

| #                                    | Rt.min. | m/z    | Rf. | Name      | Height | Amount |
|--------------------------------------|---------|--------|-----|-----------|--------|--------|
|                                      |         |        |     |           | ng/mg  |        |
| <b>Internal standard (if added):</b> |         |        |     |           |        |        |
| 1)                                   | 46.50   | 217.2  |     | 24baa     | 1842   | 24     |
| <b>Diterpanes:</b>                   |         |        |     |           |        |        |
| 2)                                   | 34.13   | 191.2  | s1  | 19/3      | 823    | 8      |
| 3)                                   | 36.12   | 191.2  | s1  | 20/3      | 581    | 6      |
| 4)                                   | 38.16   | 191.2  | s1  | 21/3      | 907    | 9      |
| 5)                                   | 42.14   | 191.2  | s1  | 23/3      | 1785   | 18     |
| 6)                                   | 43.27   | 191.2  | s1  | 24/3      | 1138   | 11     |
| 7)                                   | 45.55   | 191.2  | s1  | 25/3      | 624    | 6      |
| 8)                                   | 47.09   | 191.2  | s1  | 24/4      | 1126   | 11     |
| 9)                                   | 47.18   | 191.2  | s1  | 26/3R     | 435    | 4      |
| 10)                                  | 47.32   | 191.2  | s1  | 26/3S     | 481    | 5      |
| 11)                                  | 50.86   | 191.2  | s1  | 28/3R     | 509    | 5      |
| 12)                                  | 51.10   | 191.2  | s1  | 28/3S     | 422    | 4      |
| 13)                                  | 51.90   | 191.2  | s1  | 29/3R     | 724    | 7      |
| 14)                                  | 52.18   | 191.2  | s1  | 29/3S     | 620    | 6      |
| <b>Triterpanes:</b>                  |         |        |     |           |        |        |
| 15)                                  | 53.06   | 191.2  | s1  | 27Ts      | 3667   | 36     |
| 16)                                  | 53.31   | 177.15 | s1  | 25nor28ab | 3141   | 31     |
| 17)                                  | 53.74   | 191.2  | s1  | 27Tm      | 3084   | 30     |
| 18)                                  | 54.11   | 177.15 | s1  | 25nor29ab | 1763   | 17     |
| 19)                                  | 54.20   | 191.2  | s1  | 27b       | 600    | 6      |
| 20)                                  | 55.31   | 191.2  | s1  | 28ab      | 4591   | 45     |
| 21)                                  | 55.51   | 177.15 | s1  | 25nor30ab | 1631   | 16     |
| 22)                                  | 56.01   | 191.2  | s1  | 29ab      | 8935   | 88     |
| 23)                                  | 56.12   | 191.2  | s1  | 29Ts      | 3355   | 33     |
| 24)                                  | 56.35   | 191.2  | s1  | 30D       | 2056   | 20     |
| 25)                                  | 56.80   | 191.2  | s1  | 29ba      | 1742   | 17     |
| 26)                                  | 57.38   | 191.2  | s2  | 30ab      | 21279  | 135    |
| 27)                                  | 57.73   | 191.2  | s1  | 30D13     | 1212   | 12     |
| 28)                                  | 58.01   | 191.2  | s2  | 30ba      | 2129   | 14     |
| 29)                                  | 58.97   | 191.2  | s1  | 31abS     | 8030   | 79     |
| 30)                                  | 59.17   | 191.2  | s1  | 31abR     | 5585   | 55     |
| 31)                                  | 59.51   | 191.2  | s1  | 30G       | 951    | 9      |
| 32)                                  | 59.70   | 191.2  | s1  | 31ba      | 1129   | 11     |
| 33)                                  | 60.21   | 191.2  | s1  | 32abS     | 5542   | 55     |
| 34)                                  | 60.48   | 191.2  | s1  | 32abR     | 3804   | 38     |
| 35)                                  | 61.64   | 191.2  | s1  | 33abS     | 4368   | 43     |
| 36)                                  | 62.01   | 191.2  | s1  | 33abR     | 2771   | 27     |
| 37)                                  | 63.21   | 191.2  | s1  | 34abS     | 2326   | 23     |
| 38)                                  | 63.72   | 191.2  | s1  | 34abR     | 1433   | 14     |
| 39)                                  | 65.00   | 191.2  | s1  | 35abS     | 1761   | 17     |
| 40)                                  | 65.74   | 191.2  | s1  | 35abR     | 1176   | 12     |

### Saturated biomarkers

GC/MS detection HP-6890/5973  
Compound data



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

Data file name: NSO1\_23S.D  
Sample name: nso ref sat  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
  
Vial no.: 1  
Method: MSD\_S\_E2  
Operator: Hans  
Date: 21 Nov 2000 20:00

Response curve y = ax  
Response factor groups: s1...s3, responses as defined in method

| #                | Rt.min. | m/z   | Rf. | Name  | Height | Amount |
|------------------|---------|-------|-----|-------|--------|--------|
|                  |         |       |     |       | ng/mg  |        |
| <b>Steranes:</b> |         |       |     |       |        |        |
| 41)              | 38.67   | 217.2 | s3  | 21aa  | 1805   | 26     |
| 42)              | 40.34   | 217.2 | s3  | 21bb  | 2315   | 33     |
| 43)              | 40.46   | 217.2 | s3  | 22aa  | 1481   | 21     |
| 44)              | 42.70   | 217.2 | s3  | 22bb  | 1463   | 21     |
| 45)              | 49.03   | 217.2 | s3  | 27dbS | 4027   | 57     |
| 46)              | 49.66   | 217.2 | s3  | 27dbR | 2532   | 36     |
| 47)              | 52.02   | 218.2 | s3  | 27bbR | 3340   | 48     |
| 48)              | 52.17   | 218.2 | s3  | 27bbS | 2143   | 31     |
| 49)              | 52.58   | 217.2 | s3  | 27aaR | 1250   | 18     |
| 50)              | 53.77   | 218.2 | s3  | 28bbR | 1694   | 24     |
| 51)              | 53.92   | 218.2 | s3  | 28bbS | 2254   | 32     |
| 52)              | 54.90   | 217.2 | s3  | 29aaS | 1130   | 16     |
| 53)              | 55.21   | 218.2 | s3  | 29bbR | 2539   | 36     |
| 54)              | 55.31   | 218.2 | s3  | 29bbS | 2592   | 37     |
| 55)              | 55.98   | 217.2 | s3  | 29aaR | 1300   | 19     |
| 56)              | 56.39   | 218.2 | s3  | 30bbR | 1025   | 15     |
| 57)              | 56.43   | 218.2 | s3  | 30bbS | 932    | 13     |

| #                            | Rt.min. | m/z    | Rf. | Name      | Height | Amount |
|------------------------------|---------|--------|-----|-----------|--------|--------|
| Internal standard (if added) |         |        |     |           |        |        |
| 1)                           | 46.54   | 217,2  |     | 24baa     | 3255   | 24     |
| <b>Diterpanes:</b>           |         |        |     |           |        |        |
| 2)                           | 34,18   | 191,2  | s1  | 19/3      | 1514   | 8      |
| 3)                           | 36,16   | 191,2  | s1  | 20/3      | 1073   | 6      |
| 4)                           | 38,21   | 191,2  | s1  | 21/3      | 1577   | 9      |
| 5)                           | 42,19   | 191,2  | s1  | 23/3      | 2813   | 16     |
| 6)                           | 43,32   | 191,2  | s1  | 24/3      | 2132   | 12     |
| 7)                           | 45,59   | 191,2  | s1  | 25/3      | 1098   | 6      |
| 8)                           | 47,15   | 191,2  | s1  | 24/4      | 2024   | 11     |
| 9)                           | 47,23   | 191,2  | s1  | 26/3R     | 791    | 4      |
| 10)                          | 47,36   | 191,2  | s1  | 26/3S     | 774    | 4      |
| 11)                          | 50,91   | 191,2  | s1  | 28/3R     | 916    | 5      |
| 12)                          | 51,16   | 191,2  | s1  | 28/3S     | 796    | 4      |
| 13)                          | 51,94   | 191,2  | s1  | 29/3R     | 1259   | 7      |
| 14)                          | 52,23   | 191,2  | s1  | 29/3S     | 1154   | 6      |
| <b>Triterpanes:</b>          |         |        |     |           |        |        |
| 15)                          | 53,11   | 191,2  | s1  | 27Ts      | 6027   | 34     |
| 16)                          | 53,36   | 177,15 | s1  | 25nor28ab | 5198   | 29     |
| 17)                          | 53,79   | 191,2  | s1  | 27Tm      | 5201   | 29     |
| 18)                          | 54,16   | 177,15 | s1  | 25nor29ab | 2775   | 16     |
| 19)                          | 54,24   | 191,2  | s1  | 27b       | 866    | 5      |
| 20)                          | 55,36   | 191,2  | s1  | 28ab      | 8007   | 45     |
| 21)                          | 55,57   | 177,15 | s1  | 25nor30ab | 2699   | 15     |
| 22)                          | 56,06   | 191,2  | s1  | 29ab      | 15294  | 86     |
| 23)                          | 56,17   | 191,2  | s1  | 29Ts      | 6314   | 35     |
| 24)                          | 56,41   | 191,2  | s1  | 30D       | 3676   | 21     |
| 25)                          | 56,86   | 191,2  | s1  | 29ba      | 3358   | 19     |
| 26)                          | 57,43   | 191,2  | s2  | 30ab      | 37144  | 134    |
| 27)                          | 57,78   | 191,2  | s1  | 30D13     | 2114   | 12     |
| 28)                          | 58,06   | 191,2  | s2  | 30ba      | 3901   | 14     |
| 29)                          | 59,03   | 191,2  | s1  | 31abS     | 14599  | 82     |
| 30)                          | 59,22   | 191,2  | s1  | 31abR     | 10230  | 57     |
| 31)                          | 59,56   | 191,2  | s1  | 30G       | 2098   | 12     |
| 32)                          | 59,75   | 191,2  | s1  | 31ba      | 2086   | 12     |
| 33)                          | 60,26   | 191,2  | s1  | 32abS     | 8847   | 50     |
| 34)                          | 60,53   | 191,2  | s1  | 32abR     | 6905   | 39     |
| 35)                          | 61,70   | 191,2  | s1  | 33abS     | 8406   | 47     |
| 36)                          | 62,06   | 191,2  | s1  | 33abR     | 5156   | 29     |
| 37)                          | 63,26   | 191,2  | s1  | 34abS     | 4384   | 25     |
| 38)                          | 63,78   | 191,2  | s1  | 34abR     | 2656   | 15     |
| 39)                          | 65,07   | 191,2  | s1  | 35abS     | 3414   | 19     |
| 40)                          | 65,81   | 191,2  | s1  | 35abR     | 2280   | 13     |

### Saturated biomarkers

GC/MS detection HP-6890/5973  
Compound data



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

Data file name: NSO1\_6S.D  
Sample name: nso1\_6 ref.sat  
Data File Path: C:\HPCHEM\1\DATA\OIL\

Misc. info.:

Vial no.: 1  
Method: MSD\_S\_E2  
Operator: marian  
Date: 4 Jan 2001 18:59

Response curve y = ax  
Response factor groups: s1...s3, responses as defined in method

| #                | Rt.min. | m/z   | Rf. | Name  | Height | Amount |
|------------------|---------|-------|-----|-------|--------|--------|
| <b>Steranes:</b> |         |       |     |       |        |        |
| 41)              | 38,71   | 217,2 | s3  | 21aa  | 3168   | 26     |
| 42)              | 40,38   | 217,2 | s3  | 21bb  | 4203   | 34     |
| 43)              | 40,50   | 217,2 | s3  | 22aa  | 2690   | 22     |
| 44)              | 42,75   | 217,2 | s3  | 22bb  | 2841   | 23     |
| 45)              | 49,08   | 217,2 | s3  | 27dbS | 7806   | 63     |
| 46)              | 49,71   | 217,2 | s3  | 27dbR | 4823   | 39     |
| 47)              | 52,08   | 218,2 | s3  | 27bbR | 6085   | 49     |
| 48)              | 52,22   | 218,2 | s3  | 27bbS | 4136   | 33     |
| 49)              | 52,63   | 217,2 | s3  | 27aaR | 2473   | 20     |
| 50)              | 53,82   | 218,2 | s3  | 28bbR | 3304   | 27     |
| 51)              | 53,96   | 218,2 | s3  | 28bbS | 4599   | 37     |
| 52)              | 54,94   | 217,2 | s3  | 29aaS | 2369   | 19     |
| 53)              | 55,26   | 218,2 | s3  | 29bbR | 5109   | 41     |
| 54)              | 55,36   | 218,2 | s3  | 29bbS | 4634   | 37     |
| 55)              | 55,97   | 217,2 | s3  | 29aaR | 2416   | 20     |
| 56)              | 56,42   | 218,2 | s3  | 30bbR | 1893   | 15     |
| 57)              | 56,48   | 218,2 | s3  | 30bbS | 1674   | 14     |

| #                                    | Rt.min. | m/z    | Rf. | Name      | Height | Amount |
|--------------------------------------|---------|--------|-----|-----------|--------|--------|
|                                      |         |        |     |           | ng/mg  |        |
| <b>Internal standard (if added):</b> |         |        |     |           |        |        |
| 1)                                   | 46.47   | 217.2  |     | 24baa     | 1224   | 24     |
| <b>Diterpanes:</b>                   |         |        |     |           |        |        |
| 2)                                   | 34.12   | 191.2  | s1  | 19/3      | 539    | 8      |
| 3)                                   | 36.09   | 191.2  | s1  | 20/3      | 401    | 6      |
| 4)                                   | 38.14   | 191.2  | s1  | 21/3      | 616    | 9      |
| 5)                                   | 42.11   | 191.2  | s1  | 23/3      | 1317   | 20     |
| 6)                                   | 43.23   | 191.2  | s1  | 24/3      | 754    | 11     |
| 7)                                   | 45.50   | 191.2  | s1  | 25/3      | 429    | 6      |
| 8)                                   | 47.05   | 191.2  | s1  | 24/4      | 691    | 10     |
| 9)                                   | 47.15   | 191.2  | s1  | 26/3R     | 270    | 4      |
| 10)                                  | 47.28   | 191.2  | s1  | 26/3S     | 291    | 4      |
| 11)                                  | 50.81   | 191.2  | s1  | 28/3R     | 330    | 5      |
| 12)                                  | 51.06   | 191.2  | s1  | 28/3S     | 287    | 4      |
| 13)                                  | 51.84   | 191.2  | s1  | 29/3R     | 499    | 7      |
| 14)                                  | 52.14   | 191.2  | s1  | 29/3S     | 447    | 7      |
| <b>Triterpanes:</b>                  |         |        |     |           |        |        |
| 15)                                  | 53.01   | 191.2  | s1  | 27Ts      | 2246   | 33     |
| 16)                                  | 53.26   | 177.15 | s1  | 25nor28ab | 1862   | 28     |
| 17)                                  | 53.69   | 191.2  | s1  | 27Tm      | 1992   | 30     |
| 18)                                  | 54.07   | 177.15 | s1  | 25nor29ab | 1056   | 16     |
| 19)                                  | 54.15   | 191.2  | s1  | 27b       | 416    | 6      |
| 20)                                  | 55.25   | 191.2  | s1  | 28ab      | 3111   | 46     |
| 21)                                  | 55.47   | 177.15 | s1  | 25nor30ab | 949    | 14     |
| 22)                                  | 55.96   | 191.2  | s1  | 29ab      | 5399   | 80     |
| 23)                                  | 56.06   | 191.2  | s1  | 29Ts      | 2244   | 33     |
| 24)                                  | 56.31   | 191.2  | s1  | 30D       | 1399   | 21     |
| 25)                                  | 56.75   | 191.2  | s1  | 29ba      | 1121   | 17     |
| 26)                                  | 57.34   | 191.2  | s2  | 30ab      | 14818  | 142    |
| 27)                                  | 57.67   | 191.2  | s1  | 30D13     | 813    | 12     |
| 28)                                  | 57.96   | 191.2  | s2  | 30ba      | 1452   | 14     |
| 29)                                  | 58.92   | 191.2  | s1  | 31abS     | 5100   | 76     |
| 30)                                  | 59.11   | 191.2  | s1  | 31abR     | 3926   | 58     |
| 31)                                  | 59.45   | 191.2  | s1  | 30G       | 759    | 11     |
| 32)                                  | 59.64   | 191.2  | s1  | 31ba      | 749    | 11     |
| 33)                                  | 60.15   | 191.2  | s1  | 32abS     | 3744   | 56     |
| 34)                                  | 60.42   | 191.2  | s1  | 32abR     | 2698   | 40     |
| 35)                                  | 61.58   | 191.2  | s1  | 33abS     | 3189   | 47     |
| 36)                                  | 61.96   | 191.2  | s1  | 33abR     | 2124   | 32     |
| 37)                                  | 63.14   | 191.2  | s1  | 34abS     | 1864   | 28     |
| 38)                                  | 63.65   | 191.2  | s1  | 34abR     | 1118   | 17     |
| 39)                                  | 64.93   | 191.2  | s1  | 35abS     | 1462   | 22     |
| 40)                                  | 65.65   | 191.2  | s1  | 35abR     | 939    | 14     |

### Saturated biomarkers

GC/MS detection HP-6890/5973  
Compound data



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

Data file name: NSO1\_03S.D  
Sample name: nso1-ref sat  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
  
Vial no.: 1  
Method: MSD\_S\_E2  
Operator: Marian  
Date: 29 Aug 2000 16:01

Response curve y = ax  
Response factor groups: s1...s3, responses as defined in method

| #                | Rt.min. | m/z   | Rf. | Name  | Height | Amount |
|------------------|---------|-------|-----|-------|--------|--------|
|                  |         |       |     |       | ng/mg  |        |
| <b>Steranes:</b> |         |       |     |       |        |        |
| 41)              | 38.64   | 217.2 | s3  | 21aa  | 1107   | 24     |
| 42)              | 40.30   | 217.2 | s3  | 21bb  | 1457   | 31     |
| 43)              | 40.42   | 217.2 | s3  | 22aa  | 945    | 20     |
| 44)              | 42.66   | 217.2 | s3  | 22bb  | 913    | 20     |
| 45)              | 48.99   | 217.2 | s3  | 27dbS | 2755   | 59     |
| 46)              | 49.62   | 217.2 | s3  | 27dbR | 1635   | 35     |
| 47)              | 51.98   | 218.2 | s3  | 27bbR | 2226   | 48     |
| 48)              | 52.13   | 218.2 | s3  | 27bbS | 1515   | 33     |
| 49)              | 52.53   | 217.2 | s3  | 27aaR | 811    | 17     |
| 50)              | 53.73   | 218.2 | s3  | 28bbR | 1239   | 27     |
| 51)              | 53.87   | 218.2 | s3  | 28bbS | 1542   | 33     |
| 52)              | 54.86   | 217.2 | s3  | 29aaS | 918    | 20     |
| 53)              | 55.15   | 218.2 | s3  | 29bbR | 1860   | 40     |
| 54)              | 55.25   | 218.2 | s3  | 29bbS | 1763   | 38     |
| 55)              | 55.86   | 217.2 | s3  | 29aaR | 855    | 18     |
| 56)              | 56.34   | 218.2 | s3  | 30bbR | 711    | 15     |
| 57)              | 56.38   | 218.2 | s3  | 30bbS | 615    | 13     |

## **Appendix IV**

**Mass chromatograms and tabulated results from the GC-MSD analysis  
of the aromatic hydrocarbons**

## **Oil samples**

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount<br>ng/mg |
|-------------------------------|---------|-----|-----|-----------------|--------|-----------------|
| Internal standard (if added): |         |     |     |                 |        |                 |
| 14)                           | 10,20   | 136 |     | d8N             | 23674  | 48              |
| 16)                           | 16,31   | 164 |     | d10BP           | 20392  | 42              |
| 59)                           | 27,63   | 188 |     | d10P            | 27017  | 48              |
| 79)                           | 42,92   | 240 |     | d12C            | 15270  | 48              |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |                 |
| 1)                            | 20,35   | 133 | 0   | C13AI           | 2391   |                 |
| 2)                            | 22,13   | 133 | 0   | C14AI           | 6109   |                 |
| 3)                            | 26,37   | 133 | 0   | C15AI           | 3766   |                 |
| 4)                            | 28,66   | 133 | 0   | C16AI           | 1544   |                 |
| 5)                            | 30,79   | 133 | 0   | C17AI           | 350    |                 |
| 6)                            | 33,79   | 133 | 0   | C18AI           | 156    |                 |
| 7)                            | 34,74   | 133 | 0   | C19AI           | 610    |                 |
| 8)                            | 37,79   | 133 | 0   | C20AI           | 392    |                 |
| 9)                            | 39,75   | 133 | 0   | C21AI           | 23     |                 |
| 10)                           | 42,77   | 133 | 0   | C22AI           | 13     |                 |
| 11)                           | 44,77   | 133 | 0   | C23AI           | 4      |                 |
| 12)                           | 55,74   | 133 | 0   | C30AI           | 5      |                 |
| 13)                           | 56,75   | 133 | 0   | C31AI           | 5      |                 |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |                 |
| 15)                           | 10,28   | 128 | a1  | N               | 159103 | 292             |
| 17)                           | 13,75   | 142 | a2  | 2-MN            | 236882 | 463             |
| 18)                           | 14,27   | 142 | a2  | 1-MN            | 133555 | 261             |
| 19)                           | 16,85   | 156 | a3  | 2-EN            | 17008  | 31              |
| 20)                           | 16,96   | 156 | a3  | 1-EN            | 10564  | 19              |
| 21)                           | 17,18   | 156 | a3  | 2.6+2.7-DMN     | 55909  | 103             |
| 22)                           | 17,64   | 156 | a3  | 1.3+1.7-DMN     | 91667  | 168             |
| 23)                           | 17,73   | 156 | a3  | 1.6-DMN         | 58546  | 107             |
| 24)                           | 18,23   | 156 | a3  | 2.3+1.4-DMN     | 26146  | 48              |
| 25)                           | 18,32   | 156 | a3  | 1.5-DMN         | 14800  | 27              |
| 26)                           | 18,68   | 156 | a3  | 1.2-DMN         | 14002  | 26              |
| 27)                           | 20,37   | 170 | a4  | C3-N-1          | 2819   | 5               |
| 28)                           | 20,72   | 170 | a4  | C3-N-2          | 3678   | 7               |
| 29)                           | 20,84   | 170 | a4  | 1.3.7-TMN       | 16830  | 31              |
| 30)                           | 20,98   | 170 | a4  | 1.3.6-TMN       | 23077  | 43              |
| 31)                           | 21,44   | 170 | a4  | 1.3.5+1.4.6-TMN | 17153  | 32              |
| 32)                           | 21,52   | 170 | a4  | 2.3.6-TMN       | 9711   | 18              |
| 33)                           | 21,93   | 170 | a4  | 1.6.7+1.2.7-TMN | 9561   | 18              |
| 34)                           | 21,98   | 170 | a4  | 1.2.6-TMN       | 6768   | 13              |
| 35)                           | 22,41   | 170 | a4  | 1.2.4-TMN       | 2294   | 4               |
| 36)                           | 22,61   | 170 | a4  | 1.2.5-TMN       | 8679   | 16              |
| <b>Biphenyls:</b>             |         |     |     |                 |        |                 |
| 37)                           | 16,42   | 154 | a5  | BP              | 21575  | 28              |
| 38)                           | 19,66   | 168 | a5  | 3-MBP           | 35903  | 46              |
| 39)                           | 19,91   | 168 | a5  | 4-MBP           | 7347   | 9               |
| 40)                           | 19,99   | 182 | a4  | 2.3'-DMBP       | 2330   | 4               |
| 41)                           | 20,19   | 182 | a4  | 2.5-DMBP        | 1200   | 2               |
| 42)                           | 20,36   | 182 | a4  | 2.4+2.4'-DMBP   | 1491   | 3               |
| 43)                           | 20,97   | 182 | a4  | 2.3-DMBP        | 4896   | 9               |
| 44)                           | 22,33   | 182 | a4  | 3-EBP           | 1385   | 3               |
| 45)                           | 22,66   | 182 | a4  | 3.5-DMBP        | 5951   | 11              |
| 46)                           | 22,75   | 182 | a4  | 3.3'-DMBP       | 12457  | 23              |
| 47)                           | 22,85   | 182 | a4  | 4-EBP           | 365    | 1               |
| 48)                           | 23,04   | 182 | a4  | 3.4'-DMBP       | 5611   | 10              |
| 49)                           | 23,25   | 182 | a4  | 4.4'-DMBP       | 736    | 1               |
| 50)                           | 23,78   | 182 | a4  | 3.4-DMBP        | 1761   | 3               |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 2923\_6A.D  
Sample name: 6305/8-1 2923.6m aro  
Data File Path: C:\HPCHEM\1\DATA\IORM\_OIL\  
Misc. info.:  
Vial no.: 8  
Method: MSD\_A\_E2  
Operator: marian  
Date: 5/1-2001 5:16

Response curve: y = ax+b  
Response factor groups: a1...a11, responses as defined in method

| #                            | Rt.min. | m/z | Rf. | Name                  | Height | Amount<br>ng/mg |
|------------------------------|---------|-----|-----|-----------------------|--------|-----------------|
| <b>Dibenzofuranes:</b>       |         |     |     |                       |        |                 |
| 51)                          | 20,49   | 168 | a5  | DBF                   | 8438   | 11              |
| 52)                          | 23,54   | 182 | a4  | MDBF-1                | 7033   | 13              |
| 53)                          | 23,90   | 182 | a4  | MDBF-2                | 3019   | 6               |
| 54)                          | 24,18   | 182 | a4  | MDBF-3                | 2152   | 4               |
| <b>Fluorenes:</b>            |         |     |     |                       |        |                 |
| 55)                          | 22,42   | 166 | a6  | F                     | 8818   | 14              |
| 56)                          | 25,60   | 180 | a6  | C1-F-1                | 2015   | 3               |
| 57)                          | 25,83   | 180 | a6  | C1-F-2                | 3398   | 5               |
| 58)                          | 26,14   | 180 | a6  | 1-MF                  | 943    | 1               |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |                 |
| 60)                          | 27,04   | 184 | a7  | DBT                   | 218    | 0               |
| 61)                          | 30,15   | 198 | a7  | 4-MDBT                | 49     | 0               |
| 62)                          | 30,41   | 198 | a7  | 3+2-MDBT              | 426    | 0               |
| 63)                          | 30,70   | 198 | a7  | 1-MDBT                | 46     | 0               |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |                 |
| 64)                          | 27,75   | 178 | a8  | P                     | 4022   | 6               |
| 65)                          | 30,67   | 192 | a9  | 3-MP                  | 599    | 1               |
| 66)                          | 30,81   | 192 | a9  | 2-MP                  | 654    | 1               |
| 67)                          | 31,27   | 192 | a9  | 9-MP                  | 848    | 1               |
| 68)                          | 31,40   | 192 | a9  | 1-MP                  | 580    | 1               |
| 69)                          | 33,37   | 206 | a10 | 2EP+9EP+3.6-DMP       | 102    | 0               |
| 70)                          | 33,60   | 206 | a10 | 1EP                   | 97     | 0               |
| 71)                          | 33,70   | 206 | a10 | 2.6+2.7+3.5-DMP       | 47     | 0               |
| 72)                          | 34,03   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 207    | 0               |
| 73)                          | 34,17   | 206 | a10 | 1.6+2.5+2.9-DMP       | 141    | 0               |
| 74)                          | 34,31   | 206 | a10 | 1.7-DMP               | 109    | 0               |
| 75)                          | 34,46   | 206 | a10 | 2.3-DMP               | 52     | 0               |
| 76)                          | 34,56   | 206 | a10 | 1.9+4.9+4.10-DMP      | 68     | 0               |
| 77)                          | 34,87   | 206 | a10 | 1.8-DMP               | 63     | 0               |
| <b>Retene:</b>               |         |     |     |                       |        |                 |
| 78)                          | 38,16   | 219 | a8  | Retene                | 413    | 1               |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |                 |
| 80)                          | 42,58   | 231 | a11 | 20TA                  | 10     | 0               |
| 81)                          | 44,41   | 231 | a11 | 21TA                  | 10     | 0               |
| 82)                          | 51,39   | 231 | a11 | S26TA                 | 6      | 0               |
| 83)                          | 52,60   | 231 | a11 | R26TA/S27TA           | 13     | 0               |
| 84)                          | 53,55   | 231 | a11 | S28TA                 | 5      | 0               |
| 85)                          | 54,06   | 231 | a11 | R27TA                 | 4      | 0               |
| 86)                          | 55,31   | 231 | a11 | R28TA                 | 5      | 0               |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount<br>ng/mg |
|-------------------------------|---------|-----|-----|-----------------|--------|-----------------|
| Internal standard (if added): |         |     |     |                 |        |                 |
| 14)                           | 11,84   | 136 |     | d8N             | 13864  | 47              |
| 16)                           | 18,14   | 164 |     | d10BP           | 12458  | 42              |
| 59)                           | 29,73   | 188 |     | d10P            | 18863  | 47              |
| 79)                           | 45,19   | 240 |     | d12C            | 8496   | 47              |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |                 |
| 1)                            | 20,23   | 133 | 0   | C13AI           | 4505   |                 |
| 2)                            | 22,04   | 133 | 0   | C14AI           | 3689   |                 |
| 3)                            | 26,34   | 133 | 0   | C15AI           | 1543   |                 |
| 4)                            | 28,75   | 133 | 0   | C16Ai           | 2432   |                 |
| 5)                            | 30,79   | 133 | 0   | C17AI           | 271    |                 |
| 6)                            | 33,76   | 133 | 0   | C18AI           | 1063   |                 |
| 7)                            | 34,80   | 133 | 0   | C19AI           | 3571   |                 |
| 8)                            | 37,78   | 133 | 0   | C20AI           | 1221   |                 |
| 9)                            | 39,78   | 133 | 0   | C21AI           | 2953   |                 |
| 10)                           | 42,72   | 133 | 0   | C22AI           | 625    |                 |
| 11)                           | 44,73   | 133 | 0   | C23AI           | 102    |                 |
| 12)                           | 55,77   | 133 | 0   | C30AI           | 177    |                 |
| 13)                           | 56,78   | 133 | 0   | C31AI           | 42     |                 |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |                 |
| 15)                           | 11,93   | 128 | a1  | N               | 39398  | 123             |
| 17)                           | 15,53   | 142 | a2  | 2-MN            | 86286  | 274             |
| 18)                           | 16,08   | 142 | a2  | 1-MN            | 52997  | 168             |
| 19)                           | 18,72   | 156 | a3  | 2-EN            | 8533   | 25              |
| 20)                           | 18,83   | 156 | a3  | 1-EN            | 5239   | 16              |
| 21)                           | 19,05   | 156 | a3  | 2.6+2.7-DMN     | 29793  | 89              |
| 22)                           | 19,52   | 156 | a3  | 1.3+1.7-DMN     | 53807  | 160             |
| 23)                           | 19,63   | 156 | a3  | 1.6-DMN         | 32684  | 97              |
| 24)                           | 20,12   | 156 | a3  | 2.3+1.4-DMN     | 15707  | 47              |
| 25)                           | 20,23   | 156 | a3  | 1.5-DMN         | 8751   | 26              |
| 26)                           | 20,61   | 156 | a3  | 1.2-DMN         | 8881   | 26              |
| 27)                           | 22,12   | 170 | a4  | C3-N-1          | 7187   | 22              |
| 28)                           | 22,66   | 170 | a4  | C3-N-2          | 3001   | 9               |
| 29)                           | 22,78   | 170 | a4  | 1.3.7-TMN       | 12331  | 37              |
| 30)                           | 22,91   | 170 | a4  | 1.3.6-TMN       | 19253  | 58              |
| 31)                           | 23,39   | 170 | a4  | 1.3.5+1.4.6-TMN | 14814  | 45              |
| 32)                           | 23,46   | 170 | a4  | 2.3.6-TMN       | 8482   | 26              |
| 33)                           | 23,88   | 170 | a4  | 1.6.7+1.2.7-TMN | 8165   | 25              |
| 34)                           | 23,94   | 170 | a4  | 1.2.6-TMN       | 6146   | 19              |
| 35)                           | 24,38   | 170 | a4  | 1.2.4-TMN       | 2150   | 7               |
| 36)                           | 24,59   | 170 | a4  | 1.2.5-TMN       | 9254   | 28              |
| <b>Biphenyls:</b>             |         |     |     |                 |        |                 |
| 37)                           | 18,26   | 154 | a5  | BP              | 10089  | 21              |
| 38)                           | 21,56   | 168 | a5  | 3-MBP           | 23605  | 49              |
| 39)                           | 21,82   | 168 | a5  | 4-MBP           | 5109   | 11              |
| 40)                           | 21,87   | 182 | a4  | 2.3'-DMBP       | 1408   | 4               |
| 41)                           | 22,07   | 182 | a4  | 2.5-DMBP        | 644    | 2               |
| 42)                           | 22,24   | 182 | a4  | 2.4+2.4'-DMBP   | 998    | 3               |
| 43)                           | 22,86   | 182 | a4  | 2.3-DMBP        | 3068   | 9               |
| 44)                           | 24,25   | 182 | a4  | 3-EBP           | 1220   | 4               |
| 45)                           | 24,59   | 182 | a4  | 3.5-DMBP        | 5742   | 17              |
| 46)                           | 24,68   | 182 | a4  | 3.3'-DMBP       | 11861  | 36              |
| 47)                           | 24,79   | 182 | a4  | 4-EBP           | 315    | 1               |
| 48)                           | 24,97   | 182 | a4  | 3.4'-DMBP       | 5714   | 17              |
| 49)                           | 25,19   | 182 | a4  | 4.4'-DMBP       | 761    | 2               |
| 50)                           | 25,75   | 182 | a4  | 3.4-DMBP        | 1899   | 6               |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 2992A.D  
Sample name: 6305\_8\_1\_aro  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1B\  
Misc. info.: 2922 m  
Vial no.: 9  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

Response curve:  $y = ax + b$   
Response factor groups: a1...a11, responses as defined in method

| #                            | Rt.min. | m/z | Rf. | Name                  | Height | Amount<br>ng/mg |
|------------------------------|---------|-----|-----|-----------------------|--------|-----------------|
| <b>Dibenzofuranes:</b>       |         |     |     |                       |        |                 |
| 51)                          | 22,44   | 168 | a5  | DBF                   | 6622   | 14              |
| 52)                          | 25,53   | 182 | a4  | MDBF-1                | 8829   | 27              |
| 53)                          | 25,91   | 182 | a4  | MDBF-2                | 3377   | 10              |
| 54)                          | 26,21   | 182 | a4  | MDBF-3                | 2931   | 9               |
| <b>Fluorenes:</b>            |         |     |     |                       |        |                 |
| 55)                          | 24,42   | 166 | a6  | F                     | 9796   | 25              |
| 56)                          | 27,64   | 180 | a6  | C1-F-1                | 2775   | 7               |
| 57)                          | 27,88   | 180 | a6  | C1-F-2                | 5599   | 14              |
| 58)                          | 28,18   | 180 | a6  | 1-MF                  | 1688   | 4               |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |                 |
| 60)                          | 29,12   | 184 | a7  | DBT                   | 451    | 0               |
| 61)                          | 31,74   | 198 | a7  | 4-MDBT                | 266    | 0               |
| 62)                          | 32,24   | 198 | a7  | 3+2-MDBT              | 91     | 0               |
| 63)                          | 32,85   | 198 | a7  | 1-MDBT                | 58     | 0               |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |                 |
| 64)                          | 29,84   | 178 | a8  | P                     | 9615   | 20              |
| 65)                          | 32,79   | 192 | a9  | 3-MP                  | 2189   | 5               |
| 66)                          | 32,92   | 192 | a9  | 2-MP                  | 2461   | 6               |
| 67)                          | 33,40   | 192 | a9  | 9-MP                  | 3264   | 8               |
| 68)                          | 33,53   | 192 | a9  | 1-MP                  | 2426   | 6               |
| 69)                          | 35,50   | 206 | a10 | 2EP+9EP+3.6-DMP       | 558    | 1               |
| 70)                          | 35,74   | 206 | a10 | 1EP                   | 414    | 1               |
| 71)                          | 35,83   | 206 | a10 | 2.6+2.7+3.5-DMP       | 206    | 0               |
| 72)                          | 36,17   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 1214   | 3               |
| 73)                          | 36,32   | 206 | a10 | 1.6+2.5+2.9-DMP       | 787    | 2               |
| 74)                          | 36,45   | 206 | a10 | 1.7-DMP               | 630    | 1               |
| 75)                          | 36,61   | 206 | a10 | 2.3-DMP               | 286    | 1               |
| 76)                          | 36,72   | 206 | a10 | 1.9+4.9+4.10-DMP      | 385    | 1               |
| 77)                          | 37,02   | 206 | a10 | 1.8-DMP               | 384    | 1               |
| <b>Retene:</b>               |         |     |     |                       |        |                 |
| 78)                          | 40,33   | 219 | a8  | Retene                | 5447   | 11              |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |                 |
| 80)                          | 44,80   | 231 | a11 | 20TA                  | 97     | 0               |
| 81)                          | 46,58   | 231 | a11 | 21TA                  | 69     | 0               |
| 82)                          | 53,62   | 231 | a11 | S26TA                 | 235    | 0               |
| 83)                          | 54,83   | 231 | a11 | R26TA/S27TA           | 812    | 1               |
| 84)                          | 55,82   | 231 | a11 | S28TA                 | 255    | 0               |
| 85)                          | 56,32   | 231 | a11 | R27TA                 | 422    | 1               |
| 86)                          | 57,54   | 231 | a11 | R28TA                 | 251    | 0               |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount<br>ng/mg |
|-------------------------------|---------|-----|-----|-----------------|--------|-----------------|
| Internal standard (if added): |         |     |     |                 |        |                 |
| 14)                           | 10,20   | 136 |     | d8N             | 28227  | 43              |
| 16)                           | 16,31   | 164 |     | d10BP           | 22058  | 38              |
| 59)                           | 27,64   | 188 |     | d10P            | 28191  | 43              |
| 79)                           | 42,91   | 240 |     | d12C            | 18047  | 43              |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |                 |
| 1)                            | 20,20   | 133 | 0   | C13AI           | 8487   |                 |
| 2)                            | 22,14   | 133 | 0   | C14AI           | 7479   |                 |
| 3)                            | 26,38   | 133 | 0   | C15AI           | 5036   |                 |
| 4)                            | 28,77   | 133 | 0   | C16AI           | 450    |                 |
| 5)                            | 30,77   | 133 | 0   | C17AI           | 1274   |                 |
| 6)                            | 33,78   | 133 | 0   | C18AI           | 479    |                 |
| 7)                            | 34,74   | 133 | 0   | C19AI           | 1444   |                 |
| 8)                            | 37,79   | 133 | 0   | C20AI           | 1200   |                 |
| 9)                            | 39,61   | 133 | 0   | C21AI           | 304    |                 |
| 10)                           | 42,74   | 133 | 0   | C22AI           | 43     |                 |
| 11)                           | 44,75   | 133 | 0   | C23AI           | 38     |                 |
| 12)                           | 55,75   | 133 | 0   | C30AI           | 13     |                 |
| 13)                           | 56,73   | 133 | 0   | C31AI           | 3      |                 |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |                 |
| 15)                           | 10,28   | 128 | a1  | N               | 224049 | 308             |
| 17)                           | 13,75   | 142 | a2  | 2-MN            | 304316 | 491             |
| 18)                           | 14,27   | 142 | a2  | 1-MN            | 168228 | 272             |
| 19)                           | 16,85   | 156 | a3  | 2-EN            | 21402  | 32              |
| 20)                           | 16,96   | 156 | a3  | 1-EN            | 12915  | 20              |
| 21)                           | 17,18   | 156 | a3  | 2.6+2.7-DMN     | 71873  | 109             |
| 22)                           | 17,64   | 156 | a3  | 1.3+1.7-DMN     | 114504 | 173             |
| 23)                           | 17,74   | 156 | a3  | 1.6-DMN         | 71508  | 108             |
| 24)                           | 18,23   | 156 | a3  | 2.3+1.4-DMN     | 35825  | 54              |
| 25)                           | 18,32   | 156 | a3  | 1.5-DMN         | 19409  | 29              |
| 26)                           | 18,68   | 156 | a3  | 1.2-DMN         | 17658  | 27              |
| 27)                           | 20,37   | 170 | a4  | C3-N-1          | 4068   | 6               |
| 28)                           | 20,73   | 170 | a4  | C3-N-2          | 5143   | 8               |
| 29)                           | 20,85   | 170 | a4  | 1.3.7-TMN       | 23689  | 36              |
| 30)                           | 20,98   | 170 | a4  | 1.3.6-TMN       | 34215  | 53              |
| 31)                           | 21,45   | 170 | a4  | 1.3.5+1.4.6-TMN | 23924  | 37              |
| 32)                           | 21,52   | 170 | a4  | 2.3.6-TMN       | 14401  | 22              |
| 33)                           | 21,93   | 170 | a4  | 1.6.7+1.2.7-TMN | 14014  | 22              |
| 34)                           | 21,98   | 170 | a4  | 1.2.6-TMN       | 9876   | 15              |
| 35)                           | 22,41   | 170 | a4  | 1.2.4-TMN       | 3249   | 5               |
| 36)                           | 22,60   | 170 | a4  | 1.2.5-TMN       | 12509  | 19              |
| <b>Biphenyls:</b>             |         |     |     |                 |        |                 |
| 37)                           | 16,42   | 154 | a5  | BP              | 29808  | 32              |
| 38)                           | 19,66   | 168 | a5  | 3-MBP           | 48294  | 51              |
| 39)                           | 19,92   | 168 | a5  | 4-MBP           | 10805  | 11              |
| 40)                           | 19,99   | 182 | a4  | 2.3'-DMBP       | 2932   | 5               |
| 41)                           | 20,19   | 182 | a4  | 2.5-DMBP        | 1533   | 2               |
| 42)                           | 20,36   | 182 | a4  | 2.4+2.4'-DMBP   | 1993   | 3               |
| 43)                           | 20,97   | 182 | a4  | 2.3-DMBP        | 6363   | 10              |
| 44)                           | 22,34   | 182 | a4  | 3-EBP           | 2250   | 3               |
| 45)                           | 22,66   | 182 | a4  | 3.5-DMBP        | 9088   | 14              |
| 46)                           | 22,75   | 182 | a4  | 3.3'-DMBP       | 18384  | 28              |
| 47)                           | 22,85   | 182 | a4  | 4-EBP           | 572    | 1               |
| 48)                           | 23,04   | 182 | a4  | 3.4'-DMBP       | 8822   | 14              |
| 49)                           | 23,25   | 182 | a4  | 4.4'-DMBP       | 1241   | 2               |
| 50)                           | 23,80   | 182 | a4  | 3.4-DMBP        | 2877   | 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: 2919\_6A.D  
Sample name: 6305/8-1 2919.6m aro  
Data File Path: C:\HPCHEM\1\DATA\ORM\_OIL\  
Misc. info.:  
  
Vial no.: 7  
Method: MSD\_A\_E2  
Operator: marian  
Date: 5/1-2001 3:47

Response curve: y = ax+b  
Response factor groups: a1...a11, responses as defined in method

| #                            | Rt.min. | m/z | Rf. | Name                  | Height | Amount<br>ng/mg |
|------------------------------|---------|-----|-----|-----------------------|--------|-----------------|
| <b>Dibenzofuranes:</b>       |         |     |     |                       |        |                 |
| 51)                          | 20,49   | 168 | a5  | DBF                   | 10484  | 11              |
| 52)                          | 23,55   | 182 | a4  | MDBF-1                | 10441  | 16              |
| 53)                          | 23,90   | 182 | a4  | MDBF-2                | 4330   | 7               |
| 54)                          | 24,18   | 182 | a4  | MDBF-3                | 3246   | 5               |
| <b>Fluorenes:</b>            |         |     |     |                       |        |                 |
| 55)                          | 22,42   | 166 | a6  | F                     | 12468  | 16              |
| 56)                          | 25,61   | 180 | a6  | C1-F-1                | 3291   | 4               |
| 57)                          | 25,85   | 180 | a6  | C1-F-2                | 5743   | 7               |
| 58)                          | 26,14   | 180 | a6  | 1-MF                  | 1750   | 2               |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |                 |
| 60)                          | 27,04   | 184 | a7  | DBT                   | 451    | 0               |
| 61)                          | 30,15   | 198 | a7  | 4-MDBT                | 124    | 0               |
| 62)                          | 30,43   | 198 | a7  | 3+2-MDBT              | 810    | 0               |
| 63)                          | 30,71   | 198 | a7  | 1-MDBT                | 120    | 0               |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |                 |
| 64)                          | 27,75   | 178 | a8  | P                     | 7285   | 9               |
| 65)                          | 30,68   | 192 | a9  | 3-MP                  | 1994   | 3               |
| 66)                          | 30,82   | 192 | a9  | 2-MP                  | 2100   | 3               |
| 67)                          | 31,28   | 192 | a9  | 9-MP                  | 2291   | 3               |
| 68)                          | 31,40   | 192 | a9  | 1-MP                  | 1631   | 2               |
| 69)                          | 33,37   | 206 | a10 | 2EP+9EP+3.6-DMP       | 356    | 1               |
| 70)                          | 33,61   | 206 | a10 | 1EP                   | 443    | 1               |
| 71)                          | 33,71   | 206 | a10 | 2.6+2.7+3.5-DMP       | 236    | 0               |
| 72)                          | 34,03   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 1007   | 1               |
| 73)                          | 34,17   | 206 | a10 | 1.6+2.5+2.9-DMP       | 618    | 1               |
| 74)                          | 34,31   | 206 | a10 | 1.7-DMP               | 442    | 1               |
| 75)                          | 34,46   | 206 | a10 | 2.3-DMP               | 191    | 0               |
| 76)                          | 34,56   | 206 | a10 | 1.9+4.9+4.10-DMP      | 259    | 0               |
| 77)                          | 34,86   | 206 | a10 | 1.8-DMP               | 180    | 0               |
| <b>Retene:</b>               |         |     |     |                       |        |                 |
| 78)                          | 38,17   | 219 | a8  | Retene                | 1482   | 2               |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |                 |
| 80)                          | 42,58   | 231 | a11 | 20TA                  | 40     | 0               |
| 81)                          | 44,44   | 231 | a11 | 21TA                  | 30     | 0               |
| 82)                          | 51,39   | 231 | a11 | S26TA                 | 21     | 0               |
| 83)                          | 52,59   | 231 | a11 | R26TA/S27TA           | 51     | 0               |
| 84)                          | 53,58   | 231 | a11 | S28TA                 | 26     | 0               |
| 85)                          | 54,07   | 231 | a11 | R27TA                 | 21     | 0               |
| 86)                          | 55,31   | 231 | a11 | R28TA                 | 21     | 0               |



| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount<br>ng/mg |
|-------------------------------|---------|-----|-----|-----------------|--------|-----------------|
| Internal standard (if added): |         |     |     |                 |        |                 |
| 14)                           | 10,20   | 136 |     | d8N             | 26951  | 50              |
| 16)                           | 16,30   | 164 |     | d10BP           | 21293  | 44              |
| 59)                           | 27,63   | 188 |     | d10P            | 29097  | 50              |
| 79)                           | 42,92   | 240 |     | d12C            | 17397  | 50              |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |                 |
| 1)                            | 20,20   | 133 | 0   | C13AI           | 7160   |                 |
| 2)                            | 22,13   | 133 | 0   | C14AI           | 5990   |                 |
| 3)                            | 26,37   | 133 | 0   | C15AI           | 4676   |                 |
| 4)                            | 28,66   | 133 | 0   | C16AI           | 1874   |                 |
| 5)                            | 30,77   | 133 | 0   | C17AI           | 1119   |                 |
| 6)                            | 33,71   | 133 | 0   | C18AI           | 367    |                 |
| 7)                            | 34,74   | 133 | 0   | C19AI           | 1253   |                 |
| 8)                            | 37,79   | 133 | 0   | C20AI           | 1301   |                 |
| 9)                            | 39,79   | 133 | 0   | C21AI           | 66     |                 |
| 10)                           | 42,74   | 133 | 0   | C22AI           | 38     |                 |
| 11)                           | 44,78   | 133 | 0   | C23AI           | 44     |                 |
| 12)                           | 55,76   | 133 | 0   | C30AI           | 8      |                 |
| 13)                           | 56,75   | 133 | 0   | C31AI           | 18     |                 |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |                 |
| 15)                           | 10,29   | 128 | a1  | N               | 170879 | 287             |
| 17)                           | 13,75   | 142 | a2  | 2-MN            | 239619 | 468             |
| 18)                           | 14,26   | 142 | a2  | 1-MN            | 135386 | 264             |
| 19)                           | 16,85   | 156 | a3  | 2-EN            | 18527  | 34              |
| 20)                           | 16,96   | 156 | a3  | 1-EN            | 11452  | 21              |
| 21)                           | 17,19   | 156 | a3  | 2.6+2.7-DMN     | 58819  | 108             |
| 22)                           | 17,64   | 156 | a3  | 1.3+1.7-DMN     | 99383  | 182             |
| 23)                           | 17,74   | 156 | a3  | 1.6-DMN         | 59588  | 109             |
| 24)                           | 18,22   | 156 | a3  | 2.3+1.4-DMN     | 29320  | 54              |
| 25)                           | 18,32   | 156 | a3  | 1.5-DMN         | 16231  | 30              |
| 26)                           | 18,68   | 156 | a3  | 1.2-DMN         | 15464  | 28              |
| 27)                           | 20,36   | 170 | a4  | C3-N-1          | 3402   | 6               |
| 28)                           | 20,72   | 170 | a4  | C3-N-2          | 4576   | 9               |
| 29)                           | 20,84   | 170 | a4  | 1.3.7-TMN       | 20627  | 38              |
| 30)                           | 20,97   | 170 | a4  | 1.3.6-TMN       | 29391  | 55              |
| 31)                           | 21,44   | 170 | a4  | 1.3.5+1.4.6-TMN | 21431  | 40              |
| 32)                           | 21,51   | 170 | a4  | 2.3.6-TMN       | 12779  | 24              |
| 33)                           | 21,93   | 170 | a4  | 1.6.7+1.2.7-TMN | 12437  | 23              |
| 34)                           | 21,98   | 170 | a4  | 1.2.6-TMN       | 8395   | 16              |
| 35)                           | 22,41   | 170 | a4  | 1.2.4-TMN       | 2977   | 6               |
| 36)                           | 22,60   | 170 | a4  | 1.2.5-TMN       | 11030  | 21              |
| <b>Biphenyls:</b>             |         |     |     |                 |        |                 |
| 37)                           | 16,42   | 154 | a5  | BP              | 22911  | 29              |
| 38)                           | 19,66   | 168 | a5  | 3-MBP           | 39806  | 51              |
| 39)                           | 19,92   | 168 | a5  | 4-MBP           | 8821   | 11              |
| 40)                           | 19,99   | 182 | a4  | 2.3'-DMBP       | 2685   | 5               |
| 41)                           | 20,19   | 182 | a4  | 2.5-DMBP        | 1367   | 3               |
| 42)                           | 20,35   | 182 | a4  | 2.4+2.4'-DMBP   | 1814   | 3               |
| 43)                           | 20,97   | 182 | a4  | 2.3-DMBP        | 5321   | 10              |
| 44)                           | 22,32   | 182 | a4  | 3-EBP           | 1781   | 3               |
| 45)                           | 22,66   | 182 | a4  | 3.5-DMBP        | 7855   | 15              |
| 46)                           | 22,76   | 182 | a4  | 3.3'-DMBP       | 17301  | 32              |
| 47)                           | 22,85   | 182 | a4  | 4-EBP           | 553    | 1               |
| 48)                           | 23,04   | 182 | a4  | 3.4'-DMBP       | 7955   | 15              |
| 49)                           | 23,25   | 182 | a4  | 4.4'-DMBP       | 1109   | 2               |
| 50)                           | 23,79   | 182 | a4  | 3.4-DMBP        | 2563   | 5               |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 2914A.D  
Sample name: 6305/8-1 2914m aro  
Data File Path: C:\HPCHEM\1\DATA\ORM\_OIL\  
Misc. info.:  
Vial no.: 6  
Method: MSD\_A\_E2  
Operator: marian  
Date: 5/1-2001 2:19

Response curve: y = ax+b  
Response factor groups: a1...a11, responses as defined in method

| #                            | Rt.min. | m/z | Rf. | Name                  | Height | Amount<br>ng/mg |
|------------------------------|---------|-----|-----|-----------------------|--------|-----------------|
| <b>Dibenzofuranes:</b>       |         |     |     |                       |        |                 |
| 51)                          | 20,49   | 168 | a5  | DBF                   | 9070   | 12              |
| 52)                          | 23,55   | 182 | a4  | MDBF-1                | 9068   | 17              |
| 53)                          | 23,91   | 182 | a4  | MDBF-2                | 3935   | 7               |
| 54)                          | 24,18   | 182 | a4  | MDBF-3                | 2891   | 5               |
| <b>Fluorenes:</b>            |         |     |     |                       |        |                 |
| 55)                          | 22,42   | 166 | a6  | F                     | 10973  | 17              |
| 56)                          | 25,61   | 180 | a6  | C1-F-1                | 2753   | 4               |
| 57)                          | 25,83   | 180 | a6  | C1-F-2                | 5291   | 8               |
| 58)                          | 26,13   | 180 | a6  | 1-MF                  | 1394   | 2               |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |                 |
| 60)                          | 27,04   | 184 | a7  | DBT                   | 391    | 0               |
| 61)                          | 30,15   | 198 | a7  | 4-MDBT                | 124    | 0               |
| 62)                          | 30,43   | 198 | a7  | 3+2-MDBT              | 759    | 0               |
| 63)                          | 30,71   | 198 | a7  | 1-MDBT                | 101    | 0               |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |                 |
| 64)                          | 27,75   | 178 | a8  | P                     | 5846   | 8               |
| 65)                          | 30,68   | 192 | a9  | 3-MP                  | 1428   | 2               |
| 66)                          | 30,82   | 192 | a9  | 2-MP                  | 1456   | 2               |
| 67)                          | 31,28   | 192 | a9  | 9-MP                  | 1898   | 3               |
| 68)                          | 31,41   | 192 | a9  | 1-MP                  | 1236   | 2               |
| 69)                          | 33,37   | 206 | a10 | 2EP+9EP+3.6-DMP       | 294    | 0               |
| 70)                          | 33,61   | 206 | a10 | 1EP                   | 289    | 0               |
| 71)                          | 33,69   | 206 | a10 | 2.6+2.7+3.5-DMP       | 133    | 0               |
| 72)                          | 34,03   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 763    | 1               |
| 73)                          | 34,17   | 206 | a10 | 1.6+2.5+2.9-DMP       | 457    | 1               |
| 74)                          | 34,31   | 206 | a10 | 1.7-DMP               | 322    | 1               |
| 75)                          | 34,45   | 206 | a10 | 2.3-DMP               | 133    | 0               |
| 76)                          | 34,57   | 206 | a10 | 1.9+4.9+4.10-DMP      | 213    | 0               |
| 77)                          | 34,86   | 206 | a10 | 1.8-DMP               | 153    | 0               |
| <b>Retene:</b>               |         |     |     |                       |        |                 |
| 78)                          | 38,16   | 219 | a8  | Retene                | 1450   | 2               |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |                 |
| 80)                          | 42,58   | 231 | a11 | 20TA                  | 39     | 0               |
| 81)                          | 44,43   | 231 | a11 | 21TA                  | 33     | 0               |
| 82)                          | 51,39   | 231 | a11 | S26TA                 | 26     | 0               |
| 83)                          | 52,58   | 231 | a11 | R26TA/S27TA           | 57     | 0               |
| 84)                          | 53,57   | 231 | a11 | S28TA                 | 29     | 0               |
| 85)                          | 54,07   | 231 | a11 | R27TA                 | 24     | 0               |
| 86)                          | 55,31   | 231 | a11 | R28TA                 | 25     | 0               |

| #                                    | Rt.min. | m/z | Rf. | Name            | Height | Amount<br>ng/mg |
|--------------------------------------|---------|-----|-----|-----------------|--------|-----------------|
| <b>Internal standard (if added):</b> |         |     |     |                 |        |                 |
| 14)                                  | 11,83   | 136 |     | d8N             | 15785  | 44              |
| 16)                                  | 18,13   | 164 |     | d10BP           | 13867  | 39              |
| 59)                                  | 29,70   | 188 |     | d10P            | 21353  | 44              |
| 79)                                  | 45,16   | 240 |     | d12C            | 8819   | 44              |
| <b>Aryl isoprenoids:</b>             |         |     |     |                 |        |                 |
| 1)                                   | 20,21   | 133 | 0   | C13AI           | 8292   |                 |
| 2)                                   | 22,18   | 133 | 0   | C14AI           | 1746   |                 |
| 3)                                   | 26,48   | 133 | 0   | C15AI           | 8340   |                 |
| 4)                                   | 28,72   | 133 | 0   | C16AI           | 2143   |                 |
| 5)                                   | 30,76   | 133 | 0   | C17AI           | 219    |                 |
| 6)                                   | 33,73   | 133 | 0   | C18AI           | 497    |                 |
| 7)                                   | 34,77   | 133 | 0   | C19AI           | 1914   |                 |
| 8)                                   | 37,77   | 133 | 0   | C20AI           | 432    |                 |
| 9)                                   | 39,75   | 133 | 0   | C21AI           | 916    |                 |
| 10)                                  | 42,79   | 133 | 0   | C22AI           | 74     |                 |
| 11)                                  | 44,76   | 133 | 0   | C23AI           | 48     |                 |
| 12)                                  | 55,74   | 133 | 0   | C30AI           | 20     |                 |
| 13)                                  | 56,74   | 133 | 0   | C31AI           | 12     |                 |
| <b>Naphthalenes:</b>                 |         |     |     |                 |        |                 |
| 15)                                  | 11,92   | 128 | a1  | N               | 116786 | 297             |
| 17)                                  | 15,53   | 142 | a2  | 2-MN            | 189134 | 504             |
| 18)                                  | 16,07   | 142 | a2  | 1-MN            | 106831 | 285             |
| 19)                                  | 18,70   | 156 | a3  | 2-EN            | 14613  | 37              |
| 20)                                  | 18,82   | 156 | a3  | 1-EN            | 8340   | 21              |
| 21)                                  | 19,05   | 156 | a3  | 2.6+2.7-DMN     | 52170  | 130             |
| 22)                                  | 19,51   | 156 | a3  | 1.3+1.7-DMN     | 84655  | 211             |
| 23)                                  | 19,61   | 156 | a3  | 1.6-DMN         | 51591  | 129             |
| 24)                                  | 20,12   | 156 | a3  | 2.3+1.4-DMN     | 22465  | 56              |
| 25)                                  | 20,21   | 156 | a3  | 1.5-DMN         | 12870  | 32              |
| 26)                                  | 20,58   | 156 | a3  | 1.2-DMN         | 11538  | 29              |
| 27)                                  | 22,11   | 170 | a4  | C3-N-1          | 11590  | 29              |
| 28)                                  | 22,65   | 170 | a4  | C3-N-2          | 4321   | 11              |
| 29)                                  | 22,76   | 170 | a4  | 1.3.7-TMN       | 18154  | 46              |
| 30)                                  | 22,90   | 170 | a4  | 1.3.6-TMN       | 28003  | 71              |
| 31)                                  | 23,38   | 170 | a4  | 1.3.5+1.4.6-TMN | 19600  | 50              |
| 32)                                  | 23,45   | 170 | a4  | 2.3.6-TMN       | 12395  | 31              |
| 33)                                  | 23,87   | 170 | a4  | 1.6.7+1.2.7-TMN | 10898  | 28              |
| 34)                                  | 23,93   | 170 | a4  | 1.2.6-TMN       | 7734   | 20              |
| 35)                                  | 24,36   | 170 | a4  | 1.2.4-TMN       | 2451   | 6               |
| 36)                                  | 24,57   | 170 | a4  | 1.2.5-TMN       | 9548   | 24              |
| <b>Biphenyls:</b>                    |         |     |     |                 |        |                 |
| 37)                                  | 18,25   | 154 | a5  | BP              | 17964  | 31              |
| 38)                                  | 21,54   | 168 | a5  | 3-MBP           | 35124  | 61              |
| 39)                                  | 21,81   | 168 | a5  | 4-MBP           | 7393   | 13              |
| 40)                                  | 21,85   | 182 | a4  | 2.3'-DMBP       | 2274   | 6               |
| 41)                                  | 22,06   | 182 | a4  | 2.5-DMBP        | 1021   | 3               |
| 42)                                  | 22,24   | 182 | a4  | 2.4+2.4'-DMBP   | 1546   | 4               |
| 43)                                  | 22,85   | 182 | a4  | 2.3-DMBP        | 4238   | 11              |
| 44)                                  | 24,24   | 182 | a4  | 3-EBP           | 1728   | 4               |
| 45)                                  | 24,57   | 182 | a4  | 3.5-DMBP        | 6927   | 18              |
| 46)                                  | 24,67   | 182 | a4  | 3.3'-DMBP       | 15113  | 38              |
| 47)                                  | 24,78   | 182 | a4  | 4-EBP           | 541    | 1               |
| 48)                                  | 24,96   | 182 | a4  | 3.4'-DMBP       | 8059   | 20              |
| 49)                                  | 25,17   | 182 | a4  | 4.4'-DMBP       | 1158   | 3               |
| 50)                                  | 25,72   | 182 | a4  | 3.4-DMBP        | 2413   | 6               |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 8\_1\_A.D  
Sample name: 6305/8-1 aro  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.: 2908 m  
Vial no.: 15  
Method: MSD\_A\_E2  
Operator: Marian  
Date: #VALUE!

Response curve: y = ax+b  
Response factor groups: a1...a11, responses as defined in method

| #                            | Rt.min. | m/z | Rf. | Name                  | Height | Amount<br>ng/mg |
|------------------------------|---------|-----|-----|-----------------------|--------|-----------------|
| <b>Dibenzofuranes:</b>       |         |     |     |                       |        |                 |
| 51)                          | 22,43   | 168 | a5  | DBF                   | 7365   | 13              |
| 52)                          | 25,52   | 182 | a4  | MDBF-1                | 8110   | 21              |
| 53)                          | 25,89   | 182 | a4  | MDBF-2                | 3296   | 8               |
| 54)                          | 26,18   | 182 | a4  | MDBF-3                | 2545   | 6               |
| <b>Fluorenes:</b>            |         |     |     |                       |        |                 |
| 55)                          | 24,39   | 166 | a6  | F                     | 9247   | 20              |
| 56)                          | 27,62   | 180 | a6  | C1-F-1                | 2250   | 5               |
| 57)                          | 27,86   | 180 | a6  | C1-F-2                | 5175   | 11              |
| 58)                          | 28,16   | 180 | a6  | 1-MF                  | 1213   | 3               |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |                 |
| 60)                          | 29,09   | 184 | a7  | DBT                   | 405    | 0               |
| 61)                          | 31,71   | 198 | a7  | 4-MDBT                | 368    | 0               |
| 62)                          | 32,21   | 198 | a7  | 3+2-MDBT              | 65     | 0               |
| 63)                          | 32,82   | 198 | a7  | 1-MDBT                | 57     | 0               |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |                 |
| 64)                          | 29,82   | 178 | a8  | P                     | 8537   | 15              |
| 65)                          | 32,76   | 192 | a9  | 3-MP                  | 2738   | 6               |
| 66)                          | 32,90   | 192 | a9  | 2-MP                  | 3232   | 7               |
| 67)                          | 33,37   | 192 | a9  | 9-MP                  | 3670   | 7               |
| 68)                          | 33,50   | 192 | a9  | 1-MP                  | 2773   | 6               |
| 69)                          | 35,48   | 206 | a10 | 2EP+9EP+3.6-DMP       | 605    | 1               |
| 70)                          | 35,71   | 206 | a10 | 1EP                   | 797    | 2               |
| 71)                          | 35,80   | 206 | a10 | 2.6+2.7+3.5-DMP       | 440    | 1               |
| 72)                          | 36,13   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 2684   | 5               |
| 73)                          | 36,29   | 206 | a10 | 1.6+2.5+2.9-DMP       | 1512   | 3               |
| 74)                          | 36,42   | 206 | a10 | 1.7-DMP               | 1189   | 2               |
| 75)                          | 36,58   | 206 | a10 | 2.3-DMP               | 435    | 1               |
| 76)                          | 36,68   | 206 | a10 | 1.9+4.9+4.10-DMP      | 791    | 2               |
| 77)                          | 36,99   | 206 | a10 | 1.8-DMP               | 345    | 1               |
| <b>Retene:</b>               |         |     |     |                       |        |                 |
| 78)                          | 40,30   | 219 | a8  | Retene                | 1118   | 2               |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |                 |
| 80)                          | 44,77   | 231 | a11 | 20TA                  | 90     | 0               |
| 81)                          | 46,64   | 231 | a11 | 21TA                  | 87     | 0               |
| 82)                          | 53,59   | 231 | a11 | S26TA                 | 34     | 0               |
| 83)                          | 54,79   | 231 | a11 | R26TA/S27TA           | 114    | 0               |
| 84)                          | 55,79   | 231 | a11 | S28TA                 | 53     | 0               |
| 85)                          | 56,29   | 231 | a11 | R27TA                 | 53     | 0               |
| 86)                          | 57,52   | 231 | a11 | R28TA                 | 50     | 0               |

## **Sediment samples**

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount |
|-------------------------------|---------|-----|-----|-----------------|--------|--------|
|                               |         |     |     |                 |        | ng/mg  |
| Internal standard (if added): |         |     |     |                 |        |        |
| 14)                           | 11.84   | 136 |     | d8N             | 39295  | 46     |
| 16)                           | 18.15   | 164 |     | d10BP           | 40066  | 41     |
| 59)                           | 29.72   | 188 |     | d10P            | 43188  | 46     |
| 79)                           | 45.22   | 240 |     | d12C            | 13744  | 46     |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |        |
| 1)                            | 20.24   | 133 | 0   | C13AI           |        | 17     |
| 2)                            | 22.04   | 133 | 0   | C14AI           |        | 19     |
| 3)                            | 26.48   | 133 | 0   | C15AI           |        | 26     |
| 4)                            | 28.75   | 133 | 0   | C16AI           |        | 8      |
| 5)                            | 30.73   | 133 | 0   | C17AI           |        | 7      |
| 6)                            | 33.74   | 133 | 0   | C18AI           |        | 7      |
| 7)                            | 34.77   | 133 | 0   | C19AI           |        | 17     |
| 8)                            | 37.79   | 133 | 0   | C20AI           |        | 5      |
| 9)                            | 39.80   | 133 | 0   | C21AI           |        | 17     |
| 10)                           | 42.77   | 133 | 0   | C22AI           |        | 5      |
| 11)                           | 44.75   | 133 | 0   | C23AI           |        | 7      |
| 12)                           | 55.71   | 133 | 0   | C30AI           |        | 12     |
| 13)                           | 56.71   | 133 | 0   | C31AI           |        | 11     |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |        |
| 15)                           | 11.93   | 128 | a1  | N               | 4420   | 5      |
| 17)                           | 15.52   | 142 | a2  | 2-MN            | 4115   | 4      |
| 18)                           | 16.07   | 142 | a2  | 1-MN            | 4144   | 4      |
| 19)                           | 18.71   | 156 | a3  | 2-EN            | 452    | 0      |
| 20)                           | 18.83   | 156 | a3  | 1-EN            | 286    | 0      |
| 21)                           | 19.06   | 156 | a3  | 2.6+2.7-DMN     | 944    | 1      |
| 22)                           | 19.51   | 156 | a3  | 1.3+1.7-DMN     | 1898   | 2      |
| 23)                           | 19.62   | 156 | a3  | 1.6-DMN         | 1650   | 1      |
| 24)                           | 20.12   | 156 | a3  | 2.3+1.4-DMN     | 894    | 1      |
| 25)                           | 20.22   | 156 | a3  | 1.5-DMN         | 508    | 0      |
| 26)                           | 20.60   | 156 | a3  | 1.2-DMN         | 628    | 1      |
| 27)                           | 22.28   | 170 | a4  | C3-N-1          | 134    | 0      |
| 28)                           | 22.65   | 170 | a4  | C3-N-2          | 165    | 0      |
| 29)                           | 22.77   | 170 | a4  | 1.3.7-TMN       | 382    | 0      |
| 30)                           | 22.91   | 170 | a4  | 1.3.6-TMN       | 961    | 1      |
| 31)                           | 23.39   | 170 | a4  | 1.3.5+1.4.6-TMN | 757    | 1      |
| 32)                           | 23.46   | 170 | a4  | 2.3.6-TMN       | 456    | 0      |
| 33)                           | 23.84   | 170 | a4  | 1.6.7+1.2.7-TMN | 907    | 1      |
| 34)                           | 23.94   | 170 | a4  | 1.2.6-TMN       | 439    | 0      |
| 35)                           | 24.37   | 170 | a4  | 1.2.4-TMN       | 149    | 0      |
| 36)                           | 24.58   | 170 | a4  | 1.2.5-TMN       | 1626   | 1      |
| <b>Biphenyls:</b>             |         |     |     |                 |        |        |
| 37)                           | 18.25   | 154 | a5  | BP              | 468    | 0      |
| 38)                           | 21.55   | 168 | a5  | 3-MBP           | 493    | 0      |
| 39)                           | 21.81   | 168 | a5  | 4-MBP           | 192    | 0      |
| 40)                           | 21.87   | 182 | a4  | 2.3'-DMBP       | 15     | 0      |
| 41)                           | 22.07   | 182 | a4  | 2.5-DMBP        | 11     | 0      |
| 42)                           | 22.24   | 182 | a4  | 2.4+2.4'-DMBP   | 15     | 0      |
| 43)                           | 22.85   | 182 | a4  | 2.3-DMBP        | 37     | 0      |
| 44)                           | 24.24   | 182 | a4  | 3-EBP           | 40     | 0      |
| 45)                           | 24.58   | 182 | a4  | 3.5-DMBP        | 68     | 0      |
| 46)                           | 24.69   | 182 | a4  | 3.3'-DMBP       | 161    | 0      |
| 47)                           | 24.79   | 182 | a4  | 4-EBP           | 20     | 0      |
| 48)                           | 24.97   | 182 | a4  | 3.4'-DMBP       | 144    | 0      |
| 49)                           | 25.19   | 182 | a4  | 4.4'-DMBP       | 32     | 0      |
| 50)                           | 25.74   | 182 | a4  | 3.4-DMBP        | 56     | 0      |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 3171A.D  
Sample name: 6305\_8\_1, 3171a  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
Vial no.: 25  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

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)                          | 22.45   | 168 | a5  | DBF                   | 456    | 0      |
| 52)                          | 25.54   | 182 | a4  | MDBF-1                | 395    | 0      |
| 53)                          | 25.91   | 182 | a4  | MDBF-2                | 279    | 0      |
| 54)                          | 26.19   | 182 | a4  | MDBF-3                | 256    | 0      |
| <b>Fluorenes:</b>            |         |     |     |                       |        |        |
| 55)                          | 24.41   | 166 | a6  | F                     | 1114   | 1      |
| 56)                          | 27.63   | 180 | a6  | C1-F-1                | 256    | 0      |
| 57)                          | 27.87   | 180 | a6  | C1-F-2                | 679    | 1      |
| 58)                          | 28.18   | 180 | a6  | 1-MF                  | 226    | 0      |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |        |
| 60)                          | 29.12   | 184 | a7  | DBT                   | 163    | 0      |
| 61)                          | 31.75   | 198 | a7  | 4-MDBT                | 124    | 0      |
| 62)                          | 32.28   | 198 | a7  | 3+2-MDBT              | 52     | 0      |
| 63)                          | 32.85   | 198 | a7  | 1-MDBT                | 41     | 0      |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |        |
| 64)                          | 29.84   | 178 | a8  | P                     | 2371   | 2      |
| 65)                          | 32.80   | 192 | a9  | 3-MP                  | 717    | 1      |
| 66)                          | 32.93   | 192 | a9  | 2-MP                  | 778    | 1      |
| 67)                          | 33.41   | 192 | a9  | 9-MP                  | 643    | 1      |
| 68)                          | 33.54   | 192 | a9  | 1-MP                  | 533    | 1      |
| 69)                          | 35.53   | 206 | a10 | 2EP+9EP+3.6-DMP       | 117    | 0      |
| 70)                          | 35.74   | 206 | a10 | 1EP                   | 242    | 0      |
| 71)                          | 35.84   | 206 | a10 | 2.6+2.7+3.5-DMP       | 123    | 0      |
| 72)                          | 36.17   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 317    | 0      |
| 73)                          | 36.34   | 206 | a10 | 1.6+2.5+2.9-DMP       | 250    | 0      |
| 74)                          | 36.47   | 206 | a10 | 1.7-DMP               | 212    | 0      |
| 75)                          | 36.62   | 206 | a10 | 2.3-DMP               | 113    | 0      |
| 76)                          | 36.72   | 206 | a10 | 1.9+4.9+4.10-DMP      | 65     | 0      |
| 77)                          | 37.04   | 206 | a10 | 1.8-DMP               | 66     | 0      |
| <b>Retene:</b>               |         |     |     |                       |        |        |
| 78)                          | 40.34   | 219 | a8  | Retene                | 510    | 0      |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |        |
| 80)                          | 44.82   | 231 | a11 | 20TA                  | 24     | 0      |
| 81)                          | 46.68   | 231 | a11 | 21TA                  | 22     | 0      |
| 82)                          | 53.65   | 231 | a11 | S26TA                 | 17     | 0      |
| 83)                          | 54.87   | 231 | a11 | R26TA/S27TA           | 50     | 0      |
| 84)                          | 55.84   | 231 | a11 | S28TA                 | 23     | 0      |
| 85)                          | 56.38   | 231 | a11 | R27TA                 | 28     | 0      |
| 86)                          | 57.60   | 231 | a11 | R28TA                 | 22     | 0      |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount |
|-------------------------------|---------|-----|-----|-----------------|--------|--------|
|                               |         |     |     |                 |        | ng/mg  |
| Internal standard (if added): |         |     |     |                 |        |        |
| 14)                           | 11.84   | 136 |     | d8N             | 58260  | 47     |
| 16)                           | 18.14   | 164 |     | d10BP           | 65234  | 41     |
| 59)                           | 29.73   | 188 |     | d10P            | 67098  | 47     |
| 79)                           | 45.22   | 240 |     | d12C            | 22880  | 47     |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |        |
| 1)                            | 20.24   | 133 | 0   | C13AI           | 57     |        |
| 2)                            | 22.04   | 133 | 0   | C14AI           | 77     |        |
| 3)                            | 26.38   | 133 | 0   | C15AI           | 8      |        |
| 4)                            | 28.76   | 133 | 0   | C16Ai           | 17     |        |
| 5)                            | 30.76   | 133 | 0   | C17AI           | 5      |        |
| 6)                            | 33.75   | 133 | 0   | C18AI           | 14     |        |
| 7)                            | 34.82   | 133 | 0   | C19AI           | 76     |        |
| 8)                            | 37.75   | 133 | 0   | C20AI           | 9      |        |
| 9)                            | 39.80   | 133 | 0   | C21AI           | 34     |        |
| 10)                           | 42.75   | 133 | 0   | C22AI           | 21     |        |
| 11)                           | 44.74   | 133 | 0   | C23AI           | 9      |        |
| 12)                           | 55.69   | 133 | 0   | C30AI           | 17     |        |
| 13)                           | 56.74   | 133 | 0   | C31AI           | 27     |        |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |        |
| 15)                           | 11.93   | 128 | a1  | N               | 9302   | 7      |
| 17)                           | 15.53   | 142 | a2  | 2-MN            | 11249  | 7      |
| 18)                           | 16.08   | 142 | a2  | 1-MN            | 10021  | 6      |
| 19)                           | 18.72   | 156 | a3  | 2-EN            | 1266   | 1      |
| 20)                           | 18.82   | 156 | a3  | 1-EN            | 807    | 0      |
| 21)                           | 19.05   | 156 | a3  | 2.6+2.7-DMN     | 2726   | 2      |
| 22)                           | 19.52   | 156 | a3  | 1.3+1.7-DMN     | 5587   | 3      |
| 23)                           | 19.62   | 156 | a3  | 1.6-DMN         | 4464   | 2      |
| 24)                           | 20.12   | 156 | a3  | 2.3+1.4-DMN     | 2606   | 1      |
| 25)                           | 20.23   | 156 | a3  | 1.5-DMN         | 1467   | 1      |
| 26)                           | 20.61   | 156 | a3  | 1.2-DMN         | 1683   | 1      |
| 27)                           | 22.29   | 170 | a4  | C3-N-1          | 335    | 0      |
| 28)                           | 22.66   | 170 | a4  | C3-N-2          | 410    | 0      |
| 29)                           | 22.77   | 170 | a4  | 1.3.7-TMN       | 974    | 1      |
| 30)                           | 22.91   | 170 | a4  | 1.3.6-TMN       | 2712   | 2      |
| 31)                           | 23.39   | 170 | a4  | 1.3.5+1.4.6-TMN | 2122   | 1      |
| 32)                           | 23.46   | 170 | a4  | 2.3.6-TMN       | 1153   | 1      |
| 33)                           | 23.83   | 170 | a4  | 1.6.7+1.2.7-TMN | 2190   | 1      |
| 34)                           | 23.94   | 170 | a4  | 1.2.6-TMN       | 1266   | 1      |
| 35)                           | 24.38   | 170 | a4  | 1.2.4-TMN       | 424    | 0      |
| 36)                           | 24.59   | 170 | a4  | 1.2.5-TMN       | 4190   | 2      |
| <b>Biphenyls:</b>             |         |     |     |                 |        |        |
| 37)                           | 18.26   | 154 | a5  | BP              | 1093   | 0      |
| 38)                           | 21.56   | 168 | a5  | 3-MBP           | 1030   | 0      |
| 39)                           | 21.82   | 168 | a5  | 4-MBP           | 378    | 0      |
| 40)                           | 21.87   | 182 | a4  | 2.3'-DMBP       | 49     | 0      |
| 41)                           | 22.06   | 182 | a4  | 2.5-DMBP        | 27     | 0      |
| 42)                           | 22.25   | 182 | a4  | 2.4+2.4'-DMBP   | 40     | 0      |
| 43)                           | 22.86   | 182 | a4  | 2.3-DMBP        | 85     | 0      |
| 44)                           | 24.25   | 182 | a4  | 3-EBP           | 87     | 0      |
| 45)                           | 24.57   | 182 | a4  | 3.5-DMBP        | 153    | 0      |
| 46)                           | 24.68   | 182 | a4  | 3.3'-DMBP       | 319    | 0      |
| 47)                           | 24.80   | 182 | a4  | 4-EBP           | 37     | 0      |
| 48)                           | 24.97   | 182 | a4  | 3.4'-DMBP       | 296    | 0      |
| 49)                           | 25.20   | 182 | a4  | 4.4'-DMBP       | 55     | 0      |
| 50)                           | 25.74   | 182 | a4  | 3.4-DMBP        | 99     | 0      |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 3135A.D  
Sample name: 6305\_8\_1, 3135a  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
Vial no.: 24  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

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)                          | 22.45   | 168 | a5  | DBF                   | 1465   | 1      |
| 52)                          | 25.53   | 182 | a4  | MDBF-1                | 1143   | 1      |
| 53)                          | 25.90   | 182 | a4  | MDBF-2                | 843    | 0      |
| 54)                          | 26.20   | 182 | a4  | MDBF-3                | 806    | 0      |
| <b>Fluorenes:</b>            |         |     |     |                       |        |        |
| 55)                          | 24.42   | 166 | a6  | F                     | 3165   | 2      |
| 56)                          | 27.63   | 180 | a6  | C1-F-1                | 720    | 0      |
| 57)                          | 27.87   | 180 | a6  | C1-F-2                | 1927   | 1      |
| 58)                          | 28.18   | 180 | a6  | 1-MF                  | 631    | 0      |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |        |
| 60)                          | 29.11   | 184 | a7  | DBT                   | 508    | 0      |
| 61)                          | 31.76   | 198 | a7  | 4-MDBT                | 451    | 0      |
| 62)                          | 32.28   | 198 | a7  | 3+2-MDBT              | 220    | 0      |
| 63)                          | 32.85   | 198 | a7  | 1-MDBT                | 147    | 0      |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |        |
| 64)                          | 29.85   | 178 | a8  | P                     | 7787   | 5      |
| 65)                          | 32.80   | 192 | a9  | 3-MP                  | 2682   | 2      |
| 66)                          | 32.94   | 192 | a9  | 2-MP                  | 3239   | 2      |
| 67)                          | 33.42   | 192 | a9  | 9-MP                  | 2007   | 1      |
| 68)                          | 33.55   | 192 | a9  | 1-MP                  | 1833   | 1      |
| 69)                          | 35.53   | 206 | a10 | 2EP+9EP+3.6-DMP       | 523    | 0      |
| 70)                          | 35.75   | 206 | a10 | 1EP                   | 1121   | 1      |
| 71)                          | 35.85   | 206 | a10 | 2.6+2.7+3.5-DMP       | 545    | 0      |
| 72)                          | 36.18   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 1173   | 1      |
| 73)                          | 36.33   | 206 | a10 | 1.6+2.5+2.9-DMP       | 894    | 1      |
| 74)                          | 36.47   | 206 | a10 | 1.7-DMP               | 717    | 0      |
| 75)                          | 36.63   | 206 | a10 | 2.3-DMP               | 446    | 0      |
| 76)                          | 36.74   | 206 | a10 | 1.9+4.9+4.10-DMP      | 211    | 0      |
| 77)                          | 37.05   | 206 | a10 | 1.8-DMP               | 205    | 0      |
| <b>Retene:</b>               |         |     |     |                       |        |        |
| 78)                          | 40.35   | 219 | a8  | Retene                | 3027   | 2      |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |        |
| 80)                          | 44.83   | 231 | a11 | 20TA                  | 88     | 0      |
| 81)                          | 46.70   | 231 | a11 | 21TA                  | 69     | 0      |
| 82)                          | 53.65   | 231 | a11 | S26TA                 | 75     | 0      |
| 83)                          | 54.87   | 231 | a11 | R26TA/S27TA           | 309    | 0      |
| 84)                          | 55.85   | 231 | a11 | S28TA                 | 89     | 0      |
| 85)                          | 56.37   | 231 | a11 | R27TA                 | 149    | 0      |
| 86)                          | 57.59   | 231 | a11 | R28TA                 | 86     | 0      |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount |
|-------------------------------|---------|-----|-----|-----------------|--------|--------|
|                               |         |     |     |                 |        | ng/mg  |
| Internal standard (if added): |         |     |     |                 |        |        |
| 14)                           | 11.84   | 136 |     | d8N             | 62841  | 53     |
| 16)                           | 18.14   | 164 |     | d10BP           | 69657  | 47     |
| 59)                           | 29.73   | 188 |     | d10P            | 69098  | 53     |
| 79)                           | 45.22   | 240 |     | d12C            | 21767  | 53     |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |        |
| 1)                            | 20.23   | 133 | 0   | C13AI           | 57     |        |
| 2)                            | 22.04   | 133 | 0   | C14AI           | 60     |        |
| 3)                            | 26.39   | 133 | 0   | C15AI           | 13     |        |
| 4)                            | 28.75   | 133 | 0   | C16AI           | 22     |        |
| 5)                            | 30.78   | 133 | 0   | C17AI           | 9      |        |
| 6)                            | 33.76   | 133 | 0   | C18AI           | 18     |        |
| 7)                            | 34.80   | 133 | 0   | C19AI           | 64     |        |
| 8)                            | 37.75   | 133 | 0   | C20AI           | 9      |        |
| 9)                            | 39.71   | 133 | 0   | C21AI           | 10     |        |
| 10)                           | 42.74   | 133 | 0   | C22AI           | 18     |        |
| 11)                           | 44.74   | 133 | 0   | C23AI           | 18     |        |
| 12)                           | 55.70   | 133 | 0   | C30AI           | 20     |        |
| 13)                           | 56.74   | 133 | 0   | C31AI           | 17     |        |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |        |
| 15)                           | 11.93   | 128 | a1  | N               | 7790   | 6      |
| 17)                           | 15.53   | 142 | a2  | 2-MN            | 10861  | 7      |
| 18)                           | 16.08   | 142 | a2  | 1-MN            | 9008   | 6      |
| 19)                           | 18.72   | 156 | a3  | 2-EN            | 1169   | 1      |
| 20)                           | 18.83   | 156 | a3  | 1-EN            | 697    | 0      |
| 21)                           | 19.05   | 156 | a3  | 2.6+2.7-DMN     | 3127   | 2      |
| 22)                           | 19.52   | 156 | a3  | 1.3+1.7-DMN     | 5879   | 4      |
| 23)                           | 19.62   | 156 | a3  | 1.6-DMN         | 4313   | 3      |
| 24)                           | 20.12   | 156 | a3  | 2.3+1.4-DMN     | 2478   | 1      |
| 25)                           | 20.23   | 156 | a3  | 1.5-DMN         | 1362   | 1      |
| 26)                           | 20.60   | 156 | a3  | 1.2-DMN         | 1573   | 1      |
| 27)                           | 22.29   | 170 | a4  | C3-N-1          | 360    | 0      |
| 28)                           | 22.65   | 170 | a4  | C3-N-2          | 393    | 0      |
| 29)                           | 22.78   | 170 | a4  | 1.3.7-TMN       | 1162   | 1      |
| 30)                           | 22.91   | 170 | a4  | 1.3.6-TMN       | 2810   | 2      |
| 31)                           | 23.39   | 170 | a4  | 1.3.5+1.4.6-TMN | 1946   | 1      |
| 32)                           | 23.46   | 170 | a4  | 2.3.6-TMN       | 1293   | 1      |
| 33)                           | 23.83   | 170 | a4  | 1.6.7+1.2.7-TMN | 1638   | 1      |
| 34)                           | 23.94   | 170 | a4  | 1.2.6-TMN       | 1098   | 1      |
| 35)                           | 24.37   | 170 | a4  | 1.2.4-TMN       | 360    | 0      |
| 36)                           | 24.59   | 170 | a4  | 1.2.5-TMN       | 2964   | 2      |
| <b>Biphenyls:</b>             |         |     |     |                 |        |        |
| 37)                           | 18.26   | 154 | a5  | BP              | 1357   | 1      |
| 38)                           | 21.56   | 168 | a5  | 3-MBP           | 1408   | 1      |
| 39)                           | 21.81   | 168 | a5  | 4-MBP           | 477    | 0      |
| 40)                           | 21.87   | 182 | a4  | 2.3'-DMBP       | 61     | 0      |
| 41)                           | 22.06   | 182 | a4  | 2.5-DMBP        | 33     | 0      |
| 42)                           | 22.24   | 182 | a4  | 2.4+2.4'-DMBP   | 62     | 0      |
| 43)                           | 22.86   | 182 | a4  | 2.3-DMBP        | 111    | 0      |
| 44)                           | 24.25   | 182 | a4  | 3-EBP           | 114    | 0      |
| 45)                           | 24.58   | 182 | a4  | 3.5-DMBP        | 213    | 0      |
| 46)                           | 24.69   | 182 | a4  | 3.3'-DMBP       | 500    | 0      |
| 47)                           | 24.79   | 182 | a4  | 4-EBP           | 47     | 0      |
| 48)                           | 24.97   | 182 | a4  | 3.4'-DMBP       | 367    | 0      |
| 49)                           | 25.19   | 182 | a4  | 4.4'-DMBP       | 76     | 0      |
| 50)                           | 25.75   | 182 | a4  | 3.4-DMBP        | 157    | 0      |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 3081A.D  
Sample name: 6305\_8\_1, 3081a  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
Vial no.: 23  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

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)                          | 22.44   | 168 | a5  | DBF                   | 1772   | 1      |
| 52)                          | 25.54   | 182 | a4  | MDBF-1                | 1475   | 1      |
| 53)                          | 25.91   | 182 | a4  | MDBF-2                | 858    | 1      |
| 54)                          | 26.21   | 182 | a4  | MDBF-3                | 763    | 0      |
| <b>Fluorenes:</b>            |         |     |     |                       |        |        |
| 55)                          | 24.41   | 166 | a6  | F                     | 2977   | 2      |
| 56)                          | 27.64   | 180 | a6  | C1-F-1                | 722    | 0      |
| 57)                          | 27.87   | 180 | a6  | C1-F-2                | 1857   | 1      |
| 58)                          | 28.18   | 180 | a6  | 1-MF                  | 551    | 0      |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |        |
| 60)                          | 29.13   | 184 | a7  | DBT                   | 642    | 0      |
| 61)                          | 31.76   | 198 | a7  | 4-MDBT                | 662    | 0      |
| 62)                          | 32.28   | 198 | a7  | 3+2-MDBT              | 325    | 0      |
| 63)                          | 32.86   | 198 | a7  | 1-MDBT                | 171    | 0      |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |        |
| 64)                          | 29.85   | 178 | a8  | P                     | 9247   | 6      |
| 65)                          | 32.80   | 192 | a9  | 3-MP                  | 3902   | 3      |
| 66)                          | 32.94   | 192 | a9  | 2-MP                  | 4714   | 4      |
| 67)                          | 33.42   | 192 | a9  | 9-MP                  | 2435   | 2      |
| 68)                          | 33.55   | 192 | a9  | 1-MP                  | 2118   | 2      |
| 69)                          | 35.55   | 206 | a10 | 2EP+9EP+3.6-DMP       | 724    | 1      |
| 70)                          | 35.75   | 206 | a10 | 1EP                   | 1712   | 1      |
| 71)                          | 35.85   | 206 | a10 | 2.6+2.7+3.5-DMP       | 899    | 1      |
| 72)                          | 36.19   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 1593   | 1      |
| 73)                          | 36.34   | 206 | a10 | 1.6+2.5+2.9-DMP       | 1140   | 1      |
| 74)                          | 36.47   | 206 | a10 | 1.7-DMP               | 905    | 1      |
| 75)                          | 36.62   | 206 | a10 | 2.3-DMP               | 747    | 1      |
| 76)                          | 36.74   | 206 | a10 | 1.9+4.9+4.10-DMP      | 277    | 0      |
| 77)                          | 37.05   | 206 | a10 | 1.8-DMP               | 221    | 0      |
| <b>Retene:</b>               |         |     |     |                       |        |        |
| 78)                          | 40.35   | 219 | a8  | Retene                | 2396   | 2      |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |        |
| 80)                          | 44.83   | 231 | a11 | 20TA                  | 71     | 0      |
| 81)                          | 46.69   | 231 | a11 | 21TA                  | 59     | 0      |
| 82)                          | 53.66   | 231 | a11 | S26TA                 | 68     | 0      |
| 83)                          | 54.87   | 231 | a11 | R26TA/S27TA           | 221    | 0      |
| 84)                          | 55.85   | 231 | a11 | S28TA                 | 75     | 0      |
| 85)                          | 56.37   | 231 | a11 | R27TA                 | 123    | 0      |
| 86)                          | 57.59   | 231 | a11 | R28TA                 | 83     | 0      |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount<br>ng/mg |
|-------------------------------|---------|-----|-----|-----------------|--------|-----------------|
| Internal standard (if added): |         |     |     |                 |        |                 |
| 14)                           | 11.84   | 136 |     | d8N             | 32382  | 51              |
| 16)                           | 18.15   | 164 |     | d10BP           | 35217  | 45              |
| 59)                           | 29.73   | 188 |     | d10P            | 35771  | 51              |
| 79)                           | 45.22   | 240 |     | d12C            | 13368  | 51              |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |                 |
| 1)                            | 20.23   | 133 | 0   | C13AI           | 44     |                 |
| 2)                            | 22.03   | 133 | 0   | C14AI           | 25     |                 |
| 3)                            | 26.49   | 133 | 0   | C15AI           | 50     |                 |
| 4)                            | 28.75   | 133 | 0   | C16AI           | 24     |                 |
| 5)                            | 30.75   | 133 | 0   | C17AI           | 6      |                 |
| 6)                            | 33.77   | 133 | 0   | C18AI           | 21     |                 |
| 7)                            | 34.80   | 133 | 0   | C19AI           | 61     |                 |
| 8)                            | 37.73   | 133 | 0   | C20AI           | 10     |                 |
| 9)                            | 39.81   | 133 | 0   | C21AI           | 35     |                 |
| 10)                           | 42.76   | 133 | 0   | C22AI           | 24     |                 |
| 11)                           | 44.72   | 133 | 0   | C23AI           | 16     |                 |
| 12)                           | 55.71   | 133 | 0   | C30AI           | 20     |                 |
| 13)                           | 56.74   | 133 | 0   | C31AI           | 25     |                 |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |                 |
| 15)                           | 11.93   | 128 | a1  | N               | 3688   | 5               |
| 17)                           | 15.53   | 142 | a2  | 2-MN            | 6313   | 8               |
| 18)                           | 16.08   | 142 | a2  | 1-MN            | 4831   | 6               |
| 19)                           | 18.72   | 156 | a3  | 2-EN            | 807    | 1               |
| 20)                           | 18.83   | 156 | a3  | 1-EN            | 413    | 0               |
| 21)                           | 19.07   | 156 | a3  | 2.6+2.7-DMN     | 2486   | 3               |
| 22)                           | 19.52   | 156 | a3  | 1.3+1.7-DMN     | 4369   | 5               |
| 23)                           | 19.62   | 156 | a3  | 1.6-DMN         | 3249   | 4               |
| 24)                           | 20.12   | 156 | a3  | 2.3+1.4-DMN     | 1755   | 2               |
| 25)                           | 20.23   | 156 | a3  | 1.5-DMN         | 937    | 1               |
| 26)                           | 20.60   | 156 | a3  | 1.2-DMN         | 977    | 1               |
| 27)                           | 22.29   | 170 | a4  | C3-N-1          | 293    | 0               |
| 28)                           | 22.66   | 170 | a4  | C3-N-2          | 357    | 0               |
| 29)                           | 22.78   | 170 | a4  | 1.3.7-TMN       | 1145   | 1               |
| 30)                           | 22.91   | 170 | a4  | 1.3.6-TMN       | 2258   | 3               |
| 31)                           | 23.39   | 170 | a4  | 1.3.5+1.4.6-TMN | 1740   | 2               |
| 32)                           | 23.48   | 170 | a4  | 2.3.6-TMN       | 1226   | 1               |
| 33)                           | 23.88   | 170 | a4  | 1.6.7+1.2.7-TMN | 1177   | 1               |
| 34)                           | 23.94   | 170 | a4  | 1.2.6-TMN       | 771    | 1               |
| 35)                           | 24.39   | 170 | a4  | 1.2.4-TMN       | 257    | 0               |
| 36)                           | 24.59   | 170 | a4  | 1.2.5-TMN       | 1520   | 2               |
| <b>Biphenyls:</b>             |         |     |     |                 |        |                 |
| 37)                           | 18.26   | 154 | a5  | BP              | 1235   | 1               |
| 38)                           | 21.56   | 168 | a5  | 3-MBP           | 1585   | 1               |
| 39)                           | 21.82   | 168 | a5  | 4-MBP           | 583    | 0               |
| 40)                           | 21.87   | 182 | a4  | 2.3'-DMBP       | 55     | 0               |
| 41)                           | 22.07   | 182 | a4  | 2.5-DMBP        | 33     | 0               |
| 42)                           | 22.24   | 182 | a4  | 2.4+2.4'-DMBP   | 57     | 0               |
| 43)                           | 22.86   | 182 | a4  | 2.3-DMBP        | 116    | 0               |
| 44)                           | 24.25   | 182 | a4  | 3-EBP           | 159    | 0               |
| 45)                           | 24.59   | 182 | a4  | 3.5-DMBP        | 245    | 0               |
| 46)                           | 24.69   | 182 | a4  | 3.3'-DMBP       | 617    | 1               |
| 47)                           | 24.79   | 182 | a4  | 4-EBP           | 58     | 0               |
| 48)                           | 24.99   | 182 | a4  | 3.4'-DMBP       | 455    | 1               |
| 49)                           | 25.20   | 182 | a4  | 4.4'-DMBP       | 97     | 0               |
| 50)                           | 25.75   | 182 | a4  | 3.4-DMBP        | 200    | 0               |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 3051A.D  
Sample name: 6305\_8\_1, 3051a  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
  
Vial no.: 22  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

Response curve: y = ax+b  
Response factor groups: a1...a11, responses as defined in method

| #                            | Rt.min. | m/z | Rf. | Name                  | Height | Amount<br>ng/mg |
|------------------------------|---------|-----|-----|-----------------------|--------|-----------------|
| <b>Dibenzofuranes:</b>       |         |     |     |                       |        |                 |
| 51)                          | 22.46   | 168 | a5  | DBF                   | 1274   | 1               |
| 52)                          | 25.54   | 182 | a4  | MDBF-1                | 1035   | 1               |
| 53)                          | 25.91   | 182 | a4  | MDBF-2                | 660    | 1               |
| 54)                          | 26.21   | 182 | a4  | MDBF-3                | 533    | 1               |
| <b>Fluorenes:</b>            |         |     |     |                       |        |                 |
| 55)                          | 24.42   | 166 | a6  | F                     | 1895   | 2               |
| 56)                          | 27.64   | 180 | a6  | C1-F-1                | 530    | 1               |
| 57)                          | 27.88   | 180 | a6  | C1-F-2                | 1444   | 1               |
| 58)                          | 28.20   | 180 | a6  | 1-MF                  | 364    | 0               |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |                 |
| 60)                          | 29.13   | 184 | a7  | DBT                   | 735    | 0               |
| 61)                          | 31.76   | 198 | a7  | 4-MDBT                | 752    | 0               |
| 62)                          | 32.29   | 198 | a7  | 3+2-MDBT              | 366    | 0               |
| 63)                          | 32.86   | 198 | a7  | 1-MDBT                | 192    | 0               |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |                 |
| 64)                          | 29.85   | 178 | a8  | P                     | 9604   | 11              |
| 65)                          | 32.80   | 192 | a9  | 3-MP                  | 4042   | 6               |
| 66)                          | 32.95   | 192 | a9  | 2-MP                  | 4937   | 7               |
| 67)                          | 33.42   | 192 | a9  | 9-MP                  | 2133   | 3               |
| 68)                          | 33.55   | 192 | a9  | 1-MP                  | 1991   | 3               |
| 69)                          | 35.55   | 206 | a10 | 2EP+9EP+3.6-DMP       | 736    | 1               |
| 70)                          | 35.75   | 206 | a10 | 1EP                   | 1604   | 2               |
| 71)                          | 35.85   | 206 | a10 | 2.6+2.7+3.5-DMP       | 903    | 1               |
| 72)                          | 36.18   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 1718   | 2               |
| 73)                          | 36.34   | 206 | a10 | 1.6+2.5+2.9-DMP       | 1130   | 1               |
| 74)                          | 36.47   | 206 | a10 | 1.7-DMP               | 899    | 1               |
| 75)                          | 36.63   | 206 | a10 | 2.3-DMP               | 701    | 1               |
| 76)                          | 36.74   | 206 | a10 | 1.9+4.9+4.10-DMP      | 270    | 0               |
| 77)                          | 37.05   | 206 | a10 | 1.8-DMP               | 202    | 0               |
| <b>Retene:</b>               |         |     |     |                       |        |                 |
| 78)                          | 40.36   | 219 | a8  | Retene                | 3483   | 4               |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |                 |
| 80)                          | 44.83   | 231 | a11 | 20TA                  | 52     | 0               |
| 81)                          | 46.69   | 231 | a11 | 21TA                  | 43     | 0               |
| 82)                          | 53.66   | 231 | a11 | S26TA                 | 53     | 0               |
| 83)                          | 54.87   | 231 | a11 | R26TA/S27TA           | 195    | 0               |
| 84)                          | 55.86   | 231 | a11 | S28TA                 | 81     | 0               |
| 85)                          | 56.36   | 231 | a11 | R27TA                 | 91     | 0               |
| 86)                          | 57.59   | 231 | a11 | R28TA                 | 78     | 0               |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount<br>ng/mg |
|-------------------------------|---------|-----|-----|-----------------|--------|-----------------|
| Internal standard (if added): |         |     |     |                 |        |                 |
| 14)                           | 11.83   | 136 |     | d8N             | 42201  | 48              |
| 16)                           | 18.12   | 164 |     | d10BP           | 44172  | 42              |
| 59)                           | 29.71   | 188 |     | d10P            | 51050  | 48              |
| 79)                           | 45.21   | 240 |     | d12C            | 16991  | 48              |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |                 |
| 1)                            | 20.30   | 133 | 0   | C13AI           |        | 17              |
| 2)                            | 22.19   | 133 | 0   | C14AI           |        | 33              |
| 3)                            | 26.48   | 133 | 0   | C15AI           |        | 94              |
| 4)                            | 28.72   | 133 | 0   | C16AI           |        | 26              |
| 5)                            | 30.75   | 133 | 0   | C17AI           |        | 8               |
| 6)                            | 33.75   | 133 | 0   | C18AI           |        | 19              |
| 7)                            | 34.80   | 133 | 0   | C19AI           |        | 56              |
| 8)                            | 37.75   | 133 | 0   | C20AI           |        | 8               |
| 9)                            | 39.79   | 133 | 0   | C21AI           |        | 22              |
| 10)                           | 42.73   | 133 | 0   | C22AI           |        | 23              |
| 11)                           | 44.73   | 133 | 0   | C23AI           |        | 8               |
| 12)                           | 55.81   | 133 | 0   | C30AI           |        | 45              |
| 13)                           | 56.73   | 133 | 0   | C31AI           |        | 15              |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |                 |
| 15)                           | 11.92   | 128 | a1  | N               | 73860  | 77              |
| 17)                           | 15.51   | 142 | a2  | 2-MN            | 60446  | 55              |
| 18)                           | 16.06   | 142 | a2  | 1-MN            | 49450  | 45              |
| 19)                           | 18.70   | 156 | a3  | 2-EN            | 4256   | 4               |
| 20)                           | 18.82   | 156 | a3  | 1-EN            | 3252   | 3               |
| 21)                           | 19.04   | 156 | a3  | 2.6+2.7-DMN     | 9235   | 8               |
| 22)                           | 19.50   | 156 | a3  | 1.3+1.7-DMN     | 16842  | 14              |
| 23)                           | 19.61   | 156 | a3  | 1.6-DMN         | 13116  | 11              |
| 24)                           | 20.11   | 156 | a3  | 2.3+1.4-DMN     | 8287   | 7               |
| 25)                           | 20.22   | 156 | a3  | 1.5-DMN         | 4913   | 4               |
| 26)                           | 20.59   | 156 | a3  | 1.2-DMN         | 8210   | 7               |
| 27)                           | 22.27   | 170 | a4  | C3-N-1          | 634    | 1               |
| 28)                           | 22.64   | 170 | a4  | C3-N-2          | 926    | 1               |
| 29)                           | 22.76   | 170 | a4  | 1.3.7-TMN       | 1589   | 1               |
| 30)                           | 22.89   | 170 | a4  | 1.3.6-TMN       | 4633   | 4               |
| 31)                           | 23.37   | 170 | a4  | 1.3.5+1.4.6-TMN | 3014   | 3               |
| 32)                           | 23.45   | 170 | a4  | 2.3.6-TMN       | 2275   | 2               |
| 33)                           | 23.82   | 170 | a4  | 1.6.7+1.2.7-TMN | 2447   | 2               |
| 34)                           | 23.93   | 170 | a4  | 1.2.6-TMN       | 3164   | 3               |
| 35)                           | 24.36   | 170 | a4  | 1.2.4-TMN       | 994    | 1               |
| 36)                           | 24.57   | 170 | a4  | 1.2.5-TMN       | 7714   | 7               |
| <b>Biphenyls:</b>             |         |     |     |                 |        |                 |
| 37)                           | 18.24   | 154 | a5  | BP              | 3532   | 2               |
| 38)                           | 21.54   | 168 | a5  | 3-MBP           | 2932   | 2               |
| 39)                           | 21.80   | 168 | a5  | 4-MBP           | 804    | 0               |
| 40)                           | 21.85   | 182 | a4  | 2.3'-DMBP       | 151    | 0               |
| 41)                           | 22.05   | 182 | a4  | 2.5-DMBP        | 62     | 0               |
| 42)                           | 22.23   | 182 | a4  | 2.4+2.4'-DMBP   | 114    | 0               |
| 43)                           | 22.84   | 182 | a4  | 2.3-DMBP        | 249    | 0               |
| 44)                           | 24.23   | 182 | a4  | 3-EBP           | 118    | 0               |
| 45)                           | 24.57   | 182 | a4  | 3.5-DMBP        | 375    | 0               |
| 46)                           | 24.66   | 182 | a4  | 3.3'-DMBP       | 699    | 1               |
| 47)                           | 24.77   | 182 | a4  | 4-EBP           | 56     | 0               |
| 48)                           | 24.96   | 182 | a4  | 3.4'-DMBP       | 560    | 0               |
| 49)                           | 25.18   | 182 | a4  | 4.4'-DMBP       | 95     | 0               |
| 50)                           | 25.74   | 182 | a4  | 3.4-DMBP        | 250    | 0               |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 3025A.D  
Sample name: 6305\_8\_1, 3025a  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
Vial no.: 37  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

Response curve: y = ax+b  
Response factor groups: a1...a11, responses as defined in method

| #                            | Rt.min. | m/z | Rf. | Name                  | Height | Amount<br>ng/mg |
|------------------------------|---------|-----|-----|-----------------------|--------|-----------------|
| <b>Dibenzofuranes:</b>       |         |     |     |                       |        |                 |
| 51)                          | 22.43   | 168 | a5  | DBF                   | 14737  | 9               |
| 52)                          | 25.52   | 182 | a4  | MDBF-1                | 5893   | 5               |
| 53)                          | 25.90   | 182 | a4  | MDBF-2                | 3936   | 3               |
| 54)                          | 26.18   | 182 | a4  | MDBF-3                | 4289   | 4               |
| <b>Fluorenes:</b>            |         |     |     |                       |        |                 |
| 55)                          | 24.40   | 166 | a6  | F                     | 10027  | 7               |
| 56)                          | 27.62   | 180 | a6  | C1-F-1                | 1832   | 1               |
| 57)                          | 27.86   | 180 | a6  | C1-F-2                | 7117   | 5               |
| 58)                          | 28.17   | 180 | a6  | 1-MF                  | 1585   | 1               |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |                 |
| 60)                          | 29.11   | 184 | a7  | DBT                   | 1915   | 1               |
| 61)                          | 31.73   | 198 | a7  | 4-MDBT                | 560    | 0               |
| 62)                          | 32.26   | 198 | a7  | 3+2-MDBT              | 295    | 0               |
| 63)                          | 32.84   | 198 | a7  | 1-MDBT                | 589    | 0               |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |                 |
| 64)                          | 29.82   | 178 | a8  | P                     | 31056  | 24              |
| 65)                          | 32.78   | 192 | a9  | 3-MP                  | 4180   | 4               |
| 66)                          | 32.92   | 192 | a9  | 2-MP                  | 4886   | 5               |
| 67)                          | 33.41   | 192 | a9  | 9-MP                  | 5115   | 5               |
| 68)                          | 33.53   | 192 | a9  | 1-MP                  | 5138   | 5               |
| 69)                          | 35.50   | 206 | a10 | 2EP+9EP+3.6-DMP       | 607    | 1               |
| 70)                          | 35.73   | 206 | a10 | 1EP                   | 1098   | 1               |
| 71)                          | 35.84   | 206 | a10 | 2.6+2.7+3.5-DMP       | 323    | 0               |
| 72)                          | 36.17   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 1110   | 1               |
| 73)                          | 36.32   | 206 | a10 | 1.6+2.5+2.9-DMP       | 1262   | 1               |
| 74)                          | 36.45   | 206 | a10 | 1.7-DMP               | 1168   | 1               |
| 75)                          | 36.60   | 206 | a10 | 2.3-DMP               | 438    | 0               |
| 76)                          | 36.72   | 206 | a10 | 1.9+4.9+4.10-DMP      | 326    | 0               |
| 77)                          | 37.02   | 206 | a10 | 1.8-DMP               | 413    | 0               |
| <b>Retene:</b>               |         |     |     |                       |        |                 |
| 78)                          | 40.33   | 219 | a8  | Retene                | 634    | 0               |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |                 |
| 80)                          | 44.82   | 231 | a11 | 20TA                  | 115    | 0               |
| 81)                          | 46.68   | 231 | a11 | 21TA                  | 85     | 0               |
| 82)                          | 53.64   | 231 | a11 | S26TA                 | 45     | 0               |
| 83)                          | 54.85   | 231 | a11 | R26TA/S27TA           | 193    | 0               |
| 84)                          | 55.85   | 231 | a11 | S28TA                 | 49     | 0               |
| 85)                          | 56.35   | 231 | a11 | R27TA                 | 97     | 0               |
| 86)                          | 57.56   | 231 | a11 | R28TA                 | 41     | 0               |



| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount |
|-------------------------------|---------|-----|-----|-----------------|--------|--------|
|                               |         |     |     |                 |        | ng/mg  |
| Internal standard (if added): |         |     |     |                 |        |        |
| 14)                           | 11.83   | 136 |     | d8N             | 39025  | 40     |
| 16)                           | 18.13   | 164 |     | d10BP           | 40948  | 35     |
| 59)                           | 29.71   | 188 |     | d10P            | 49957  | 40     |
| 79)                           | 45.20   | 240 |     | d12C            | 18021  | 40     |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |        |
| 1)                            | 20.33   | 133 | 0   | C13AI           | 5      |        |
| 2)                            | 22.08   | 133 | 0   | C14AI           | 22     |        |
| 3)                            | 26.43   | 133 | 0   | C15AI           | 7      |        |
| 4)                            | 28.72   | 133 | 0   | C16AI           | 7      |        |
| 5)                            | 30.75   | 133 | 0   | C17AI           | 5      |        |
| 6)                            | 33.74   | 133 | 0   | C18AI           | 8      |        |
| 7)                            | 34.79   | 133 | 0   | C19AI           | 10     |        |
| 8)                            | 37.75   | 133 | 0   | C20AI           | 9      |        |
| 9)                            | 39.78   | 133 | 0   | C21AI           | 16     |        |
| 10)                           | 42.72   | 133 | 0   | C22AI           | 9      |        |
| 11)                           | 44.78   | 133 | 0   | C23AI           | 7      |        |
| 12)                           | 55.79   | 133 | 0   | C30AI           | 17     |        |
| 13)                           | 56.75   | 133 | 0   | C31AI           | 12     |        |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |        |
| 15)                           | 11.91   | 128 | a1  | N               | 845    | 1      |
| 17)                           | 15.51   | 142 | a2  | 2-MN            | 1046   | 1      |
| 18)                           | 16.07   | 142 | a2  | 1-MN            | 828    | 1      |
| 19)                           | 18.71   | 156 | a3  | 2-EN            | 89     | 0      |
| 20)                           | 18.81   | 156 | a3  | 1-EN            | 69     | 0      |
| 21)                           | 19.04   | 156 | a3  | 2.6+2.7-DMN     | 316    | 0      |
| 22)                           | 19.50   | 156 | a3  | 1.3+1.7-DMN     | 624    | 0      |
| 23)                           | 19.60   | 156 | a3  | 1.6-DMN         | 398    | 0      |
| 24)                           | 20.11   | 156 | a3  | 2.3+1.4-DMN     | 232    | 0      |
| 25)                           | 20.21   | 156 | a3  | 1.5-DMN         | 157    | 0      |
| 26)                           | 20.59   | 156 | a3  | 1.2-DMN         | 149    | 0      |
| 27)                           | 22.27   | 170 | a4  | C3-N-1          | 34     | 0      |
| 28)                           | 22.63   | 170 | a4  | C3-N-2          | 48     | 0      |
| 29)                           | 22.75   | 170 | a4  | 1.3.7-TMN       | 187    | 0      |
| 30)                           | 22.90   | 170 | a4  | 1.3.6-TMN       | 301    | 0      |
| 31)                           | 23.38   | 170 | a4  | 1.3.5+1.4.6-TMN | 294    | 0      |
| 32)                           | 23.45   | 170 | a4  | 2.3.6-TMN       | 172    | 0      |
| 33)                           | 23.87   | 170 | a4  | 1.6.7+1.2.7-TMN | 177    | 0      |
| 34)                           | 23.93   | 170 | a4  | 1.2.6-TMN       | 119    | 0      |
| 35)                           | 24.37   | 170 | a4  | 1.2.4-TMN       | 56     | 0      |
| 36)                           | 24.56   | 170 | a4  | 1.2.5-TMN       | 192    | 0      |
| <b>Biphenyls:</b>             |         |     |     |                 |        |        |
| 37)                           | 18.24   | 154 | a5  | BP              | 216    | 0      |
| 38)                           | 21.53   | 168 | a5  | 3-MBP           | 294    | 0      |
| 39)                           | 21.81   | 168 | a5  | 4-MBP           | 82     | 0      |
| 40)                           | 21.84   | 182 | a4  | 2.3'-DMBP       | 15     | 0      |
| 41)                           | 22.05   | 182 | a4  | 2.5-DMBP        | 5      | 0      |
| 42)                           | 22.23   | 182 | a4  | 2.4+2.4'-DMBP   | 9      | 0      |
| 43)                           | 22.84   | 182 | a4  | 2.3-DMBP        | 25     | 0      |
| 44)                           | 24.23   | 182 | a4  | 3-EBP           | 23     | 0      |
| 45)                           | 24.56   | 182 | a4  | 3.5-DMBP        | 51     | 0      |
| 46)                           | 24.67   | 182 | a4  | 3.3'-DMBP       | 131    | 0      |
| 47)                           | 24.78   | 182 | a4  | 4-EBP           | 8      | 0      |
| 48)                           | 24.96   | 182 | a4  | 3.4'-DMBP       | 80     | 0      |
| 49)                           | 25.17   | 182 | a4  | 4.4'-DMBP       | 19     | 0      |
| 50)                           | 25.74   | 182 | a4  | 3.4-DMBP        | 43     | 0      |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 2967A.D  
Sample name: 6305\_8\_1, 2967a  
Data File Path: C:\HPCHEM1\DATA\6305\_8\_1\  
Misc. info.:

Vial no.: 33  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

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)                          | 22.43   | 168 | a5  | DBF                   | 357    | 0      |
| 52)                          | 25.52   | 182 | a4  | MDBF-1                | 290    | 0      |
| 53)                          | 25.89   | 182 | a4  | MDBF-2                | 138    | 0      |
| 54)                          | 26.18   | 182 | a4  | MDBF-3                | 126    | 0      |
| <b>Fluorenes:</b>            |         |     |     |                       |        |        |
| 55)                          | 24.40   | 166 | a6  | F                     | 446    | 0      |
| 56)                          | 27.62   | 180 | a6  | C1-F-1                | 100    | 0      |
| 57)                          | 27.86   | 180 | a6  | C1-F-2                | 268    | 0      |
| 58)                          | 28.17   | 180 | a6  | 1-MF                  | 61     | 0      |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |        |
| 60)                          | 29.11   | 184 | a7  | DBT                   | 62     | 0      |
| 61)                          | 31.73   | 198 | a7  | 4-MDBT                | 56     | 0      |
| 62)                          | 32.25   | 198 | a7  | 3+2-MDBT              | 22     | 0      |
| 63)                          | 32.83   | 198 | a7  | 1-MDBT                | 20     | 0      |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |        |
| 64)                          | 29.82   | 178 | a8  | P                     | 1569   | 1      |
| 65)                          | 32.78   | 192 | a9  | 3-MP                  | 215    | 0      |
| 66)                          | 32.92   | 192 | a9  | 2-MP                  | 222    | 0      |
| 67)                          | 33.40   | 192 | a9  | 9-MP                  | 334    | 0      |
| 68)                          | 33.53   | 192 | a9  | 1-MP                  | 255    | 0      |
| 69)                          | 35.50   | 206 | a10 | 2EP+9EP+3.6-DMP       | 35     | 0      |
| 70)                          | 35.74   | 206 | a10 | 1EP                   | 43     | 0      |
| 71)                          | 35.82   | 206 | a10 | 2.6+2.7+3.5-DMP       | 20     | 0      |
| 72)                          | 36.16   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 104    | 0      |
| 73)                          | 36.32   | 206 | a10 | 1.6+2.5+2.9-DMP       | 66     | 0      |
| 74)                          | 36.46   | 206 | a10 | 1.7-DMP               | 57     | 0      |
| 75)                          | 36.61   | 206 | a10 | 2.3-DMP               | 18     | 0      |
| 76)                          | 36.71   | 206 | a10 | 1.9+4.9+4.10-DMP      | 37     | 0      |
| 77)                          | 37.02   | 206 | a10 | 1.8-DMP               | 24     | 0      |
| <b>Retene:</b>               |         |     |     |                       |        |        |
| 78)                          | 40.33   | 219 | a8  | Retene                | 262    | 0      |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |        |
| 80)                          | 44.82   | 231 | a11 | 20TA                  | 9      | 0      |
| 81)                          | 46.68   | 231 | a11 | 21TA                  | 7      | 0      |
| 82)                          | 53.61   | 231 | a11 | S26TA                 | 4      | 0      |
| 83)                          | 54.85   | 231 | a11 | R26TA/S27TA           | 6      | 0      |
| 84)                          | 55.82   | 231 | a11 | S28TA                 | 5      | 0      |
| 85)                          | 56.33   | 231 | a11 | R27TA                 | 5      | 0      |
| 86)                          | 57.56   | 231 | a11 | R28TA                 | 3      | 0      |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount |
|-------------------------------|---------|-----|-----|-----------------|--------|--------|
|                               |         |     |     |                 |        | ng/mg  |
| Internal standard (if added): |         |     |     |                 |        |        |
| 14)                           | 11.83   | 136 |     | d8N             | 69326  | 52     |
| 16)                           | 18.13   | 164 |     | d10BP           | 73651  | 46     |
| 59)                           | 29.71   | 188 |     | d10P            | 90684  | 52     |
| 79)                           | 45.21   | 240 |     | d12C            | 36140  | 52     |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |        |
| 1)                            | 20.20   | 133 | 0   | C13AI           | 18     |        |
| 2)                            | 22.08   | 133 | 0   | C14AI           | 67     |        |
| 3)                            | 26.48   | 133 | 0   | C15AI           | 23     |        |
| 4)                            | 28.74   | 133 | 0   | C16AI           | 14     |        |
| 5)                            | 30.75   | 133 | 0   | C17AI           | 6      |        |
| 6)                            | 33.74   | 133 | 0   | C18AI           | 6      |        |
| 7)                            | 34.74   | 133 | 0   | C19AI           | 7      |        |
| 8)                            | 37.75   | 133 | 0   | C20AI           | 10     |        |
| 9)                            | 39.76   | 133 | 0   | C21AI           | 8      |        |
| 10)                           | 42.72   | 133 | 0   | C22AI           | 4      |        |
| 11)                           | 44.75   | 133 | 0   | C23AI           | 4      |        |
| 12)                           | 55.72   | 133 | 0   | C30AI           | 7      |        |
| 13)                           | 56.76   | 133 | 0   | C31AI           | 8      |        |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |        |
| 15)                           | 11.91   | 128 | a1  | N               | 1830   | 1      |
| 17)                           | 15.51   | 142 | a2  | 2-MN            | 2671   | 2      |
| 18)                           | 16.07   | 142 | a2  | 1-MN            | 1946   | 1      |
| 19)                           | 18.71   | 156 | a3  | 2-EN            | 267    | 0      |
| 20)                           | 18.81   | 156 | a3  | 1-EN            | 178    | 0      |
| 21)                           | 19.04   | 156 | a3  | 2.6+2.7-DMN     | 963    | 1      |
| 22)                           | 19.51   | 156 | a3  | 1.3+1.7-DMN     | 1767   | 1      |
| 23)                           | 19.60   | 156 | a3  | 1.6-DMN         | 1234   | 1      |
| 24)                           | 20.11   | 156 | a3  | 2.3+1.4-DMN     | 644    | 0      |
| 25)                           | 20.21   | 156 | a3  | 1.5-DMN         | 382    | 0      |
| 26)                           | 20.59   | 156 | a3  | 1.2-DMN         | 391    | 0      |
| 27)                           | 22.28   | 170 | a4  | C3-N-1          | 125    | 0      |
| 28)                           | 22.63   | 170 | a4  | C3-N-2          | 131    | 0      |
| 29)                           | 22.75   | 170 | a4  | 1.3.7-TMN       | 501    | 0      |
| 30)                           | 22.90   | 170 | a4  | 1.3.6-TMN       | 829    | 0      |
| 31)                           | 23.38   | 170 | a4  | 1.3.5+1.4.6-TMN | 694    | 0      |
| 32)                           | 23.45   | 170 | a4  | 2.3.6-TMN       | 440    | 0      |
| 33)                           | 23.87   | 170 | a4  | 1.6.7+1.2.7-TMN | 465    | 0      |
| 34)                           | 23.93   | 170 | a4  | 1.2.6-TMN       | 305    | 0      |
| 35)                           | 24.37   | 170 | a4  | 1.2.4-TMN       | 122    | 0      |
| 36)                           | 24.58   | 170 | a4  | 1.2.5-TMN       | 447    | 0      |
| <b>Biphenyls:</b>             |         |     |     |                 |        |        |
| 37)                           | 18.24   | 154 | a5  | BP              | 627    | 0      |
| 38)                           | 21.53   | 168 | a5  | 3-MBP           | 854    | 0      |
| 39)                           | 21.80   | 168 | a5  | 4-MBP           | 259    | 0      |
| 40)                           | 21.86   | 182 | a4  | 2.3'-DMBP       | 42     | 0      |
| 41)                           | 22.05   | 182 | a4  | 2.5-DMBP        | 16     | 0      |
| 42)                           | 22.24   | 182 | a4  | 2.4+2.4'-DMBP   | 28     | 0      |
| 43)                           | 22.84   | 182 | a4  | 2.3-DMBP        | 75     | 0      |
| 44)                           | 24.24   | 182 | a4  | 3-EBP           | 55     | 0      |
| 45)                           | 24.56   | 182 | a4  | 3.5-DMBP        | 150    | 0      |
| 46)                           | 24.67   | 182 | a4  | 3.3'-DMBP       | 337    | 0      |
| 47)                           | 24.78   | 182 | a4  | 4-EBP           | 20     | 0      |
| 48)                           | 24.96   | 182 | a4  | 3.4'-DMBP       | 194    | 0      |
| 49)                           | 25.17   | 182 | a4  | 4.4'-DMBP       | 33     | 0      |
| 50)                           | 25.72   | 182 | a4  | 3.4-DMBP        | 92     | 0      |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 2963\_4A.D  
Sample name: 6305\_8\_1, 2963\_4a  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
Vial no.: 32  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

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)                          | 22.43   | 168 | a5  | DBF                   | 793    | 0      |
| 52)                          | 25.52   | 182 | a4  | MDBF-1                | 651    | 0      |
| 53)                          | 25.89   | 182 | a4  | MDBF-2                | 341    | 0      |
| 54)                          | 26.18   | 182 | a4  | MDBF-3                | 287    | 0      |
| <b>Fluorenes:</b>            |         |     |     |                       |        |        |
| 55)                          | 24.40   | 166 | a6  | F                     | 953    | 0      |
| 56)                          | 27.62   | 180 | a6  | C1-F-1                | 192    | 0      |
| 57)                          | 27.86   | 180 | a6  | C1-F-2                | 553    | 0      |
| 58)                          | 28.17   | 180 | a6  | 1-MF                  | 132    | 0      |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |        |
| 60)                          | 29.10   | 184 | a7  | DBT                   | 113    | 0      |
| 61)                          | 31.73   | 198 | a7  | 4-MDBT                | 93     | 0      |
| 62)                          | 32.27   | 198 | a7  | 3+2-MDBT              | 28     | 0      |
| 63)                          | 32.84   | 198 | a7  | 1-MDBT                | 25     | 0      |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |        |
| 64)                          | 29.82   | 178 | a8  | P                     | 2688   | 1      |
| 65)                          | 32.78   | 192 | a9  | 3-MP                  | 313    | 0      |
| 66)                          | 32.92   | 192 | a9  | 2-MP                  | 385    | 0      |
| 67)                          | 33.40   | 192 | a9  | 9-MP                  | 520    | 0      |
| 68)                          | 33.52   | 192 | a9  | 1-MP                  | 386    | 0      |
| 69)                          | 35.50   | 206 | a10 | 2EP+9EP+3.6-DMP       | 59     | 0      |
| 70)                          | 35.72   | 206 | a10 | 1EP                   | 49     | 0      |
| 71)                          | 35.84   | 206 | a10 | 2.6+2.7+3.5-DMP       | 27     | 0      |
| 72)                          | 36.16   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 135    | 0      |
| 73)                          | 36.32   | 206 | a10 | 1.6+2.5+2.9-DMP       | 98     | 0      |
| 74)                          | 36.46   | 206 | a10 | 1.7-DMP               | 88     | 0      |
| 75)                          | 36.60   | 206 | a10 | 2.3-DMP               | 30     | 0      |
| 76)                          | 36.71   | 206 | a10 | 1.9+4.9+4.10-DMP      | 56     | 0      |
| 77)                          | 37.02   | 206 | a10 | 1.8-DMP               | 41     | 0      |
| <b>Retene:</b>               |         |     |     |                       |        |        |
| 78)                          | 40.33   | 219 | a8  | Retene                | 427    | 0      |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |        |
| 80)                          | 44.81   | 231 | a11 | 20TA                  | 8      | 0      |
| 81)                          | 46.66   | 231 | a11 | 21TA                  | 6      | 0      |
| 82)                          | 53.60   | 231 | a11 | S26TA                 | 7      | 0      |
| 83)                          | 54.85   | 231 | a11 | R26TA/S27TA           | 7      | 0      |
| 84)                          | 55.86   | 231 | a11 | S28TA                 | 4      | 0      |
| 85)                          | 56.34   | 231 | a11 | R27TA                 | 4      | 0      |
| 86)                          | 57.50   | 231 | a11 | R28TA                 | 3      | 0      |

| #                             | Rt.min. | m/z | Rf. | Name            | Height | Amount |
|-------------------------------|---------|-----|-----|-----------------|--------|--------|
|                               |         |     |     |                 |        | ng/mg  |
| Internal standard (if added): |         |     |     |                 |        |        |
| 14)                           | 11.83   | 136 |     | d8N             | 42534  | 48     |
| 16)                           | 18.13   | 164 |     | d10BP           | 45698  | 42     |
| 59)                           | 29.71   | 188 |     | d10P            | 50699  | 48     |
| 79)                           | 45.21   | 240 |     | d12C            | 21298  | 48     |
| <b>Aryl isoprenoids:</b>      |         |     |     |                 |        |        |
| 1)                            | 20.21   | 133 | 0   | C13AI           | 27     |        |
| 2)                            | 22.11   | 133 | 0   | C14AI           | 7      |        |
| 3)                            | 26.48   | 133 | 0   | C15AI           | 41     |        |
| 4)                            | 28.72   | 133 | 0   | C16AI           | 20     |        |
| 5)                            | 30.76   | 133 | 0   | C17AI           | 7      |        |
| 6)                            | 33.71   | 133 | 0   | C18AI           | 9      |        |
| 7)                            | 34.71   | 133 | 0   | C19AI           | 6      |        |
| 8)                            | 37.78   | 133 | 0   | C20AI           | 13     |        |
| 9)                            | 39.79   | 133 | 0   | C21AI           | 45     |        |
| 10)                           | 42.71   | 133 | 0   | C22AI           | 55     |        |
| 11)                           | 44.77   | 133 | 0   | C23AI           | 35     |        |
| 12)                           | 55.77   | 133 | 0   | C30AI           | 26     |        |
| 13)                           | 56.77   | 133 | 0   | C31AI           | 19     |        |
| <b>Naphthalenes:</b>          |         |     |     |                 |        |        |
| 15)                           | 11.92   | 128 | a1  | N               | 403    | 0      |
| 17)                           | 15.51   | 142 | a2  | 2-MN            | 794    | 1      |
| 18)                           | 16.07   | 142 | a2  | 1-MN            | 608    | 1      |
| 19)                           | 18.70   | 156 | a3  | 2-EN            | 80     | 0      |
| 20)                           | 18.81   | 156 | a3  | 1-EN            | 56     | 0      |
| 21)                           | 19.05   | 156 | a3  | 2.6+2.7-DMN     | 292    | 0      |
| 22)                           | 19.50   | 156 | a3  | 1.3+1.7-DMN     | 610    | 1      |
| 23)                           | 19.60   | 156 | a3  | 1.6-DMN         | 368    | 0      |
| 24)                           | 20.11   | 156 | a3  | 2.3+1.4-DMN     | 226    | 0      |
| 25)                           | 20.21   | 156 | a3  | 1.5-DMN         | 127    | 0      |
| 26)                           | 20.59   | 156 | a3  | 1.2-DMN         | 128    | 0      |
| 27)                           | 22.27   | 170 | a4  | C3-N-1          | 39     | 0      |
| 28)                           | 22.63   | 170 | a4  | C3-N-2          | 48     | 0      |
| 29)                           | 22.75   | 170 | a4  | 1.3.7-TMN       | 247    | 0      |
| 30)                           | 22.90   | 170 | a4  | 1.3.6-TMN       | 336    | 0      |
| 31)                           | 23.38   | 170 | a4  | 1.3.5+1.4.6-TMN | 286    | 0      |
| 32)                           | 23.45   | 170 | a4  | 2.3.6-TMN       | 169    | 0      |
| 33)                           | 23.87   | 170 | a4  | 1.6.7+1.2.7-TMN | 189    | 0      |
| 34)                           | 23.93   | 170 | a4  | 1.2.6-TMN       | 112    | 0      |
| 35)                           | 24.36   | 170 | a4  | 1.2.4-TMN       | 48     | 0      |
| 36)                           | 24.57   | 170 | a4  | 1.2.5-TMN       | 179    | 0      |
| <b>Biphenyls:</b>             |         |     |     |                 |        |        |
| 37)                           | 18.24   | 154 | a5  | BP              | 142    | 0      |
| 38)                           | 21.53   | 168 | a5  | 3-MBP           | 411    | 0      |
| 39)                           | 21.81   | 168 | a5  | 4-MBP           | 100    | 0      |
| 40)                           | 21.84   | 182 | a4  | 2.3'-DMBP       | 18     | 0      |
| 41)                           | 22.07   | 182 | a4  | 2.5-DMBP        | 12     | 0      |
| 42)                           | 22.23   | 182 | a4  | 2.4+2.4'-DMBP   | 15     | 0      |
| 43)                           | 22.85   | 182 | a4  | 2.3-DMBP        | 47     | 0      |
| 44)                           | 24.24   | 182 | a4  | 3-EBP           | 28     | 0      |
| 45)                           | 24.56   | 182 | a4  | 3.5-DMBP        | 101    | 0      |
| 46)                           | 24.67   | 182 | a4  | 3.3'-DMBP       | 231    | 0      |
| 47)                           | 24.78   | 182 | a4  | 4-EBP           | 12     | 0      |
| 48)                           | 24.96   | 182 | a4  | 3.4'-DMBP       | 119    | 0      |
| 49)                           | 25.19   | 182 | a4  | 4.4'-DMBP       | 17     | 0      |
| 50)                           | 25.74   | 182 | a4  | 3.4-DMBP        | 45     | 0      |

## Aromatic hydrocarbons

GC/MS detection HP-6890/5973

### Compound data



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

Data file name: 2943\_3A.D  
Sample name: 6305\_8\_1, 2943\_3a  
Data File Path: C:\HPCHEM\1\DATA\6305\_8\_1\  
Misc. info.:  
Vial no.: 31  
Method: MSD\_A\_E2  
Operator: Hans  
Date: #VALUE!

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)                          | 22.44   | 168 | a5  | DBF                   | 207    | 0      |
| 52)                          | 25.52   | 182 | a4  | MDBF-1                | 232    | 0      |
| 53)                          | 25.89   | 182 | a4  | MDBF-2                | 110    | 0      |
| 54)                          | 26.18   | 182 | a4  | MDBF-3                | 92     | 0      |
| <b>Fluorenes:</b>            |         |     |     |                       |        |        |
| 55)                          | 24.39   | 166 | a6  | F                     | 291    | 0      |
| 56)                          | 27.63   | 180 | a6  | C1-F-1                | 74     | 0      |
| 57)                          | 27.86   | 180 | a6  | C1-F-2                | 194    | 0      |
| 58)                          | 28.17   | 180 | a6  | 1-MF                  | 42     | 0      |
| <b>Dibenzothiophenes:</b>    |         |     |     |                       |        |        |
| 60)                          | 29.10   | 184 | a7  | DBT                   | 32     | 0      |
| 61)                          | 31.74   | 198 | a7  | 4-MDBT                | 36     | 0      |
| 62)                          | 32.26   | 198 | a7  | 3+2-MDBT              | 13     | 0      |
| 63)                          | 32.84   | 198 | a7  | 1-MDBT                | 14     | 0      |
| <b>Phenanthrenes:</b>        |         |     |     |                       |        |        |
| 64)                          | 29.82   | 178 | a8  | P                     | 718    | 1      |
| 65)                          | 32.79   | 192 | a9  | 3-MP                  | 146    | 0      |
| 66)                          | 32.91   | 192 | a9  | 2-MP                  | 176    | 0      |
| 67)                          | 33.40   | 192 | a9  | 9-MP                  | 179    | 0      |
| 68)                          | 33.53   | 192 | a9  | 1-MP                  | 154    | 0      |
| 69)                          | 35.51   | 206 | a10 | 2EP+9EP+3.6-DMP       | 28     | 0      |
| 70)                          | 35.74   | 206 | a10 | 1EP                   | 52     | 0      |
| 71)                          | 35.83   | 206 | a10 | 2.6+2.7+3.5-DMP       | 27     | 0      |
| 72)                          | 36.16   | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 97     | 0      |
| 73)                          | 36.32   | 206 | a10 | 1.6+2.5+2.9-DMP       | 62     | 0      |
| 74)                          | 36.45   | 206 | a10 | 1.7-DMP               | 51     | 0      |
| 75)                          | 36.59   | 206 | a10 | 2.3-DMP               | 25     | 0      |
| 76)                          | 36.73   | 206 | a10 | 1.9+4.9+4.10-DMP      | 27     | 0      |
| 77)                          | 37.02   | 206 | a10 | 1.8-DMP               | 24     | 0      |
| <b>Retene:</b>               |         |     |     |                       |        |        |
| 78)                          | 40.33   | 219 | a8  | Retene                | 172    | 0      |
| <b>Triaromatic steroids:</b> |         |     |     |                       |        |        |
| 80)                          | 44.81   | 231 | a11 | 20TA                  | 13     | 0      |
| 81)                          | 46.69   | 231 | a11 | 21TA                  | 9      | 0      |
| 82)                          | 53.63   | 231 | a11 | S26TA                 | 10     | 0      |
| 83)                          | 54.84   | 231 | a11 | R26TA/S27TA           | 28     | 0      |
| 84)                          | 55.86   | 231 | a11 | S28TA                 | 23     | 0      |
| 85)                          | 56.36   | 231 | a11 | R27TA                 | 18     | 0      |
| 86)                          | 57.55   | 231 | a11 | R28TA                 | 17     | 0      |