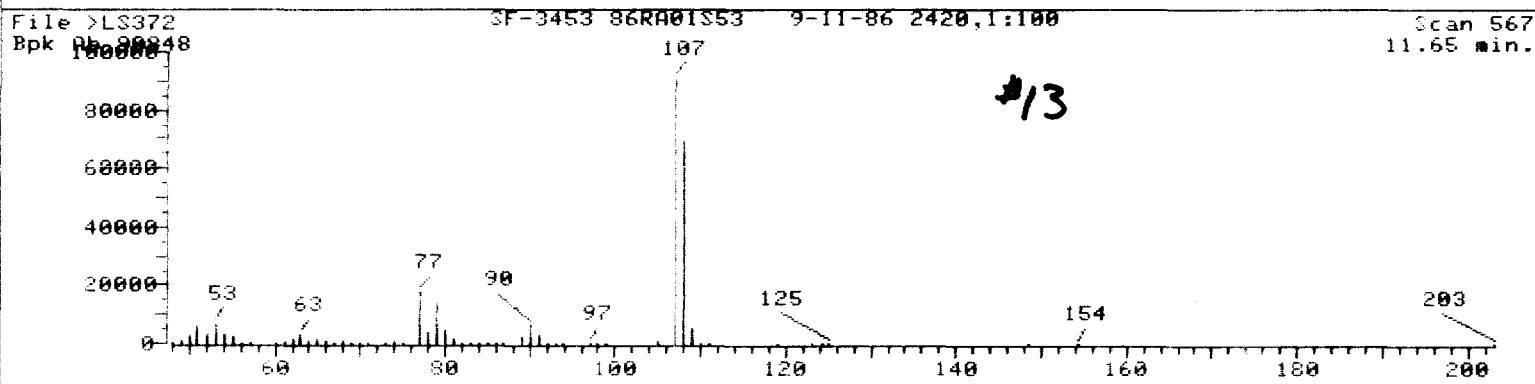
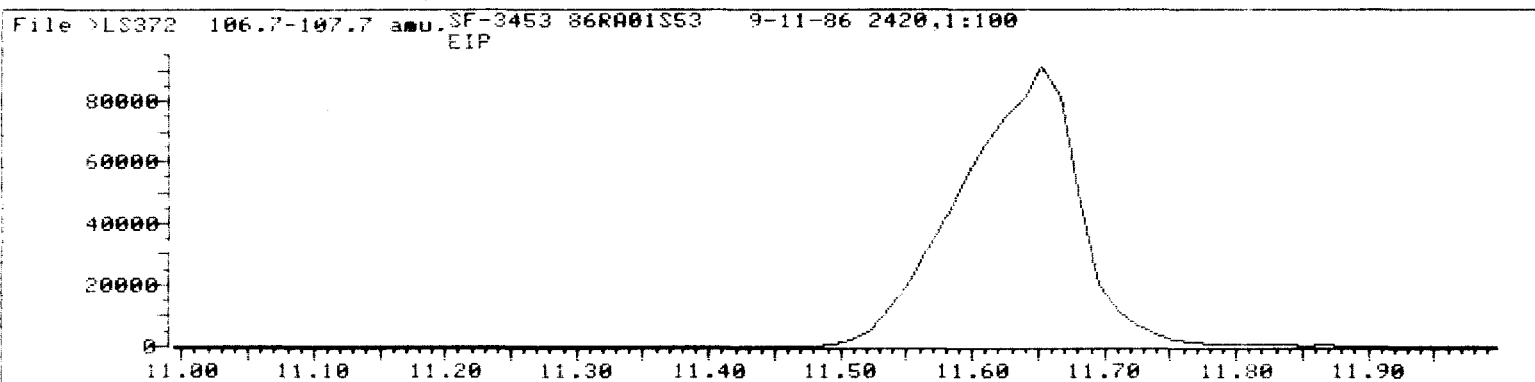
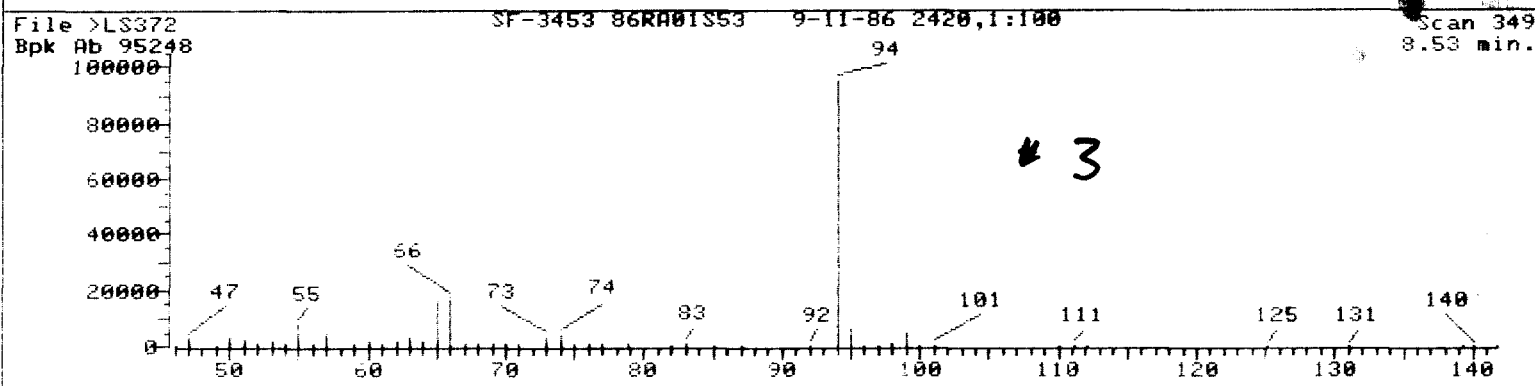
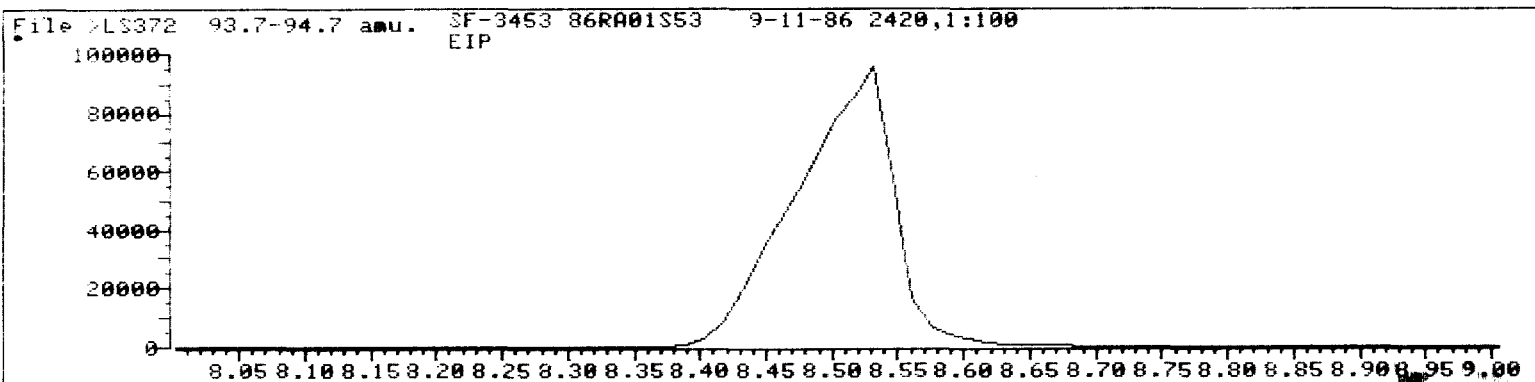
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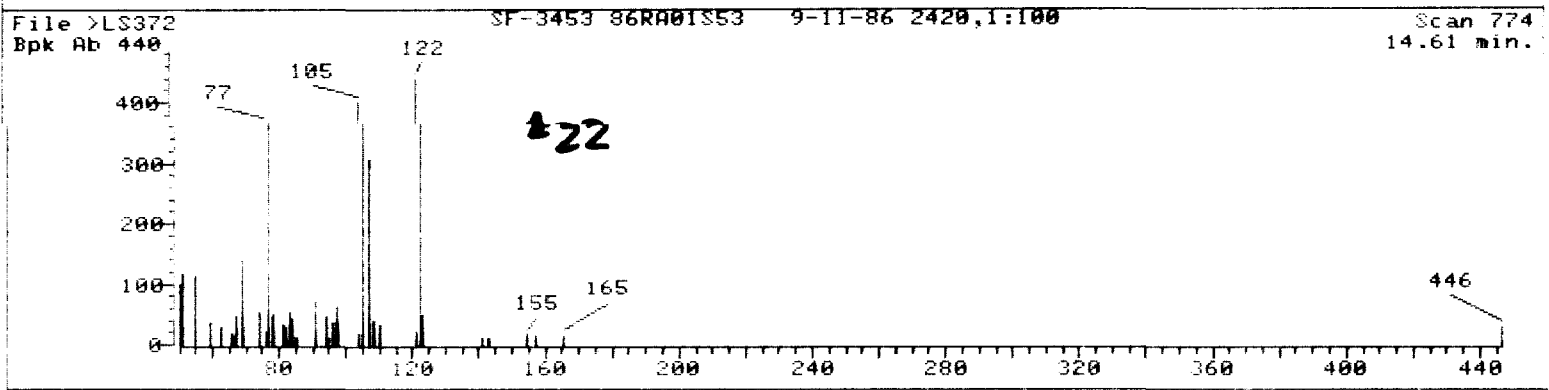
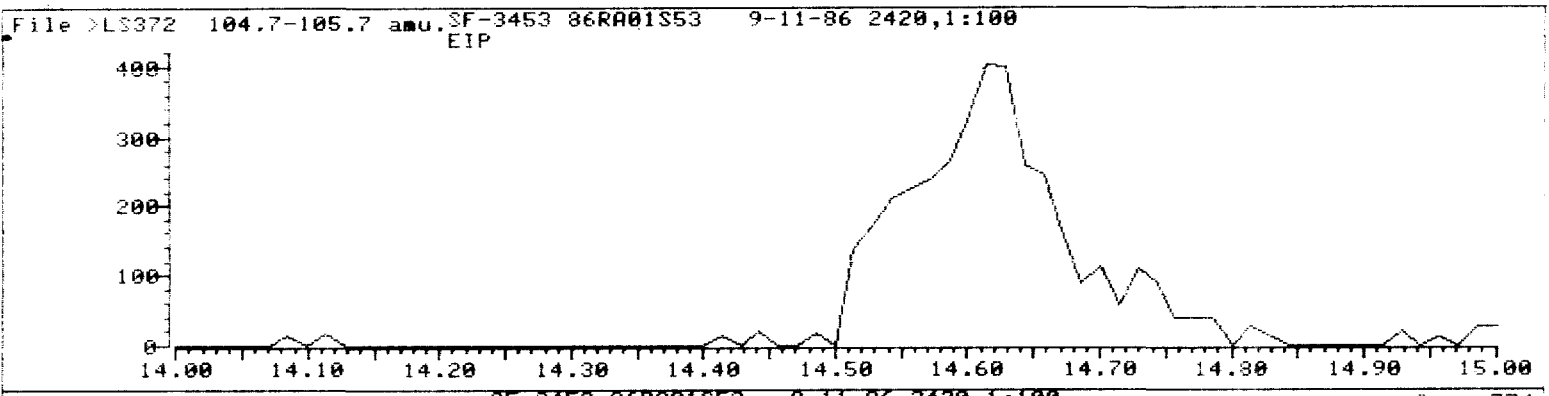
Scan 346  
8.44 min.

Bpk Ab 12773

#3









INT

>LS353 TOXSTD 50PPM 9-11-86  
201.71 202.7 EIP

12570 = 51404

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	28.951	1727	1733	1742	7892	28167	28167	100.00	50.883
2	29.523	1767	1773	1785	7261	27189	27189	96.53	49.117

Sum of corrected areas: 55356.

:AL,,1

INT

>LS353 TOXSTD 50PPM 9-11-86  
93.71 94.7 EIP

12570 = 45648

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.443	321	330	338	27704	114855	114855	100.00	100.000

Sum of corrected areas: 114855.

:AL,,1

IUNT  
FMGR 067  
:INT

>LS353 TOXSTD 50PPM 9-11-86  
106.71 107.7 EIP

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	11.539	527	533	550	22624	91731	90309	100.00	100.000

Sum of corrected areas: 90309.

:AL,,1

LS353-51404

>LS353 TOXSTD 50PPM 9-11-86  
104.71 105.7 EIP

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	14.580	732	739	740	275	1442	1058	53.64	20.004
2	14.666	740	745	747	321	3368	1507	76.41	28.493
3	14.795	747	754	755	472	5854	1972	99.99	37.285
4	15.304	785	787	793	87	488	488	24.74	9.227
5	15.612	803	807	810	76	264	264	13.39	4.991

0.883

4537

Sum of corrected areas: 5289.

:AL..1

INT

INST = 23097

>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
201.71 202.7 EIP

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	28.924	1774	1780	1783	349	1215	1215	99.99	55.227
2	29.481	1815	1819	1823	287	985	985	81.06	44.773

Sum of corrected areas: 2200.

:AL,,1

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
93.71 94.7 EIP

INST = 28397

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.532	337	349	366	95248	496698	496698	100.00	100.000

Sum of corrected areas: 496698.

:AL,,1

INT

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
106.71 107.7 EIP

WAITING FOR INPUT  
:INT

125702 14870

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
104.71 105.7 EIP

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	14.614	766	774	781	401	2829	2829	100.00	93.274
2	14.728	781	782	784	110	204	204	7.21	6.726

Sum of corrected areas: 3033.

:AL,,1

108

No peaks found.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
230.71 231.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.711	84	85	86	10	8	8	37.27	14.286
2	4.740	86	87	88	10	8	8	37.27	14.286
3	19.526	1121	1122	1124	14	21	21	97.83	37.500
4	32.604	2037	2038	2039	10	8	8	37.27	14.286
5	32.632	2039	2040	2041	13	11	11	51.25	19.643

Sum of corrected areas: 56.

No peaks found.

>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
228.71 229.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.714	364	365	367	11	18	18	37.43	12.000
2	32.810	2050	2052	2053	29	48	48	99.81	32.000
3	32.867	2055	2056	2057	25	21	21	43.67	14.000
4	32.968	2062	2063	2064	51	43	43	89.41	28.667
5	32.996	2064	2065	2067	12	20	20	41.59	13.333

Sum of corrected areas: 150.

>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
230.71 231.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.683	81	83	84	15	23	23	89.35	19.492
2	4.926	99	100	102	16	25	25	97.12	21.186
3	13.685	711	713	714	14	22	22	85.47	18.644
4	45.015	2905	2906	2908	16	24	24	93.24	20.339
5	45.430	2934	2935	2936	28	24	24	93.24	20.339

Sum of corrected areas: 118.

No peaks found.

>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
228.71 229.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.169	1376	1377	1379	17	28	28	98.89	100.000

Sum of corrected areas: 28.

No peaks found.

No peaks found.

No peaks found.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
230.71 231.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.055	107	108	109	14	12	12	16.61	7.792
2	5.084	109	110	111	16	13	13	18.00	8.442
3	29.956	1849	1851	1852	14	22	22	30.45	14.285
4	32.827	2051	2052	2055	32	72	72	99.67	46.753
5	32.885	2055	2056	2057	41	35	35	48.45	22.727

Sum of corrected areas: 154.

No peaks found.



>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
228.71 229.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.152	1374	1376	1378	41	87	87	99.27	100.000

Sum of corrected areas: 87.

No peaks found.

No peaks found.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
228.71 229.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	9.370	408	410	411	15	21	21	31.76	24.138
2	23.135	1372	1374	1376	29	66	66	99.81	75.862

Sum of corrected areas: 87.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
230.71 231.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	18.010	1014	1015	1016	11	9	9	95.47	100.000

Sum of corrected areas: 9.

No peaks found.

>LS371 SF-3453 86RA01S49 9-11-86 2420,1:100  
228.71 229.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.147	1374	1375	1376	18	15	15	79.37	45.455
2	23.175	1376	1377	1378	22	18	18	95.25	54.545

Sum of corrected areas: 33.

No peaks found.

No peaks found.

No peaks found.

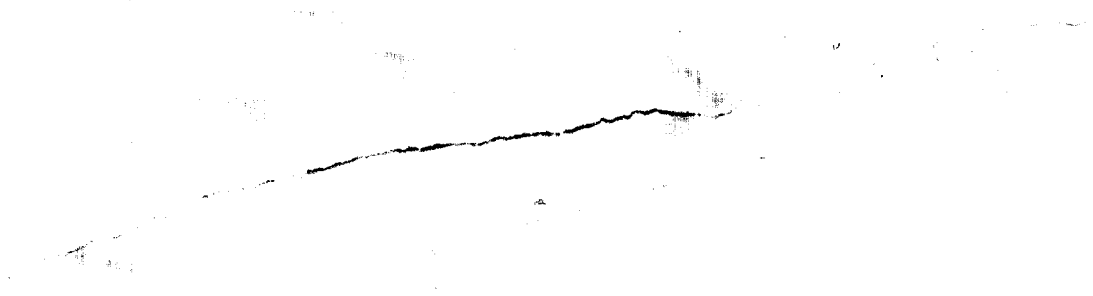
No peaks found.

No peaks found.

No peaks found.

No peaks found.

No peaks found.



No peaks found.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
300.71 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.881	1426	1427	1431	90	257	257	99.80	100.000

Sum of corrected areas: 257.

>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.754	85	88	91	128	394	394	99.89	56.286
2	15.056	807	809	812	30	77	77	19.52	11.000
3	16.799	930	931	933	68	66	66	16.73	9.429
4	19.512	1119	1121	1122	59	89	89	22.56	12.714
5	21.568	1264	1265	1267	48	74	74	18.76	10.571

Sum of corrected areas: 700.

No peaks found.

No peaks found.

>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.755	86	88	90	89	165	165	88.21	27.005
2	28.895	1777	1778	1780	79	187	187	99.98	30.606
3	28.938	1780	1781	1782	84	72	72	38.49	11.784
4	29.467	1817	1818	1819	72	61	61	32.61	9.984
5	29.495	1819	1820	1823	81	126	126	67.36	20.622

Sum of corrected areas: 611.

No peaks found.

>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
300.71 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.912	1425	1429	1433	660	2094	2094	99.99	100.000

Sum of corrected areas: 2094.

>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.740	85	87	94	398	1239	1239	99.96	44.077
2	8.372	337	341	344	167	545	545	43.97	19.388
3	9.315	405	407	408	38	64	64	5.16	2.277
4	19.528	1118	1122	1125	328	963	963	77.69	34.258

Sum of corrected areas: 2811.



>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
271.71 272.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	37.242	2360	2361	2362	12	10	10	97.25	55.556
2	37.271	2362	2363	2364	10	8	8	77.80	44.444

Sum of corrected areas: 18.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
300.74 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.917	1422	1428	1429	504	1615	1615	99.98	100.000

Sum of corrected areas: 1615.

>LS368 SF-3453 86RA01S47 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.741	83	86	92	415	1174	1174	99.92	41.455
2	4.855	92	94	95	51	83	83	7.06	2.931
3	8.400	337	342	346	154	563	563	47.92	19.880
4	19.505	1115	1119	1123	347	1012	1012	86.13	35.734

Sum of corrected areas: 2832.

No peaks found.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
300.71 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.909	1424	1429	1433	585	1883	1883	99.98	100.000

Sum of corrected areas: 1883.

>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.741	84	87	92	497	1328	1328	99.94	44.895
2	4.826	92	93	97	46	79	79	5.94	2.671
3	8.414	340	344	346	181	504	504	37.93	17.039
4	19.526	1118	1122	1125	415	1047	1047	78.79	35.396

Sum of corrected areas: 2958.

No peaks found.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
300.71 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.892	1423	1427	1431	495	1662	1662	99.99	100.000

Sum of corrected areas: 1662.

>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.725	83	85	90	186	606	606	84.95	29.794
2	8.384	337	341	345	169	575	575	80.61	28.269
3	9.298	404	405	407	47	74	74	10.37	3.638
4	15.011	804	805	808	31	66	66	9.25	3.245
5	19.509	1116	1120	1122	308	713	713	99.95	35.054

Sum of corrected areas: 2034.

No peaks found.

>LS371 SF-3453 86RA01S49 9-11-86 2420,1:100  
300.71 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.918	1425	1429	1431	330	783	783	99.89	95.255
2	23.961	1431	1432	1433	46	39	39	4.98	4.745

Sum of corrected areas: 822.

>LS371 SF-3453 86RA01S49 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.745	84	87	93	1023	2581	2581	99.99	70.423
2	8.419	342	344	345	110	187	187	7.24	5.102
3	19.533	1119	1122	1127	331	897	897	34.75	24.475

Sum of corrected areas: 3665.

No peaks found.

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
300.71 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.892	1419	1423	1426	228	669	669	99.94	100.000

Sum of corrected areas: 669.

>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	6.056	173	176	182	97	367	367	62.72	15.336
2	8.331	332	335	337	157	552	552	94.33	23.067
3	8.489	344	346	347	275	397	397	67.85	16.590
4	8.517	347	348	351	191	492	492	84.08	20.560
5	19.490	1113	1115	1118	207	585	585	99.97	24.446

Sum of corrected areas: 2393.

No peaks found.

>LS373 SF-3453 86RA01R53 9-11-86 2420,1:100  
300.71 301.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.883	1423	1427	1428	385	763	763	99.93	76.300
2	23.911	1428	1429	1433	163	237	237	31.04	23.700

Sum of corrected areas: 1000.

>LS373 SF-3453 86RA01R53 9-11-86 2420,1:100  
100.71 101.7

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.313	336	337	339	42	67	67	15.58	8.690
2	8.385	339	342	343	57	127	127	29.53	16.472
3	9.314	405	407	408	51	65	65	15.11	8.431
4	19.498	1117	1120	1121	196	430	430	99.97	55.772
5	19.527	1121	1122	1124	80	82	82	19.06	10.636

Sum of corrected areas: 771.

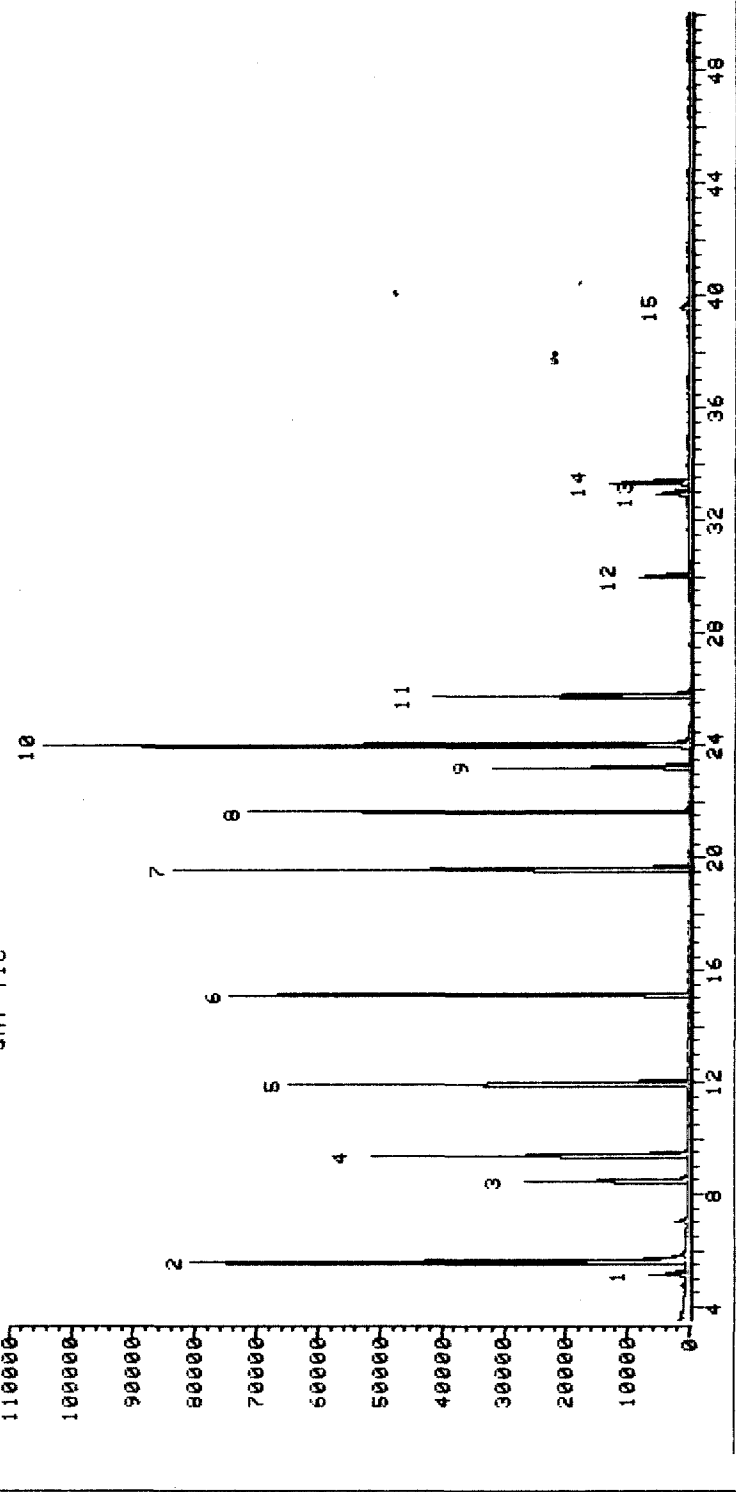
>LS351 LAB BLANK  
45.01 450.0 SMT TIC

9-11-86 1000,1:50

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.130	108	<del>114</del>	127	6147	37645	27406	6.67	1.011
2	5.516	135	<del>141</del>	163	79894	382103	363763	88.48	13.419
3	8.404	336	343	361	26434	143524	135481	32.96	4.998
4	9.333	400	408	421	51118	219762	215526	52.43	7.951
5	11.904	578	588	603	64830	297809	294550	71.65	10.866
6	15.075	801	810	821	74220	314467	311190	75.70	11.480
7	19.545	1116	1123	1131	83401	288375	286056	69.58	10.553
8	21.587	1259	1266	1276	71156	266997	264940	64.45	9.774
9	23.200	1373	<del>1379</del>	1384	31938	107325	105947	25.77	3.908
10	23.943	1422	1431	1454	104598	413603	411102	100.00	15.166
11	25.743	1550	<del>1557</del>	1573	41448	166469	163923	39.87	6.047
12	29.997	1846	<del>1855</del>	1866	8338	35573	32587	7.93	1.202
13	32.911	2051	2059	2069	5311	36249	29497	7.18	1.088
14	33.283	2074	2085	2100	12910	67697	58108	14.13	2.144
15	39.540	2512	2523	2533	1229	20773	10649	2.59	.393

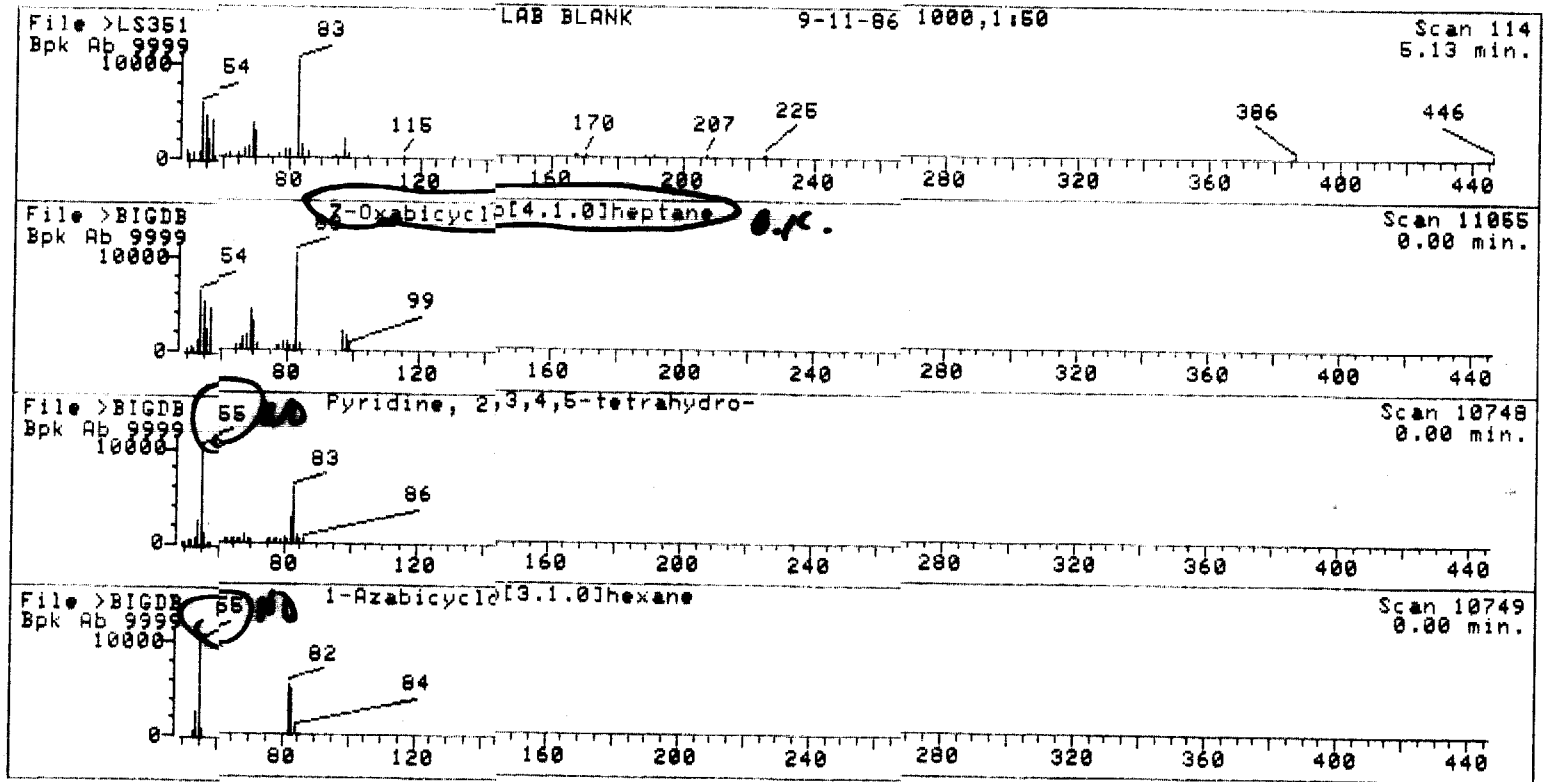
Sum of corrected areas: 2710725.

File >LS351 45.0-450.0 amu. LAB BLANK 9-11-86 1000,1.150

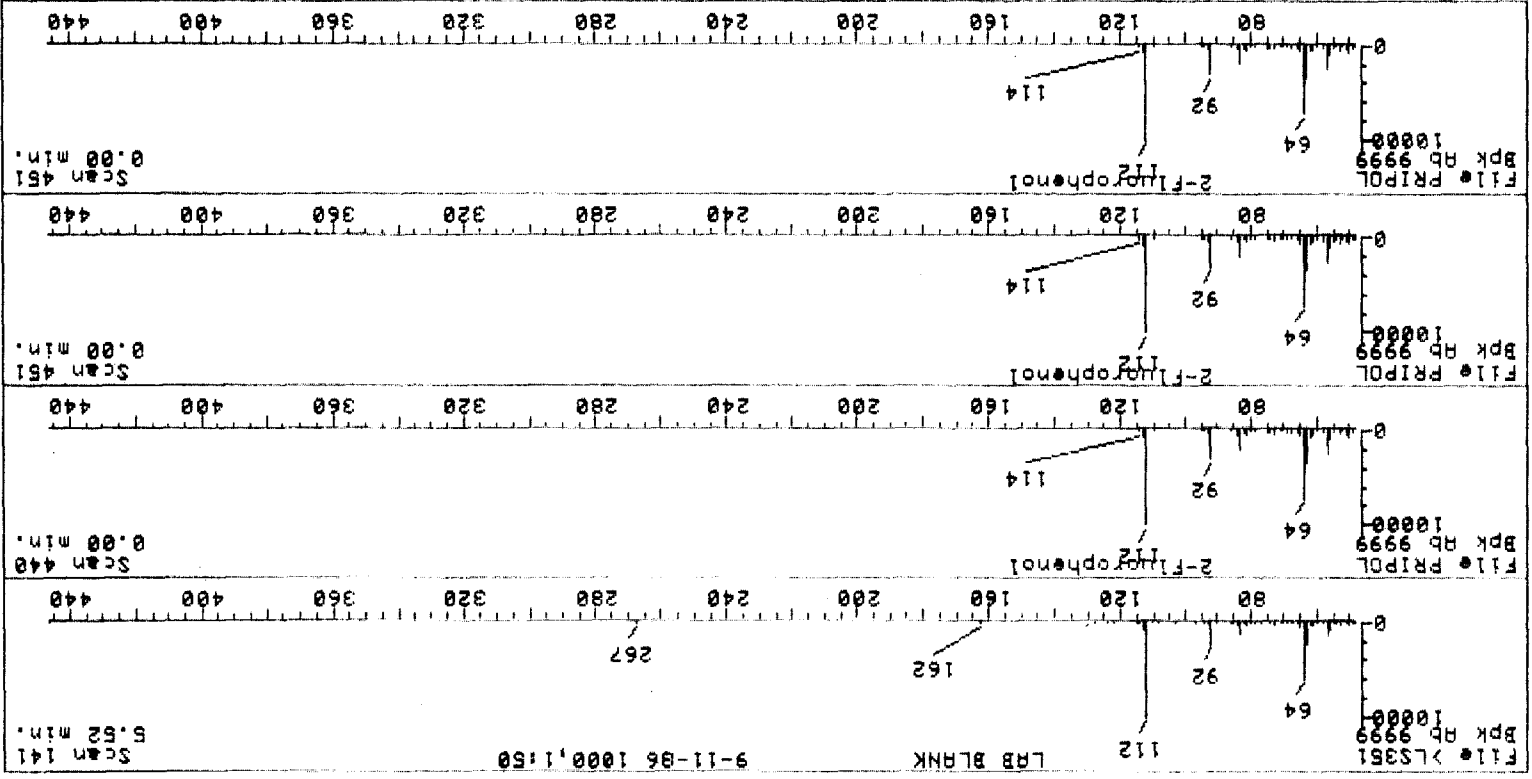




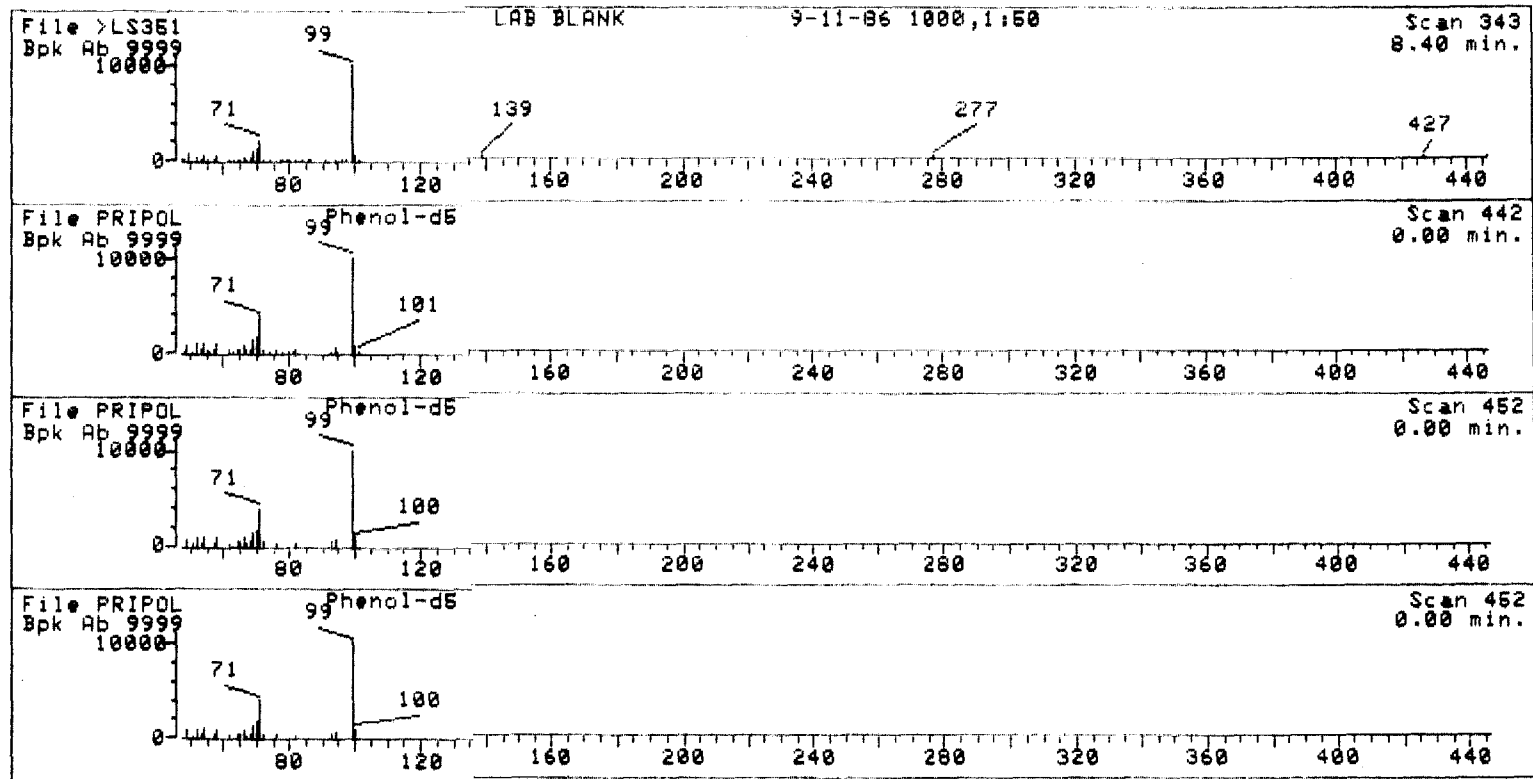
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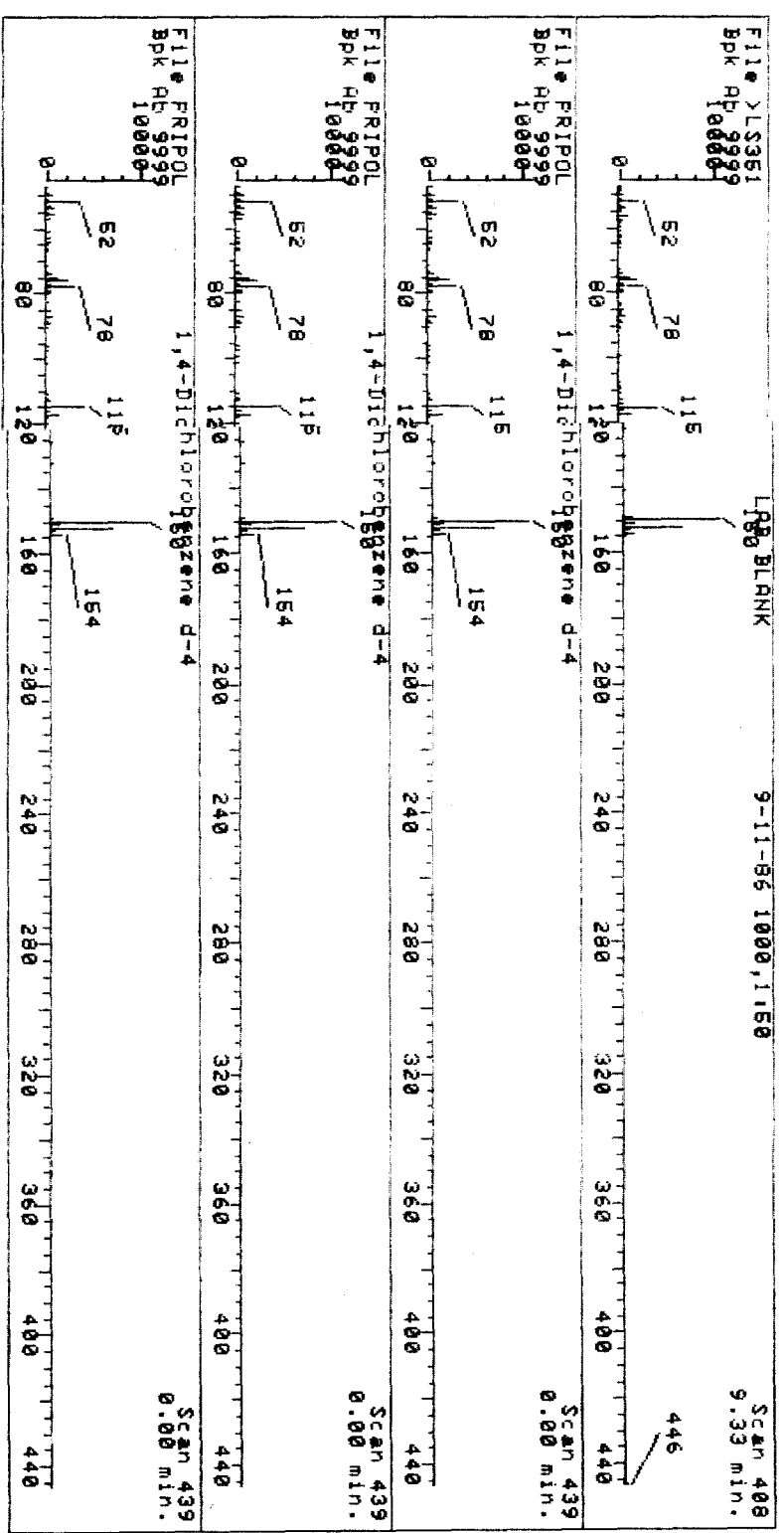
*Handwritten signature*



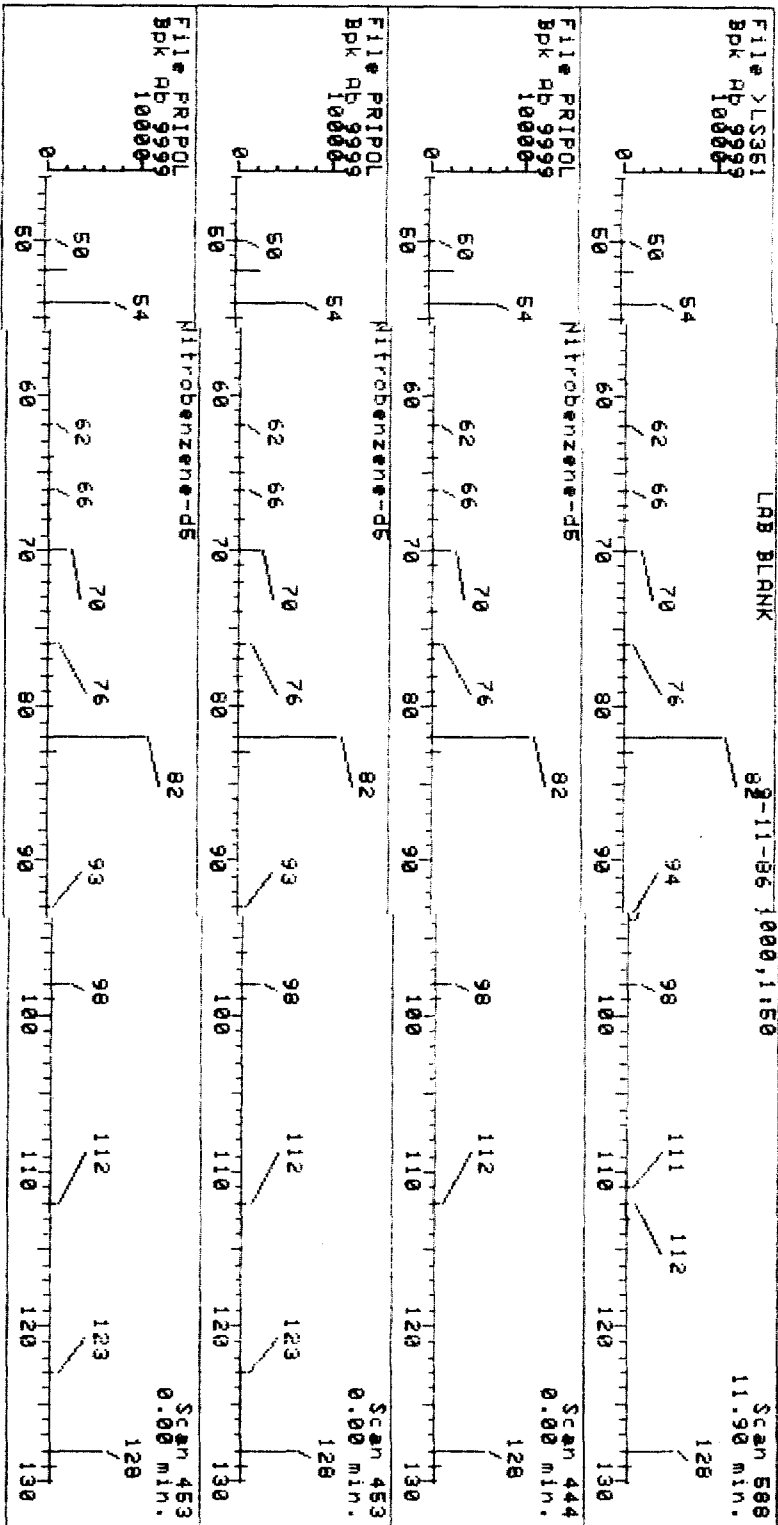
*low*



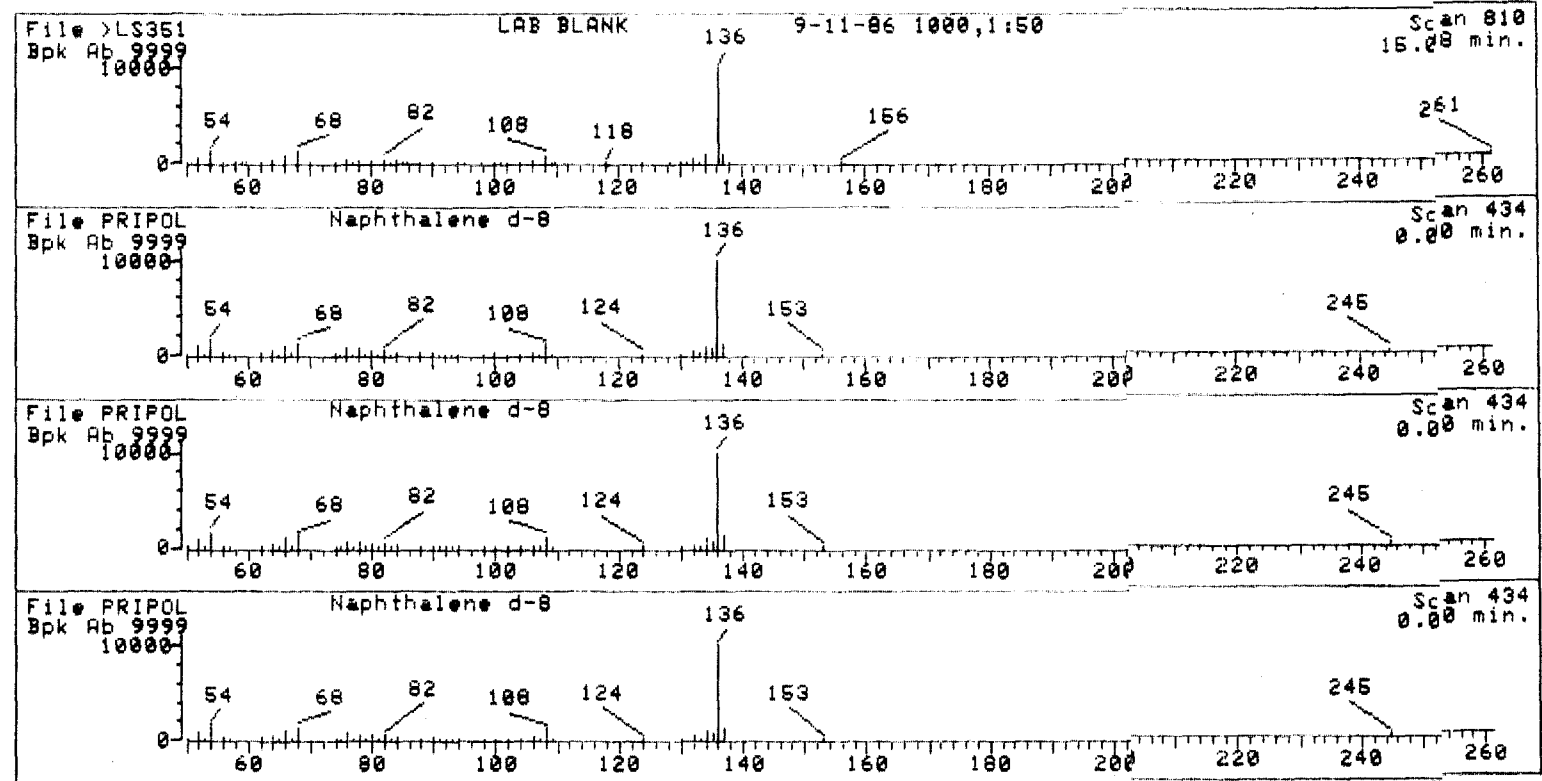
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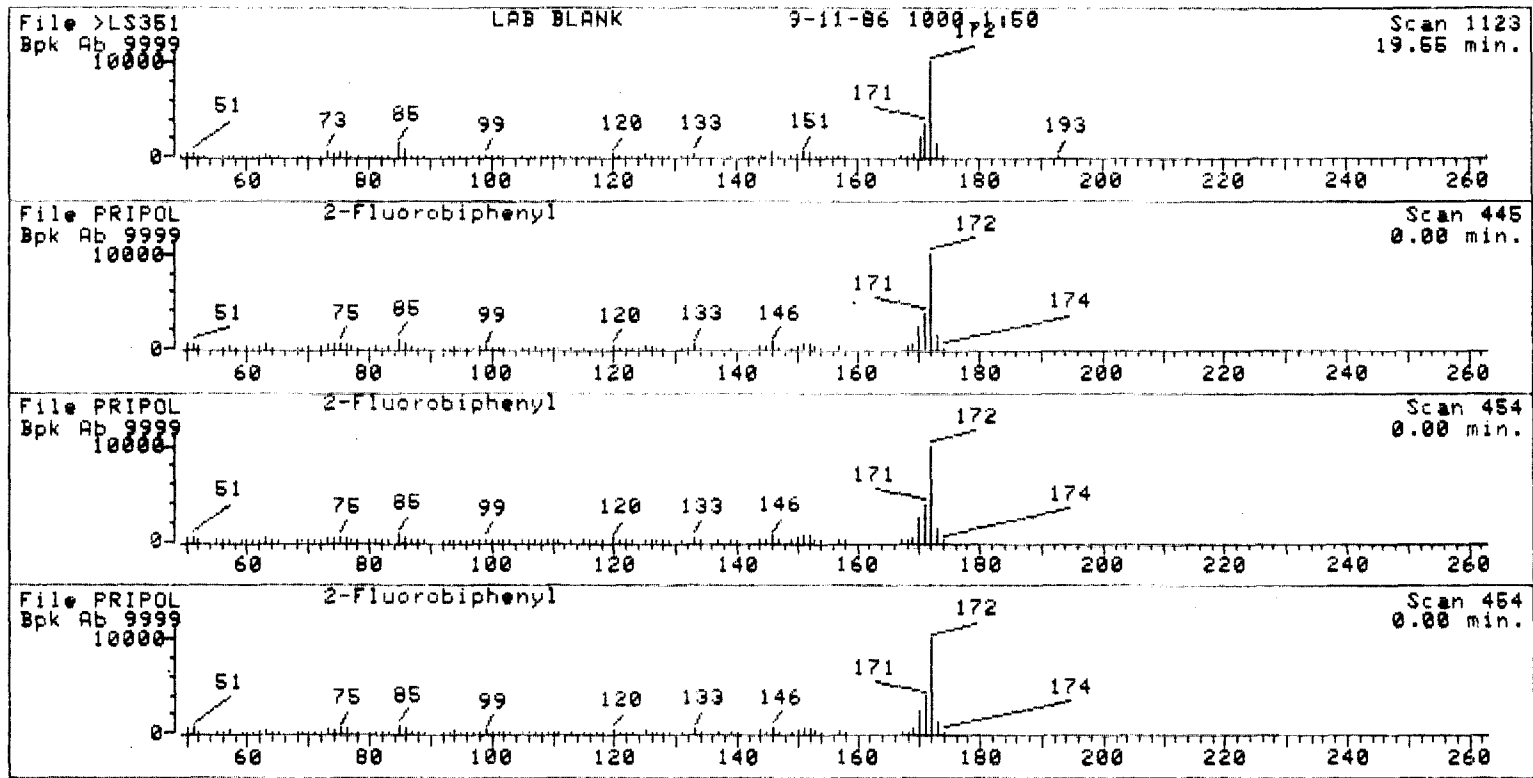
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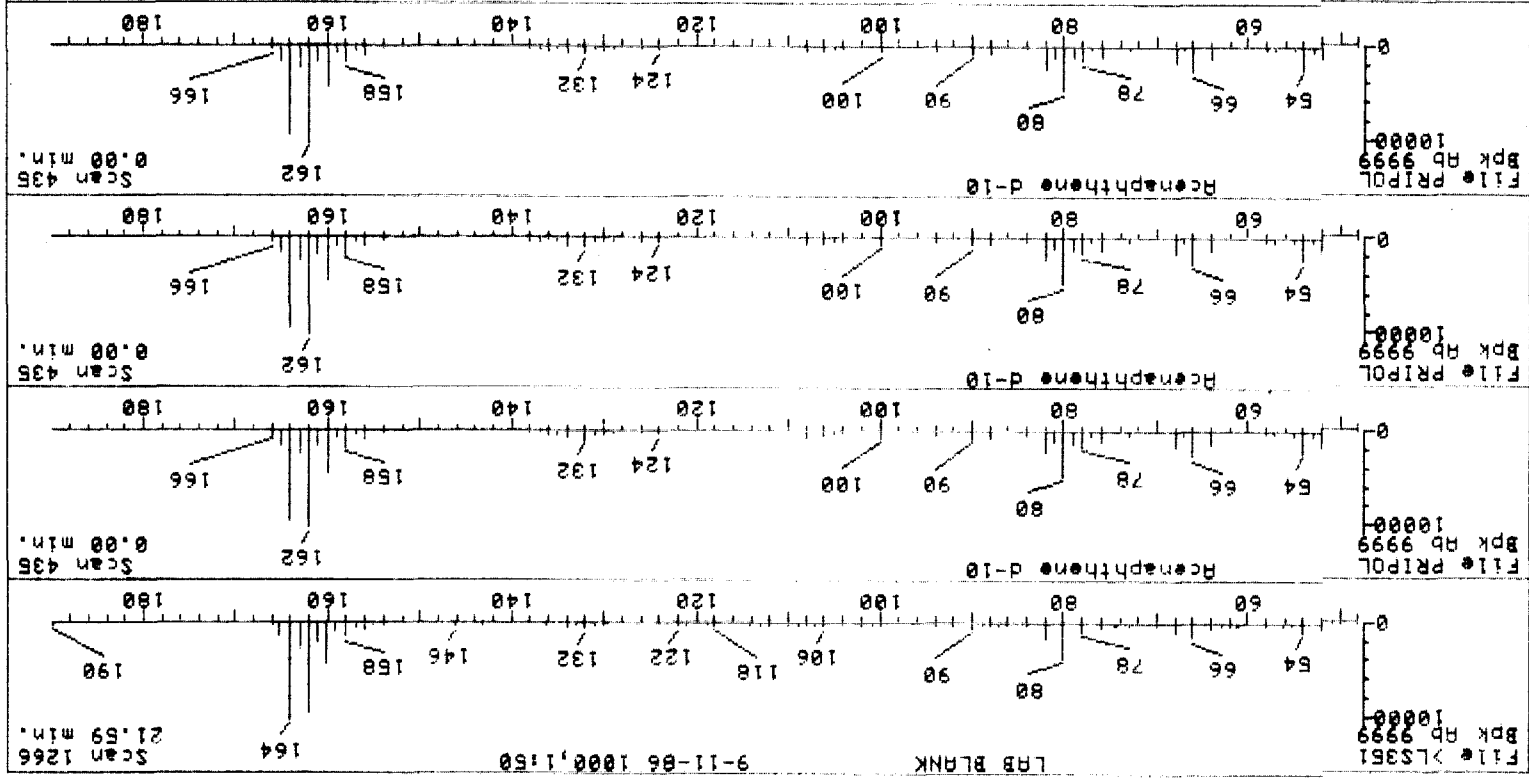


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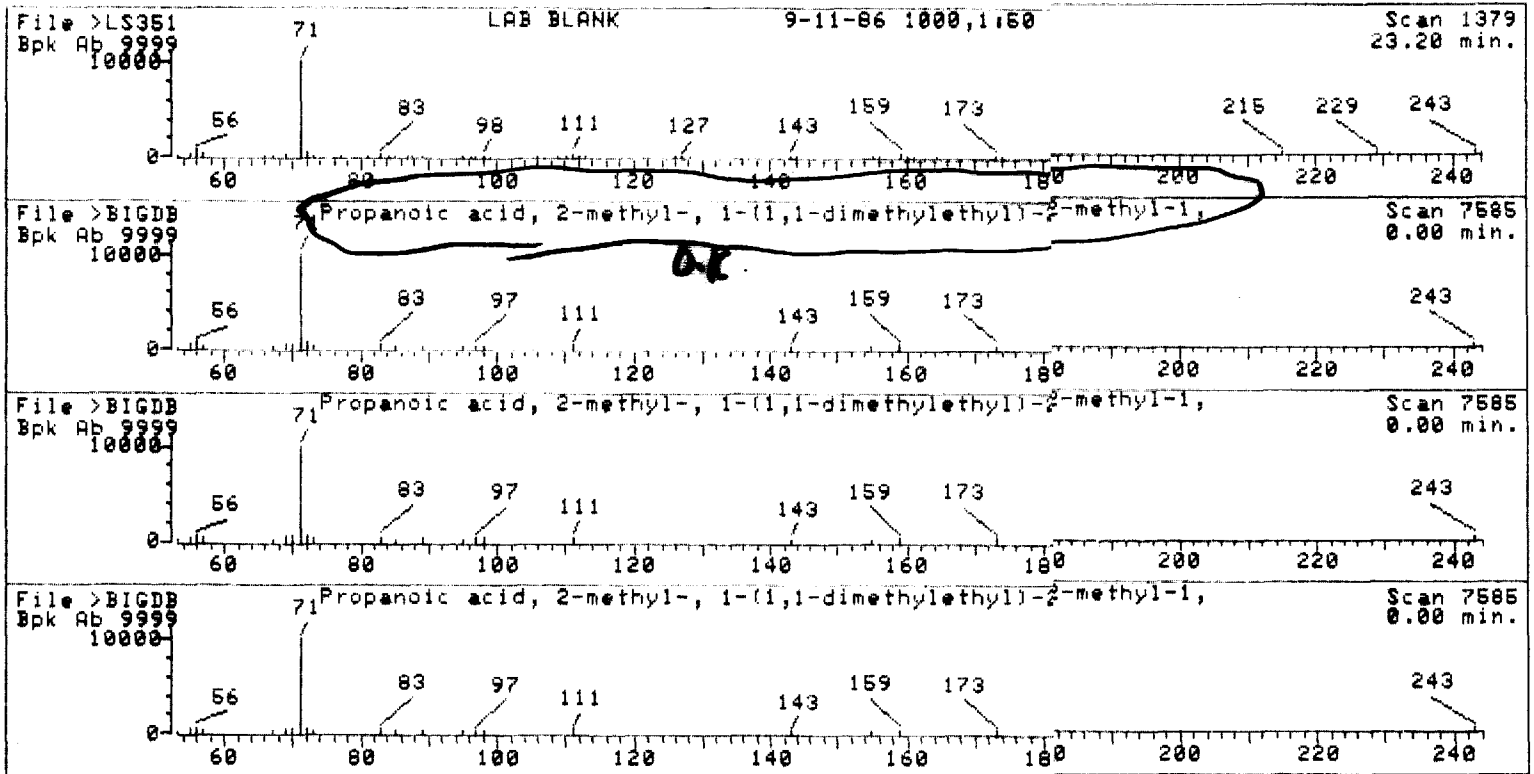
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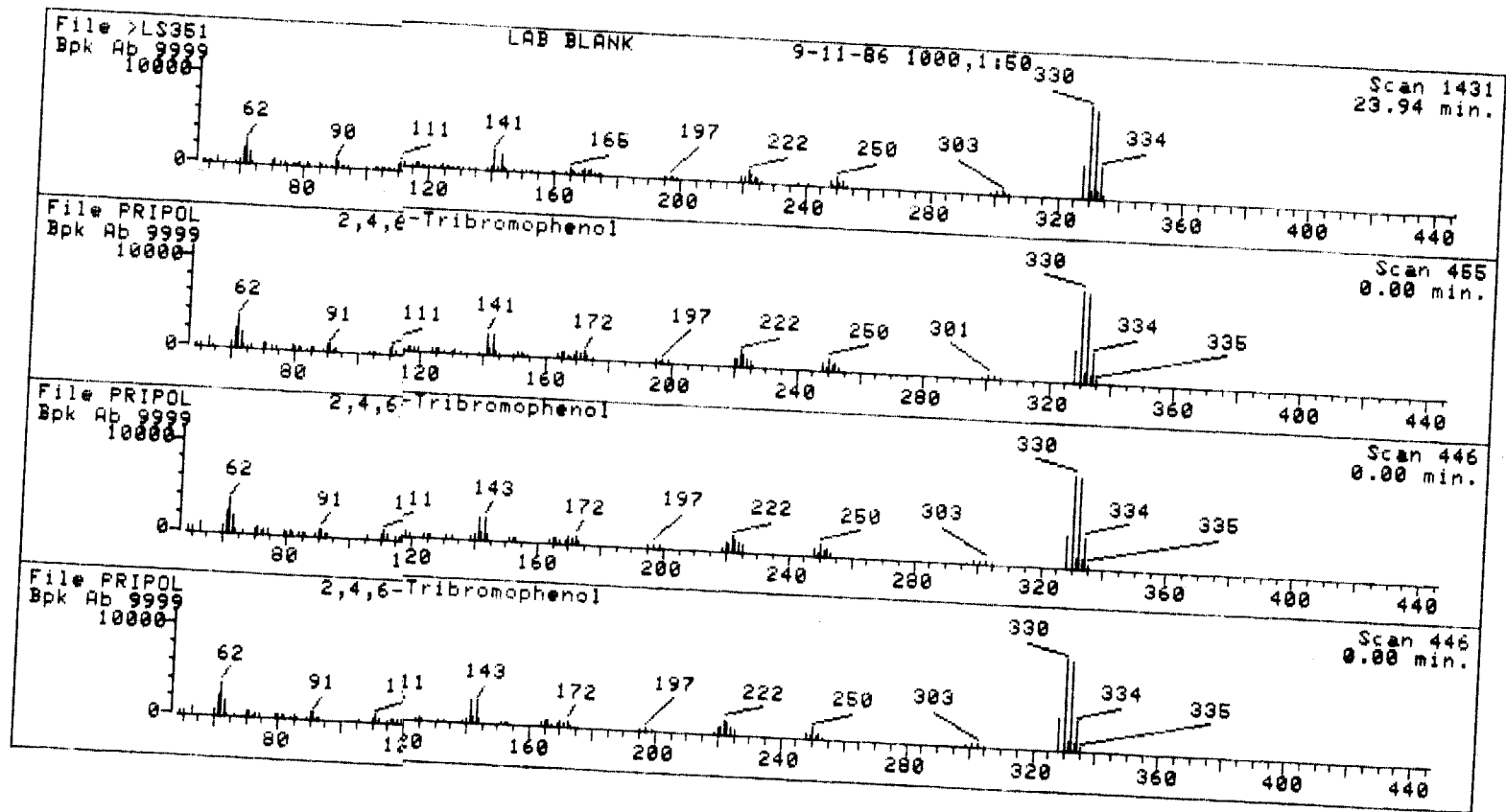


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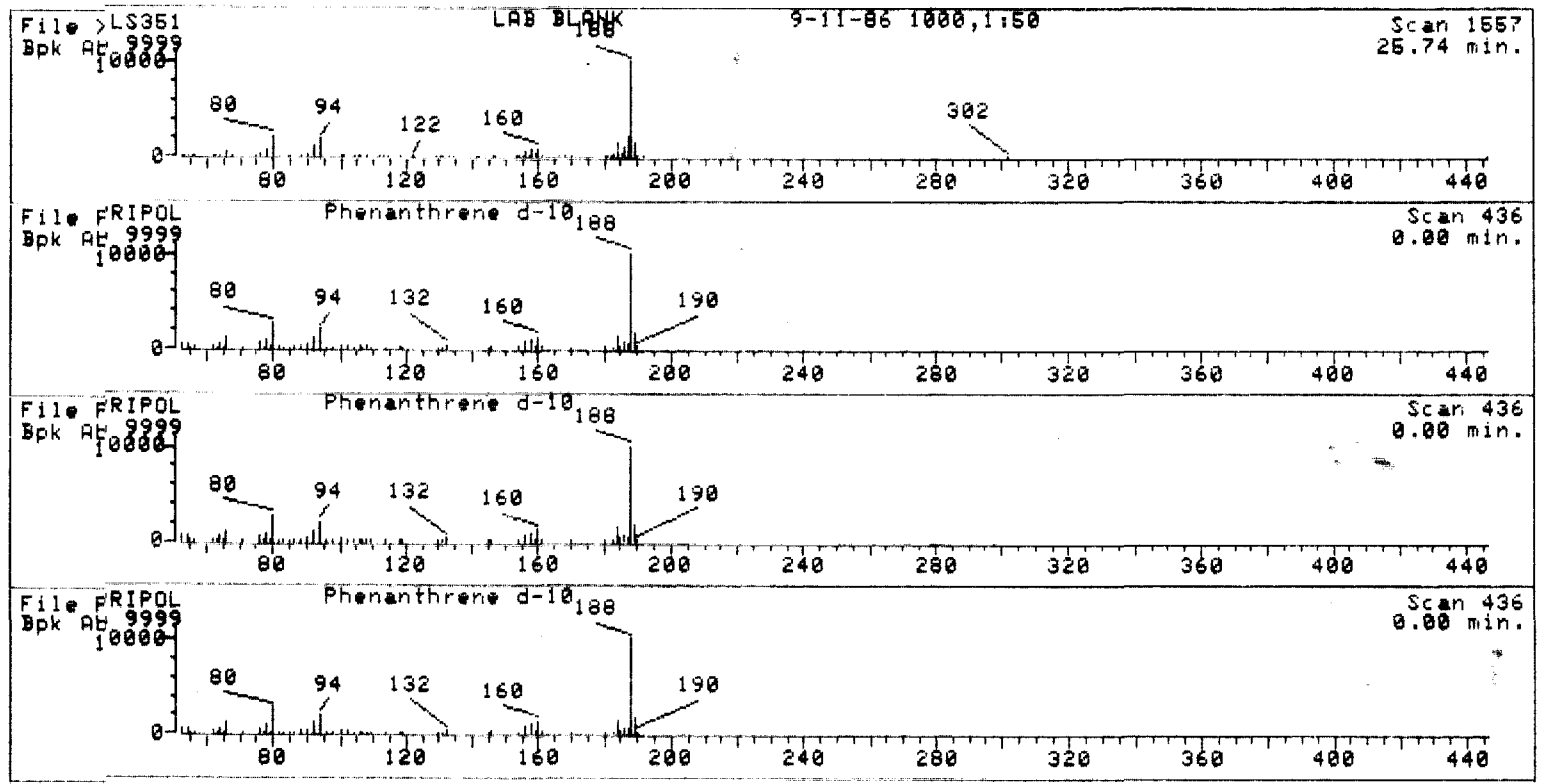




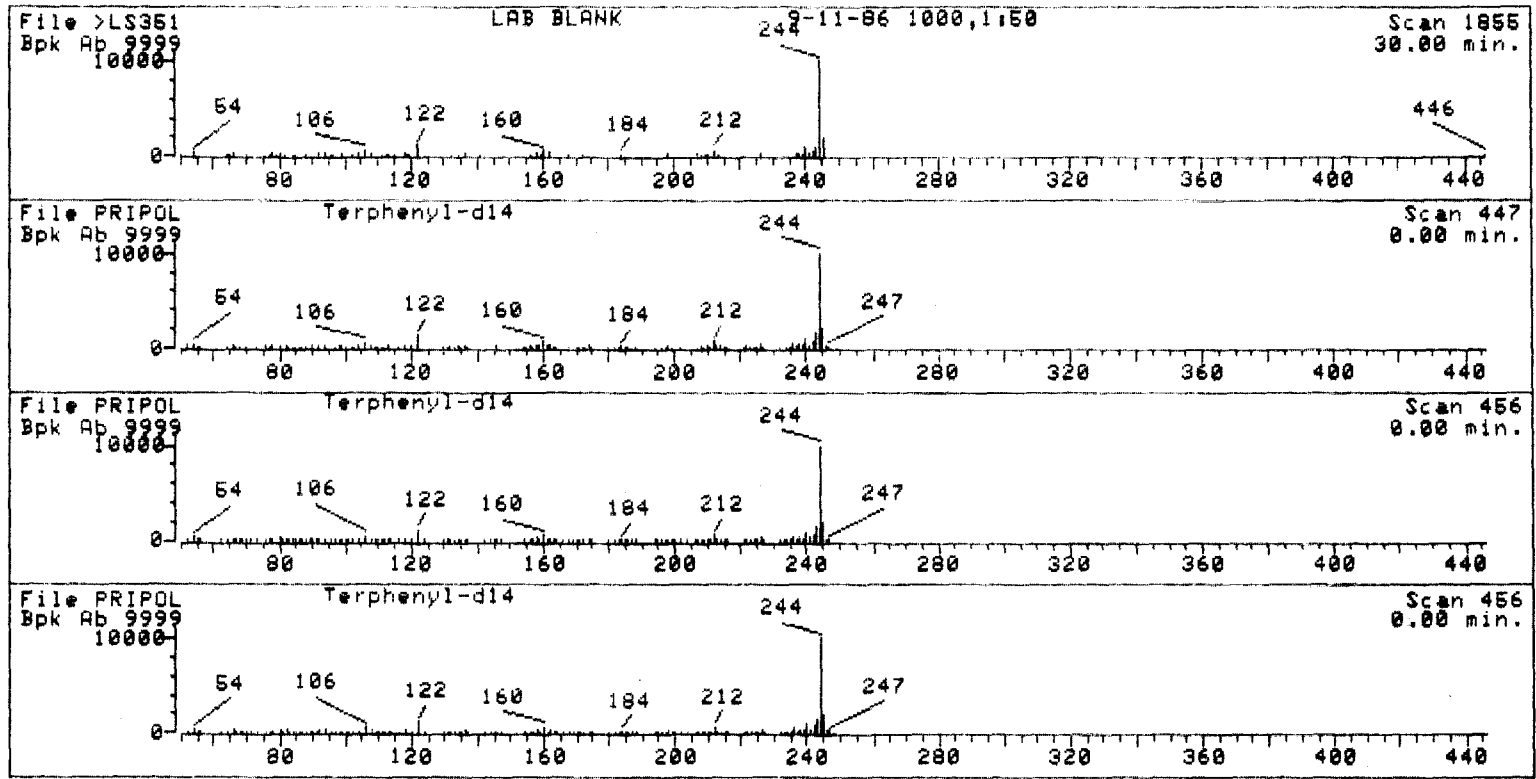
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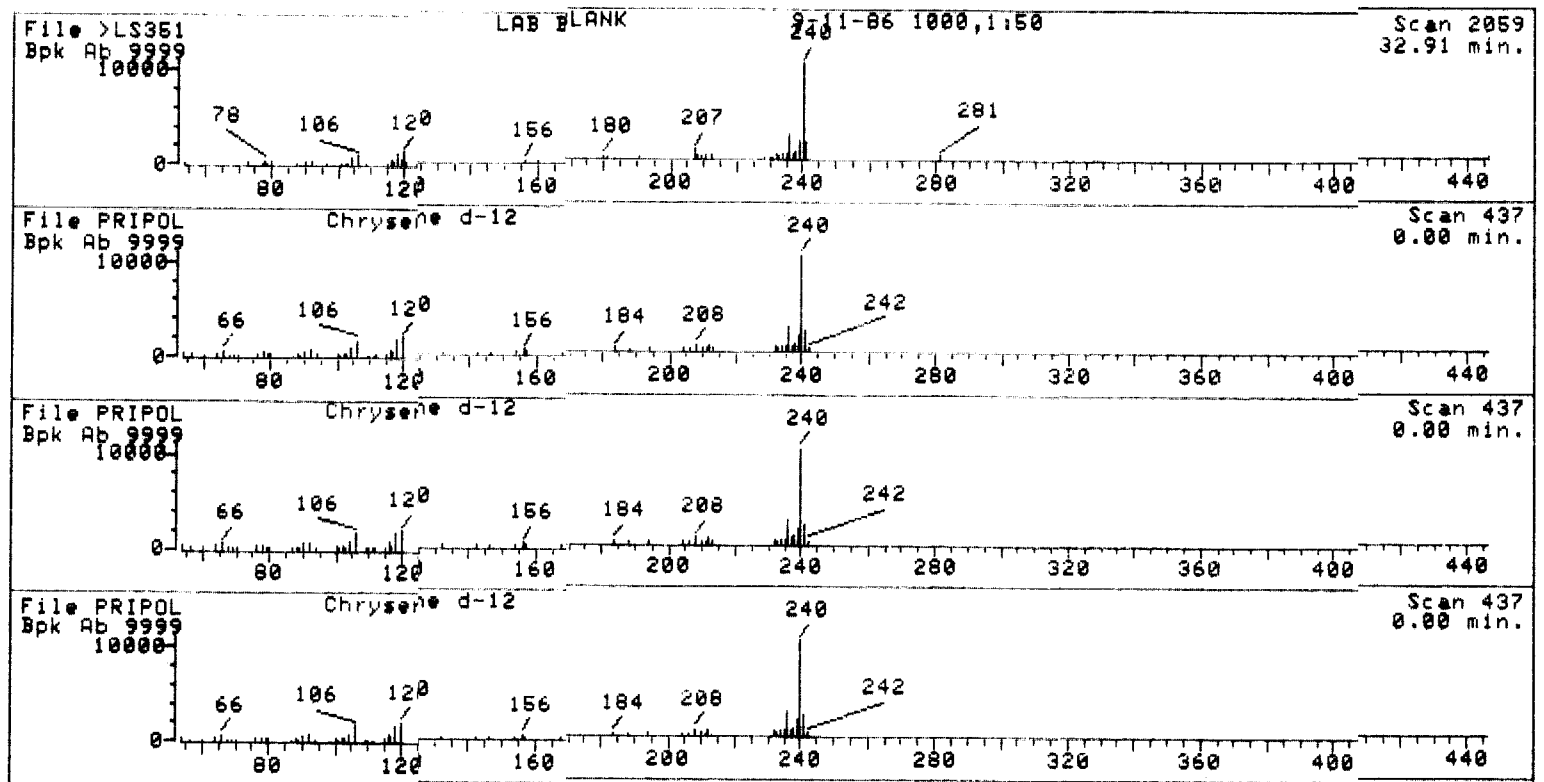
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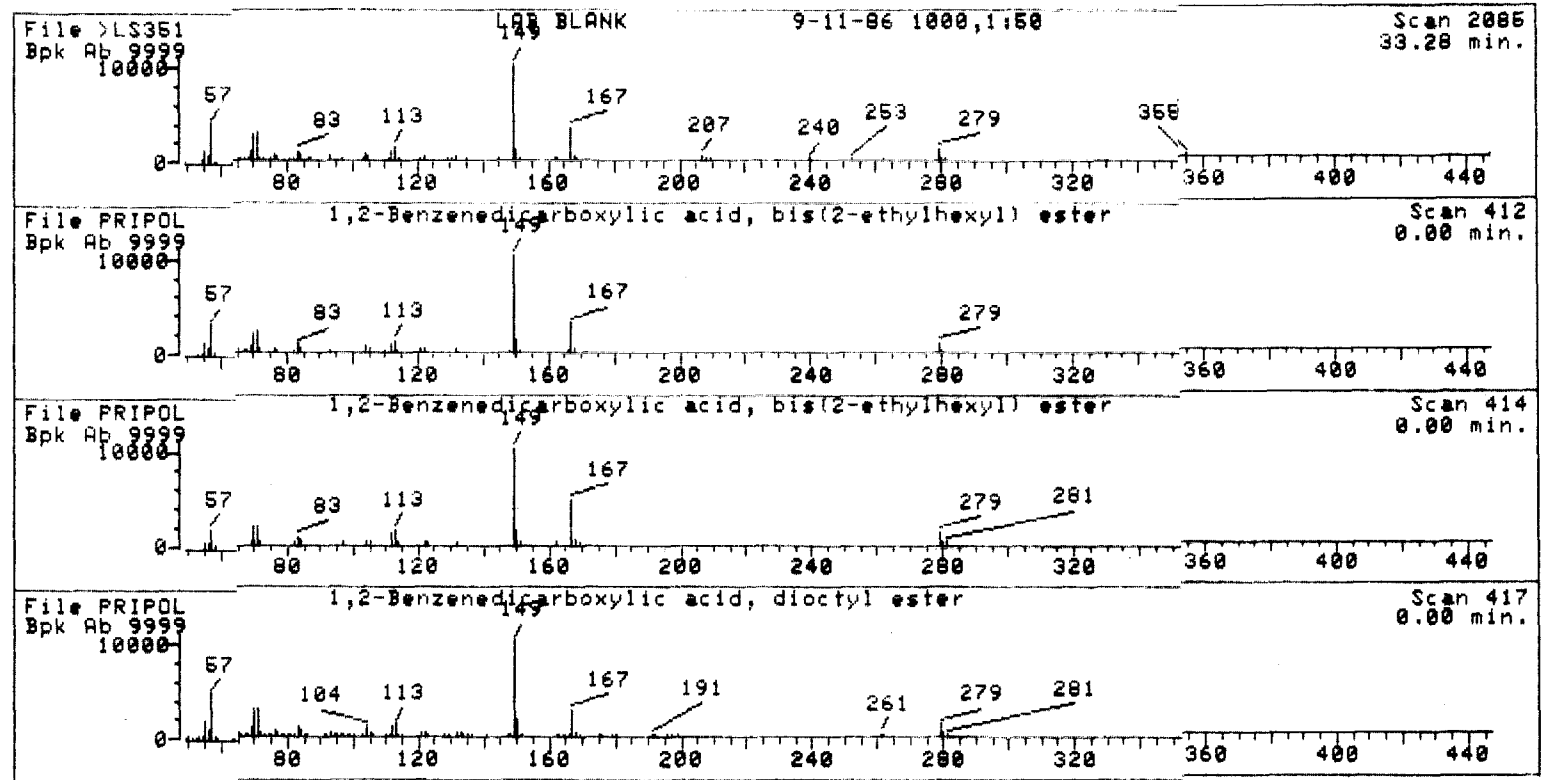
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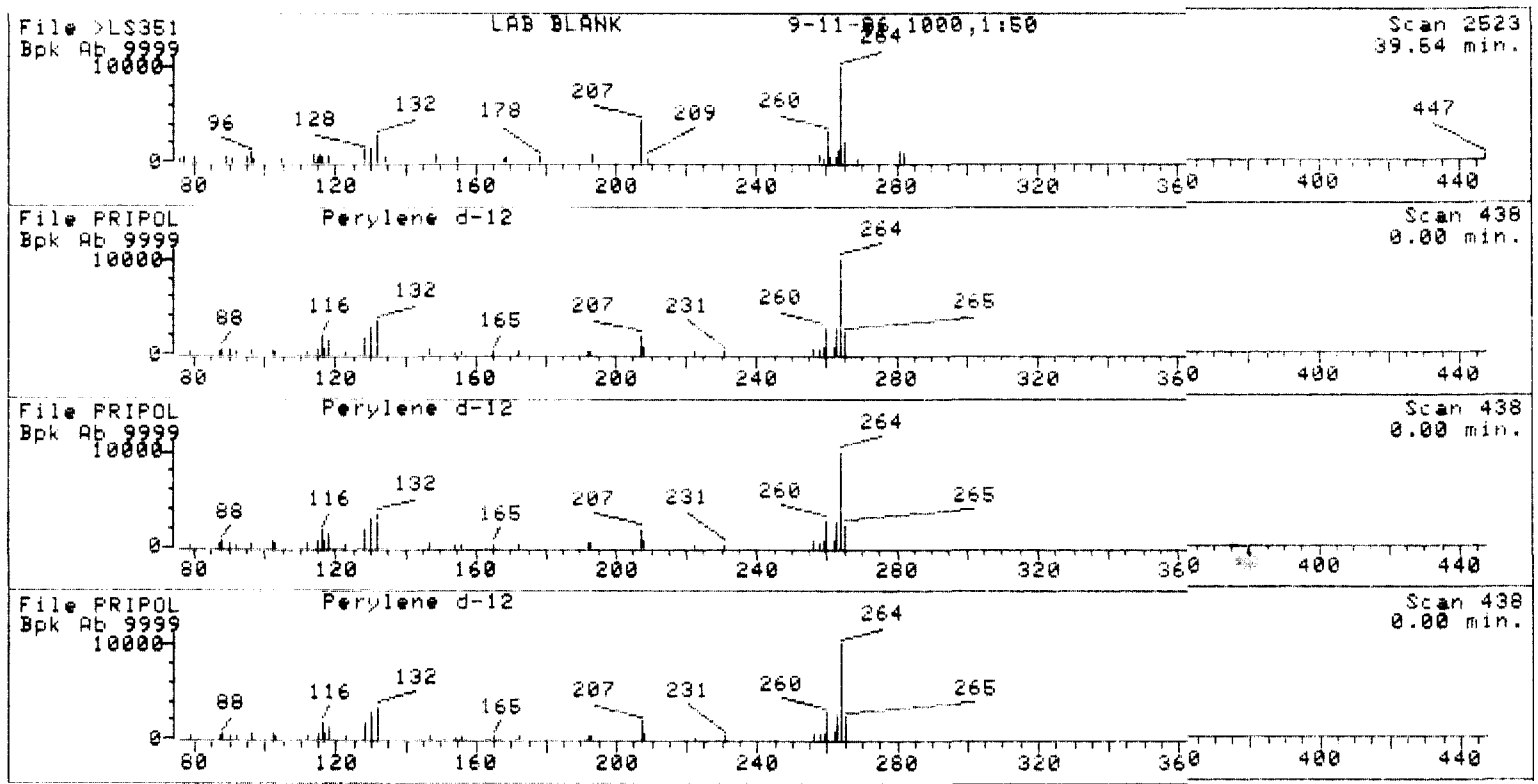
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*[Handwritten signature]*

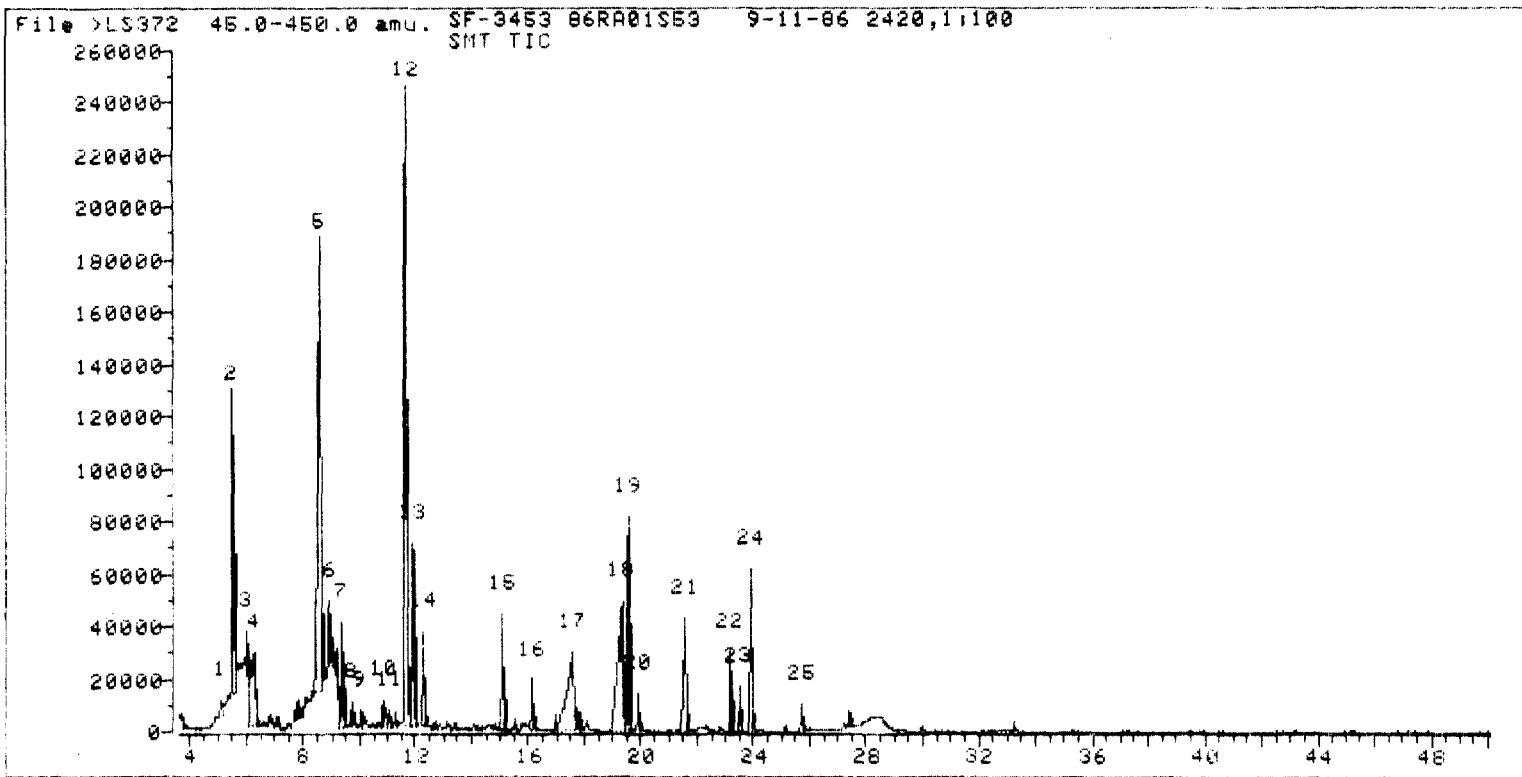


>LS372 SF-3453 86RA01S53 9-11-86 2420,1:100  
 45.01 450.0 SMT TIC

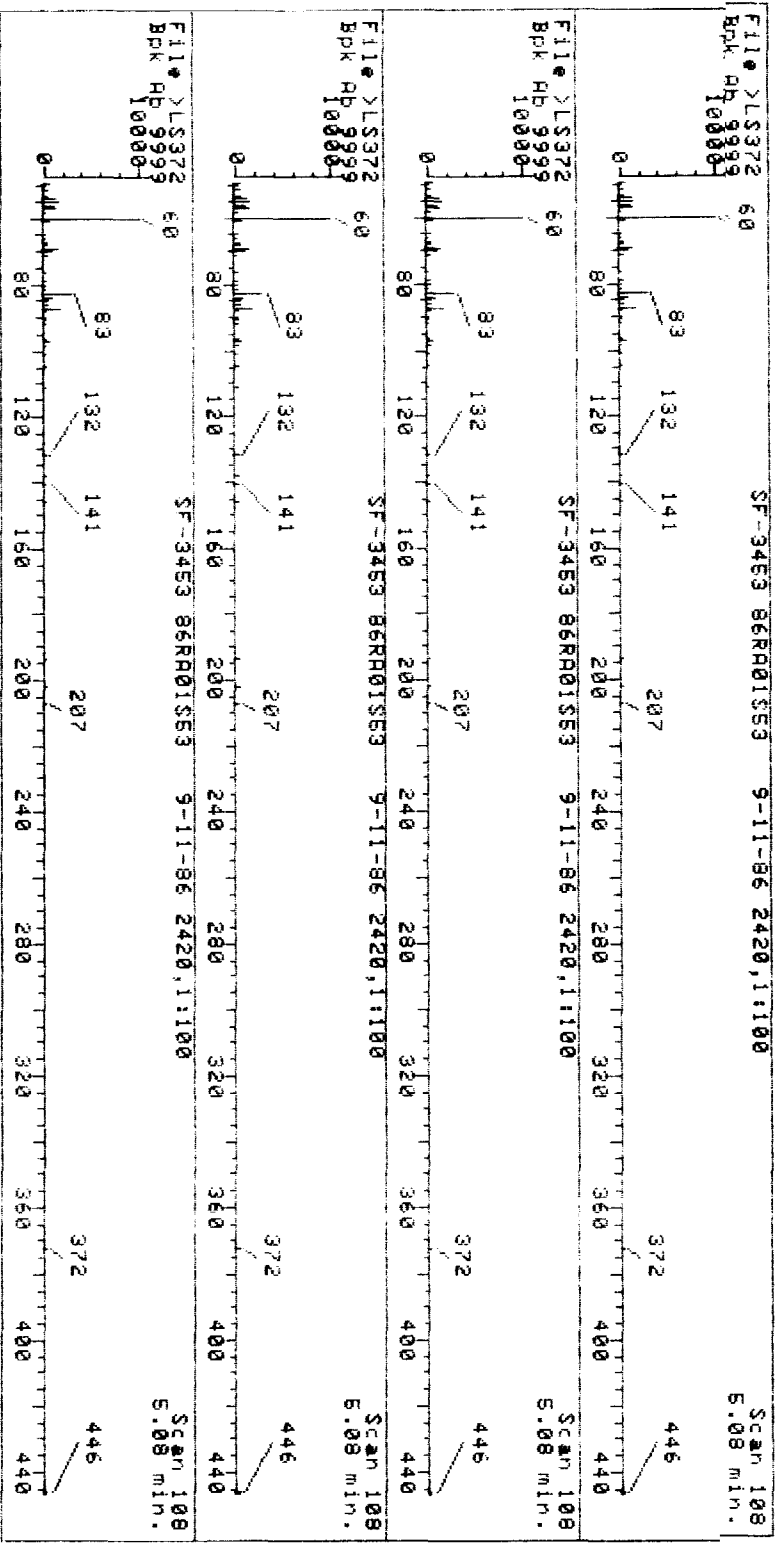
Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.082	103	108	114	5843	96720	36124	2.18	.508
2	5.469	130	135	145	115886	679555	488958	29.53	6.877
3	5.955	166	169	174	12125	241400	65381	3.95	.920
4	6.299	179	193	197	27779	349054	312077	18.85	4.389
5	8.517	333	348	356	172621	1510245	1195008	72.17	16.807
6	8.904	371	375	381	24434	310337	91199	5.51	1.283
7	9.319	399	404	417	39606	201107	169610	10.24	2.385
8	9.649	422	427	431	9257	55628	35535	2.15	.500
9	9.978	445	450	458	6532	58130	37198	2.25	.523
10	10.793	501	507	511	10190	70383	53022	3.20	.746
11	11.037	519	524	533	6826	57675	36709	2.22	.516
12	11.652	555	567	577	243543	1715663	1655859	100.00	23.288
13	11.910	577	585	593	69414	389204	357572	21.59	5.029
14	12.239	602	608	616	36415	159836	131072	7.92	1.843
15	15.043	796	804	812	44811	196902	189564	11.45	2.666
16	16.115	873	879	895	18915	101658	78593	4.75	1.105
17	17.545	939	979	990	30034	525232	503632	30.42	7.083
18	19.289	1071	1101	1110	49582	641876	630993	38.11	8.874
19	19.504	1110	1116	1127	80981	295801	281169	16.98	3.954
20	19.905	1138	1144	1152	14149	61921	53501	3.23	.752
21	21.534	1246	1258	1267	43240	264046	257553	15.55	3.622
22	23.134	1364	1370	1375	30326	97822	95198	5.75	1.339
23	23.449	1386	1392	1400	17101	60508	57698	3.48	.811
24	23.892	1415	1423	1436	62251	258087	252887	15.27	3.557
25	25.693	1536	1549	1555	10631	50689	44154	2.67	.621

Sum of corrected areas: 7110266.

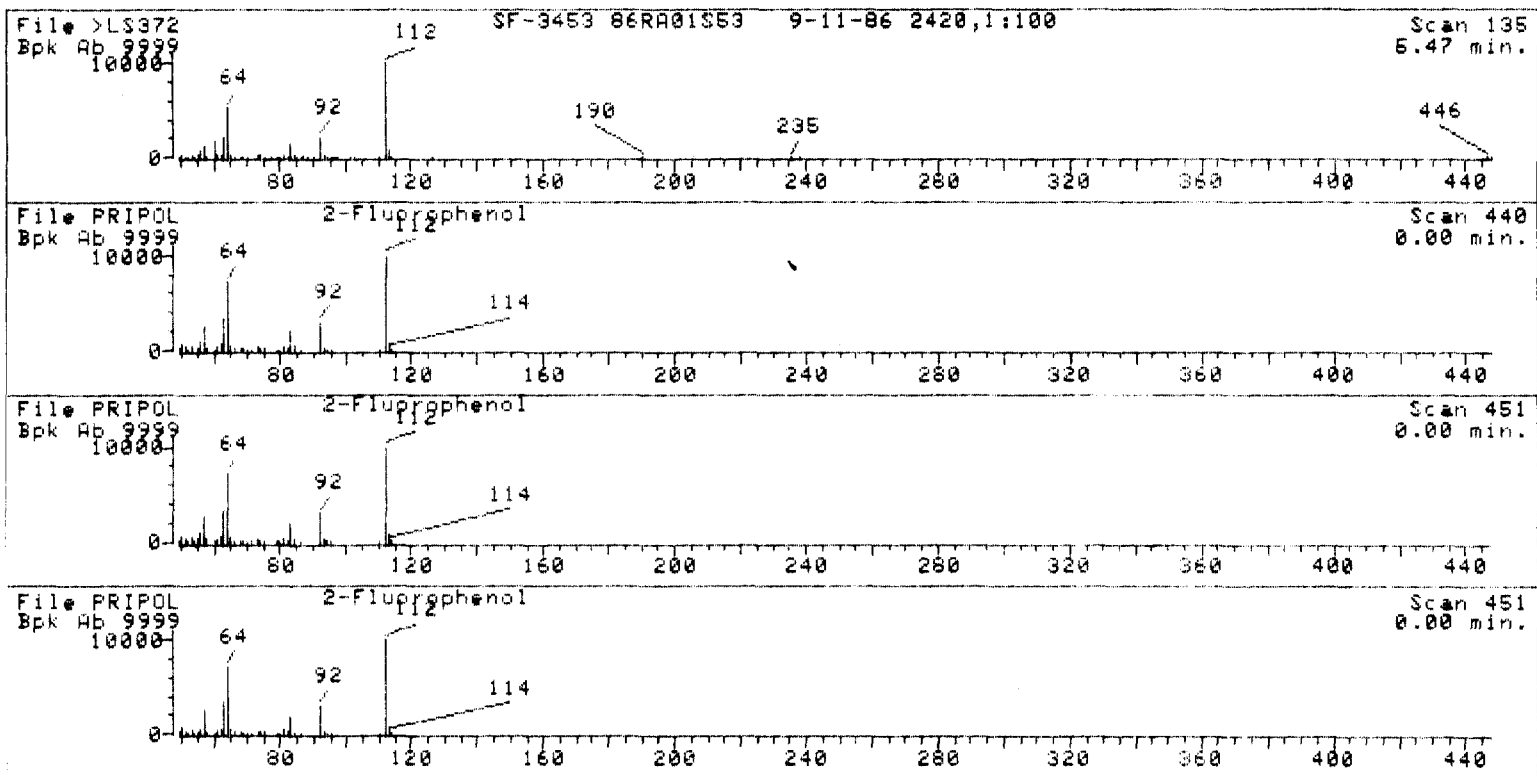


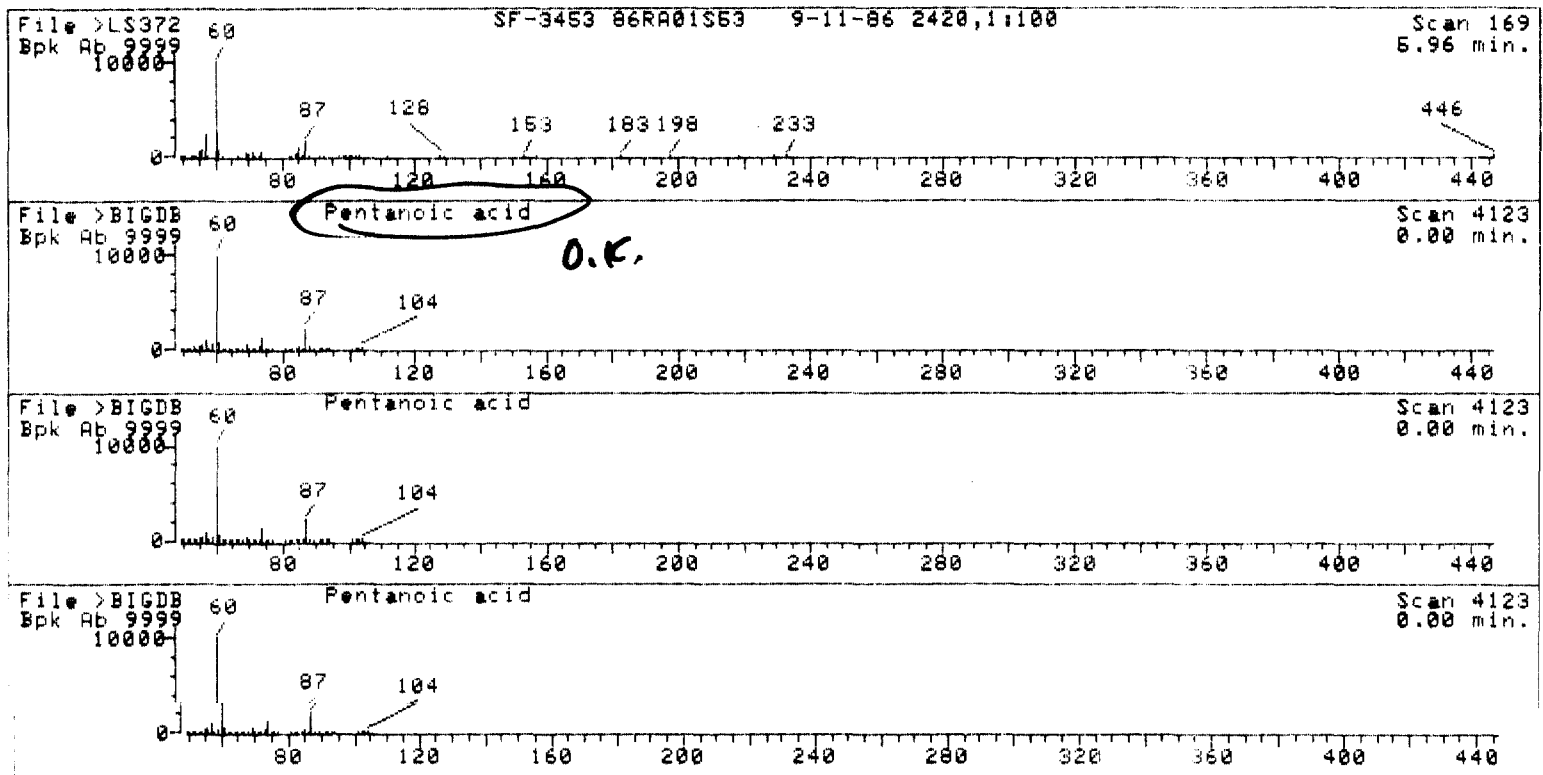


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*sun*

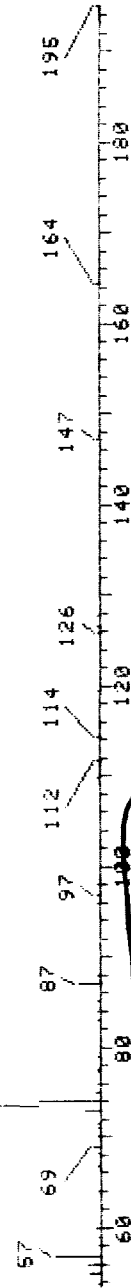




File > LS972  
Spk Ab 9999  
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SF-3453 86RA01553 9-11-86 2420,1:100

Scan 193  
6.30 min.

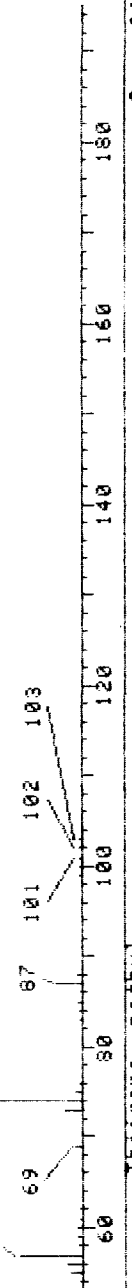


File > BIGDB  
Spk Ab 9999  
10000

Butyric acid, 2-methyl-

O.K.

Scan 8760  
0.00 min.

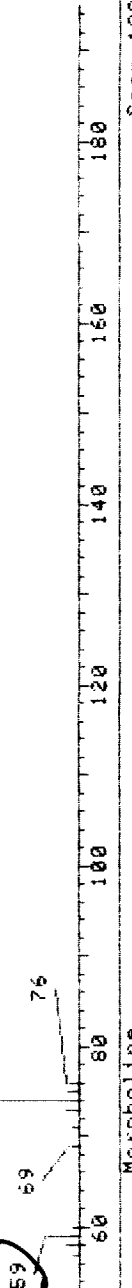


File > BIGDB  
Spk Ab 9999  
10000

Thiirane, methyl-

NO

Scan 8642  
0.00 min.

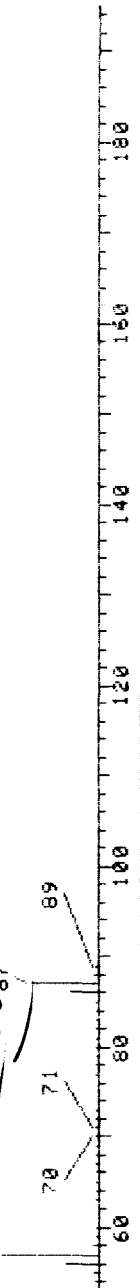


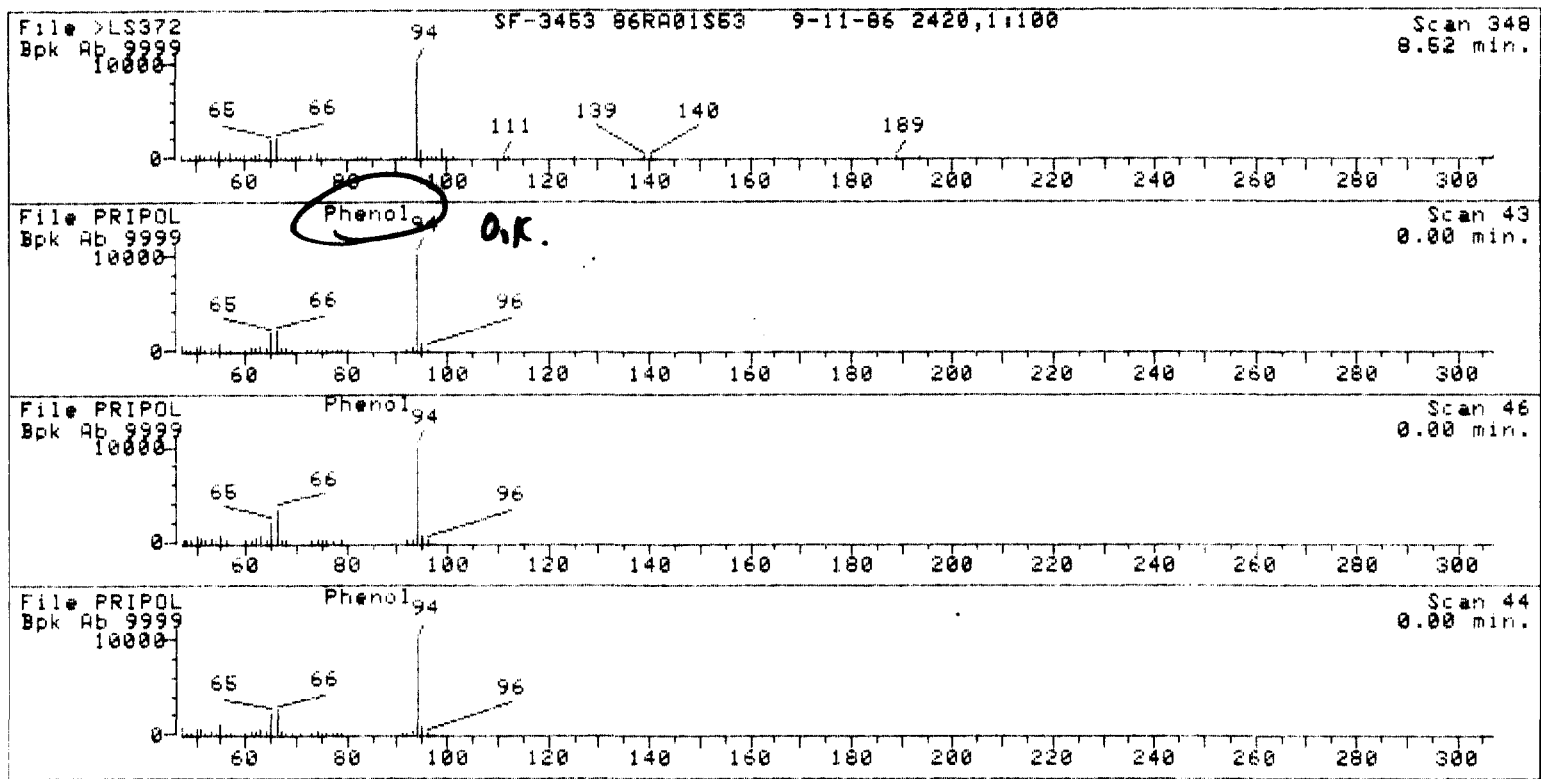
File > BIGDB  
Spk Ab 9999  
10000

Morpholine

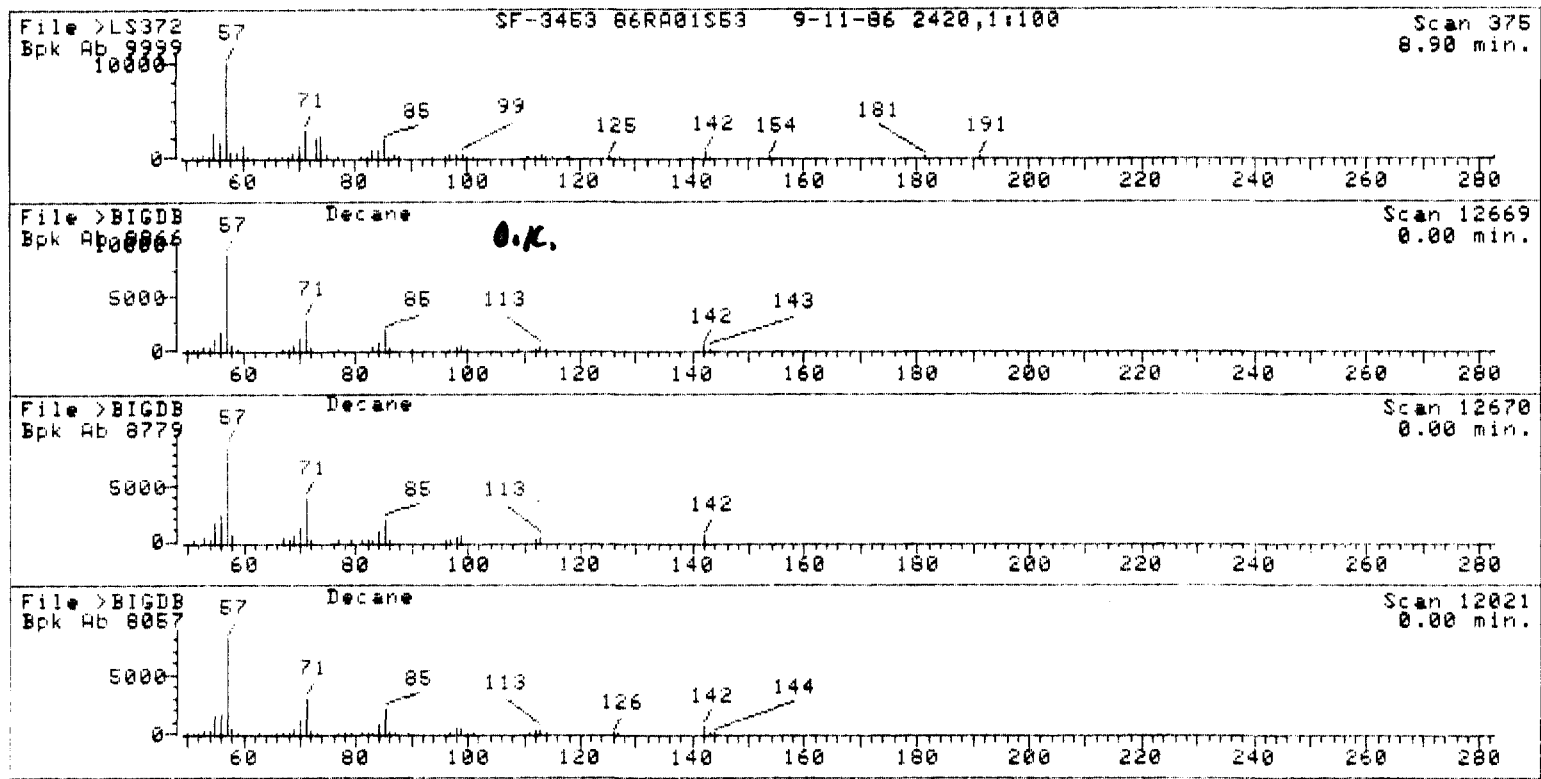
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Scan 13314  
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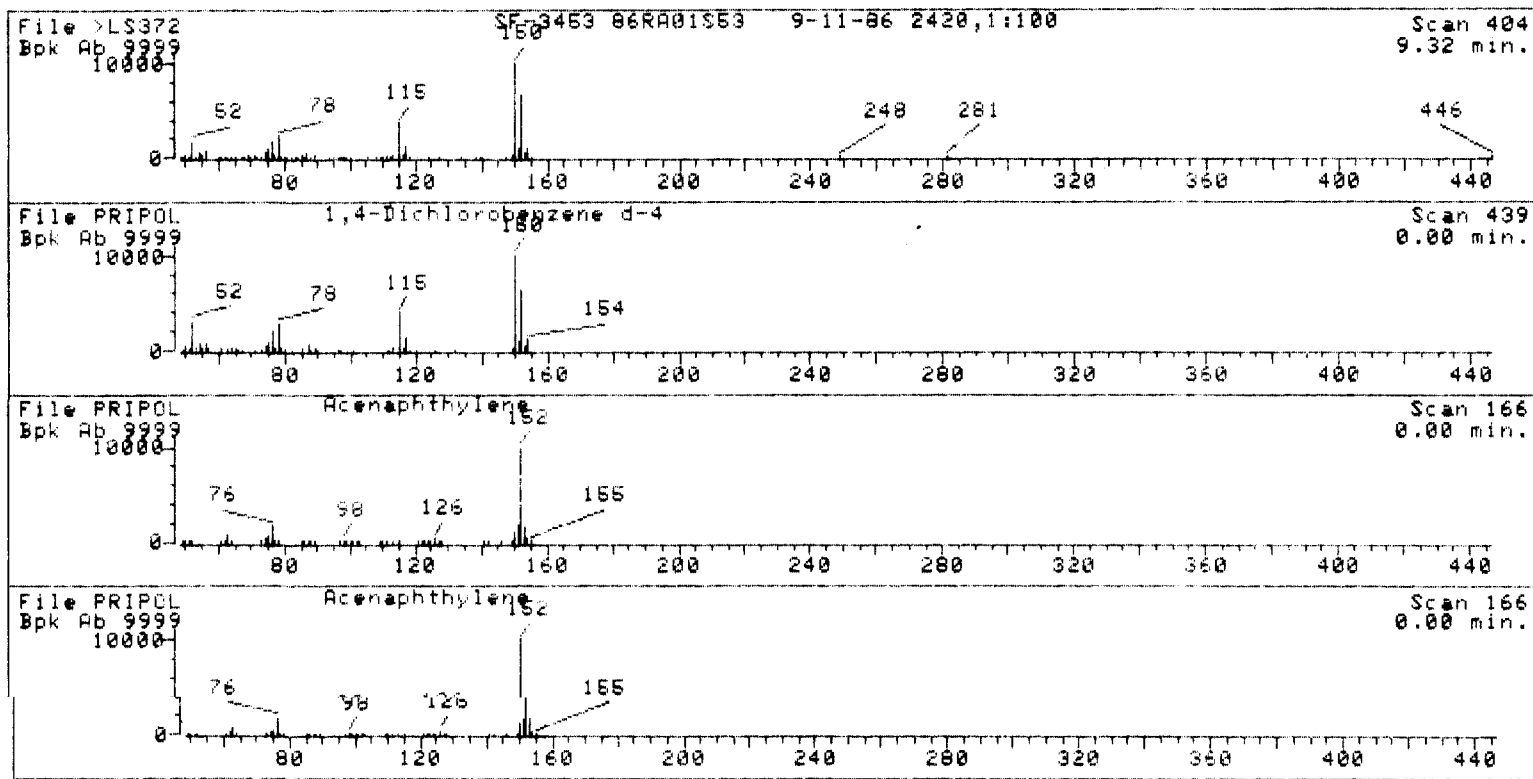




HC

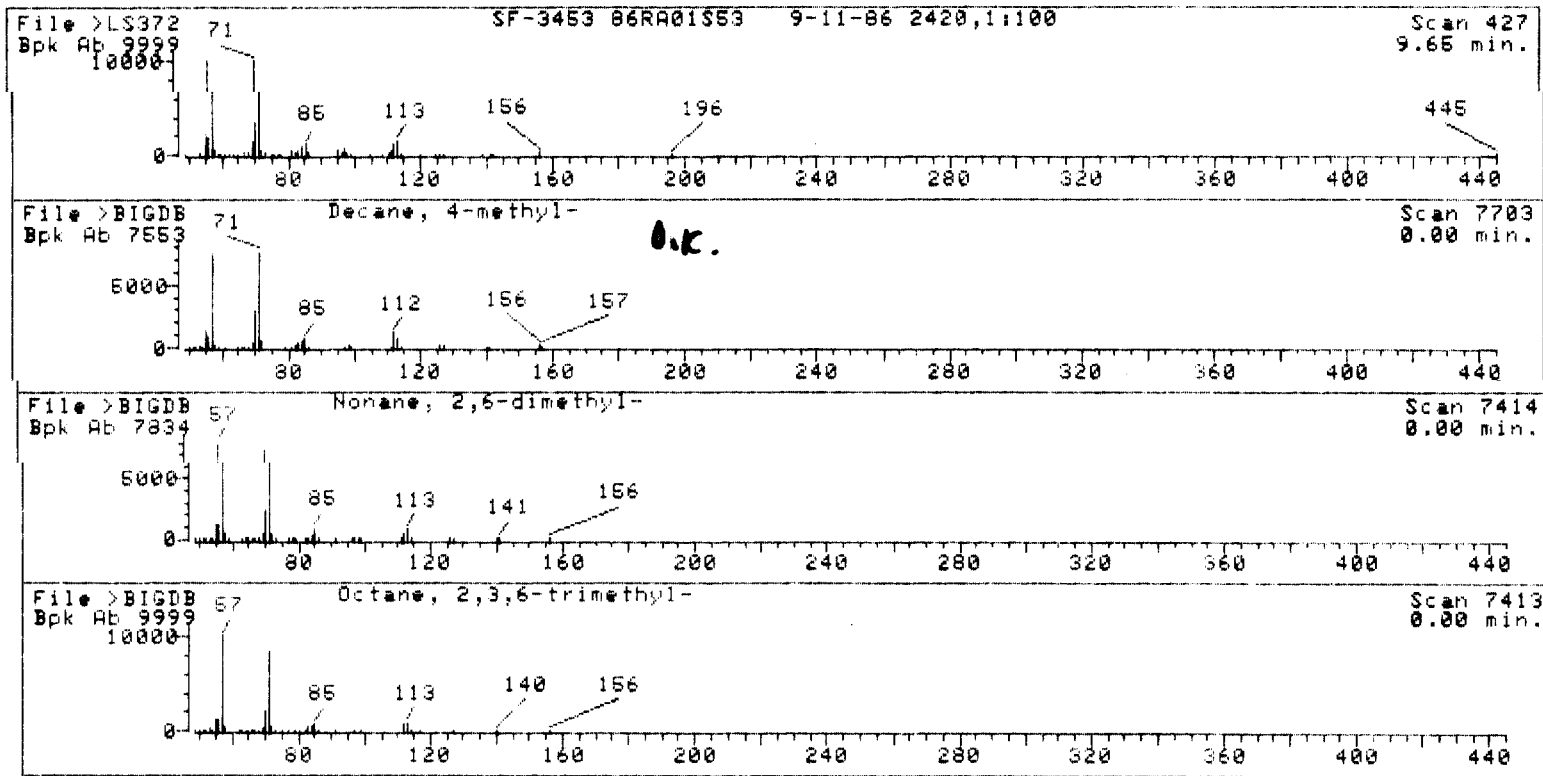


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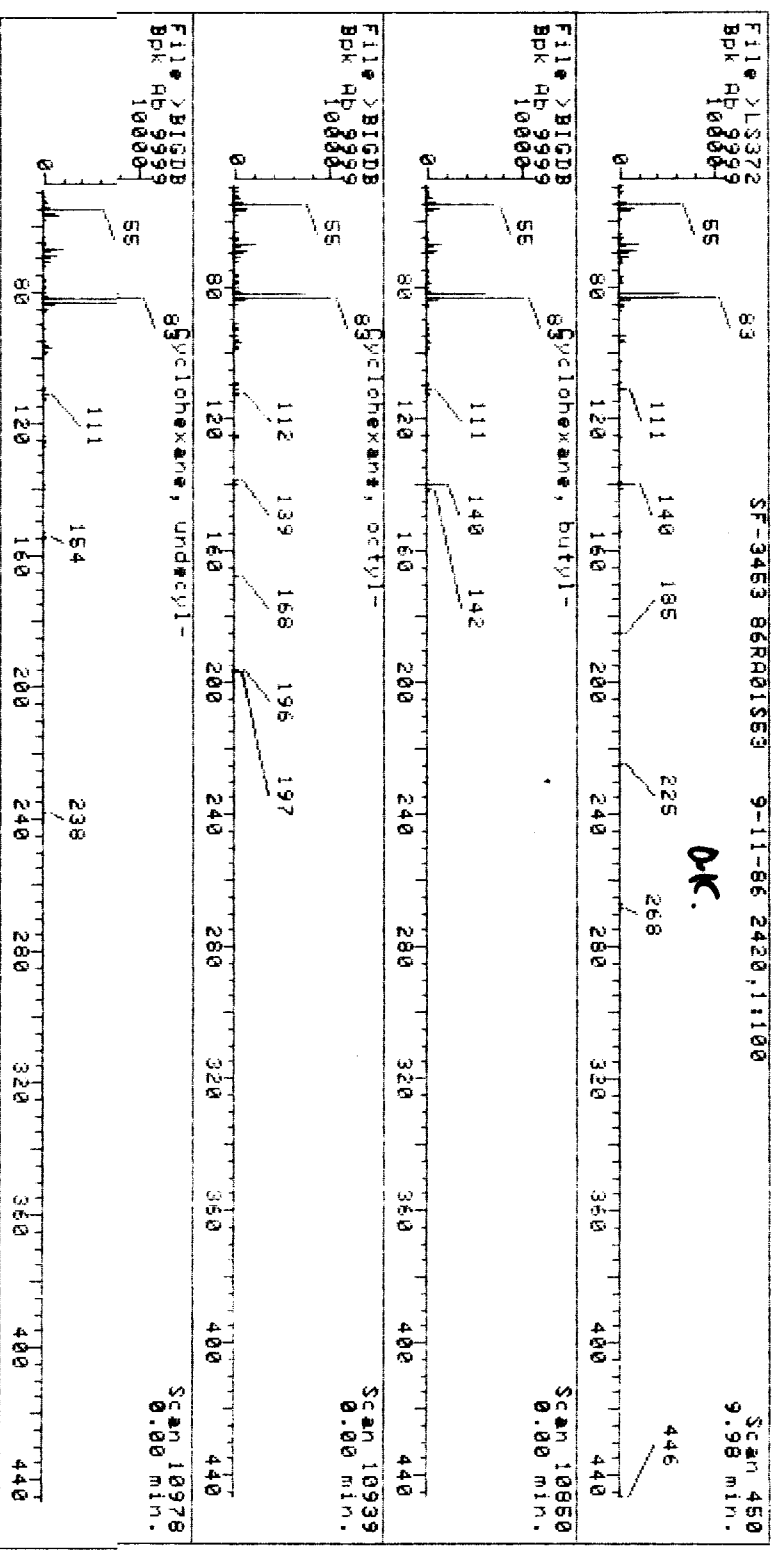


H.C.



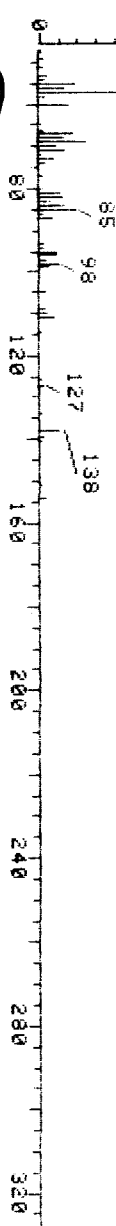
HC

OK.



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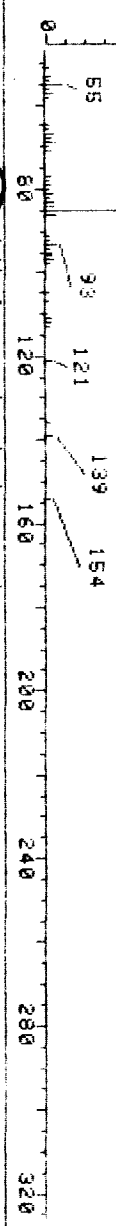
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Bpk Rp 9999 10.79 min.  
10000-



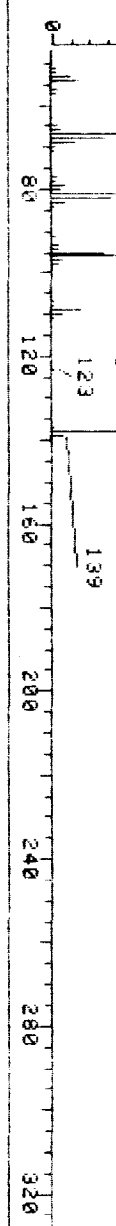
File > BIGDB 68 Naphthalene, decahydro-, trans-  
Bpk Rp 0000 0.00 min. **ND**  
10000-



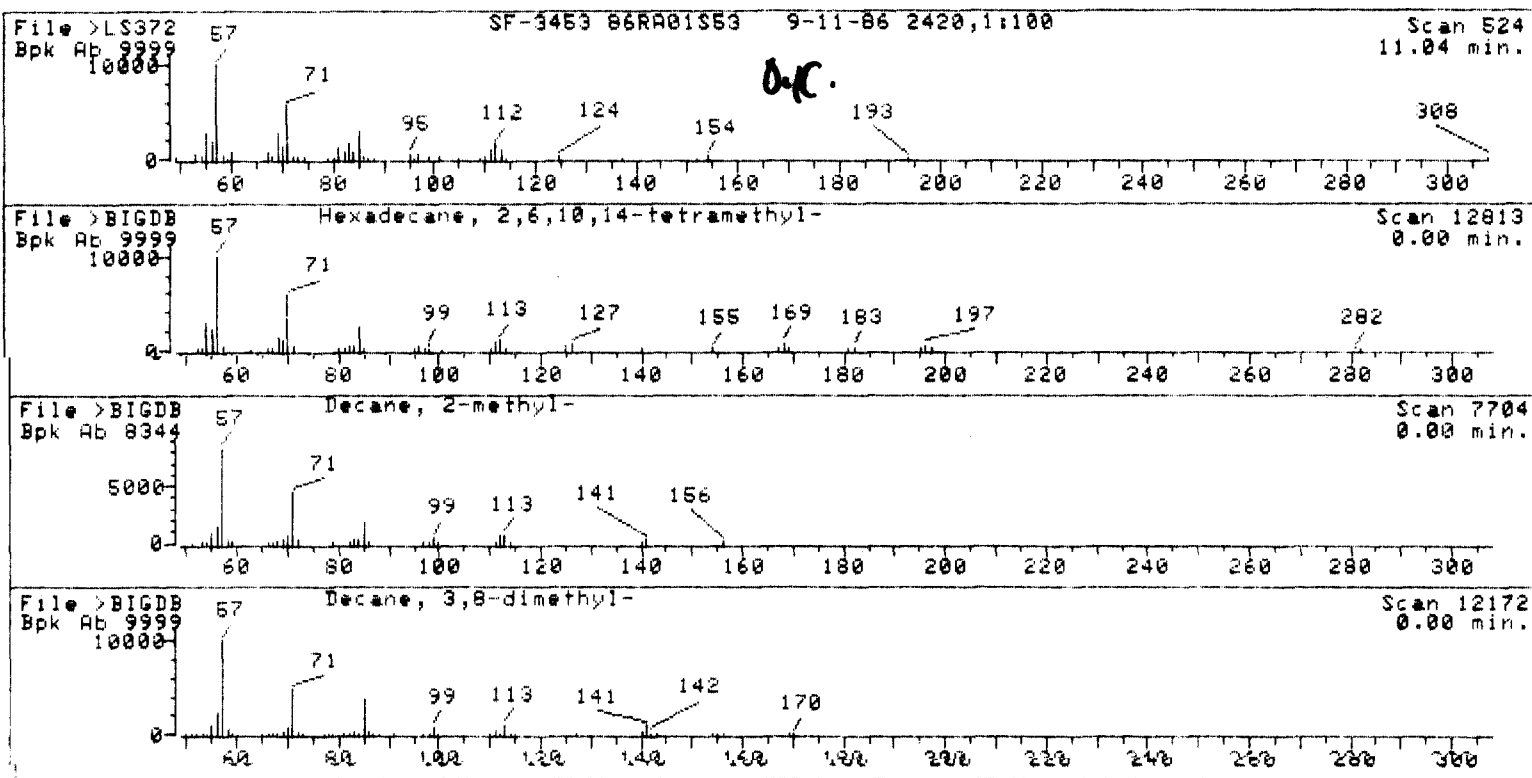
File > BIGDB 85 2-Norpinanol, 3,6,6-trimethyl-  
Bpk Rp 0000 0.00 min. **ND**  
10000-



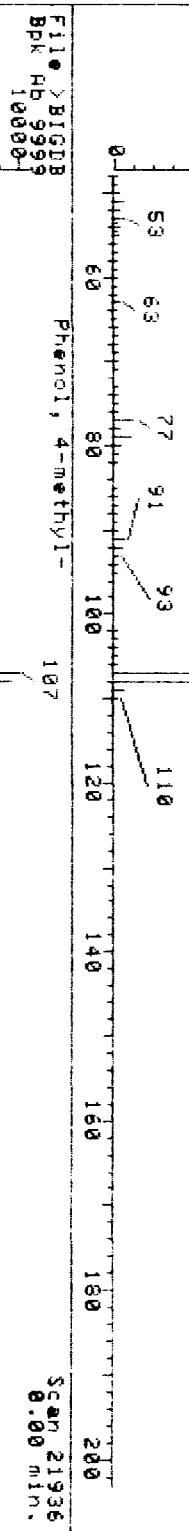
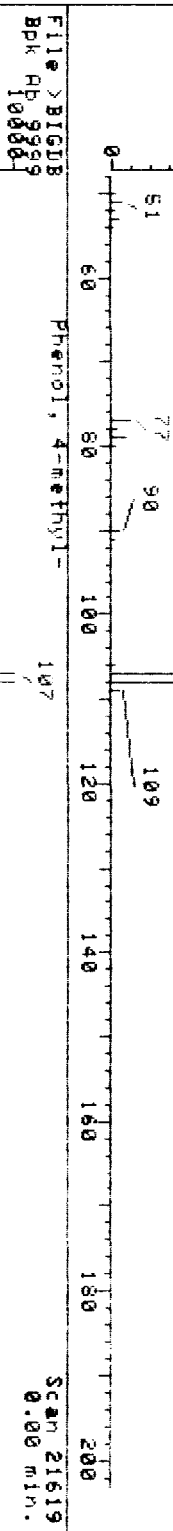
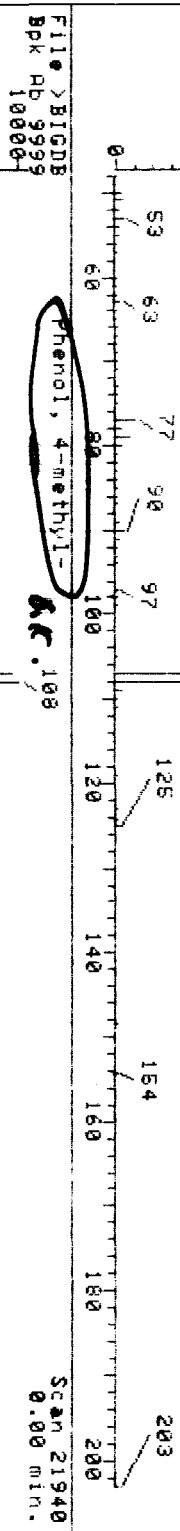
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Bpk Rp 9999 0.00 min. **ND**  
10000-



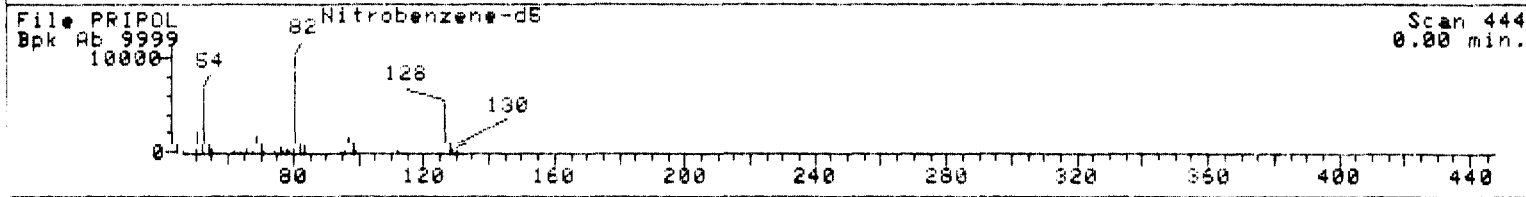
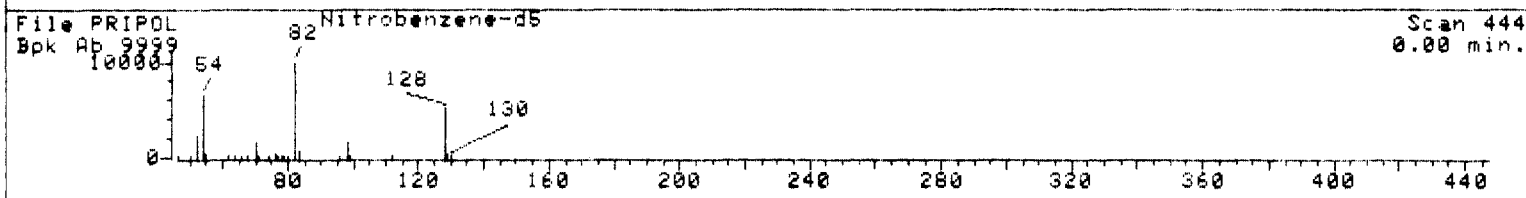
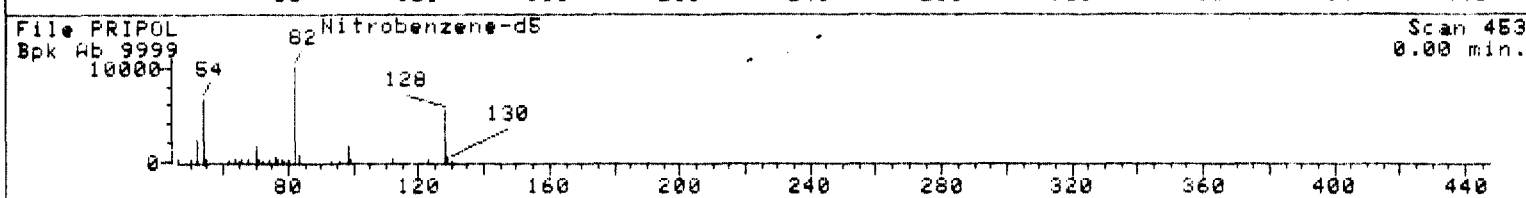
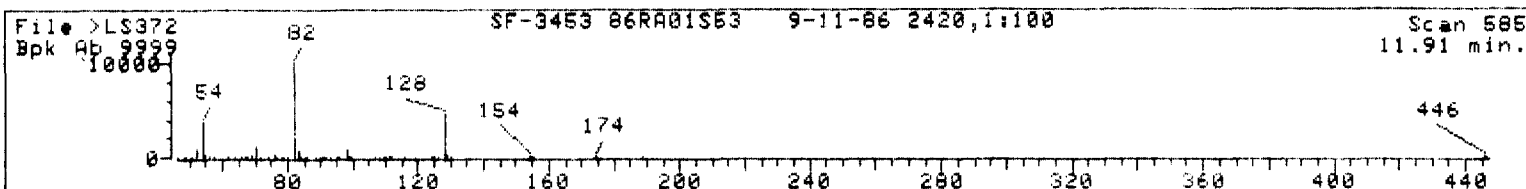
HC



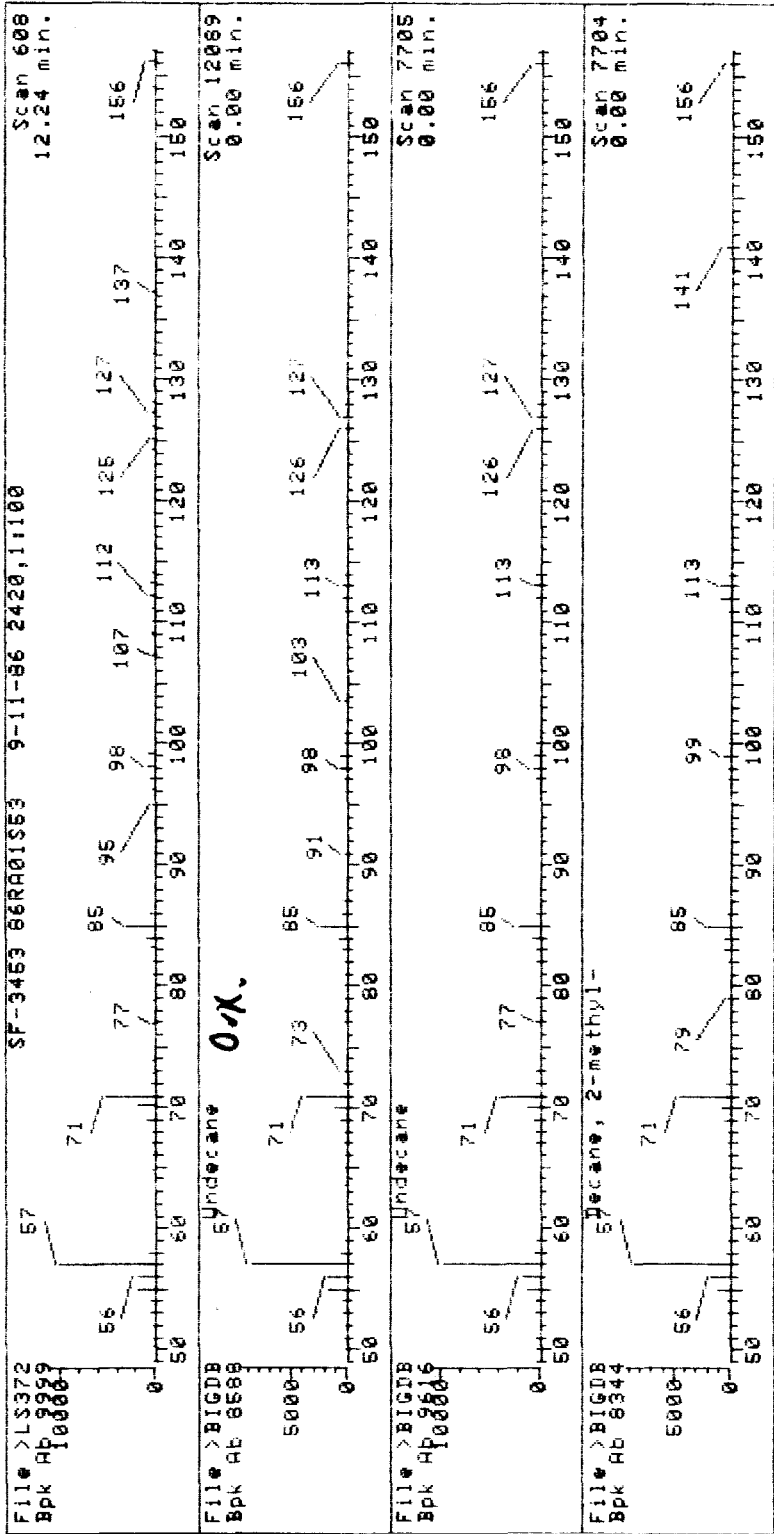
File > LS372 SF-3453 86R901553 9-11-86 2420,1:100 Scan 567  
Bpk Rp 9999 11.65 min.  
10000



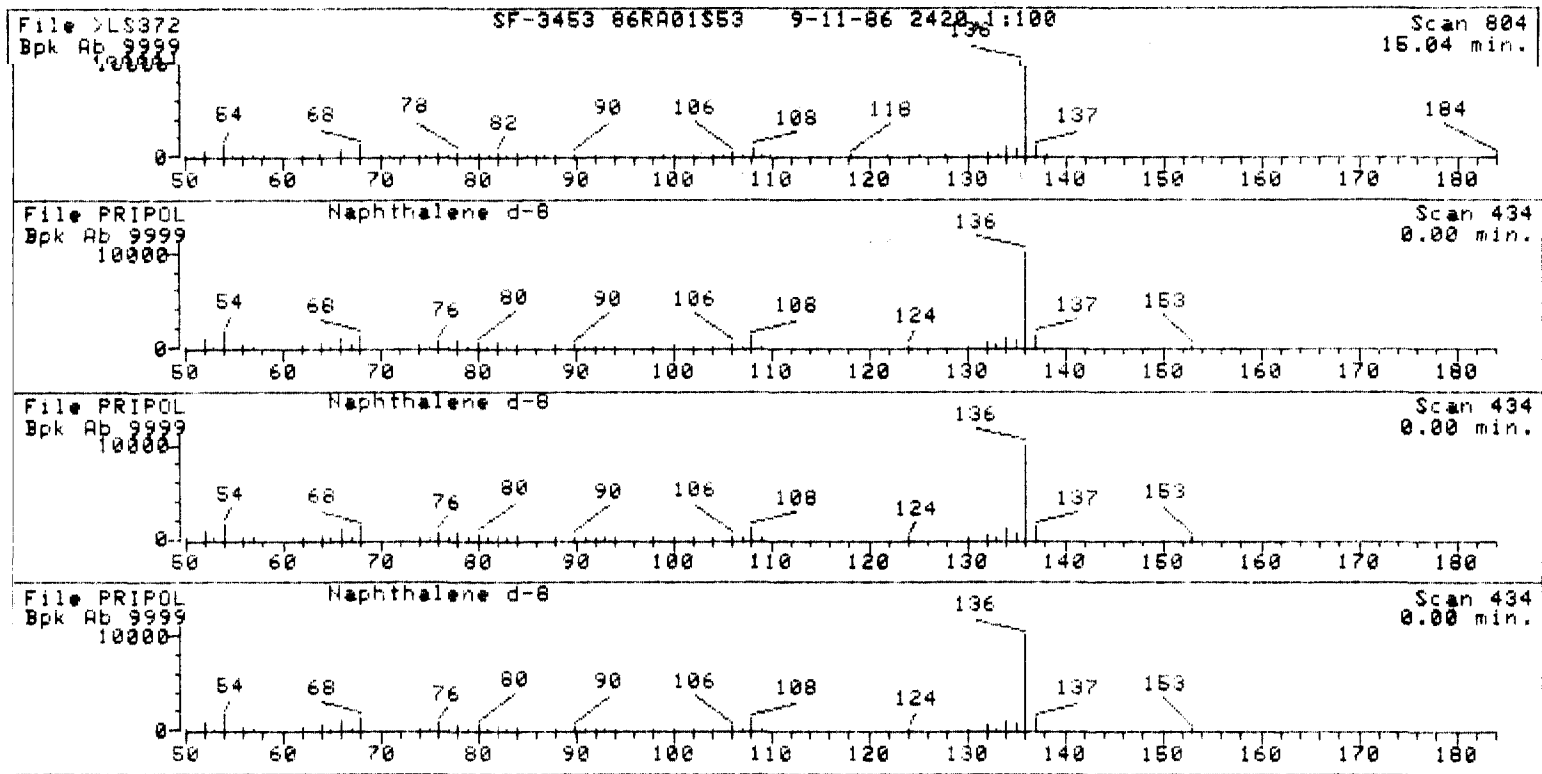
*han*



HC



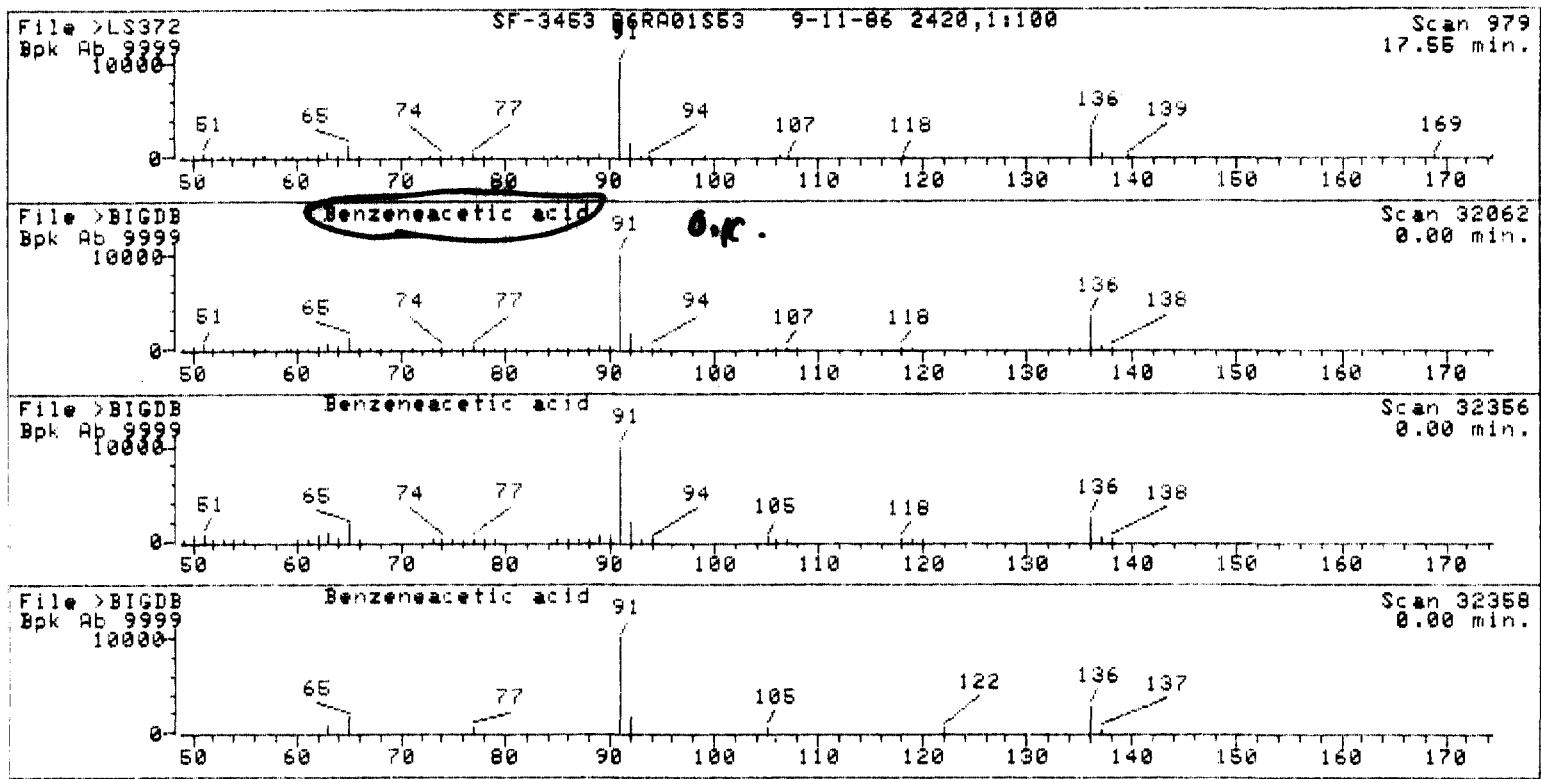
*Just*

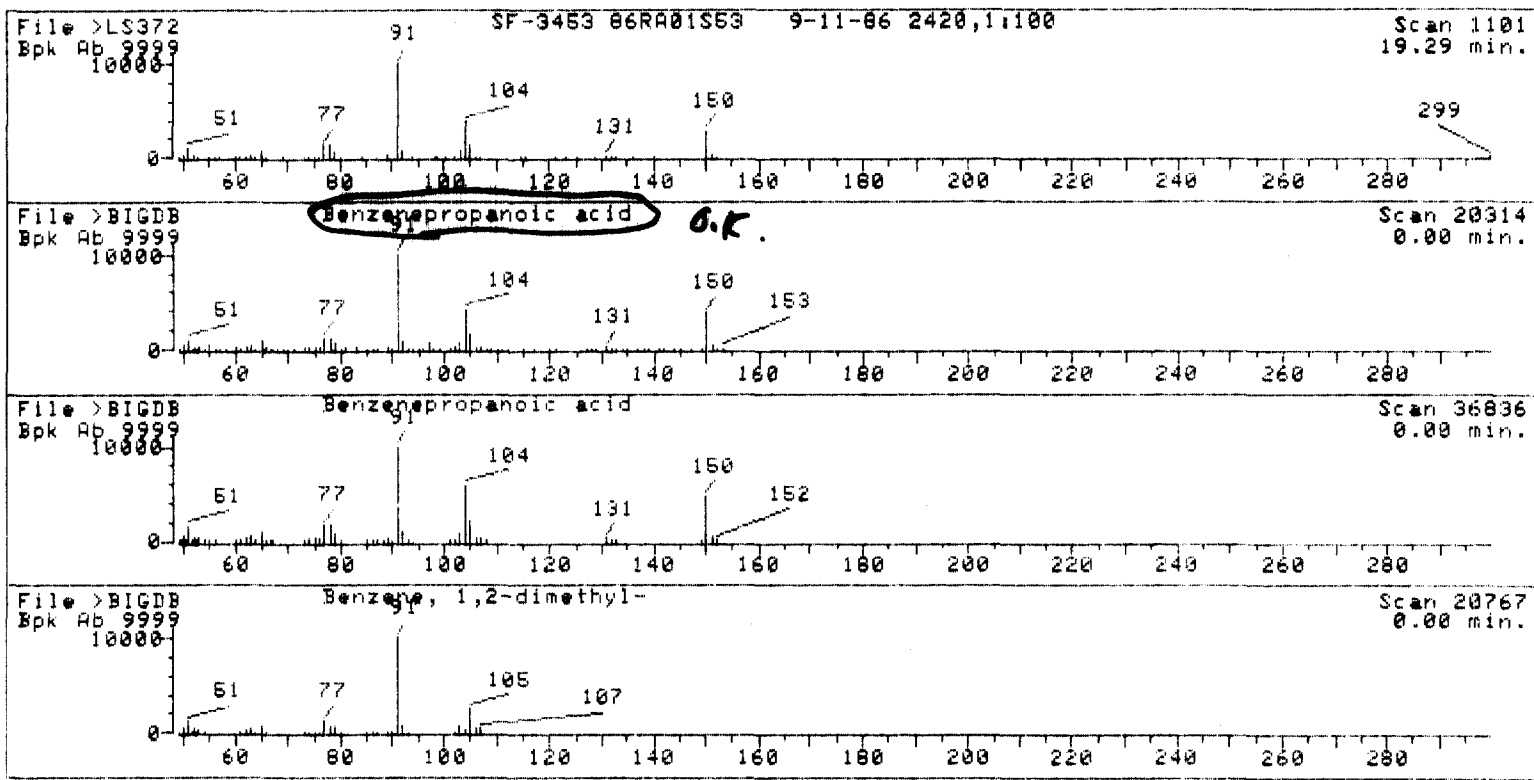




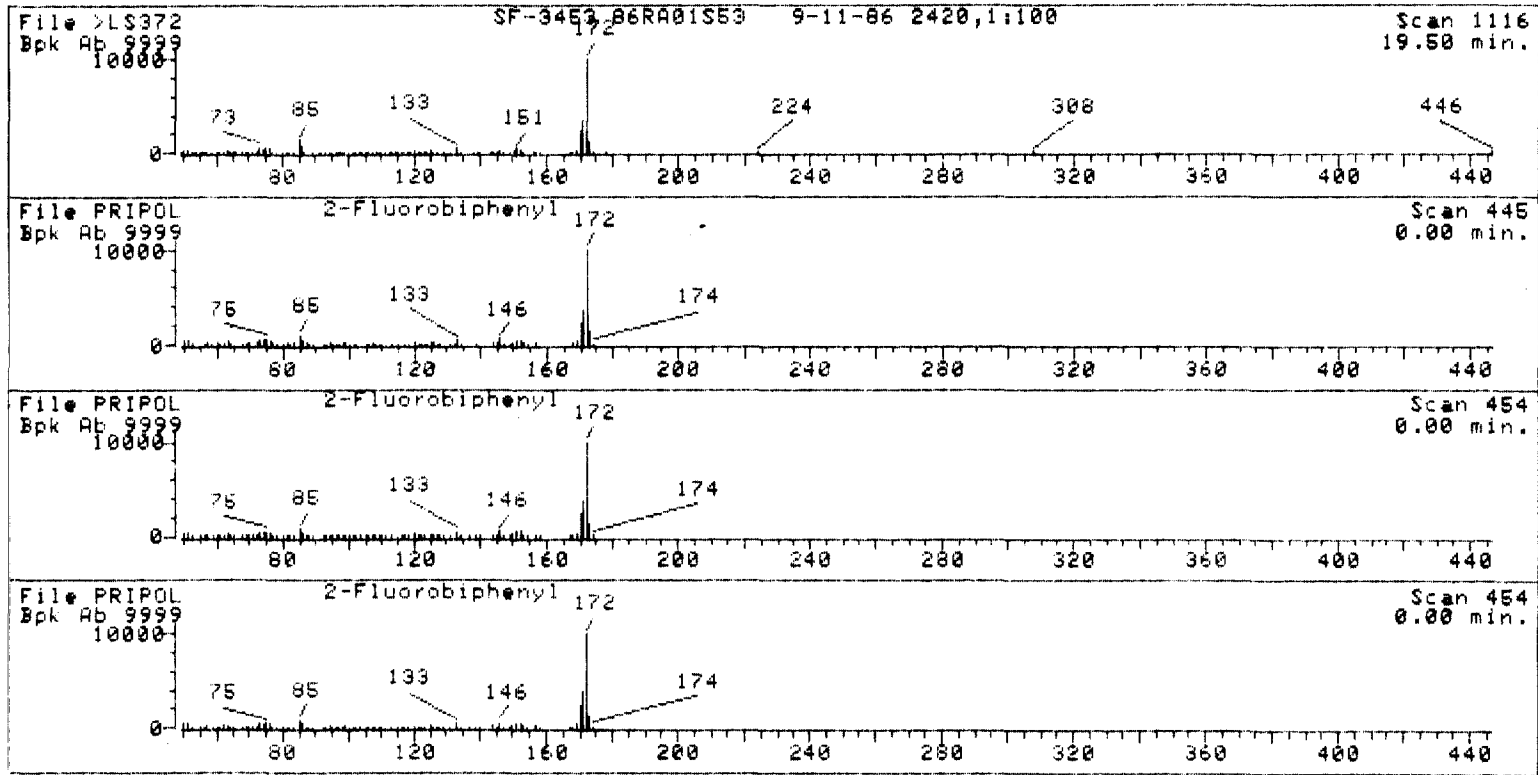


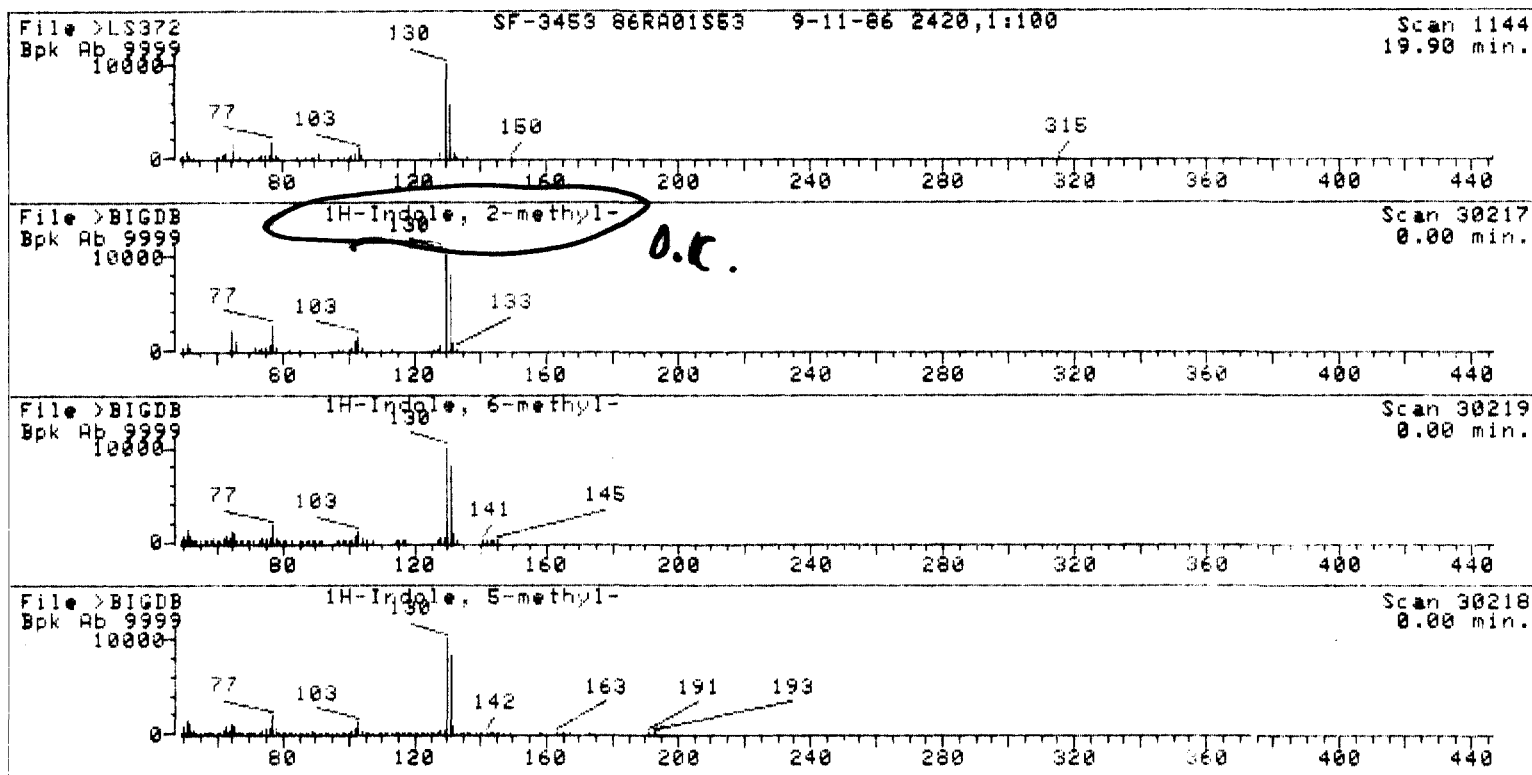
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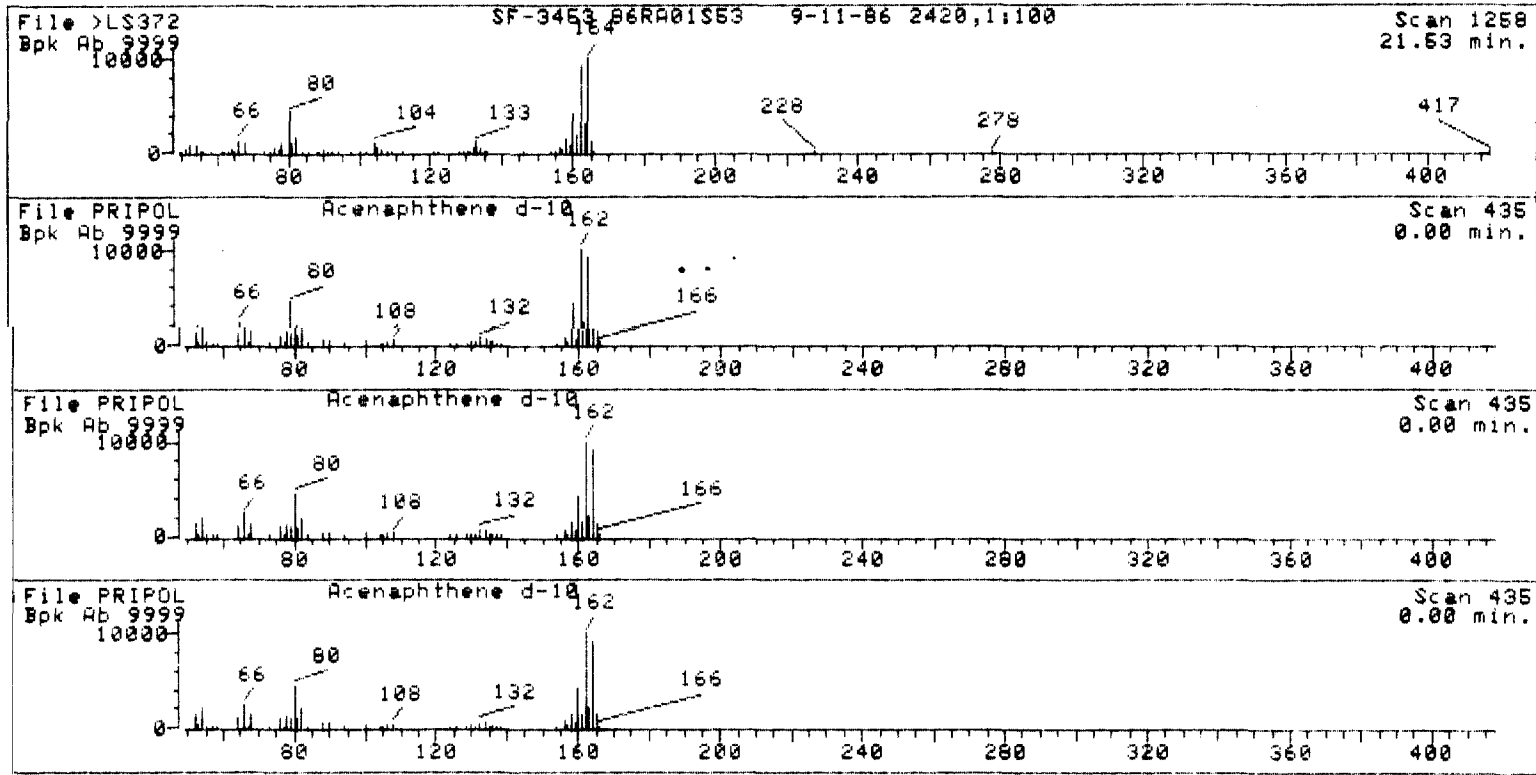


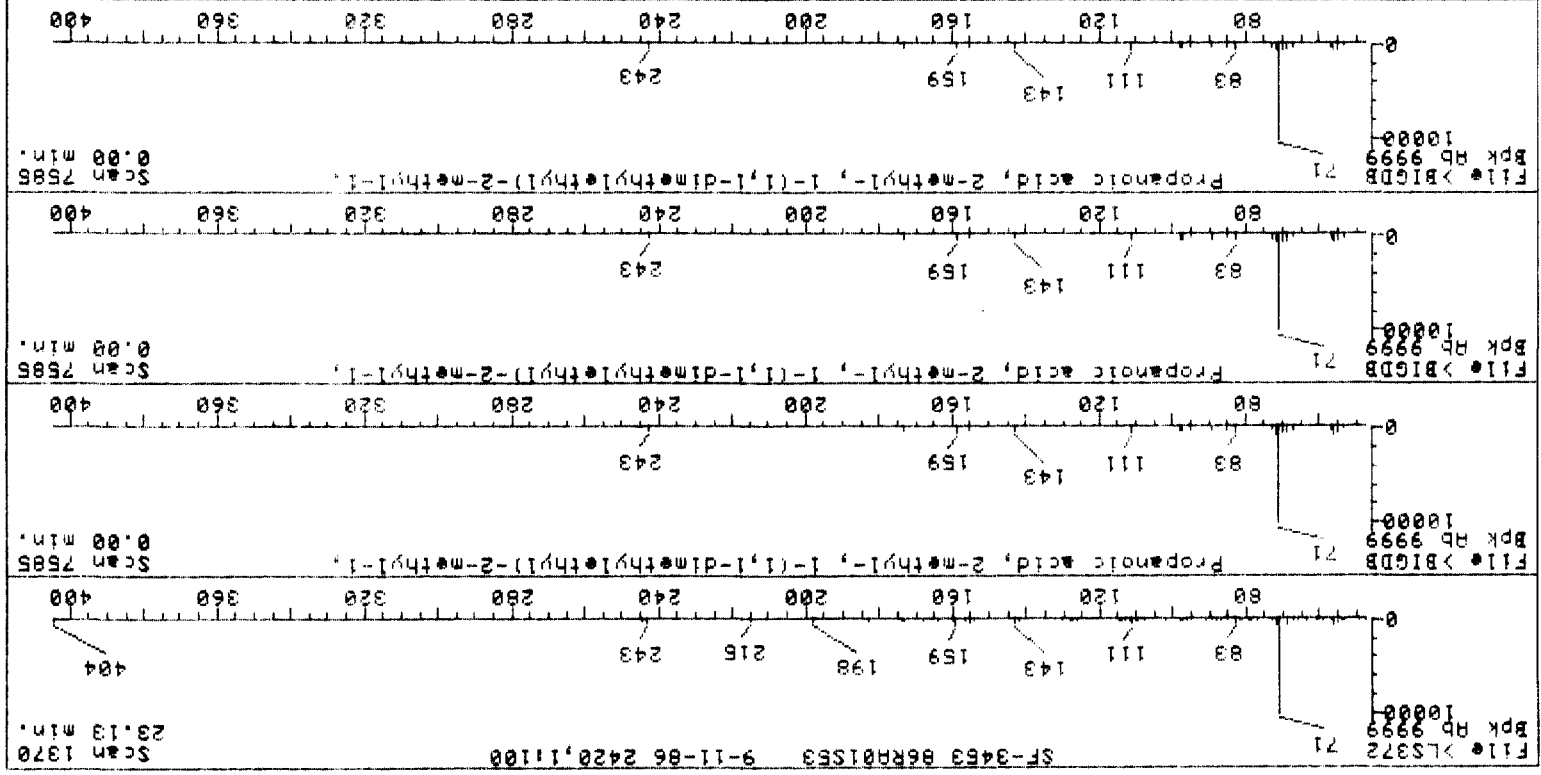
*Am*



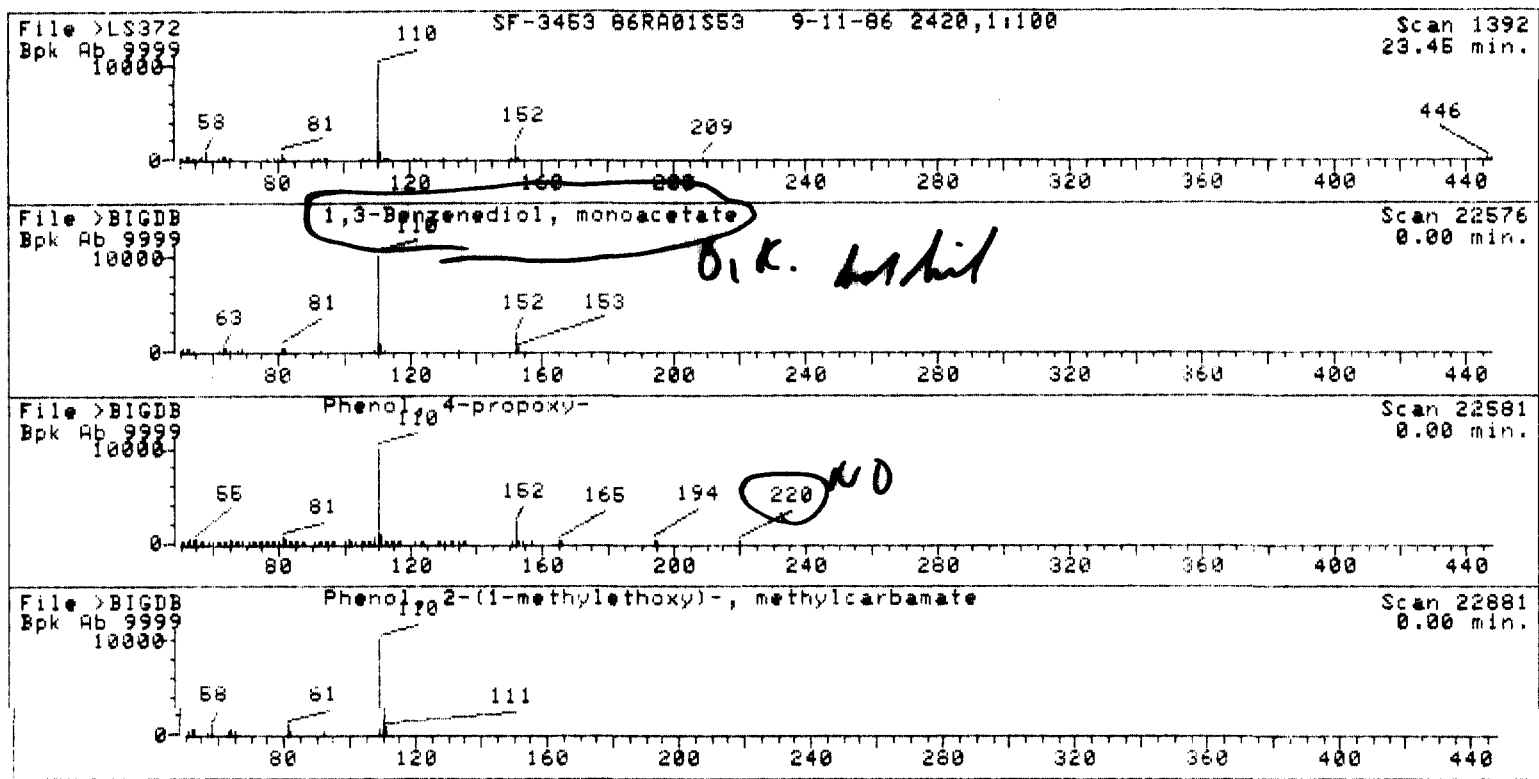


*Smith*



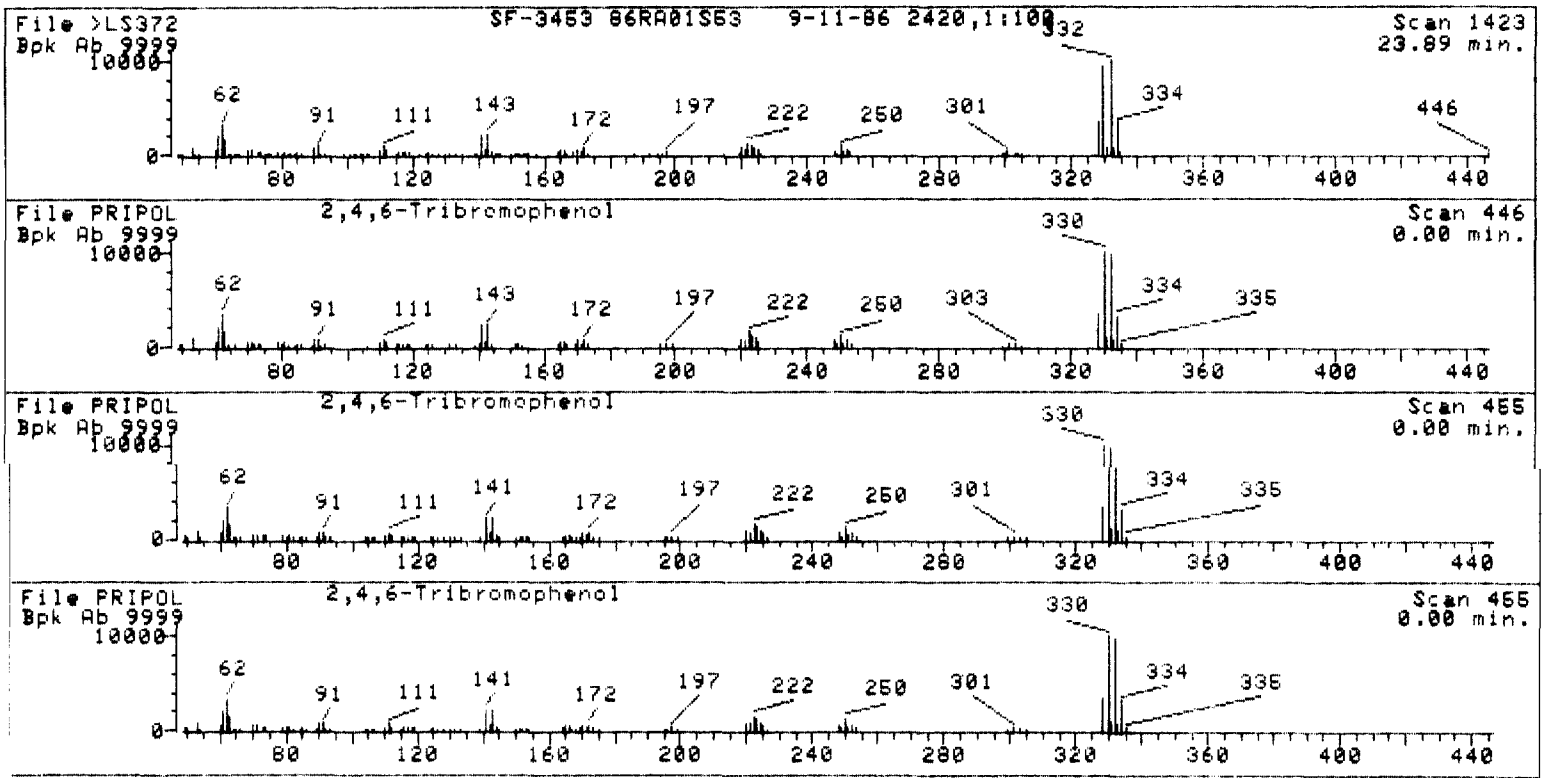


*J. B. Clark*

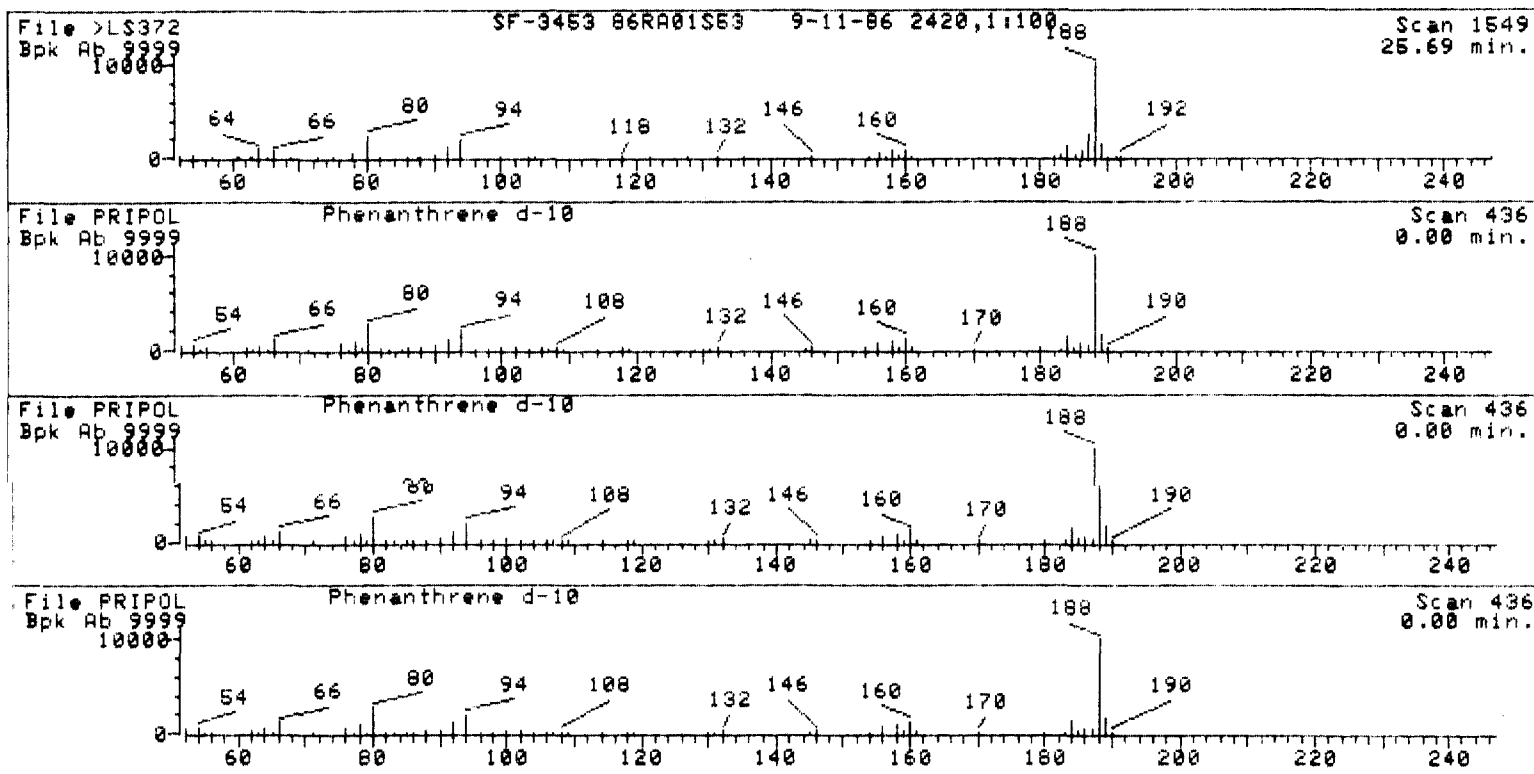




*Sam*



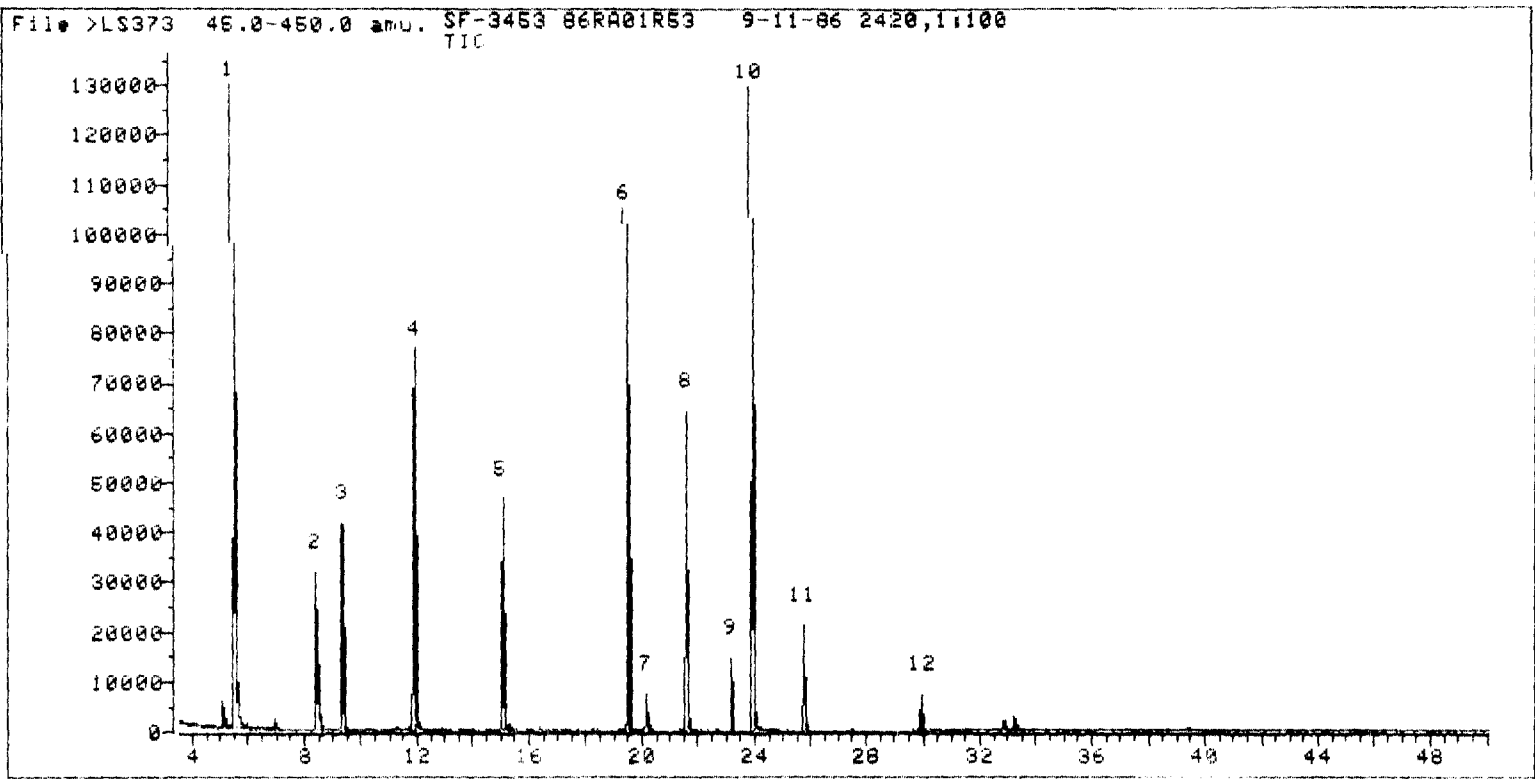
*Int'l*



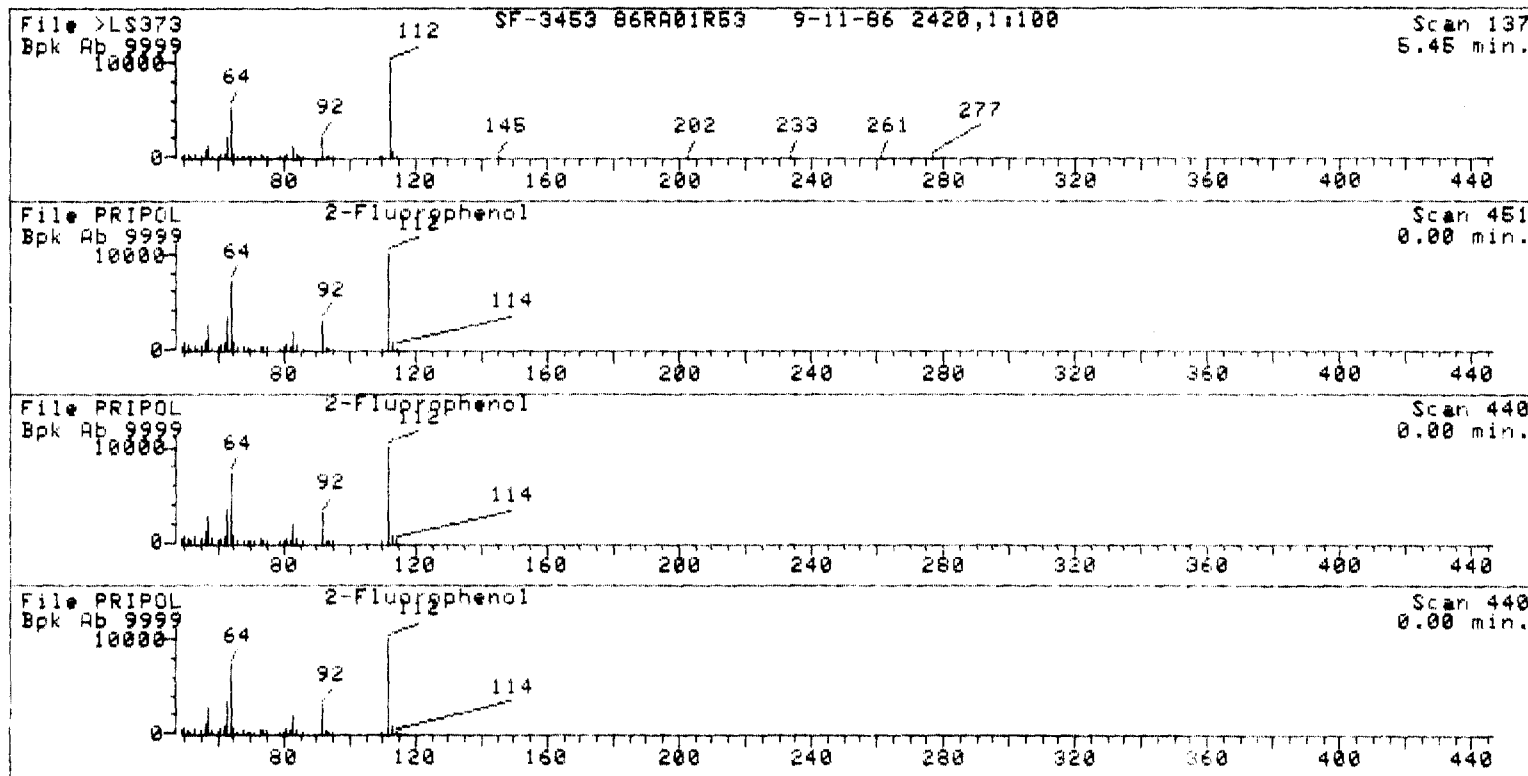
>LS373 SF-3453 86RA01R53 9-11-86 2420,1:100  
45.01 450.0 TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.455	133	137	159	129194	441606	421342	95.59	17.807
2	8.356	335	340	358	31764	161833	156169	35.43	6.600
3	9.285	400	405	417	41670	162646	158910	36.05	6.716
4	11.871	576	586	591	77614	332649	331079	75.11	13.993
5	15.014	799	806	814	46493	182974	179356	40.69	7.580
6	19.498	1114	1120	1126	105099	308863	307533	69.77	12.997
7	20.113	1159	1163	1171	7421	30443	29198	6.62	1.234
8	21.541	1256	1263	1274	64078	211769	209096	47.44	8.837
9	23.140	1370	1375	1379	14590	35789	35203	7.99	1.488
10	23.883	1421	1427	1437	129297	443208	440771	100.00	18.629
11	25.683	1546	1553	1563	21180	73692	73226	16.61	3.095
12	29.950	1844	1852	1859	7125	25640	24212	5.49	1.023

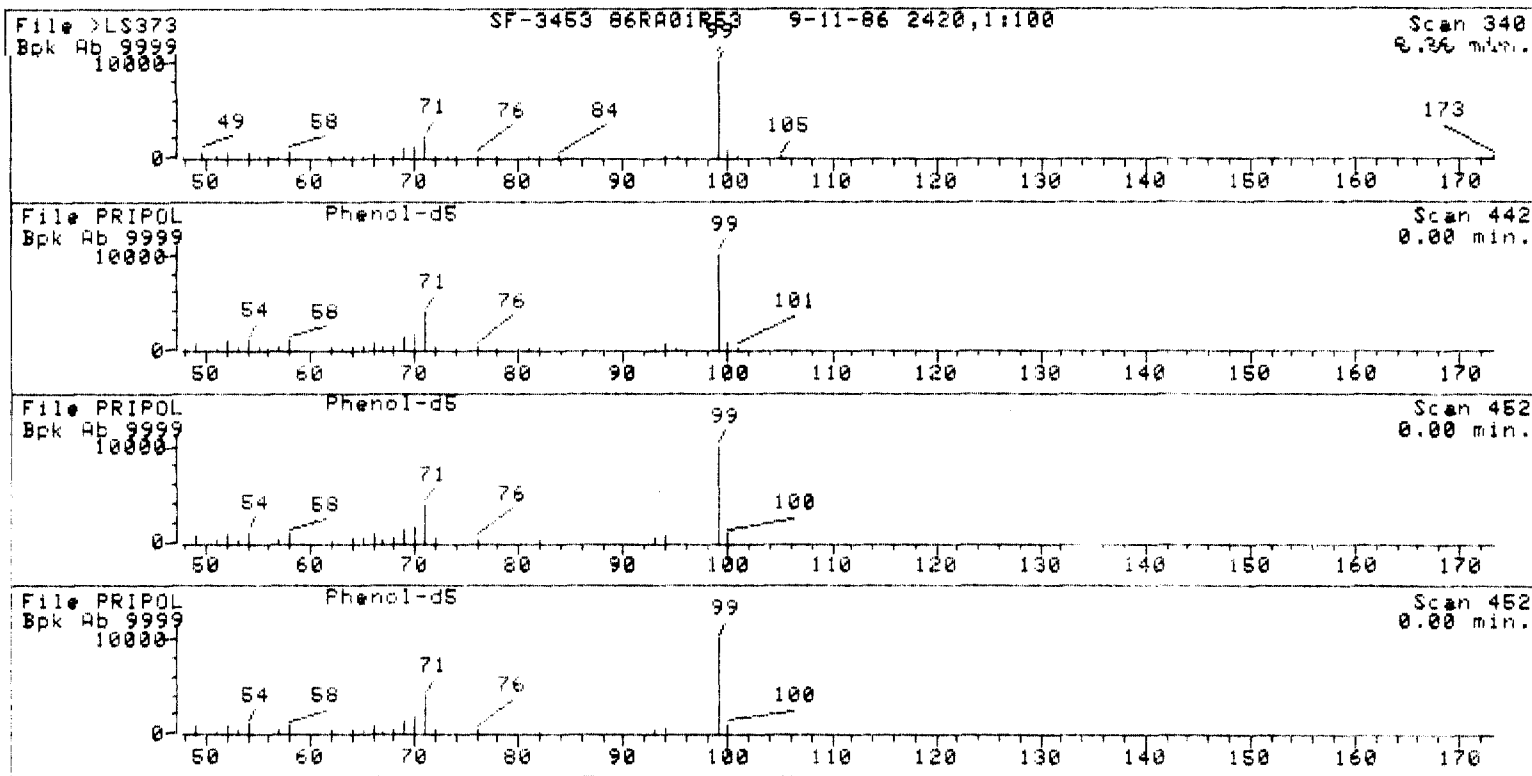
Sum of corrected areas: 2366095.



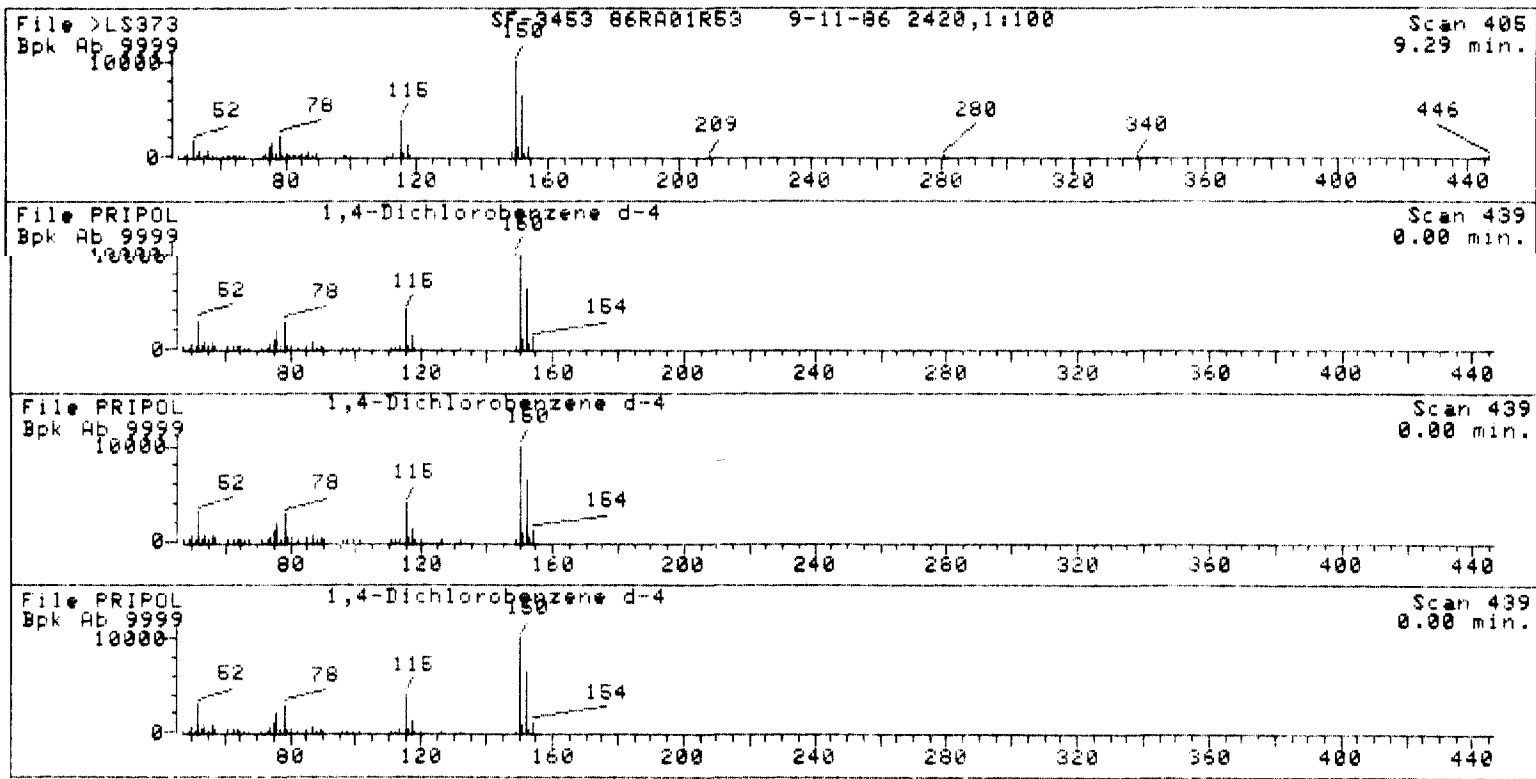
*Jan*



*Am*

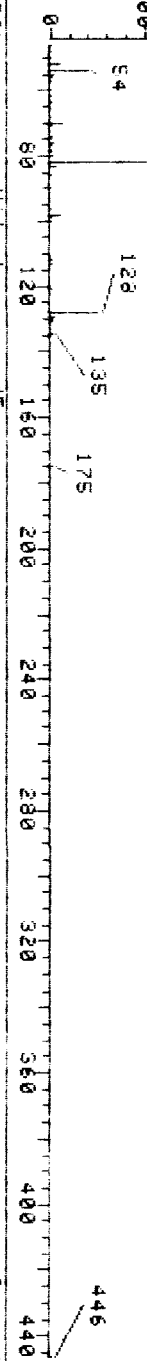


*Handwritten signature*

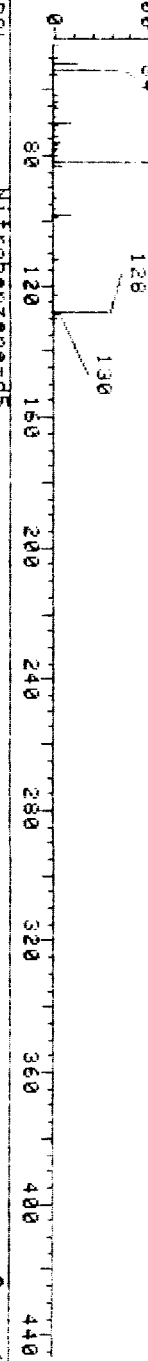


*Am*

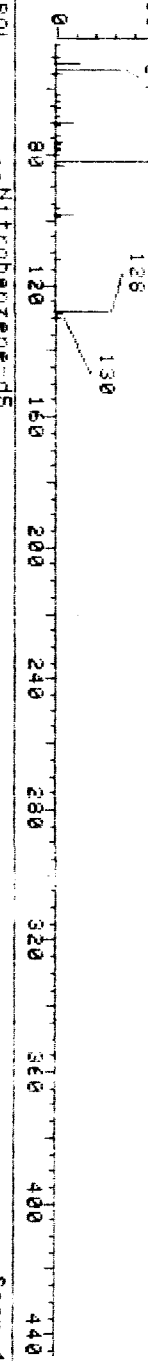
File XLS373 SF-3453 86RA01R53 9-11-86 2420.1:100 Scan 586  
Bpk Rp 9999 11.87 min.  
Bpk Rp 10000



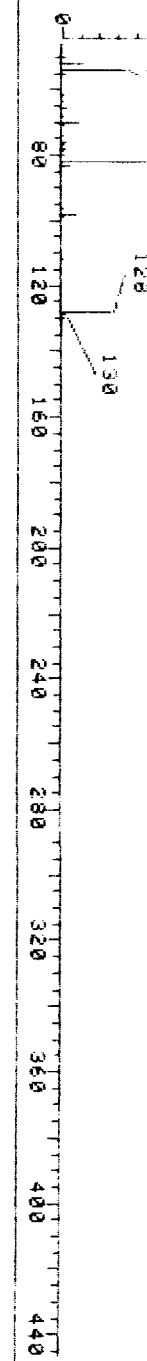
File PRIPOL Scan 453  
Bpk Rp 9999 0.00 min.  
Bpk Rp 10000



File PRIPOL Scan 444  
Bpk Rp 9999 0.00 min.  
Bpk Rp 10000

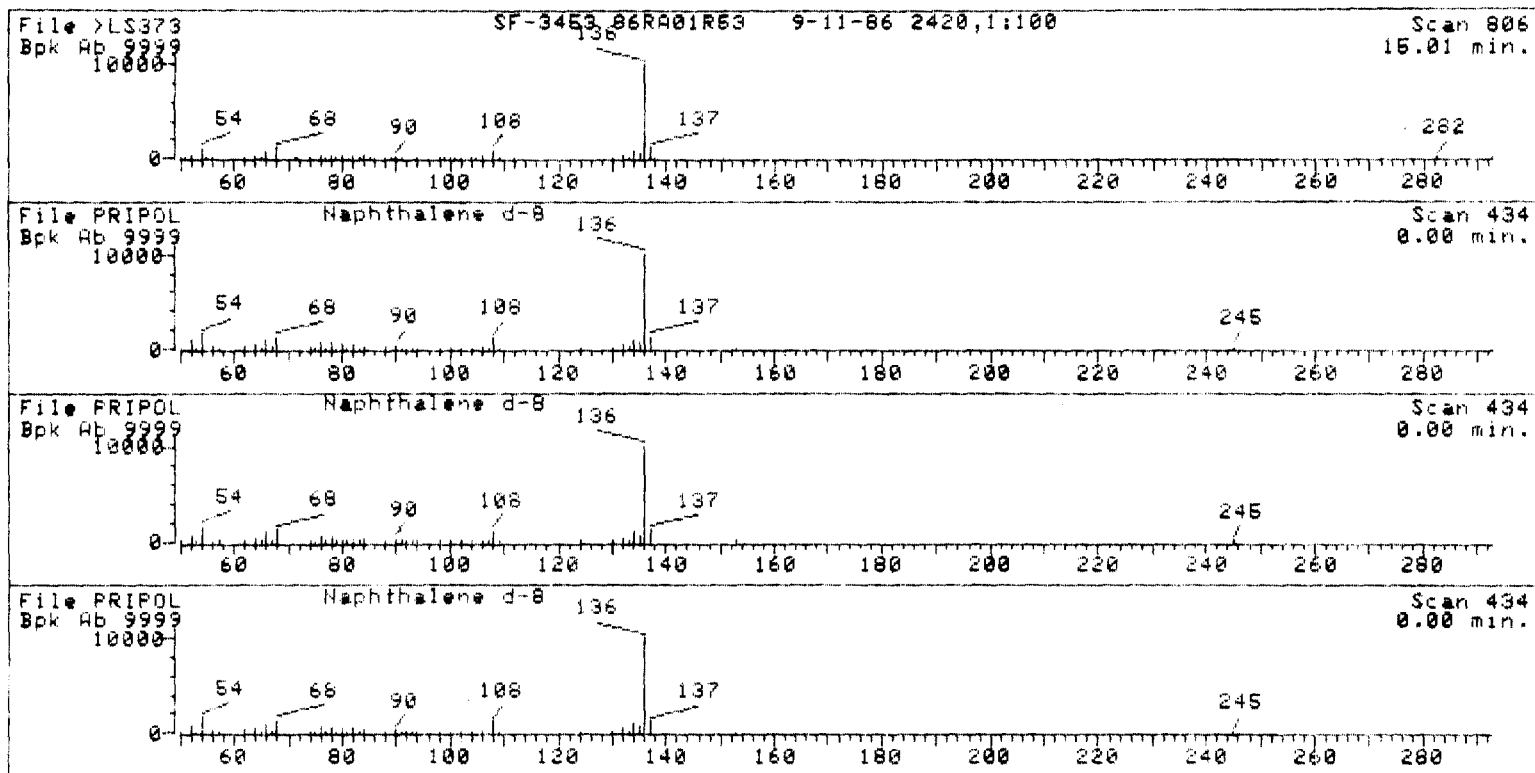


File PRIPOL Scan 444  
Bpk Rp 9999 0.00 min.  
Bpk Rp 10000

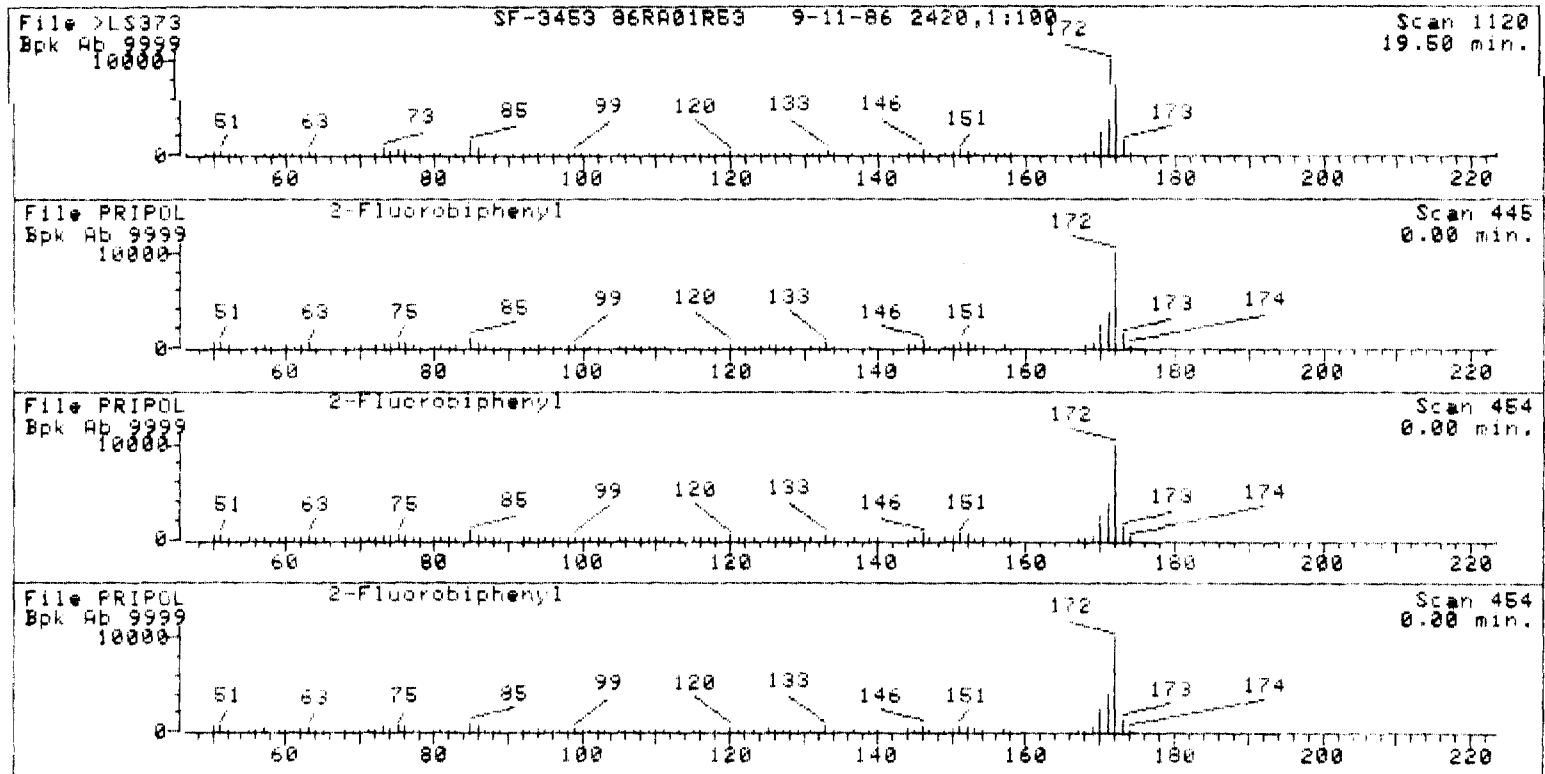


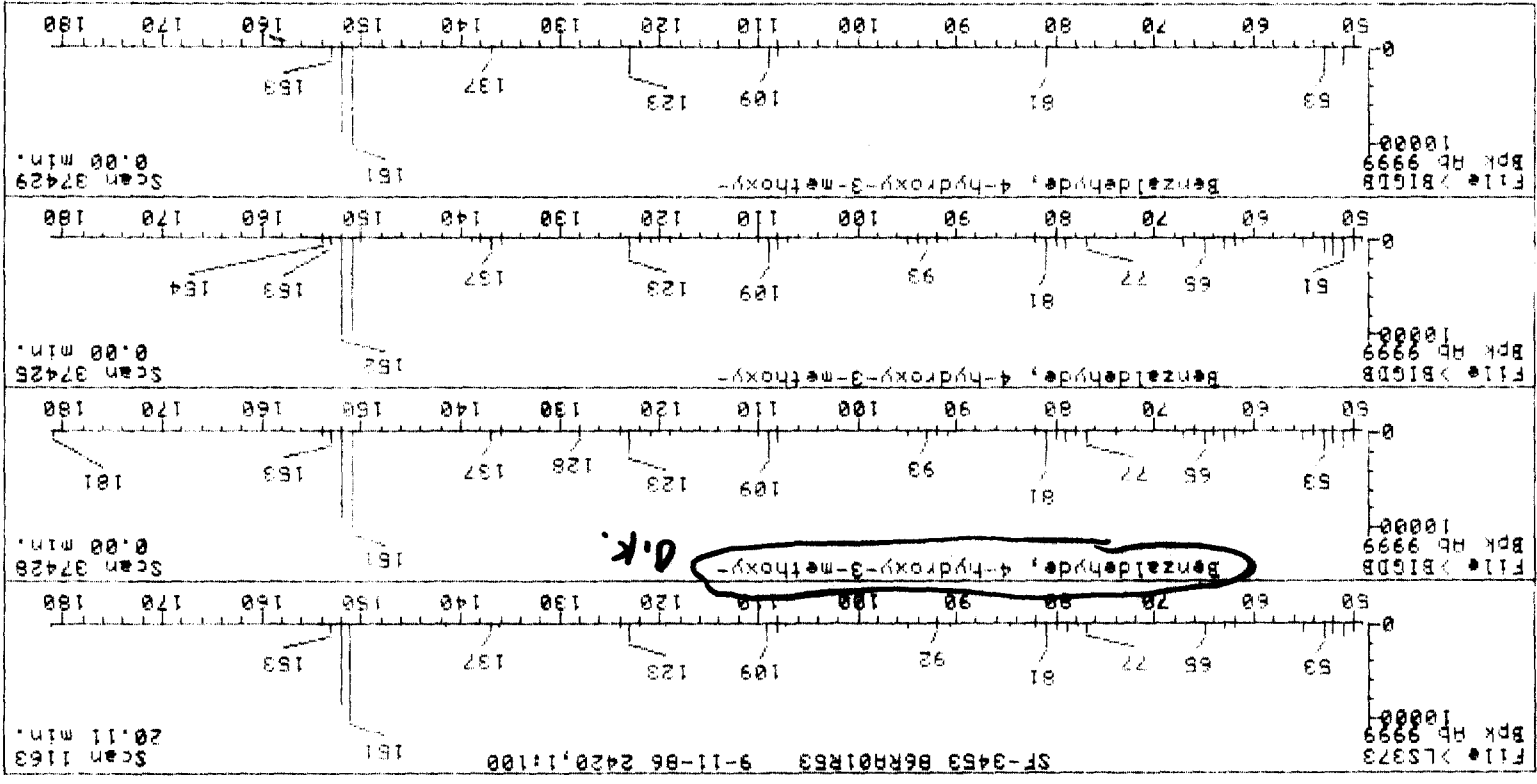


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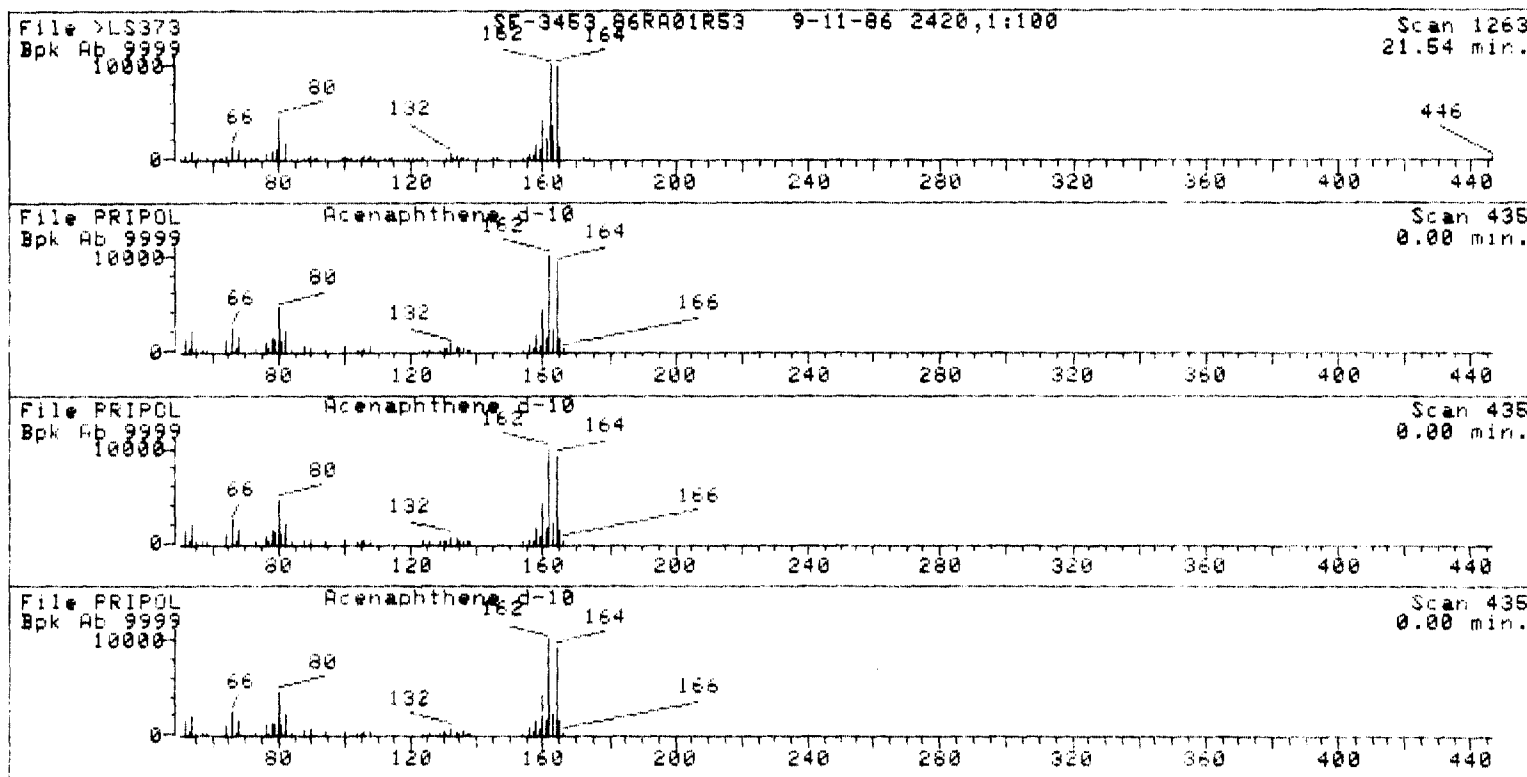


*Am*

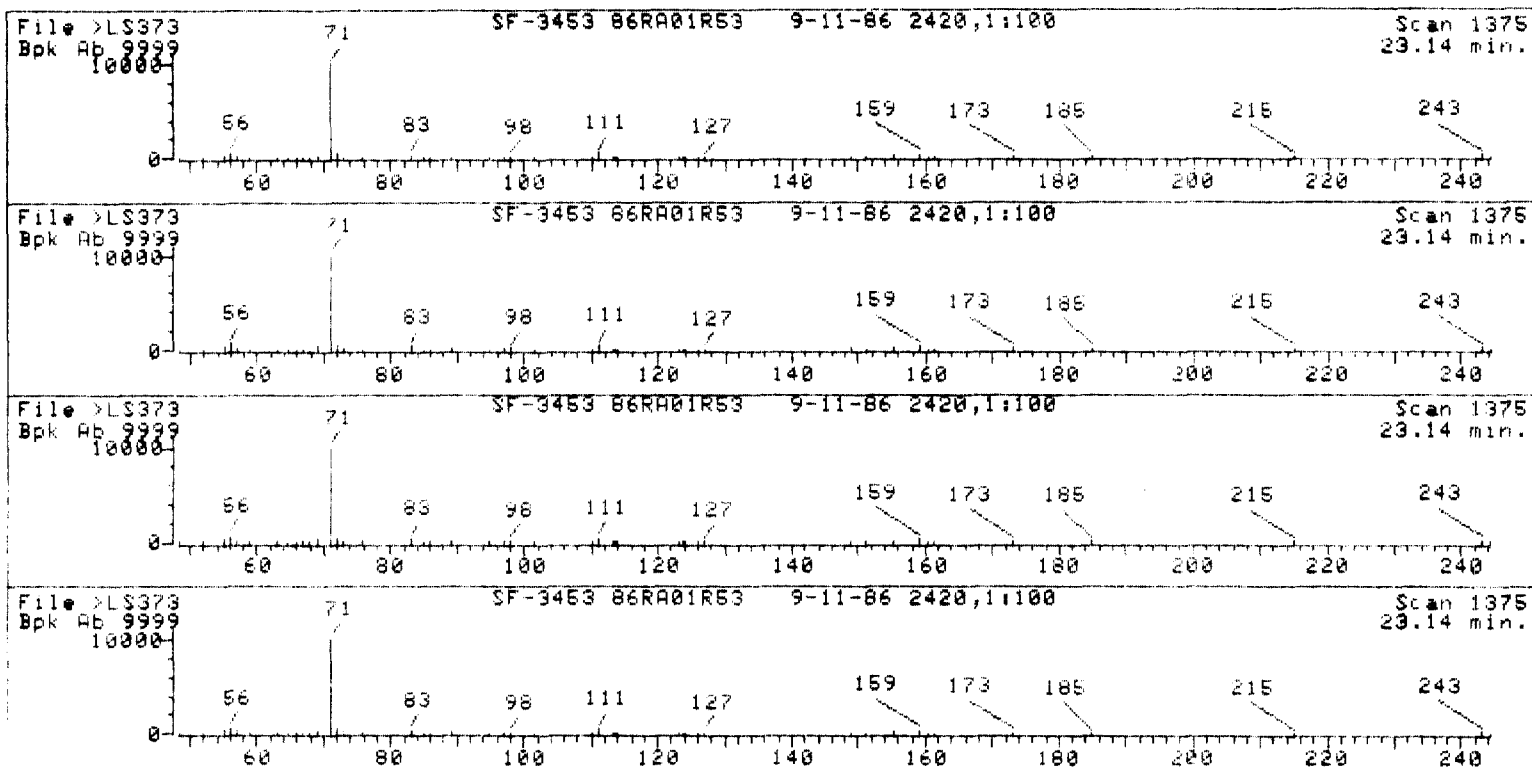




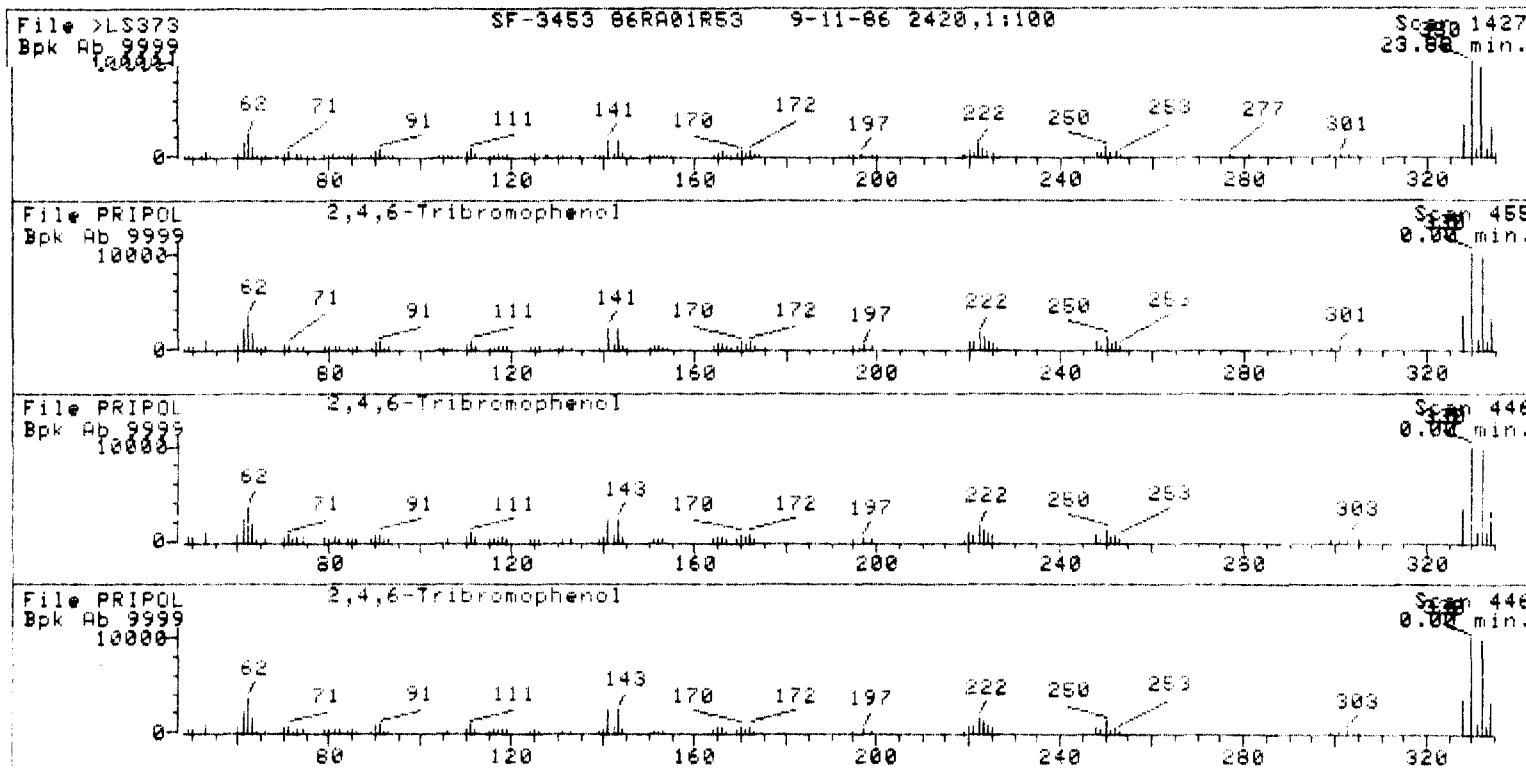
*Intel*



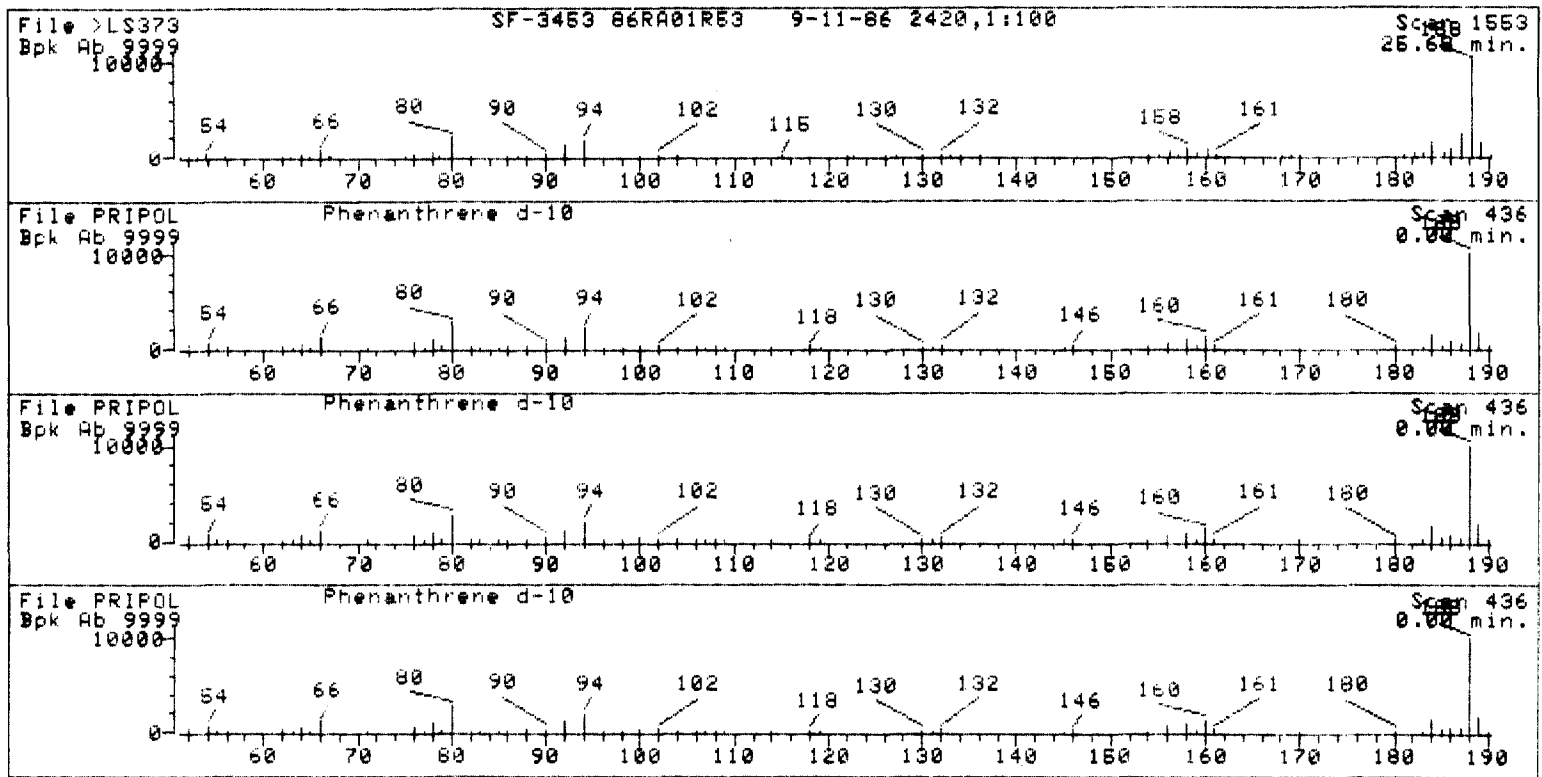
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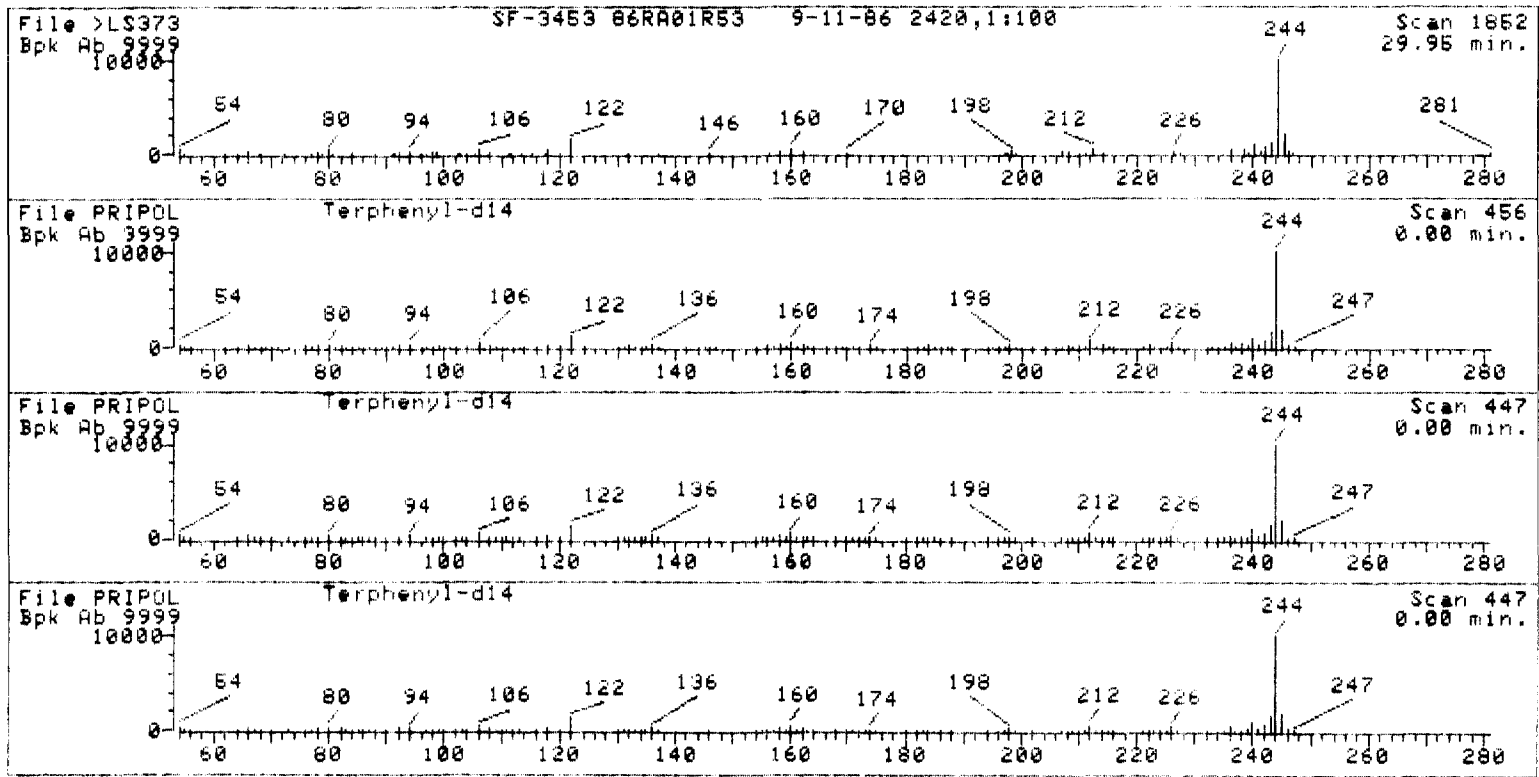
*Sm*



*Handwritten signature*



*sun*

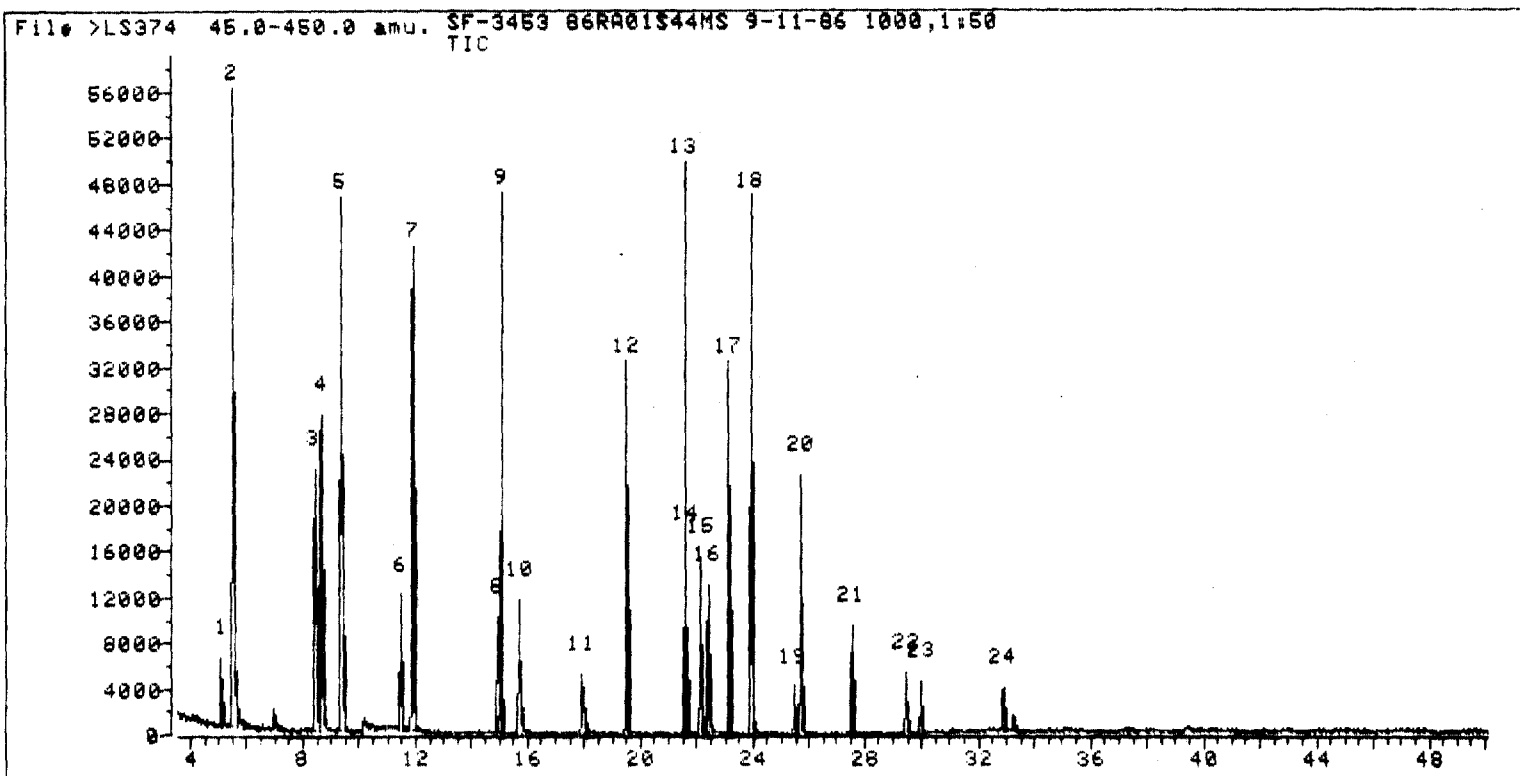




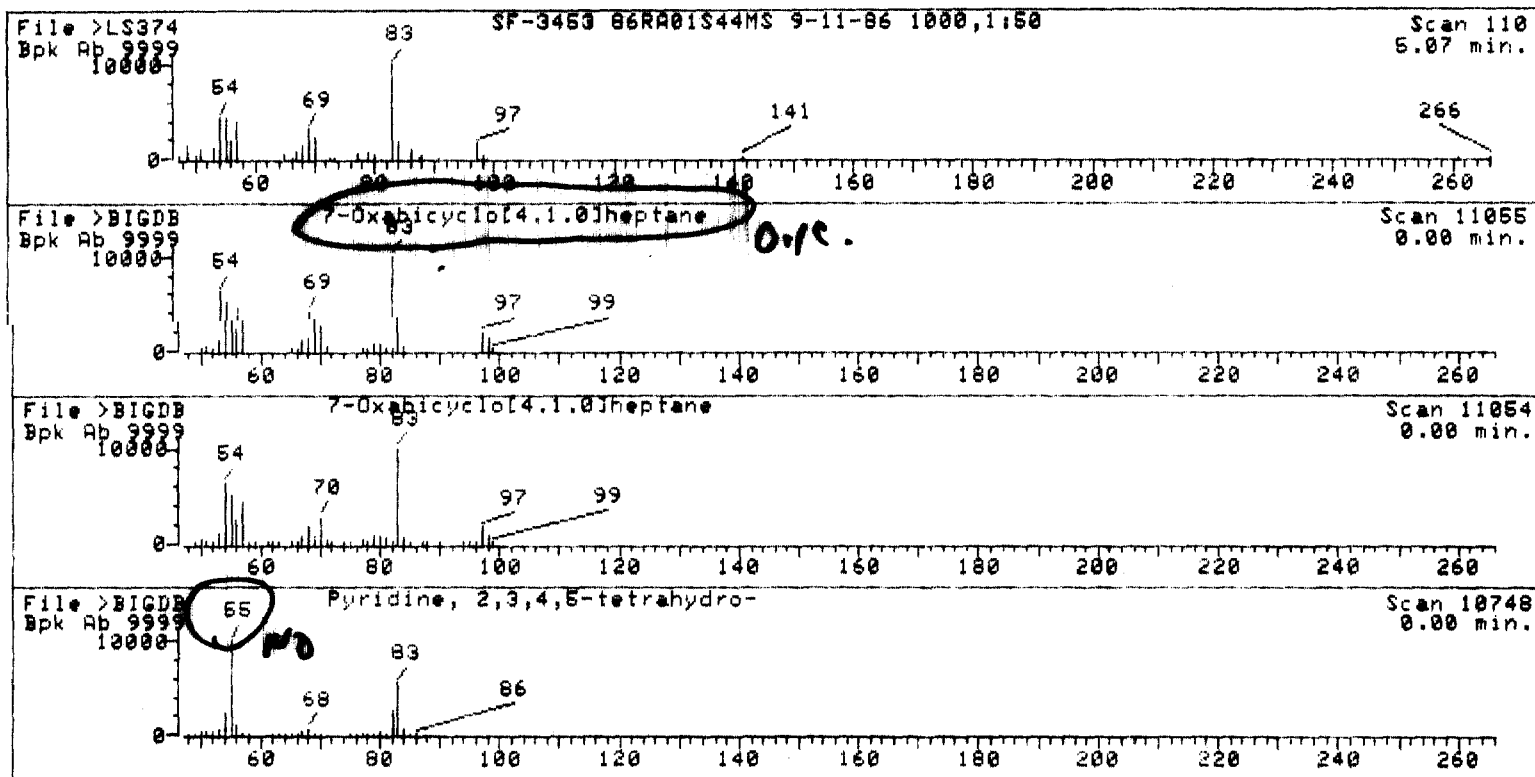
>LS374 SF-3453 86RA01S44MS 9-11-86 1000,1:50  
 45.01 450.0 TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.069	106	110	115	5957	22064	16319	8.02	.847
2	5.455	133	137	149	55568	197606	186467	91.61	9.679
3	8.370	336	341	356	22854	129983	123925	60.88	6.433
4	8.656	356	361	370	27008	104872	94222	46.29	4.891
5	9.313	402	407	419	46458	210405	203544	100.00	10.565
6	11.456	552	557	562	11817	45871	42019	20.64	2.181
7	11.871	579	586	596	42189	163472	158091	77.67	8.206
8	14.884	792	797	802	10122	43625	41531	20.40	2.156
9	15.041	802	808	817	47039	182158	180202	88.53	9.354
10	15.684	847	853	868	11741	51959	50176	24.65	2.604
11	17.911	1004	1009	1019	5271	32863	32529	15.98	1.688
12	19.496	1114	1120	1125	32549	93984	93824	46.10	4.870
13	21.537	1257	1263	1267	49785	164634	163788	80.47	8.502
14	21.623	1267	1269	1278	16634	48212	47533	23.35	2.467
15	22.109	1297	1303	1310	15429	50094	49280	24.21	2.558
16	22.366	1317	1321	1335	12923	48943	46364	22.78	2.407
17	23.137	1370	1375	1380	32317	77500	76119	37.40	3.951
18	23.879	1421	1427	1434	46869	152389	151383	74.37	7.858
19	25.407	1529	1534	1540	4183	15457	15032	7.39	.780
20	25.693	1549	1554	1561	22271	76797	73450	36.09	3.813
21	27.505	1677	1681	1689	9469	27140	26173	12.86	1.359
22	29.460	1813	1818	1824	5406	22256	21125	10.38	1.097
23	29.946	1846	1852	1859	4605	15753	14638	7.19	.760
24	32.859	2049	2056	2061	3719	23303	18782	9.23	.975

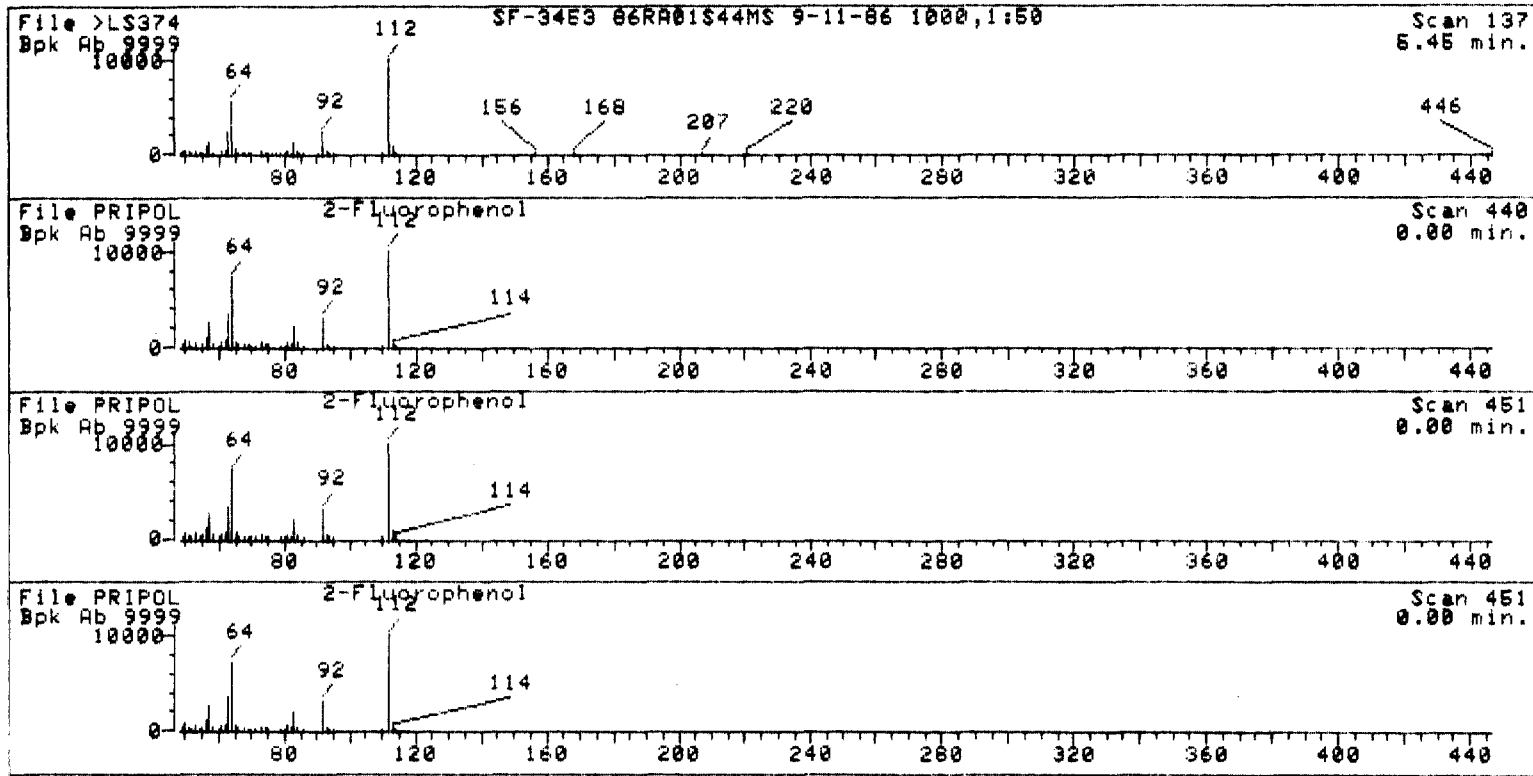
Sum of corrected areas: 1926516.



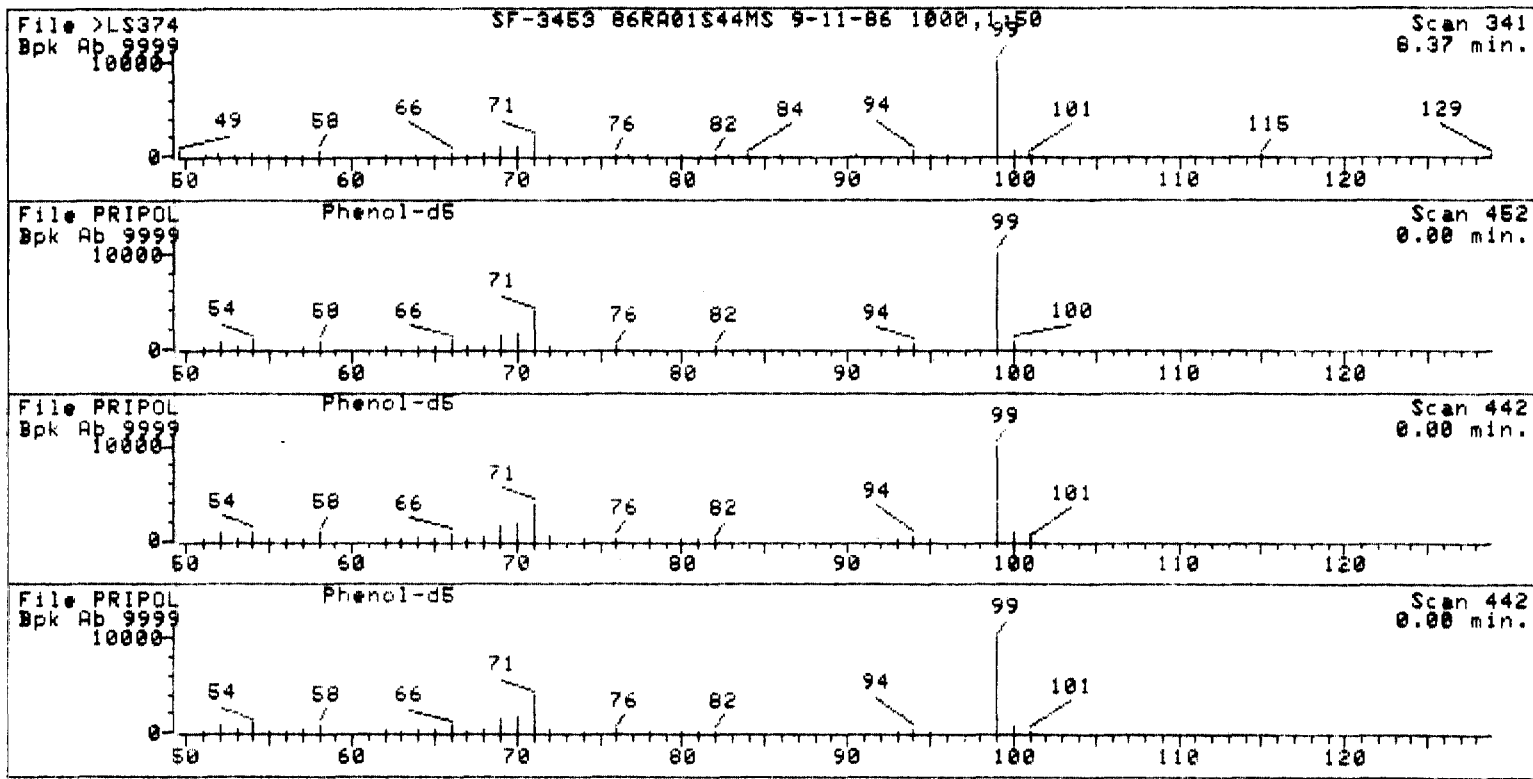
204



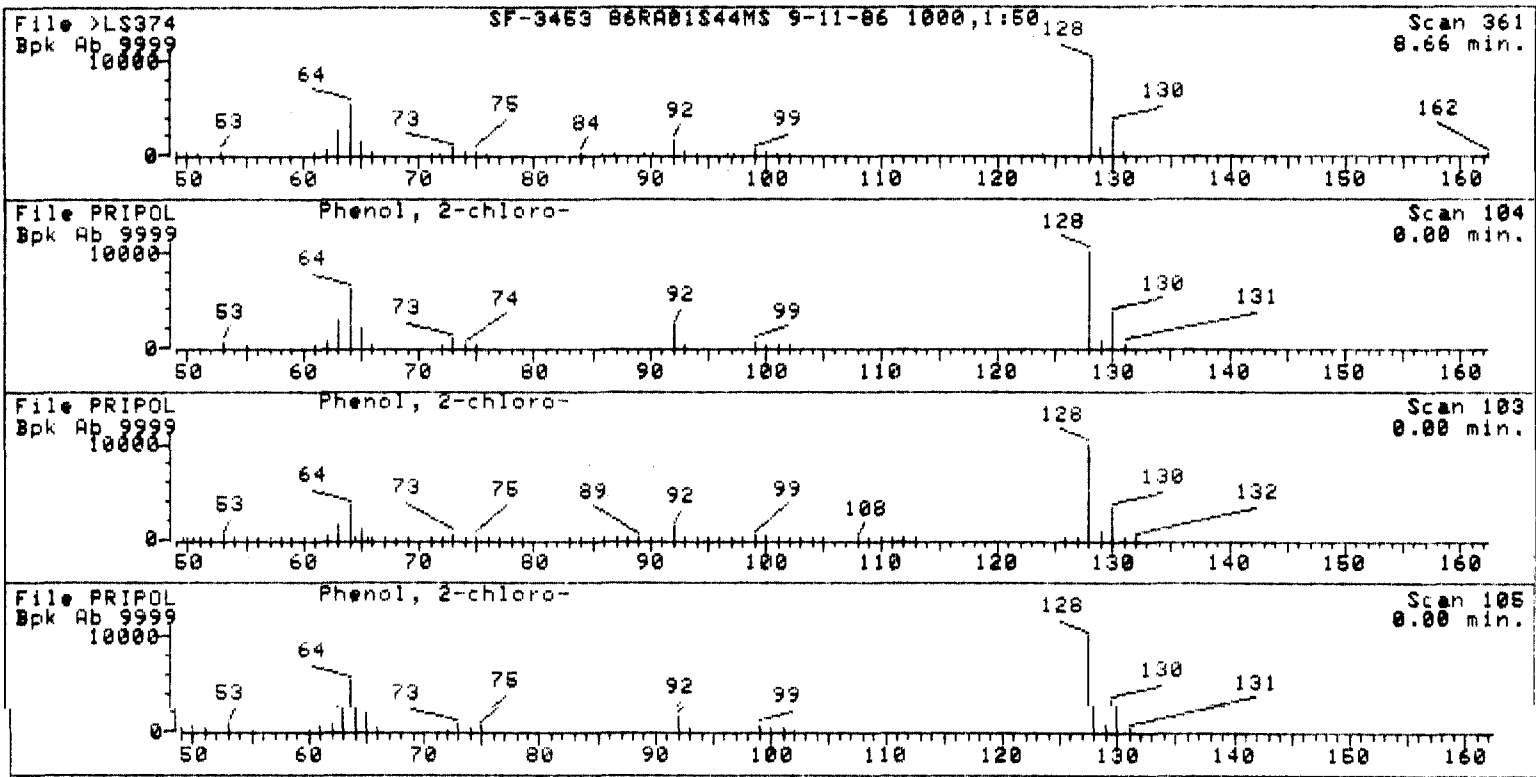
*Sm*



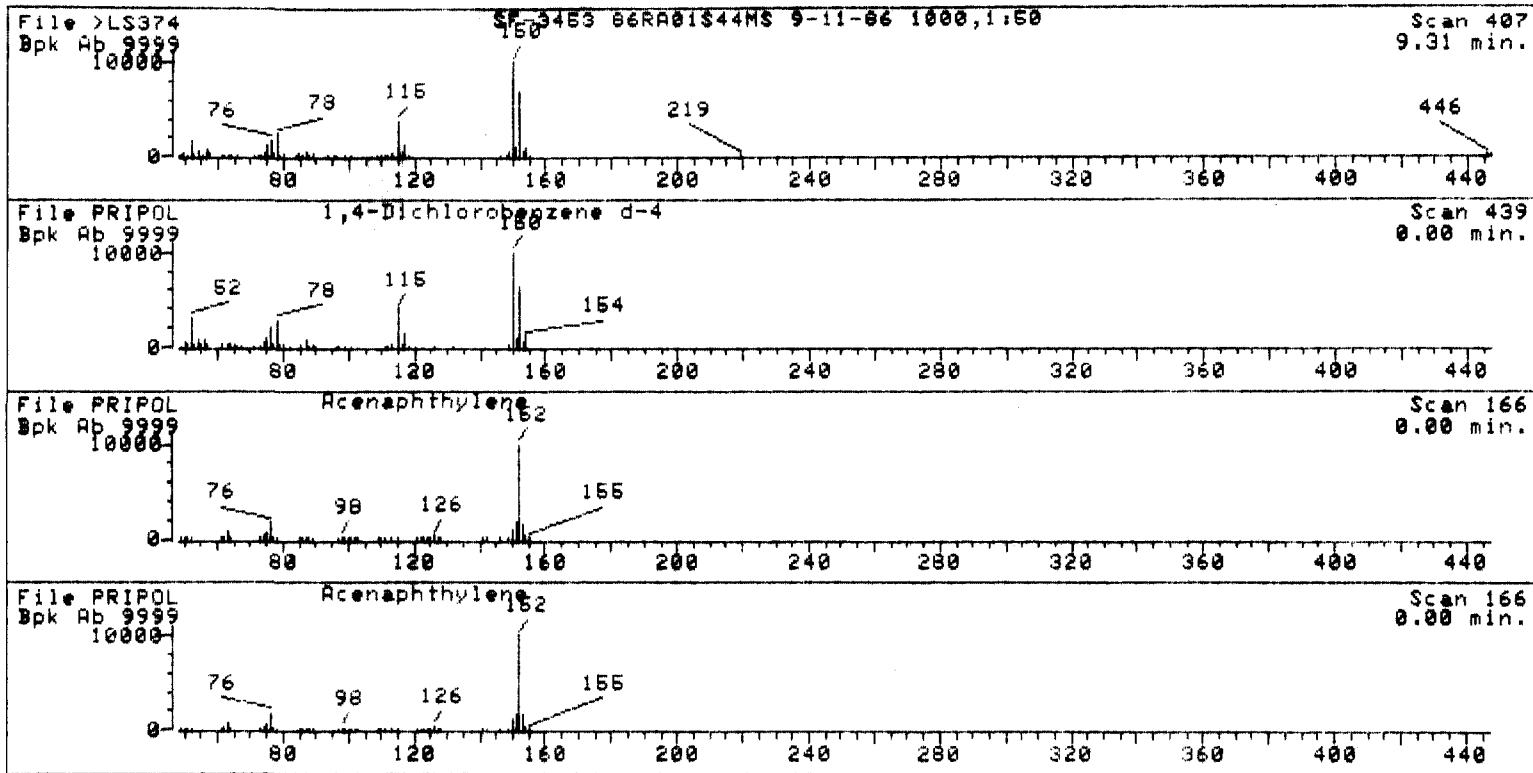
*Sm*



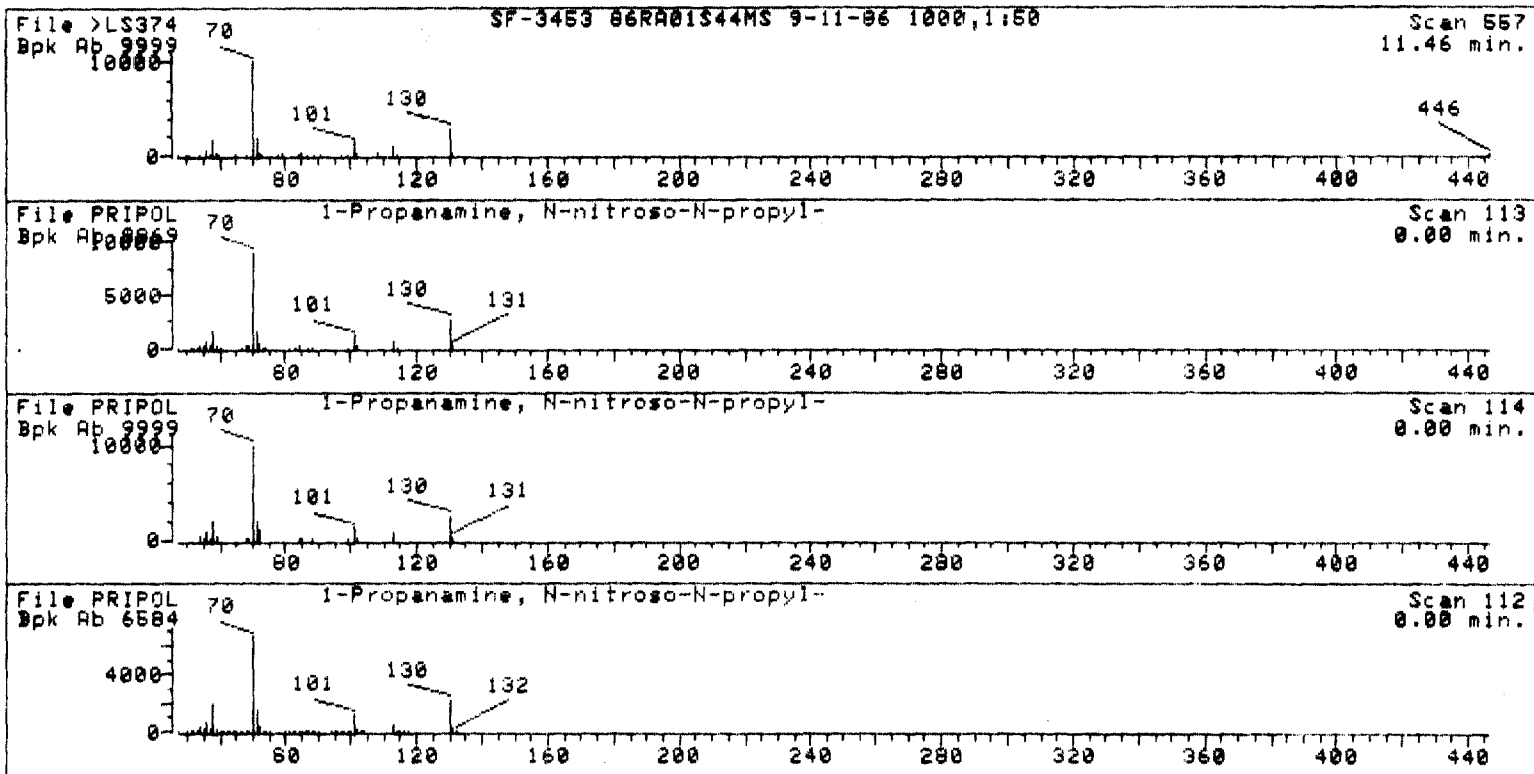
*File*



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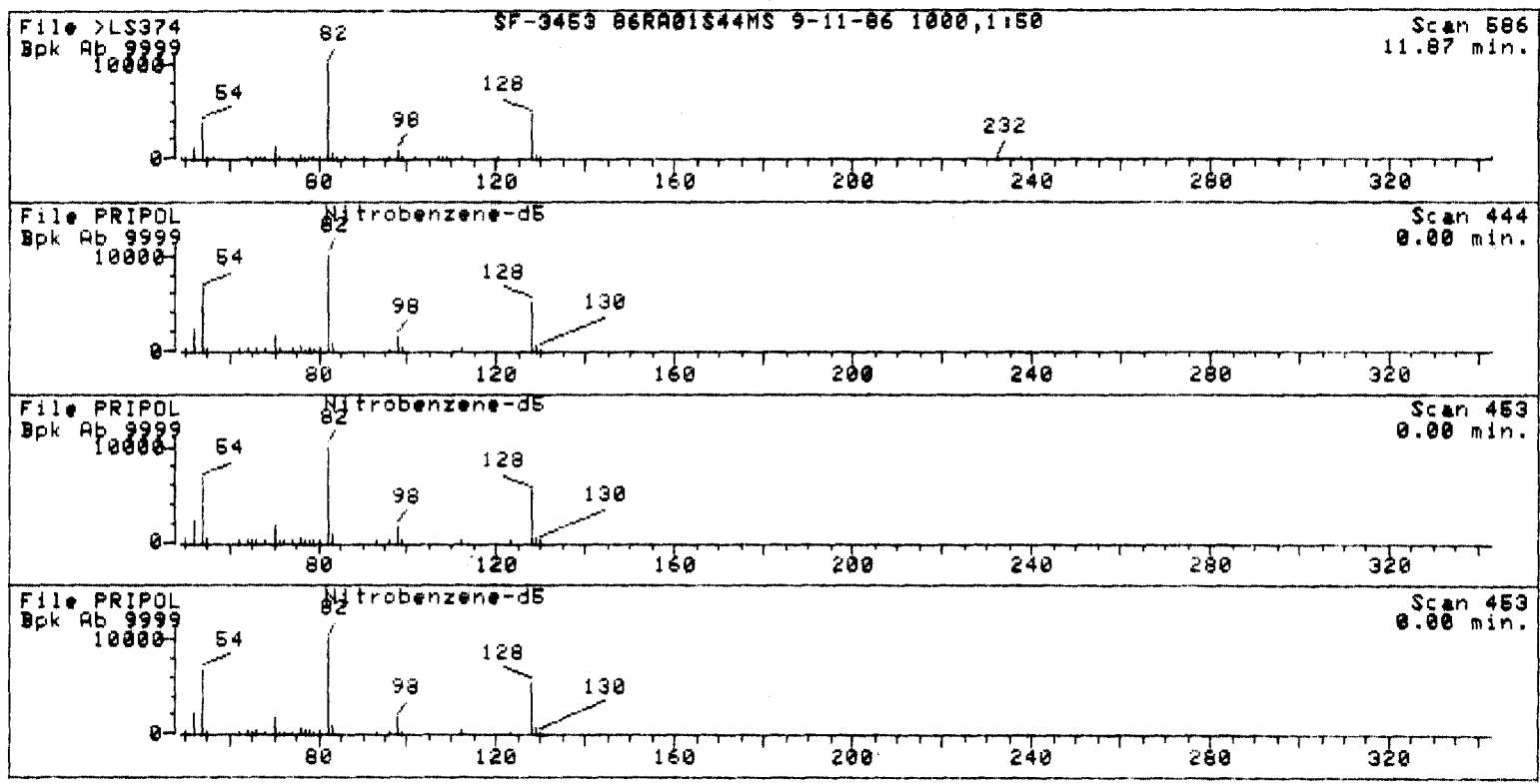


*Spide*

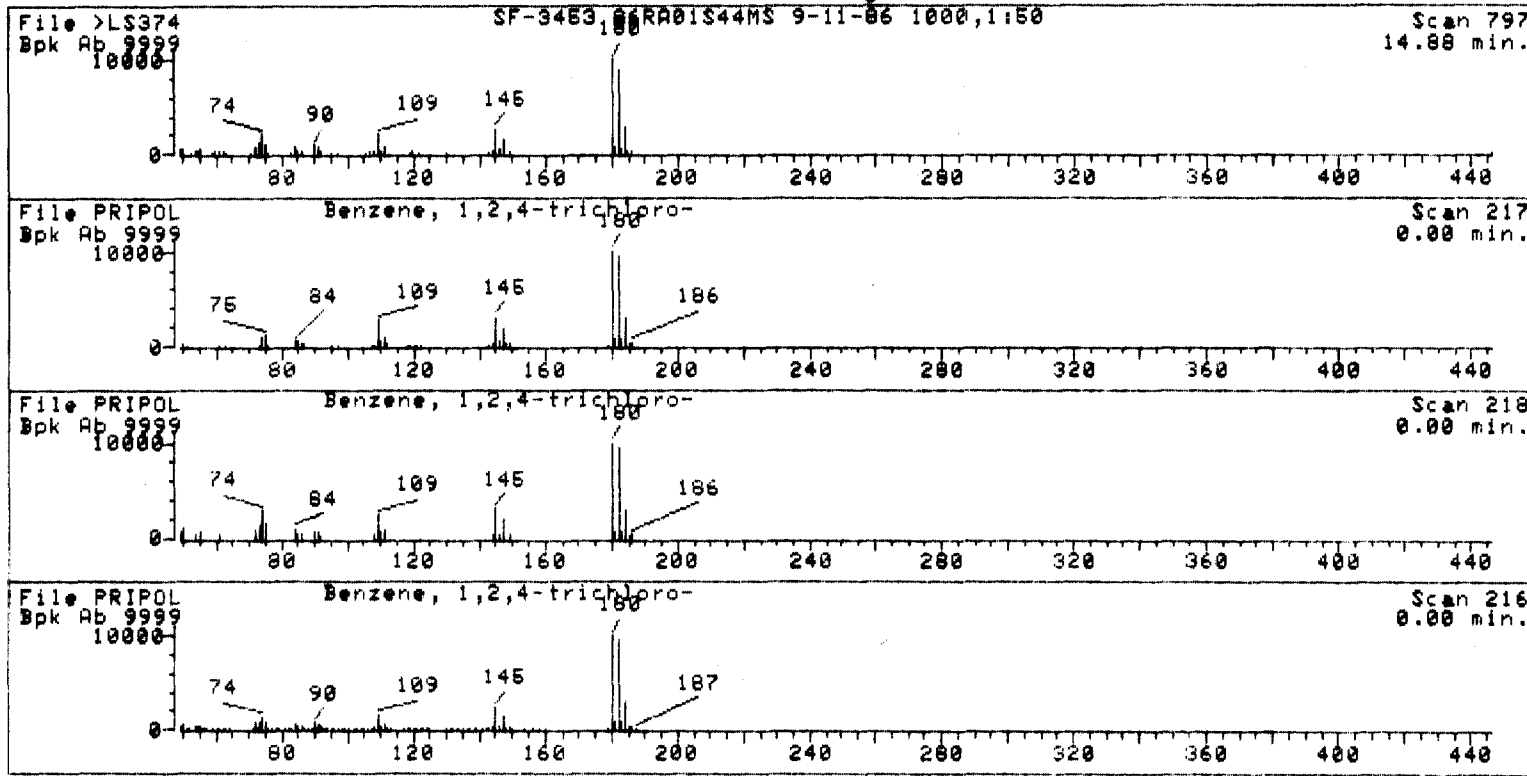




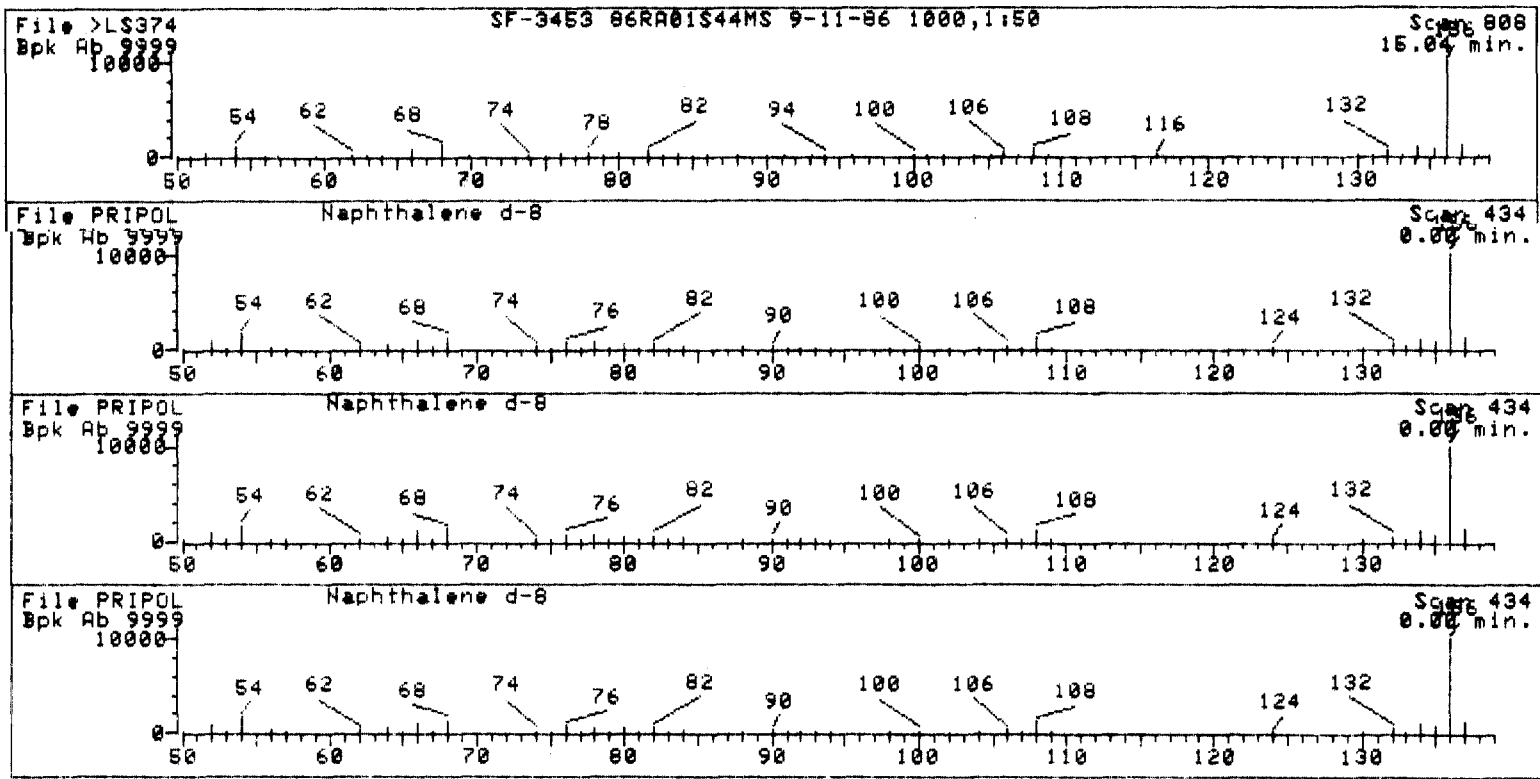
*sm*



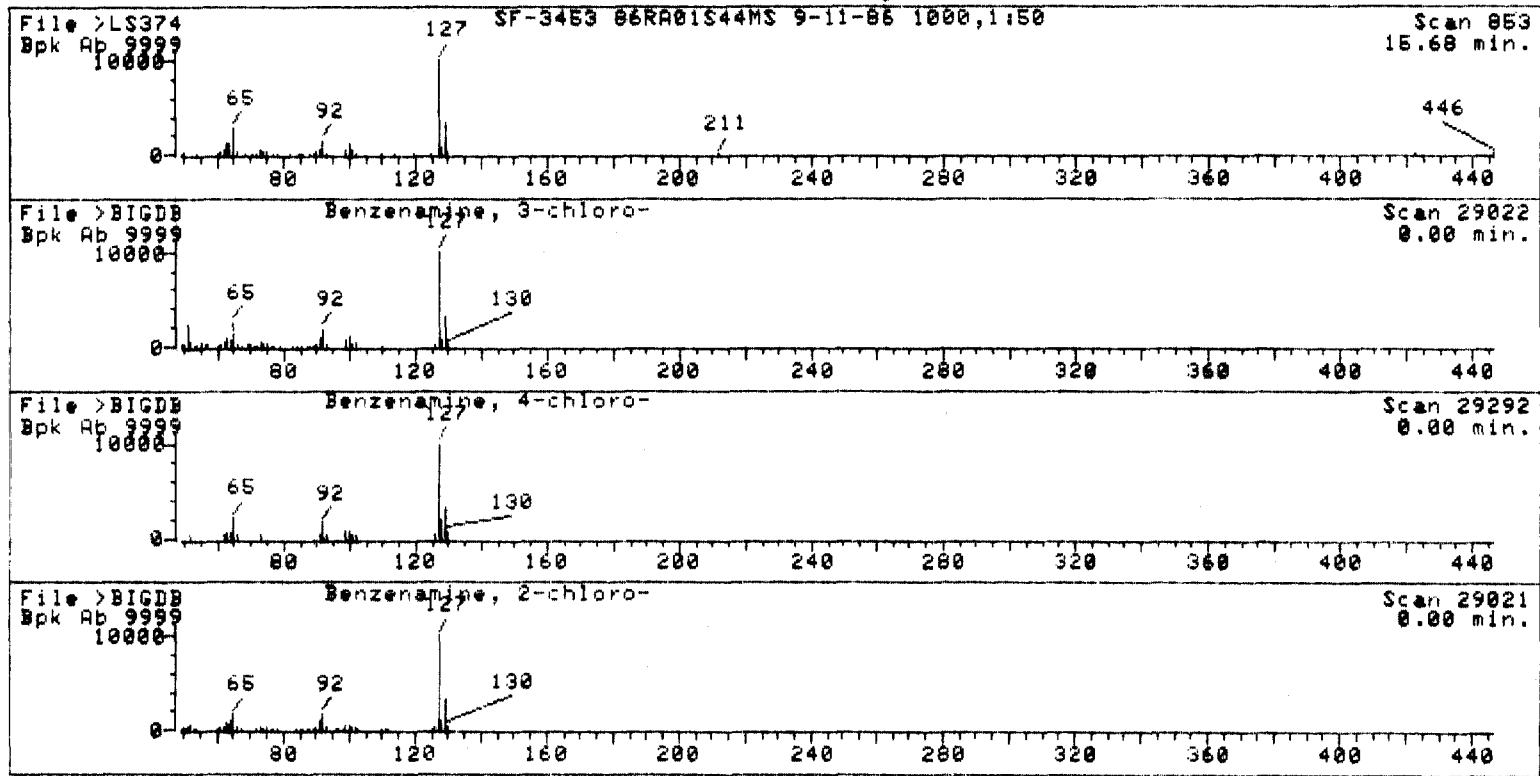
*[Handwritten signature]*



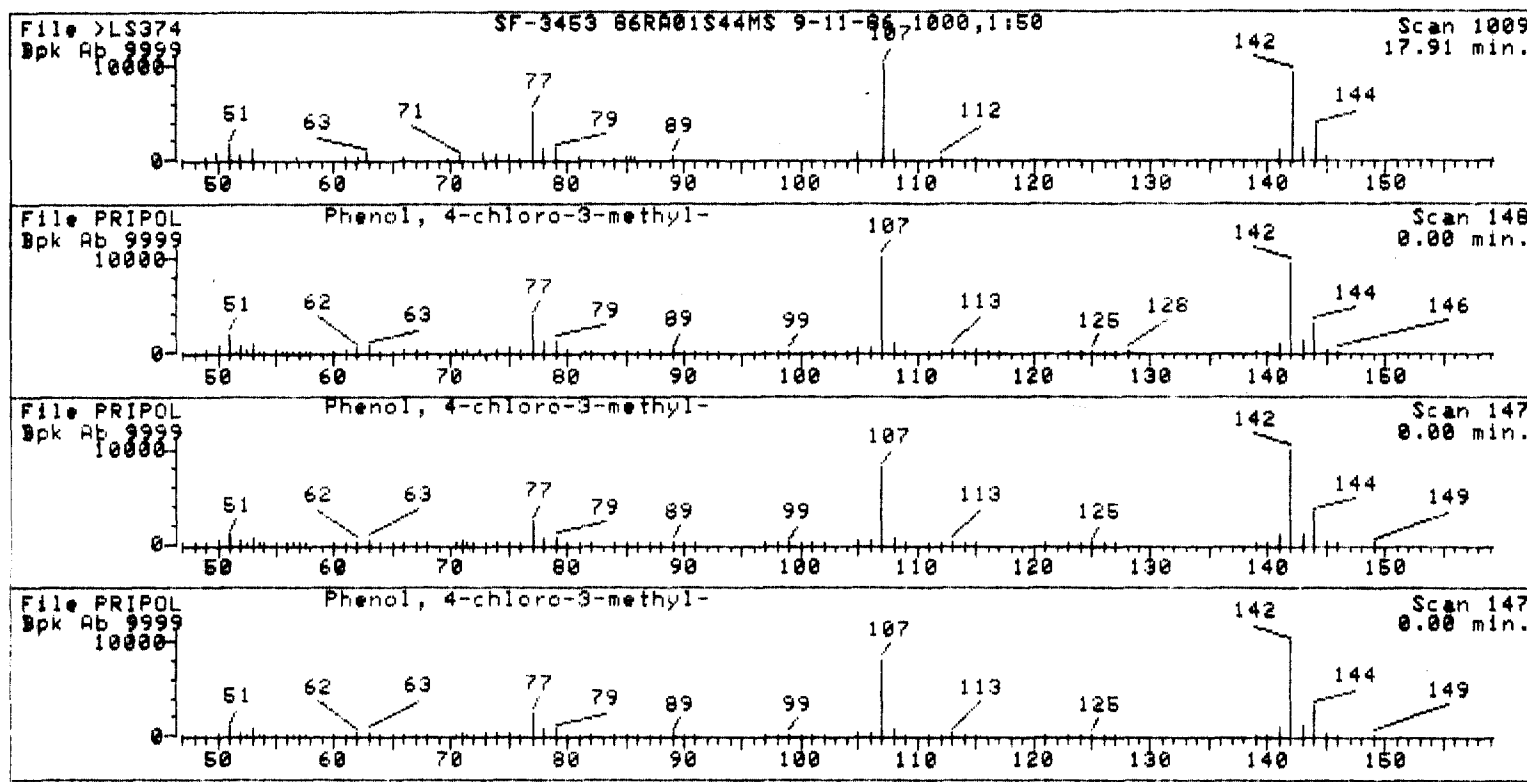
*John*



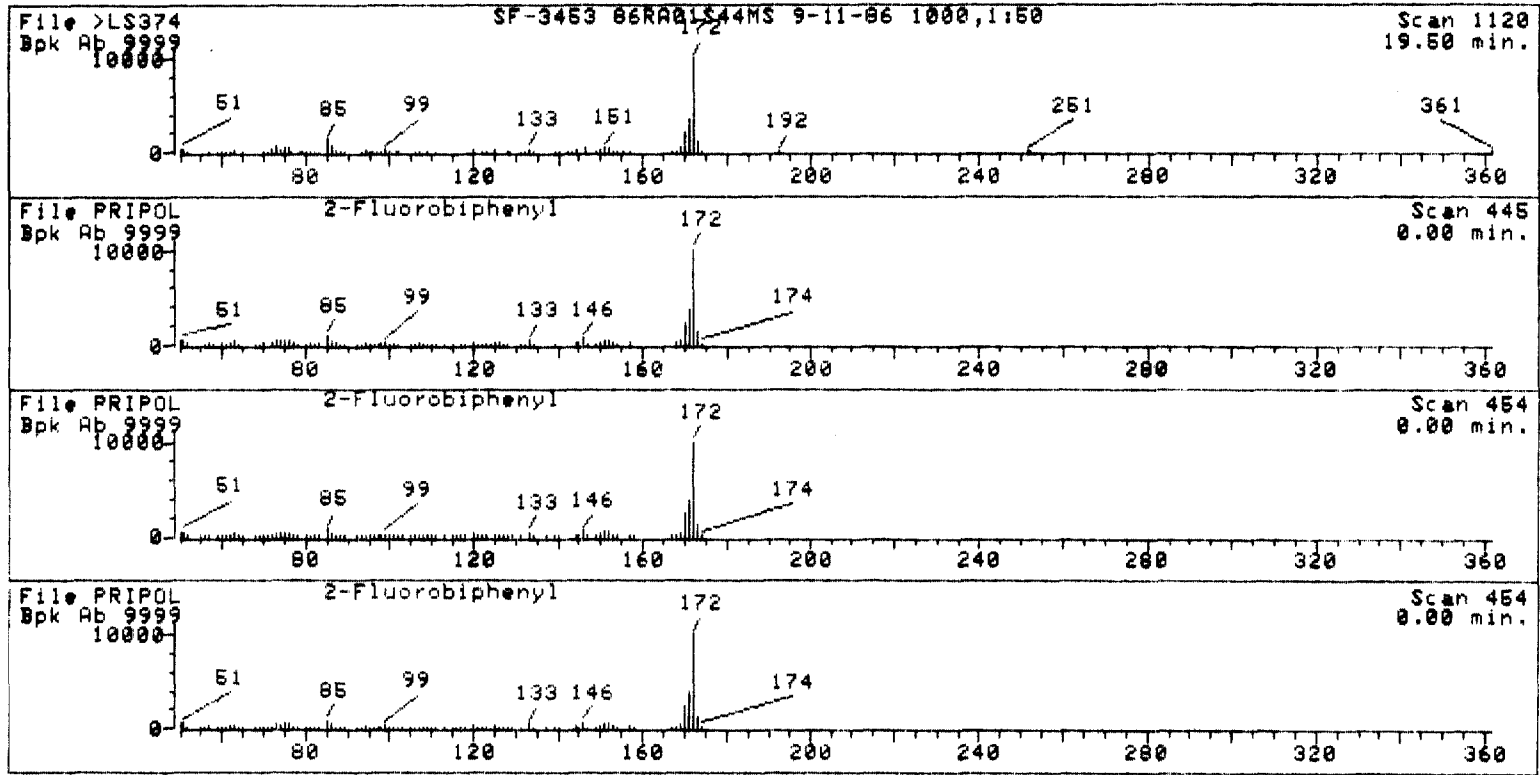
*File*



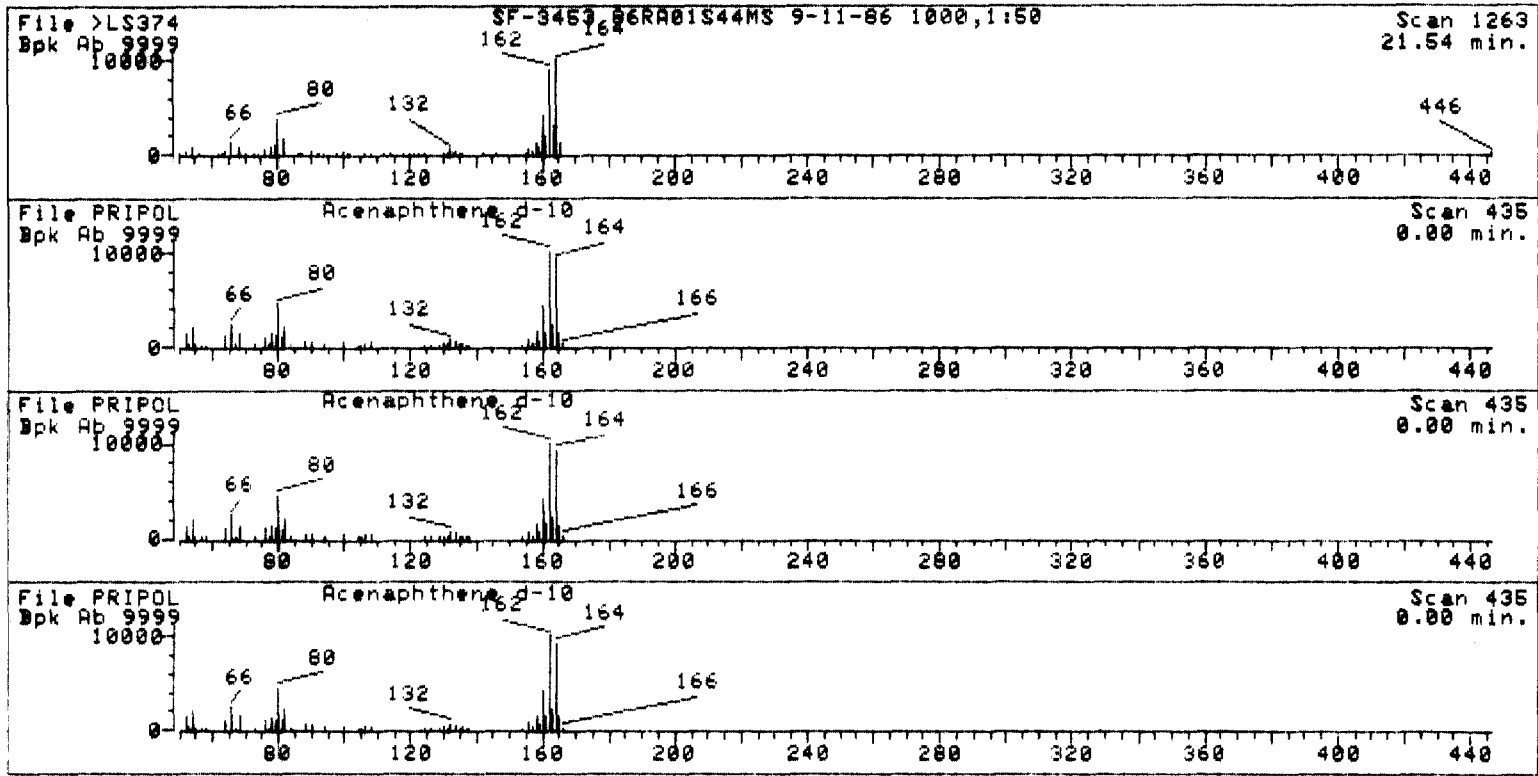
*Spide*



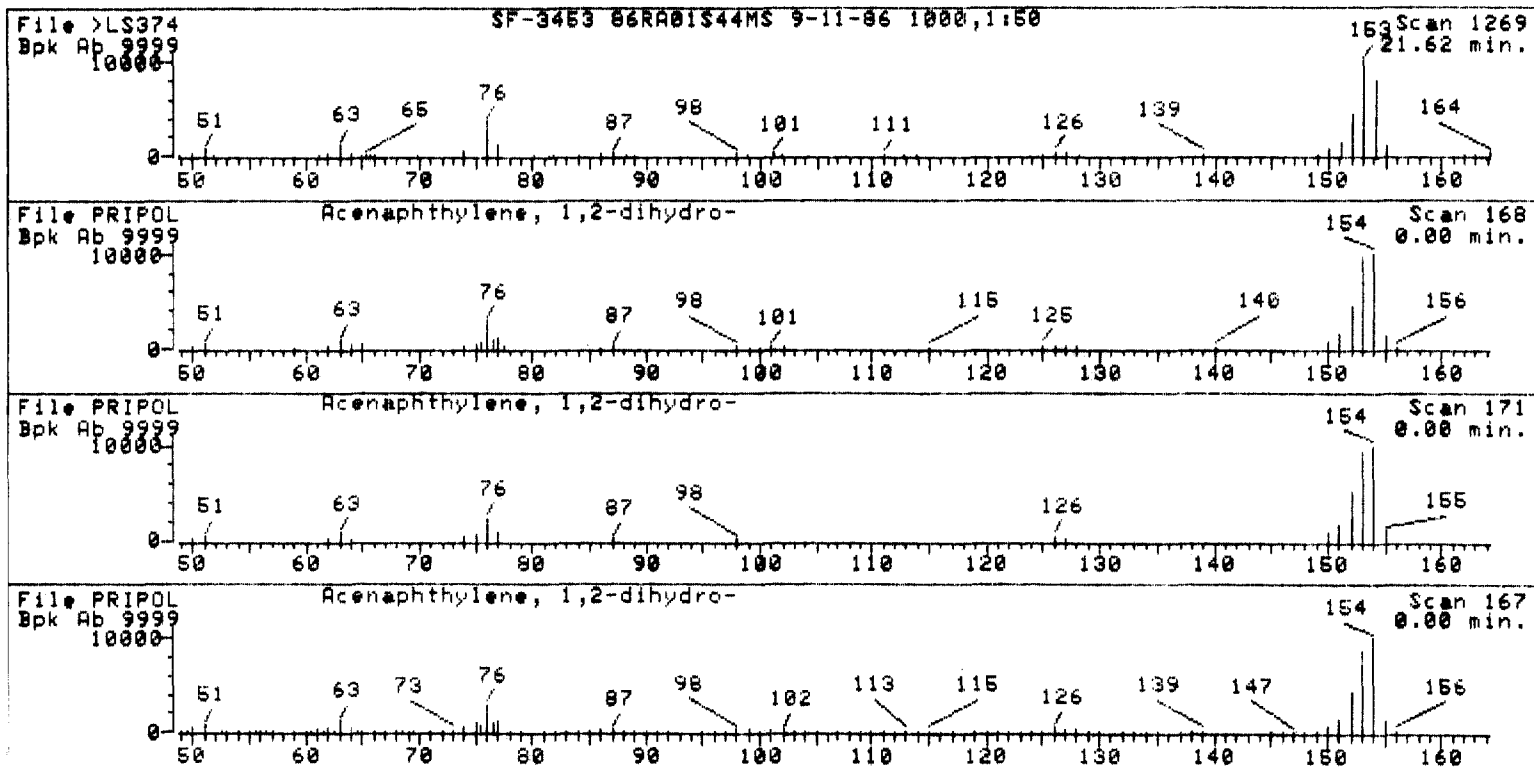
*Sam*



*Int*

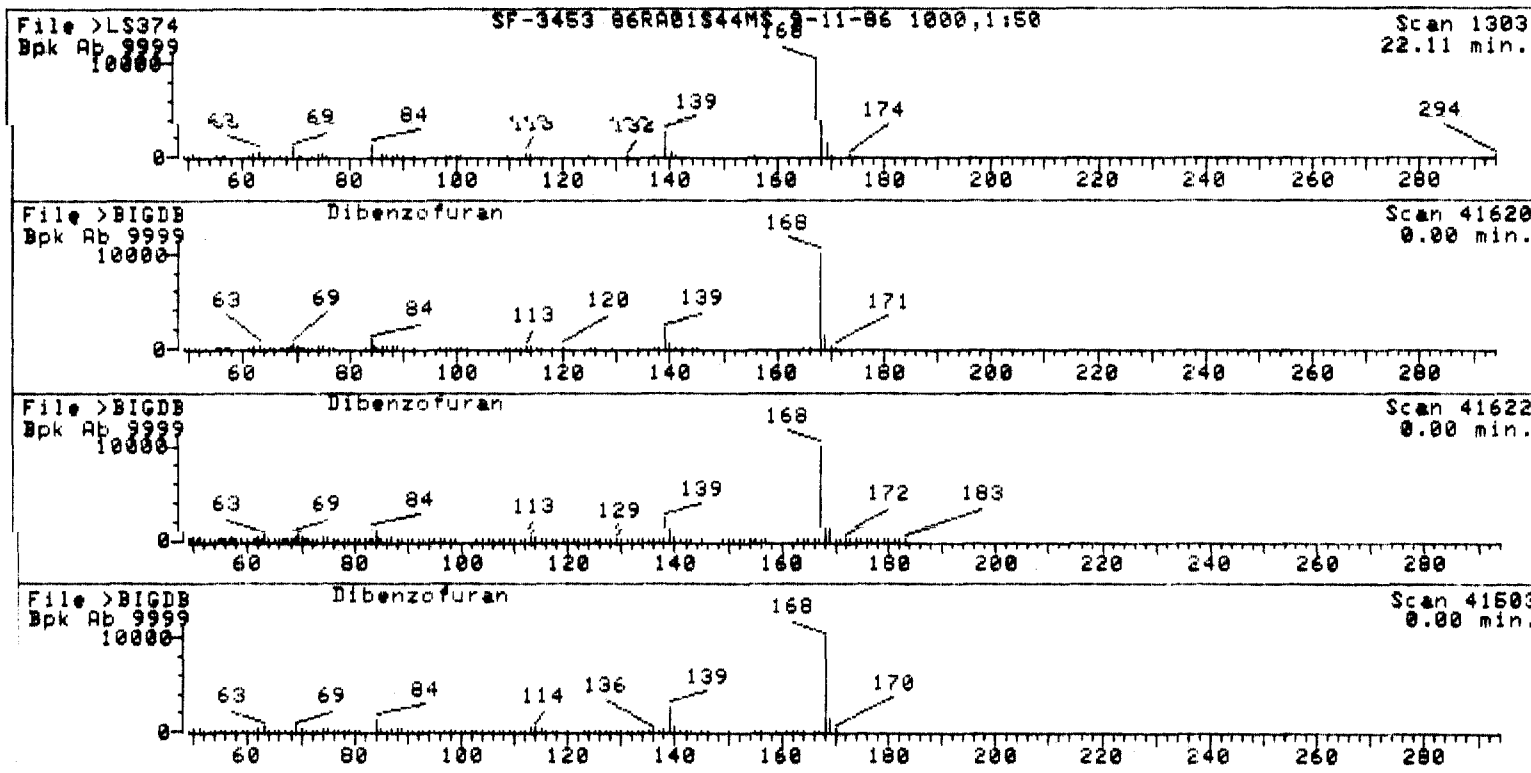


*gfk*

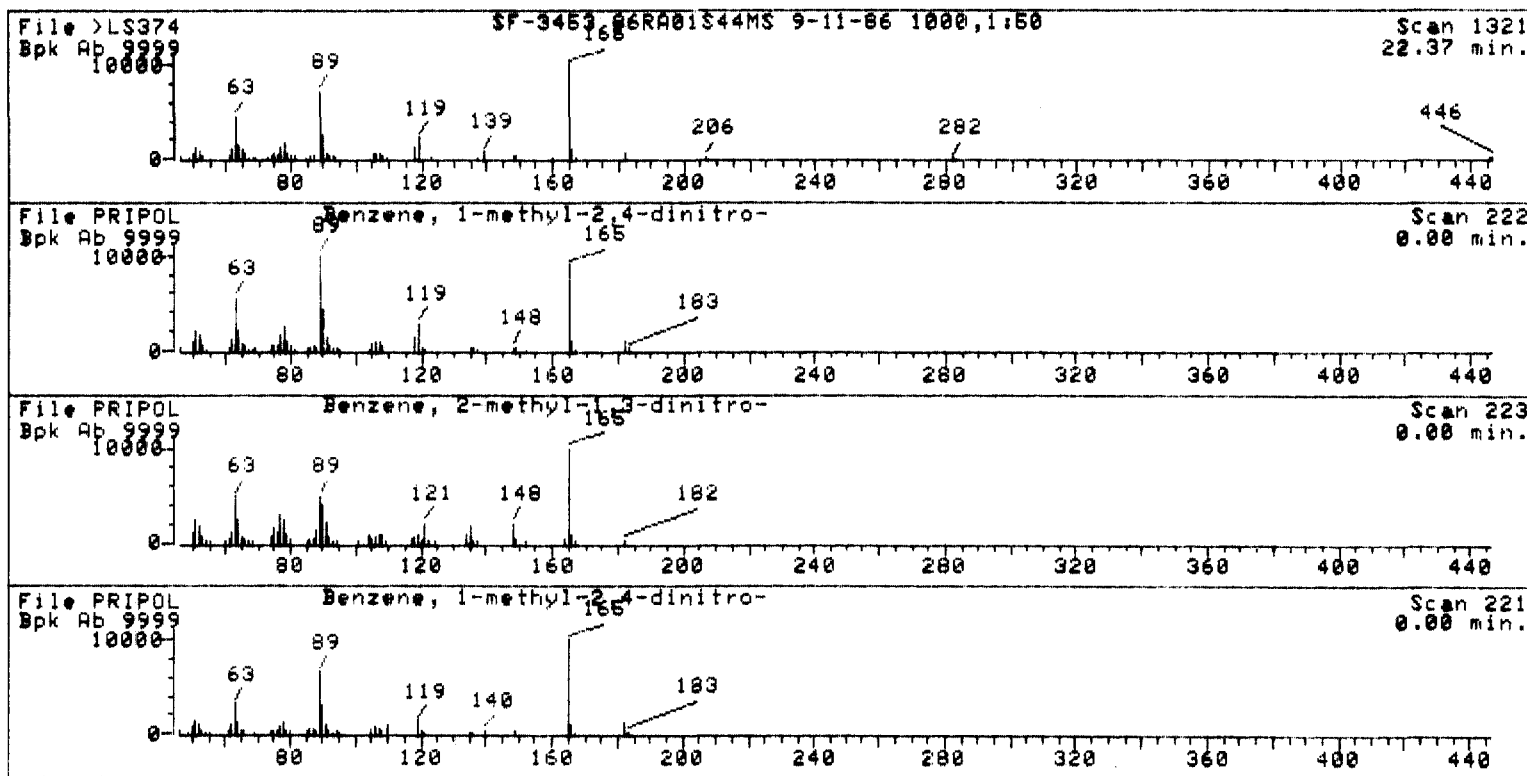




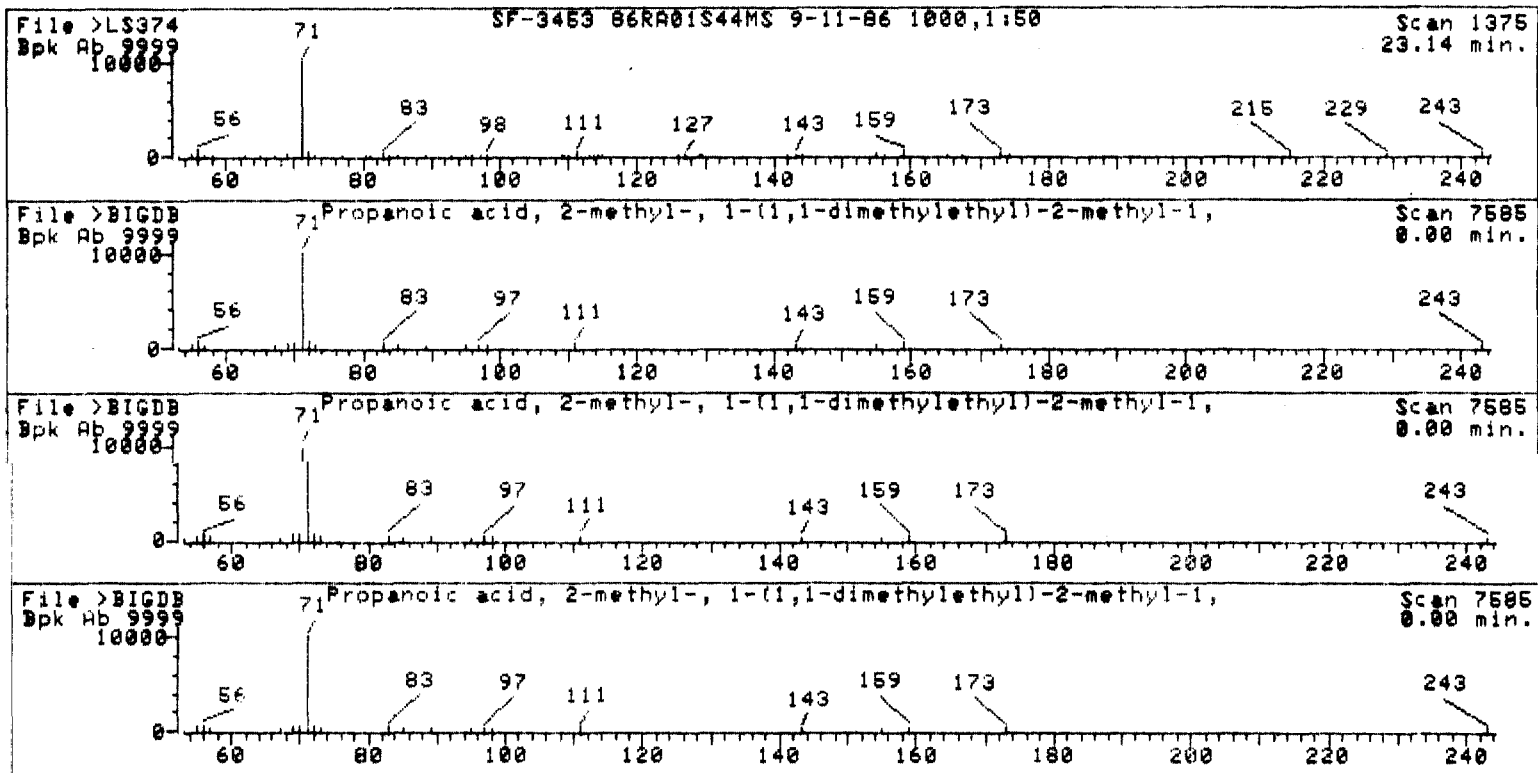
*hid*



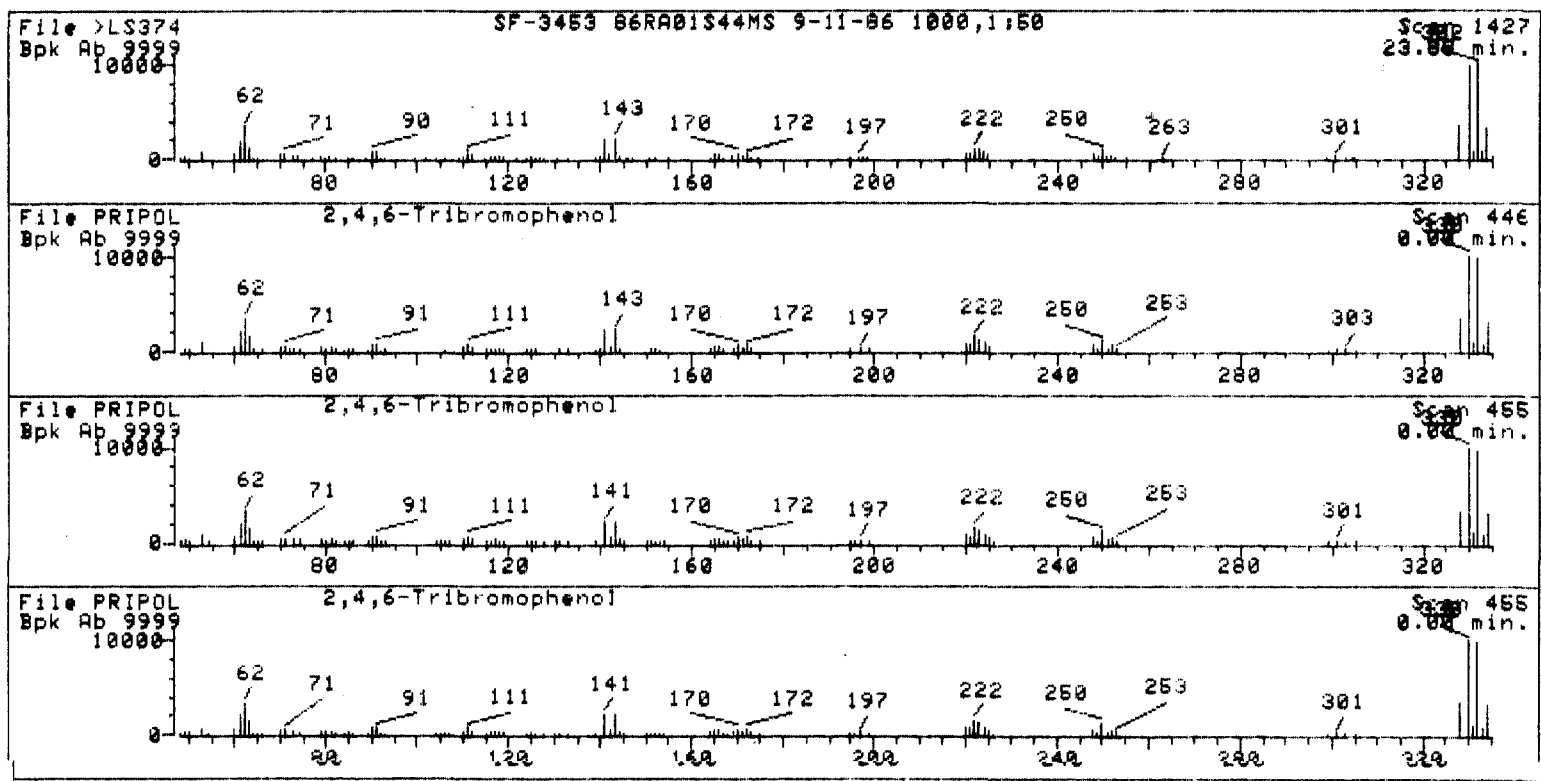
*file*



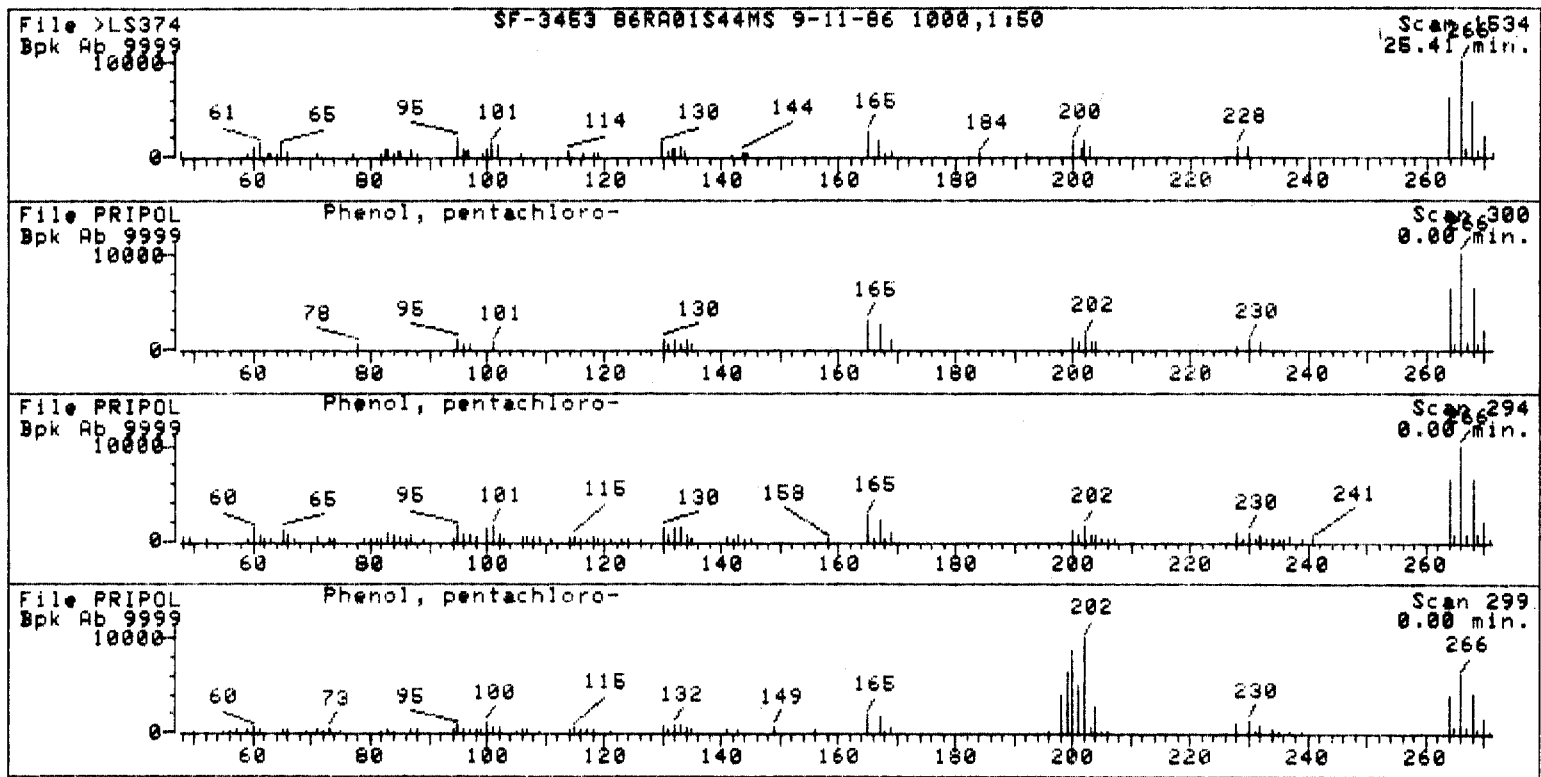
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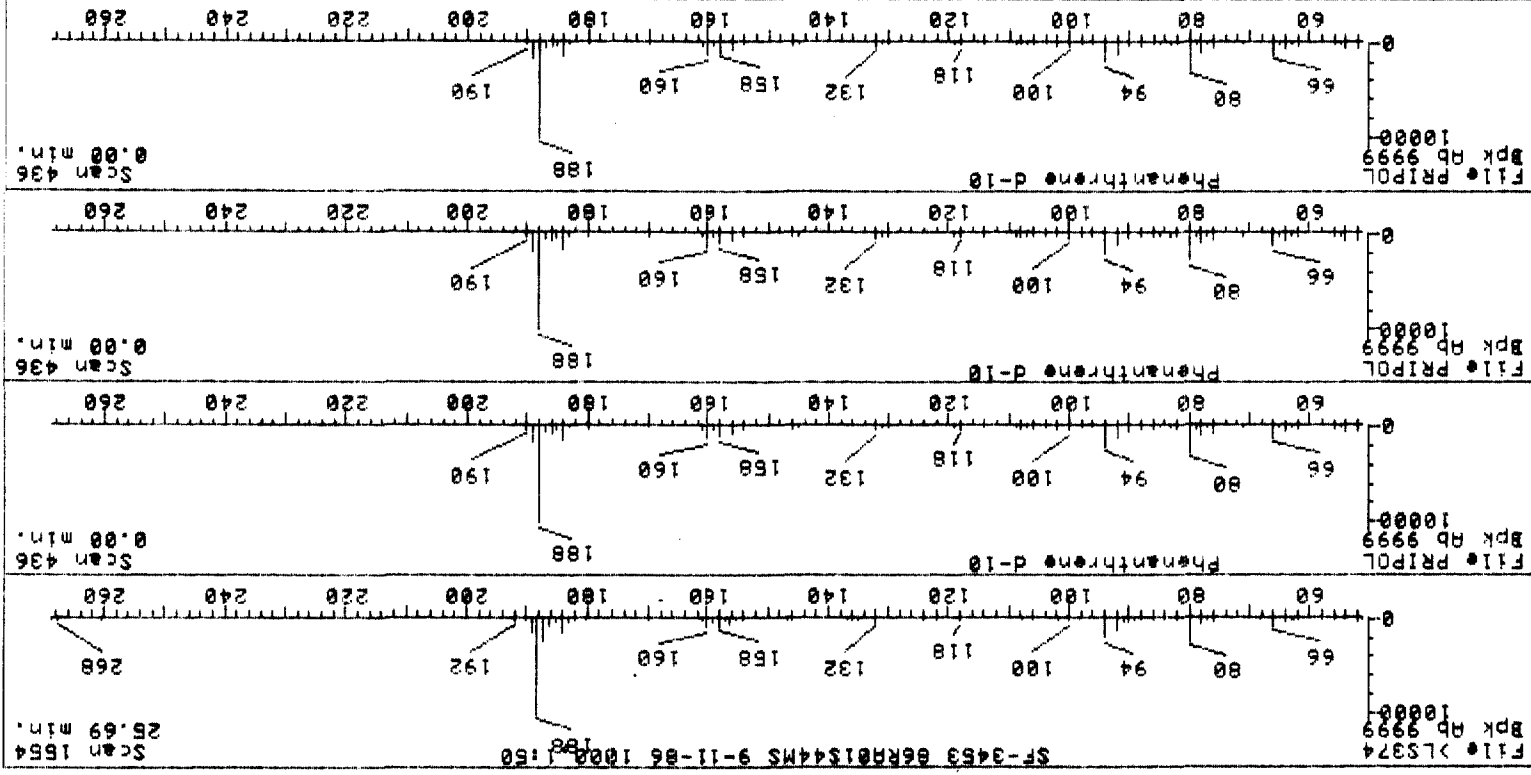


*Sam*



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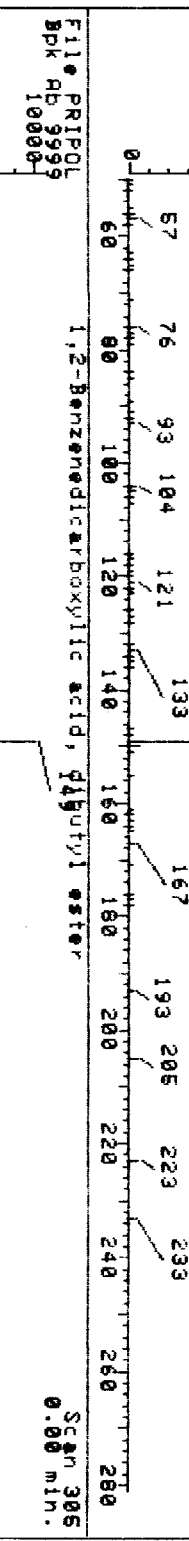
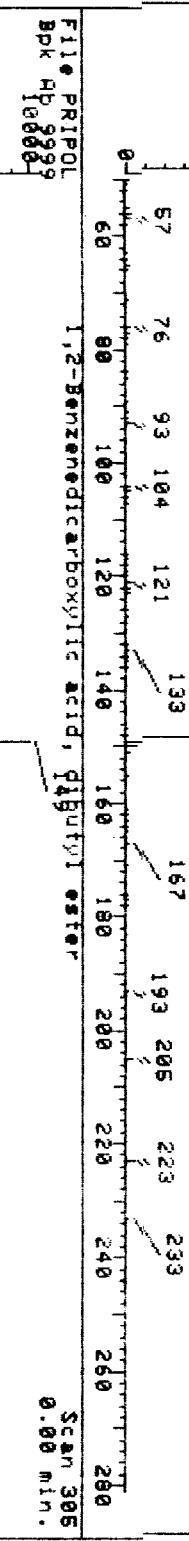
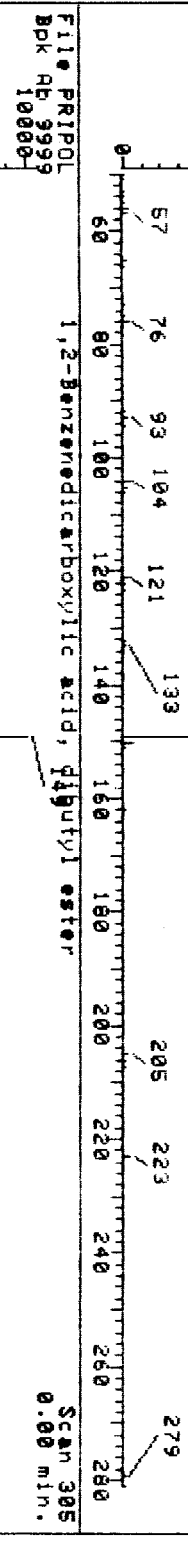




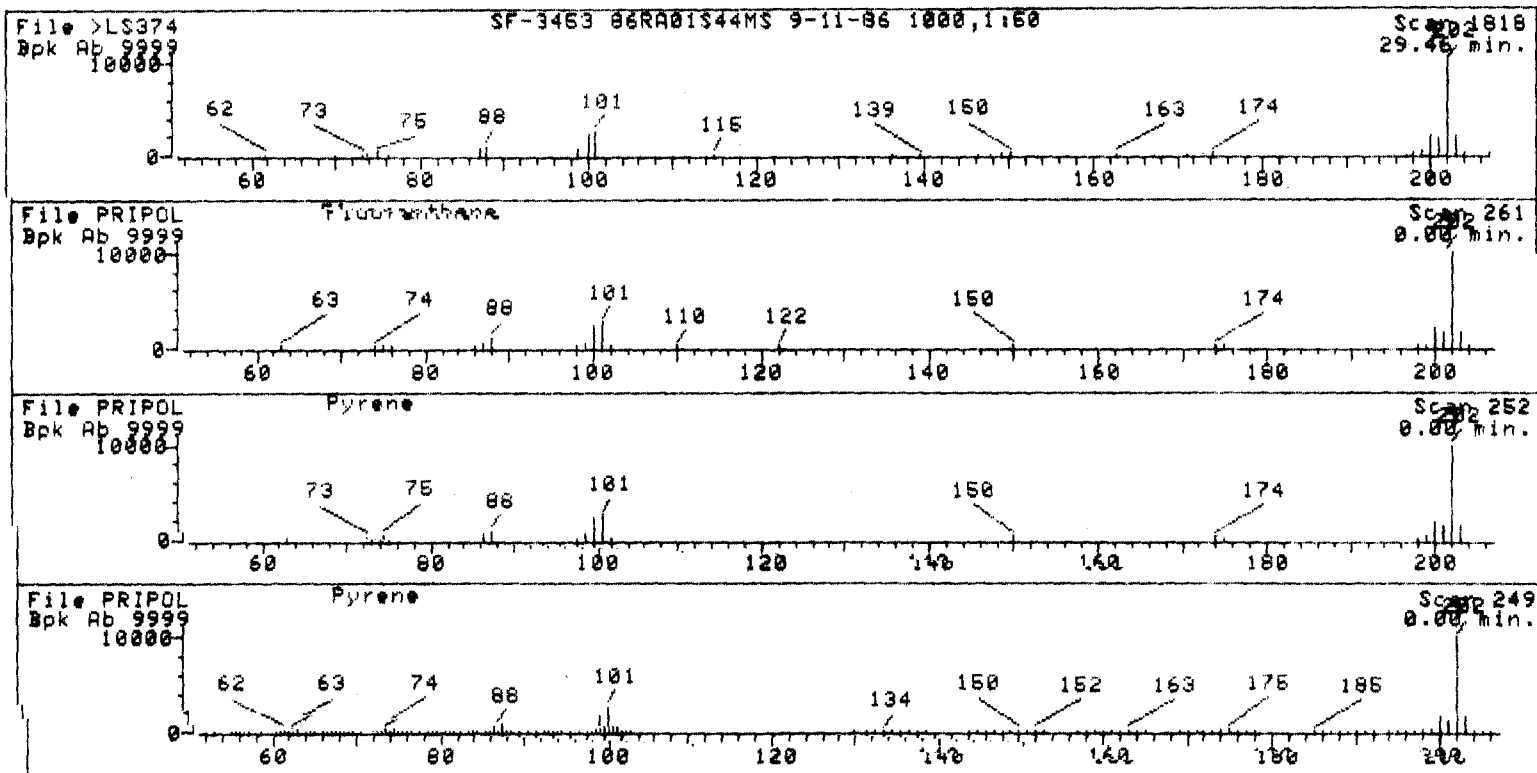
*[Handwritten signature]*

*Handwritten signature*

File >LS374 SF-3453 66RBD1\$4MS, 25-11-96 1000, 1:50 Scan 1681  
Bpk Ab 9999 27.51 min.  
10000-

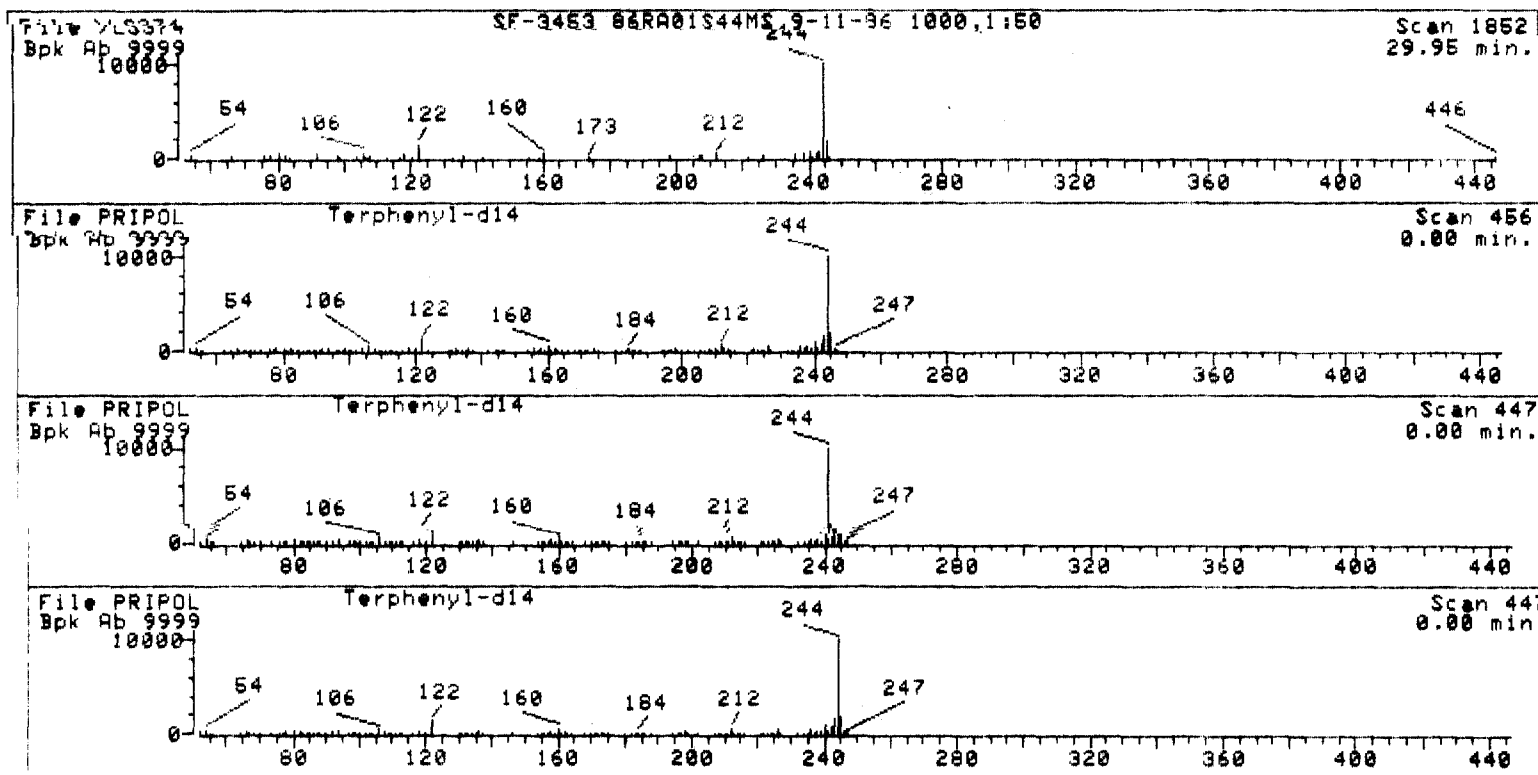


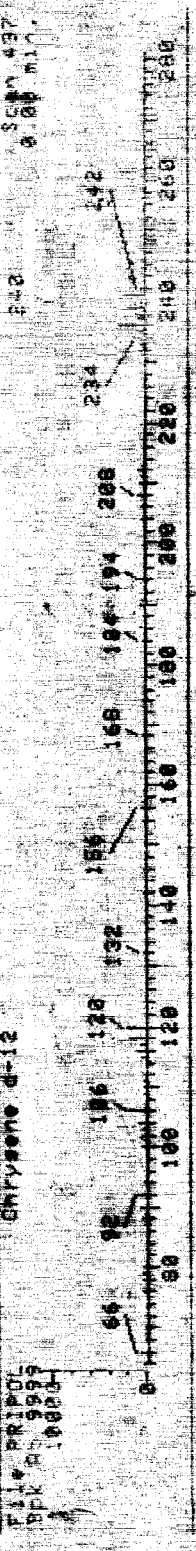
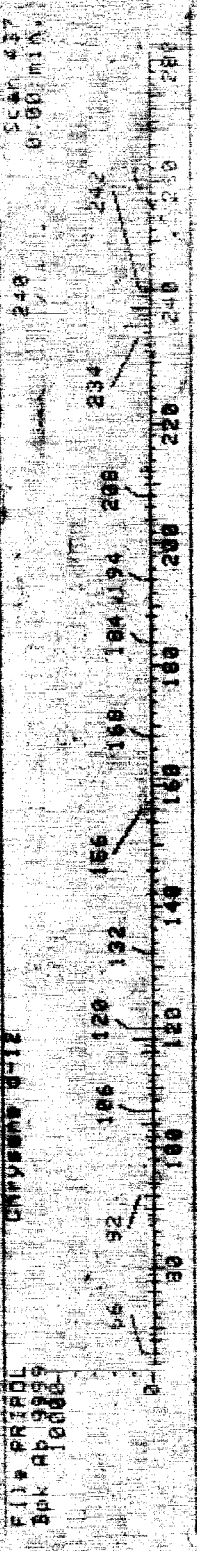
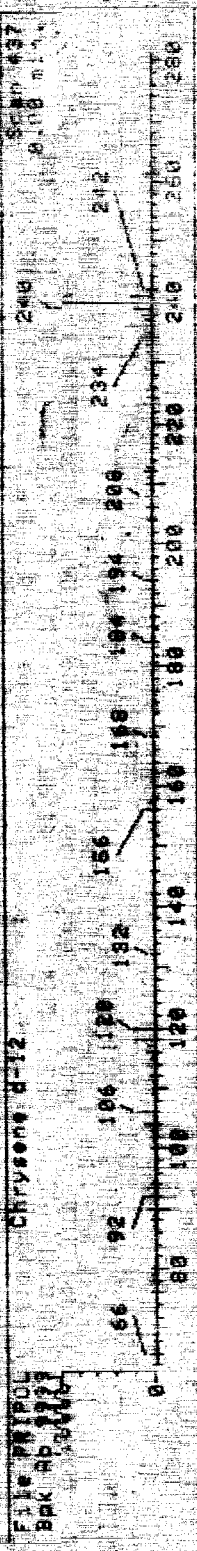
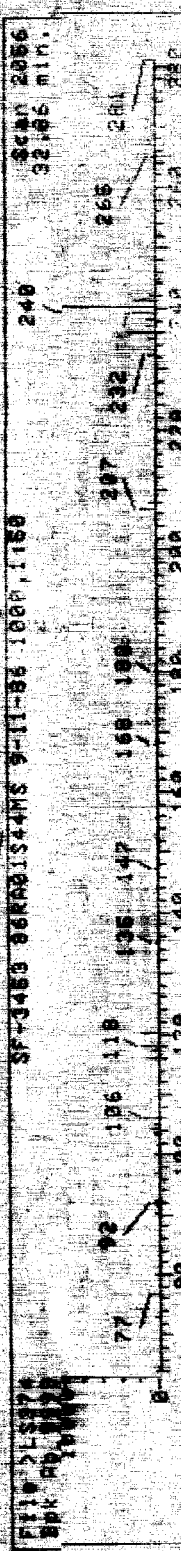
*File*





*San*



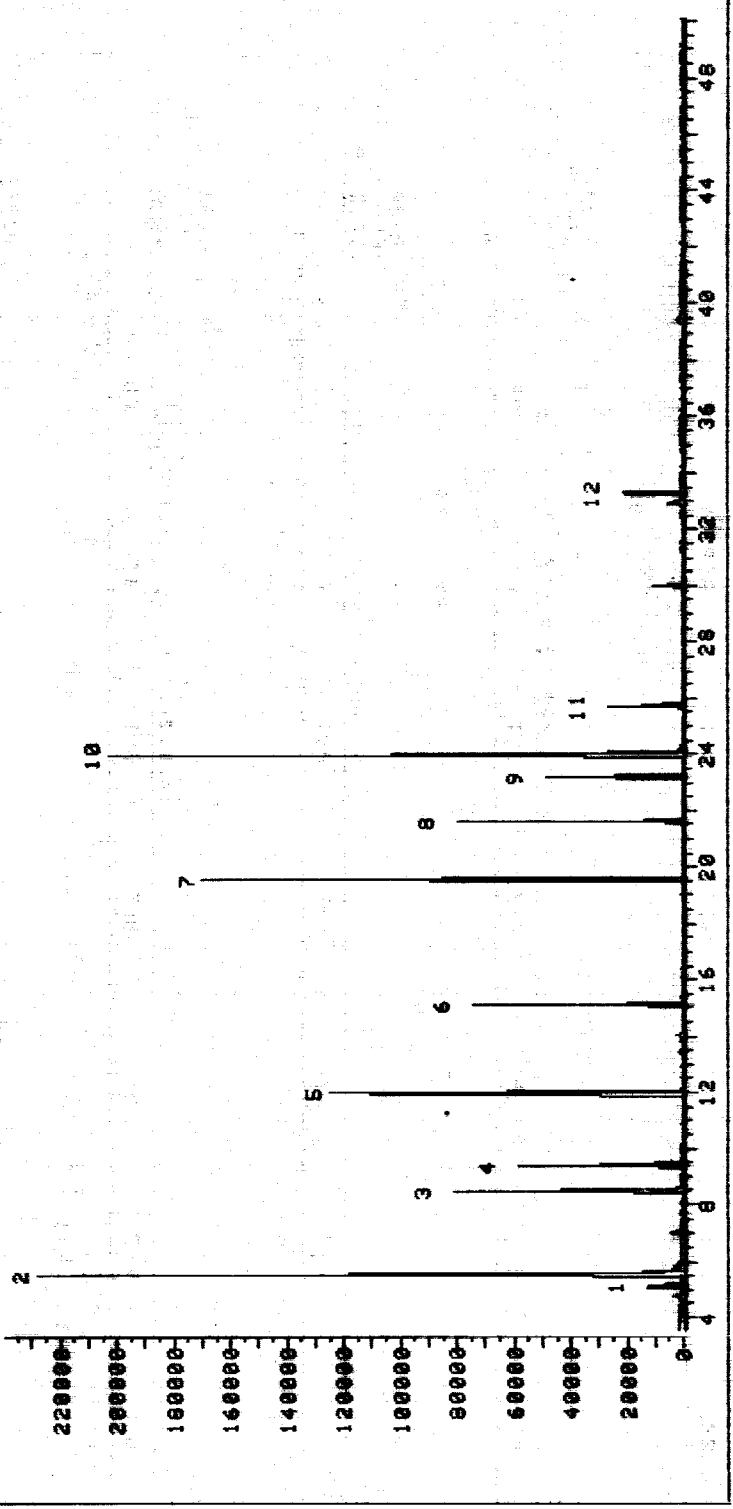


>LS369 SF-3453 86RA01S48 9-11-86 2420,1:100  
45.01 450.0 TIC

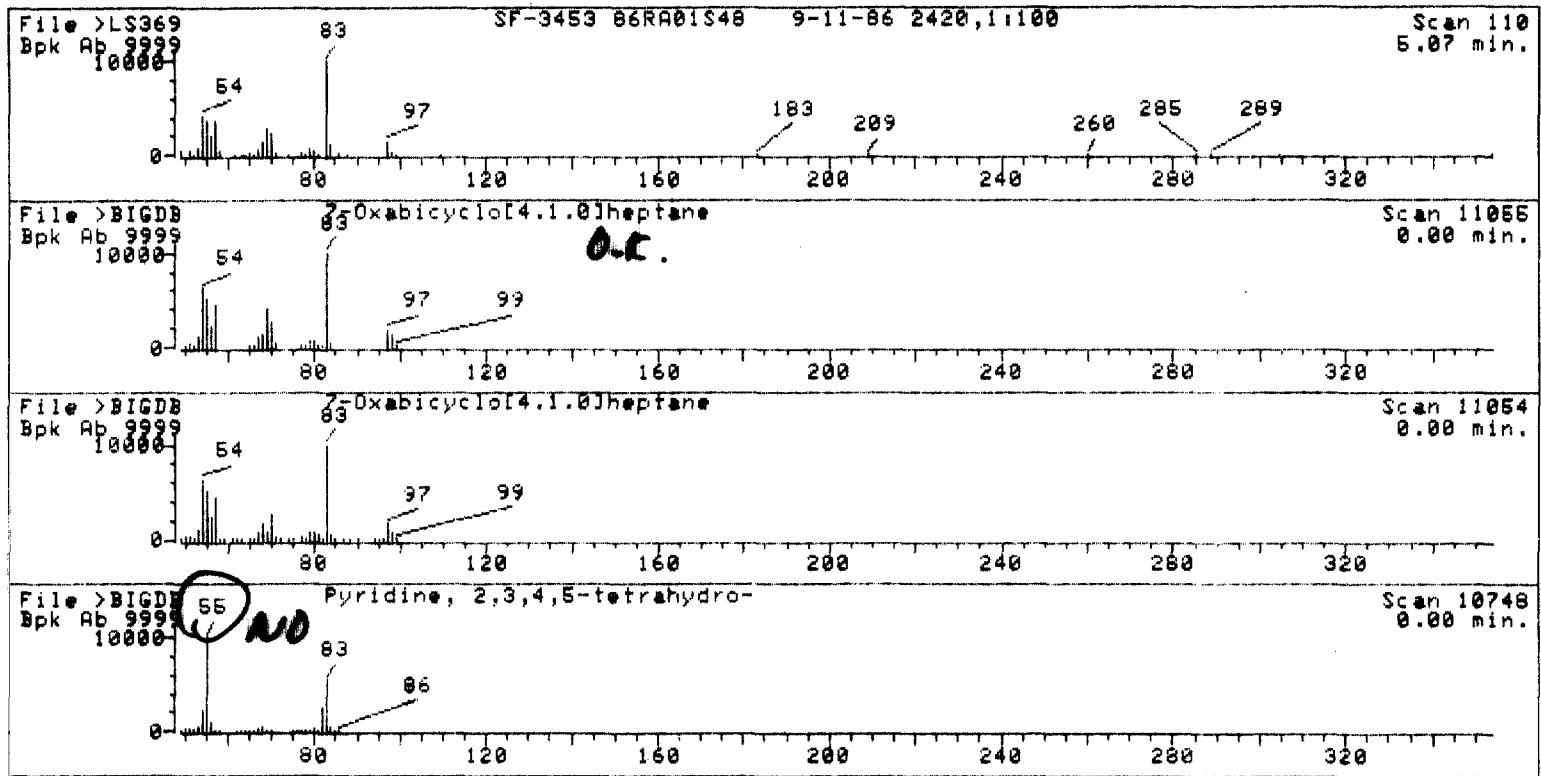
Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.069	106	110	118	12171	47810	39676	5.88	1.040
2	5.470	133	138	155	227401	673497	661106	97.92	17.329
3	8.414	338	344	366	80558	341343	335147	49.64	8.785
4	9.343	403	409	420	57678	210339	205946	30.51	5.398
5	11.943	580	591	596	124273	576474	573797	84.99	15.040
6	15.057	801	809	817	73884	281238	278877	41.31	7.310
7	19.526	1115	1122	1132	169454	503616	502010	74.36	13.158
8	21.553	1258	1264	1271	79016	245328	242627	25.84	6.350
9	23.166	1372	1377	1381	48472	130351	129254	9.75	3.335
10	23.909	1422	1429	1446	202279	678169	675116	90.00	12.606
11	25.694	1547	1554	1564	26793	94583	94000	13.92	2.464
12	33.219	2075	2081	2090	20529	86070	77572	11.49	2.093

Sum of corrected areas: 3815128.

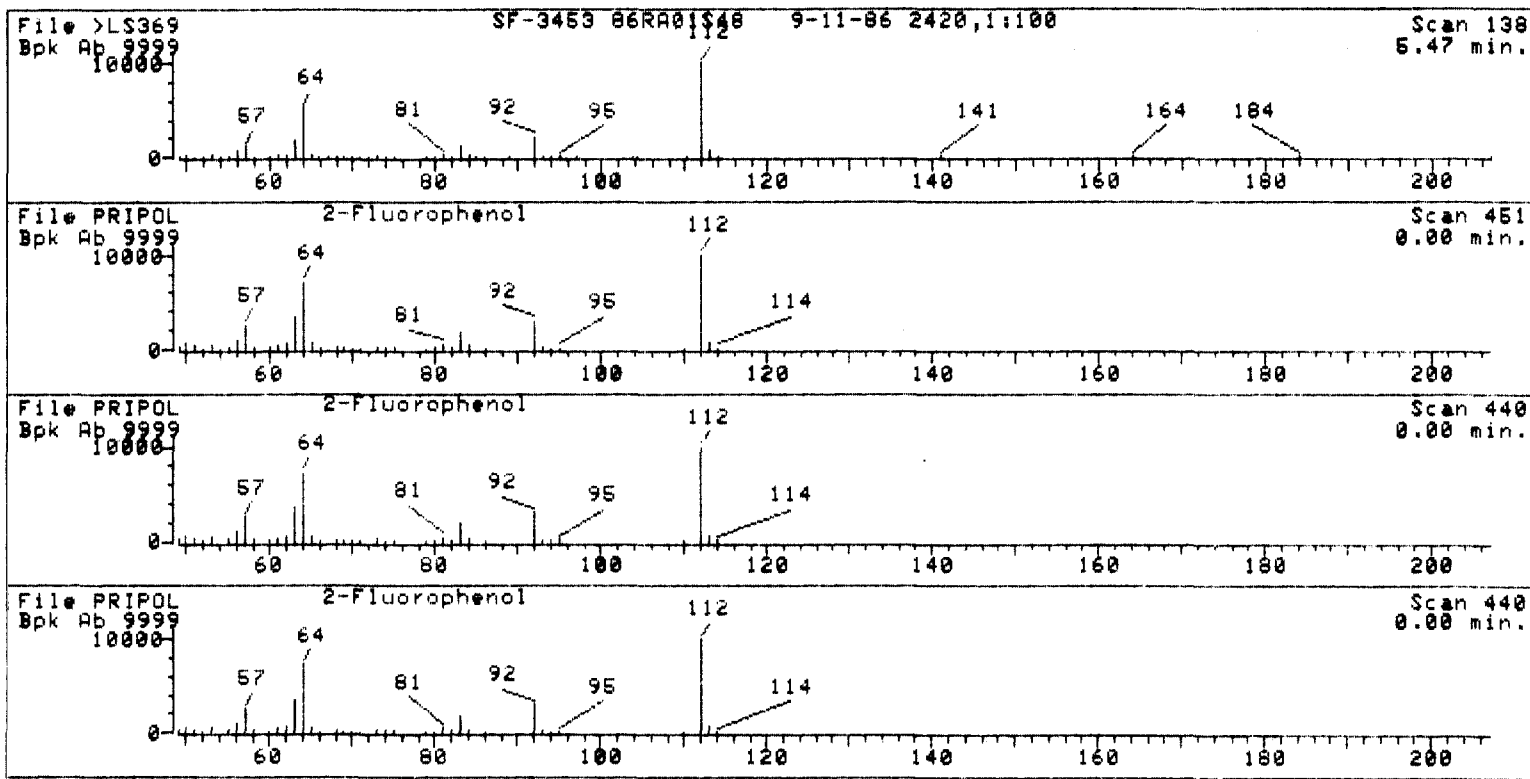
File >LS369 45.0-450.0 amu. SF-3459 86RAB1S40 9-11-86 2426.1100



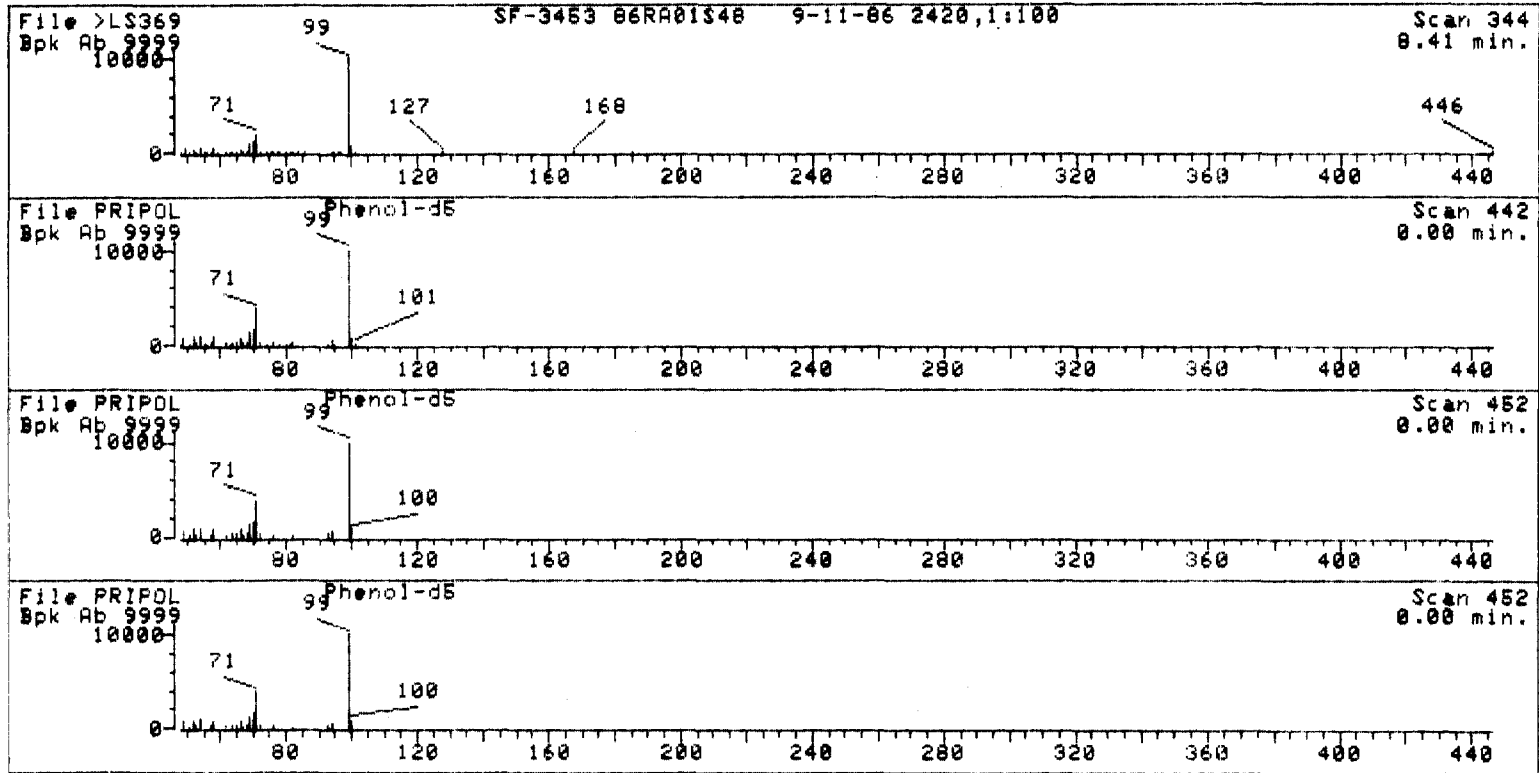
2.06



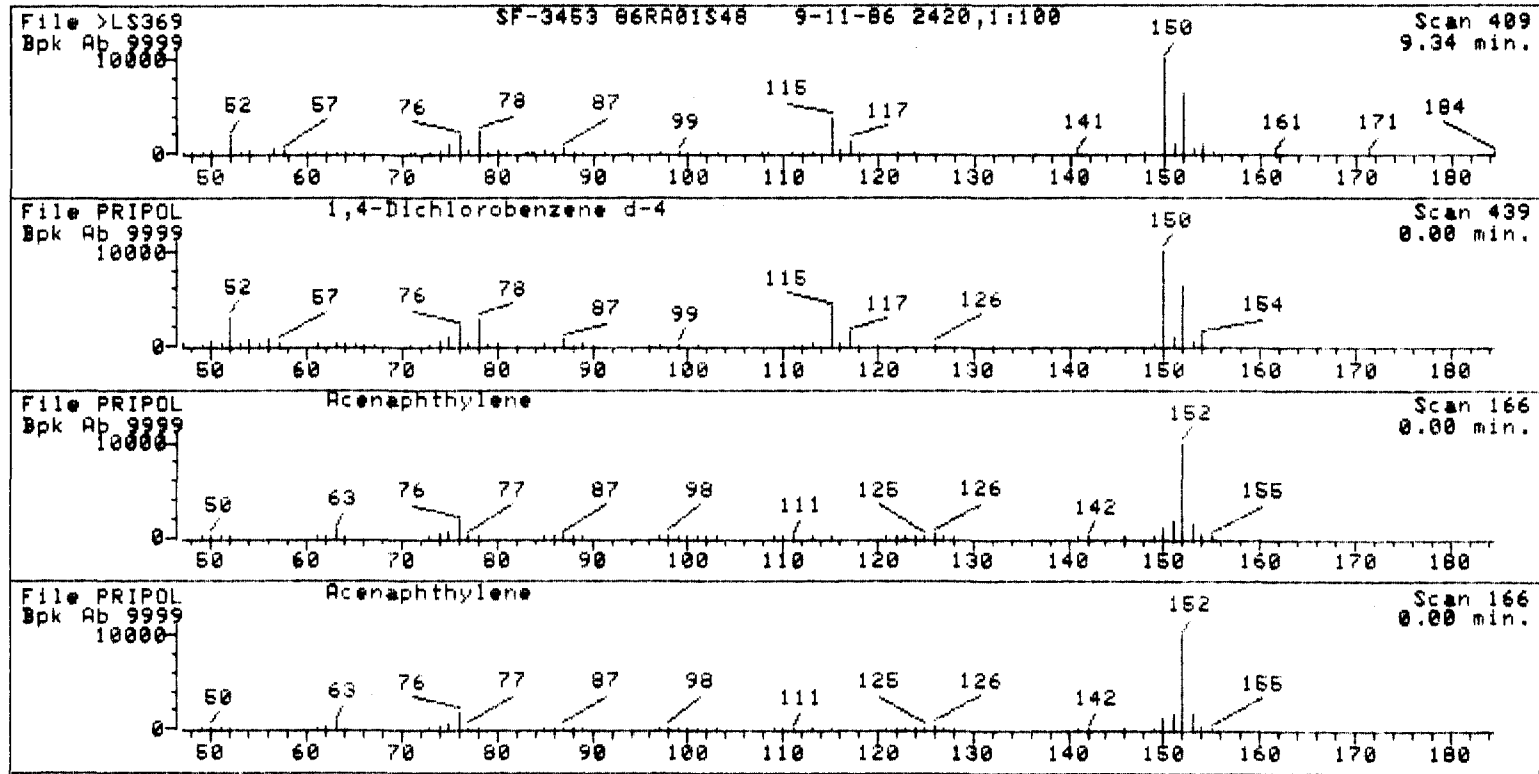
*Am*



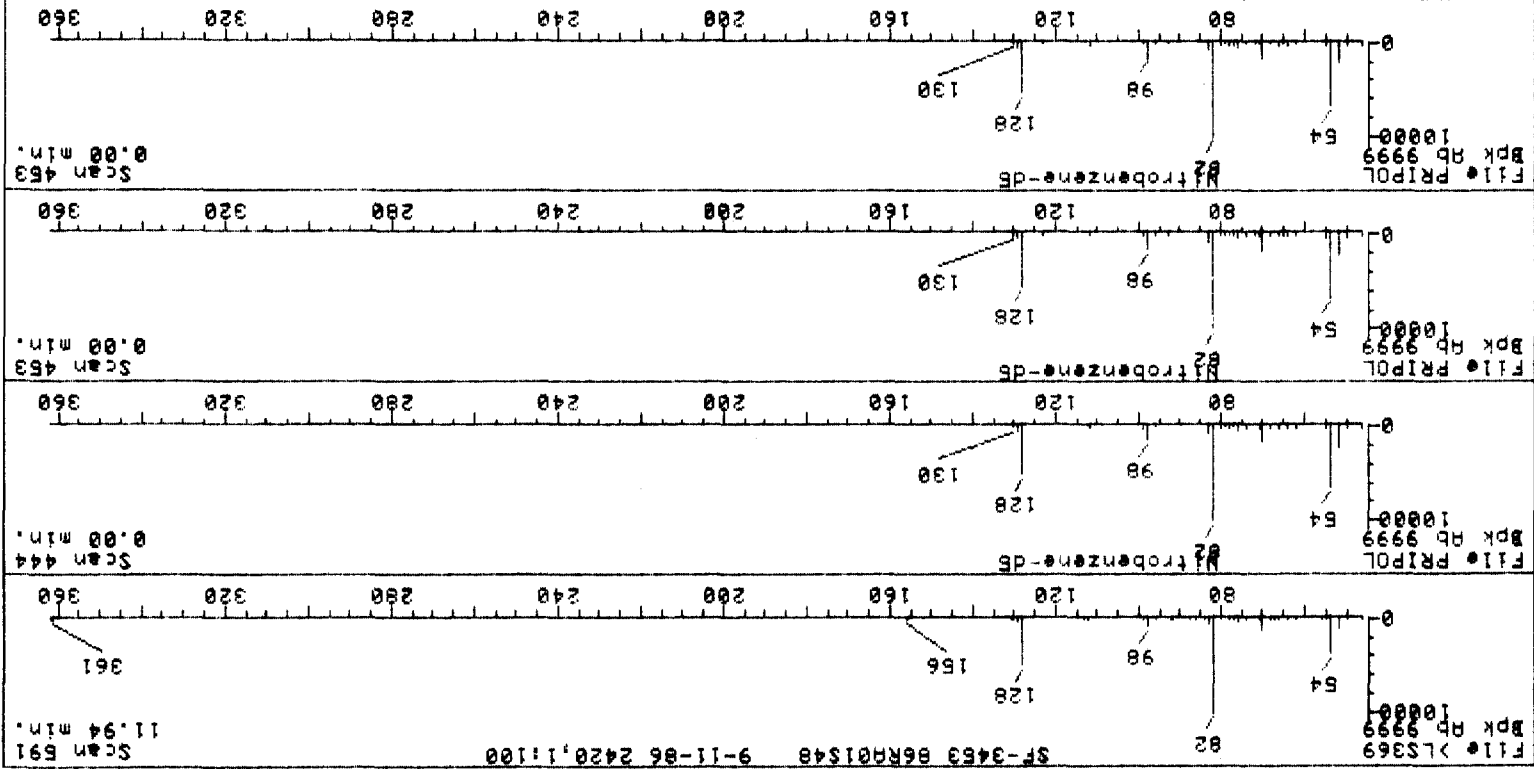
*Jim*



*Index*

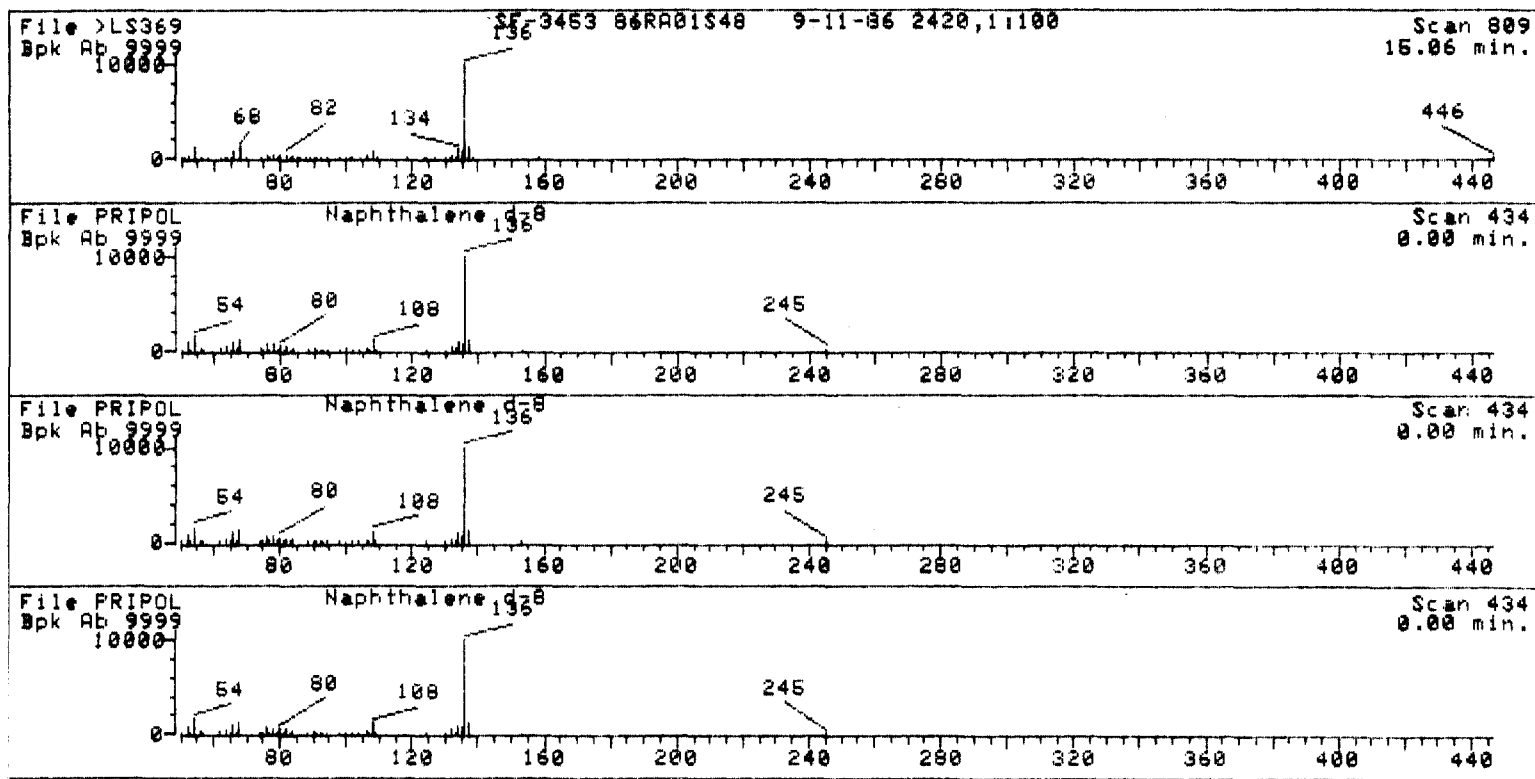




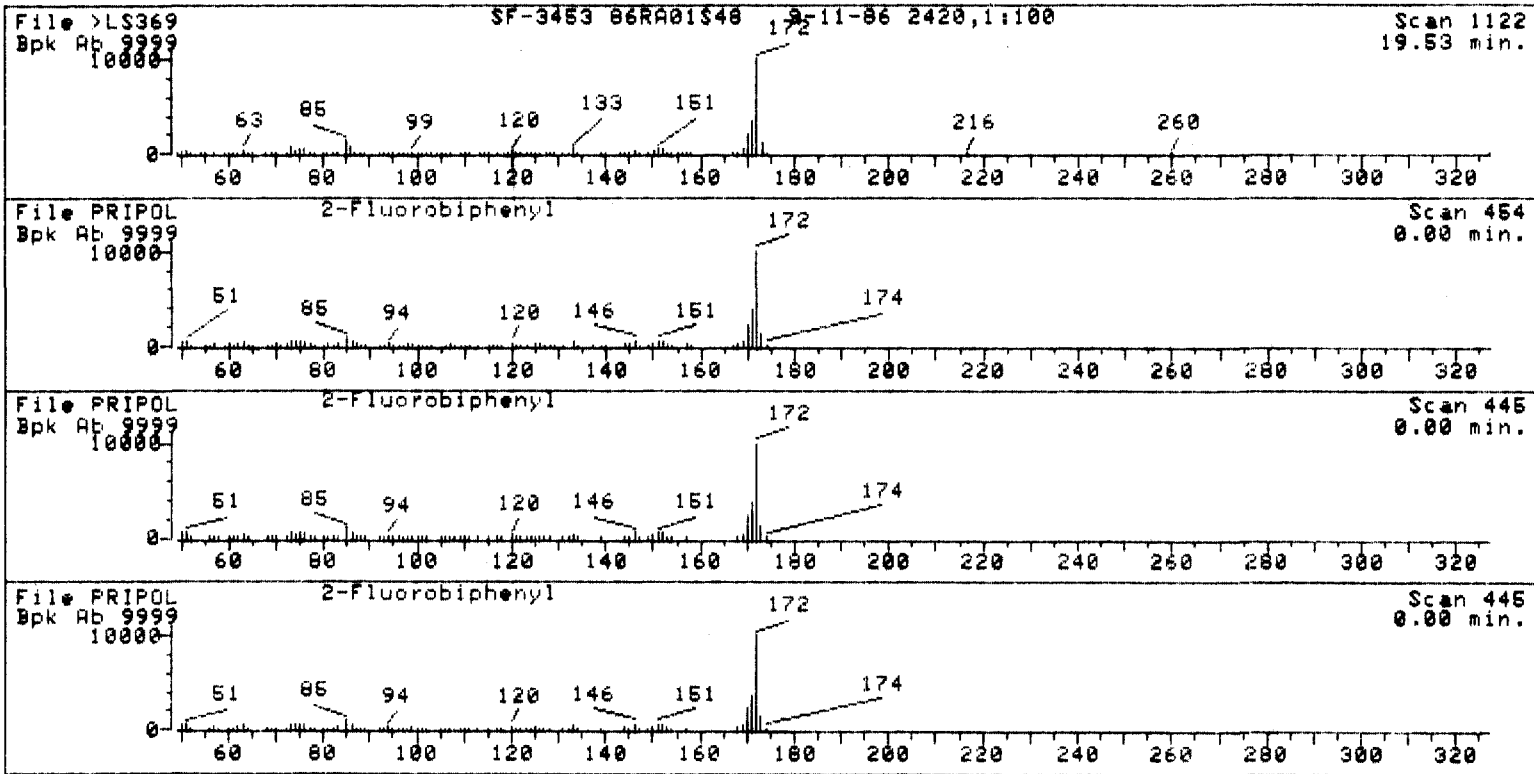


*dm*

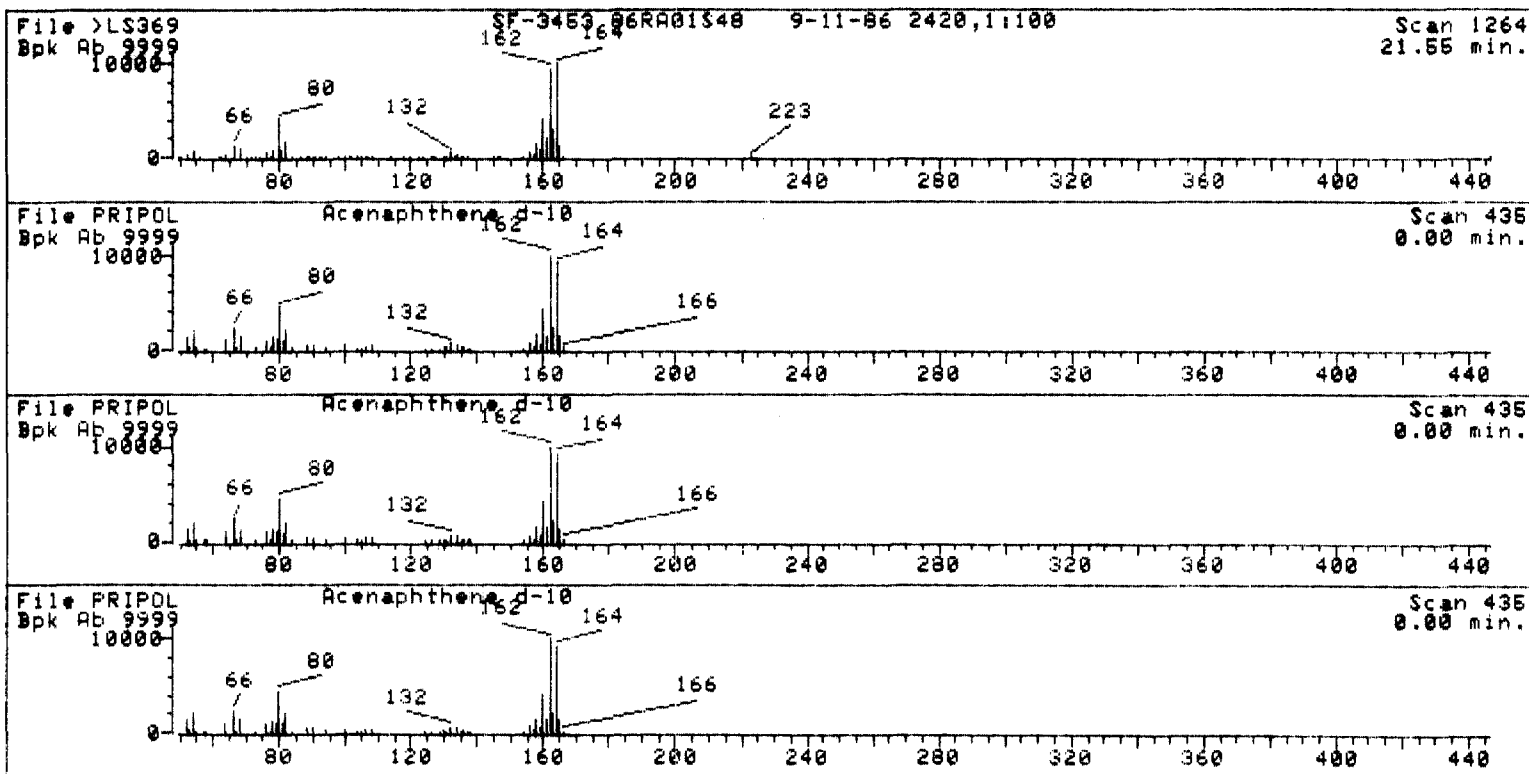
*data*

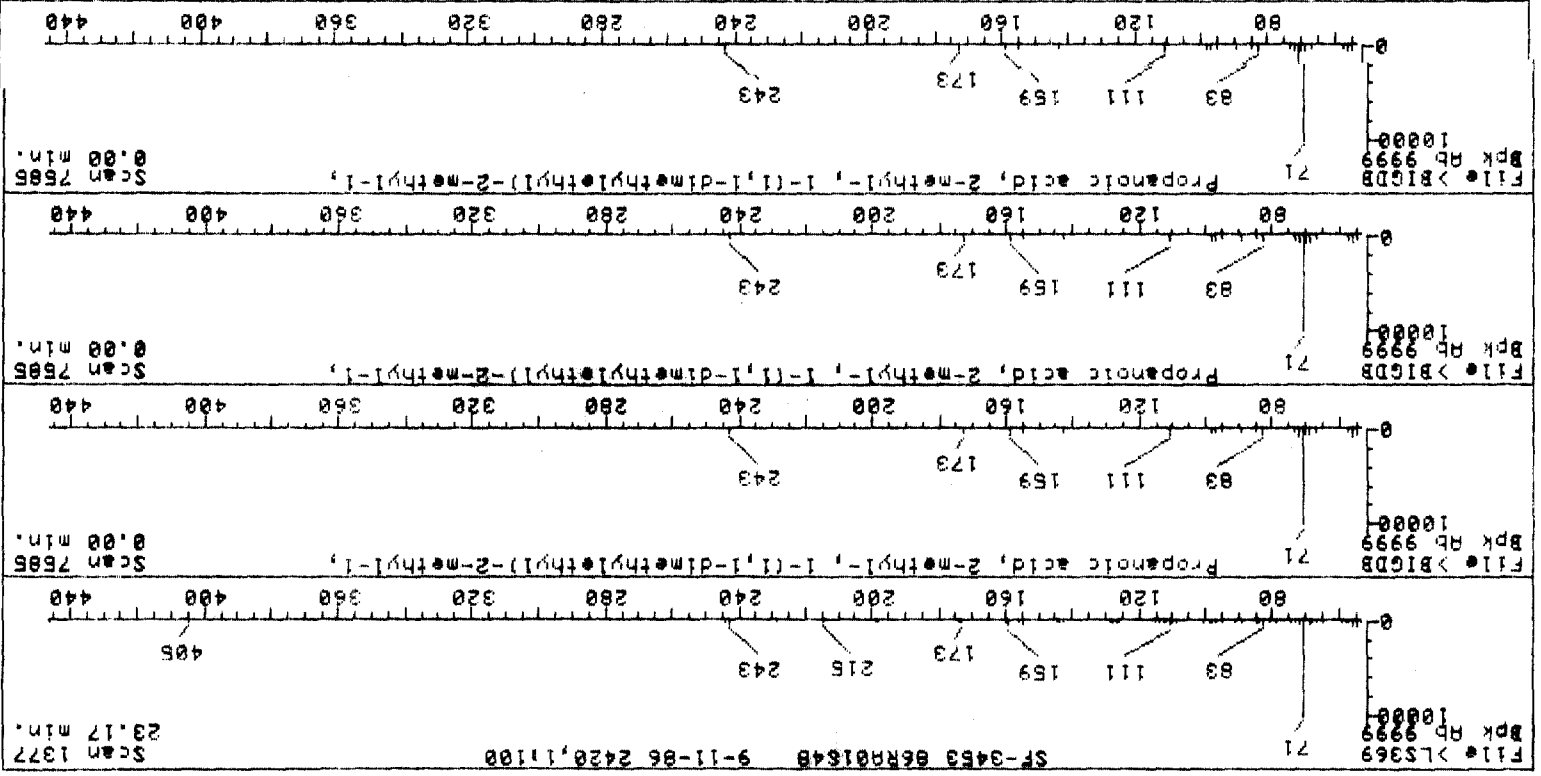


*Jan*



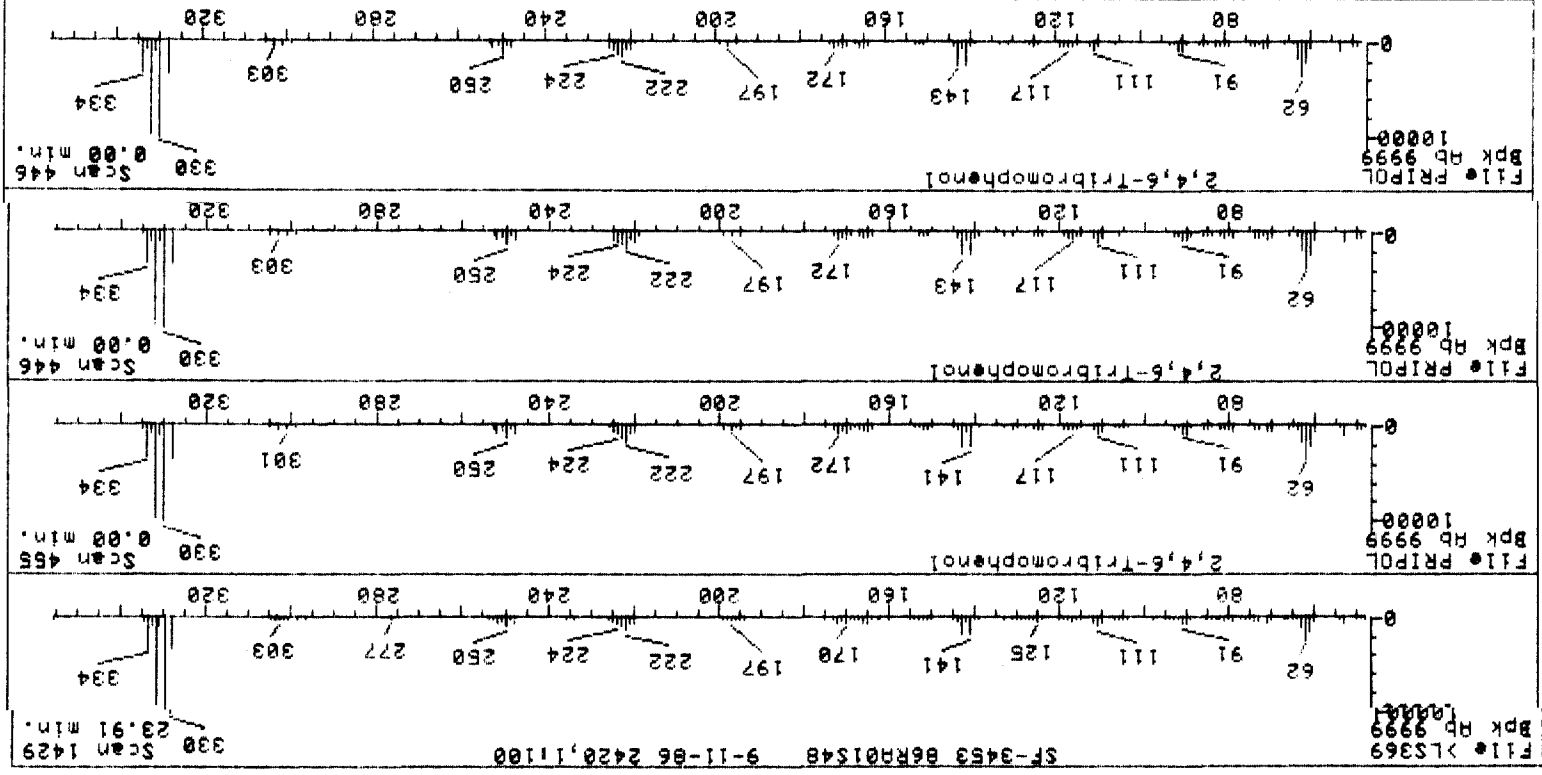
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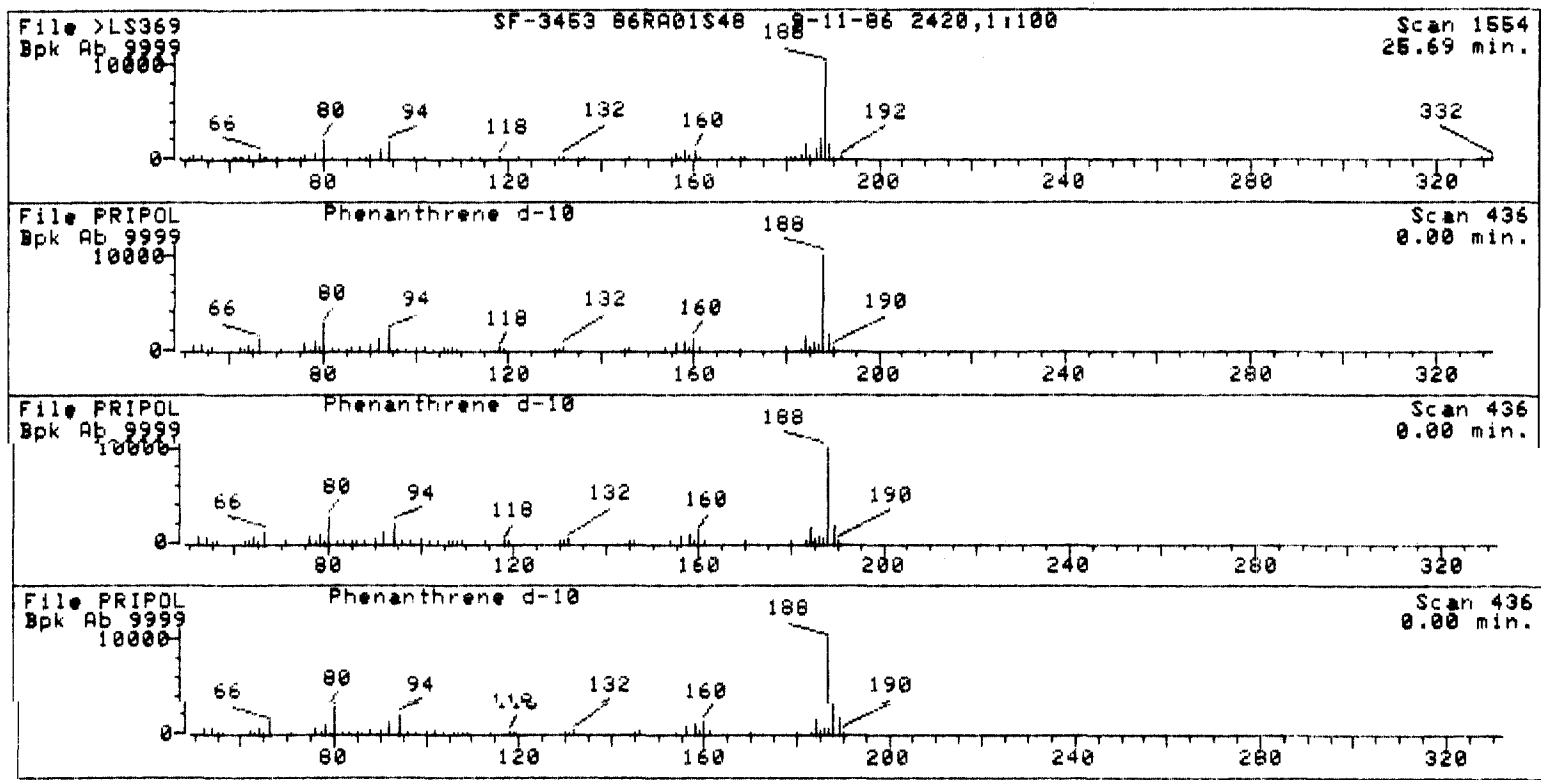
SF-0453 06R01548 9-11-06 2420,11100

*OK*

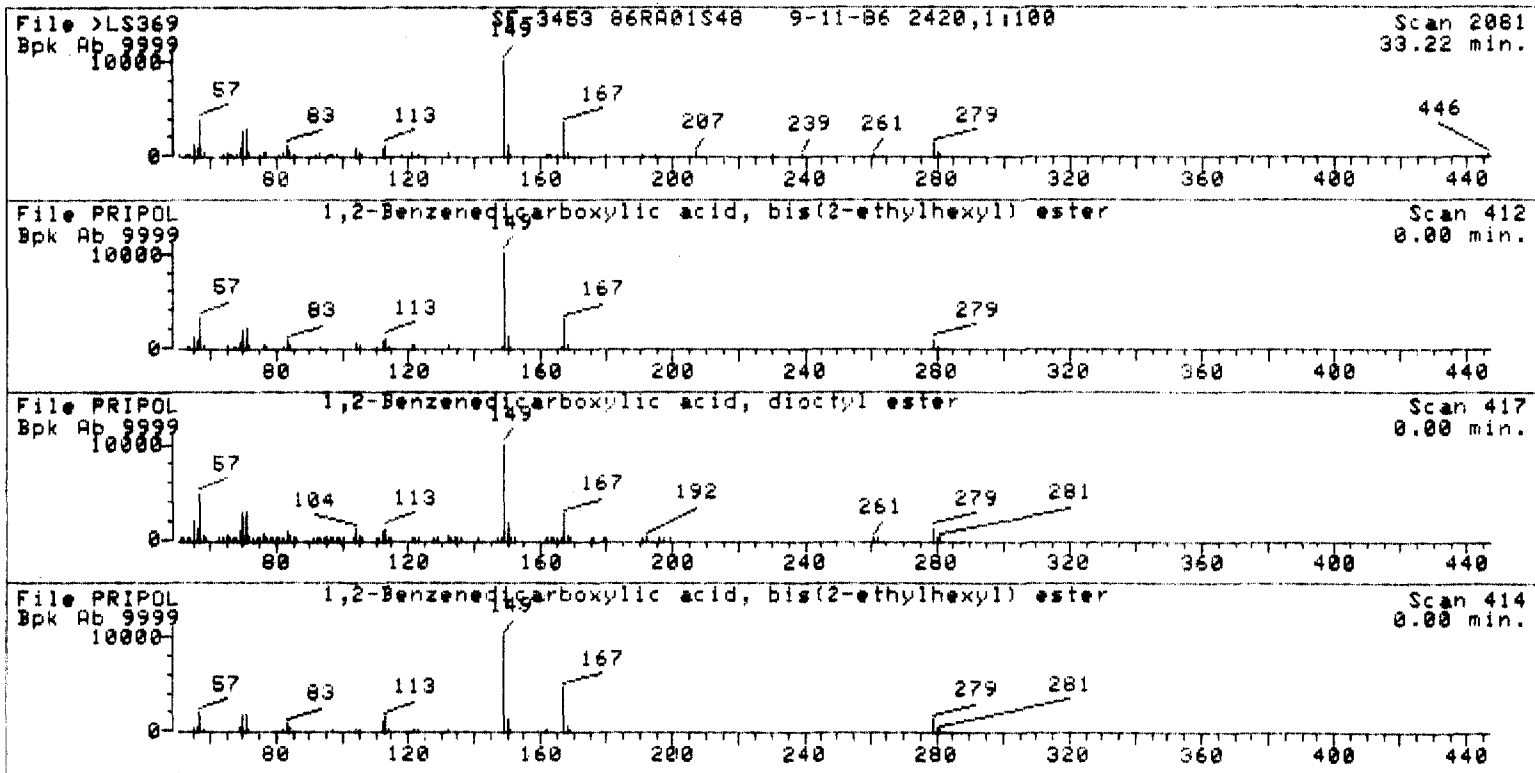


*[Handwritten signature]*

*not*



*Adthli*

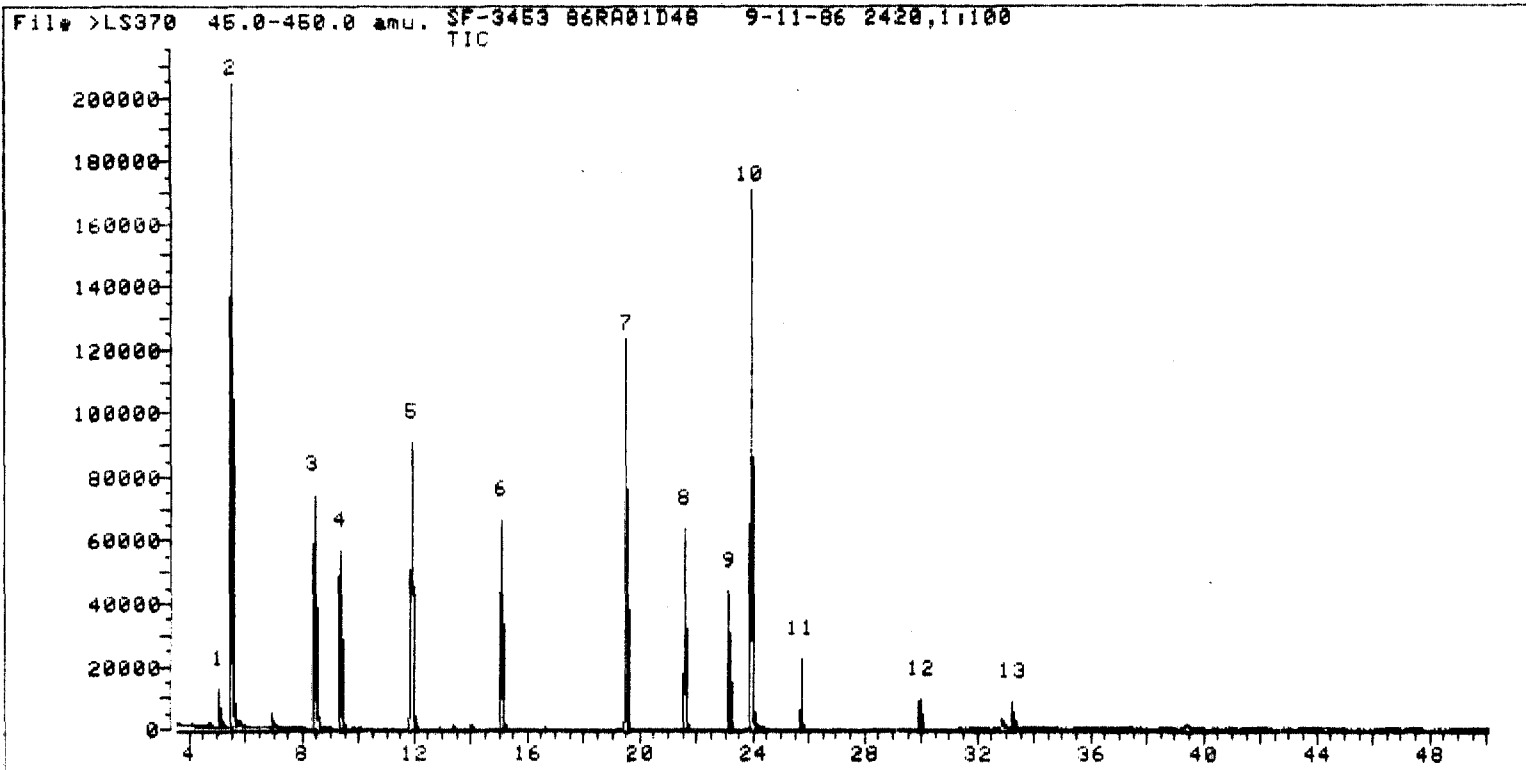




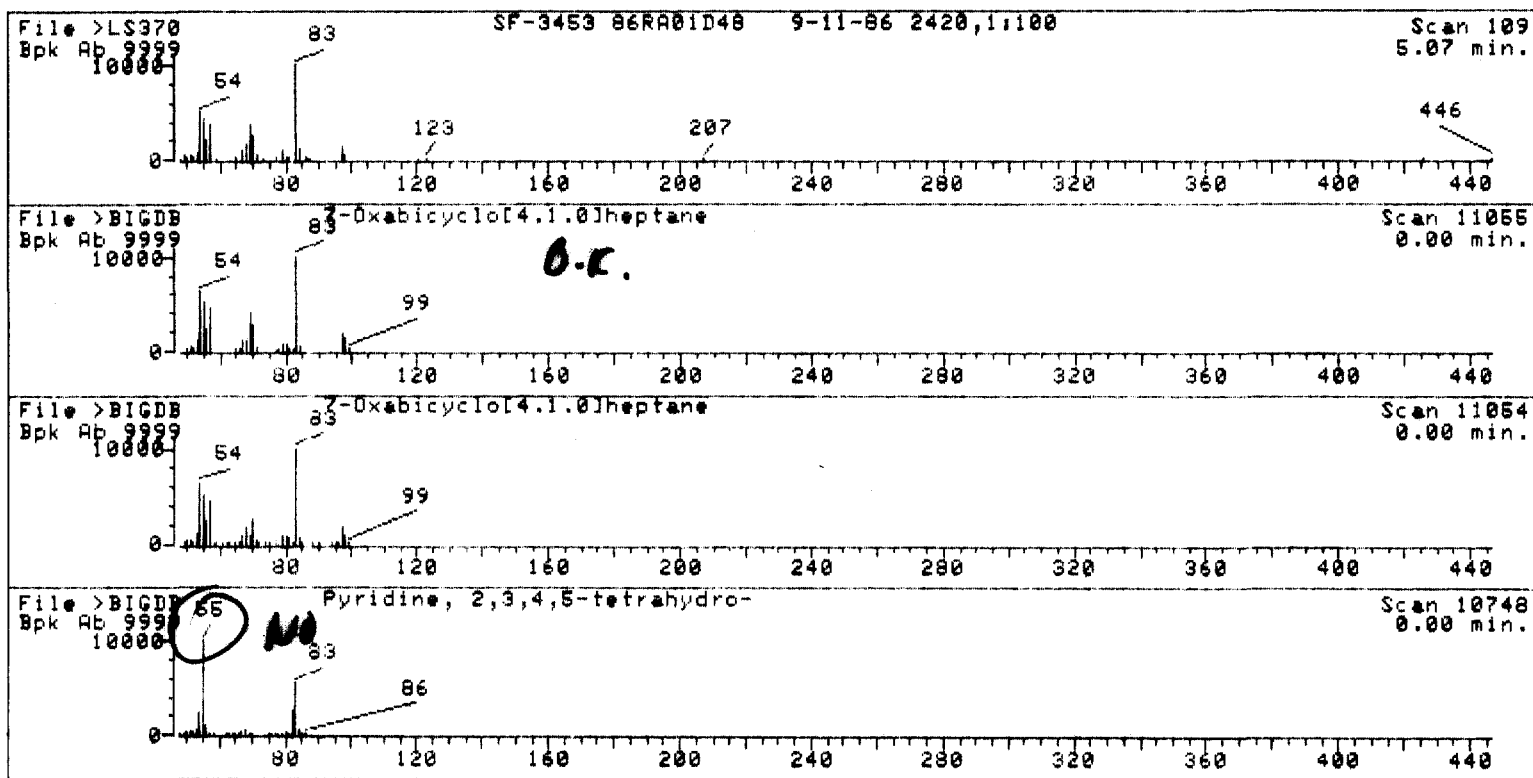
>LS370 SF-3453 86RA01D48 9-11-86 2420,1:100  
 45.01 450.0 TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.068	105	109	117	12027	45763	36291	6.08	1.132
2	5.454	132	136	151	203696	607007	594054	99.52	18.522
3	8.384	335	341	361	74272	289234	284171	47.60	8.860
4	9.313	401	406	416	56916	202425	199591	33.44	6.223
5	11.912	578	588	600	90888	440125	437163	73.23	13.630
6	15.040	799	807	815	66367	266372	265123	44.41	8.266
7	19.509	1113	1120	1127	122971	341114	339658	56.90	10.590
8	21.536	1255	1262	1273	63512	208019	207309	34.73	6.464
9	23.149	1371	1375	1379	43662	106899	104943	17.58	3.272
10	23.892	1421	1427	1442	170504	598696	596944	100.00	18.612
11	25.692	1547	1553	1560	22348	77473	76123	12.75	2.373
12	29.945	1846	1851	1858	9248	34837	32962	5.52	1.028
13	33.201	2073	2079	2087	8508	37676	32980	5.52	1.028

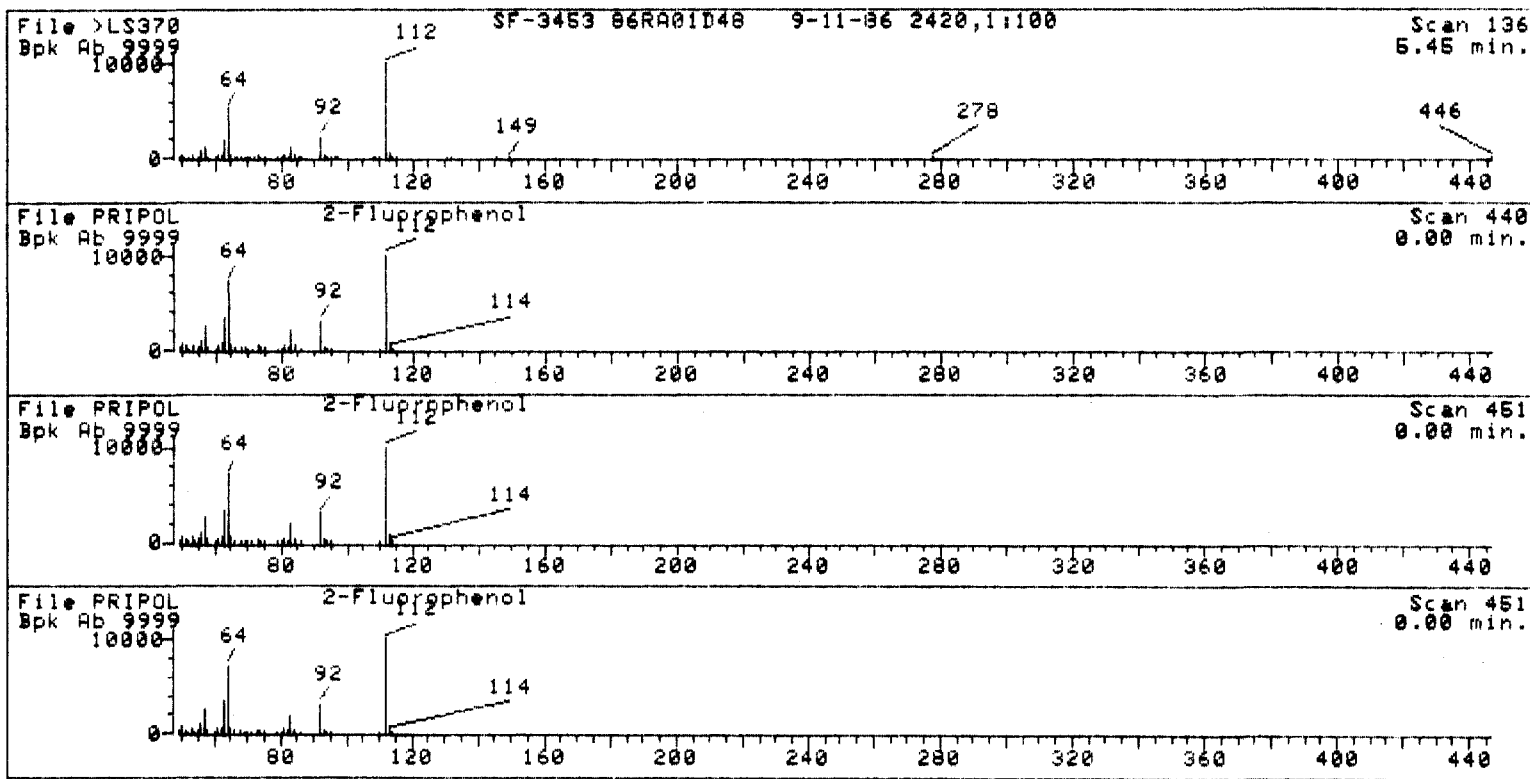
Sum of corrected areas: 3207312.



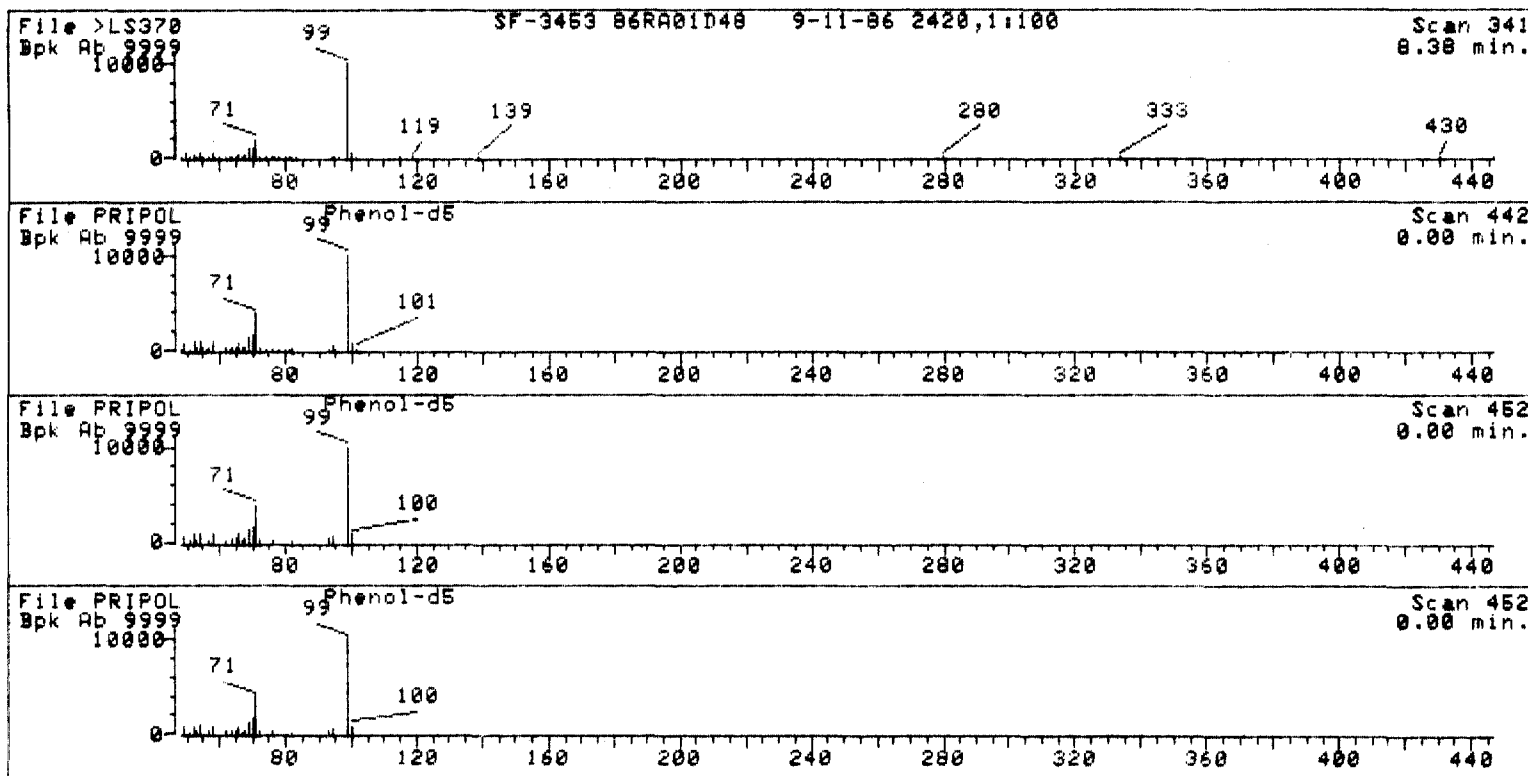
*In [unclear]*



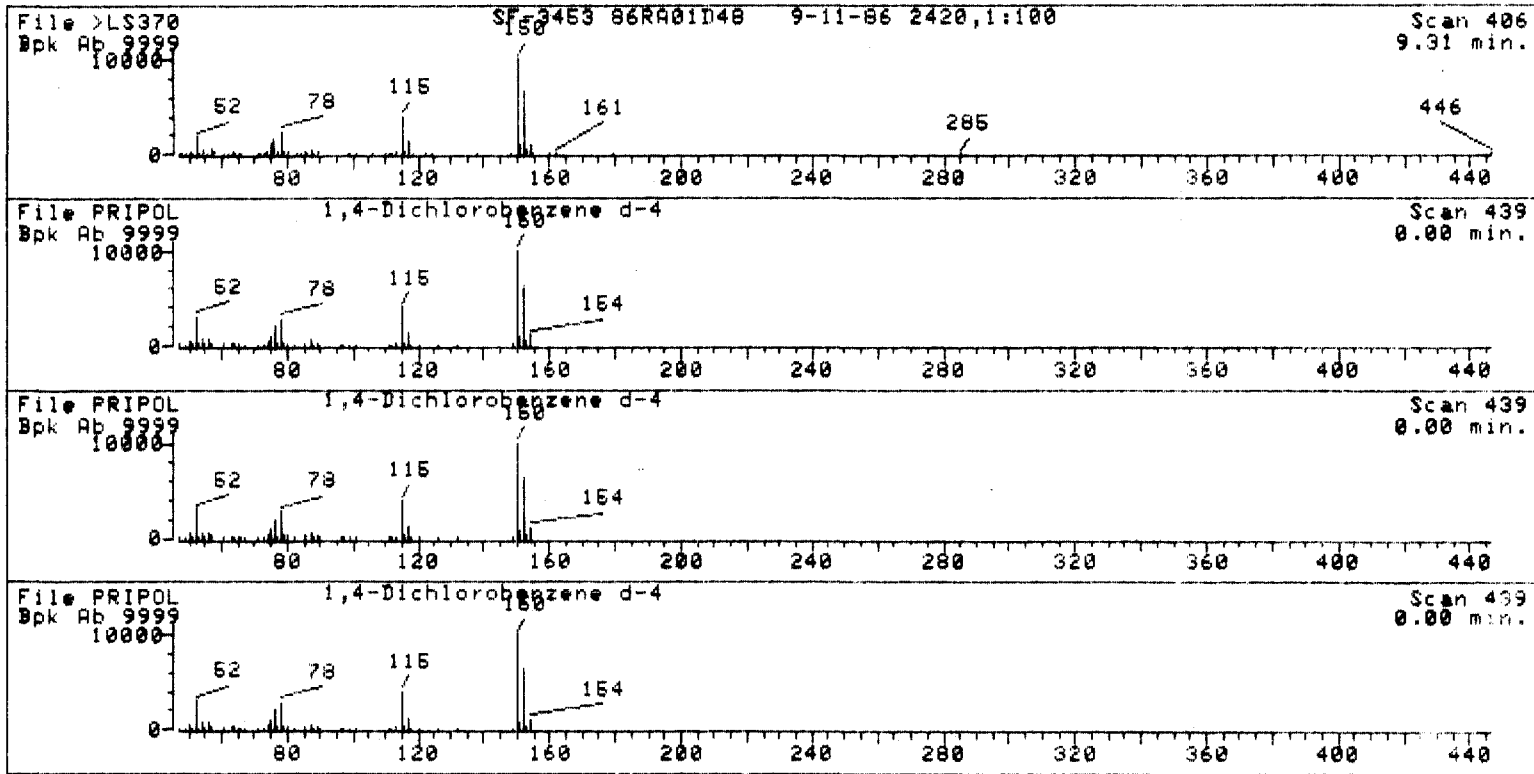
*Sam*



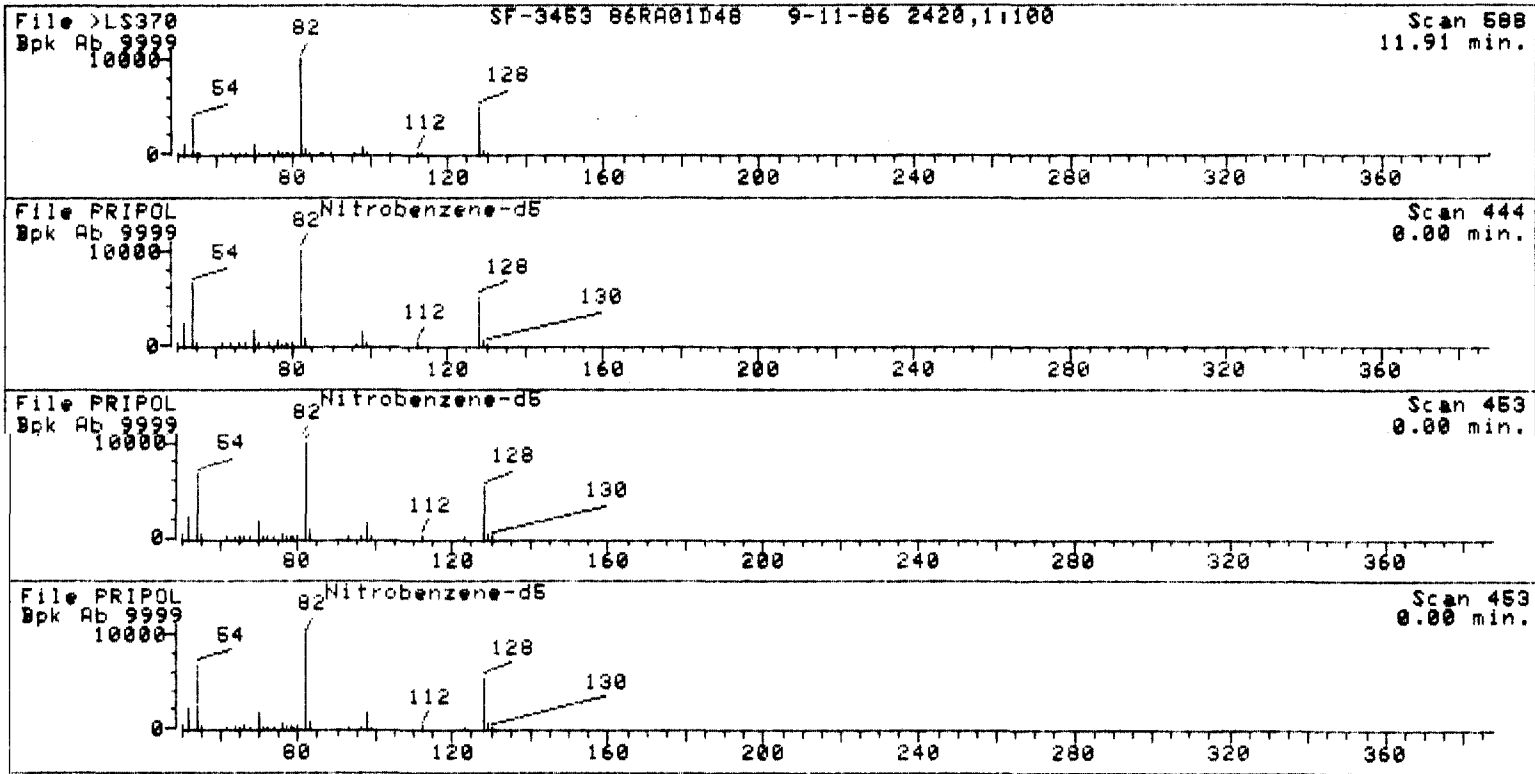
*Jan*



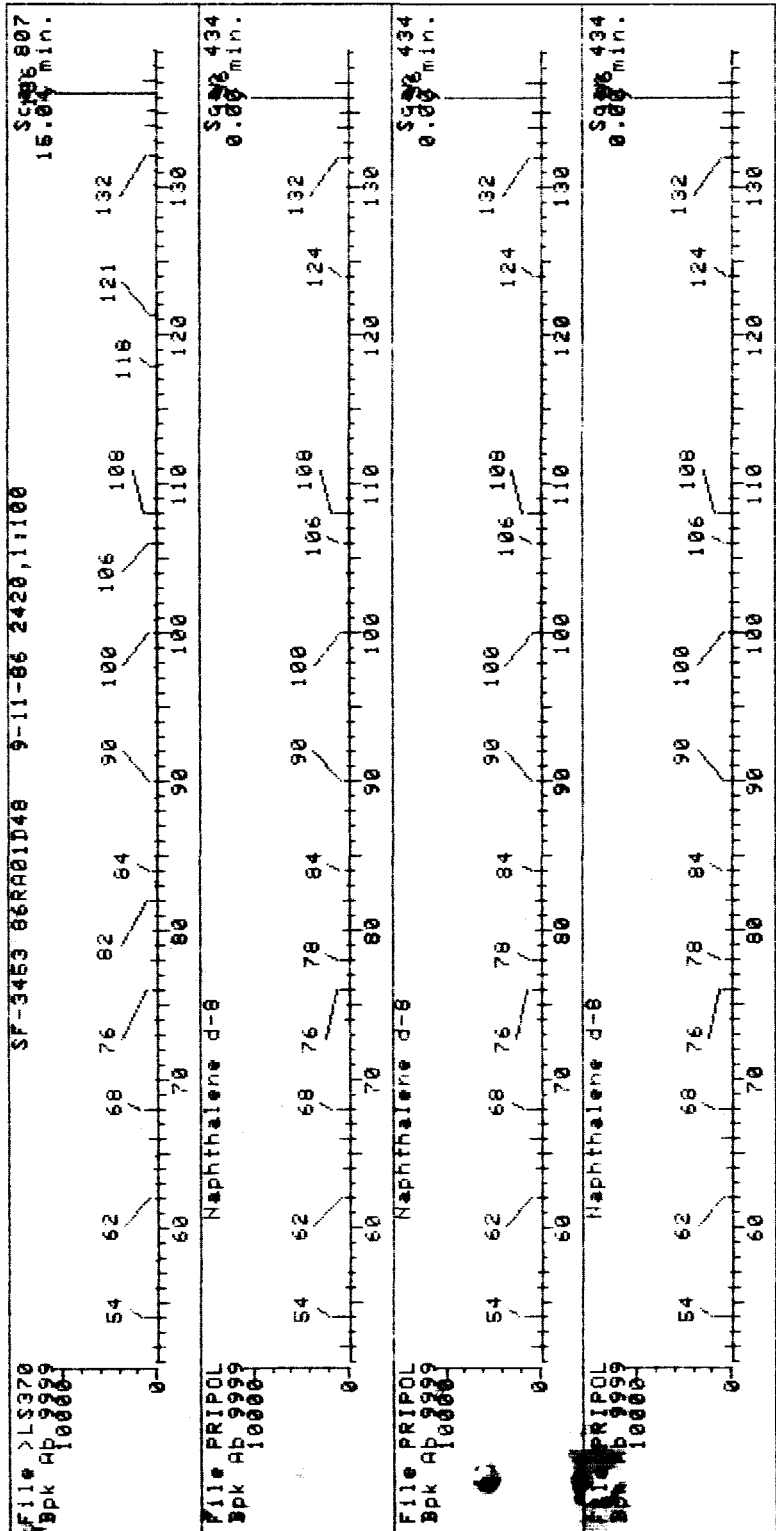
*Handwritten signature*



*Sam*

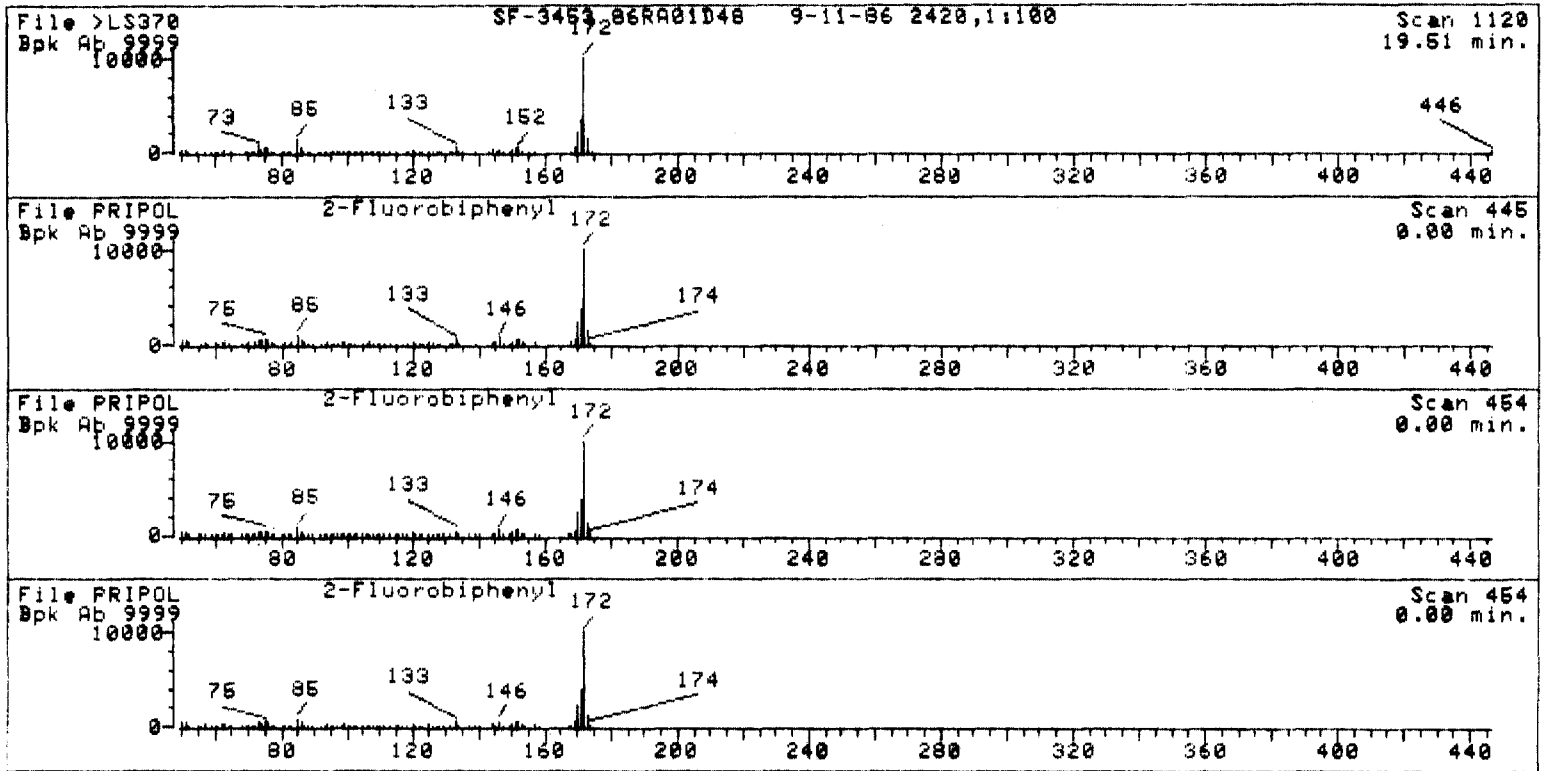


*Handwritten signature*

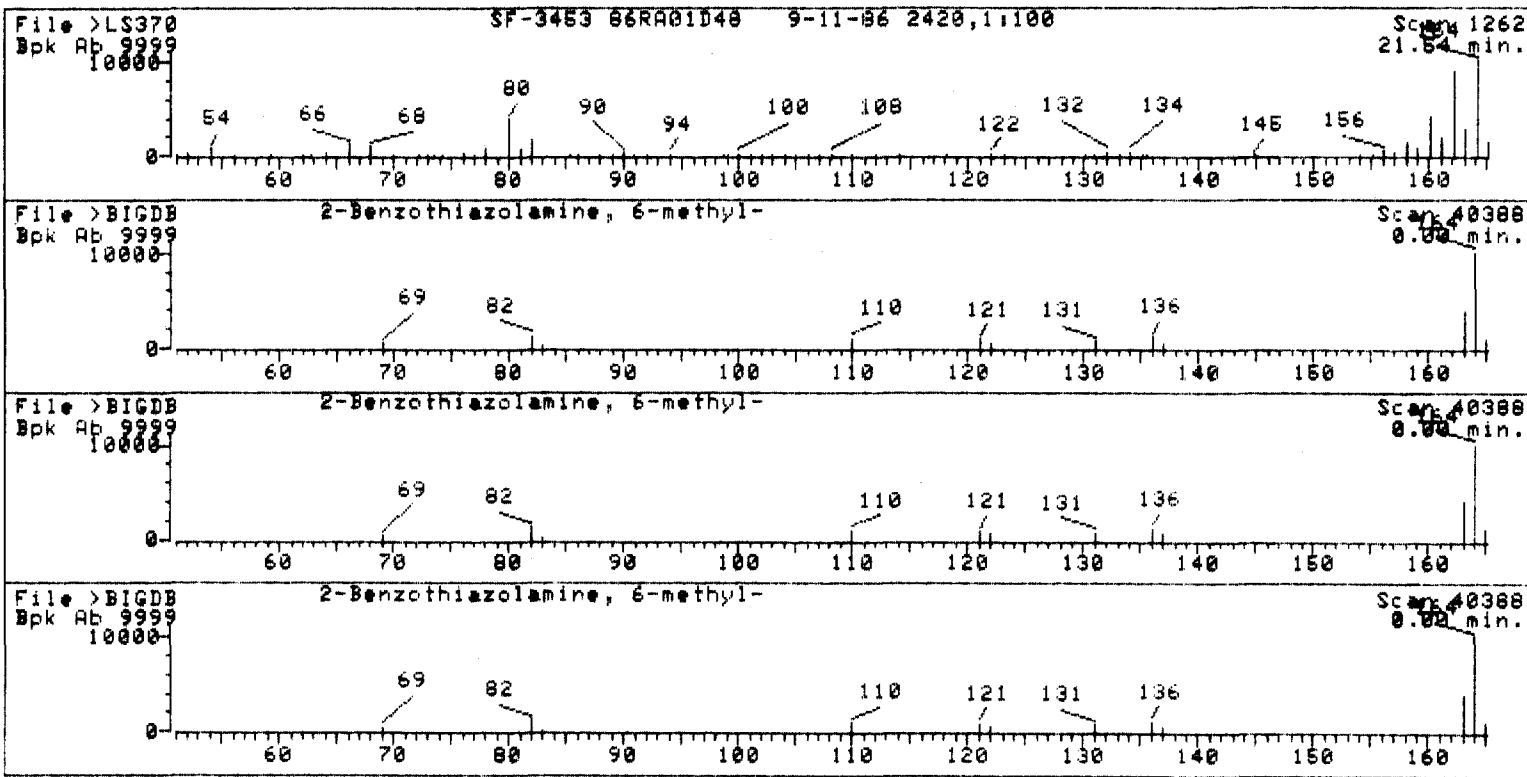




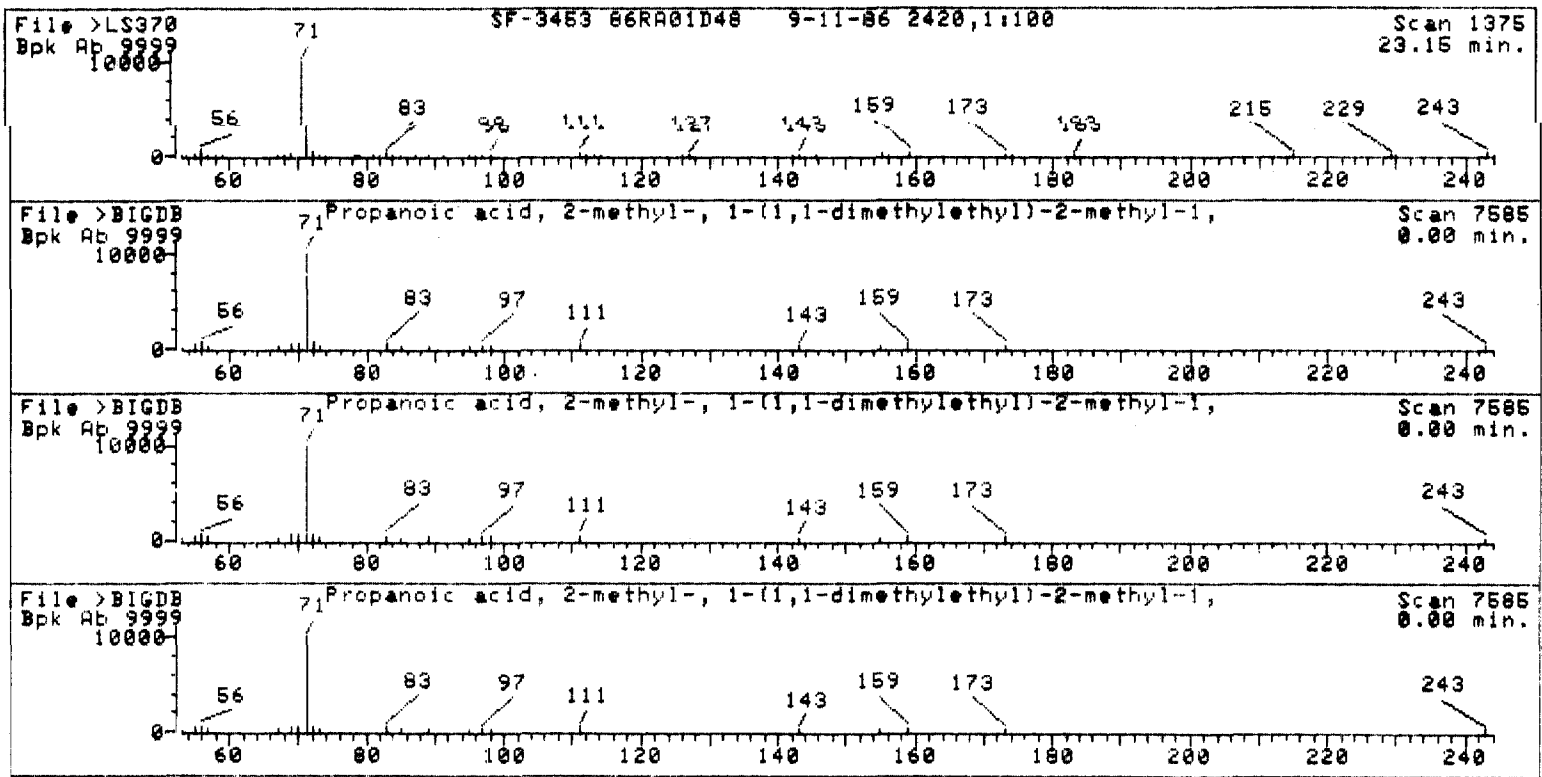
*Sam*



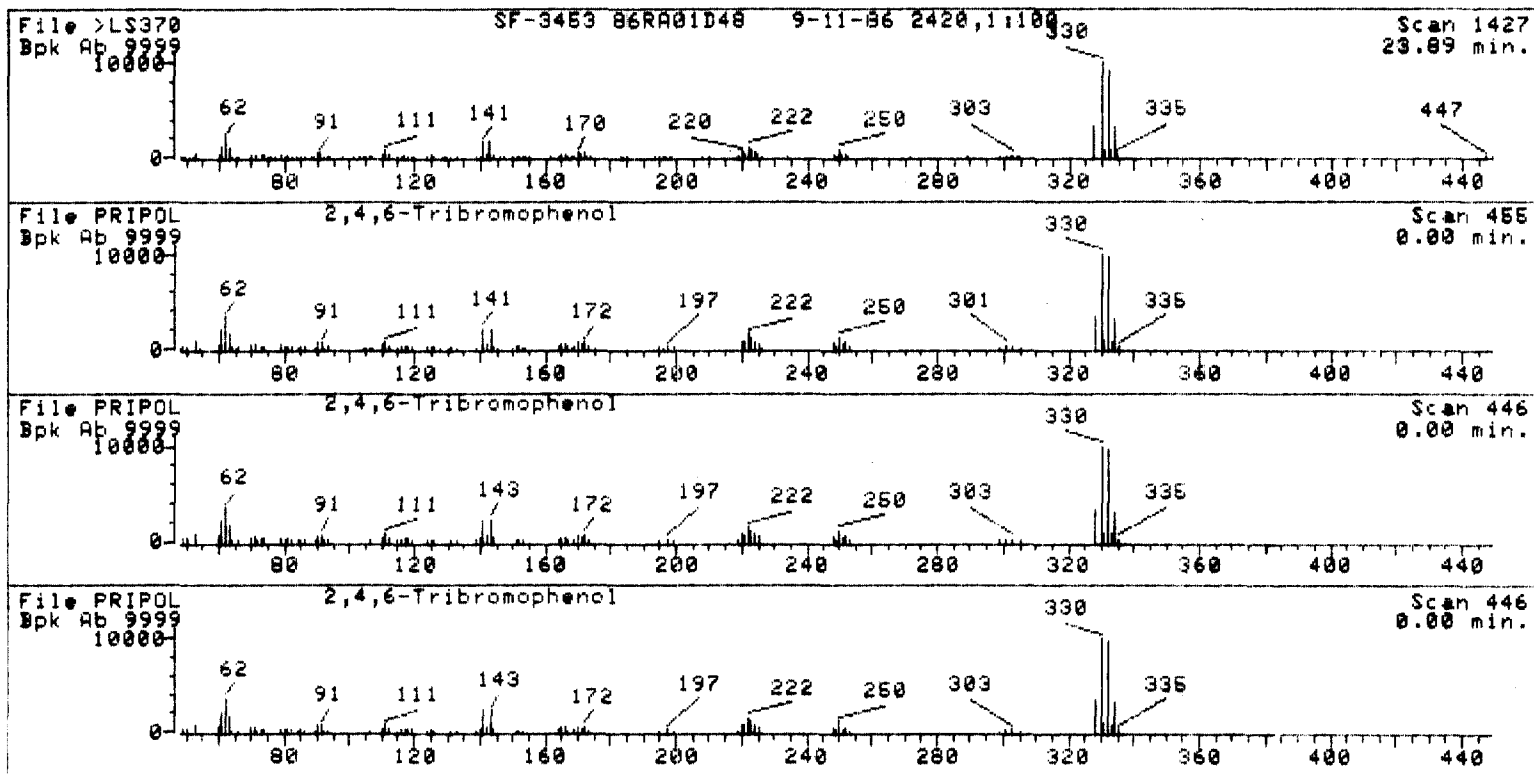
*Handwritten signature*

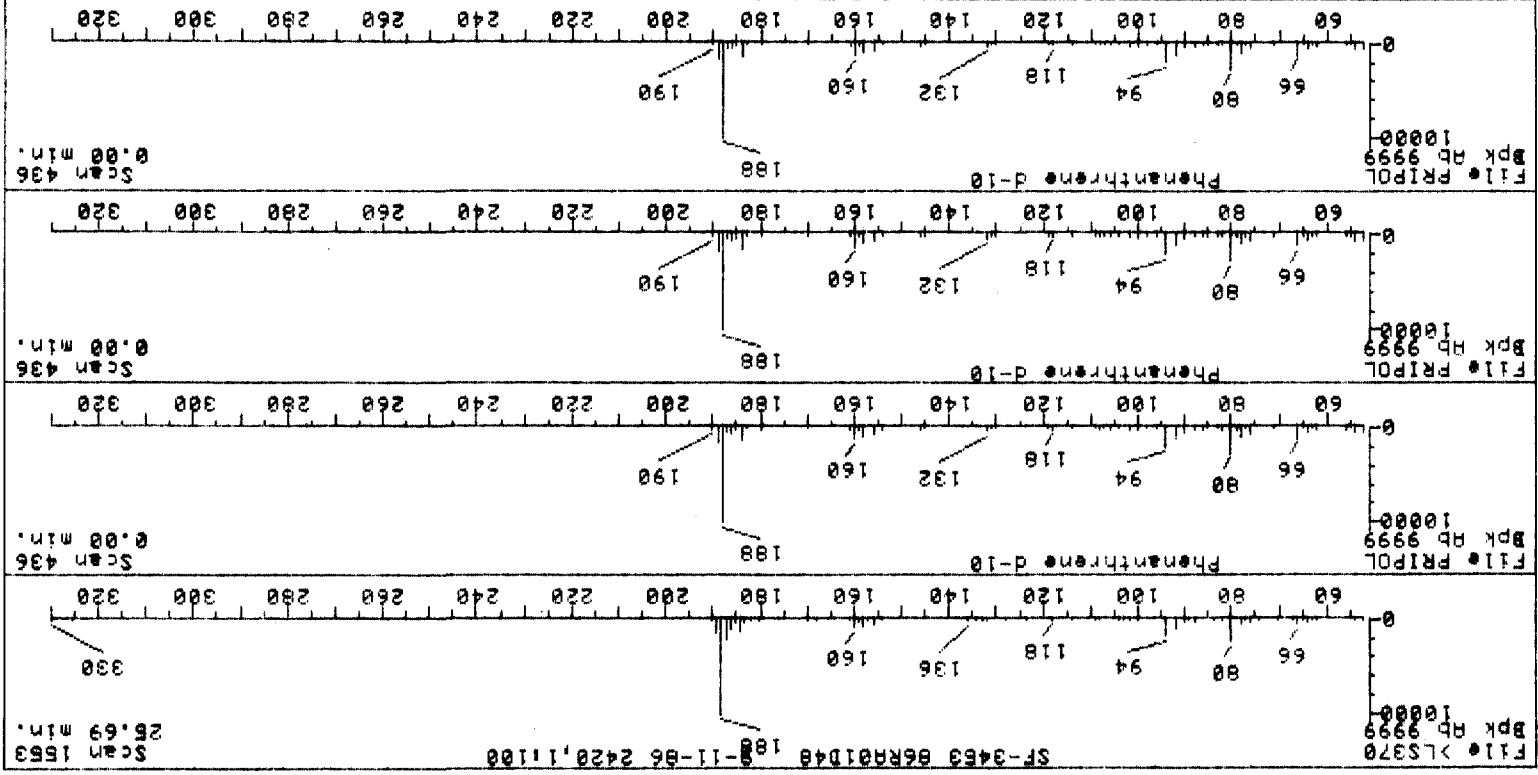


2 Old



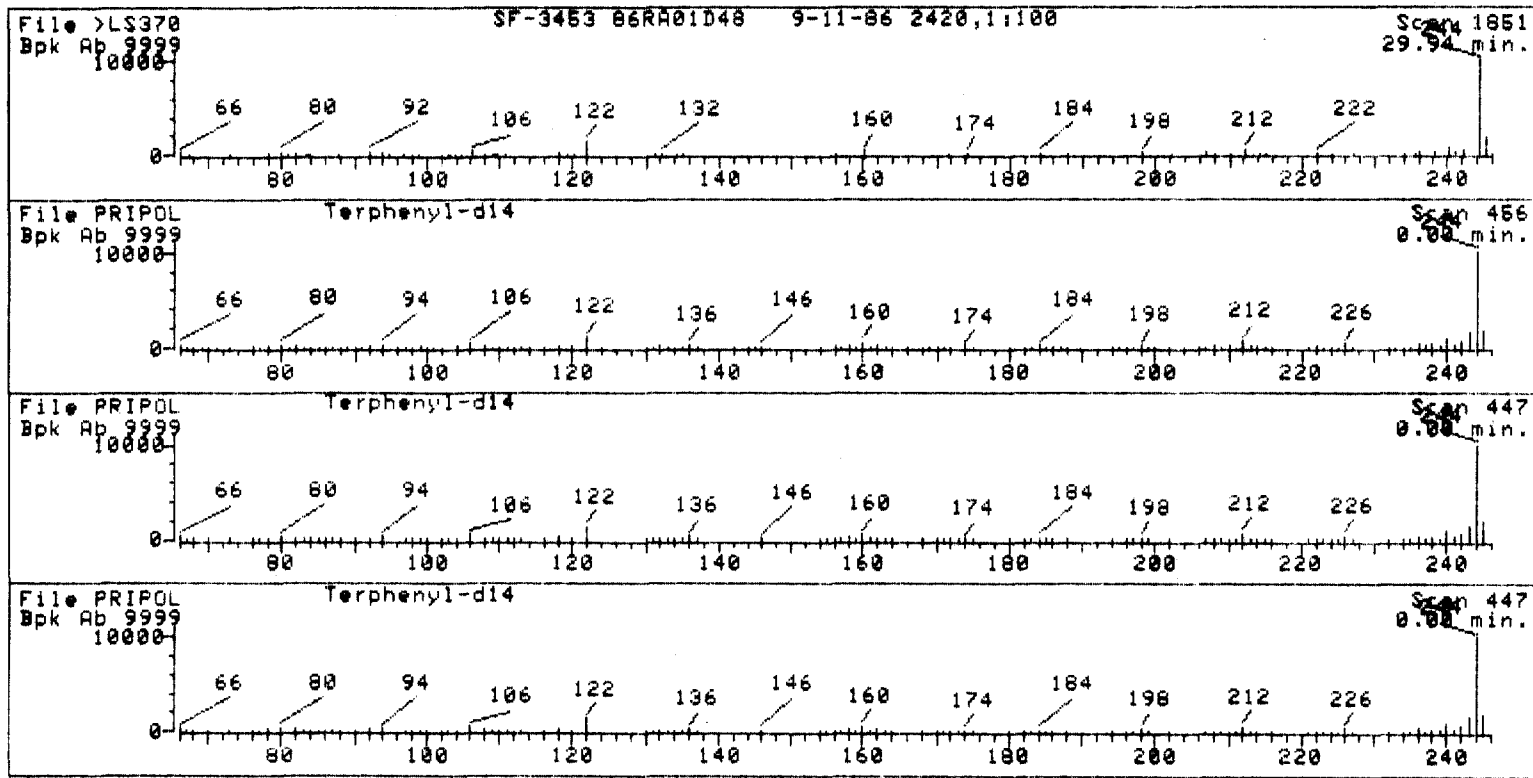
*Sam*



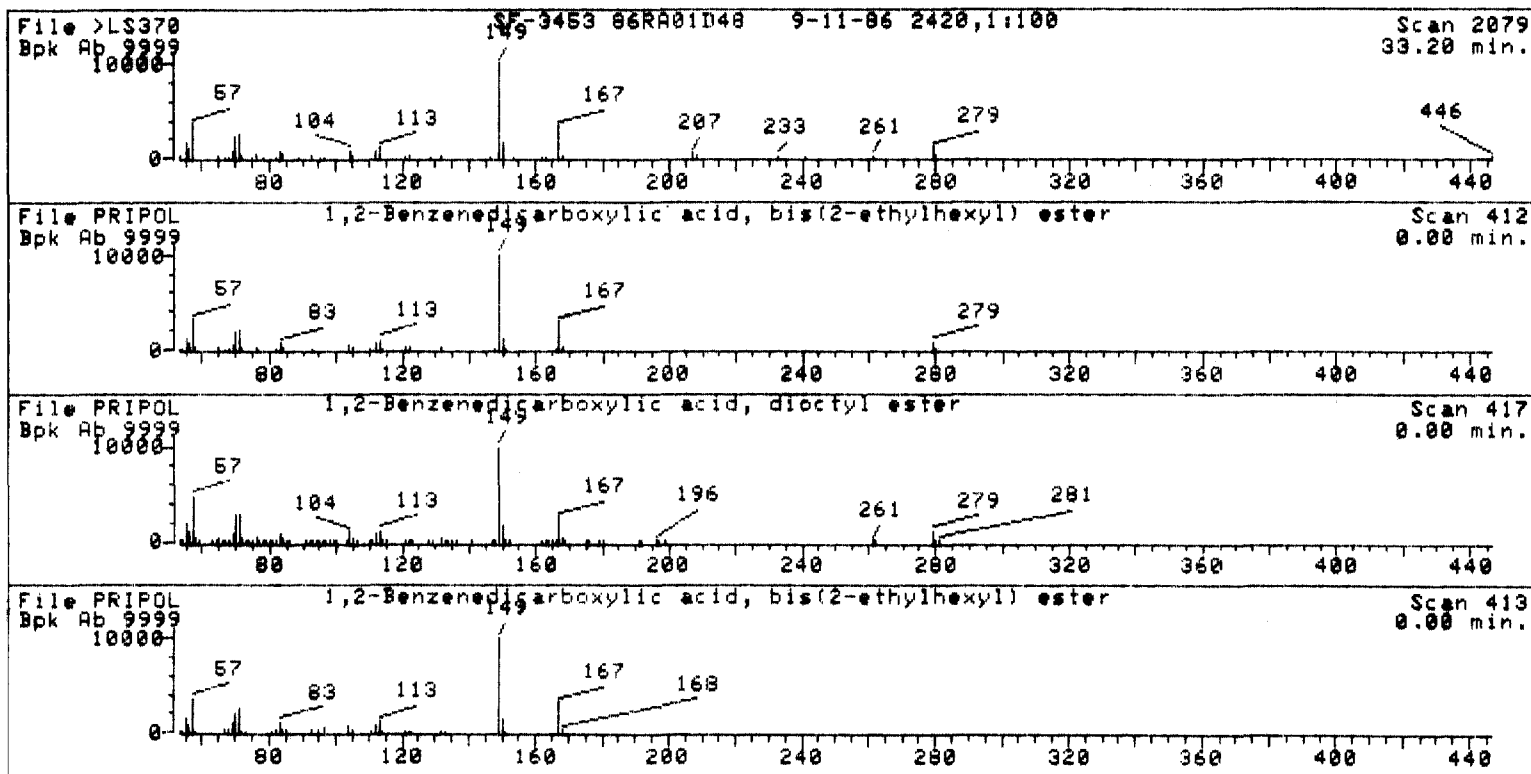


*Handwritten signature or initials*

*sun*



*Optical*



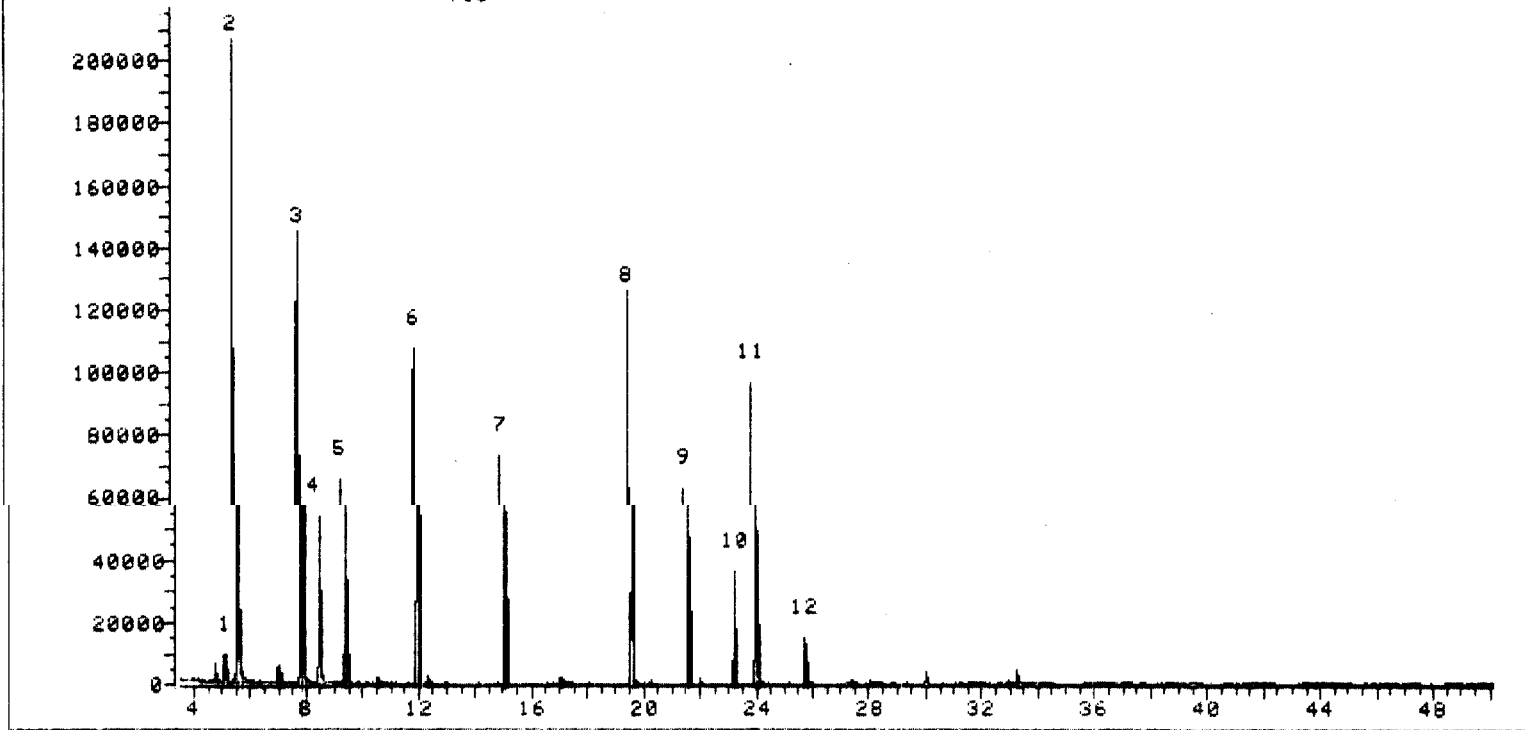
>LS371 SF-3453 86RA01S49 9-11-86 2420.1:100  
 45.01 450.0 TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.088	107	111	118	9021	38459	29463	5.07	.879
2	5.488	135	139	164	206242	599401	580930	100.00	17.339
3	7.804	294	301	316	144952	502007	492665	84.81	14.705
4	8.419	339	344	354	53645	238781	229792	39.56	6.859
5	9.348	403	409	421	65695	228950	224748	38.69	6.708
6	11.948	580	591	603	107357	499337	494847	85.18	14.770
7	15.076	802	810	819	73446	282617	280531	48.29	8.373
8	19.533	1117	1122	1130	125701	374805	371687	63.98	11.094
9	21.576	1260	1265	1272	62849	195736	192458	33.13	5.744
10	23.175	1372	1377	1381	36112	89210	88793	15.28	2.650
11	23.918	1423	1429	1439	96673	315625	313822	54.02	9.367
12	25.718	1550	1555	1561	15346	51857	50649	8.72	1.512

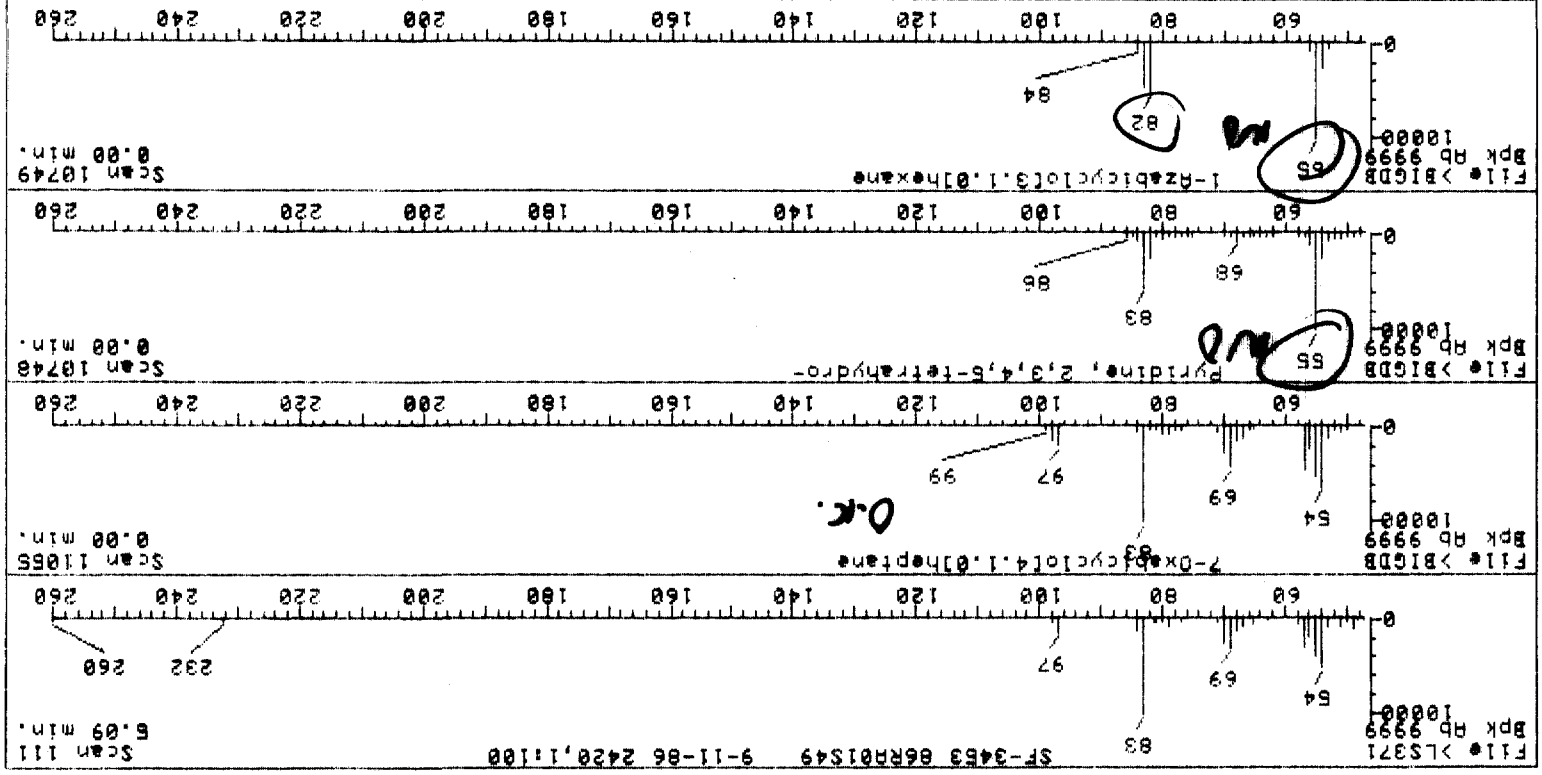
Sum of corrected areas: 3350385.



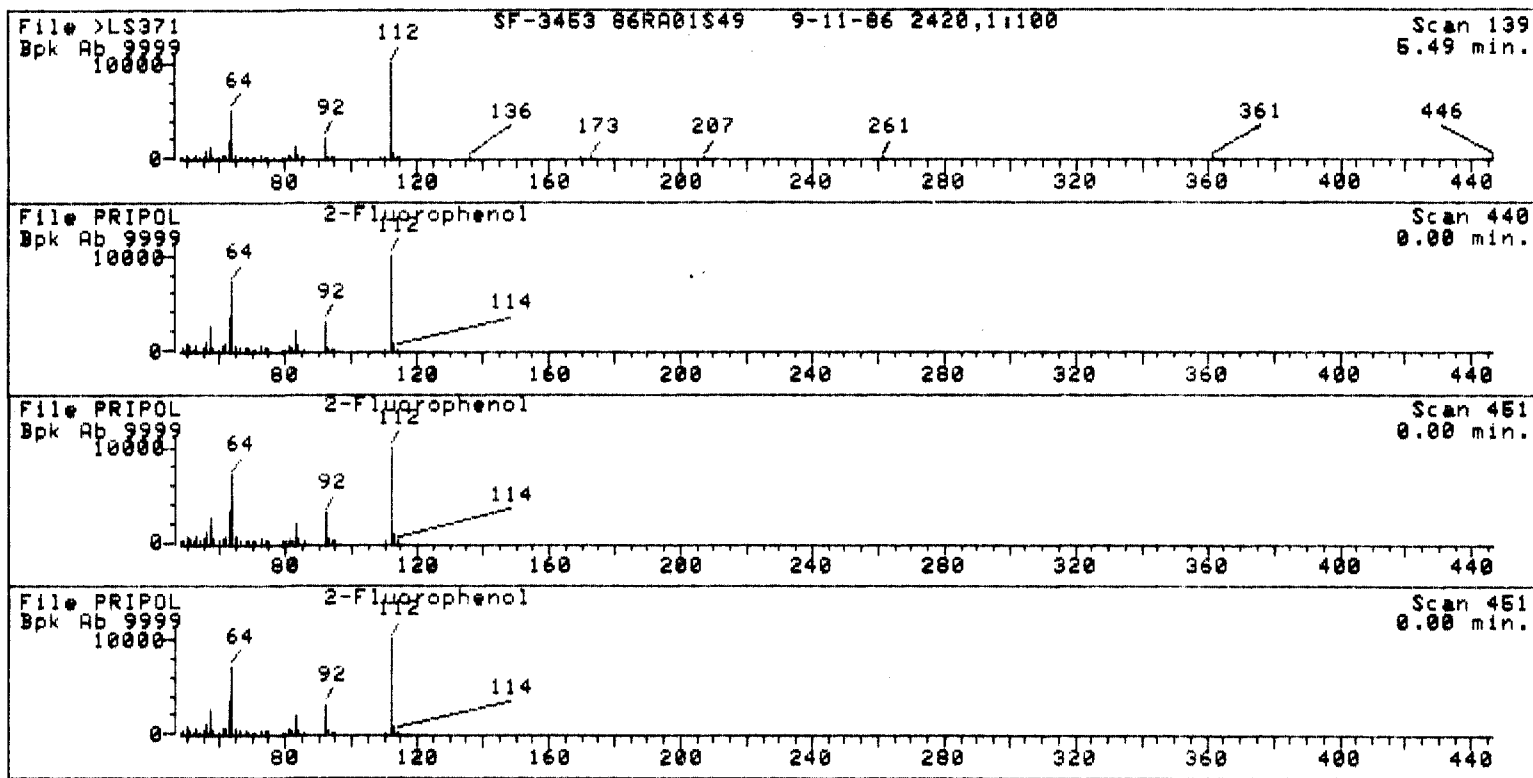
File >LS371 45.0-450.0 amu. SF-3453 86RA01S49 9-11-86 2420,11100  
TIC

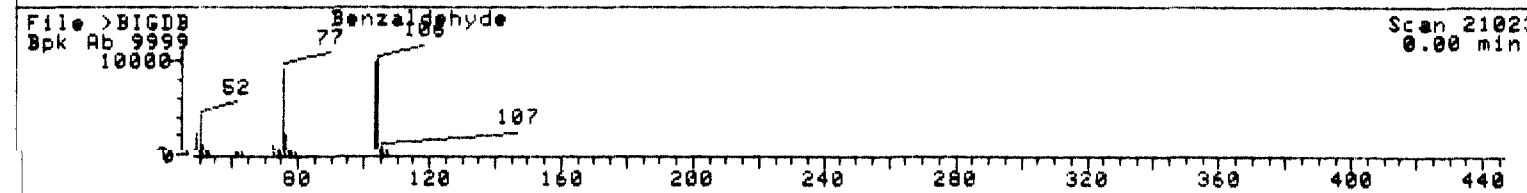
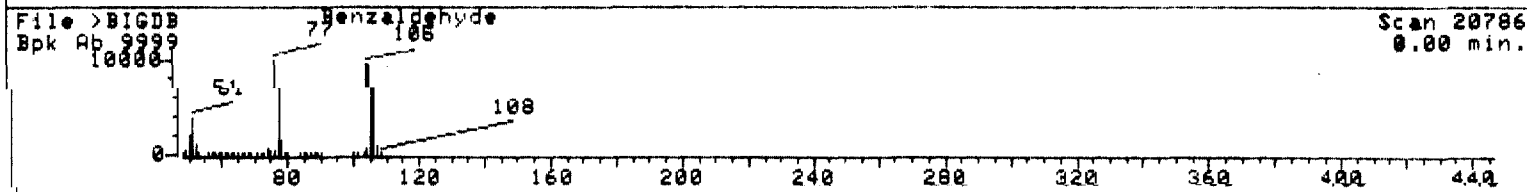
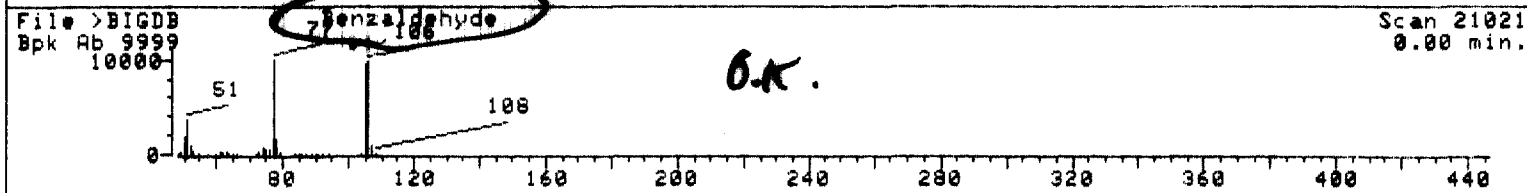
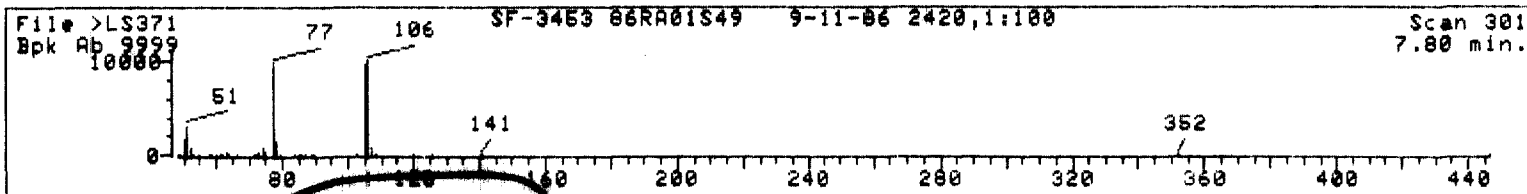


OK

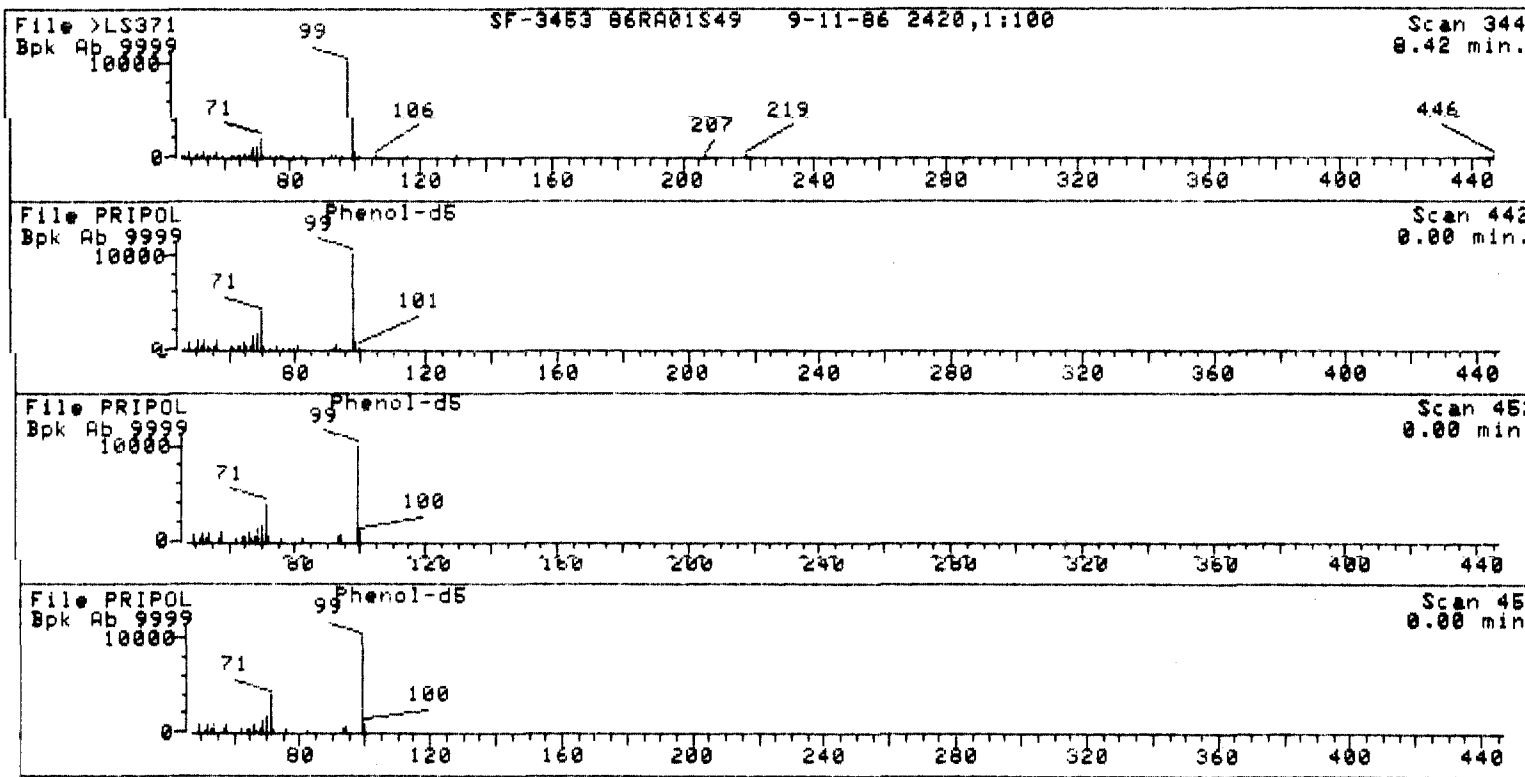


*Jan*

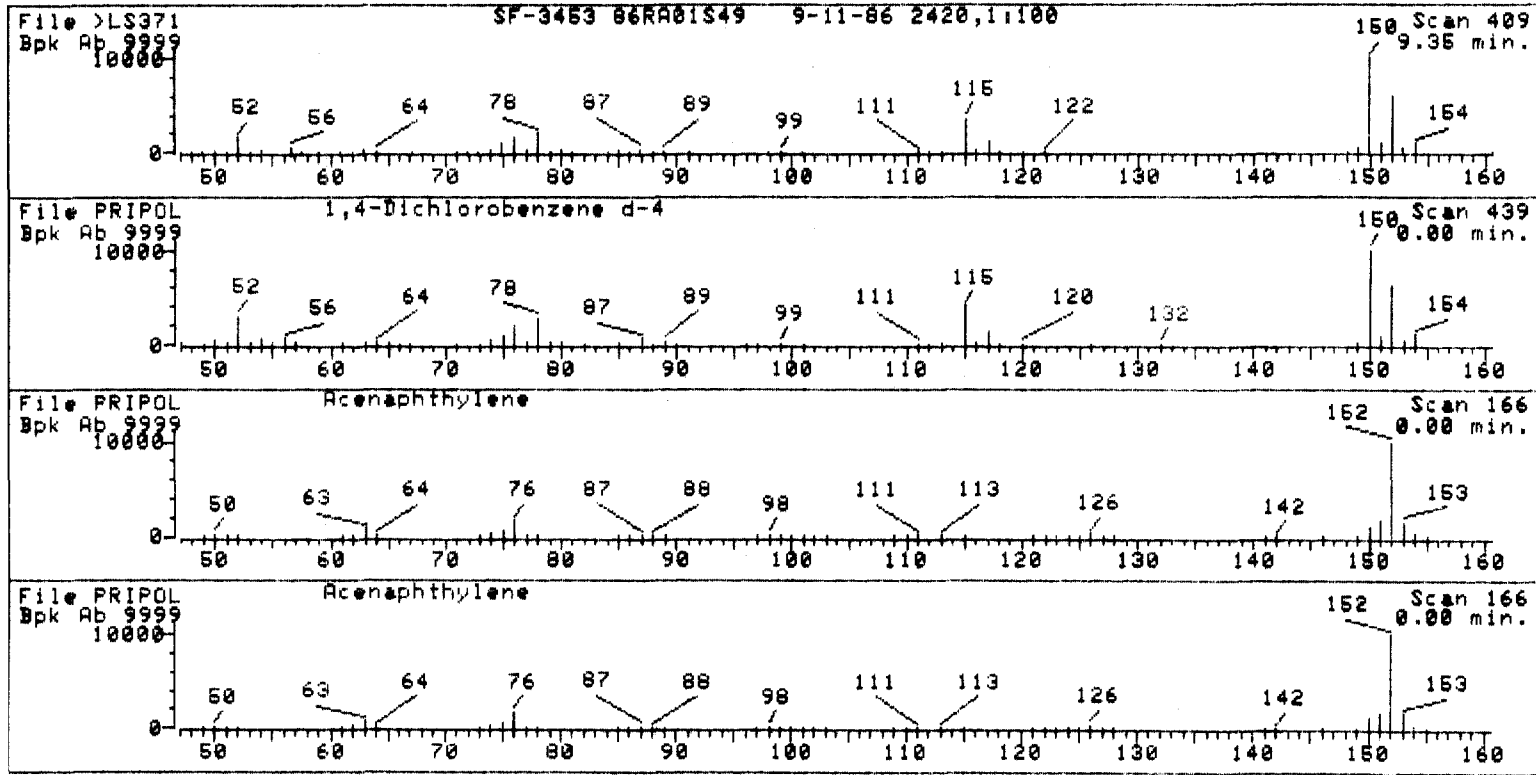




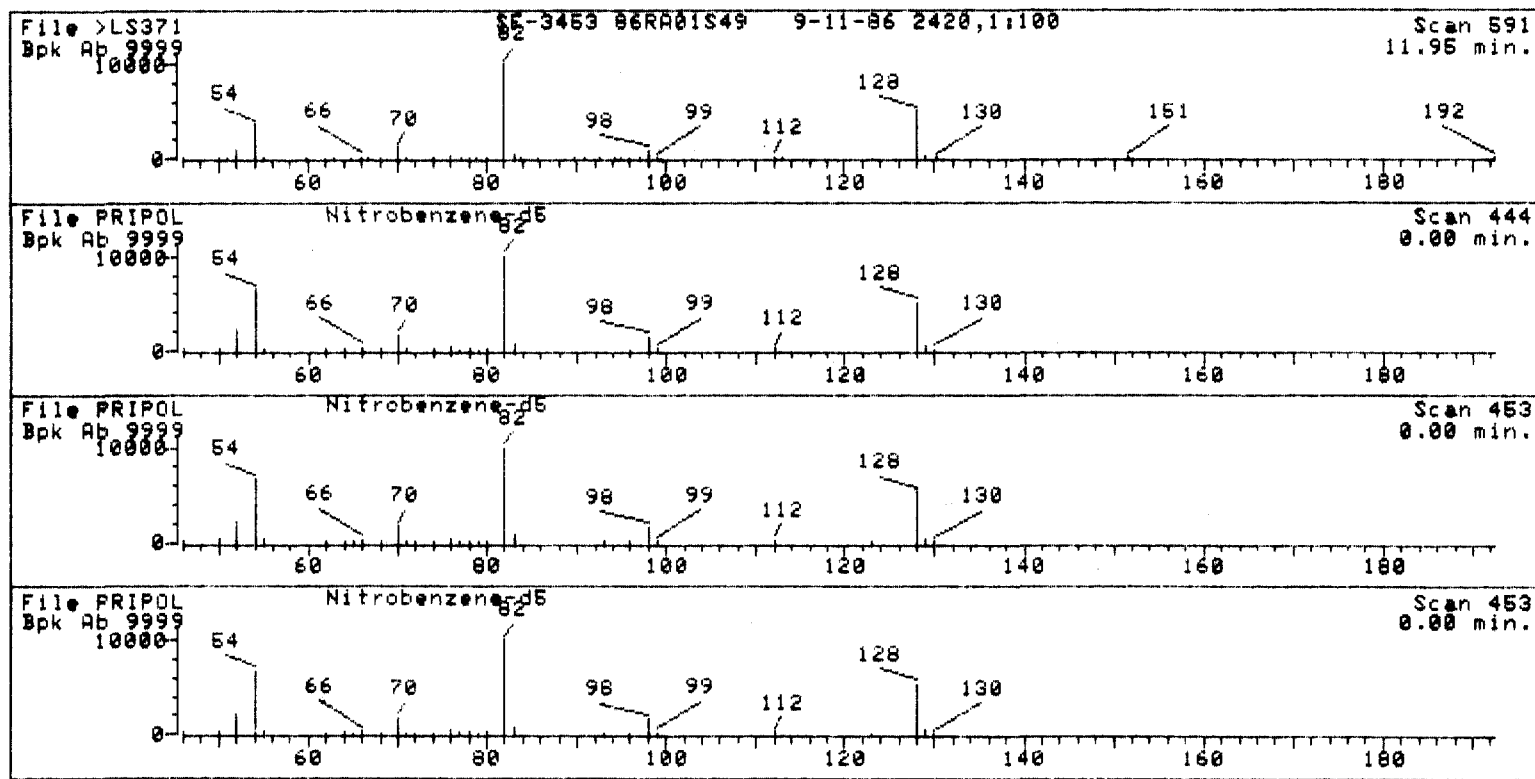
*Jan*



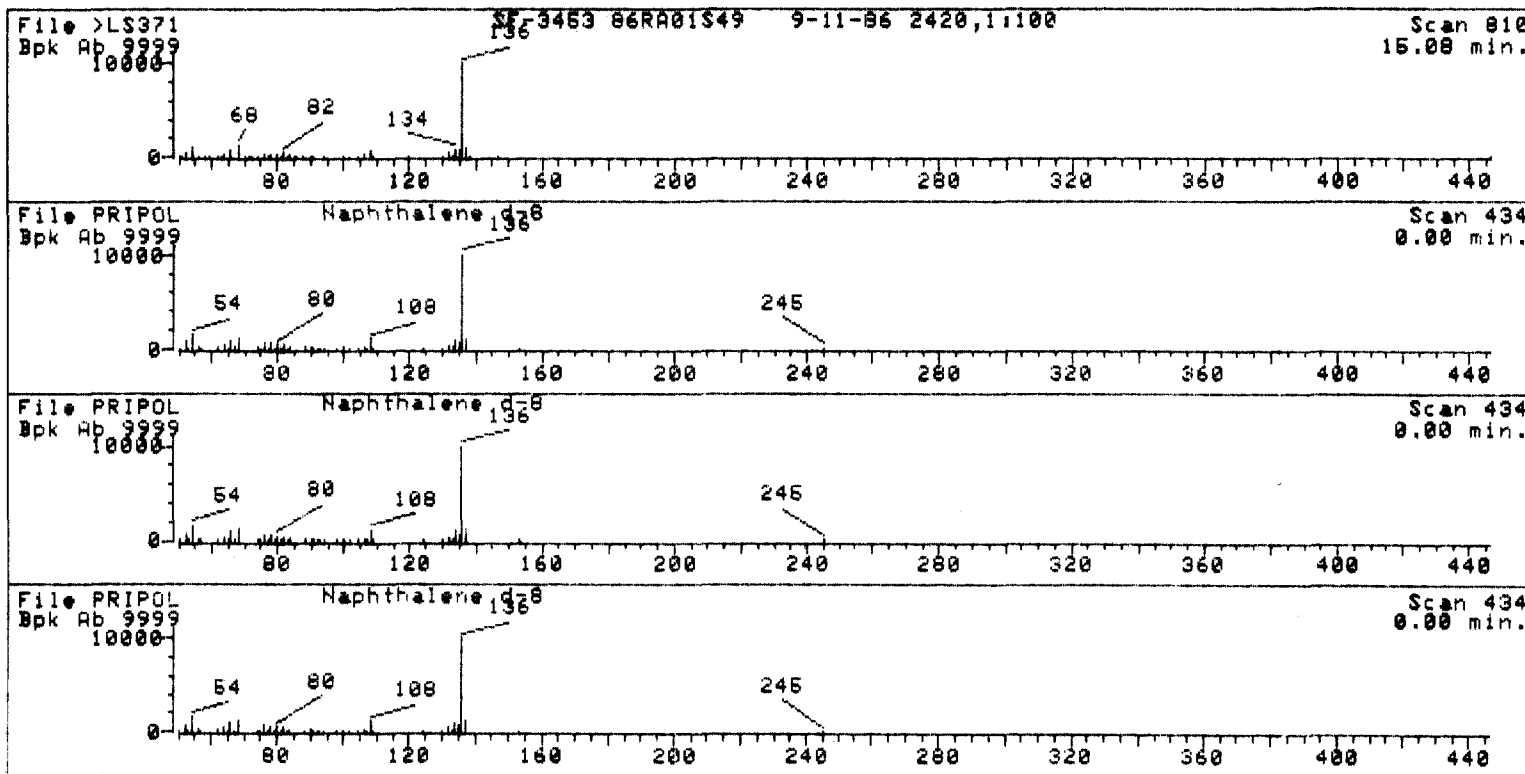
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*Sam*



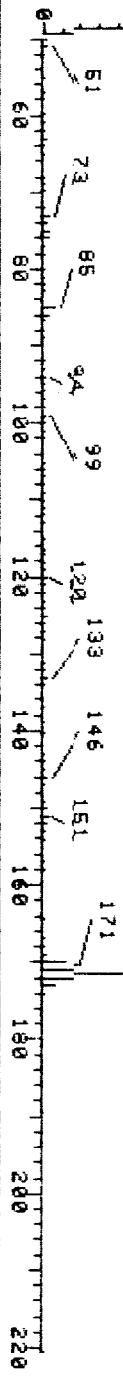
*Intal*



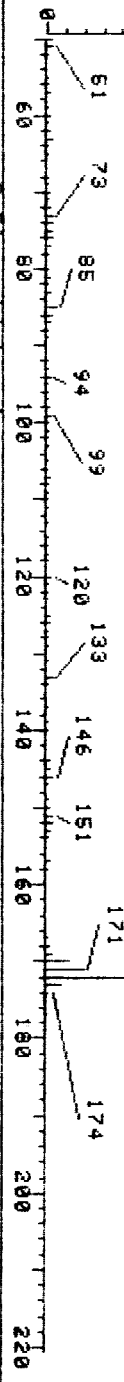


*Shan*

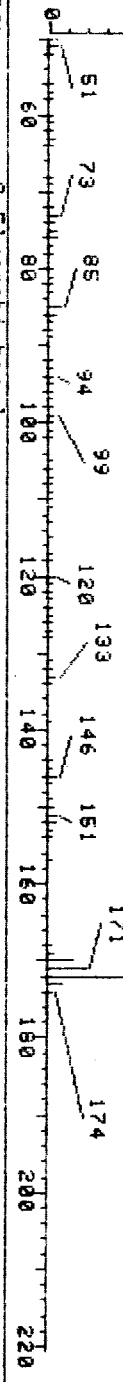
File >LS371 SF-3453 86R01549 9-11-86 2420,1:100 Scan 1122  
Bpk Rp 9999 19.53 min.  
10000



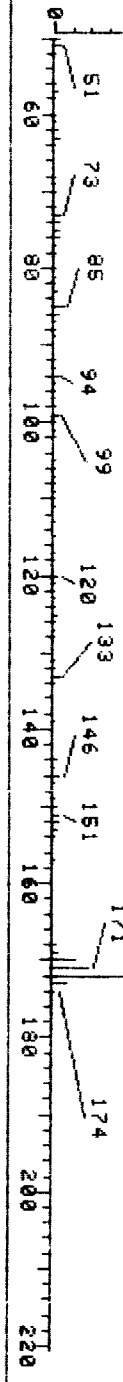
File >PRIPOL SF-3453 86R01549 9-11-86 2420,1:100 Scan 454  
Bpk Rp 9999 0.00 min.  
10000

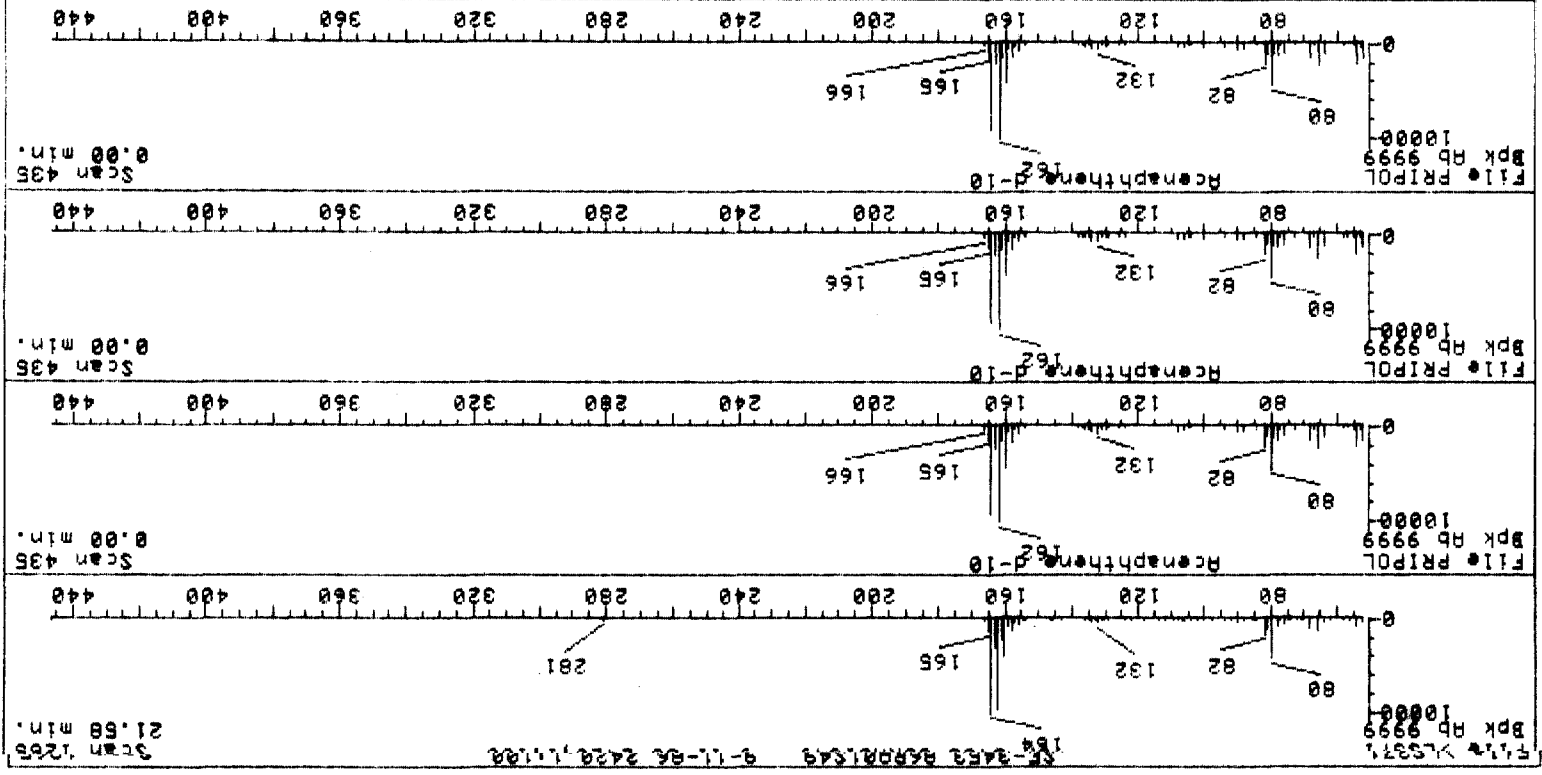


File >PRIPOL SF-3453 86R01549 9-11-86 2420,1:100 Scan 445  
Bpk Rp 9999 0.00 min.  
10000



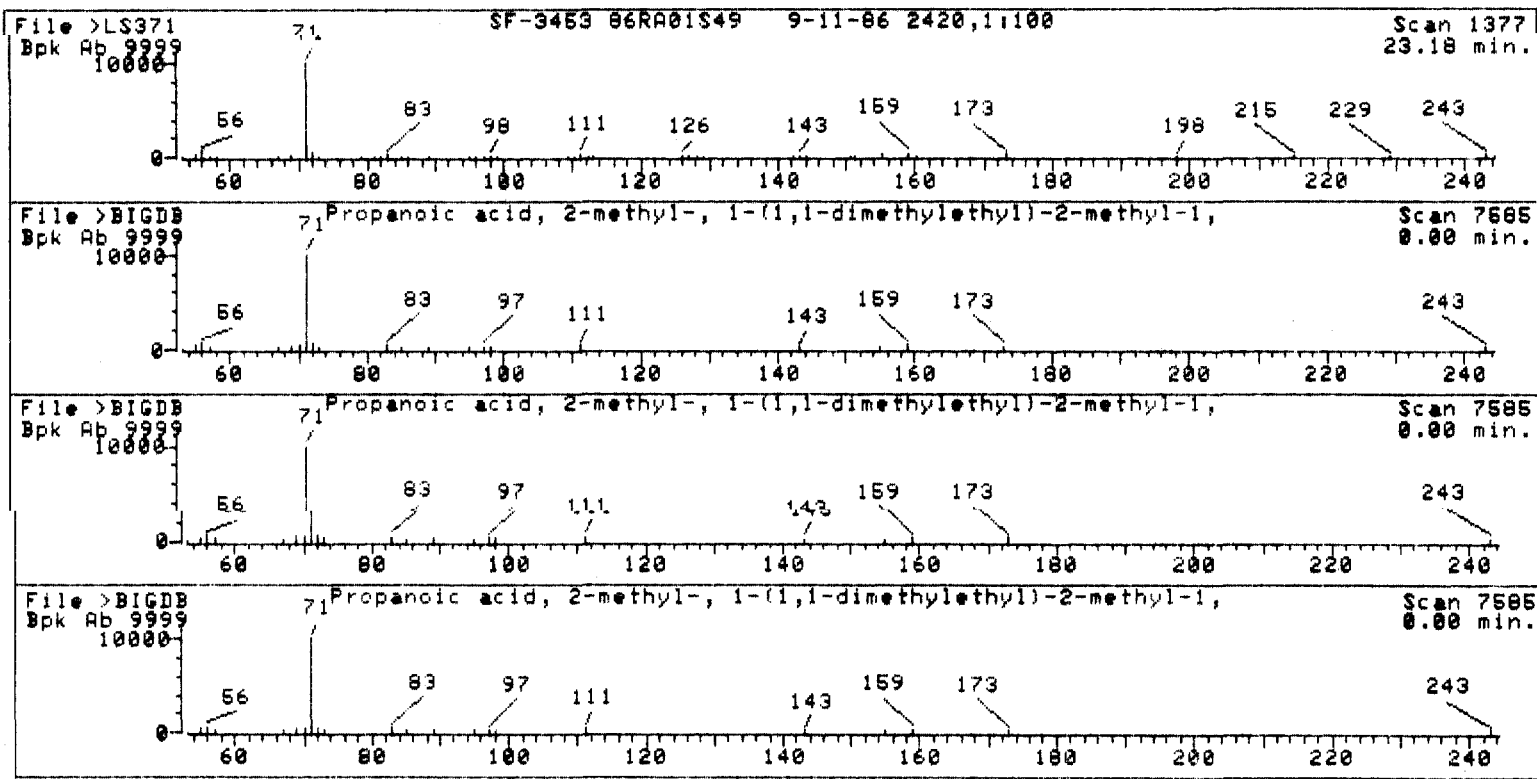
File >PRIPOL SF-3453 86R01549 9-11-86 2420,1:100 Scan 445  
Bpk Rp 9999 0.00 min.  
10000



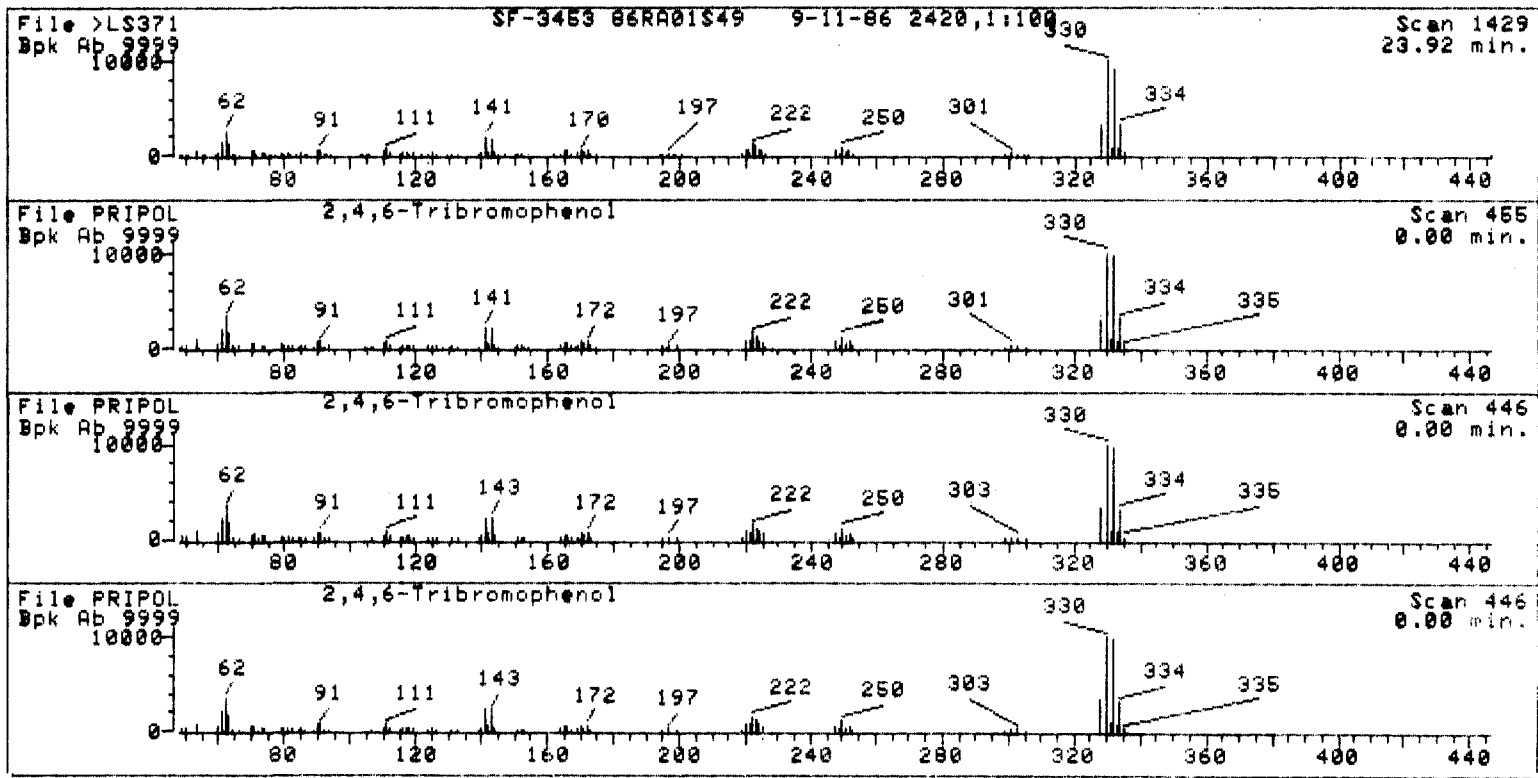


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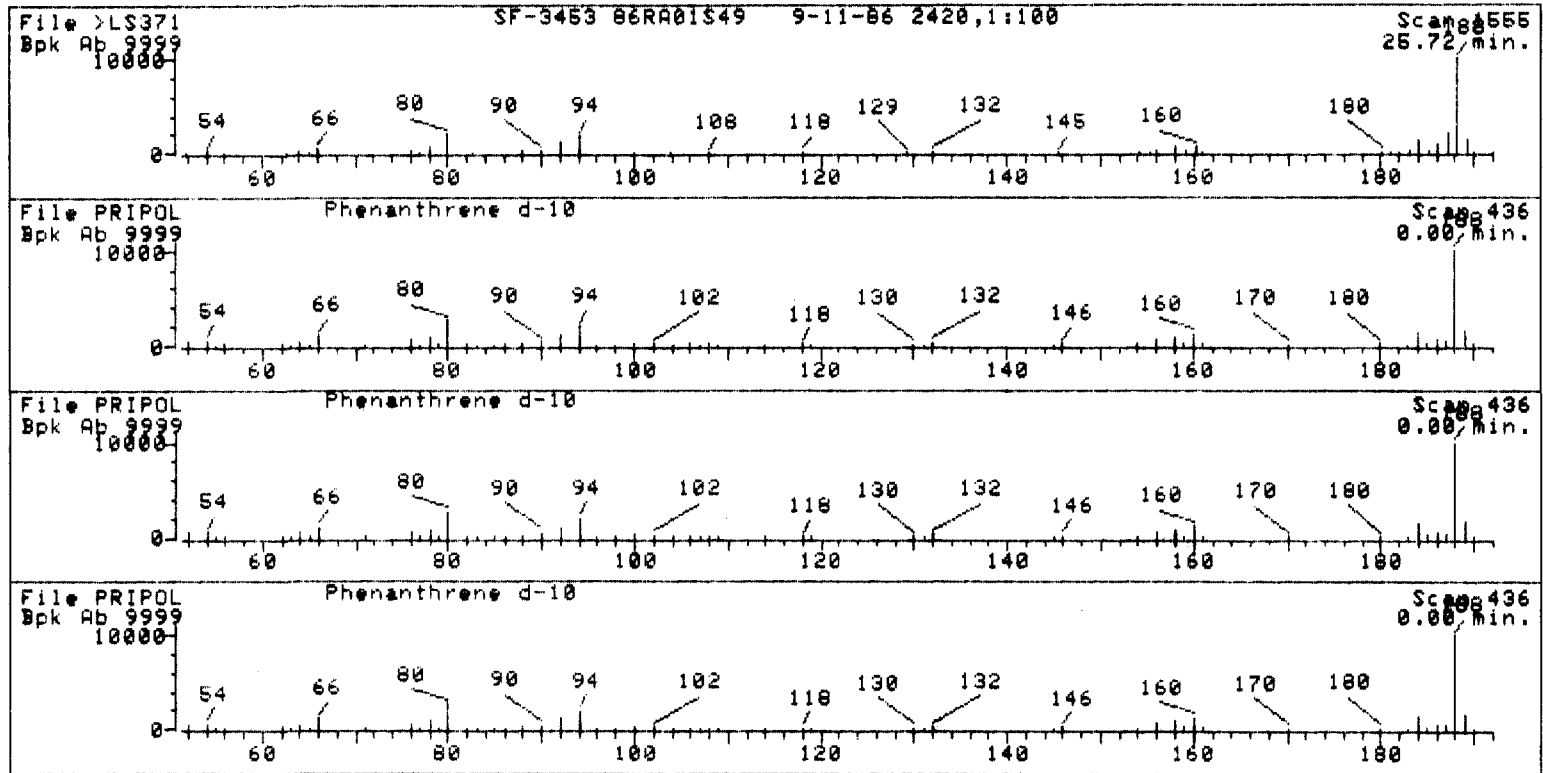
200



*Am*



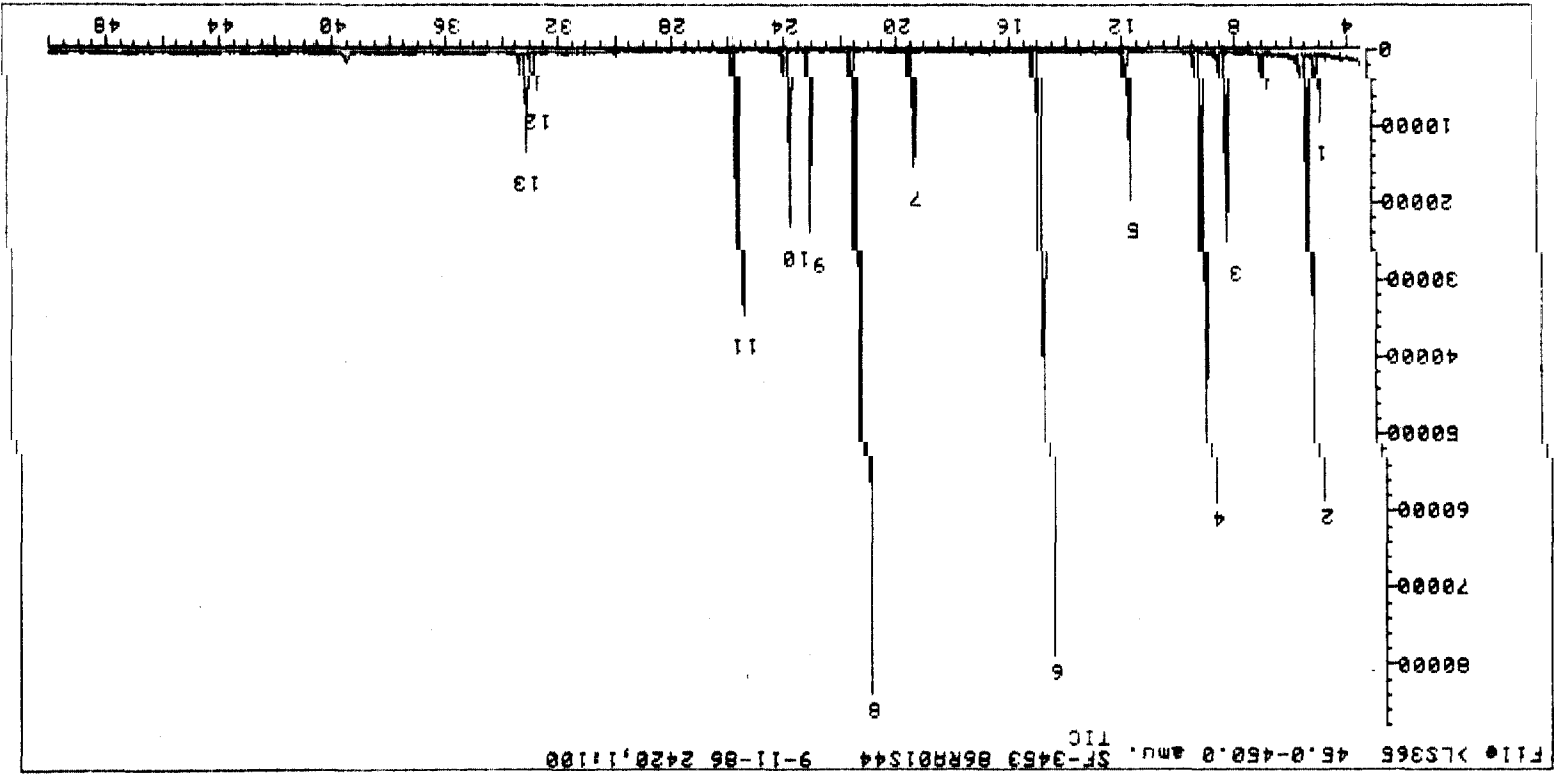
*John*



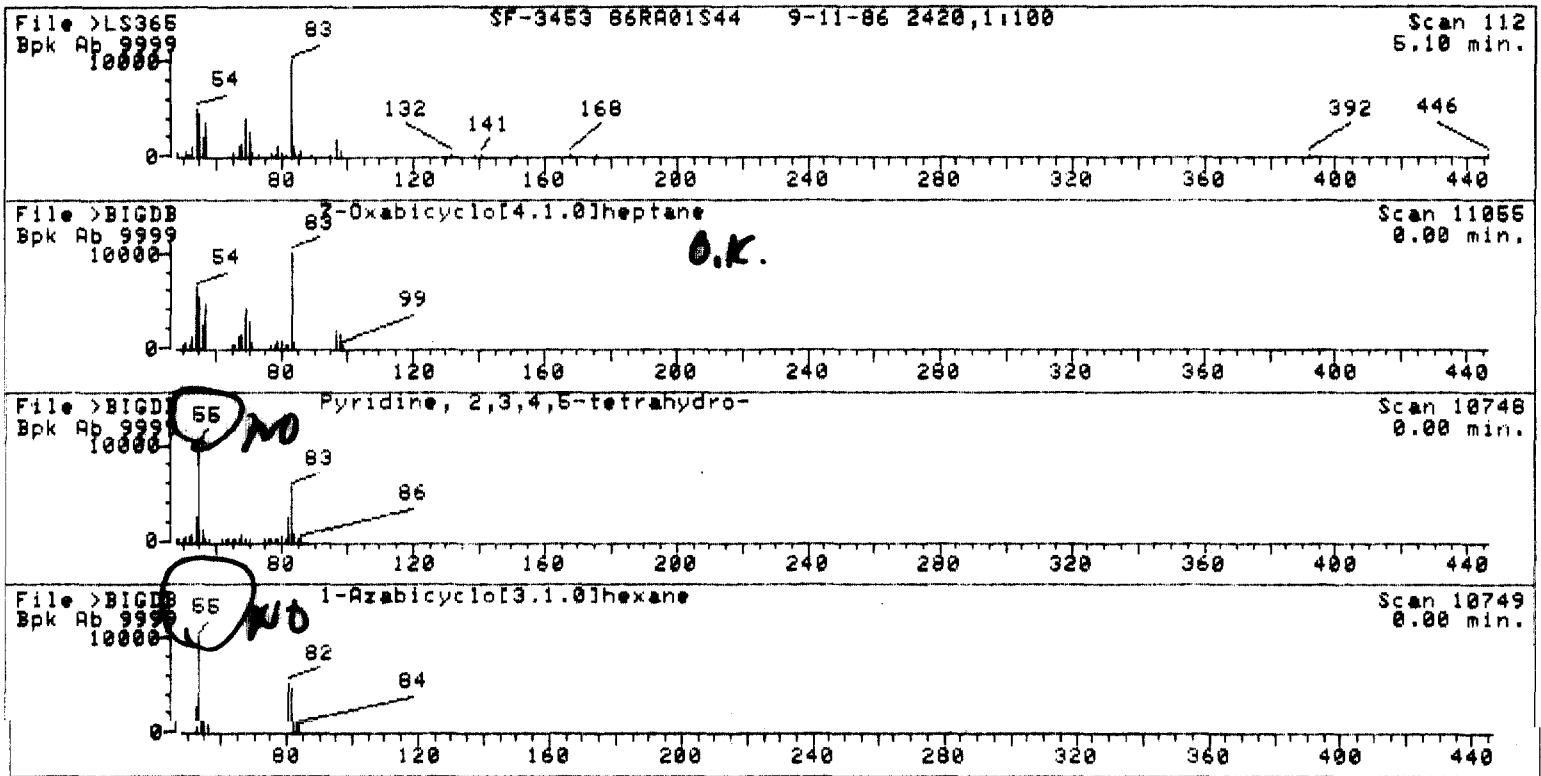
>LS365 SF-3453 86RA01S44 9-11-86 2420,1:100  
45.01 450.0 TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.097	108	112	123	8984	38727	31365	10.63	2.000
2	5.483	135	139	155	57877	202453	190711	64.65	12.159
3	8.371	336	341	350	24682	107751	103534	35.10	6.601
4	9.300	398	406	417	58734	225929	224119	75.97	14.288
5	11.843	578	584	593	19406	79159	76843	26.05	4.899
6	15.042	800	808	817	78677	297380	295003	100.00	18.808
7	19.512	1116	1121	1128	15225	46287	44907	15.22	2.863
8	21.568	1258	1265	1272	83584	266994	264974	89.82	16.893
9	23.153	1372	1376	1380	23882	58515	57712	19.56	3.679
10	23.895	1423	1428	1439	23101	82495	81546	27.64	5.199
11	25.708	1550	1555	1563	34250	123897	121632	41.23	7.754
12	32.875	2050	2057	2064	4989	30241	26336	8.93	1.679
13	33.247	2077	2083	2090	12816	56964	49854	16.90	3.178

Sum of corrected areas: 1568536.

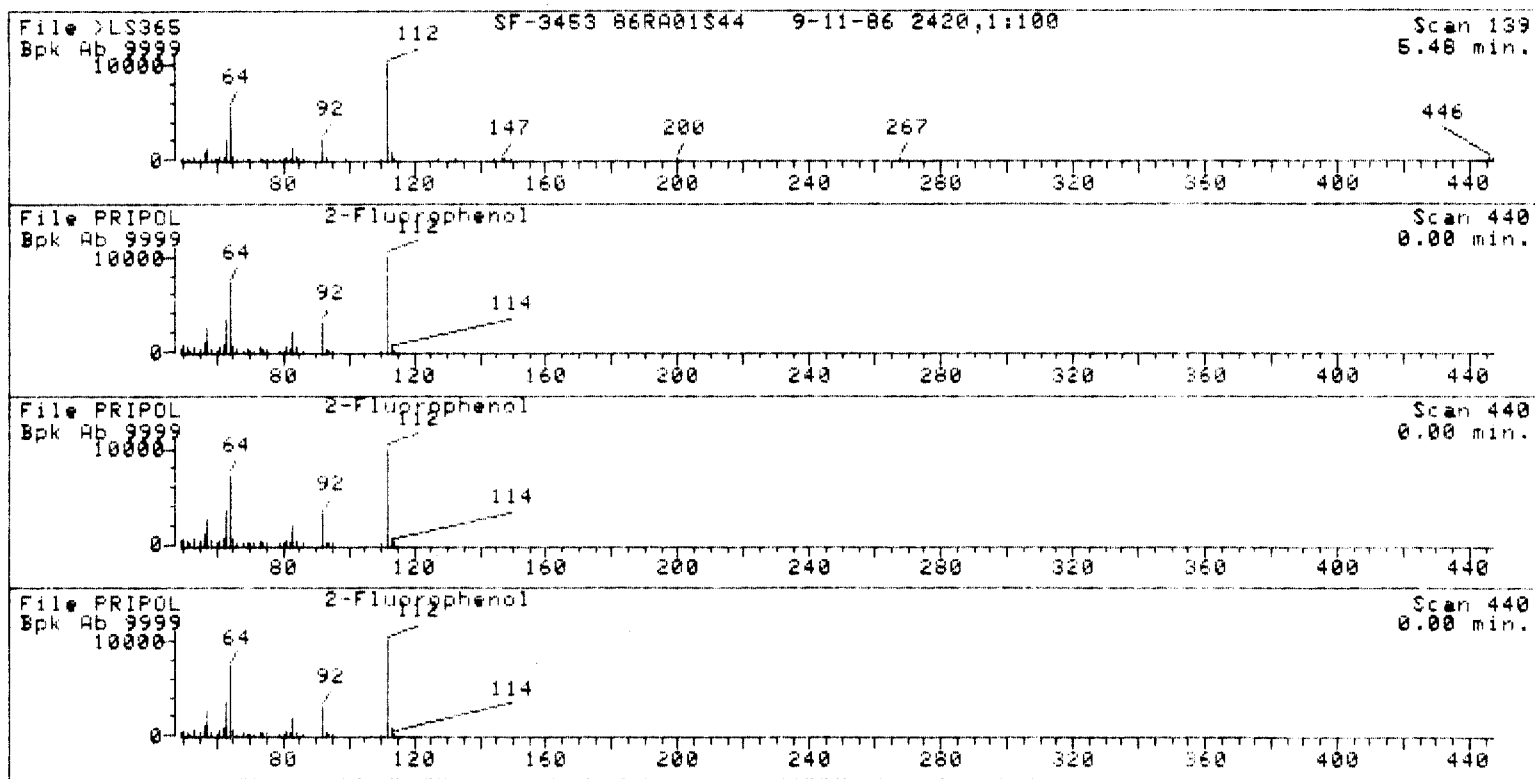


In Blank

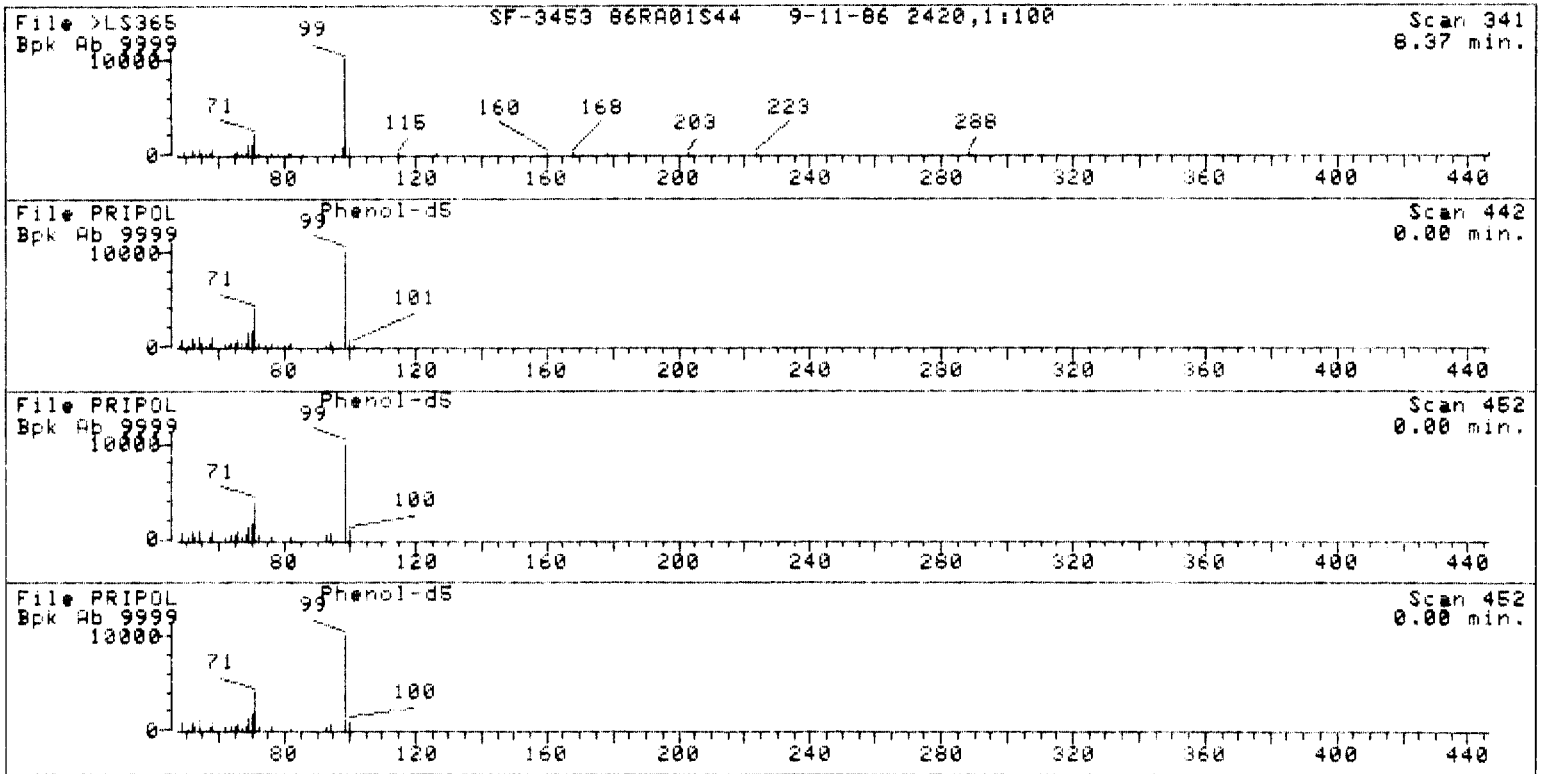




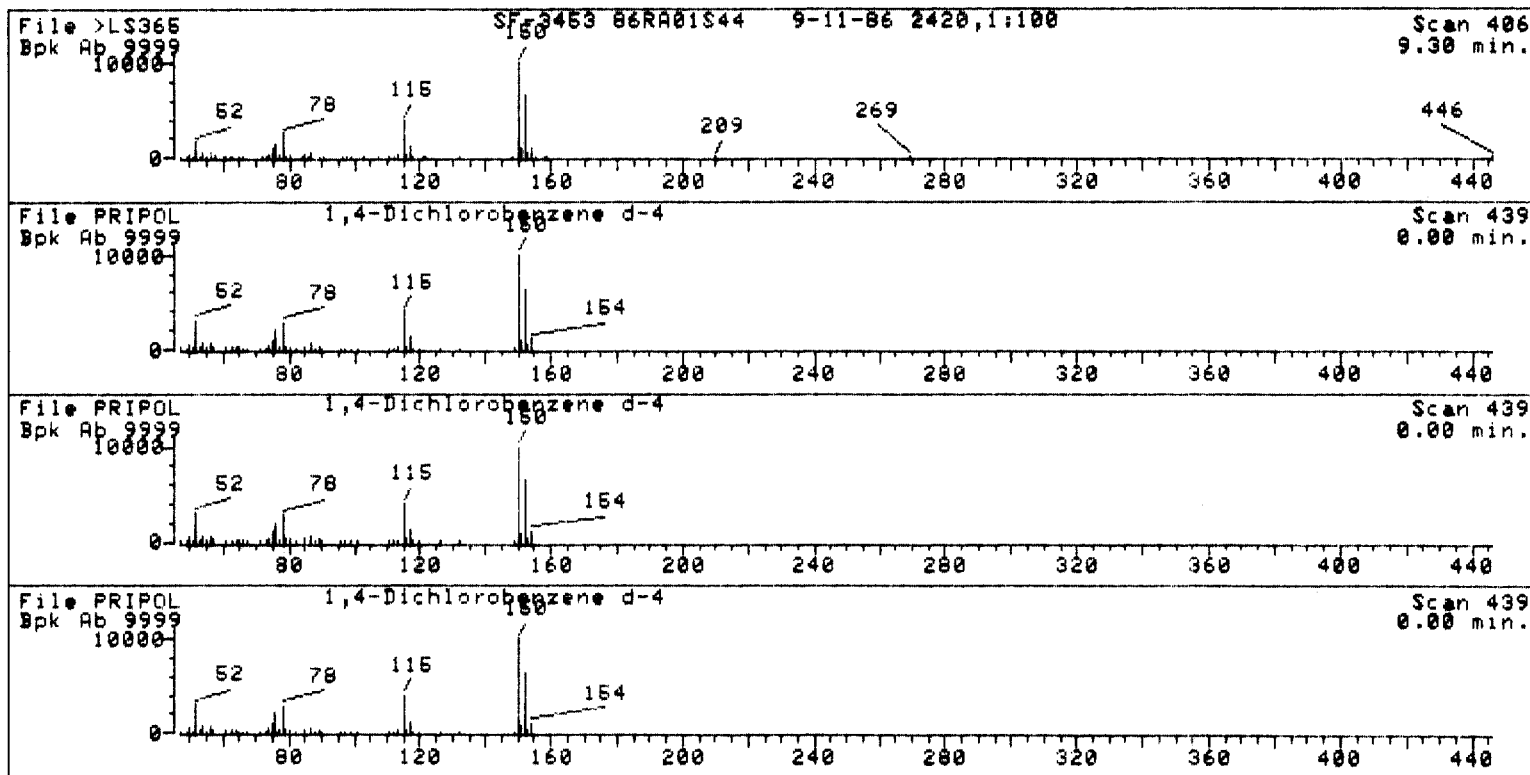
*Jim*



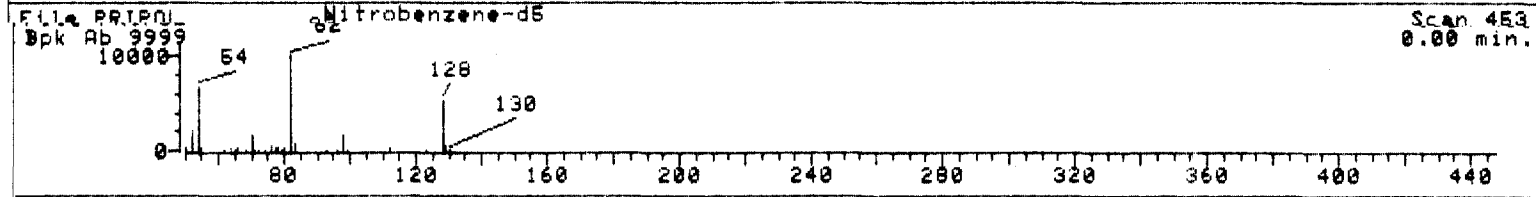
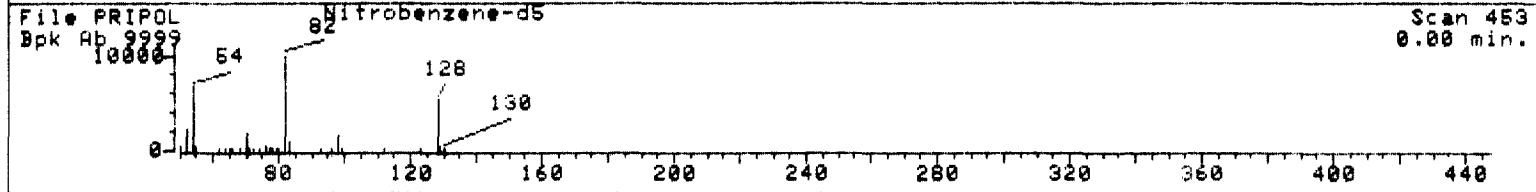
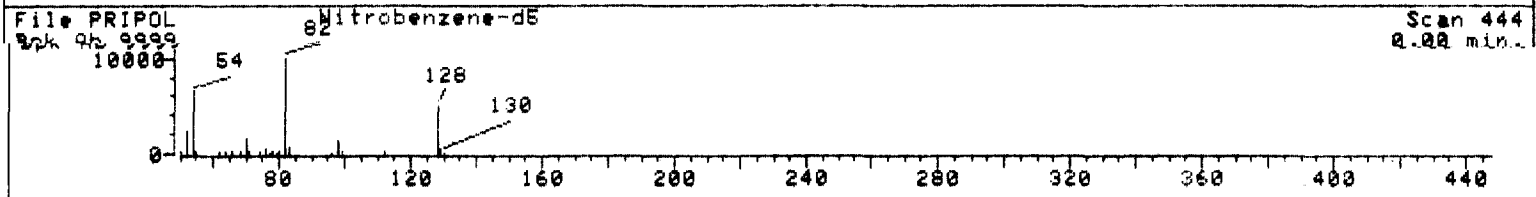
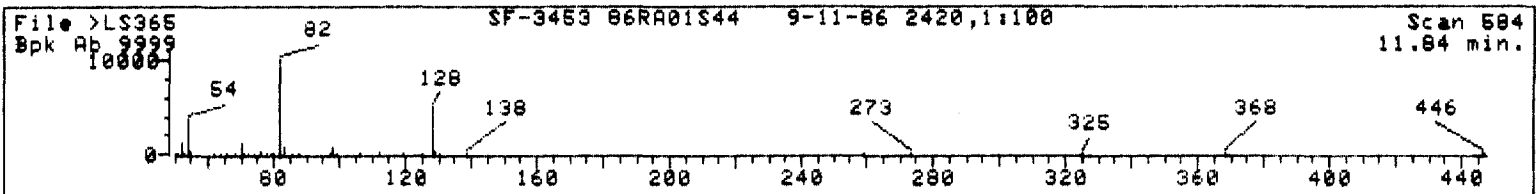
*Jim*



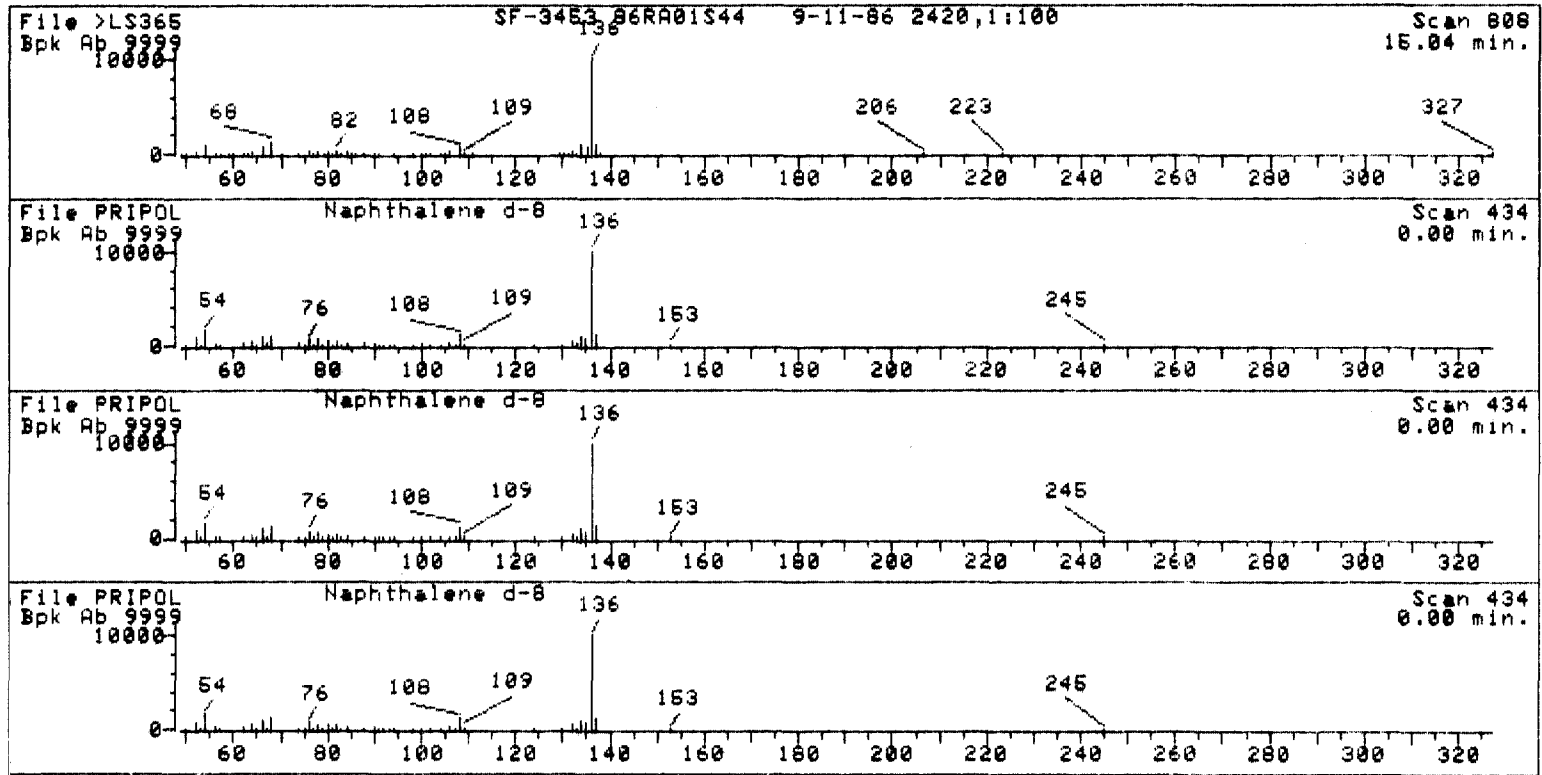
*Isot*



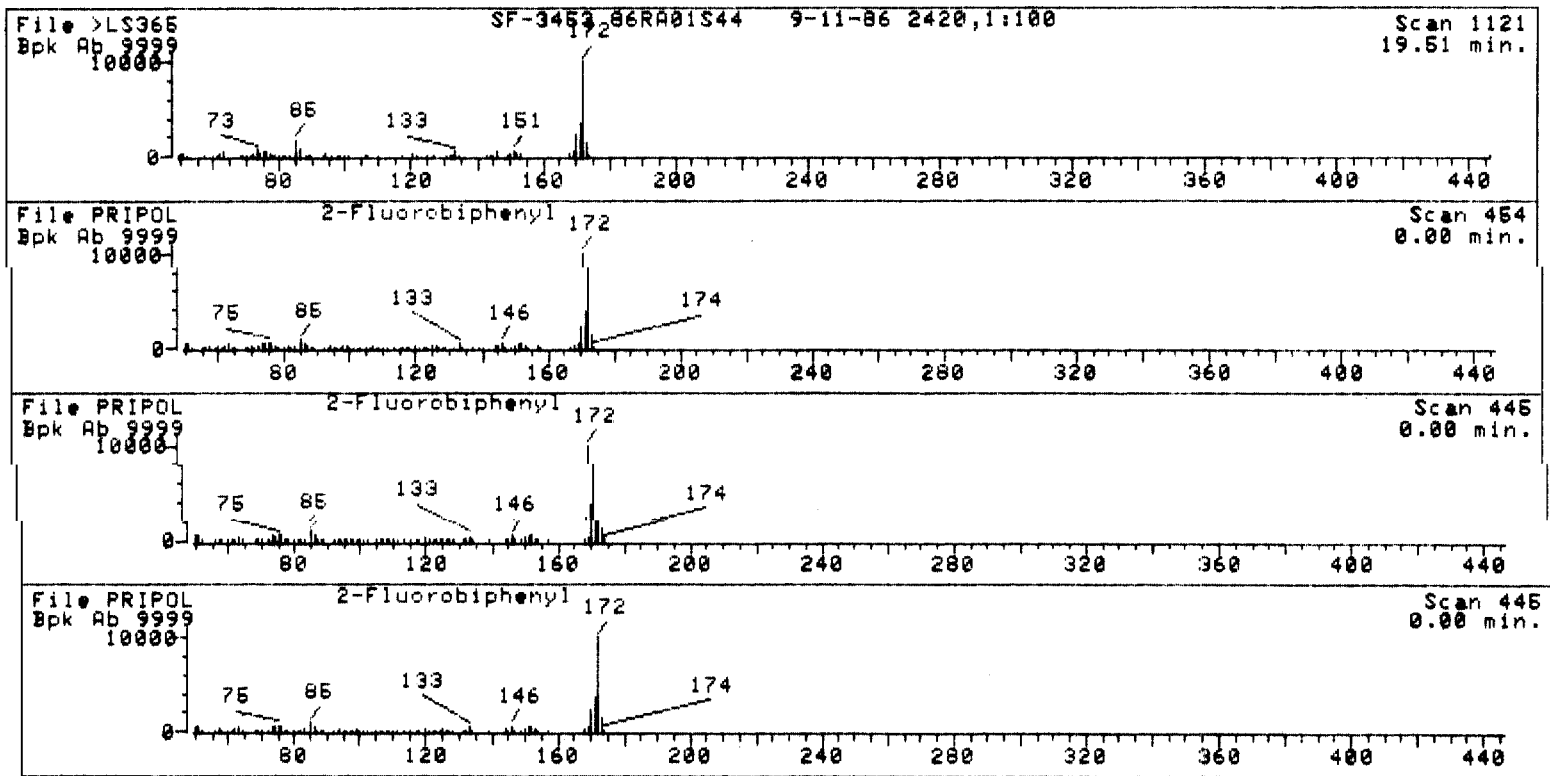
*Jan*



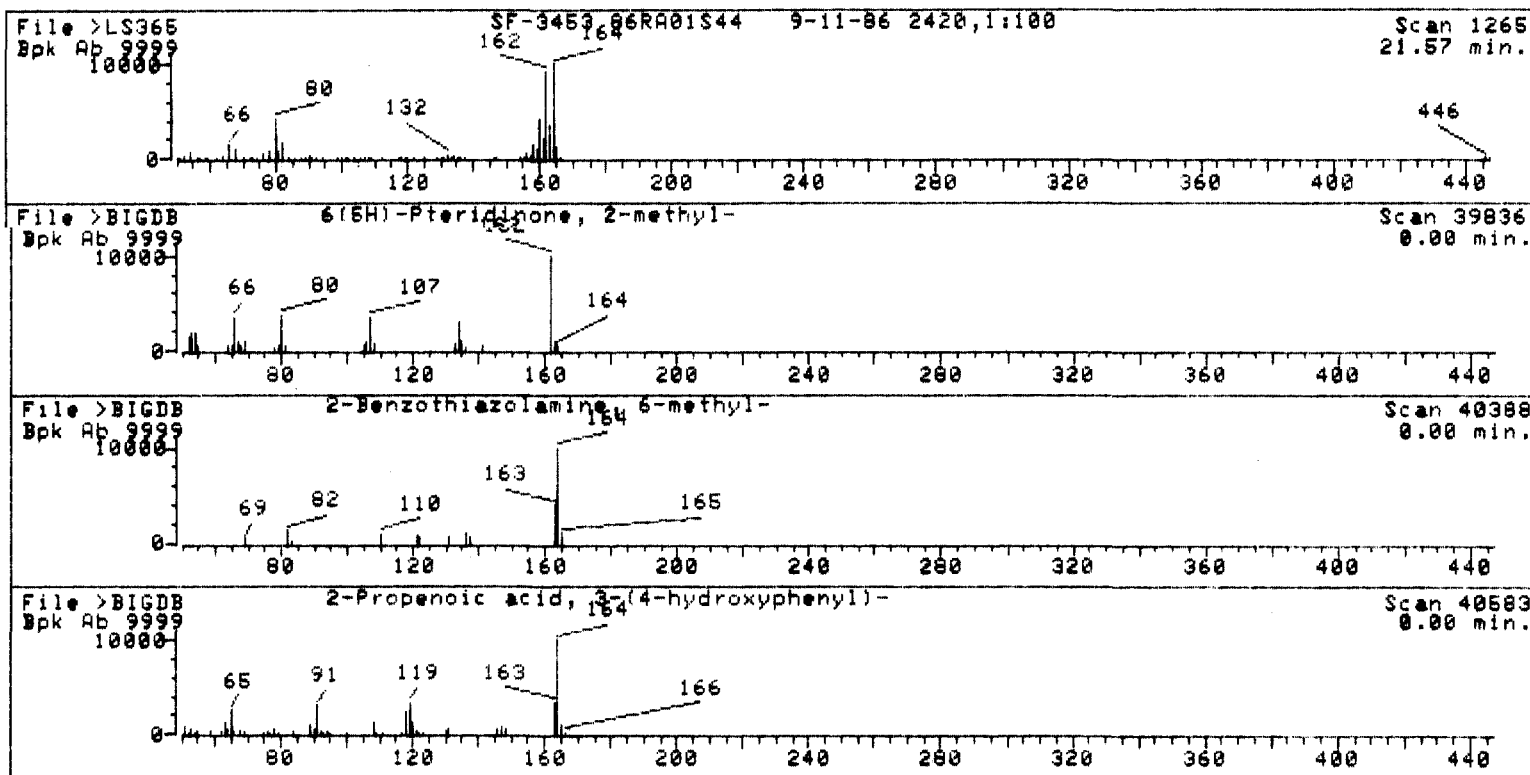
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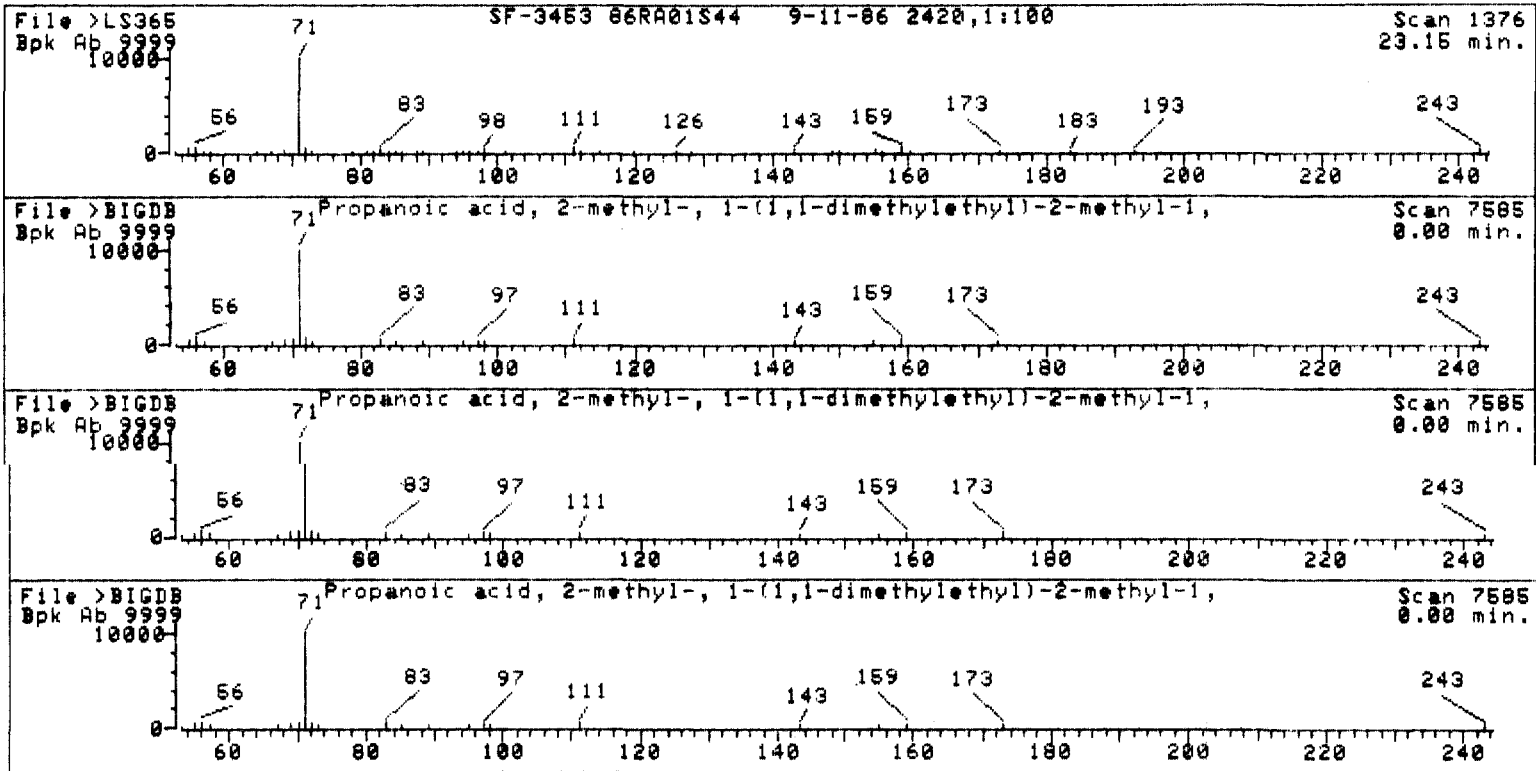
*Jur*



*Inst*

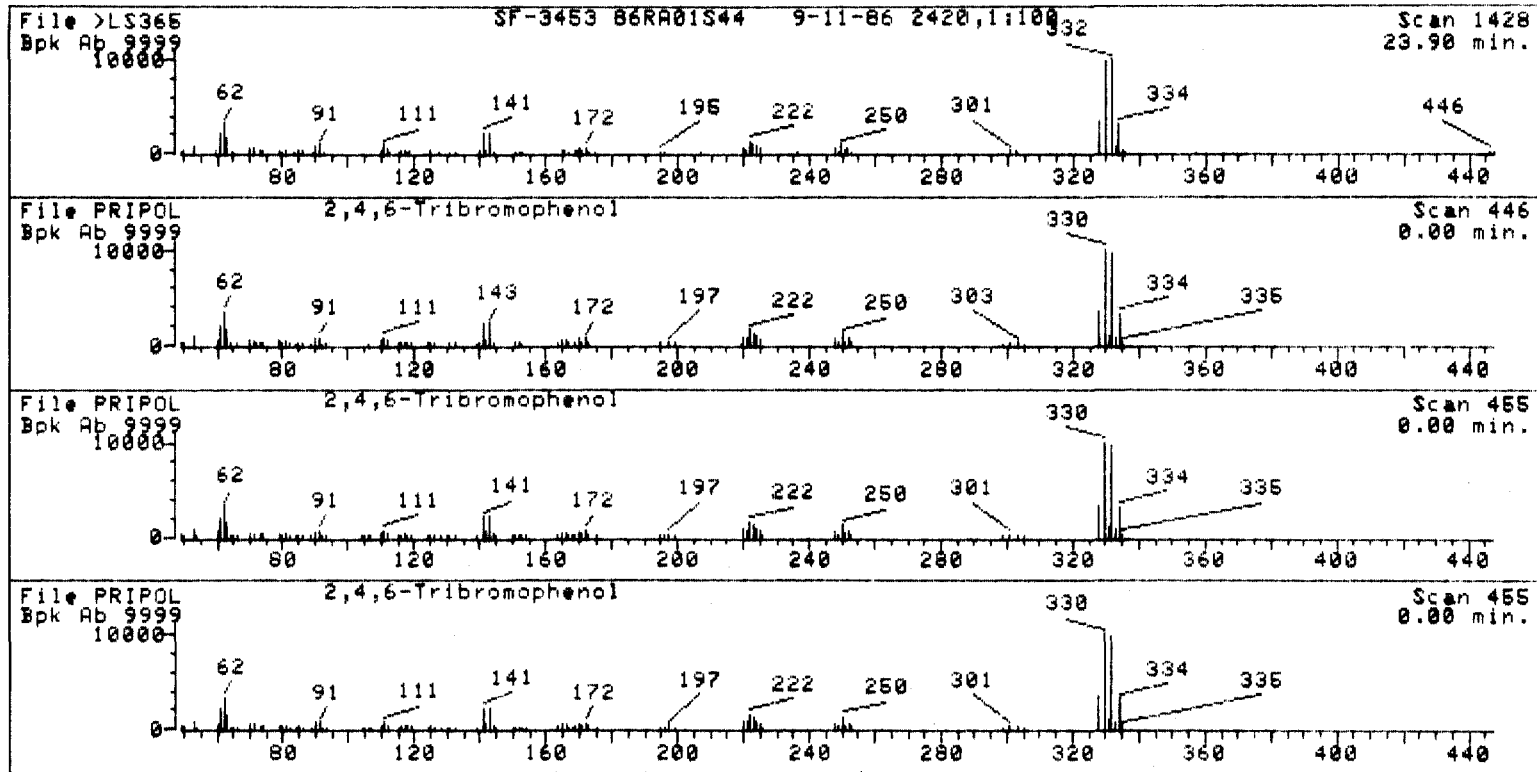


*In Blue*

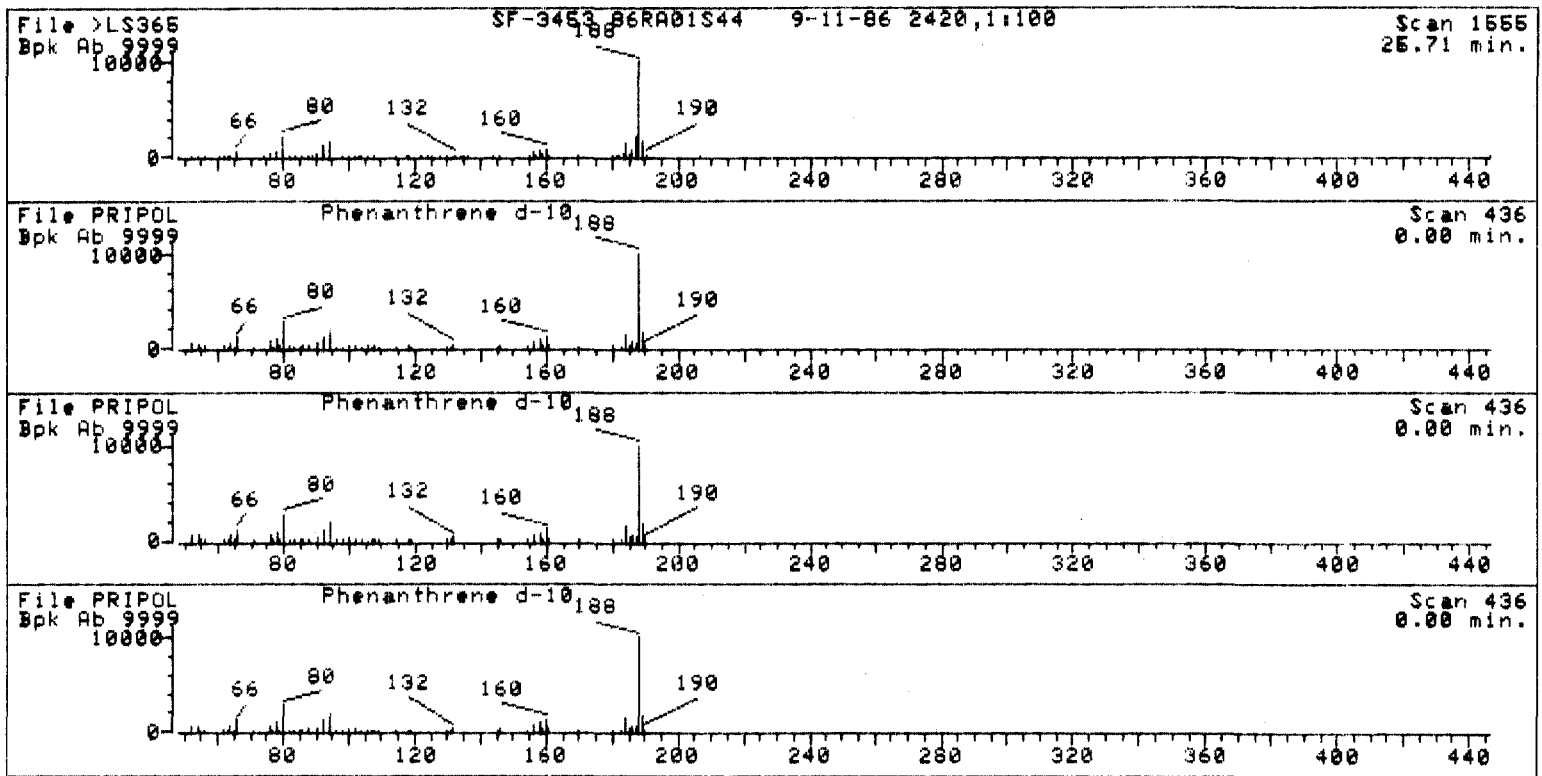




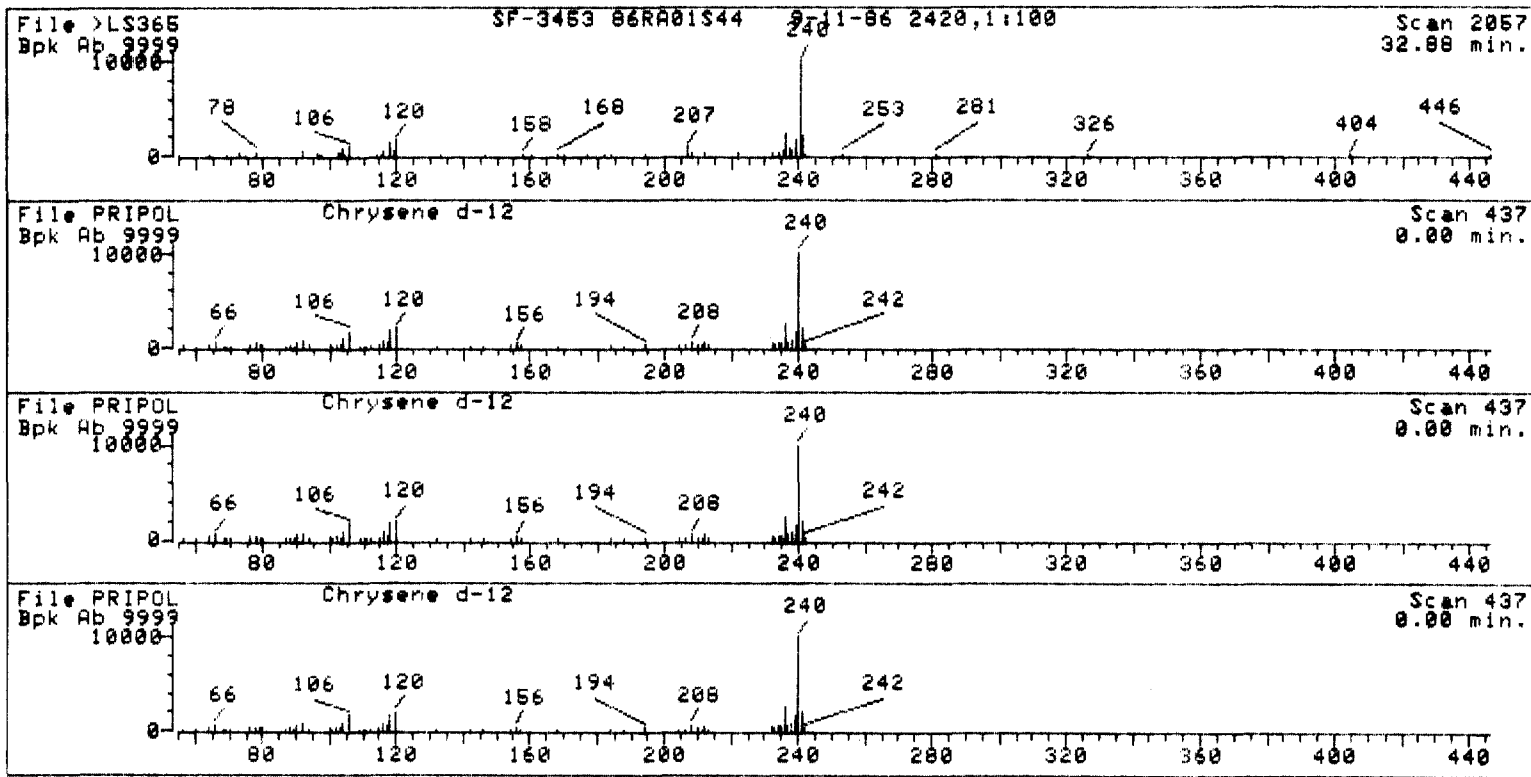
*Sam*



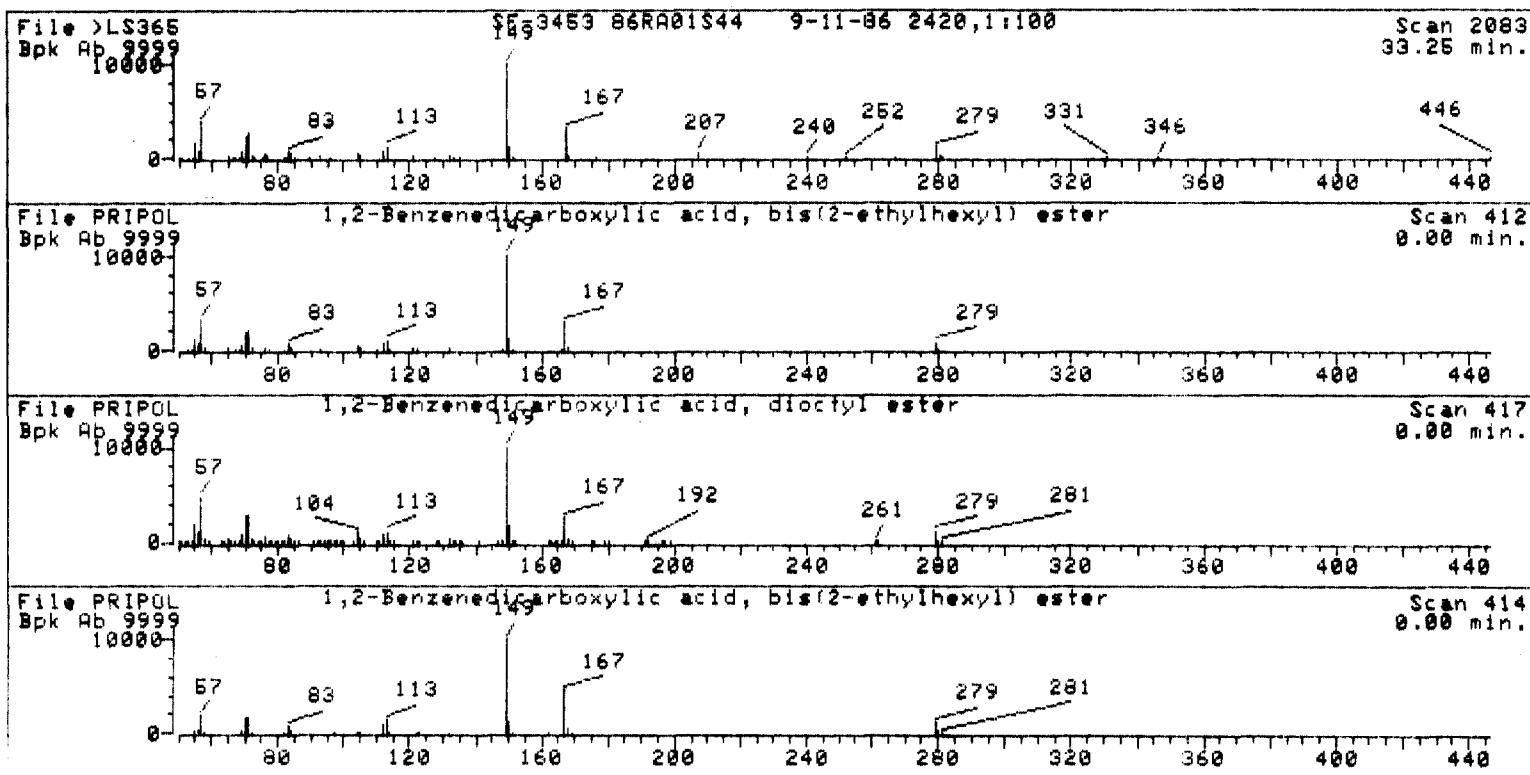
*Just*



*John*



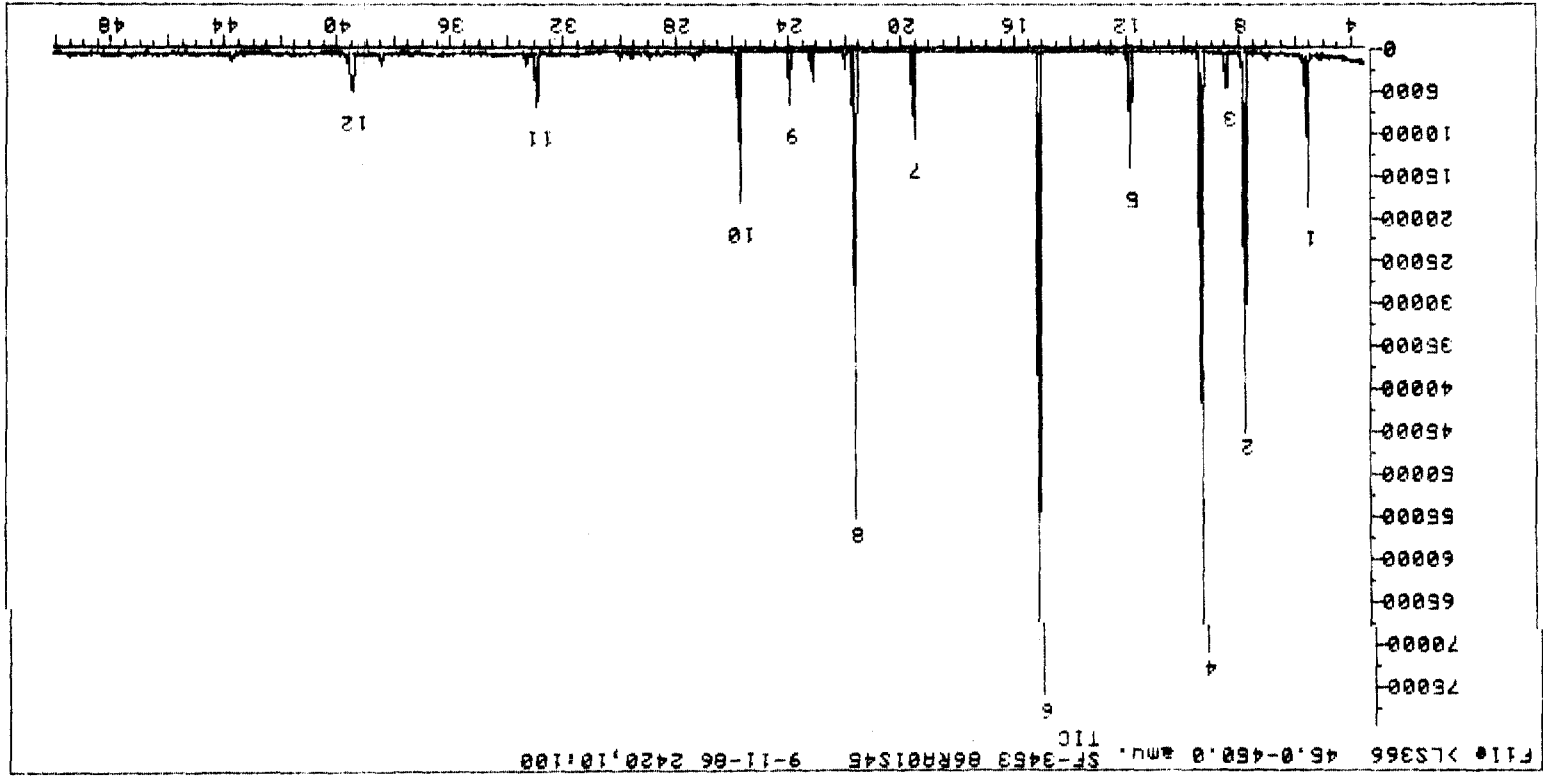
*Handwritten signature*



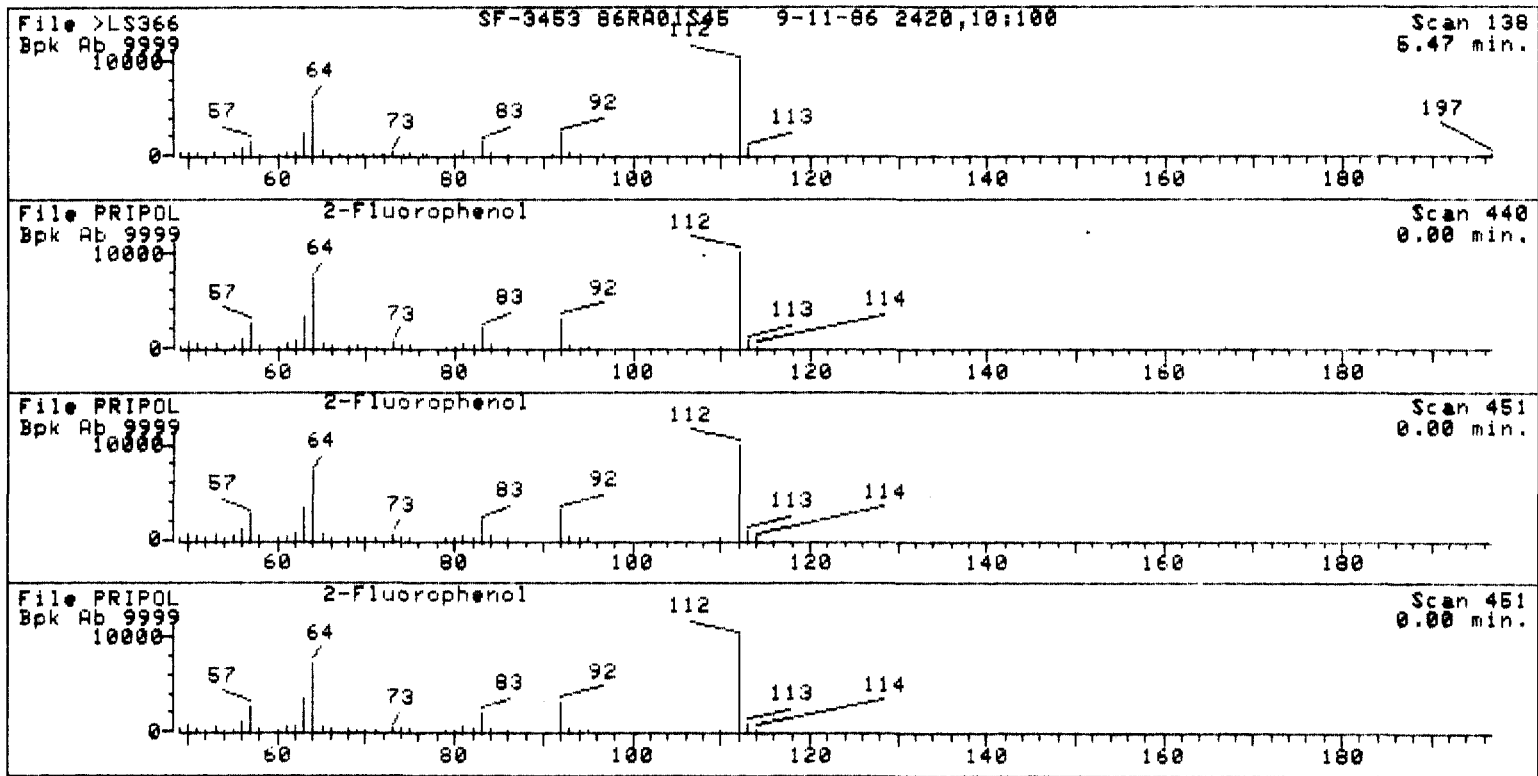
>LS366 SF-3453 86RA01S45 9-11-86 2420,10:100  
45.01 450.0 TIC

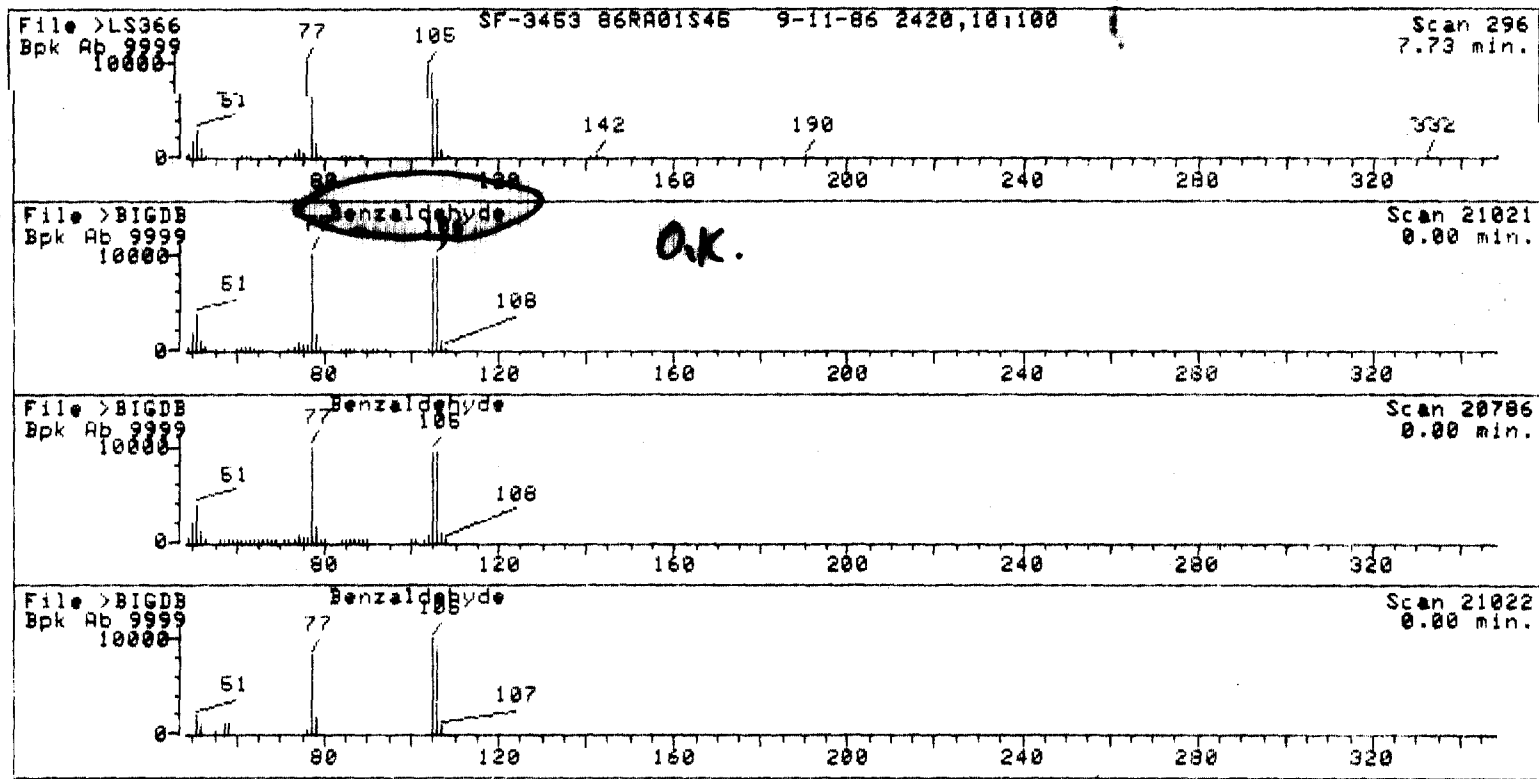
Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.469	135	138	146	17642	71341	62352	21.06	5.136
2	7.727	291	296	310	44557	163818	158978	53.70	13.095
3	8.356	336	340	349	4140	28098	22109	7.47	1.821
4	9.271	397	404	415	70660	257224	253299	85.56	20.864
5	11.814	577	582	589	13821	53646	51268	17.32	4.223
6	15.027	799	807	813	75673	298328	296045	100.00	24.385
7	19.497	1115	1120	1125	10532	32020	31161	10.53	2.567
8	21.554	1258	1264	1271	54969	181493	181069	61.16	14.914
9	23.882	1422	1427	1433	6441	23363	21776	7.36	1.794
10	25.695	1549	1554	1562	17819	68729	66317	22.40	5.462
11	32.867	2050	2056	2065	6249	36719	30057	10.15	2.476
12	39.427	2506	2515	2526	4454	50743	39626	13.39	3.264

Sum of corrected areas: 1214057.



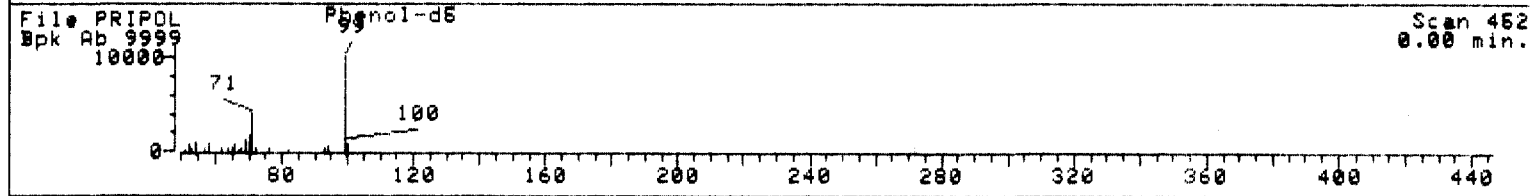
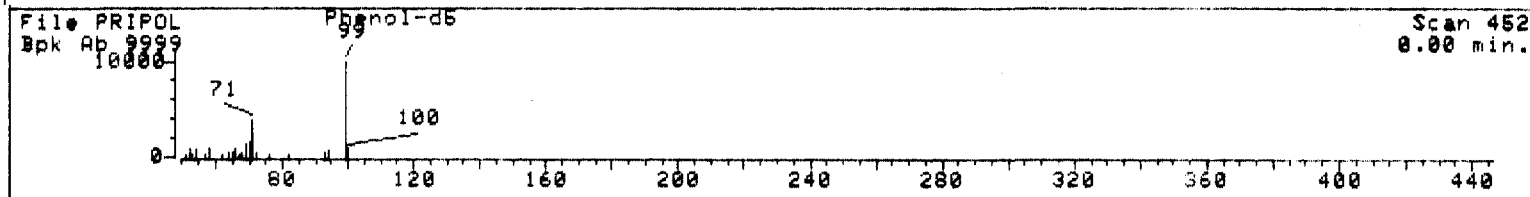
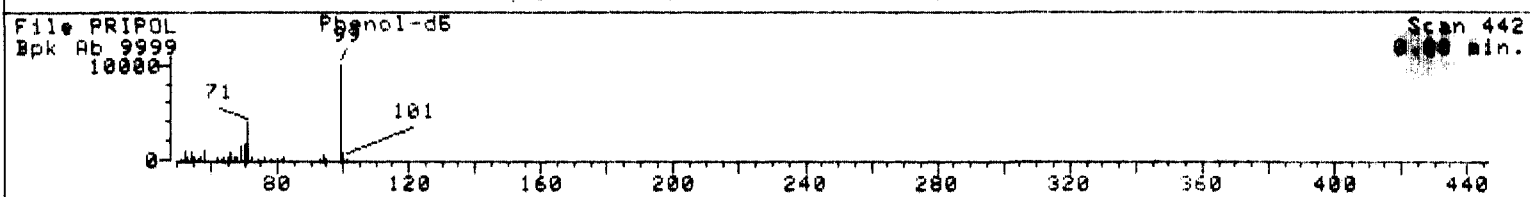
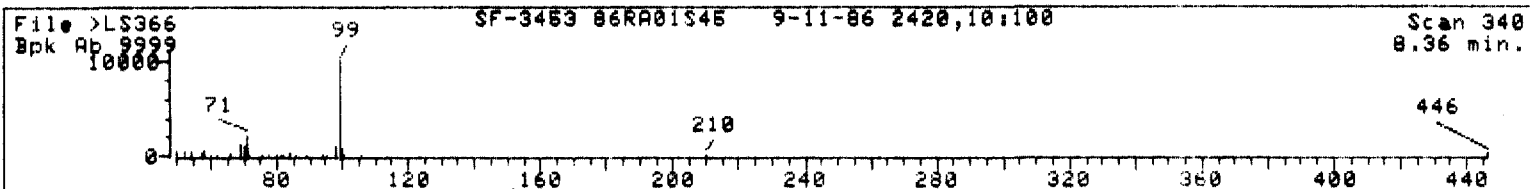
*Sm*



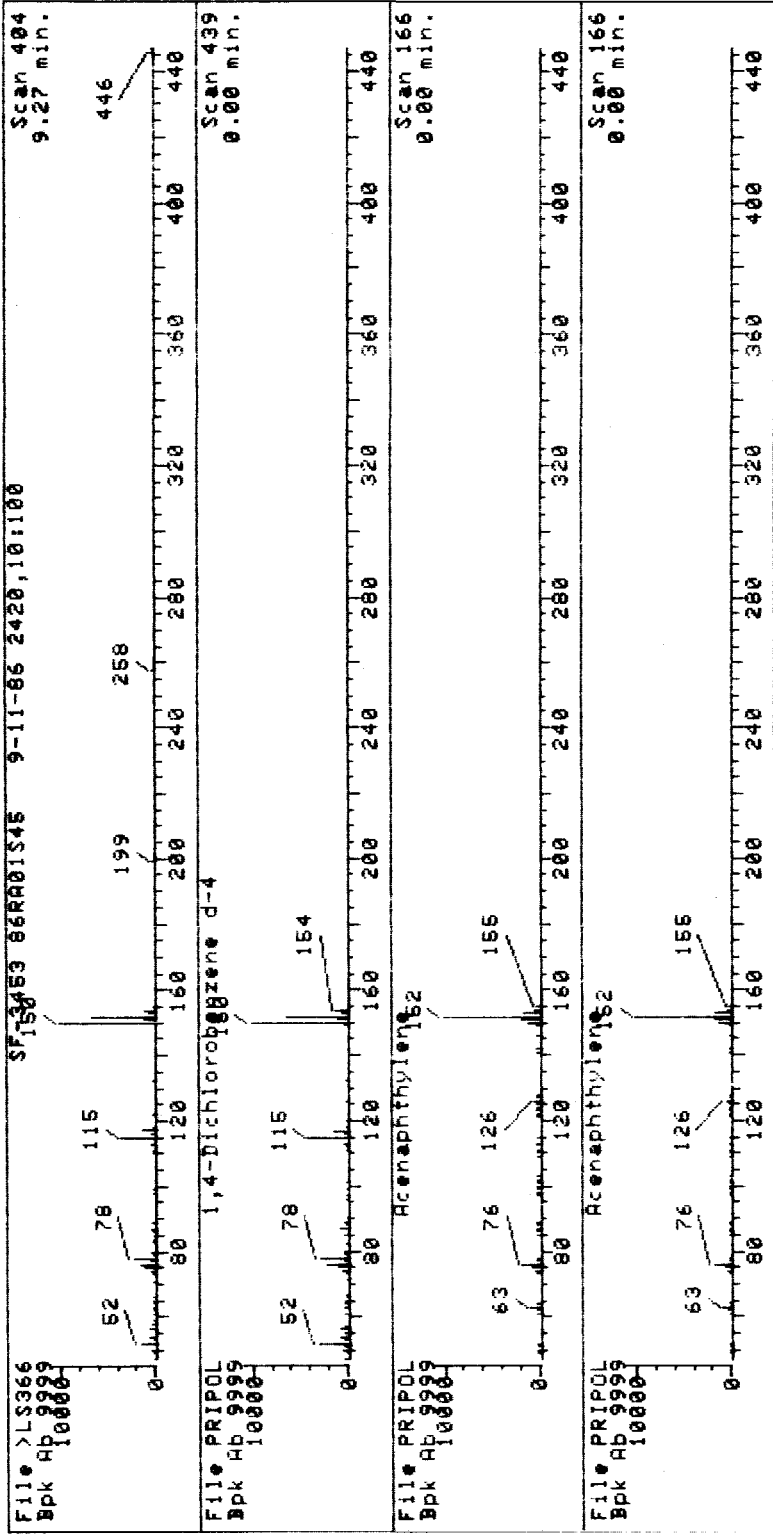




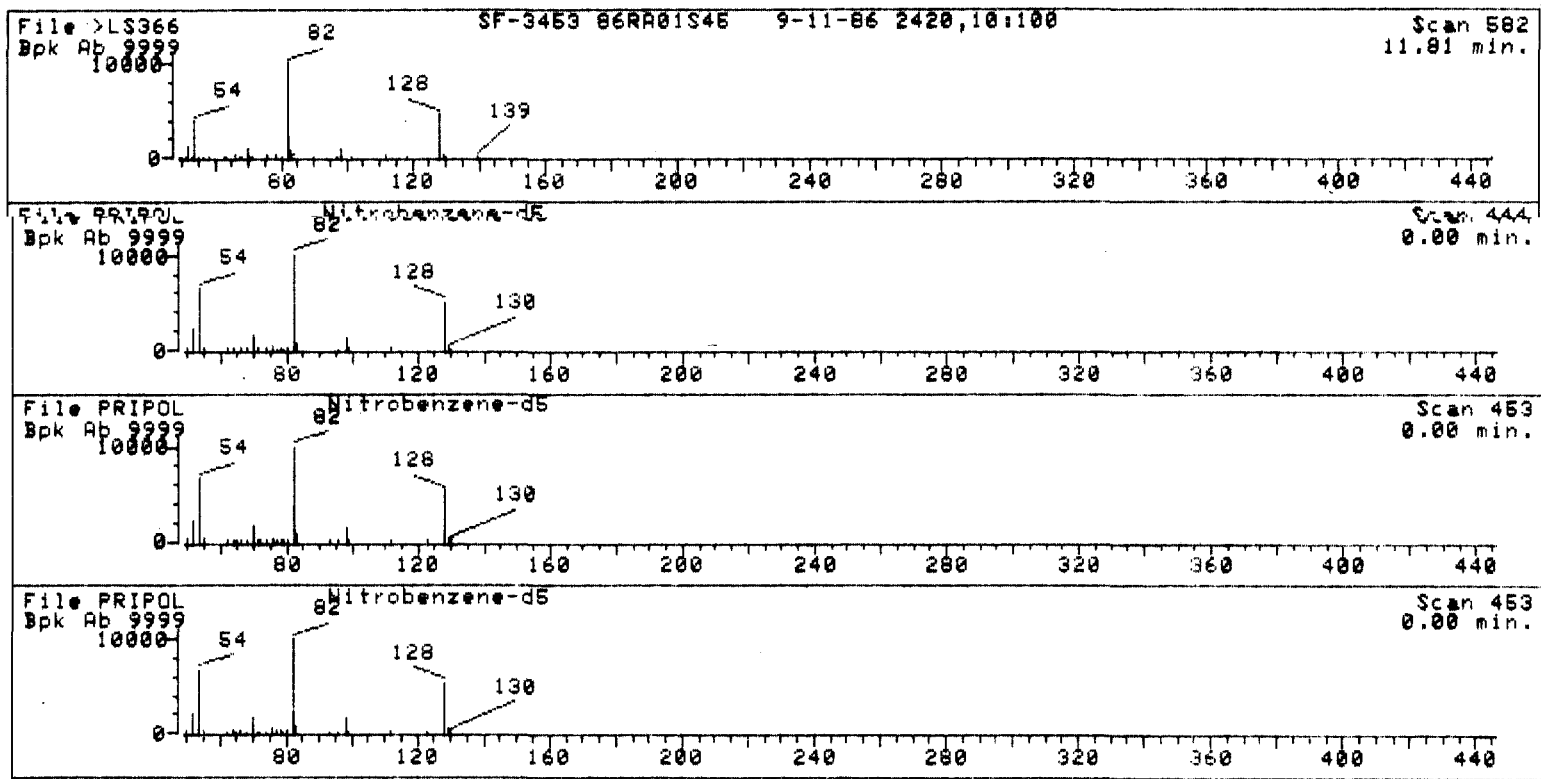
*Jan*



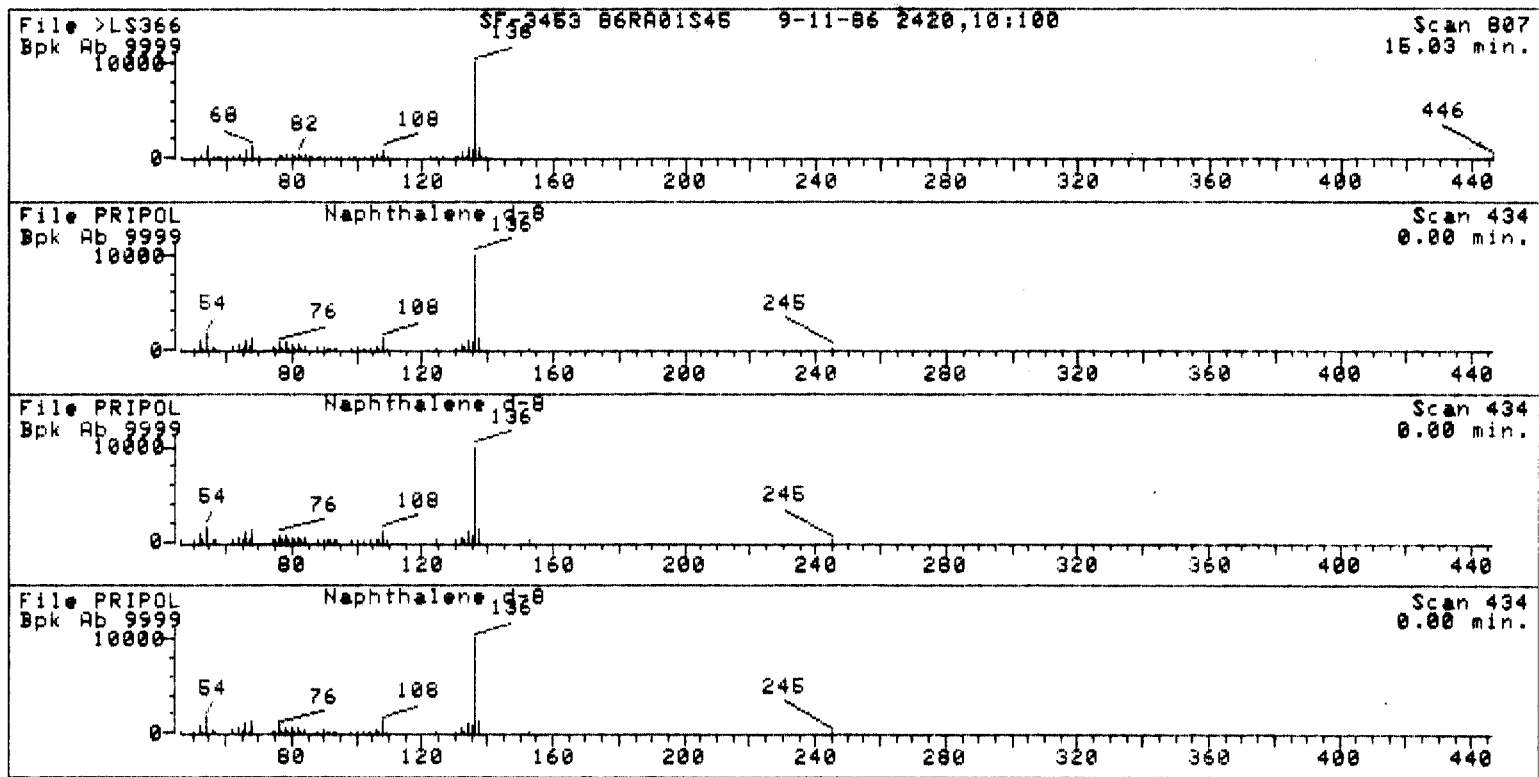
*Good*



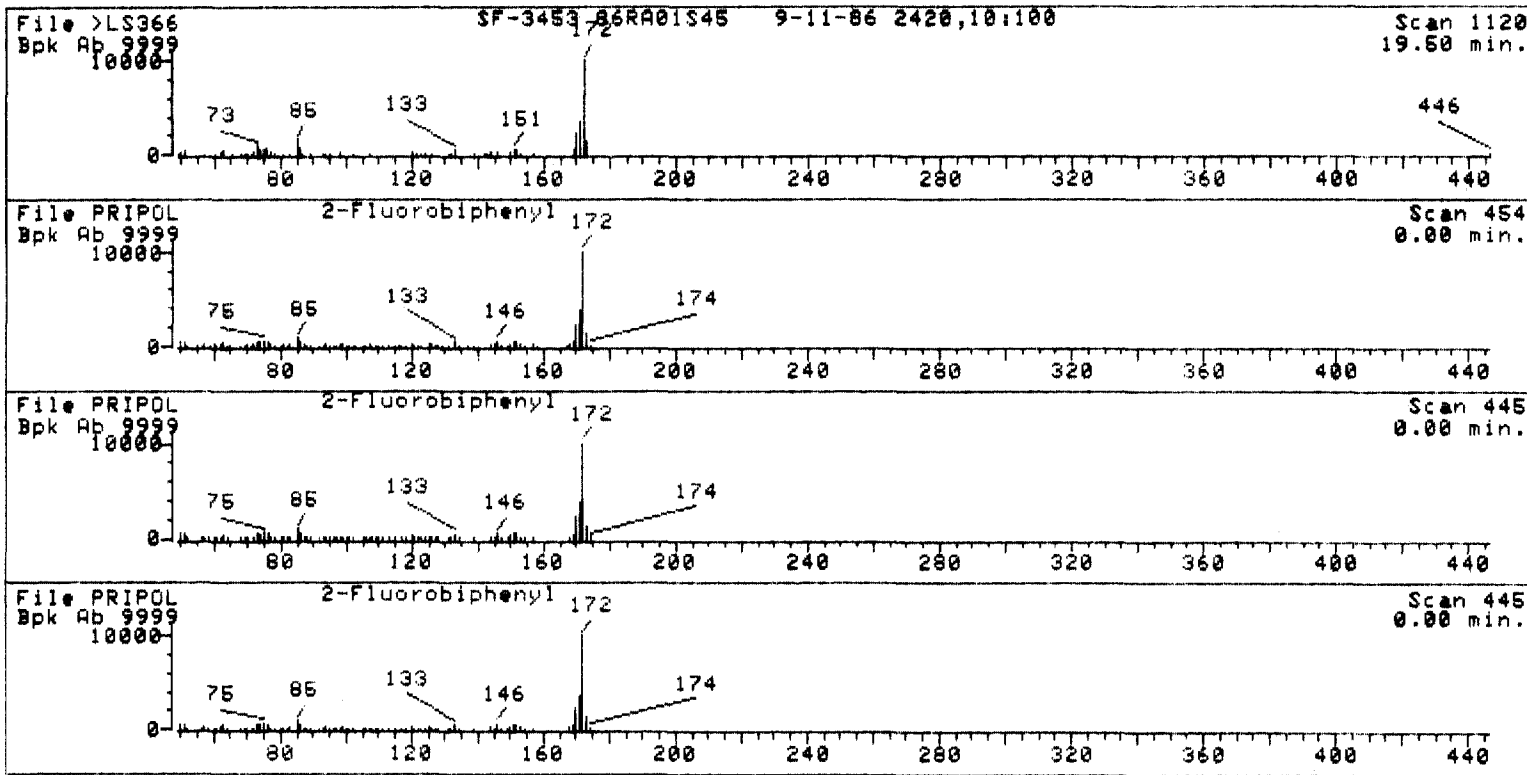
*Sam*



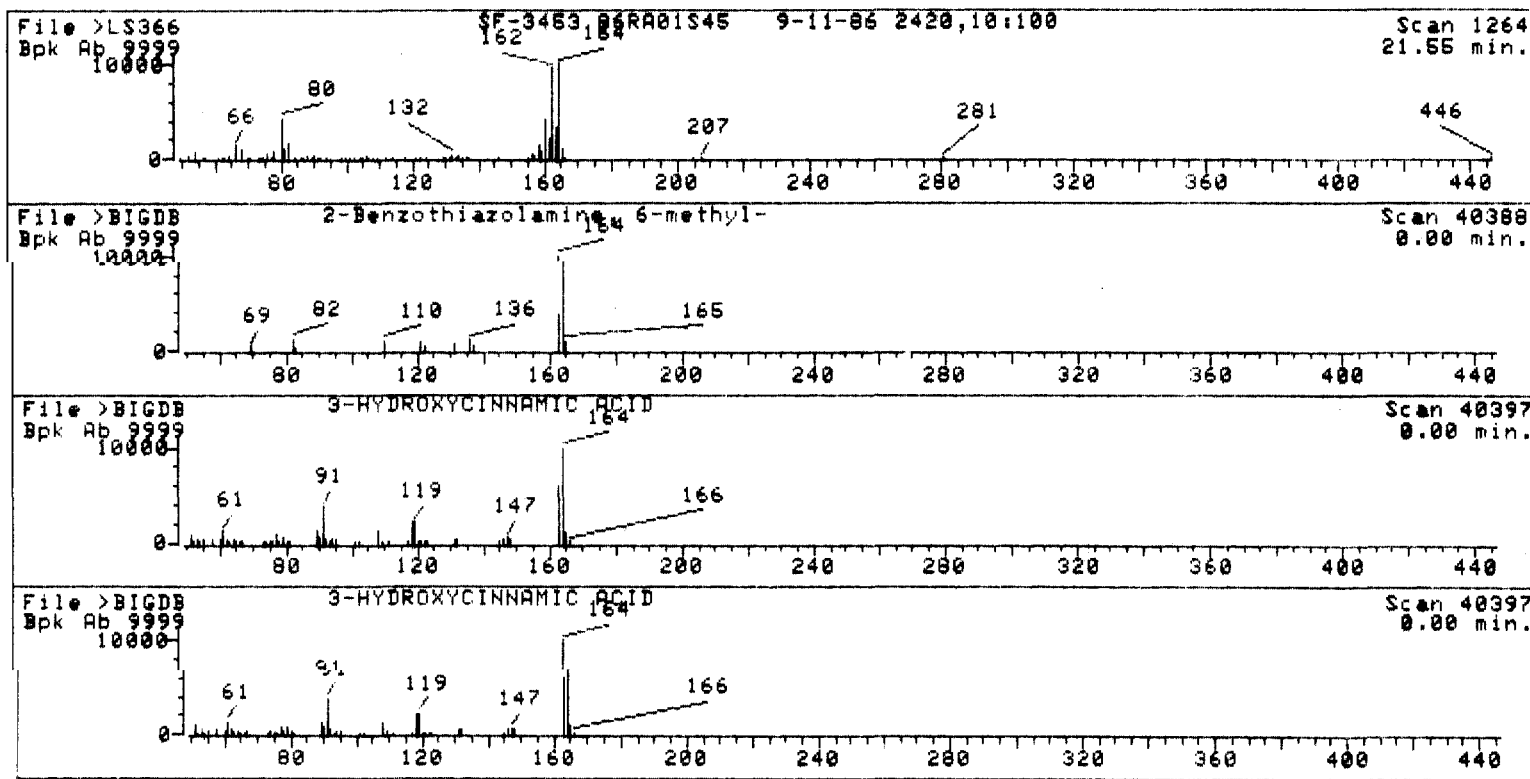
*Justus*



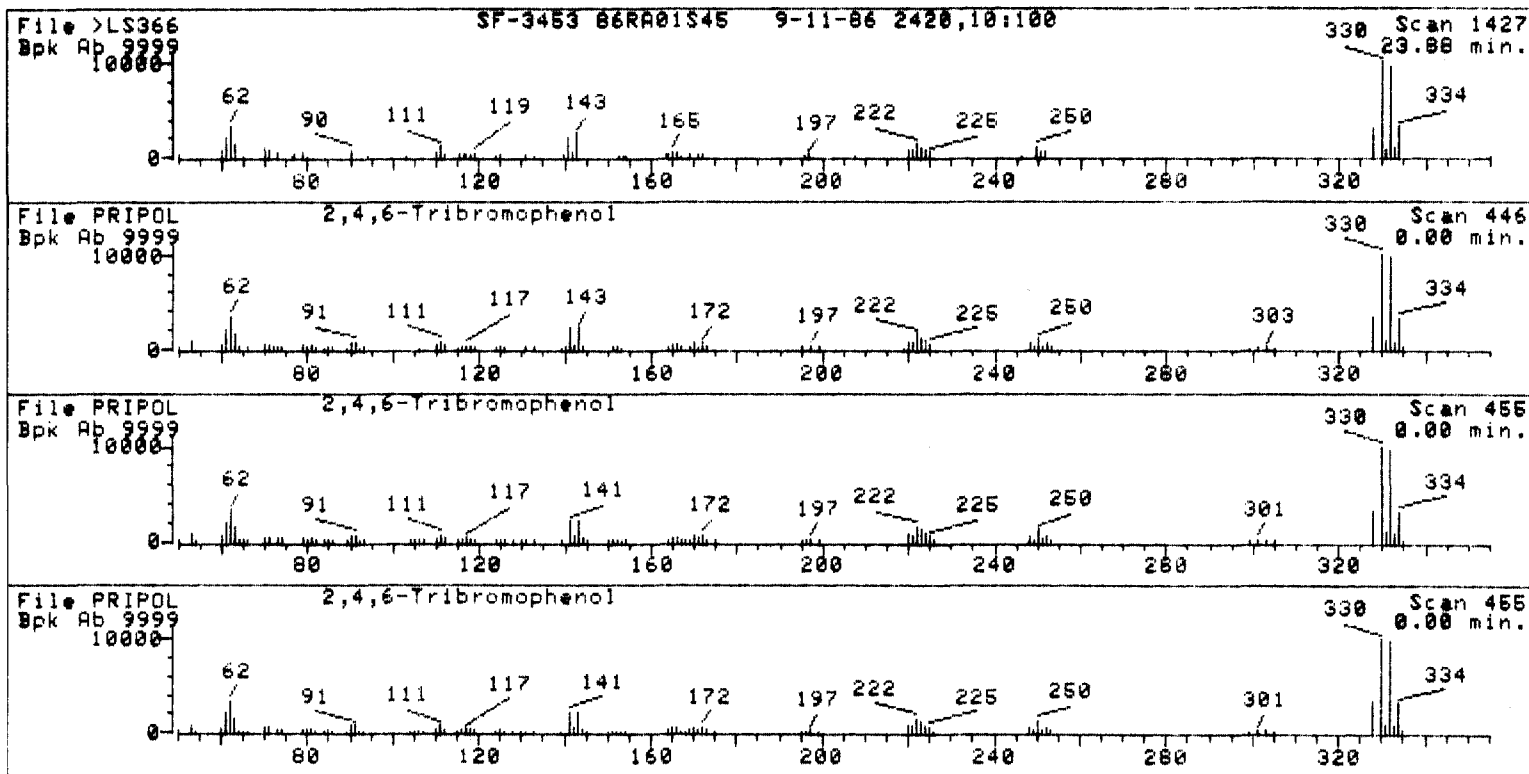
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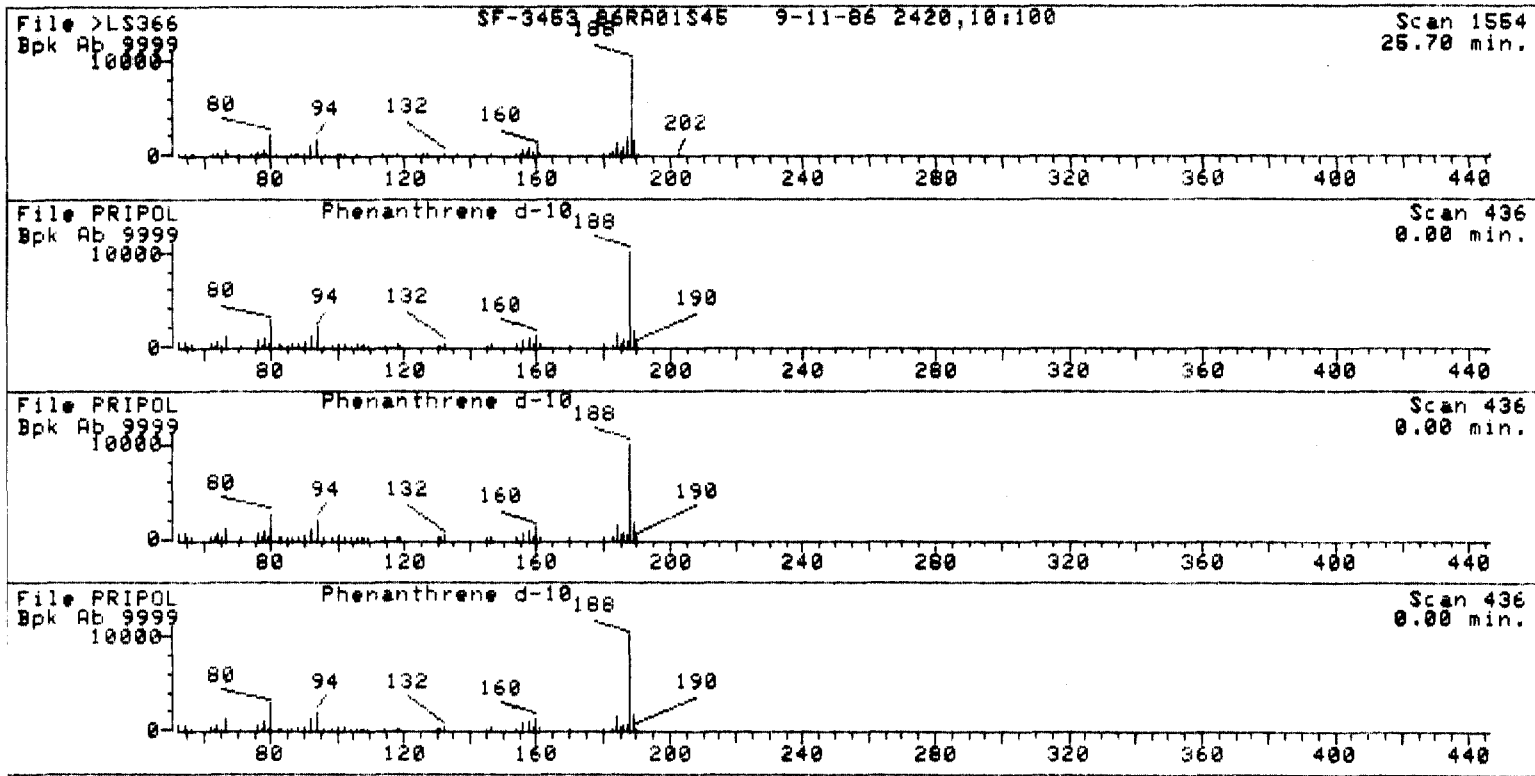
*handwritten mark*



*Jan*

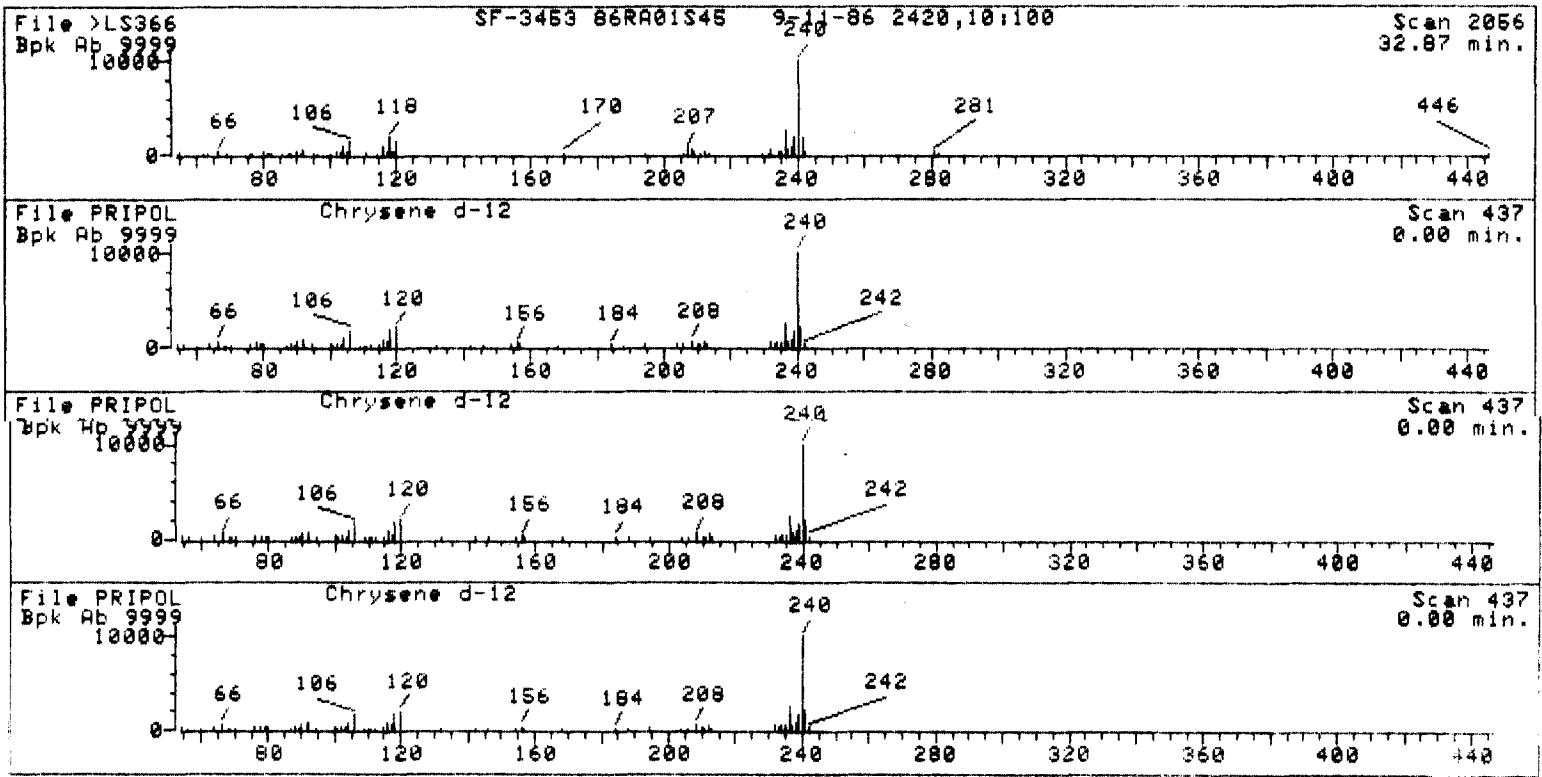


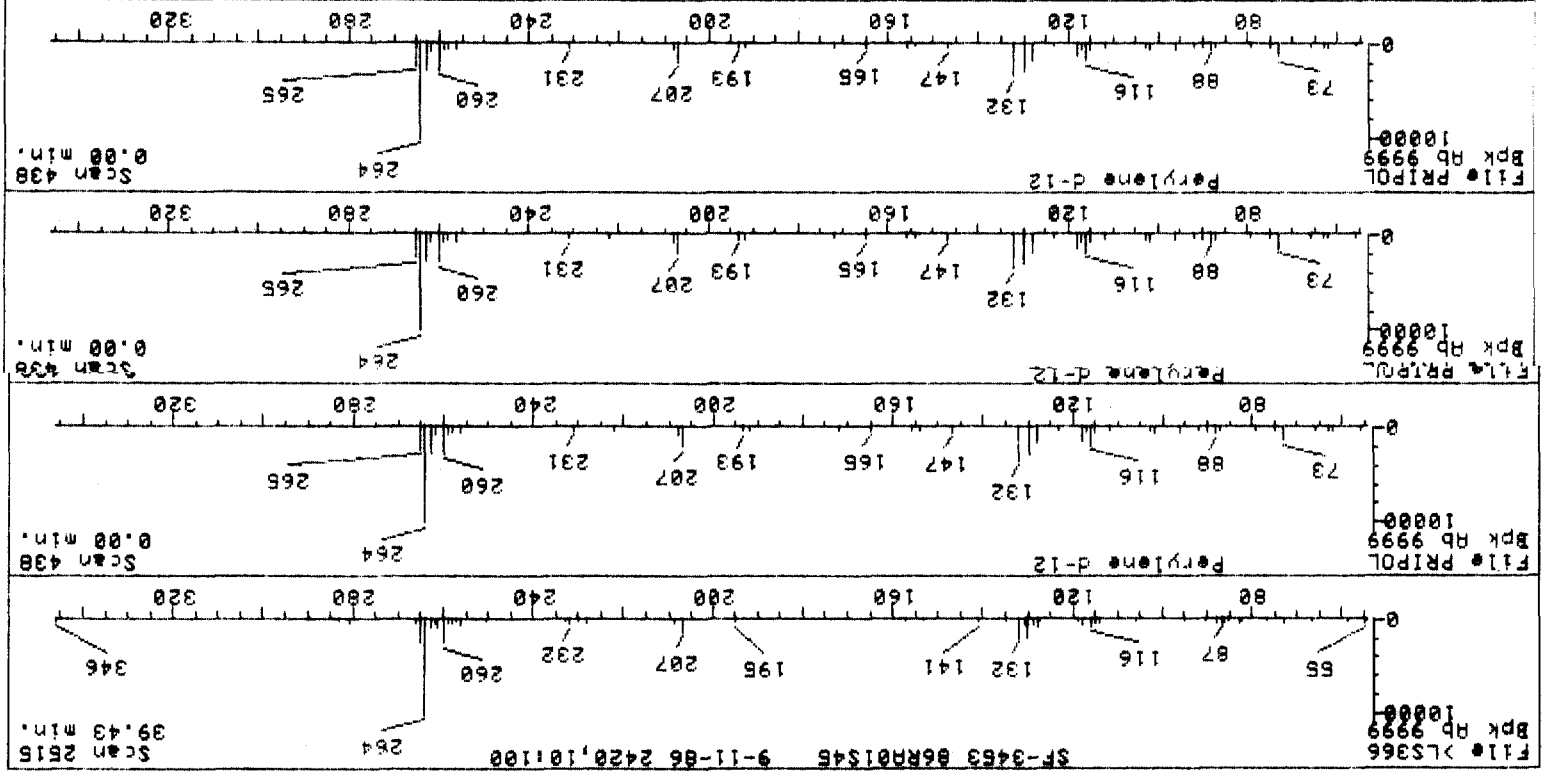
*Handwritten signature*





~~\_\_\_\_\_~~ *Sam*



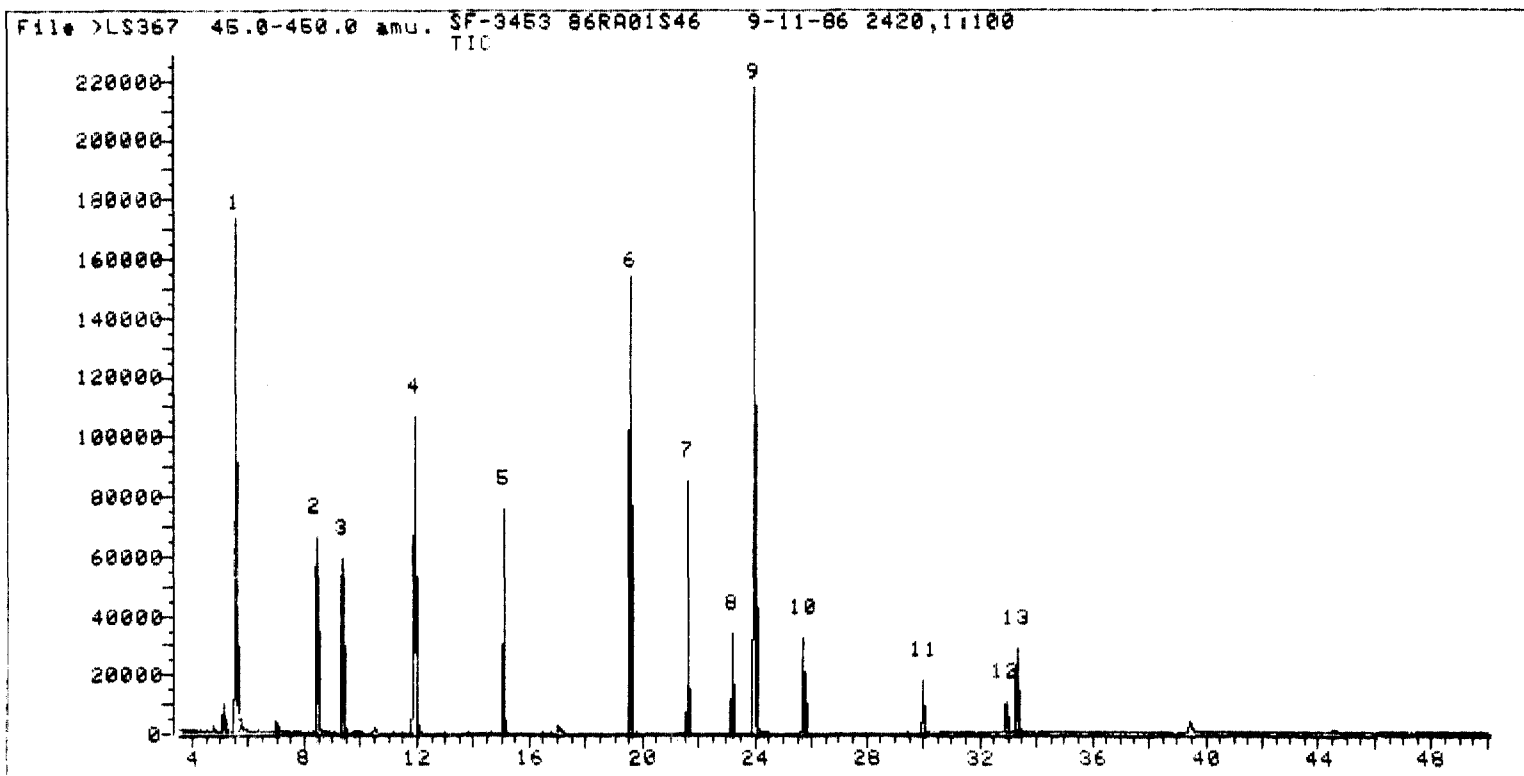


*Handwritten signature or initials.*

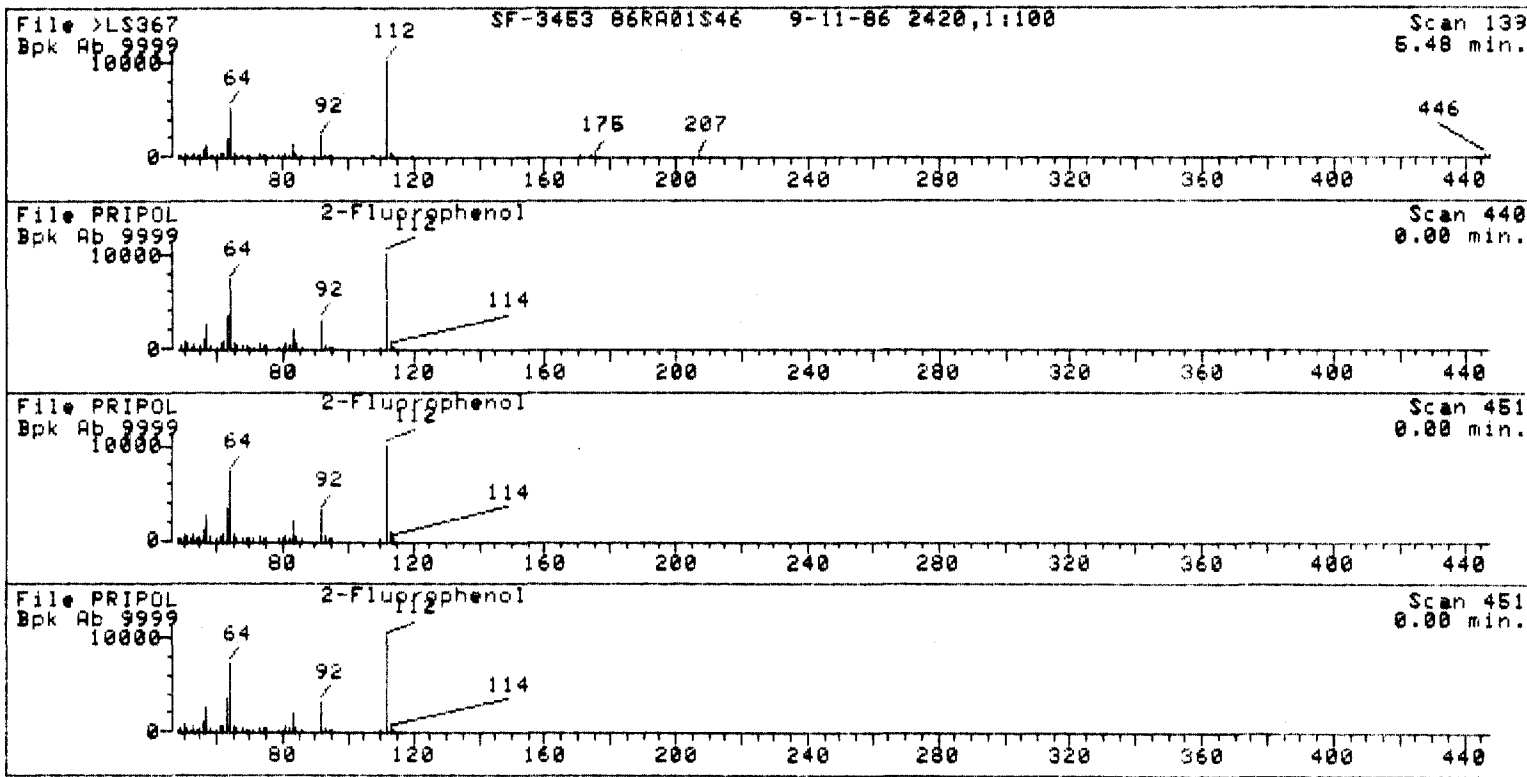
>LS367 SF-3453 86RA01S46 9-11-86 2420,1:100  
45.01 450.0 TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.484	134	139	154	173125	617478	604546	79.97	15.907
2	8.372	336	341	359	66144	279750	272920	36.10	7.181
3	9.301	400	406	419	59125	216910	214285	28.35	5.638
4	11.901	577	588	594	106860	506037	504505	66.74	13.275
5	15.043	800	808	817	75752	297763	294802	39.00	7.757
6	19.513	1115	1121	1126	154133	460631	459751	60.82	12.097
7	21.556	1257	1264	1276	85311	269737	267911	35.44	7.049
8	23.169	1372	1377	1381	33588	83983	82879	10.96	2.181
9	23.912	1422	1429	1445	217492	759359	755975	100.00	19.892
10	25.712	1548	1555	1562	32737	116460	115379	15.26	3.036
11	29.968	1846	1853	1859	17699	61598	59174	7.83	1.557
12	32.869	2049	2056	2064	10477	57938	50734	6.71	1.335
13	33.226	2076	2081	2094	28628	125660	117622	15.56	3.095

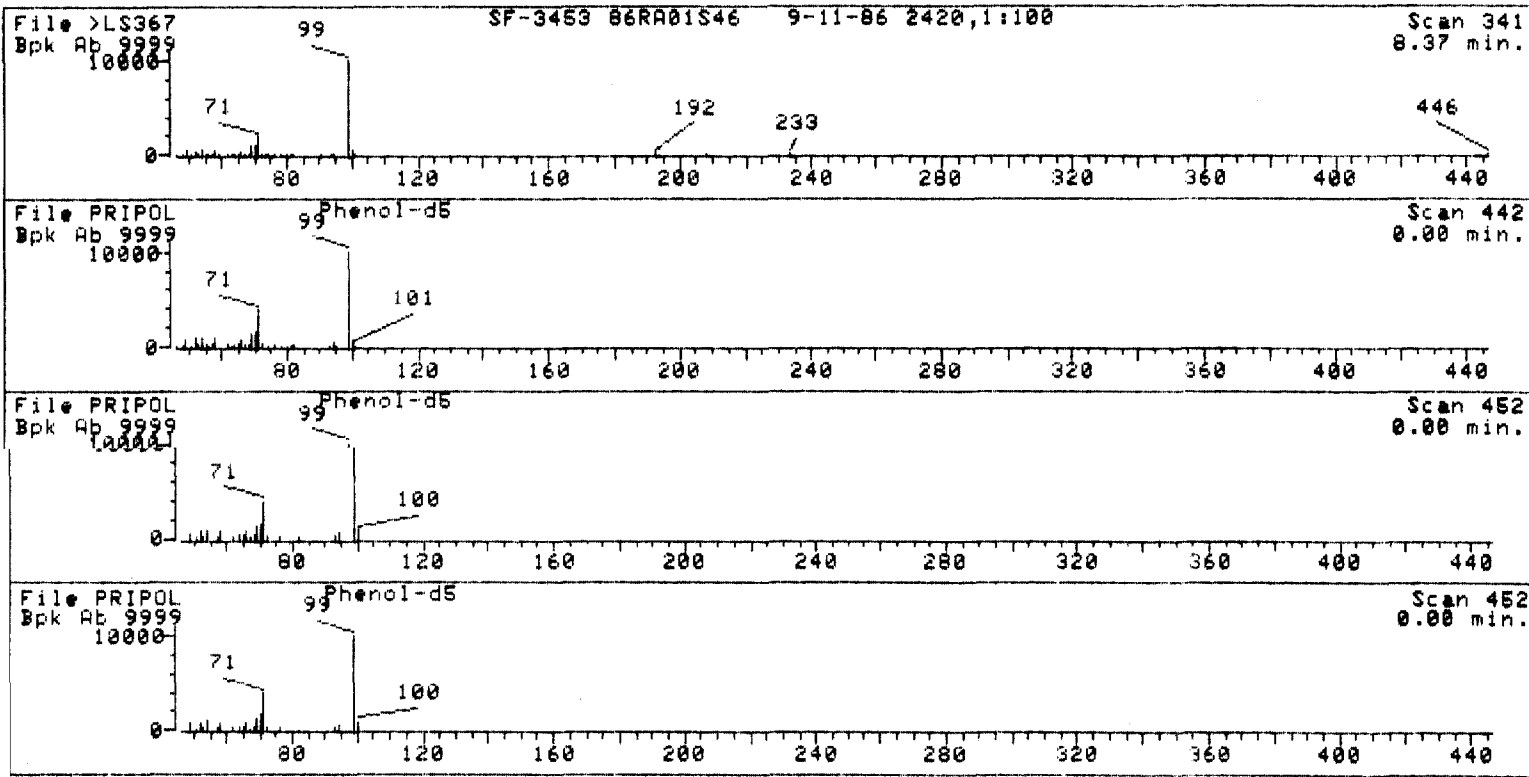
Sum of corrected areas: 3800483.



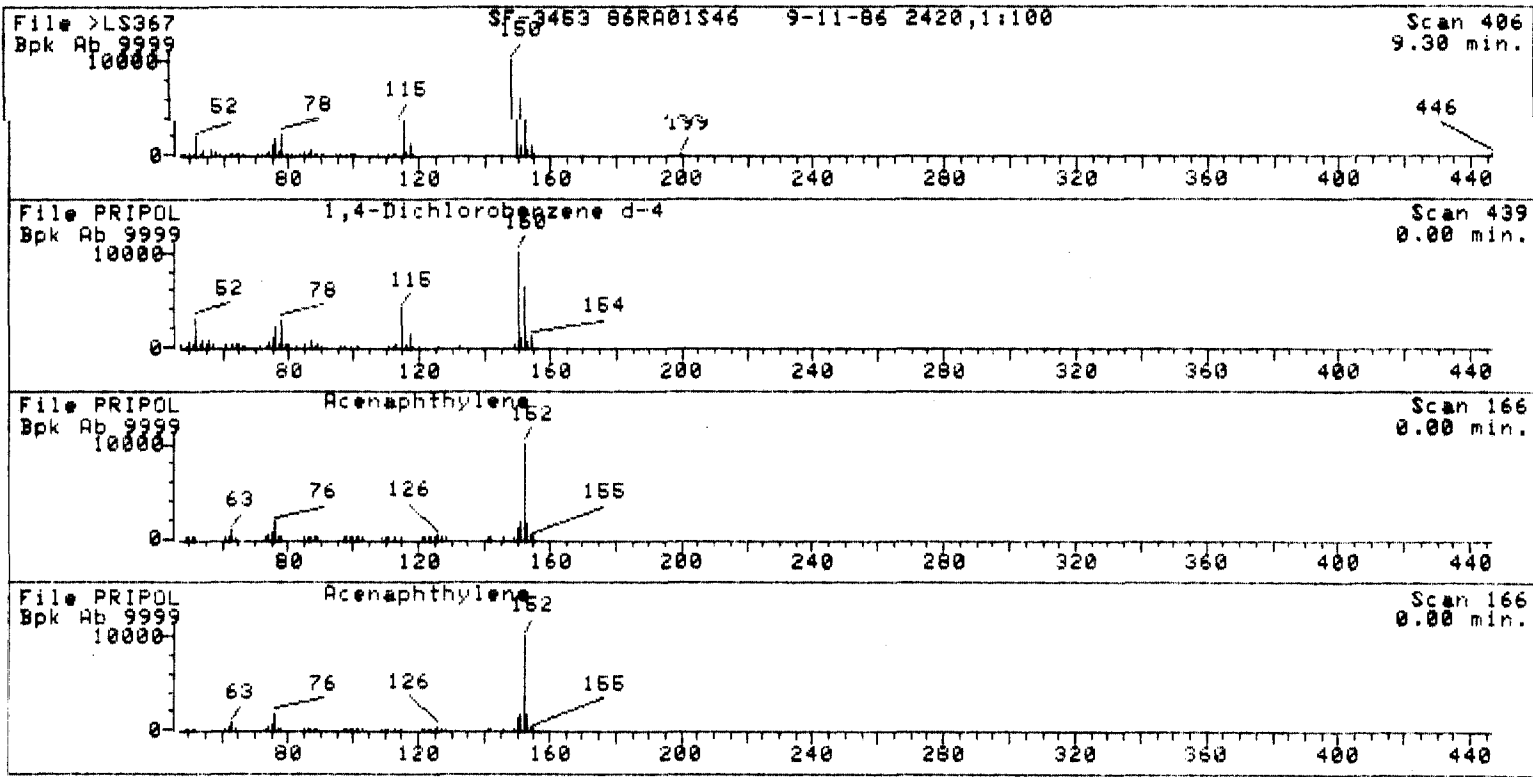
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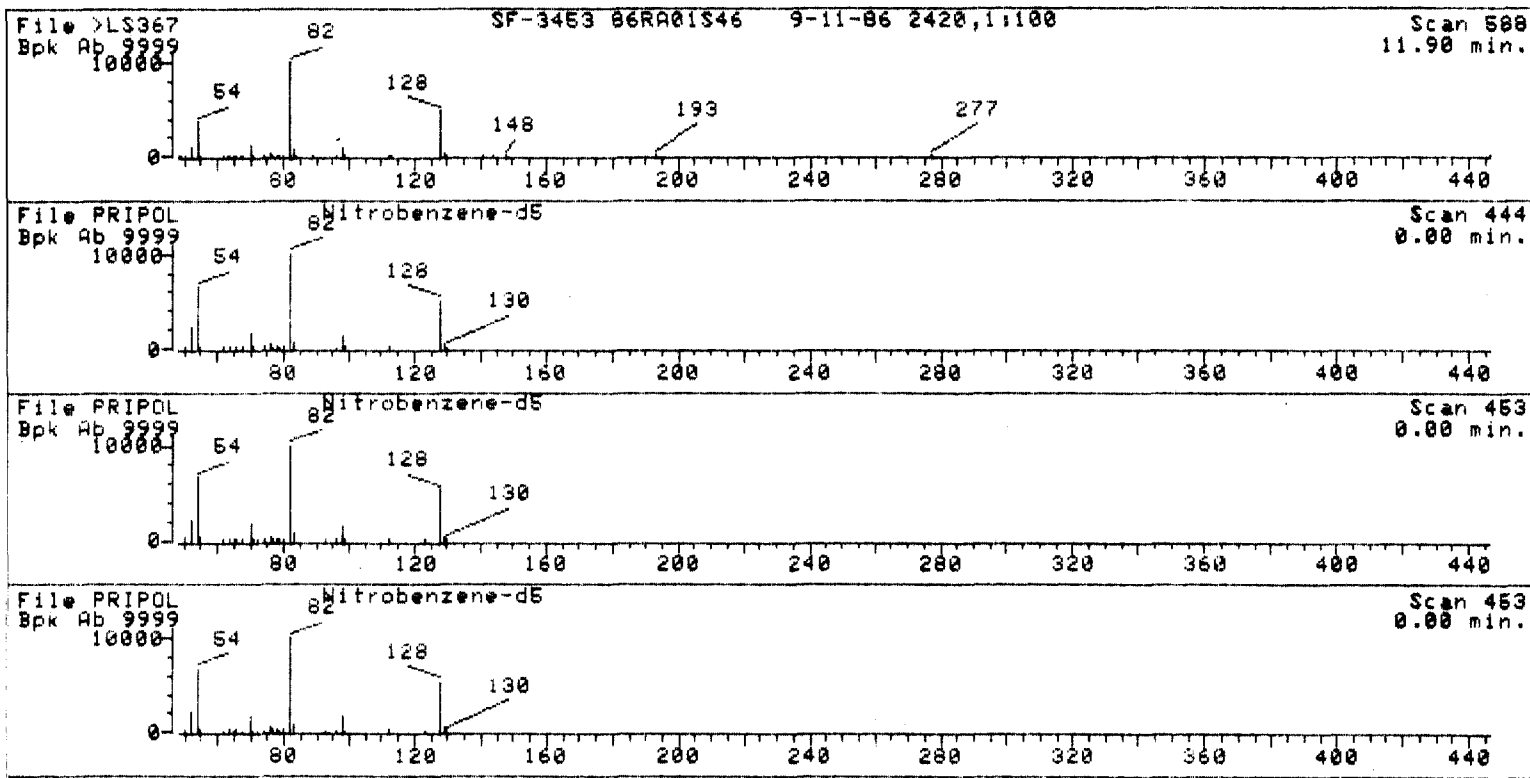
*Sam*



*Int*

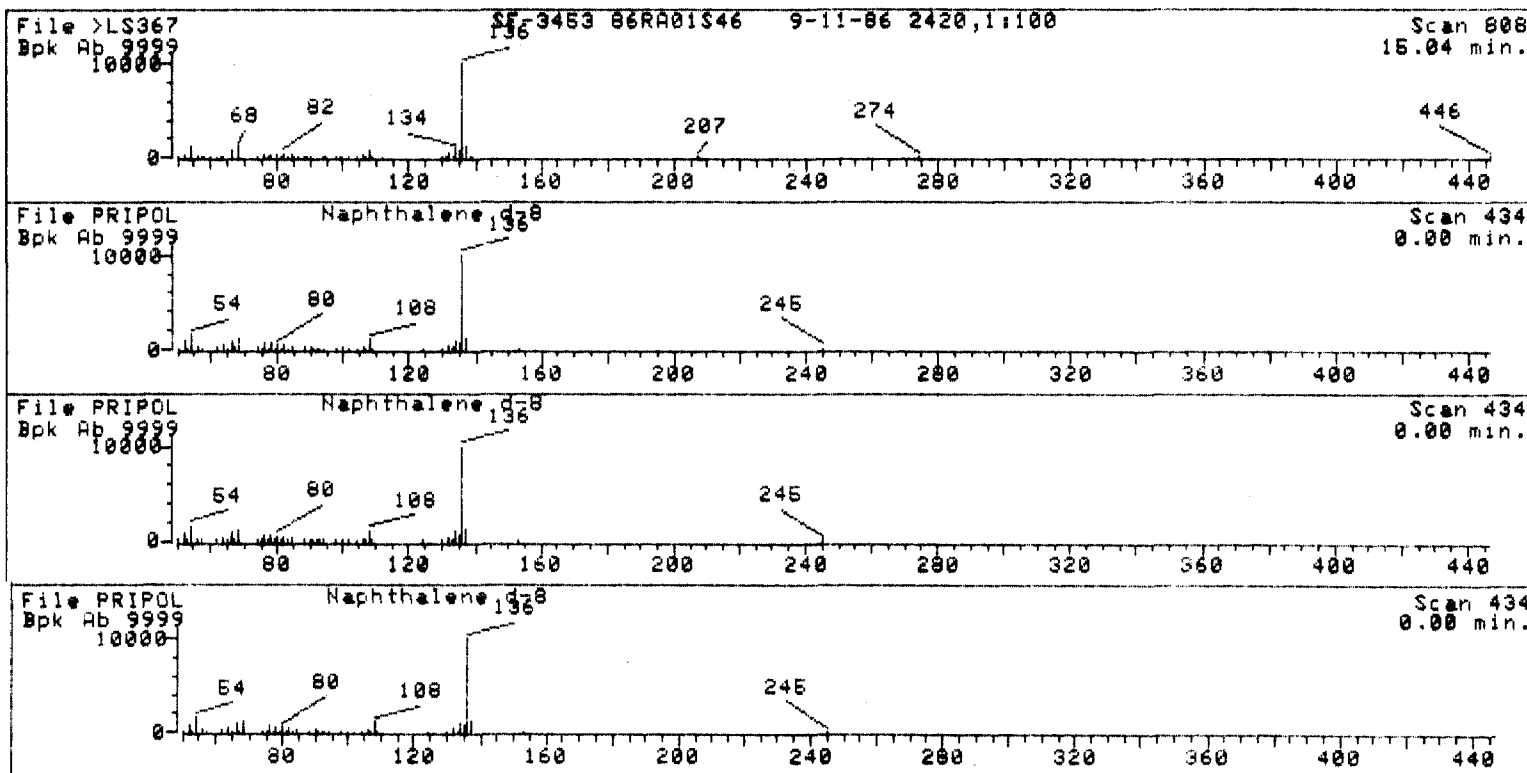


*Jim*

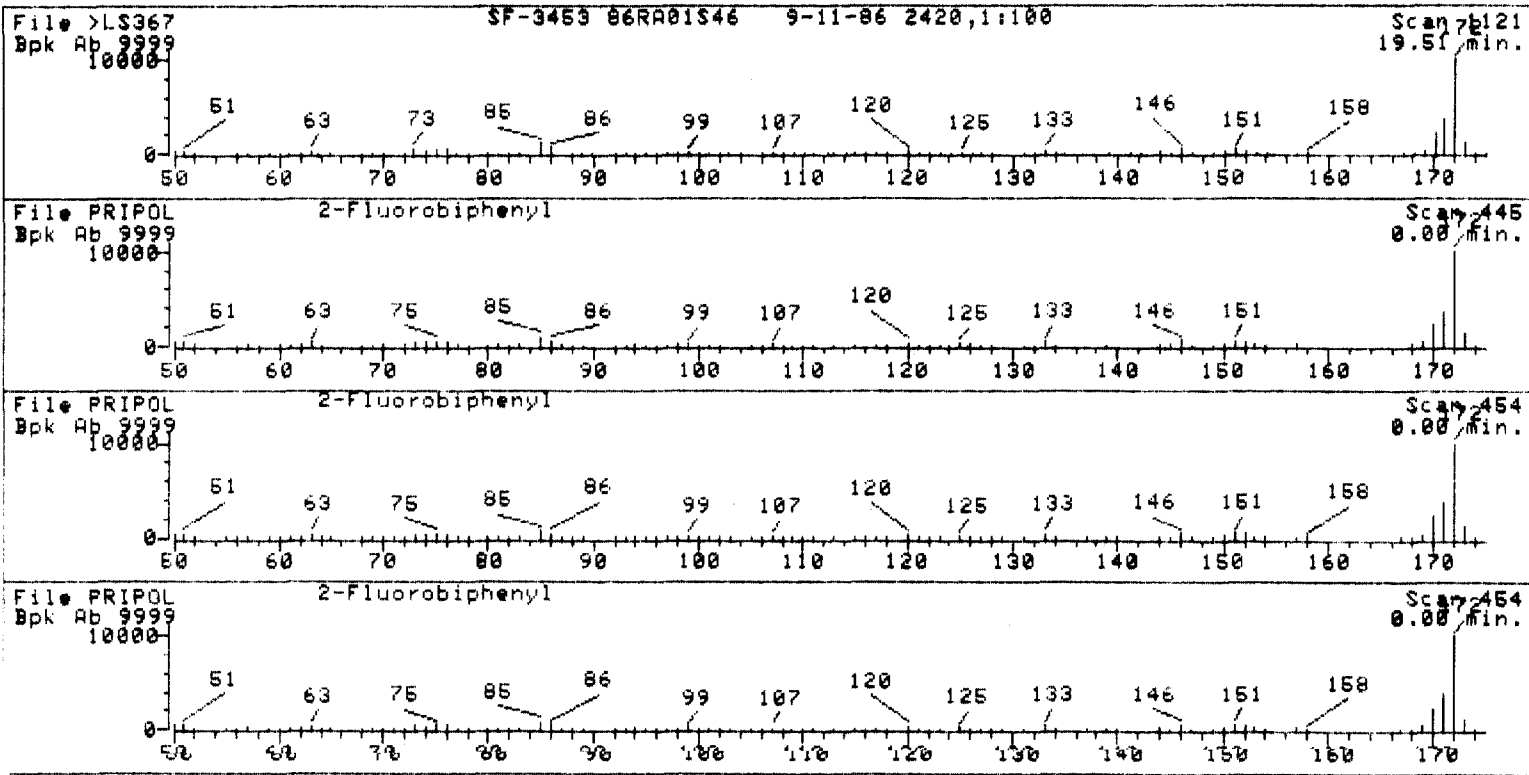




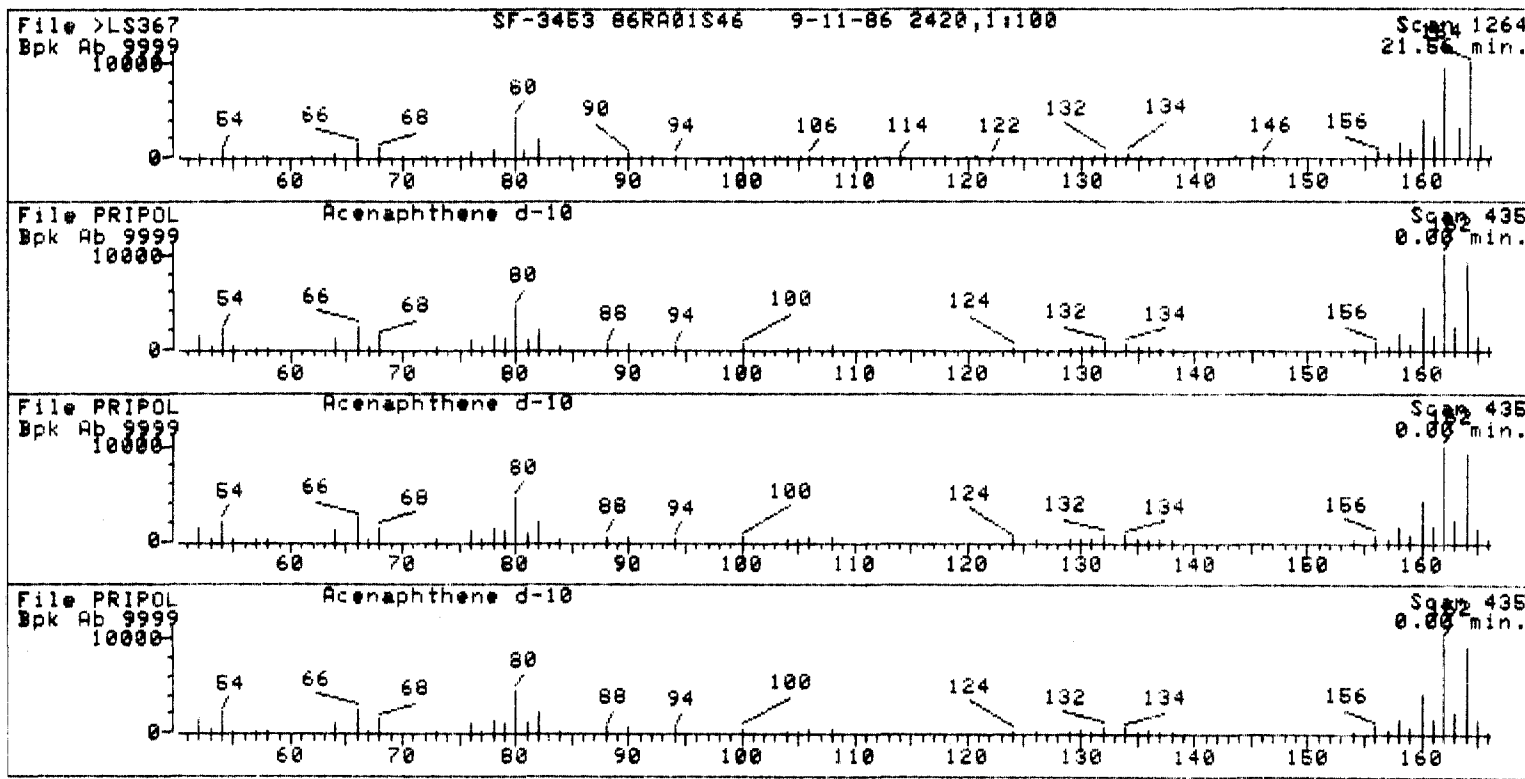
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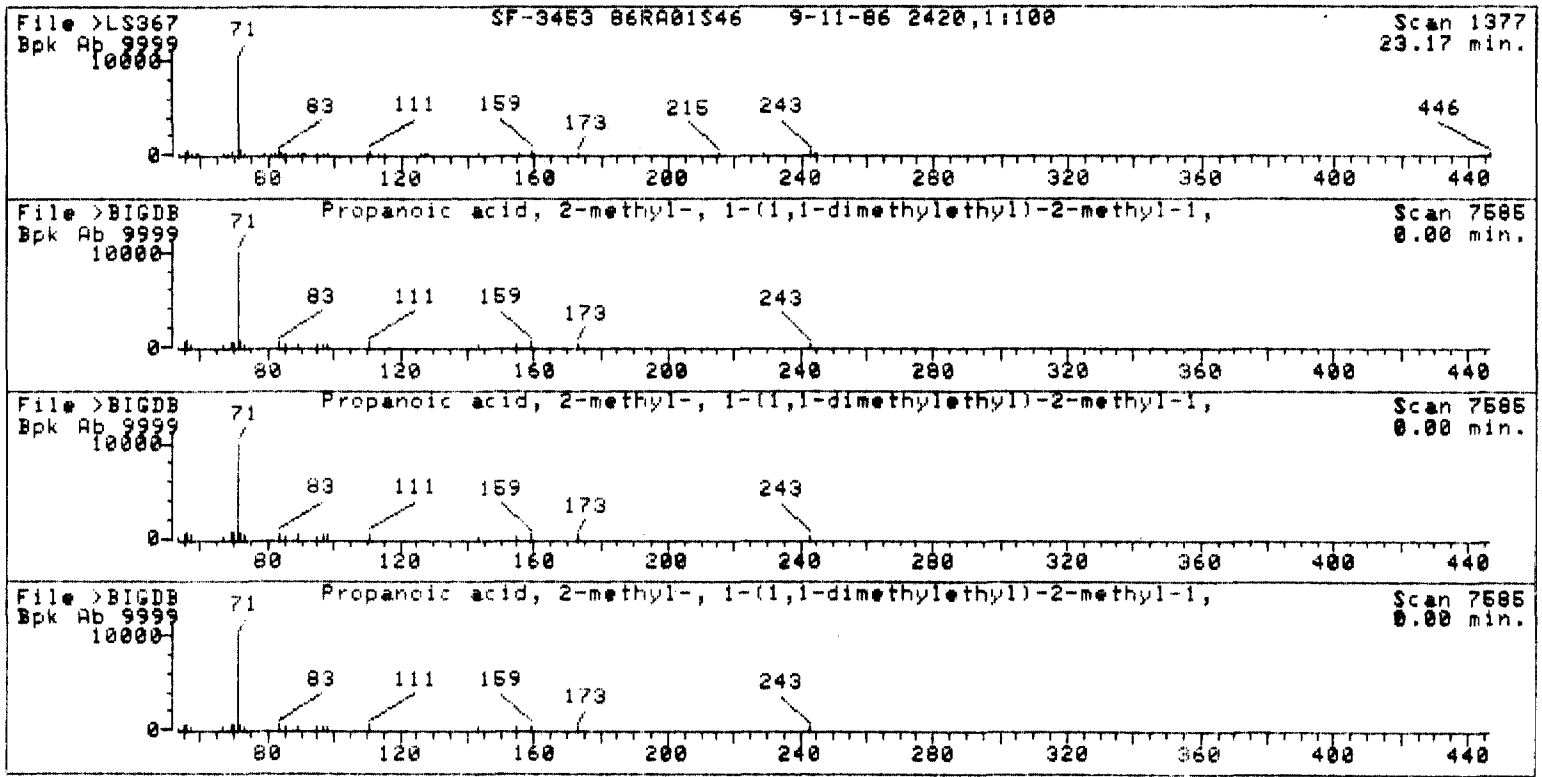
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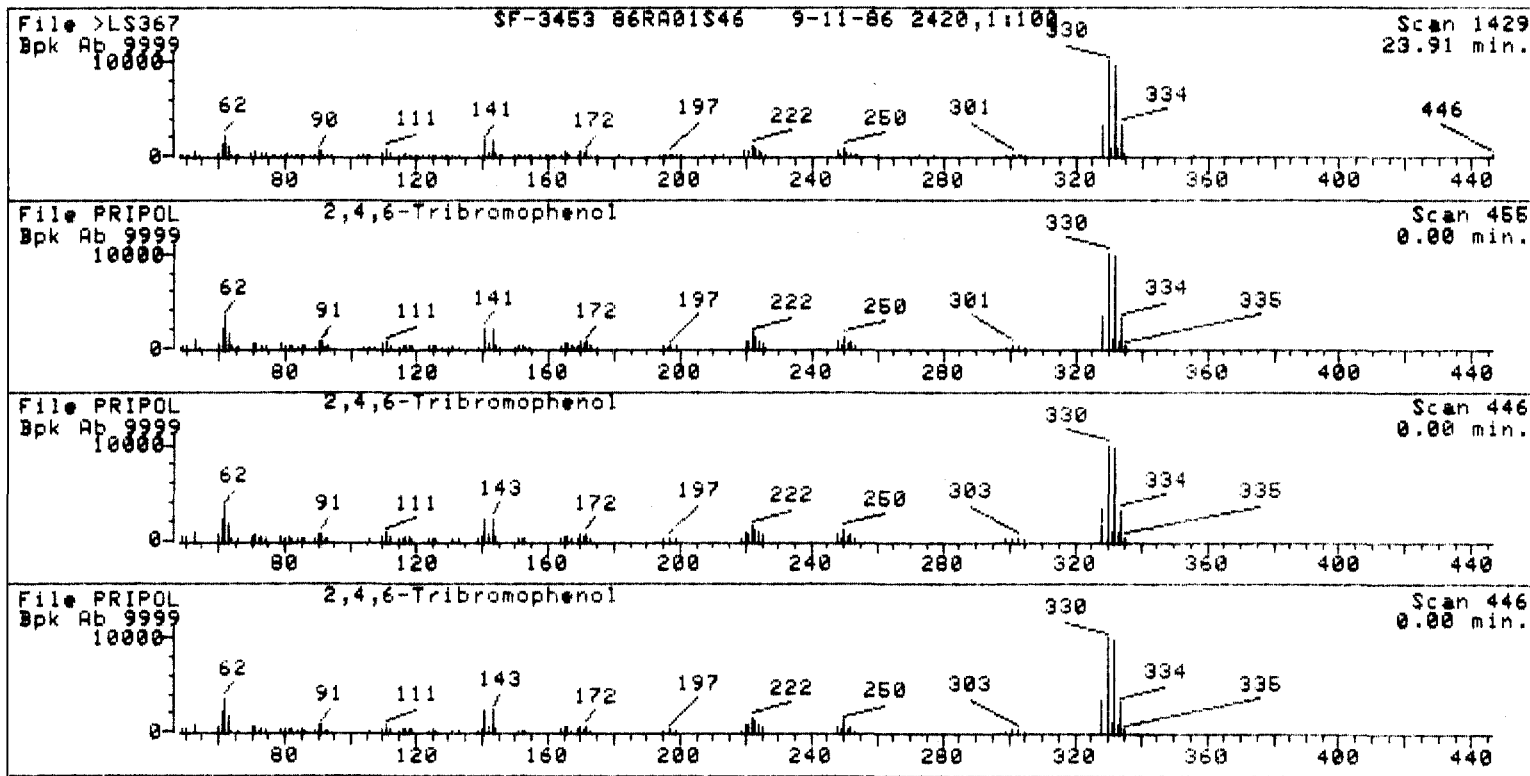
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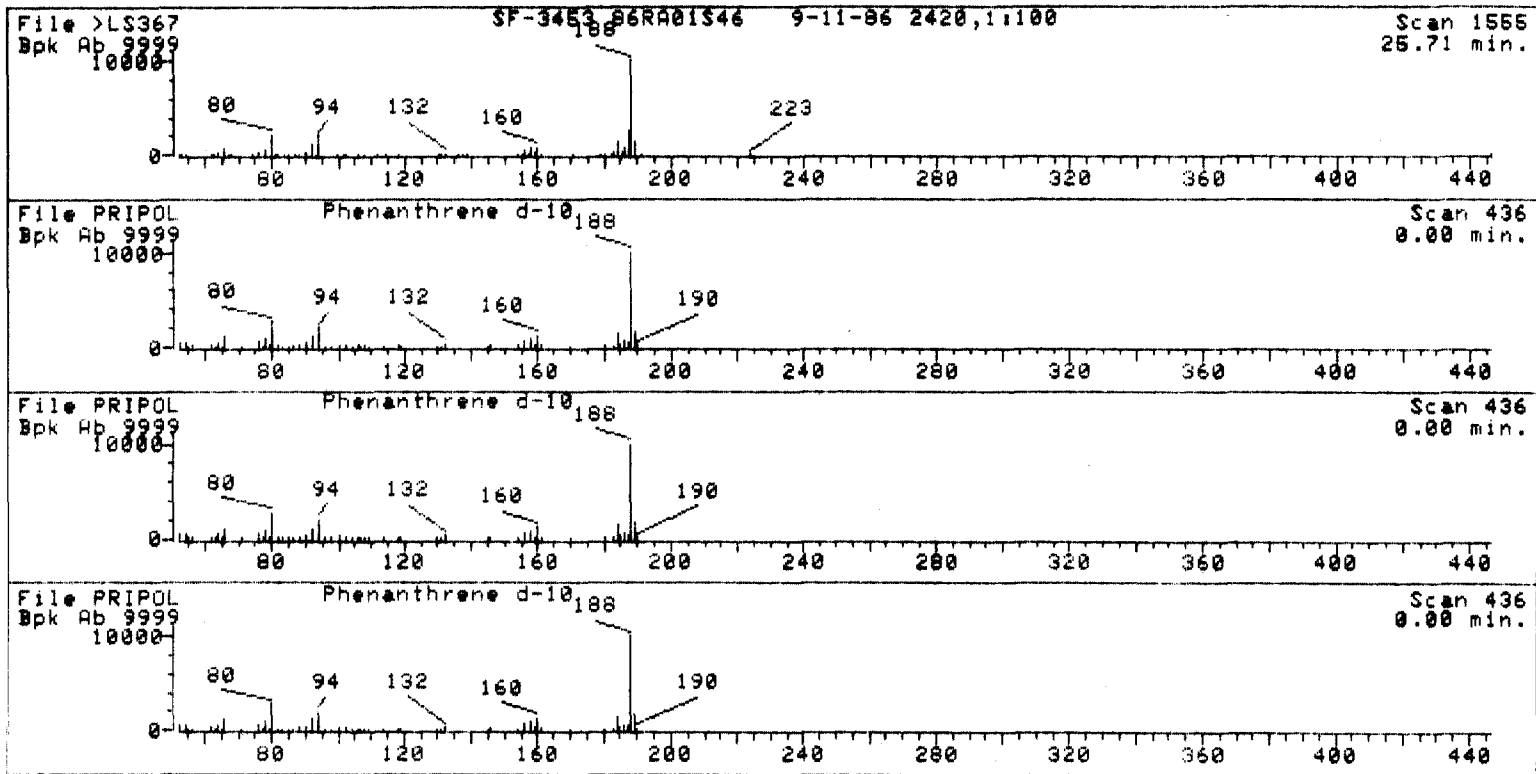
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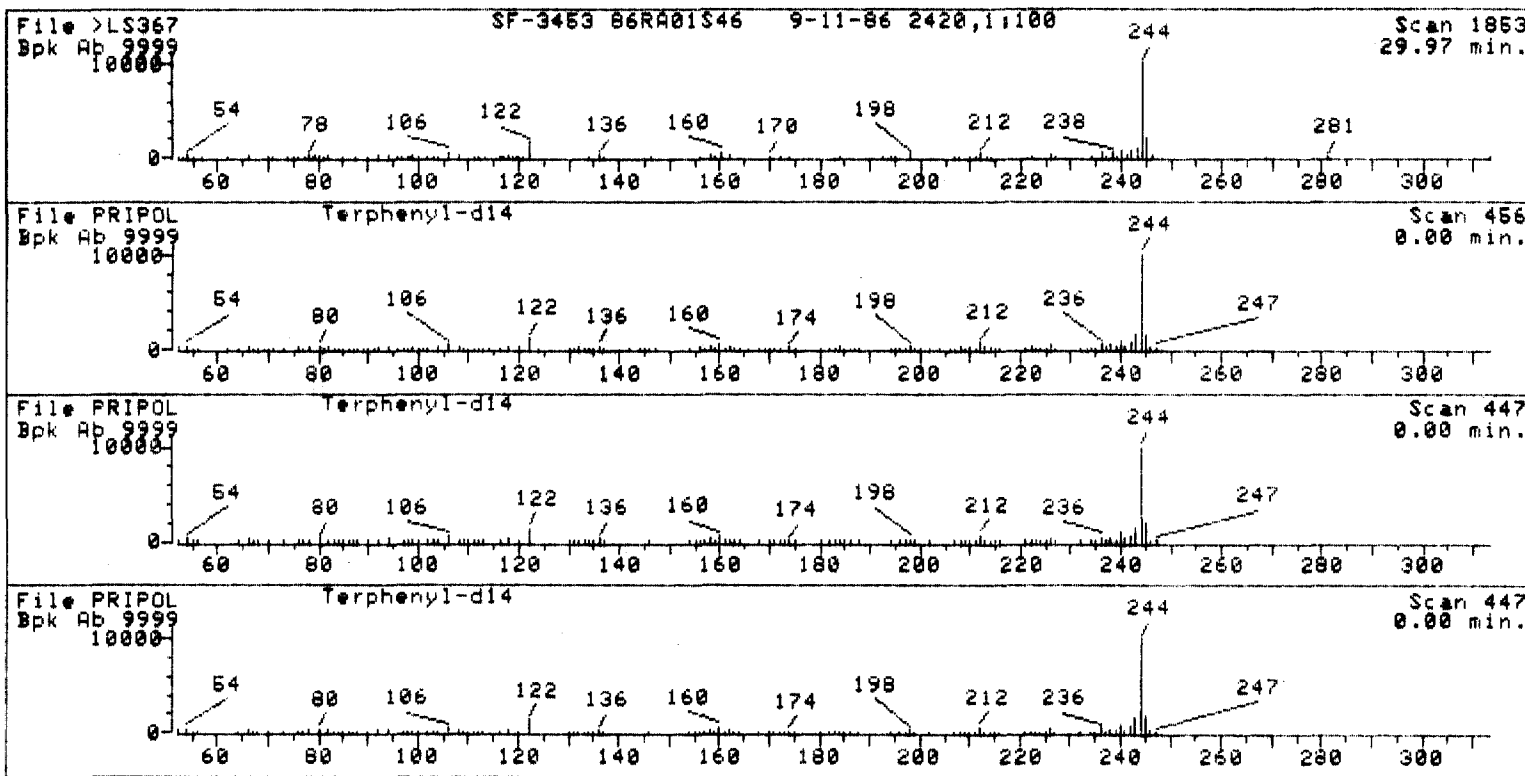
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*Handwritten:* **inst**

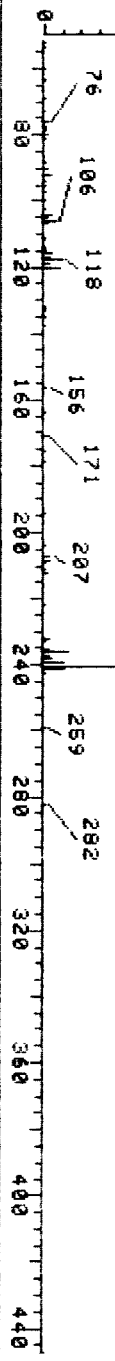


*Sam*

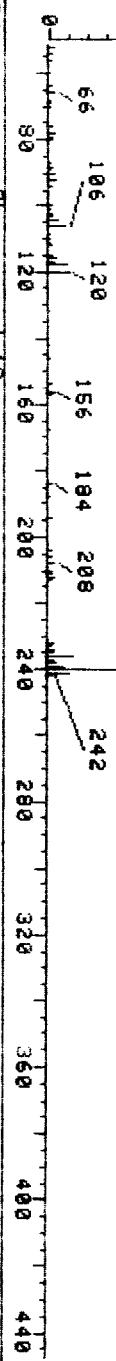


*Qtd*

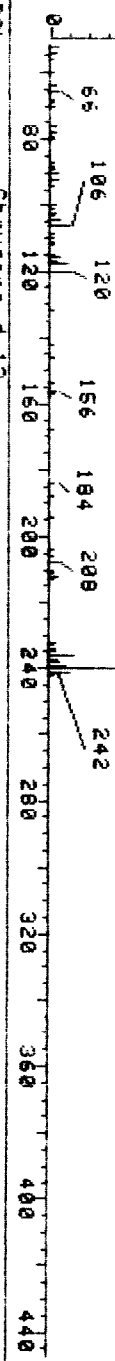
F11 >LS367 SF-3453 86R01546 2201-86 2420.11100 Scan 2056  
Bpk Rp 9999 32.87 min.  
10000



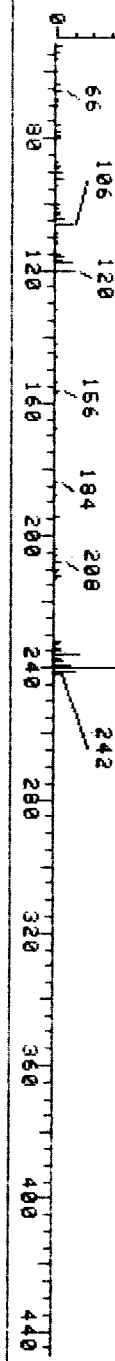
F11 PRIPOL Chrysene d-12 Scan 437  
Bpk Rp 9999 0.00 min.  
10000



F11 PRIPOL Chrysene d-12 Scan 437  
Bpk Rp 9999 0.00 min.  
10000

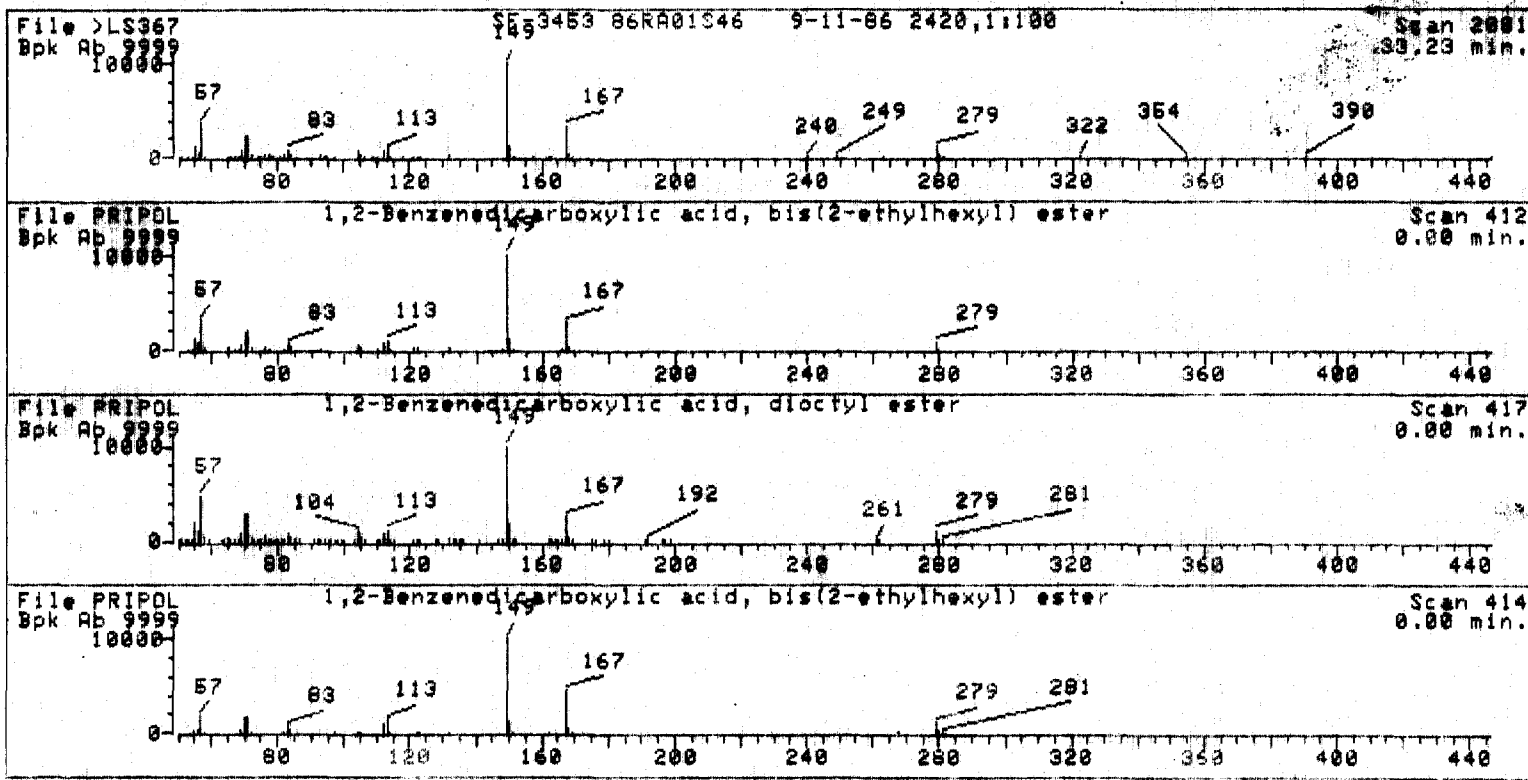


F11 PRIPOL Chrysene d-12 Scan 437  
Bpk Rp 9999 0.00 min.  
10000





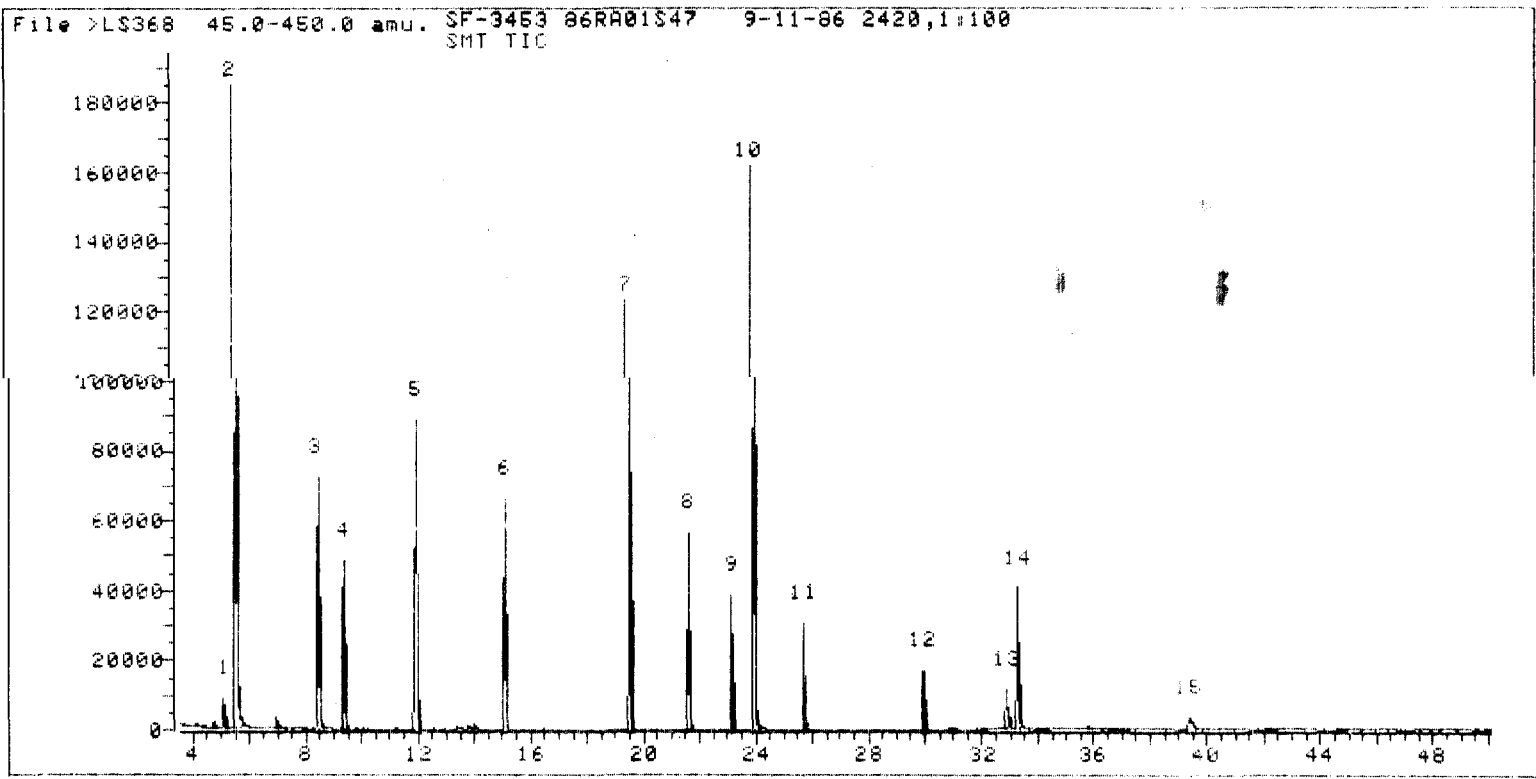
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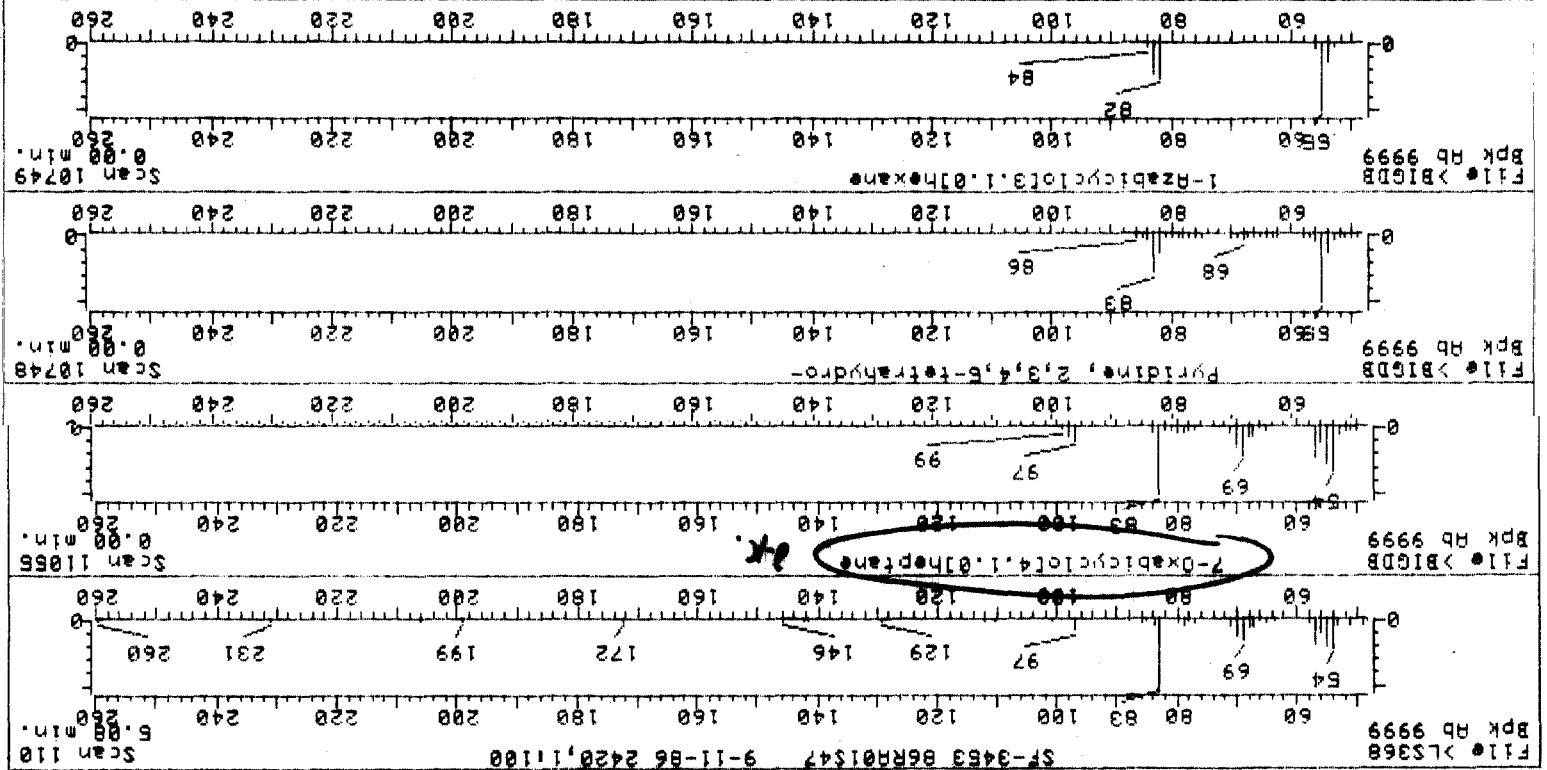


>LS368 SF-3453 86RA01S47 9-11-86 2420.1:100  
45.01 450.0 SMT TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.084	105	110	122	8489	45046	34863	5.01	.906
2	5.470	131	137	155	184265	711496	695360	100.00	18.068
3	8.386	334	341	363	71815	335260	326005	46.88	8.471
4	9.315	399	406	421	48125	196258	191633	27.56	4.979
5	11.915	577	588	599	88600	455918	453182	65.17	11.775
6	15.044	799	807	818	65996	282485	279632	40.21	7.266
7	19.505	1112	1119	1135	122806	439756	436853	62.82	11.351
8	21.546	1255	1262	1272	56268	206080	205307	29.53	5.335
9	23.160	1369	1375	1386	38418	124666	122842	17.67	3.192
10	23.903	1419	1427	1445	161508	635638	633381	91.09	16.458
11	25.688	1545	1552	1564	30541	123632	120875	17.38	3.141
12	29.942	1843	1850	1862	17289	69903	67669	9.73	1.758
13	32.842	2046	2053	2062	11386	66846	59316	8.53	1.541
14	33.214	2066	2079	2100	40229	197603	180822	26.00	4.698
15	39.385	2495	2511	2530	3739	48698	40802	5.87	1.060

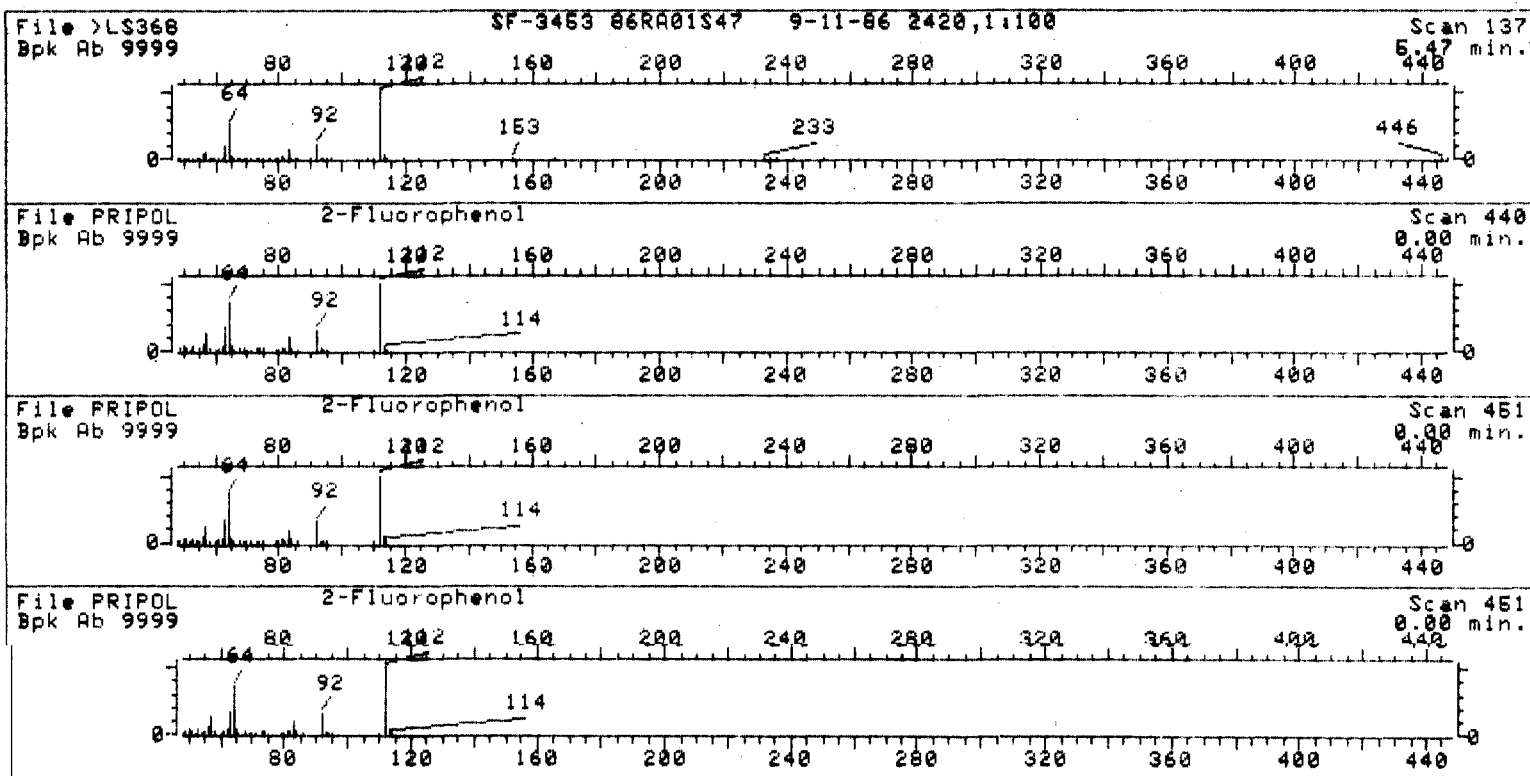
Sum of corrected areas: 3848542.

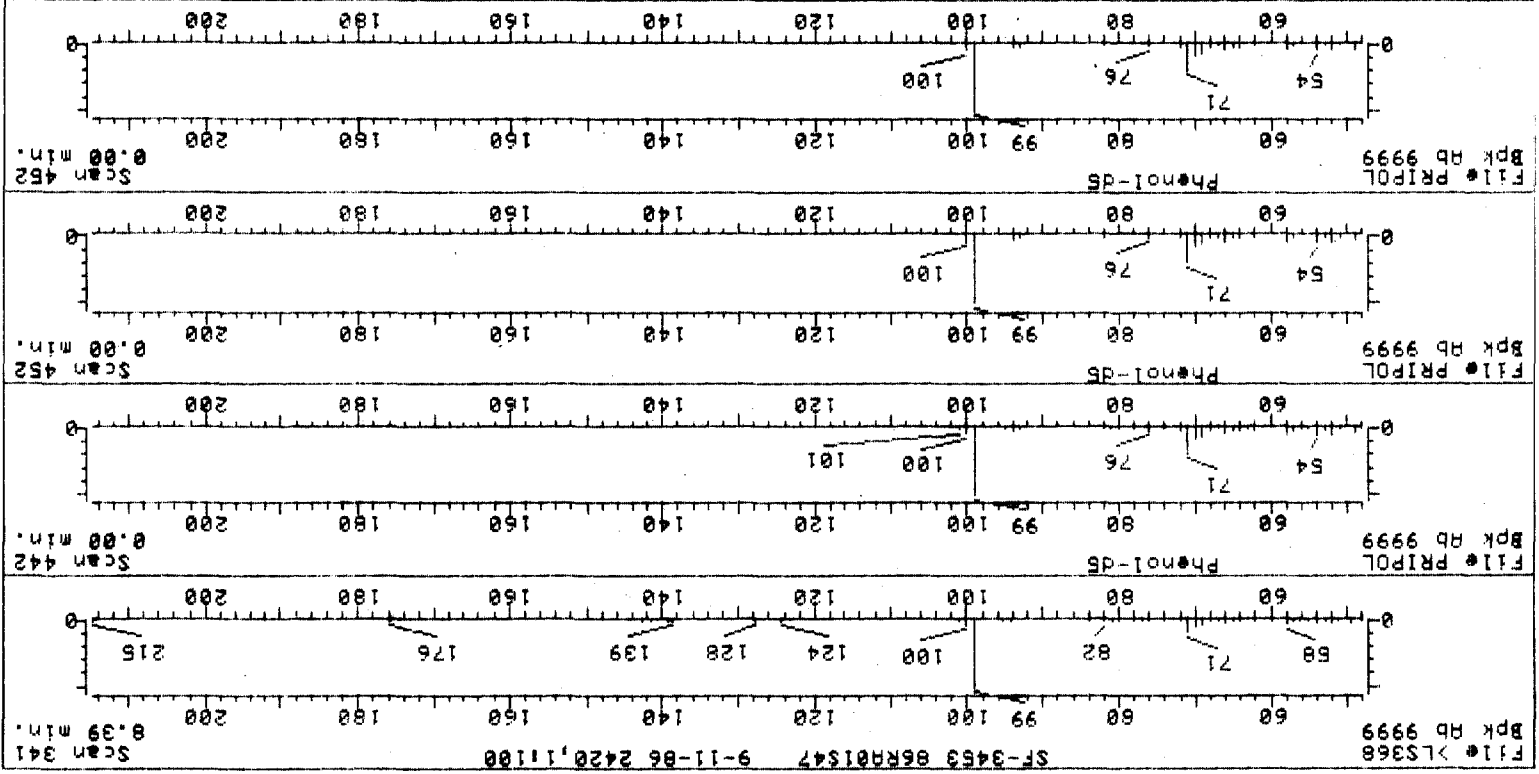




*Handwritten signature or initials.*

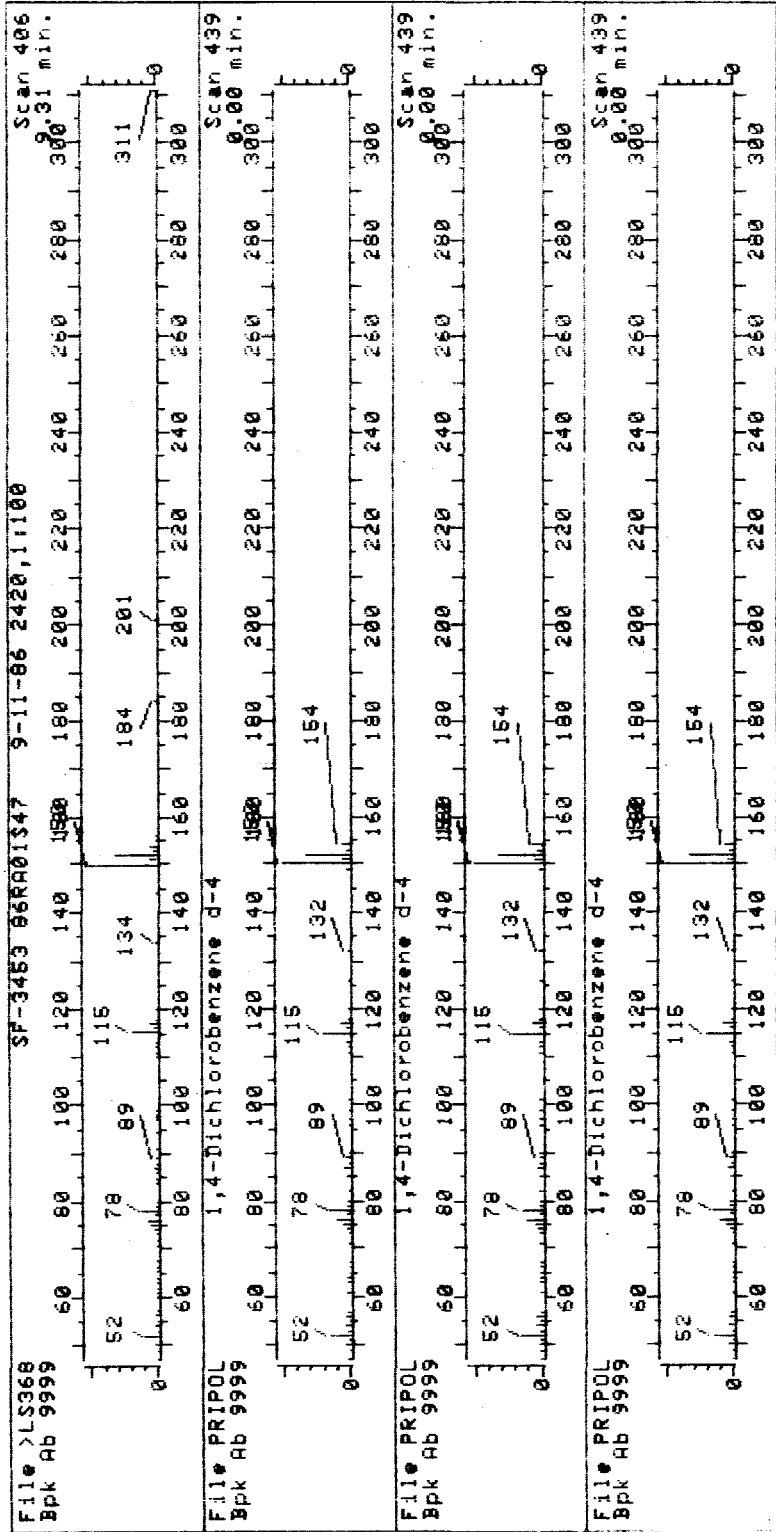
*Jan*



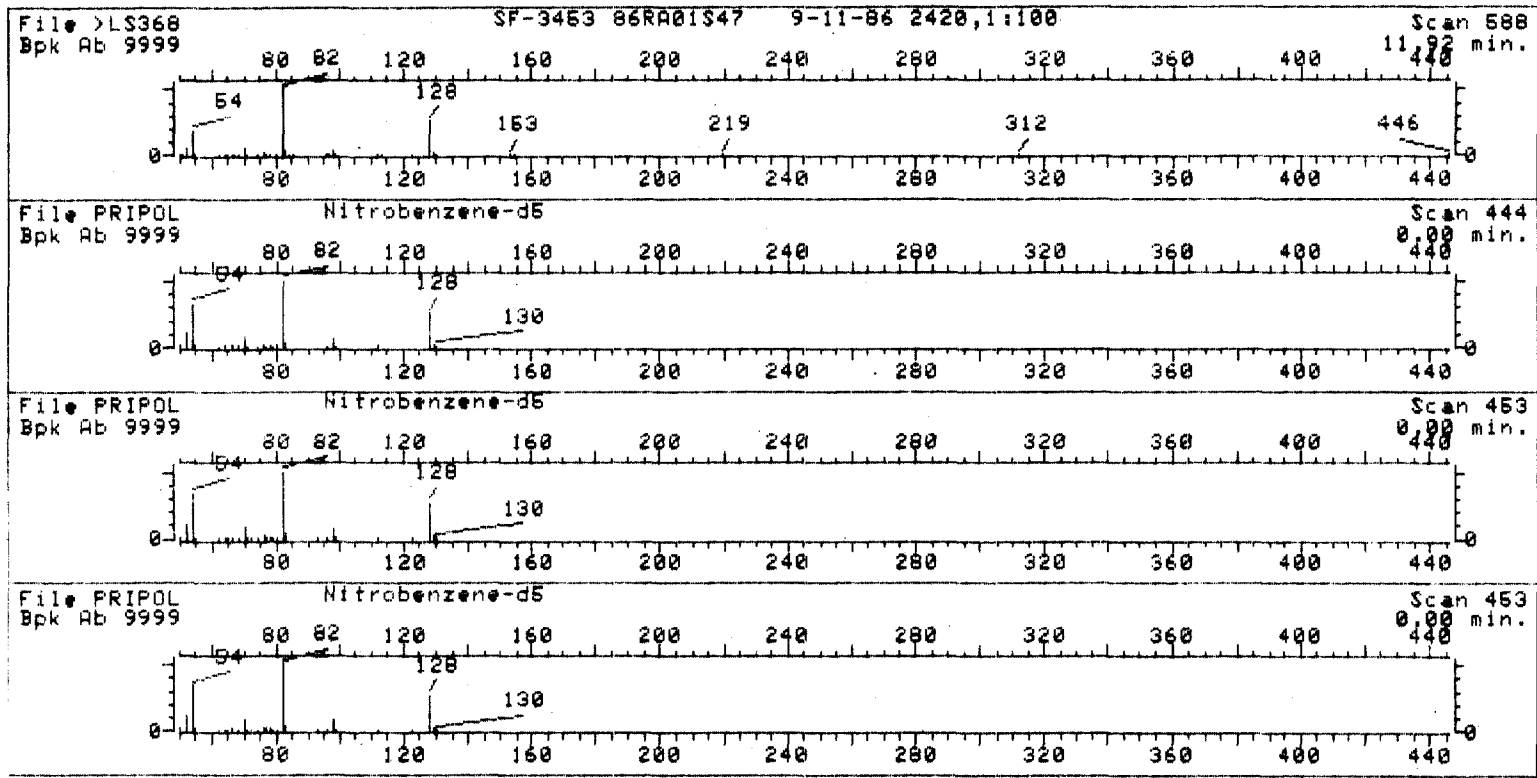


*dm*

*data*

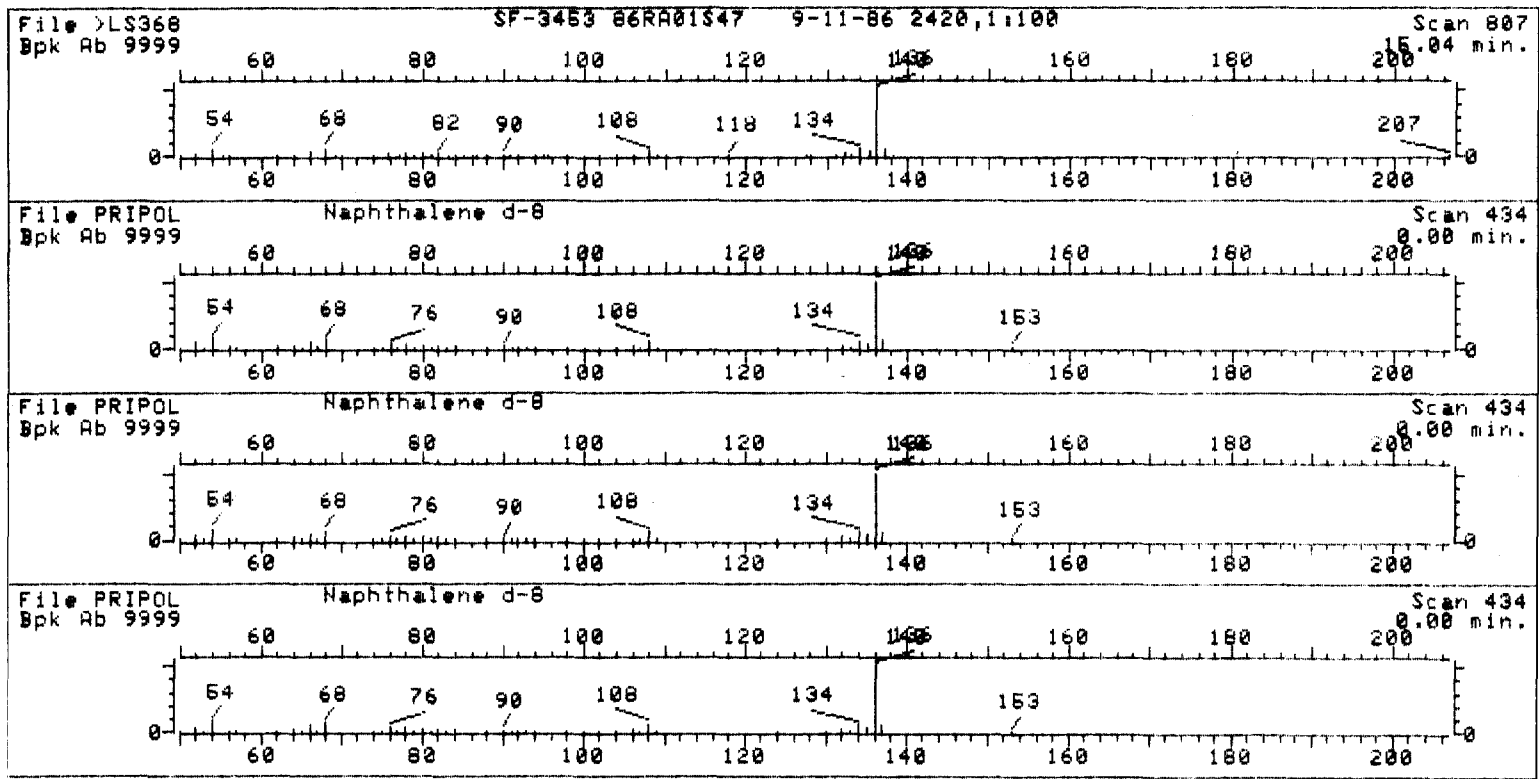


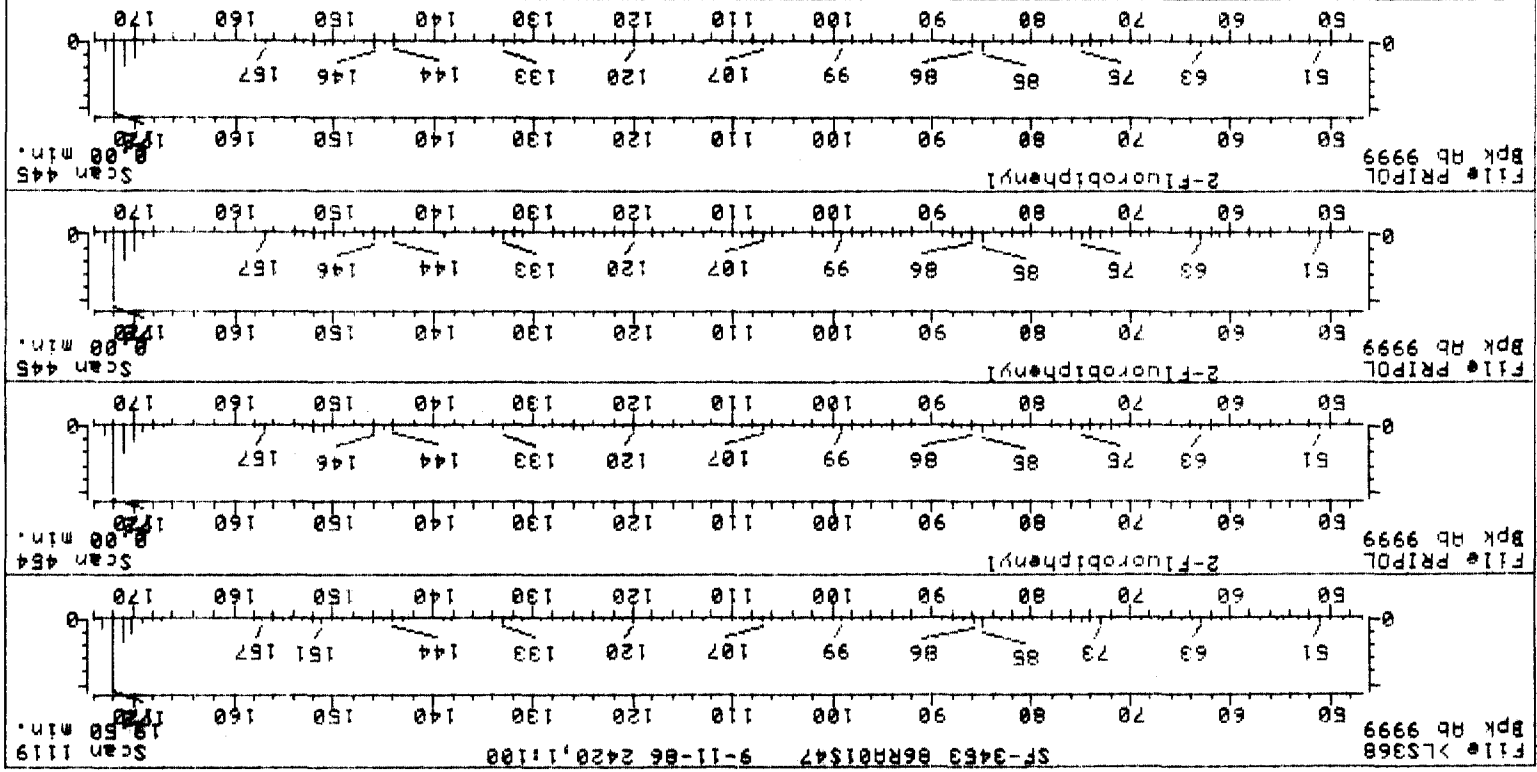
*Jan*





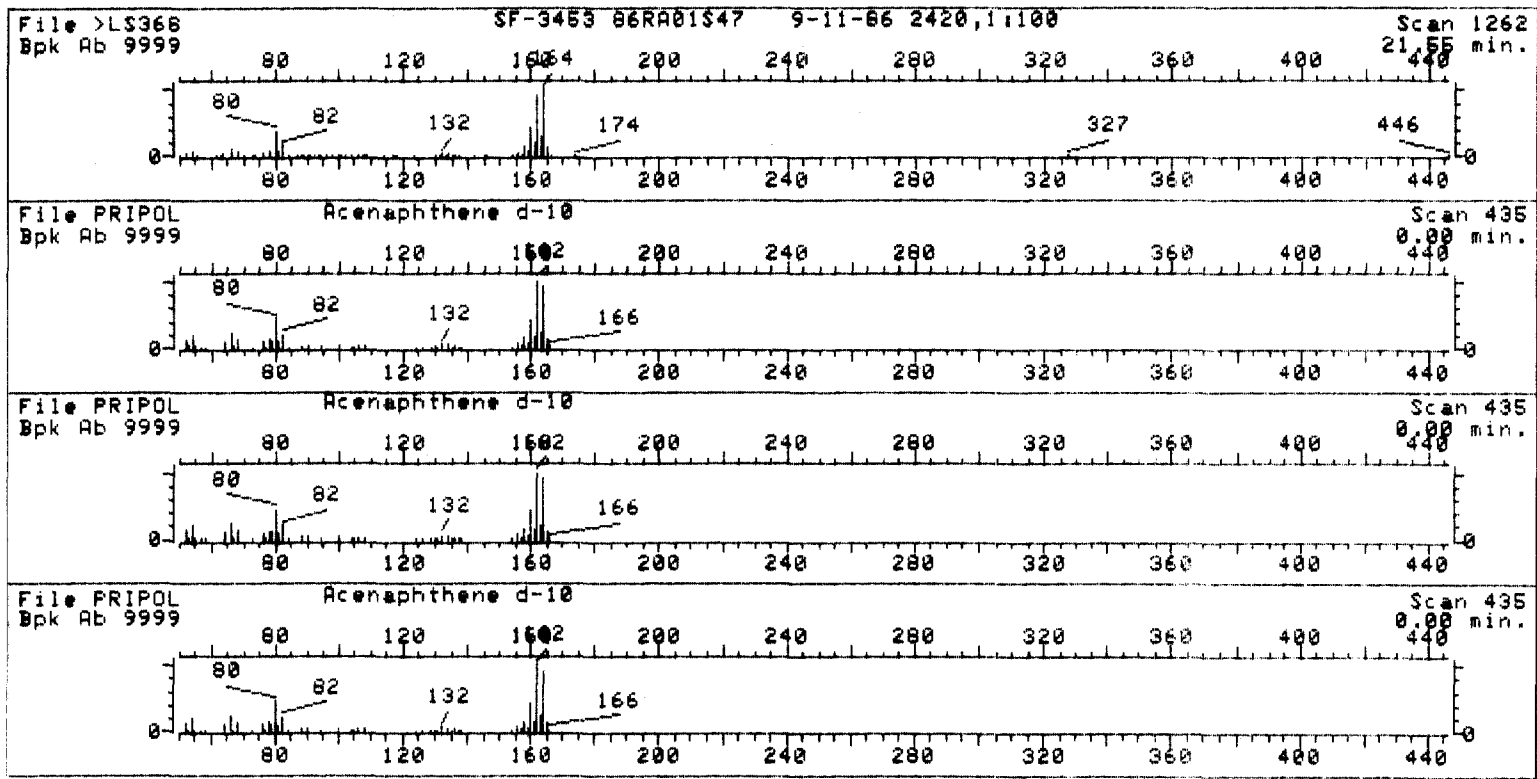
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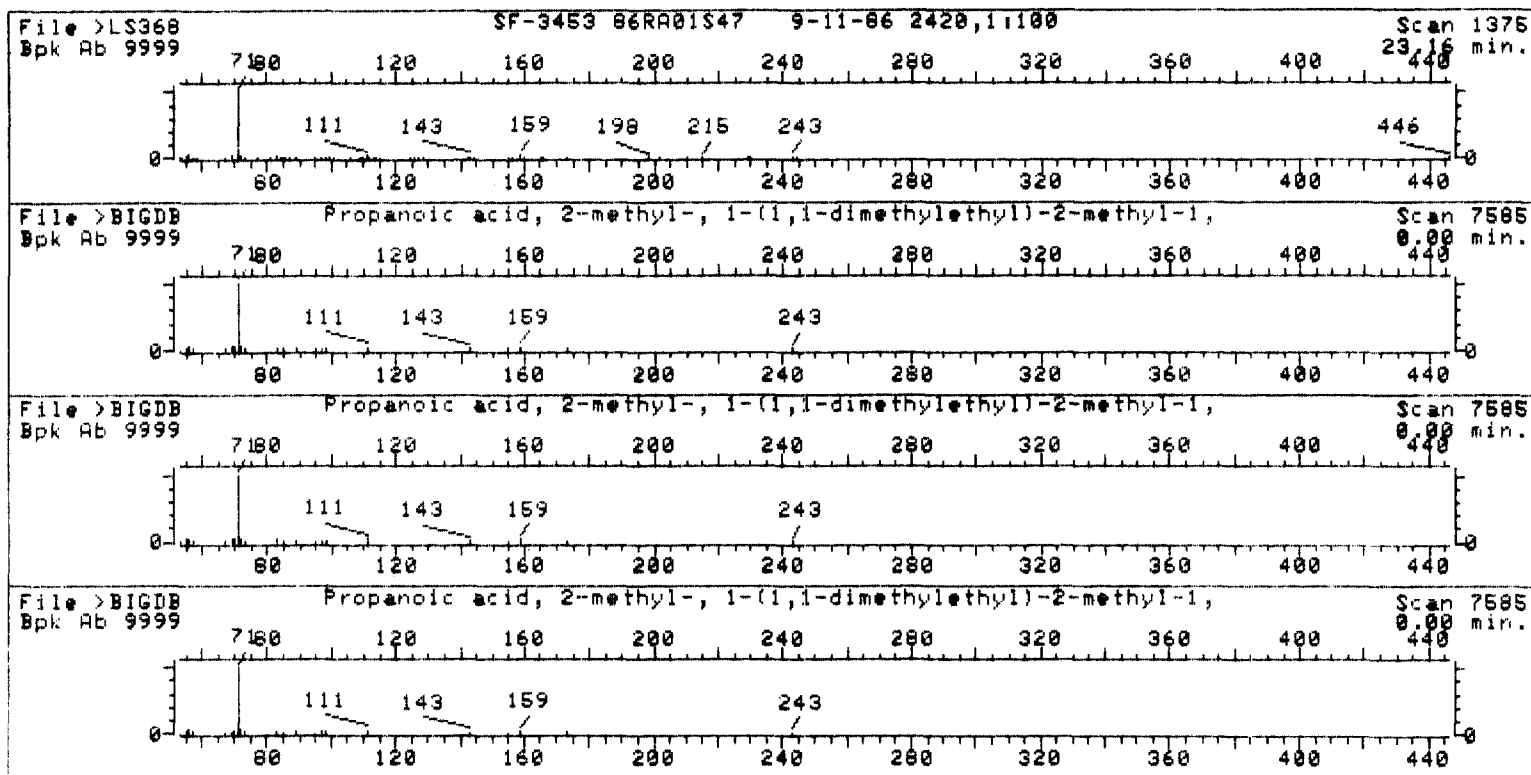


*four*

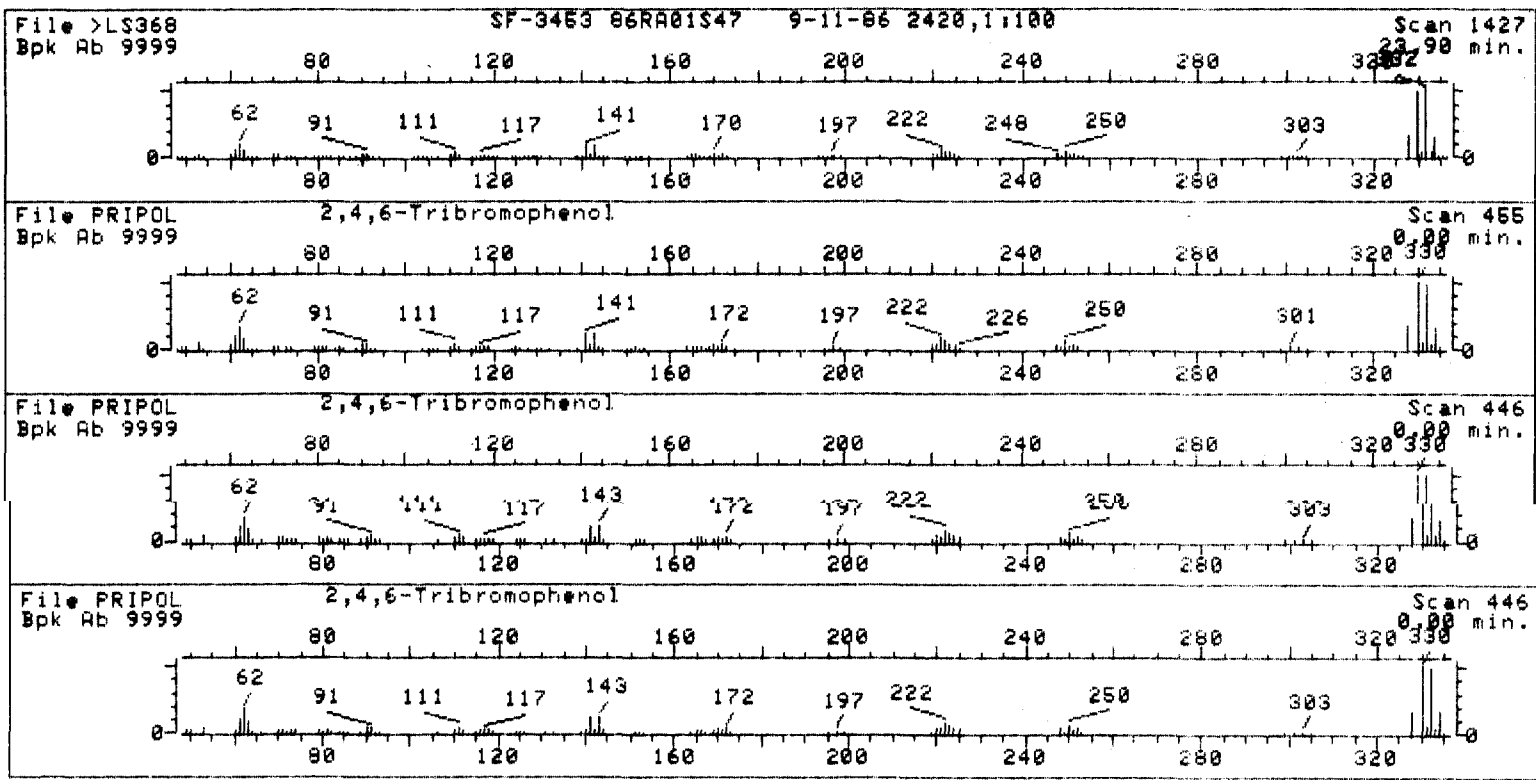
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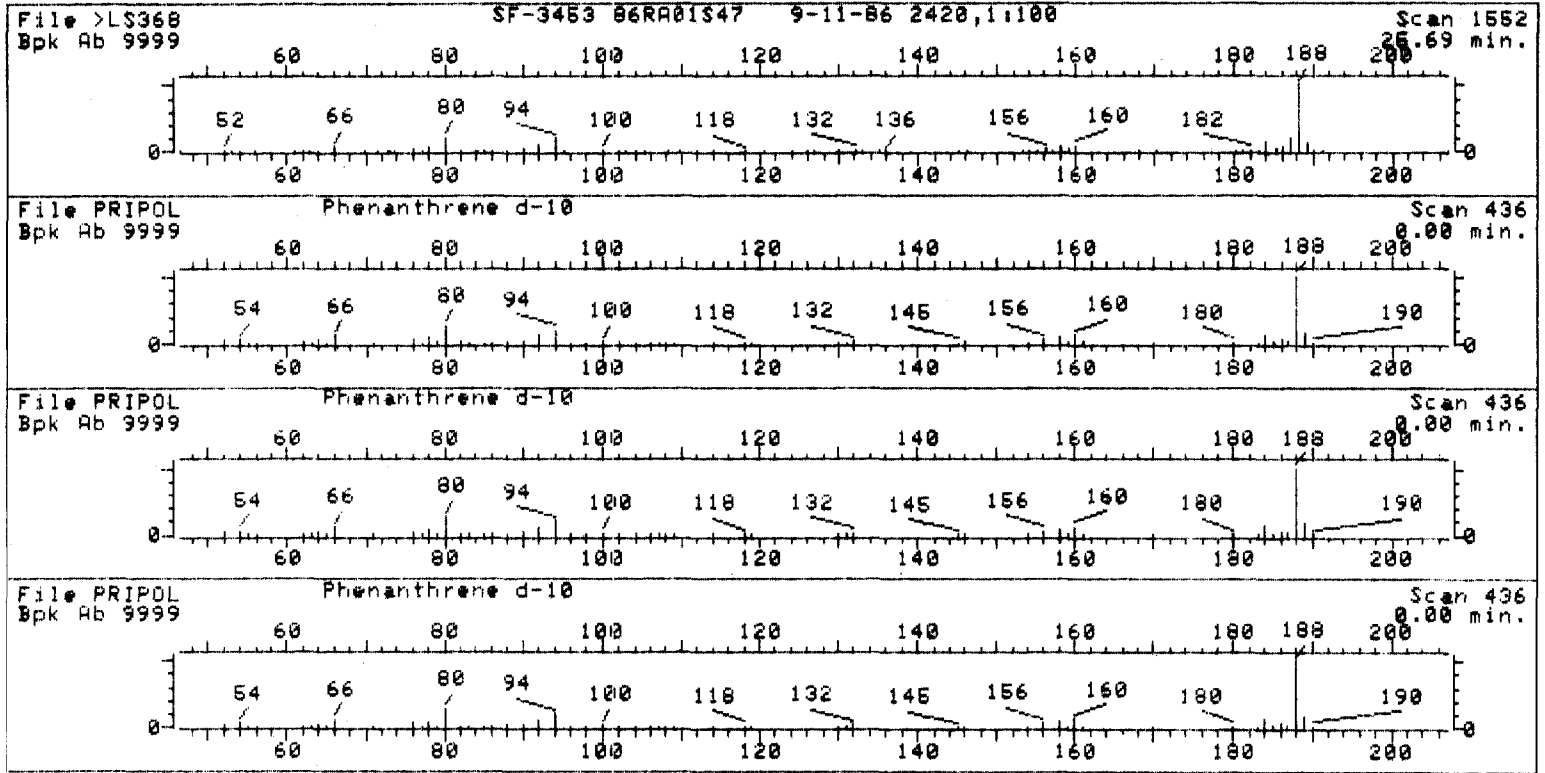
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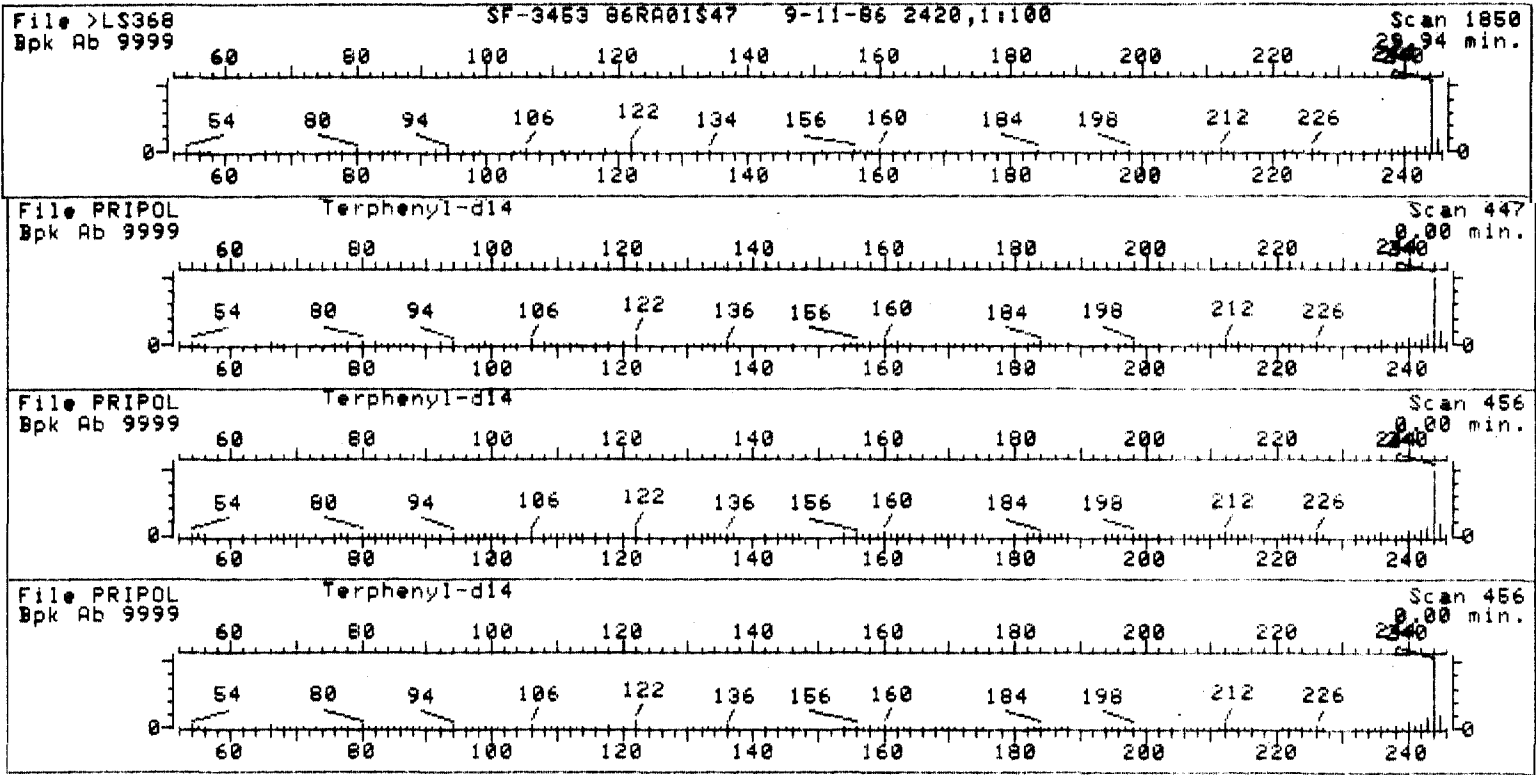
*Am*



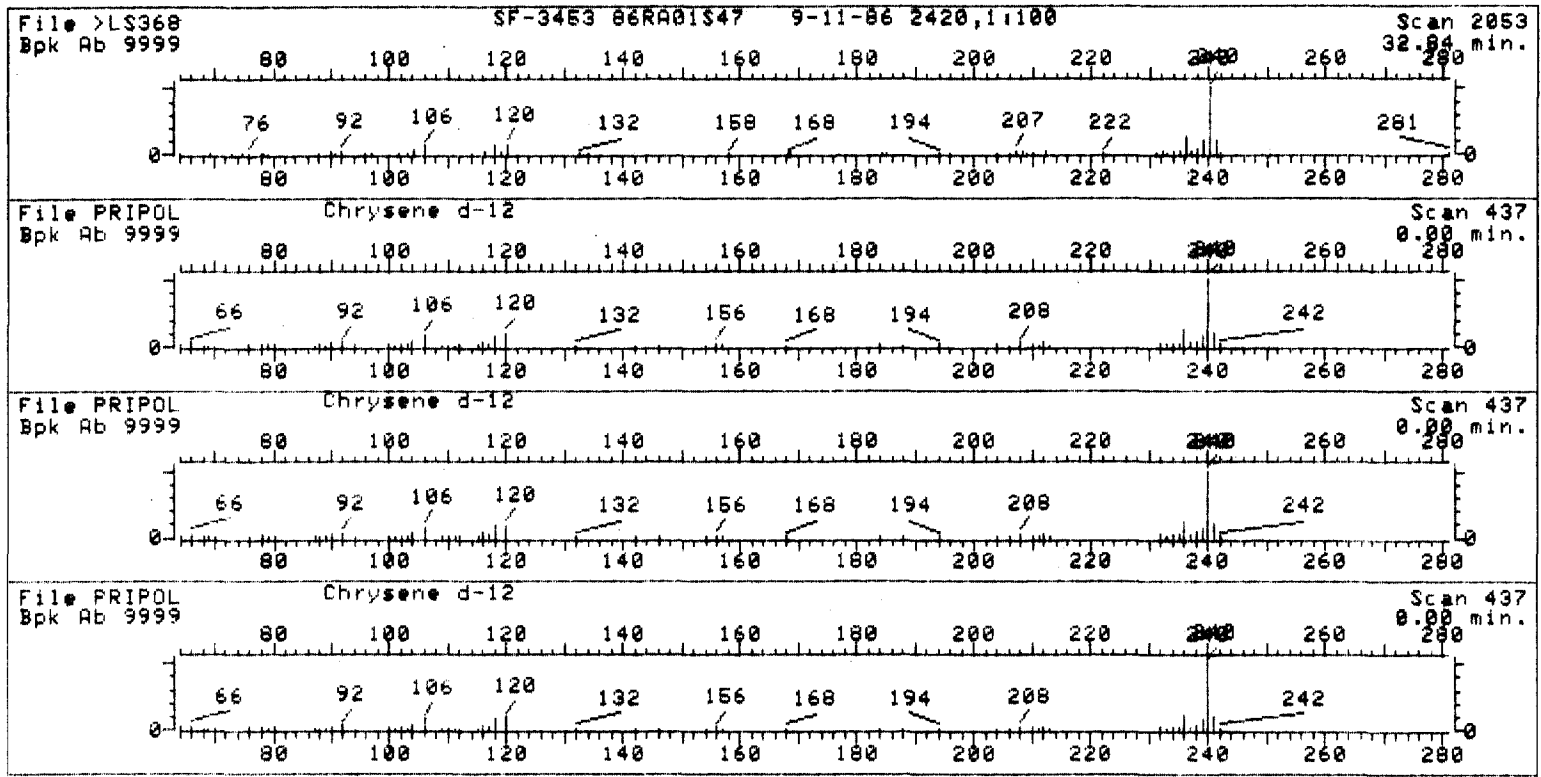
*Int*



*Am*

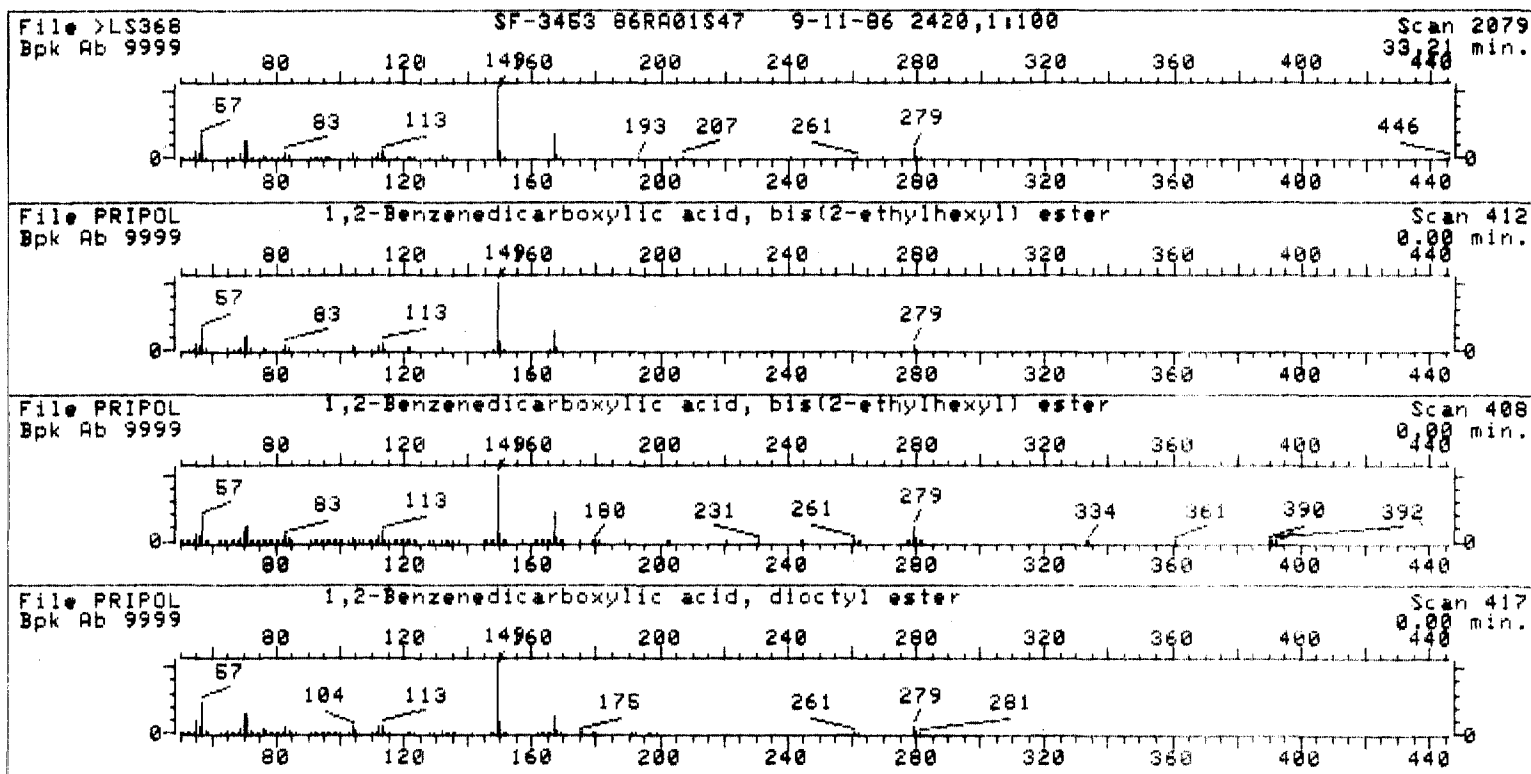


*Intd*





*Ortho*



*gpa*

