

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
 Data File : BF101725.D  
 Acq On : 26 Dec 2017 20:40  
 Operator : SJ/JU  
 Sample : I7022-01  
 Misc :  
 ALS Vial : 6 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 352

Integration Parameters: rteint.p  
 Integrator: RTE  
 Smoothing : ON  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0  
 Filtering: 5  
 Min Area: 3 % of largest Peak  
 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

Signal : TIC

| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 4.998       | 492           | 495         | 515          | rBV      | 93969          | 188007        | 11.76%          | 0.752%        |
| 2         | 5.410       | 562           | 565         | 598          | rBV      | 706653         | 1323256       | 82.74%          | 5.291%        |
| 3         | 5.628       | 598           | 602         | 609          | rVB      | 29999          | 40454         | 2.53%           | 0.162%        |
| 4         | 6.434       | 736           | 739         | 758          | rBV      | 719216         | 1342118       | 83.92%          | 5.367%        |
| 5         | 6.563       | 758           | 761         | 767          | rVV      | 1254449        | 1328915       | 83.10%          | 5.314%        |
| 6         | 6.610       | 767           | 769         | 775          | rVB4     | 27988          | 36971         | 2.31%           | 0.148%        |
| 7         | 6.786       | 796           | 799         | 808          | rVB      | 738723         | 734054        | 45.90%          | 2.935%        |
| 8         | 6.857       | 808           | 811         | 814          | rVV      | 150955         | 128457        | 8.03%           | 0.514%        |
| 9         | 6.892       | 814           | 817         | 820          | rVB2     | 15924          | 16304         | 1.02%           | 0.065%        |
| 10        | 6.939       | 822           | 825         | 841          | rBV      | 946465         | 1031964       | 64.53%          | 4.127%        |
| 11        | 7.357       | 893           | 896         | 918          | rBV      | 519380         | 846931        | 52.96%          | 3.387%        |
| 12        | 7.592       | 932           | 936         | 940          | rVB2     | 14413          | 16044         | 1.00%           | 0.064%        |
| 13        | 7.810       | 964           | 973         | 978          | rBV2     | 102131         | 112366        | 7.03%           | 0.449%        |
| 14        | 7.969       | 996           | 1000        | 1004         | rBV      | 13903          | 19016         | 1.19%           | 0.076%        |
| 15        | 8.039       | 1009          | 1012        | 1014         | rVV      | 25691          | 26603         | 1.66%           | 0.106%        |
| 16        | 8.069       | 1014          | 1017        | 1028         | rVV      | 898573         | 952773        | 59.58%          | 3.810%        |
| 17        | 8.145       | 1028          | 1030        | 1040         | rVB      | 29041          | 49132         | 3.07%           | 0.196%        |
| 18        | 8.457       | 1080          | 1083        | 1098         | rVB3     | 28465          | 73782         | 4.61%           | 0.295%        |
| 19        | 8.657       | 1111          | 1117        | 1122         | rBV2     | 74452          | 103152        | 6.45%           | 0.412%        |
| 20        | 8.792       | 1137          | 1140        | 1143         | rBV      | 15373          | 16302         | 1.02%           | 0.065%        |
| 21        | 9.139       | 1196          | 1199        | 1207         | rBV      | 1286297        | 1161309       | 72.62%          | 4.644%        |
| 22        | 9.210       | 1208          | 1211        | 1216         | rVB2     | 45639          | 39228         | 2.45%           | 0.157%        |
| 23        | 9.486       | 1255          | 1258        | 1261         | rVB      | 23597          | 19802         | 1.24%           | 0.079%        |
| 24        | 9.522       | 1261          | 1264        | 1266         | rVV3     | 24303          | 34032         | 2.13%           | 0.136%        |
| 25        | 9.545       | 1266          | 1268        | 1274         | rVV      | 58492          | 61764         | 3.86%           | 0.247%        |
| 26        | 9.610       | 1276          | 1279        | 1285         | rVB5     | 16810          | 27056         | 1.69%           | 0.108%        |
| 27        | 9.692       | 1290          | 1293        | 1296         | rVV      | 74836          | 74365         | 4.65%           | 0.297%        |
| 28        | 9.739       | 1298          | 1301        | 1305         | rVB      | 74189          | 58041         | 3.63%           | 0.232%        |
| 29        | 9.822       | 1312          | 1315        | 1320         | rBV      | 821448         | 784339        | 49.04%          | 3.136%        |
| 30        | 9.857       | 1320          | 1321        | 1329         | rVB      | 49505          | 43940         | 2.75%           | 0.176%        |
| 31        | 9.980       | 1338          | 1342        | 1344         | rBV3     | 12619          | 16260         | 1.02%           | 0.065%        |
| 32        | 10.027      | 1347          | 1350        | 1353         | rVV2     | 17282          | 19336         | 1.21%           | 0.077%        |
| 33        | 10.069      | 1353          | 1357        | 1360         | rVB2     | 20881          | 28721         | 1.80%           | 0.115%        |
| 34        | 10.145      | 1365          | 1370        | 1373         | rBV5     | 22319          | 34301         | 2.14%           | 0.137%        |

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Integration Parameters: rteint.p  
 Integrator: RTE  
 Smoothing : ON  
 Sampling : 1  
 Start Thrs: 0.2  
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Filtering: 5  
 Min Area: 3 % of largest Peak  
 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |         |        |        |
|----|--------|------|------|------|------|---------|---------|--------|--------|
| 35 | 10.175 | 1373 | 1375 | 1379 | rVB4 | 16480   | 16515   | 1.03%  | 0.066% |
| 36 | 10.216 | 1379 | 1382 | 1383 | rBV2 | 19333   | 19644   | 1.23%  | 0.079% |
| 37 | 10.239 | 1383 | 1386 | 1388 | rVV  | 71481   | 61201   | 3.83%  | 0.245% |
| 38 | 10.257 | 1388 | 1389 | 1393 | rVB4 | 19511   | 16445   | 1.03%  | 0.066% |
| 39 | 10.380 | 1403 | 1410 | 1415 | rVB3 | 32845   | 50990   | 3.19%  | 0.204% |
| 40 | 10.457 | 1415 | 1423 | 1425 | rBV3 | 40542   | 65501   | 4.10%  | 0.262% |
| 41 | 10.539 | 1435 | 1437 | 1440 | rVB3 | 21237   | 18591   | 1.16%  | 0.074% |
| 42 | 10.622 | 1447 | 1451 | 1461 | rBV  | 503302  | 601180  | 37.59% | 2.404% |
| 43 | 10.710 | 1463 | 1466 | 1470 | rBV  | 66228   | 77297   | 4.83%  | 0.309% |
| 44 | 10.927 | 1497 | 1503 | 1505 | rBV5 | 35785   | 61316   | 3.83%  | 0.245% |
| 45 | 10.957 | 1505 | 1508 | 1510 | rVV2 | 21632   | 22381   | 1.40%  | 0.089% |
| 46 | 11.074 | 1526 | 1528 | 1533 | rVB4 | 18592   | 19695   | 1.23%  | 0.079% |
| 47 | 11.157 | 1539 | 1542 | 1545 | rBV4 | 54770   | 58805   | 3.68%  | 0.235% |
| 48 | 11.222 | 1550 | 1553 | 1556 | rVB2 | 29351   | 30781   | 1.92%  | 0.123% |
| 49 | 11.316 | 1566 | 1569 | 1571 | rBV  | 890305  | 729950  | 45.64% | 2.919% |
| 50 | 11.339 | 1571 | 1573 | 1580 | rVB  | 424402  | 414932  | 25.95% | 1.659% |
| 51 | 11.398 | 1580 | 1583 | 1587 | rBV  | 118802  | 130869  | 8.18%  | 0.523% |
| 52 | 11.580 | 1612 | 1614 | 1617 | rVB3 | 25081   | 22329   | 1.40%  | 0.089% |
| 53 | 11.604 | 1617 | 1618 | 1620 | rVB  | 27119   | 16881   | 1.06%  | 0.068% |
| 54 | 11.633 | 1620 | 1623 | 1624 | rBV  | 28785   | 21956   | 1.37%  | 0.088% |
| 55 | 11.733 | 1638 | 1640 | 1644 | rBV4 | 19962   | 31195   | 1.95%  | 0.125% |
| 56 | 11.792 | 1648 | 1650 | 1652 | rVV2 | 19639   | 17122   | 1.07%  | 0.068% |
| 57 | 11.816 | 1652 | 1654 | 1657 | rVV  | 146065  | 155689  | 9.74%  | 0.623% |
| 58 | 11.851 | 1657 | 1660 | 1666 | rVV  | 190211  | 190895  | 11.94% | 0.763% |
| 59 | 11.898 | 1666 | 1668 | 1670 | rVV  | 67860   | 56323   | 3.52%  | 0.225% |
| 60 | 11.933 | 1670 | 1674 | 1676 | rVV2 | 225576  | 262731  | 16.43% | 1.051% |
| 61 | 11.957 | 1676 | 1678 | 1682 | rVV  | 116219  | 112710  | 7.05%  | 0.451% |
| 62 | 11.992 | 1682 | 1684 | 1686 | rVB  | 33687   | 23460   | 1.47%  | 0.094% |
| 63 | 12.110 | 1701 | 1704 | 1709 | rBV  | 92921   | 117212  | 7.33%  | 0.469% |
| 64 | 12.151 | 1709 | 1711 | 1713 | rBV2 | 27506   | 21734   | 1.36%  | 0.087% |
| 65 | 12.239 | 1724 | 1726 | 1728 | rBV2 | 39984   | 35289   | 2.21%  | 0.141% |
| 66 | 12.263 | 1728 | 1730 | 1733 | rVB  | 42487   | 35651   | 2.23%  | 0.143% |
| 67 | 12.292 | 1733 | 1735 | 1738 | rVB  | 38537   | 30719   | 1.92%  | 0.123% |
| 68 | 12.321 | 1738 | 1740 | 1743 | rVB  | 42485   | 37650   | 2.35%  | 0.151% |
| 69 | 12.368 | 1745 | 1748 | 1752 | rBV  | 172102  | 201015  | 12.57% | 0.804% |
| 70 | 12.410 | 1753 | 1755 | 1757 | rVB2 | 39812   | 29627   | 1.85%  | 0.118% |
| 71 | 12.533 | 1773 | 1776 | 1781 | rBV  | 1029599 | 1002416 | 62.68% | 4.008% |

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 ClientSampleId :  
 352

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-BF121417.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |         |         |        |
|----|--------|------|------|------|------|---------|---------|---------|--------|
| 72 | 12.633 | 1791 | 1793 | 1795 | rBV  | 76361   | 51541   | 3.22%   | 0.206% |
| 73 | 12.692 | 1799 | 1803 | 1804 | rBV3 | 71313   | 84719   | 5.30%   | 0.339% |
| 74 | 12.763 | 1809 | 1815 | 1821 | rBV  | 1124880 | 1242527 | 77.69%  | 4.968% |
| 75 | 12.816 | 1822 | 1824 | 1827 | rVV  | 66427   | 56412   | 3.53%   | 0.226% |
| 76 | 12.892 | 1834 | 1837 | 1841 | rBV  | 1010728 | 971408  | 60.74%  | 3.884% |
| 77 | 12.980 | 1849 | 1852 | 1858 | rBV3 | 113861  | 196950  | 12.32%  | 0.788% |
| 78 | 13.074 | 1864 | 1868 | 1870 | rBV3 | 142377  | 220282  | 13.77%  | 0.881% |
| 79 | 13.163 | 1880 | 1883 | 1885 | rBV  | 111398  | 106113  | 6.64%   | 0.424% |
| 80 | 13.198 | 1887 | 1889 | 1893 | rVV2 | 148736  | 162109  | 10.14%  | 0.648% |
| 81 | 13.263 | 1897 | 1900 | 1902 | rVB3 | 87914   | 74367   | 4.65%   | 0.297% |
| 82 | 13.292 | 1902 | 1905 | 1908 | rBV  | 163536  | 134076  | 8.38%   | 0.536% |
| 83 | 13.321 | 1908 | 1910 | 1914 | rVV  | 114868  | 110929  | 6.94%   | 0.444% |
| 84 | 13.768 | 1984 | 1986 | 1989 | rBV  | 106488  | 126433  | 7.91%   | 0.506% |
| 85 | 13.968 | 2015 | 2020 | 2022 | rBV2 | 1102763 | 1599245 | 100.00% | 6.395% |
| 86 | 13.992 | 2022 | 2024 | 2031 | rVB  | 604787  | 643056  | 40.21%  | 2.571% |
| 87 | 14.074 | 2036 | 2038 | 2043 | rBV2 | 110630  | 105183  | 6.58%   | 0.421% |
| 88 | 14.357 | 2084 | 2086 | 2090 | rVB  | 160265  | 138624  | 8.67%   | 0.554% |
| 89 | 14.392 | 2090 | 2092 | 2095 | rBV2 | 98668   | 89910   | 5.62%   | 0.360% |
| 90 | 15.015 | 2194 | 2198 | 2201 | rBV  | 551644  | 845889  | 52.89%  | 3.382% |
| 91 | 15.315 | 2245 | 2249 | 2255 | rVB  | 351769  | 446414  | 27.91%  | 1.785% |
| 92 | 15.380 | 2256 | 2260 | 2266 | rBV  | 501137  | 632172  | 39.53%  | 2.528% |
| 93 | 15.439 | 2266 | 2270 | 2274 | rBV  | 601132  | 736702  | 46.07%  | 2.946% |
| 94 | 16.921 | 2519 | 2522 | 2531 | rVB  | 167746  | 322421  | 20.16%  | 1.289% |
| 95 | 17.374 | 2595 | 2599 | 2610 | rVB  | 138303  | 302927  | 18.94%  | 1.211% |

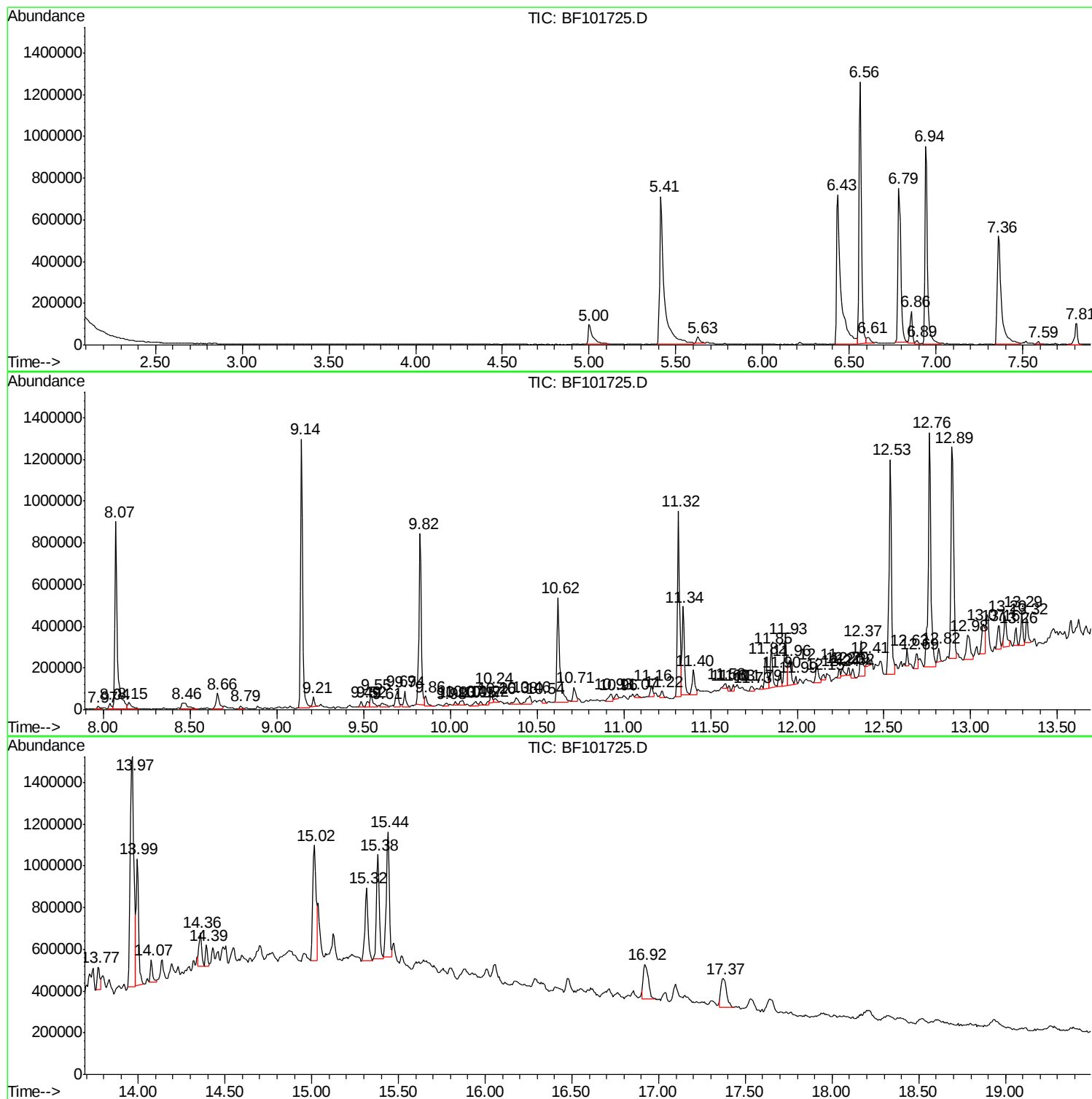
Sum of corrected areas: 25008201

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Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampled :  
352

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

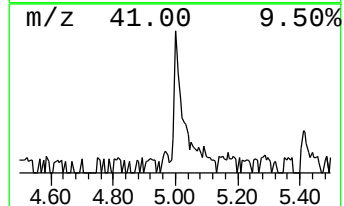
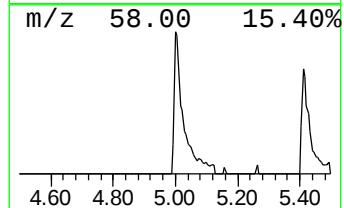
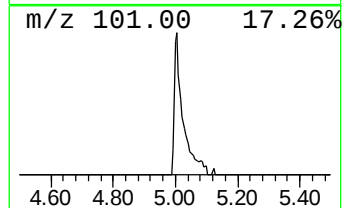
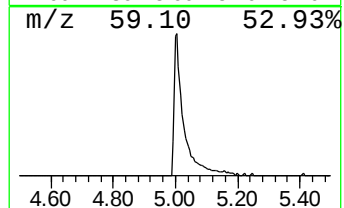
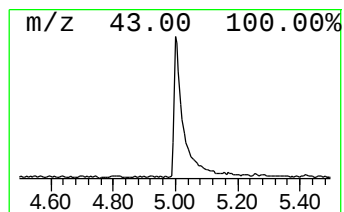
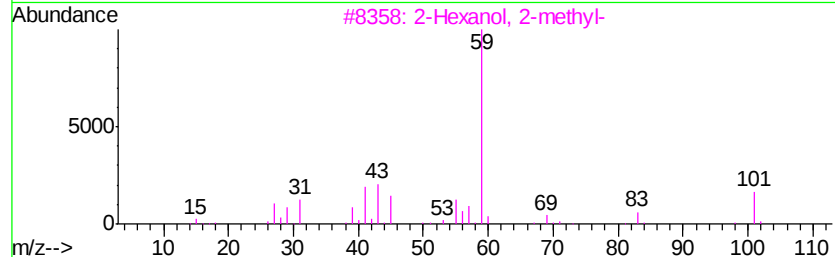
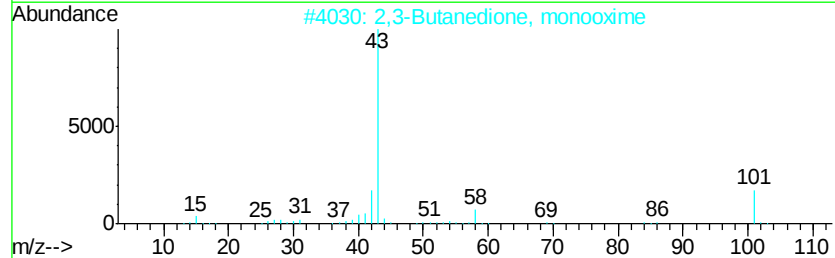
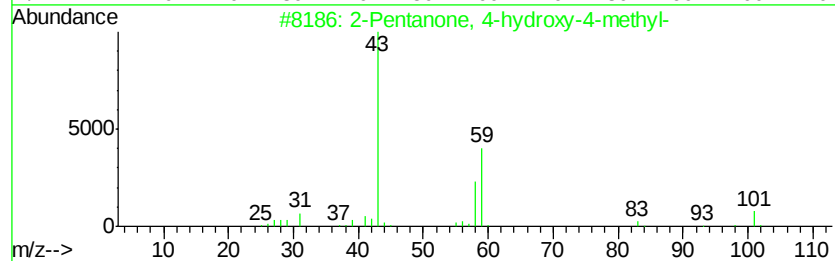
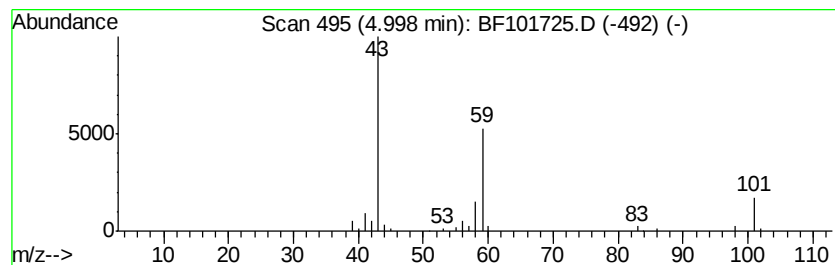
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 7

| R.T. | EstConc | Area   | Relative to ISTD       | R.T. |
|------|---------|--------|------------------------|------|
| 5.00 | 5.12 ng | 188007 | 1,4-Dichlorobenzene-d4 | 6.79 |

| 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 | 35   |      |
| 3       | 2-Hexanol, 2-methyl-             | 116          | C7H16O  | 000625-23-0 | 33   |      |
| 4       | 3-Heptanol                       | 116          | C7H16O  | 000589-82-2 | 25   |      |
| 5       | Butane                           | 58           | C4H10   | 000106-97-8 | 9    |      |



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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
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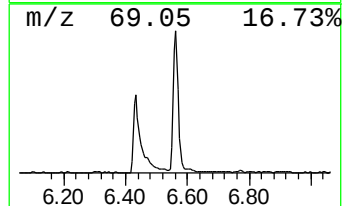
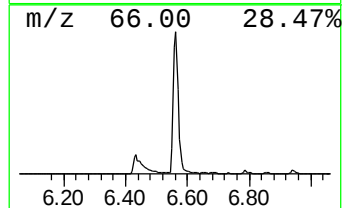
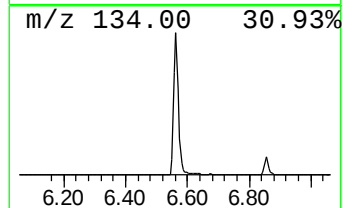
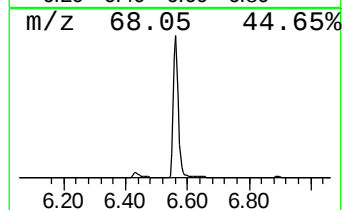
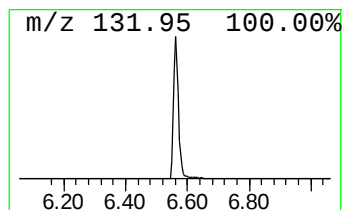
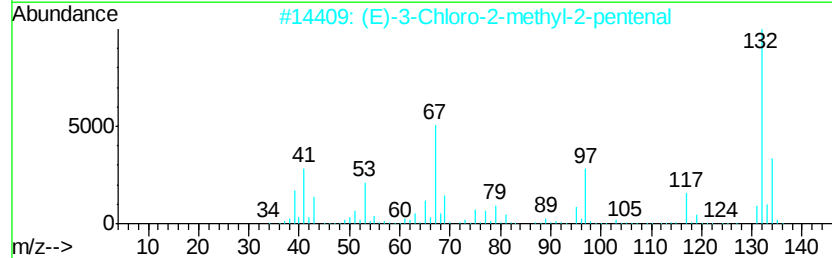
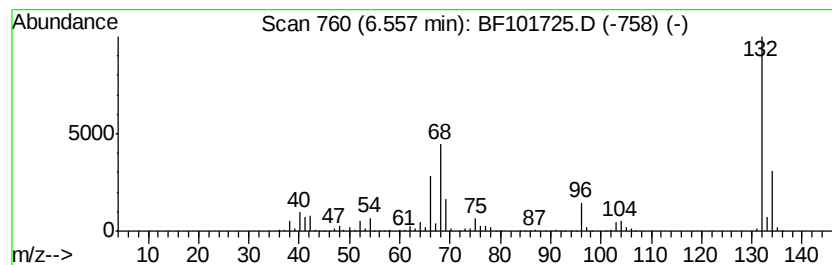
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 2 unknown6.56 Concentration Rank 1

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 6.56 | 36.21 ng | 1328920 | 1,4-Dichlorobenzene-d4 | 6.79 |

| Hit# | of | Tentative ID                     | MW  | MolForm   | CAS#         | Qual |
|------|----|----------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 3-Chloro-6-fluoro-pyrazine       | 132 | C4H2ClFN2 | 1000146-10-7 | 27   |
| 2    |    | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO   | 031357-76-3  | 17   |
| 3    |    | 5-Aminoindole                    | 132 | C8H8N2    | 005192-03-0  | 12   |
| 4    |    | 5-Fluoro-2-chloropyrimidine      | 132 | C4H2ClFN2 | 062802-42-0  | 9    |
| 5    |    | 1-Methylpyrrolo[1,2-a]pyrazine   | 132 | C8H8N2    | 064608-59-9  | 9    |



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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

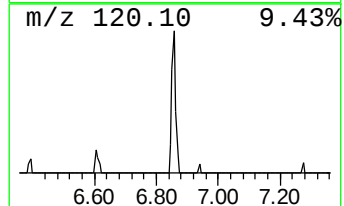
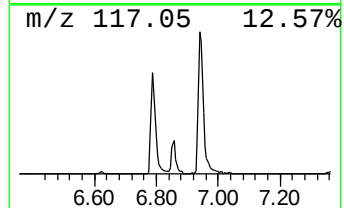
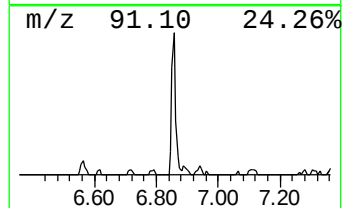
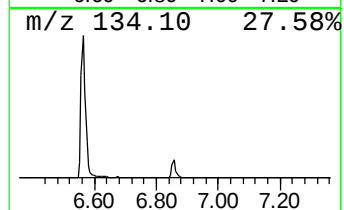
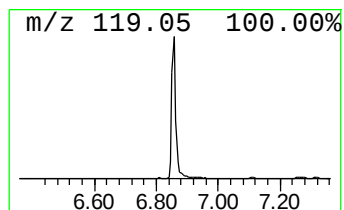
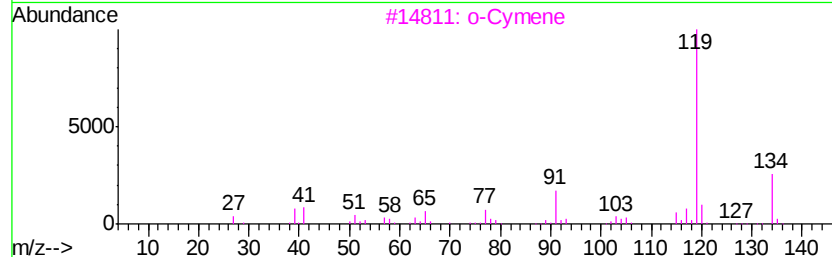
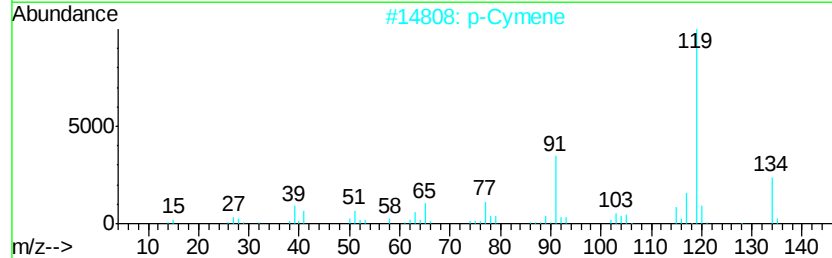
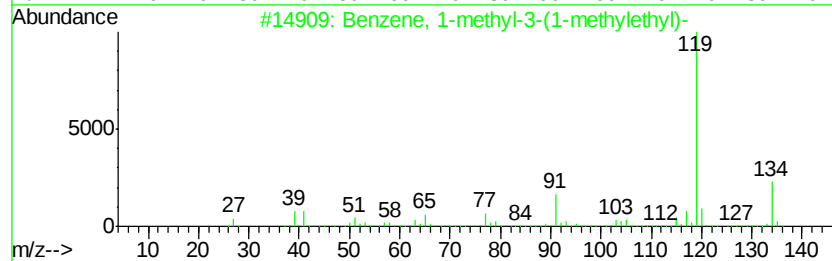
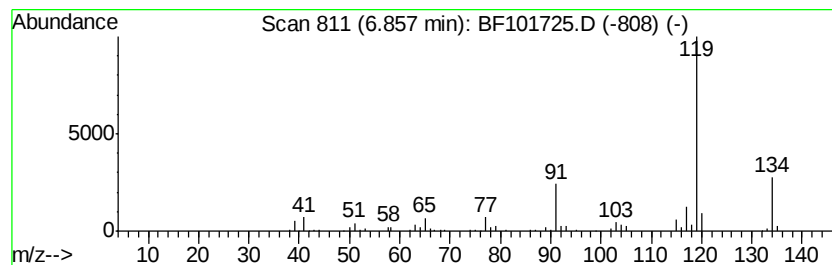
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 3 Benzene, 1-methyl-3-(1-meth... Concentration Rank 9

| R.T. | EstConc | Area   | Relative to ISTD       | R.T. |
|------|---------|--------|------------------------|------|
| 6.86 | 3.50 ng | 128457 | 1,4-Dichlorobenzene-d4 | 6.79 |

| Hit# | of       | 5                          | Tentative ID | MW     | MolForm | CAS#        | Qual |
|------|----------|----------------------------|--------------|--------|---------|-------------|------|
| 1    | Benzene, | 1-methyl-3-(1-methyleth... | 134          | C10H14 |         | 000535-77-3 | 95   |
| 2    | p-Cymene |                            | 134          | C10H14 |         | 000099-87-6 | 95   |
| 3    | o-Cymene |                            | 134          | C10H14 |         | 000527-84-4 | 94   |
| 4    | Benzene, | 2-ethyl-1,3-dimethyl-      | 134          | C10H14 |         | 002870-04-4 | 91   |
| 5    | Benzene, | 1,2,3,4-tetramethyl-       | 134          | C10H14 |         | 000488-23-3 | 91   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

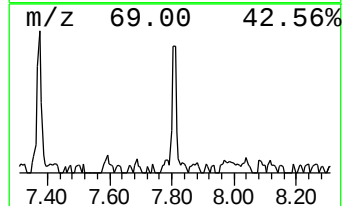
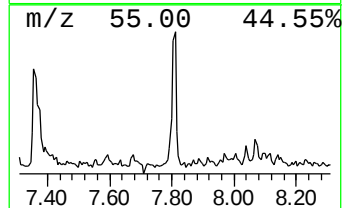
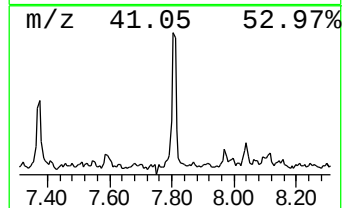
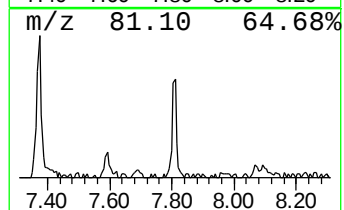
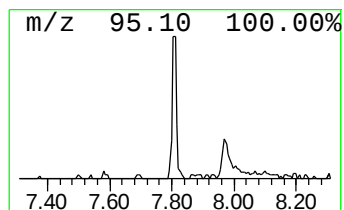
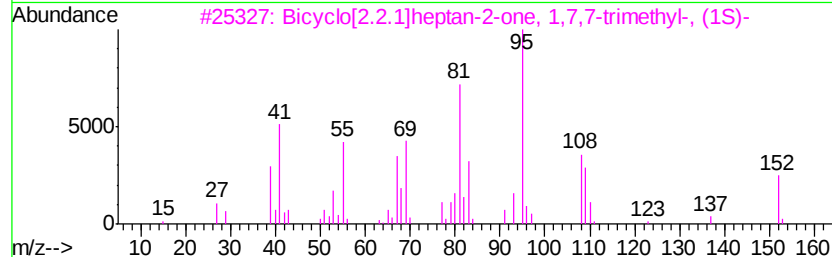
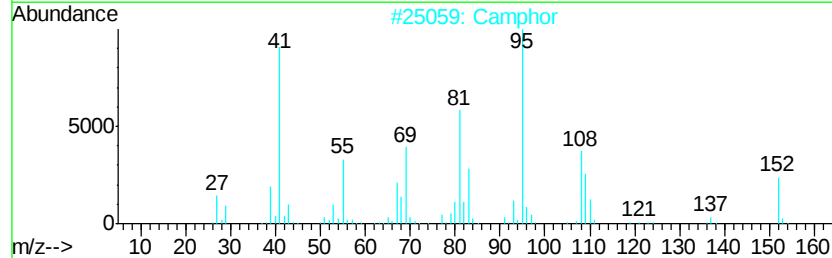
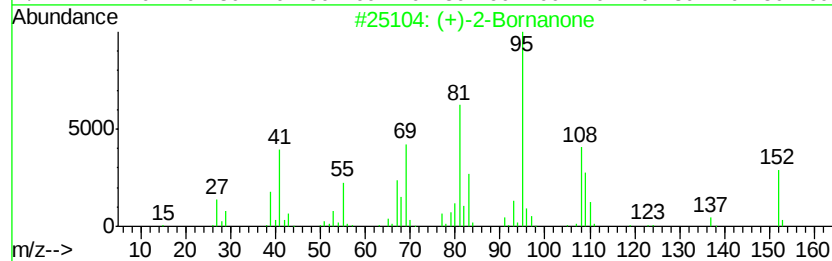
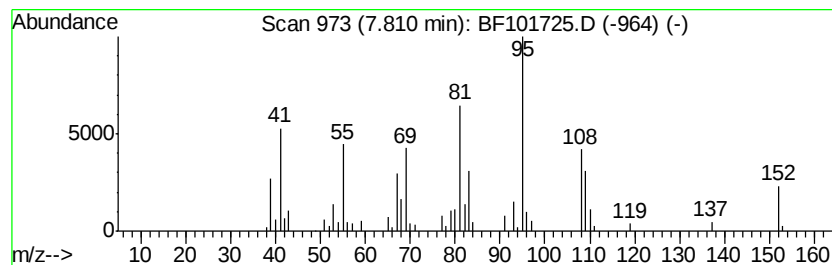
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TIC Integration Parameters: LSCINT.P

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Peak Number 5 (+)-2-Bornanone Concentration Rank 14

| R.T. | EstConc | Area   | Relative to ISTD | R.T. |
|------|---------|--------|------------------|------|
| 7.81 | 2.36 ng | 112366 | Napthalene-d8    | 8.07 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#         | Qual |
|------|----|-------------------------------------|-----|---------|--------------|------|
| 1    | 5  | (+)-2-Bornanone                     | 152 | C10H16O | 000464-49-3  | 97   |
| 2    |    | Camphor                             | 152 | C10H16O | 000076-22-2  | 97   |
| 3    |    | Bicyclo[2.2.1]heptan-2-one, 1,7,... | 152 | C10H16O | 000464-48-2  | 96   |
| 4    |    | 5,7-Octadien-4-one, 2,6-dimethyl... | 152 | C10H16O | 006752-80-3  | 52   |
| 5    |    | Bicyclo[3.1.0]hexane, 1,5-dimethyl- | 110 | C8H14   | 1000142-17-5 | 43   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
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Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
352

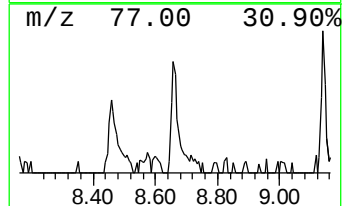
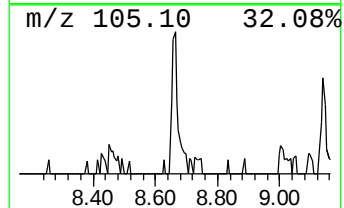
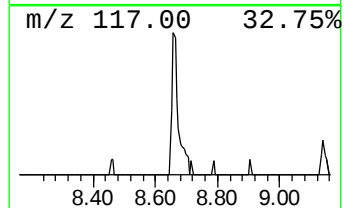
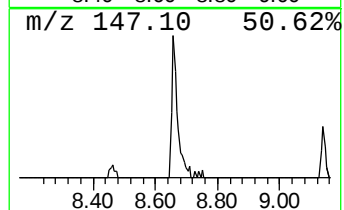
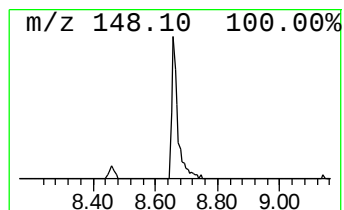
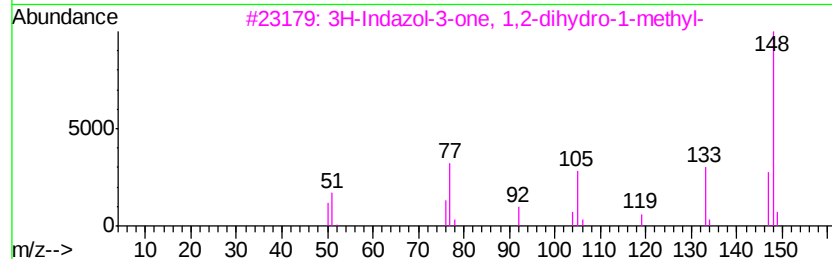
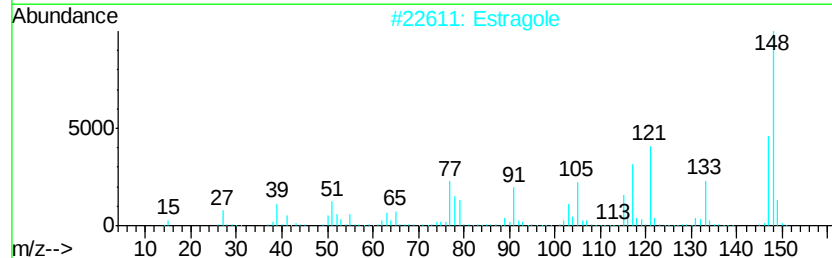
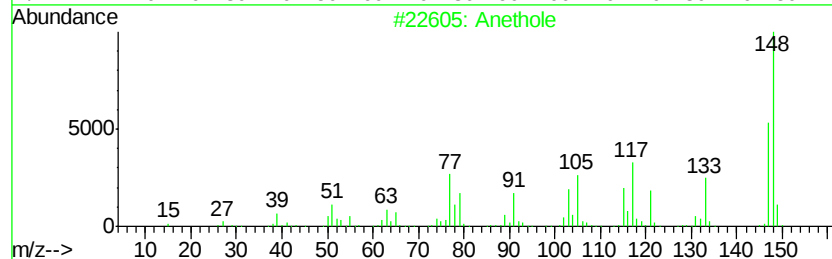
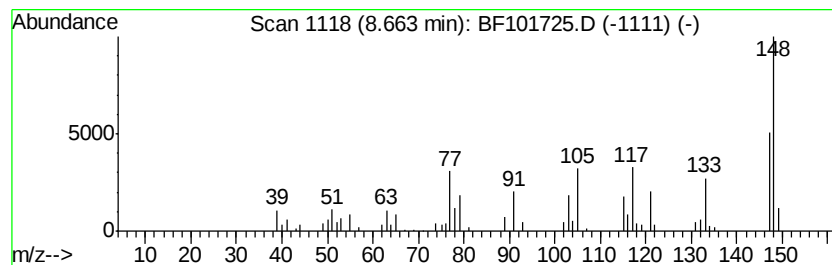
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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 6 Anethole Concentration Rank 15

| R.T. | EstConc | Area   | Relative to ISTD | R.T. |
|------|---------|--------|------------------|------|
| 8.66 | 2.17 ng | 103152 | Napthalene-d8    | 8.07 |

| Hit# | of                                  | 5 | Tentative ID | MW  | MolForm | CAS#         | Qual |
|------|-------------------------------------|---|--------------|-----|---------|--------------|------|
| 1    | Anethole                            |   |              | 148 | C10H12O | 000104-46-1  | 98   |
| 2    | Estragole                           |   |              | 148 | C10H12O | 000140-67-0  | 90   |
| 3    | 3H-Indazol-3-one, 1,2-dihydro-1-... |   |              | 148 | C8H8N2O | 001006-19-5  | 53   |
| 4    | 5-Methyl-2-allylphenol              |   |              | 148 | C10H12O | 1000306-52-5 | 49   |
| 5    | Phenol, 2-methyl-6-(2-propenyl)-    |   |              | 148 | C10H12O | 003354-58-3  | 46   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

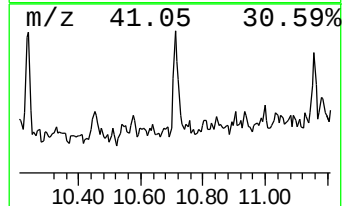
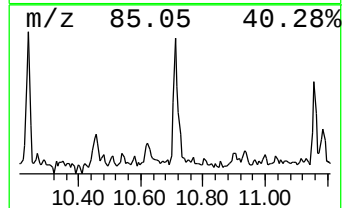
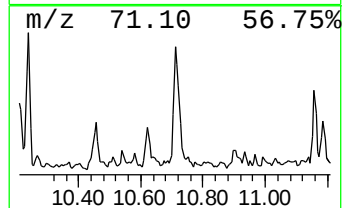
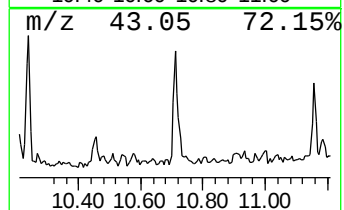
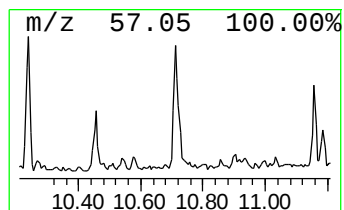
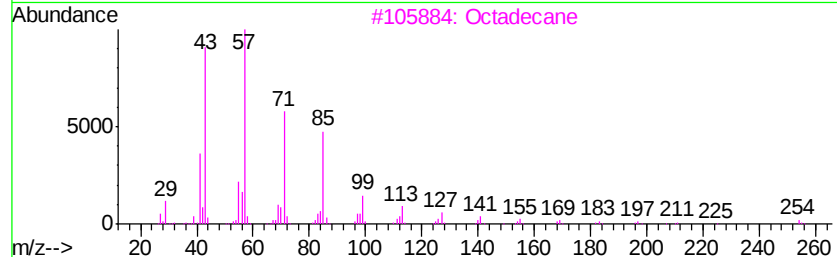
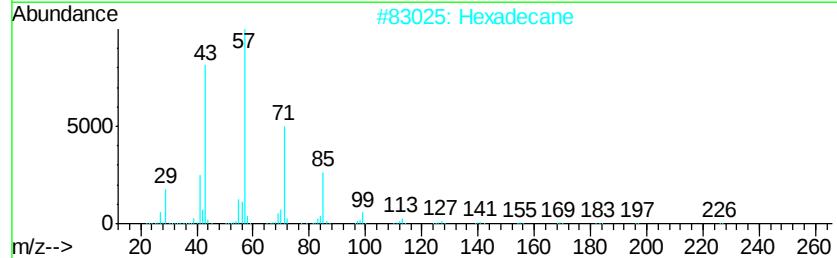
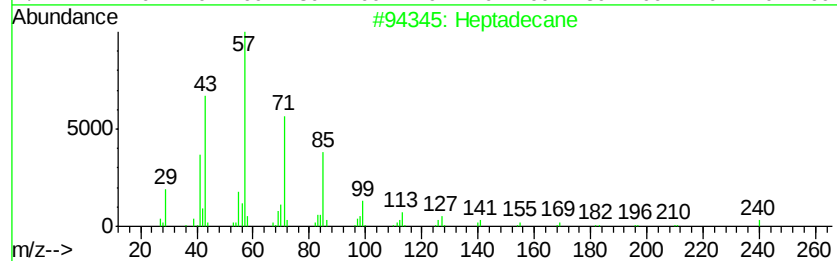
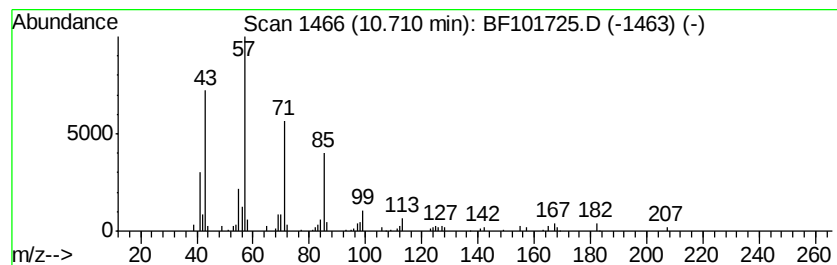
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 7 Heptadecane Concentration Rank 16

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 10.71 | 2.12 ng | 77297 | Phenanthrene-d10 | 11.32 |

| Hit# of | 5           | Tentative ID | MW  | MolForm | CAS#        | Qual |
|---------|-------------|--------------|-----|---------|-------------|------|
| 1       | Heptadecane |              | 240 | C17H36  | 000629-78-7 | 86   |
| 2       | Hexadecane  |              | 226 | C16H34  | 000544-76-3 | 86   |
| 3       | Octadecane  |              | 254 | C18H38  | 000593-45-3 | 86   |
| 4       | Pentadecane |              | 212 | C15H32  | 000629-62-9 | 80   |
| 5       | Tetradecane |              | 198 | C14H30  | 000629-59-4 | 80   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

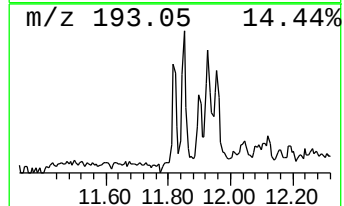
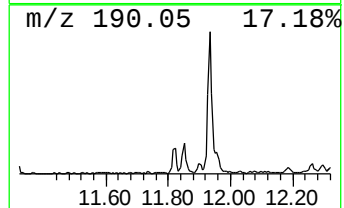
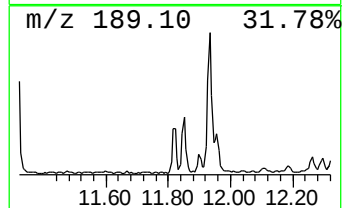
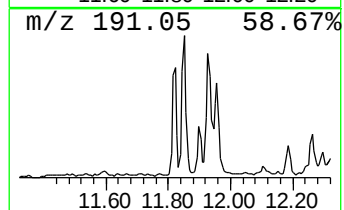
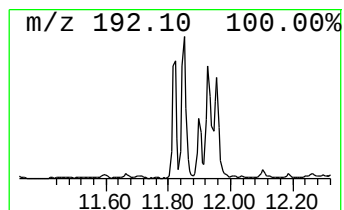
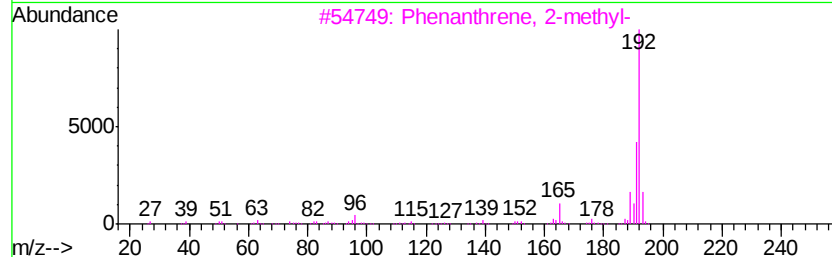
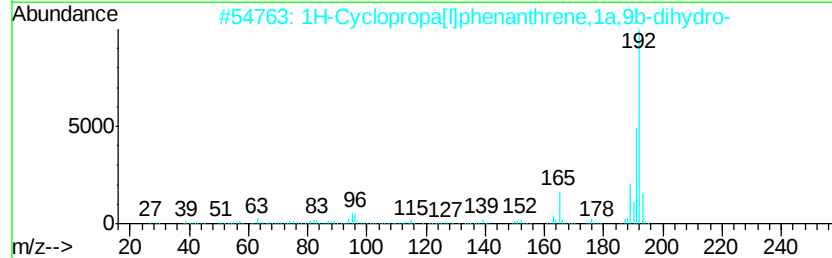
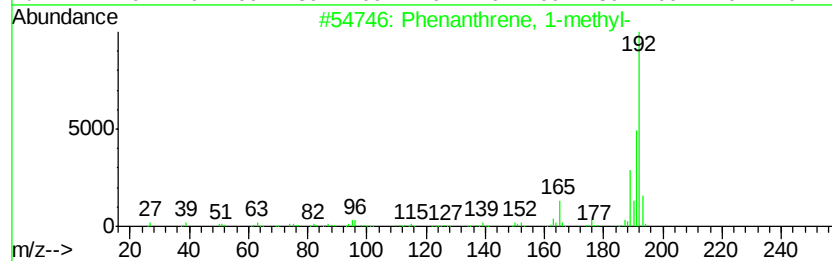
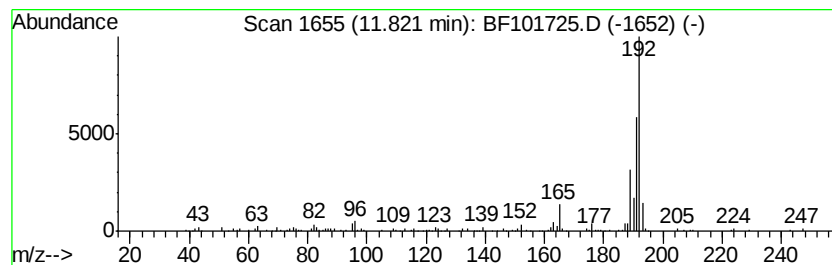
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 8 Phenanthrene, 1-methyl- Concentration Rank 8

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.82 | 4.27 ng | 155689 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                          | MW  | MolForm | CAS#        | Qual |
|------|----|---------------------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 1-methyl-               | 192 | C15H12  | 000832-69-9 | 91   |
| 2    |    | 1H-Cyclopropa[1]phenanthrene, 1a, ... | 192 | C15H12  | 000949-41-7 | 91   |
| 3    |    | Phenanthrene, 2-methyl-               | 192 | C15H12  | 002531-84-2 | 87   |
| 4    |    | Anthracene, 1-methyl-                 | 192 | C15H12  | 000610-48-0 | 87   |
| 5    |    | Anthracene, 9-methyl-                 | 192 | C15H12  | 000779-02-2 | 87   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

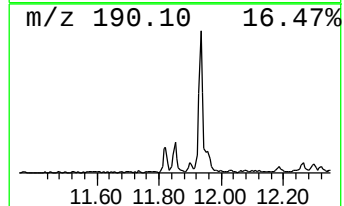
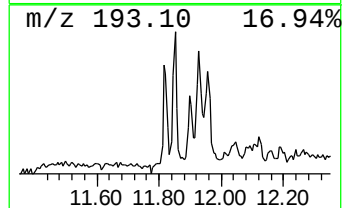
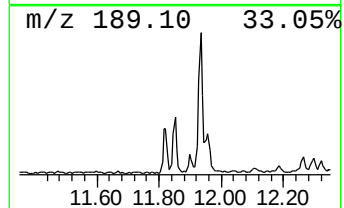
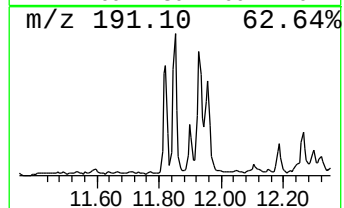
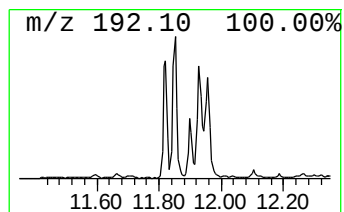
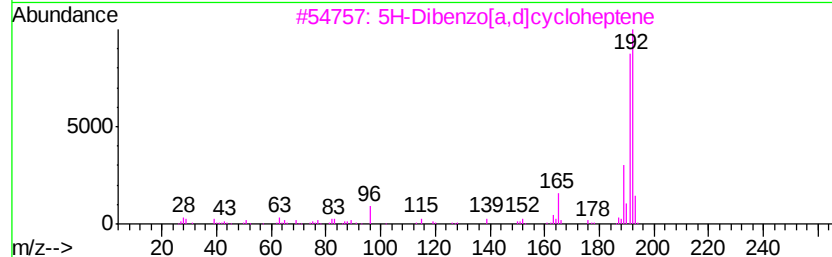
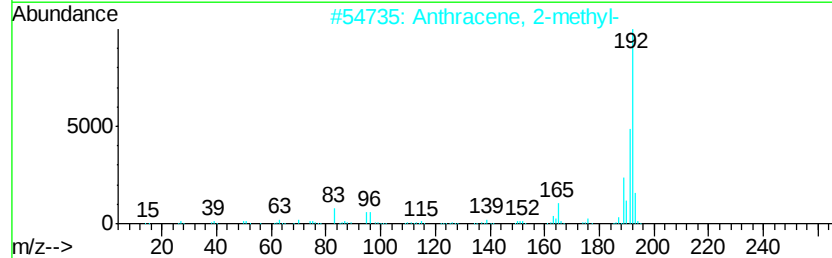
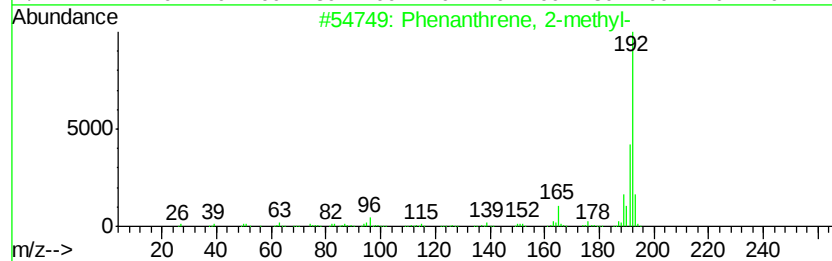
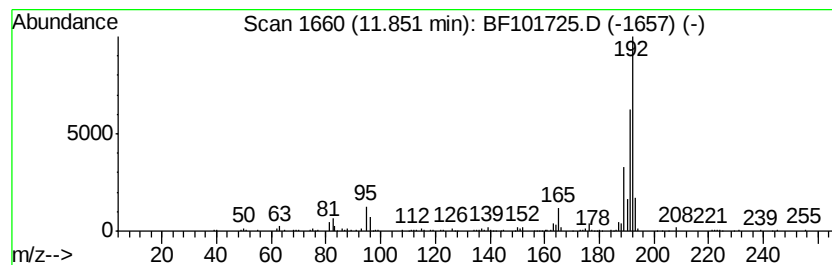
Instrument :  
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ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 9 Phenanthrene, 2-methyl- Concentration Rank 6

| R.T.      | EstConc                               | Area   | Relative to ISTD | R.T.        |      |
|-----------|---------------------------------------|--------|------------------|-------------|------|
| 11.85     | 5.23 ng                               | 190895 | Phenanthrene-d10 | 11.32       |      |
| Hit# of 5 | Tentative ID                          | MW     | MolForm          | CAS#        | Qual |
| 1         | Phenanthrene, 2-methyl-               | 192    | C15H12           | 002531-84-2 | 96   |
| 2         | Anthracene, 2-methyl-                 | 192    | C15H12           | 000613-12-7 | 96   |
| 3         | 5H-Dibenzo[a,d]cycloheptene           | 192    | C15H12           | 000256-81-5 | 96   |
| 4         | Phenanthrene, 1-methyl-               | 192    | C15H12           | 000832-69-9 | 94   |
| 5         | 1H-Cyclopropa[1]phenanthrene, 1a, ... | 192    | C15H12           | 000949-41-7 | 94   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
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Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

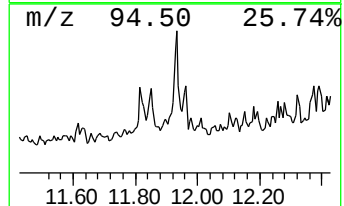
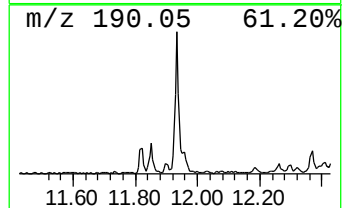
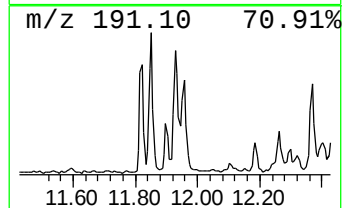
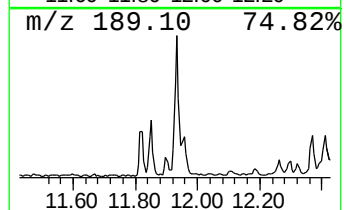
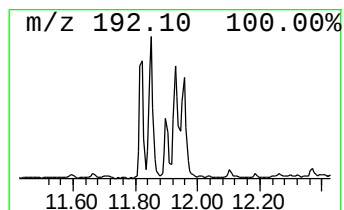
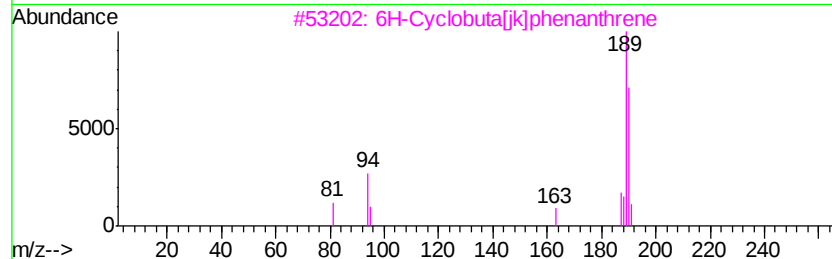
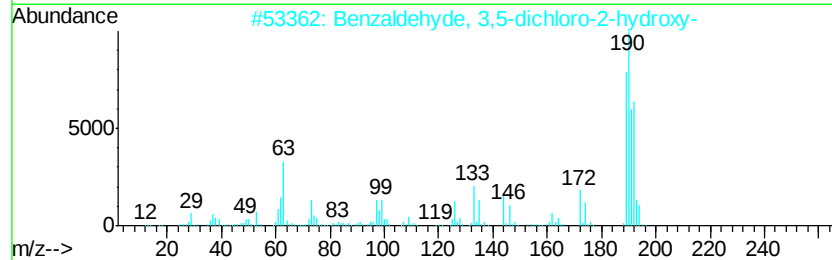
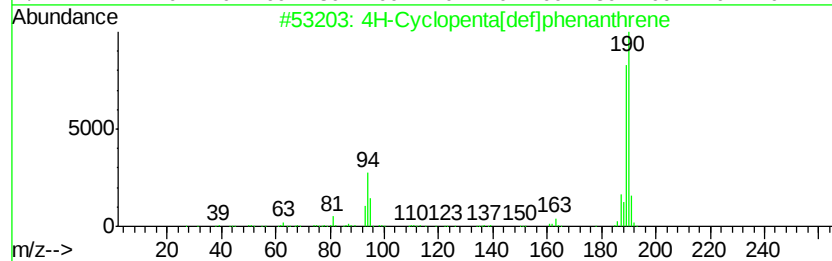
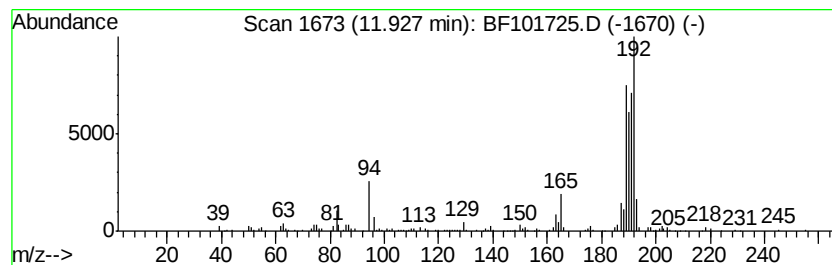
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 10 4H-Cyclopenta[def]phenanthrene Concentration Rank 4

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.93 | 7.20 ng | 262731 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|------|----|-------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10    | 000203-64-5 | 92   |
| 2    |    | Benzaldehyde, 3,5-dichloro-2-hyd... | 190 | C7H4Cl2O2 | 000090-60-8 | 40   |
| 3    |    | 6H-Cyclobuta[jk]phenanthrene        | 190 | C15H10    | 083469-43-6 | 40   |
| 4    |    | Benzene, 1,1'-(1,2-propadienylid... | 192 | C15H12    | 014251-57-1 | 22   |
| 5    |    | Phenanthrene, 4-methyl-             | 192 | C15H12    | 000832-64-4 | 18   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
352

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

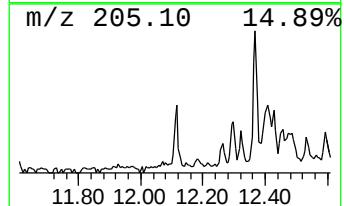
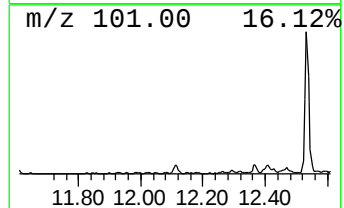
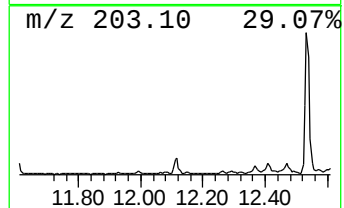
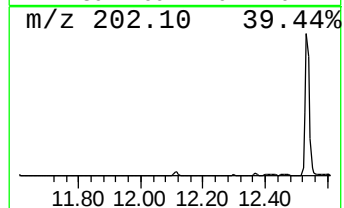
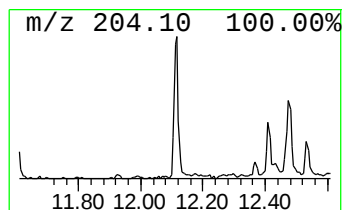
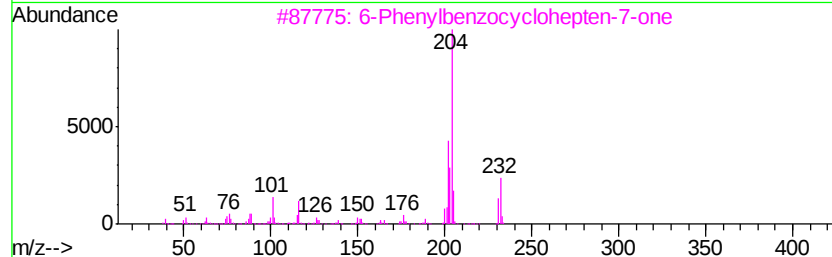
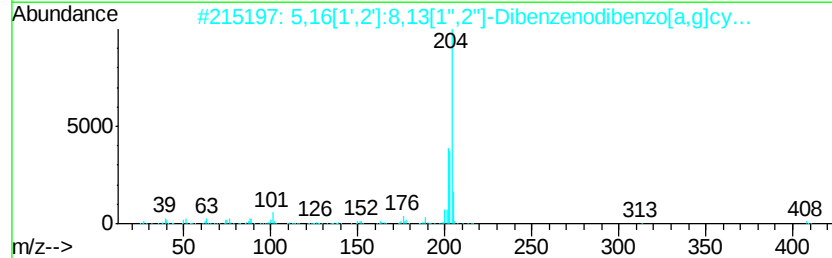
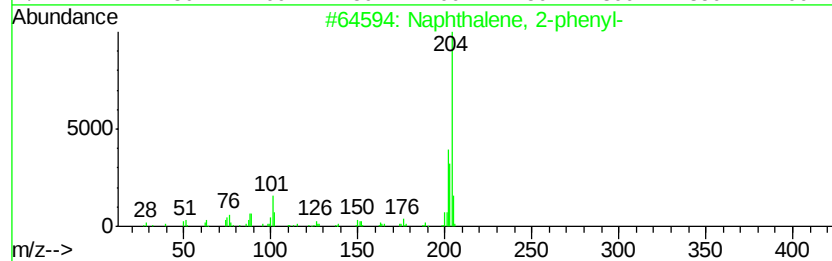
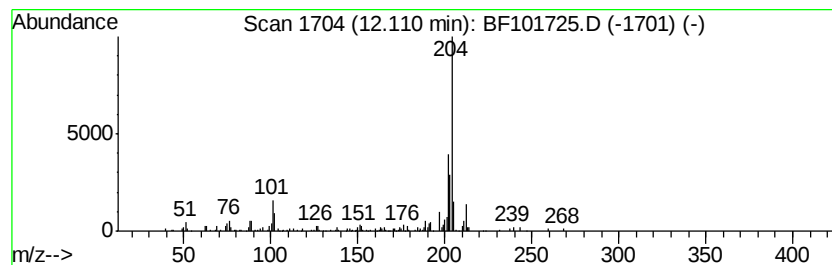
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 12 Naphthalene, 2-phenyl- Concentration Rank 10

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.11 | 3.21 ng | 117212 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|------|----|-------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | Naphthalene, 2-phenyl-              | 204 | C16H12    | 000612-94-2 | 83   |
| 2    |    | 5,16[1',2']:8,13[1'',2'']-Dibenz... | 408 | C32H24    | 005672-97-9 | 72   |
| 3    |    | 6-Phenylbenzocyclohepten-7-one      | 232 | C17H12O   | 093327-56-1 | 64   |
| 4    |    | 9,10-Bis(bromomethyl)anthracene     | 362 | C16H12Br2 | 034373-96-1 | 47   |
| 5    |    | Naphthalene, 1-phenyl-              | 204 | C16H12    | 000605-02-7 | 45   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

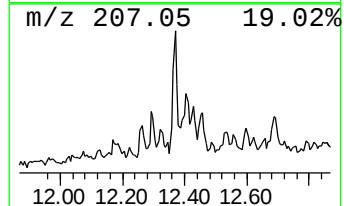
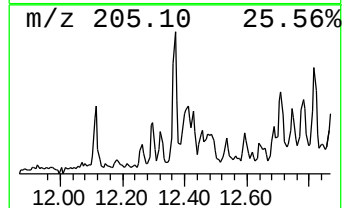
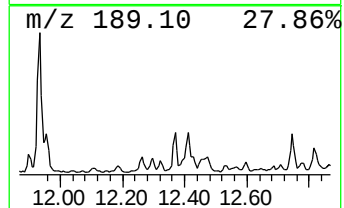
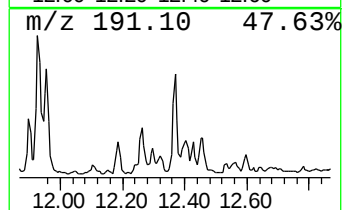
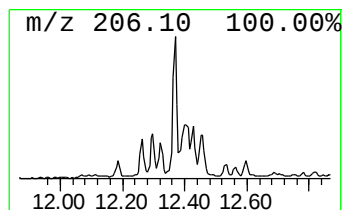
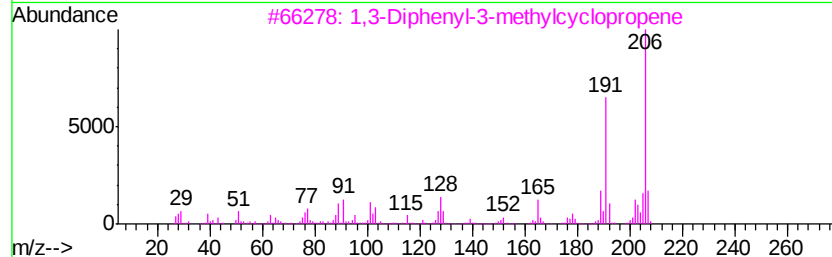
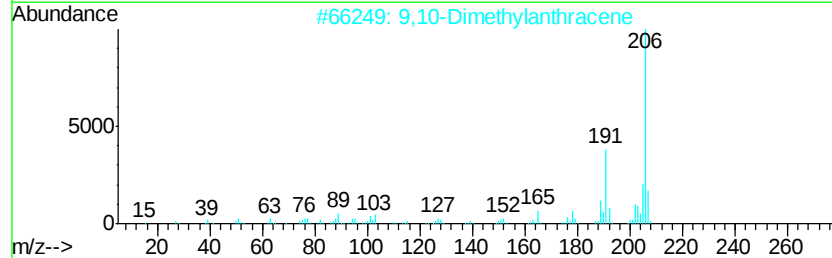
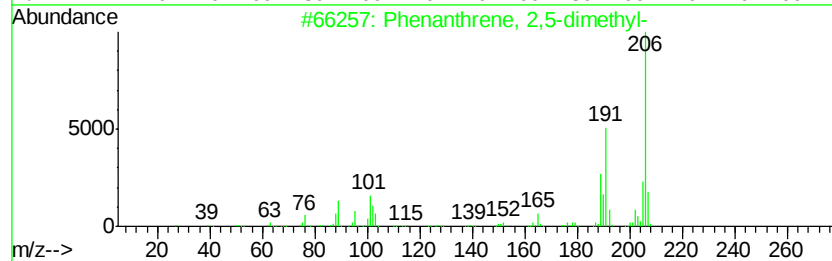
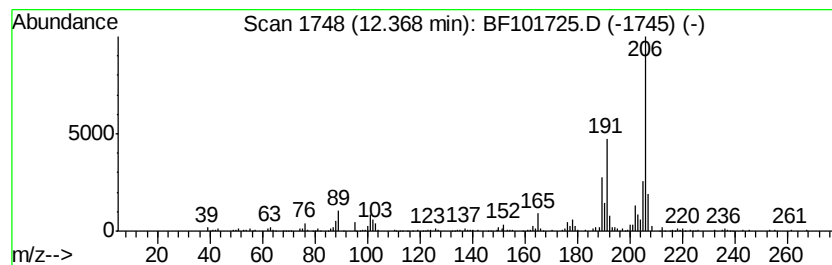
Instrument :  
BNA\_F  
ClientSampleId :  
352

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 13 Phenanthrene, 2,5-dimethyl- Concentration Rank 5

| R.T.      | EstConc                           | Area   | Relative to ISTD | R.T.        |      |
|-----------|-----------------------------------|--------|------------------|-------------|------|
| 12.37     | 5.51 ng                           | 201015 | Phenanthrene-d10 | 11.32       |      |
| Hit# of 5 | Tentative ID                      | MW     | MolForm          | CAS#        | Qual |
| 1         | Phenanthrene, 2,5-dimethyl-       | 206    | C16H14           | 003674-66-6 | 98   |
| 2         | 9,10-Dimethylantracene            | 206    | C16H14           | 000781-43-1 | 95   |
| 3         | 1,3-Diphenyl-3-methylcyclopropene | 206    | C16H14           | 086544-79-8 | 93   |
| 4         | Phenanthrene, 3,6-dimethyl-       | 206    | C16H14           | 001576-67-6 | 93   |
| 5         | Phenanthrene, 2,3-dimethyl-       | 206    | C16H14           | 003674-65-5 | 93   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
352

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

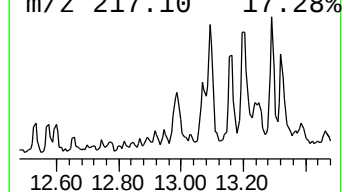
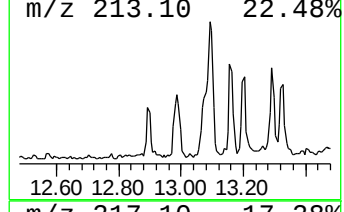
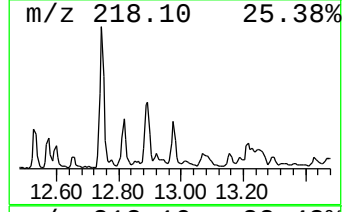
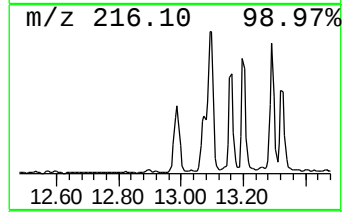
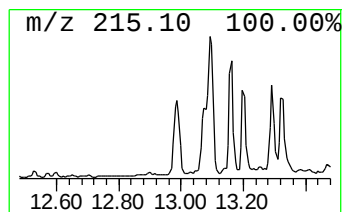
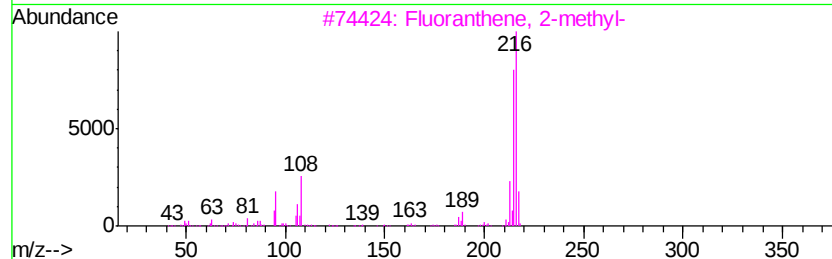
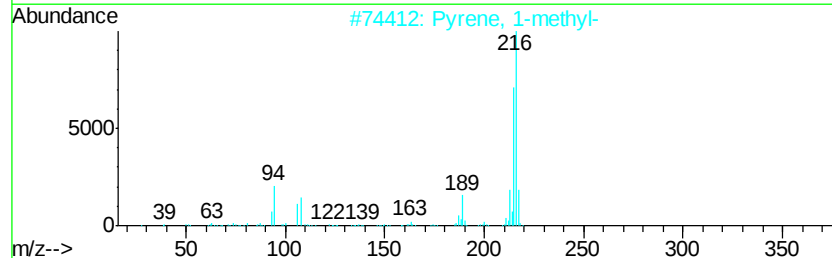
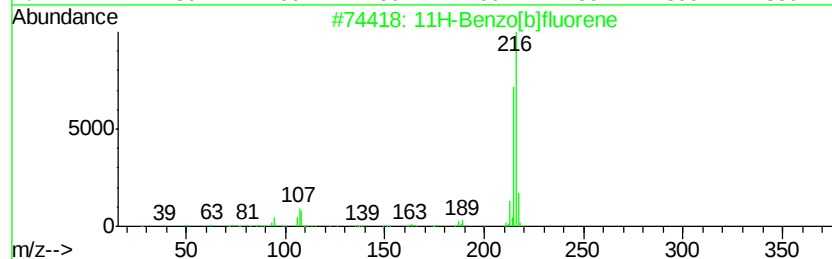
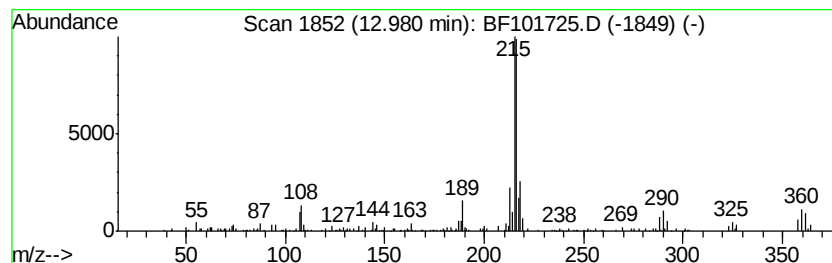
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 14 11H-Benzo[b]fluorene Concentration Rank 13

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.98 | 2.46 ng | 196950 | Chrysene-d12     | 13.97 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 68   |
| 2    |    | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 64   |
| 3    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 64   |
| 4    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 58   |
| 5    |    | Pyrene, 2-methyl-       | 216 | C17H12  | 003442-78-2 | 55   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampled :  
352

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

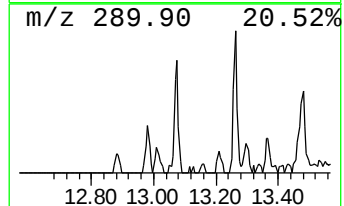
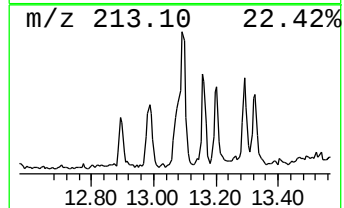
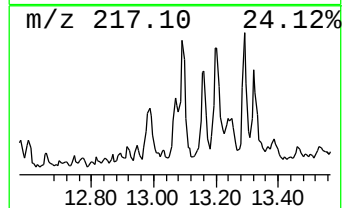
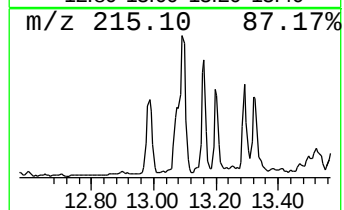
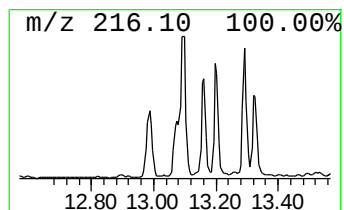
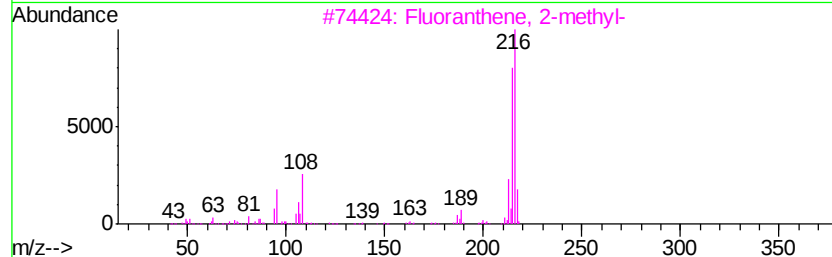
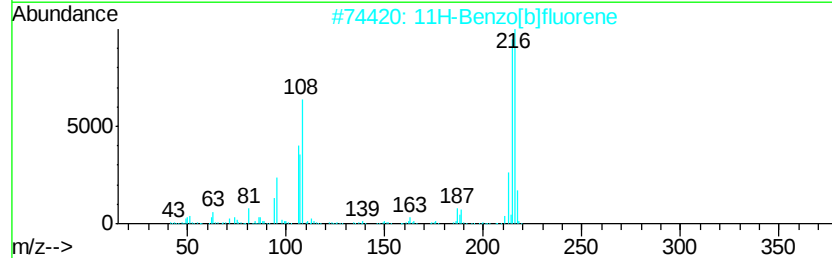
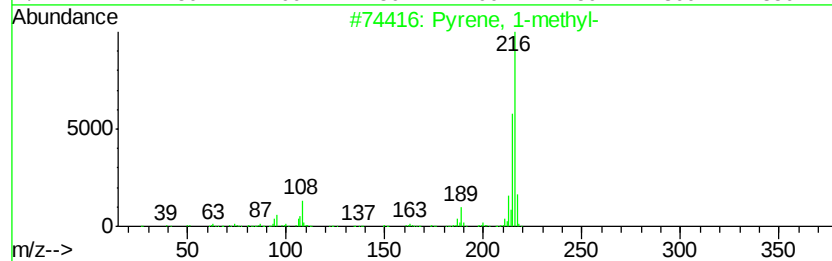
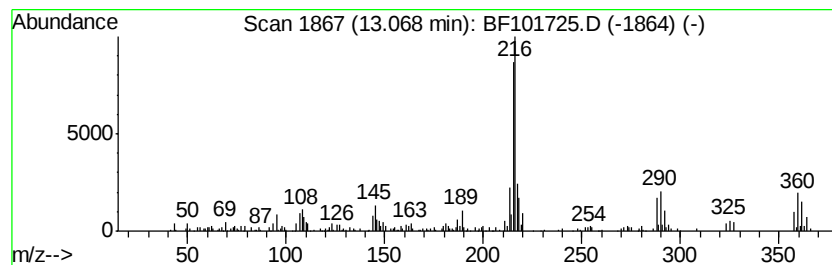
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 15 Pyrene, 1-methyl- Concentration Rank 12

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 13.07 | 2.75 ng | 220282 | Chrysene-d12     | 13.97 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 80   |
| 2    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 55   |
| 3    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 55   |
| 4    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 49   |
| 5    |    | Pyrene, 2-methyl-       | 216 | C17H12  | 003442-78-2 | 38   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

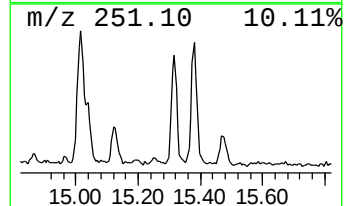
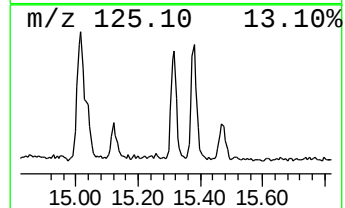
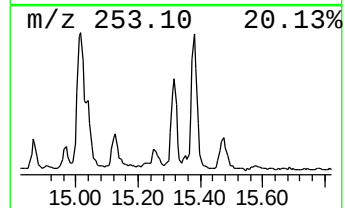
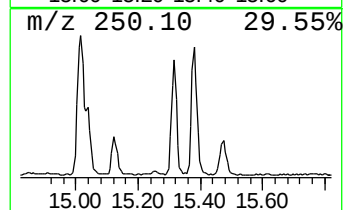
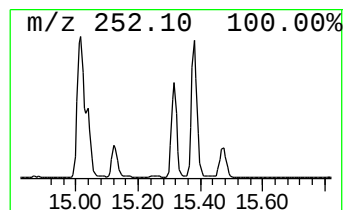
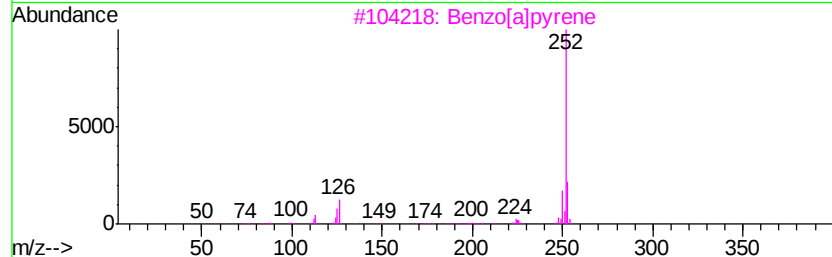
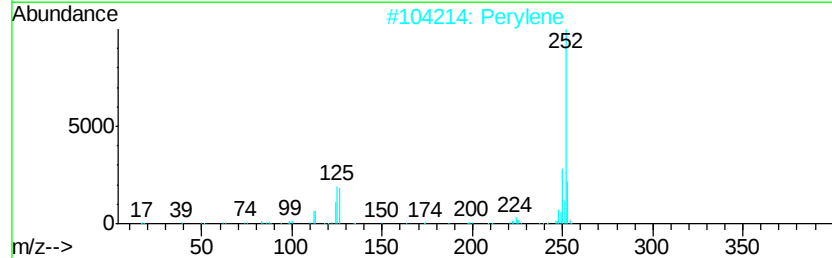
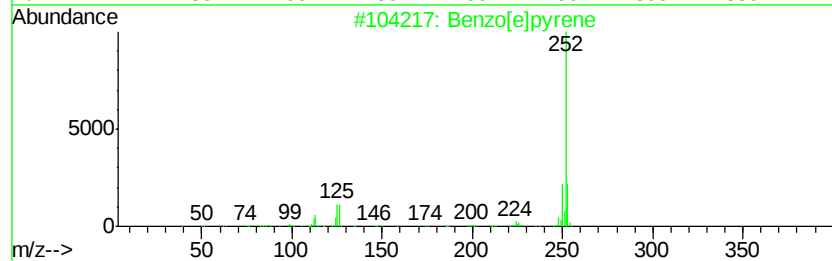
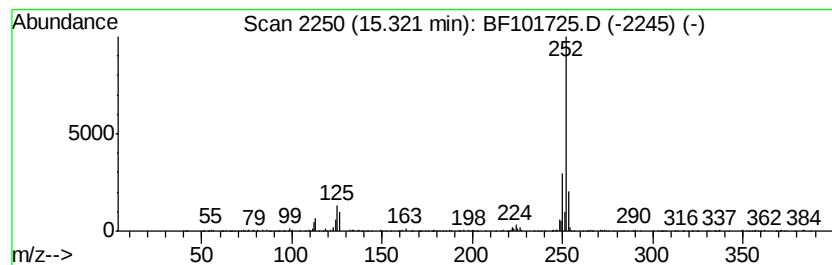
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 17 Benzo[e]pyrene Concentration Rank 3

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 15.32 | 12.12 ng | 446414 | Perylene-d12     | 15.44 |

| Hit# | of | Tentative ID             | MW  | MolForm | CAS#        | Qual |
|------|----|--------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[e]pyrene           | 252 | C20H12  | 000192-97-2 | 98   |
| 2    |    | Perylene                 | 252 | C20H12  | 000198-55-0 | 96   |
| 3    |    | Benzo[a]pyrene           | 252 | C20H12  | 000050-32-8 | 96   |
| 4    |    | Benzo[k]fluoranthene     | 252 | C20H12  | 000207-08-9 | 93   |
| 5    |    | Benz[e]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 93   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122617\  
Data File : BF101725.D  
Acq On : 26 Dec 2017 20:40  
Operator : SJ/JU  
Sample : I7022-01  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
352

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

| TIC Top Hit name     | RT    | EstConc | Units | Response | --Internal Standard-- |       |         |      |
|----------------------|-------|---------|-------|----------|-----------------------|-------|---------|------|
|                      |       |         |       |          | #                     | RT    | Resp    | Conc |
| 2-Pentanone, 4-hy... | 5.00  | 5.1 ng  |       | 188007   | 1                     | 6.79  | 734054  | 20.0 |
| unknown6.56          | 6.56  | 36.2 ng |       | 1328920  | 1                     | 6.79  | 734054  | 20.0 |
| Benzene, 1-methyl... | 6.86  | 3.5 ng  |       | 128457   | 1                     | 6.79  | 734054  | 20.0 |
| (+)-2-Bornanone      | 7.81  | 2.4 ng  |       | 112366   | 2                     | 8.07  | 952773  | 20.0 |
| Anethole             | 8.66  | 2.2 ng  |       | 103152   | 2                     | 8.07  | 952773  | 20.0 |
| Heptadecane          | 10.71 | 2.1 ng  |       | 77297    | 4                     | 11.32 | 729950  | 20.0 |
| Phenanthrene, 1-m... | 11.82 | 4.3 ng  |       | 155689   | 4                     | 11.32 | 729950  | 20.0 |
| Phenanthrene, 2-m... | 11.85 | 5.2 ng  |       | 190895   | 4                     | 11.32 | 729950  | 20.0 |
| 4H-Cyclopenta[def... | 11.93 | 7.2 ng  |       | 262731   | 4                     | 11.32 | 729950  | 20.0 |
| Naphthalene, 2-ph... | 12.11 | 3.2 ng  |       | 117212   | 4                     | 11.32 | 729950  | 20.0 |
| Phenanthrene, 2,5... | 12.37 | 5.5 ng  |       | 201015   | 4                     | 11.32 | 729950  | 20.0 |
| 11H-Benzo[b]fluorene | 12.98 | 2.5 ng  |       | 196950   | 5                     | 13.97 | 1599250 | 20.0 |
| Pyrene, 1-methyl-    | 13.07 | 2.8 ng  |       | 220282   | 5                     | 13.97 | 1599250 | 20.0 |
| Benzo[e]pyrene       | 15.32 | 12.1 ng |       | 446414   | 6                     | 15.44 | 736702  | 20.0 |