LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

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-BF081517.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 | 4.963 | 486 | 489 | 495 | rBV | 65324 | 62775 | 3.66% | 0.243% |
| 2 | 5.375 | 555 | 559 | 563 | rVB | 790789 | 695243 | 40.58% | 2.690% |
| 3 | 6.398 | 729 | 733 | 740 | rVB | 945749 | 745693 | 43.53% | 2.885% |
| 4 | 6.540 | 754 | 757 | 761 | rVB | 869696 | 733872 | 42.84% | 2.840% |
| 5 | 6.781 | 794 | 798 | 801 | rBV | 1260026 | 1032040 | 60.24% | 3.994% |
| 6 | 6.934 | 820 | 824 | 827 | rBV | 701545 | 551327 | 32.18% | 2.133% |
| 7 | 7.334 | 888 | 892 | 896 | rBV | 477621 | 432139 | 25.22% | 1.672% |
| 8 | 8.063 | 1011 | 1016 | 1019 | rBV | 1646847 | 1343995 | 78.45% | 5.201% |
| 9 | 9.139 | 1195 | 1199 | 1202 | rBV | 864164 | 713929 | 41.67% | 2.763% |
| 10 | 9.475 | 1252 | 1256 | 1258 | rBV | 43931 | 37337 | 2.18% | 0.144% |
| 11 | 9.534 | 1263 | 1266 | 1271 | rVB | 113153 | 90920 | 5.31% | 0.352% |
| 12 | 9.816 | 1308 | 1314 | 1317 | rBV | 1494024 | 1287189 | 75.13% | 4.981% |
| 13 | 9.845 | 1317 | 1319 | 1323 | rVB | 137214 | 110324 | 6.44% | 0.427% |
| 14 | 10.016 | 1345 | 1348 | 1352 | rVB | 66686 | 57075 | 3.33% | 0.221% |
| 15 | 10.222 | 1379 | 1383 | 1387 | rBV5 | 22617 | 33046 | 1.93% | 0.128% |
| 16 | 10.363 | 1404 | 1407 | 1413 | rVB2 | 80532 | 79182 | 4.62% | 0.306% |
| 17 | 10.428 | 1413 | 1418 | 1420 | rBV | 35619 | 46058 | 2.69% | 0.178% |
| 18 | 10.522 | 1431 | 1434 | 1438 | rVB2 | 35852 | 40812 | 2.38% | 0.158% |
| 19 | 10.598 | 1443 | 1447 | 1452 | rVV | 437389 | 366102 | 21.37% | 1.417% |
| 20 | 10.728 | 1466 | 1469 | 1474 | rBV | 70811 | 74613 | 4.36% | 0.289% |
| 21 | 10.910 | 1494 | 1500 | 1503 | rBV4 | 34682 | 60582 | 3.54% | 0.234% |
| 22 | 11.039 | 1517 | 1522 | 1523 | rBV2 | 47496 | 54216 | 3.16% | 0.210% |
| 23 | 11.057 | 1523 | 1525 | 1529 | rVV3 | 47369 | 55470 | 3.24% | 0.215% |
| 24 | 11.104 | 1529 | 1533 | 1537 | rVB | 52643 | 62529 | 3.65% | 0.242% |
| 25 | 11.151 | 1537 | 1541 | 1543 | rBV | 34226 | 46336 | 2.70% | 0.179% |
| 26 | 11.175 | 1543 | 1545 | 1547 | rVV | 42405 | 42938 | 2.51% | 0.166% |
| 27 | 11.192 | 1547 | 1548 | 1554 | rVB4 | 51152 | 57056 | 3.33% | 0.221% |
| 28 | 11.298 | 1562 | 1566 | 1568 | rBV | 1248676 | 1060087 | 61.88% | 4.102% |
| 29 | 11.322 | 1568 | 1570 | 1574 | rVV | 1124260 | 904198 | 52.78% | 3.499% |
| 30 | 11.375 | 1574 | 1579 | 1582 | rVB | 253971 | 238975 | 13.95% | 0.925% |
| 31 | 11.404 | 1582 | 1584 | 1589 | rBV3 | 32101 | 37327 | 2.18% | 0.144% |
| 32 | 11.528 | 1600 | 1605 | 1607 | rBV2 | 60643 | 57991 | 3.38% | 0.224% |
| 33 | 11.598 | 1615 | 1617 | 1620 | rBV2 | 70289 | 57492 | 3.36% | 0.222% |
| 34 | 11.628 | 1620 | 1622 | 1626 | rVB2 | 44900 | 34199 | 2.00% | 0.132% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

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-BF081517.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 11.798 | 1646 | 1651 | 1654 | rVV | 213300 | 203157 | 11.86% | 0.786% |
| 36 | 11.828 | 1654 | 1656 | 1660 | rVB | 277443 | 213041 | 12.44% | 0.824% |
| 37 | 11.875 | 1660 | 1664 | 1666 | rBV | 115188 | 108158 | 6.31% | 0.419% |
| 38 | 11.910 | 1666 | 1670 | 1672 | rVV | 311450 | 338744 | 19.77% | 1.311% |
| 39 | 11.933 | 1672 | 1674 | 1677 | rVV | 160181 | 125692 | 7.34% | 0.486% |
| 40 | 12.010 | 1684 | 1687 | 1689 | rVV2 | 33290 | 34880 | 2.04% | 0.135% |
| 41 | 12.098 | 1693 | 1702 | 1703 | rVV | 133726 | 149032 | 8.70% | 0.577% |
| 42 | 12.116 | 1703 | 1705 | 1709 | rVB2 | 94985 | 80008 | 4.67% | 0.310% |
| 43 | 12.245 | 1724 | 1727 | 1730 | rVB2 | 74921 | 57964 | 3.38% | 0.224% |
| 44 | 12.275 | 1730 | 1732 | 1734 | rBV | 64069 | 51665 | 3.02% | 0.200% |
| 45 | 12.298 | 1734 | 1736 | 1739 | rVB | 70830 | 56446 | 3.29% | 0.218% |
| 46 | 12.351 | 1739 | 1745 | 1748 | rBV | 162860 | 195312 | 11.40% | 0.756% |
| 47 | 12.386 | 1748 | 1751 | 1753 | rVV | 82500 | 95133 | 5.55% | 0.368% |
| 48 | 12.433 | 1756 | 1759 | 1764 | rVB3 | 96169 | 124342 | 7.26% | 0.481% |
| 49 | 12.510 | 1768 | 1772 | 1775 | rBV | 1550675 | 1297467 | 75.73% | 5.021% |
| 50 | 12.639 | 1790 | 1794 | 1795 | rBV3 | 42812 | 52413 | 3.06% | 0.203% |
| 51 | 12.663 | 1795 | 1798 | 1802 | rVV | 58018 | 89867 | 5.25% | 0.348% |
| 52 | 12.739 | 1805 | 1811 | 1814 | rVV | 1526872 | 1572497 | 91.79% | 6.085% |
| 53 | 12.786 | 1817 | 1819 | 1824 | rVB2 | 62741 | 93643 | 5.47% | 0.362% |
| 54 | 12.857 | 1824 | 1831 | 1832 | rBV2 | 78289 | 80935 | 4.72% | 0.313% |
| 55 | 12.880 | 1832 | 1835 | 1842 | rVB | 509755 | 535283 | 31.24% | 2.071% |
| 56 | 12.957 | 1842 | 1848 | 1851 | rBV3 | 133177 | 204391 | 11.93% | 0.791% |
| 57 | 13.016 | 1855 | 1858 | 1860 | rBV4 | 35522 | 45586 | 2.66% | 0.176% |
| 58 | 13.039 | 1860 | 1862 | 1863 | rVV2 | 97040 | 87273 | 5.09% | 0.338% |
| 59 | 13.063 | 1864 | 1866 | 1869 | rVB | 183964 | 161264 | 9.41% | 0.624% |
| 60 | 13.127 | 1874 | 1877 | 1880 | rBV | 103920 | 98191 | 5.73% | 0.380% |
| 61 | 13.169 | 1880 | 1884 | 1887 | rBV | 209318 | 206911 | 12.08% | 0.801% |
| 62 | 13.198 | 1887 | 1889 | 1892 | rVV4 | 37635 | 33810 | 1.97% | 0.131% |
| 63 | 13.257 | 1896 | 1899 | 1902 | rVB | 122863 | 111890 | 6.53% | 0.433% |
| 64 | 13.292 | 1902 | 1905 | 1908 | rBV | 135619 | 116192 | 6.78% | 0.450% |
| 65 | 13.369 | 1915 | 1918 | 1919 | rBV2 | 29644 | 34688 | 2.02% | 0.134% |
| 66 | 13.469 | 1933 | 1935 | 1937 | rVV2 | 52355 | 51476 | 3.00% | 0.199% |
| 67 | 13.569 | 1947 | 1952 | 1958 | rVV | 121398 | 171746 | 10.02% | 0.665% |
| 68 | 13.633 | 1961 | 1963 | 1966 | rVB | 34560 | 31672 | 1.85% | 0.123% |
| 69 | 13.680 | 1966 | 1971 | 1974 | rBV2 | 116887 | 196268 | 11.46% | 0.759% |
| 70 | 13.710 | 1974 | 1976 | 1978 | rVV | 144130 | 126063 | 7.36% | 0.488% |
| 71 | 13.733 | 1978 | 1980 | 1984 | rVV2 | 108860 | 141128 | 8.24% | 0.546% |

LSC Area Percent Report

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Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

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-BF081517.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 13.774 | 1984 | 1987 | 1995 | rVB2 | 112566 | 160501 | 9.37% | 0.621% |
| 73 | 13.933 | 2006 | 2014 | 2016 | rBV2 | 1250116 | 1713192 | 100.00% | 6.629% |
| 74 | 13.957 | 2016 | 2018 | 2024 | rVB | 697723 | 655584 | 38.27% | 2.537% |
| 75 | 14.039 | 2029 | 2032 | 2034 | rVB | 87572 | 74562 | 4.35% | 0.289% |
| 76 | 14.116 | 2042 | 2045 | 2048 | rVB3 | 50233 | 55877 | 3.26% | 0.216% |
| 77 | 14.157 | 2048 | 2052 | 2055 | rVV2 | 41762 | 68537 | 4.00% | 0.265% |
| 78 | 14.186 | 2055 | 2057 | 2060 | rVB3 | 45367 | 34571 | 2.02% | 0.134% |
| 79 | 14.251 | 2065 | 2068 | 2071 | rBV2 | 38352 | 41967 | 2.45% | 0.162% |
| 80 | 14.280 | 2071 | 2073 | 2075 | rBV | 56814 | 50255 | 2.93% | 0.194% |
| 81 | 14.316 | 2075 | 2079 | 2082 | rVV | 170760 | 190275 | 11.11% | 0.736% |
| 82 | 14.351 | 2082 | 2085 | 2089 | rVV | 105242 | 95043 | 5.55% | 0.368% |
| 83 | 14.386 | 2089 | 2091 | 2093 | rVV2 | 38555 | 44660 | 2.61% | 0.173% |
| 84 | 14.410 | 2093 | 2095 | 2098 | rVV3 | 93886 | 102351 | 5.97% | 0.396% |
| 85 | 14.439 | 2098 | 2100 | 2102 | rVV2 | 78764 | 79481 | 4.64% | 0.308% |
| 86 | 14.463 | 2102 | 2104 | 2108 | rVB3 | 61729 | 63527 | 3.71% | 0.246% |
| 87 | 14.516 | 2108 | 2113 | 2118 | rVB3 | 56522 | 88821 | 5.18% | 0.344% |
| 88 | 14.616 | 2127 | 2130 | 2133 | rBV2 | 46006 | 59798 | 3.49% | 0.231% |
| 89 | 14.698 | 2141 | 2144 | 2146 | rBV | 40338 | 40218 | 2.35% | 0.156% |
| 90 | 14.780 | 2155 | 2158 | 2160 | rBV2 | 41106 | 50919 | 2.97% | 0.197% |
| 91 | 14.863 | 2169 | 2172 | 2175 | rBV4 | 47123 | 48779 | 2.85% | 0.189% |
| 92 | 14.957 | 2183 | 2188 | 2190 | rBV | 530524 | 770966 | 45.00% | 2.983% |
| 93 | 15.057 | 2202 | 2205 | 2208 | rVB | 123846 | 132211 | 7.72% | 0.512% |
| 94 | 15.245 | 2232 | 2237 | 2242 | rVB | 336969 | 388933 | 22.70% | 1.505% |
| 95 | 15.304 | 2243 | 2247 | 2253 | rVV | 493149 | 557467 | 32.54% | 2.157% |
| 96 | 15.368 | 2253 | 2258 | 2261 | rVV | 584355 | 781246 | 45.60% | 3.023% |
| 97 | 15.392 | 2261 | 2262 | 2269 | rVB2 | 149997 | 179067 | 10.45% | 0.693% |
| 98 | 16.757 | 2488 | 2494 | 2502 | rVB2 | 154400 | 314190 | 18.34% | 1.216% |
| 99 | 17.174 | 2558 | 2565 | 2576 | rBV | 125919 | 275394 | 16.07% | 1.066% |
| 100 | 17.392 | 2598 | 2602 | 2606 | rBV2 | 28653 | 47178 | 2.75% | 0.183% |

Sum of corrected areas: 25842865

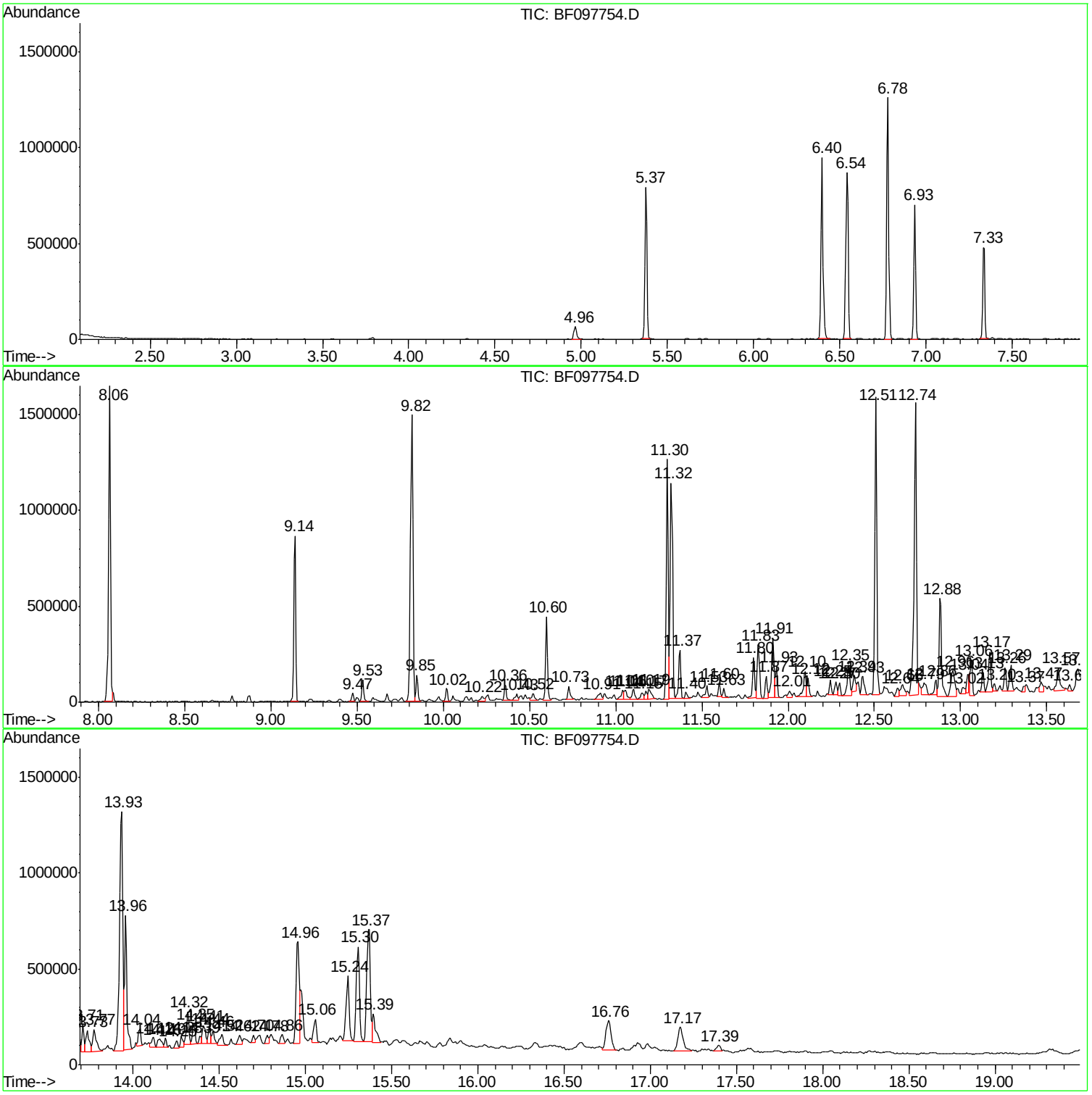
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

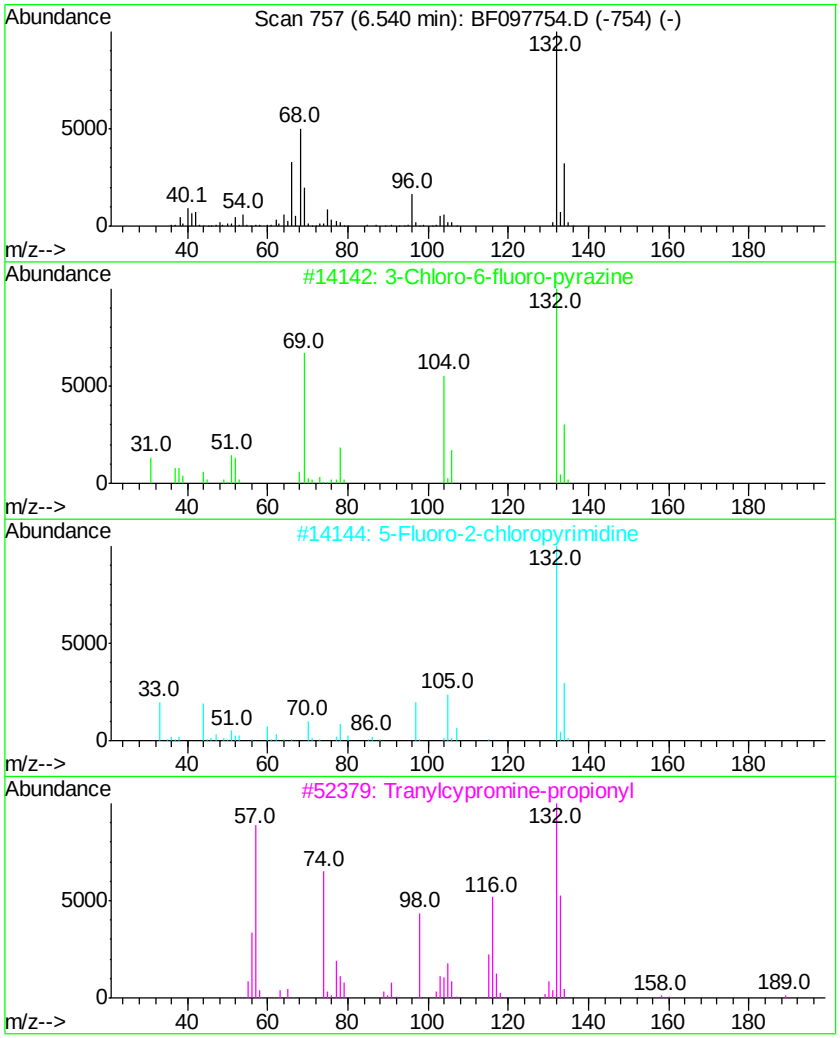
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

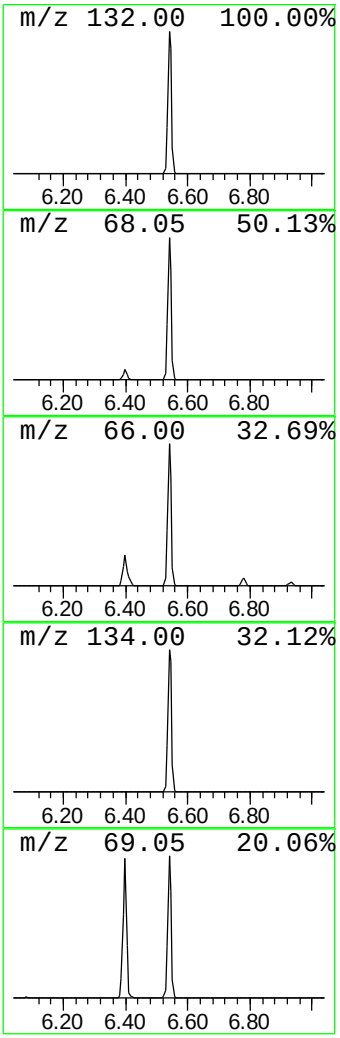
**********

Peak Number 1 unknown6.54 Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.54 | 14.22 ng | 733872 | 1,4-Dichlorobenzene-d4 | 6.78 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 16 |
| 2 | 5-Fluoro-2-chloropyrimidine | 132 | C4H2ClFN2 | 062802-42-0 | 12 |
| 3 | Tranylcypromine-propionyl | 189 | C12H15NO | 1000123-86-3 | 10 |
| 4 | 2-Cyclohexen-1-one | 96 | C6H8O | 000930-68-7 | 10 |
| 5 | Cyclopropanamine, 1-phenyl- | 133 | C9H11N | 1000351-26-2 | 10 |



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Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

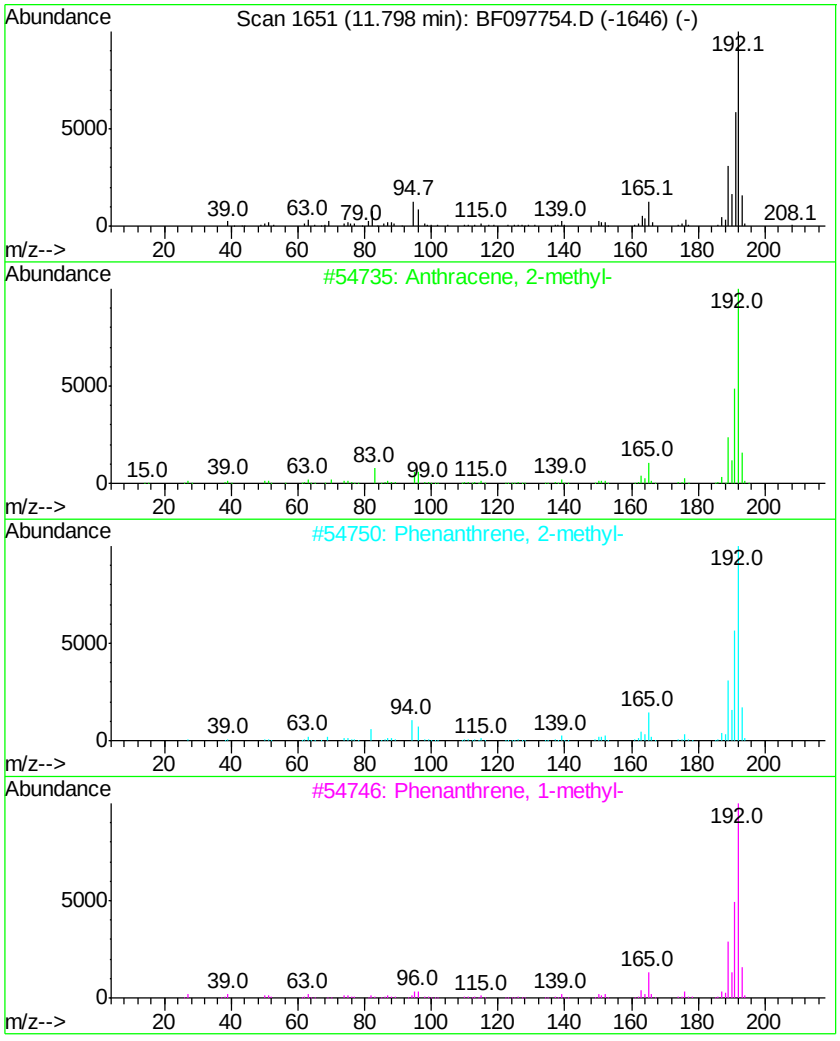
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

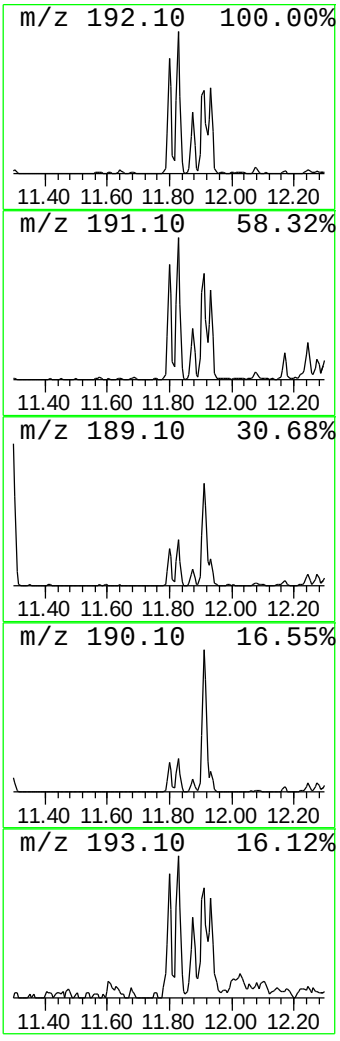
**********

Peak Number 3 Anthracene, 2-methyl- Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.80 | 3.83 ng | 203157 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 97 |
| 2 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 97 |
| 3 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 96 |
| 4 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 95 |
| 5 | Phenanthrene, 4-methyl- | 192 | C15H12 | 000832-64-4 | 93 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

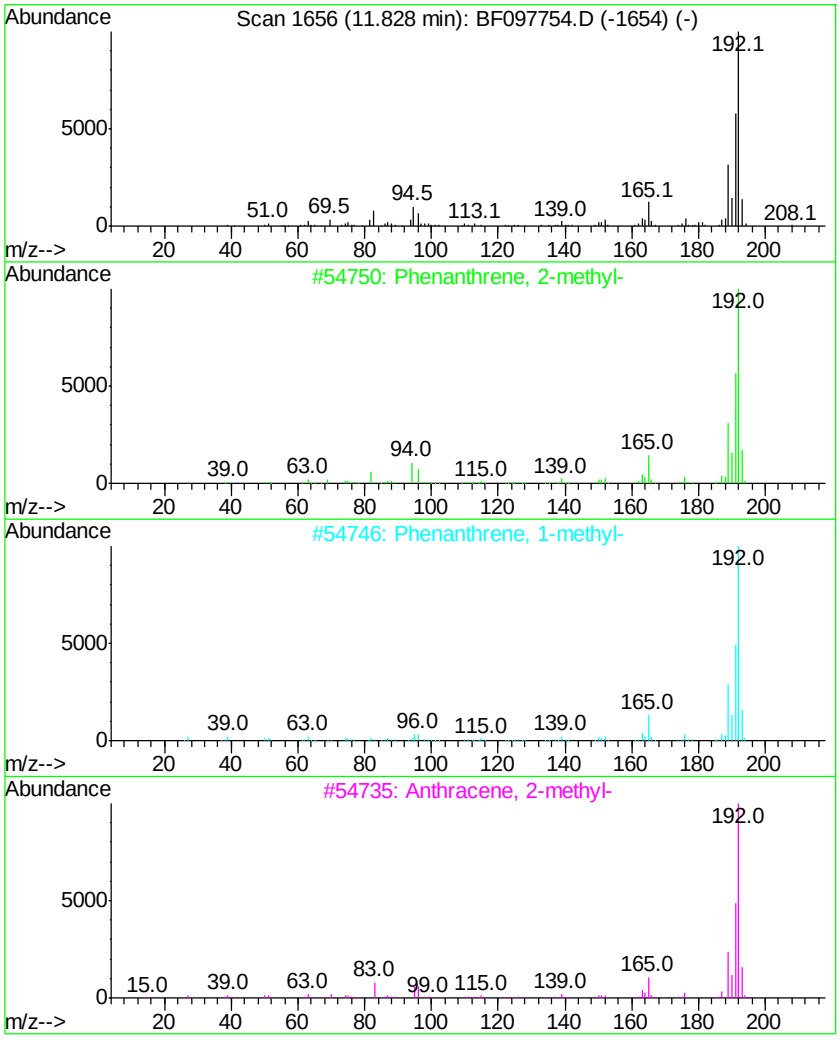
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

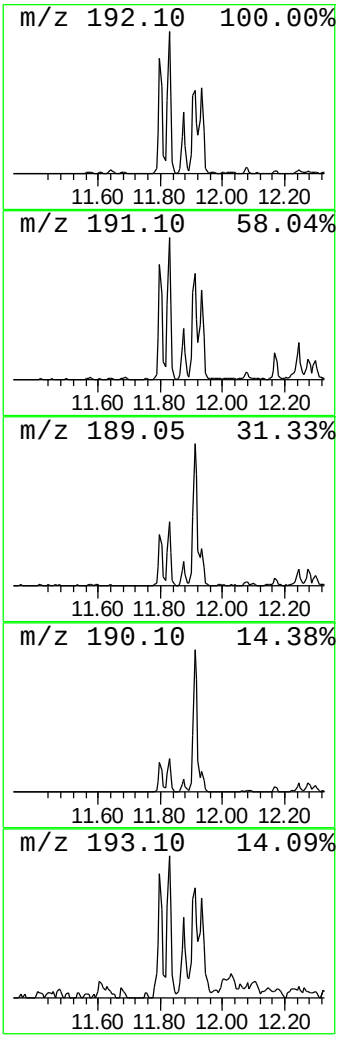
**********

Peak Number 4 Phenanthrene, 2-methyl- Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.83 | 4.02 ng | 213041 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 98 |
| 2 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 96 |
| 3 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 96 |
| 4 | Phenanthrene, 4-methyl- | 192 | C15H12 | 000832-64-4 | 95 |
| 5 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 95 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

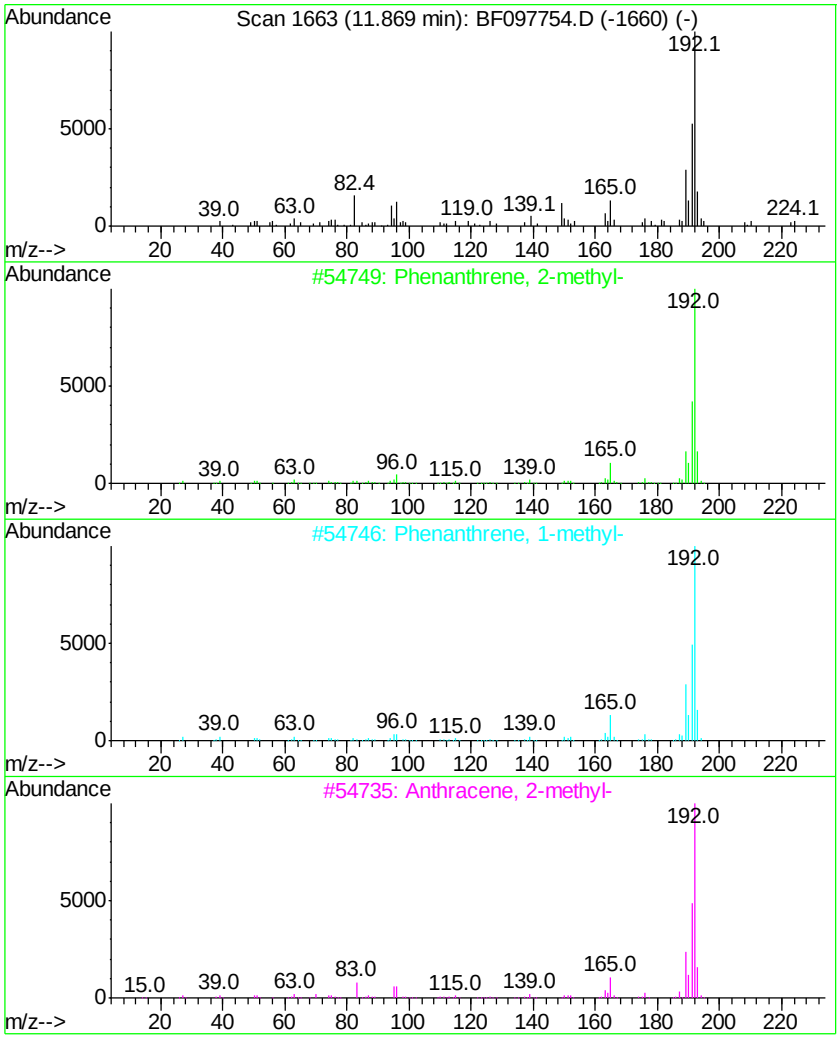
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

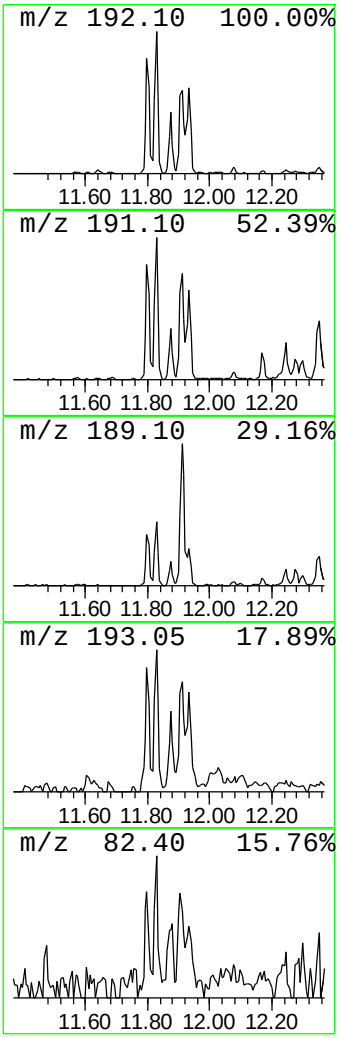
**********

Peak Number 5 Phenanthrene, 1-methyl- Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.87 | 2.04 ng | 108158 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 96 |
| 2 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 96 |
| 3 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 96 |
| 4 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 90 |
| 5 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 90 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

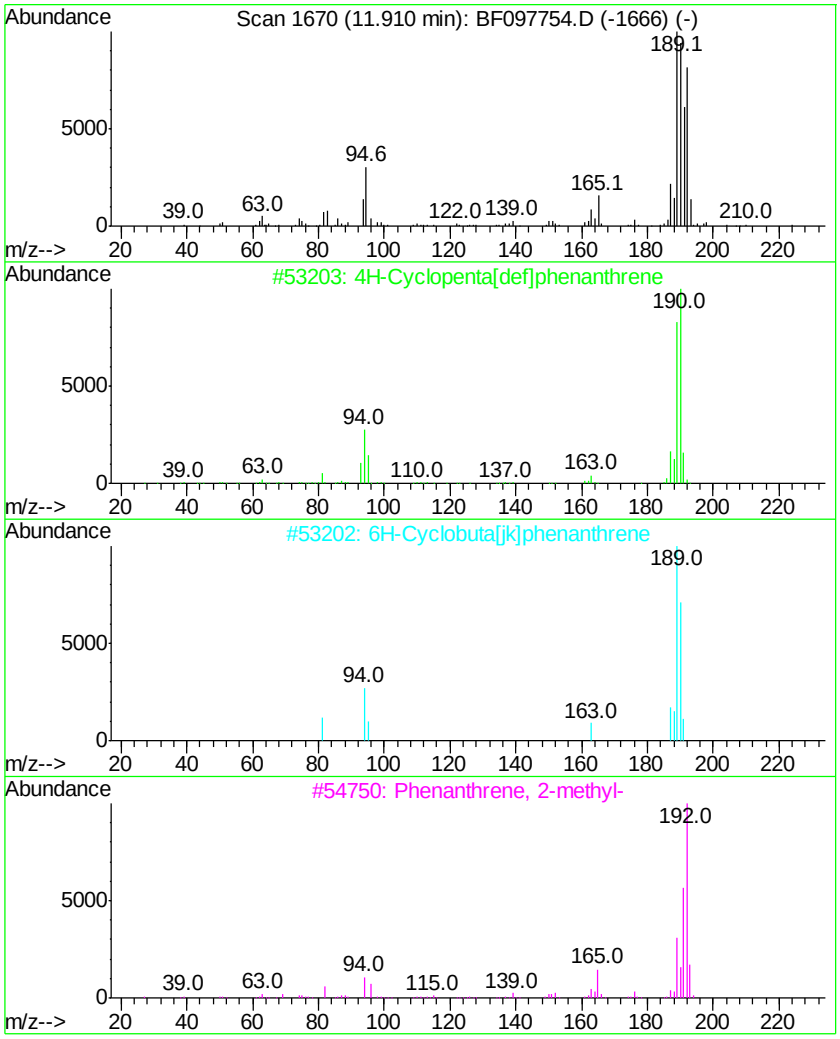
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

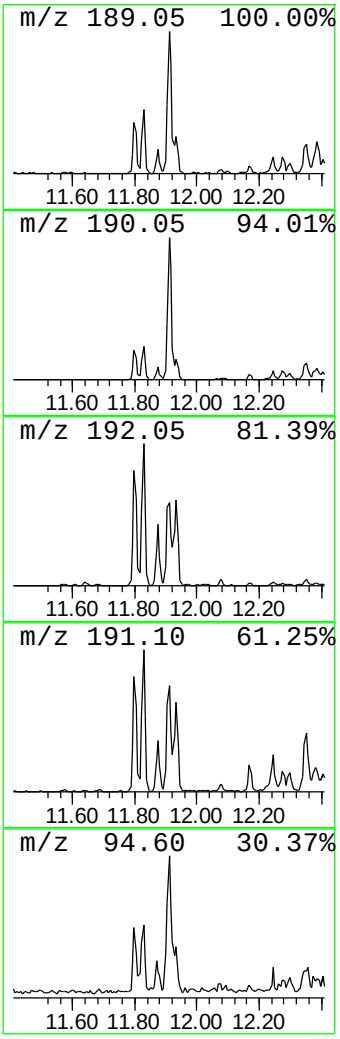
**********

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

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.91 | 6.39 ng | 338744 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10 | 000203-64-5 | 60 |
| 2 | 6H-Cyclobuta[jk]phenanthrene | 190 | C15H10 | 083469-43-6 | 49 |
| 3 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 38 |
| 4 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 38 |
| 5 | 8,9-Dihydrocyclopenta[def]phenan... | 192 | C15H12 | 027410-55-5 | 30 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

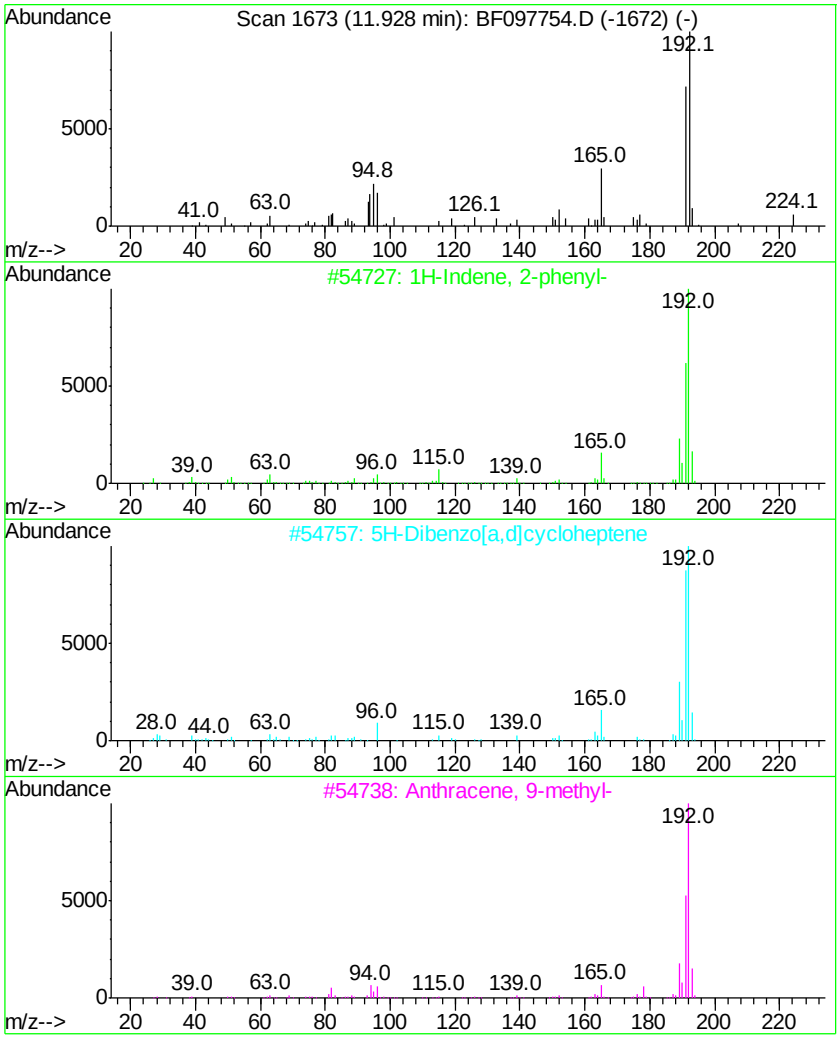
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

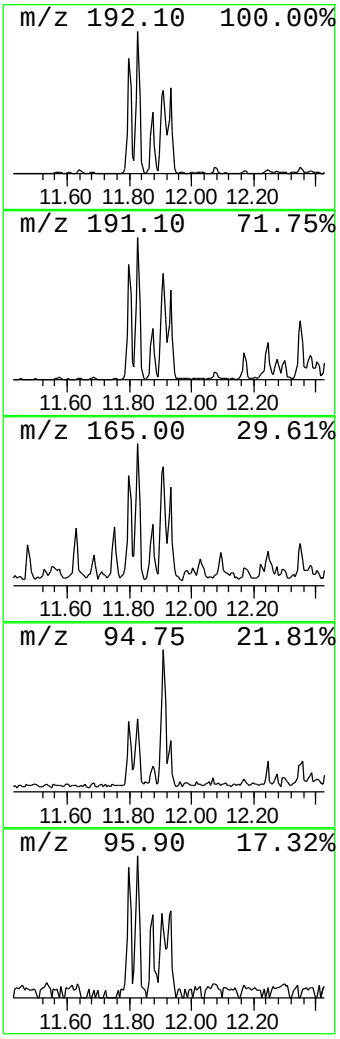
**********

Peak Number 7 1H-Indene, 2-phenyl- Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.93 | 2.37 ng | 125692 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1H-Indene, 2-phenyl- | 192 | C15H12 | 004505-48-0 | 87 |
| 2 | 5H-Dibenzo[a,d]cycloheptene | 192 | C15H12 | 000256-81-5 | 87 |
| 3 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 83 |
| 4 | 1H-Indene, 1-phenyl- | 192 | C15H12 | 001961-96-2 | 80 |
| 5 | Phenanthrene, 4-methyl- | 192 | C15H12 | 000832-64-4 | 78 |



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Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

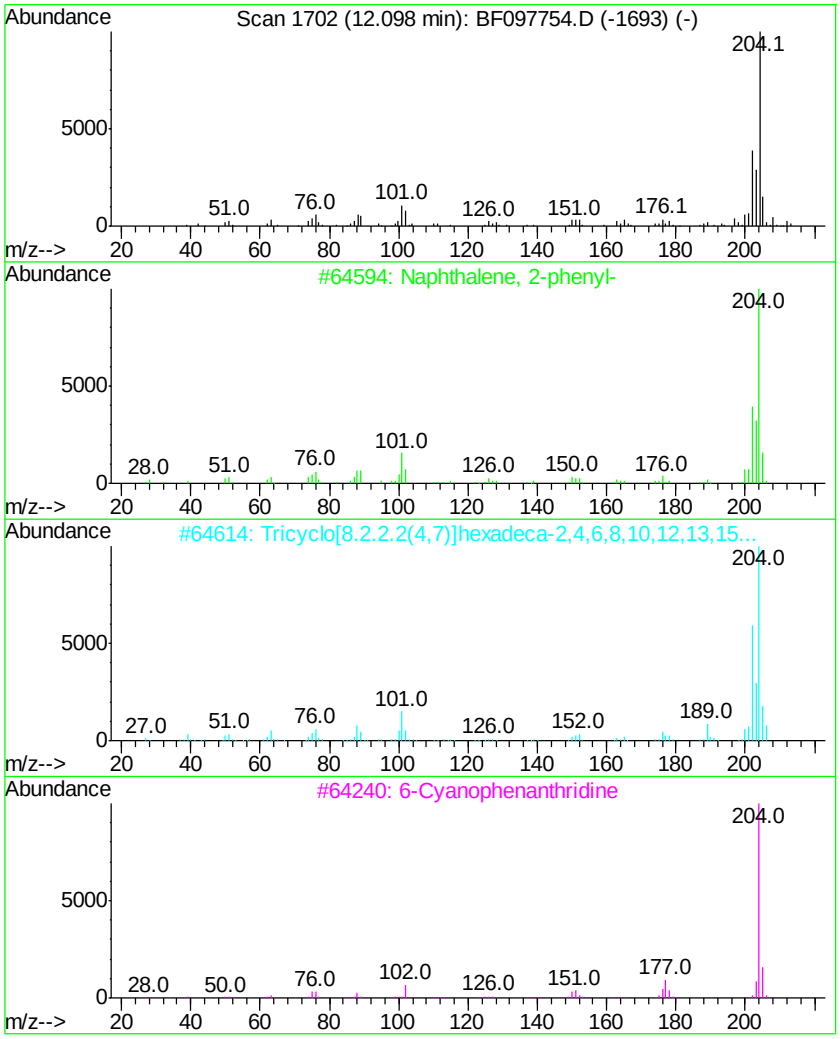
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

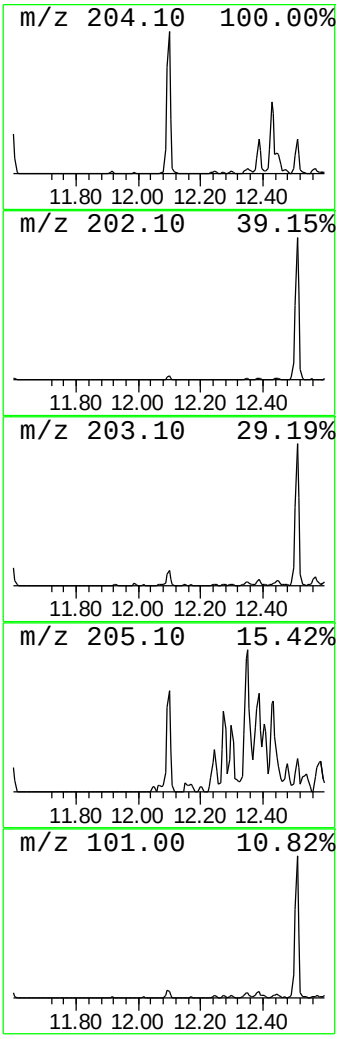
**********

Peak Number 8 Naphthalene, 2-phenyl- Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.10 | 2.81 ng | 149032 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 93 |
| 2 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 70 |
| 3 | 6-Cyanophenanthridine | 204 | C14H8N2 | 002176-28-5 | 55 |
| 4 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 53 |
| 5 | 9,10-Bis(bromomethyl)anthracene | 362 | C16H12Br2 | 034373-96-1 | 49 |



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Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

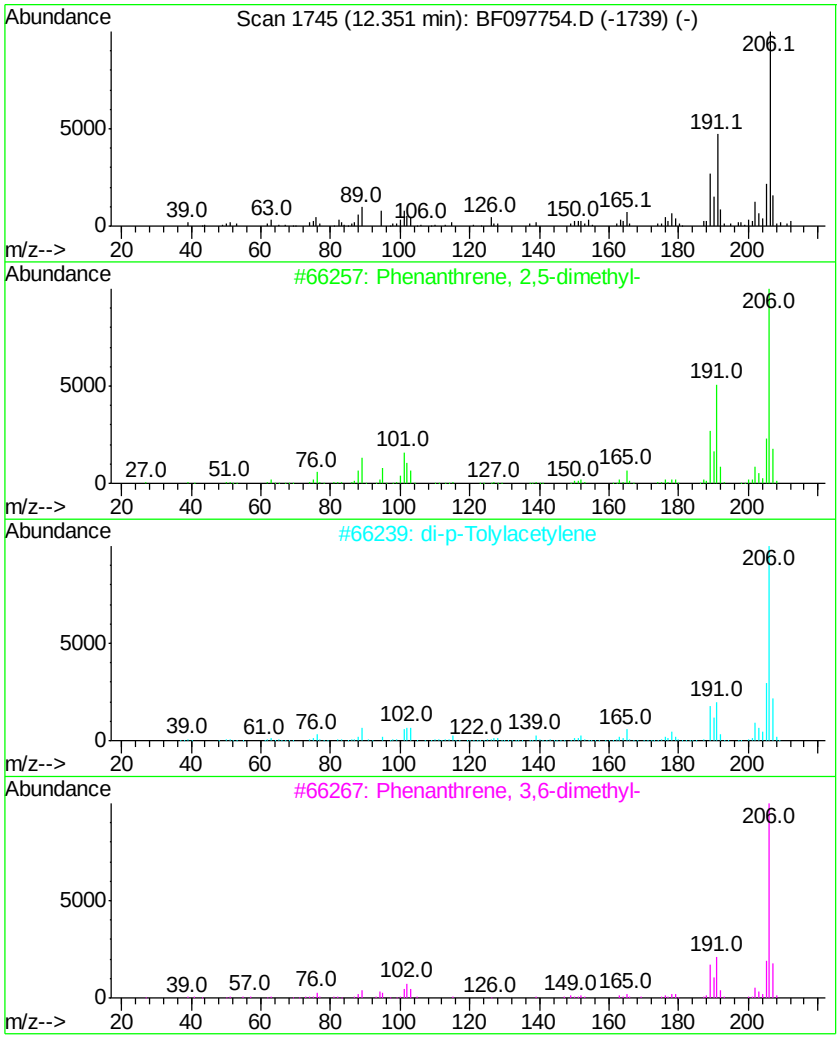
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

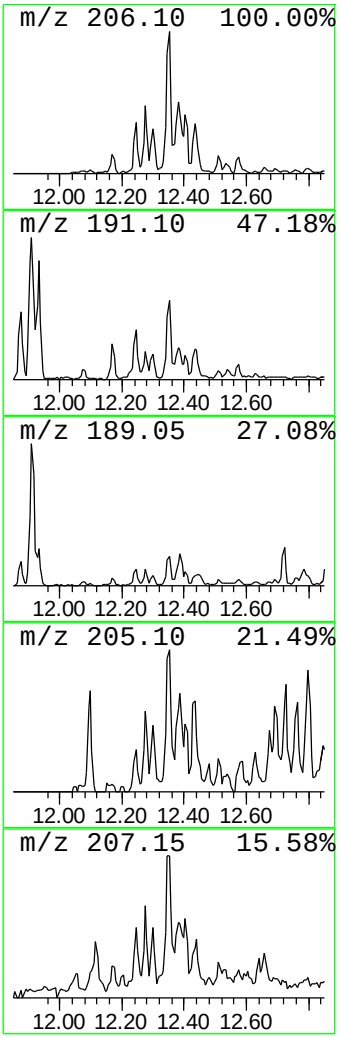
**********

Peak Number 9 Phenanthrene, 2,5-dimethyl- Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.35 | 3.68 ng | 195312 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 98 |
| 2 | di-p-Tolylacetylene | 206 | C16H14 | 002789-88-0 | 96 |
| 3 | Phenanthrene, 3,6-dimethyl- | 206 | C16H14 | 001576-67-6 | 93 |
| 4 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 91 |
| 5 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 91 |



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Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

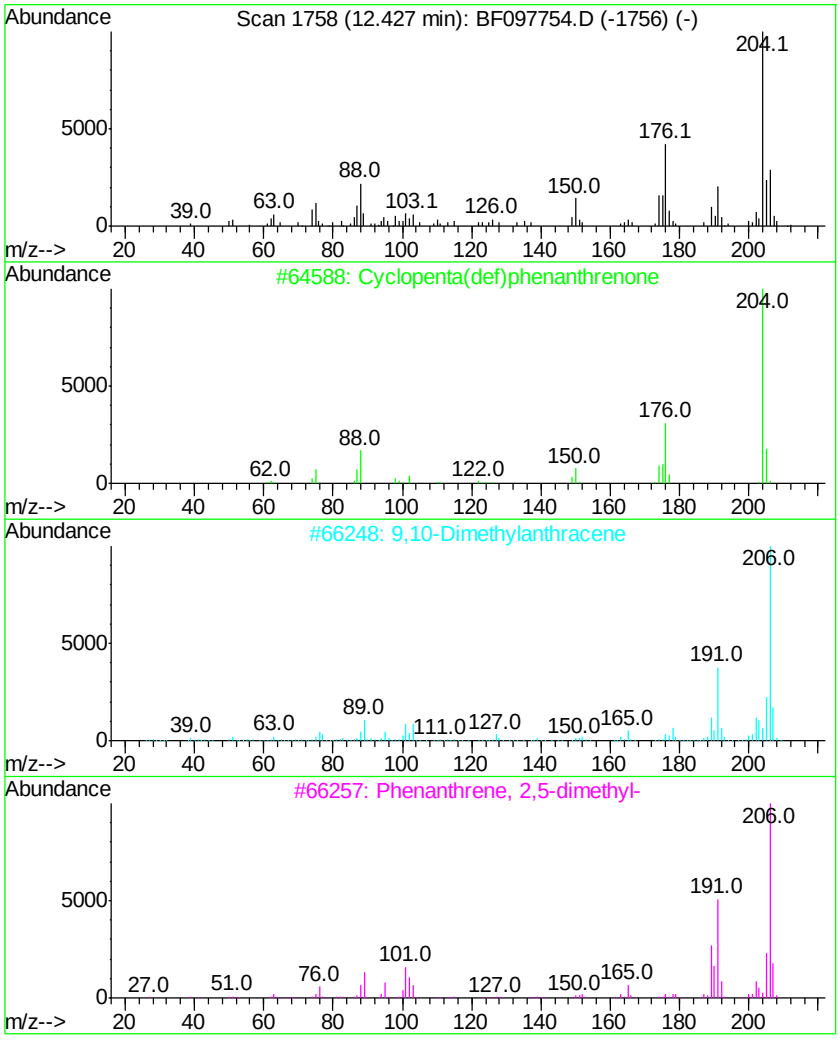
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

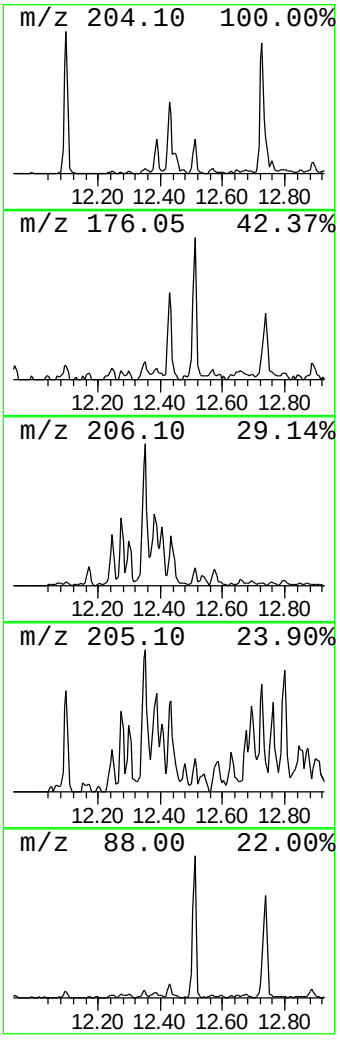
**********

Peak Number 10 Cyclopenta(def)phenanthrenone Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.43 | 2.35 ng | 124342 | Phenanthrene-d10 | 11.30 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 86 |
| 2 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 41 |
| 3 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 41 |
| 4 | 1,3-Diphenyl-3-methylcyclopropene | 206 | C16H14 | 086544-79-8 | 38 |
| 5 | 1H-Indene, 2-methyl-3-phenyl- | 206 | C16H14 | 035099-60-6 | 38 |



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Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

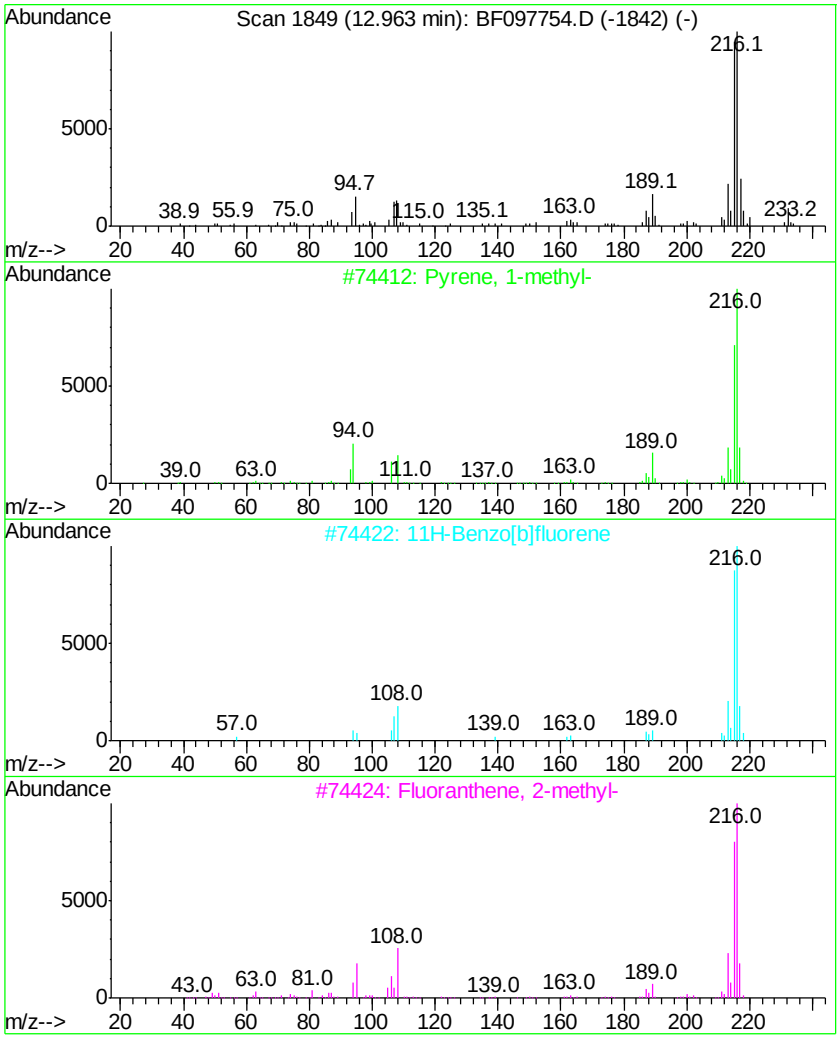
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

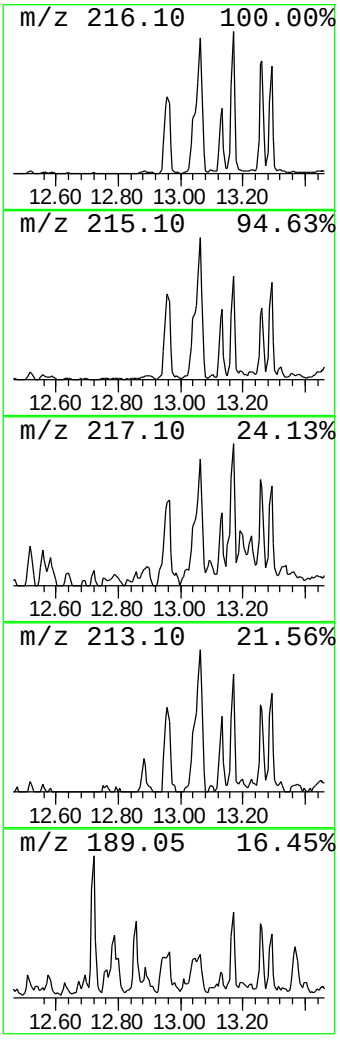
**********

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

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.96 | 2.39 ng | 204391 | Chrysene-d12 | 13.93 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 97 |
| 2 | 11H-Benzo[b]fluorene | 216 | C17H12 | 000243-17-4 | 95 |
| 3 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 90 |
| 4 | Pyrene, 2-methyl- | 216 | C17H12 | 003442-78-2 | 89 |
| 5 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 81 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

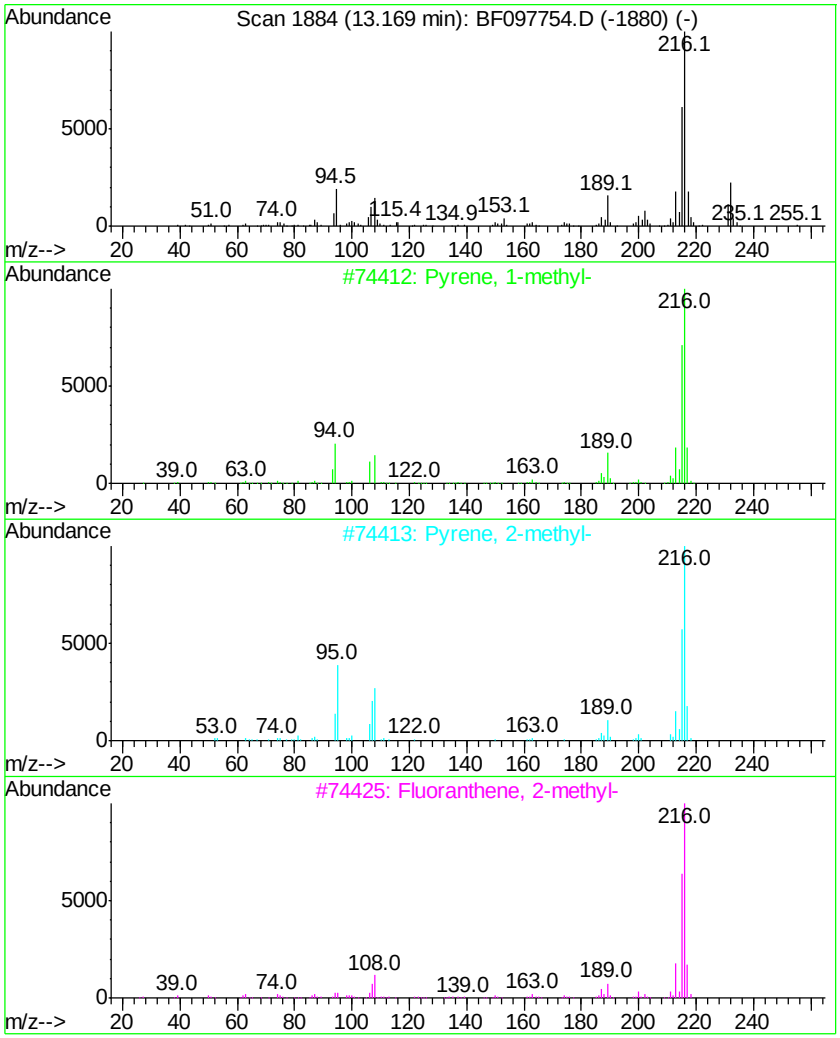
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

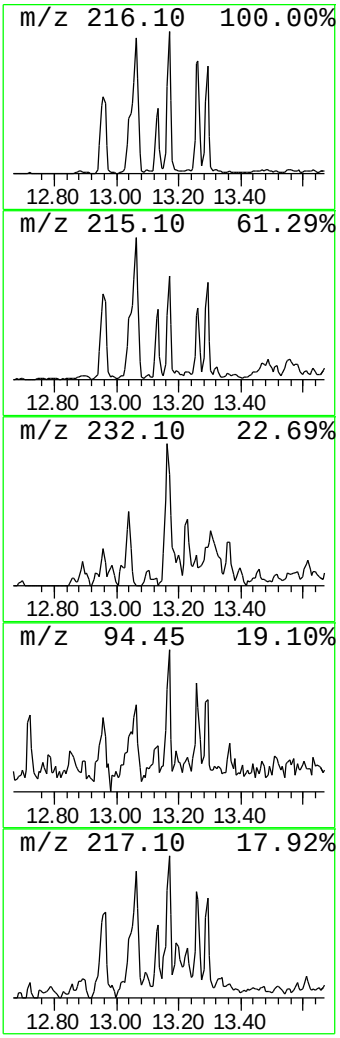
**********

Peak Number 12 Pyrene, 2-methyl- Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.17 | 2.42 ng | 206911 | Chrysene-d12 | 13.93 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 97 |
| 2 | Pyrene, 2-methyl- | 216 | C17H12 | 003442-78-2 | 93 |
| 3 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 92 |
| 4 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 70 |
| 5 | Pyrene, 4-methyl- | 216 | C17H12 | 003353-12-6 | 64 |



Library Search Compound Report

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Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

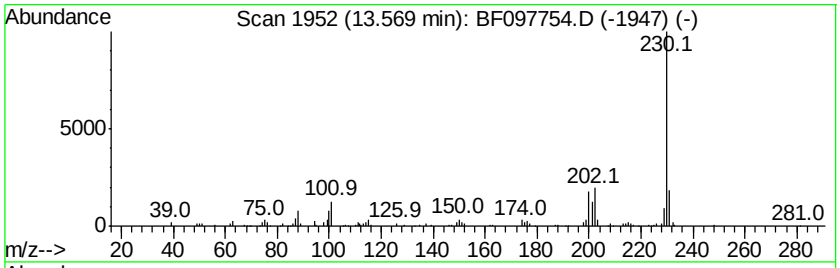
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

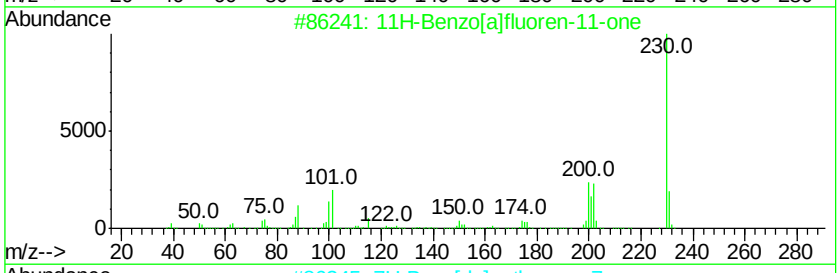
**********

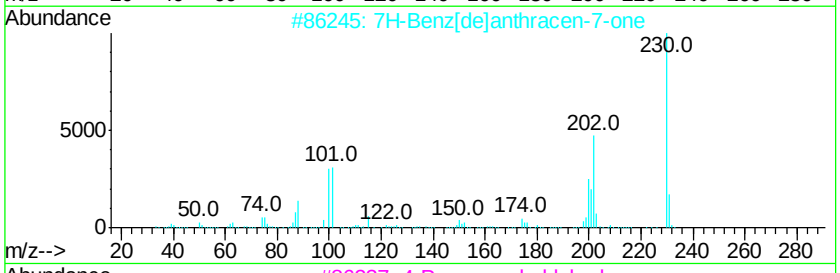
Peak Number 13 11H-Benzo[a]fluoren-11-one Concentration Rank 17

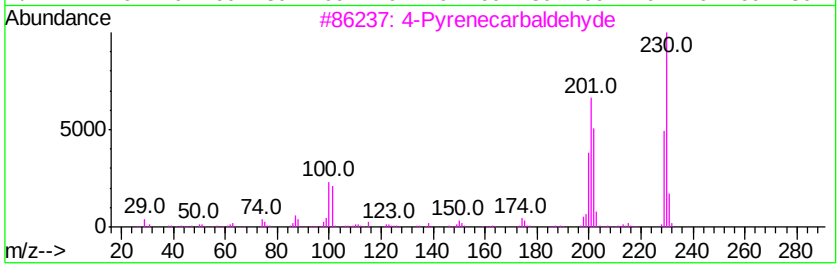
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.57 | 2.00 ng | 171746 | Chrysene-d12 | 13.93 |

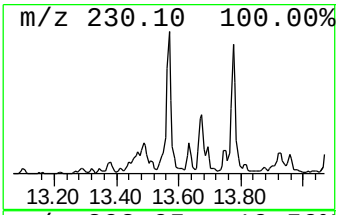
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 11H-Benzo[a]fluoren-11-one | 230 | C17H10O | 000479-79-8 | 96 |
| 2 | 7H-Benz[de]anthracen-7-one | 230 | C17H10O | 000082-05-3 | 93 |
| 3 | 4-Pyrenecarbaldehyde | 230 | C17H10O | 022245-51-8 | 87 |
| 4 | (E)-.alpha.,.alpha.'-Dicyanostil... | 230 | C16H10N2 | 002450-55-7 | 72 |
| 5 | 1-Pyrenecarboxaldehyde | 230 | C17H10O | 003029-19-4 | 64 |

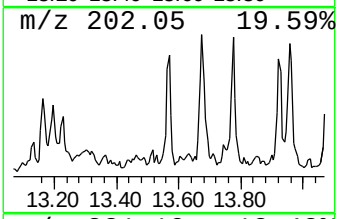


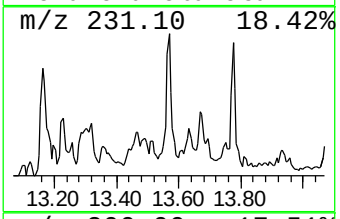



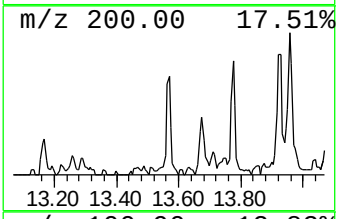



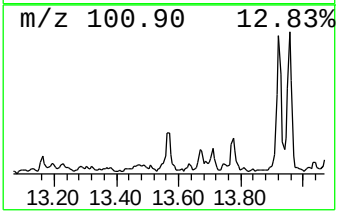



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

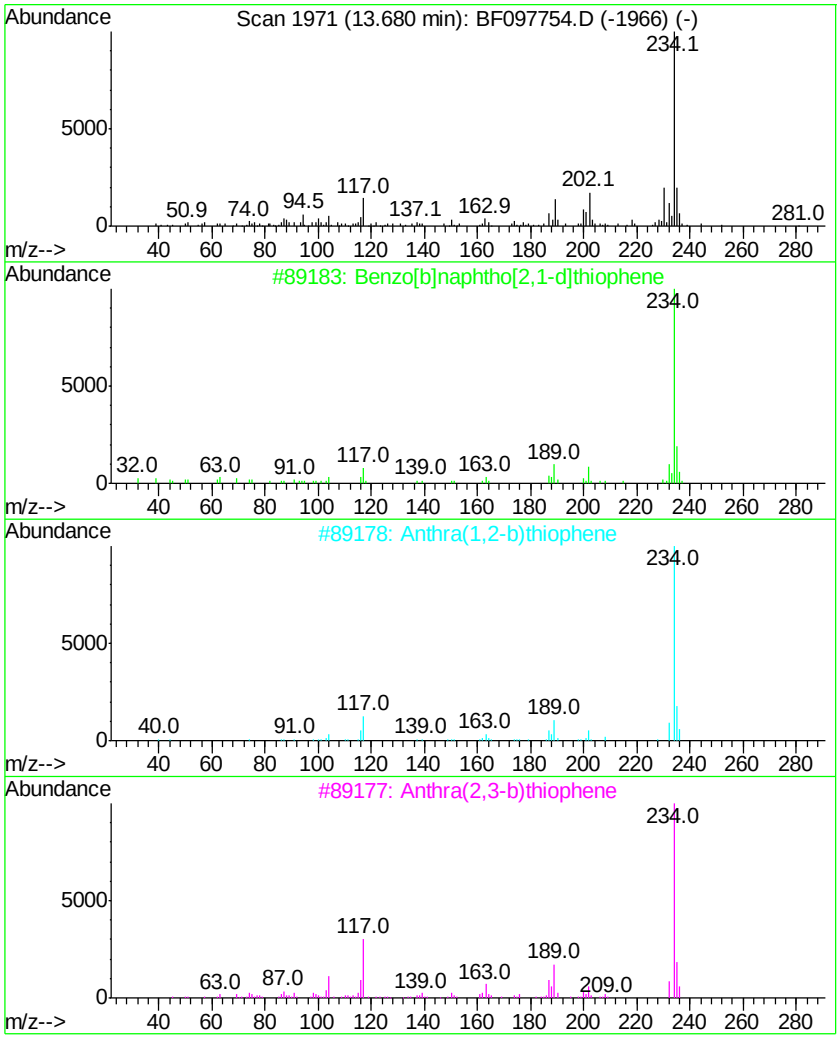
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

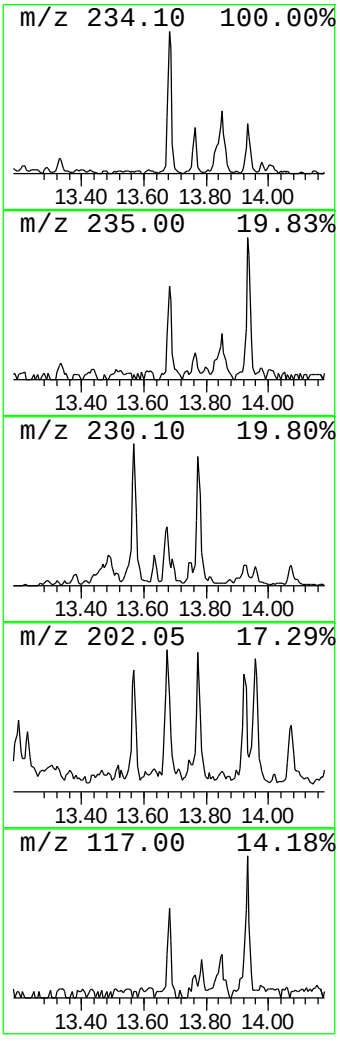
**********

Peak Number 14 Benzo[b]naphtho[2,1-d]thiop... Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.68 | 2.29 ng | 196268 | Chrysene-d12 | 13.93 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 96 |
| 2 | Anthra(1,2-b)thiophene | 234 | C16H10S | 000227-86-1 | 95 |
| 3 | Anthra(2,3-b)thiophene | 234 | C16H10S | 022108-55-0 | 93 |
| 4 | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 91 |
| 5 | Benzo[b]naphtho[1,2-d]thiophene | 234 | C16H10S | 000205-43-6 | 76 |



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.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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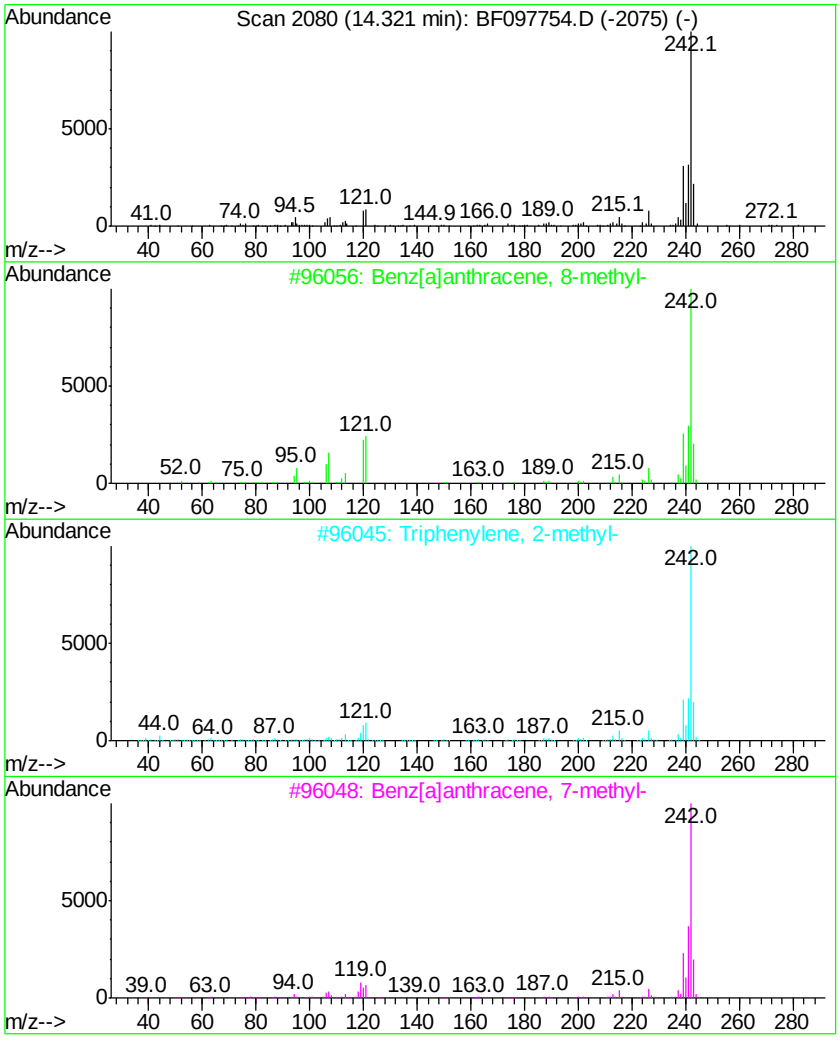
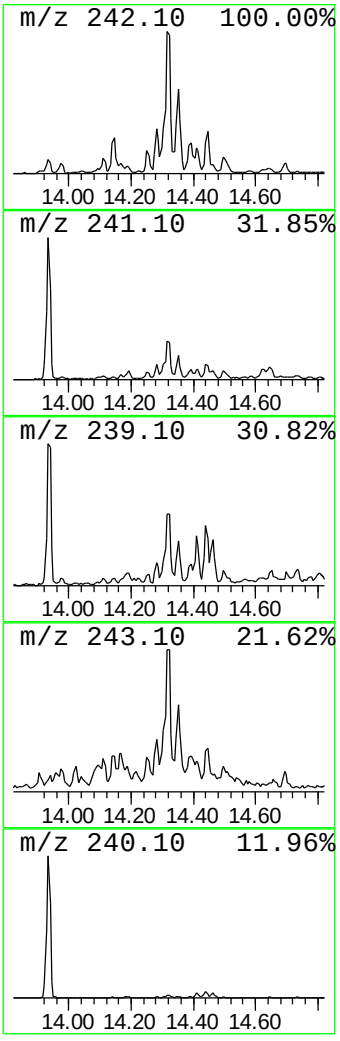
Peak Number 15 Benz[a]anthracene, 8-methyl- Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.32 | 2.22 ng | 190275 | Chrysene-d12 | 13.93 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benz[a]anthracene, 8-methyl- | 242 | C19H14 | 002381-31-9 | 95 |
| 2 | Triphenylene, 2-methyl- | 242 | C19H14 | 001705-84-6 | 94 |
| 3 | Benz[a]anthracene, 7-methyl- | 242 | C19H14 | 002541-69-7 | 94 |
| 4 | Chrysene, 1-methyl- | 242 | C19H14 | 003351-28-8 | 93 |
| 5 | Chrysene, 5-methyl- | 242 | C19H14 | 003697-24-3 | 91 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

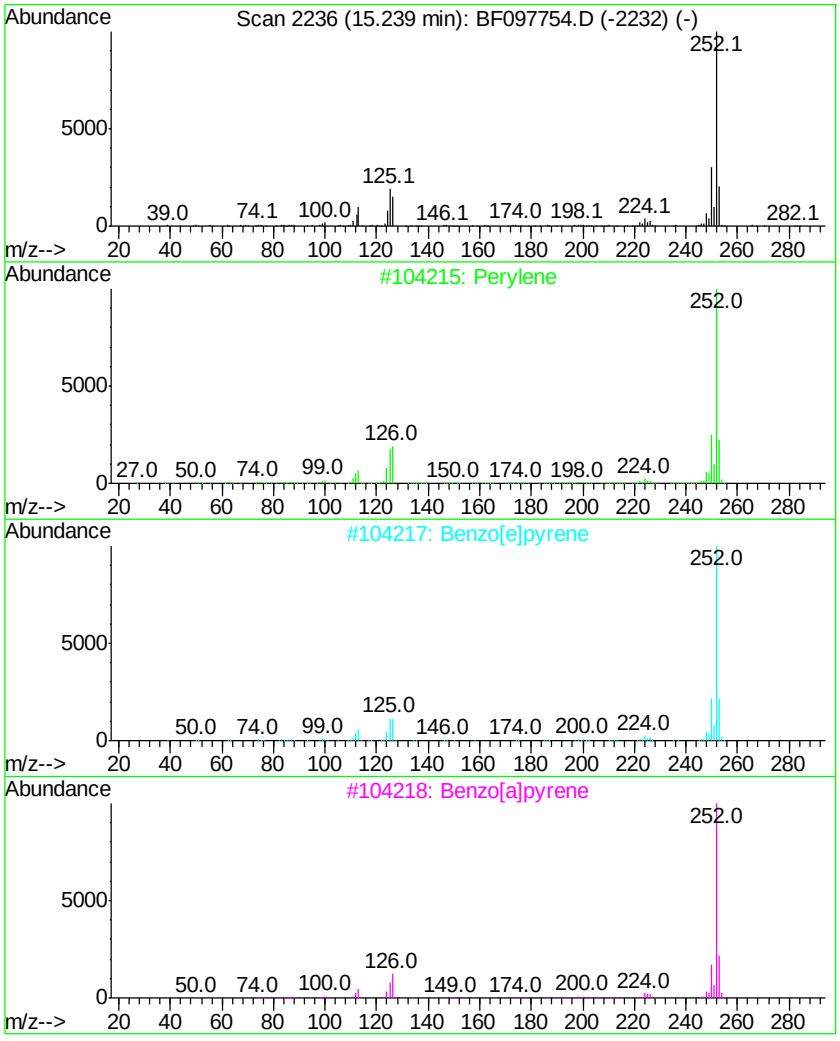
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

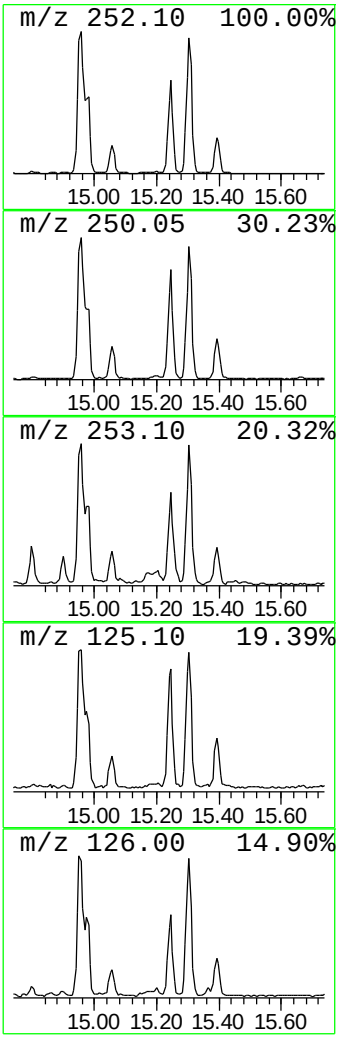
**********

Peak Number 17 Perylene Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.24 | 9.96 ng | 388933 | Perylene-d12 | 15.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Perylene | 252 | C20H12 | 000198-55-0 | 98 |
| 2 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 97 |
| 3 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 93 |
| 4 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 91 |
| 5 | Benzo[j]fluoranthene | 252 | C20H12 | 000205-82-3 | 90 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF081617\
Data File : BF097754.D
Acq On : 16 Aug 2017 22:25
Operator : SJ/JU
Sample : I4739-04 5X
Misc :
ALS Vial : 22 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S11-WC-4

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF081517.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 |
| unknown6.54 | 6.54 | 14.2 | ng | 733872 | 1 | 6.78 | 1032040 | 20.0 |
| Anthracene, 2-met... | 11.80 | 3.8 | ng | 203157 | 4 | 11.30 | 1060090 | 20.0 |
| Phenanthrene, 2-m... | 11.83 | 4.0 | ng | 213041 | 4 | 11.30 | 1060090 | 20.0 |
| Phenanthrene, 1-m... | 11.87 | 2.0 | ng | 108158 | 4 | 11.30 | 1060090 | 20.0 |
| 4H-Cyclopenta[def... | 11.91 | 6.4 | ng | 338744 | 4 | 11.30 | 1060090 | 20.0 |
| 1H-Indene, 2-phenyl- | 11.93 | 2.4 | ng | 125692 | 4 | 11.30 | 1060090 | 20.0 |
| Naphthalene, 2-ph... | 12.10 | 2.8 | ng | 149032 | 4 | 11.30 | 1060090 | 20.0 |
| Phenanthrene, 2,5... | 12.35 | 3.7 | ng | 195312 | 4 | 11.30 | 1060090 | 20.0 |
| Cyclopenta(def)ph... | 12.43 | 2.4 | ng | 124342 | 4 | 11.30 | 1060090 | 20.0 |
| Pyrene, 1-methyl- | 12.96 | 2.4 | ng | 204391 | 5 | 13.93 | 1713190 | 20.0 |
| Pyrene, 2-methyl- | 13.17 | 2.4 | ng | 206911 | 5 | 13.93 | 1713190 | 20.0 |
| 11H-Benzo[a]fluor... | 13.57 | 2.0 | ng | 171746 | 5 | 13.93 | 1713190 | 20.0 |
| Benzo[b]naphtho[2... | 13.68 | 2.3 | ng | 196268 | 5 | 13.93 | 1713190 | 20.0 |
| Benz[a]anthracene... | 14.32 | 2.2 | ng | 190275 | 5 | 13.93 | 1713190 | 20.0 |
| Perylene | 15.24 | 10.0 | ng | 388933 | 6 | 15.37 | 781246 | 20.0 |