LSC Area Percent Report

Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.116 | 512 | 515 | 521 | rVB | 32800 | 32564 | 1.62% | 0.148% |
| 2 | 5.510 | 578 | 582 | 588 | rBV | 224169 | 188508 | 9.36% | 0.856% |
| 3 | 6.516 | 749 | 753 | 757 | rBV | 227348 | 190150 | 9.44% | 0.864% |
| 4 | 6.663 | 775 | 778 | 782 | rBV | 213554 | 192080 | 9.54% | 0.873% |
| 5 | 6.904 | 815 | 819 | 822 | rBV | 902873 | 743729 | 36.93% | 3.378% |
| 6 | 7.057 | 842 | 845 | 848 | rBV | 193057 | 148436 | 7.37% | 0.674% |
| 7 | 7.457 | 910 | 913 | 917 | rBV | 125763 | 96208 | 4.78% | 0.437% |
| 8 | 8.186 | 1033 | 1037 | 1039 | rBV | 1057524 | 888307 | 44.11% | 4.035% |
| 9 | 8.204 | 1039 | 1040 | 1043 | rVB | 149336 | 99098 | 4.92% | 0.450% |
| 10 | 8.898 | 1154 | 1158 | 1161 | rBV | 60244 | 45274 | 2.25% | 0.206% |
| 11 | 8.998 | 1170 | 1175 | 1178 | rBV | 43772 | 37718 | 1.87% | 0.171% |
| 12 | 9.257 | 1215 | 1219 | 1226 | rBV | 195049 | 159919 | 7.94% | 0.726% |
| 13 | 9.598 | 1270 | 1277 | 1279 | rBV | 30434 | 29674 | 1.47% | 0.135% |
| 14 | 9.798 | 1308 | 1311 | 1314 | rBV | 28408 | 24132 | 1.20% | 0.110% |
| 15 | 9.939 | 1329 | 1335 | 1339 | rBV2 | 887742 | 784910 | 38.98% | 3.565% |
| 16 | 9.975 | 1339 | 1341 | 1344 | rVB | 86033 | 68944 | 3.42% | 0.313% |
| 17 | 10.145 | 1365 | 1370 | 1374 | rBV | 67573 | 64943 | 3.22% | 0.295% |
| 18 | 10.486 | 1425 | 1428 | 1433 | rBV | 89789 | 78813 | 3.91% | 0.358% |
| 19 | 10.645 | 1452 | 1455 | 1459 | rVB | 34261 | 28943 | 1.44% | 0.131% |
| 20 | 10.722 | 1465 | 1468 | 1474 | rVB | 114687 | 114832 | 5.70% | 0.522% |
| 21 | 11.163 | 1538 | 1543 | 1544 | rBV2 | 20231 | 22215 | 1.10% | 0.101% |
| 22 | 11.227 | 1551 | 1554 | 1558 | rVB | 92160 | 82774 | 4.11% | 0.376% |
| 23 | 11.275 | 1558 | 1562 | 1566 | rVV2 | 20977 | 32245 | 1.60% | 0.146% |
| 24 | 11.322 | 1568 | 1570 | 1575 | rVB | 61738 | 52266 | 2.60% | 0.237% |
| 25 | 11.427 | 1584 | 1588 | 1590 | rBV | 871210 | 747717 | 37.13% | 3.396% |
| 26 | 11.451 | 1590 | 1592 | 1596 | rVV | 1205670 | 973454 | 48.34% | 4.422% |
| 27 | 11.504 | 1596 | 1601 | 1604 | rVV | 259608 | 240238 | 11.93% | 1.091% |
| 28 | 11.533 | 1604 | 1606 | 1609 | rVB2 | 37777 | 34756 | 1.73% | 0.158% |
| 29 | 11.657 | 1621 | 1627 | 1629 | rBV2 | 140948 | 156087 | 7.75% | 0.709% |
| 30 | 11.722 | 1635 | 1638 | 1641 | rBV2 | 26599 | 22475 | 1.12% | 0.102% |
| 31 | 11.757 | 1641 | 1644 | 1648 | rVB3 | 39003 | 38856 | 1.93% | 0.177% |
| 32 | 11.927 | 1667 | 1673 | 1675 | rBV | 175073 | 152555 | 7.58% | 0.693% |
| 33 | 11.957 | 1675 | 1678 | 1682 | rVB | 249505 | 202935 | 10.08% | 0.922% |
| 34 | 12.004 | 1682 | 1686 | 1689 | rBV | 84297 | 74167 | 3.68% | 0.337% |

LSC Area Percent Report

Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 12.039 | 1689 | 1692 | 1695 | rBV2 | 236046 | 279252 | 13.87% | 1.268% |
| 36 | 12.063 | 1695 | 1696 | 1699 | rVB | 128922 | 72172 | 3.58% | 0.328% |
| 37 | 12.104 | 1699 | 1703 | 1705 | rBV2 | 22142 | 22075 | 1.10% | 0.100% |
| 38 | 12.222 | 1720 | 1723 | 1725 | rBV | 139390 | 116253 | 5.77% | 0.528% |
| 39 | 12.245 | 1725 | 1727 | 1731 | rVB | 161494 | 127586 | 6.34% | 0.580% |
| 40 | 12.374 | 1746 | 1749 | 1751 | rBV | 42443 | 31225 | 1.55% | 0.142% |
| 41 | 12.404 | 1751 | 1754 | 1756 | rBV | 37885 | 28492 | 1.41% | 0.129% |
| 42 | 12.427 | 1756 | 1758 | 1760 | rVB | 41865 | 30634 | 1.52% | 0.139% |
| 43 | 12.480 | 1760 | 1767 | 1770 | rBV | 110441 | 131622 | 6.54% | 0.598% |
| 44 | 12.516 | 1770 | 1773 | 1775 | rVV3 | 52627 | 56561 | 2.81% | 0.257% |
| 45 | 12.563 | 1778 | 1781 | 1787 | rVB | 187684 | 170780 | 8.48% | 0.776% |
| 46 | 12.645 | 1790 | 1795 | 1798 | rVB | 2003786 | 1813755 | 90.07% | 8.239% |
| 47 | 12.686 | 1798 | 1802 | 1803 | rBV | 29476 | 24991 | 1.24% | 0.114% |
| 48 | 12.704 | 1803 | 1805 | 1808 | rVB2 | 59259 | 47071 | 2.34% | 0.214% |
| 49 | 12.769 | 1812 | 1816 | 1818 | rBV2 | 58644 | 75171 | 3.73% | 0.341% |
| 50 | 12.792 | 1818 | 1820 | 1823 | rVB | 60790 | 52612 | 2.61% | 0.239% |
| 51 | 12.874 | 1827 | 1834 | 1837 | rBV2 | 1719138 | 1919240 | 95.31% | 8.718% |
| 52 | 12.916 | 1839 | 1841 | 1846 | rVB2 | 108004 | 107672 | 5.35% | 0.489% |
| 53 | 12.986 | 1846 | 1853 | 1855 | rBV | 150030 | 168796 | 8.38% | 0.767% |
| 54 | 13.010 | 1855 | 1857 | 1858 | rVV | 163538 | 135289 | 6.72% | 0.615% |
| 55 | 13.027 | 1858 | 1860 | 1863 | rVB | 155467 | 135129 | 6.71% | 0.614% |
| 56 | 13.086 | 1865 | 1870 | 1873 | rBV2 | 157485 | 269902 | 13.40% | 1.226% |
| 57 | 13.116 | 1873 | 1875 | 1877 | rVB | 42294 | 31194 | 1.55% | 0.142% |
| 58 | 13.169 | 1877 | 1884 | 1886 | rBV3 | 122145 | 177391 | 8.81% | 0.806% |
| 59 | 13.198 | 1886 | 1889 | 1892 | rVB | 206004 | 213501 | 10.60% | 0.970% |
| 60 | 13.227 | 1892 | 1894 | 1897 | rBV2 | 36214 | 41786 | 2.08% | 0.190% |
| 61 | 13.263 | 1897 | 1900 | 1902 | rBV | 93972 | 75118 | 3.73% | 0.341% |
| 62 | 13.298 | 1902 | 1906 | 1909 | rBV2 | 214714 | 254678 | 12.65% | 1.157% |
| 63 | 13.327 | 1909 | 1911 | 1914 | rVB2 | 78194 | 63875 | 3.17% | 0.290% |
| 64 | 13.357 | 1914 | 1916 | 1920 | rBV3 | 51167 | 52143 | 2.59% | 0.237% |
| 65 | 13.392 | 1920 | 1922 | 1925 | rBV | 113970 | 96650 | 4.80% | 0.439% |
| 66 | 13.421 | 1925 | 1927 | 1931 | rBV2 | 105069 | 117071 | 5.81% | 0.532% |
| 67 | 13.504 | 1937 | 1941 | 1945 | rBV4 | 34413 | 52175 | 2.59% | 0.237% |
| 68 | 13.574 | 1950 | 1953 | 1954 | rBV3 | 45842 | 50061 | 2.49% | 0.227% |
| 69 | 13.598 | 1955 | 1957 | 1959 | rVV | 56347 | 55527 | 2.76% | 0.252% |
| 70 | 13.645 | 1963 | 1965 | 1967 | rVB3 | 31285 | 23954 | 1.19% | 0.109% |
| 71 | 13.704 | 1971 | 1975 | 1979 | rVB | 322490 | 312982 | 15.54% | 1.422% |

LSC Area Percent Report

Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 13.816 | 1989 | 1994 | 1997 | rBV2 | 206261 | 311533 | 15.47% | 1.415% |
| 73 | 13.845 | 1997 | 1999 | 2001 | rVV | 216635 | 177955 | 8.84% | 0.808% |
| 74 | 13.868 | 2001 | 2003 | 2007 | rVV2 | 165611 | 233620 | 11.60% | 1.061% |
| 75 | 13.910 | 2007 | 2010 | 2016 | rVB | 339614 | 328842 | 16.33% | 1.494% |
| 76 | 13.986 | 2021 | 2023 | 2028 | rVB | 45838 | 47969 | 2.38% | 0.218% |
| 77 | 14.063 | 2028 | 2036 | 2039 | rBV3 | 1390405 | 2013744 | 100.00% | 9.147% |
| 78 | 14.092 | 2039 | 2041 | 2047 | rVB | 898097 | 908131 | 45.10% | 4.125% |
| 79 | 14.151 | 2049 | 2051 | 2053 | rBV2 | 27690 | 23614 | 1.17% | 0.107% |
| 80 | 14.174 | 2053 | 2055 | 2058 | rBV | 89131 | 74052 | 3.68% | 0.336% |
| 81 | 14.251 | 2066 | 2068 | 2071 | rVB2 | 79856 | 82978 | 4.12% | 0.377% |
| 82 | 14.292 | 2071 | 2075 | 2078 | rBV2 | 104131 | 151422 | 7.52% | 0.688% |
| 83 | 14.321 | 2078 | 2080 | 2083 | rVV3 | 58547 | 44169 | 2.19% | 0.201% |
| 84 | 14.415 | 2094 | 2096 | 2098 | rBV | 57305 | 59401 | 2.95% | 0.270% |
| 85 | 14.451 | 2098 | 2102 | 2105 | rVV | 191822 | 213889 | 10.62% | 0.972% |
| 86 | 14.486 | 2105 | 2108 | 2111 | rVV2 | 122425 | 115114 | 5.72% | 0.523% |
| 87 | 14.574 | 2121 | 2123 | 2126 | rBV2 | 70642 | 70221 | 3.49% | 0.319% |
| 88 | 14.933 | 2182 | 2184 | 2186 | rBV | 45982 | 48343 | 2.40% | 0.220% |
| 89 | 15.115 | 2211 | 2215 | 2218 | rBV2 | 548928 | 829639 | 41.20% | 3.769% |
| 90 | 15.227 | 2231 | 2234 | 2238 | rVB | 87029 | 96134 | 4.77% | 0.437% |
| 91 | 15.427 | 2264 | 2268 | 2274 | rVB | 299330 | 375279 | 18.64% | 1.705% |
| 92 | 15.486 | 2274 | 2278 | 2285 | rVB | 381548 | 492420 | 24.45% | 2.237% |
| 93 | 15.557 | 2285 | 2290 | 2293 | rBV | 432081 | 599649 | 29.78% | 2.724% |
| 94 | 17.051 | 2539 | 2544 | 2552 | rVB2 | 134253 | 262460 | 13.03% | 1.192% |
| 95 | 17.504 | 2616 | 2621 | 2627 | rVB | 99593 | 169683 | 8.43% | 0.771% |

Sum of corrected areas: 22014569

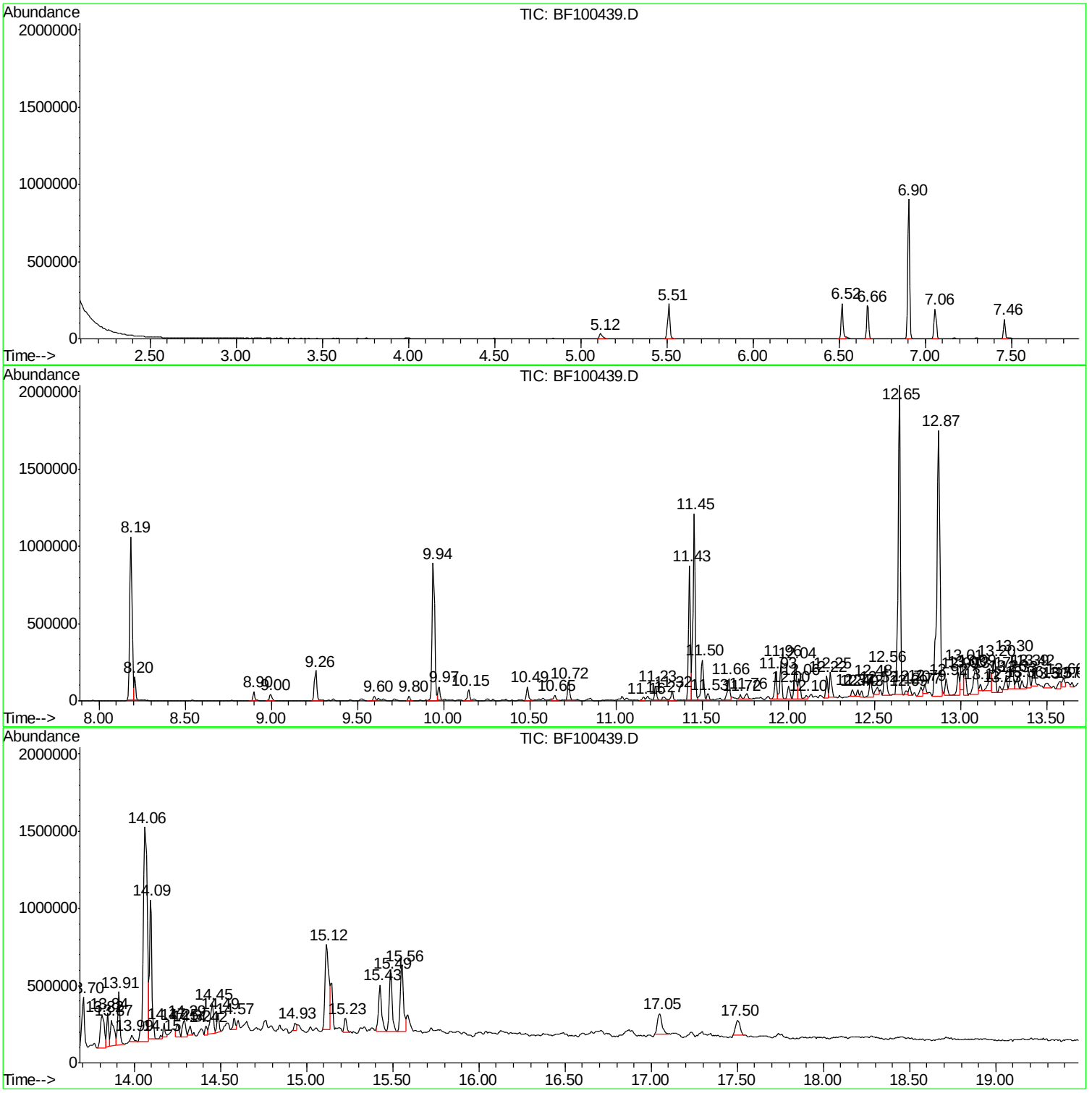
LSC Report - Integrated Chromatogram

Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P



Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

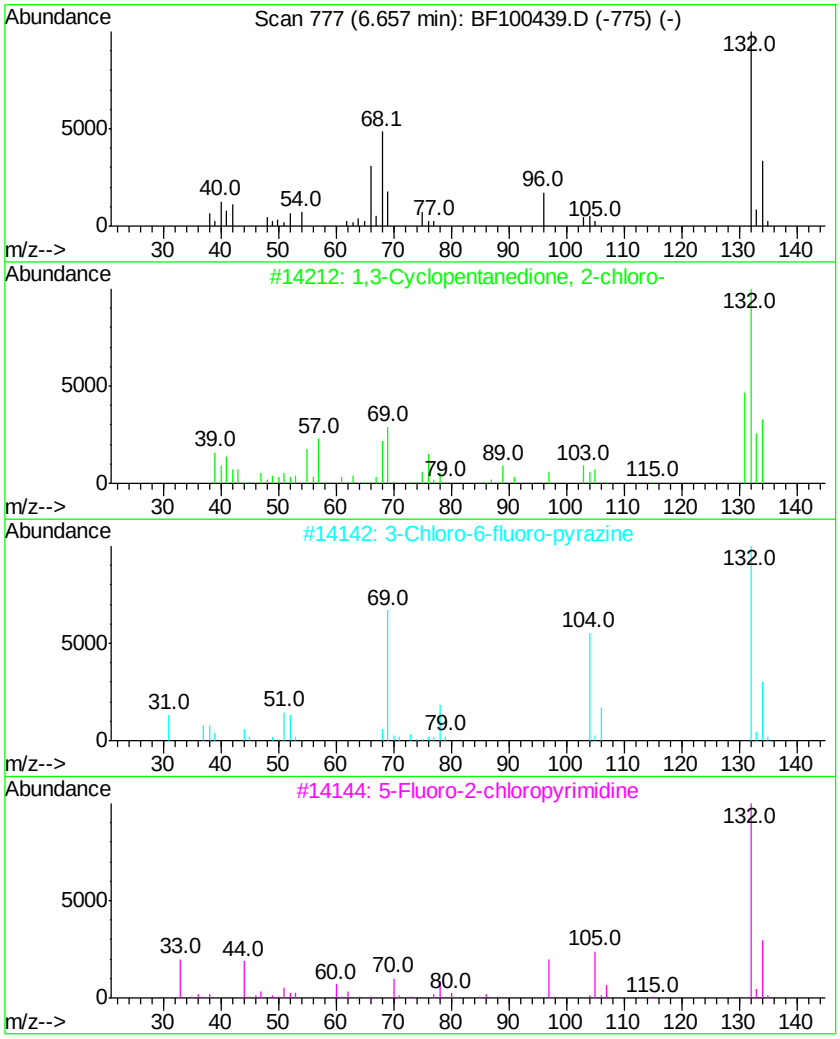
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

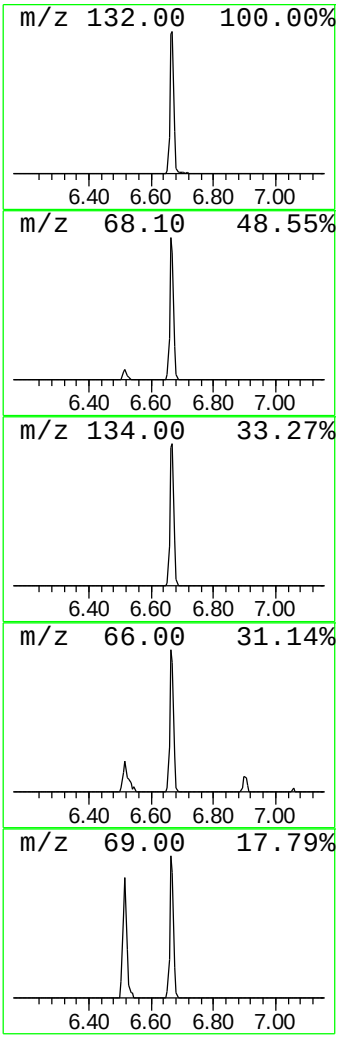
**********

Peak Number 1 unknown6.66 Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.66 | 5.17 ng | 192080 | 1,4-Dichlorobenzene-d4 | 6.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,3-Cyclopentanedione, 2-chloro- | 132 | C5H5ClO2 | 014203-19-1 | 17 |
| 2 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 16 |
| 3 | 5-Fluoro-2-chloropyrimidine | 132 | C4H2ClFN2 | 062802-42-0 | 12 |
| 4 | 5-Aminoindole | 132 | C8H8N2 | 005192-03-0 | 12 |
| 5 | Tranylcypromine-propionyl | 189 | C12H15NO | 1000123-86-3 | 10 |



Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

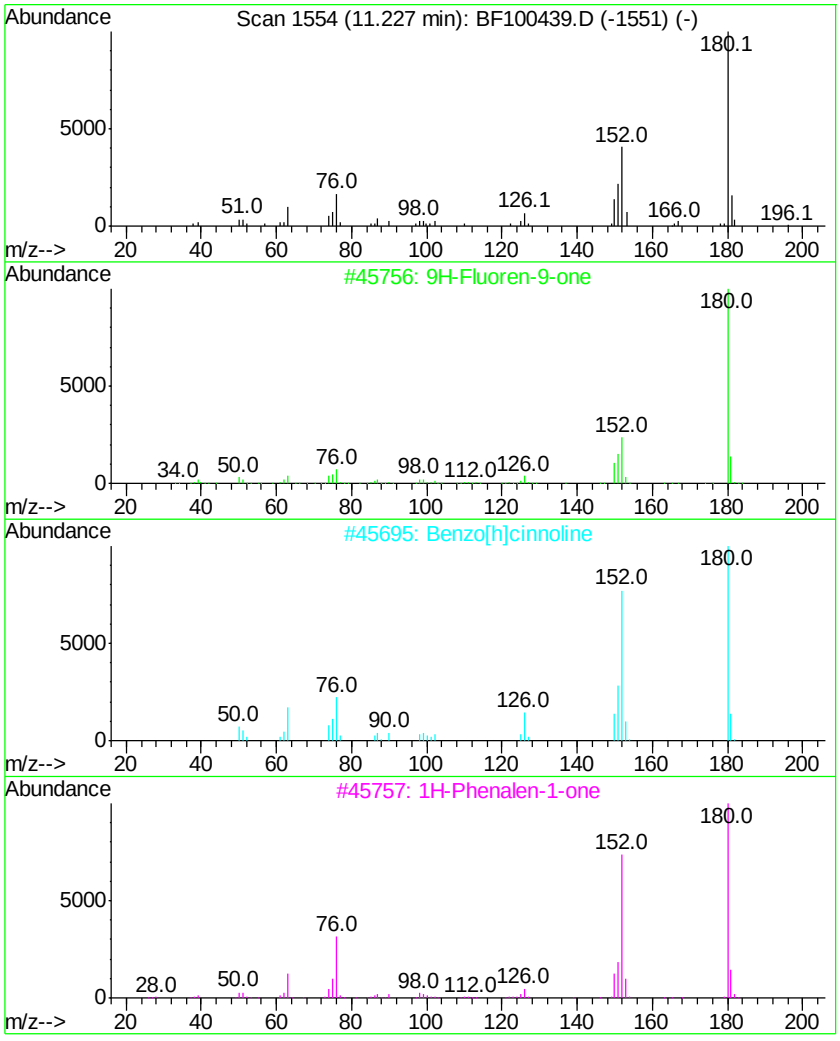
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

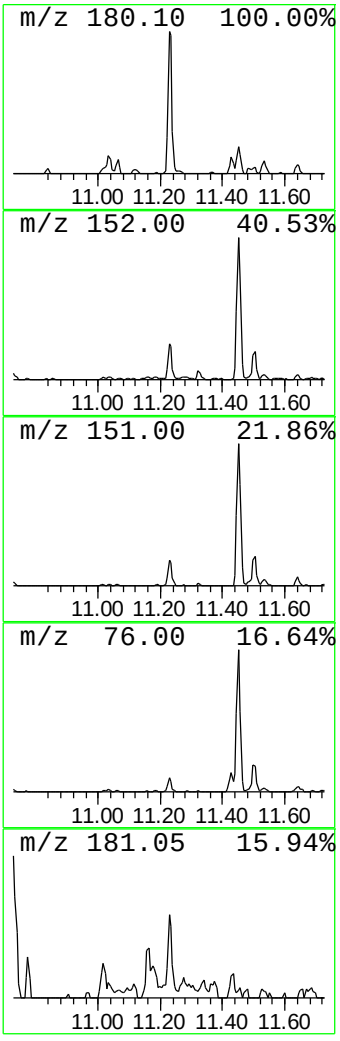
**********

Peak Number 3 9H-Fluoren-9-one Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.23 | 2.21 ng | 82774 | Phenanthrene-d10 | 11.43 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 95 |
| 2 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 83 |
| 3 | 1H-Phenalen-1-one | 180 | C13H8O | 000548-39-0 | 50 |
| 4 | Phenazine | 180 | C12H8N2 | 000092-82-0 | 43 |
| 5 | 6H-Purine-6-thione, 9-ethyl-1,9-... | 180 | C7H8N4S | 005427-20-3 | 42 |



Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

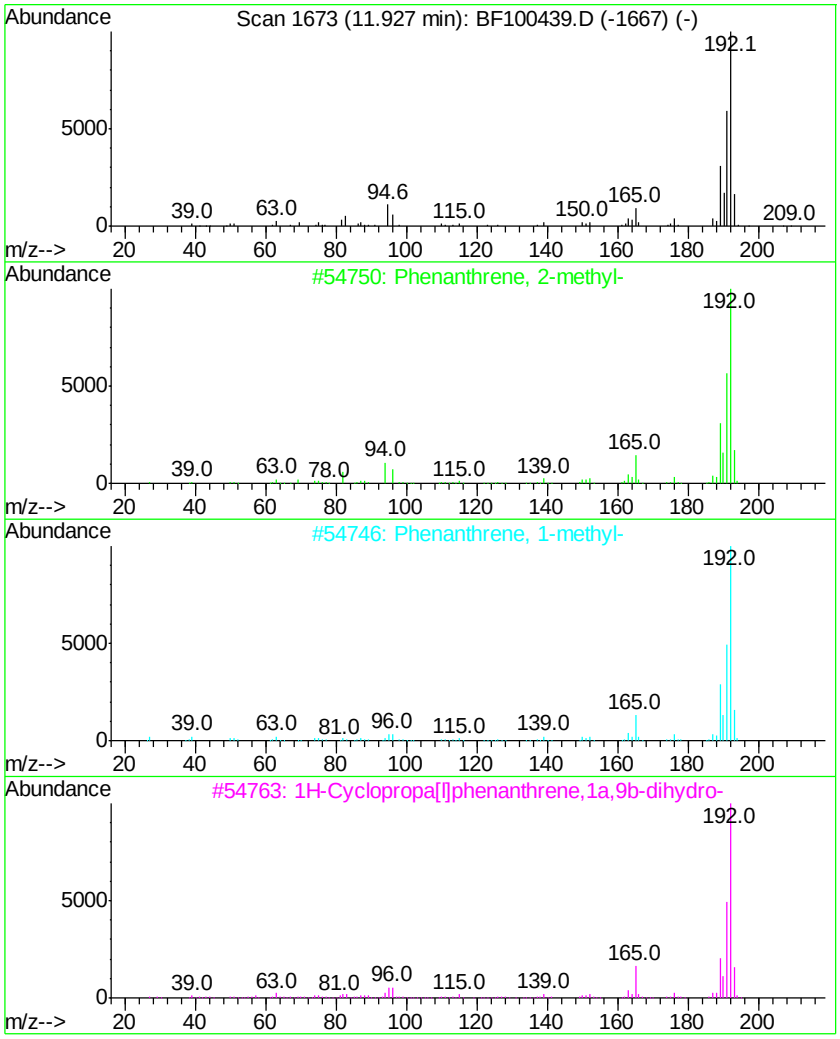
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

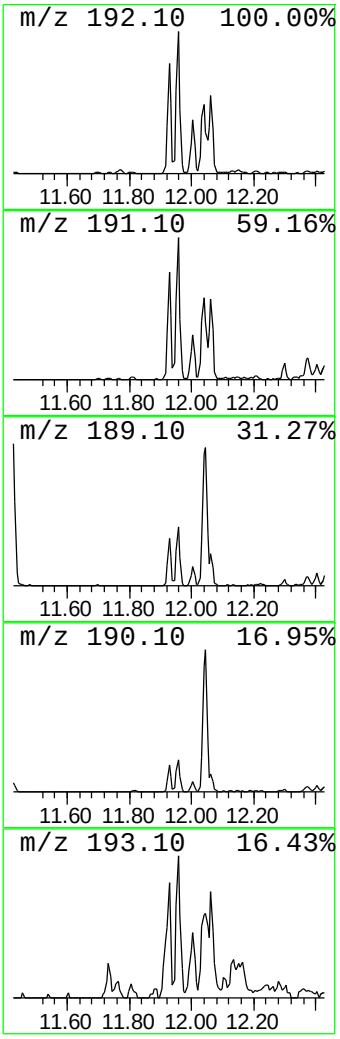
**********

Peak Number 4 Phenanthrene, 2-methyl- Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.93 | 4.08 ng | 152555 | Phenanthrene-d10 | 11.43 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 91 |
| 2 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 90 |
| 3 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 90 |
| 4 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 89 |
| 5 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 87 |



Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

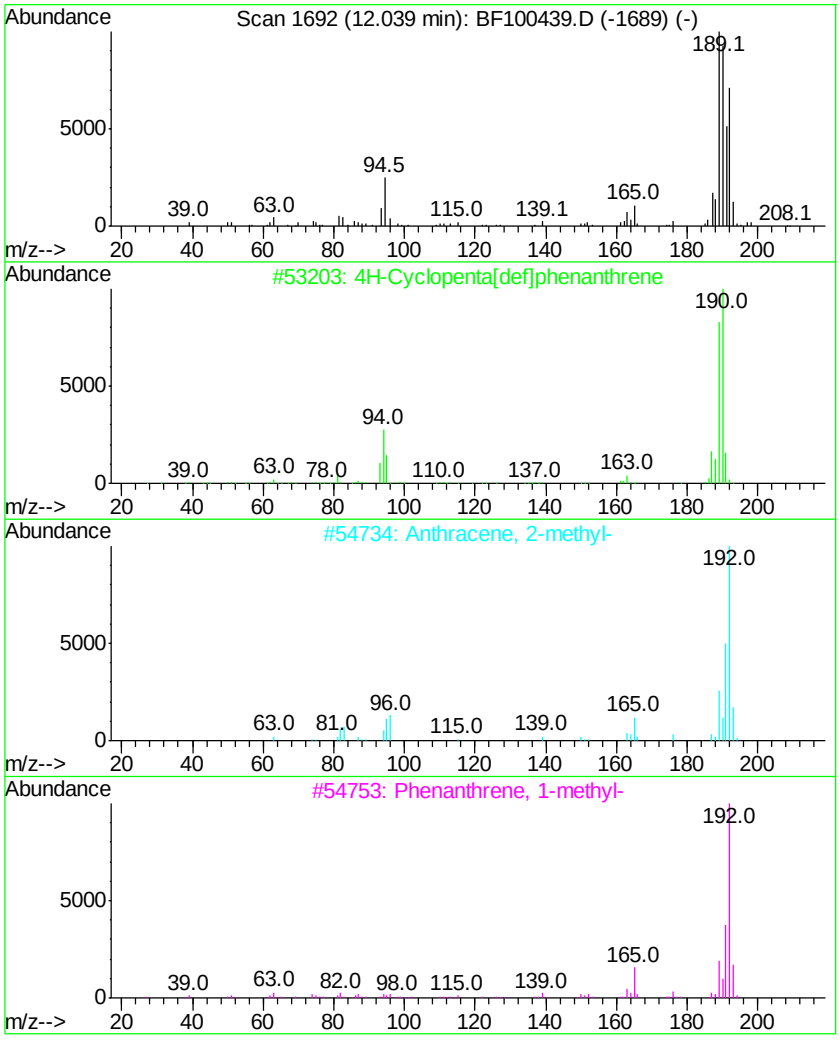
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

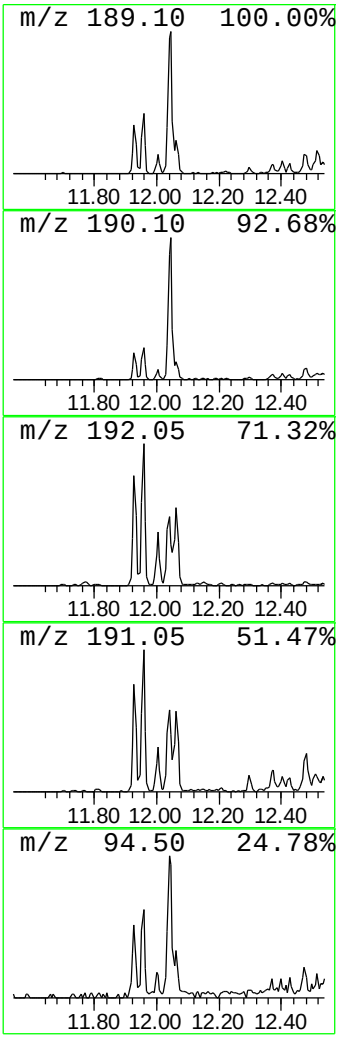
**********

Peak Number 6 4H-Cyclopenta[def]phenanthrene Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.04 | 7.47 ng | 279252 | Phenanthrene-d10 | 11.43 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10 | 000203-64-5 | 93 |
| 2 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 38 |
| 3 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 35 |
| 4 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 35 |
| 5 | Phenanthrene, 4-methyl- | 192 | C15H12 | 000832-64-4 | 30 |



# Library Search Compound Report

Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

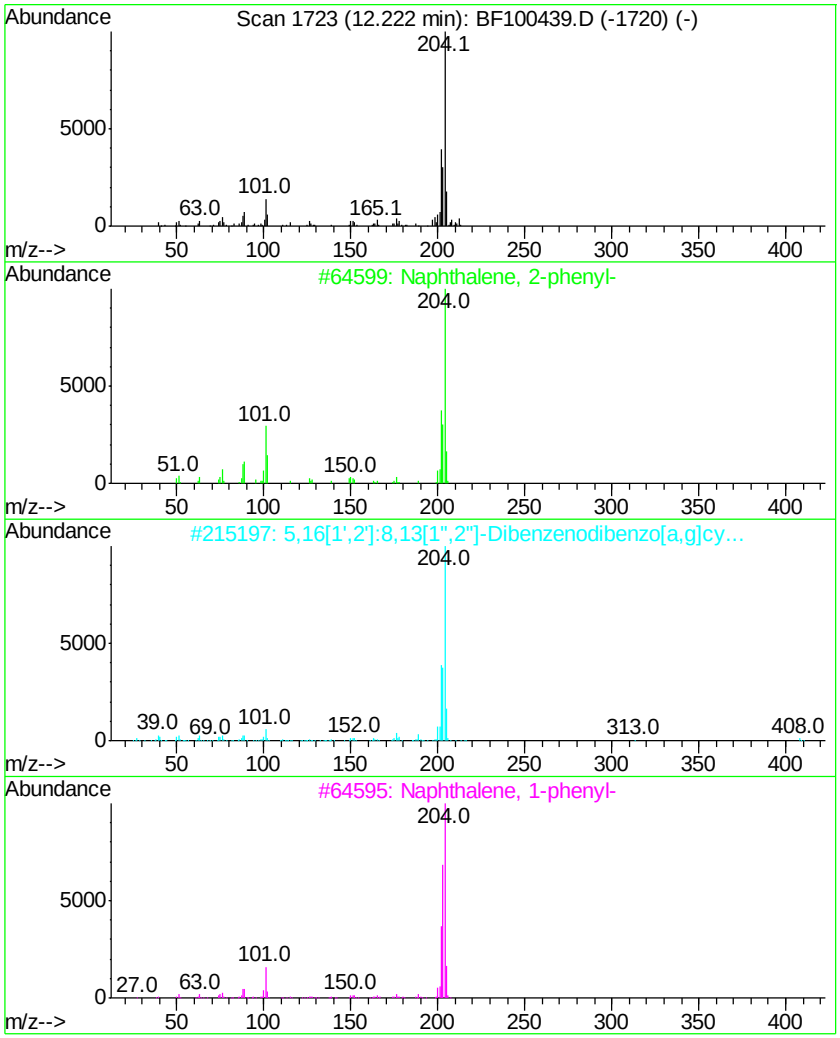
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

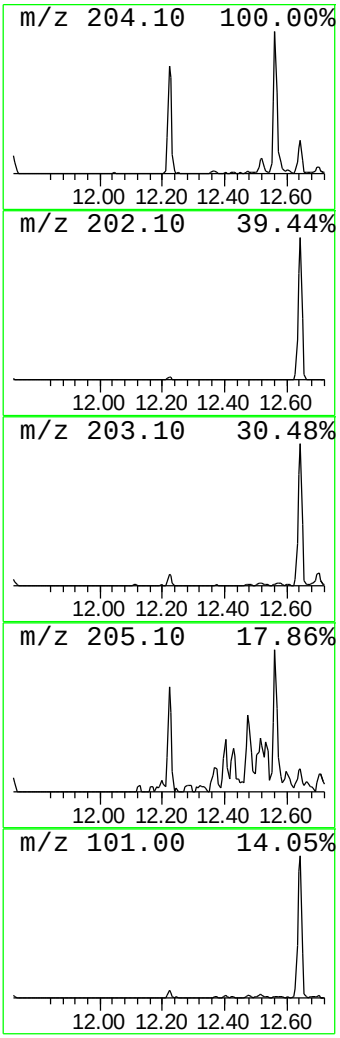
**********

Peak Number 7 Naphthalene, 2-phenyl- Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.22 | 3.11 ng | 116253 | Phenanthrene-d10 | 11.43 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 83 |
| 2 | 5,16[1',2']:8,13[1'',2'']-Dibenz... | 408 | C32H24 | 005672-97-9 | 83 |
| 3 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 70 |
| 4 | 9,10-Bis(bromomethyl)anthracene | 362 | C16H12Br2 | 034373-96-1 | 52 |
| 5 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 52 |



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Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

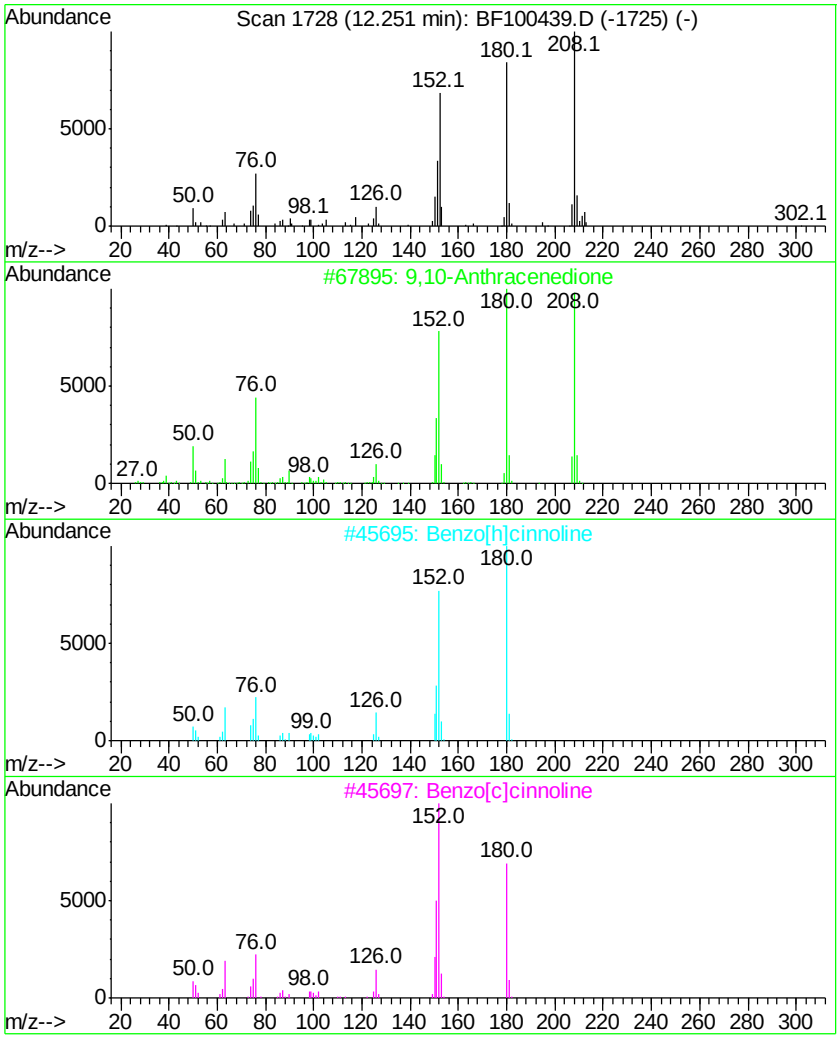
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

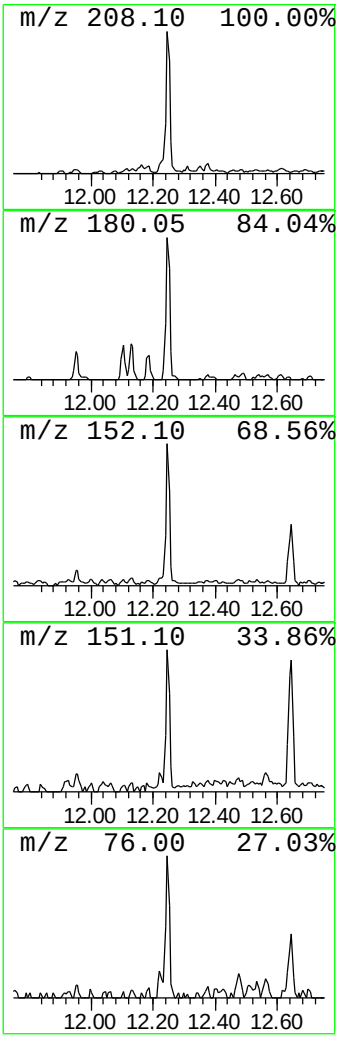
**********

Peak Number 8 9,10-Anthracenedione Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.25 | 3.41 ng | 127586 | Phenanthrene-d10 | 11.43 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 98 |
| 2 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 86 |
| 3 | Benzo[c]cinnoline | 180 | C12H8N2 | 000230-17-1 | 86 |
| 4 | 1H-Phenalen-1-one | 180 | C13H8O | 000548-39-0 | 78 |
| 5 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 78 |



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Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

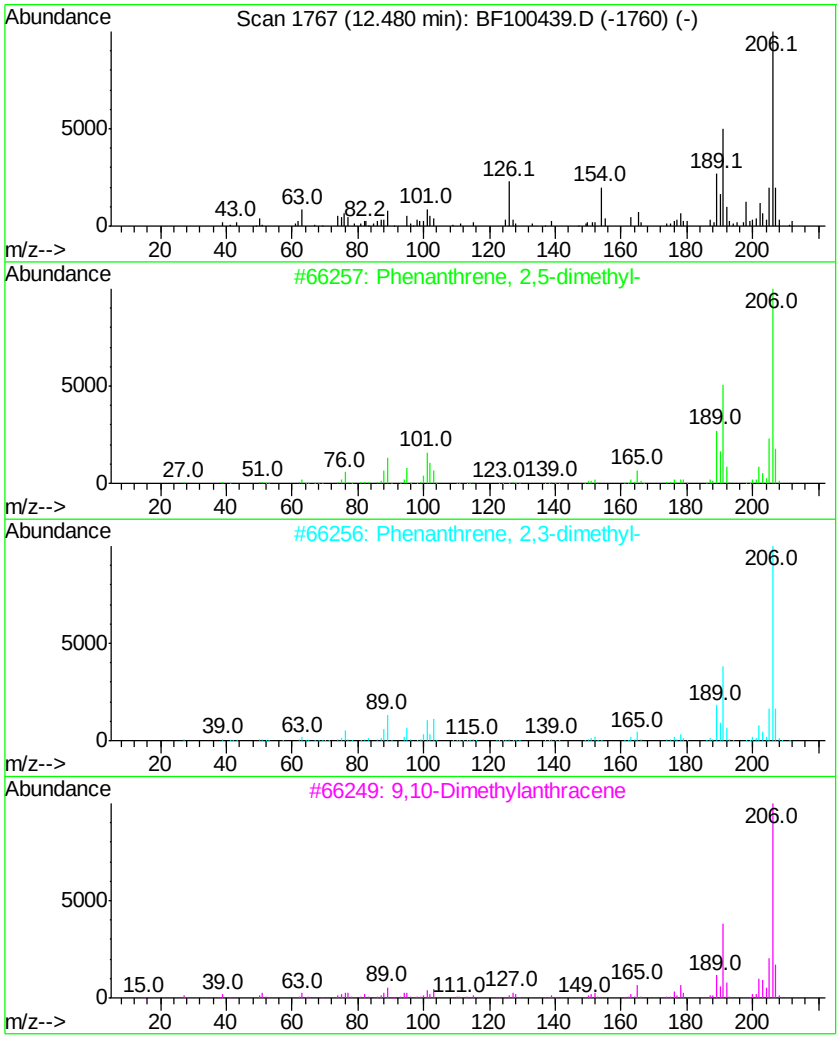
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

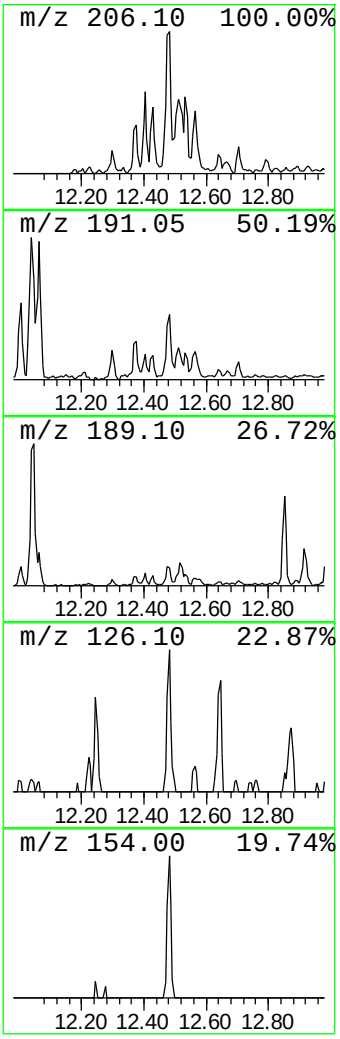
**********

Peak Number 9 Phenanthrene, 2,5-dimethyl- Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.48 | 3.52 ng | 131622 | Phenanthrene-d10 | 11.43 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 97 |
| 2 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 89 |
| 3 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 89 |
| 4 | Phenanthrene, 3,6-dimethyl- | 206 | C16H14 | 001576-67-6 | 83 |
| 5 | Phenanthrene, 1,7-dimethyl- | 206 | C16H14 | 000483-87-4 | 70 |



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Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

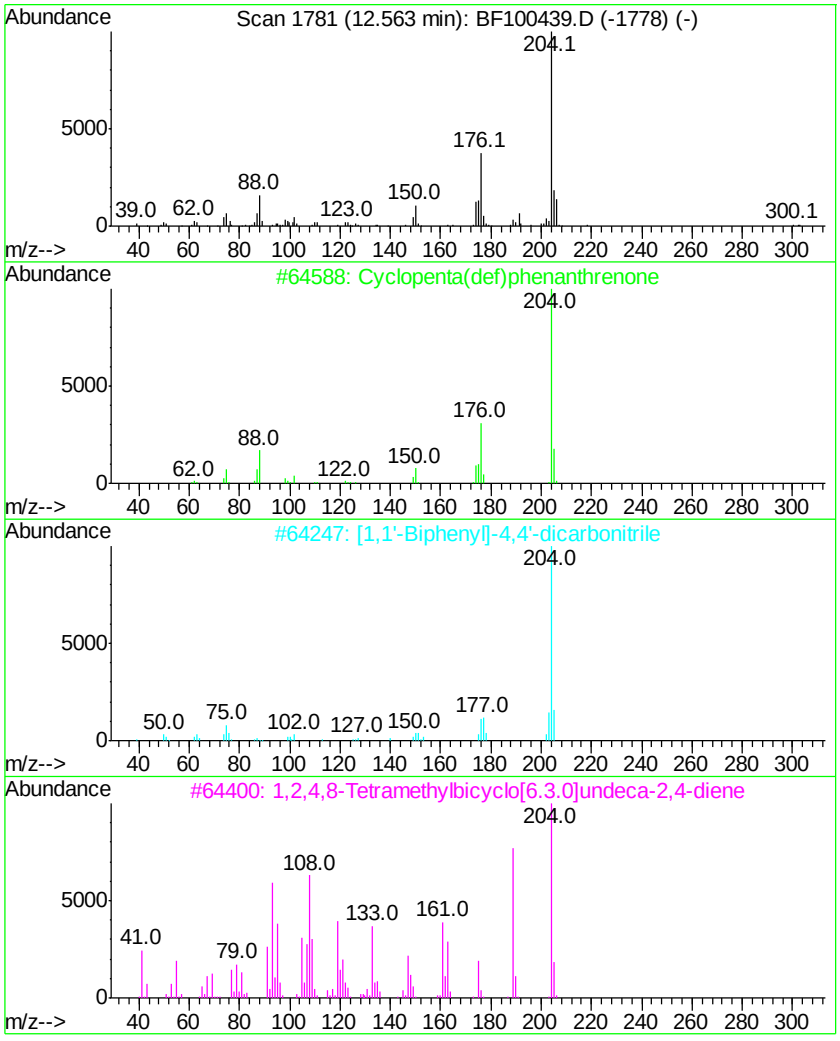
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

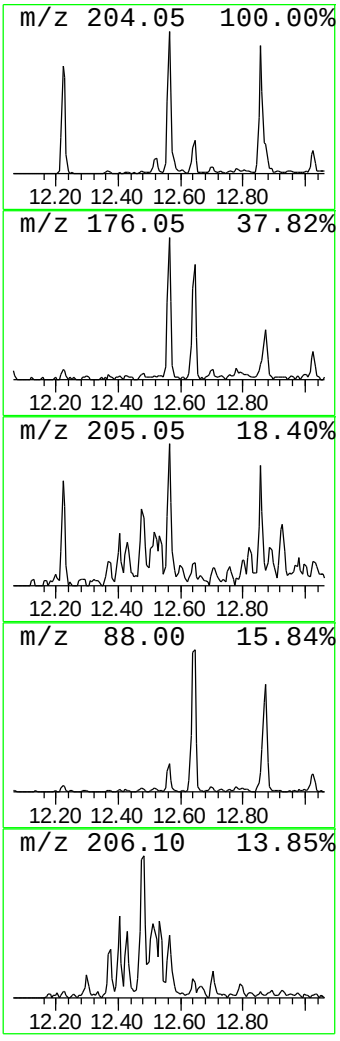
**********

Peak Number 10 Cyclopenta(def)phenanthrenone Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.56 | 4.57 ng | 170780 | Phenanthrene-d10 | 11.43 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 96 |
| 2 | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2 | 001591-30-6 | 72 |
| 3 | 1,2,4,8-Tetramethylbicyclo[6.3.0... | 204 | C15H24 | 137235-51-9 | 60 |
| 4 | 5-(4-Ethoxy-phenyl)-2H-pyrazol-3-ol | 204 | C11H12N2O2 | 1000278-26-8 | 53 |
| 5 | 9-Acridinecarbonitrile | 204 | C14H8N2 | 005326-19-2 | 50 |



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Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

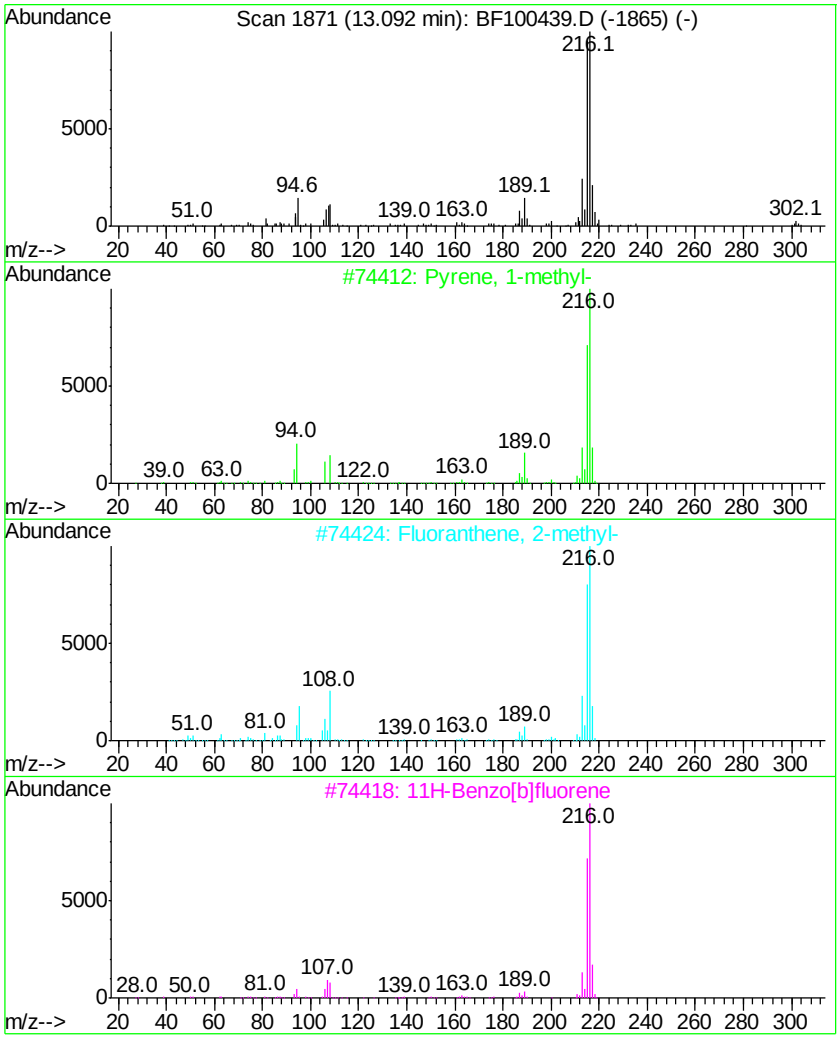
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

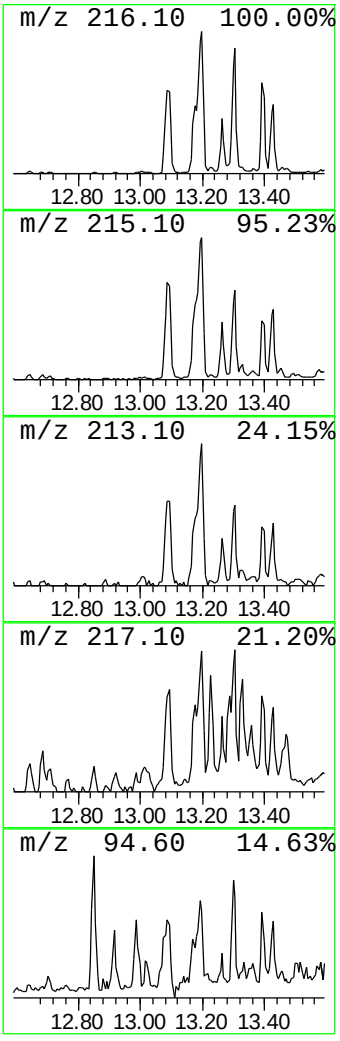
**********

Peak Number 11 Pyrene, 1-methyl- Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.09 | 2.68 ng | 269902 | Chrysene-d12 | 14.07 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 97 |
| 2 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 91 |
| 3 | 11H-Benzo[b]fluorene | 216 | C17H12 | 000243-17-4 | 90 |
| 4 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 87 |
| 5 | 7H-Benzo[c]fluorene | 216 | C17H12 | 000205-12-9 | 83 |



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Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

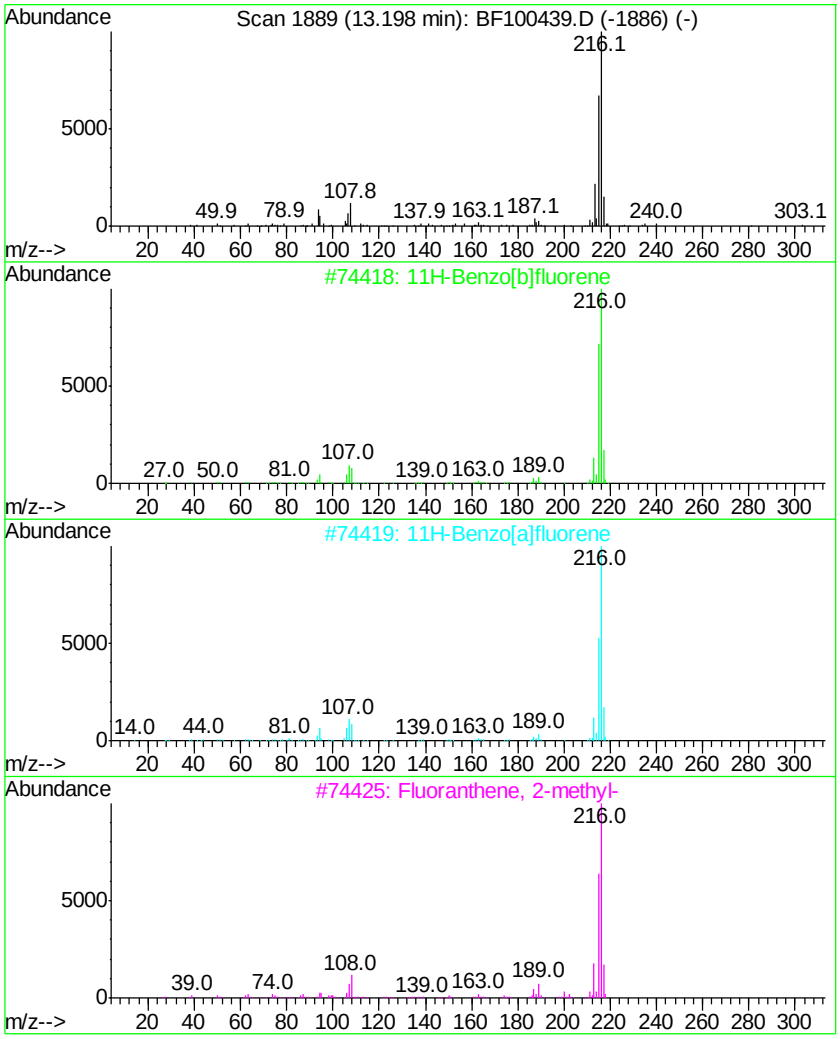
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

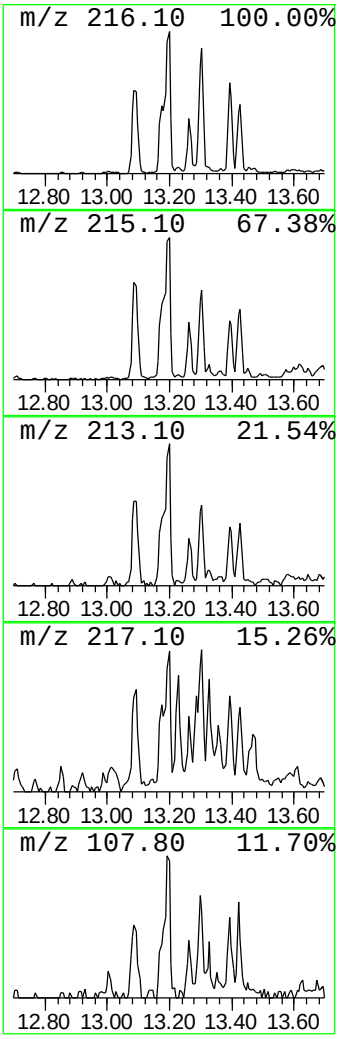
**********

Peak Number 12 11H-Benzo[b]fluorene Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.20 | 2.12 ng | 213501 | Chrysene-d12 | 14.07 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 11H-Benzo[b]fluorene | 216 | C17H12 | 000243-17-4 | 93 |
| 2 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 91 |
| 3 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 81 |
| 4 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 74 |
| 5 | Pyrene, 2-methyl- | 216 | C17H12 | 003442-78-2 | 72 |



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Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

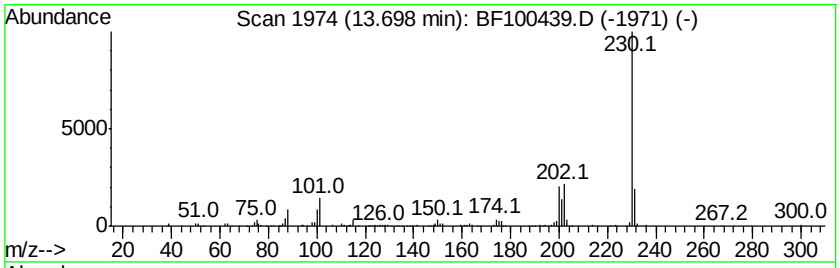
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

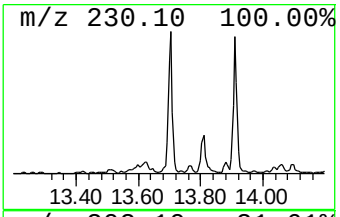
**********

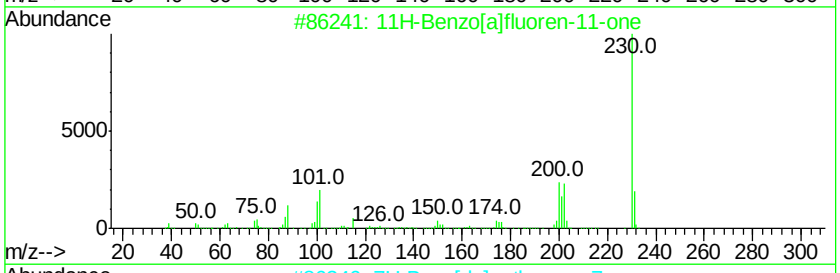
Peak Number 14 11H-Benzo[a]fluoren-11-one Concentration Rank 13

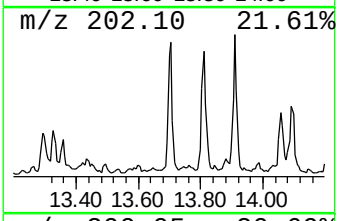
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.70 | 3.11 ng | 312982 | Chrysene-d12 | 14.07 |

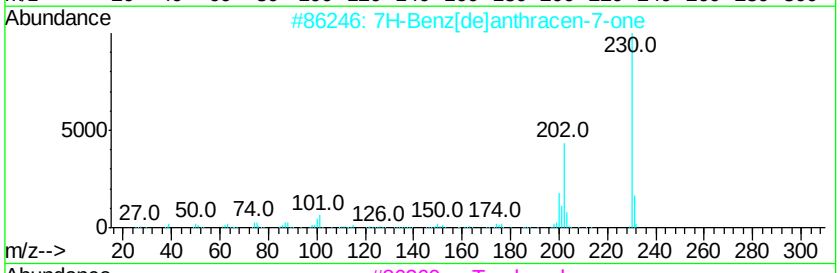
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 11H-Benzo[a]fluoren-11-one | 230 | C17H10O | 000479-79-8 | 97 |
| 2 | 7H-Benz[de]anthracen-7-one | 230 | C17H10O | 000082-05-3 | 93 |
| 3 | o-Terphenyl | 230 | C18H14 | 000084-15-1 | 80 |
| 4 | 4-Pyrenecarbaldehyde | 230 | C17H10O | 022245-51-8 | 72 |
| 5 | 1-Pyrenecarboxaldehyde | 230 | C17H10O | 003029-19-4 | 72 |

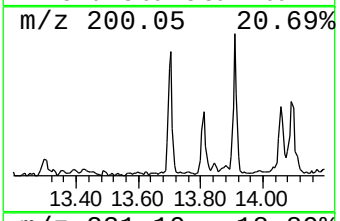


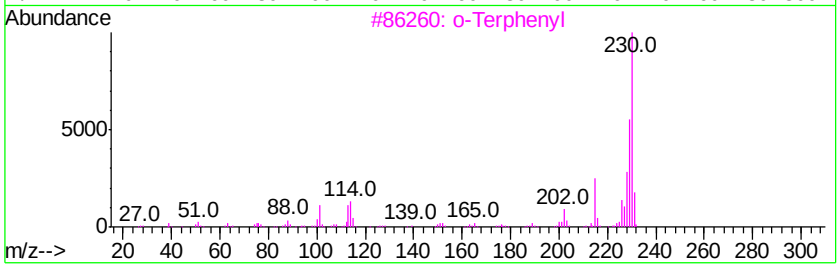



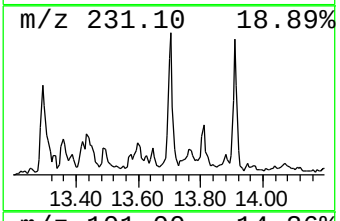



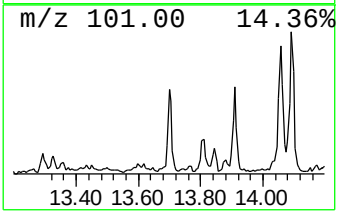



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Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

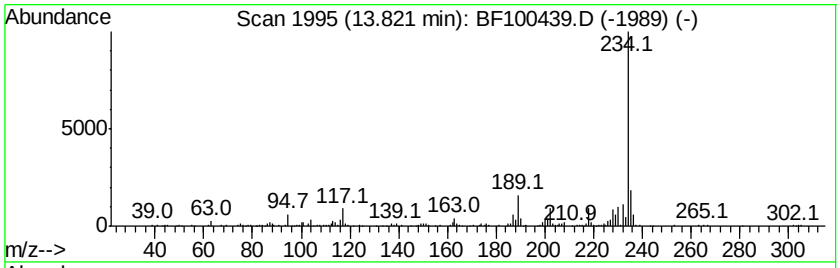
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

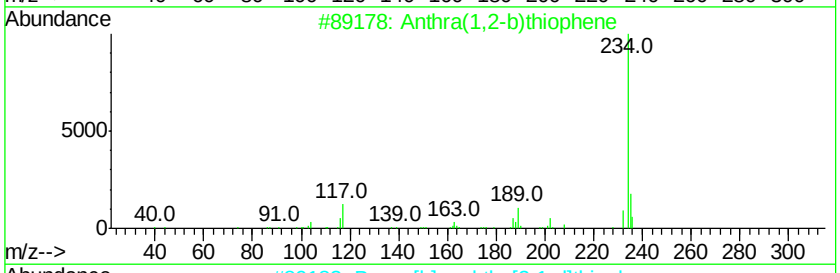
**********

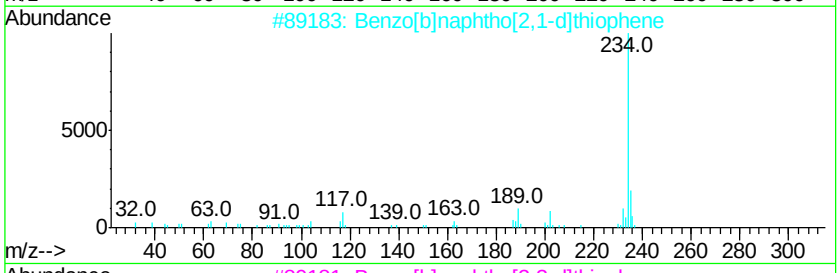
Peak Number 15 Anthra(1,2-b)thiophene Concentration Rank 14

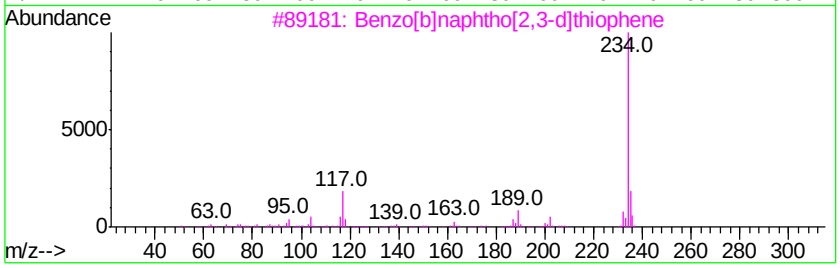
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.82 | 3.09 ng | 311533 | Chrysene-d12 | 14.07 |

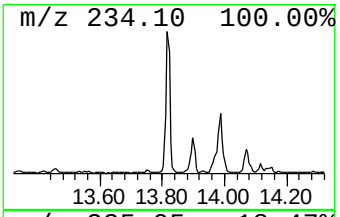
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthra(1,2-b)thiophene | 234 | C16H10S | 000227-86-1 | 96 |
| 2 | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 95 |
| 3 | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 86 |
| 4 | Benzo[b]naphtho[1,2-d]thiophene | 234 | C16H10S | 000205-43-6 | 83 |
| 5 | Anthra[1,9a,9-cd:5,10a,10-c'd']d... | 234 | C14H6N2O2 | 000201-91-2 | 38 |

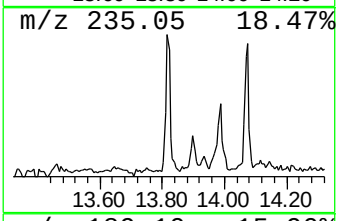


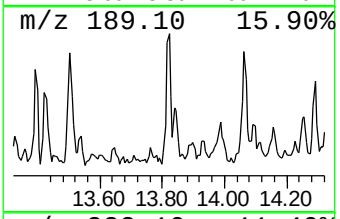



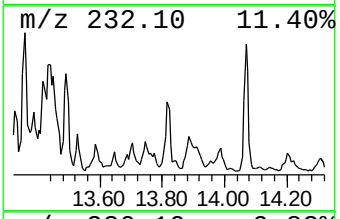



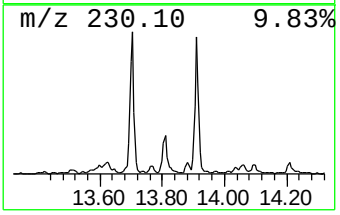



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Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

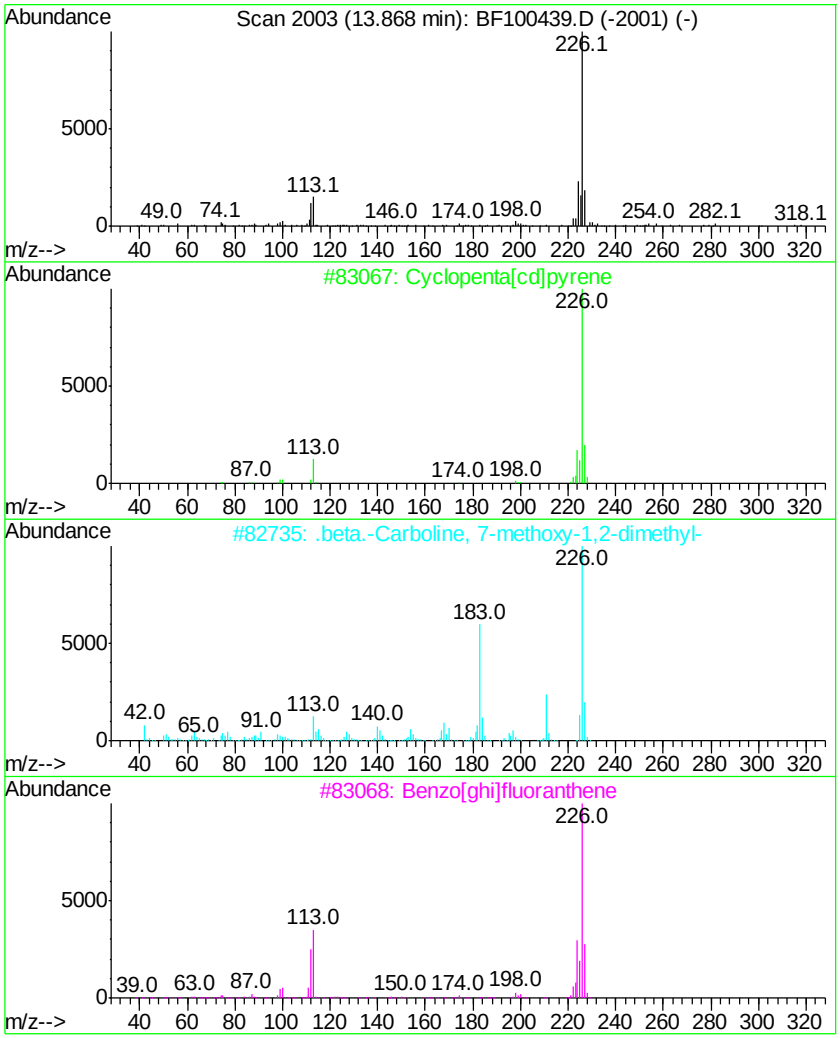
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

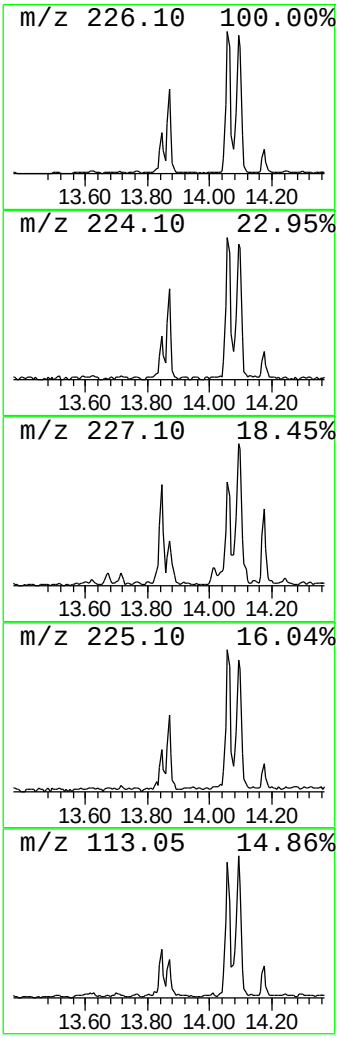
**********

Peak Number 16 Cyclopenta[cd]pyrene Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.87 | 2.32 ng | 233620 | Chrysene-d12 | 14.07 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta[cd]pyrene | 226 | C18H10 | 027208-37-3 | 93 |
| 2 | .beta.-Carboline, 7-methoxy-1,2-... | 226 | C14H14N2O | 006519-18-2 | 58 |
| 3 | Benzo[ghi]fluoranthene | 226 | C18H10 | 000203-12-3 | 43 |
| 4 | 2-Imidazolidinone, 1-(4-chloroph... | 226 | C10H11ClN2O2 | 052420-34-5 | 38 |
| 5 | 4-Naphthalen-2-yl-thiazol-2-ylamine | 226 | C13H10N2S | 1000300-53-4 | 36 |



Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

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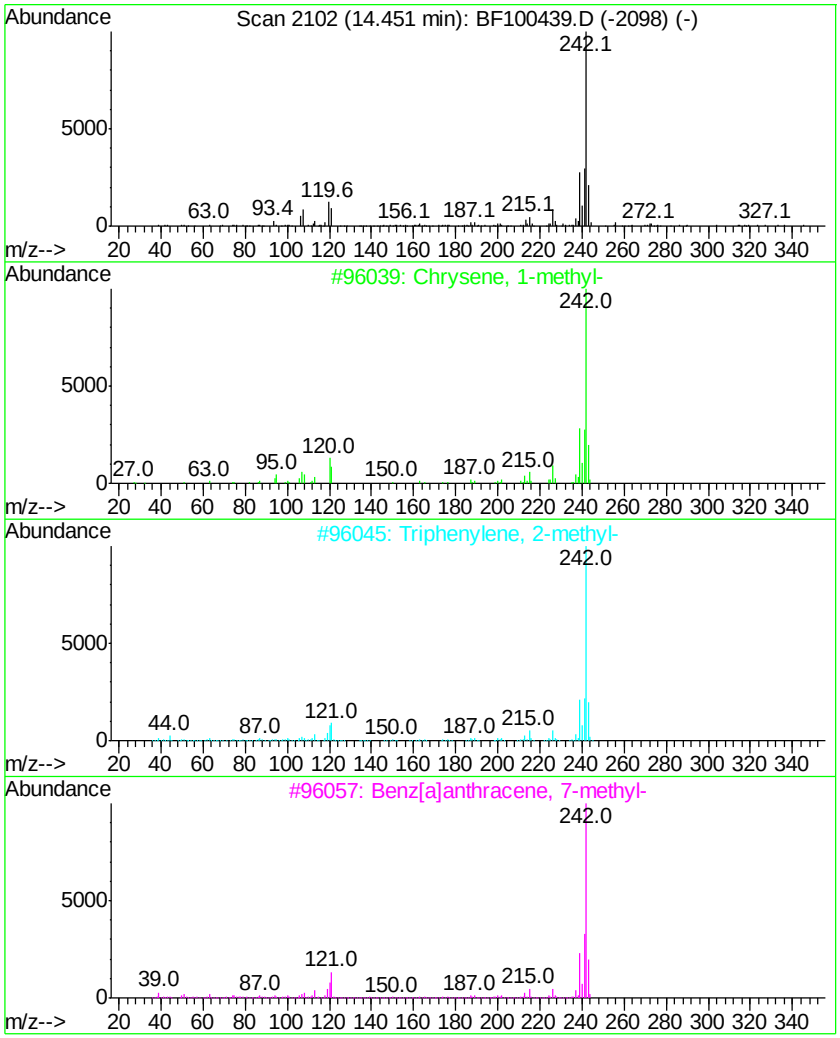
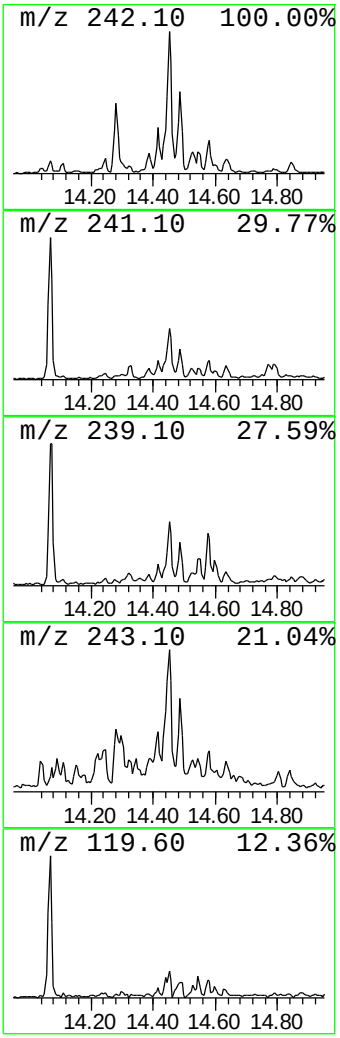
Peak Number 18 Chrysene, 1-methyl- Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.45 | 2.12 ng | 213889 | Chrysene-d12 | 14.07 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Chrysene, 1-methyl- | 242 | C19H14 | 003351-28-8 | 97 |
| 2 | Triphenylene, 2-methyl- | 242 | C19H14 | 001705-84-6 | 96 |
| 3 | Benz[a]anthracene, 7-methyl- | 242 | C19H14 | 002541-69-7 | 94 |
| 4 | Chrysene, 3-methyl- | 242 | C19H14 | 003351-31-3 | 94 |
| 5 | Benz[a]anthracene, 8-methyl- | 242 | C19H14 | 002381-31-9 | 94 |



Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

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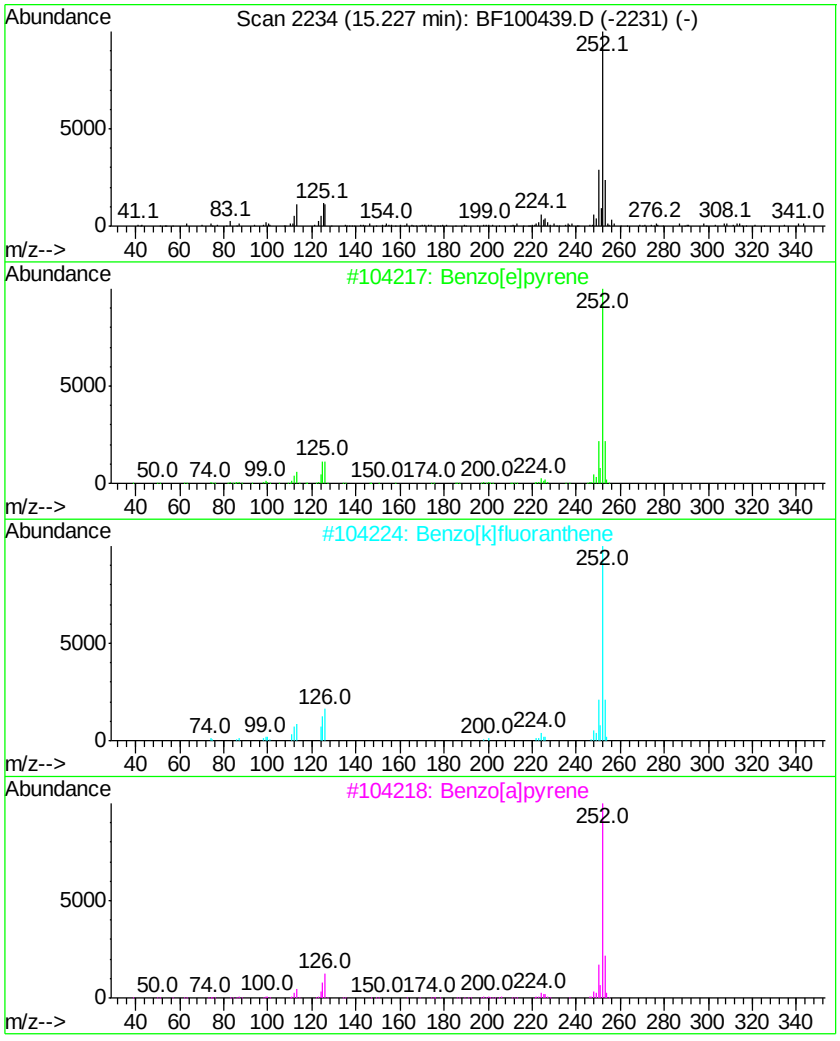
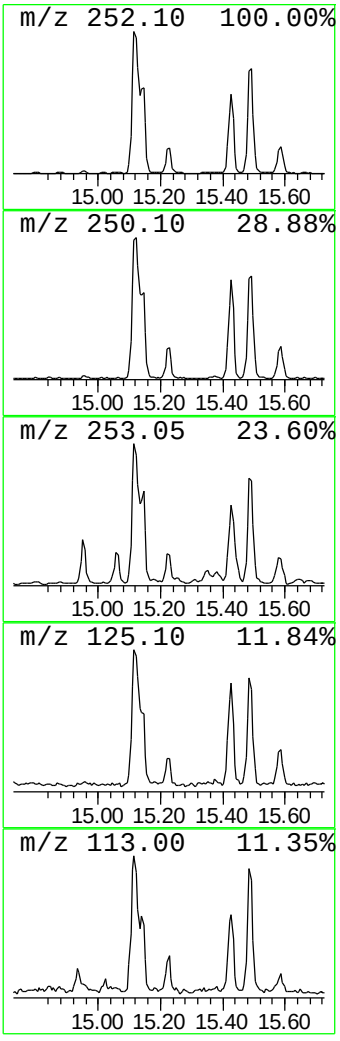
Peak Number 19 Benzo[e]pyrene Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.23 | 3.21 ng | 96134 | Perylene-d12 | 15.56 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 93 |
| 2 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 91 |
| 3 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 91 |
| 4 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 90 |
| 5 | Perylene | 252 | C20H12 | 000198-55-0 | 74 |



Library Search Compound Report

Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

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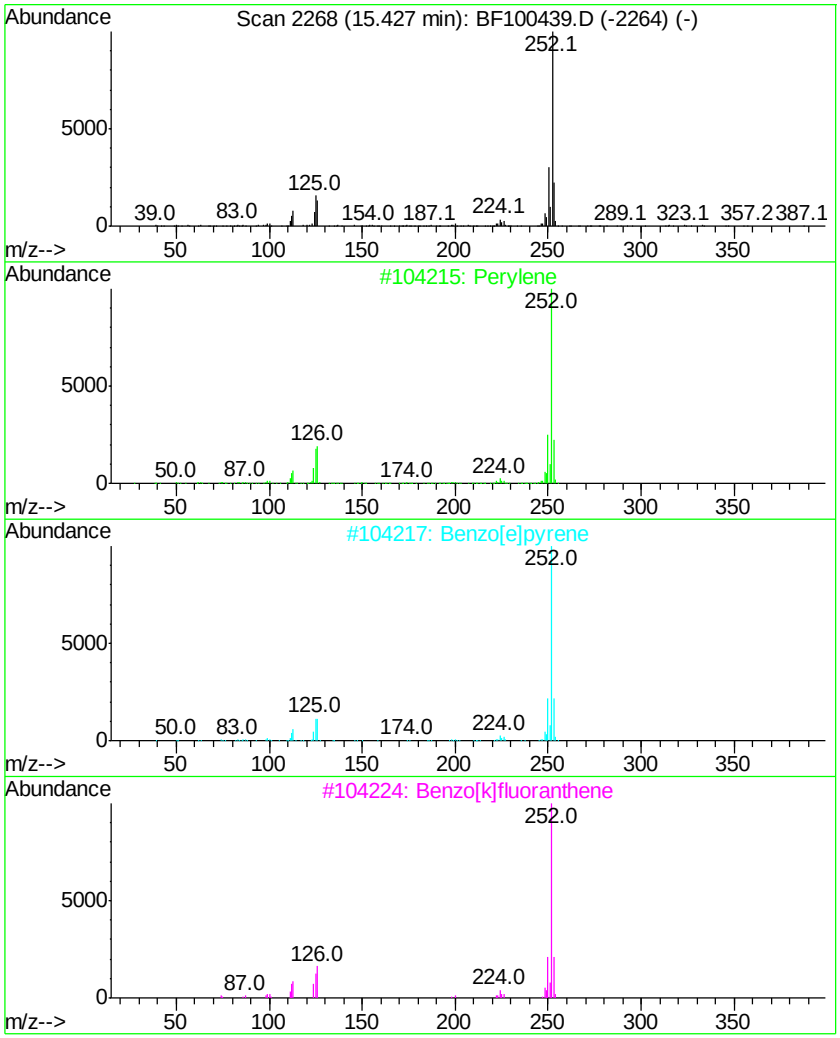
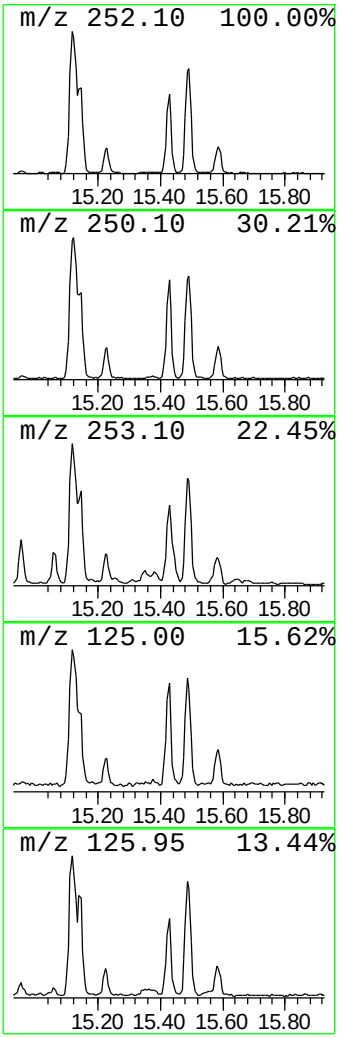
Peak Number 20 Perylene Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.43 | 12.52 ng | 375279 | Perylene-d12 | 15.56 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Perylene | 252 | C20H12 | 000198-55-0 | 99 |
| 2 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 98 |
| 3 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 97 |
| 4 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 97 |
| 5 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 94 |



Tentatively Identified Compound (LSC) summary

Data Path : \\74.0.250.170\SVOASRV\HPCHEM1\BNA_F\DATA\BF111117\
Data File : BF100439.D
Acq On : 11 Nov 2017 14:35
Operator : SJ/JU
Sample : I6396-05 20X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** LS-SOIL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF110817.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| unknown6.66 | 6.66 | 5.2 | ng | 192080 | 1 | 6.90 | 743729 | 20.0 |
| 9H-Fluoren-9-one | 11.23 | 2.2 | ng | 82774 | 4 | 11.43 | 747717 | 20.0 |
| Phenanthrene, 2-m... | 11.93 | 4.1 | ng | 152555 | 4 | 11.43 | 747717 | 20.0 |
| 4H-Cyclopenta[def... | 12.04 | 7.5 | ng | 279252 | 4 | 11.43 | 747717 | 20.0 |
| Naphthalene, 2-ph... | 12.22 | 3.1 | ng | 116253 | 4 | 11.43 | 747717 | 20.0 |
| 9,10-Anthracenedione | 12.25 | 3.4 | ng | 127586 | 4 | 11.43 | 747717 | 20.0 |
| Phenanthrene, 2,5... | 12.48 | 3.5 | ng | 131622 | 4 | 11.43 | 747717 | 20.0 |
| Cyclopenta(def)ph... | 12.56 | 4.6 | ng | 170780 | 4 | 11.43 | 747717 | 20.0 |
| Pyrene, 1-methyl- | 13.09 | 2.7 | ng | 269902 | 5 | 14.07 | 2013740 | 20.0 |
| 11H-Benzo[b]fluorene | 13.20 | 2.1 | ng | 213501 | 5 | 14.07 | 2013740 | 20.0 |
| 11H-Benzo[a]fluor... | 13.70 | 3.1 | ng | 312982 | 5 | 14.07 | 2013740 | 20.0 |
| Anthra(1,2-b)thio... | 13.82 | 3.1 | ng | 311533 | 5 | 14.07 | 2013740 | 20.0 |
| Cyclopenta[cd]pyrene | 13.87 | 2.3 | ng | 233620 | 5 | 14.07 | 2013740 | 20.0 |
| Chrysene, 1-methyl- | 14.45 | 2.1 | ng | 213889 | 5 | 14.07 | 2013740 | 20.0 |
| Benzo[e]pyrene | 15.23 | 3.2 | ng | 96134 | 6 | 15.56 | 599649 | 20.0 |
| Perylene | 15.43 | 12.5 | ng | 375279 | 6 | 15.56 | 599649 | 20.0 |