



Research Centre documentation

Norsk Hydro a.s Bergen

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6. Distribution J.H. Augustson, HA (8) Arkiv, F-BG (2) A. Steen		7. Title Data report on Biomarkers, Well 6507/2-3	
8. Summary/Conclusion/Recommendation  Data on saturated and aromatic biomarkers of selected samples in Well 6507/2-3 are reported.  Contents: Analytical program _____ page: 2 Experimental, GC/MSD-SAT _____: 3 GC/MSD-ARO _____: 6 GC/MS-MRM1-SAT _____: 9 Results _____: 12  Semi-quantitative data are reported in samples which contain internal standards. Low molecular compounds, especially aromatic compounds, are affected by evaporation in the process of establishing %-weight of group type fractions.			
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## ANALYTICAL PROGRAM

The samples are prepared by either the Geochem Group, Chester, or by Hydro Research Centre, Bergen. All samples are analysed by GC/MS at Hydro Research Centre, Bergen. The analysed samples and analytical quality are listed below. The samples which are labeled 'BIOM..' represent the internal lab reference sample. This sample is included in all analytical series and reflects the analytical repeatability. The results are classified as OK, WEAK (but acceptable) or ND (Not Detectable)

Sample	Type	Workup	MSD_SAT	MSD_ARO	MRM1
2865.50	COCH	Geochem9291	OK		
2871.50	COCH	Geochem9291	OK		
2871.75	COCH	Geochem9291	OK	OK	OK
2876.75	COCH	Geochem9291	OK		
2877.25	COCH	Geochem9291	OK	OK	OK
2878.00	COCH	Geochem9291	OK		
2878.50	COCH	Geochem9291	OK		
3178.50	COCH	Geochem9291	OK		
3239.00	COCH	Geochem9291	OK		
3259.08	COCH	Geochem9291	OK		
3259.25	COCH	Geochem9291	OK		
3260.15	COCH	Geochem9291	OK		
3260.34	COCH	Geochem9291	OK	OK	OK
3260.50	COCH	Geochem9291	OK		
3260.75	COCH	Geochem9291	OK	OK	OK
3260.90	COCH	Geochem9291	OK		
3271.50	COCH	Geochem9291	OK		
3738.00	COCH	Geochem9291	OK		
3835.00	DC	Norsk hydro	OK		
3845.00	DC	Norsk hydro	OK	OK	OK
3855.00	DC	Norsk hydro	OK	OK	OK
3865.00	DC	Norsk hydro	OK		
3875.00	DC	Norsk hydro	OK		
3885.00	DC	Norsk hydro	OK	OK	OK
3895.00	DC	Norsk hydro	OK		
3905.00	DC	Norsk hydro	OK		
3915.00	DC	Norsk hydro	OK	OK	OK
3925.00	DC	Norsk hydro	OK		
3935.00	DC	Norsk hydro	OK		
3945.00	DC	Norsk hydro	OK	OK	OK
3955.00	DC	Norsk hydro	OK		
3965.00	DC	Norsk hydro	OK		
3972.00	DC	Norsk hydro	OK	OK	OK
BIOM01	Lab.ref.				
BIOM02	Lab.ref.				
BIOMA1	Lab.ref.				
BIOMA5	Lab.ref.				
BIOMA2	Lab.ref.				
BIOMA3	Lab.ref.				
BIOMA2	Lab.ref.				
BIOMA3	Lab.ref.				

## EXPERIMENTAL: GC/MS saturated biomarkers

Analytical method:	MSD_S_C version June 1993 (Mass Spectrometric Detection Saturated-biomarkers version C)
	Gas chromatographic and linked quadropole Mass Spectrometric (MS) analysis of Saturated biomarkers. And a parallel Flame Ionization Detection (FID) of saturated compounds.
Detected compounds:	<p>Detected pre-selected groups of saturated (SAT)-biomarkers in the saturated group type fraction are listed on the next page.</p> <p>The MS-detected SAT-biomarkers are presented in mass chromatograms (fragmentograms) and normalised to the most abundant compound. Processed peak height data and standard peak ratios are reported.</p> <p>This semi-quantitative presentation is strictly related to the analytical method. The concentration/response ratio is not necessarily comparable between different type of compounds. The quantitative comparison based on the presented biomarker distributions are restricted.</p>
Method description:	<p>The samples are analysed according to the standard lab procedures for SAT-biomarker MS-detection.</p> <p>The analytical conditions are indicated on the following pages.</p> <p>The MS-detection is based on low resolution selected ion recording of a standard selection of common fragment ions. The mass window is approximately 1 mass units.</p>

**Detection parameters for pre-selected, common fragmentation-ions:**

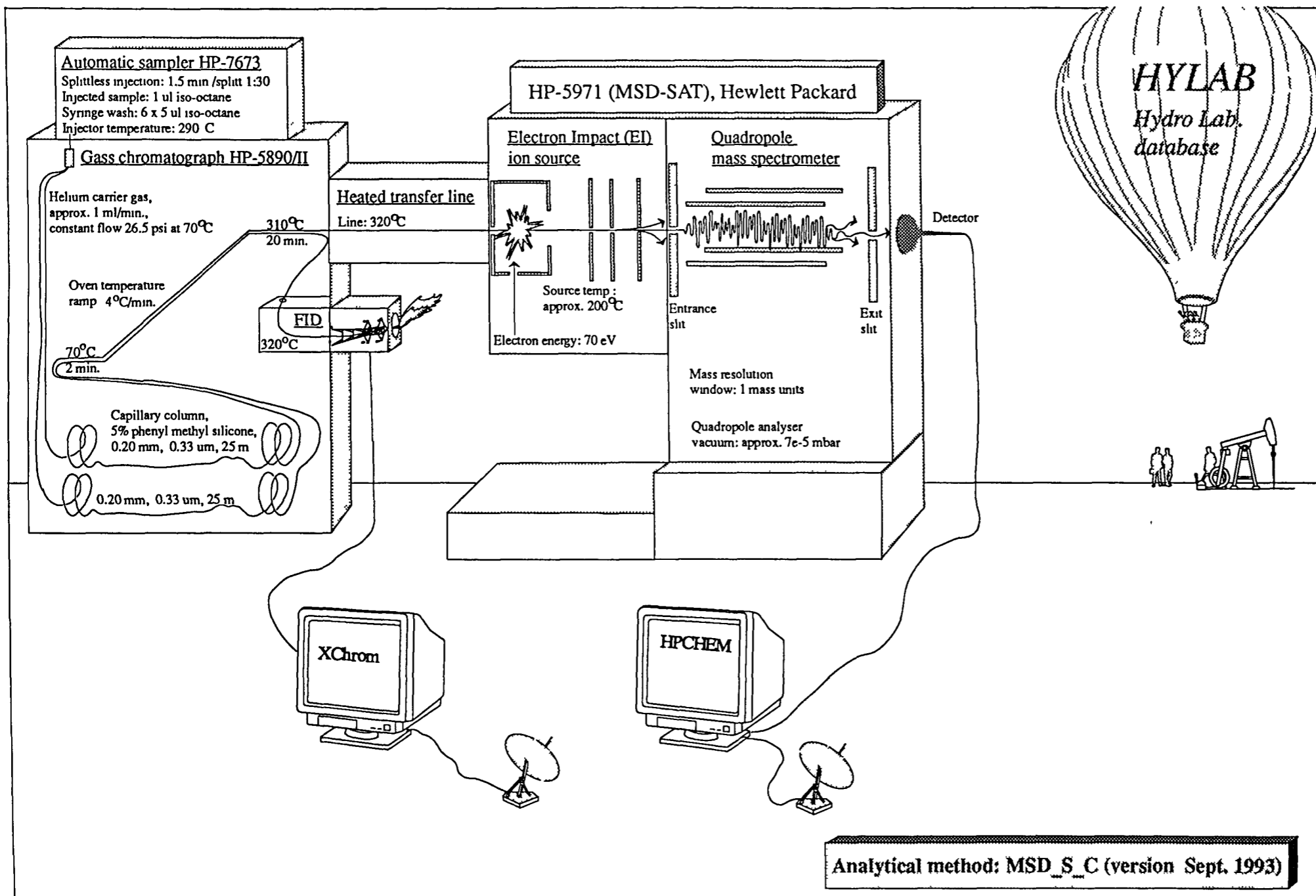
Experiment method: MSD_S_C	Detected retention time interval: 0:10:00 - 0:70:00
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GC/FID	Cycle time: 1 sec		
Splitting (1:1) of the injected sample	Inter-channel time, ms	Common fragment ions, m/z	Channel time, ms
GC/MS			

Detected groups of compounds:

TIC = sum of the signals from all detected ions

1	Alkanes	15	85.1	85
2	Demethylated-terpanes	15	177.2	85
3	Terpanes	15	191.2	85
4	Methylated-terpanes	15	205.5	85
5	Steranes	15	217.2	85
6	Favourized 5 $\alpha$ (H),14 $\beta$ (H),17 $\beta$ (H)-steranes	15	218.2	85
7	Methylated-steranes	15	231.3	85
8	Favourized dia-steranes	15	259.3	85
9	Internal standard 24 $\beta$ $\alpha\alpha$ (m/z 217.2)			



## EXPERIMENTAL: GC/MS aromatic biomarkers

Analytical method:	MSD_ARO1 version March 1994 (Mass Spectrometric Detection Aromatic-biomarkers)
	Gas chromatographic and linked quadropole Mass Spectrometric (MS) analysis of Aromatic biomarkers. And a parallel Flame Ionization Detection (FID) of aromatic compounds.

Detected compounds:	<p>Detected pre-selected groups of aromatic (ARO)-biomarkers in the aromatic group type fraction are listed on the next page.</p> <p>The MS-detected ARO-biomarkers are presented in mass chromatograms (fragmentograms) and normalised to the most abundant compound. Processed peak height data and standard peak ratios are reported.</p> <p>This semi-quantitative presentation is strictly related to the analytical method. The concentration/response ratio is not necessarily comparable between different type of compounds. The quantitative comparison based on the presented biomarker distributions are restricted.</p>
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Method description:	<p>The samples are analysed according to the standard lab procedures for ARO-biomarker MS-detection.</p> <p>The analytical conditions are indicated on the following pages.</p> <p>The MS-detection is based on low resolution selected ion recording of a standard selection of common fragment ions. The mass window is approximately 1 mass units.</p>
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**Detection parameters for pre-selected, common fragmentation-ions:**

Experiment method: MSD_ARO1	Group 1 of 2	Detected retention time interval: 10-34 min.
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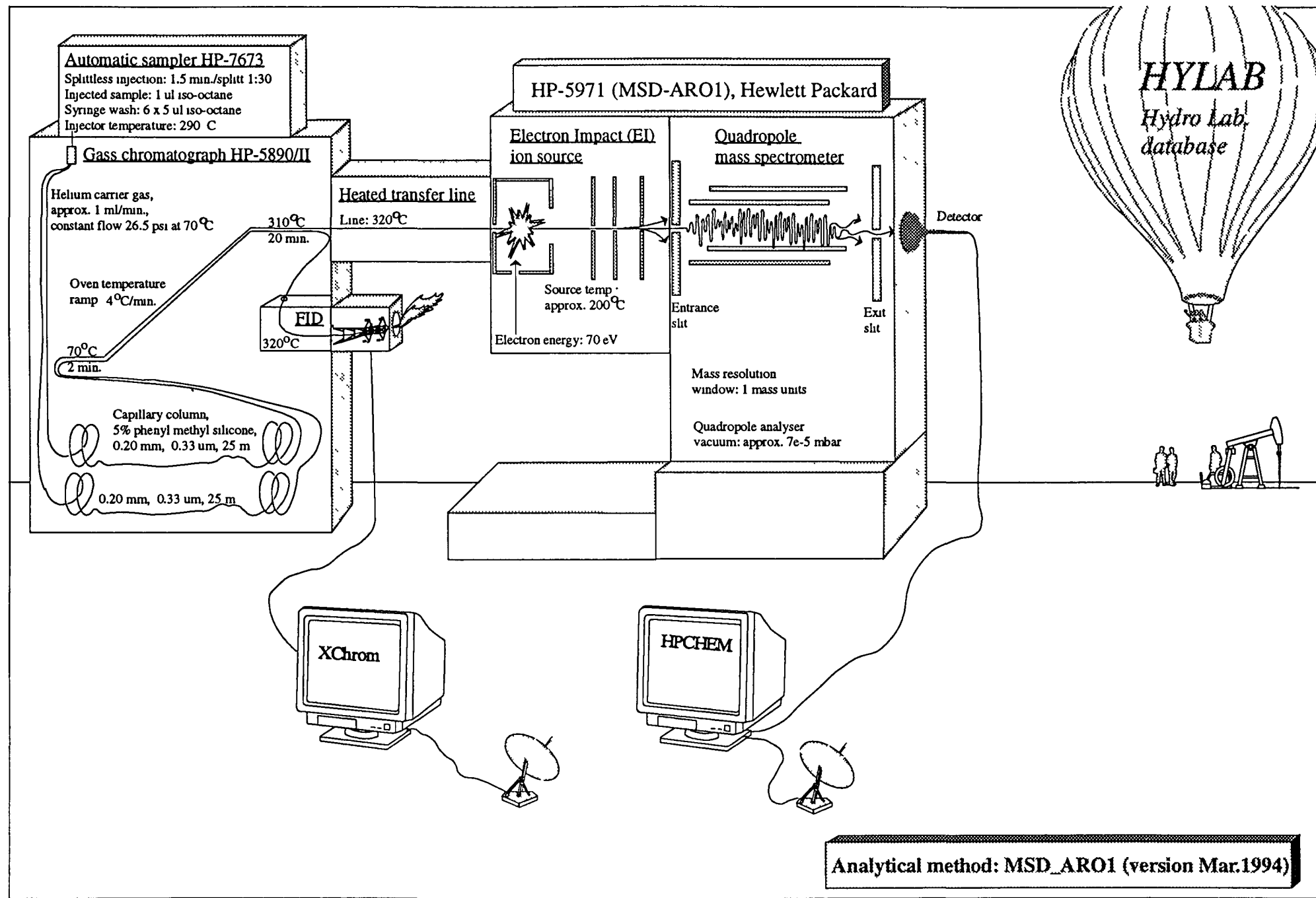
GC/FID	Cycle time: 1 sec		
Splitting (1:1) of the injected sample	Inter- channel time, ms	Common fragment ions, m/z	Channel time, ms
GC/MS			

Detected groups of compounds:

TIC = sum of the signals from all detected ions			
1	Aryl isopernoids	15	133 45
2	Naphtalenes and alkylated naphtalenes	15	128, 142, 156, 170 45
3	Biphenyls and alkylated biphenyls	15	154, 168, 182 45
4	Fluorenes and methyl-fluorenes	15	166, 180 45
5	Dibenzothiophene	15	184 45
6	Phenantrenes and alkylated phenanthrenes	15	178, 192, 45

Experiment method: MSD_ARO1	Group 2 of 2	Detected retention time interval: 34-70 min
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1	Aryl isopernoids	15	133 70
2	Alkylated-dibenzothiophenes	15	, 198, 212 70
3	Alkylated phenanthrenes	15	, 192, 206, 220 70
4	Retene	15	219 70
5	Monoaromatic steroids		253
6	Triaromatic steroids	15	231 70
Internal standards: d8-Naphtalenes			136
d10 Phenanthrenes			188
d12 Crysene			240





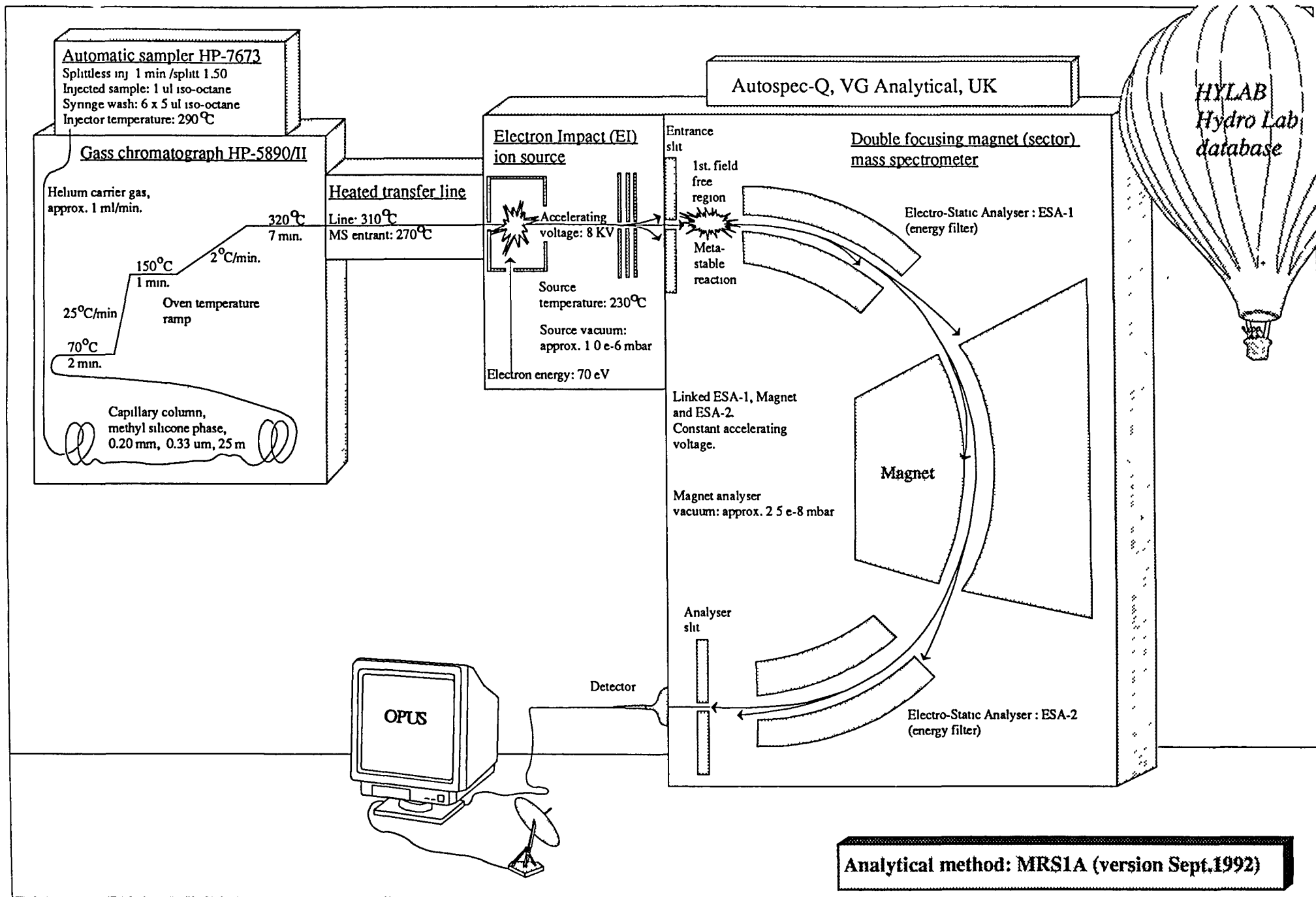
## EXPERIMENTAL: GC/MS-MRM1

Analytical method:	MRS1A version Oct.1993 (Metastable reaction monitoring version-A)
	Gas chromatographic and 1st field-free region metastable reaction monitoring analysis of saturated biomarkers.
Detected compounds:	<p>Detected pre-selected groups of saturated (SAT)-biomarkers in the saturated or mixed saturated/aromatic group type fraction are listed on the next two pages.</p> <p>The relative distribution of the detected SAT-biomarkers are presented in bargraphs as measured peak heights and normalised to the most abundant compound.</p> <p>This semi-quantitative presentation is strictly related to the analytical method. The concentration/response ratio is not necessarily comparable between different type of compounds. A quantitative comparison based on the presented biomarker distributions are restricted.</p> <p>Sample information, tabulated peak data and normalised bargraphs with abbreviation codes and identities of the detected SAT-biomarkers are reported.</p>
Method description:	<p>The analytical parameters are listed on the following pages.</p> <p>The metastable reaction ions which are produced in the 1st field-free region of the double focusing magnetic MS, are detected by pre-selected and linked changes of the ESA/magnet values. A constant accelerating voltage will not give an instrumental mass discrimination.</p> <p>The mass resolution is related to both parent and daughter ions,- as a function of the metastable transition (<math>\text{daughter}^2/\text{parent}</math>). Typically, a detection of C27-steranes (<math>m/z</math> 372--217) will have a significant contribution from the D2-C27-sterane transition (<math>m/z</math> 374--219).</p>

**Detection parameters for pre-selected parent-daughter ion transitions:**

Experiment method: MRS1A (Oct. 1993)		Analytical function: #1 of 2	Detected retention time interval: 0:20:00 - 0:53:50			
Cycle time: 900 ms						
Detected compounds		Inter-channel time, ms	Parent ion, m/z	Metastable transition	Daughter ion, m/z	Channel time, ms
1	C-20 Tricyclic-terpanes	60	276.28		191.18	40
2	C-21 Tricyclic-terpanes	40	290.28		191.18	40
3	C-23 Tricyclic-terpanes	40	318.33		191.18	40
4	C-24 Tricyclic-terpanes	40	332.34		191.18	40
5	C-25 Tricyclic-terpanes	40	346.35		191.18	40
6	C-26 Tricyclic-terpanes	40	360.38		191.18	40
7	C-24 Tetracyclic-terpanes	40	330.33		191.18	40
8	C-21 Steranes	40	288.28		217.2	40
9	C-22 Steranes	40	302.3		217.2	40
10	C-23 Steranes	40	316.31		217.2	40

Experiment method: MRS1A (Oct. 1992)		Analytical function: #2 of 2	Detected retention time interval: 0:54:00 - 1:35:00			
Cycle time: 1300 ms						
Detected compounds		Inter-channel time, ms	Parent ion, m/z	Metastable transition	Daughter ion, m/z	Channel time, ms
1	C-27 Pentacyclic-triterpanes	60	370.38		191.18	40
2	C-28 Pentacyclic-triterpanes	40	384.38		191.18	40
3	C-29 Pentacyclic-triterpanes	40	398.38		191.18	40
4	C-30 Pentacyclic-triterpanes	40	412.41		191.18	40
5	C-31 Pentacyclic-triterpanes	40	426.42		191.18	40
6	C-32 Pentacyclic-triterpanes	40	440.44		191.18	40
7	C-33 Pentacyclic-triterpanes	40	454.45		191.18	40
8	C-34 Pentacyclic-triterpanes	40	468.47		191.18	40
9	C-35 Pentacyclic-triterpanes	40	482.48		191.18	40
10	C-27 Steranes	40	372.38		217.2	40
11	C-28 Steranes	40	386.38		217.2	40
12	C-29 Steranes	40	400.41		217.2	40
13	C-30 Steranes	40	414.42		217.2	40
14	C-27 Mehtyl-steranes	40	372.38		231.21	40
15	C-28 Mehtyl-steranes	40	386.38		231.21	40
16	C-29 Mehtyl-steranes	40	400.41		231.21	40
17	C-30 Mehtyl-steranes	40	414.42		231.21	40



## RESULTS

The data are presented by increasing depths and accordingly:

1. Results from the **Saturated biomarker GC/MS** analysis:  
method: MSD\_S\_C
  - \* MS-detected compounds and annotations.
  - \* Tabulated compound data.
  - \* Compound data, peak ratios and normalized mass chromatograms.
  
2. Results from the **Aromatic biomarker GC/MS** analysis:  
method: MSD\_ARO1
  - \* MS-detected compounds and annotations.
  - \* Tabulated compound data.
  - \* Compound data, peak ratios and normalized mass chromatograms.
  
3. Results from the **Saturated biomarker GC/MS-MRM1** analysis  
method: MRS1A
  - \* Detected compounds and annotations.
  - \* Tabulated peak height data.
  - \* Normalized bargraphs of the SAT-biomarker distributions.

The information on the samples which are prepared by the Geochem Group are reported in:  
Reservoir geochemical data, Well 6507/2-3, report # 94/9291/01/01, Aug. 1994

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## Results from the GC/FID and GC/MS method: MSD\_S\_C

- \* MS-detected compounds and annotations.
- \* Tabulated compound data.
- \* Compound data, peak ratios and normalized mass chromatograms.

**Detected compounds and annotations according to the "Norwegian Industry Guide to Organic Geochemical Analysis, Feb. 1993":**

	Abbrev.	Ion-window, m/z	Identification
Internal standard	24baa	217.2 (-0.3/+0.7)	5b(H),14a(H),17a(H)-cholane

TERPANES:	Abbrev.	Ion-window, m/z	Identification
Tricyclic C19-29:	19/3	191.2 (-0.3/+0.7)	C19H34 tricyclic terpane
	20/3	----- " -----	C20H36 tricyclic terpane
	21/3	----- " -----	C21H38 tricyclic terpane
	23/3	----- " -----	C23H42 tricyclic terpane
	24/3	----- " -----	C24H44 tricyclic terpane
	25/3	----- " -----	C25H46 tricyclic terpane
	26/3R	----- " -----	C26H48 tricyclic terpane (22R)
	26/3S	----- " -----	C26H48 tricyclic terpane (22S)
	28/3R	----- " -----	C28H52 tricyclic terpane (22R)
	28/3S	----- " -----	C28H52 tricyclic terpane (22S)
	29/3R	----- " -----	C29H54 tricyclic terpane (22R)
	29/3S	----- " -----	C29H54 tricyclic terpane (22S)
	24/4	191.2 (-0.3/+0.7)	C24H42 tetracyclic terpane
Pentacyclic C27-30	27Ts	191.2 (-0.3/+0.7)	18a(H)-22,29,30-trisnorhopane
	25nor28ab	177.15 (-0.3/+0.7)	17a(H),21b(H)-25,28,30-trisnorhopane
	27Tm	191.2 (-0.3/+0.7)	17a(H)-22,29,30-trisnorhopane
	27b	----- " -----	17b(H)-22,29,30-trisnorhopane
	25nor29ab	177.15 (-0.3/+0.7)	17a(H),21b(H)-25,30-bisnorhopane
	28ab	191.2 (-0.3/+0.7)	17a(H),21b(H)-28,30-bisnorhopane
	25nor30ab	177.15 (-0.3/+0.7)	17a(H),21b(H)-25-norhopane
	29ab	191.2 (-0.3/+0.7)	17a(H),21b(H)-norhopane
	29Ts	----- " -----	18a(H)-30-neonorhopane
	29ba	----- " -----	17b(H),21a(H)-norhopane
	30D	----- " -----	C30-15a-methyl-17a(H)-27-norhopane
	30ab	----- " -----	17a(H),21b(H)-hopane
	30D13	----- " -----	D <sup>13-17</sup> -hopane
	30ba	----- " -----	17b(H),21a(H)-hopane
	30G	----- " -----	Gammacerane
	31abS	----- " -----	17a(H),21b(H)-homohopane (22S)
	31abR	----- " -----	17a(H),21b(H)-homohopane (22R)
	31ba	----- " -----	17b(H),21a(H)-homohopane
	32abS	----- " -----	17a(H),21b(H)-bishomohopane (22S)

	32abR	———— " ————	17a(H),21b(H)-bishomohopane (22R)
	33abS	———— " ————	17a(H),21b(H)-trishomohopane (22S)
	33abR	———— " ————	17a(H),21b(H)-trishomohopane (22R)
	34abS	———— " ————	17a(H),21b(H)-tetrakishomohopane (22S)
	34abR	———— " ————	17a(H),21b(H)-tetrakishomohopane (22R)
	35abS	———— " ————	17a(H),21b(H)-pentakishomohopane (22S)
	35abR	———— " ————	17a(H),21b(H)-pentakishomohopane (22R)
<b>STERANES:</b>	<b>Abbrev</b>	<b>Detected</b>	<b>Identification</b>
Pregnanes C21-22:	21aa	217.2 (-0.3/+0.7)	C21-5a(H),14a(H),17a(H)-pregnane
	21bb	———— " ————	C21-5a(H),14b(H),17b(H)-pregnane
	22aa	———— " ————	C22-5a(H),14a(H),17a(H)-pregnane
	22bb	———— " ————	C22-5a(H),14b(H),17b(H)-pregnane
Steranes C27-30:	27dbS	217.2 (-0.3/+0.7)	13b(H),17a(H)-diacholestane (20S)
	27dbR	———— " ————	13b(H),17a(H)-diacholestane (20R)
	27bbR	218.2 (-0.3/+0.7)	5a(H),14b(H),17b(H)-cholestane (20R)
	27bbS	———— " ————	5a(H),14b(H),17b(H)-cholestane (20S)
	27aaR	217.2 (-0.3/+0.7)	5a(H),14a(H),17a(H)-cholestane (20R)
	28bbR	218.2 (-0.3/+0.7)	24-methyl-5a(H),14b(H),17b(H)-cholestane (20R)
	28bbS	———— " ————	24-methyl-5a(H),14b(H),17b(H)-cholestane (20S)
	29aaS	217.2 (-0.3/+0.7)	24-ethyl-5a(H),14a(H),17a(H)-cholestane (20S)
	29bbR	218.2 (-0.3/+0.7)	24-ethyl-5a(H),14b(H),17b(H)-cholestane (20R)
	29bbS	———— " ————	24-ethyl-5a(H),14b(H),17b(H)-cholestane (20S)
	29aaR	217.2 (-0.3/+0.7)	24-ethyl-5a(H),14a(H),17a(H)-cholestane (20R)
	30bbR	218.2 (-0.3/+0.7)	24-propyl-5a(H),14b(H),17b(H)-cholestane (20R)
	30bbS	———— " ————	24-propyl-5a(H),14b(H),17b(H)-cholestane (20S)

## Saturated biomarkers, SAT-MSD, peak heights

MSD746S XLS 23 09 94 18 22

Sample	Type	File name	File path	Proj.#	Operator	Method	Aquired date	Seq.#	Workup	Amounts:	24baa
2865.50	COCH	2865_5D	F650723	34746	JORUNN	MSD_S_C	12.09.94 17:38	5	Geochem9291		0
2871.50	COCH	2871_5.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 07:59	4	Geochem9291		0
2871.75	COCH	2871_75.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 17:43	5	Geochem9291		0
2876.75	COCH	2876_75.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 19:11	6	Geochem9291		0
2877.25	COCH	2877_25.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 20:40	7	Geochem9291		0
2878.00	COCH	2878.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 22:08	8	Geochem9291		0
2878.50	COCH	2878_5.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 23:37	9	Geochem9291		0
3178.50	COCH	3178_5.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 02:34	11	Geochem9291		0
3239.00	COCH	3239.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 04:02	12	Geochem9291		0
3259.08	COCH	3259_08.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 05:31	13	Geochem9291		0
3259.25	COCH	3259_25.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 06:59	14	Geochem9291		0
3260.15	COCH	3260_15.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 08:28	15	Geochem9291		0
3260.34	COCH	3260_34.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 09:56	16	Geochem9291		0
3260.50	COCH	3260_5.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 11:25	17	Geochem9291		0
3260.75	COCH	3260_75.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 12:53	18	Geochem9291		0
3260.90	COCH	3260_9.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 14:21	19	Geochem9291		0
3271.50	COCH	3271_5.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 17:18	21	Geochem9291		0
3738.00	COCH	3738.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 18:47	22	Geochem9291		0
3835.00	DC	3835DC.D	D650723S	34746	JKB,GN	MSD_S_C	13.08.94 04:17	5	Norsk hydro		400
3845.00	DC	3845DC.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 20:24	23	Norsk hydro		11
3855.00	DC	3855DC.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 21:53	24	Norsk hydro		9
3865.00	DC	3865DC.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 23:21	25	Norsk hydro		7
3875.00	DC	3875DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 00:49	26	Norsk hydro		11
3885.00	DC	3885DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 02:18	27	Norsk hydro		9
3895.00	DC	3895DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 03:46	28	Norsk hydro		9
3905.00	DC	3905DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 05:14	29	Norsk hydro		12
3915.00	DC	3915DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 08:11	31	Norsk hydro		15
3925.00	DC	3925DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 09:39	32	Norsk hydro		11
3935.00	DC	3935DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 18:42	33	Norsk hydro		10
3945.00	DC	3945DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 20:11	34	Norsk hydro		12
3955.00	DC	3955DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 21:39	35	Norsk hydro		14
3965.00	DC	3965DC.D	D650723S	34746	JORUNN	MSD_S_C	13.08.94 04:17	14	Norsk hydro		17
3972.00	DC	3972_S.D	D650723A	34746	JORUNN	MSD_S_C	13.08.94 04:17	15	Norsk hydro		13



## Saturated biomarkers, SAT-MSD, peak heights

MSD746S.XLS 23.09.94 18:22

Sample	Heights:	24baa	19/3	20/3	21/3	23/3	24/3	25/3	26/3R	26/3S	28/3R	28/3S	29/3R	29/3S	24/4	27Ts	25nor28ab	27Tm	27b	25nor29ab	28ab
2865.50		5	496	241	55	53	45	34	7	14	20	13	22	27	44	35	153	97	22	76	241
2871.50		10	249	173	146	220	148	51	61	47	157	35	99	35	395	554	990	918	86	85	855
2871.75		1	173	118	102	150	105	31	34	46	128	40	71	45	269	400	667	580	67	52	576
2876.75		20	275	175	160	183	121	48	29	37	162	34	85	38	398	490	988	838	66	65	695
2877.25		189	423	273	222	306	177	56	75	74	230	72	50	61	555	743	1154	1249	101	102	1107
2878.00		8	315	228	193	265	162	60	52	66	190	59	86	46	424	697	908	983	70	92	930
2878.50		7	283	230	208	259	166	54	63	65	204	57	105	31	468	676	944	964	75	84	916
3178.50		102	52	55	82	101	78	38	28	29	32	26	46	41	90	149	143	203	41	316	303
3239.00		8	224	148	132	260	244	107	76	78	122	81	132	119	263	494	496	709	105	1951	334
3259.08		6	405	197	147	216	174	80	36	49	66	50	67	56	267	371	404	574	75	1531	276
3259.25		7	269	145	112	189	211	103	66	77	109	84	120	90	213	417	499	544	50	2171	307
3260.15		5	19	20	24	36	30	21	13	12	10	13	21	14	36	86	67	79	16	142	41
3260.34		3	100	65	60	104	80	41	26	26	45	37	43	48	112	294	188	271	49	430	136
3260.50		3	130	85	80	161	125	66	35	61	65	54	74	73	138	385	280	340	57	504	194
3260.75		3	98	65	70	136	120	63	46	45	58	52	82	61	123	375	259	342	64	638	189
3260.90		11	137	87	106	188	191	87	56	70	95	81	123	94	198	493	349	511	75	1012	308
3271.50		6	32	35	47	95	85	45	25	29	29	27	41	38	58	167	24	64	35	16	40
3738.00		11	337	234	335	620	563	273	198	209	284	250	388	335	437	1495	705	799	274	645	523
3835.00		2677	74	90	176	469	321	142	79	87	78	77	105	87	140	300	35	250	455	61	61
3845.00		616	332	365	694	1195	1103	559	270	308	329	309	487	493	724	2416	39	897	388	56	108
3855.00		427	258	281	515	895	857	419	212	246	271	240	369	351	552	1967	26	699	309	56	132
3865.00		347	247	246	439	812	730	421	202	227	241	229	352	355	509	1848	30	621	301	47	105
3875.00		443	239	242	455	811	803	375	212	221	270	230	409	329	488	1857	22	593	287	43	125
3885.00		317	182	206	321	571	534	283	153	163	177	153	280	251	377	1385	27	451	231	29	135
3895.00		355	217	207	333	601	538	282	155	160	178	172	283	244	406	1500	38	477	214	24	210
3905.00		455	311	283	487	789	678	382	211	217	242	230	365	350	549	1974	30	604	270	32	321
3915.00		396	244	194	288	495	404	221	145	135	161	145	248	201	359	1543	21	371	181	48	369
3925.00		764	335	237	306	505	405	203	151	158	183	142	235	188	494	1963	90	455	217	18	505
3935.00		299	291	183	195	363	267	137	92	98	135	94	156	117	350	1825	90	410	135	43	376
3945.00		250	228	146	169	275	193	81	67	79	86	75	123	81	272	1234	126	255	101	35	301
3955.00		369	318	182	191	377	269	155	95	104	130	113	188	157	340	1814	116	325	145	29	262
3965.00		546	527	336	278	455	402	168	116	120	223	135	246	182	520	2840	30	637	184	76	206
3972.00		637	606	377	303	534	389	179	103	147	259	186	242	188	549	2484	92	595	230	74	362

## Saturated biomarkers, SAT-MSD, peak heights

MSD746S.XLS 23.09.94 18:22

Sample	25nor30ab	29ab	29Ts	29ba	30D	30ab	30D13	30ba	30G	31abS	31abR	31ba	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR	21aa
2865.50	44	169	46	86	45	334	133	86	27	110	230	86	43	85	52	41	17	29	20	29	121
2871.50	36	2421	566	382	303	3804	215	589	264	1002	685	201	440	320	166	104	83	48	24	14	131
2871.75	31	1688	373	264	199	2828	147	435	204	737	504	146	299	214	120	83	59	42	20	18	103
2876.75	39	1967	455	343	261	3117	225	532	198	827	657	179	342	271	134	115	64	49	29	29	130
2877.25	31	3148	718	550	426	4884	297	944	355	1329	1040	276	557	390	215	153	112	73	32	27	200
2878.00	32	2522	656	504	390	4580	236	738	296	1147	829	235	501	342	209	149	85	52	24	22	165
2878.50	43	2732	656	458	340	4649	249	752	311	1129	846	245	520	353	200	131	95	56	12	23	186
3178.50	265	348	144	57	115	520	51	68	58	227	156	30	146	118	119	84	74	49	61	34	69
3239.00	1773	999	544	218	411	1457	247	259	280	627	426	106	596	465	506	292	369	209	263	147	144
3259.08	1112	570	271	101	284	742	193	143	175	291	226	82	346	223	244	180	198	109	130	79	220
3259.25	1885	580	507	111	448	700	236	115	267	346	209	41	440	377	412	244	325	177	234	142	184
3260.15	112	126	75	15	56	275	36	31	30	99	74	12	84	62	59	36	47	25	28	19	28
3260.34	359	426	218	61	153	788	86	92	78	295	232	34	230	174	167	108	126	68	77	45	84
3260.50	436	628	342	79	242	1371	114	158	123	504	360	42	391	295	272	173	236	127	153	91	136
3260.75	577	601	301	85	251	1143	139	139	138	450	286	42	377	270	302	168	213	140	148	97	126
3260.90	890	965	450	122	367	1646	198	174	184	625	479	61	623	406	454	271	310	195	249	158	178
3271.50	14	136	115	16	44	345	28	24	36	174	112	18	117	91	82	58	60	38	34	27	82
3738.00	505	2250	1191	160	1012	4880	327	499	400	1951	1369	144	1486	1019	948	647	751	382	493	300	522
3835.00	26	636	267	75	117	939	57	140	76	475	378	62	290	198	161	108	101	56	78	46	130
3845.00	49	2469	1754	154	582	6879	473	448	348	3078	2176	174	2193	1567	1365	899	825	533	573	358	1143
3855.00	44	1960	1489	121	529	5819	401	351	253	2668	1841	123	1722	1192	1222	764	731	409	554	352	908
3865.00	40	1789	1440	133	522	5267	351	313	242	2355	1722	130	1649	1176	1131	764	703	441	537	359	907
3875.00	33	1687	1493	117	499	5328	351	316	260	2313	1752	118	1753	1248	1131	715	728	455	555	360	900
3885.00	39	1317	1062	86	386	3997	264	234	180	1794	1305	110	1189	942	785	548	572	357	429	238	681
3895.00	45	1357	1151	70	443	4162	258	255	223	1799	1352	113	1266	947	912	604	540	317	449	253	764
3905.00	44	1909	1680	134	688	6023	382	362	281	2658	1755	121	1796	1260	1125	749	723	471	600	338	1004
3915.00	34	1355	1162	62	517	3983	250	245	198	1711	1254	102	1297	874	825	553	516	316	441	264	769
3925.00	33	1615	1562	93	800	5464	318	345	289	2166	1509	138	1620	1054	1000	689	637	368	459	306	652
3935.00	41	1473	1353	100	666	4943	263	301	264	2005	1392	91	1455	959	802	582	532	354	347	232	421
3945.00	23	1044	1000	52	543	3401	168	228	185	1280	937	56	961	716	604	388	401	238	258	175	356
3955.00	31	1333	1440	54	808	4650	266	304	275	1767	1282	84	1362	982	784	549	553	338	389	265	425
3965.00	32	2077	2163	130	1436	7328	382	442	441	2612	1841	195	1988	1494	1174	816	870	525	462	288	563
3972.00	35	1831	2081	138	1397	6702	398	392	418	2251	1654	198	1991	1332	1093	747	751	410	416	286	558

## Saturated biomarkers, SAT-MSD, peak heights

MSD746S XLS 23 09 94 18 22

Sample	21bb	22aa	22bb	27dbS	27dbR	27bbR	27bbS	27aaR	28bbR	28bbS	29aaS	29bbR	29bbS	29aaR	30bbR	30bbS
2865.50	163	102	53	190	134	128	66	102	79	88	28	100	77	125	17	14
2871.50	172	101	93	296	186	196	135	261	131	140	124	155	127	224	34	34
2871.75	120	75	63	206	120	136	87	182	95	95	94	96	84	141	26	24
2876.75	165	99	79	249	160	169	122	314	117	116	116	136	119	353	28	34
2877.25	218	163	129	390	256	254	167	377	161	173	174	199	176	310	40	36
2878.00	208	121	98	340	201	206	148	313	133	159	132	178	141	284	30	36
2878.50	184	136	104	343	196	215	152	324	148	158	156	170	141	264	25	28
3178.50	77	64	48	197	118	137	93	76	79	116	56	120	120	74	41	30
3239.00	191	144	124	637	380	372	189	201	128	250	192	290	275	245	83	66
3259.08	313	170	188	374	263	233	115	101	85	157	124	183	163	123	48	47
3259.25	167	140	113	647	390	353	194	163	116	264	142	230	243	192	71	61
3260.15	33	28	20	65	47	46	21	30	24	37	24	35	36	21	15	19
3260.34	125	83	69	187	114	152	85	56	71	101	55	121	109	63	44	35
3260.50	148	132	105	352	205	254	147	102	120	175	101	181	186	97	66	75
3260.75	142	115	76	342	203	250	141	92	123	175	100	192	189	91	70	73
3260.90	174	171	113	518	329	355	229	139	162	291	139	278	261	138	107	93
3271.50	88	71	63	143	86	112	75	36	61	78	26	70	69	24	37	38
3738.00	538	501	337	1654	968	1083	650	393	517	718	333	777	674	343	347	312
3835.00	184	122	118	272	159	178	125	61	95	128	35	116	112	48	42	42
3845.00	1523	1020	991	1663	1008	1669	1287	616	1141	1171	375	1047	1020	419	540	486
3855.00	1152	857	788	1459	891	1406	1047	482	953	994	312	858	823	335	458	446
3865.00	1075	827	700	1456	867	1296	1010	487	859	976	318	833	738	313	432	431
3875.00	1116	832	678	1512	889	1293	998	497	943	955	331	815	800	341	480	458
3885.00	804	606	478	1244	739	968	705	339	645	773	254	693	654	229	333	289
3895.00	875	604	498	1394	871	1039	735	392	648	753	254	681	660	240	349	289
3905.00	1137	905	702	2090	1187	1570	1026	489	899	1003	393	1060	997	378	459	411
3915.00	715	634	429	1382	826	942	676	313	556	661	238	712	620	254	323	263
3925.00	746	637	405	1365	812	932	604	298	529	598	252	650	383	240	247	213
3935.00	481	421	278	867	544	557	364	203	333	333	191	434	434	166	162	117
3945.00	443	357	230	875	496	516	320	155	248	314	136	379	346	132	140	127
3955.00	510	454	262	1118	650	768	499	198	355	410	200	533	509	183	235	194
3965.00	655	618	385	1471	866	935	586	289	429	604	396	790	703	304	259	220
3972.00	591	635	418	1333	812	864	559	296	413	536	337	751	634	270	200	211

## Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S.XLS 23.09.94 18:27

Sample	Type	File name	File path	Proj.#	Operator	Method	Aquired date	Seq.#	Workup	Amounts:	24baa
2865.50	COCH	2865_5D	F650723	34746	JORUNN	MSD_S_C	12.09.94 17:38	5	Geochem9291		0
2871.50	COCH	2871_5.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 07:59	4	Geochem9291		0
2871.75	COCH	2871_75.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 17:43	5	Geochem9291		0
2876.75	COCH	2876_75.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 19:11	6	Geochem9291		0
2877.25	COCH	2877_25.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 20:40	7	Geochem9291		0
2878.00	COCH	2878.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 22:08	8	Geochem9291		0
2878.50	COCH	2878_5.D	E650723	34746	JORUNN	MSD_S_CH	09.09.94 23:37	9	Geochem9291		0
3178.50	COCH	3178_5.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 02:34	11	Geochem9291		0
3239.00	COCH	3239.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 04:02	12	Geochem9291		0
3259.08	COCH	3259_08.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 05:31	13	Geochem9291		0
3259.25	COCH	3259_25.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 06:59	14	Geochem9291		0
3260.15	COCH	3260_15.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 08:28	15	Geochem9291		0
3260.34	COCH	3260_34.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 09:56	16	Geochem9291		0
3260.50	COCH	3260_5.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 11:25	17	Geochem9291		0
3260.75	COCH	3260_75.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 12:53	18	Geochem9291		0
3260.90	COCH	3260_9.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 14:21	19	Geochem9291		0
3271.50	COCH	3271_5.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 17:18	21	Geochem9291		0
3738.00	COCH	3738.D	E650723	34746	JORUNN	MSD_S_CH	10.09.94 18:47	22	Geochem9291		0
3835.00	DC	3835DC.D	D650723S	34746	JKB,GN	MSD_S_C	13.08.94 04:17	5	Norsk hydro		400
3845.00	DC	3845DC.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 20:24	23	Norsk hydro		11
3855.00	DC	3855DC.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 21:53	24	Norsk hydro		9
3865.00	DC	3865DC.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 23:21	25	Norsk hydro		7
3875.00	DC	3875DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 00:49	26	Norsk hydro		11
3885.00	DC	3885DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 02:18	27	Norsk hydro		9
3895.00	DC	3895DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 03:46	28	Norsk hydro		9
3905.00	DC	3905DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 05:14	29	Norsk hydro		12
3915.00	DC	3915DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 08:11	31	Norsk hydro		15
3925.00	DC	3925DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 09:39	32	Norsk hydro		11
3935.00	DC	3935DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 18:42	33	Norsk hydro		10
3945.00	DC	3945DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 20:11	34	Norsk hydro		12
3955.00	DC	3955DC.D	F650723	34746	JORUNN	MSD_S_C	14.09.94 21:39	35	Norsk hydro		14
3965.00	DC	3965DC.D	D650723S	34746	JORUNN	MSD_S_C	13.08.94 04:17	14	Norsk hydro		17
3972.00	DC	3972_S.D	D650723A	34746	JORUNN	MSD_S_C	13.08.94 04:17	15	Norsk hydro		13

## Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S.XLS 23.09.94 18:27

Sample	19/3	20/3	21/3	23/3	24/3	25/3	26/3R	26/3S	28/3R	28/3S	29/3R	29/3S	24/4	27Ts	25nor28ab	27Tm	27b	25nor29ab	28ab	25nor30ab	
2865.50																					
2871.50																					
2871.75																					
2876.75																					
2877.25																					
2878.00																					
2878.50																					
3178.50																					
3239.00																					
3259.08																					
3259.25																					
3260.15																					
3260.34																					
3260.50																					
3260.75																					
3260.90																					
3271.50																					
3738.00																					
3835.00	9	11	21	57	39	17	10	11	9	9	13	11	17	37	4	30	58	7	7	3	
3845.00	5	6	10	18	17	8	4	5	5	5	7	7	11	36	1	14	6	1	2	1	
3855.00	5	5	9	16	15	7	4	4	5	4	7	6	10	35	0	12	6	1	2	1	
3865.00	4	4	8	14	13	7	3	4	4	4	6	6	9	32	1	11	5	1	2	1	
3875.00	5	5	9	16	16	7	4	4	5	4	8	6	10	36	0	12	6	1	2	1	
3885.00	4	5	7	13	12	7	4	4	4	4	6	6	9	32	1	10	6	1	3	1	
3895.00	4	4	7	12	11	6	3	3	4	4	6	5	8	31	1	10	5	0	4	1	
3905.00	6	6	10	16	14	8	4	5	5	5	8	7	11	41	1	13	6	1	7	1	
3915.00	7	6	9	15	12	7	4	4	5	4	8	6	11	47	1	11	6	1	11	1	
3925.00	4	3	3	6	5	2	2	2	2	2	3	2	6	22	1	5	3	0	6	0	
3935.00	8	5	5	10	7	4	3	3	4	3	4	3	10	50	2	11	4	1	10	1	
3945.00	9	6	7	11	8	3	3	3	3	3	5	3	11	49	5	10	4	1	12	1	
3955.00	10	6	6	12	8	5	3	3	4	4	6	5	11	57	4	10	5	1	8	1	
3965.00	13	8	7	11	10	4	3	3	6	3	6	5	13	71	1	16	5	2	5	1	
3972.00	10	6	5	9	7	3	2	2	4	3	4	3	9	42	2	10	4	1	6	1	

Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S XLS 23 09 94 18 27

Sample	29ab	29Ts	29ba	30D	30ab	30D13	30ba	30G	31abS	31abR	31ba	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR	21aa	21bb	22aa		
2865.50																								
2871.50																								
2871.75																								
2876.75																								
2877.25																								
2878.00																								
2878.50																								
3178.50																								
3239.00																								
3259.08																								
3259.25																								
3260.15																								
3260.34																								
3260.50																								
3260.75																								
3260.90																								
3271.50																								
3738.00																								
3835.00	77	33	9	14	80	7	12	9	58	46	8	35	24	20	13	12	7	9	6	20	28	19		
3845.00	37	26	2	9	72	7	5	5	46	33	3	33	24	21	14	12	8	9	5	22	29	19		
3855.00	35	26	2	9	72	7	4	4	47	33	2	31	21	22	14	13	7	10	6	20	26	19		
3865.00	31	25	2	9	63	6	4	4	40	30	2	28	20	19	13	12	8	9	6	19	23	18		
3875.00	33	29	2	10	72	7	4	5	45	34	2	34	24	22	14	14	9	11	7	22	27	20		
3885.00	30	25	2	9	64	6	4	4	42	30	3	28	22	18	13	13	8	10	6	20	23	18		
3895.00	28	24	1	9	59	5	4	5	37	28	2	26	19	19	12	11	6	9	5	20	22	15		
3905.00	40	35	3	14	87	8	5	6	55	36	3	37	26	23	16	15	10	12	7	26	30	24		
3915.00	41	36	2	16	85	8	5	6	52	38	3	40	27	25	17	16	10	13	8	29	27	24		
3925.00	18	18	1	9	43	4	3	3	24	17	2	18	12	11	8	7	4	5	3	9	11	9		
3935.00	41	37	3	18	95	7	6	7	55	38	3	40	26	22	16	15	10	10	6	15	17	15		
3945.00	41	40	2	22	94	7	6	7	51	37	2	38	28	24	15	16	9	10	7	18	22	18		
3955.00	42	45	2	25	102	8	7	9	56	40	3	43	31	25	17	17	11	12	8	17	20	18		
3965.00	52	54	3	36	128	10	8	11	65	46	5	50	37	29	20	22	13	12	7	18	21	19		
3972.00	31	35	2	23	78	7	5	7	38	28	3	33	22	18	13	13	7	7	5	12	12	13		

Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S XLS 23 09 94 18 27

Sample	22bb	27dbS	27dbR	27bbR	27bbS	27aaR	28bbR	28bbS	29aaS	29bbR	29bbS	29aaR	30bbR	30bbS
2865.50														
2871.50														
2871.75														
2876.75														
2877.25														
2878.00														
2878.50														
3178.50														
3239.00														
3259.08														
3259.25														
3260.15														
3260.34														
3260.50														
3260.75														
3260.90														
3271.50														
3738.00														
3835.00	18	42	24	27	19	9	15	20	5	18	17	7	6	6
3845.00	19	31	19	32	24	12	22	22	7	20	19	8	10	9
3855.00	18	32	20	31	23	11	21	22	7	19	18	7	10	10
3865.00	15	31	19	28	22	10	18	21	7	18	16	7	9	9
3875.00	17	37	22	32	24	12	23	23	8	20	20	8	12	11
3885.00	14	36	21	28	20	10	19	22	7	20	19	7	10	8
3895.00	13	36	22	27	19	10	17	19	7	17	17	6	9	7
3905.00	18	54	31	41	27	13	23	26	10	28	26	10	12	11
3915.00	16	53	32	36	26	12	21	25	9	27	24	10	12	10
3925.00	6	19	12	13	9	4	7	8	4	9	5	3	4	3
3935.00	10	30	19	19	13	7	11	11	7	15	15	6	6	4
3945.00	11	43	25	26	16	8	12	16	7	19	17	6	7	6
3955.00	10	44	26	30	20	8	14	16	8	21	20	7	9	8
3965.00	12	46	27	29	18	9	13	19	12	25	22	9	8	7
3972.00	9	28	17	18	12	6	9	11	7	16	13	6	4	4

## Saturated biomarkers, SAT-MSD, peak heights

MSD746S.XLS 23.09.94 18:22

Sample	Type	File name	File path	Proj.#	Operator	Method	Aquired date	Seq.#	Workup	Amounts:	24baa
BIOM01	Lab.ref.	BIOM01.D	D650723S	34746	JORUNN	MSD_S_C	13.08.94 04:17	2	Norsk hydro		24
BIOM02	Lab.ref.	BIOM02.D	D650723S	34746	JORUNN	MSD_S_C	13.08.94 04:17	10	Norsk hydro		24
BIOMA1	Lab.ref.	BIOMA1.D	E650723	34746	JORUNN	MSD_S_C	08.09.94 16:53	2	Norsk hydro		24
BIOMA5	Lab.ref.	BIOMA5.D	E650723	34746	JORUNN	MSD_S_C	09.09.94 11:18	6	Norsk hydro		24
BIOMA2	Lab.ref.	BIOMA2.D	E650723	34746	JORUNN	MSD_S_C	10.09.94 01:05	14	Norsk hydro		24
BIOMA3	Lab.ref.	BIOMA3.D	E650723	34746	JORUNN	MSD_S_C	10.09.94 15:50	24	Norsk hydro		24
BIOMA2	Lab.ref.	BIOMA2.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 01:00	10	Norsk hydro		24
BIOMA3	Lab.ref.	BIOMA3.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 15:59	20	Norsk hydro		24



## Saturated biomarkers, SAT-MSD, peak heights

MSD746S.XLS 23.09.94 18:22

Sample	Heights:	24baa	19/3	20/3	21/3	23/3	24/3	25/3	26/3R	26/3S	28/3R	28/3S	29/3R	29/3S	24/4	27Ts	25nor28ab	27Tm	27b	25nor29ab	28ab
BIOM01		993	441	320	468	813	603	360	233	224	256	244	369	340	592	1737	1453	1614	375	791	2411
BIOM02		624	311	240	354	608	458	267	189	193	239	240	337	347	435	1394	1002	1166	346	610	1765
BIOMA1		396	214	166	218	371	279	142	111	113	116	107	168	118	286	726	601	683	185	366	936
BIOMA5		408	228	148	230	352	267	134	83	81	121	114	154	133	260	789	574	746	153	342	993
BIOMA2		532	256	182	262	482	321	184	125	127	180	141	233	175	338	1034	769	873	224	443	1313
BIOMA3		578	278	218	309	497	365	221	143	166	161	158	242	205	361	1127	863	1072	229	479	1441
BIOMA2		1339	592	435	629	970	832	427	262	323	360	350	474	409	772	2371	1863	2115	423	1039	2984
BIOMA3		1404	606	455	712	1122	805	447	278	330	377	368	522	513	822	2356	1925	2092	441	1024	3156

## Saturated biomarkers, SAT-MSD, peak heights

MSD746S.XLS 23.09.94 18:22

Sample	25nor30ab	29ab	29Ts	29ba	30D	30ab	30D13	30ba	30G	31abS	31abR	31ba	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR	21aa
BIOM01	687	4481	1645	665	1075	11181	706	972	588	4233	2822	404	2701	2009	2337	1590	1303	764	976	673	1025
BIOM02	535	3408	1377	666	707	8223	569	755	420	3089	2245	301	2138	1589	1853	1201	1112	677	870	565	729
BIOMA1	295	1917	711	334	427	5160	279	482	260	1713	1268	215	1114	795	908	670	531	316	418	271	489
BIOMA5	315	1939	785	341	464	4881	295	435	249	1757	1294	183	1189	821	981	649	567	334	416	290	474
BIOMA2	385	2553	925	471	547	6185	366	589	278	2199	1550	237	1497	1067	1299	833	740	439	550	396	605
BIOMA3	430	3099	1125	594	618	6928	446	740	381	2656	1850	282	1684	1246	1585	1070	931	587	691	435	645
BIOMA2	914	5832	2348	1107	1435	13359	842	1464	742	4792	3516	548	3578	2814	3103	2136	1859	1126	1461	957	1327
BIOMA3	944	6391	2353	1131	1336	15172	956	1402	703	5170	4051	551	3667	2642	3155	2033	2161	1102	1608	927	1267

## Saturated biomarkers, SAT-MSD, peak heights

MSD746S.XLS 23.09.94 18:22

Sample	21bb	22aa	22bb	27dbS	27dbR	27bbR	27bbS	27aaR	28bbR	28bbS	29aaS	29bbR	29bbS	29aaR	30bbR	30bbS
BIOM01	1287	930	866	2529	1538	1727	1245	667	1054	1412	755	1633	1573	845	624	554
BIOM02	994	582	593	1875	1101	1510	927	537	824	1089	586	1089	1083	626	448	358
BIOMA1	577	360	360	1025	665	776	554	257	410	618	317	667	627	341	221	215
BIOMA5	584	363	351	940	591	799	555	271	476	556	342	707	642	319	223	218
BIOMA2	734	449	440	1272	808	1073	691	412	537	781	390	803	797	424	337	288
BIOMA3	824	471	529	1612	892	1279	749	440	650	899	507	986	946	487	379	348
BIOMA2	1690	1007	1020	3229	1846	2384	1635	885	1365	1781	1016	1924	2059	1046	769	735
BIOMA3	1776	1021	1137	3396	1903	2457	1566	975	1441	1883	1019	2061	1904	1147	844	738

## Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S.XLS 23.09.94 18:27

Sample	Type	File name	File path	Proj.#	Operator	Method	Aquired date	Seq.#	Workup	Amounts:	24baa
BIOM01	Lab.ref.	BIOM01.D	D650723S	34746	JORUNN	MSD_S_C	13.08.94 04:17	2	Norsk hydro		24
BIOM02	Lab.ref.	BIOM02.D	D650723S	34746	JORUNN	MSD_S_C	13.08.94 04:17	10	Norsk hydro		24
BIOMA1	Lab.ref.	BIOMA1.D	E650723	34746	JORUNN	MSD_S_C	08.09.94 16:53	2	Norsk hydro		24
BIOMA5	Lab.ref.	BIOMA5.D	E650723	34746	JORUNN	MSD_S_C	09.09.94 11:18	6	Norsk hydro		24
BIOMA2	Lab.ref.	BIOMA2.D	E650723	34746	JORUNN	MSD_S_C	10.09.94 01:05	14	Norsk hydro		24
BIOMA3	Lab.ref.	BIOMA3.D	E650723	34746	JORUNN	MSD_S_C	10.09.94 15:50	24	Norsk hydro		24
BIOMA2	Lab.ref.	BIOMA2.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 01:00	10	Norsk hydro		24
BIOMA3	Lab.ref.	BIOMA3.D	F650723	34746	JORUNN	MSD_S_C	13.09.94 15:59	20	Norsk hydro		24

## Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S.XLS 23.09.94 18:27

Sample	19/3	20/3	21/3	23/3	24/3	25/3	26/3R	26/3S	28/3R	28/3S	29/3R	29/3S	24/4	27Ts	25nor28ab	27Tm	27b	25nor29ab	28ab	25nor30ab
BIOM01	9	6	9	16	12	7	5	4	5	5	7	7	12	34	28	32	8	15	47	13
BIOM02	10	7	11	19	14	8	6	6	7	7	10	11	14	43	31	36	11	19	55	17
BIOMA1	10	8	10	18	13	7	5	5	6	5	8	6	14	35	31	33	9	19	45	15
BIOMA5	11	7	11	17	13	6	4	4	6	5	7	6	12	38	27	35	8	16	47	15
BIOMA2	9	7	10	18	12	7	5	5	7	5	8	6	12	38	28	32	9	16	48	14
BIOMA3	9	7	10	17	12	7	5	6	5	5	8	7	12	38	29	36	8	16	48	14
BIOMA2	9	6	9	14	12	6	4	5	5	5	7	6	11	34	27	31	6	15	43	13
BIOMA3	8	6	10	15	11	6	4	5	5	5	7	7	11	33	27	29	6	14	44	13

## Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S.XLS 23.09.94 18:27

Sample	29ab	29Ts	29ba	30D	30ab	30D13	30ba	30G	31abS	31abR	31ba	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR	21aa	21bb	22aa
BIOM01	88	32	13	21	152	14	13	11	83	55	8	53	39	46	31	25	15	19	13	25	32	23
BIOM02	106	43	21	22	178	18	16	13	96	70	9	66	49	58	37	35	21	27	18	28	39	23
BIOMA1	92	34	16	21	173	13	16	13	82	61	10	54	38	44	32	26	15	20	13	30	35	22
BIOMA5	92	37	16	22	162	14	14	12	84	62	9	57	39	47	31	27	16	20	14	28	35	22
BIOMA2	93	34	17	20	157	13	15	10	80	57	9	55	39	47	30	27	16	20	14	28	34	21
BIOMA3	104	38	20	21	162	15	17	13	89	62	9	57	42	53	36	31	20	23	15	27	35	20
BIOMA2	84	34	16	21	135	12	15	11	69	51	8	52	41	45	31	27	16	21	14	24	31	18
BIOMA3	88	33	16	18	146	13	13	10	71	56	8	51	36	44	28	30	15	22	13	22	31	18

Saturated biomarkers, SAT-MSD, absolute amounts

MSD746S.XLS 23.09.94 18:27

Sample	22bb	27dbS	27dbR	27bbR	27bbS	27aaR	28bbR	28bbS	29aaS	29bbR	29bbS	29aaR	30bbR	30bbS
BIOM01	21	62	38	42	30	16	26	35	18	40	39	20	15	14
BIOM02	23	73	43	59	36	21	32	42	23	42	42	24	17	14
BIOMA1	22	62	40	47	33	16	25	37	19	40	38	20	13	13
BIOMA5	21	56	35	48	33	16	28	33	20	42	38	19	13	13
BIOMA2	20	58	37	49	32	19	25	36	18	37	36	19	15	13
BIOMA3	22	68	38	54	32	19	27	38	21	41	40	20	16	15
BIOMA2	19	59	34	43	30	16	25	32	18	35	37	19	14	13
BIOMA3	20	59	33	43	27	17	25	33	18	36	33	20	15	13

## Results from the GC/FID and GC/MS method: MSD\_ARO1

- \* MS-detected compounds and annotations.
- \* Tabulated compound data.
- \* Compound data, peak ratios and normalized mass chromatograms.



**Detected compounds and annotations according to the "Norwegian Industry Guide to Organic Geochemical Analysis, Feb.1993":**

	Abbreviation	Ion, m/z	Identification
Internal standard	d8-N	136.1	Deuterated d8-Napthalenes
	d10-P	188.1	Deuterated d10-P
	d12-C	240.2	Crysene
Aryl isoprenoids	C13 AI	133.1	C13 AI
	C14 AI	133.1	C14 Aryl isoprenoids
	C15 AI	133.1	C15 Aryl isoprenoids
	C16 AI	133.1	C16 Aryl isoprenoids
	C17 AI	133.1	C17 Aryl isoprenoids
	C18 AI	133.1	C18 Aryl isoprenoids
	C19 AI	133.1	C19 Aryl isoprenoids
	C20 AI	133.1	C20 Aryl isoprenoids
	C21 AI	133.1	C21 Aryl isoprenoids
	C22 AI	133.1	C22 Aryl isoprenoids
	C23 AI	133.1	C23 Aryl isoprenoids
	C30 AI	133.1	C30 Aryl isoprenoids
	C31 AI	133.1	C31 Aryl isoprenoids
Napthalenes	N	128.1	Naphtalene
	2-MN	142.1	2-methyl-naphtalene
	1-MN	142.1	1-methyl-naphtalene
	2-EN	156.1	2-ethyl-naphtalene
	2,6+2,7-DMN	156.1	2,6+2,7-di-methyl-naphtalenes
	1,3+1,7-DMN	156.1	1,3+1,7-di-methyl-naphtalenes
	1,6-DMN	156.1	1,6-di-methyl-naphtalenes
	2,3+1,4-DMN	156.1	2,3+1,4-di-methyl-naphtalenes
	1,5-DMN	156.1	1,5-di-methyl-naphtalenes
	1,2-DMN	156.1	1,2-di-methyl-naphtalenes
	C3-N	170.1	C3-naphtalenes
	C3-N	170.1	C3-naphtalenes
	1,3,7-TMN	170.1	1,3,7-tri-methyl-naphtalene
	1,3,6-TMN	170.1	1,3,6-tri-methyl-naphtalene
	1,3,5+1,4,6-TMN	170.1	1,3,5+1,4,6-tri-methyl-naphtalene
	2,3,6-TMN	170.1	2,3,6-tri-methyl-naphtalene
	1,6,7+1,2,7-TMN	170.1	1,6,7+1,2,7-tri-methyl-naphtalene
	1,2,6-TMN	170.1	1,2,6-tri-methyl-naphtalene
	1,2,4-TMN	170.1	1,2,4-tri-methyl-naphtalene

Biphenyls	1,2,5-TMN	170.1	1,2,5-tri-methyl-naphtalene
	BP	154.1	Biphenyl
	3-MBP	168.1	3-methyl-biphenyl
	4-MBP	168.1	4-methyl-biphenyl
	C2-BP	182.1	C3-biphenyl
	C2-BP	182.1	C3-biphenyl
	C2-BP	182.1	C3-biphenyl
Fluorenes	F	166.1	Fluorenes
	C1-F	180.1	C1-fluorenes
	C1-F	180.1	C1-fluorenes
	1-MF	180.1	1-methyl-fluorenes
Dibenzothiophene  Phenantrenes	DBT	184.1	Dibenzothiophenes
	4-MDBT	198.1	4-methyl-dibenzothiophenes
	3+2-MDBT	198.1	2+3-methyl-dibenzothiophenes
	1-MDBT	198.1	1-methyl-dibenzothiophenes
	P	178.1	Phenantrenes
	3-MP	192.1	3-methyl-phenantrene
	2-MP	192.1	2-methyl-phenantrene
	9-MP	192.1	9-methyl-phenantrene
	1-MP	192.1	1-methyl-phenantrene
	2EP+9EP+3,6DMP	206.1	2+9ethyl + 3,6-di-methyl-phenantrene
	1EP	206.1	1-ethyl-phenantrene
	2,6+2,7+3,5-DMP	206.1	2,6+2,7+3,5-di-methyl-phenantrene
	1,3+2,10+3,9+3,10-DMP	206.1	1,3+2,10+3,9+3,10-di-methyl-phenantrene
	1,6+2,5+2,9-DMP	206.1	1,6+2,5+2,9-di-methyl-phenantrene
	1,7-DMP	206.1	1,7-di-methyl-phenantrene
	2,3-DMP	206.1	2,3-di-methyl-phenantrene
	1,9+4,9+4,10-DMP	206.1	1,9+4,9+4,10-di-methyl-phenantrene
	1,8-DMP	206.1	1,8-di-methyl-phenantrene
	Retene	Retene	219.1
Triaromatic	20TA	231.1	C20-tri-aromatic steroids
	21TA	231.1	C20-tri-aromatic steroids
	S26TA	231.1	C26-S-tri-aromatic steroids
	R26TA/S27TA	231.1	C26-R-/C27-S-tri-aromatic steroids
	S28TA	231.1	28-S-tri-aromatic steroids
	R27TA	231.1	C27-R-tri-aromatic steroids
	R28TA	231.1	C28-R-tri-aromatic steroids

Aromatic biomarkers, Well 6507/2-3  
compound amounts ng/mg EOM or peak heights

									Int. standards		
Sample name:	Type	File name	File path:	Project	Misc.info	Operator:	Method:	Amounts:	d8 N	d10 P	d12 C
2871.75	COCH	2871_75A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
2877.25	COCH	2877_25A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
3260.34	COCH	3260_34A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
3260.75	COCH	3260_75A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
3845.00	DC	3845DC.D	D650723A	34746		JORUNN	MSD_ARO1		10	10	10
3855.00	DC	3855DC.D	D650723A	34746		JORUNN	MSD_ARO1		8	8	8
3885.00	DC	3885DC.D	C650723A	34746		JORUNN	MSD_ARO1		8	8	8
3915.00	DC	3915DC.D	C650723A	34746		JORUNN	MSD_ARO1		12	12	12
3945.00	DC	3945DC.D	D650723A	34746		JORUNN	MSD_ARO1		10	10	10
3972.00	DC	3972DC.D	D650723A	34746		JORUNN	MSD_ARO1		11	11	11
Sample name:	Type	File name	File path:	Project	Misc.info	Operator:	Method:	Heights:	d8 N	d10 P	d12 C
2871.75	COCH	2871_75A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
2877.25	COCH	2877_25A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
3260.34	COCH	3260_34A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
3260.75	COCH	3260_75A.D	E650723	34746		JORUNN	MSD_ARO1		0	0	0
3845.00	DC	3845DC.D	D650723A	34746		JORUNN	MSD_ARO1		13	53	1802
3855.00	DC	3855DC.D	D650723A	34746		JORUNN	MSD_ARO1		9	8	3015
3885.00	DC	3885DC.D	C650723A	34746		JORUNN	MSD_ARO1		106	577	3799
3915.00	DC	3915DC.D	C650723A	34746		JORUNN	MSD_ARO1		184	6095	6197
3945.00	DC	3945DC.D	D650723A	34746		JORUNN	MSD_ARO1		48	4729	6249
3972.00	DC	3972DC.D	D650723A	34746		JORUNN	MSD_ARO1		740	5753	5476

Aromatic biomarkers, Well 6507/2-3  
compound amounts ng/mg EOM or peak heights

Compound amounts													
Sample name:	C13 AI	C14 AI	C15 AI	C16 AI	C17 AI	C18 AI	C19 AI	C20 AI	C21 AI	C22 AI	C23 AI	C30AI	C31 AI
2871.75													
2877.25													
3260.34													
3260.75													
3845.00													
3855.00													
3885.00													
3915.00													
3945.00													
3972.00													
Peak heights													
Sample name:	C13 AI	C14 AI	C15 AI	C16 AI	C17 AI	C18 AI	C19 AI	C20 AI	C21 AI	C22 AI	C23 AI	C30AI	C31 AI
2871.75	25	67	266	214	129	106	44	46	130	44	116	33	25
2877.25	8	6	32	55	37	22	13	32	80	27	91	19	29
3260.34	7	16	11	23	31	31	39	17	26	6	14	43	48
3260.75	14	41	47	45	45	27	24	10	11	13	15	15	19
3845.00	30	101	16	22	19	24	9	8	18	12	8	133	23
3855.00	96	14	15	7	20	20	10	9	17	4	11	183	50
3885.00	13	18	24	19	13	15	42	63	29	14	28	169	45
3915.00	11	15	16	10	57	47	163	82	74	48	45	202	30
3945.00	15	37	57	17	70	52	40	38	25	74	31	494	1316
3972.00	13	13	24	16	63	51	43	32	33	34	21	157	122

Aromatic biomarkers, Well 6507/2-3  
compound amounts ng/mg EOM or peak heights

Compound amounts														
Sample name:	N	2-MN	1-MN	2-EN	1-EN	2,6+ 2,7-DMN	1,3+1,7-DMN	1,6-DMN	2,3+1,4-DMN	1,5-DMN	1,2-DMN	C3- N	C3-N	1,3,7-TMN
2871.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2877.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3260.34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3260.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3845.00	24	144	207	43	26	181	316	327	182	137	118	49	104	186
3855.00	48	172	221	36	17	105	169	173	86	78	55	11	18	41
3885.00	3	12	16	2	1	8	14	14	7	5	4	1	1	4
3915.00	248	2596	2878	157	125	1983	3624	3331	2044	1096	1689	134	168	1145
3945.00	261	2899	3177	276	162	2118	3825	3315	1825	1031	1233	196	229	1133
3972.00	181	2645	2591	123	70	1972	3236	3097	1744	907	1220	73	96	984
Peak heights														
Sample name:	N	2-MN	1-MN	2-EN	1-EN	2,6+ 2,7-DMN	1,3+1,7-DMN	1,6-DMN	2,3+1,4-DMN	1,5-DMN	1,2-DMN	C3- N	C3-N	1,3,7-TMN
2871.75	15	275	307	261	195	2414	4848	3091	2079	1008	1057	682	824	5320
2877.25	24	21	19	10	5	71	127	102	80	38	43	34	55	457
3260.34	21	305	443	345	235	4828	8416	7024	5520	2107	3171	958	1357	9201
3260.75	1504	14117	10695	2203	1122	16670	24480	17978	9399	4070	5065	1410	1753	10991
3845.00	35	160	230	54	33	227	397	410	228	172	148	57	121	218
3855.00	61	164	210	39	18	113	181	186	92	84	59	11	18	41
3885.00	39	141	185	25	19	103	181	184	88	64	54	13	17	52
3915.00	3986	31344	34752	2138	1707	26992	49328	45344	27816	14917	22992	1698	2126	14539
3945.00	1344	11211	12288	1202	705	9232	16674	14451	7957	4493	5374	796	925	4607
3972.00	13320	146131	143137	7658	4348	122830	201512	192832	108602	56488	75977	4240	5527	57192

Aromatic biomarkers, Well 6507/2-3  
compound amounts ng/mg EOM or peak heights

Compound amounts													
Sample name:	1,3,6-TMN	1,3,5+1,4,6-TMN	2,3,6-TMN	1,6,7+1,2,7-TMN	1,2,6-TMN	1,2,4-TMN	1,2,5-TMN	BP	3-MBP	4-MBP	C2-BP	C2-BP	C2-BP
2871.75	0	0	0	0	0	0	0	0	0	0	0	0	0
2877.25	0	0	0	0	0	0	0	0	0	0	0	0	0
3260.34	0	0	0	0	0	0	0	0	0	0	0	0	0
3260.75	0	0	0	0	0	0	0	0	0	0	0	0	0
3845.00	414	522	258	268	224	354	373	80	141	52	295	108	116
3855.00	85	127	51	15	45	225	60	55	40	16	12	27	25
3885.00	7	11	5	5	5	14	5	5	4	2	7	3	4
3915.00	1850	2238	2627	2707	1871	493	2362	5382	4989	1865	3919	2230	2539
3945.00	1715	2141	2344	2694	1503	295	2095	9521	10384	4598	4519	5860	6183
3972.00	1362	1588	1957	1874	1468	257	1803	3110	3069	1126	1557	1047	1227
Peak heights													
Sample name:	1,3,6-TMN	1,3,5+1,4,6-TMN	2,3,6-TMN	1,6,7+1,2,7-TMN	1,2,6-TMN	1,2,4-TMN	1,2,5-TMN	BP	3-MBP	4-MBP	C2-BP	C2-BP	C2-BP
2871.75	7827	6485	6422	5364	3563	881	6270	1420	10814	3667	8489	6042	4775
2877.25	723	708	828	799	470	157	1146	60	647	263	1844	1524	1333
3260.34	14563	11449	14503	12124	8625	2189	12643	2940	20374	8776	21176	15943	14215
3260.75	14845	12176	11668	9666	6765	1618	8706	15209	30594	10444	9848	6300	5152
3845.00	485	611	302	314	262	415	437	138	243	89	507	186	199
3855.00	85	127	51	15	45	225	60	81	59	23	17	39	37
3885.00	80	133	63	60	55	166	66	88	70	37	128	57	63
3915.00	23498	28424	33368	34376	23760	6265	30016	100376	93045	34780	73096	41592	47352
3945.00	6976	8709	9533	10959	6112	1199	8528	56867	62022	27462	26992	35000	36930
3972.00	79164	92288	113704	108880	85304	14958	104824	265385	261888	96112	132876	89328	104726

Aromatic biomarkers, Well 6507/2-3  
compound amounts ng/mg EOM or peak heights

Compound amounts															
Sample name:	F	C1-F	C1-F	1-MF	DBT	4-MDBT	3+2-MDBT	1-MDBT	P	3-MP	2-MP	9-MP	1-MP	2EP+9EP+3,6-DMP	1EP
2871.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2877.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3260.34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3260.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3845.00	232	103	474	80	111	151	42	32	495	179	198	480	355	107	48
3855.00	77	25	107	26	204	129	48	45	447	139	168	375	293	283	140
3885.00	14	4	23	2	4	3	1	1	53	13	18	36	37	1	2
3915.00	8505	2254	8551	1392	125	135	43	34	698	227	319	534	520	60	63
3945.00	28512	7330	30979	4262	31	28	12	8	693	251	329	492	528	50	59
3972.00	3571	846	3257	559	130	152	57	38	995	345	512	669	718	93	92

Peak heights															
Sample name:	F	C1-F	C1-F	1-MF	DBT	4-MDBT	3+2-MDBT	1-MDBT	P	3-MP	2-MP	9-MP	1-MP	2EP+9EP+3,6-DMP	1EP
2871.75	5083	4100	10715	1649	2314	3710	1562	593	25853	16972	15134	15209	11225	4158	4695
2877.25	974	1725	5361	805	871	2095	871	312	13805	11324	9112	9902	7096	2854	2618
3260.34	10014	7070	22365	2701	16620	28574	9452	7723	91260	37440	41410	56886	43480	10486	10906
3260.75	5191	2178	6625	920	3475	5597	1882	1573	16768	7281	7328	10490	7157	2268	2034
3845.00	308	137	631	106	2234	3022	834	636	3233	1114	1230	2986	2212	727	330
3855.00	88	29	122	29	762	481	179	168	544	161	195	435	339	359	177
3885.00	186	53	319	31	1226	882	332	221	4772	1112	1558	3078	3141	132	232
3915.00	122664	32560	123328	20072	221398	238208	76128	59968	402170	124336	174912	292672	285050	36296	37912
3945.00	131709	33912	143104	19688	52352	47488	20680	13195	380135	130904	171648	256960	275783	28344	33456
3972.00	235653	55880	214912	36896	246788	287976	107408	72112	615307	203368	301571	394023	422573	59968	59179

Aromatic biomarkers, Well 6507/2-3  
compound amounts ng/mg EOM or peak heights

Compound amounts									
Sample name:	2,6+2,7+3,5-DMP	1,3+2,10+3,9+3,10-DMP	1,6+2,5+2,9-DMP	1,7-DMP	2,3-DMP	1,9+4,9+4,10-DMP	1,8-DMP	Retene	
2871.75	0	0	0	0	0	0	0	0	0
2877.25	0	0	0	0	0	0	0	0	0
3260.34	0	0	0	0	0	0	0	0	0
3260.75	0	0	0	0	0	0	0	0	0
3845.00	29	233	130	121	35	93	51	32	
3855.00	28	179	242	132	48	80	44	145	
3885.00	2	16	11	12	7	10	6	3	
3915.00	34	325	180	209	52	152	77	21	
3945.00	38	304	174	268	58	152	73	17	
3972.00	63	427	250	358	71	197	94	37	
Peak heights									
Sample name:	2,6+2,7+3,5-DMP	1,3+2,10+3,9+3,10-DMP	1,6+2,5+2,9-DMP	1,7-DMP	2,3-DMP	1,9+4,9+4,10-DMP	1,8-DMP	Retene	
2871.75	2032	12100	5566	4585	2090	2534	873	6988	
2877.25	1021	7167	3212	2599	1224	1585	500	9741	
3260.34	6076	42912	23360	24428	6993	14977	5427	16351	
3260.75	899	7971	3951	3954	1163	2373	838	4974	
3845.00	199	1585	888	823	236	635	348	206	
3855.00	36	227	307	168	61	101	56	177	
3885.00	152	1484	1022	1130	689	941	540	248	
3915.00	20568	194775	108271	125503	30920	91045	46080	11899	
3945.00	21642	173707	99224	153168	33007	86869	41576	9248	
3972.00	40596	275207	161216	230558	45641	127068	60784	23094	



Aromatic biomarkers, Well 6507/2-3  
compound amounts ng/mg EOM or peak heights

Compound amounts							
Sample name:	20TA	21TA	S26TA	R26TA/S27TA	S28TA	R27TA	R28TA
2871.75	0	0	0	0	0	0	0
2877.25	0	0	0	0	0	0	0
3260.34	0	0	0	0	0	0	0
3260.75	0	0	0	0	0	0	0
3845.00	0	11	0	0	0	0	0
3855.00	0	7	0	0	0	0	0
3885.00	0	3	0	0	0	0	0
3915.00	4	3	0	1	0	0	0
3945.00	1	1	0	0	0	0	0
3972.00	4	4	0	1	0	0	0
Peak heights							
Sample name:	20TA	21TA	S26TA	R26TA/S27TA	S28TA	R27TA	R28TA
2871.75	713	485	976	2964	1226	1289	1011
2877.25	1196	915	1036	3147	1125	1432	1119
3260.34	3477	3572	1339	3867	1858	1998	2034
3260.75	1004	1052	1105	3403	1974	1595	2003
3845.00	191	10521	119	14	25	39	14
3855.00	81	15202	117	54	25	36	65
3885.00	82	7093	78	42	58	29	47
3915.00	9939	7870	708	2097	991	952	1115
3945.00	4051	3462	171	387	239	153	220
3972.00	10620	10961	651	1833	1188	828	1293