LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

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-BF073018.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 | 6.754 | 746 | 751 | 764 | rBV4 | 39626 | 128874 | 5.94% | 0.551% |
| 2 | 6.954 | 782 | 785 | 808 | rBV | 299509 | 676861 | 31.19% | 2.896% |
| 3 | 7.107 | 808 | 811 | 821 | rVV | 81205 | 146668 | 6.76% | 0.627% |
| 4 | 7.572 | 878 | 890 | 896 | rBV6 | 15601 | 63593 | 2.93% | 0.272% |
| 5 | 8.236 | 999 | 1003 | 1028 | rBV | 612195 | 1113191 | 51.30% | 4.762% |
| 6 | 8.960 | 1122 | 1126 | 1134 | rBV | 17990 | 38270 | 1.76% | 0.164% |
| 7 | 9.048 | 1137 | 1141 | 1149 | rVB | 33415 | 45548 | 2.10% | 0.195% |
| 8 | 9.307 | 1182 | 1185 | 1194 | rBV | 135668 | 201342 | 9.28% | 0.861% |
| 9 | 9.577 | 1228 | 1231 | 1239 | rBV3 | 13770 | 25008 | 1.15% | 0.107% |
| 10 | 9.648 | 1239 | 1243 | 1246 | rBV2 | 38740 | 46757 | 2.15% | 0.200% |
| 11 | 9.766 | 1260 | 1263 | 1271 | rVB3 | 18346 | 34837 | 1.61% | 0.149% |
| 12 | 9.854 | 1275 | 1278 | 1284 | rBV2 | 26873 | 38715 | 1.78% | 0.166% |
| 13 | 9.995 | 1298 | 1302 | 1305 | rBV | 763697 | 810517 | 37.35% | 3.468% |
| 14 | 10.025 | 1305 | 1307 | 1316 | rVB | 158704 | 195877 | 9.03% | 0.838% |
| 15 | 10.148 | 1323 | 1328 | 1332 | rVB3 | 19539 | 25703 | 1.18% | 0.110% |
| 16 | 10.207 | 1332 | 1338 | 1340 | rVV2 | 35208 | 62903 | 2.90% | 0.269% |
| 17 | 10.230 | 1340 | 1342 | 1351 | rVV | 35319 | 51961 | 2.39% | 0.222% |
| 18 | 10.307 | 1351 | 1355 | 1358 | rVV | 19352 | 23469 | 1.08% | 0.100% |
| 19 | 10.395 | 1366 | 1370 | 1378 | rVB3 | 26435 | 41420 | 1.91% | 0.177% |
| 20 | 10.548 | 1390 | 1396 | 1402 | rBV2 | 70405 | 117571 | 5.42% | 0.503% |
| 21 | 10.607 | 1402 | 1406 | 1408 | rBV2 | 19141 | 23517 | 1.08% | 0.101% |
| 22 | 10.701 | 1416 | 1422 | 1427 | rVB2 | 30291 | 44752 | 2.06% | 0.191% |
| 23 | 10.795 | 1432 | 1438 | 1444 | rBV4 | 63855 | 123680 | 5.70% | 0.529% |
| 24 | 11.095 | 1482 | 1489 | 1491 | rBV4 | 34556 | 56720 | 2.61% | 0.243% |
| 25 | 11.219 | 1505 | 1510 | 1512 | rBV3 | 27440 | 38265 | 1.76% | 0.164% |
| 26 | 11.236 | 1512 | 1513 | 1519 | rVB4 | 26858 | 31124 | 1.43% | 0.133% |
| 27 | 11.307 | 1519 | 1525 | 1526 | rBV6 | 26412 | 40619 | 1.87% | 0.174% |
| 28 | 11.336 | 1526 | 1530 | 1536 | rVV4 | 32856 | 71457 | 3.29% | 0.306% |
| 29 | 11.389 | 1536 | 1539 | 1550 | rVB | 54367 | 94726 | 4.37% | 0.405% |
| 30 | 11.489 | 1552 | 1556 | 1558 | rBV | 587423 | 648469 | 29.88% | 2.774% |
| 31 | 11.513 | 1558 | 1560 | 1567 | rVV | 1193410 | 1536731 | 70.82% | 6.574% |
| 32 | 11.571 | 1567 | 1570 | 1591 | rVB | 242391 | 537323 | 24.76% | 2.299% |
| 33 | 11.748 | 1591 | 1600 | 1603 | rBV2 | 70892 | 142504 | 6.57% | 0.610% |
| 34 | 11.777 | 1603 | 1605 | 1610 | rVB2 | 37838 | 38168 | 1.76% | 0.163% |

LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

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-BF073018.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 11.995 | 1638 | 1642 | 1644 | rBV | 166280 | 205130 | 9.45% | 0.878% |
| 36 | 12.024 | 1644 | 1647 | 1652 | rVB | 167624 | 205589 | 9.47% | 0.880% |
| 37 | 12.071 | 1652 | 1655 | 1657 | rBV | 51370 | 48261 | 2.22% | 0.206% |
| 38 | 12.107 | 1657 | 1661 | 1663 | rBV2 | 202980 | 259724 | 11.97% | 1.111% |
| 39 | 12.289 | 1689 | 1692 | 1696 | rBV | 98800 | 124067 | 5.72% | 0.531% |
| 40 | 12.324 | 1696 | 1698 | 1702 | rVV | 52068 | 73120 | 3.37% | 0.313% |
| 41 | 12.360 | 1702 | 1704 | 1708 | rVB | 30524 | 27875 | 1.28% | 0.119% |
| 42 | 12.436 | 1714 | 1717 | 1720 | rBV | 34061 | 45396 | 2.09% | 0.194% |
| 43 | 12.466 | 1720 | 1722 | 1724 | rVB | 33316 | 23794 | 1.10% | 0.102% |
| 44 | 12.489 | 1724 | 1726 | 1732 | rVB2 | 25355 | 29994 | 1.38% | 0.128% |
| 45 | 12.542 | 1732 | 1735 | 1738 | rBV | 135565 | 164055 | 7.56% | 0.702% |
| 46 | 12.577 | 1738 | 1741 | 1743 | rVV3 | 43186 | 49516 | 2.28% | 0.212% |
| 47 | 12.636 | 1747 | 1751 | 1759 | rVB3 | 92478 | 163175 | 7.52% | 0.698% |
| 48 | 12.713 | 1760 | 1764 | 1772 | rBV | 1570513 | 1995269 | 91.95% | 8.536% |
| 49 | 12.860 | 1786 | 1789 | 1796 | rVB3 | 55575 | 95642 | 4.41% | 0.409% |
| 50 | 12.942 | 1796 | 1803 | 1809 | rBV | 1625837 | 2170016 | 100.00% | 9.284% |
| 51 | 12.989 | 1809 | 1811 | 1818 | rVB | 119443 | 140898 | 6.49% | 0.603% |
| 52 | 13.071 | 1821 | 1825 | 1829 | rBV2 | 209345 | 282334 | 13.01% | 1.208% |
| 53 | 13.160 | 1835 | 1840 | 1845 | rVB3 | 118952 | 218861 | 10.09% | 0.936% |
| 54 | 13.207 | 1846 | 1848 | 1851 | rBV2 | 32545 | 34151 | 1.57% | 0.146% |
| 55 | 13.242 | 1851 | 1854 | 1855 | rVV2 | 85222 | 85049 | 3.92% | 0.364% |
| 56 | 13.271 | 1856 | 1859 | 1863 | rVV | 125911 | 168804 | 7.78% | 0.722% |
| 57 | 13.336 | 1867 | 1870 | 1872 | rBV2 | 52312 | 56860 | 2.62% | 0.243% |
| 58 | 13.371 | 1872 | 1876 | 1883 | rVB3 | 147701 | 246841 | 11.38% | 1.056% |
| 59 | 13.465 | 1889 | 1892 | 1894 | rBV | 112155 | 112481 | 5.18% | 0.481% |
| 60 | 13.495 | 1895 | 1897 | 1901 | rVB2 | 82959 | 88579 | 4.08% | 0.379% |
| 61 | 13.783 | 1943 | 1946 | 1953 | rBV | 132610 | 197047 | 9.08% | 0.843% |
| 62 | 13.895 | 1962 | 1965 | 1967 | rBV | 137038 | 166220 | 7.66% | 0.711% |
| 63 | 13.918 | 1967 | 1969 | 1971 | rVV | 169707 | 174526 | 8.04% | 0.747% |
| 64 | 13.942 | 1971 | 1973 | 1980 | rVV3 | 133087 | 279479 | 12.88% | 1.196% |
| 65 | 13.995 | 1980 | 1982 | 1988 | rVB | 139963 | 182750 | 8.42% | 0.782% |
| 66 | 14.142 | 2002 | 2007 | 2010 | rBV2 | 1199584 | 2086263 | 96.14% | 8.925% |
| 67 | 14.171 | 2010 | 2012 | 2022 | rVV | 945243 | 1139126 | 52.49% | 4.873% |
| 68 | 14.248 | 2023 | 2025 | 2031 | rVB2 | 101140 | 128407 | 5.92% | 0.549% |
| 69 | 14.530 | 2070 | 2073 | 2077 | rBV | 141319 | 180519 | 8.32% | 0.772% |
| 70 | 15.048 | 2159 | 2161 | 2168 | rVB2 | 65178 | 80716 | 3.72% | 0.345% |
| 71 | 15.224 | 2186 | 2191 | 2202 | rBV | 658933 | 1682790 | 77.55% | 7.199% |

LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

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-BF073018.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 15.336 | 2207 | 2210 | 2214 | rVV | 80156 | 104688 | 4.82% | 0.448% |
| 73 | 15.542 | 2241 | 2245 | 2252 | rBV | 340961 | 534453 | 24.63% | 2.286% |
| 74 | 15.612 | 2252 | 2257 | 2264 | rBV | 449876 | 895659 | 41.27% | 3.832% |
| 75 | 15.677 | 2264 | 2268 | 2272 | rBV | 426233 | 658036 | 30.32% | 2.815% |
| 76 | 17.259 | 2532 | 2537 | 2549 | rVB2 | 176746 | 451336 | 20.80% | 1.931% |

Sum of corrected areas: 23374636

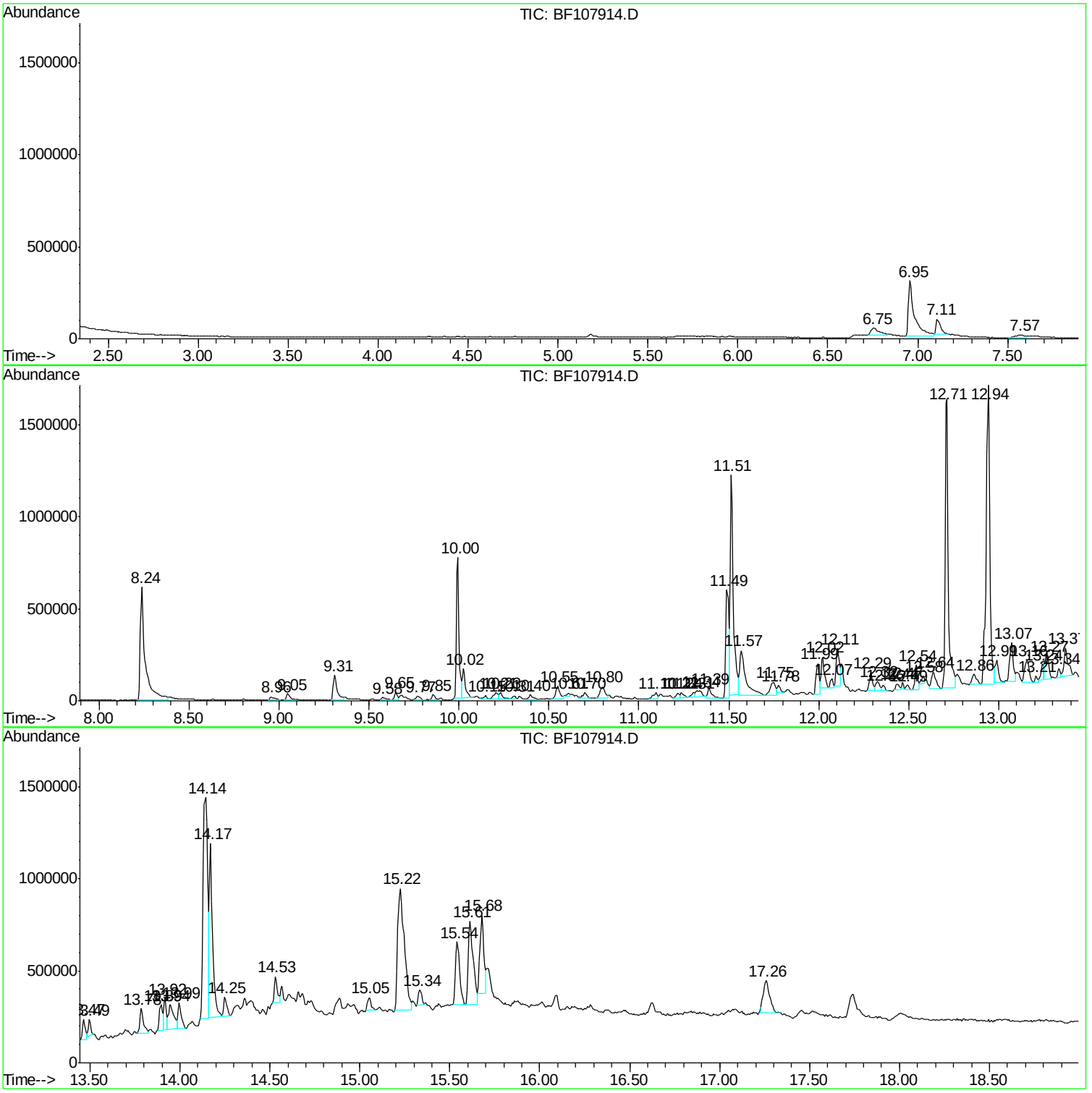
LSC Report - Integrated Chromatogram

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.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\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

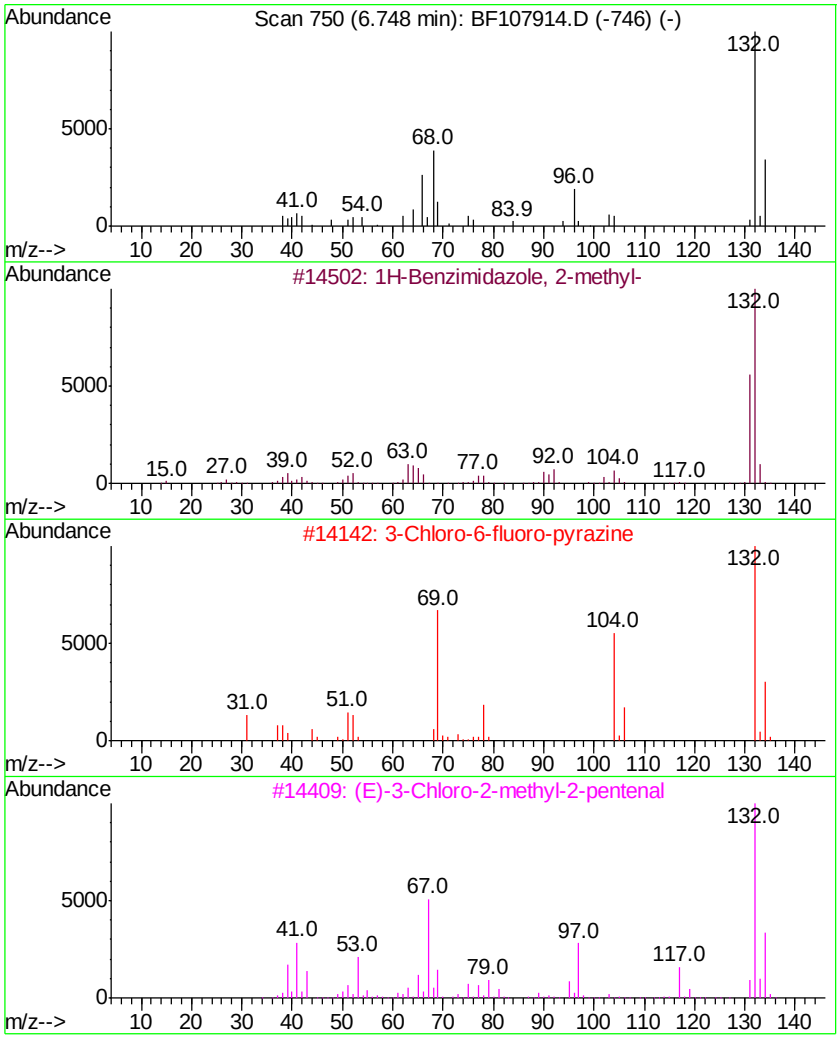
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

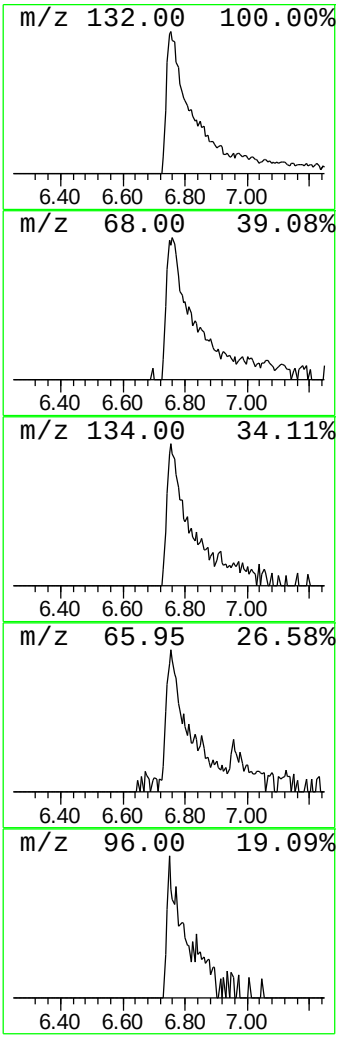
**********

Peak Number 1 unknown6.75 Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.75 | 3.81 ng | 128874 | 1,4-Dichlorobenzene-d4 | 6.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1H-Benzimidazole, 2-methyl- | 132 | C8H8N2 | 000615-15-6 | 27 |
| 2 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 25 |
| 3 | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO | 031357-76-3 | 25 |
| 4 | 1,3-Cyclopentanedione, 2-chloro- | 132 | C5H5ClO2 | 014203-19-1 | 23 |
| 5 | 1-Aminoindan | 133 | C9H11N | 034698-41-4 | 16 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

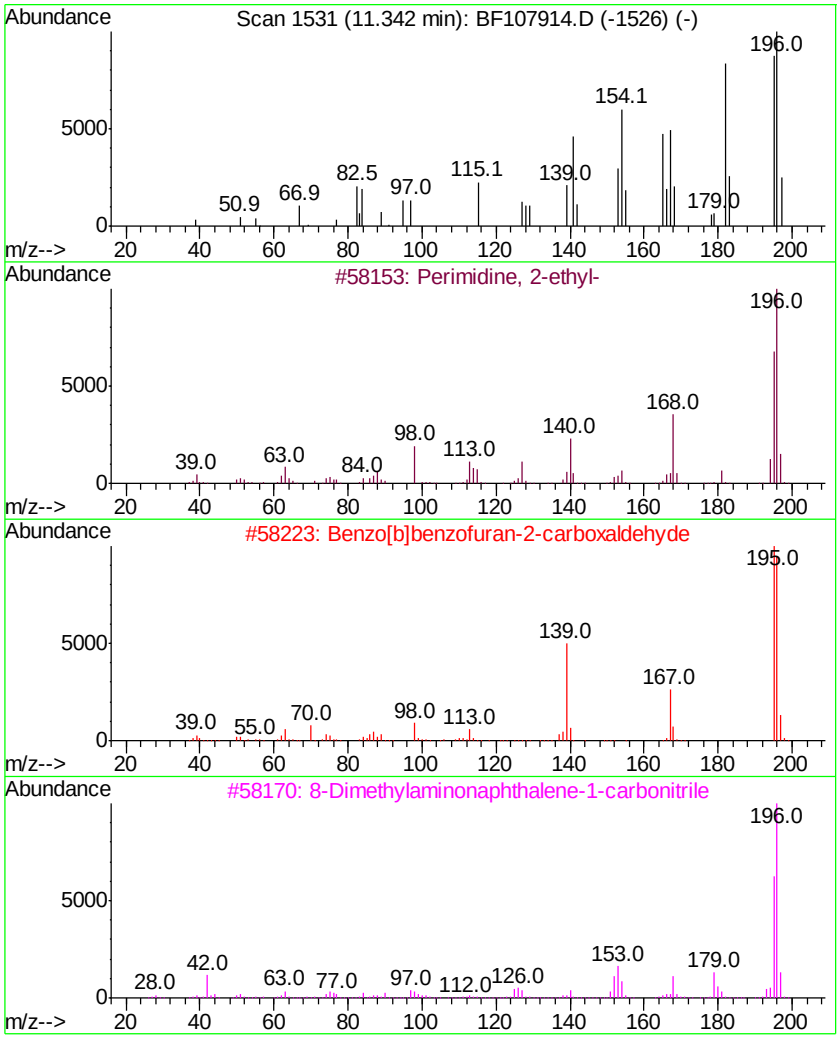
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

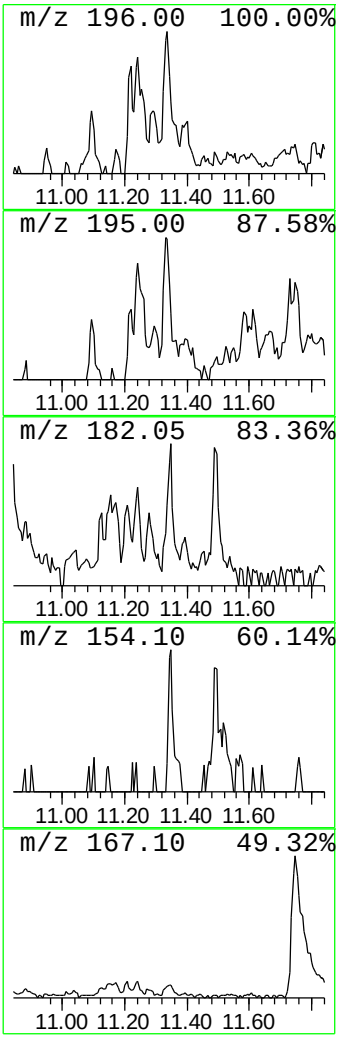
**********

Peak Number 3 Perimidine, 2-ethyl- Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.34 | 2.20 ng | 71457 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Perimidine, 2-ethyl- | 196 | C13H12N2 | 028478-13-9 | 52 |
| 2 | Benzo[b]benzofuran-2-carboxaldehyde | 196 | C13H8O2 | 1000351-56-0 | 42 |
| 3 | 8-Dimethylaminonaphthalene-1-car... | 196 | C13H12N2 | 128644-69-9 | 38 |
| 4 | 5,7-Dimethylpyrimido-[3,4-a]-indole | 196 | C13H12N2 | 038349-21-2 | 38 |
| 5 | Dibenz[c,e]oxepin, 5,7-dihydro- | 196 | C14H12O | 001136-22-7 | 37 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

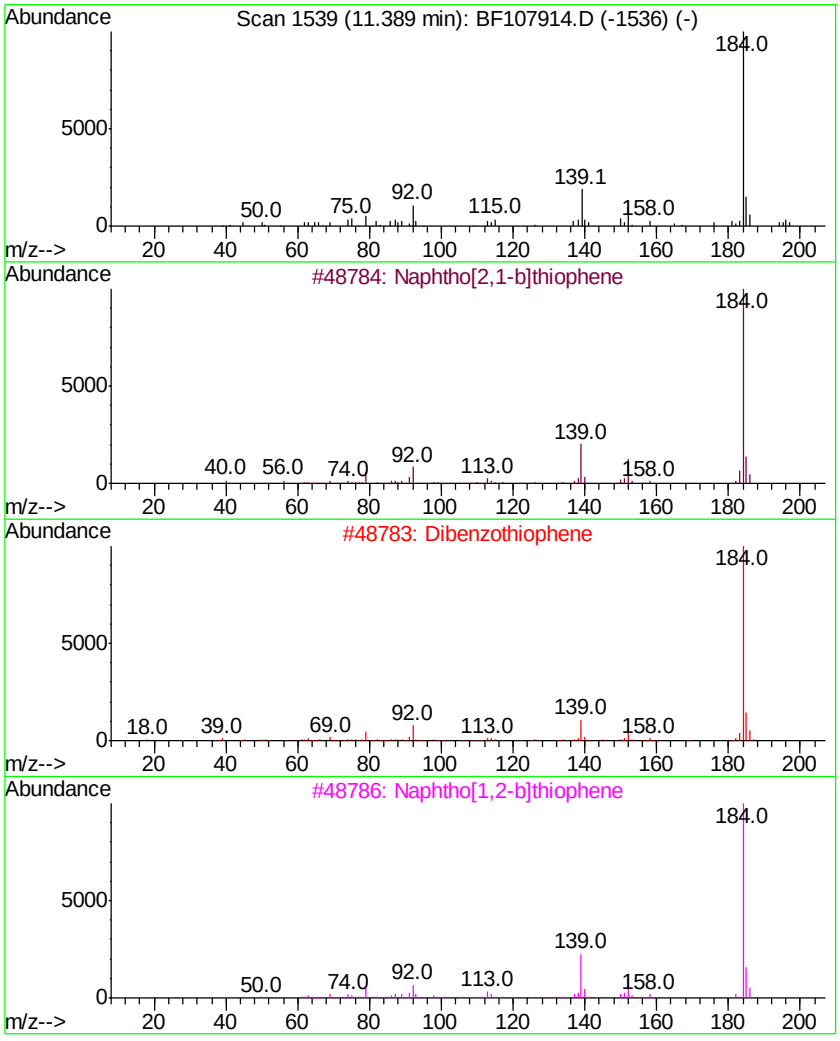
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

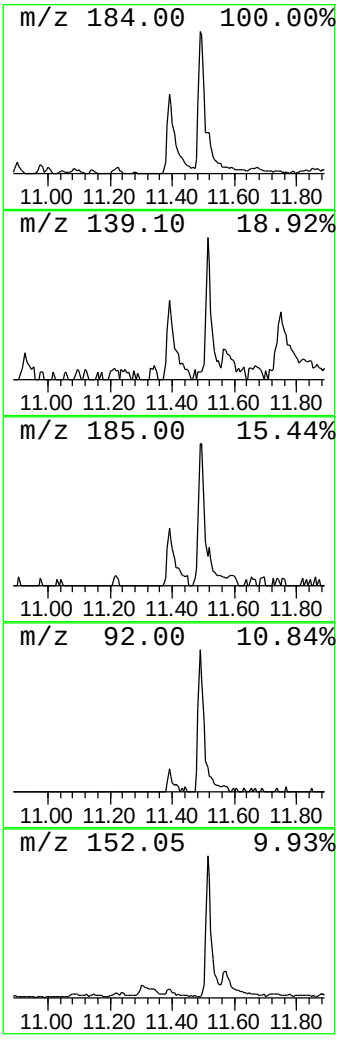
**********

Peak Number 4 Naphtho[2,1-b]thiophene Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.39 | 2.92 ng | 94726 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphtho[2,1-b]thiophene | 184 | C12H8S | 000233-02-3 | 93 |
| 2 | Dibenzothiophene | 184 | C12H8S | 000132-65-0 | 93 |
| 3 | Naphtho[1,2-b]thiophene | 184 | C12H8S | 000234-41-3 | 90 |
| 4 | Azuleno(2,1-b)thiophene | 184 | C12H8S | 000248-13-5 | 90 |
| 5 | Naphtho[2,3-b]thiophene | 184 | C12H8S | 000268-77-9 | 90 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

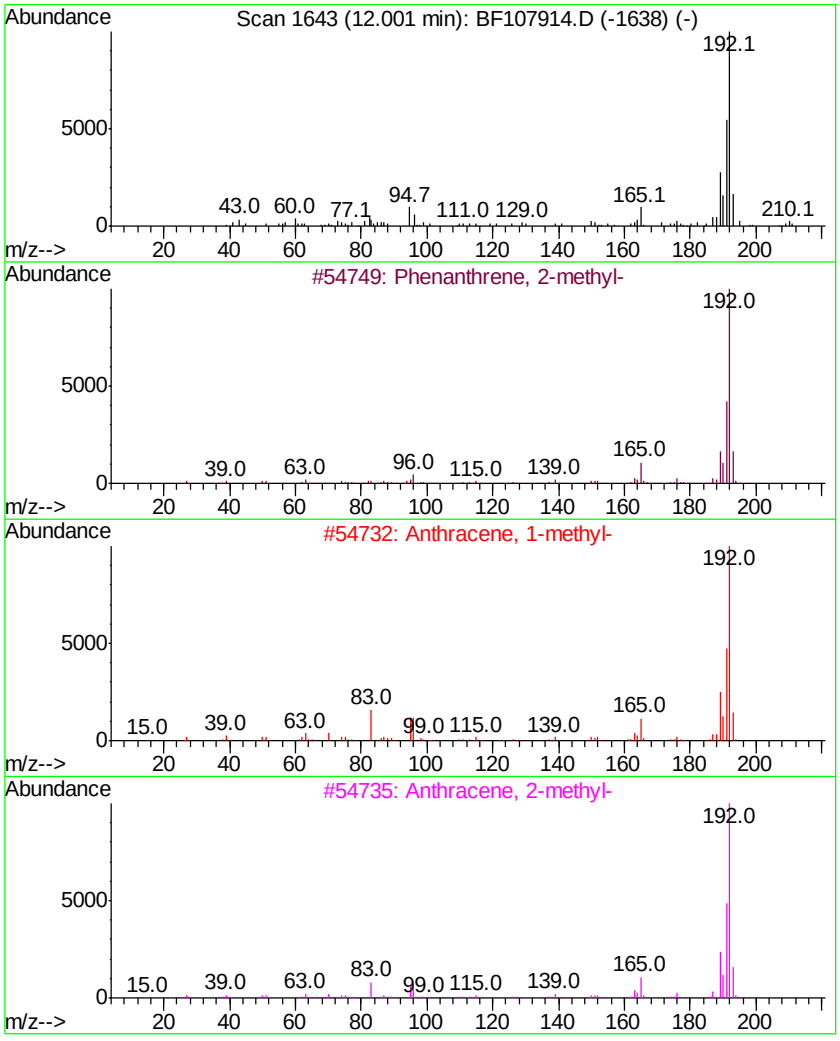
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

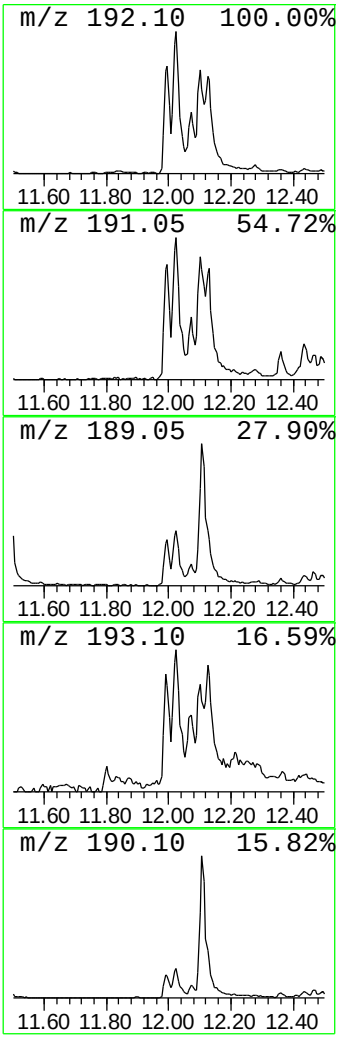
**********

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

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.00 | 6.33 ng | 205130 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 95 |
| 2 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 90 |
| 3 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 90 |
| 4 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 89 |
| 5 | Phenanthrene, 3-methyl- | 192 | C15H12 | 000832-71-3 | 87 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

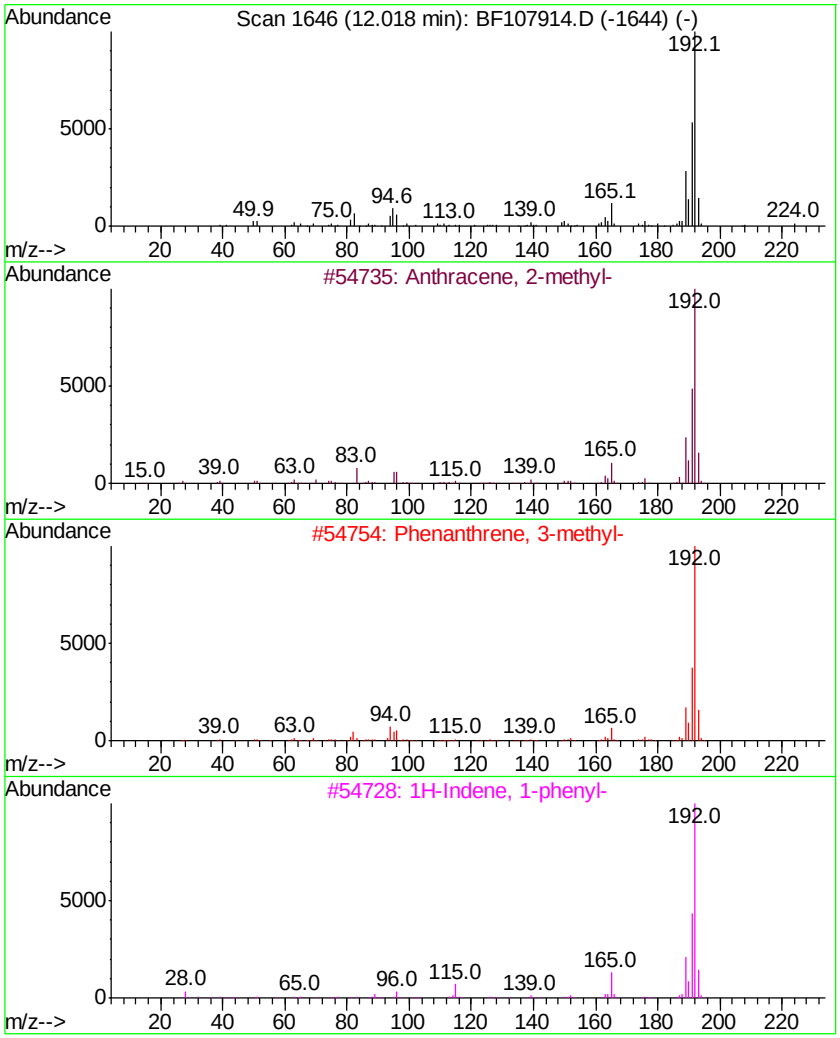
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

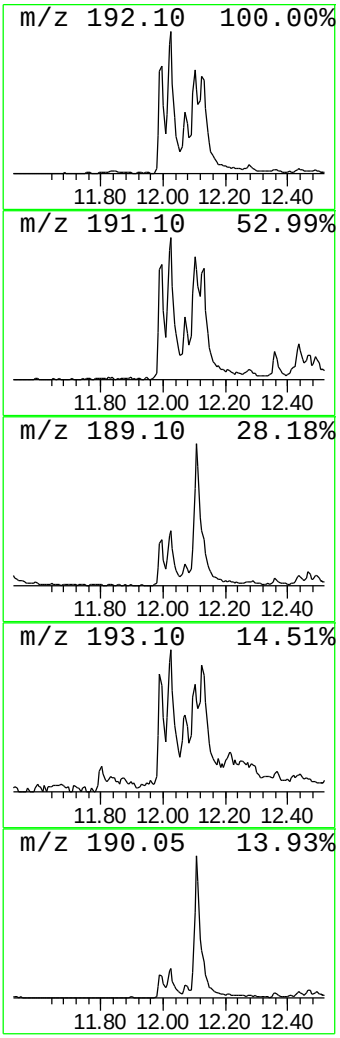
**********

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

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.02 | 6.34 ng | 205589 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 95 |
| 2 | Phenanthrene, 3-methyl- | 192 | C15H12 | 000832-71-3 | 93 |
| 3 | 1H-Indene, 1-phenyl- | 192 | C15H12 | 001961-96-2 | 93 |
| 4 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 93 |
| 5 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 93 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

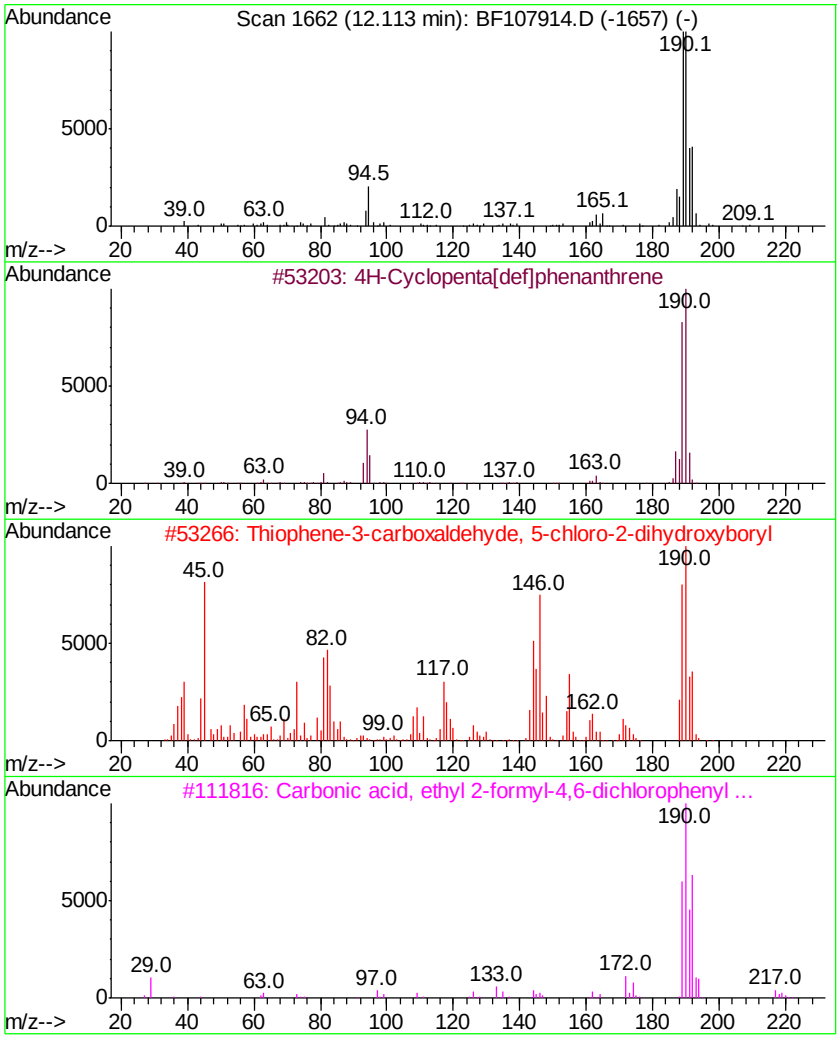
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

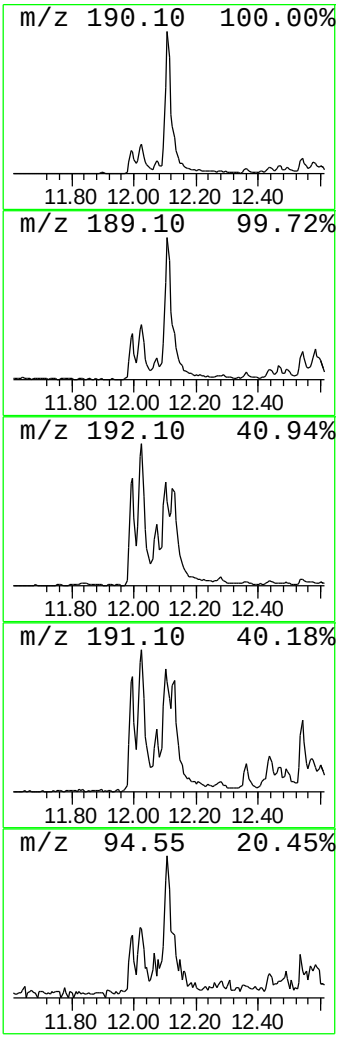
**********

Peak Number 7 4H-Cyclopenta[def]phenanthrene Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.11 | 8.01 ng | 259724 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10 | 000203-64-5 | 76 |
| 2 | Thiophene-3-carboxaldehyde, 5-ch... | 190 | C5H4BClO3S | 036155-87-0 | 53 |
| 3 | Carbonic acid, ethyl 2-formyl-4,... | 262 | C10H8Cl2O4 | 1000331-34-4 | 50 |
| 4 | 2,2'-Bis(4,5-dimethylimidazole) | 190 | C10H14N4 | 069286-06-2 | 40 |
| 5 | Methyl diselenide | 190 | C2H6Se2 | 007101-31-7 | 35 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

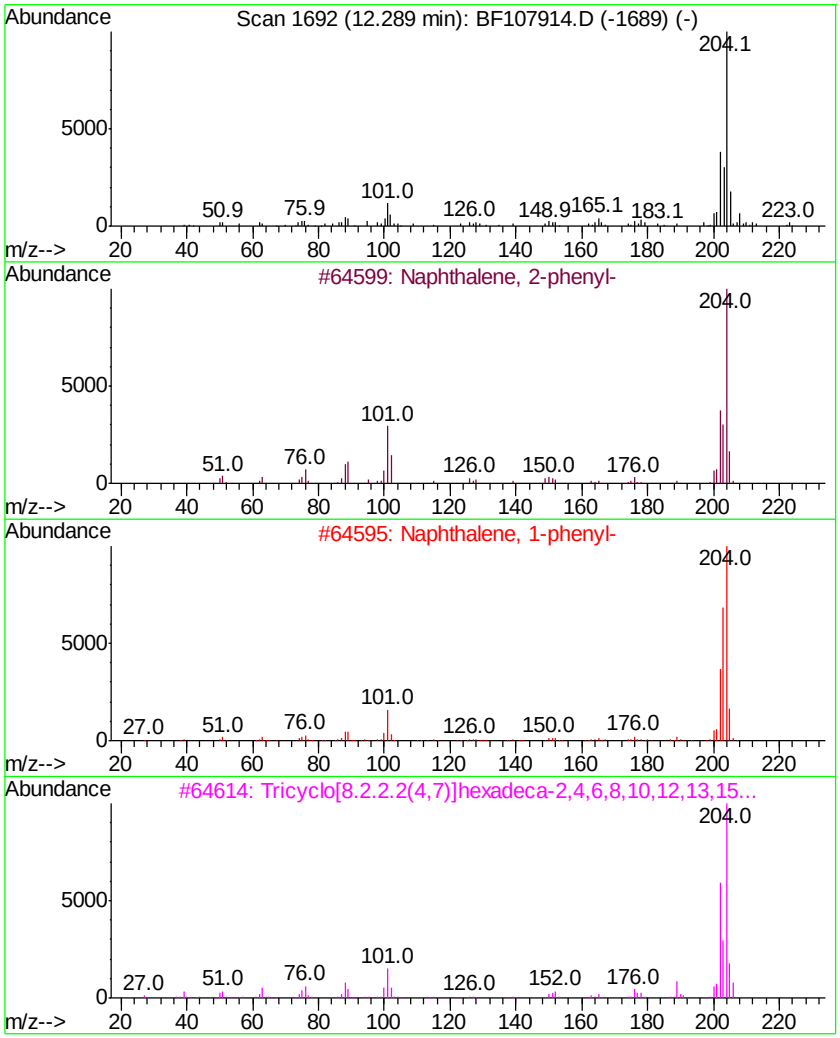
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

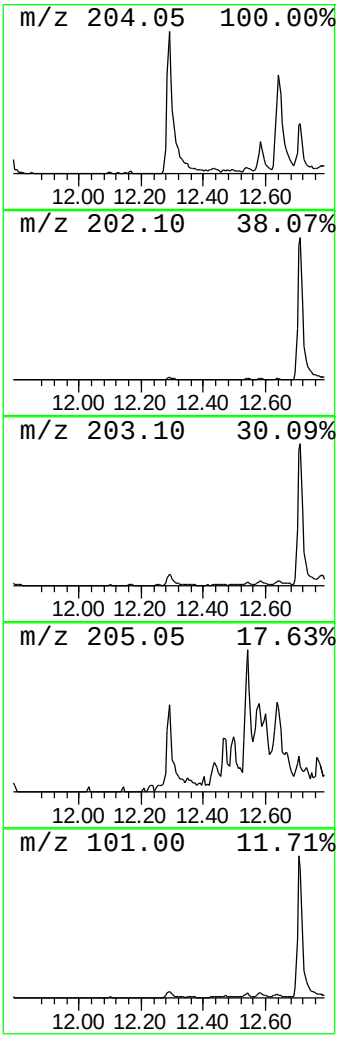
**********

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

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.29 | 3.83 ng | 124067 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 94 |
| 2 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 78 |
| 3 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 62 |
| 4 | 9,10-Bis(bromomethyl)anthracene | 362 | C16H12Br2 | 034373-96-1 | 62 |
| 5 | 1,4-Ethenoanthracene, 1,4-dihydro- | 204 | C16H12 | 027765-96-4 | 49 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

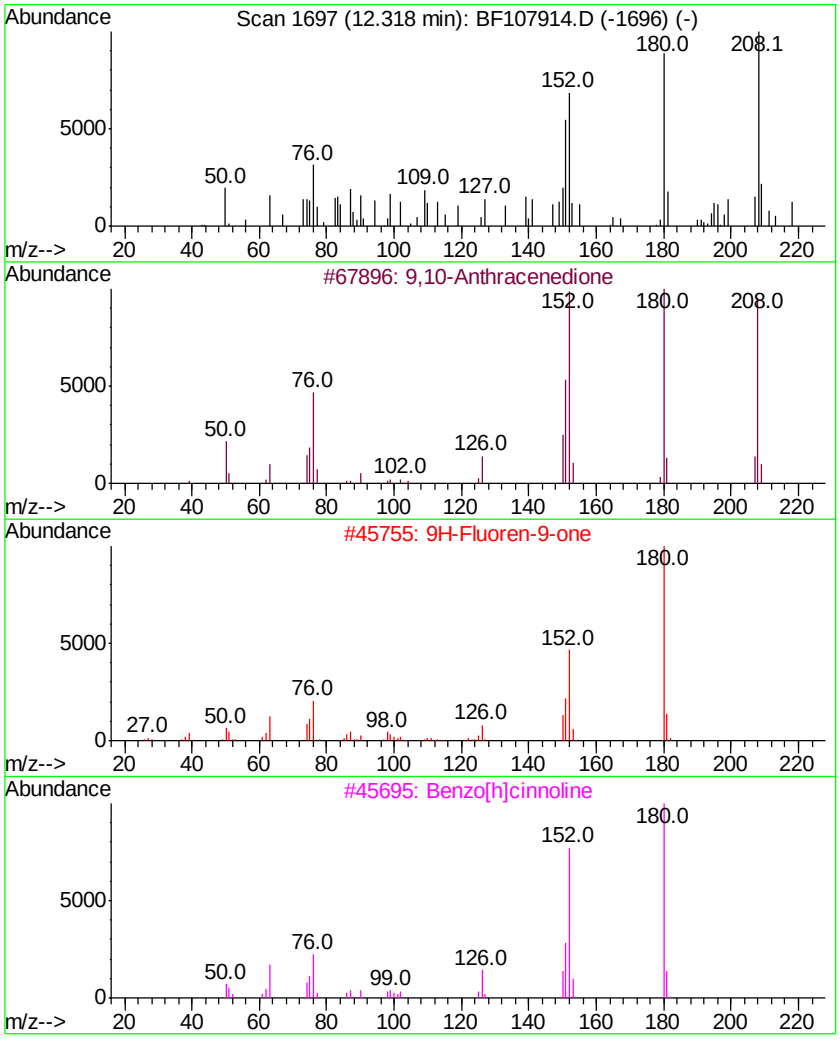
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

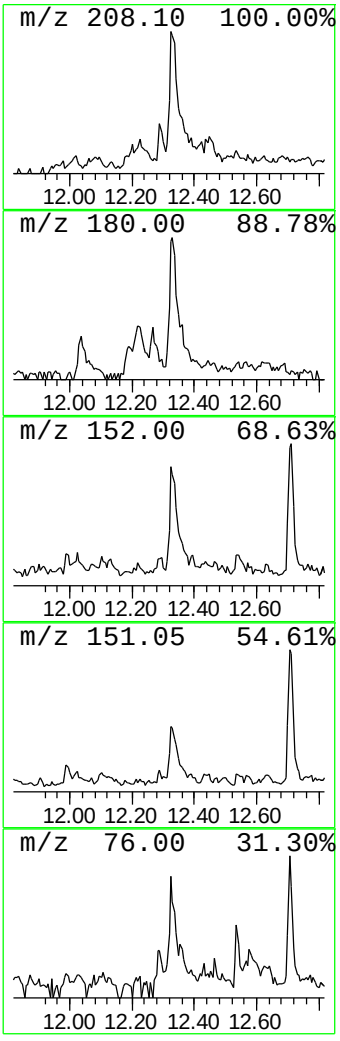
**********

Peak Number 9 9,10-Anthracenedione Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.32 | 2.26 ng | 73120 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 94 |
| 2 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 78 |
| 3 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 53 |
| 4 | 1,4-Anthracenedione | 208 | C14H8O2 | 000635-12-1 | 52 |
| 5 | Benzo[c]cinnoline | 180 | C12H8N2 | 000230-17-1 | 49 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

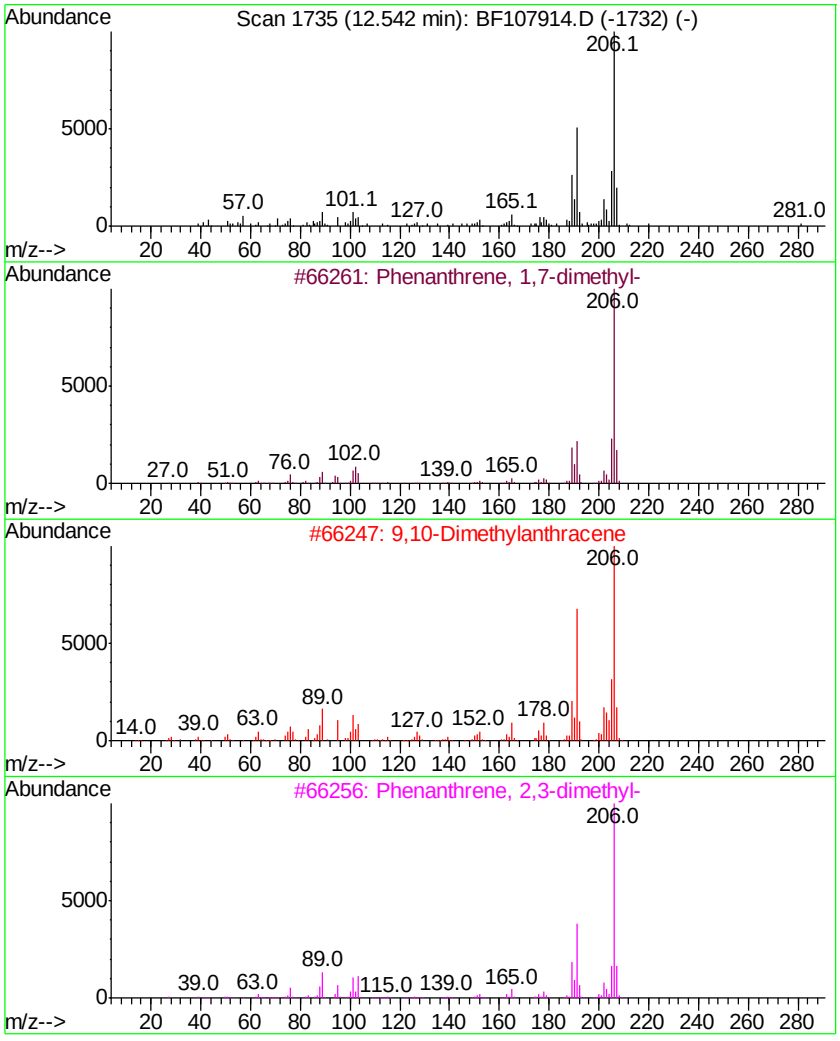
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

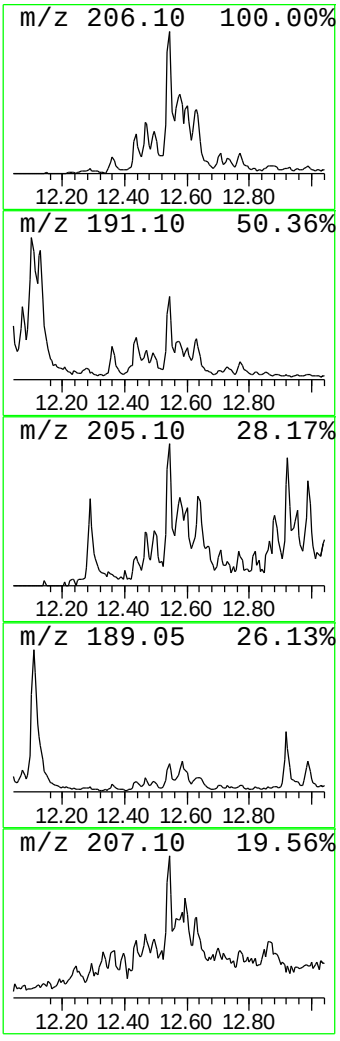
**********

Peak Number 10 Phenanthrene, 1,7-dimethyl- Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.54 | 5.06 ng | 164055 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 1,7-dimethyl- | 206 | C16H14 | 000483-87-4 | 90 |
| 2 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 87 |
| 3 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 87 |
| 4 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 81 |
| 5 | Phenanthrene, 2,7-dimethyl- | 206 | C16H14 | 001576-69-8 | 81 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

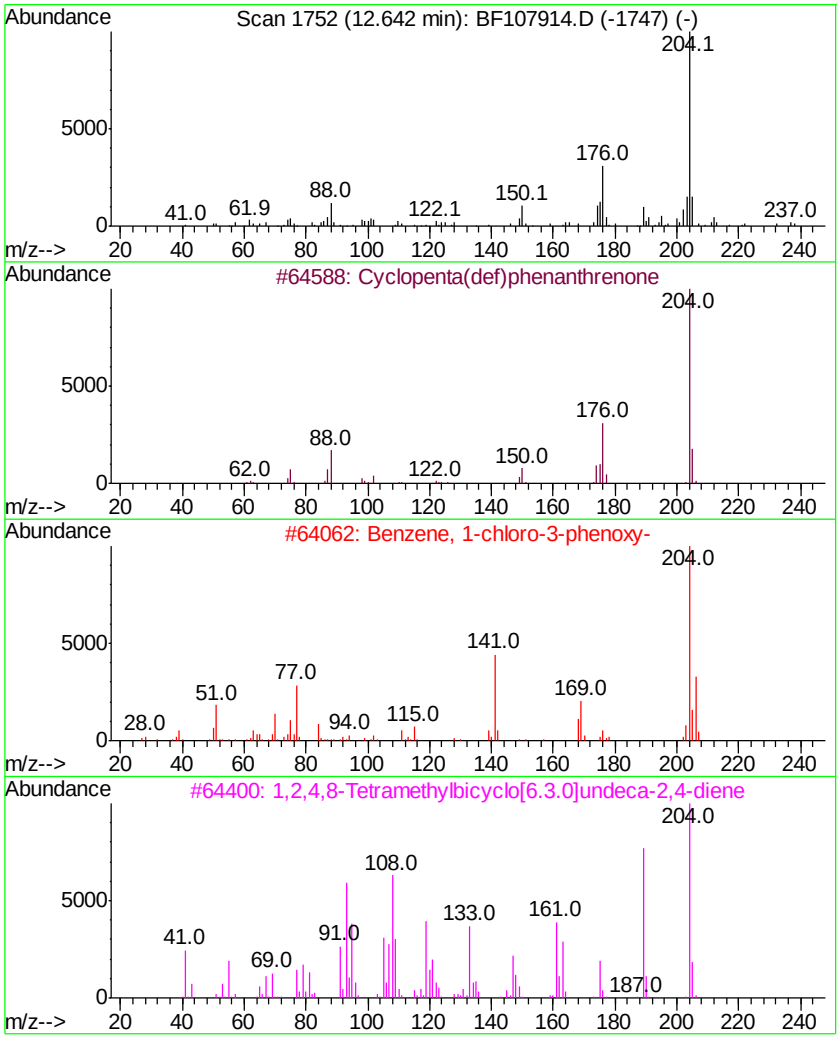
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

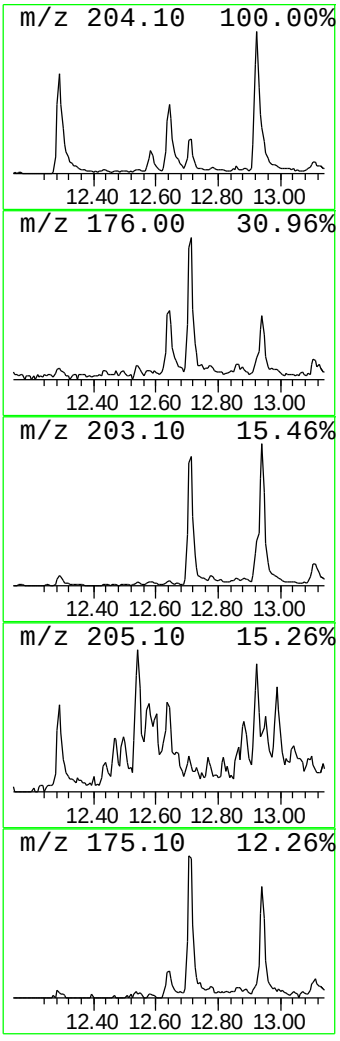
**********

Peak Number 11 Cyclopenta(def)phenanthrenone Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.64 | 5.03 ng | 163175 | Phenanthrene-d10 | 11.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 90 |
| 2 | Benzene, 1-chloro-3-phenoxy- | 204 | C12H9ClO | 006452-49-9 | 47 |
| 3 | 1,2,4,8-Tetramethylbicyclo[6.3.0... | 204 | C15H24 | 137235-51-9 | 46 |
| 4 | 1,2,4-Triazolo[2,3-c]thieno[3,2-... | 204 | C9H8N4S | 113246-88-1 | 43 |
| 5 | .alpha.-L-Mannopyranose, 6-deoxy... | 452 | C18H44O5Si4 | 055057-21-1 | 43 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

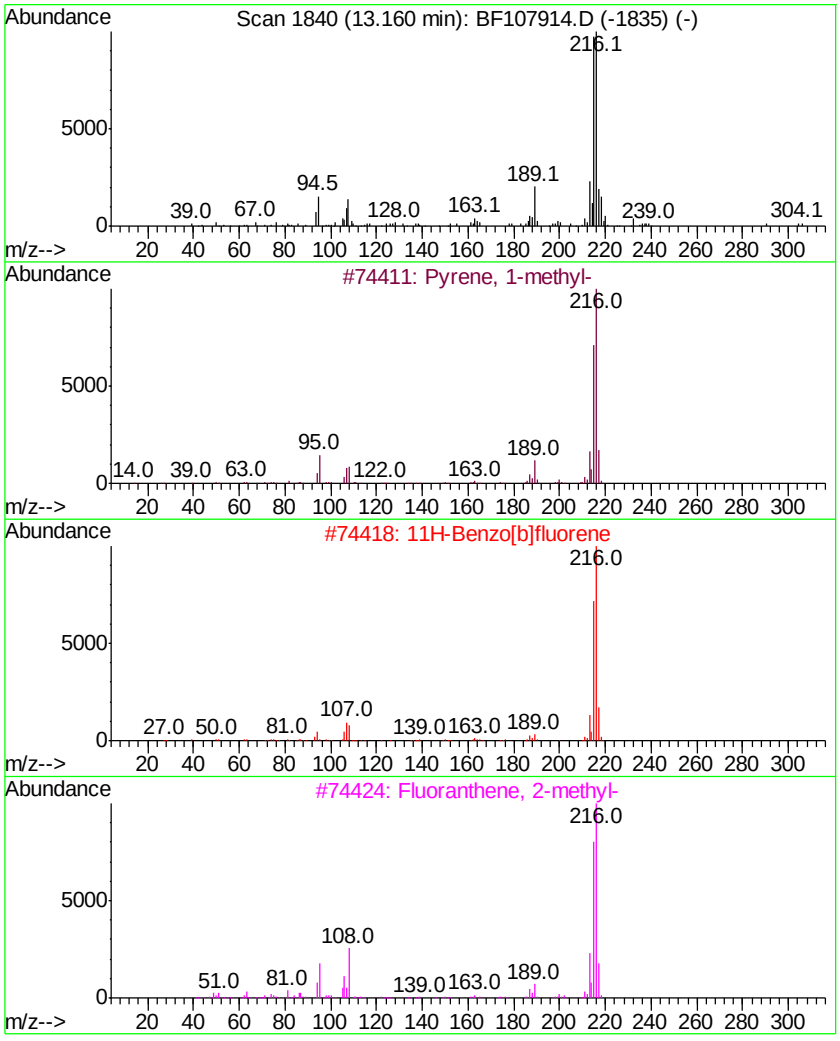
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

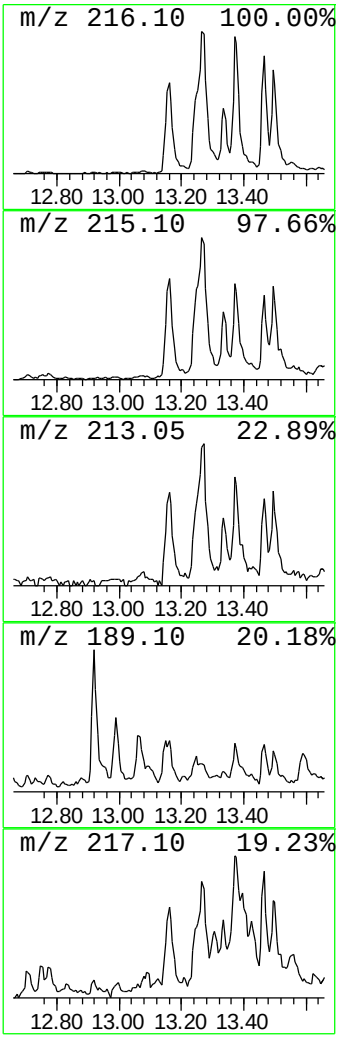
**********

Peak Number 12 11H-Benzo[b]fluorene Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.16 | 2.10 ng | 218861 | Chrysene-d12 | 14.15 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 93 |
| 2 | 11H-Benzo[b]fluorene | 216 | C17H12 | 000243-17-4 | 87 |
| 3 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 81 |
| 4 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 72 |
| 5 | Pyrene, 2-methyl- | 216 | C17H12 | 003442-78-2 | 58 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

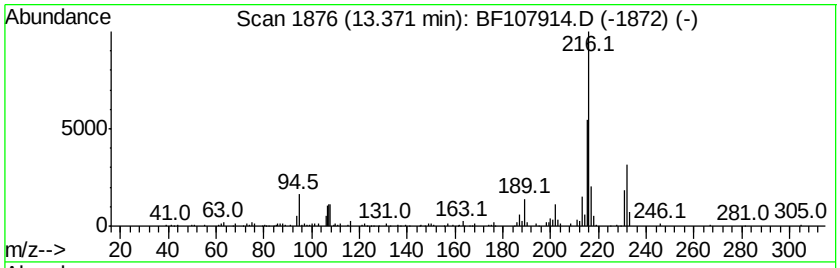
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

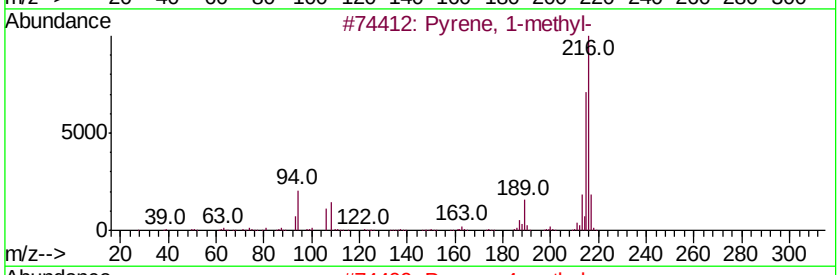
**********

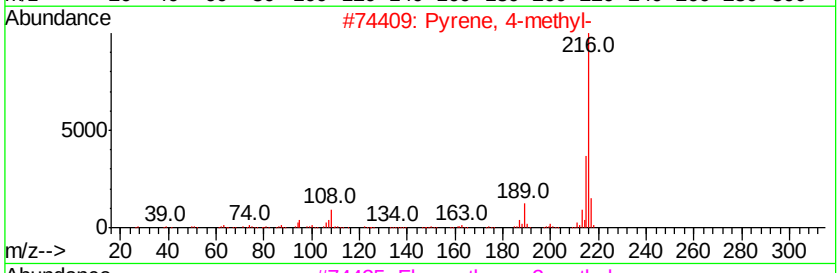
Peak Number 13 Pyrene, 1-methyl- Concentration Rank 14

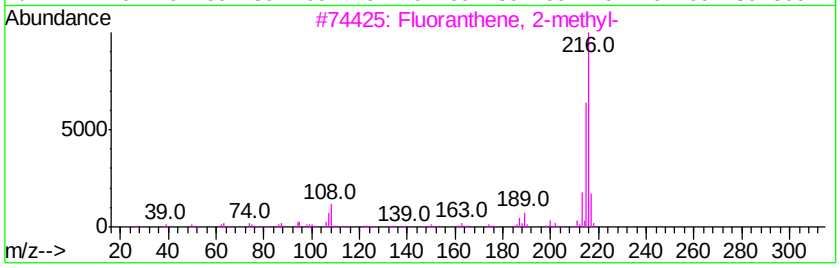
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.37 | 2.37 ng | 246841 | Chrysene-d12 | 14.15 |

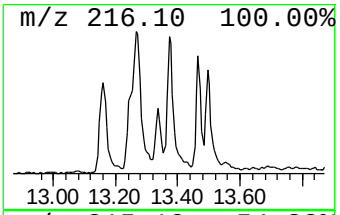
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 98 |
| 2 | Pyrene, 4-methyl- | 216 | C17H12 | 003353-12-6 | 95 |
| 3 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 95 |
| 4 | Pyrene, 2-methyl- | 216 | C17H12 | 003442-78-2 | 89 |
| 5 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 76 |

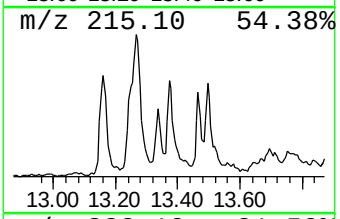


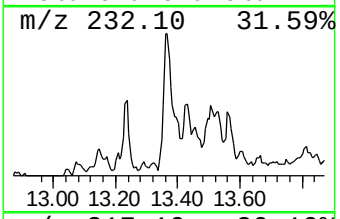



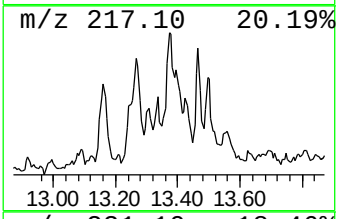



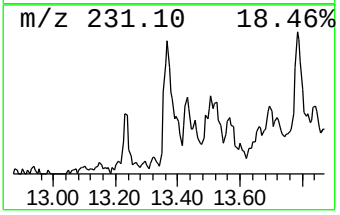



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

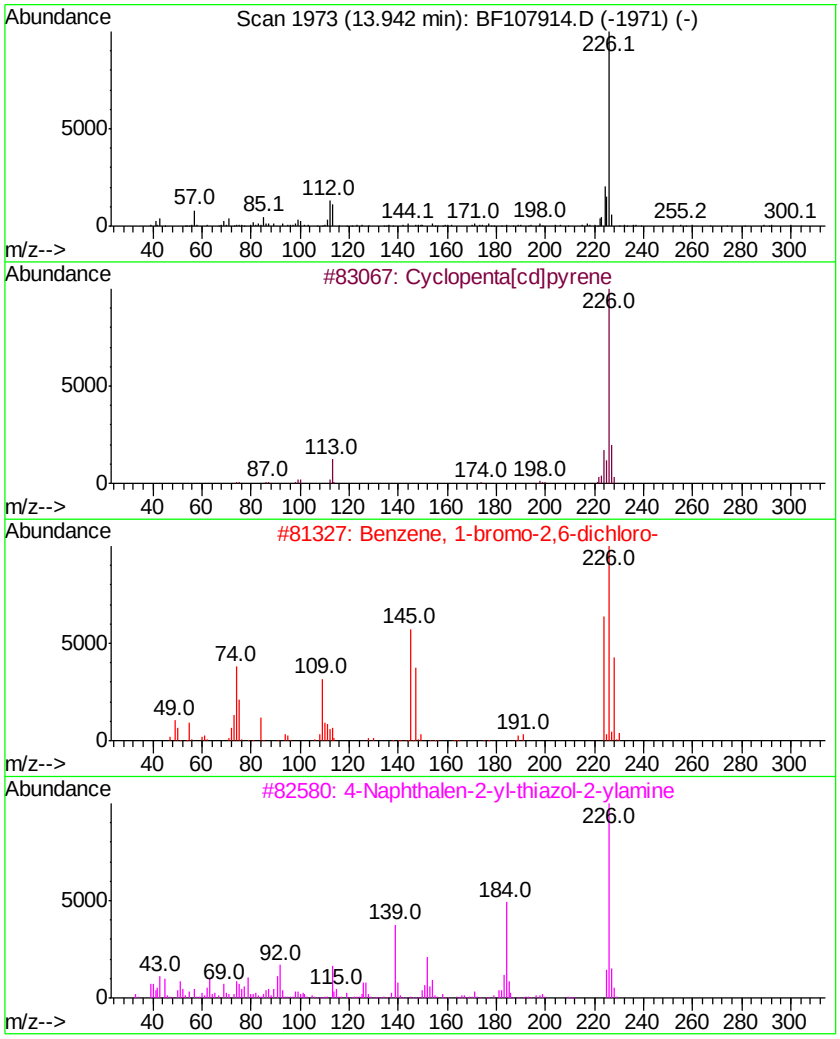
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

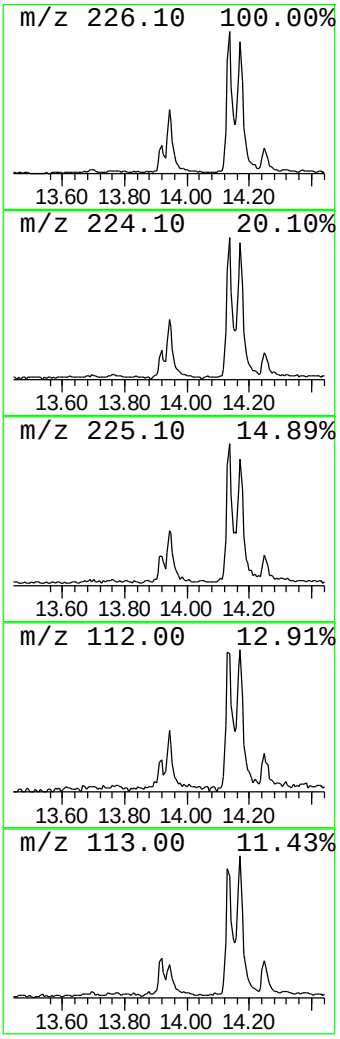
**********

Peak Number 14 Cyclopenta[cd]pyrene Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.94 | 2.68 ng | 279479 | Chrysene-d12 | 14.15 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta[cd]pyrene | 226 | C18H10 | 027208-37-3 | 52 |
| 2 | Benzene, 1-bromo-2,6-dichloro- | 224 | C6H3BrCl2 | 019393-92-1 | 45 |
| 3 | 4-Naphthalen-2-yl-thiazol-2-ylamine | 226 | C13H10N2S | 1000300-53-4 | 33 |
| 4 | .beta.-Carboline, 7-methoxy-1,2-... | 226 | C14H14N2O | 006519-18-2 | 33 |
| 5 | Benzo[ghi]fluoranthene | 226 | C18H10 | 000203-12-3 | 25 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

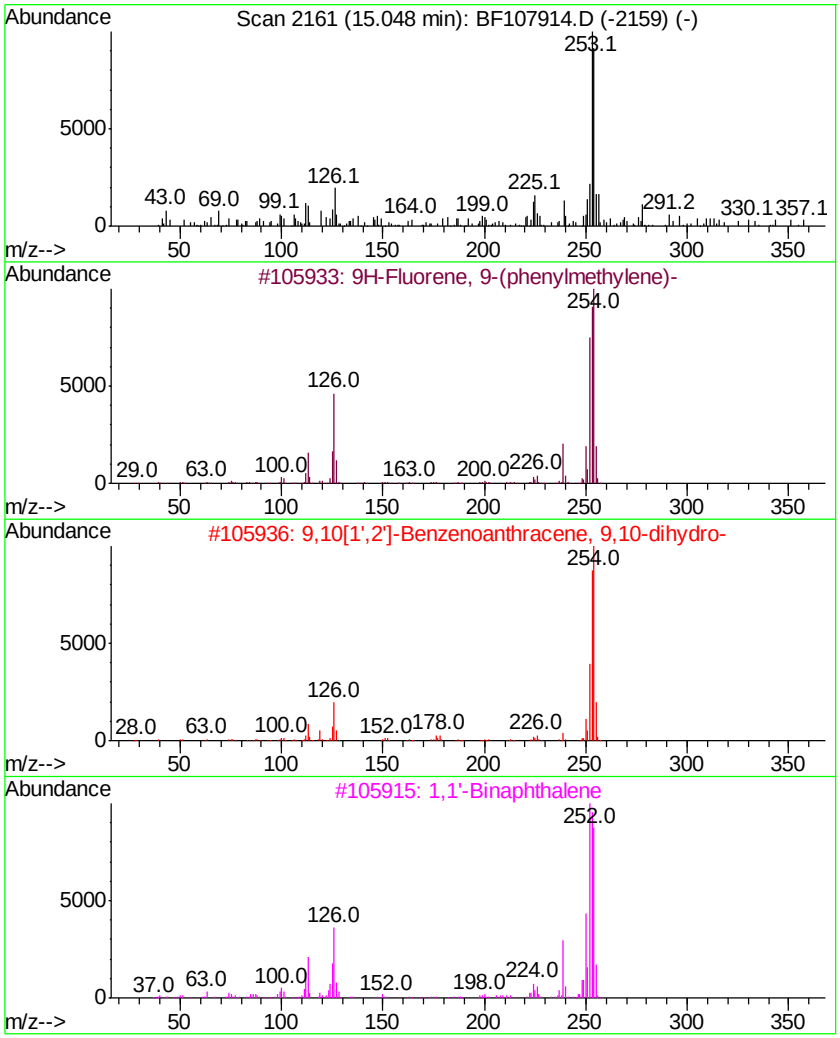
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

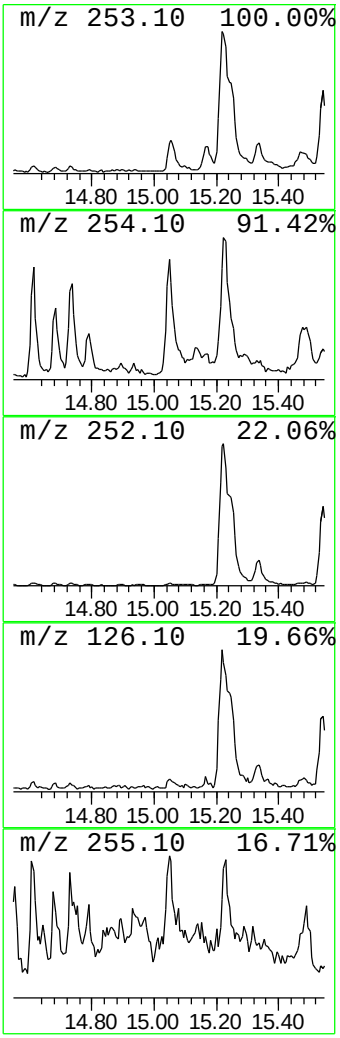
**********

Peak Number 15 9H-Fluorene, 9-(phenylmethy... Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.05 | 2.45 ng | 80716 | Perylene-d12 | 15.68 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9H-Fluorene, 9-(phenylmethylene)- | 254 | C20H14 | 001836-87-9 | 76 |
| 2 | 9,10[1',2']-Benzenoanthracene, 9... | 254 | C20H14 | 000477-75-8 | 76 |
| 3 | 1,1'-Binaphthalene | 254 | C20H14 | 000604-53-5 | 72 |
| 4 | 4,5-Dihydrobenzo[e]pyrene | 254 | C20H14 | 095676-42-9 | 70 |
| 5 | 1,2'-Binaphthalene | 254 | C20H14 | 004325-74-0 | 64 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

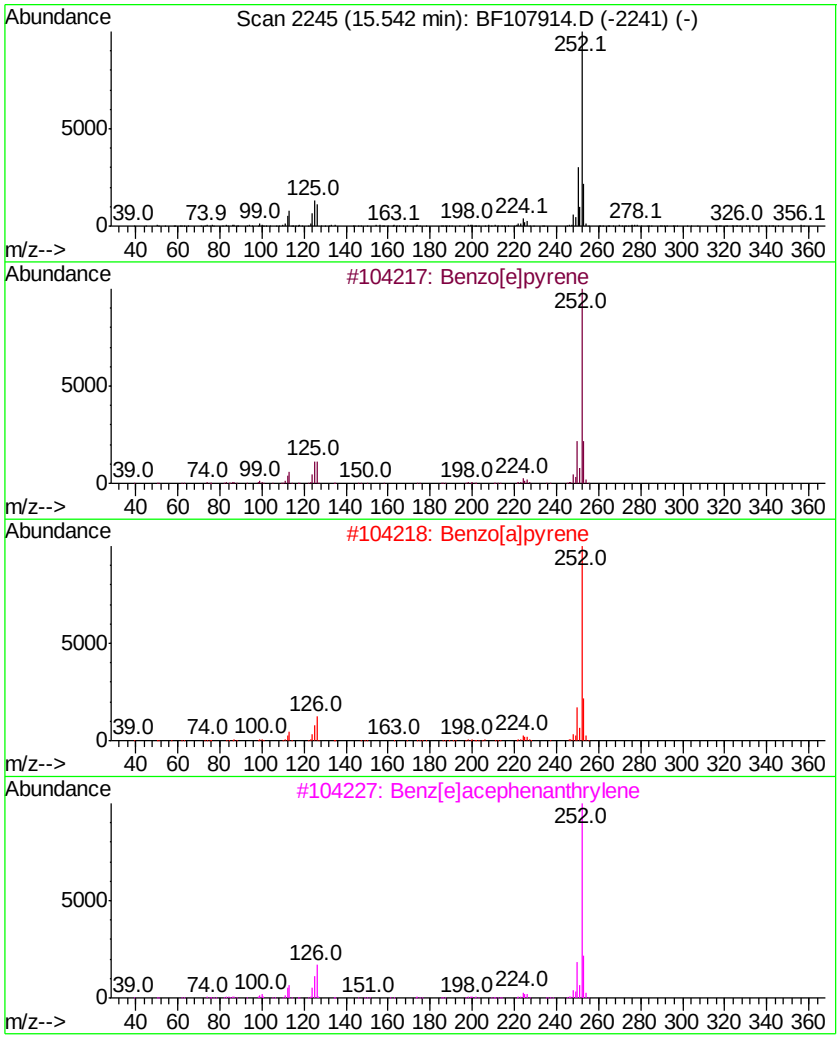
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

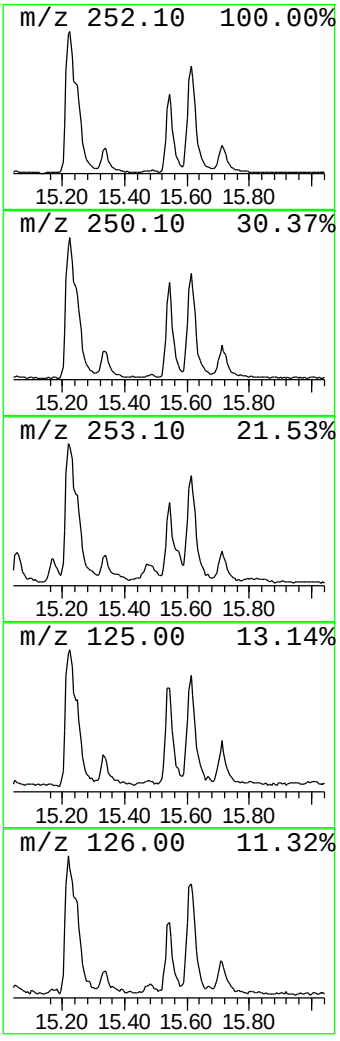
**********

Peak Number 17 Benzo[e]pyrene Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.54 | 16.24 ng | 534453 | Perylene-d12 | 15.68 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 97 |
| 2 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 93 |
| 3 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 93 |
| 4 | Benzo[j]fluoranthene | 252 | C20H12 | 000205-82-3 | 90 |
| 5 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 90 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\SVOASRV\HPCHEM1\BNA_F\DATA\BF080218\
Data File : BF107914.D
Acq On : 2 Aug 2018 17:28
Operator : JU/SJ
Sample : J4285-17 10X
Misc :
ALS Vial : 10 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** KG-PIT-5

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073018.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 |
| unknown6.75 | 6.75 | 3.8 | ng | 128874 | 1 | 6.95 | 676861 | 20.0 |
| Perimidine, 2-ethyl- | 11.34 | 2.2 | ng | 71457 | 4 | 11.49 | 648469 | 20.0 |
| Naphtho[2,1-b]thi... | 11.39 | 2.9 | ng | 94726 | 4 | 11.49 | 648469 | 20.0 |
| Phenanthrene, 2-m... | 12.00 | 6.3 | ng | 205130 | 4 | 11.49 | 648469 | 20.0 |
| Anthracene, 2-met... | 12.02 | 6.3 | ng | 205589 | 4 | 11.49 | 648469 | 20.0 |
| 4H-Cyclopenta[def... | 12.11 | 8.0 | ng | 259724 | 4 | 11.49 | 648469 | 20.0 |
| Naphthalene, 2-ph... | 12.29 | 3.8 | ng | 124067 | 4 | 11.49 | 648469 | 20.0 |
| 9,10-Anthracenedione | 12.32 | 2.3 | ng | 73120 | 4 | 11.49 | 648469 | 20.0 |
| Phenanthrene, 1,7... | 12.54 | 5.1 | ng | 164055 | 4 | 11.49 | 648469 | 20.0 |
| Cyclopenta(def)ph... | 12.64 | 5.0 | ng | 163175 | 4 | 11.49 | 648469 | 20.0 |
| 11H-Benzo[b]fluorene | 13.16 | 2.1 | ng | 218861 | 5 | 14.15 | 2086260 | 20.0 |
| Pyrene, 1-methyl- | 13.37 | 2.4 | ng | 246841 | 5 | 14.15 | 2086260 | 20.0 |
| Cyclopenta[cd]pyrene | 13.94 | 2.7 | ng | 279479 | 5 | 14.15 | 2086260 | 20.0 |
| 9H-Fluorene, 9-(p... | 15.05 | 2.5 | ng | 80716 | 6 | 15.68 | 658036 | 20.0 |
| Benzo[e]pyrene | 15.54 | 16.2 | ng | 534453 | 6 | 15.68 | 658036 | 20.0 |