File name (sample):		Sample name:
2455_8.D		30/9-5
File path:		Operator: jkb
C:\HPCHEM\1\DATA\ARO\B3009OIL\		Method: MSD_ARO1
Misc information:		Date analyzed: 06-Apr-94

AROMATICS

Ratios based on amounts, ng/mg

Naphtalene amount (ng/mg)	Naphtalene	2440
C1 Naphtalenes amount (ng/mg)	Sum C1-Naph.	13544
C2 Naphtalenes amount (ng/mg)	Sum C2-Naph.	20008
C3 Naphtalenes amount (ng/mg)	Sum C3-Naph.	15695
Phenanthrene amount (ng/mg)	Phenanthrene	770
C1 Phenanthrenes amount (ng/mg)	Sum C1-Phen.	1700
C2 Phenanthrenes amount (ng/mg)	Sum C2-Phen.	1149
3/2*(3MP+2MP)/(P+9MP+1MP)	MPI1	0.9
(3MP+2MP)/(3MP+2MP+9MP+1MP)	F1	0.5
2MP/(3MP+2MP+9MP+1MP)	F2	0.3
(2,6+2,7)DMN/1,5DMN	DNR	4.9
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	41
DBT/P	DBT/P	0.0
F/P	F/P	0.6
BP/1,6DMN	BPH/1,6DMN	0.4
2MN/1MN	2MN/1MN	1.5
2EN/1EN	2EN/1EN	2.5
4MDBT/1MDBT	4MDBT/1MDBT	6.7

AROMATICS

File name (sample):
2455_3.D

File path:
C:\HPCHEM\1\DATA\ARO\B3009OIL\

Misc information:

Sample name:
30/9-5

Operator: jkb
Method: MSD_ARO1
Date analyzed: 06-Apr-94

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
14	14.43	136.00	d8 N	1099	87
46	32.48	188.00	d10 P	45344	87
66	47.89	240.00	d12 C	63558	87
ARYL ISOPRENOIDS					
1	21.27	133	C13 AI	1254	
2	23.92	133	C14 AI	2937	
3	26.26	133	C15 AI	7250	
4	29.36	133	C16 AI	1610	
5	32.43	133	C17 AI	3766	
6	35.04	133	C18 AI	3046	
7	35.96	133	C19 AI	1785	
8	39.24	133	C20 AI	1326	
9	40.68	133	C21 AI	382	
10	42.96	133	C22 AI	952	
11	44.85	133	C23 AI	301	
12	55.98	133	C30AI	950	
13	57.69	133	C31 AI	1198	
NAPHTALENES					
15	14.51	128	N	26093	1905
16	18.22	142	2-MN	540961	52600
17	18.78	142	1-MN	315705	30697
18	21.41	156	2-EN	93957	8105
19	21.53	156	1-EN	36662	3163
20	21.77	156	2,6+ 2,7-DMN	591070	50987
21	22.26	156	1,3+1,7-DMN	567666	48969
22	22.36	156	1,6-DMN	556096	47970
23	22.85	156	2,3+1,4-DMN	280266	24177
24	22.95	156	1,5-DMN	90913	7842
25	23.33	156	1,2-DMN	98391	8488
29	25.17	170	C3- N	41128	3815
30	25.36	170	C3-N	50050	4656
31	25.48	170	1,3,7-TMN	260542	24088
32	25.64	170	1,3,6-TMN	379659	35101
33	26.10	170	1,3,5+1,4,6-TMN	203457	18810
34	26.19	170	2,3,6-TMN	322624	29827
35	26.61	170	1,6,7+1,2,7-TMN	185920	17189
36	26.66	170	1,2,6-TMN	99444	9194
37	27.09	170	1,2,4-TMN	23264	2151
38	27.32	170	1,2,5-TMN	81430	7523
BIPHENYLS					
26	20.92	154	BP	217119	13669
27	24.23	168	3-MBP	544185	34261
28	24.49	168	4-MBP	221376	13937
39	28.25	182	C2-BP	204672	12886
40	28.63	182	C2-BP	235056	14799
41	28.94	182	C2-BP	113977	7176

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
FLUORENES					
42	27.33	166	F	54240	4415
43	30.35	180	C1-F	3655	297
44	30.42	180	C1-F	5814	473
45	30.61	180	1-MF	18352	1494
DIBENZOTHIOPHENES					
47	31.87	184	DBT	10132	5
48	34.49	198	4-MDBT	14777	8
49	34.99	198	3+2-MDBT	6022	3
50	35.41	198	1-MDBT	1932	1
PHENANTRENES					
51	32.62	178	P	449423	736
52	35.53	192	3-MP	239324	411
53	35.67	192	2-MP	271560	467
54	36.15	192	9-MP	249867	430
55	36.29	192	1-MP	175007	301
57	38.22	206	2EP+9EP+3,6-DMP	77235	121
58	38.44	206	1EP	84409	133
59	38.54	206	2,6+2,7+3,5-DMP	45821	72
60	38.89	206	1,3+2,10+3,9+3,10-DMP	209179	329
61	39.03	206	1,6+2,5+2,9-DMP	106662	168
62	39.17	206	1,7-DMP	70579	111
63	39.32	206	2,3-DMP	43280	68
64	39.43	206	1,9+4,9+4,10-DMP	52867	83
65	39.74	206	1,8-DMP	14632	23
RETENE					
56	42.98	219	Retene	40304	66
TRIAROMATIC STEROIDS					
67	47.42	231	20TA	1801	0.5
68	49.29	231	21TA	1003	0.3
69	56.10	231	S26TA	538	0.1
70	57.31	231	R26TA/S27TA	1407	0.4
71	58.30	231	S28TA	1360	0.4
72	58.79	231	R27TA	612	0.2
73	59.98	231	R28TA	3158	0.8

File name (sample):	Sample name:
2455_3.D	30/9-5
File path:	Operator: jkb
C:\HPCHEM\1\DATA\ARO\B3009OIL\	Method: MSD_ARO1
Misc information:	Date analyzed: 06-Apr-94

AROMATICS

Ratios based on amounts, ng/mg

Naphtalene amount (ng/mg)	Naphtalene	1905
C1 Naphtalenes amount (ng/mg)	Sum C1-Naph.	83297
C2 Naphtalenes amount (ng/mg)	Sum C2-Naph.	199701
C3 Naphtalenes amount (ng/mg)	Sum C3-Naph.	152354
Phenanthrene amount (ng/mg)	Phenanthrene	736
C1 Phenanthrenes amount (ng/mg)	Sum C1-Phen.	1609
C2 Phenanthrenes amount (ng/mg)	Sum C2-Phen.	1107
3/2*(3MP+2MP)/(P+9MP+1MP)	MPI1	0.9
(3MP+2MP)/(3MP+2MP+9MP+1MP)	F1	0.5
2MP/(3MP+2MP+9MP+1MP)	F2	0.3
(2,6+2,7)DMN/1,5DMN	DNR	6.5
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	29
DBT/P	DBT/P	0.0
F/P	F/P	6.0
BP/1,6DMN	BPH/1,6DMN	0.3
2MN/1MN	2MN/1MN	1.7
2EN/1EN	2EN/1EN	2.6
4MDBT/1MDBT	4MDBT/1MDBT	7.6

AROMATICS

File name (sample):
2237_A.D

File path:
C:\HPCHEM\1\DATA\SAT\SATGNAR\

Misc information:

Sample name:

Operator: JORUNN
Method: MSD_ARO1
Date analyzed: 25-Apr-94

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
14	14.53	136.00	d8 N	8	384
46	32.51	188.00	d10 P	42937	384
66	47.94	240.00	d12 C	57943	384
ARYL ISOPRENOIDS					
1	21.58	133	C13 AI	42	
2	23.54	133	C14 AI	99	
3	26.80	133	C15 AI	353	
4	29.33	133	C16 AI	776	
5	31.98	133	C17 AI	684	
6	34.52	133	C18 AI	3287	
7	36.02	133	C19 AI	2900	
8	38.65	133	C20 AI	2518	
9	40.71	133	C21 AI	208	
10	42.74	133	C22 AI	484	
11	44.87	133	C23 AI	187	
12	56.05	133	C30AI	52	
13	57.94	133	C31 AI	35	
NAPHTALENES					
15	14.64	128	N	6	266
16	18.27	142	2-MN	44	2595
17	18.83	142	1-MN	63	3716
18	21.46	156	2-EN	207	10832
19	21.58	156	1-EN	103	5390
20	21.81	156	2,6+ 2,7-DMN	1614	84459
21	22.28	156	1,3+1,7-DMN	2597	135899
22	22.38	156	1,6-DMN	2416	126427
23	22.88	156	2,3+1,4-DMN	1438	75249
24	23.00	156	1,5-DMN	699	36578
25	23.38	156	1,2-DMN	772	40398
29	25.22	170	C3- N	510	28700
30	25.41	170	C3-N	737	41589
31	25.51	170	1,3,7-TMN	2837	159110
32	25.65	170	1,3,6-TMN	5510	309023
33	26.14	170	1,3,5+1,4,6-TMN	4205	235834
34	26.23	170	2,3,6-TMN	4420	247892
35	26.64	170	1,6,7+1,2,7-TMN	3440	192929
36	26.71	170	1,2,6-TMN	2175	121983
37	27.14	170	1,2,4-TMN	635	35613
38	27.35	170	1,2,5-TMN	3530	197832
BIPHENYLS					
26	20.99	154	BP	546	20853
27	24.27	168	3-MBP	5451	208185
28	24.54	168	4-MBP	2096	80051
39	28.30	182	C2-BP	5862	223882
40	28.67	182	C2-BP	5614	214410
41	28.98	182	C2-BP	3676	140394

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
FLUORENES					
42	27.20	166	F	920	45432
43	30.40	180	C1-F	593	29241
44	30.47	180	C1-F	657	32445
45	30.64	180	1-MF	3088	152495
DIBENZOTHIOPHENES					
47	31.92	184	DBT	6511	16
48	34.52	198	4-MDBT	13492	34
49	35.04	198	3+2-MDBT	4126	10
50	35.63	198	1-MDBT	3795	9
PHENANTRENES					
51	32.63	178	P	51265	391
52	35.56	192	3-MP	28921	232
53	35.70	192	2-MP	42088	337
54	36.19	192	9-MP	44100	354
55	36.31	192	1-MP	36344	291
57	38.25	206	2EP+9EP+3,6-DMP	9161	67
58	38.48	206	1EP	11253	82
59	38.58	206	2,6+2,7+3,5-DMP	6623	49
60	38.91	206	1,3+2,10+3,9+3,10-DMP	35682	261
61	39.07	206	1,6+2,5+2,9-DMP	19464	143
62	39.20	206	1,7-DMP	21746	159
63	39.36	206	2,3-DMP	6494	48
64	39.46	206	1,9+4,9+4,10-DMP	10369	76
65	39.78	206	1,8-DMP	5636	41
RETENE					
56	43.02	219	Retene	10637	81
TRIAROMATIC STEROIDS					
67	47.47	231	20TA	2295	2.9
68	49.34	231	21TA	1007	1.3
69	56.17	231	S26TA	325	0.4
70	57.37	231	R26TA/S27TA	1306	1.6
71	58.35	231	S28TA	557	0.7
72	58.84	231	R27TA	698	0.9
73	60.03	231	R28TA	2145	2.7

File name (sample):		Sample name:	
2237_A.D			
File path:		Operator:	JORUNN
C:\HPCHEM\1\DATA\SAT\SATGNAR\		Method:	MSD_ARO1
Misc information:		Date analyzed:	25-Apr-94

AROMATICS

Ratios based on amounts, ng/mg

Naphtalene amount (ng/mg)	Naphtalene	266
C1 Naphtalenes amount (ng/mg)	Sum C1-Naph.	6311
C2 Naphtalenes amount (ng/mg)	Sum C2-Naph.	515233
C3 Naphtalenes amount (ng/mg)	Sum C3-Naph.	1570506
Phenanthrene amount (ng/mg)	Phenanthrene	391
C1 Phenanthrenes amount (ng/mg)	Sum C1-Phen.	1214
C2 Phenanthrenes amount (ng/mg)	Sum C2-Phen.	926
3/2*(3MP+2MP)/(P+9MP+1MP)	MPI1	0.8
(3MP+2MP)/(3MP+2MP+9MP+1MP)	F1	0.5
2MP/(3MP+2MP+9MP+1MP)	F2	0.3
(2,6+2,7)DMN/1,5DMN	DNR	2.3
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	46
DBT/P	DBT/P	0.0
F/P	F/P	116.1
BP/1,6DMN	BPH/1,6DMN	0.2
2MN/1MN	2MN/1MN	0.7
2EN/1EN	2EN/1EN	2.0
4MDBT/1MDBT	4MDBT/1MDBT	3.6

AROMATICS

File name (sample):
BIOM_B1.D

File path:
C:\HPCHEM\1\DATA\ARO\B3009OIL\

Misc information:

Sample name:

Operator: jkb
Method: MSD_ARO1
Date analyzed: 06-Apr-94

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
14	14.43	136.00	d8 N	935	21
46	32.46	188.00	d10 P	7204	21
66	47.87	240.00	d12 C	6224	21
ARYL ISOPRENOIDS					
1	21.53	133	C13 AI	5547	
2	23.57	133	C14 AI	2325	
3	26.87	133	C15 AI	3609	
4	29.38	133	C16 AI	706	
5	31.92	133	C17 AI	802	
6	35.03	133	C18 AI	2962	
7	35.96	133	C19 AI	1989	
8	38.58	133	C20 AI	1562	
9	40.57	133	C21 AI	802	
10	42.70	133	C22 AI	271	
11	44.84	133	C23 AI	279	
12	56.10	133	C30AI	206	
13	57.76	133	C31 AI	300	
NAPHTALENES					
15	14.51	128	N	42925	896
16	18.20	142	2-MN	134602	3740
17	18.76	142	1-MN	113983	3167
18	21.41	156	2-EN	20974	517
19	21.53	156	1-EN	10117	249
20	21.74	156	2,6+ 2,7-DMN	98725	2433
21	22.22	156	1,3+1,7-DMN	151883	3744
22	22.33	156	1,6-DMN	117772	2903
23	22.83	156	2,3+1,4-DMN	53639	1322
24	22.95	156	1,5-DMN	30923	762
25	23.31	156	1,2-DMN	24690	609
29	25.15	170	C3- N	11004	292
30	25.34	170	C3-N	12906	343
31	25.46	170	1,3,7-TMN	47488	1255
32	25.60	170	1,3,6-TMN	77284	2042
33	26.09	170	1,3,5+1,4,6-TMN	68944	1821
34	26.16	170	2,3,6-TMN	46354	1225
35	26.59	170	1,6,7+1,2,7-TMN	39208	1036
36	26.64	170	1,2,6-TMN	25426	672
37	27.09	170	1,2,4-TMN	8642	228
38	27.30	170	1,2,5-TMN	27338	722
BIPHENYLS					
26	20.92	154	BP	56380	1014
27	24.22	168	3-MBP	62792	1130
28	24.48	168	4-MBP	23739	427
39	28.23	182	C2-BP	21648	389
40	28.62	182	C2-BP	13578	244
41	28.93	182	C2-BP	11057	199

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
FLUORENES					
42	27.14	166	F	22730	529
43	30.35	180	C1-F	10021	233
44	30.40	180	C1-F	9944	231
45	30.59	180	1-MF	36789	856
DIBENZOTHIOPHENES					
47	31.86	184	DBT	16010	13
48	34.47	198	4-MDBT	22794	19
49	34.98	198	3+2-MDBT	7303	6
50	35.56	198	1-MDBT	7252	6
PHENANTRENES					
51	32.58	178	P	90050	226
52	35.50	192	3-MP	40488	107
53	35.63	192	2-MP	41160	108
54	36.12	192	9-MP	59313	156
55	36.26	192	1-MP	48582	128
57	38.20	206	2EP+9EP+3,6-DMP	10903	26
58	38.42	206	1EP	10295	25
59	38.51	206	2,6+2,7+3,5-DMP	6364	15
60	38.86	206	1,3+2,10+3,9+3,10-DMP	52665	127
61	39.00	206	1,6+2,5+2,9-DMP	24609	59
62	39.15	206	1,7-DMP	26448	64
63	39.29	206	2,3-DMP	7429	18
64	39.41	206	1,9+4,9+4,10-DMP	15543	37
65	39.72	206	1,8-DMP	6290	15
RETENE					
56	42.96	219	Retene	29770	75
TRIAROMATIC STEROIDS					
67	47.44	231	20TA	4331	2.8
68	49.27	231	21TA	5247	3.4
69	56.12	231	S26TA	5150	3.3
70	57.31	231	R26TA/S27TA	14806	9.6
71	58.30	231	S28TA	7652	5.0
72	58.79	231	R27TA	7301	4.7
73	60.00	231	R28TA	8511	5.5

File name (sample):	Sample name:
BIOM_B1.D	
File path:	Operator: jkb
C:\HPCHEM\1\DATA\ARO\B3009OIL\	Method: MSD_ARO1
Misc information:	Date analyzed: 06-Apr-94

AROMATICS

Ratios based on amounts, ng/mg

Naphtalene amount (ng/mg)	Naphtalene	896
C1 Naphtalenes amount (ng/mg)	Sum C1-Naph.	6907
C2 Naphtalenes amount (ng/mg)	Sum C2-Naph.	12539
C3 Naphtalenes amount (ng/mg)	Sum C3-Naph.	9634
Phenanthrene amount (ng/mg)	Phenanthrene	226
C1 Phenanthrenes amount (ng/mg)	Sum C1-Phen.	499
C2 Phenanthrenes amount (ng/mg)	Sum C2-Phen.	386
3/2*(3MP+2MP)/(P+9MP+1MP)	MPI1	0.6
(3MP+2MP)/(3MP+2MP+9MP+1MP)	F1	0.4
2MP/(3MP+2MP+9MP+1MP)	F2	0.2
(2,6+2,7)DMN/1,5DMN	DNR	3.2
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	21
DBT/P	DBT/P	0.1
F/P	F/P	2.3
BP/1,6DMN	BPH/1,6DMN	0.3
2MN/1MN	2MN/1MN	1.2
2EN/1EN	2EN/1EN	2.1
4MDBT/1MDBT	4MDBT/1MDBT	3.1

Appendix II

Mass chromatograms of biomarkers and summary sheets, saturated hydrocarbons

SATURATE BIOMARKERS

File name (sample):
2471.D
File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\
Misc information:
Sample name:
30/9-15,11
Operator:
jkb
Method:
MSD_S_C
Date analyzed:
########

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
4	46.18	217.00	24baa	1511	21
DITERPANES:					
5	33.96	191.00	19/3	517	6
6	35.92	191.00	20/3	220	3
7	37.93	191.00	21/3	149	2
11	41.86	191.00	23/3	217	2
13	42.97	191.00	24/3	116	1
14	45.27	191.00	25/3	51	1
16	46.87	191.00	26/3R	55	1
17	46.98	191.00	26/3S	62	1
20	50.48	191.00	28/3R	63	1
21	50.71	191.00	28/3S	74	1
23	51.48	191.00	29/3R	102	1
25	51.75	191.00	29/3S	58	1
15	46.74	191.00	24/4	226	3
TRITERPANES:					
26	52.61	191.00	27Ts	399	5
28	52.93	177.00	25nor28ab	51	1
29	53.29	191.00	27Tm	312	4
33	53.79	191.00	27b	322	4
32	53.62	177.00	25nor29ab	30	0
34	54.84	191.00	28ab	35	0
36	55.11	177.00	25nor30ab	28	0
39	55.52	191.00	29ab	587	7
40	55.63	191.00	29Ts	303	3
43	56.32	191.00	29ba	97	1
42	55.88	191.00	30D	577	7
46	56.89	191.00	30ab	1060	8
47	57.23	191.00	30D13	140	2
48	57.50	191.00	30ba	182	1
51	58.93	191.00	30G	95	1
49	58.44	191.00	31abS	489	6
50	58.63	191.00	31abR	358	4
52	59.16	191.00	31ba	101	1
53	59.66	191.00	32abS	301	3
54	59.93	191.00	32abR	234	3
55	61.09	191.00	33abS	149	2
56	61.45	191.00	33abR	100	1
57	62.57	191.00	34abS	99	1
58	63.04	191.00	34abR	62	1
59	64.25	191.00	35abS	36	0
60	64.89	191.00	35abR	29	0

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
STERANES:					ng/mg
8	38.44	217.00	21aa	185	3
9	40.09	217.00	21bb	155	2
10	40.20	217.00	22aa	183	3
12	42.41	217.00	22bb	73	1
18	48.66	217.00	27dbS	540	8
19	49.30	217.00	27dbR	264	4
22	51.61	218.00	27bbR	321	5
24	51.77	218.00	27bbS	118	2
27	52.18	217.00	27aaR	68	1
30	53.34	218.00	28bbR	76	1
31	53.48	218.00	28bbS	137	2
35	54.44	217.00	29aaS	117	2
37	54.75	218.00	29bbR	244	4
38	54.84	218.00	29bbS	223	3
41	55.44	217.00	29aaR	139	2
44	55.91	218.00	30bbR	29	0
45	55.93	218.00	30bbS	32	0

TERPANE ratios

100*(20/3+21/3+23/3+24/3+25/3+26/3(R+S)) (191)	%Tri	17
((20+21+23+24+25)/3+26/3(R+S)+27(Ts+Tm)+ 28ab+SUM 29-30(ab+ba)+SUM 31-35ab(S+R)) (191)		
100*20/3 (191)	%20/3	25
20/3+21/3+23/3+24/3+25/3+26/3(R+S) (191)		
100*23/3 (191)	%23/3	57
23/3+24/3+25/3 (191)		
100*24/4 (191)	%24/4	58
24/4+24/3+25/3 (191)		
100*27Ts (191)	%27Ts	56
27Ts+27Tm (191)		
100*28ab (191)	%28ab	5
28ab+30ab (191)		
100*29Ts (191)	%29Ts	34
29Ts+29ab (191)		
100*25nor30ab (191)	%25nor30ab	4
25nor30ab+30ab (191)		
100*29ab (191)	%29ab	44
29ab+30ab (191)		
100*30ba (191)	%30ba	15
30ba+30ab (191)		
100*30D (191)	%30D	44
30D+30ab (191)		
100*30G (191)	%30G	11
30G+30ab (191)		
100*32abS (191)	%32abS	56
32abS+32abR (191)		
100*35ab(S+R) (191)	%35ab	29
SUM 34-35ab(S+R) (191)		
100*(27Ts+27Tm) (191)	%27HOP	17
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*28ab (191)	%28HOP	1
27(Ts+Tm)+28ab+SUM29-30(ab+ba)SUM 31-35ab(S+R)(191)		
100*(29ab+29ba) (191)	%29HOP	16
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(30ab+30ba) (191)	%30HOP	20
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(31ab(S+R)) (191)	%31HOP	20
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(32ab(S+R)) (191)	%32HOP	13
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(33ab(S+R)) (191)	%33HOP	6
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(34ab(S+R)) (191)	%34HOP	4
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(35ab(S+R)) (191)	%35HOP	2
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		

SATURATE BIOMARKERS

File name (sample):
2471.D

File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\

Misc information:

Sample name:
30/9-15,11

Operator:
jkb

Method:
MSD_S_C

Date analyzed:
06-Apr-94

STERANE ratios

100*(21+22)bb (217)	%Preg	16
(21+22)bb (217) + (27+28+29+30)bb(S+R) (218)		
100*29aaS (217)	%29aaS	46
(29aa(S+R) (217)		
100*29bb(S+R) (218)	%29bb	65
(29bb(S+R) (218) + 29aa(S+R) (217))		
100*27db(S+R) (217)	%27dia	65
27ds(S+R) (217) + 27bb(R+S) (218)		
100*27bb(S+R) (218)	%27STER	37
(27+28+29+30)bb(S+R) (218)		
100*28bb(S+R) (218)	%28STER	18
(27+28+29+30)bb(S+R) (218)		
100*29bb(S+R) (218)	%29STER	40
(27+28+29+30)bb(S+R) (218)		
100*30bb(S+R) (218)	%30STER	5
(27+28+29+30)bb(S+R) (218)		

TERPANE-STERANE ratio

27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)	Ho/St2	2.9
(27+28+29+30)bb(S+R) (218)		

SATURATE BIOMARKERS

File name (sample):
2465_5.D
File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\
Misc information:
Sample name:
30/9-15,13
Operator:
jkb
Method:
MSD_S_C
Date analyzed:
########

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
4	46.18	217.00	24baa	1672	21
DITERPANES:					
5	33.96	191.00	19/3	592	6
6	35.92	191.00	20/3	262	3
7	37.95	191.00	21/3	179	2
11	41.87	191.00	23/3	229	2
13	42.99	191.00	24/3	178	2
14	45.28	191.00	25/3	45	0
16	46.87	191.00	26/3R	77	1
17	46.99	191.00	26/3S	75	1
20	50.48	191.00	28/3R	57	1
21	50.70	191.00	28/3S	46	0
23	51.50	191.00	29/3R	135	1
25	51.78	191.00	29/3S	57	1
15	46.74	191.00	24/4	291	3
TRITERPANES:					
26	52.63	191.00	27Ts	427	4
28	52.93	177.00	25nor28ab	49	0
29	53.29	191.00	27Tm	464	5
33	53.81	191.00	27b	305	3
32	53.64	177.00	25nor29ab	41	0
34	54.84	191.00	28ab	111	1
36	55.11	177.00	25nor30ab	21	0
39	55.52	191.00	29ab	734	7
40	55.63	191.00	29Ts	385	4
43	56.30	191.00	29ba	113	1
42	55.88	191.00	30D	649	7
46	56.89	191.00	30ab	1457	10
47	57.23	191.00	30D13	184	2
48	57.50	191.00	30ba	246	2
51	58.97	191.00	30G	86	1
49	58.46	191.00	31abS	603	6
50	58.64	191.00	31abR	466	5
52	59.18	191.00	31ba	135	1
53	59.66	191.00	32abS	382	4
54	59.95	191.00	32abR	268	3
55	61.09	191.00	33abS	188	2
56	61.45	191.00	33abR	131	1
57	62.59	191.00	34abS	130	1
58	63.06	191.00	34abR	75	1
59	64.25	191.00	35abS	46	0
60	64.91	191.00	35abR	36	0

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
STERANES:					ng/mg
8	38.44	217.00	21aa	215	2
9	40.08	217.00	21bb	199	3
10	40.21	217.00	22aa	194	2
12	42.42	217.00	22bb	99	1
18	48.67	217.00	27dbS	645	8
19	49.30	217.00	27dbR	351	4
22	51.63	218.00	27bbR	346	4
24	51.77	218.00	27bbS	121	2
27	52.16	217.00	27aaR	90	1
30	53.34	218.00	28bbR	76	1
31	53.48	218.00	28bbS	182	2
35	54.45	217.00	29aaS	146	2
37	54.75	218.00	29bbR	307	4
38	54.86	218.00	29bbS	295	4
41	55.46	217.00	29aaR	193	2
44	55.91	218.00	30bbR	36	0
45	55.97	218.00	30bbS	29	0

TERPANE ratios		
100*(20/3+21/3+23/3+24/3+25/3+26/3(R+S)) (191)	%Tri	16
((20+21+23+24+25)/3+26/3(R+S)+27(Ts+Tm)+ 28ab+SUM 29-30(ab+ba)+SUM 31-35ab(S+R)) (191)		
100*20/3 (191)	%20/3	25
20/3+21/3+23/3+24/3+25/3+26/3(R+S) (191)		
100*23/3 (191)	%23/3	51
23/3+24/3+25/3 (191)		
100*24/4 (191)	%24/4	57
24/4+24/3+25/3 (191)		
100*27Ts (191)	%27Ts	48
27Ts+27Tm (191)		
100*28ab (191)	%28ab	10
28ab+30ab (191)		
100*29Ts (191)	%29Ts	34
29Ts+29ab (191)		
100*25nor30ab (191)	%25nor30ab	2
25nor30ab+30ab (191)		
100*29ab (191)	%29ab	42
29ab+30ab (191)		
100*30ba (191)	%30ba	14
30ba+30ab (191)		
100*30D (191)	%30D	39
30D+30ab (191)		
100*30G (191)	%30G	8
30G+30ab (191)		
100*32abS (191)	%32abS	59
32abS+32abR (191)		
100*35ab(S+R) (191)	%35ab	29
SUM 34-35ab(S+R) (191)		
100*(27Ts+27Tm) (191)	%27HOP	16
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*28ab (191)	%28HOP	2
27(Ts+Tm)+28ab+SUM29-30(ab+ba)SUM 31-35ab(S+R)(191)		
100*(29ab+29ba) (191)	%29HOP	15
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(30ab+30ba) (191)	%30HOP	22
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(31ab(S+R)) (191)	%31HOP	19
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(32ab(S+R)) (191)	%32HOP	12
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(33ab(S+R)) (191)	%33HOP	6
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(34ab(S+R)) (191)	%34HOP	4
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(35ab(S+R)) (191)	%35HOP	1
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		

SATURATE BIOMARKERS

File name (sample):
2465_5.D
File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\
Misc information:
Sample name:
30/9-15,13
Operator:
jkb
Method:
MSD_S_C
Date analyzed:
06-Apr-94

STERANE ratios		
100*(21+22)bb (217)	%Preg	18
(21+22)bb (217) + (27+28+29+30)bb(S+R) (218)		
100*29aaS (217)	%29aaS	43
(29aa(S+R) (217)		
100*29bb(S+R) (218)	%29bb	64
(29bb(S+R) (218) + 29aa(S+R) (217))		
100*27db(S+R) (217)	%27dia	68
27ds(S+R) (217) + 27bb(R+S) (218)		
100*27bb(S+R) (218)	%27STER	34
(27+28+29+30)bb(S+R) (218)		
100*28bb(S+R) (218)	%28STER	19
(27+28+29+30)bb(S+R) (218)		
100*29bb(S+R) (218)	%29STER	43
(27+28+29+30)bb(S+R) (218)		
100*30bb(S+R) (218)	%30STER	5
(27+28+29+30)bb(S+R) (218)		

TERPANE-STERANE ratio		
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)	Ho/St2	3.1
(27+28+29+30)bb(S+R) (218)		

SATURATE BIOMARKERS

File name (sample):
2263_5.D
File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\
Misc information:
Sample name:
30/9-15, mdt
Operator:
jkb
Method:
MSD_S_C
Date analyzed:
########

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
4	46.21	217.00	24baa	4725	22
DITERPANES:					
5	34.01	191.00	19/3	1907	7
6	35.97	191.00	20/3	1241	5
7	37.98	191.00	21/3	1626	6
11	41.91	191.00	23/3	2631	10
13	43.02	191.00	24/3	2085	8
14	45.27	191.00	25/3	1145	4
16	46.88	191.00	26/3R	846	3
17	47.02	191.00	26/3S	874	3
20	50.53	191.00	28/3R	937	4
21	50.75	191.00	28/3S	880	3
23	51.53	191.00	29/3R	1361	5
25	51.83	191.00	29/3S	1180	5
15	46.79	191.00	24/4	2133	8
TRITERPANES:					
26	52.66	191.00	27Ts	6589	25
28	52.90	177.00	25nor28ab	3811	15
29	53.34	191.00	27Tm	5912	23
33	53.81	191.00	27b	1248	5
32	53.70	177.00	25nor29ab	2016	8
34	54.88	191.00	28ab	8192	32
36	55.10	177.00	25nor30ab	1872	7
39	55.57	191.00	29ab	16521	64
40	55.68	191.00	29Ts	6506	25
43	56.35	191.00	29ba	3057	12
42	55.91	191.00	30D	4087	16
46	56.93	191.00	30ab	38635	103
47	57.26	191.00	30D13	2481	10
48	57.54	191.00	30ba	3717	10
51	59.02	191.00	30G	2165	8
49	58.50	191.00	31abS	15132	58
50	58.69	191.00	31abR	11441	44
52	59.21	191.00	31ba	1643	6
53	59.71	191.00	32abS	10171	39
54	59.98	191.00	32abR	7262	28
55	61.14	191.00	33abS	8733	34
56	61.50	191.00	33abR	5982	23
57	62.62	191.00	34abS	5461	21
58	63.10	191.00	34abR	3334	13
59	64.30	191.00	35abS	4029	15
60	64.97	191.00	35abR	2753	11

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
STERANES:					ng/mg
8	38.48	217.00	21aa	3563	14
9	40.13	217.00	21bb	4206	20
10	40.24	217.00	22aa	2995	14
12	42.46	217.00	22bb	2776	13
18	48.70	217.00	27dbS	9626	46
19	49.33	217.00	27dbR	5600	27
22	51.66	218.00	27bbR	8116	39
24	51.81	218.00	27bbS	5358	26
27	52.21	217.00	27aaR	2920	14
30	53.38	218.00	28bbR	4343	21
31	53.53	218.00	28bbS	5636	27
35	54.50	217.00	29aaS	3645	18
37	54.80	218.00	29bbR	7184	35
38	54.91	218.00	29bbS	6808	33
41	55.49	217.00	29aaR	4003	19
44	55.96	218.00	30bbR	2398	12
45	55.99	218.00	30bbS	2157	10

TERPANE ratios		
100*(20/3+21/3+23/3+24/3+25/3+26/3(R+S)) (191)	%Tri	7
((20+21+23+24+25)/3+26/3(R+S)+27(Ts+Tm)+ 28ab+SUM 29-30(ab+ba)+SUM 31-35ab(S+R)) (191)		
100*20/3 (191)	%20/3	12
20/3+21/3+23/3+24/3+25/3+26/3(R+S) (191)		
100*23/3 (191)	%23/3	45
23/3+24/3+25/3 (191)		
100*24/4 (191)	%24/4	40
24/4+24/3+25/3 (191)		
100*27Ts (191)	%27Ts	53
27Ts+27Tm (191)		
100*28ab (191)	%28ab	23
28ab+30ab (191)		
100*29Ts (191)	%29Ts	28
29Ts+29ab (191)		
100*25nor30ab (191)	%25nor30ab	7
25nor30ab+30ab (191)		
100*29ab (191)	%29ab	38
29ab+30ab (191)		
100*30ba (191)	%30ba	9
30ba+30ab (191)		
100*30D (191)	%30D	13
30D+30ab (191)		
100*30G (191)	%30G	7
30G+30ab (191)		
100*32abS (191)	%32abS	58
32abS+32abR (191)		
100*35ab(S+R) (191)	%35ab	44
SUM 34-35ab(S+R) (191)		
100*(27Ts+27Tm) (191)	%27HOP	9
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*28ab (191)	%28HOP	6
27(Ts+Tm)+28ab+SUM29-30(ab+ba)SUM 31-35ab(S+R)(191)		
100*(29ab+29ba) (191)	%29HOP	13
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(30ab+30ba) (191)	%30HOP	20
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(31ab(S+R)) (191)	%31HOP	18
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(32ab(S+R)) (191)	%32HOP	12
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(33ab(S+R)) (191)	%33HOP	10
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(34ab(S+R)) (191)	%34HOP	6
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(35ab(S+R)) (191)	%35HOP	5
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		

SATURATE BIOMARKERS

File name (sample):
2263_5.D

File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\

Misc information:

Sample name:
30/9-15, mdt

Operator:
jkb

Method:
MSD_S_C

Date analyzed:
06-Apr-94

STERANE ratios		
100*(21+22)bb (217)	%Preg	14
(21+22)bb (217) + (27+28+29+30)bb(S+R) (218)		
100*29aaS (217)	%29aaS	48
(29aa(S+R) (217)		
100*29bb(S+R) (218)	%29bb	65
(29bb(S+R) (218) + 29aa(S+R) (217))		
100*27db(S+R) (217)	%27dia	53
27ds(S+R) (217) + 27bb(R+S) (218)		
100*27bb(S+R) (218)	%27STER	32
(27+28+29+30)bb(S+R) (218)		
100*28bb(S+R) (218)	%28STER	24
(27+28+29+30)bb(S+R) (218)		
100*29bb(S+R) (218)	%29STER	33
(27+28+29+30)bb(S+R) (218)		
100*30bb(S+R) (218)	%30STER	11
(27+28+29+30)bb(S+R) (218)		

TERPANE-STERANE ratio		
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)	Ho/St2	2.8
(27+28+29+30)bb(S+R) (218)		

SATURATE BIOMARKERS

File name (sample):
2568_75.D
File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\
Misc information:
Sample name:
30/9-11a
Operator:
jkb
Method:
MSD_S_C
Date analyzed:
########

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
4	46.27	217.00	24baa	3526	15
DITERPANES:					
5	34.06	191.00	19/3	1817	7
6	36.00	191.00	20/3	1397	5
7	38.03	191.00	21/3	1878	7
11	41.97	191.00	23/3	3254	12
13	43.08	191.00	24/3	3293	12
14	45.33	191.00	25/3	1838	7
16	46.95	191.00	26/3R	1207	4
17	47.09	191.00	26/3S	1277	5
20	50.57	191.00	28/3R	1521	5
21	50.81	191.00	28/3S	1451	5
23	51.61	191.00	29/3R	2287	8
25	51.89	191.00	29/3S	2044	7
15	46.84	191.00	24/4	2563	9
TRITERPANES:					
26	52.72	191.00	27Ts	8175	29
28	52.96	177.00	25nor28ab	2397	9
29	53.40	191.00	27Tm	9273	33
33	53.87	191.00	27b	2524	9
32	53.75	177.00	25nor29ab	599	2
34	54.95	191.00	28ab	14645	52
36	54.95	177.00	25nor30ab	2858	10
39	55.64	191.00	29ab	30373	109
40	55.74	191.00	29Ts	9968	36
43	56.43	191.00	29ba	6016	22
42	55.99	191.00	30D	5654	20
46	57.01	191.00	30ab	68871	172
47	57.32	191.00	30D13	3681	13
48	57.61	191.00	30ba	6748	17
51	59.07	191.00	30G	3362	12
49	58.55	191.00	31abS	31469	113
50	58.74	191.00	31abR	23634	85
52	59.27	191.00	31ba	4074	15
53	59.77	191.00	32abS	19491	70
54	60.04	191.00	32abR	14363	51
55	61.19	191.00	33abS	15620	56
56	61.55	191.00	33abR	10874	39
57	62.68	191.00	34abS	8719	31
58	63.15	191.00	34abR	5443	19
59	64.36	191.00	35abS	6859	25
60	65.03	191.00	35abR	4279	15

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
STERANES:					ng/mg
8	38.53	217.00	21aa	3928	15
9	40.18	217.00	21bb	4819	22
10	40.30	217.00	22aa	3313	15
12	42.52	217.00	22bb	3393	15
18	48.77	217.00	27dbS	16258	73
19	49.40	217.00	27dbR	9601	43
22	51.74	218.00	27bbR	25176	113
24	51.88	218.00	27bbS	20328	91
27	52.27	217.00	27aaR	12143	54
30	53.46	218.00	28bbR	17677	79
31	53.59	218.00	28bbS	19024	85
35	54.56	217.00	29aaS	11413	51
37	54.58	218.00	29bbR	7431	33
38	54.88	218.00	29bbS	23987	108
41	55.57	217.00	29aaR	13766	61
44	56.02	218.00	30bbR	7419	33
45	56.07	218.00	30bbS	6995	31

TERPANE ratios

100*(20/3+21/3+23/3+24/3+25/3+26/3(R+S)) (191)	%Tri	5
((20+21+23+24+25)/3+26/3(R+S)+27(Ts+Tm)+ 28ab+SUM 29-30(ab+ba)+SUM 31-35ab(S+R)) (191)		
100*20/3 (191)	%20/3	10
20/3+21/3+23/3+24/3+25/3+26/3(R+S) (191)		
100*23/3 (191)	%23/3	39
23/3+24/3+25/3 (191)		
100*24/4 (191)	%24/4	33
24/4+24/3+25/3 (191)		
100*27Ts (191)	%27Ts	47
27Ts+27Tm (191)		
100*28ab (191)	%28ab	23
28ab+30ab (191)		
100*29Ts (191)	%29Ts	25
29Ts+29ab (191)		
100*25nor30ab (191)	%25nor30ab	6
25nor30ab+30ab (191)		
100*29ab (191)	%29ab	39
29ab+30ab (191)		
100*30ba (191)	%30ba	9
30ba+30ab (191)		
100*30D (191)	%30D	11
30D+30ab (191)		
100*30G (191)	%30G	7
30G+30ab (191)		
100*32abS (191)	%32abS	58
32abS+32abR (191)		
100*35ab(S+R) (191)	%35ab	44
SUM 34-35ab(S+R) (191)		
100*(27Ts+27Tm) (191)	%27HOP	7
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*28ab (191)	%28HOP	6
27(Ts+Tm)+28ab+SUM29-30(ab+ba)SUM 31-35ab(S+R)(191)		
100*(29ab+29ba) (191)	%29HOP	14
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(30ab+30ba) (191)	%30HOP	20
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(31ab(S+R)) (191)	%31HOP	21
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(32ab(S+R)) (191)	%32HOP	13
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(33ab(S+R)) (191)	%33HOP	10
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(34ab(S+R)) (191)	%34HOP	5
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		
100*(35ab(S+R)) (191)	%35HOP	4
27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)		

SATURATE BIOMARKERS

File name (sample):
2568_75.D

File path:
C:\HPCHEM\1\DATA\SAT\A3009OIL\

Misc information:

Sample name:
30/9-11a

Operator:
jkb

Method:
MSD_S_C

Date analyzed:
06-Apr-94

STERANE ratios

100*(21+22)bb (217)	%Preg	6
(21+22)bb (217) + (27+28+29+30)bb(S+R) (218)		
100*29aaS (217)	%29aaS	46
(29aa(S+R) (217)		
100*29bb(S+R) (218)	%29bb	56
(29bb(S+R) (218) + 29aa(S+R) (217))		
100*27db(S+R) (217)	%27dia	36
27ds(S+R) (217) + 27bb(R+S) (218)		
100*27bb(S+R) (218)	%27STER	36
(27+28+29+30)bb(S+R) (218)		
100*28bb(S+R) (218)	%28STER	29
(27+28+29+30)bb(S+R) (218)		
100*29bb(S+R) (218)	%29STER	25
(27+28+29+30)bb(S+R) (218)		
100*30bb(S+R) (218)	%30STER	11
(27+28+29+30)bb(S+R) (218)		

TERPANE-STERANE ratio

27(Ts+Tm)+28ab+SUM29-30(ab+ba)+SUM31-35ab(S+R)(191)	Ho/St2	1.7
(27+28+29+30)bb(S+R) (218)		