

**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
 Petroleum Geochemistry Laboratories

Data file name: A2128\_50.D  
 Sample name: 25/7-5 2128\_50m aro  
 Data File Path: C:\HPCHEM\1\DATA\SA315H3D\  
 Misc. info.:  
  
 Vial no.: 19  
 Method: MSD\_A\_D  
 Operator:  
 Date: Fri Nov 14 22:12:54 1997

Aromatic HC ratios, heights and amounts		Height	Amount
Naphthalene	Naphthalene	118372	690
C1 Naphthanes	Sum C1 Naphthanes	740705	3879
C2 Naphthanes	Sum C2 Naphthanes	1204055	5914
C3 Naphthanes	Sum C3 Naphthanes	847470	4233
Phenanthrene	Phenanthrene	276157	554
C1 Phenanthrenes	Sum C1 Phenanthrenes	547882	1289
C2 Phenanthrenes	Sum C2 Phenanthrenes	432547	974
3/2*(3MP+2MP)/(P+9MP+1MP)	MPI1	0.7	0.7
(3MP+2MP)/(3MP+2MP+9MP+1MP)	F1	0.5	0.5
2MP/(3MP+2MP+9MP+1MP)	F2	0.2	0.2
(2.6+2.7)DMN/1.5DMN	DNR	3.4	3.4
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	43.2	43.2
DBT/P	DBT/P	0.1	0.0
F/P	F/P	0.4	0.8
BP/1.6DMN	BP/1.6DMN	0.4	0.3
2MN/1MN	2MN/1MN	1.4	1.4
2EN/1EN	2EN/1EN	2.6	2.6
4MDBT/1MDBT	4MDBT/1MDBT	5.2	5.2

**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

**Compound data**



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **A2131\_50.D**  
 Sample name: **25/7-5 2131\_50m aro**  
 Data File Path: **C:\HPCHEM\1\DATA\ISA315H3D\**  
 Misc. info.:  
  
 Vial no.: **20**  
 Method: **MSD\_A\_D**  
 Operator:  
 Date: **Fri Nov 14 23:41:34 1997**  
  
 Response curve:  $y = ax + b$   
 Response factor groups: a1...a11, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Internal standard (if added):</b>						
14)	11.59	136		d8N	4100	35
16)	21.06	164		d10BP	7179	33
59)	29.45	188		d10P	16405	35
79)	44.92	240		d12C	12654	35

<b>Aryl isoprenoids:</b>						
1)	20.59	133	0	C13AI	3728	
2)	22.38	133	0	C14AI	2500	
3)	26.68	133	0	C15AI	1801	
4)	28.96	133	0	C16AI	1441	
5)	30.97	133	0	C17AI	1563	
6)	34.05	133	0	C18AI	1615	
7)	34.97	133	0	C19AI	1109	
8)	38.05	133	0	C20AI	1137	
9)	39.95	133	0	C21AI	534	
10)	42.97	133	0	C22AI	1323	
11)	45.04	133	0	C23AI	837	
12)	55.99	133	0	C30AI	327	
13)	56.98	133	0	C31AI	94	

<b>Naphthalenes:</b>						
15)	11.69	128	a1	N	115954	897
17)	15.31	142	a2	2-MN	473665	2086
18)	15.84	142	a2	1-MN	338959	1493
19)	18.45	156	a3	2-EN	49123	203
20)	18.56	156	a3	1-EN	19405	80
21)	18.83	156	a3	2.6+2.7-DMN	313189	1294
22)	19.30	156	a3	1.3+1.7-DMN	335121	1384
23)	19.42	156	a3	1.6-DMN	370094	1529
24)	19.87	156	a3	2.3+1.4-DMN	147472	609
25)	19.98	156	a3	1.5-DMN	100070	413
26)	20.35	156	a3	1.2-DMN	56229	232
27)	22.20	170	a4	C3-N-1	27540	116
28)	22.39	170	a4	C3-N-2	34828	146
29)	22.53	170	a4	1.3.7-TMN	155262	652
30)	22.69	170	a4	1.3.6-TMN	237810	999
31)	23.14	170	a4	1.3.5+1.4.6-TMN	168500	708
32)	23.23	170	a4	2.3.6-TMN	176472	741
33)	23.64	170	a4	1.6.7+1.2.7-TMN	112529	473
34)	23.69	170	a4	1.2.6-TMN	73999	311
35)	24.12	170	a4	1.2.4-TMN	16622	70
36)	24.33	170	a4	1.2.5-TMN	62713	263

<b>Biphenyls:</b>						
37)	18.00	154	a5	BP	161772	468
38)	21.31	168	a5	3-MBP	238501	690
39)	21.57	168	a5	4-MBP	92722	268
40)	21.62	182	a4	2.3'-DMBP	5566	23
41)	21.82	182	a4	2.5-DMBP	3306	14
42)	21.99	182	a4	2.4+2.4'-DMBP	6419	27
43)	22.62	182	a4	2.3-DMBP	17019	71
44)	24.00	182	a4	3-EBP	18647	78
45)	24.33	182	a4	3.5-DMBP	37353	157
46)	24.43	182	a4	3.3'-DMBP	95081	399
47)	24.54	182	a4	4-EBP	7571	32
48)	24.72	182	a4	3.4'-DMBP	87402	367
49)	24.94	182	a4	4.4'-DMBP	19288	81
50)	25.50	182	a4	3.4-DMBP	38713	163

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	

<b>Dibenzofuranes:</b>						
51)	22.18	168	a5	DBF	36143	105
52)	25.28	182	a4	MDBF-1	51020	214
53)	25.64	182	a4	MDBF-2	39543	166
54)	25.93	182	a4	MDBF-3	30905	130

<b>Fluorenes:</b>						
55)	24.16	166	a6	F	136133	478
56)	27.44	180	a6	C1-F-1	56004	197
57)	27.65	180	a6	C1-F-2	133036	467
58)	27.93	180	a6	1-MF	25569	90

<b>Dibenzothiophenes:</b>						
60)	28.86	184	a7	DBT	45564	28
61)	31.48	198	a7	4-MDBT	70371	43
62)	32.00	198	a7	3+2-MDBT	19461	12
63)	32.58	198	a7	1-MDBT	13241	8

<b>Phenanthrenes:</b>						
64)	29.61	178	a8	P	335944	595
65)	32.54	192	a9	3-MP	135214	281
66)	32.69	192	a9	2-MP	183330	381
67)	33.18	192	a9	9-MP	177610	369
68)	33.30	192	a9	1-MP	165984	345
69)	35.25	206	a10	2EP+9EP+3.6-DMP	28257	56
70)	35.48	206	a10	1EP	43198	86
71)	35.58	206	a10	2.6+2.7+3.5-DMP	27711	55
72)	35.95	206	a10	1.3+2.10+3.9+3.10-DMP	150118	298
73)	36.08	206	a10	1.6+2.5+2.9-DMP	93292	185
74)	36.22	206	a10	1.7-DMP	80665	160
75)	36.36	206	a10	2.3-DMP	27167	54
76)	36.47	206	a10	1.9+4.9+4.10-DMP	51708	103
77)	36.76	206	a10	1.8-DMP	19193	38

<b>Retene:</b>						
78)	40.07	219	a8	Retene	11859	21

<b>Triaromatic steroids:</b>						
80)	44.53	231	a11	20TA	6018	4
81)	46.40	231	a11	21TA	5748	3
82)	53.36	231	a11	S26TA	2133	1
83)	54.56	231	a11	R26TA/S27TA	6630	4
84)	55.55	231	a11	S28TA	3730	2
85)	56.05	231	a11	R27TA	2980	2
86)	57.27	231	a11	R28TA	3833	2

**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

**Compound data**



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: A2133\_75.D  
Sample name: 257-5 2133\_75m aro  
Data File Path: C:\HPCHEM\1\DATA\ISA315H3D\  
Misc. info.:  
  
Vial no.: 21  
Method: MSD\_A\_D  
Operator:  
Date: Sat Nov 15 01:10:14 1997  
  
Response curve: y = ax+b  
Response factor groups: a1...a11, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Internal standard (if added):</b>						
14)	11.60	136		d8N	5459	39
16)	21.05	164		d10BP	6929	37
59)	29.43	188		d10P	15642	39
79)	44.90	240		d12C	11826	39
<b>Aryl isoprenoids:</b>						
1)	20.58	133	0	C13AI	2492	
2)	22.36	133	0	C14AI	1494	
3)	26.66	133	0	C15AI	1187	
4)	29.02	133	0	C16AI	1473	
5)	30.96	133	0	C17AI	1002	
6)	34.02	133	0	C18AI	1107	
7)	35.06	133	0	C19AI	391	
8)	38.03	133	0	C20AI	691	
9)	39.93	133	0	C21AI	423	
10)	42.95	133	0	C22AI	905	
11)	45.02	133	0	C23AI	614	
12)	55.96	133	0	C30AI	214	
13)	56.97	133	0	C31AI	106	
<b>Naphthalenes:</b>						
15)	11.68	128	a1	N	51549	335
17)	15.28	142	a2	2-MN	309547	1582
18)	15.83	142	a2	1-MN	213167	1090
19)	18.44	156	a3	2-EN	33587	161
20)	18.55	156	a3	1-EN	13622	65
21)	18.81	156	a3	2.6+2.7-DMN	210441	1009
22)	19.28	156	a3	1.3+1.7-DMN	255614	1225
23)	19.38	156	a3	1.6-DMN	254592	1221
24)	19.86	156	a3	2.3+1.4-DMN	101311	486
25)	19.97	156	a3	1.5-DMN	65225	313
26)	20.32	156	a3	1.2-DMN	37662	181
27)	22.19	170	a4	C3-N-1	18712	91
28)	22.38	170	a4	C3-N-2	22616	110
29)	22.51	170	a4	1.3.7-TMN	106128	517
30)	22.65	170	a4	1.3.6-TMN	147125	717
31)	23.13	170	a4	1.3.5+1.4.6-TMN	113130	552
32)	23.21	170	a4	2.3.6-TMN	112743	550
33)	23.62	170	a4	1.6.7+1.2.7-TMN	74655	364
34)	23.67	170	a4	1.2.6-TMN	47536	232
35)	24.10	170	a4	1.2.4-TMN	11209	55
36)	24.30	170	a4	1.2.5-TMN	41934	204
<b>Biphenyls:</b>						
37)	17.99	154	a5	BP	110474	371
38)	21.30	168	a5	3-MBP	163135	548
39)	21.54	168	a5	4-MBP	63062	212
40)	21.59	182	a4	2.3'-DMBP	3740	18
41)	21.81	182	a4	2.5-DMBP	2056	10
42)	21.98	182	a4	2.4+2.4'-DMBP	4131	20
43)	22.60	182	a4	2.3-DMBP	11005	54
44)	23.99	182	a4	3-EBP	11637	57
45)	24.32	182	a4	3.5-DMBP	23819	116
46)	24.42	182	a4	3.3'-DMBP	64037	312
47)	24.52	182	a4	4-EBP	4813	23
48)	24.71	182	a4	3.4'-DMBP	57426	280
49)	24.92	182	a4	4.4'-DMBP	12587	61
50)	25.47	182	a4	3.4-DMBP	24687	120

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Dibenzofuranes:</b>						
51)	22.17	168	a5	DBF	25416	85
52)	25.26	182	a4	MDBF-1	34122	166
53)	25.63	182	a4	MDBF-2	26141	127
54)	25.92	182	a4	MDBF-3	19513	95
<b>Fluorenes:</b>						
55)	24.14	166	a6	F	94804	386
56)	27.42	180	a6	C1-F-1	35860	146
57)	27.61	180	a6	C1-F-2	97394	397
58)	27.90	180	a6	1-MF	18161	74
<b>Dibenzothiophenes:</b>						
60)	28.83	184	a7	DBT	30527	22
61)	31.45	198	a7	4-MDBT	50381	36
62)	31.98	198	a7	3+2-MDBT	13208	10
63)	32.56	198	a7	1-MDBT	10037	7
<b>Phenanthrenes:</b>						
64)	29.58	178	a8	P	238999	496
65)	32.52	192	a9	3-MP	94163	229
66)	32.66	192	a9	2-MP	114546	279
67)	33.15	192	a9	9-MP	132117	322
68)	33.27	192	a9	1-MP	110698	270
69)	35.24	206	a10	2EP+9EP+3.6-DMP	17731	41
70)	35.45	206	a10	1EP	29090	68
71)	35.55	206	a10	2.6+2.7+3.5-DMP	18340	43
72)	35.91	206	a10	1.3+2.10+3.9+3.10-DMP	106813	249
73)	36.06	206	a10	1.6+2.5+2.9-DMP	63627	148
74)	36.19	206	a10	1.7-DMP	53395	124
75)	36.33	206	a10	2.3-DMP	17498	41
76)	36.44	206	a10	1.9+4.9+4.10-DMP	35163	82
77)	36.74	206	a10	1.8-DMP	13560	32
<b>Retene:</b>						
78)	40.05	219	a8	Retene	7843	16
<b>Triaromatic steroids:</b>						
80)	44.51	231	a11	20TA	4501	3
81)	46.38	231	a11	21TA	4576	3
82)	53.34	231	a11	S26TA	1617	1
83)	54.53	231	a11	R26TA/S27TA	5176	4
84)	55.53	231	a11	S28TA	2791	2
85)	56.03	231	a11	R27TA	2198	2
86)	57.25	231	a11	R28TA	2782	2

**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

Ratios, from heights and amounts


 Norsk Hydro E&P Research Centre, Bergen, Norway  
 Petroleum Geochemistry Laboratories

 Data file name: A2131\_50.D  
 Sample name: 25/7-5 2131\_50m aro  
 Data File Path: C:\HPCHEM\1\DATA\ISA315H3D\  
 Misc. info.:

 Vial no.: 20  
 Method: MSD\_A\_D  
 Operator:  
 Date: Fri Nov 14 23:41:34 1997

Aromatic HC ratios, heights and amounts		Height	Amount
Naphthalene	Naphthalene	115954	897
C1 Naphthanes	Sum C1 Naphthanes	812624	3579
C2 Naphthanes	Sum C2 Naphthanes	1390703	5745
C3 Naphthanes	Sum C3 Naphthanes	1066275	4479
Phenanthrene	Phenanthrene	335944	595
C1 Phenanthrenes	Sum C1 Phenanthrenes	662138	1376
C2 Phenanthrenes	Sum C2 Phenanthrenes	521309	1036
$3/2 \cdot (3MP+2MP)/(P+9MP+1MP)$	MPI1	0.7	0.8
$(3MP+2MP)/(3MP+2MP+9MP+1MP)$	F1	0.5	0.5
$2MP/(3MP+2MP+9MP+1MP)$	F2	0.3	0.3
$(2.6+2.7)DMN/1.5DMN$	DNR	3.1	3.1
$100 \cdot 20TA/(20TA+S28TA+R28TA)$	%-TAS'n	44.3	44.3
DBT/P	DBT/P	0.1	0.0
F/P	F/P	0.4	0.8
BP/1.6DMN	BP/1.6DMN	0.4	0.3
2MN/1MN	2MN/1MN	1.4	1.4
2EN/1EN	2EN/1EN	2.5	2.5
4MDBT/1MDBT	4MDBT/1MDBT	5.3	5.3

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Internal standard (if added):</b>						
14)	11.60	136		d8N	7275	46
16)	21.05	164		d10BP	8087	45
59)	29.45	188		d10P	19365	46
79)	44.92	240		d12C	14379	46
<b>Aryl isoprenoids:</b>						
1)	20.59	133	0	C13AI	3329	
2)	22.37	133	0	C14AI	2018	
3)	26.67	133	0	C15AI	1714	
4)	29.04	133	0	C16AI	2258	
5)	30.97	133	0	C17AI	1459	
6)	34.03	133	0	C18AI	1515	
7)	34.96	133	0	C19AI	1073	
8)	38.04	133	0	C20AI	863	
9)	39.94	133	0	C21AI	583	
10)	42.97	133	0	C22AI	1287	
11)	45.03	133	0	C23AI	913	
12)	55.98	133	0	C30AI	313	
13)	56.99	133	0	C31AI	89	
<b>Naphthalenes:</b>						
15)	11.69	128	a1	N	118372	690
17)	15.30	142	a2	2-MN	437148	2289
18)	15.85	142	a2	1-MN	303557	1590
19)	18.45	156	a3	2-EN	44545	219
20)	18.57	156	a3	1-EN	17108	84
21)	18.82	156	a3	2.6+2.7-DMN	272864	1340
22)	19.29	156	a3	1.3+1.7-DMN	304240	1494
23)	19.41	156	a3	1.6-DMN	318656	1565
24)	19.88	156	a3	2.3+1.4-DMN	121476	597
25)	19.97	156	a3	1.5-DMN	79101	388
26)	20.34	156	a3	1.2-DMN	46065	226
27)	22.19	170	a4	C3-N-1	21523	107
28)	22.38	170	a4	C3-N-2	28579	143
29)	22.52	170	a4	1.3.7-TMN	125747	628
30)	22.66	170	a4	1.3.6-TMN	186465	931
31)	23.14	170	a4	1.3.5+1.4.6-TMN	135569	677
32)	23.22	170	a4	2.3.6-TMN	135287	676
33)	23.63	170	a4	1.6.7+1.2.7-TMN	91031	455
34)	23.68	170	a4	1.2.6-TMN	57545	287
35)	24.11	170	a4	1.2.4-TMN	13459	67
36)	24.32	170	a4	1.2.5-TMN	52265	261
<b>Biphenyls:</b>						
37)	18.00	154	a5	BP	140651	484
38)	21.30	168	a5	3-MBP	191492	659
39)	21.56	168	a5	4-MBP	80311	276
40)	21.61	182	a4	2.3'-DMBP	4440	22
41)	21.81	182	a4	2.5-DMBP	2594	13
42)	21.98	182	a4	2.4+2.4'-DMBP	5147	26
43)	22.61	182	a4	2.3-DMBP	13319	67
44)	23.99	182	a4	3-EBP	14913	74
45)	24.32	182	a4	3.5-DMBP	30533	152
46)	24.42	182	a4	3.3'-DMBP	74596	373
47)	24.53	182	a4	4-EBP	5956	30
48)	24.73	182	a4	3.4'-DMBP	70755	353
49)	24.93	182	a4	4.4'-DMBP	15681	78
50)	25.49	182	a4	3.4-DMBP	30895	154

**Aromatic hydrocarbons**  
GC/MS detection HP-6890/5973  
**Compound data**



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **A2128\_50.D**  
Sample name: **25/7-5 2128\_50m aro**  
Data File Path: **C:\HPCHEM\1\DATA\ISA315H3D\**  
Misc. info.:  
  
Vial no.: **19**  
Method: **MSD\_A\_D**  
Operator:  
Date: **Fri Nov 14 22:12:54 1997**  
  
Response curve:  $y = ax+b$   
Response factor groups: a1...a11, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Dibenzofuranes:</b>						
51)	22.17	168	a5	DBF	28233	97
52)	25.26	182	a4	MDBF-1	40901	204
53)	25.63	182	a4	MDBF-2	32558	163
54)	25.92	182	a4	MDBF-3	23768	119
<b>Fluorenes:</b>						
55)	24.15	166	a6	F	109540	457
56)	27.44	180	a6	C1-F-1	45596	190
57)	27.63	180	a6	C1-F-2	113715	475
58)	27.92	180	a6	1-MF	20947	87
<b>Dibenzothiophenes:</b>						
60)	28.85	184	a7	DBT	34901	24
61)	31.47	198	a7	4-MDBT	54667	38
62)	31.99	198	a7	3+2-MDBT	14733	10
63)	32.57	198	a7	1-MDBT	10579	7
<b>Phenanthrenes:</b>						
64)	29.60	178	a8	P	276157	554
65)	32.53	192	a9	3-MP	114281	269
66)	32.68	192	a9	2-MP	136178	320
67)	33.16	192	a9	9-MP	159751	376
68)	33.29	192	a9	1-MP	137672	324
69)	35.25	206	a10	2EP+9EP+3.6-DMP	23224	52
70)	35.46	206	a10	1EP	38044	86
71)	35.56	206	a10	2.6+2.7+3.5-DMP	22347	50
72)	35.93	206	a10	1.3+2.10+3.9+3.10-DMP	126051	284
73)	36.07	206	a10	1.6+2.5+2.9-DMP	76953	173
74)	36.20	206	a10	1.7-DMP	65593	148
75)	36.35	206	a10	2.3-DMP	21602	49
76)	36.46	206	a10	1.9+4.9+4.10-DMP	42607	96
77)	36.75	206	a10	1.8-DMP	16126	36
<b>Retene:</b>						
78)	40.06	219	a8	Retene	10385	21
<b>Triaromatic steroids:</b>						
80)	44.52	231	a11	20TA	4960	3
81)	46.40	231	a11	21TA	4748	3
82)	53.35	231	a11	S26TA	1857	1
83)	54.55	231	a11	R26TA/S27TA	5583	4
84)	55.53	231	a11	S28TA	3178	2
85)	56.04	231	a11	R27TA	2588	2
86)	57.26	231	a11	R28TA	3353	2

**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: A2126\_7.D  
 Sample name: 25/7-5 2126.7m ARO  
 Data File Path: C:\HPCHEM\1\DATA\ELIN2\  
 Misc. info.:  
 Vial no.: 12  
 Method: MSD\_A\_D  
 Operator:  
 Date: Thu Dec 04 17:22:45 1997

**Aromatic HC ratios, heights and amounts**

		Height	Amount
Naphthalene	Naphthalene	619810	1300
C1 Naphthanes	Sum C1 Naphthanes	2488867	3677
C2 Naphthanes	Sum C2 Naphthanes	3307323	4582
C3 Naphthanes	Sum C3 Naphthanes	2135415	3008
Phenanthrene	Phenanthrene	689467	394
C1 Phenanthrenes	Sum C1 Phenanthrenes	1421828	954
C2 Phenanthrenes	Sum C2 Phenanthrenes	1136563	730
$3/2 \cdot (3MP+2MP)/(P+9MP+1MP)$	MPI1	0.7	0.7
$(3MP+2MP)/(3MP+2MP+9MP+1MP)$	F1	0.5	0.5
$2MP/(3MP+2MP+9MP+1MP)$	F2	0.3	0.3
(2.6+2.7)DMN/1.5DMN	DNR	3.5	3.5
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	44.1	44.1
DBT/P	DBT/P	0.1	0.0
F/P	F/P	0.4	0.8
BP/1.6DMN	BP/1.6DMN	0.5	0.3
2MN/1MN	2MN/1MN	1.5	1.5
2EN/1EN	2EN/1EN	2.6	2.6
4MDBT/1MDBT	4MDBT/1MDBT	5.0	5.0

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Internal standard (if added):</b>						
14)	11.60	136		d8N	13353	58
16)	21.05	164		d10BP	17379	56
59)	29.43	188		d10P	36305	58
79)	44.91	240		d12C	25531	58
<b>Aryl isoprenoids:</b>						
1)	20.58	133	0	C13AI	3597	
2)	22.36	133	0	C14AI	1865	
3)	26.66	133	0	C15AI	1728	
4)	29.03	133	0	C16AI	1961	
5)	30.95	133	0	C17AI	1306	
6)	34.02	133	0	C18AI	1601	
7)	35.06	133	0	C19AI	514	
8)	38.03	133	0	C20AI	920	
9)	40.02	133	0	C21AI	110	
10)	42.96	133	0	C22AI	1326	
11)	45.03	133	0	C23AI	800	
12)	56.02	133	0	C30AI	176	
13)	56.99	133	0	C31AI	234	
<b>Naphthalenes:</b>						
15)	11.69	128	a1	N	136788	541
17)	15.30	142	a2	2-MN	514679	1564
18)	15.85	142	a2	1-MN	383415	1165
19)	18.44	156	a3	2-EN	39853	114
20)	18.56	156	a3	1-EN	17674	50
21)	18.81	156	a3	2.6+2.7-DMN	214377	611
22)	19.28	156	a3	1.3+1.7-DMN	287974	820
23)	19.40	156	a3	1.6-DMN	290193	827
24)	19.87	156	a3	2.3+1.4-DMN	118464	338
25)	19.97	156	a3	1.5-DMN	89104	254
26)	20.32	156	a3	1.2-DMN	49973	142
27)	22.19	170	a4	C3-N-1	17244	50
28)	22.37	170	a4	C3-N-2	21892	63
29)	22.50	170	a4	1.3.7-TMN	88231	256
30)	22.65	170	a4	1.3.6-TMN	139374	404
31)	23.14	170	a4	1.3.5+1.4.6-TMN	135701	393
32)	23.20	170	a4	2.3.6-TMN	91107	264
33)	23.62	170	a4	1.6.7+1.2.7-TMN	79483	230
34)	23.67	170	a4	1.2.6-TMN	49854	144
35)	24.10	170	a4	1.2.4-TMN	13889	40
36)	24.31	170	a4	1.2.5-TMN	53922	156
<b>Biphenyls:</b>						
37)	18.00	154	a5	BP	158629	317
38)	21.29	168	a5	3-MBP	135487	270
39)	21.55	168	a5	4-MBP	55669	111
40)	21.60	182	a4	2.3'-DMBP	5418	16
41)	21.80	182	a4	2.5-DMBP	2285	7
42)	21.98	182	a4	2.4+2.4'-DMBP	5106	15
43)	22.60	182	a4	2.3-DMBP	10519	30
44)	23.99	182	a4	3-EBP	8756	25
45)	24.31	182	a4	3.5-DMBP	14327	42
46)	24.41	182	a4	3.3'-DMBP	39526	115
47)	24.52	182	a4	4-EBP	3547	10
48)	24.70	182	a4	3.4'-DMBP	34027	99
49)	24.92	182	a4	4.4'-DMBP	7341	21
50)	25.46	182	a4	3.4-DMBP	16787	49

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: A2119\_10.D  
Sample name: 25/7-5 2119\_10m aro  
Data File Path: C:\HPCHEM\1\DATA\ISA315H3D\  
Misc. info.:  
Vial no.: 18  
Method: MSD\_A\_D  
Operator:  
Date: Fri Nov 14 20:44:14 1997  
Response curve:  $y = ax + b$   
Response factor groups: a1...a11, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Dibenzofuranes:</b>						
51)	22.17	168	a5	DBF	19639	39
52)	25.25	182	a4	MDBF-1	24190	70
53)	25.62	182	a4	MDBF-2	13623	39
54)	25.91	182	a4	MDBF-3	15111	44
<b>Fluorenes:</b>						
55)	24.13	166	a6	F	52442	127
56)	27.41	180	a6	C1-F-1	15778	38
57)	27.60	180	a6	C1-F-2	59459	144
58)	27.89	180	a6	1-MF	9463	23
<b>Dibenzothiophenes:</b>						
60)	28.83	184	a7	DBT	28433	13
61)	31.45	198	a7	4-MDBT	52973	25
62)	31.97	198	a7	3+2-MDBT	11204	5
63)	32.55	198	a7	1-MDBT	11114	5
<b>Phenanthrenes:</b>						
64)	29.56	178	a8	P	149549	199
65)	32.50	192	a9	3-MP	47906	75
66)	32.63	192	a9	2-MP	57651	90
67)	33.13	192	a9	9-MP	90047	141
68)	33.26	192	a9	1-MP	75158	118
69)	35.22	206	a10	2EP+9EP+3.6-DMP	9314	14
70)	35.45	206	a10	1EP	13743	21
71)	35.55	206	a10	2.6+2.7+3.5-DMP	7675	11
72)	35.90	206	a10	1.3+2.10+3.9+3.10-DMP	67935	102
73)	36.04	206	a10	1.6+2.5+2.9-DMP	37733	56
74)	36.18	206	a10	1.7-DMP	32679	49
75)	36.32	206	a10	2.3-DMP	9263	14
76)	36.44	206	a10	1.9+4.9+4.10-DMP	24244	36
77)	36.73	206	a10	1.8-DMP	9760	15
<b>Retene:</b>						
78)	40.05	219	a8	Retene	13564	18
<b>Triaromatic steroids:</b>						
80)	44.51	231	a11	20TA	8592	4
81)	46.38	231	a11	21TA	10299	5
82)	53.35	231	a11	S26TA	4518	2
83)	54.55	231	a11	R26TA/S27TA	14003	7
84)	55.54	231	a11	S28TA	7043	3
85)	56.05	231	a11	R27TA	7032	3
86)	57.27	231	a11	R28TA	7543	4

**Aromatic hydrocarbons**  
 GC/MS detection HP-6890/5973  
 Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
 Petroleum Geochemistry Laboratories

Data file name: A2117\_95.D  
 Sample name: 25/7-5 2117.95m aro  
 Data File Path: C:\HPCHEM\1\DATA\SA315H3D\  
 Misc. info.:  
 Vial no.: 17  
 Method: MSD\_A\_D  
 Operator:  
 Date: Fri Nov 14 19:15:30 1997

Aromatic HC ratios, heights and amounts		Height	Amount
Naphthalene	Naphthalene	47376	273
C1 Naphthanes	Sum C1 Naphthanes	488304	1931
C2 Naphthanes	Sum C2 Naphthanes	849697	3152
C3 Naphthanes	Sum C3 Naphthanes	627589	2367
Phenanthrene	Phenanthrene	131802	197
C1 Phenanthrenes	Sum C1 Phenanthrenes	255109	448
C2 Phenanthrenes	Sum C2 Phenanthrenes	229219	385
$3/2 \cdot (3MP+2MP)/(P+9MP+1MP)$	MPI1	0.5	0.6
$(3MP+2MP)/(3MP+2MP+9MP+1MP)$	F1	0.4	0.4
$2MP/(3MP+2MP+9MP+1MP)$	F2	0.2	0.2
$(2.6+2.7)DMN/1.5DMN$	DNR	2.6	2.6
$100 \cdot 20TA/(20TA+S28TA+R28TA)$	%-TAS'n	36.2	36.2
DBT/P	DBT/P	0.2	0.1
F/P	F/P	0.3	0.7
BP/1.6DMN	BP/1.6DMN	0.4	0.3
2MN/1MN	2MN/1MN	1.3	1.3
2EN/1EN	2EN/1EN	2.2	2.2
4MDBT/1MDBT	4MDBT/1MDBT	5.4	5.4



**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

**Compound data**



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **A2116.D**  
 Sample name: **25/7-5 2116m ARO**  
 Data File Path: **C:\HPCHEM\1\DATA\ELIN2\**  
 Misc. info.:  
 Vial no.: **11**  
 Method: **MSD\_A\_D**  
 Operator:  
 Date: **Thu Dec 04 15:54:05 1997**  
 Response curve:  $y = ax+b$   
 Response factor groups: a1...a11, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
						ng/mg
<b>Internal standard (if added):</b>						
14)	11.56	136		d8N	17782	51
16)	21.00	164		d10BP	21502	49
59)	29.36	188		d10P	53255	51
79)	44.81	240		d12C	44034	51

<b>Aryl isoprenoids:</b>						
1)	20.53	133	0	C13AI	6741	
2)	22.36	133	0	C14AI	4089	
3)	26.74	133	0	C15AI	2313	
4)	28.97	133	0	C16AI	3392	
5)	31.12	133	0	C17AI	3914	
6)	34.00	133	0	C18AI	2637	
7)	35.00	133	0	C19AI	797	
8)	37.96	133	0	C20AI	1356	
9)	39.96	133	0	C21AI	247	
10)	43.01	133	0	C22AI	1610	
11)	45.03	133	0	C23AI	882	
12)	55.97	133	0	C30AI	727	
13)	57.02	133	0	C31AI	275	

<b>Naphthalenes:</b>						
15)	11.65	128	a1	N	414626	1087
17)	15.24	142	a2	2-MN	804554	1745
18)	15.77	142	a2	1-MN	551673	1196
19)	18.39	156	a3	2-EN	57072	116
20)	18.50	156	a3	1-EN	25125	51
21)	18.73	156	a3	2.6+2.7-DMN	276964	563
22)	19.20	156	a3	1.3+1.7-DMN	429783	874
23)	19.31	156	a3	1.6-DMN	354856	722
24)	19.79	156	a3	2.3+1.4-DMN	146634	298
25)	19.90	156	a3	1.5-DMN	98201	200
26)	20.27	156	a3	1.2-DMN	57545	117
27)	22.13	170	a4	C3-N-1	21837	45
28)	22.32	170	a4	C3-N-2	30957	64
29)	22.44	170	a4	1.3.7-TMN	128042	265
30)	22.58	170	a4	1.3.6-TMN	180432	373
31)	23.06	170	a4	1.3.5+1.4.6-TMN	175037	362
32)	23.12	170	a4	2.3.6-TMN	105291	218
33)	23.54	170	a4	1.6.7+1.2.7-TMN	95529	198
34)	23.61	170	a4	1.2.6-TMN	55747	115
35)	24.04	170	a4	1.2.4-TMN	17486	36
36)	24.24	170	a4	1.2.5-TMN	61167	126

<b>Biphenyls:</b>						
37)	17.94	154	a5	BP	198092	282
38)	21.23	168	a5	3-MBP	179562	256
39)	21.48	168	a5	4-MBP	68384	97
40)	21.54	182	a4	2.3'-DMBP	6433	13
41)	21.75	182	a4	2.5'-DMBP	3168	7
42)	21.91	182	a4	2.4+2.4'-DMBP	6406	13
43)	22.54	182	a4	2.3'-DMBP	12674	26
44)	23.92	182	a4	3-EBP	12331	26
45)	24.24	182	a4	3.5'-DMBP	20224	42
46)	24.34	182	a4	3.3'-DMBP	59136	122
47)	24.46	182	a4	4-EBP	4863	10
48)	24.64	182	a4	3.4'-DMBP	48469	100
49)	24.85	182	a4	4.4'-DMBP	10090	21
50)	25.41	182	a4	3.4'-DMBP	22639	47

#	Rt.min.	m/z	Rf.	Name	Height	Amount
						ng/mg

<b>Dibenzofuranes:</b>						
51)	22.10	168	a5	DBF	21410	31
52)	25.18	182	a4	MDBF-1	29108	60
53)	25.55	182	a4	MDBF-2	16343	34
54)	25.84	182	a4	MDBF-3	16806	35

<b>Fluorenes:</b>						
55)	24.06	166	a6	F	59451	103
56)	27.35	180	a6	C1-F-1	21171	37
57)	27.52	180	a6	C1-F-2	71715	124
58)	27.83	180	a6	1-MF	12471	22

<b>Dibenzothiophenes:</b>						
60)	28.76	184	a7	DBT	26179	7
61)	31.37	198	a7	4-MDBT	54460	15
62)	31.90	198	a7	3+2-MDBT	10790	3
63)	32.47	198	a7	1-MDBT	10342	3

<b>Phenanthrenes:</b>						
64)	29.48	178	a8	P	166082	133
65)	32.42	192	a9	3-MP	67399	63
66)	32.56	192	a9	2-MP	71726	67
67)	33.04	192	a9	9-MP	129802	122
68)	33.17	192	a9	1-MP	96185	90
69)	35.15	206	a10	2EP+9EP+3.6-DMP	14496	13
70)	35.37	206	a10	1EP	21480	19
71)	35.46	206	a10	2.6+2.7+3.5-DMP	12437	11
72)	35.81	206	a10	1.3+2.10+3.9+3.10-DMP	109283	98
73)	35.95	206	a10	1.6+2.5+2.9-DMP	58323	52
74)	36.09	206	a10	1.7-DMP	49775	45
75)	36.24	206	a10	2.3-DMP	14260	13
76)	36.35	206	a10	1.9+4.9+4.10-DMP	37361	34
77)	36.65	206	a10	1.8-DMP	15666	14

<b>Retene:</b>						
78)	39.96	219	a8	Retene	18823	15

<b>Triaromatic steroids:</b>						
80)	44.43	231	a11	20TA	11332	3
81)	46.30	231	a11	21TA	14315	4
82)	53.26	231	a11	S26TA	5917	1
83)	54.46	231	a11	R26TA/S27TA	18584	5
84)	55.46	231	a11	S28TA	9597	2
85)	55.97	231	a11	R27TA	9039	2
86)	57.18	231	a11	R28TA	10109	3

**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

Ratios, from heights and amounts

Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **A2052.D**  
 Sample name: **25/7-5 2052m aro**  
 Data File Path: **K:\CAM\GEOKJEM\HPCHEM\W95\DATA\ISA351110\**  
 Misc. info.:  
 Vial no.: **22**  
 Method: **MSD\_A\_D**  
 Operator:  
 Date: **Fri Oct 31 04:18:33 1997**

**Aromatic HC ratios, heights and amounts**

		Height	Amount
Naphthalene	Naphthalene	274817	1508
C1 Naphthanes	Sum C1 Naphthanes	905570	4684
C2 Naphthanes	Sum C2 Naphthanes	1122628	5446
C3 Naphthanes	Sum C3 Naphthanes	693275	3420
Phenanthrene	Phenanthrene	196401	448
C1 Phenanthrenes	Sum C1 Phenanthrenes	374003	1002
C2 Phenanthrenes	Sum C2 Phenanthrenes	290329	744
3/2*(3MP+2MP)/(P+9MP+1MP)	MPI1	0.7	0.7
(3MP+2MP)/(3MP+2MP+9MP+1MP)	F1	0.5	0.5
2MP/(3MP+2MP+9MP+1MP)	F2	0.3	0.3
(2.6+2.7)DMN/1.5DMN	DNR	3.3	3.3
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	44.2	44.2
DBT/P	DBT/P	0.1	0.0
F/P	F/P	0.4	0.8
BP/1.6DMN	BP/1.6DMN	0.5	0.3
2MN/1MN	2MN/1MN	1.4	1.4
2EN/1EN	2EN/1EN	2.7	2.7
4MDBT/1MDBT	4MDBT/1MDBT	5.4	5.4

**Aromatic hydrocarbons**

GC/MS detection HP-6890/5973

**Ratios, from heights and amounts**



Norsk Hydro E&P Research Centre, Bergen, Norway  
 Petroleum Geochemistry Laboratories

Data file name: **A2133\_75.D**  
 Sample name: **25/7-5 2133\_75m aro**  
 Data File Path: **C:\HPCHEM\1\DATA\SA315H3D\**  
 Misc. info.:  
  
 Vial no.: **21**  
 Method: **MSD\_A\_D**  
 Operator:  
 Date: **Sat Nov 15 01:10:14 1997**

**Aromatic HC ratios, heights and amounts**

		Height	Amount
Naphthalene	Naphthalene	51549	335
C1 Naphthanes	Sum C1 Naphthanes	522714	2672
C2 Naphthanes	Sum C2 Naphthanes	972054	4660
C3 Naphthanes	Sum C3 Naphthanes	695788	3392
Phenanthrene	Phenanthrene	238999	496
C1 Phenanthrenes	Sum C1 Phenanthrenes	451524	1100
C2 Phenanthrenes	Sum C2 Phenanthrenes	355217	828
$3/2 \cdot (3MP+2MP)/(P+9MP+1MP)$	MPI1	0.6	0.7
$(3MP+2MP)/(3MP+2MP+9MP+1MP)$	F1	0.5	0.5
$2MP/(3MP+2MP+9MP+1MP)$	F2	0.3	0.3
$(2.6+2.7)DMN/1.5DMN$	DNR	3.2	3.2
$100 \cdot 20TA/(20TA+S28TA+R28TA)$	%-TAS'n	44.7	44.7
DBT/P	DBT/P	0.1	0.0
F/P	F/P	0.4	0.8
BP/1.6DMN	BP/1.6DMN	0.4	0.3
2MN/1MN	2MN/1MN	1.5	1.5
2EN/1EN	2EN/1EN	2.5	2.5
4MDBT/1MDBT	4MDBT/1MDBT	5.0	5.0

AROMATIC HYDROCARBONS

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
Int.Std.(if added):					
14	11.50	136	d8 N	5943	29
16	17.66	164	d10BP	12690	30
59	29.05	188	d10 P	23574	29
79	44.26	240	d12 C	16472	29
<b>ARYL ISOPRENOIDS</b>					
1	18.44	133	C13 AI	11877	
2	20.49	133	C14 AI	5885	
3	23.74	133	C15 AI	12148	
4	26.26	133	C16 AI	3656	
5	28.77	133	C17 AI	2914	
6	31.47	133	C18 AI	2001	
7	32.93	133	C19 AI	1712	
8	34.33	133	C20 AI	5410	
9	35.49	133	C21 AI	1434	
10	37.54	133	C22 AI	1410	
11	39.08	133	C23 AI	606	
12	52.84	133	C30 AI	203	
13	54.57	133	C31 AI	141	
<b>NAPHTHALENES</b>					
15	11.58	128	N	391944	1887
17	15.17	142	2-MN	750771	2410
18	15.64	142	1-MN	85280	274
19	18.23	156	2-EN	75340	214
20	18.36	156	1-EN	33415	95
21	18.62	156	2,6+2,7-DMN	367604	1043
22	19.07	156	1,3+1,7-DMN	337112	957
23	19.15	156	1,6-DMN	120032	341
24	19.64	156	2,3+1,4-DMN	187914	533
25	19.74	156	1,5-DMN	139648	396
26	20.09	156	1,2-DMN	82576	234
31	21.75	170	C3-N	39272	112
32	22.12	170	C3-N	46649	133
33	22.25	170	1,3,7-TMN	199792	569
34	22.39	170	1,3,6-TMN	277824	791
35	22.86	170	1,3,5+1,4,6-TMN	220928	629
36	22.93	170	2,3,6-TMN	200768	572
37	23.33	170	1,6,7+1,2,7-TMN	139136	396
38	23.40	170	1,2,6-TMN	93160	265
39	23.81	170	1,2,4-TMN	24424	70
40	24.00	170	1,2,5-TMN	78840	225
<b>BIPHENYLS</b>					
27	17.78	154	BP	208329	417
28	21.06	168	3-MBP	278575	558
29	21.30	168	4-MBP	127938	256
41	21.35	182	2,3'-DMBP	10015	29
42	21.56	182	2,5-DMBP	5705	16
43	21.72	182	2,4 & 2,4'-DMBP	11248	32
44	22.34	182	2,3-DMBP	27394	78
45	23.69	182	3-EBP	26828	76
46	24.02	182	3,5-DMBP	51872	148
47	24.13	182	3,3'-DMBP	133248	379
48	24.23	182	4-EBP	11492	33
49	24.42	182	3,4'-DMBP	108936	310
50	24.61	182	4,4'-DMBP	26016	74
52	25.16	182	3,4-DMBP	53876	152

File name (sample):	24 9 5A.D
File path:	K:\CAPMSDARKIV\HC_AROKV24_25A\
Misc information:	
Sample name:	24/9-5, 0 m, ARO
Operator:	Lotte
Method:	MSD_A_C
Date:	#VALUE!

P#	Rt	Ion m/z	Compound	Height	Amount ng/mg
<b>DIBENZOFURANES</b>					
30	21.91	168	DBF	46344	93
51	24.94	182	MDBF	72856	207
53	25.30	182	MDBF	55352	158
54	25.60	182	MDBF	40824	116
<b>FLUORENES</b>					
55	23.85	166	F	127503	302
56	27.02	180	C1-F	50064	119
57	27.26	180	C1-F	153088	375
58	27.56	180	1-MF	28312	67
<b>DIBENZOTHIOPHENES</b>					
60	28.46	184	DBT	61120	19
61	31.04	198	4-MDBT	110224	34
62	31.54	198	3+2-MDBT	30688	9
63	32.13	198	1-MDBT	22280	7
<b>PHENANTHRENES</b>					
64	29.18	178	P	333760	317
65	32.08	192	3-MP	164864	168
66	32.22	192	2-MP	199052	203
67	32.70	192	9-MP	240704	245
68	32.82	192	1-MP	203968	208
70	34.75	206	2EP+9EP+3,6-DMP	34272	34
71	34.97	206	1EP	56576	56
72	35.08	206	2,6+2,7+3,5-DMP	36448	36
73	35.44	206	1,3+2,10+3,9+3,10-DMP	193152	191
74	35.56	206	1,6+2,5+2,9-DMP	116760	115
75	35.70	206	1,7-DMP	102232	101
76	35.84	206	2,3-DMP	37812	37
77	35.94	206	1,9+4,9+4,10-DMP	68256	67
78	36.24	206	1,8-DMP	29545	29
<b>RETENE</b>					
69	39.50	219	Retene	18780	18
<b>TRIAROMATIC STEROIDS</b>					
80	43.88	231	20TA	10918	3
81	45.72	231	21TA	9739	3
82	52.58	231	S26TA	3242	1
83	53.76	231	R26TA/S27TA	9342	2
84	54.73	231	S28TA	4887	1
85	55.21	231	R27TA	3878	1
86	56.43	231	R28TA	5002	1

AROMATIC HYDROCARBONS

File name (sample): 24_9_5A.D	Sample name: 24/9-5, 0 m, ARO
File path: K:\CAP\MSDARKIV\HC_ARO\KV24_25A\	Operator: Lotte
Misc information:	Method: MSD_A_C
	Date analyzed: #VALUE!

Ratios based on heights or amounts (ng/mg)	Name	Heights:	Amounts (ng/mg):
Naphthalene	Naphthalene	391944	1887
C1 Naphthalenes	Sum C1-Naph.	836051	2684
C2 Naphthalenes	Sum C2-Naph.	1343641	3813
C3 Naphthalenes	Sum C3-Naph.	1320793	3762
Phenanthrene	Phenanthrene	333760	317
C1 Phenanthrenes	Sum C1-Phen.	808588	823
C2 Phenanthrenes	Sum C2-Phen.	675053	667
3/2*(3MP+2MP)/(P+9MP+1MP)	MPI1	0.7	0.7
(3MP+2MP)/(3MP+2MP+9MP+1MP)	F1	0.5	0.5
2MP/(3MP+2MP+9MP+1MP)	F2	0.2	0.2
(2,6+2,7)DMN/1,5DMN	DNR	2.6	2.6
100*20TA/(20TA+S28TA+R28TA)	%-TAS'n	52	52
DBT/P	DBT/P	0.2	0.1
F/P	F/P	0.4	1.0
BP/1,6DMN	BP/1,6DMN	1.7	1.2
2MN/1MN	2MN/1MN	8.8	8.8
2EN/1EN	2EN/1EN	2.3	2.3
4MDBT/1MDBT	4MDBT/1MDBT	4.9	4.9

Aromatic hydrocarbon parameters, calculated from amounts, ng/mg EOM/oil

