

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
4	46.00	217.00	24baa	1645	21
DITERPANES:					
5	33.78	191.00	19/3	883	9
6	35.75	191.00	20/3	707	7
7	37.76	191.00	21/3	972	10
11	41.69	191.00	23/3	1635	17
13	42.79	191.00	24/3	1260	13
14	45.07	191.00	25/3	719	7
16	46.67	191.00	26/3R	463	5
17	46.82	191.00	26/3S	513	5
20	50.31	191.00	28/3R	552	6
21	50.54	191.00	28/3S	563	6
23	51.31	191.00	29/3R	896	9
25	51.61	191.00	29/3S	744	8
15	46.56	191.00	24/4	1164	12
TRITERPANES:					
26	52.43	191.00	27Ts	3619	37
28	52.68	177.00	25nor28ab	2731	28
29	53.11	191.00	27Tm	3230	33
33	53.59	191.00	27b	774	8
32	53.47	177.00	25nor29ab	1584	16
34	54.66	191.00	28ab	4586	47
36	54.87	177.00	25nor30ab	1377	14
39	55.35	191.00	29ab	9281	96
40	55.46	191.00	29Ts	3366	35
43	56.14	191.00	29ba	1781	18
42	55.70	191.00	30D	2025	21
46	56.71	191.00	30ab	22107	159
47	57.05	191.00	30D13	1372	14
48	57.32	191.00	30ba	2164	16
51	58.78	191.00	30G	1069	11
49	58.28	191.00	31abS	7769	80
50	58.47	191.00	31abR	6138	64
52	59.05	191.00	31ba	611	6
53	59.49	191.00	32abS	5966	62
54	59.76	191.00	32abR	4111	43
55	60.92	191.00	33abS	4978	52
56	61.28	191.00	33abR	3217	33
57	62.40	191.00	34abS	3111	32
58	62.85	191.00	34abR	1833	19
59	64.03	191.00	35abS	2448	25
60	64.69	191.00	35abR	1690	17

SATURATE BIOMARKERS

File name (sample):

BIOMD09S.D

File path:

C:\HPCHEM\1\DATA\SAT\A2511_X\

Misc information:

Sample name:

Operator:

JKB,GN

Method:

MSD_S_C

Date analyzed:

29. Nov. 94

Peak#	Rt min.	Ion m/z	Compound	Height	Amount
STERANES:					ng/mg
8	38.26	217.00	21aa	2074	23
9	39.90	217.00	21bb	2540	33
10	40.02	217.00	22aa	1743	23
12	42.22	217.00	22bb	1587	21
18	48.50	217.00	27dbS	4741	62
19	49.11	217.00	27dbR	3003	39
22	51.44	218.00	27bbR	3741	49
24	51.60	218.00	27bbS	2522	33
27	51.97	217.00	27aaR	1484	19
30	53.17	218.00	28bbR	2332	30
31	53.31	218.00	28bbS	2907	38
35	54.28	217.00	29aaS	1625	21
37	54.58	218.00	29bbR	3299	43
38	54.69	218.00	29bbS	2995	39
41	55.29	217.00	29aaR	1697	22
44	55.76	218.00	30bbR	1191	15
45	55.81	218.00	30bbS	1120	15

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
4	46,03	217.00	24baa	655	24

DITERPANES:					
5	33,79	191.00	19/3	376	11
6	35,76	191.00	20/3	325	10
7	37,77	191.00	21/3	466	14
11	41,72	191.00	23/3	780	23
13	42,82	191.00	24/3	552	16
14	45,08	191.00	25/3	318	9
16	46,70	191.00	26/3R	211	6
17	46,83	191.00	26/3S	231	7
20	50,35	191.00	28/3R	343	10
21	50,59	191.00	28/3S	266	8
23	51,37	191.00	29/3R	422	12
25	51,66	191.00	29/3S	362	11
15	46,59	191.00	24/4	470	14

TRITERPANES:					
26	52,49	191.00	27Ts	1531	45
28	52,73	177.00	25nor28ab	975	29
29	53,15	191.00	27Tm	1196	35
33	53,64	191.00	27b	396	12
32	53,53	177.00	25nor29ab	630	19
34	54,71	191.00	28ab	1806	53
36	54,91	177.00	25nor30ab	559	17
39	55,40	191.00	29ab	3615	107
40	55,51	191.00	29Ts	1461	43
43	56,17	191.00	29ba	778	23
42	55,74	191.00	30D	810	24
46	56,75	191.00	30ab	8766	181
47	57,08	191.00	30D13	534	16
48	57,36	191.00	30ba	992	20
51	58,83	191.00	30G	440	13
49	58,31	191.00	31abS	3256	96
50	58,51	191.00	31abR	2315	69
52	59,03	191.00	31ba	318	9
53	59,53	191.00	32abS	3062	91
54	59,83	191.00	32abR	1516	45
55	60,96	191.00	33abS	1980	59
56	61,33	191.00	33abR	1254	37
57	62,43	191.00	34abS	1172	35
58	62,90	191.00	34abR	711	21
59	64,08	191.00	35abS	982	29
60	64,74	191.00	35abR	608	18

SATURATE BIOMARKERS					
File name (sample): BIOM2.D					
File path: C:\HPCHEM\1\DATA\SAT_ARO\HER18RFT\					
Misc information:					
Sample name:					
Operator: JORUNN					
Method: MSD_S_C					
Date analyzed: 11.10.94					

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
STERANES:					
8	38,26	217.00	21aa	680	21
9	39,93	217.00	21bb	844	31
10	40,04	217.00	22aa	578	21
12	42,25	217.00	22bb	540	20
18	48,53	217.00	27dbS	1741	65
19	49,16	217.00	27dbR	1055	39
22	51,50	218.00	27bbR	1390	52
24	51,64	218.00	27bbS	857	32
27	52,03	217.00	27aaR	591	22
30	53,21	218.00	28bbR	798	30
31	53,35	218.00	28bbS	1026	38
35	54,31	217.00	29aaS	529	20
37	54,61	218.00	29bbR	1071	40
38	54,72	218.00	29bbS	1014	38
41	55,32	217.00	29aaR	624	23
44	55,79	218.00	30bbR	410	15
45	55,84	218.00	30bbS	356	13

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
4	46,06	217.00	24baa	486	24

DITERPANES:					
5	33,86	191.00	19/3	235	9
6	35,81	191.00	20/3	161	6
7	37,82	191.00	21/3	238	9
11	41,77	191.00	23/3	425	17
13	42,87	191.00	24/3	297	12
14	45,11	191.00	25/3	168	7
16	46,73	191.00	26/3R	106	4
17	46,87	191.00	26/3S	133	5
20	50,38	191.00	28/3R	171	7
21	50,63	191.00	28/3S	134	5
23	51,40	191.00	29/3R	200	8
25	51,70	191.00	29/3S	161	6
15	46,64	191.00	24/4	329	13

TRITERPANES:					
26	52,52	191.00	27Ts	950	38
28	52,77	177.00	25nor28ab	716	29
29	53,19	191.00	27Tm	803	32
33	53,68	191.00	27b	203	8
32	53,57	177.00	25nor29ab	383	15
34	54,73	191.00	28ab	1208	48
36	54,95	177.00	25nor30ab	372	15
39	55,42	191.00	29ab	2201	88
40	55,53	191.00	29Ts	907	36
43	56,21	191.00	29ba	476	19
42	55,79	191.00	30D	497	20
46	56,79	191.00	30ab	5813	162
47	57,12	191.00	30D13	358	14
48	57,40	191.00	30ba	568	16
51	58,88	191.00	30G	290	12
49	58,36	191.00	31abS	2065	82
50	58,55	191.00	31abR	1479	59
52	59,07	191.00	31ba	212	8
53	59,59	191.00	32abS	1322	53
54	59,84	191.00	32abR	920	37
55	61,00	191.00	33abS	1231	49
56	61,36	191.00	33abR	769	31
57	62,48	191.00	34abS	749	30
58	62,95	191.00	34abR	413	16
59	64,13	191.00	35abS	551	22
60	64,81	191.00	35abR	339	14

SATURATE BIOMARKERS	
File name (sample):	BIOMA1.D
File path:	C:\HPCHEM\1\DATA\SAT_ARO\A251118\
Misc information:	
Sample name:	
Operator:	JKB,GN
Method:	MSD_S_C
Date analyzed:	#####

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
STERANES:					
8	38,32	217.00	21aa	499	20
9	39,97	217.00	21bb	637	32
10	40,10	217.00	22aa	402	20
12	42,30	217.00	22bb	373	19
18	48,57	217.00	27dbS	1202	60
19	49,20	217.00	27dbR	750	38
22	51,53	218.00	27bbR	939	47
24	51,67	218.00	27bbS	615	31
27	52,06	217.00	27aaR	355	18
30	53,25	218.00	28bbR	539	27
31	53,40	218.00	28bbS	691	35
35	54,37	217.00	29aaS	392	20
37	54,67	218.00	29bbR	736	37
38	54,76	218.00	29bbS	733	37
41	55,36	217.00	29aaR	372	18
44	55,85	218.00	30bbR	298	15
45	55,88	218.00	30bbS	276	14

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
Int.Std. (if added):					
4	46,06	217.00	24baa	405	24

DITERPANES:					
5	33,85	191.00	19/3	194	9
6	35,81	191.00	20/3	154	7
7	37,82	191.00	21/3	209	10
11	41,75	191.00	23/3	376	18
13	42,87	191.00	24/3	271	13
14	45,12	191.00	25/3	164	8
16	46,74	191.00	26/3R	92	4
17	46,86	191.00	26/3S	116	6
20	50,38	191.00	28/3R	139	7
21	50,60	191.00	28/3S	119	6
23	51,41	191.00	29/3R	190	9
25	51,69	191.00	29/3S	162	8
15	46,63	191.00	24/4	264	13

TRITERPANES:					
26	52,51	191.00	27Ts	799	38
28	52,76	177.00	25nor28ab	638	31
29	53,18	191.00	27Tm	690	33
33	53,65	191.00	27b	200	10
32	53,54	177.00	25nor29ab	332	16
34	54,74	191.00	28ab	1076	52
36	54,94	177.00	25nor30ab	331	16
39	55,43	191.00	29ab	2128	102
40	55,53	191.00	29Ts	838	40
43	56,20	191.00	29ba	376	18
42	55,78	191.00	30D	451	22
46	56,78	191.00	30ab	4856	162
47	57,11	191.00	30D13	337	16
48	57,40	191.00	30ba	477	16
51	58,86	191.00	30G	277	13
49	58,36	191.00	31abS	1846	88
50	58,53	191.00	31abR	1275	61
52	59,05	191.00	31ba	191	9
53	59,57	191.00	32abS	1256	60
54	59,83	191.00	32abR	918	44
55	60,98	191.00	33abS	1129	54
56	61,36	191.00	33abR	719	34
57	62,47	191.00	34abS	628	30
58	62,95	191.00	34abR	417	20
59	64,12	191.00	35abS	494	24
60	64,80	191.00	35abR	338	16

SATURATE BIOMARKERS

File name (sample):
BIOMA2.D

File path:
C:\HPCHEM\1\DATA\SAT_ARO\A251118\

Misc information:

Sample name:

Operator:
JKB,GN

Method:
MSD_S_C

Date analyzed:
#####

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
STERANES:					
8	38,31	217.00	21aa	420	22
9	39,96	217.00	21bb	521	31
10	40,09	217.00	22aa	365	22
12	42,30	217.00	22bb	314	19
18	48,56	217.00	27dbS	1107	66
19	49,19	217.00	27dbR	642	39
22	51,52	218.00	27bbR	920	55
24	51,66	218.00	27bbS	545	33
27	52,05	217.00	27aaR	290	17
30	53,25	218.00	28bbR	500	30
31	53,37	218.00	28bbS	599	36
35	54,35	217.00	29aaS	360	22
37	54,66	218.00	29bbR	715	43
38	54,76	218.00	29bbS	665	40
41	55,35	217.00	29aaR	368	22
44	55,82	218.00	30bbR	277	17
45	55,87	218.00	30bbS	215	13

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
4	46,15	217.00	24baa	1766	24

DITERPANES:					
5	33,95	191.00	19/3	769	9
6	35,92	191.00	20/3	554	6
7	37,93	191.00	21/3	844	9
11	41,84	191.00	23/3	1491	17
13	42,96	191.00	24/3	1156	13
14	45,24	191.00	25/3	603	7
16	46,84	191.00	26/3R	471	5
17	46,97	191.00	26/3S	483	5
20	50,48	191.00	28/3R	541	6
21	50,70	191.00	28/3S	476	5
23	51,50	191.00	29/3R	708	8
25	51,78	191.00	29/3S	713	8
15	46,72	191.00	24/4	1081	12

TRITERPANES:					
26	52,61	191.00	27Ts	3493	39
28	52,85	177.00	25nor28ab	2510	28
29	53,27	191.00	27Tm	2915	32
33	53,76	191.00	27b	755	9
32	53,65	177.00	25nor29ab	1453	16
34	54,83	191.00	28ab	4253	47
36	55,05	177.00	25nor30ab	1354	15
39	55,52	191.00	29ab	7634	85
40	55,63	191.00	29Ts	3473	38
43	56,31	191.00	29ba	1523	17
42	55,88	191.00	30D	2014	22
46	56,91	191.00	30ab	19232	148
47	57,22	191.00	30D13	1187	13
48	57,50	191.00	30ba	1994	15
51	58,97	191.00	30G	1144	13
49	58,45	191.00	31abS	7564	84
50	58,64	191.00	31abR	5655	63
52	59,15	191.00	31ba	777	9
53	59,66	191.00	32abS	5059	56
54	59,92	191.00	32abR	3765	42
55	61,07	191.00	33abS	4461	49
56	61,43	191.00	33abR	2877	32
57	62,55	191.00	34abS	2593	29
58	63,04	191.00	34abR	1580	17
59	64,23	191.00	35abS	1962	22
60	64,89	191.00	35abR	1318	15

SATURATE BIOMARKERS					
File name (sample): BIOMA4_5.D					
File path: C:\HPCHEM\1\DATA\SAT_ARO\F650723\					
Misc information:					
Sample name: 25/11-18					
Operator: JORUNN					
Method: MSD_S_C					
Date analyzed: #####					

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
STERANES:					
8	38,42	217.00	21aa	1875	22
9	40,08	217.00	21bb	2287	32
10	40,19	217.00	22aa	1614	22
12	42,39	217.00	22bb	1480	21
18	48,65	217.00	27dbS	4612	64
19	49,28	217.00	27dbR	2798	39
22	51,61	218.00	27bbR	3367	47
24	51,76	218.00	27bbS	2621	36
27	52,16	217.00	27aaR	1360	19
30	53,34	218.00	28bbR	2145	30
31	53,48	218.00	28bbS	2765	38
35	54,45	217.00	29aaS	1408	20
37	54,77	218.00	29bbR	2901	40
38	54,86	218.00	29bbS	2872	40
41	55,48	217.00	29aaR	1527	21
44	55,92	218.00	30bbR	1097	15
45	55,96	218.00	30bbS	1019	14

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
4	46,08	217.00	24baa	408	24

DITERPANES:					
5	33,89	191.00	19/3	228	11
6	35,84	191.00	20/3	148	7
7	37,85	191.00	21/3	230	11
11	41,78	191.00	23/3	352	17
13	42,90	191.00	24/3	267	13
14	45,15	191.00	25/3	134	6
16	46,77	191.00	26/3R	83	4
17	46,90	191.00	26/3S	81	4
20	50,40	191.00	28/3R	121	6
21	50,64	191.00	28/3S	114	5
23	51,41	191.00	29/3R	154	7
25	51,71	191.00	29/3S	133	6
15	46,66	191.00	24/4	260	12

TRITERPANES:					
26	52,53	191.00	27Ts	789	38
28	52,77	177.00	25nor28ab	574	27
29	53,20	191.00	27Tm	746	35
33	53,69	191.00	27b	153	8
32	53,58	177.00	25nor29ab	342	16
34	54,76	191.00	28ab	993	47
36	54,96	177.00	25nor30ab	315	15
39	55,45	191.00	29ab	1939	92
40	55,56	191.00	29Ts	785	37
43	56,23	191.00	29ba	341	16
42	55,80	191.00	30D	464	22
46	56,81	191.00	30ab	4881	162
47	57,15	191.00	30D13	295	14
48	57,43	191.00	30ba	435	14
51	58,91	191.00	30G	249	12
49	58,38	191.00	31abS	1757	84
50	58,57	191.00	31abR	1294	62
52	59,09	191.00	31ba	183	9
53	59,60	191.00	32abS	1189	57
54	59,88	191.00	32abR	821	39
55	61,02	191.00	33abS	981	47
56	61,39	191.00	33abR	649	31
57	62,52	191.00	34abS	567	27
58	62,98	191.00	34abR	334	16
59	64,18	191.00	35abS	416	20
60	64,85	191.00	35abR	290	14

SATURATE BIOMARKERS

File name (sample):
BIOMA5.D

File path:
C:\HPCHEM\1\DATA\SAT_ARO\E650723\

Misc information:

Sample name:

Operator:
JORUNN

Method:
MSD_S_CH

Date analyzed:
#####

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
STERANES:					
8	38,36	217.00	21aa	474	22
9	40,01	217.00	21bb	584	35
10	40,12	217.00	22aa	363	22
12	42,32	217.00	22bb	351	21
18	48,59	217.00	27dbS	940	56
19	49,22	217.00	27dbR	591	35
22	51,54	218.00	27bbR	799	48
24	51,69	218.00	27bbS	555	33
27	52,08	217.00	27aaR	271	16
30	53,28	218.00	28bbR	476	28
31	53,41	218.00	28bbS	556	33
35	54,38	217.00	29aaS	342	20
37	54,68	218.00	29bbR	707	42
38	54,77	218.00	29bbS	642	38
41	55,39	217.00	29aaR	319	19
44	55,84	218.00	30bbR	223	13
45	55,90	218.00	30bbS	218	13

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
Int.Std. (if added):					
4	46,16	217.00	24baa	1397	25

DITERPANES:					
5	33,96	191.00	19/3	689	10
6	35,92	191.00	20/3	505	7
7	37,93	191.00	21/3	765	11
11	41,86	191.00	23/3	1194	17
13	42,97	191.00	24/3	880	13
14	45,25	191.00	25/3	485	7
16	46,83	191.00	26/3R	329	5
17	46,97	191.00	26/3S	336	5
20	50,46	191.00	28/3R	368	5
21	50,69	191.00	28/3S	325	5
23	51,48	191.00	29/3R	532	8
25	51,78	191.00	29/3S	442	6
15	46,72	191.00	24/4	917	13

TRITERPANES:					
26	52,61	191.00	27Ts	2832	41
28	52,85	177.00	25nor28ab	1971	29
29	53,27	191.00	27Tm	2251	33
33	53,76	191.00	27b	612	9
32	53,65	177.00	25nor29ab	1092	16
34	54,82	191.00	28ab	3296	48
36	55,03	177.00	25nor30ab	923	13
39	55,51	191.00	29ab	6262	91
40	55,62	191.00	29Ts	2497	36
43	56,30	191.00	29ba	1250	18
42	55,86	191.00	30D	1389	20
46	56,86	191.00	30ab	14267	145
47	57,21	191.00	30D13	950	14
48	57,49	191.00	30ba	1508	15
51	58,97	191.00	30G	846	12
49	58,45	191.00	31abS	5656	82
50	58,64	191.00	31abR	4044	59
52	59,14	191.00	31ba	581	8
53	59,66	191.00	32abS	3937	57
54	59,93	191.00	32abR	2992	44
55	61,09	191.00	33abS	3434	50
56	61,45	191.00	33abR	2403	35
57	62,56	191.00	34abS	2077	30
58	63,05	191.00	34abR	1416	21
59	64,24	191.00	35abS	1721	25
60	64,92	191.00	35abR	1194	17

SATURATE BIOMARKERS

File name (sample): BIOM_B_S.D
File path: C:\HPCHEM\1\DATA\MUD40_60\
Misc information:
Sample name: Biom.std_B Sat
Operator: lotte
Method: MSD_S_C
Date analyzed: 13.Jul.94

Peak#	Rt min.	Ion m/z	Compound	Height	Amount ng/mg
STERANES:					
8	38,43	217.00	21aa	1464	23
9	40,07	217.00	21bb	1768	32
10	40,19	217.00	22aa	1254	23
12	42,40	217.00	22bb	1137	21
18	48,65	217.00	27dbS	3354	61
19	49,28	217.00	27dbR	2075	38
22	51,61	218.00	27bbR	2749	50
24	51,75	218.00	27bbS	1948	36
27	52,15	217.00	27aaR	1025	19
30	53,33	218.00	28bbR	1574	29
31	53,47	218.00	28bbS	2054	38
35	54,43	217.00	29aaS	983	18
37	54,75	218.00	29bbR	2165	40
38	54,84	218.00	29bbS	2023	37
41	55,44	217.00	29aaR	1127	20
44	55,91	218.00	30bbR	828	15
45	55,95	218.00	30bbS	817	15

Appendix 3:

Bar graphs and tabulated peak heights of saturated biomarkers (GC-MRM1)

- 1 Oil 25/11-15 (DST # 1)
- 2 Oil 25/11-18 T2 (SRFT)
- 3 Reference sample
- 4 Table

Peak heights from MRM1 analysis of saturated biomarkers.

Well	Depth start	Depth end	Sample type	Sample name	MS-method	Company	24bb IS	20Y 276-191	21Y 290-191	22Y 304-191	23Y 318-191	24Y 332-191	25Y 346-191	26Y 360-191/2	26Y 360-191/2	24X 330-191	27F 370-191	27A 370-191	27E 370-191	28A 384-191	28N 384-191	29N 398-191	29A 398-191
							24baa	203.	21/3.	22Y	23/3.	24/3.	25/3.	26/3S	26/3R	24/4.	27Ts	27Tm	27b	28ab		25nor30ab	29ab
W25/11-15	1736,00	1774,00	OIL	DST1	MRS1A	Norsk Hydro	1130000	562000	667000	0,01	942000	830000	442000	300000	296000	915000	1410000	962000	1410000	1830000	0,01	1790000	3280000
W25/11-18	1755,00	1755,00	OIL	RFT	MRS1A	Norsk Hydro	619000	388000	432000	0,01	562000	503000	279000	197000	178000	570000	889000	640000	88100	1240000	0,01	1140000	2130000
			lab ref	biom07	MRS1A	Norsk Hydro		101000	106000	0,01	164000	141000	77800	54900	48200	174000	335000	226000	192000	699000	0,01	275000	1080000
			lab ref	biom02	MRS1A	Norsk Hydro		101000	89100	0,01	130000	122000	68700	47000	47600	148000	284000	188000	16600	602000	0,01	243000	948000

Well	Sample name	29F 398-191	29C 398-191	30F 412-191	30O 412-191	30A 412-191	30H 412-191	30C 412-191	30G 412-191	30E 412-191	31A 426-191/1	31B 426-191/2	31C 426-191/3	31D 426-191/4	32A 440-191/1	32B 440-191/2	33A 454-191/1	33B 454-191/2	34A 468-191/1	34B 468-191/2	35A 482-191/1	35B 482-191/2	21a 288-21a
		29Ts	29ba	30D	30O	30ab	30D13	30ba	30G	30bb	31abS	31abR	31ba	31C	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR	21aa
W25/11-15	DST1	2110000	713000	1230000	176000	6800000	750000	569000	220000	0,01	3220000	2320000	368000	272000	2190000	1480000	1670000	1090000	835000	521000	762000	452000	3670000
W25/11-18	RFT	1350000	470000	834000	127000	4160000	478000	376000	152000	0,01	2000000	1460000	237000	189000	1340000	965000	1030000	671000	544000	335000	457000	264000	2530000
	biom07	517000	251000	249000	30000	2500000	157000	201000	77000	0,01	893000	638000	106000	63000	580000	415000	445000	294000	246000	153000	202000	129000	710000
	biom02	483000	209000	211000	2000	2120000	135000	175000	50000	0,01	775000	576000	88300	53200	503000	345000	349000	237000	189000	119000	138000	97700	629000

Well	Sample	21k 288-21bb	22a 302-22aa	22k 302-22bb	23a 316-23aa	23k 316-23bb	27a 372-27abS	27b 372-27dbR	27c 372-27daR	27d 372-27daS	27e 372-27aaS	27f 372-27bbR	27g 372-27bbS	27h 372-27aaR	28a 386-28dbSA	28aa 386-28dbSB	28b 386-28dbRA	28bb 386-28dbRB	28c 386-28daR	28d 386-28daS	28e 386-28aaS	28f 386-28bbR	28g 386-28bbS
W25/11-15	DST1	3250000	2440000	1540000	1170000	319000	3690000	2750000	822000	1150000	984000	1280000	1150000	1030000	1600000	1680000	1200000	1390000	710000	712000	598000	1390000	1200000
W25/11-18	RFT	2080000	1650000	978000	788000	213000	2500000	1740000	546000	756000	639000	798000	694000	665000	1010000	1090000	790000	870000	455000	438000	401000	864000	741000
	biom07	712000	506000	342000	190000	65100	980000	709000	210000	299000	237000	271000	239000	227000	450000	490000	355000	377000	180000	192000	137000	317000	277000
	biom02	622000	445000	294000	166000	56300	800000	592000	190000	277000	196000	248000	205000	193000	400000	407000	305000	332000	175000	169000	123000	277000	233000

Well	Sample	28b 386-28aaR	29a 400-29dbS	29b 400-29dbR	29c 400-29daR	29d 400-217	29e 400-29aaS	29f 400-29bbR	29g 400-29bbS	29h 400-29aaR	30a 414-30dbS	30b 414-30dbR	30c 414-30daR	30d 414-30daS	30e 414-30aaS	30f 414-30bbR	30g 414-30bbS	30h 414-30aaR
W25/11-15	DST1	791000	2770000	2290000	730000	1150000	1270000	1450000	1660000	1120000	628000	494000	345000	260000	367000	450000	503000	443000
W25/11-18	RFT	477000	1790000	1450000	482000	740000	791000	950000	1050000	715000	415000	317000	243000	159000	241000	299000	303000	289000
	biom07	166000	876000	652000	209000	324000	288000	350000	384000	283000	155000	114000	78500	59000	99600	104000	124000	114000
	biom02	135000	721000	554000	190000	276000	225000	280000	328000	238000	141000	112000	78500	50200	79500	95000	111000	85000

Appendix 4:

Aromatic hydrocarbon summary sheets and mass chromatograms (GC-MSD)

- 1 Oil 25/11-15 (DST # 1)
- 2 Oil 25/11-18 T2 (SRFT)
- 3 Extracts from sandstone without/with Aquamul added

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P#	Rt	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
14	14,36	136.00	d8 N	823	17
46	32,39	188.00	d10 P	2027	17
66	47,83	240.00	d12 C	1664	17
ARYL ISOPRENOIDS					
1	21,62	133	C13 AI	316	
2	23,53	133	C14 AI	547	
3	26,80	133	C15 AI	1078	
4	29,31	133	C16 AI	322	
5	31,93	133	C17 AI	168	
6	34,55	133	C18 AI	347	
7	36,06	133	C19 AI	134	
8	38,63	133	C20 AI	156	
9	40,61	133	C21 AI	122	
10	42,81	133	C22 AI	104	
11	44,86	133	C23 AI	32	
12	56,09	133	C30AI	27	
13	57,93	133	C31 AI	84	
NAPHTALENES					
15	14,47	128	N	16998	332
16	18,14	142	2-MN	35755	929
17	18,71	142	1-MN	23825	619
18	21,34	156	2-EN	7354	170
19	21,46	156	1-EN	3456	80
20	21,69	156	2,6+ 2,7-DMN	28332	653
21	22,16	156	1,3+1,7-DMN	41963	967
22	22,26	156	1,6-DMN	23824	549
23	22,76	156	2,3+1,4-DMN	15064	347
24	22,88	156	1,5-DMN	9743	225
25	23,25	156	1,2-DMN	6804	157
29	25,08	170	C3- N	3201	79
30	25,27	170	C3-N	3647	91
31	25,40	170	1,3,7-TMN	15163	375
32	25,53	170	1,3,6-TMN	22305	551
33	26,02	170	1,3,5+1,4,6-TMN	19808	489
34	26,11	170	2,3,6-TMN	13087	323
35	26,52	170	1,6,7+1,2,7-TMN	10600	262
36	26,57	170	1,2,6-TMN	7041	174
37	27,02	170	1,2,4-TMN	2691	66
38	27,23	170	1,2,5-TMN	7937	196
BIPHENYLS					
26	20,86	154	BP	10114	170
27	24,15	168	3-MBP	10776	181
28	24,41	168	4-MBP	4511	76
39	28,17	182	C2-BP	5653	95
40	28,55	182	C2-BP	3398	57
41	28,86	182	C2-BP	2980	50

AROMATICS

File name (sample):

251115A1.D

File path:

C:\HPCHEM\1\DATA\A2511150\

Misc information:

Sample name:

CN -MPLC-1 25/11-15 olje Aro

Operator: lotte

Method: MSD_ARO1

Date analyzed: 17.Sep.94

P#	Rt	Ion m/z	Compound	Height	Amount
FLUORENES					ng/mg
42	27,08	166	F	6773	147
43	30,33	180	C1-F	3989	87
44	30,52	180	C1-F	11983	261
45	30,84	180	1-MF	2100	46
DIBENZOTHIOPHENES					
47	31,79	184	DBT	4983	12
48	34,41	198	4-MDBT	9801	23
49	34,91	198	3+2-MDBT	3017	7
50	35,50	198	1-MDBT	3362	8
PHENANTRENES					
51	32,52	178	P	22239	163
52	35,43	192	3-MP	12037	93
53	35,59	192	2-MP	12797	98
54	36,06	192	9-MP	19448	150
55	36,20	192	1-MP	13889	107
57	38,14	206	2EP+9EP+3,6-DMP	3956	28
58	38,35	206	1EP	4707	33
59	38,45	206	2,6+2,7+3,5-DMP	2880	20
60	38,80	206	1,3+2,10+3,9+3,10-DMP	21800	153
61	38,96	206	1,6+2,5+2,9-DMP	10627	75
62	39,10	206	1,7-DMP	8064	57
63	39,23	206	2,3-DMP	3087	22
64	39,36	206	1,9+4,9+4,10-DMP	5934	42
65	39,65	206	1,8-DMP	1965	14
RETENE					
56	42,92	219	Retene	3466	25
TRIAROMATIC STEROIDS					
67	47,38	231	20TA	1612	3,2
68	49,24	231	21TA	1696	3,4
69	56,06	231	S26TA	1579	3,1
70	57,26	231	R26TA/S27TA	5421	10,8
71	58,25	231	S28TA	2319	4,6
72	58,75	231	R27TA	2452	4,9
73	59,95	231	R28TA	2442	4,9

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P#	Rt	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
14	14,27	136.00	d8 N	1213	18
46	32,29	188.00	d10 P	2758	18
66	47,70	240.00	d12 C	2536	18
ARYL ISOPRENOIDS					
1	21,53	133	C13 AI	54	
2	23,57	133	C14 AI	331	
3	26,85	133	C15 AI	216	
4	29,31	133	C16 AI	212	
5	31,94	133	C17 AI	246	
6	34,46	133	C18 AI	95	
7	36,04	133	C19 AI	62	
8	38,67	133	C20 AI	93	
9	40,65	133	C21 AI	22	
10	42,77	133	C22 AI	155	
11	44,79	133	C23 AI	31	
12	56,09	133	C30AI	39	
13	57,86	133	C31 AI	47	
NAPHTALENES					
15	14,36	128	N	23317	322
16	18,05	142	2-MN	42488	783
17	18,62	142	1-MN	27512	507
18	21,25	156	2-EN	9611	157
19	21,37	156	1-EN	4575	75
20	21,60	156	2,6+ 2,7-DMN	35232	576
21	22,07	156	1,3+1,7-DMN	58520	956
22	22,17	156	1,6-DMN	30504	498
23	22,67	156	2,3+1,4-DMN	22016	360
24	22,79	156	1,5-DMN	13522	221
25	23,16	156	1,2-DMN	9905	162
29	24,99	170	C3- N	5581	98
30	25,18	170	C3-N	5979	105
31	25,31	170	1,3,7-TMN	22312	391
32	25,44	170	1,3,6-TMN	33824	592
33	25,93	170	1,3,5+1,4,6-TMN	31520	552
34	26,00	170	2,3,6-TMN	21192	371
35	26,41	170	1,6,7+1,2,7-TMN	17376	304
36	26,45	170	1,2,6-TMN	11417	200
37	26,92	170	1,2,4-TMN	4175	73
38	27,14	170	1,2,5-TMN	12324	216
BIPHENYLS					
26	20,77	154	BP	12980	155
27	24,06	168	3-MBP	14595	174
28	24,32	168	4-MBP	6511	78
39	28,08	182	C2-BP	8018	96
40	28,44	182	C2-BP	4998	60
41	28,75	182	C2-BP	4215	50

AROMATICS

File name (sample):

1755_A.D

File path:

C:\HPCHEM\1\DATA\SAT_ARO\HER18RFT\

Misc information:

Sample name:

25/11-18, 1755 m, RFT, ARO

Operator: JORUNN

Method: MSD_ARO1

Date analyzed: 12.Oct.94

P#	Rt	Ion m/z	Compound	Height	Amount
FLUORENES					
42	26,99	166	F	9425	145
43	30,17	180	C1-F	5353	82
44	30,42	180	C1-F	16041	247
45	30,73	180	1-MF	2835	44
DIBENZOTHIOPHENES					
47	31,70	184	DBT	7734	14
48	34,30	198	4-MDBT	13595	25
49	34,80	198	3+2-MDBT	4487	8
50	35,39	198	1-MDBT	4335	8
PHENANTRENES					
51	32,41	178	P	30376	171
52	35,32	192	3-MP	16768	99
53	35,48	192	2-MP	19160	113
54	35,97	192	9-MP	27360	162
55	36,09	192	1-MP	19216	114
57	38,03	206	2EP+9EP+3,6-DMP	6180	33
58	38,24	206	1EP	6994	38
59	38,34	206	2,6+2,7+3,5-DMP	4209	23
60	38,69	206	1,3+2,10+3,9+3,10-DMP	29024	157
61	38,85	206	1,6+2,5+2,9-DMP	15662	85
62	38,99	206	1,7-DMP	11101	60
63	39,13	206	2,3-DMP	4377	24
64	39,25	206	1,9+4,9+4,10-DMP	7450	40
65	39,54	206	1,8-DMP	3027	16
RETENE					
56	42,79	219	Retene	4982	28
TRIAROMATIC STEROIDS					
67	47,27	231	20TA	2212	3,0
68	49,11	231	21TA	2641	3,6
69	55,95	231	S26TA	2573	3,5
70	57,15	231	R26TA/S27TA	8504	11,6
71	58,14	231	S28TA	3731	5,1
72	58,62	231	R27TA	4043	5,5
73	59,84	231	R28TA	4034	5,5

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P#	Rt	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
14	14,44	136.00	d8 N	7901	24
46	32,53	188.00	d10 P	33304	24
66	47,97	240.00	d12 C	25456	24
ARYL ISOPRENOIDS					
1	21,56	133	C13 AI	14518	
2	23,52	133	C14 AI	9758	
3	26,79	133	C15 AI	9675	
4	29,32	133	C16 AI	5807	
5	31,97	133	C17 AI	2227	
6	34,54	133	C18 AI	6809	
7	36,03	133	C19 AI	7627	
8	38,66	133	C20 AI	5159	
9	40,64	133	C21 AI	2845	
10	42,79	133	C22 AI	1164	
11	44,76	133	C23 AI	1290	
12	56,05	133	C30AI	1126	
13	57,93	133	C31 AI	400	
NAPHTALENES					
15	14,55	128	N	32066	88
16	18,24	142	2-MN	207413	758
17	18,81	142	1-MN	147336	539
18	21,44	156	2-EN	62634	203
19	21,56	156	1-EN	29166	95
20	21,81	156	2,6+ 2,7-DMN	245380	796
21	22,27	156	1,3+1,7-DMN	358511	1162
22	22,39	156	1,6-DMN	203008	658
23	22,88	156	2,3+1,4-DMN	150169	487
24	23,00	156	1,5-DMN	103739	336
25	23,36	156	1,2-DMN	73848	239
29	25,20	170	C3- N	38701	135
30	25,39	170	C3-N	39237	137
31	25,51	170	1,3,7-TMN	168384	585
32	25,67	170	1,3,6-TMN	258240	897
33	26,15	170	1,3,5+1,4,6-TMN	226240	786
34	26,22	170	2,3,6-TMN	167936	584
35	26,64	170	1,6,7+1,2,7-TMN	127264	442
36	26,71	170	1,2,6-TMN	82736	288
37	27,14	170	1,2,4-TMN	30693	107
38	27,35	170	1,2,5-TMN	89504	311
BIPHENYLS					
26	20,96	154	BP	78290	185
27	24,27	168	3-MBP	113704	269
28	24,53	168	4-MBP	53072	126
39	28,30	182	C2-BP	65160	154
40	28,67	182	C2-BP	41456	98
41	28,98	182	C2-BP	39752	94

AROMATICS

File name (sample):

0_4060_A.D

File path:

C:\HPCHEM\1\DATA\AMUD4060\

Misc information:

Sample name:

0%40/60 1764.5m 25/11-15 ARO

Operator: lotte

Method: MSD_ARO1

Date analyzed: 14.Jul.94

P#	Rt	Ion m/z	Compound	Height	Amount
FLUORENES					
42	27,19	166	F	13610	42
43	30,40	180	C1-F	4225	13
44	30,66	180	C1-F	20600	63
45	30,97	180	1-MF	1389	4
DIBENZOTHIOPHENES					
47	31,94	184	DBT	61464	12
48	34,54	198	4-MDBT	109435	21
49	35,06	198	3+2-MDBT	33922	7
50	35,65	198	1-MDBT	36417	7
PHENANTRENES					
51	32,67	178	P	268839	162
52	35,58	192	3-MP	144090	91
53	35,74	192	2-MP	179001	113
54	36,22	192	9-MP	239735	152
55	36,34	192	1-MP	171456	108
57	38,28	206	2EP+9EP+3,6-DMP	52767	30
58	38,51	206	1EP	61296	35
59	38,61	206	2,6+2,7+3,5-DMP	39760	23
60	38,96	206	1,3+2,10+3,9+3,10-DMP	240704	139
61	39,11	206	1,6+2,5+2,9-DMP	135131	78
62	39,25	206	1,7-DMP	107909	62
63	39,39	206	2,3-DMP	34397	20
64	39,50	206	1,9+4,9+4,10-DMP	72508	42
65	39,81	206	1,8-DMP	26660	15
RETENE					
56	43,07	219	Retene	44501	27
TRIAROMATIC STEROIDS					
67	47,52	231	20TA	17832	3,1
68	49,37	231	21TA	20131	3,6
69	56,20	231	S26TA	17400	3,1
70	57,40	231	R26TA/S27TA	52288	9,2
71	58,38	231	S28TA	22872	4,0
72	58,87	231	R27TA	27200	4,8
73	60,07	231	R28TA	26348	4,6

P#	Rt	Ion m/z	Compound	Height	Amount
Int.Std.(if added):					ng/mg
14	14,44	136.00	d8 N	6323	19
46	32,53	188.00	d10 P	5980	19
66	47,92	240.00	d12 C	16750	19
ARYL ISOPRENOIDS					
1	21,55	133	C13 AI	3063	
2	23,50	133	C14 AI	1148	
3	26,79	133	C15 AI	811	
4	29,32	133	C16 AI	263	
5	31,92	133	C17 AI	212	
6	34,54	133	C18 AI	1414	
7	36,03	133	C19 AI	812	
8	38,65	133	C20 AI	1425	
9	40,71	133	C21 AI	266	
10	42,74	133	C22 AI	350	
11	44,85	133	C23 AI	241	
12	56,10	133	C30AI	105	
13	57,93	133	C31 AI	47	
NAPHTALENES					
15	14,55	128	N	8830	25
16	18,22	142	2-MN	40428	152
17	18,79	142	1-MN	29602	112
18	21,44	156	2-EN	10460	35
19	21,55	156	1-EN	6388	21
20	21,79	156	2,6+ 2,7-DMN	44358	148
21	22,26	156	1,3+1,7-DMN	66774	223
22	22,34	156	1,6-DMN	50992	171
23	22,86	156	2,3+1,4-DMN	25218	84
24	22,97	156	1,5-DMN	20432	68
25	23,36	156	1,2-DMN	11311	38
29	25,18	170	C3- N	5577	20
30	25,39	170	C3-N	6179	22
31	25,51	170	1,3,7-TMN	24248	87
32	25,63	170	1,3,6-TMN	35072	126
33	26,12	170	1,3,5+1,4,6-TMN	28728	103
34	26,19	170	2,3,6-TMN	35184	126
35	26,66	170	1,6,7+1,2,7-TMN	21824	78
36	26,67	170	1,2,6-TMN	21400	77
37	27,16	170	1,2,4-TMN	3877	14
38	27,35	170	1,2,5-TMN	11920	43
BIPHENYLS					
26	20,96	154	BP	13867	34
27	24,25	168	3-MBP	16931	41
28	24,52	168	4-MBP	7787	19
39	28,28	182	C2-BP	7763	19
40	28,67	182	C2-BP	6035	15
41	28,98	182	C2-BP	4638	11

AROMATICS

File name (sample): 15_4060A.D
File path: H:\AP\MSDARKIV\MSD-HC1\DATA\ARO\AMUD4060\
Misc information:
Sample name: 15%40/60 1764.5m 25/11-15 ARO
Operator: lotte
Method: MSD_ARO1
Date analyzed: 14.Jul.94

P#	Rt	Ion m/z	Compound	Height	Amount
FLUORENES					ng/mg
42	27,21	166	F	1850	6
43	30,40	180	C1-F	480	2
44	30,64	180	C1-F	2202	7
45	0,00	180	1-MF	0	0
DIBENZOTHIOPHENES					
47	31,92	184	DBT	9537	9
48	34,57	198	4-MDBT	19664	18
49	35,35	198	3+2-MDBT	8062	7
50	35,89	198	1-MDBT	9780	9
PHENANTRENES					
51	32,63	178	P	16301	45
52	35,80	192	3-MP	38776	113
53	35,94	192	2-MP	43032	125
54	36,38	192	9-MP	64840	189
55	36,50	192	1-MP	44840	130
57	38,32	206	2EP+9EP+3,6-DMP	14219	38
58	38,53	206	1EP	15640	42
59	38,53	206	2,6+2,7+3,5-DMP	15049	40
60	38,96	206	1,3+2,10+3,9+3,10-DMP	70144	186
61	39,11	206	1,6+2,5+2,9-DMP	36176	96
62	39,25	206	1,7-DMP	26215	70
63	39,39	206	2,3-DMP	8938	24
64	39,50	206	1,9+4,9+4,10-DMP	18230	48
65	39,81	206	1,8-DMP	7268	19
RETENE					
56	43,01	219	Retene	12162	34
TRIAROMATIC STEROIDS					
67	47,47	231	20TA	4909	1,1
68	49,30	231	21TA	4978	1,1
69	56,13	231	S26TA	4756	1,0
70	57,33	231	R26TA/S27TA	15260	3,4
71	58,32	231	S28TA	7291	1,6
72	58,80	231	R27TA	7578	1,7
73	60,01	231	R28TA	7623	1,7

MSD-ARO
25/11-15, 1764 m, SST, COCH
29% Aquamul 40/60

No standardised MSD-ARO data sheet was prepared
as this is not justified by the data quality (overloaded column).

Appendix 5:

C_5 - C_{20} whole oil gas chromatograms and tabulated concentrations

- 1 Oil 25/11-15 (DST # 1)
- 2 Oil 25/11-18 T2 (SRFT)
- 3 Reference sample
- 4 Table

