LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

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:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.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 | 5.410 | 558 | 565 | 568 | rBV | 1404918 | 1270836 | 5.76% | 0.510% |
| 2 | 6.422 | 733 | 737 | 746 | rBV | 1659910 | 1377930 | 6.25% | 0.553% |
| 3 | 6.569 | 758 | 762 | 766 | rBV | 1643743 | 1288488 | 5.84% | 0.518% |
| 4 | 6.804 | 799 | 802 | 806 | rVB | 3829958 | 3197424 | 14.50% | 1.284% |
| 5 | 6.963 | 825 | 829 | 832 | rBV | 1155912 | 943669 | 4.28% | 0.379% |
| 6 | 7.357 | 890 | 896 | 902 | rBV | 1006385 | 801458 | 3.64% | 0.322% |
| 7 | 8.086 | 1016 | 1020 | 1022 | rBV | 5059858 | 4172158 | 18.92% | 1.676% |
| 8 | 8.110 | 1022 | 1024 | 1027 | rVB | 1356409 | 987582 | 4.48% | 0.397% |
| 9 | 8.798 | 1138 | 1141 | 1144 | rVB | 663657 | 513011 | 2.33% | 0.206% |
| 10 | 8.898 | 1154 | 1158 | 1162 | rVB | 726304 | 563042 | 2.55% | 0.226% |
| 11 | 9.163 | 1199 | 1203 | 1206 | rBV | 1672397 | 1243543 | 5.64% | 0.499% |
| 12 | 9.498 | 1255 | 1260 | 1263 | rBV | 465028 | 476340 | 2.16% | 0.191% |
| 13 | 9.839 | 1313 | 1318 | 1321 | rBV | 4128701 | 4062625 | 18.43% | 1.632% |
| 14 | 9.874 | 1321 | 1324 | 1327 | rVB | 6420082 | 4900471 | 22.23% | 1.968% |
| 15 | 10.045 | 1349 | 1353 | 1356 | rVB | 2057070 | 1610121 | 7.30% | 0.647% |
| 16 | 10.386 | 1407 | 1411 | 1417 | rVB | 3868223 | 3093365 | 14.03% | 1.242% |
| 17 | 10.457 | 1421 | 1423 | 1424 | rVV | 470341 | 386573 | 1.75% | 0.155% |
| 18 | 10.474 | 1424 | 1426 | 1428 | rVV | 648521 | 478717 | 2.17% | 0.192% |
| 19 | 10.545 | 1436 | 1438 | 1443 | rVB | 762350 | 603967 | 2.74% | 0.243% |
| 20 | 10.621 | 1448 | 1451 | 1455 | rVV2 | 1296025 | 1351941 | 6.13% | 0.543% |
| 21 | 10.933 | 1502 | 1504 | 1507 | rVB2 | 487621 | 417325 | 1.89% | 0.168% |
| 22 | 11.127 | 1534 | 1537 | 1542 | rVB | 1126302 | 998489 | 4.53% | 0.401% |
| 23 | 11.186 | 1542 | 1547 | 1549 | rBV2 | 391040 | 568493 | 2.58% | 0.228% |
| 24 | 11.221 | 1549 | 1553 | 1556 | rVB | 1323288 | 1122762 | 5.09% | 0.451% |
| 25 | 11.327 | 1567 | 1571 | 1572 | rBV | 2876951 | 2776938 | 12.60% | 1.115% |
| 26 | 11.357 | 1572 | 1576 | 1579 | rVV | 16171892 | 18818110 | 85.36% | 7.558% |
| 27 | 11.404 | 1579 | 1584 | 1587 | rVV | 7011122 | 5997033 | 27.20% | 2.409% |
| 28 | 11.433 | 1587 | 1589 | 1593 | rVB | 588914 | 500900 | 2.27% | 0.201% |
| 29 | 11.551 | 1603 | 1609 | 1612 | rBV2 | 3368815 | 3185685 | 14.45% | 1.279% |
| 30 | 11.621 | 1616 | 1621 | 1624 | rVV4 | 397323 | 457509 | 2.08% | 0.184% |
| 31 | 11.827 | 1650 | 1656 | 1658 | rBV | 2154234 | 1897097 | 8.61% | 0.762% |
| 32 | 11.857 | 1658 | 1661 | 1665 | rVB | 2867264 | 2629683 | 11.93% | 1.056% |
| 33 | 11.904 | 1665 | 1669 | 1671 | rBV | 1071763 | 1048907 | 4.76% | 0.421% |
| 34 | 11.939 | 1671 | 1675 | 1677 | rBV | 3999101 | 3866873 | 17.54% | 1.553% |

LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

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:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 11.963 | 1677 | 1679 | 1682 | rVB | 1195437 | 940972 | 4.27% | 0.378% |
| 36 | 12.121 | 1703 | 1706 | 1708 | rBV | 1727125 | 1612823 | 7.32% | 0.648% |
| 37 | 12.139 | 1708 | 1709 | 1713 | rVB | 1782870 | 1254198 | 5.69% | 0.504% |
| 38 | 12.374 | 1746 | 1749 | 1753 | rBV | 868156 | 949132 | 4.31% | 0.381% |
| 39 | 12.415 | 1753 | 1756 | 1758 | rVV | 467291 | 503086 | 2.28% | 0.202% |
| 40 | 12.463 | 1761 | 1764 | 1769 | rVB2 | 884313 | 983115 | 4.46% | 0.395% |
| 41 | 12.551 | 1772 | 1779 | 1782 | rBV | 16799237 | 21528374 | 97.65% | 8.647% |
| 42 | 12.598 | 1782 | 1787 | 1790 | rBV2 | 510273 | 644590 | 2.92% | 0.259% |
| 43 | 12.686 | 1795 | 1802 | 1811 | rVB2 | 964909 | 1528897 | 6.93% | 0.614% |
| 44 | 12.780 | 1811 | 1818 | 1821 | rBV4 | 14228824 | 22046255 | 100.00% | 8.855% |
| 45 | 12.815 | 1821 | 1824 | 1830 | rVB | 924470 | 941882 | 4.27% | 0.378% |
| 46 | 12.886 | 1831 | 1836 | 1838 | rBV | 1501055 | 1344644 | 6.10% | 0.540% |
| 47 | 12.915 | 1838 | 1841 | 1846 | rVB2 | 1785649 | 2224840 | 10.09% | 0.894% |
| 48 | 12.986 | 1847 | 1853 | 1855 | rBV4 | 1262879 | 2018273 | 9.15% | 0.811% |
| 49 | 13.010 | 1855 | 1857 | 1860 | rVB | 940342 | 738955 | 3.35% | 0.297% |
| 50 | 13.045 | 1860 | 1863 | 1865 | rBV3 | 480328 | 548075 | 2.49% | 0.220% |
| 51 | 13.068 | 1865 | 1867 | 1869 | rVV2 | 884347 | 965169 | 4.38% | 0.388% |
| 52 | 13.092 | 1869 | 1871 | 1874 | rVB | 3176147 | 2836965 | 12.87% | 1.139% |
| 53 | 13.162 | 1879 | 1883 | 1885 | rBV | 2515331 | 2323375 | 10.54% | 0.933% |
| 54 | 13.198 | 1885 | 1889 | 1891 | rBV2 | 1751657 | 1741818 | 7.90% | 0.700% |
| 55 | 13.221 | 1891 | 1893 | 1896 | rVB | 1017140 | 880123 | 3.99% | 0.353% |
| 56 | 13.251 | 1896 | 1898 | 1902 | rBV2 | 418611 | 467089 | 2.12% | 0.188% |
| 57 | 13.286 | 1902 | 1904 | 1907 | rVB | 690722 | 588961 | 2.67% | 0.237% |
| 58 | 13.321 | 1907 | 1910 | 1913 | rBV2 | 803583 | 875765 | 3.97% | 0.352% |
| 59 | 13.392 | 1919 | 1922 | 1927 | rBV4 | 516982 | 586411 | 2.66% | 0.236% |
| 60 | 13.498 | 1932 | 1940 | 1941 | rBV5 | 595360 | 1100954 | 4.99% | 0.442% |
| 61 | 13.515 | 1941 | 1943 | 1946 | rVV2 | 438667 | 471806 | 2.14% | 0.189% |
| 62 | 13.598 | 1950 | 1957 | 1962 | rBV | 1404883 | 2009083 | 9.11% | 0.807% |
| 63 | 13.709 | 1972 | 1976 | 1979 | rBV2 | 2113647 | 2486258 | 11.28% | 0.999% |
| 64 | 13.739 | 1979 | 1981 | 1983 | rVV | 2057710 | 1747232 | 7.93% | 0.702% |
| 65 | 13.762 | 1983 | 1985 | 1989 | rVV2 | 1914168 | 2554511 | 11.59% | 1.026% |
| 66 | 13.804 | 1989 | 1992 | 1999 | rVB2 | 1927177 | 2203507 | 9.99% | 0.885% |
| 67 | 13.874 | 1999 | 2004 | 2008 | rBV | 612586 | 951248 | 4.31% | 0.382% |
| 68 | 13.962 | 2011 | 2019 | 2022 | rVV3 | 10772492 | 16791285 | 76.16% | 6.744% |
| 69 | 13.998 | 2022 | 2025 | 2029 | rVV | 9866205 | 9580745 | 43.46% | 3.848% |
| 70 | 14.068 | 2035 | 2037 | 2040 | rVV | 2799921 | 2529793 | 11.47% | 1.016% |
| 71 | 14.098 | 2040 | 2042 | 2044 | rVV | 602896 | 591461 | 2.68% | 0.238% |

LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

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:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 14.145 | 2047 | 2050 | 2053 | rVV | 1582362 | 1382549 | 6.27% | 0.555% |
| 73 | 14.180 | 2053 | 2056 | 2061 | rVV2 | 1616108 | 1785085 | 8.10% | 0.717% |
| 74 | 14.280 | 2070 | 2073 | 2076 | rBV | 619353 | 606389 | 2.75% | 0.244% |
| 75 | 14.309 | 2076 | 2078 | 2080 | rBV | 555721 | 509872 | 2.31% | 0.205% |
| 76 | 14.345 | 2080 | 2084 | 2087 | rBV | 1407102 | 1431077 | 6.49% | 0.575% |
| 77 | 14.380 | 2087 | 2090 | 2093 | rVB2 | 979717 | 888062 | 4.03% | 0.357% |
| 78 | 14.439 | 2097 | 2100 | 2103 | rVB2 | 791103 | 755898 | 3.43% | 0.304% |
| 79 | 14.468 | 2103 | 2105 | 2107 | rBV | 801221 | 712325 | 3.23% | 0.286% |
| 80 | 14.492 | 2107 | 2109 | 2112 | rVB4 | 1267969 | 1103753 | 5.01% | 0.443% |
| 81 | 14.527 | 2112 | 2115 | 2116 | rBV | 505918 | 429478 | 1.95% | 0.172% |
| 82 | 14.645 | 2132 | 2135 | 2138 | rBV2 | 698276 | 872987 | 3.96% | 0.351% |
| 83 | 14.727 | 2146 | 2149 | 2151 | rBV2 | 434620 | 436356 | 1.98% | 0.175% |
| 84 | 14.827 | 2161 | 2166 | 2174 | rVB2 | 662283 | 1305391 | 5.92% | 0.524% |
| 85 | 14.898 | 2175 | 2178 | 2181 | rBV3 | 316386 | 407579 | 1.85% | 0.164% |
| 86 | 14.933 | 2181 | 2184 | 2188 | rVB2 | 311748 | 402847 | 1.83% | 0.162% |
| 87 | 14.998 | 2189 | 2195 | 2197 | rBV | 6717984 | 10748684 | 48.76% | 4.317% |
| 88 | 15.021 | 2197 | 2199 | 2202 | rVB | 4269065 | 3491892 | 15.84% | 1.402% |
| 89 | 15.092 | 2208 | 2211 | 2215 | rVB | 1556393 | 1567635 | 7.11% | 0.630% |
| 90 | 15.286 | 2239 | 2244 | 2249 | rVB2 | 3786283 | 5320540 | 24.13% | 2.137% |
| 91 | 15.351 | 2249 | 2255 | 2259 | rBV | 5520895 | 6990296 | 31.71% | 2.808% |
| 92 | 15.403 | 2260 | 2264 | 2267 | rBV | 1740897 | 2456726 | 11.14% | 0.987% |
| 93 | 15.433 | 2267 | 2269 | 2276 | rVB | 2043747 | 2475209 | 11.23% | 0.994% |
| 94 | 15.939 | 2353 | 2355 | 2359 | rVB3 | 328913 | 406264 | 1.84% | 0.163% |
| 95 | 16.639 | 2471 | 2474 | 2476 | rBV2 | 256333 | 374381 | 1.70% | 0.150% |
| 96 | 16.821 | 2499 | 2505 | 2512 | rVB2 | 2538655 | 4708379 | 21.36% | 1.891% |
| 97 | 16.980 | 2529 | 2532 | 2538 | rVB | 398045 | 665031 | 3.02% | 0.267% |
| 98 | 17.045 | 2539 | 2543 | 2547 | rBV2 | 305524 | 518165 | 2.35% | 0.208% |
| 99 | 17.250 | 2570 | 2578 | 2588 | rBV | 1743945 | 3795001 | 17.21% | 1.524% |
| 100 | 17.468 | 2611 | 2615 | 2620 | rVB | 438922 | 734270 | 3.33% | 0.295% |

Sum of corrected areas: 248982856

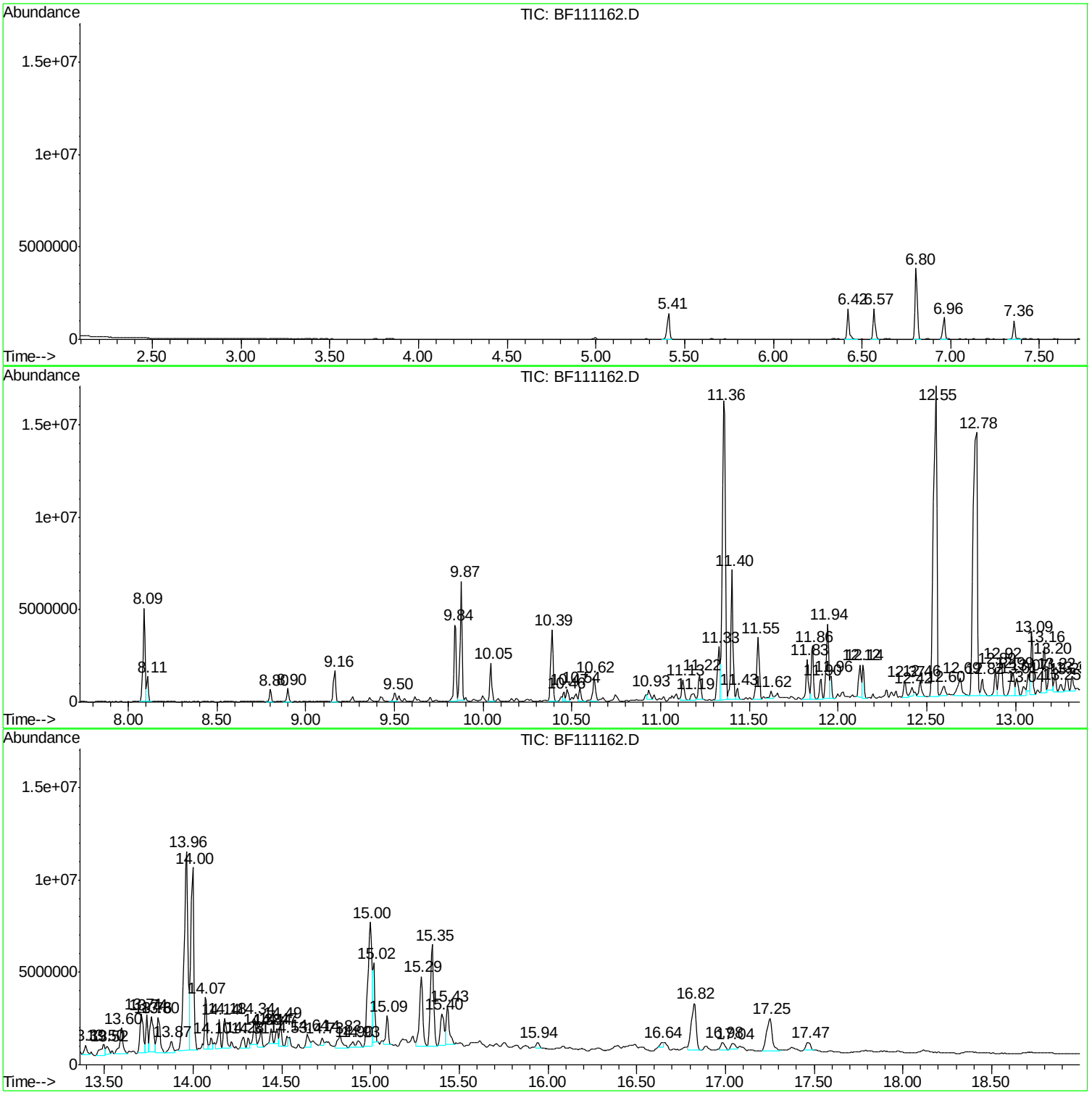
LSC Report - Integrated Chromatogram

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

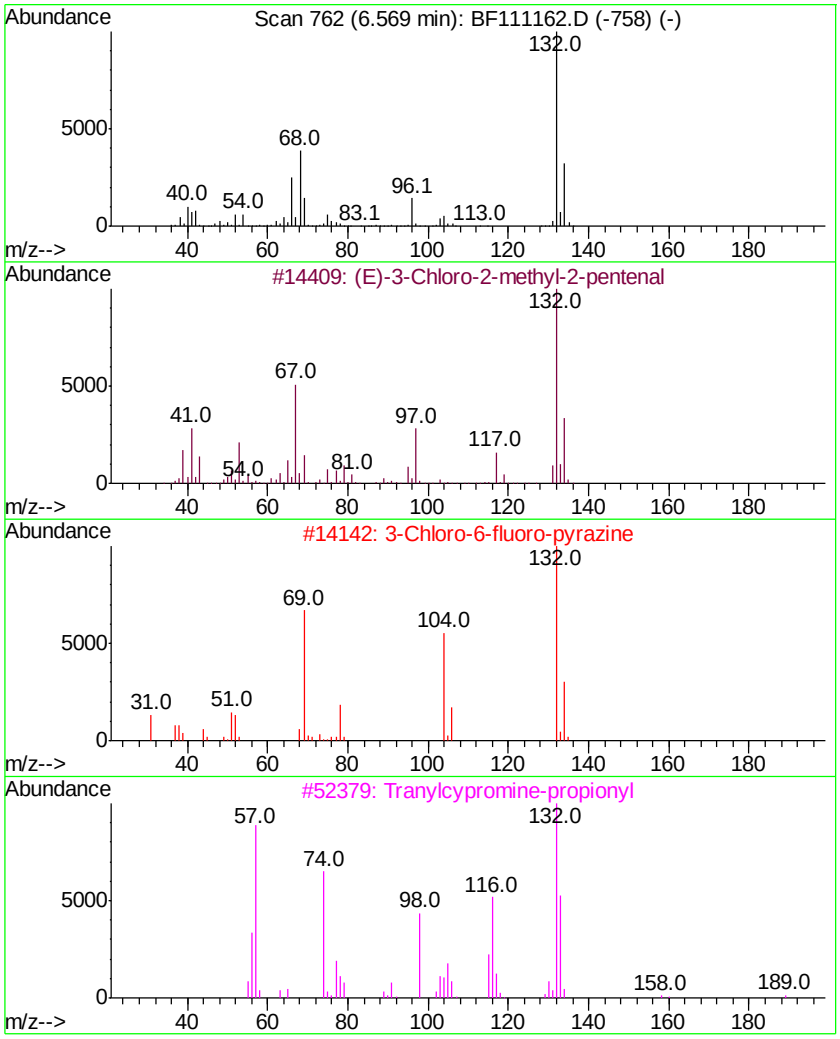
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

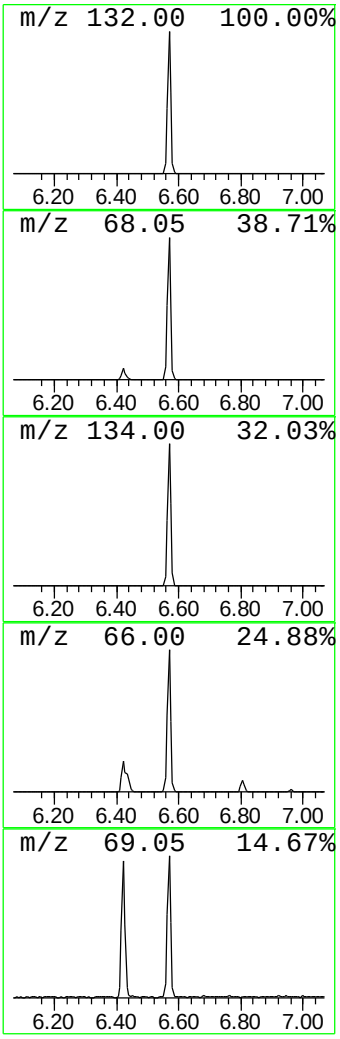
**********

Peak Number 1 unknown6.57 Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.57 | 8.06 ng | 1288490 | 1,4-Dichlorobenzene-d4 | 6.80 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO | 031357-76-3 | 17 |
| 2 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 16 |
| 3 | Tranylcypromine-propionyl | 189 | C12H15NO | 1000123-86-3 | 10 |
| 4 | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12 | 028749-81-7 | 9 |
| 5 | 1-Methylpyrrolo[1,2-a]pyrazine | 132 | C8H8N2 | 064608-59-9 | 9 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

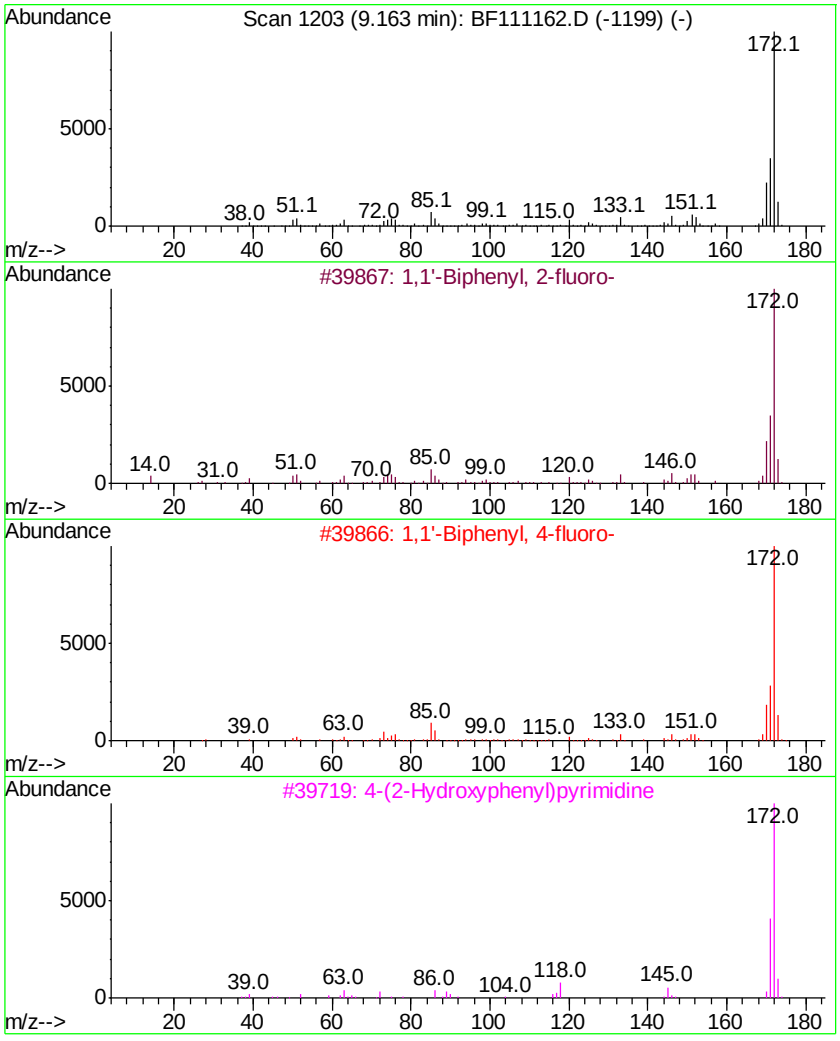
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

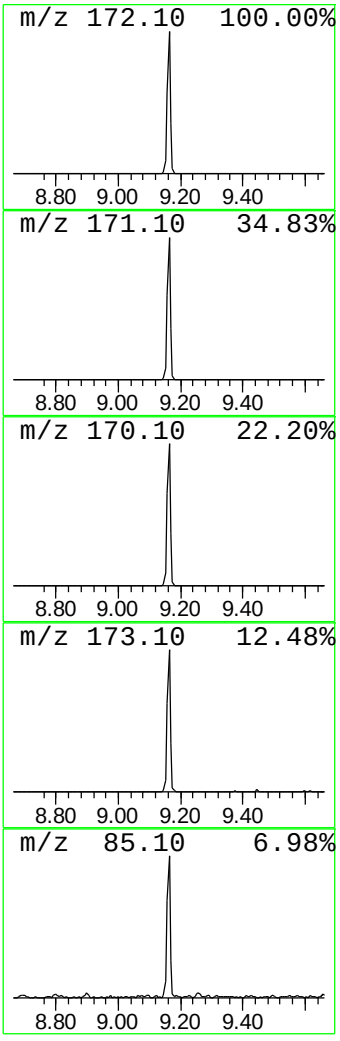
**********

Peak Number 3 1,1'-Biphenyl, 2-fluoro- Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.16 | 6.12 ng | 1243540 | Acenaphthene-d10 | 9.84 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,1'-Biphenyl, 2-fluoro- | 172 | C12H9F | 000321-60-8 | 96 |
| 2 | 1,1'-Biphenyl, 4-fluoro- | 172 | C12H9F | 000324-74-3 | 93 |
| 3 | 4-(2-Hydroxyphenyl)pyrimidine | 172 | C10H8N2O | 068535-55-7 | 53 |
| 4 | 5-Hydroxy-2-phenylpyrimidine | 172 | C10H8N2O | 066739-85-3 | 47 |
| 5 | 4-Pyrimidinol, 5-phenyl- | 172 | C10H8N2O | 022433-69-8 | 42 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

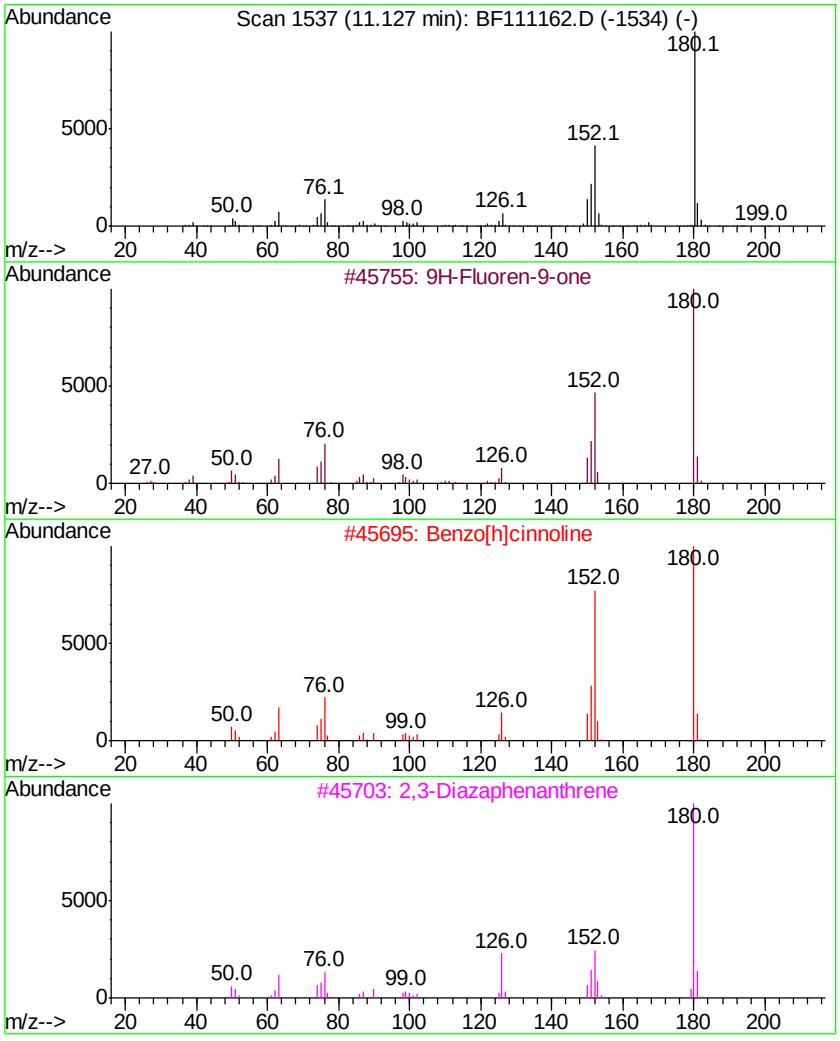
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

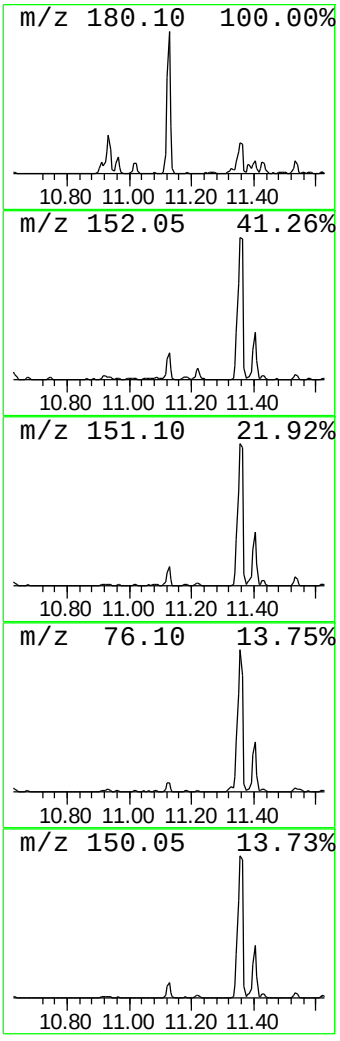
**********

Peak Number 4 9H-Fluoren-9-one Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.13 | 7.19 ng | 998489 | Phenanthrene-d10 | 11.33 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 97 |
| 2 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 87 |
| 3 | 2,3-Diazaphenanthrene | 180 | C12H8N2 | 000229-72-1 | 53 |
| 4 | Phenazine | 180 | C12H8N2 | 000092-82-0 | 47 |
| 5 | 1H-Phenalen-1-one | 180 | C13H8O | 000548-39-0 | 47 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

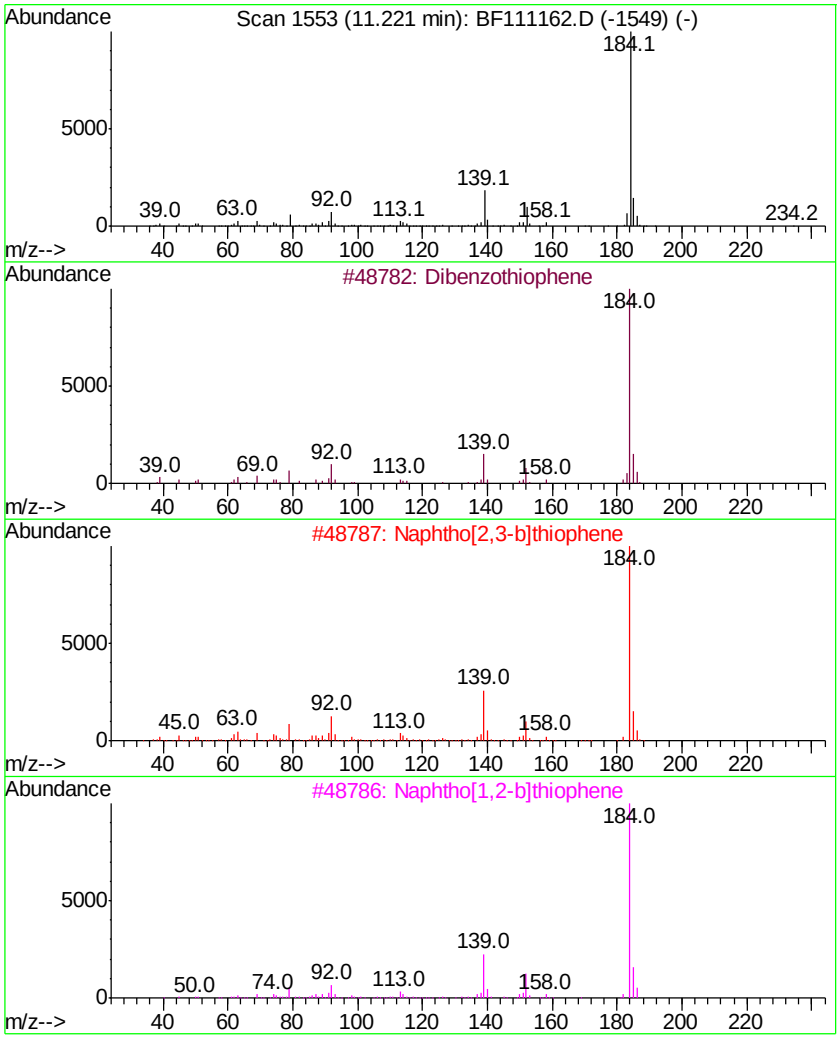
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

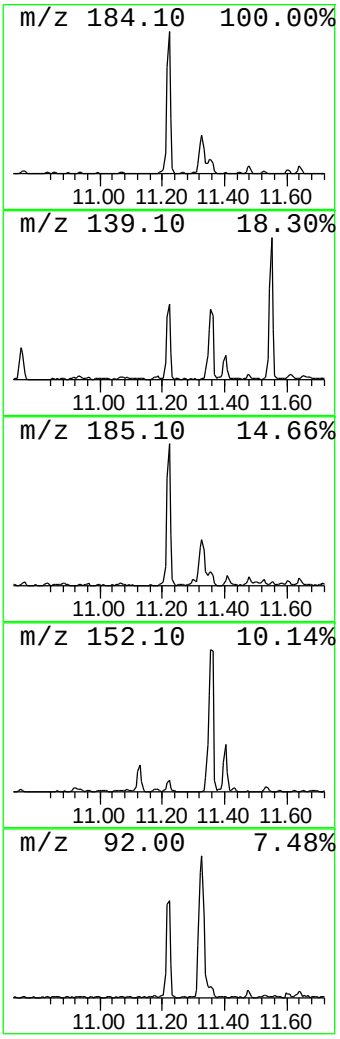
**********

Peak Number 5 Dibenzothiophene Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.22 | 8.09 ng | 1122760 | Phenanthrene-d10 | 11.33 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dibenzothiophene | 184 | C12H8S | 000132-65-0 | 97 |
| 2 | Naphtho[2,3-b]thiophene | 184 | C12H8S | 000268-77-9 | 96 |
| 3 | Naphtho[1,2-b]thiophene | 184 | C12H8S | 000234-41-3 | 94 |
| 4 | Naphtho[2,1-b]thiophene | 184 | C12H8S | 000233-02-3 | 91 |
| 5 | Azuleno(2,1-b)thiophene | 184 | C12H8S | 000248-13-5 | 91 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

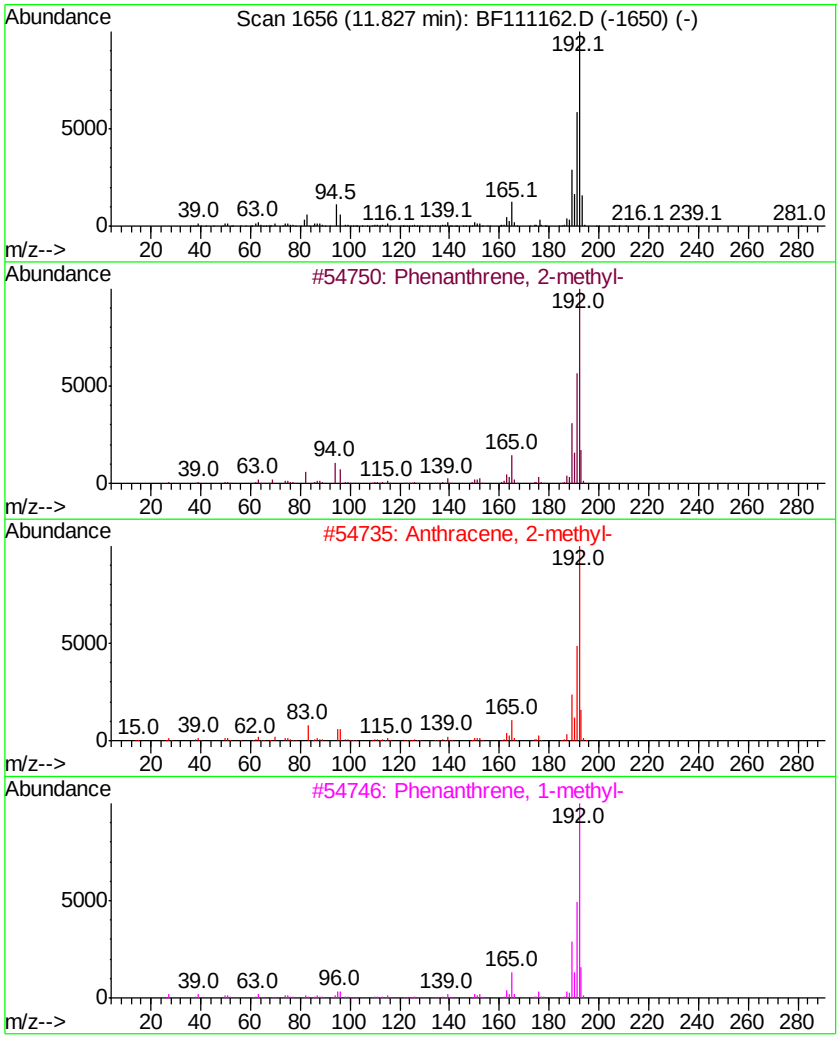
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

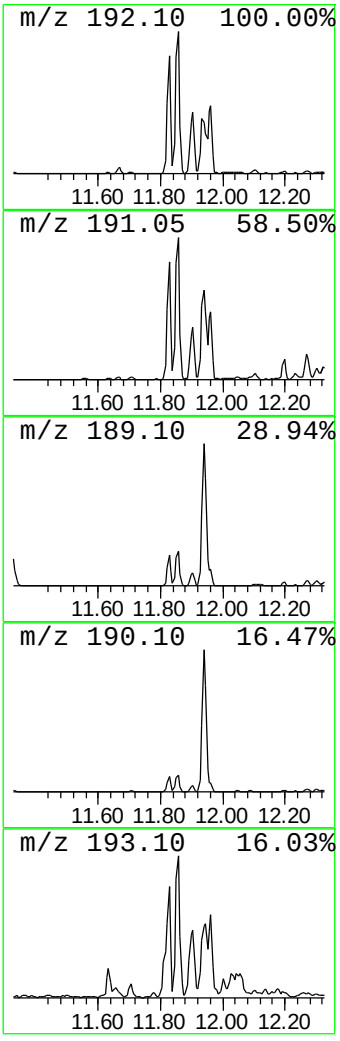
**********

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

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.83 | 13.66 ng | 1897100 | Phenanthrene-d10 | 11.33 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 95 |
| 2 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 95 |
| 3 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 94 |
| 4 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 91 |
| 5 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 90 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

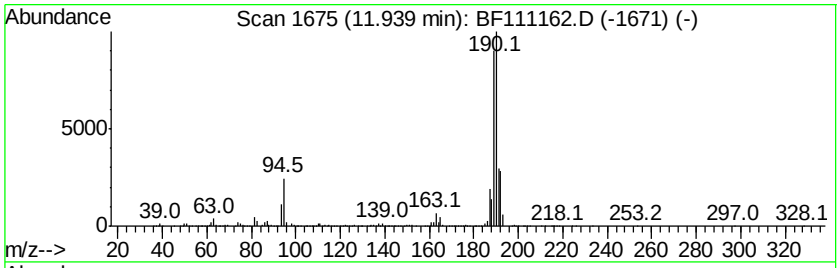
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

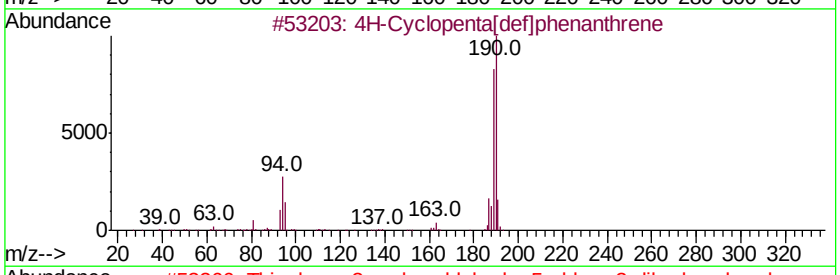
**********

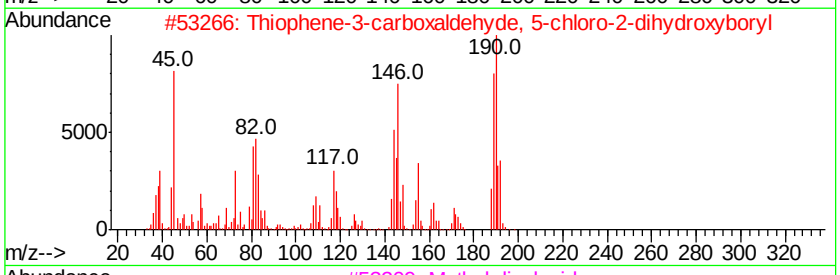
Peak Number 9 4H-Cyclopenta[def]phenanthrene Concentration Rank 2

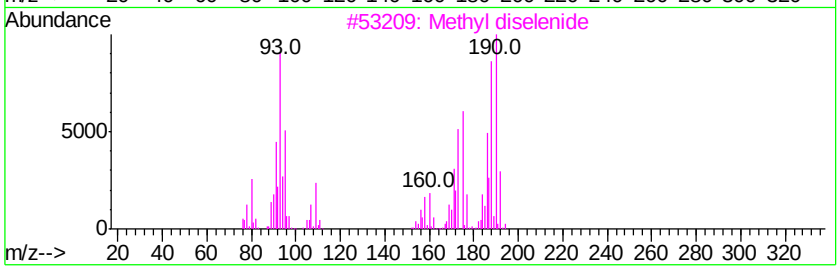
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.94 | 27.85 ng | 3866870 | Phenanthrene-d10 | 11.33 |

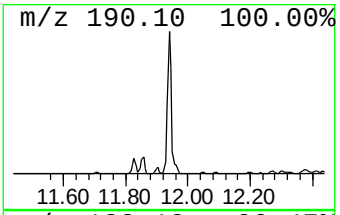
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10 | 000203-64-5 | 94 |
| 2 | Thiophene-3-carboxaldehyde, 5-ch... | 190 | C5H4BClO3S | 036155-87-0 | 50 |
| 3 | Methyl diselenide | 190 | C2H6Se2 | 007101-31-7 | 49 |
| 4 | 2,2'-Bis(4,5-dimethylimidazole) | 190 | C10H14N4 | 069286-06-2 | 40 |
| 5 | 1,4-Naphthalenedione, 2,5-dihydr... | 190 | C10H6O4 | 004923-55-1 | 25 |

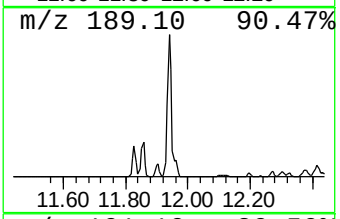


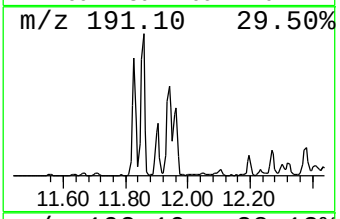



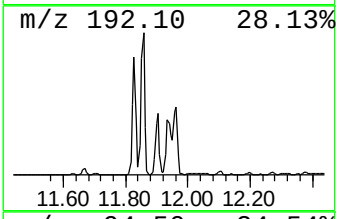



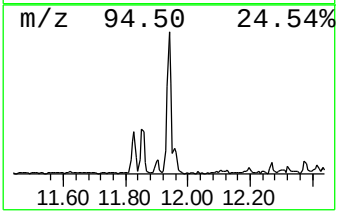



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

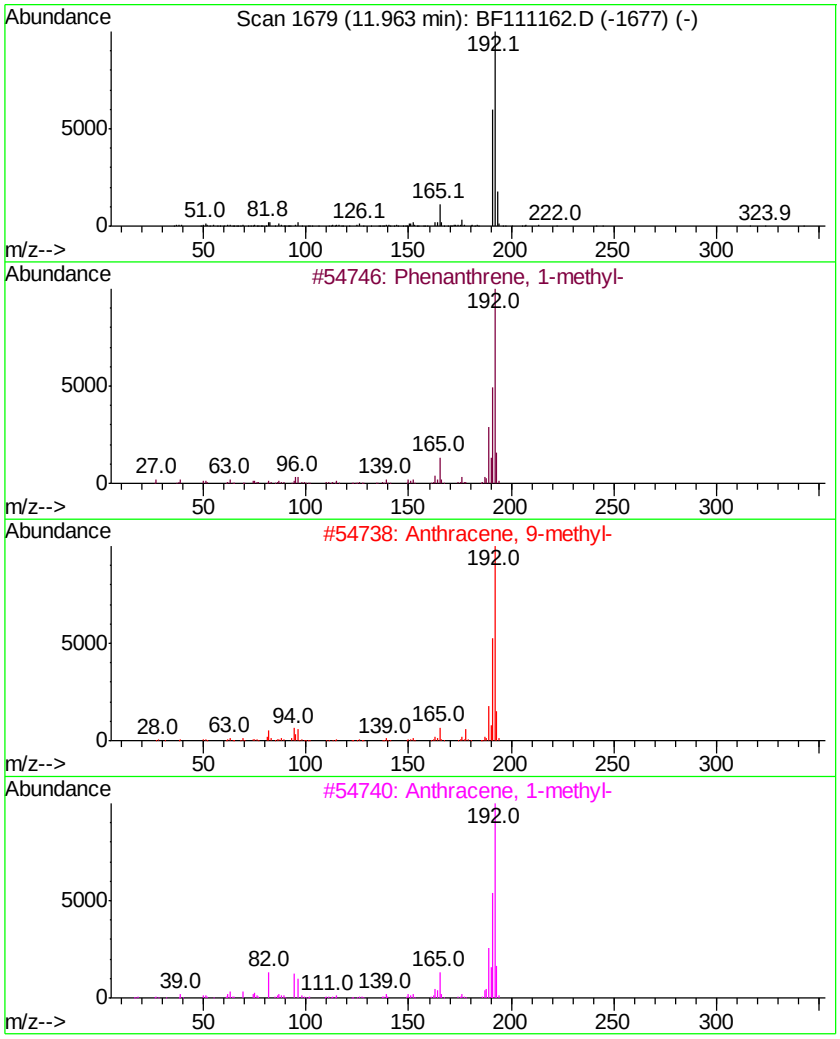
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

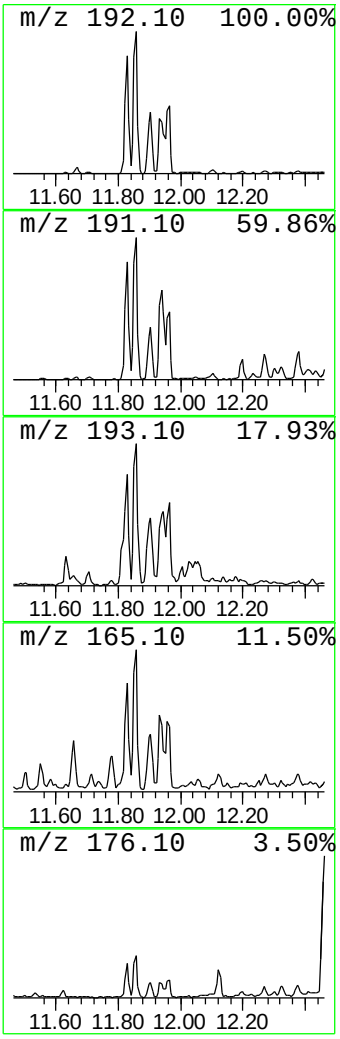
**********

Peak Number 10 Phenanthrene, 1-methyl- Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.96 | 6.78 ng | 940972 | Phenanthrene-d10 | 11.33 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 90 |
| 2 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 87 |
| 3 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 87 |
| 4 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 87 |
| 5 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 87 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

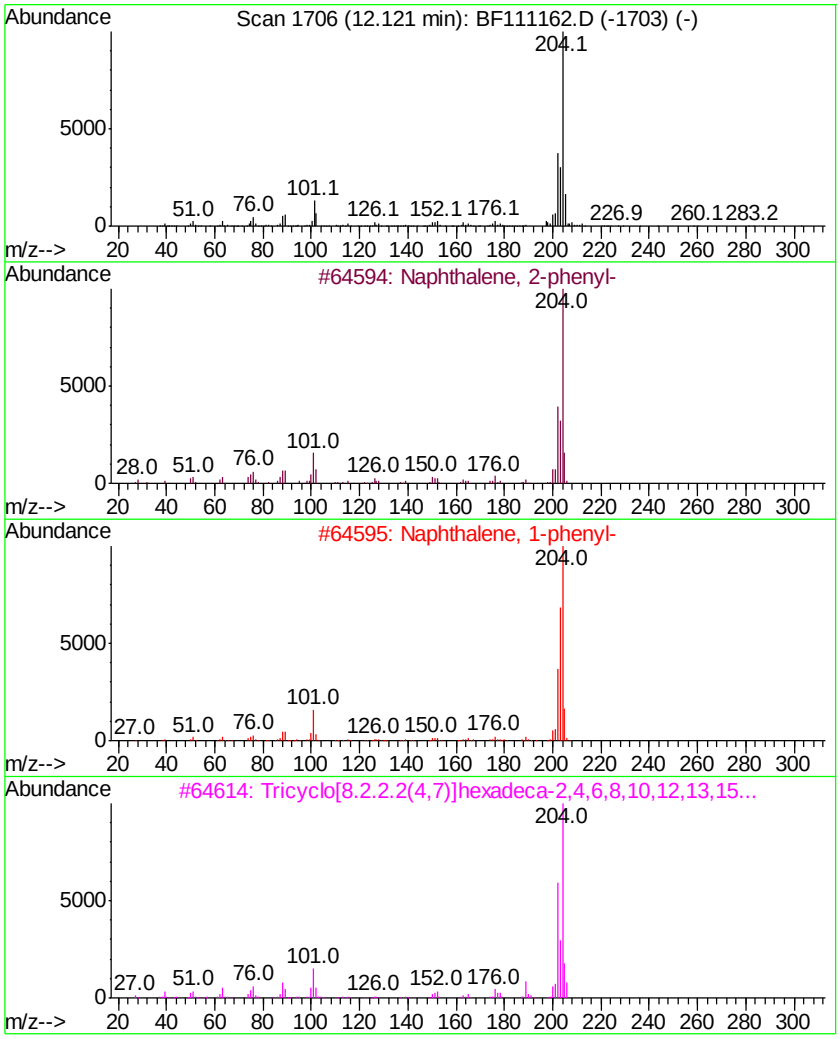
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

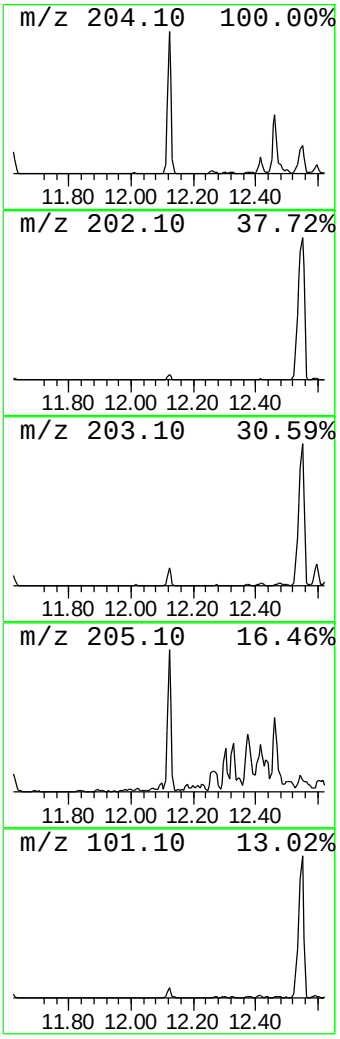
**********

Peak Number 11 Naphthalene, 2-phenyl- Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.12 | 11.62 ng | 1612820 | Phenanthrene-d10 | 11.33 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 96 |
| 2 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 86 |
| 3 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 72 |
| 4 | 1,4-Ethenoanthracene, 1,4-dihydro- | 204 | C16H12 | 027765-96-4 | 53 |
| 5 | [1,1'-Biphenyl]-2-ol, 5-chloro- | 204 | C12H9ClO | 000607-12-5 | 53 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

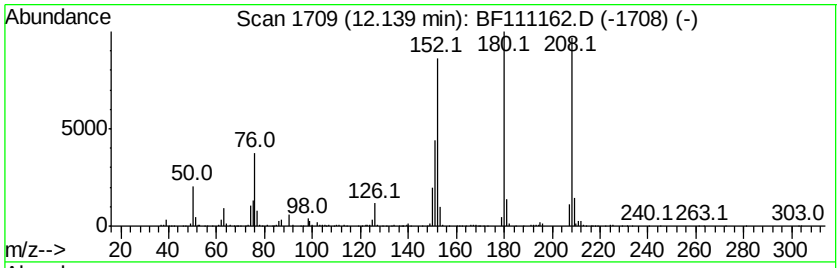
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

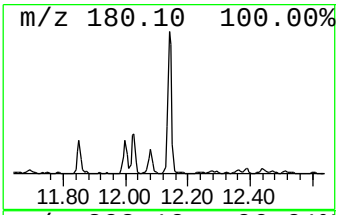
**********

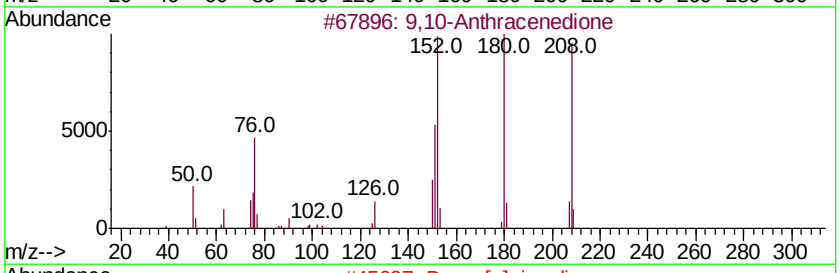
Peak Number 12 9,10-Anthracenedione Concentration Rank 8

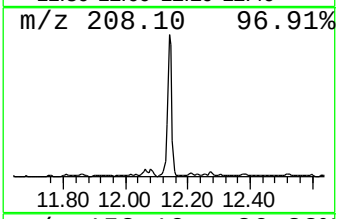
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.14 | 9.03 ng | 1254200 | Phenanthrene-d10 | 11.33 |

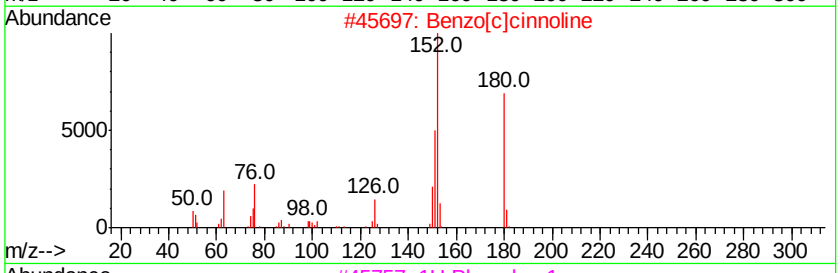
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 99 |
| 2 | Benzo[c]cinnoline | 180 | C12H8N2 | 000230-17-1 | 70 |
| 3 | 1H-Phenalen-1-one | 180 | C13H8O | 000548-39-0 | 60 |
| 4 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 60 |
| 5 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 50 |

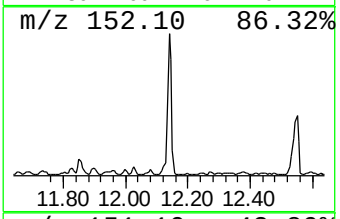


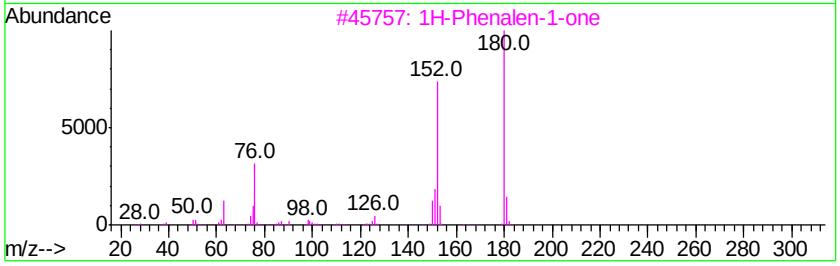



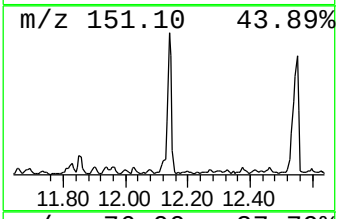



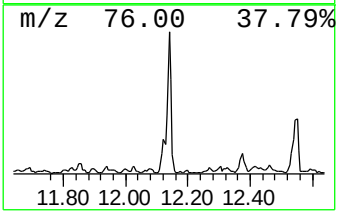



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

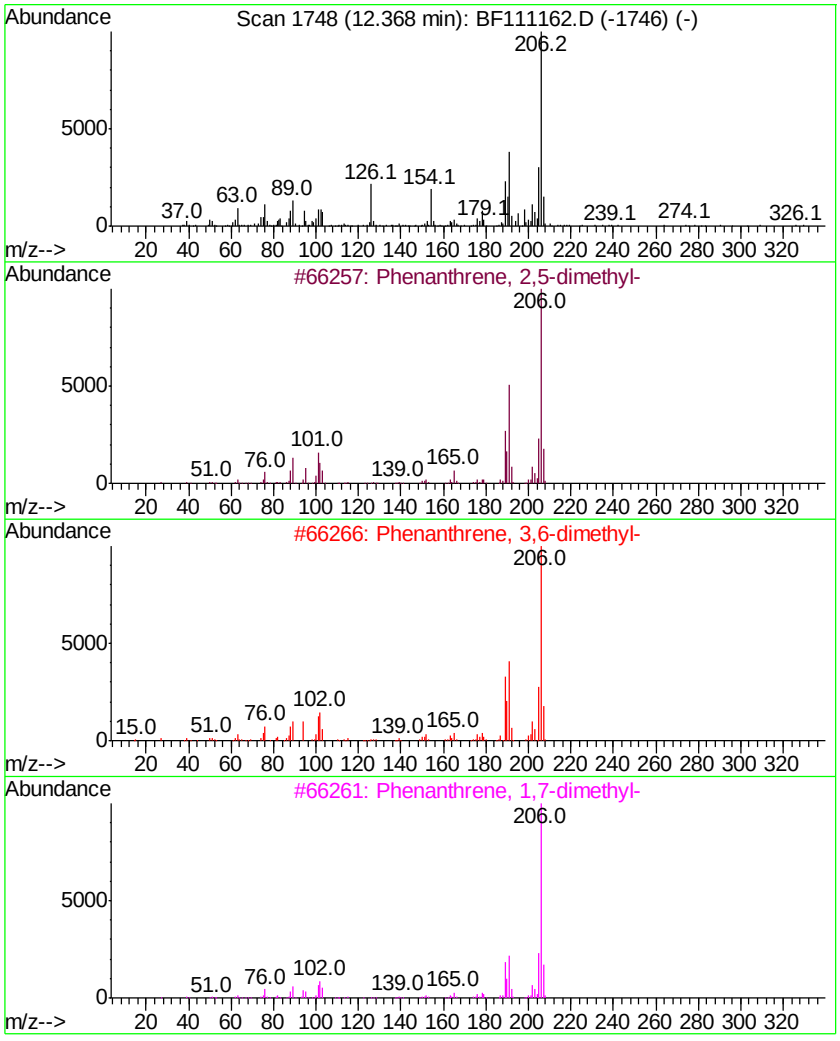
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

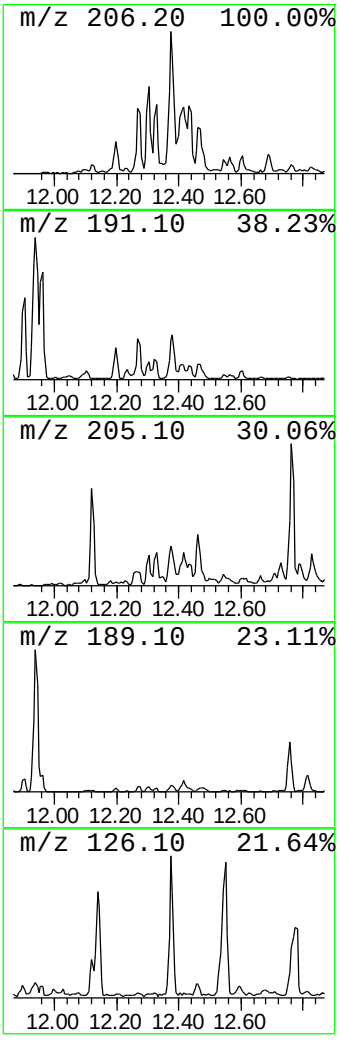
**********

Peak Number 13 Phenanthrene, 2,5-dimethyl- Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.37 | 6.84 ng | 949132 | Phenanthrene-d10 | 11.33 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 97 |
| 2 | Phenanthrene, 3,6-dimethyl- | 206 | C16H14 | 001576-67-6 | 92 |
| 3 | Phenanthrene, 1,7-dimethyl- | 206 | C16H14 | 000483-87-4 | 91 |
| 4 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 86 |
| 5 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 86 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

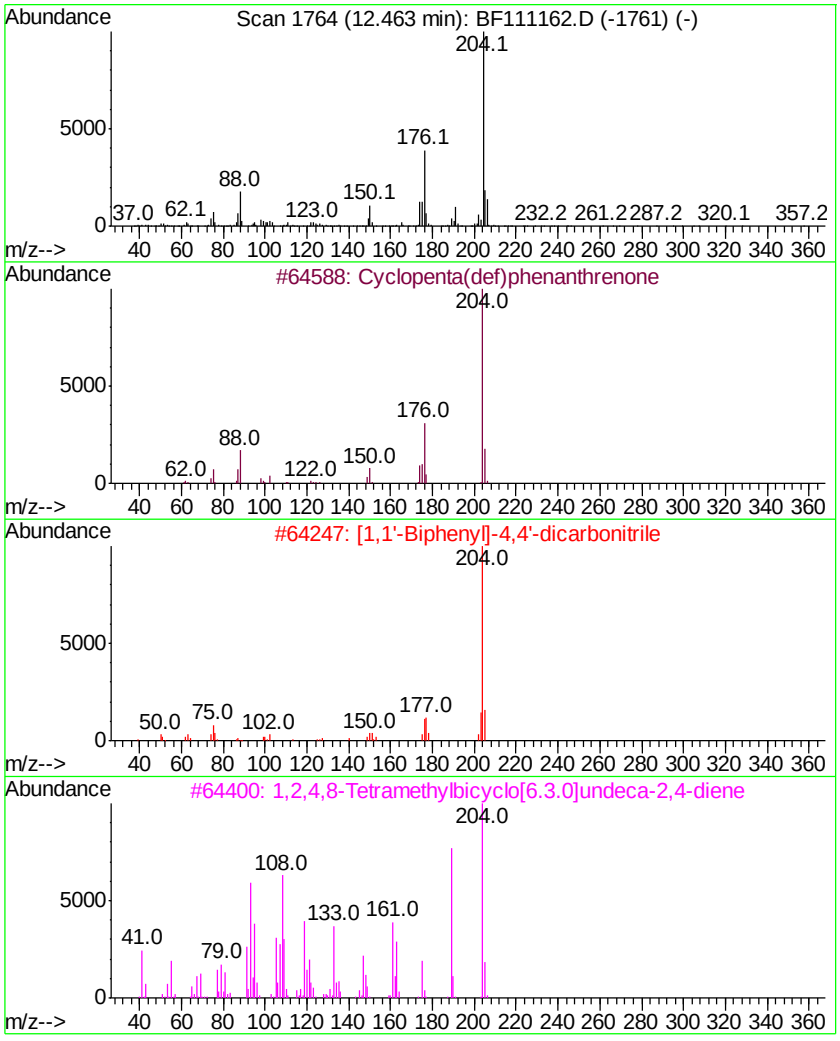
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

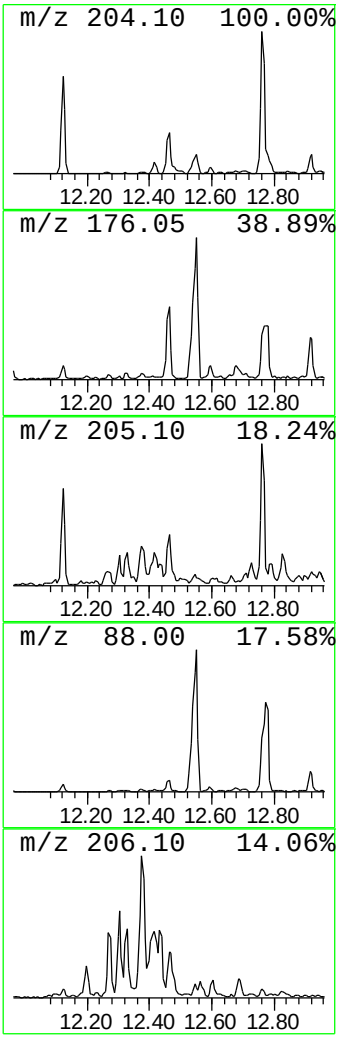
**********

Peak Number 14 Cyclopenta(def)phenanthrenone Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.46 | 7.08 ng | 983115 | Phenanthrene-d10 | 11.33 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 94 |
| 2 | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2 | 001591-30-6 | 50 |
| 3 | 1,2,4,8-Tetramethylbicyclo[6.3.0... | 204 | C15H24 | 137235-51-9 | 45 |
| 4 | 9-Acridinecarbonitrile | 204 | C14H8N2 | 005326-19-2 | 43 |
| 5 | 3,4-Biphenyldicarbonitrile | 204 | C14H8N2 | 004128-63-6 | 40 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

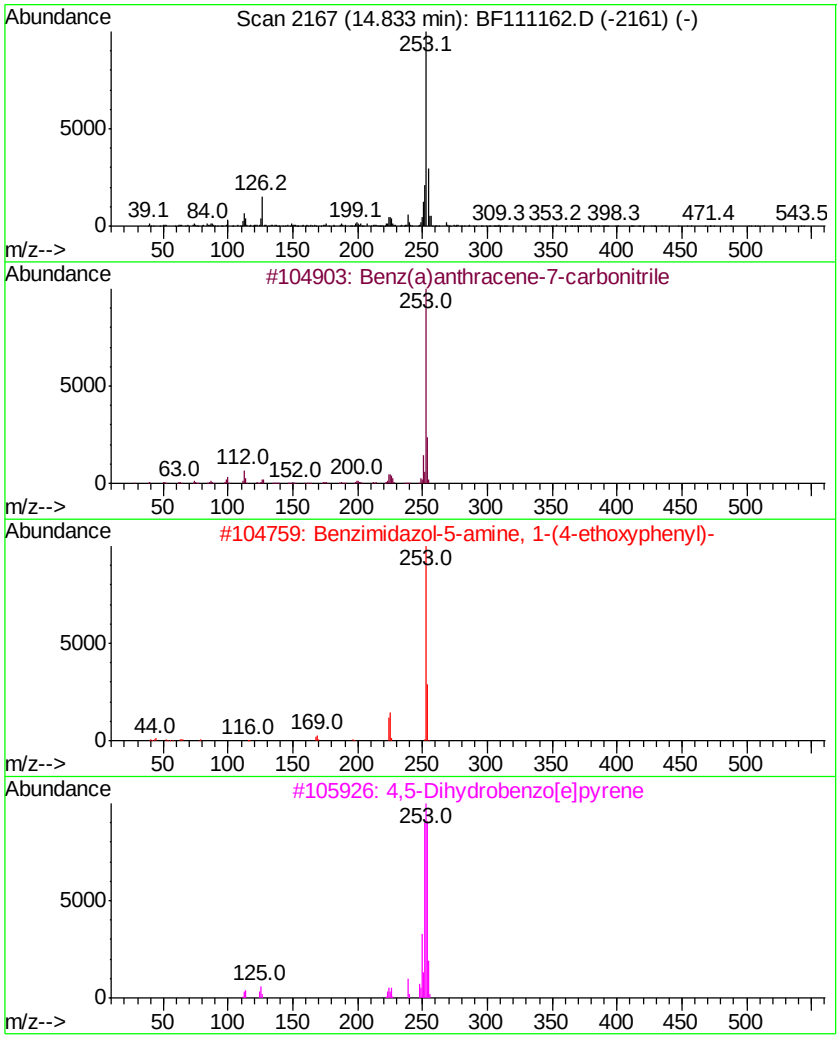
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

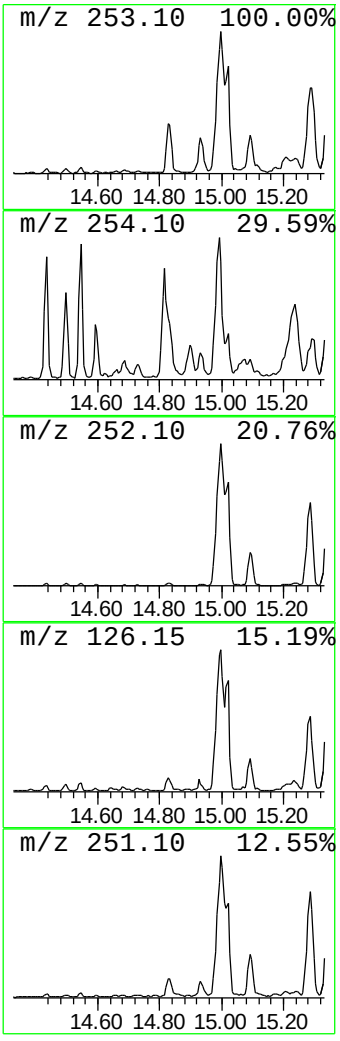
**********

Peak Number 15 Benz(a)anthracene-7-carboni... Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.83 | 10.63 ng | 1305390 | Perylene-d12 | 15.40 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benz(a)anthracene-7-carbonitrile | 253 | C19H11N | 007476-08-6 | 89 |
| 2 | Benzimidazol-5-amine, 1-(4-ethox... | 253 | C15H15N3O | 007104-62-3 | 50 |
| 3 | 4,5-Dihydrobenzo[e]pyrene | 254 | C20H14 | 095676-42-9 | 38 |
| 4 | 1,2'-Binaphthalene | 254 | C20H14 | 004325-74-0 | 38 |
| 5 | Imidazole, 2-iodo-5-methyl-4-nitro- | 253 | C4H4IN3O2 | 149510-86-1 | 38 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.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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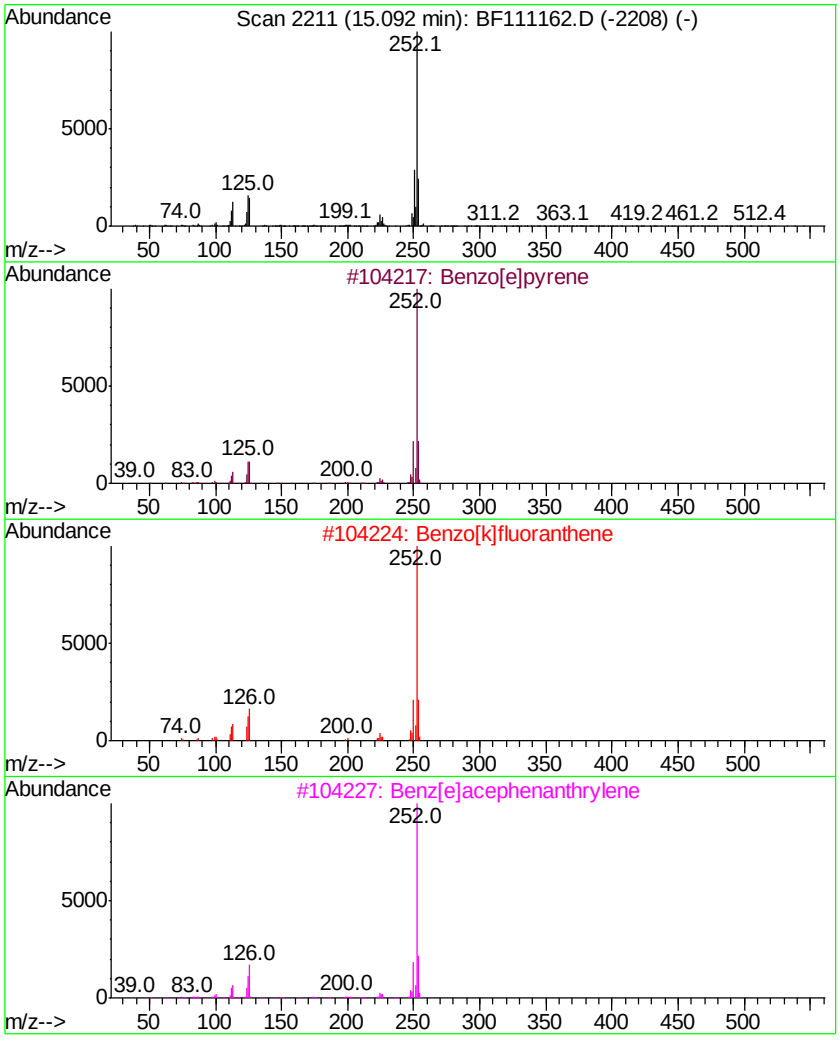
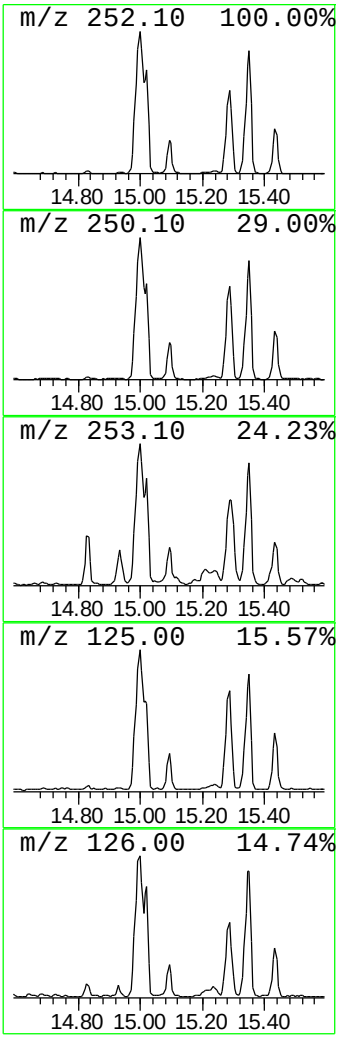
Peak Number 16 Benzo[e]pyrene Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.09 | 12.76 ng | 1567640 | Perylene-d12 | 15.40 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 97 |
| 2 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 96 |
| 3 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 95 |
| 4 | Perylene | 252 | C20H12 | 000198-55-0 | 93 |
| 5 | Benzo[j]fluoranthene | 252 | C20H12 | 000205-82-3 | 93 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

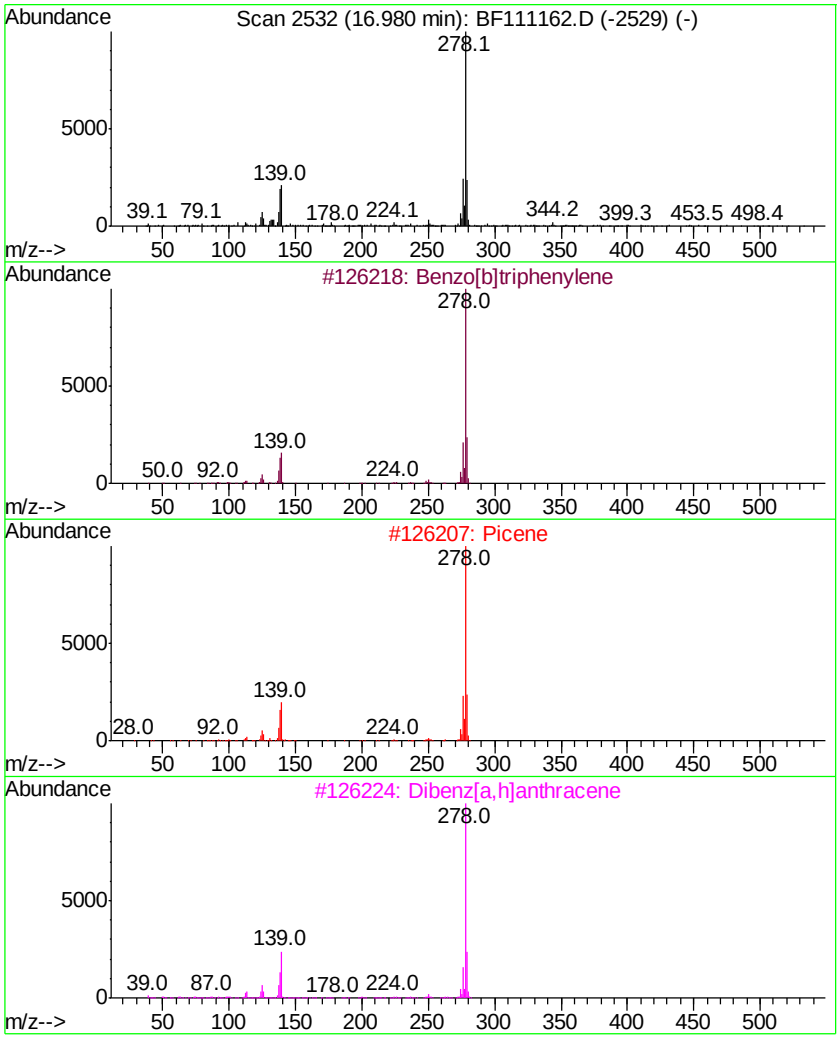
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

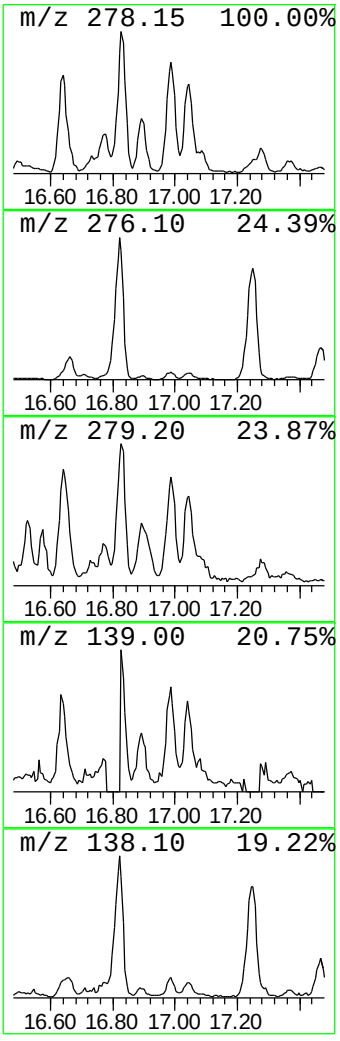
**********

Peak Number 18 Benzo[b]triphenylene Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 16.98 | 5.41 ng | 665031 | Perylene-d12 | 15.40 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[b]triphenylene | 278 | C22H14 | 000215-58-7 | 97 |
| 2 | Picene | 278 | C22H14 | 000213-46-7 | 96 |
| 3 | Dibenz[a,h]anthracene | 278 | C22H14 | 000053-70-3 | 94 |
| 4 | Pentacene | 278 | C22H14 | 000135-48-8 | 89 |
| 5 | Benzo[b]chrysene | 278 | C22H14 | 000214-17-5 | 89 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\SVOASRV\HPCHEM1\BNA_F\DATA\BF120618\
Data File : BF111162.D
Acq On : 7 Dec 2018 2:17
Operator : JU/SJ
Sample : J6214-17 10X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-10(0-2)

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF120518.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 |
| unknown6.57 | 6.57 | 8.1 | ng | 1288490 | 1 | 6.80 | 3197420 | 20.0 |
| 1,1'-Biphenyl, 2-... | 9.16 | 6.1 | ng | 1243540 | 3 | 9.84 | 4062630 | 20.0 |
| 9H-Fluoren-9-one | 11.13 | 7.2 | ng | 998489 | 4 | 11.33 | 2776940 | 20.0 |
| Dibenzothiophene | 11.22 | 8.1 | ng | 1122760 | 4 | 11.33 | 2776940 | 20.0 |
| Phenanthrene, 2-m... | 11.83 | 13.7 | ng | 1897100 | 4 | 11.33 | 2776940 | 20.0 |
| 4H-Cyclopenta[def... | 11.94 | 27.9 | ng | 3866870 | 4 | 11.33 | 2776940 | 20.0 |
| Phenanthrene, 1-m... | 11.96 | 6.8 | ng | 940972 | 4 | 11.33 | 2776940 | 20.0 |
| Naphthalene, 2-ph... | 12.12 | 11.6 | ng | 1612820 | 4 | 11.33 | 2776940 | 20.0 |
| 9,10-Anthracenedione | 12.14 | 9.0 | ng | 1254200 | 4 | 11.33 | 2776940 | 20.0 |
| Phenanthrene, 2,5... | 12.37 | 6.8 | ng | 949132 | 4 | 11.33 | 2776940 | 20.0 |
| Cyclopenta(def)ph... | 12.46 | 7.1 | ng | 983115 | 4 | 11.33 | 2776940 | 20.0 |
| Benz(a)anthracene... | 14.83 | 10.6 | ng | 1305390 | 6 | 15.40 | 2456730 | 20.0 |
| Benzo[e]pyrene | 15.09 | 12.8 | ng | 1567640 | 6 | 15.40 | 2456730 | 20.0 |
| Benzo[b]triphenylene | 16.98 | 5.4 | ng | 665031 | 6 | 15.40 | 2456730 | 20.0 |