LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

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-BF031518.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 | 2.316 | 35 | 39 | 57 | rVB | 124578 | 189881 | 6.72% | 0.409% |
| 2 | 5.216 | 528 | 532 | 540 | rBV | 130249 | 167324 | 5.92% | 0.360% |
| 3 | 5.604 | 593 | 598 | 601 | rBV | 2539918 | 2577698 | 91.26% | 5.546% |
| 4 | 6.598 | 762 | 767 | 770 | rBV | 2604391 | 2608325 | 92.35% | 5.612% |
| 5 | 6.745 | 787 | 792 | 795 | rBV | 2994231 | 2728032 | 96.59% | 5.870% |
| 6 | 6.975 | 827 | 831 | 834 | rBV | 989958 | 767418 | 27.17% | 1.651% |
| 7 | 7.134 | 853 | 858 | 861 | rBV | 2448389 | 2187120 | 77.44% | 4.706% |
| 8 | 7.539 | 922 | 927 | 930 | rBV | 1758697 | 1690549 | 59.85% | 3.637% |
| 9 | 8.257 | 1045 | 1049 | 1052 | rBV | 1235472 | 1015544 | 35.96% | 2.185% |
| 10 | 9.069 | 1183 | 1187 | 1190 | rBV | 89561 | 73374 | 2.60% | 0.158% |
| 11 | 9.328 | 1227 | 1231 | 1235 | rBV | 3005974 | 2824439 | 100.00% | 6.077% |
| 12 | 9.669 | 1285 | 1289 | 1292 | rBV | 122660 | 121688 | 4.31% | 0.262% |
| 13 | 9.716 | 1295 | 1297 | 1300 | rBV | 250245 | 220721 | 7.81% | 0.475% |
| 14 | 9.786 | 1305 | 1309 | 1314 | rBV2 | 63812 | 88060 | 3.12% | 0.189% |
| 15 | 9.875 | 1321 | 1324 | 1329 | rBV | 274265 | 245355 | 8.69% | 0.528% |
| 16 | 9.928 | 1329 | 1333 | 1336 | rVB | 146166 | 114862 | 4.07% | 0.247% |
| 17 | 10.016 | 1345 | 1348 | 1351 | rBV2 | 1232144 | 1004652 | 35.57% | 2.162% |
| 18 | 10.045 | 1351 | 1353 | 1356 | rVB | 118163 | 96754 | 3.43% | 0.208% |
| 19 | 10.216 | 1379 | 1382 | 1385 | rVV2 | 98851 | 93724 | 3.32% | 0.202% |
| 20 | 10.251 | 1385 | 1388 | 1392 | rVB | 105458 | 97173 | 3.44% | 0.209% |
| 21 | 10.327 | 1397 | 1401 | 1404 | rBV2 | 93960 | 101093 | 3.58% | 0.218% |
| 22 | 10.427 | 1411 | 1418 | 1422 | rBV2 | 187269 | 231171 | 8.18% | 0.497% |
| 23 | 10.563 | 1438 | 1441 | 1448 | rVB2 | 147949 | 178069 | 6.30% | 0.383% |
| 24 | 10.645 | 1451 | 1455 | 1458 | rVV3 | 59959 | 90622 | 3.21% | 0.195% |
| 25 | 10.722 | 1463 | 1468 | 1471 | rVV4 | 39458 | 69894 | 2.47% | 0.150% |
| 26 | 10.810 | 1478 | 1483 | 1486 | rBV | 1674673 | 1592374 | 56.38% | 3.426% |
| 27 | 10.904 | 1496 | 1499 | 1501 | rBV | 130065 | 131536 | 4.66% | 0.283% |
| 28 | 10.927 | 1501 | 1503 | 1508 | rVB2 | 82836 | 100961 | 3.57% | 0.217% |
| 29 | 11.110 | 1529 | 1534 | 1537 | rBV4 | 91585 | 140462 | 4.97% | 0.302% |
| 30 | 11.139 | 1537 | 1539 | 1542 | rVV | 76161 | 71357 | 2.53% | 0.154% |
| 31 | 11.310 | 1565 | 1568 | 1572 | rVV | 110923 | 122763 | 4.35% | 0.264% |
| 32 | 11.351 | 1572 | 1575 | 1578 | rVV | 117399 | 108955 | 3.86% | 0.234% |
| 33 | 11.404 | 1582 | 1584 | 1588 | rVB | 96602 | 79717 | 2.82% | 0.172% |
| 34 | 11.510 | 1598 | 1602 | 1604 | rBV | 1031643 | 925827 | 32.78% | 1.992% |

LSC Area Percent Report

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Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

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-BF031518.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 11.533 | 1604 | 1606 | 1610 | rVV | 1494860 | 1204801 | 42.66% | 2.592% |
| 36 | 11.586 | 1612 | 1615 | 1617 | rVV | 257056 | 206293 | 7.30% | 0.444% |
| 37 | 11.739 | 1637 | 1641 | 1646 | rBV2 | 89793 | 111666 | 3.95% | 0.240% |
| 38 | 11.839 | 1655 | 1658 | 1662 | rVB | 112856 | 102851 | 3.64% | 0.221% |
| 39 | 12.010 | 1684 | 1687 | 1690 | rVV | 536514 | 500519 | 17.72% | 1.077% |
| 40 | 12.039 | 1690 | 1692 | 1695 | rVB | 686410 | 539181 | 19.09% | 1.160% |
| 41 | 12.086 | 1695 | 1700 | 1703 | rBV | 126928 | 128197 | 4.54% | 0.276% |
| 42 | 12.121 | 1703 | 1706 | 1709 | rVV2 | 566474 | 647904 | 22.94% | 1.394% |
| 43 | 12.145 | 1709 | 1710 | 1715 | rVB | 384569 | 275485 | 9.75% | 0.593% |
| 44 | 12.186 | 1715 | 1717 | 1720 | rBV3 | 75889 | 75534 | 2.67% | 0.163% |
| 45 | 12.304 | 1734 | 1737 | 1740 | rVV | 209693 | 191507 | 6.78% | 0.412% |
| 46 | 12.333 | 1740 | 1742 | 1748 | rVB2 | 244812 | 239062 | 8.46% | 0.514% |
| 47 | 12.457 | 1761 | 1763 | 1766 | rVB | 150000 | 101578 | 3.60% | 0.219% |
| 48 | 12.486 | 1766 | 1768 | 1770 | rBV | 237924 | 179789 | 6.37% | 0.387% |
| 49 | 12.510 | 1770 | 1772 | 1775 | rVB | 164940 | 141481 | 5.01% | 0.304% |
| 50 | 12.563 | 1778 | 1781 | 1784 | rBV | 532705 | 544479 | 19.28% | 1.172% |
| 51 | 12.598 | 1784 | 1787 | 1789 | rVV2 | 178885 | 194602 | 6.89% | 0.419% |
| 52 | 12.621 | 1789 | 1791 | 1793 | rVB | 153075 | 117158 | 4.15% | 0.252% |
| 53 | 12.651 | 1793 | 1796 | 1801 | rBV2 | 240405 | 307160 | 10.88% | 0.661% |
| 54 | 12.733 | 1804 | 1810 | 1813 | rBV | 1579589 | 1465037 | 51.87% | 3.152% |
| 55 | 12.769 | 1813 | 1816 | 1818 | rBV | 84410 | 78905 | 2.79% | 0.170% |
| 56 | 12.792 | 1818 | 1820 | 1822 | rVB | 108722 | 87342 | 3.09% | 0.188% |
| 57 | 12.821 | 1822 | 1825 | 1828 | rBV | 109318 | 93552 | 3.31% | 0.201% |
| 58 | 12.963 | 1842 | 1849 | 1854 | rBV | 1780959 | 1956047 | 69.25% | 4.209% |
| 59 | 13.010 | 1854 | 1857 | 1860 | rVB2 | 271586 | 264003 | 9.35% | 0.568% |
| 60 | 13.068 | 1860 | 1867 | 1868 | rBV2 | 107234 | 180681 | 6.40% | 0.389% |
| 61 | 13.098 | 1868 | 1872 | 1875 | rBV | 2146613 | 1973698 | 69.88% | 4.247% |
| 62 | 13.174 | 1881 | 1885 | 1892 | rBV5 | 229503 | 431161 | 15.27% | 0.928% |
| 63 | 13.263 | 1897 | 1900 | 1902 | rVV3 | 193570 | 253180 | 8.96% | 0.545% |
| 64 | 13.286 | 1902 | 1904 | 1907 | rVV | 404664 | 350067 | 12.39% | 0.753% |
| 65 | 13.351 | 1913 | 1915 | 1918 | rVV | 216879 | 201695 | 7.14% | 0.434% |
| 66 | 13.392 | 1918 | 1922 | 1925 | rVV2 | 397892 | 374358 | 13.25% | 0.805% |
| 67 | 13.457 | 1930 | 1933 | 1935 | rBV2 | 65539 | 81954 | 2.90% | 0.176% |
| 68 | 13.486 | 1935 | 1938 | 1941 | rVV | 301396 | 252577 | 8.94% | 0.543% |
| 69 | 13.515 | 1941 | 1943 | 1946 | rVB | 243659 | 205292 | 7.27% | 0.442% |
| 70 | 13.545 | 1946 | 1948 | 1953 | rVB3 | 84343 | 78093 | 2.76% | 0.168% |
| 71 | 13.774 | 1983 | 1987 | 1988 | rBV | 71462 | 80680 | 2.86% | 0.174% |

LSC Area Percent Report

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Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

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-BF031518.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 13.798 | 1988 | 1991 | 1995 | rVB | 251539 | 263101 | 9.32% | 0.566% |
| 73 | 13.857 | 1999 | 2001 | 2004 | rVB | 114995 | 97484 | 3.45% | 0.210% |
| 74 | 13.910 | 2004 | 2010 | 2013 | rBV5 | 185587 | 351508 | 12.45% | 0.756% |
| 75 | 13.939 | 2013 | 2015 | 2017 | rVB | 170794 | 124663 | 4.41% | 0.268% |
| 76 | 13.974 | 2017 | 2021 | 2024 | rBV2 | 530789 | 612721 | 21.69% | 1.318% |
| 77 | 14.004 | 2024 | 2026 | 2031 | rVB | 176355 | 197942 | 7.01% | 0.426% |
| 78 | 14.163 | 2048 | 2053 | 2056 | rBV2 | 1107590 | 1706141 | 60.41% | 3.671% |
| 79 | 14.192 | 2056 | 2058 | 2065 | rVB | 844624 | 735959 | 26.06% | 1.584% |
| 80 | 14.245 | 2065 | 2067 | 2070 | rBV2 | 92417 | 76331 | 2.70% | 0.164% |
| 81 | 14.392 | 2088 | 2092 | 2095 | rBV4 | 81688 | 105755 | 3.74% | 0.228% |
| 82 | 14.515 | 2111 | 2113 | 2115 | rVV | 95501 | 87558 | 3.10% | 0.188% |
| 83 | 14.557 | 2115 | 2120 | 2123 | rVV | 353531 | 431677 | 15.28% | 0.929% |
| 84 | 14.592 | 2123 | 2126 | 2128 | rVV | 204610 | 227459 | 8.05% | 0.489% |
| 85 | 14.621 | 2129 | 2131 | 2135 | rVV4 | 126552 | 208156 | 7.37% | 0.448% |
| 86 | 14.686 | 2139 | 2142 | 2144 | rVV | 188825 | 184715 | 6.54% | 0.397% |
| 87 | 14.710 | 2144 | 2146 | 2149 | rVB | 112075 | 97470 | 3.45% | 0.210% |
| 88 | 14.998 | 2193 | 2195 | 2200 | rVB2 | 86696 | 99087 | 3.51% | 0.213% |
| 89 | 15.251 | 2233 | 2238 | 2241 | rBV | 484738 | 780143 | 27.62% | 1.679% |
| 90 | 15.362 | 2254 | 2257 | 2262 | rVB | 94310 | 110250 | 3.90% | 0.237% |
| 91 | 15.574 | 2289 | 2293 | 2300 | rVB | 350628 | 439354 | 15.56% | 0.945% |
| 92 | 15.645 | 2300 | 2305 | 2310 | rBV | 441761 | 564484 | 19.99% | 1.215% |
| 93 | 15.709 | 2311 | 2316 | 2320 | rVV | 472590 | 676943 | 23.97% | 1.457% |
| 94 | 15.745 | 2320 | 2322 | 2329 | rVB2 | 115994 | 167192 | 5.92% | 0.360% |
| 95 | 16.168 | 2390 | 2394 | 2399 | rBV3 | 71575 | 119163 | 4.22% | 0.256% |
| 96 | 16.227 | 2400 | 2404 | 2408 | rBV | 80835 | 133851 | 4.74% | 0.288% |
| 97 | 16.309 | 2415 | 2418 | 2423 | rVB2 | 56247 | 72275 | 2.56% | 0.156% |
| 98 | 17.292 | 2579 | 2585 | 2592 | rVB3 | 171577 | 336286 | 11.91% | 0.724% |
| 99 | 17.480 | 2609 | 2617 | 2623 | rVB2 | 39034 | 111630 | 3.95% | 0.240% |
| 100 | 17.774 | 2662 | 2667 | 2677 | rVB | 130891 | 282118 | 9.99% | 0.607% |

Sum of corrected areas: 46476479

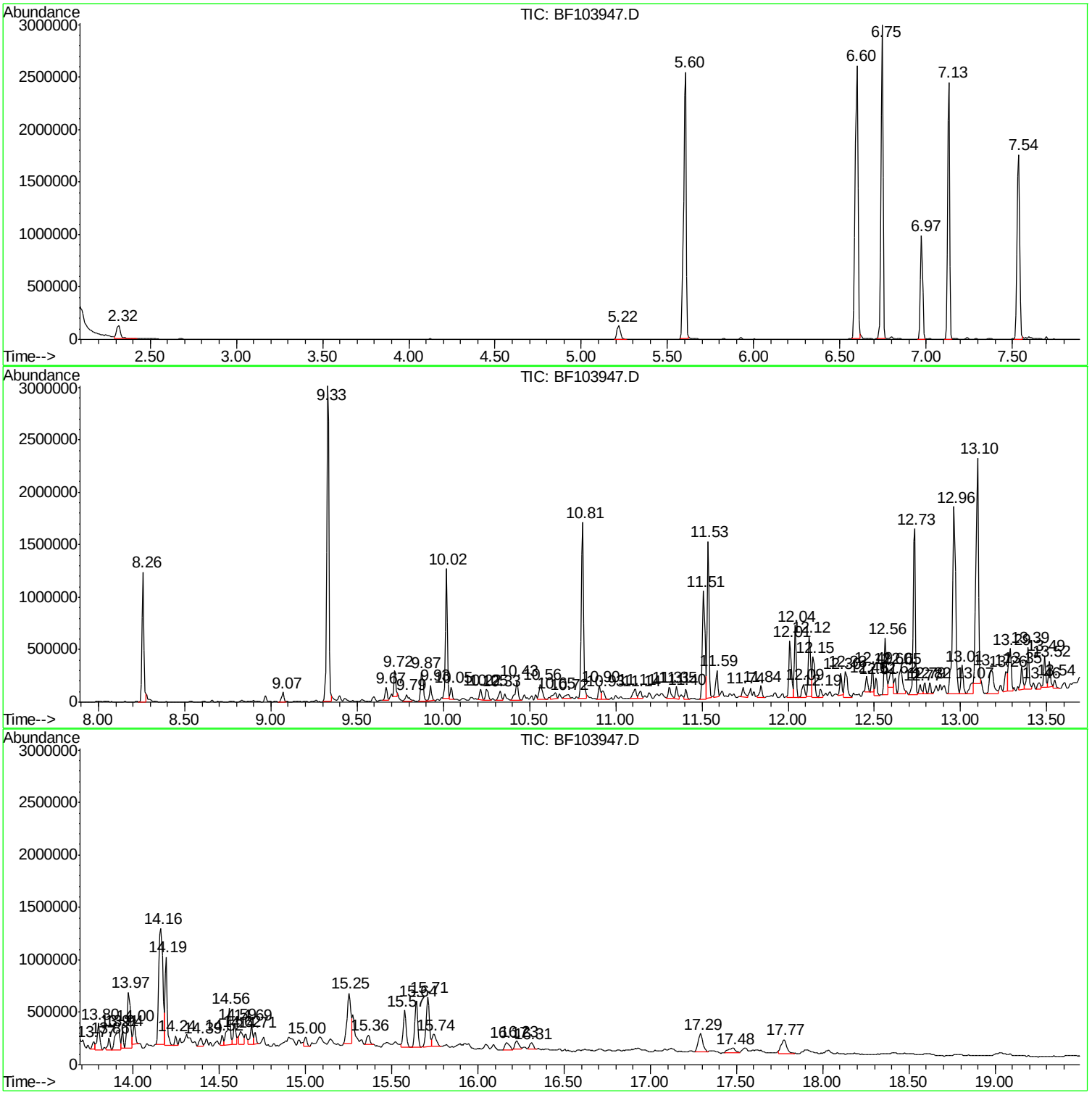
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

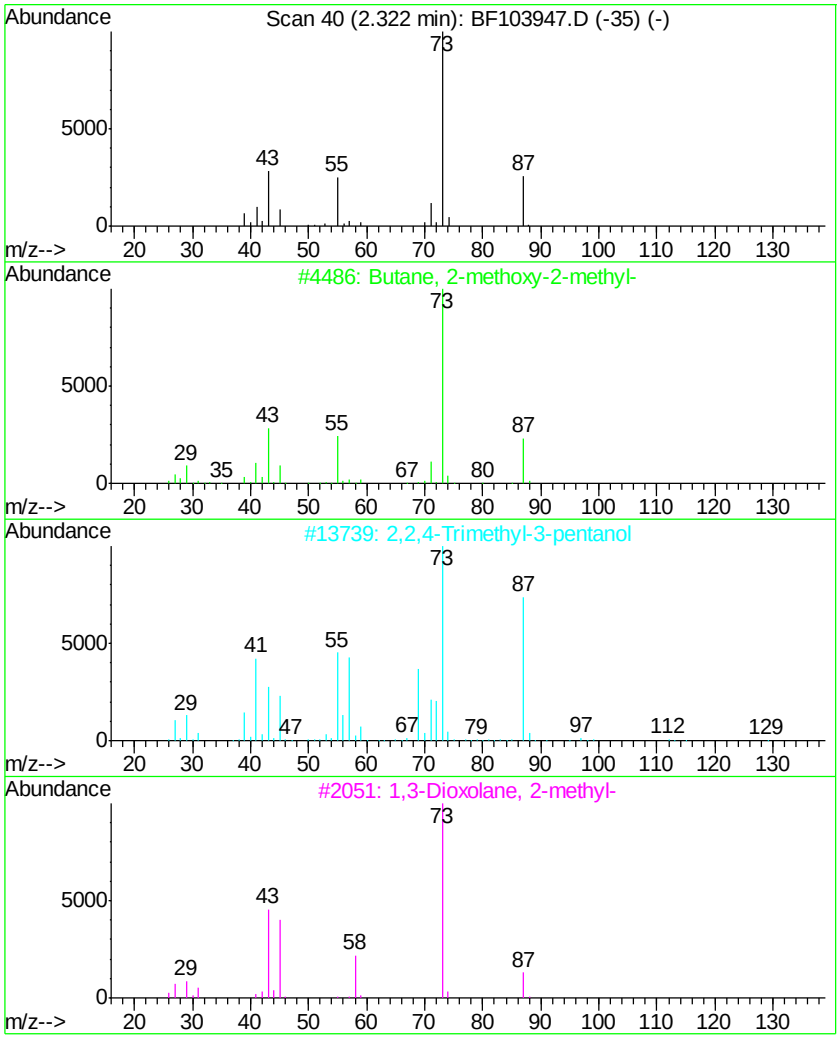
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

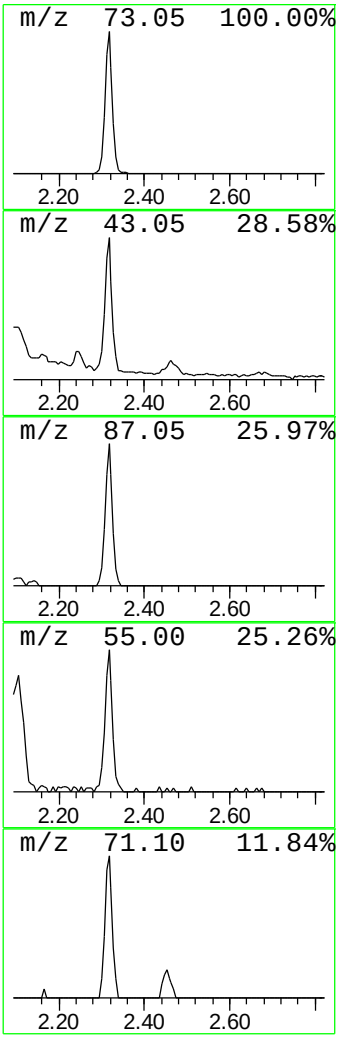
**********

Peak Number 1 Butane, 2-methoxy-2-methyl- Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 2.32 | 4.95 ng | 189881 | 1,4-Dichlorobenzene-d4 | 6.97 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Butane, 2-methoxy-2-methyl- | 102 | C6H14O | 000994-05-8 | 78 |
| 2 | 2,2,4-Trimethyl-3-pentanol | 130 | C8H18O | 005162-48-1 | 39 |
| 3 | 1,3-Dioxolane, 2-methyl- | 88 | C4H8O2 | 000497-26-7 | 25 |
| 4 | Pentane, 3-methoxy- | 102 | C6H14O | 036839-67-5 | 23 |
| 5 | 3-Hexanol, 2-methyl- | 116 | C7H16O | 000617-29-8 | 17 |



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Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

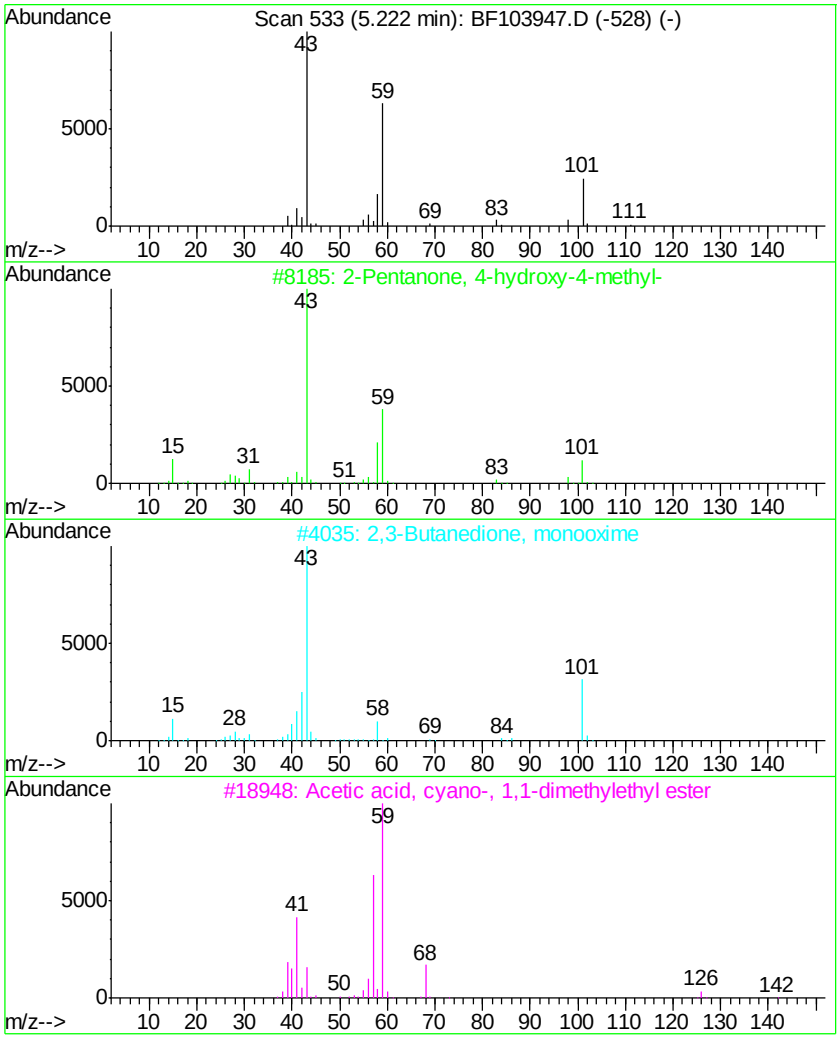
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

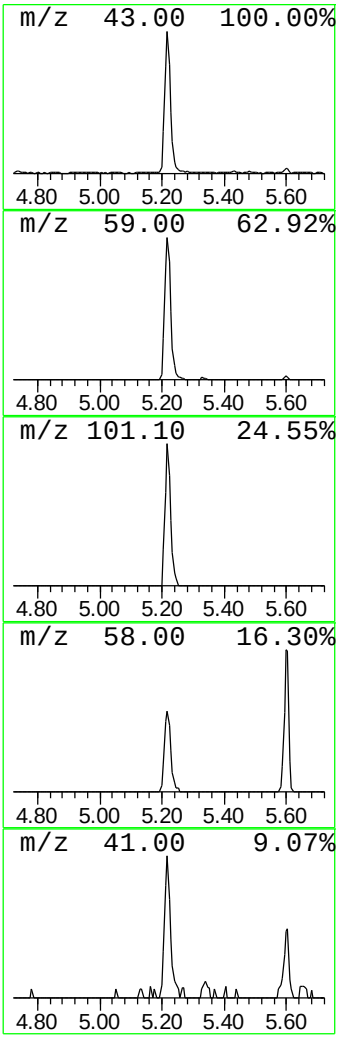
**********

Peak Number 2 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.22 | 4.36 ng | 167324 | 1,4-Dichlorobenzene-d4 | 6.97 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 2 | 2,3-Butanedione, monooxime | 101 | C4H7NO2 | 000057-71-6 | 25 |
| 3 | Acetic acid, cyano-, 1,1-dimethy... | 141 | C7H11NO2 | 001116-98-9 | 17 |
| 4 | 3-Hydroxy-3-methyl-2-butanone | 102 | C5H10O2 | 000115-22-0 | 12 |
| 5 | 5-Oxohexanenitrile | 111 | C6H9NO | 010412-98-3 | 9 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

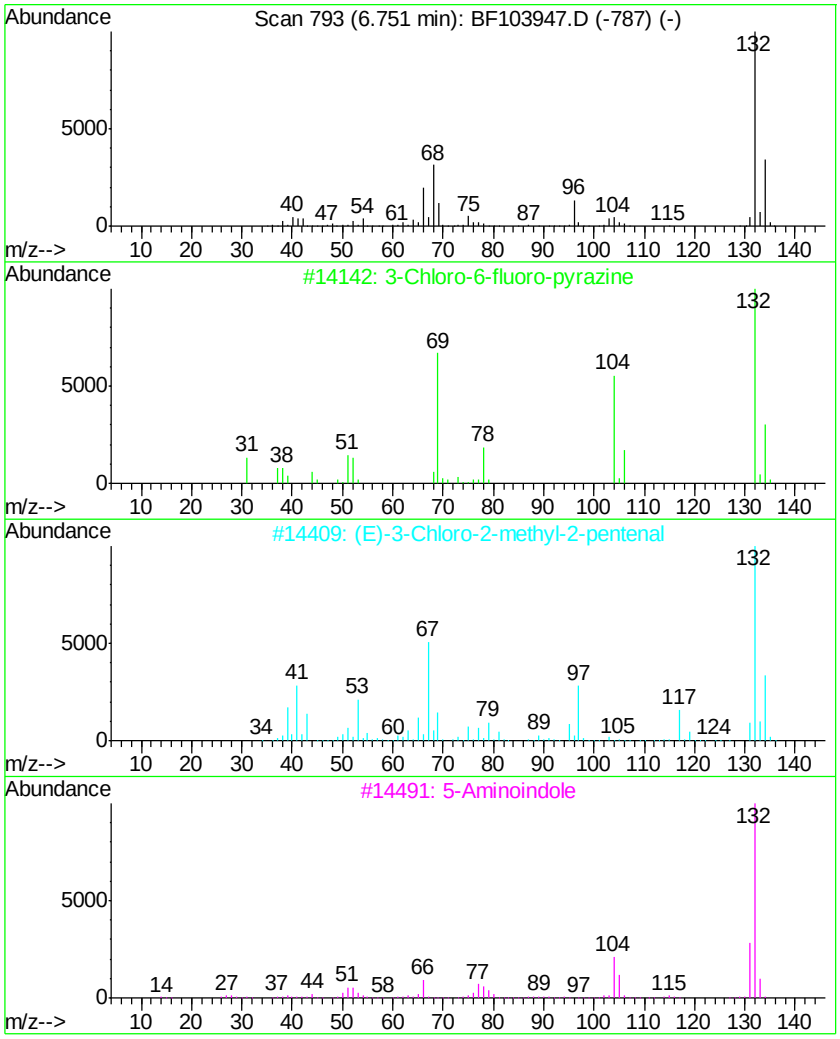
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

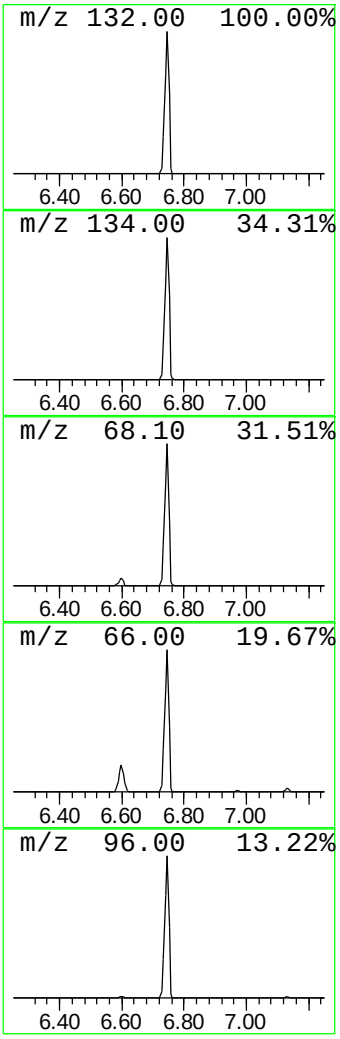
**********

Peak Number 3 unknown6.75 Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.75 | 71.10 ng | 2728030 | 1,4-Dichlorobenzene-d4 | 6.97 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 27 |
| 2 | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO | 031357-76-3 | 16 |
| 3 | 5-Aminoindole | 132 | C8H8N2 | 005192-03-0 | 12 |
| 4 | 5-Fluoro-2-chloropyrimidine | 132 | C4H2ClFN2 | 062802-42-0 | 9 |
| 5 | 4-Methylpyrrolo[1,2-a]pyrazine | 132 | C8H8N2 | 064608-60-2 | 9 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
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Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

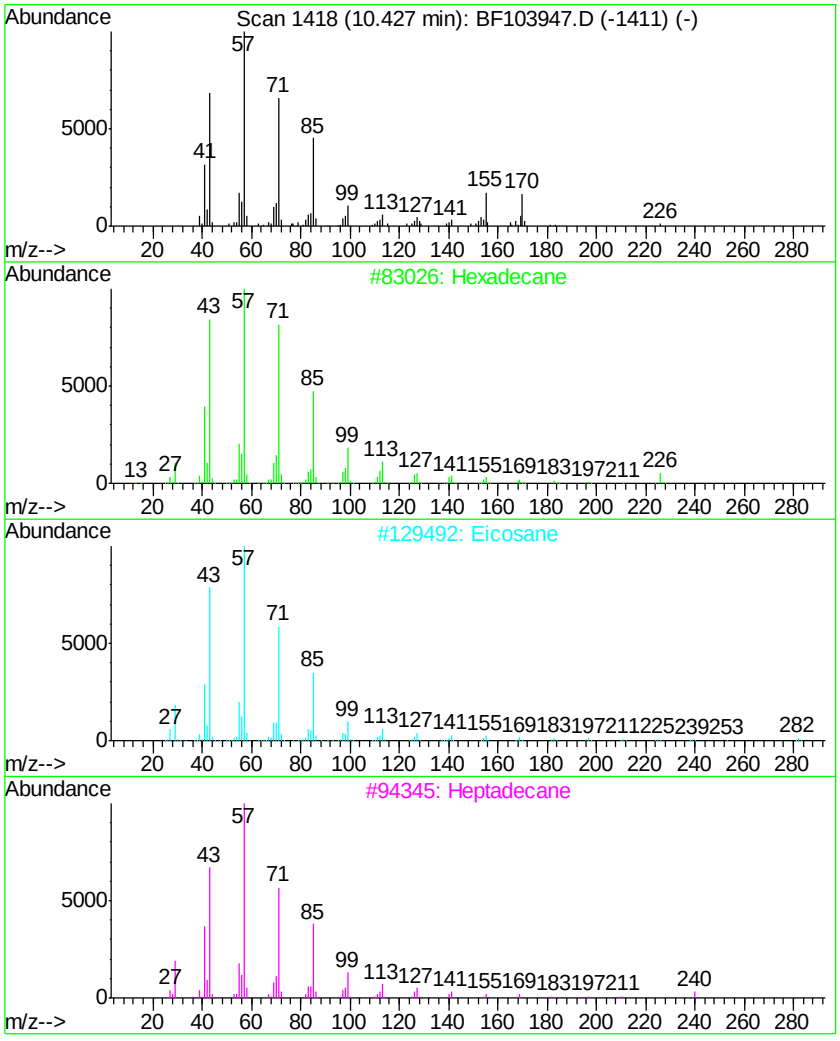
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

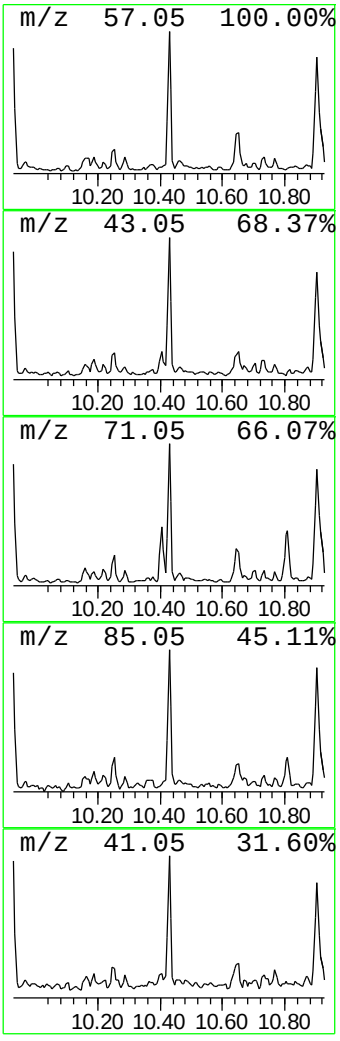
**********

Peak Number 5 Hexadecane Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.43 | 4.60 ng | 231171 | Acenaphthene-d10 | 10.02 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexadecane | 226 | C16H34 | 000544-76-3 | 91 |
| 2 | Eicosane | 282 | C20H42 | 000112-95-8 | 72 |
| 3 | Heptadecane | 240 | C17H36 | 000629-78-7 | 68 |
| 4 | Tetradecane | 198 | C14H30 | 000629-59-4 | 68 |
| 5 | Tetracosane | 338 | C24H50 | 000646-31-1 | 68 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

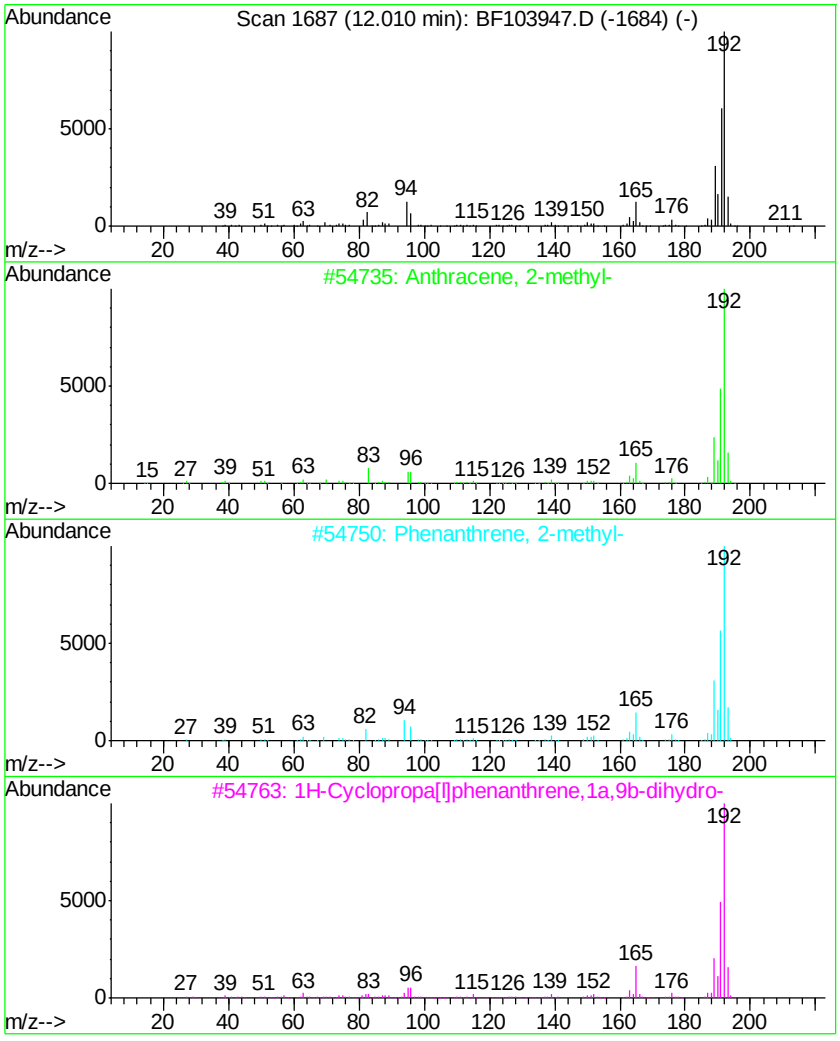
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

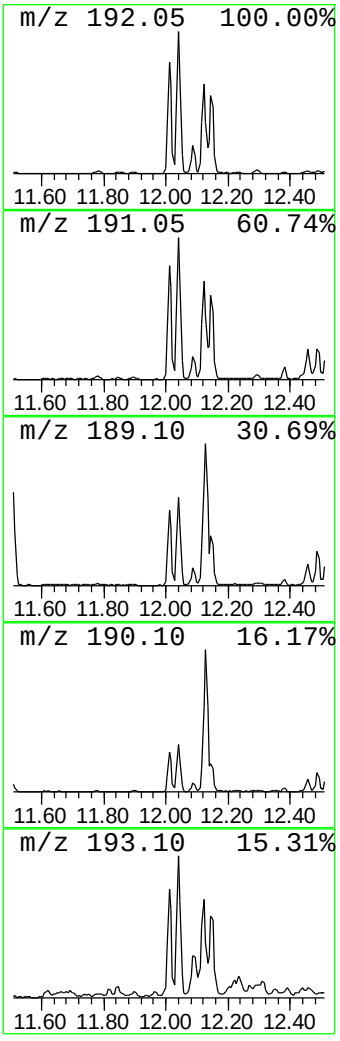
**********

Peak Number 6 Anthracene, 2-methyl- Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.01 | 10.81 ng | 500519 | Phenanthrene-d10 | 11.51 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 96 |
| 2 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 95 |
| 3 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 95 |
| 4 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 94 |
| 5 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 93 |



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Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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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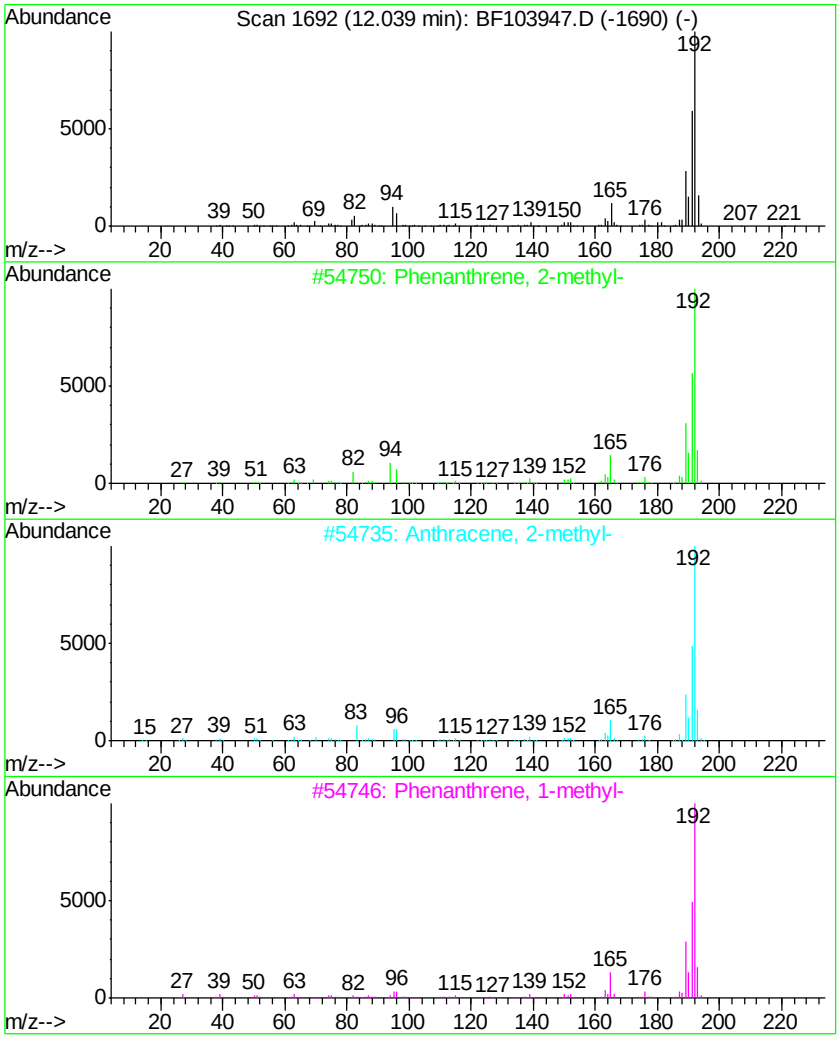
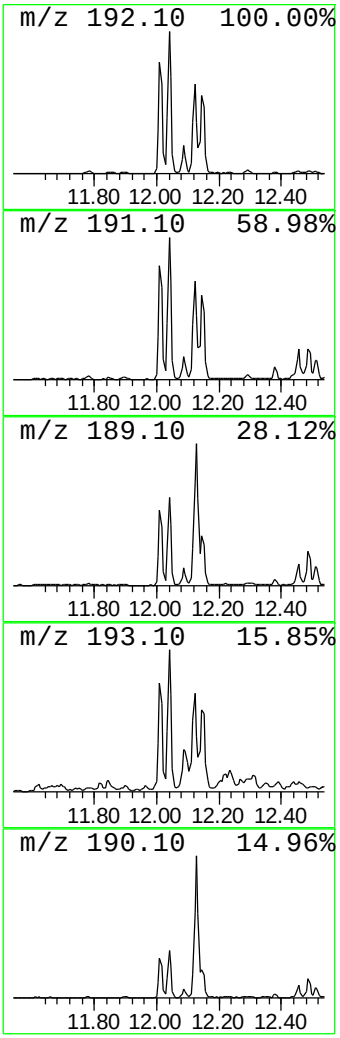
Peak Number 7 Phenanthrene, 2-methyl- Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.04 | 11.65 ng | 539181 | Phenanthrene-d10 | 11.51 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 98 |
| 2 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 96 |
| 3 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 96 |
| 4 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 96 |
| 5 | 5H-Dibenzo[a,d]cycloheptene | 192 | C15H12 | 000256-81-5 | 95 |



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Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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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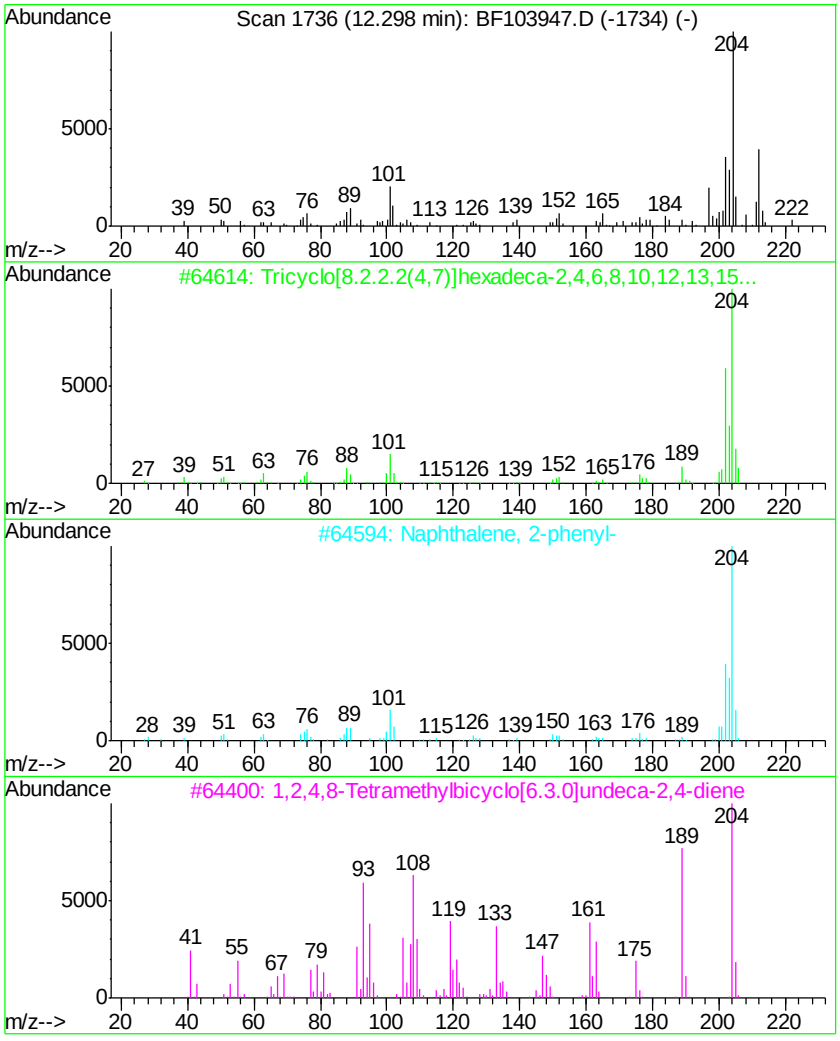
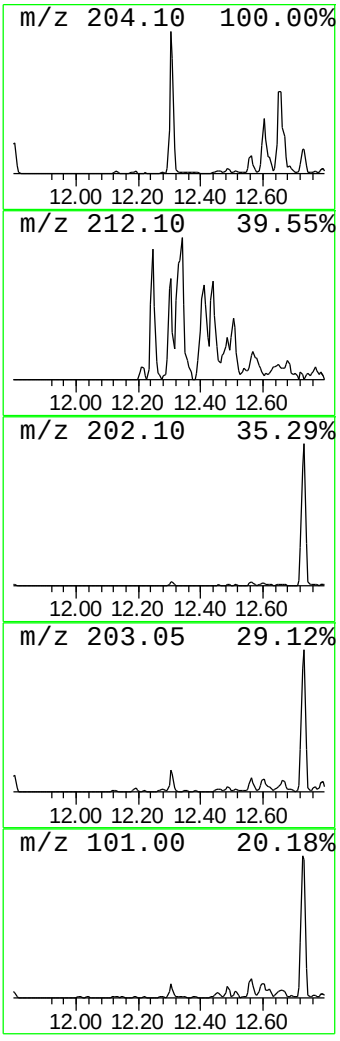
Peak Number 10 Tricyclo[8.2.2.2(4,7)]hexad... Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.30 | 4.14 ng | 191507 | Phenanthrene-d10 | 11.51 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 95 |
| 2 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 95 |
| 3 | 1,2,4,8-Tetramethylbicyclo[6.3.0... | 204 | C15H24 | 137235-51-9 | 83 |
| 4 | 5,16[1',2']:8,13[1'',2'']-Dibenz... | 408 | C32H24 | 005672-97-9 | 64 |
| 5 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 60 |



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Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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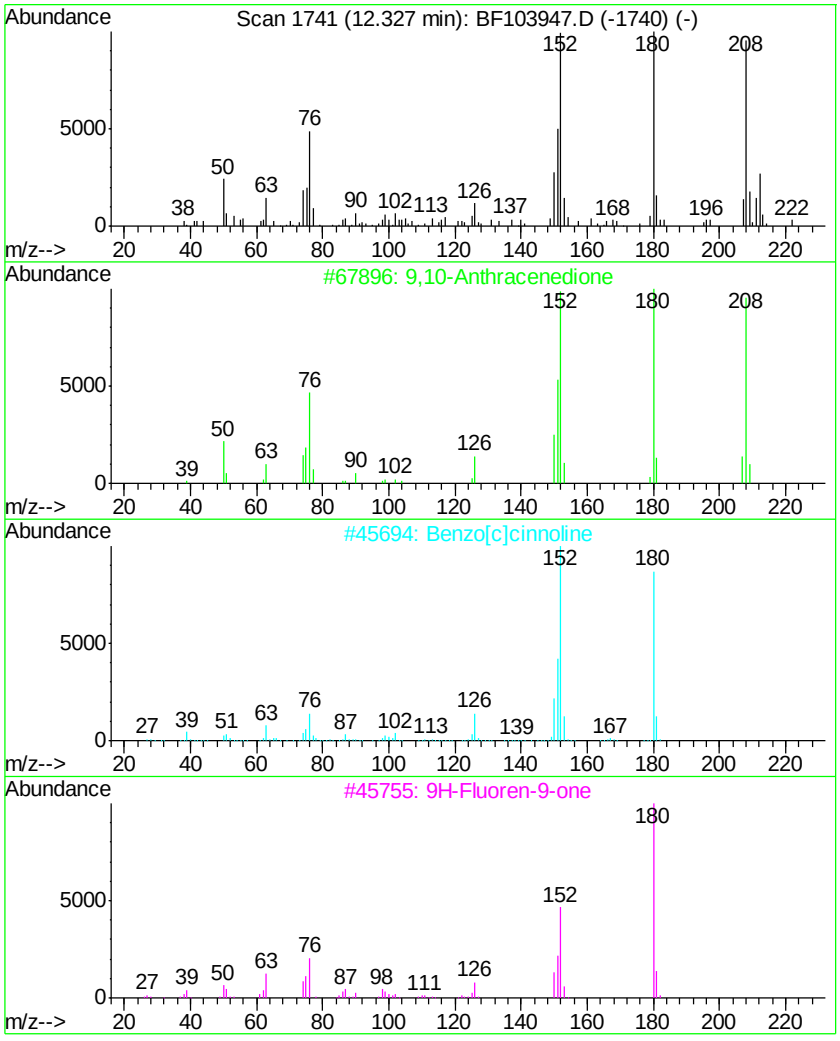
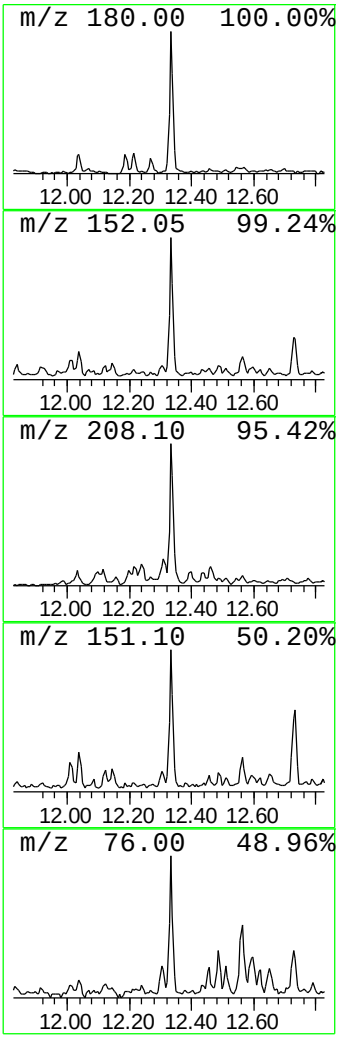
Peak Number 11 9,10-Anthracenedione Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.33 | 5.16 ng | 239062 | Phenanthrene-d10 | 11.51 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 97 |
| 2 | Benzo[c]cinnoline | 180 | C12H8N2 | 000230-17-1 | 83 |
| 3 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 70 |
| 4 | 1H-Phenalen-1-one | 180 | C13H8O | 000548-39-0 | 55 |
| 5 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 46 |



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Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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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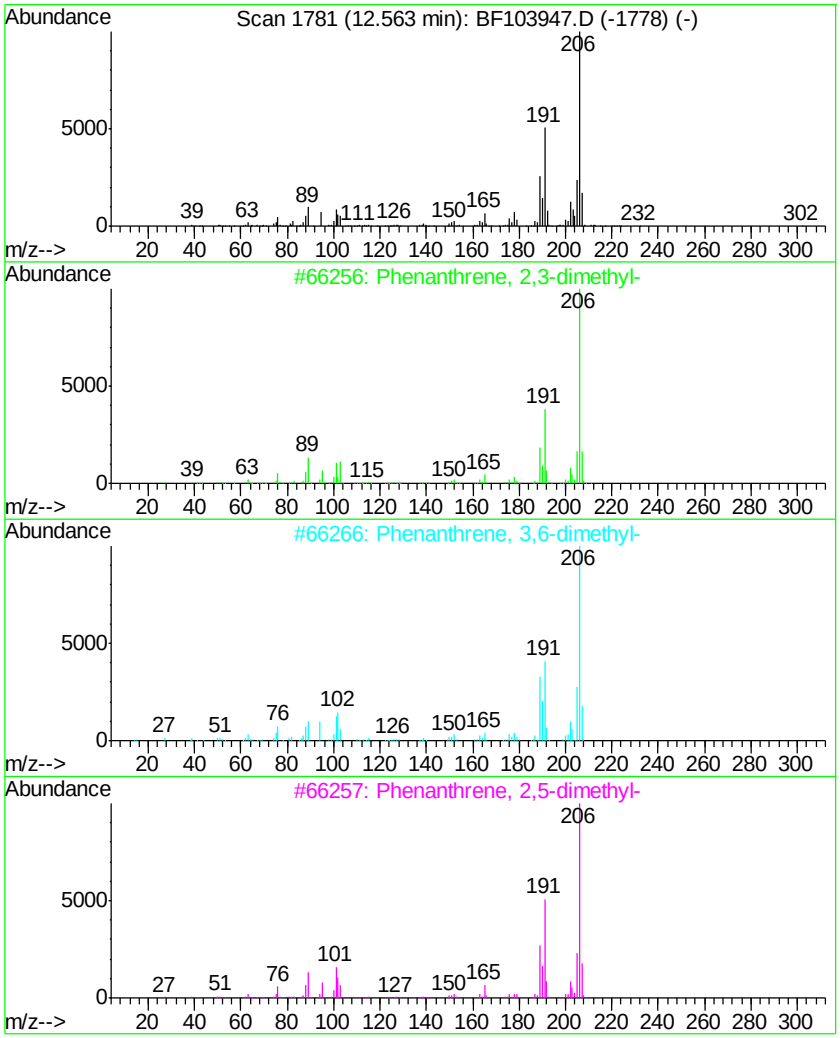
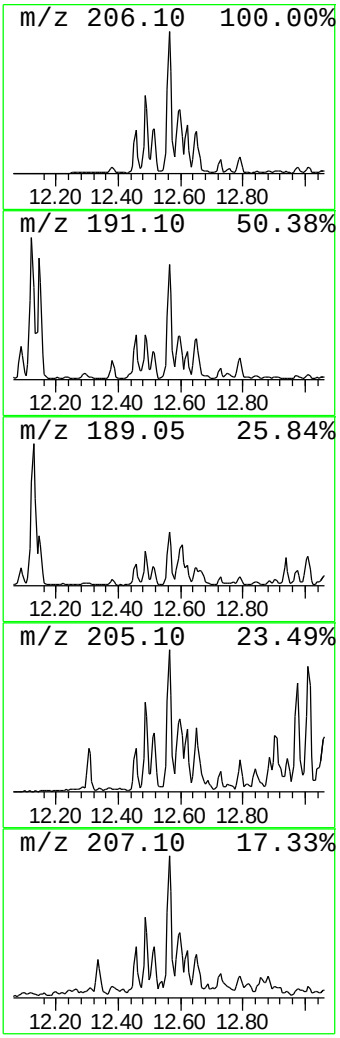
Peak Number 12 Phenanthrene, 2,3-dimethyl- Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.56 | 11.76 ng | 544479 | Phenanthrene-d10 | 11.51 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 94 |
| 2 | Phenanthrene, 3,6-dimethyl- | 206 | C16H14 | 001576-67-6 | 93 |
| 3 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 93 |
| 4 | Anthracene, 1,4-dimethyl- | 206 | C16H14 | 000781-92-0 | 93 |
| 5 | Phenanthrene, 1,7-dimethyl- | 206 | C16H14 | 000483-87-4 | 93 |



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Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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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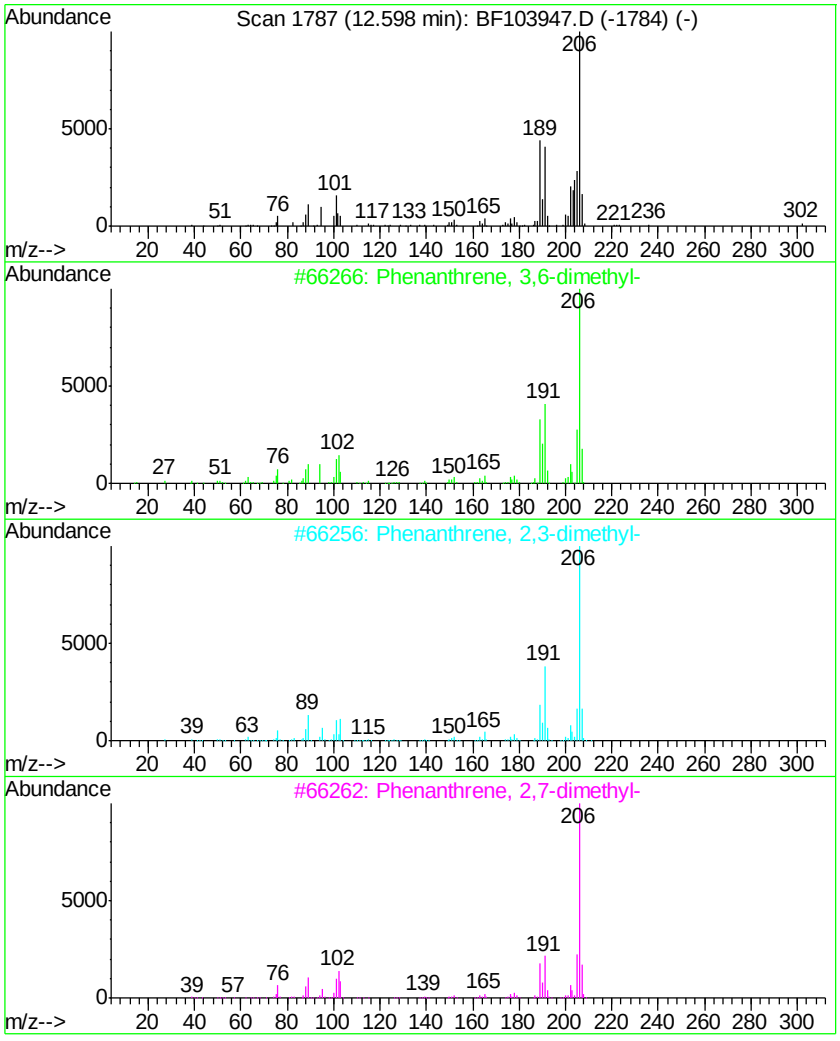
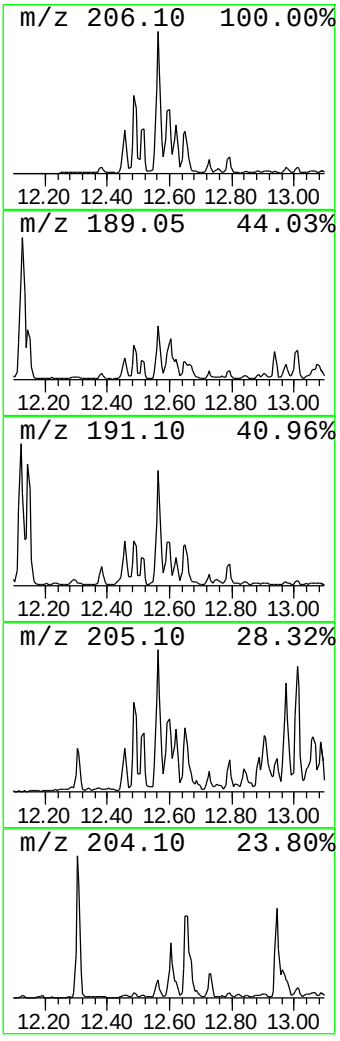
Peak Number 13 Phenanthrene, 3,6-dimethyl- Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.60 | 4.20 ng | 194602 | Phenanthrene-d10 | 11.51 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 3,6-dimethyl- | 206 | C16H14 | 001576-67-6 | 86 |
| 2 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 83 |
| 3 | Phenanthrene, 2,7-dimethyl- | 206 | C16H14 | 001576-69-8 | 74 |
| 4 | di-p-Tolylacetylene | 206 | C16H14 | 002789-88-0 | 74 |
| 5 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 70 |



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Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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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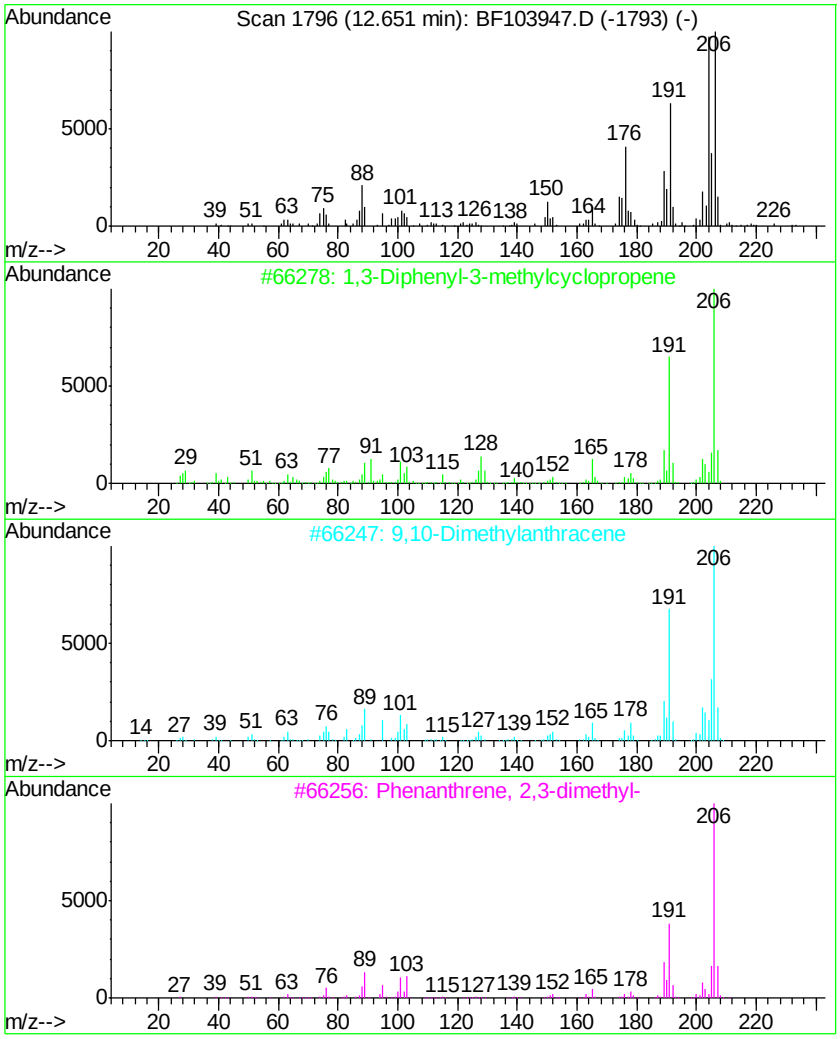
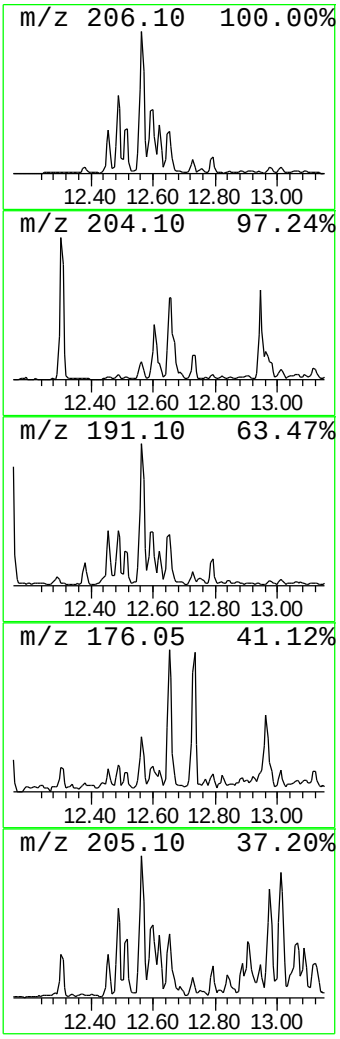
Peak Number 14 1,3-Diphenyl-3-methylcyclop... Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.65 | 6.64 ng | 307160 | Phenanthrene-d10 | 11.51 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,3-Diphenyl-3-methylcyclopropene | 206 | C16H14 | 086544-79-8 | 89 |
| 2 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 89 |
| 3 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 55 |
| 4 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 52 |
| 5 | Phenanthrene, 4,5-dimethyl- | 206 | C16H14 | 003674-69-9 | 50 |



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Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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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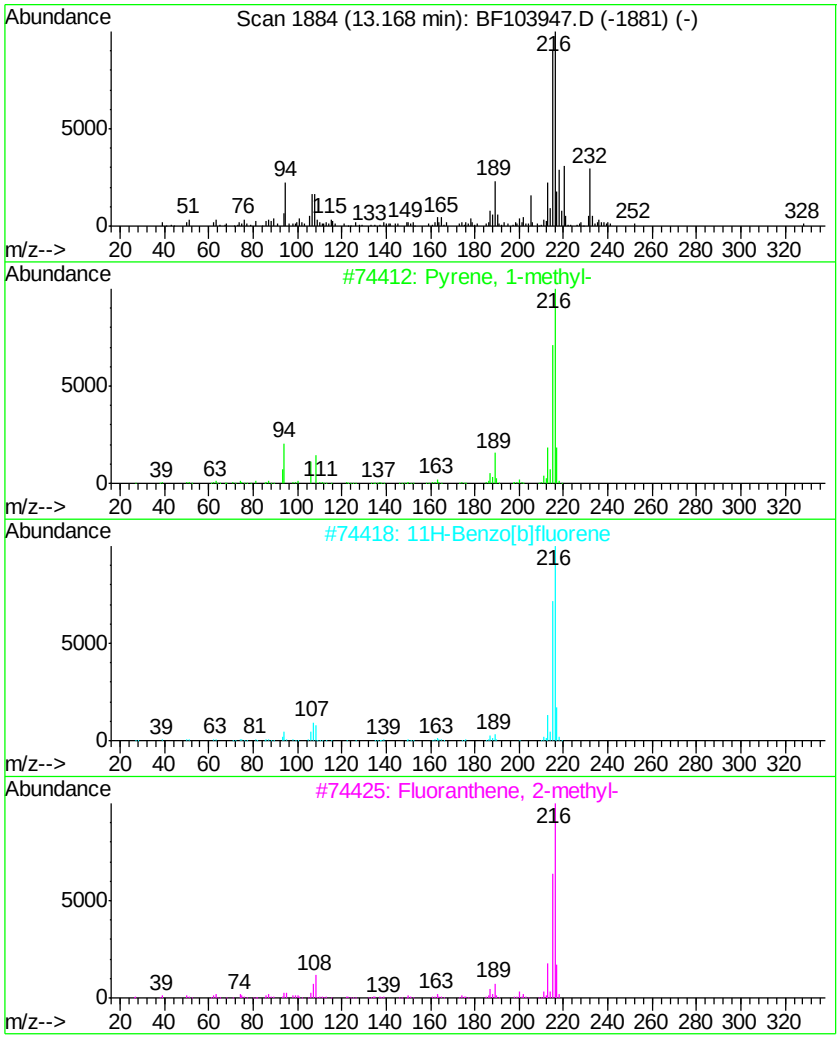
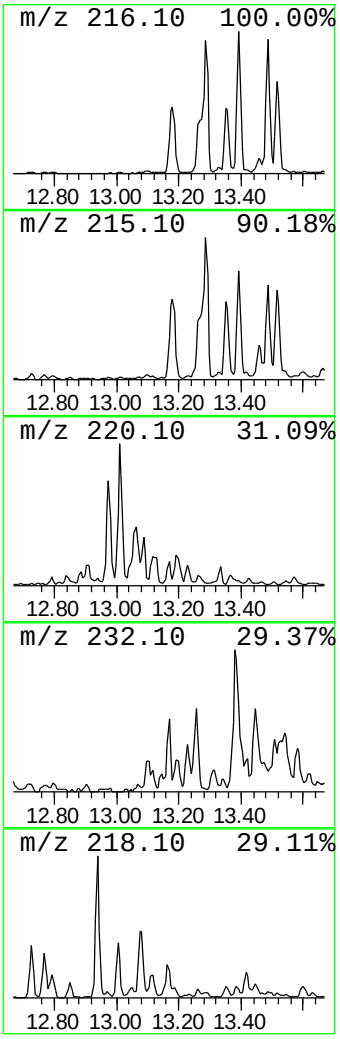
Peak Number 15 Pyrene, 1-methyl- Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.17 | 5.05 ng | 431161 | Chrysene-d12 | 14.16 |

| 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 | 94 |
| 3 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 92 |
| 4 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 87 |
| 5 | 7H-Benzo[c]fluorene | 216 | C17H12 | 000205-12-9 | 80 |



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Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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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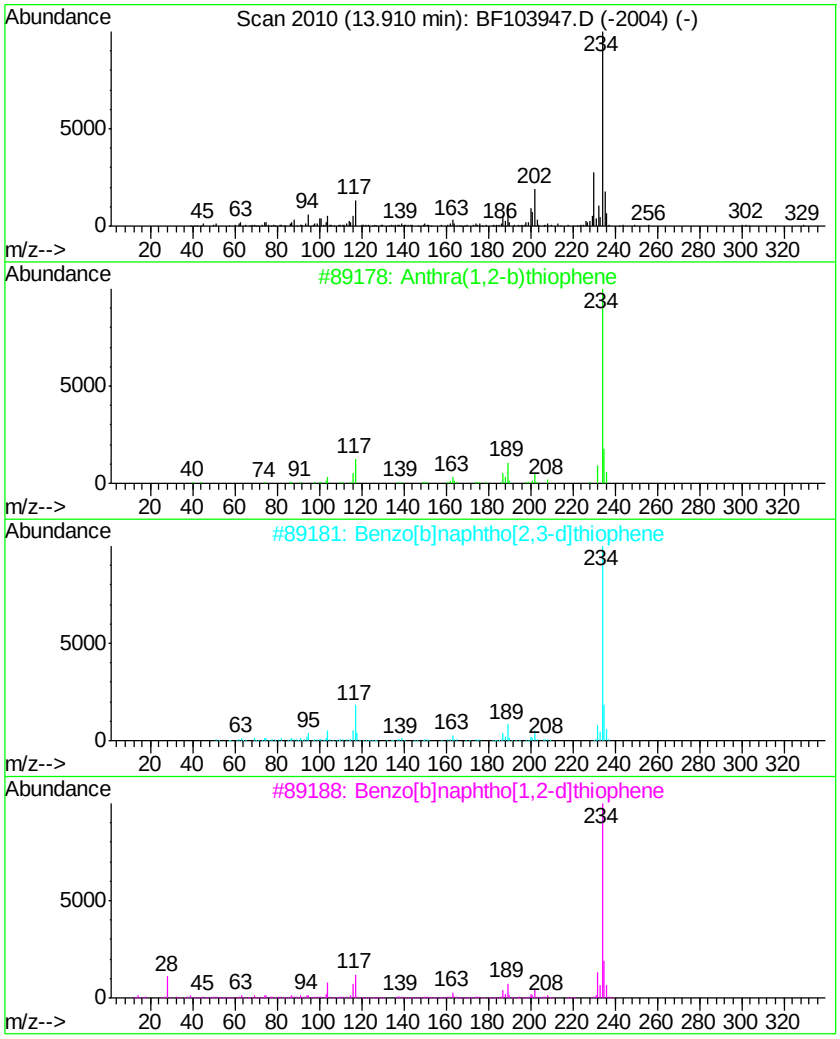
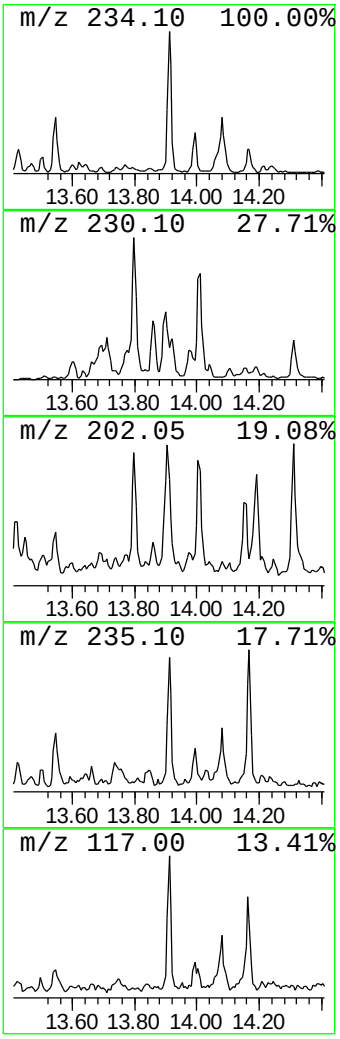
Peak Number 17 Anthra(1,2-b)thiophene Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.91 | 4.12 ng | 351508 | Chrysene-d12 | 14.16 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthra(1,2-b)thiophene | 234 | C16H10S | 000227-86-1 | 97 |
| 2 | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 95 |
| 3 | Benzo[b]naphtho[1,2-d]thiophene | 234 | C16H10S | 000205-43-6 | 95 |
| 4 | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 93 |
| 5 | Quinoxalino[2,3-b]quinoxaline, 5... | 234 | C14H10N4 | 000531-46-4 | 38 |



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Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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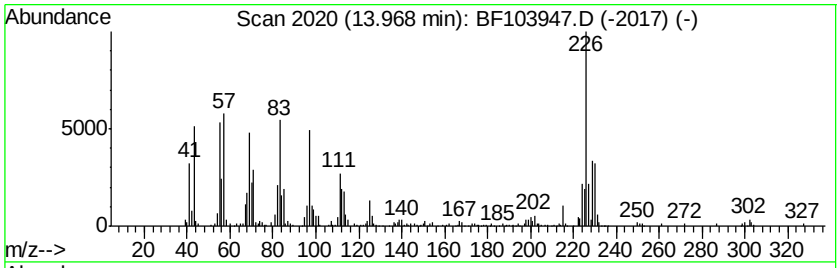
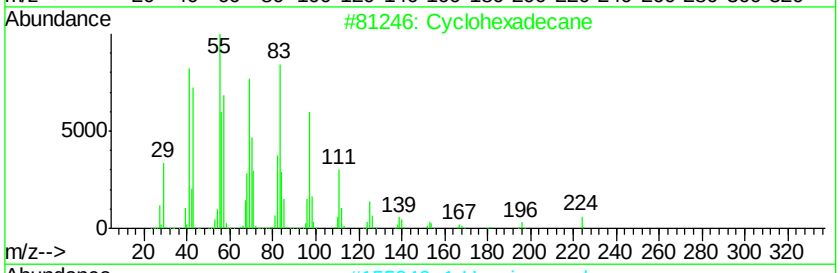
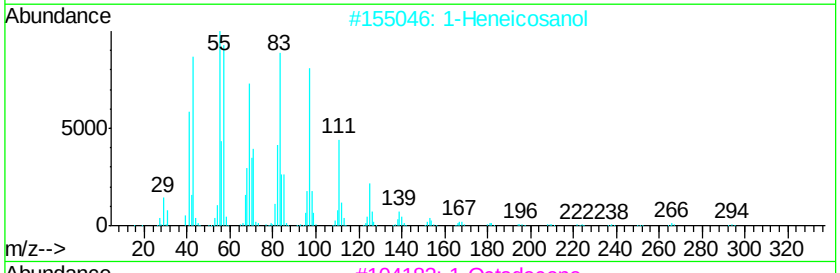
Peak Number 18 Cyclohexadecane Concentration Rank 8

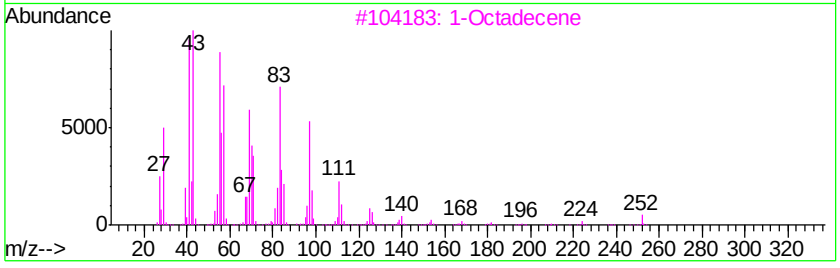
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.97 | 7.18 ng | 612721 | Chrysene-d12 | 14.16 |

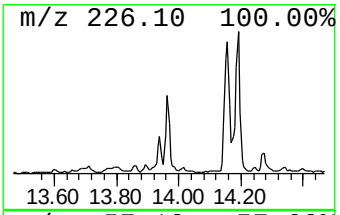
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclohexadecane | 224 | C16H32 | 000295-65-8 | 95 |
| 2 | 1-Heneicosanol | 312 | C21H44O | 015594-90-8 | 93 |
| 3 | 1-Octadecene | 252 | C18H36 | 000112-88-9 | 91 |
| 4 | Trifluoroacetic acid, pentadecyl... | 324 | C17H31F3O2 | 959010-23-2 | 90 |
| 5 | Pentafluoropropionic acid, penta... | 374 | C18H31F5O2 | 959092-08-1 | 90 |

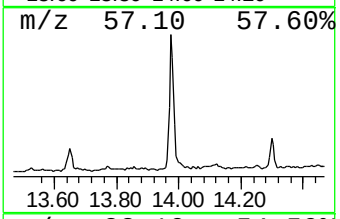


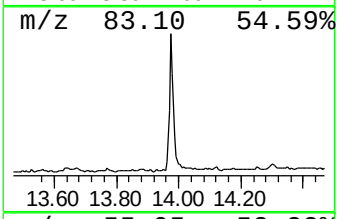



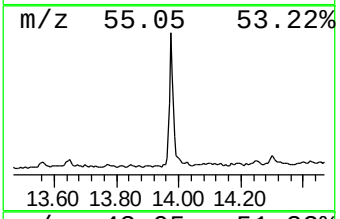



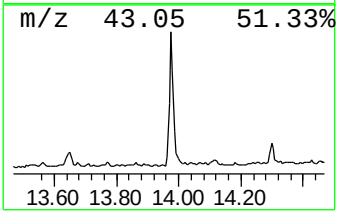



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Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

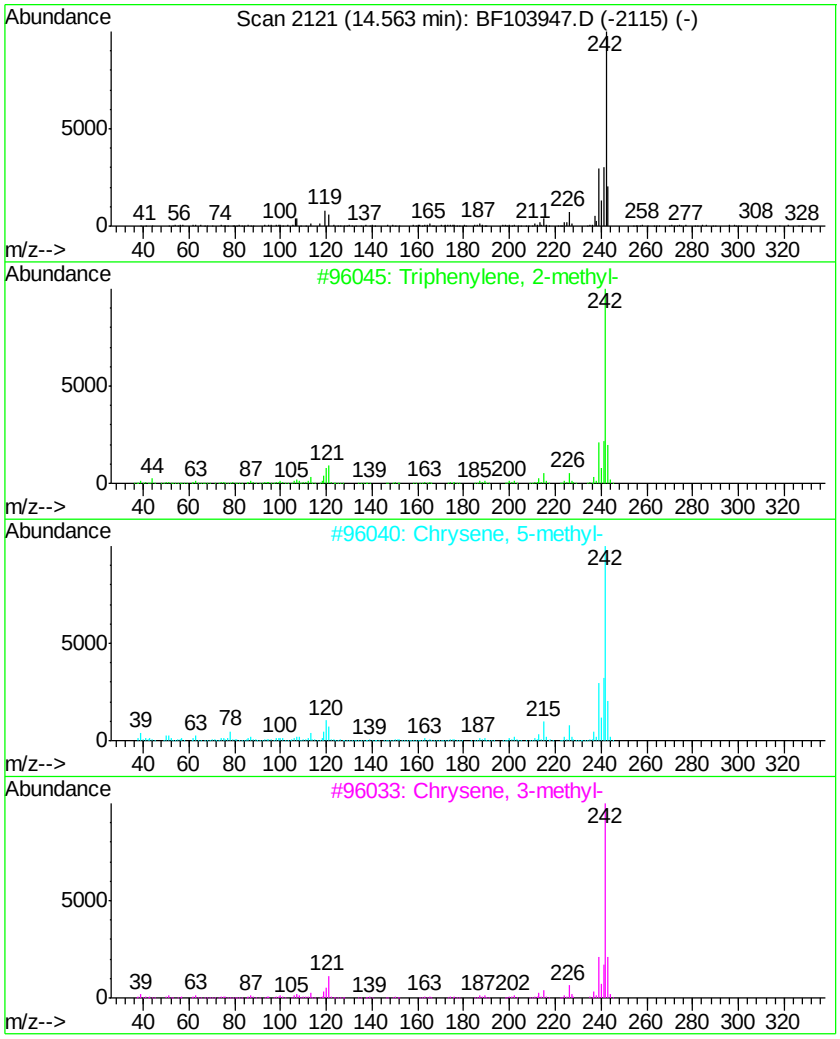
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

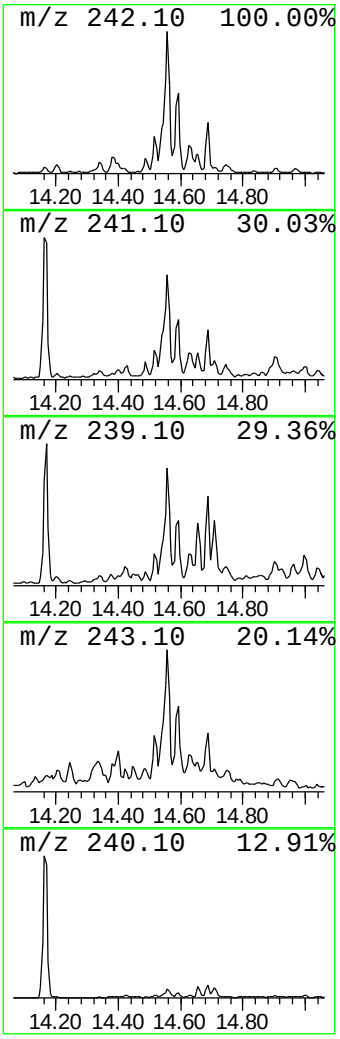
**********

Peak Number 19 Triphenylene, 2-methyl- Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.56 | 5.06 ng | 431677 | Chrysene-d12 | 14.16 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Triphenylene, 2-methyl- | 242 | C19H14 | 001705-84-6 | 96 |
| 2 | Chrysene, 5-methyl- | 242 | C19H14 | 003697-24-3 | 94 |
| 3 | Chrysene, 3-methyl- | 242 | C19H14 | 003351-31-3 | 94 |
| 4 | Benz[a]anthracene, 8-methyl- | 242 | C19H14 | 002381-31-9 | 93 |
| 5 | Benz[a]anthracene, 1-methyl- | 242 | C19H14 | 002498-77-3 | 93 |



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

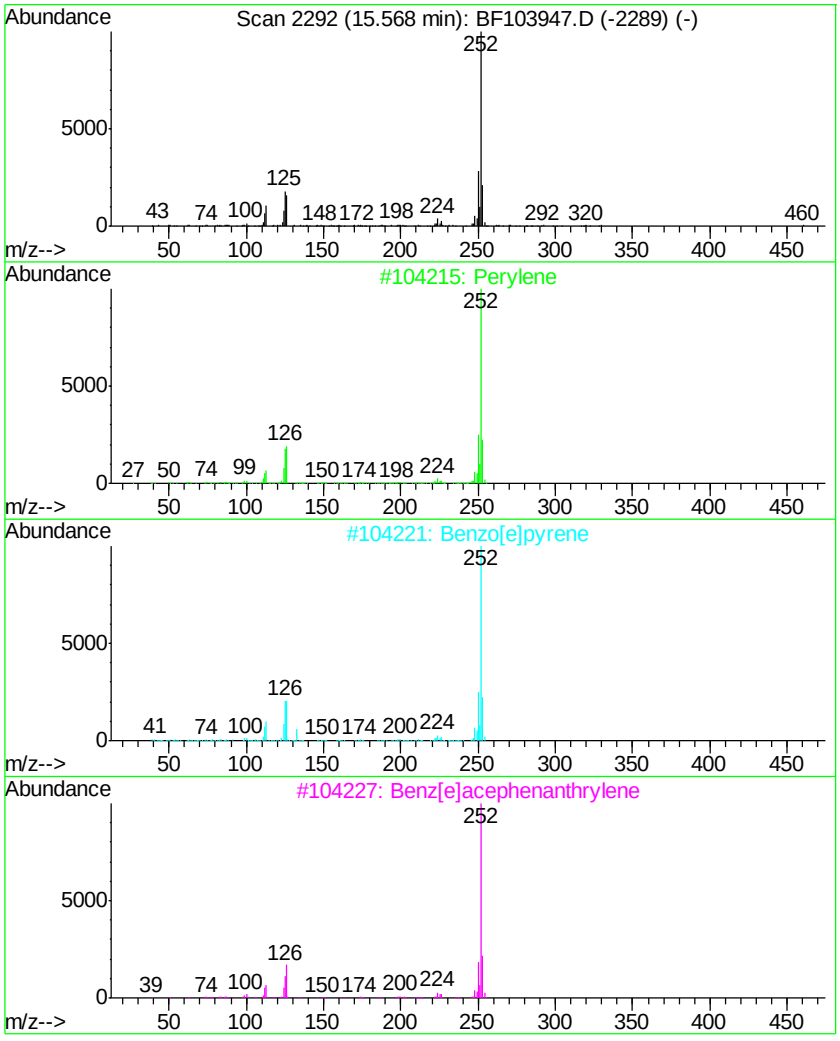
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

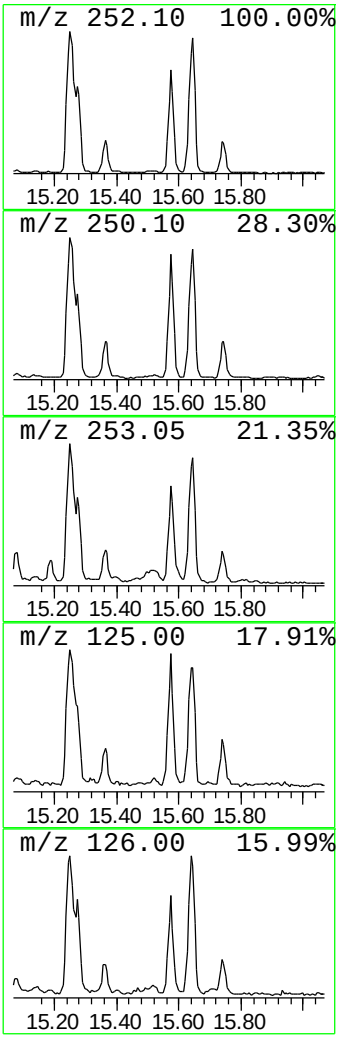
**********

Peak Number 20 Perylene Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.57 | 12.98 ng | 439354 | Perylene-d12 | 15.71 |

| 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 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 98 |
| 4 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 94 |
| 5 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 93 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF032618\
Data File : BF103947.D
Acq On : 27 Mar 2018 1:09
Operator : JU/SJ
Sample : J2009-03
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** S-3

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF031518.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 |
| Butane, 2-methoxy... | 2.32 | 5.0 | ng | 189881 | 1 | 6.97 | 767418 | 20.0 |
| 2-Pentanone, 4-hy... | 5.22 | 4.4 | ng | 167324 | 1 | 6.97 | 767418 | 20.0 |
| unknown6.75 | 6.75 | 71.1 | ng | 2728030 | 1 | 6.97 | 767418 | 20.0 |
| Hexadecane | 10.43 | 4.6 | ng | 231171 | 3 | 10.02 | 1004650 | 20.0 |
| Anthracene, 2-met... | 12.01 | 10.8 | ng | 500519 | 4 | 11.51 | 925827 | 20.0 |
| Phenanthrene, 2-m... | 12.04 | 11.7 | ng | 539181 | 4 | 11.51 | 925827 | 20.0 |
| Tricyclo[8.2.2.2(... | 12.30 | 4.1 | ng | 191507 | 4 | 11.51 | 925827 | 20.0 |
| 9,10-Anthracenedione | 12.33 | 5.2 | ng | 239062 | 4 | 11.51 | 925827 | 20.0 |
| Phenanthrene, 2,3... | 12.56 | 11.8 | ng | 544479 | 4 | 11.51 | 925827 | 20.0 |
| Phenanthrene, 3,6... | 12.60 | 4.2 | ng | 194602 | 4 | 11.51 | 925827 | 20.0 |
| 1,3-Diphenyl-3-me... | 12.65 | 6.6 | ng | 307160 | 4 | 11.51 | 925827 | 20.0 |
| Pyrene, 1-methyl- | 13.17 | 5.0 | ng | 431161 | 5 | 14.16 | 1706140 | 20.0 |
| Anthra(1,2-b)thio... | 13.91 | 4.1 | ng | 351508 | 5 | 14.16 | 1706140 | 20.0 |
| Cyclohexadecane | 13.97 | 7.2 | ng | 612721 | 5 | 14.16 | 1706140 | 20.0 |
| Triphenylene, 2-m... | 14.56 | 5.1 | ng | 431677 | 5 | 14.16 | 1706140 | 20.0 |
| Perylene | 15.57 | 13.0 | ng | 439354 | 6 | 15.71 | 676943 | 20.0 |