LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

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-BF061918.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 | 5.589 | 550 | 553 | 562 | rBV | 488181 | 473845 | 24.71% | 1.861% |
| 2 | 6.595 | 720 | 724 | 731 | rBV | 584682 | 497481 | 25.94% | 1.954% |
| 3 | 6.730 | 743 | 747 | 751 | rVB | 590073 | 508251 | 26.50% | 1.996% |
| 4 | 6.960 | 782 | 786 | 789 | rBV | 351248 | 306569 | 15.99% | 1.204% |
| 5 | 7.113 | 808 | 812 | 815 | rBV | 508204 | 407407 | 21.24% | 1.600% |
| 6 | 7.519 | 877 | 881 | 884 | rBV | 382137 | 315005 | 16.43% | 1.237% |
| 7 | 8.242 | 1000 | 1004 | 1006 | rBV | 473973 | 408686 | 21.31% | 1.605% |
| 8 | 8.260 | 1006 | 1007 | 1010 | rVB | 177974 | 128254 | 6.69% | 0.504% |
| 9 | 8.954 | 1121 | 1125 | 1128 | rBV | 213065 | 163040 | 8.50% | 0.640% |
| 10 | 9.054 | 1137 | 1142 | 1147 | rVB | 191240 | 159578 | 8.32% | 0.627% |
| 11 | 9.313 | 1182 | 1186 | 1189 | rBV | 787742 | 612211 | 31.92% | 2.404% |
| 12 | 9.583 | 1227 | 1232 | 1236 | rVV | 75178 | 95471 | 4.98% | 0.375% |
| 13 | 9.654 | 1240 | 1244 | 1246 | rVV | 138616 | 134184 | 7.00% | 0.527% |
| 14 | 9.683 | 1246 | 1249 | 1251 | rVV | 82703 | 84549 | 4.41% | 0.332% |
| 15 | 9.701 | 1251 | 1252 | 1260 | rVV2 | 64084 | 62571 | 3.26% | 0.246% |
| 16 | 9.771 | 1260 | 1264 | 1272 | rVB | 72004 | 84244 | 4.39% | 0.331% |
| 17 | 9.860 | 1275 | 1279 | 1283 | rBV2 | 92007 | 85969 | 4.48% | 0.338% |
| 18 | 10.001 | 1300 | 1303 | 1306 | rVV | 479868 | 416145 | 21.70% | 1.634% |
| 19 | 10.030 | 1306 | 1308 | 1311 | rVV | 370746 | 304572 | 15.88% | 1.196% |
| 20 | 10.154 | 1324 | 1329 | 1333 | rBV2 | 24484 | 41943 | 2.19% | 0.165% |
| 21 | 10.201 | 1333 | 1337 | 1341 | rVV2 | 205487 | 207909 | 10.84% | 0.817% |
| 22 | 10.236 | 1341 | 1343 | 1346 | rVB | 63843 | 48897 | 2.55% | 0.192% |
| 23 | 10.313 | 1352 | 1356 | 1359 | rBV2 | 53946 | 56277 | 2.93% | 0.221% |
| 24 | 10.407 | 1366 | 1372 | 1377 | rVV2 | 54080 | 87350 | 4.55% | 0.343% |
| 25 | 10.548 | 1392 | 1396 | 1401 | rVV | 447054 | 376397 | 19.63% | 1.478% |
| 26 | 10.630 | 1408 | 1410 | 1413 | rVV3 | 64471 | 63813 | 3.33% | 0.251% |
| 27 | 10.701 | 1420 | 1422 | 1426 | rVB | 65863 | 59677 | 3.11% | 0.234% |
| 28 | 10.789 | 1433 | 1437 | 1441 | rBV | 395200 | 368240 | 19.20% | 1.446% |
| 29 | 10.883 | 1450 | 1453 | 1463 | rVB3 | 38406 | 85534 | 4.46% | 0.336% |
| 30 | 11.095 | 1482 | 1489 | 1492 | rBV3 | 92406 | 124568 | 6.50% | 0.489% |
| 31 | 11.124 | 1492 | 1494 | 1496 | rVV | 59958 | 48504 | 2.53% | 0.190% |
| 32 | 11.177 | 1500 | 1503 | 1506 | rVB | 45612 | 41436 | 2.16% | 0.163% |
| 33 | 11.218 | 1506 | 1510 | 1513 | rBV3 | 26410 | 46279 | 2.41% | 0.182% |
| 34 | 11.295 | 1520 | 1523 | 1526 | rVV | 59602 | 52865 | 2.76% | 0.208% |

LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

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-BF061918.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 11.330 | 1526 | 1529 | 1533 | rVV3 | 53381 | 62630 | 3.27% | 0.246% |
| 36 | 11.389 | 1536 | 1539 | 1544 | rVB | 160481 | 136484 | 7.12% | 0.536% |
| 37 | 11.495 | 1553 | 1557 | 1558 | rBV | 388797 | 367290 | 19.15% | 1.442% |
| 38 | 11.524 | 1558 | 1562 | 1565 | rVV | 1632813 | 1628951 | 84.94% | 6.398% |
| 39 | 11.571 | 1565 | 1570 | 1573 | rVV | 511024 | 465481 | 24.27% | 1.828% |
| 40 | 11.724 | 1589 | 1596 | 1600 | rVV | 304074 | 314578 | 16.40% | 1.235% |
| 41 | 11.783 | 1604 | 1606 | 1610 | rVV2 | 55341 | 50295 | 2.62% | 0.198% |
| 42 | 11.824 | 1610 | 1613 | 1617 | rVB2 | 72067 | 72195 | 3.76% | 0.284% |
| 43 | 11.907 | 1624 | 1627 | 1632 | rVB | 38046 | 43571 | 2.27% | 0.171% |
| 44 | 11.995 | 1636 | 1642 | 1644 | rVV | 273562 | 252559 | 13.17% | 0.992% |
| 45 | 12.024 | 1644 | 1647 | 1650 | rVV | 348845 | 299836 | 15.63% | 1.178% |
| 46 | 12.071 | 1650 | 1655 | 1657 | rVV | 104352 | 97116 | 5.06% | 0.381% |
| 47 | 12.107 | 1657 | 1661 | 1663 | rVV2 | 405426 | 445323 | 23.22% | 1.749% |
| 48 | 12.130 | 1663 | 1665 | 1669 | rVB | 184302 | 145127 | 7.57% | 0.570% |
| 49 | 12.171 | 1669 | 1672 | 1674 | rBV | 54143 | 46790 | 2.44% | 0.184% |
| 50 | 12.289 | 1689 | 1692 | 1694 | rVV | 184949 | 166375 | 8.68% | 0.653% |
| 51 | 12.318 | 1694 | 1697 | 1702 | rVB | 181117 | 159190 | 8.30% | 0.625% |
| 52 | 12.436 | 1711 | 1717 | 1720 | rBV2 | 57086 | 69516 | 3.62% | 0.273% |
| 53 | 12.465 | 1720 | 1722 | 1724 | rVV | 57145 | 43623 | 2.27% | 0.171% |
| 54 | 12.542 | 1731 | 1735 | 1739 | rBV2 | 136456 | 190010 | 9.91% | 0.746% |
| 55 | 12.583 | 1739 | 1742 | 1744 | rVV2 | 68511 | 84602 | 4.41% | 0.332% |
| 56 | 12.636 | 1747 | 1751 | 1755 | rBV2 | 74994 | 109883 | 5.73% | 0.432% |
| 57 | 12.718 | 1759 | 1765 | 1768 | rBV | 1562347 | 1708264 | 89.08% | 6.709% |
| 58 | 12.771 | 1772 | 1774 | 1777 | rVB | 70499 | 51868 | 2.70% | 0.204% |
| 59 | 12.842 | 1782 | 1786 | 1787 | rBV3 | 35288 | 45539 | 2.37% | 0.179% |
| 60 | 12.865 | 1787 | 1790 | 1792 | rVB | 62961 | 58183 | 3.03% | 0.229% |
| 61 | 12.948 | 1797 | 1804 | 1808 | rBV2 | 1365374 | 1917758 | 100.00% | 7.532% |
| 62 | 12.989 | 1808 | 1811 | 1815 | rVB2 | 93402 | 94798 | 4.94% | 0.372% |
| 63 | 13.077 | 1818 | 1826 | 1828 | rBV2 | 641569 | 696380 | 36.31% | 2.735% |
| 64 | 13.101 | 1828 | 1830 | 1833 | rVB | 111045 | 97152 | 5.07% | 0.382% |
| 65 | 13.154 | 1834 | 1839 | 1843 | rBV2 | 120054 | 206537 | 10.77% | 0.811% |
| 66 | 13.189 | 1843 | 1845 | 1847 | rBV | 47449 | 42239 | 2.20% | 0.166% |
| 67 | 13.242 | 1850 | 1854 | 1855 | rBV3 | 88052 | 100718 | 5.25% | 0.396% |
| 68 | 13.265 | 1855 | 1858 | 1861 | rVB | 278945 | 266969 | 13.92% | 1.048% |
| 69 | 13.336 | 1867 | 1870 | 1872 | rBV | 278796 | 238168 | 12.42% | 0.935% |
| 70 | 13.371 | 1872 | 1876 | 1878 | rVV2 | 166403 | 175521 | 9.15% | 0.689% |
| 71 | 13.395 | 1878 | 1880 | 1883 | rVB | 65540 | 58746 | 3.06% | 0.231% |

LSC Area Percent Report

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Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

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-BF061918.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 13.465 | 1889 | 1892 | 1894 | rBV | 101211 | 81796 | 4.27% | 0.321% |
| 73 | 13.495 | 1894 | 1897 | 1900 | rBV | 105017 | 88689 | 4.62% | 0.348% |
| 74 | 13.748 | 1937 | 1940 | 1942 | rBV3 | 58894 | 62548 | 3.26% | 0.246% |
| 75 | 13.777 | 1942 | 1945 | 1949 | rVB | 88630 | 100396 | 5.24% | 0.394% |
| 76 | 13.889 | 1959 | 1964 | 1967 | rBV2 | 152384 | 199184 | 10.39% | 0.782% |
| 77 | 13.918 | 1967 | 1969 | 1971 | rVV | 169922 | 142446 | 7.43% | 0.559% |
| 78 | 13.942 | 1971 | 1973 | 1979 | rVV3 | 147963 | 276734 | 14.43% | 1.087% |
| 79 | 13.989 | 1979 | 1981 | 1984 | rVB | 86767 | 75503 | 3.94% | 0.297% |
| 80 | 14.059 | 1991 | 1993 | 1998 | rVB | 46596 | 51784 | 2.70% | 0.203% |
| 81 | 14.142 | 2000 | 2007 | 2010 | rVV2 | 878629 | 1385131 | 72.23% | 5.440% |
| 82 | 14.177 | 2010 | 2013 | 2019 | rVB | 738789 | 751015 | 39.16% | 2.950% |
| 83 | 14.253 | 2023 | 2026 | 2028 | rBV | 221643 | 177953 | 9.28% | 0.699% |
| 84 | 14.377 | 2043 | 2047 | 2049 | rBV2 | 89245 | 98511 | 5.14% | 0.387% |
| 85 | 14.536 | 2072 | 2074 | 2077 | rVB | 127065 | 102718 | 5.36% | 0.403% |
| 86 | 14.571 | 2078 | 2080 | 2082 | rBV | 65468 | 55343 | 2.89% | 0.217% |
| 87 | 14.636 | 2089 | 2091 | 2094 | rVB | 54041 | 47158 | 2.46% | 0.185% |
| 88 | 14.665 | 2094 | 2096 | 2098 | rVV2 | 78939 | 72092 | 3.76% | 0.283% |
| 89 | 14.689 | 2098 | 2100 | 2104 | rVB | 140535 | 113514 | 5.92% | 0.446% |
| 90 | 14.736 | 2104 | 2108 | 2115 | rVB4 | 66015 | 113638 | 5.93% | 0.446% |
| 91 | 15.053 | 2160 | 2162 | 2170 | rVB | 59448 | 91538 | 4.77% | 0.360% |
| 92 | 15.230 | 2187 | 2192 | 2195 | rBV | 520344 | 851500 | 44.40% | 3.344% |
| 93 | 15.342 | 2208 | 2211 | 2215 | rBV | 114356 | 119960 | 6.26% | 0.471% |
| 94 | 15.553 | 2243 | 2247 | 2253 | rVB | 320735 | 443197 | 23.11% | 1.741% |
| 95 | 15.624 | 2253 | 2259 | 2264 | rBV | 487956 | 634357 | 33.08% | 2.491% |
| 96 | 15.683 | 2264 | 2269 | 2272 | rVV | 247793 | 351506 | 18.33% | 1.381% |
| 97 | 15.718 | 2272 | 2275 | 2282 | rVB | 146960 | 204927 | 10.69% | 0.805% |
| 98 | 17.253 | 2530 | 2536 | 2544 | rBV2 | 180012 | 370288 | 19.31% | 1.454% |
| 99 | 17.494 | 2573 | 2577 | 2584 | rVB2 | 41926 | 85221 | 4.44% | 0.335% |
| 100 | 17.736 | 2612 | 2618 | 2630 | rVB | 145219 | 345451 | 18.01% | 1.357% |

Sum of corrected areas: 25462084

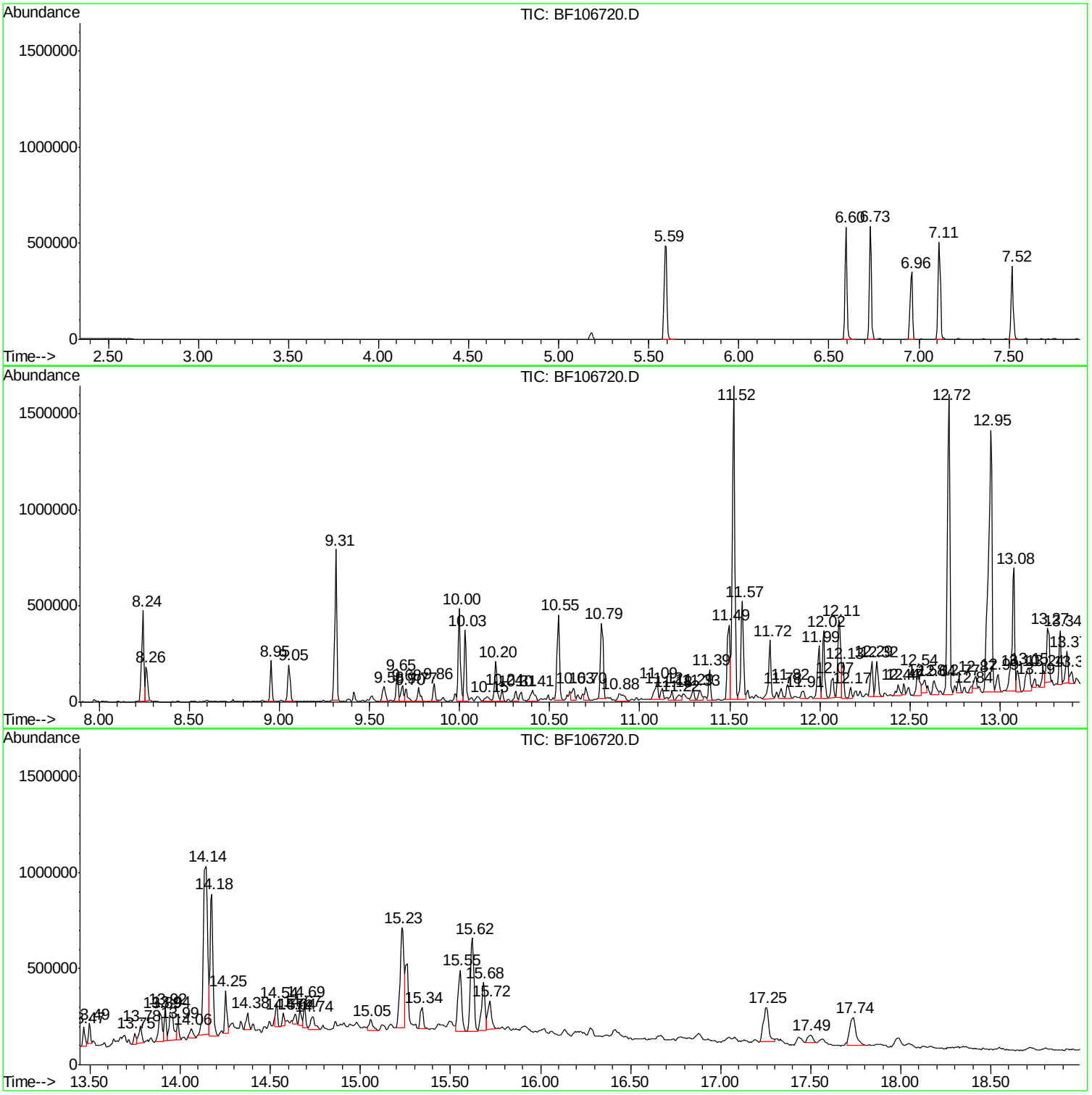
LSC Report - Integrated Chromatogram

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

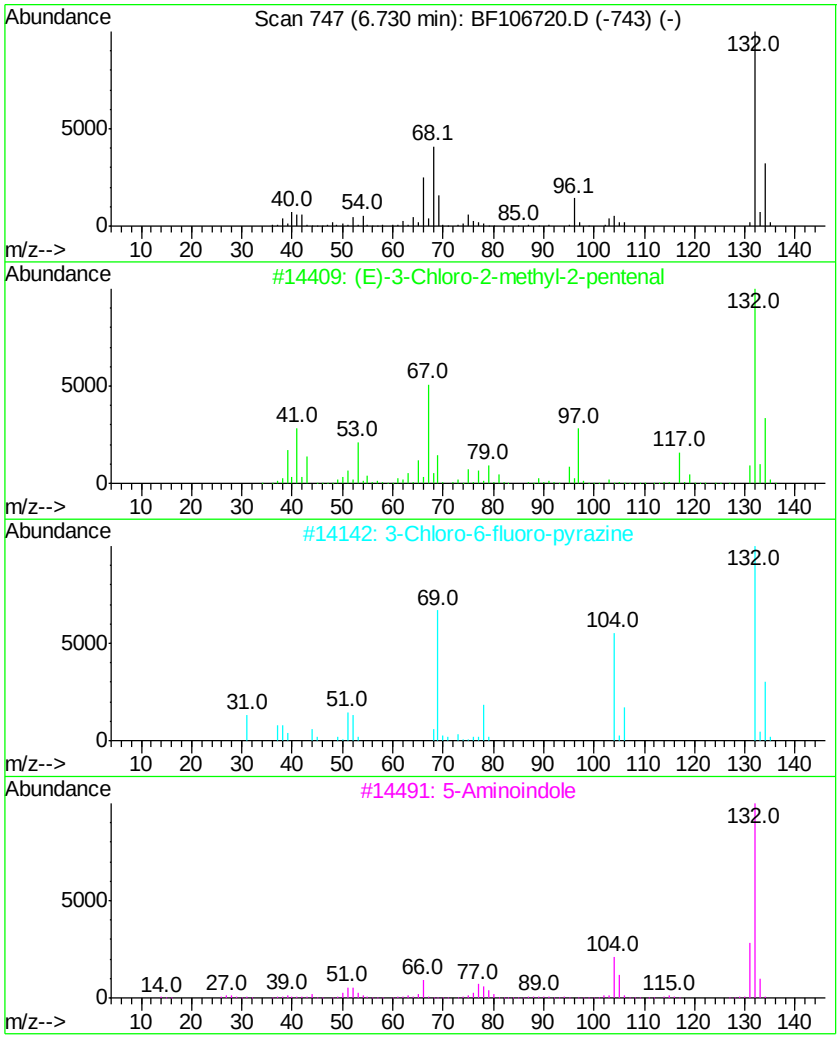
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

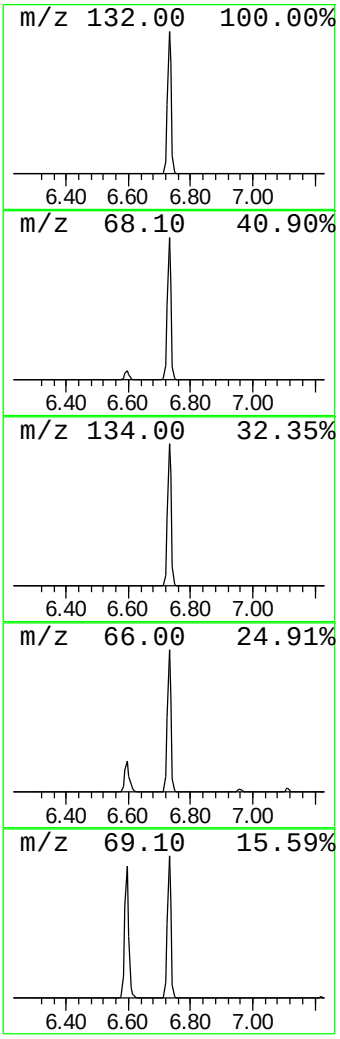
**********

Peak Number 1 unknown6.73 Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.73 | 33.16 ng | 508251 | 1,4-Dichlorobenzene-d4 | 6.96 |

| 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 | 5-Aminoindole | 132 | C8H8N2 | 005192-03-0 | 12 |
| 4 | Tranylcypromine-propionyl | 189 | C12H15NO | 1000123-86-3 | 10 |
| 5 | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12 | 028749-81-7 | 9 |



Library Search Compound Report

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Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

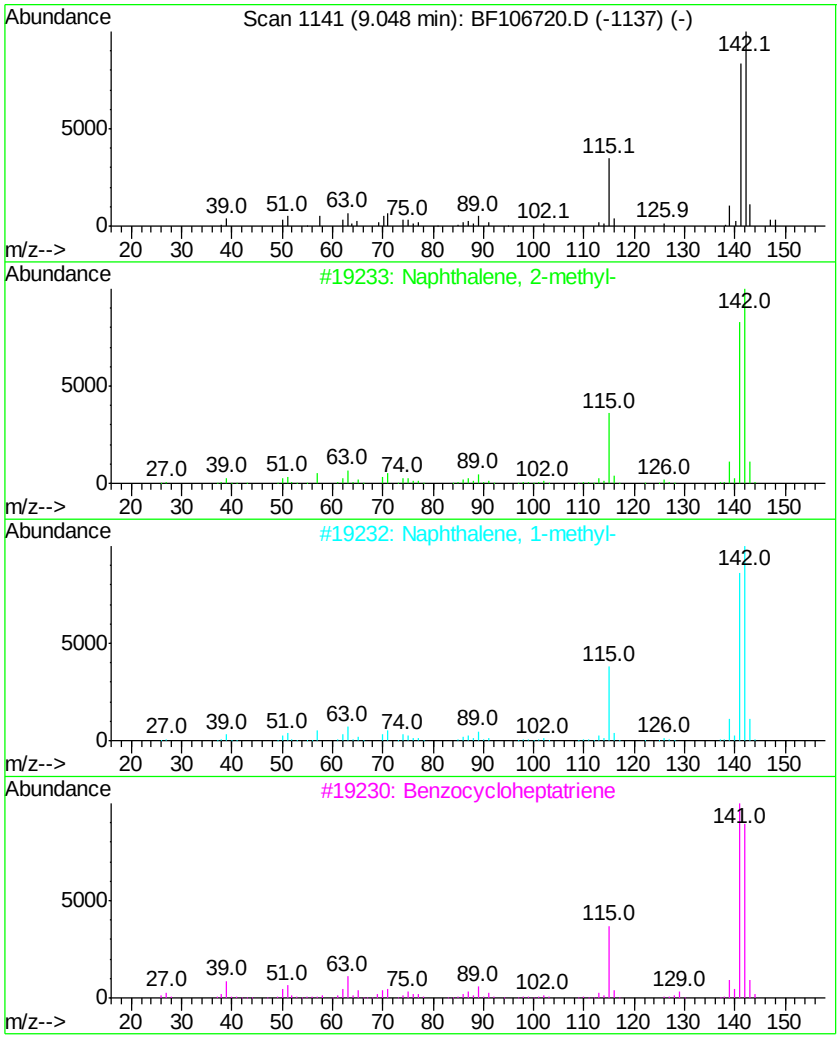
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

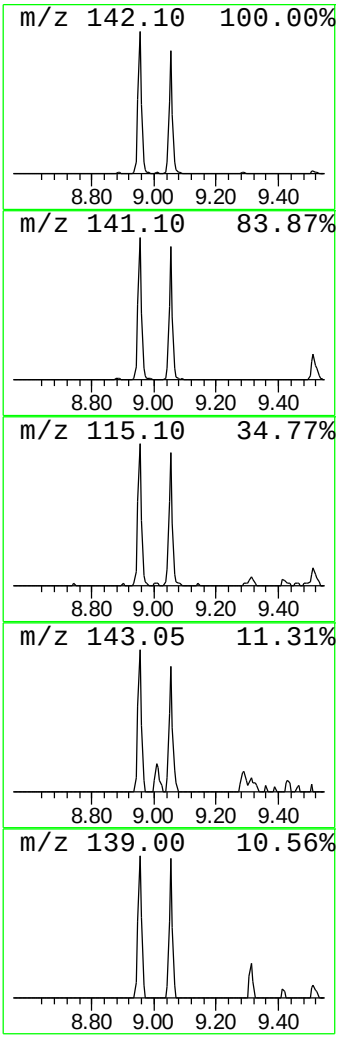
**********

Peak Number 3 Naphthalene, 1-methyl- Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.05 | 7.81 ng | 159578 | Naphthalene-d8 | 8.24 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2-methyl- | 142 | C11H10 | 000091-57-6 | 96 |
| 2 | Naphthalene, 1-methyl- | 142 | C11H10 | 000090-12-0 | 96 |
| 3 | Benzocycloheptatriene | 142 | C11H10 | 000264-09-5 | 91 |
| 4 | 1,4-Methanonaphthalene, 1,4-dihy... | 142 | C11H10 | 004453-90-1 | 91 |
| 5 | 1H-Indene, 1-ethylidene- | 142 | C11H10 | 002471-83-2 | 64 |



# Library Search Compound Report

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Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

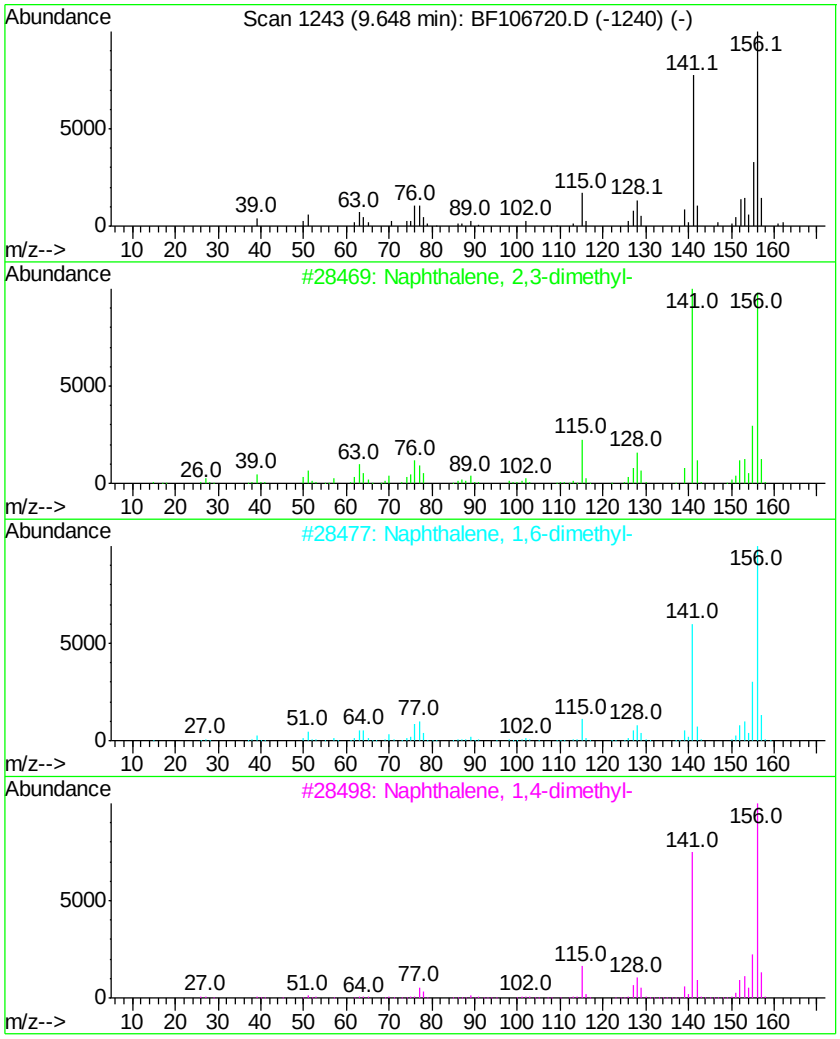
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

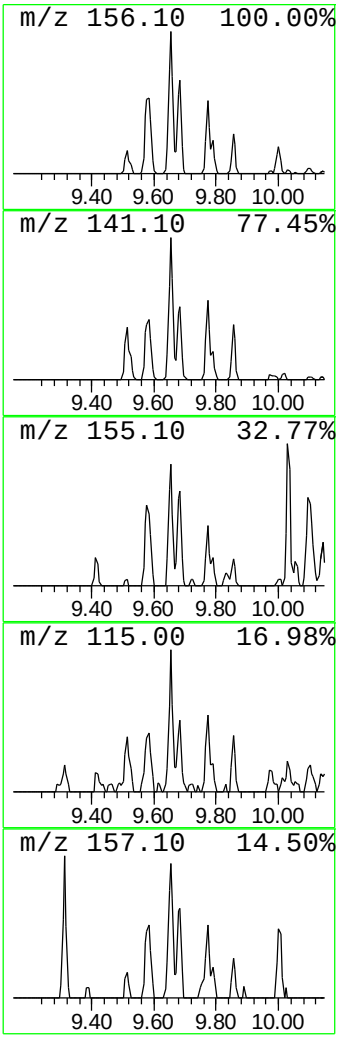
**********

Peak Number 4 Naphthalene, 2,3-dimethyl- Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.65 | 6.45 ng | 134184 | Acenaphthene-d10 | 10.00 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2,3-dimethyl- | 156 | C12H12 | 000581-40-8 | 98 |
| 2 | Naphthalene, 1,6-dimethyl- | 156 | C12H12 | 000575-43-9 | 97 |
| 3 | Naphthalene, 1,4-dimethyl- | 156 | C12H12 | 000571-58-4 | 97 |
| 4 | Naphthalene, 1,7-dimethyl- | 156 | C12H12 | 000575-37-1 | 96 |
| 5 | Naphthalene, 1,3-dimethyl- | 156 | C12H12 | 000575-41-7 | 96 |



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Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
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**Instrument :** BNA_F
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

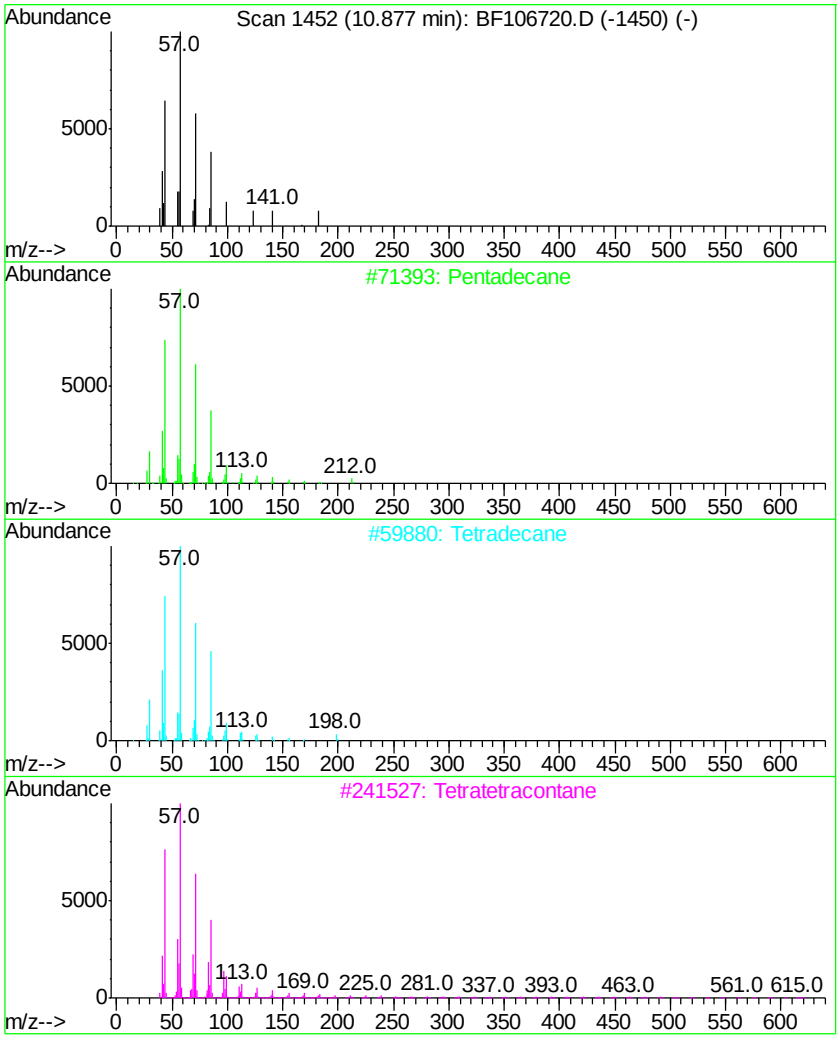
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

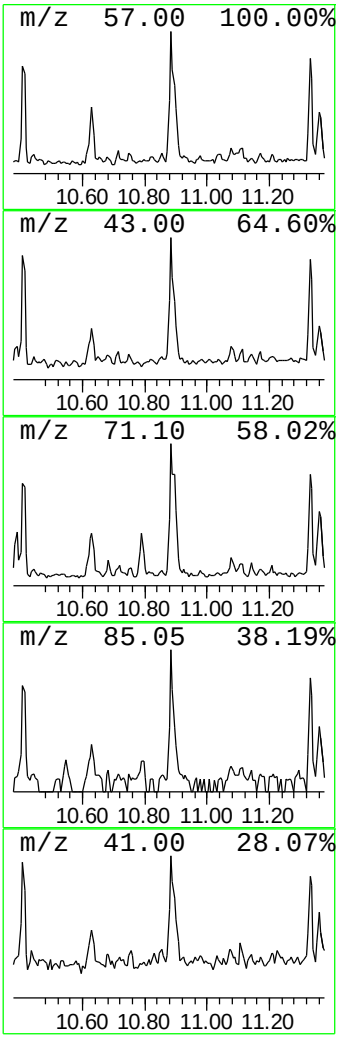
**********

Peak Number 5 Pentadecane Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.88 | 4.66 ng | 85534 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pentadecane | 212 | C15H32 | 000629-62-9 | 90 |
| 2 | Tetradecane | 198 | C14H30 | 000629-59-4 | 90 |
| 3 | Tetratetracontane | 619 | C44H90 | 007098-22-8 | 90 |
| 4 | Tritetracontane | 605 | C43H88 | 007098-21-7 | 83 |
| 5 | Heptadecane | 240 | C17H36 | 000629-78-7 | 83 |



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Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

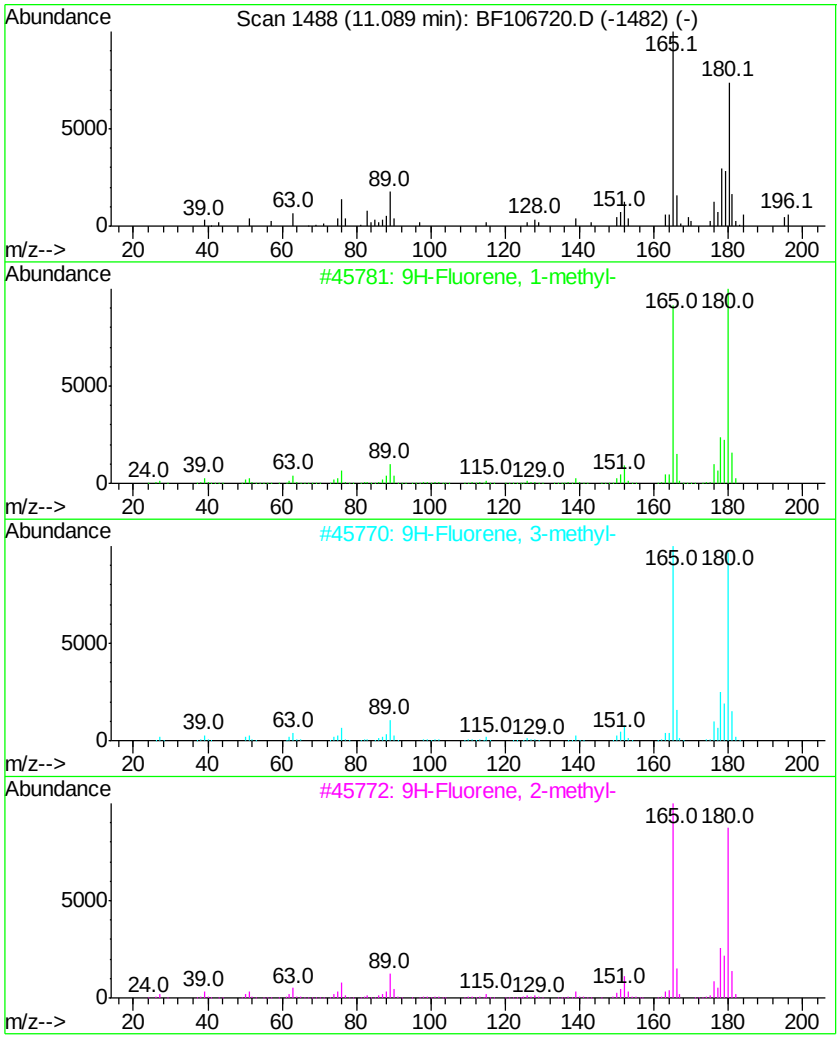
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

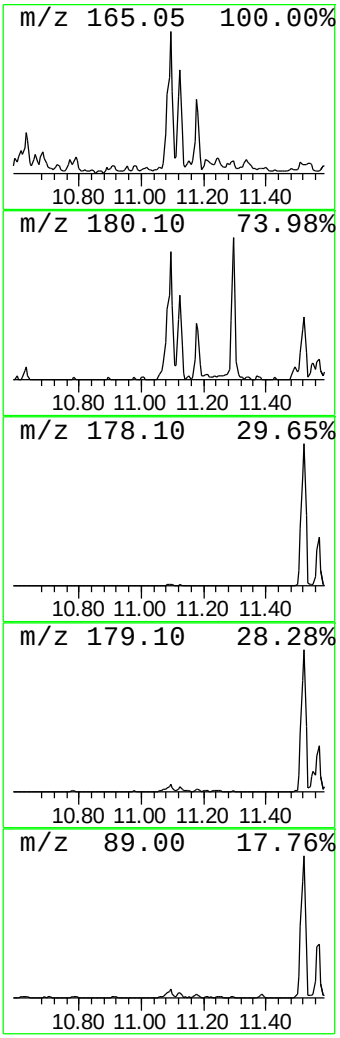
**********

Peak Number 6 9H-Fluorene, 1-methyl- Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.09 | 6.78 ng | 124568 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9H-Fluorene, 1-methyl- | 180 | C14H12 | 001730-37-6 | 96 |
| 2 | 9H-Fluorene, 3-methyl- | 180 | C14H12 | 002523-39-9 | 96 |
| 3 | 9H-Fluorene, 2-methyl- | 180 | C14H12 | 001430-97-3 | 96 |
| 4 | 9H-Fluorene, 9-methyl- | 180 | C14H12 | 002523-37-7 | 89 |
| 5 | 4a,9a-Methano-9H-fluorene | 180 | C14H12 | 019540-84-2 | 86 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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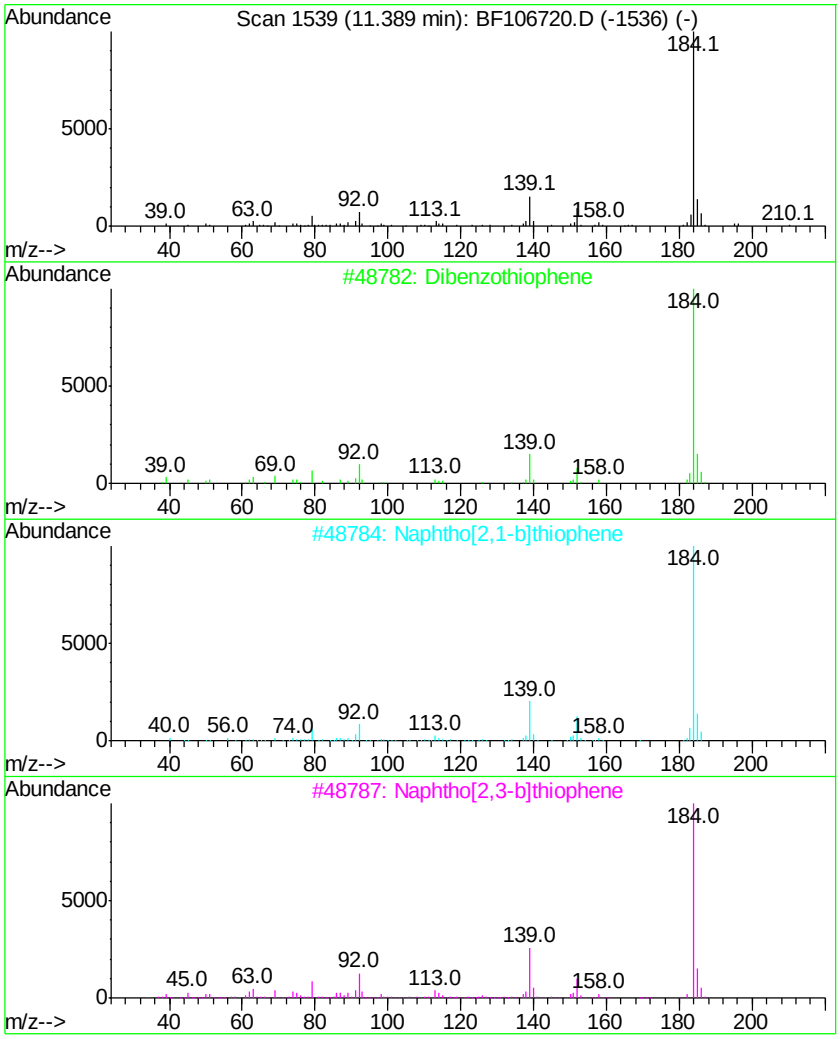
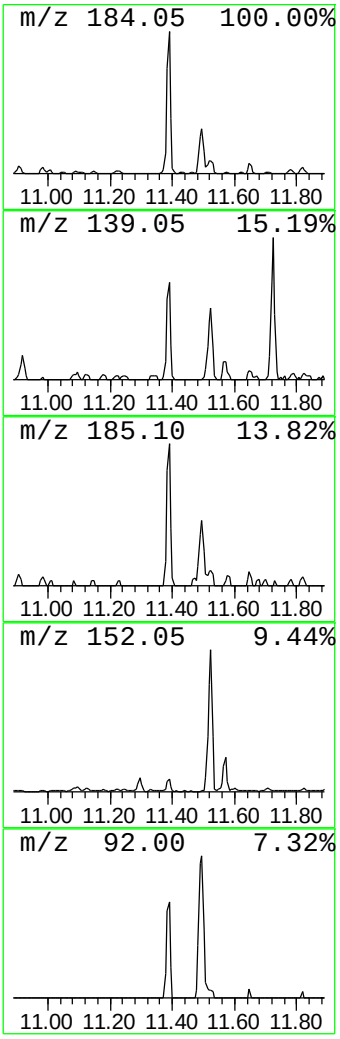
Peak Number 7 Dibenzothiophene Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.39 | 7.43 ng | 136484 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dibenzothiophene | 184 | C12H8S | 000132-65-0 | 96 |
| 2 | Naphtho[2,1-b]thiophene | 184 | C12H8S | 000233-02-3 | 95 |
| 3 | Naphtho[2,3-b]thiophene | 184 | C12H8S | 000268-77-9 | 94 |
| 4 | Naphtho[1,2-b]thiophene | 184 | C12H8S | 000234-41-3 | 94 |
| 5 | Azuleno(2,1-b)thiophene | 184 | C12H8S | 000248-13-5 | 91 |



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Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

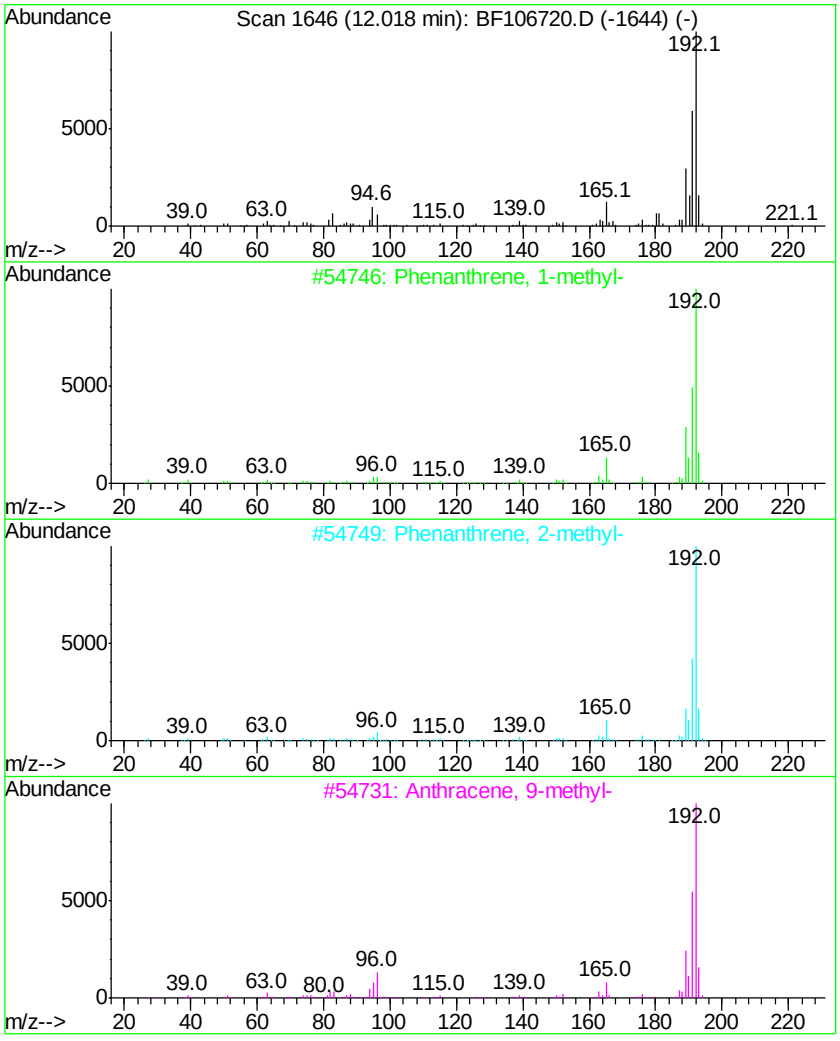
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

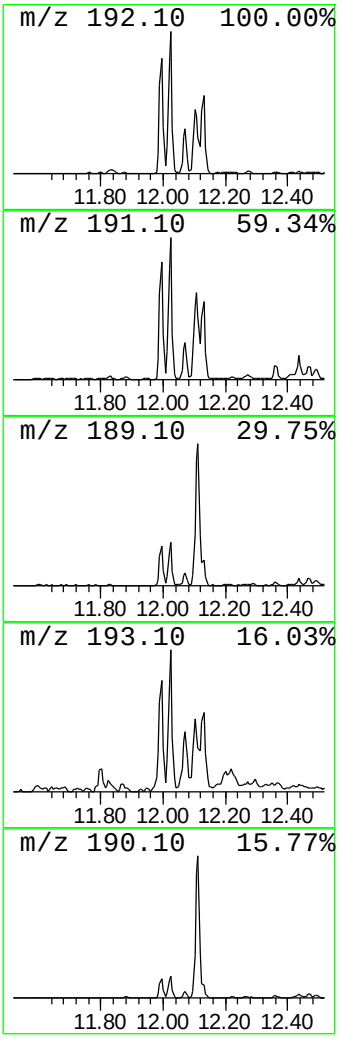
**********

Peak Number 9 Phenanthrene, 1-methyl- Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.02 | 16.33 ng | 299836 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 97 |
| 2 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 97 |
| 3 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 95 |
| 4 | 1H-Indene, 2-phenyl- | 192 | C15H12 | 004505-48-0 | 94 |
| 5 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 94 |



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Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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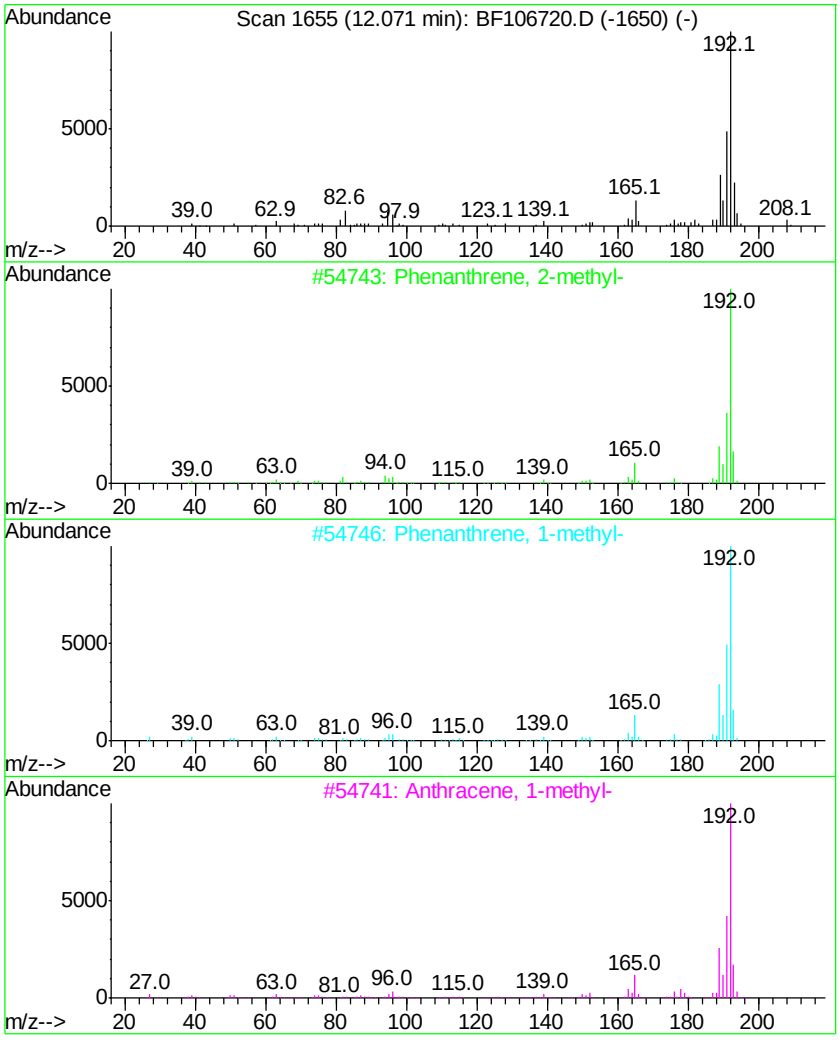
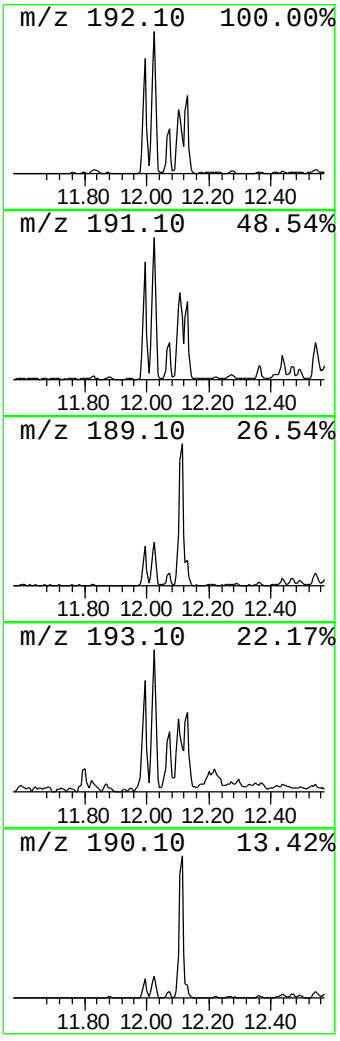
Peak Number 10 Phenanthrene, 2-methyl- Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.07 | 5.29 ng | 97116 | Phenanthrene-d10 | 11.49 |

| 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, 1-methyl- | 192 | C15H12 | 000610-48-0 | 94 |
| 4 | Phenanthrene, 3-methyl- | 192 | C15H12 | 000832-71-3 | 94 |
| 5 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 93 |



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Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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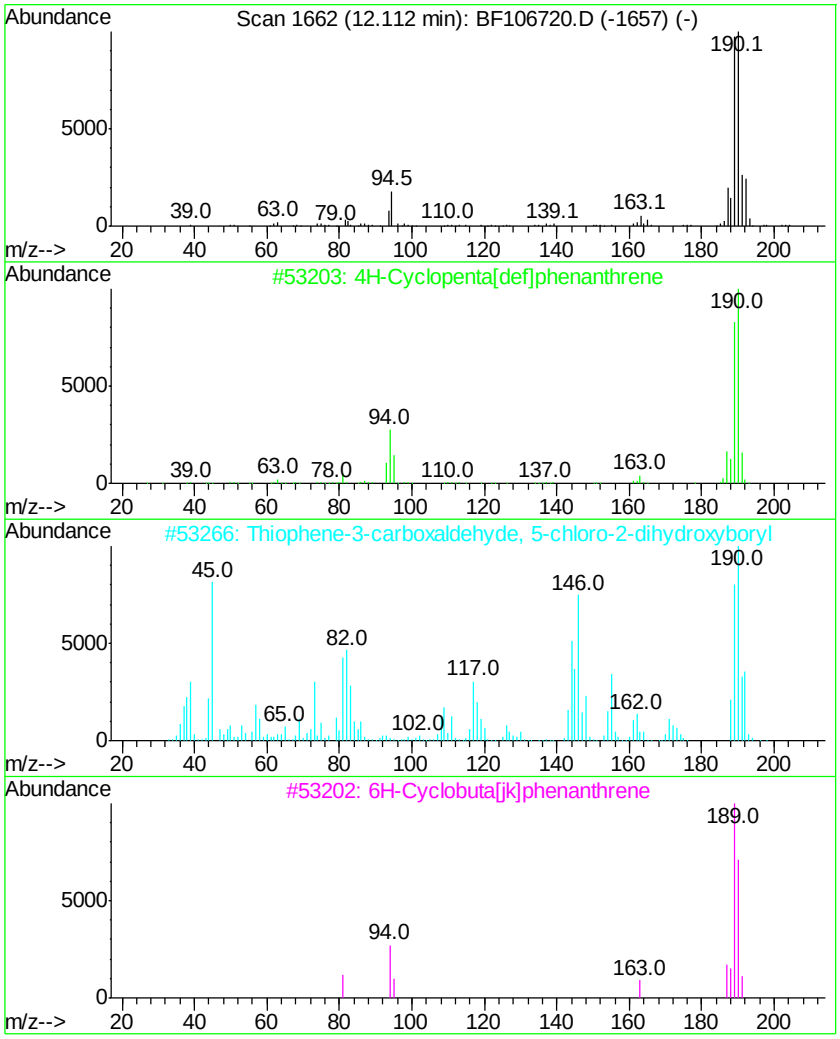
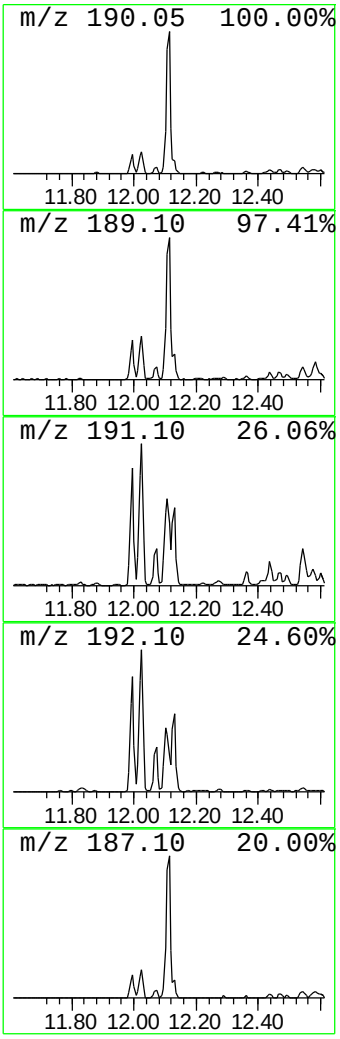
Peak Number 11 4H-Cyclopenta[def]phenanthrene Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.11 | 24.25 ng | 445323 | Phenanthrene-d10 | 11.49 |

| 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 | 53 |
| 3 | 6H-Cyclobuta[jk]phenanthrene | 190 | C15H10 | 083469-43-6 | 53 |
| 4 | 2,3,5,6-Tetramethylterephthalald... | 190 | C12H14O2 | 007072-01-7 | 43 |
| 5 | 2,2'-Bis(4,5-dimethylimidazole) | 190 | C10H14N4 | 069286-06-2 | 40 |



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Acq On : 22 Jun 2018 20:36
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Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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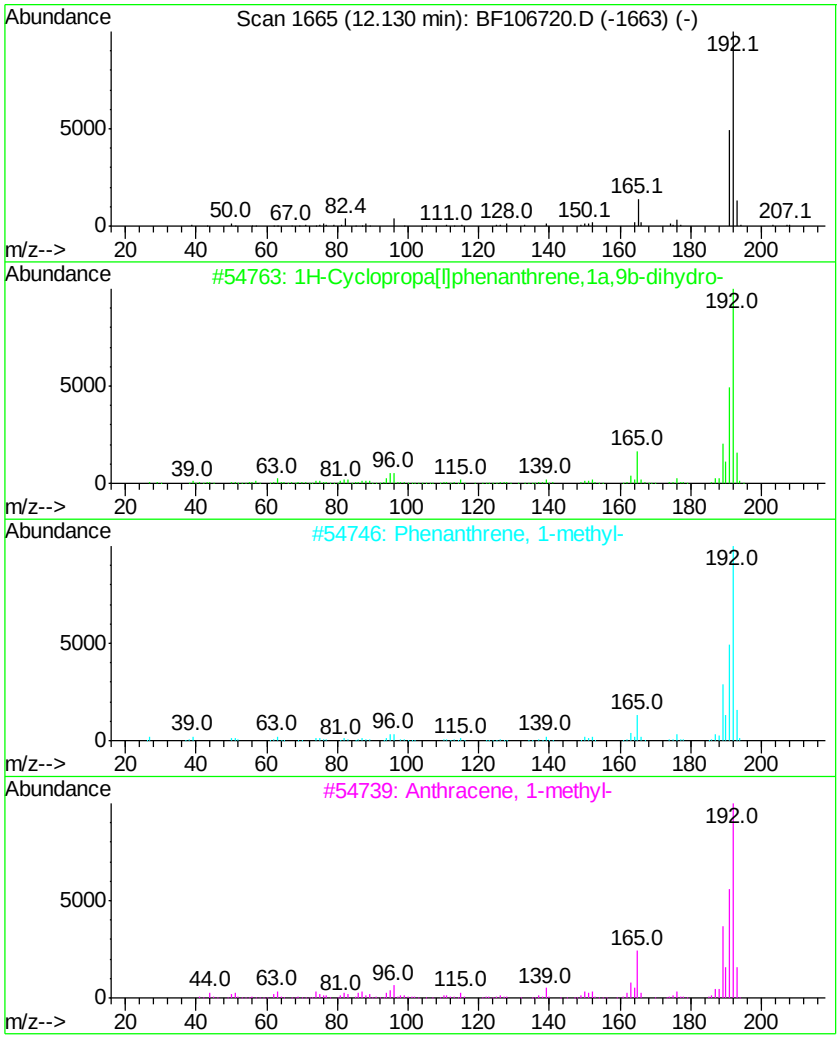
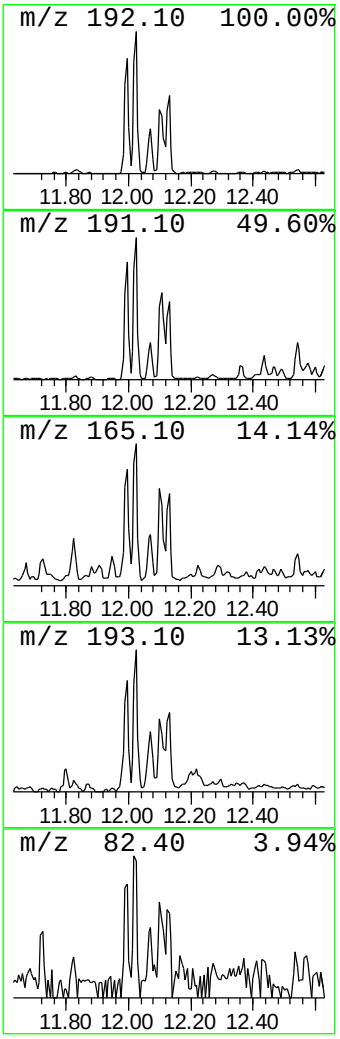
Peak Number 12 1H-Cyclopropa[l]phenanthren... Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.13 | 7.90 ng | 145127 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 91 |
| 2 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 91 |
| 3 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 91 |
| 4 | 1H-Indene, 1-phenyl- | 192 | C15H12 | 001961-96-2 | 87 |
| 5 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 87 |



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Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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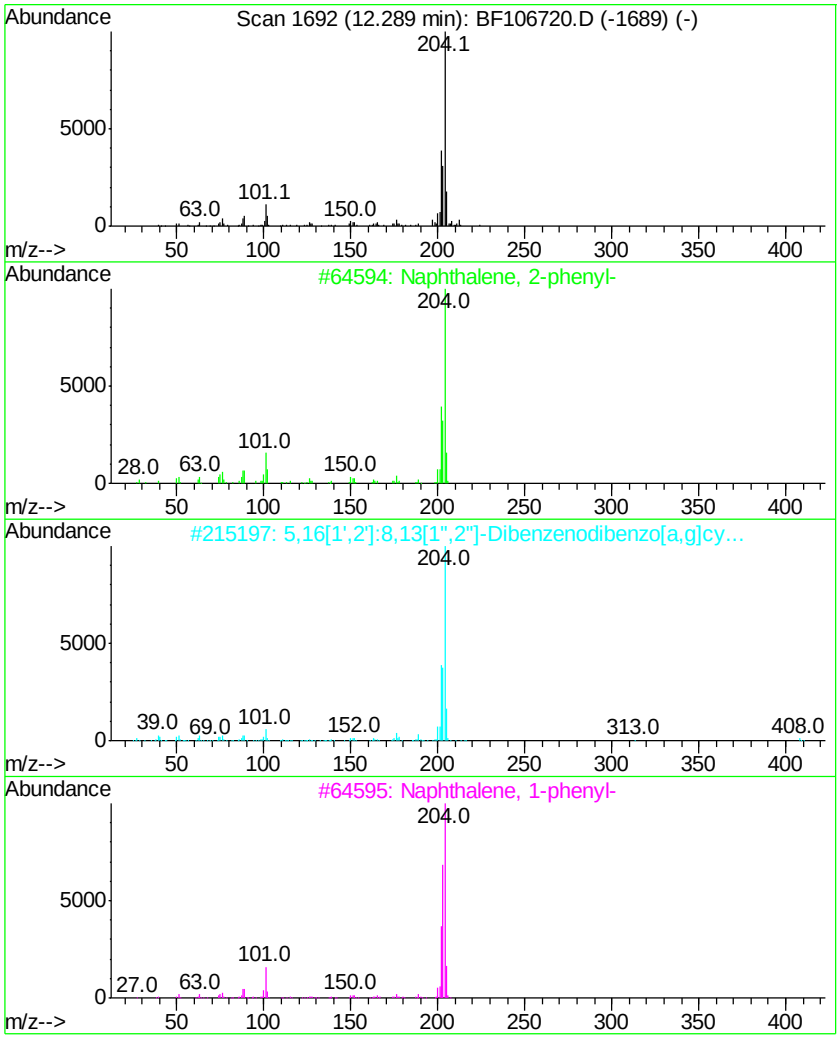
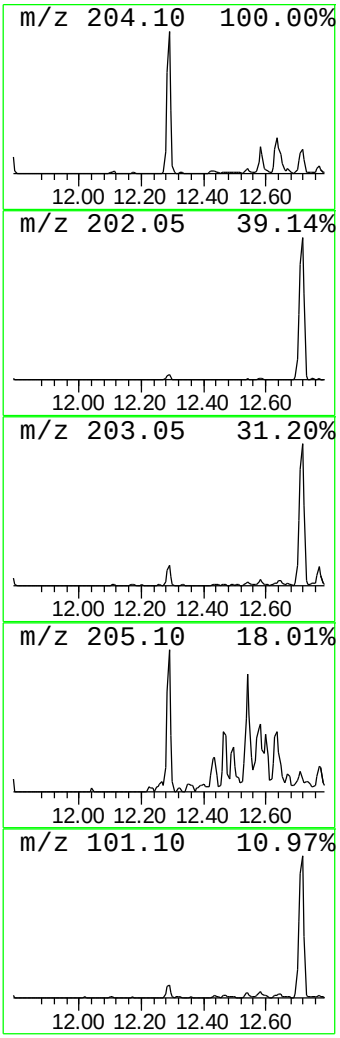
Peak Number 13 Naphthalene, 2-phenyl- Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.29 | 9.06 ng | 166375 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 95 |
| 2 | 5,16[1',2']:8,13[1'',2'']-Dibenz... | 408 | C32H24 | 005672-97-9 | 91 |
| 3 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 70 |
| 4 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 52 |
| 5 | 3,4-Biphenyldicarbonitrile | 204 | C14H8N2 | 004128-63-6 | 50 |



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Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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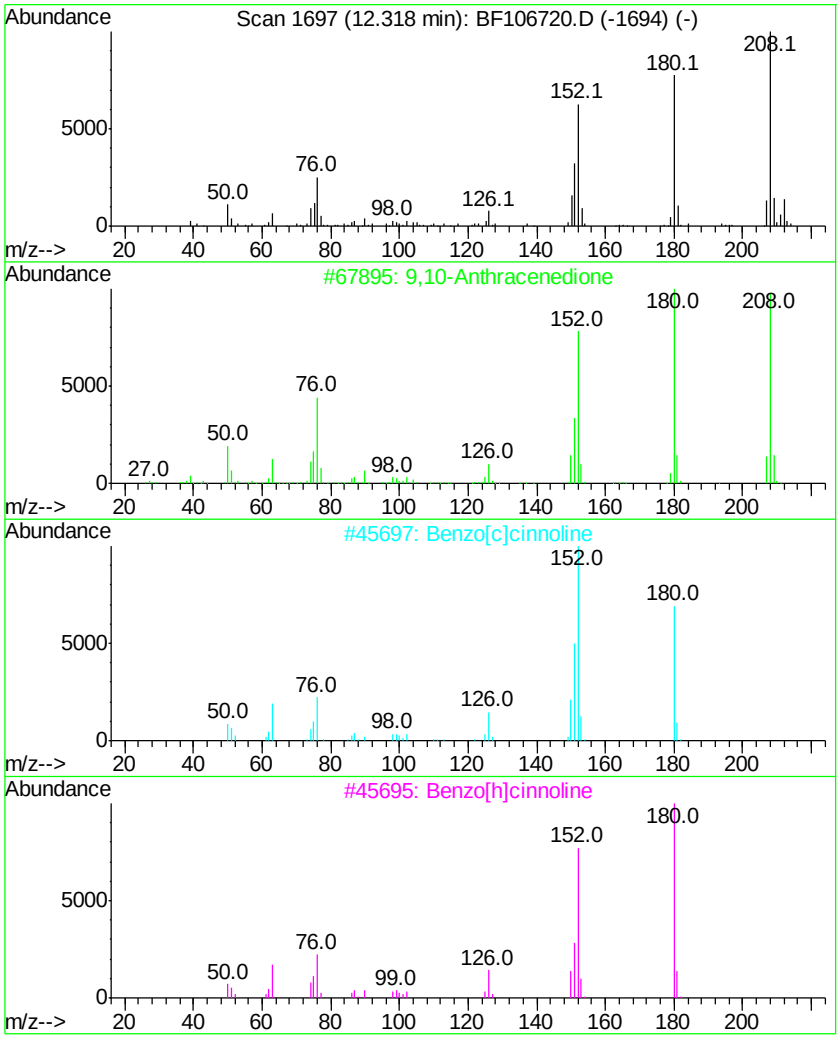
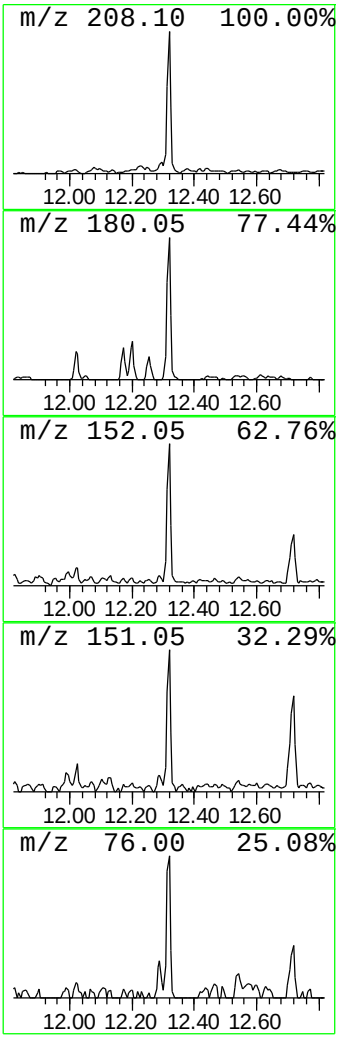
Peak Number 14 9,10-Anthracenedione Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.32 | 8.67 ng | 159190 | Phenanthrene-d10 | 11.49 |

| 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 | 70 |
| 3 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 49 |
| 4 | 1H-Phenalen-1-one | 180 | C13H8O | 000548-39-0 | 49 |
| 5 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 49 |



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Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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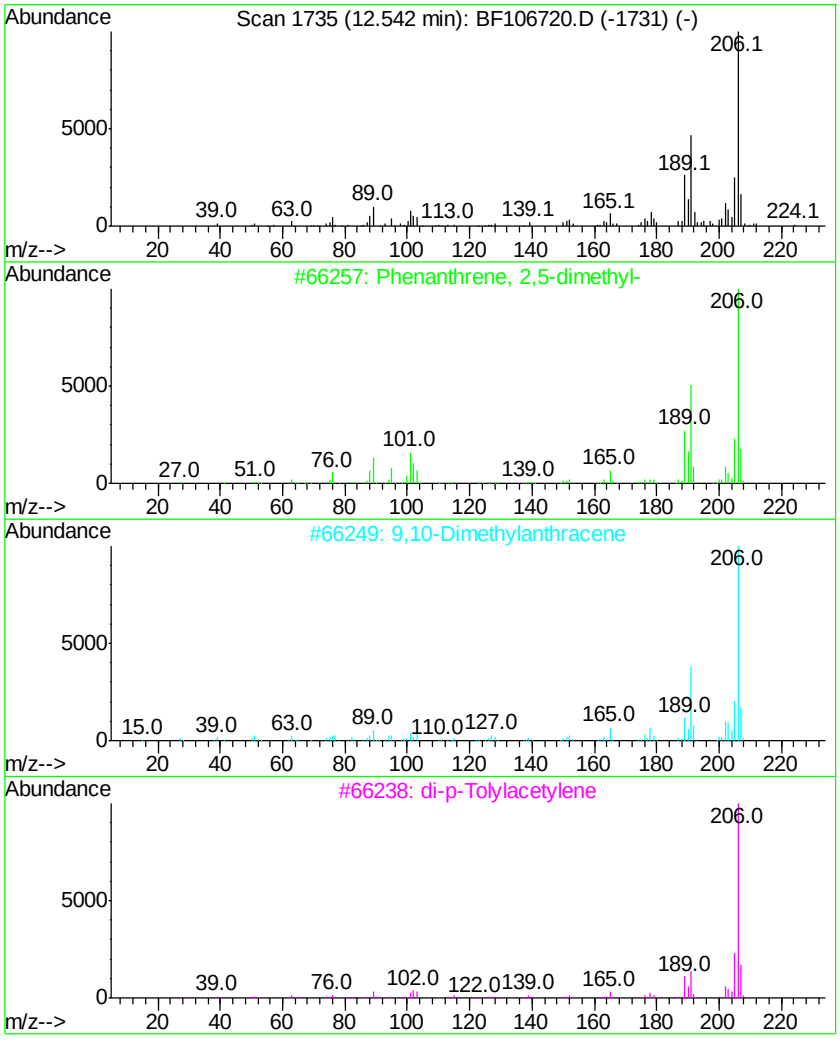
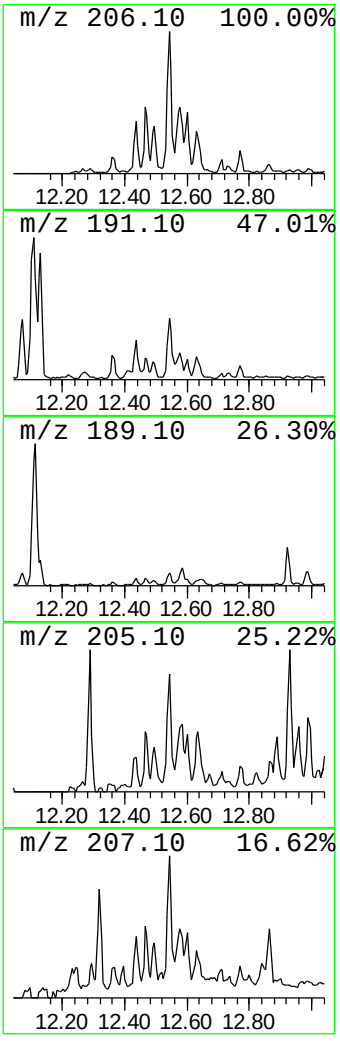
Peak Number 15 Phenanthrene, 2,5-dimethyl- Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.54 | 10.35 ng | 190010 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 98 |
| 2 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 95 |
| 3 | di-p-Tolylacetylene | 206 | C16H14 | 002789-88-0 | 93 |
| 4 | Phenanthrene, 1,7-dimethyl- | 206 | C16H14 | 000483-87-4 | 91 |
| 5 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 90 |



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Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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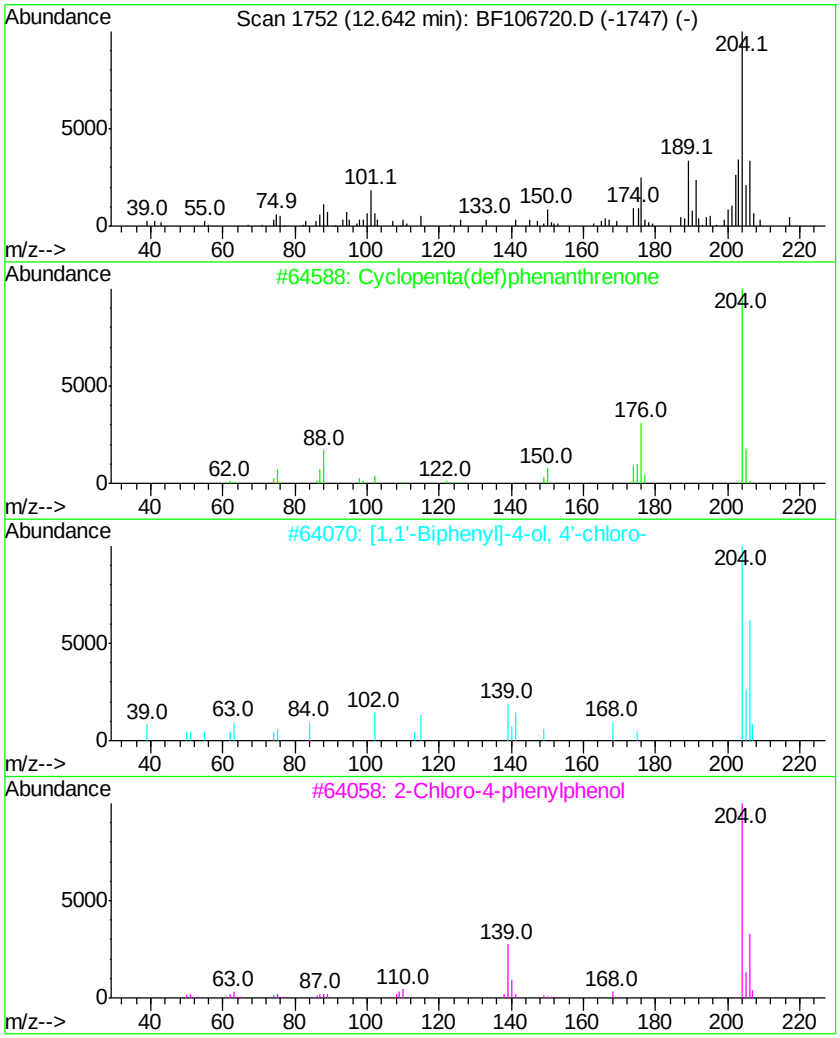
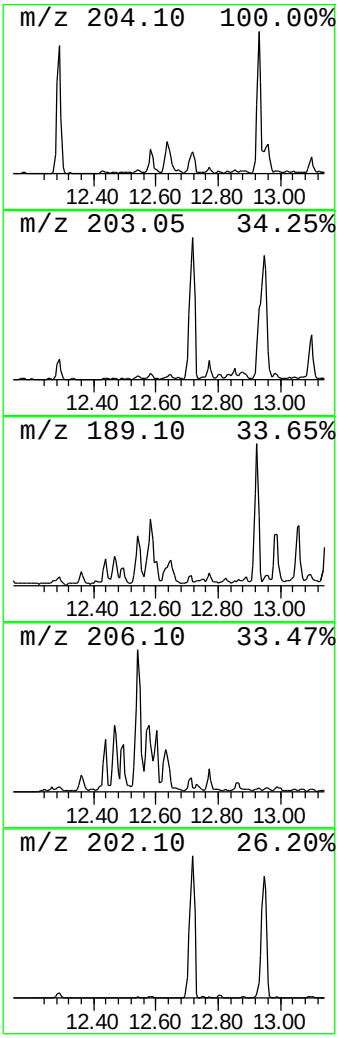
Peak Number 16 Cyclopenta(def)phenanthrenone Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.64 | 5.98 ng | 109883 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 87 |
| 2 | [1,1'-Biphenyl]-4-ol, 4'-chloro- | 204 | C12H9ClO | 028034-99-3 | 50 |
| 3 | 2-Chloro-4-phenylphenol | 204 | C12H9ClO | 000092-04-6 | 43 |
| 4 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 43 |
| 5 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 41 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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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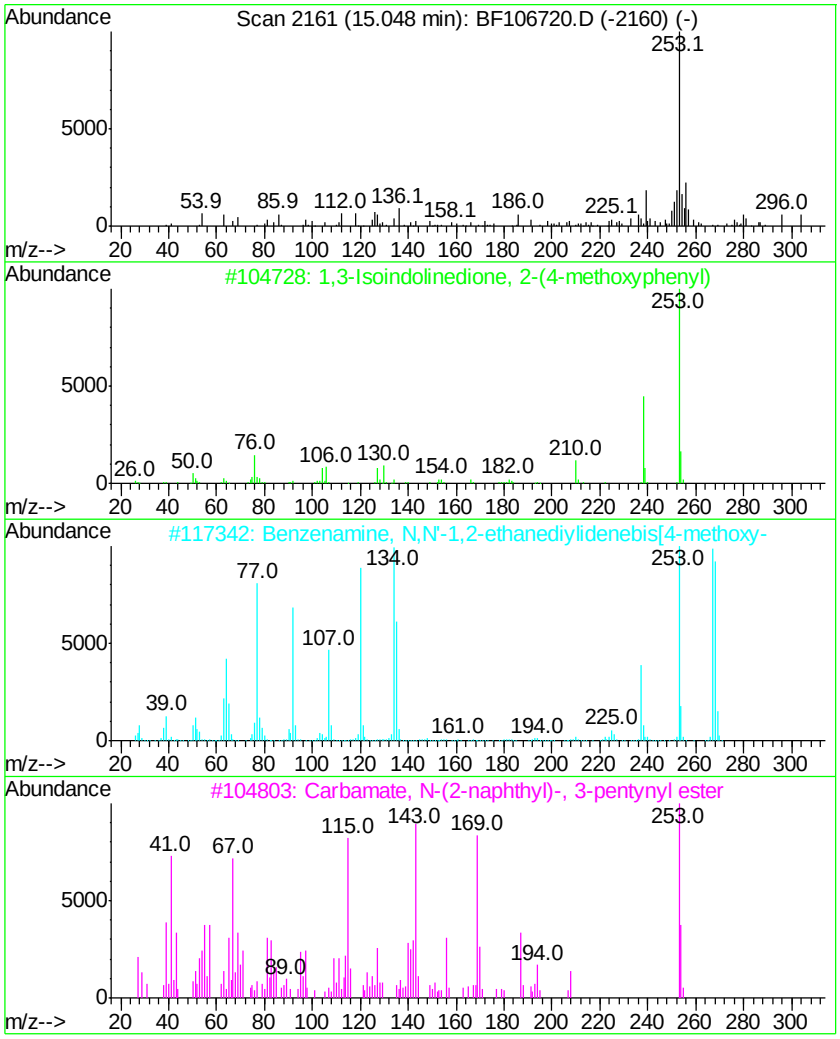
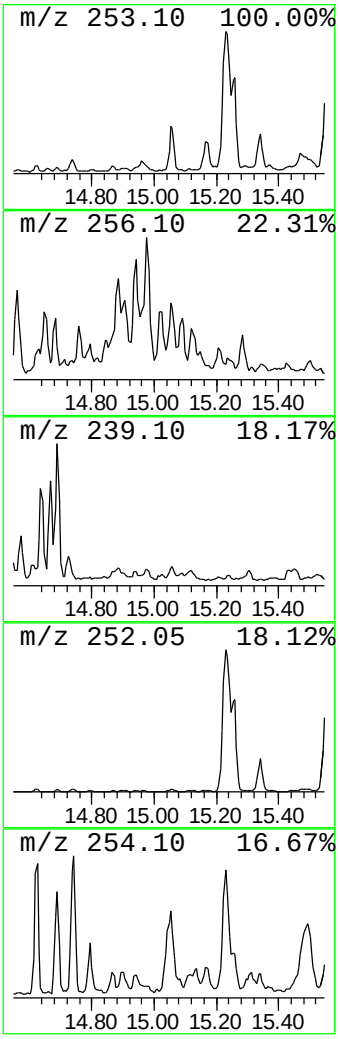
Peak Number 17 unknown15.05 Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.05 | 5.21 ng | 91538 | Perylene-d12 | 15.68 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,3-Isoindolinedione, 2-(4-metho... | 253 | C15H11NO3 | 002142-04-3 | 47 |
| 2 | Benzenamine, N,N'-1,2-ethanediyl... | 268 | C16H16N2O2 | 024764-91-8 | 43 |
| 3 | Carbamate, N-(2-naphthyl)-, 3-pe... | 253 | C16H15NO2 | 1000197-96-0 | 43 |
| 4 | Benz(a)anthracene-7-carbonitrile | 253 | C19H11N | 007476-08-6 | 43 |
| 5 | Plumbane, trimethyl(1-methylprop... | 310 | C7H18Pb | 054964-76-0 | 40 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

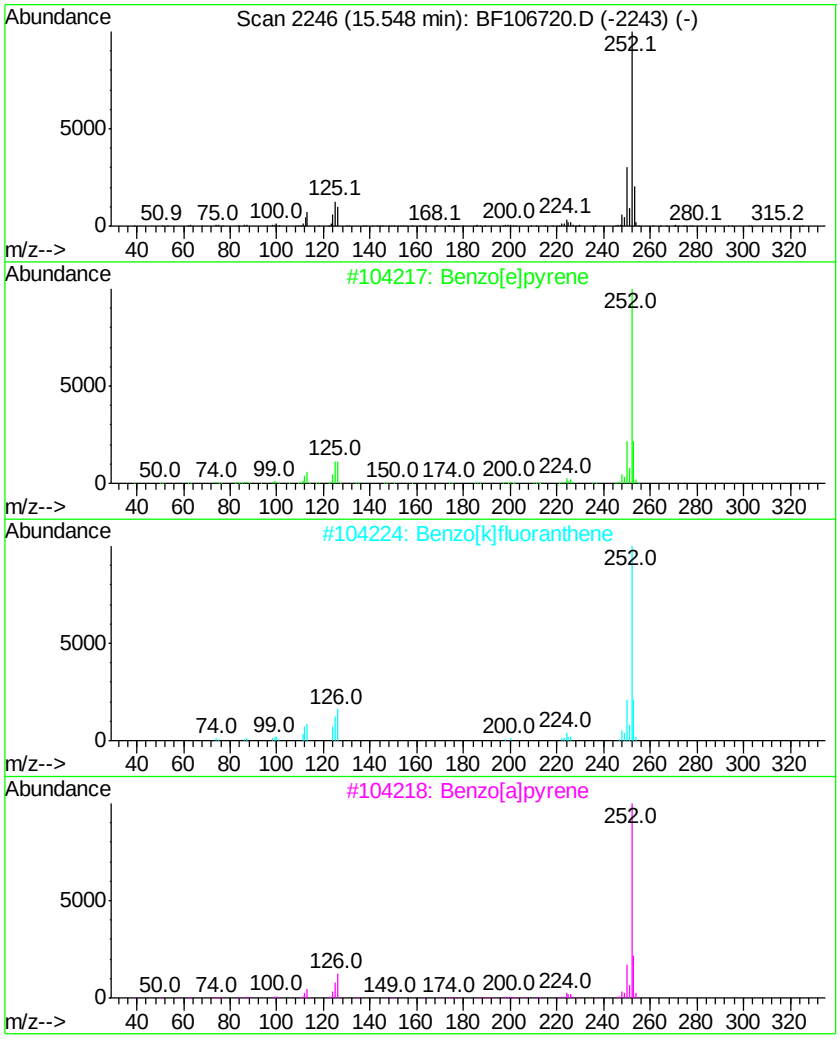
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

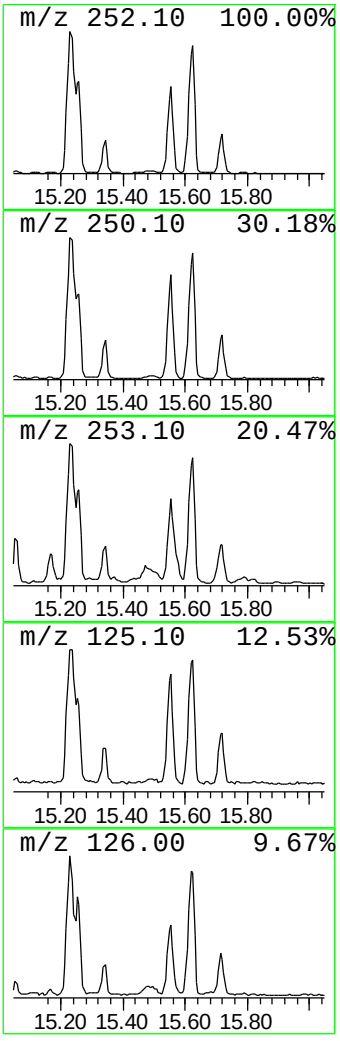
**********

Peak Number 19 Benzo[e]pyrene Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.55 | 25.22 ng | 443197 | Perylene-d12 | 15.68 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 98 |
| 2 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 95 |
| 3 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 95 |
| 4 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 95 |
| 5 | Benzo[j]fluoranthene | 252 | C20H12 | 000205-82-3 | 94 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\SVOASRV\HPCHEM1\BNA_F\DATA\BF062218\
Data File : BF106720.D
Acq On : 22 Jun 2018 20:36
Operator : JU/SJ
Sample : J3246-03 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** OK-01-062018

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF061918.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 |
| unknown6.73 | 6.73 | 33.2 | ng | 508251 | 1 | 6.96 | 306569 | 20.0 |
| Naphthalene, 1-me... | 9.05 | 7.8 | ng | 159578 | 2 | 8.24 | 408686 | 20.0 |
| Naphthalene, 2,3-... | 9.65 | 6.5 | ng | 134184 | 3 | 10.00 | 416145 | 20.0 |
| Pentadecane | 10.88 | 4.7 | ng | 85534 | 4 | 11.49 | 367290 | 20.0 |
| 9H-Fluorene, 1-me... | 11.09 | 6.8 | ng | 124568 | 4 | 11.49 | 367290 | 20.0 |
| Dibenzothiophene | 11.39 | 7.4 | ng | 136484 | 4 | 11.49 | 367290 | 20.0 |
| Phenanthrene, 1-m... | 12.02 | 16.3 | ng | 299836 | 4 | 11.49 | 367290 | 20.0 |
| Phenanthrene, 2-m... | 12.07 | 5.3 | ng | 97116 | 4 | 11.49 | 367290 | 20.0 |
| 4H-Cyclopenta[def... | 12.11 | 24.3 | ng | 445323 | 4 | 11.49 | 367290 | 20.0 |
| 1H-Cyclopropa[l]p... | 12.13 | 7.9 | ng | 145127 | 4 | 11.49 | 367290 | 20.0 |
| Naphthalene, 2-ph... | 12.29 | 9.1 | ng | 166375 | 4 | 11.49 | 367290 | 20.0 |
| 9,10-Anthracenedione | 12.32 | 8.7 | ng | 159190 | 4 | 11.49 | 367290 | 20.0 |
| Phenanthrene, 2,5... | 12.54 | 10.4 | ng | 190010 | 4 | 11.49 | 367290 | 20.0 |
| Cyclopenta(def)ph... | 12.64 | 6.0 | ng | 109883 | 4 | 11.49 | 367290 | 20.0 |
| unknown15.05 | 15.05 | 5.2 | ng | 91538 | 6 | 15.68 | 351506 | 20.0 |
| Benzo[e]pyrene | 15.55 | 25.2 | ng | 443197 | 6 | 15.68 | 351506 | 20.0 |