

Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
 Data File : BF101809.D  
 Acq On : 28 Dec 2017 18:19  
 Operator : SJ/JU  
 Sample : I6970-10  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 S4-5-10

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         | 513          | rBV      | 290008         | 559896        | 16.33%          | 1.442%        |
| 2         | 5.404       | 561           | 564         | 603          | rBV      | 2278807        | 3429052       | 100.00%         | 8.834%        |
| 3         | 6.434       | 735           | 739         | 756          | rBV      | 2651785        | 3398120       | 99.10%          | 8.755%        |
| 4         | 6.557       | 756           | 760         | 773          | rVB      | 3150098        | 3166617       | 92.35%          | 8.158%        |
| 5         | 6.781       | 795           | 798         | 808          | rBV      | 878282         | 864269        | 25.20%          | 2.227%        |
| 6         | 6.934       | 821           | 824         | 837          | rBV      | 2301989        | 2491774       | 72.67%          | 6.420%        |
| 7         | 7.357       | 892           | 896         | 917          | rBV      | 1803424        | 2103677       | 61.35%          | 5.420%        |
| 8         | 8.063       | 1013          | 1016        | 1036         | rVB      | 1123304        | 1233117       | 35.96%          | 3.177%        |
| 9         | 8.645       | 1112          | 1115        | 1125         | rBV      | 57110          | 68079         | 1.99%           | 0.175%        |
| 10        | 8.786       | 1136          | 1139        | 1144         | rBV      | 42489          | 43411         | 1.27%           | 0.112%        |
| 11        | 8.881       | 1151          | 1155        | 1166         | rBV      | 35168          | 50567         | 1.47%           | 0.130%        |
| 12        | 9.139       | 1195          | 1199        | 1207         | rBV      | 3271956        | 3192600       | 93.10%          | 8.225%        |
| 13        | 9.204       | 1207          | 1210        | 1213         | rVB      | 37281          | 34729         | 1.01%           | 0.089%        |
| 14        | 9.416       | 1240          | 1246        | 1250         | rBV2     | 21845          | 38780         | 1.13%           | 0.100%        |
| 15        | 9.481       | 1253          | 1257        | 1260         | rVV      | 38675          | 47317         | 1.38%           | 0.122%        |
| 16        | 9.539       | 1264          | 1267        | 1272         | rVV      | 140724         | 156929        | 4.58%           | 0.404%        |
| 17        | 9.604       | 1275          | 1278        | 1284         | rVB      | 21288          | 35655         | 1.04%           | 0.092%        |
| 18        | 9.733       | 1297          | 1300        | 1303         | rVB      | 72379          | 52816         | 1.54%           | 0.136%        |
| 19        | 9.816       | 1311          | 1314        | 1318         | rBV      | 1128422        | 1082053       | 31.56%          | 2.788%        |
| 20        | 9.851       | 1318          | 1320        | 1328         | rVB      | 162568         | 158141        | 4.61%           | 0.407%        |
| 21        | 10.033      | 1346          | 1351        | 1353         | rBV      | 111663         | 132402        | 3.86%           | 0.341%        |
| 22        | 10.233      | 1378          | 1385        | 1392         | rBV2     | 96630          | 113331        | 3.31%           | 0.292%        |
| 23        | 10.375      | 1402          | 1409        | 1414         | rBV      | 145007         | 161710        | 4.72%           | 0.417%        |
| 24        | 10.451      | 1414          | 1422        | 1425         | rBV3     | 45913          | 86330         | 2.52%           | 0.222%        |
| 25        | 10.528      | 1433          | 1435        | 1440         | rVB2     | 59605          | 54279         | 1.58%           | 0.140%        |
| 26        | 10.616      | 1446          | 1450        | 1462         | rBV      | 1563661        | 1728791       | 50.42%          | 4.454%        |
| 27        | 10.704      | 1462          | 1465        | 1474         | rVB      | 95162          | 123872        | 3.61%           | 0.319%        |
| 28        | 10.922      | 1495          | 1502        | 1505         | rBV3     | 44129          | 83964         | 2.45%           | 0.216%        |
| 29        | 11.045      | 1518          | 1523        | 1525         | rBV2     | 31738          | 40731         | 1.19%           | 0.105%        |
| 30        | 11.133      | 1535          | 1538        | 1540         | rBV      | 74416          | 74447         | 2.17%           | 0.192%        |
| 31        | 11.151      | 1540          | 1541        | 1545         | rVV3     | 74657          | 85477         | 2.49%           | 0.220%        |
| 32        | 11.210      | 1549          | 1551        | 1557         | rVB      | 98500          | 96249         | 2.81%           | 0.248%        |
| 33        | 11.310      | 1565          | 1568        | 1570         | rBV      | 1074255        | 940416        | 27.42%          | 2.423%        |
| 34        | 11.333      | 1570          | 1572        | 1577         | rVV      | 1337848        | 1278925       | 37.30%          | 3.295%        |

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 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 S4-5-10

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

|    |        |      |      |      |      |         |         |        |        |
|----|--------|------|------|------|------|---------|---------|--------|--------|
| 35 | 11.392 | 1578 | 1582 | 1589 | rVB  | 332220  | 336621  | 9.82%  | 0.867% |
| 36 | 11.557 | 1606 | 1610 | 1615 | rBV2 | 170033  | 197645  | 5.76%  | 0.509% |
| 37 | 11.727 | 1636 | 1639 | 1644 | rVB5 | 25196   | 34378   | 1.00%  | 0.089% |
| 38 | 11.816 | 1651 | 1654 | 1657 | rBV2 | 159053  | 209763  | 6.12%  | 0.540% |
| 39 | 11.845 | 1657 | 1659 | 1664 | rVV  | 200765  | 189108  | 5.51%  | 0.487% |
| 40 | 11.892 | 1665 | 1667 | 1670 | rVV  | 65360   | 57562   | 1.68%  | 0.148% |
| 41 | 11.927 | 1670 | 1673 | 1676 | rVV  | 175745  | 210749  | 6.15%  | 0.543% |
| 42 | 11.951 | 1676 | 1677 | 1680 | rVB  | 92685   | 54498   | 1.59%  | 0.140% |
| 43 | 12.110 | 1701 | 1704 | 1707 | rBV  | 92593   | 84728   | 2.47%  | 0.218% |
| 44 | 12.163 | 1710 | 1713 | 1719 | rVB2 | 82407   | 96104   | 2.80%  | 0.248% |
| 45 | 12.363 | 1744 | 1747 | 1752 | rBV2 | 77852   | 106439  | 3.10%  | 0.274% |
| 46 | 12.474 | 1763 | 1766 | 1772 | rVB  | 48887   | 53209   | 1.55%  | 0.137% |
| 47 | 12.533 | 1772 | 1776 | 1780 | rBV  | 1150214 | 1105653 | 32.24% | 2.849% |
| 48 | 12.610 | 1784 | 1789 | 1791 | rBV3 | 35193   | 40968   | 1.19%  | 0.106% |
| 49 | 12.686 | 1799 | 1802 | 1806 | rBV  | 77442   | 82033   | 2.39%  | 0.211% |
| 50 | 12.739 | 1808 | 1811 | 1812 | rVV  | 212868  | 179914  | 5.25%  | 0.464% |
| 51 | 12.763 | 1812 | 1815 | 1820 | rVV  | 959348  | 930860  | 27.15% | 2.398% |
| 52 | 12.810 | 1820 | 1823 | 1829 | rVB  | 60747   | 63319   | 1.85%  | 0.163% |
| 53 | 12.892 | 1833 | 1837 | 1840 | rVV  | 2425579 | 2260049 | 65.91% | 5.823% |
| 54 | 12.939 | 1842 | 1845 | 1848 | rVV  | 52601   | 57949   | 1.69%  | 0.149% |
| 55 | 12.980 | 1848 | 1852 | 1857 | rVB2 | 66962   | 109818  | 3.20%  | 0.283% |
| 56 | 13.092 | 1863 | 1871 | 1876 | rBV3 | 113252  | 200357  | 5.84%  | 0.516% |
| 57 | 13.198 | 1885 | 1889 | 1892 | rVV2 | 68716   | 84672   | 2.47%  | 0.218% |
| 58 | 13.292 | 1902 | 1905 | 1907 | rBV  | 36692   | 36279   | 1.06%  | 0.093% |
| 59 | 13.321 | 1907 | 1910 | 1913 | rVV2 | 47572   | 46193   | 1.35%  | 0.119% |
| 60 | 13.616 | 1958 | 1960 | 1966 | rVB  | 80125   | 77084   | 2.25%  | 0.199% |
| 61 | 13.769 | 1983 | 1986 | 1993 | rBV3 | 291499  | 416308  | 12.14% | 1.073% |
| 62 | 13.827 | 1993 | 1996 | 2000 | rVB  | 108505  | 110333  | 3.22%  | 0.284% |
| 63 | 13.963 | 2014 | 2019 | 2022 | rBV2 | 986557  | 1317733 | 38.43% | 3.395% |
| 64 | 13.992 | 2022 | 2024 | 2032 | rVB  | 432625  | 403709  | 11.77% | 1.040% |
| 65 | 14.074 | 2035 | 2038 | 2041 | rBV  | 61749   | 66178   | 1.93%  | 0.170% |
| 66 | 14.357 | 2083 | 2086 | 2089 | rVB  | 84364   | 82948   | 2.42%  | 0.214% |
| 67 | 14.386 | 2089 | 2091 | 2094 | rBV  | 45785   | 38736   | 1.13%  | 0.100% |
| 68 | 14.480 | 2105 | 2107 | 2113 | rBV3 | 41382   | 61550   | 1.79%  | 0.159% |
| 69 | 15.010 | 2193 | 2197 | 2200 | rBV  | 370830  | 521236  | 15.20% | 1.343% |
| 70 | 15.115 | 2213 | 2215 | 2221 | rVB  | 56406   | 72765   | 2.12%  | 0.187% |
| 71 | 15.310 | 2245 | 2248 | 2255 | rVB  | 184350  | 218566  | 6.37%  | 0.563% |

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Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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 | 15.374 | 2255 | 2259 | 2265 | rVB  | 315762 | 373303 | 10.89% | 0.962% |
| 73 | 15.433 | 2265 | 2269 | 2273 | rBV  | 567084 | 723173 | 21.09% | 1.863% |
| 74 | 16.921 | 2517 | 2522 | 2527 | rBV2 | 83245  | 157082 | 4.58%  | 0.405% |
| 75 | 17.368 | 2595 | 2598 | 2604 | rVB  | 76251  | 136934 | 3.99%  | 0.353% |

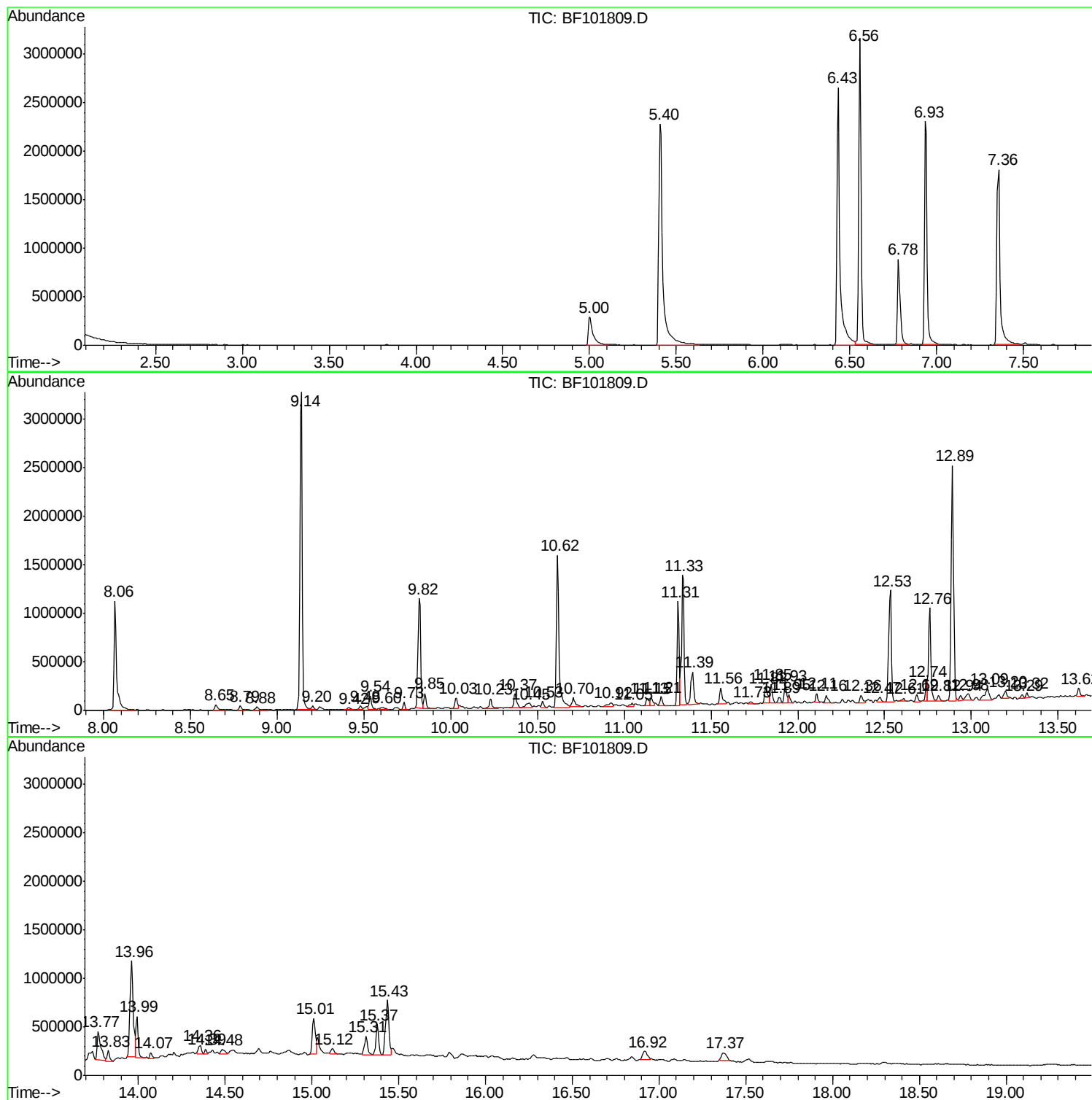
Sum of corrected areas: 38815029

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Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampled :  
S4-5-10

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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Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

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

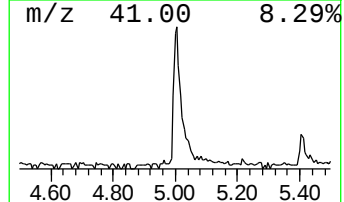
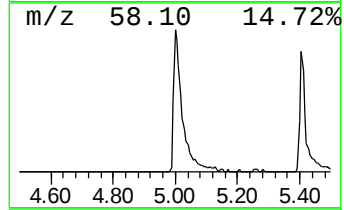
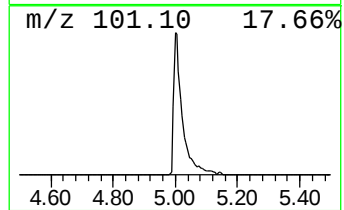
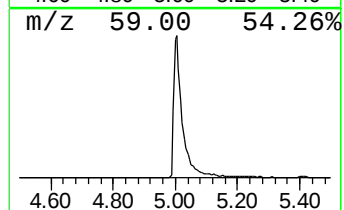
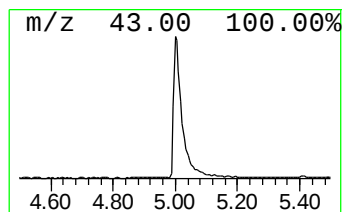
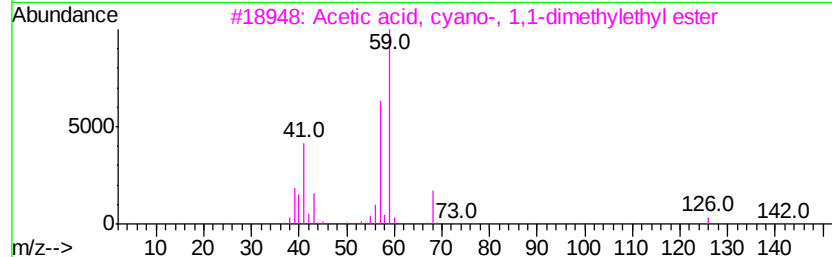
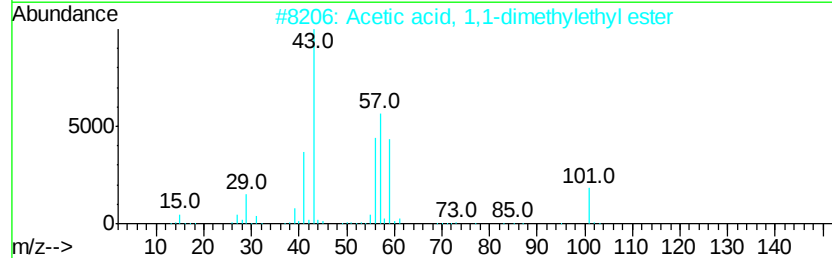
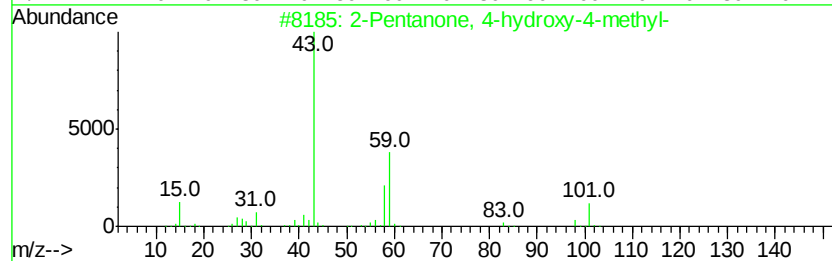
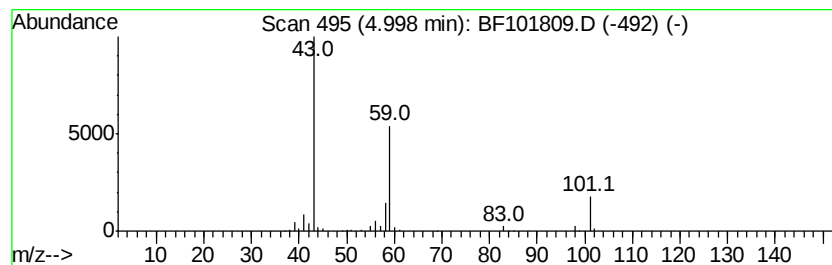
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 3

| R.T. | EstConc  | Area   | Relative to ISTD       | R.T. |
|------|----------|--------|------------------------|------|
| 5.00 | 12.96 ng | 559896 | 1,4-Dichlorobenzene-d4 | 6.78 |

| Hit# | of | 5 | Tentative ID                        | MW  | MolForm  | CAS#        | Qual |
|------|----|---|-------------------------------------|-----|----------|-------------|------|
| 1    |    |   | 2-Pentanone, 4-hydroxy-4-methyl-    | 116 | C6H12O2  | 000123-42-2 | 64   |
| 2    |    |   | Acetic acid, 1,1-dimethylethyl e... | 116 | C6H12O2  | 000540-88-5 | 50   |
| 3    |    |   | Acetic acid, cyano-, 1,1-dimethy... | 141 | C7H11NO2 | 001116-98-9 | 23   |
| 4    |    |   | Morpholine, 4-methyl-               | 101 | C5H11NO  | 000109-02-4 | 9    |
| 5    |    |   | 2,3-Butanedione, monooxime          | 101 | C4H7NO2  | 000057-71-6 | 9    |



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

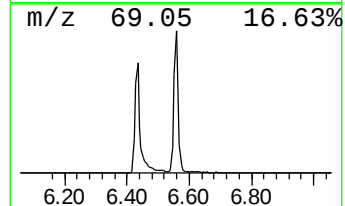
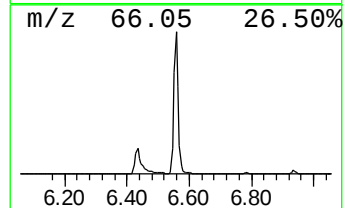
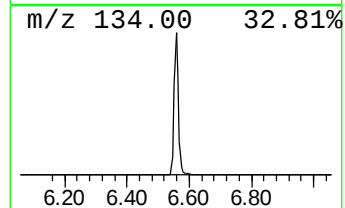
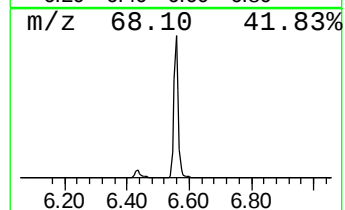
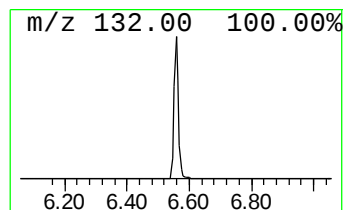
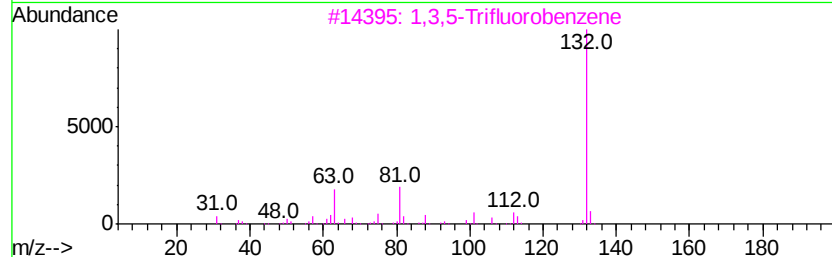
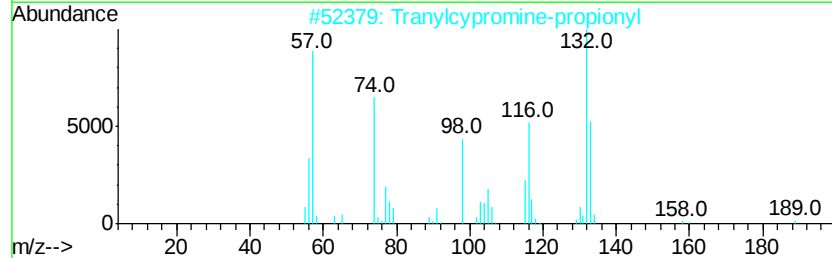
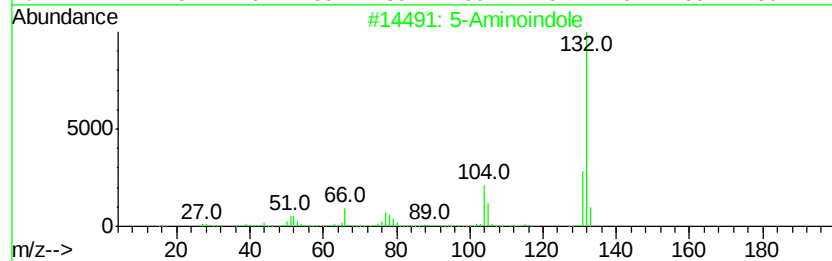
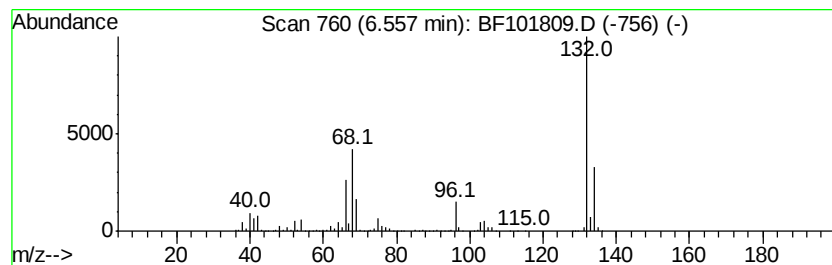
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 2 unknown6.56 Concentration Rank 1

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 6.56 | 73.28 ng | 3166620 | 1,4-Dichlorobenzene-d4 | 6.78 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 5-Aminoindole                       | 132 | C8H8N2    | 005192-03-0  | 12   |
| 2    |    | Tranylcypromine-propionyl           | 189 | C12H15NO  | 1000123-86-3 | 10   |
| 3    |    | 1,3,5-Trifluorobenzene              | 132 | C6H3F3    | 000372-38-3  | 9    |
| 4    |    | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12    | 028749-81-7  | 9    |
| 5    |    | 4-Chloro-2-fluoro-pyrimidine        | 132 | C4H2ClFN2 | 051422-00-5  | 9    |



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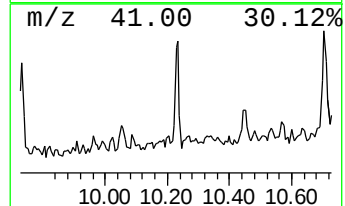
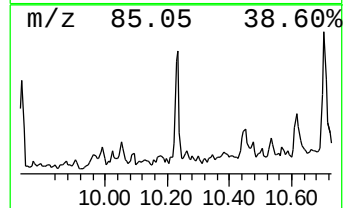
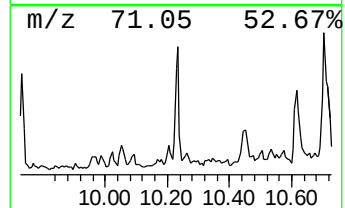
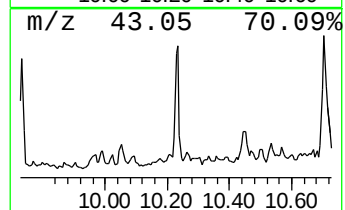
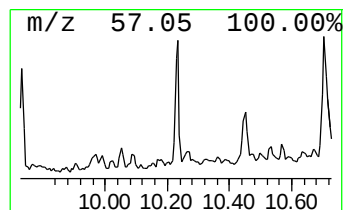
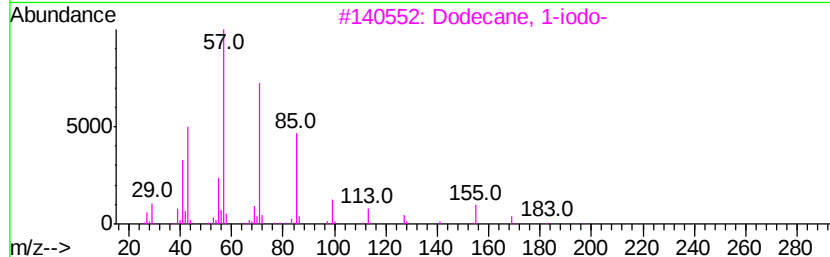
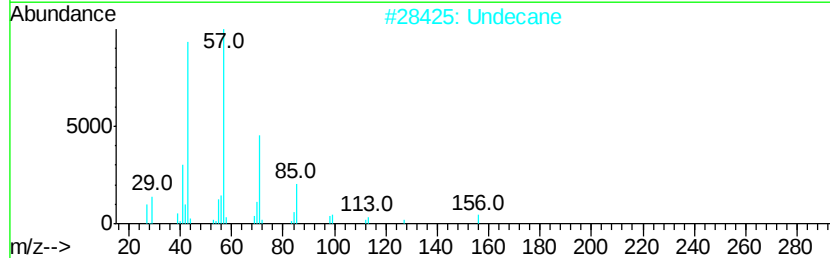
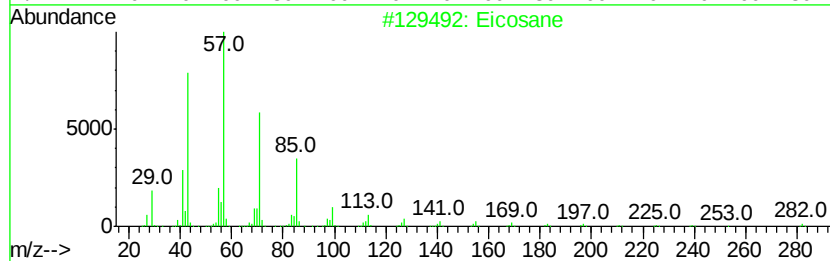
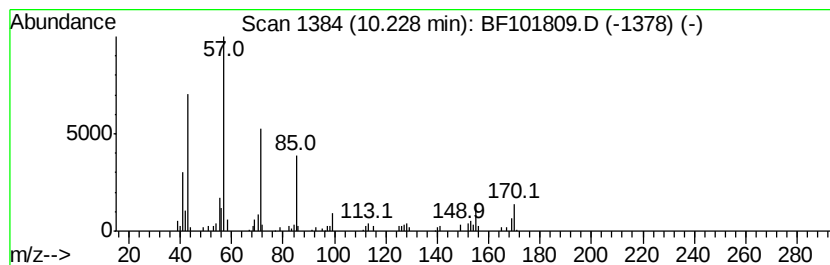
Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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 4 Eicosane Concentration Rank 12

| R.T.    | EstConc                     | Area            | Relative to ISTD | R.T.      |
|---------|-----------------------------|-----------------|------------------|-----------|
| 10.23   | 2.09 ng                     | 113331          | Acenaphthene-d10 | 9.82      |
| Hit# of | 5                           | Tentative ID    | MW MolForm       | CAS# Qual |
| 1       | Eicosane                    | 282 C20H42      | 000112-95-8      | 86        |
| 2       | Undecane                    | 156 C11H24      | 001120-21-4      | 83        |
| 3       | Dodecane, 1-iodo-           | 296 C12H25I     | 004292-19-7      | 80        |
| 4       | Tetradecane                 | 198 C14H30      | 000629-59-4      | 80        |
| 5       | Silane, trichlorooctadecyl- | 386 C18H37Cl3Si | 000112-04-9      | 80        |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

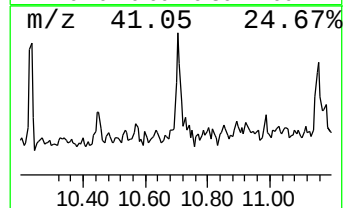
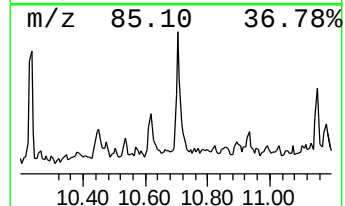
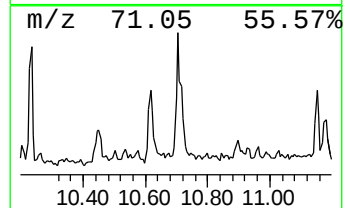
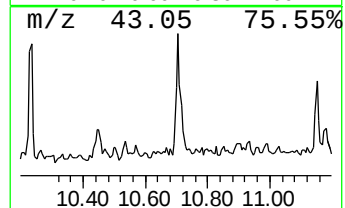
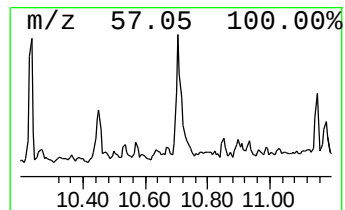
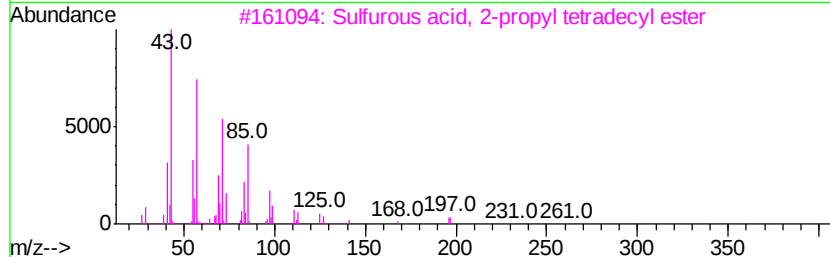
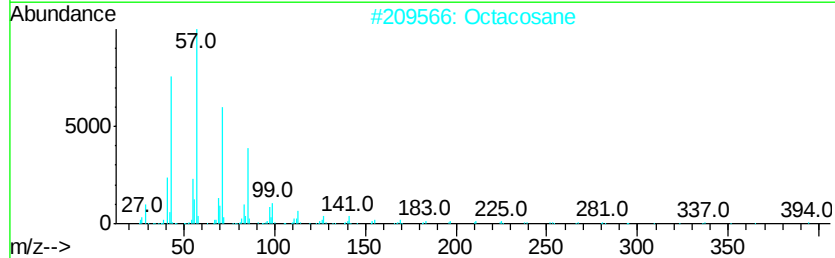
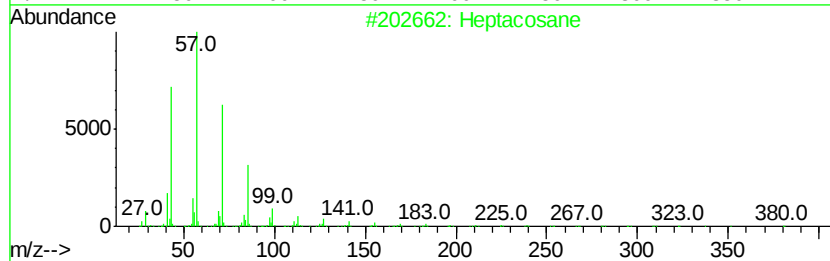
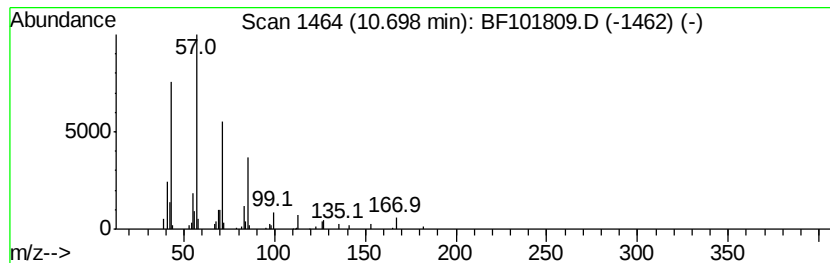
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TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 5 Heptacosane Concentration Rank 10

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 10.70 | 2.63 ng | 123872 | Phenanthrene-d10 | 11.31 |

| Hit# of | 5                                   | Tentative ID | MW  | MolForm   | CAS#         | Qual |
|---------|-------------------------------------|--------------|-----|-----------|--------------|------|
| 1       | Heptacosane                         |              | 380 | C27H56    | 000593-49-7  | 90   |
| 2       | Octacosane                          |              | 394 | C28H58    | 000630-02-4  | 90   |
| 3       | Sulfurous acid, 2-propyl tetradecyl |              | 320 | C17H36O3S | 1000309-12-5 | 86   |
| 4       | Nonadecane                          |              | 268 | C19H40    | 000629-92-5  | 86   |
| 5       | Heneicosane                         |              | 296 | C21H44    | 000629-94-7  | 83   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

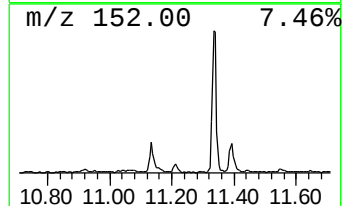
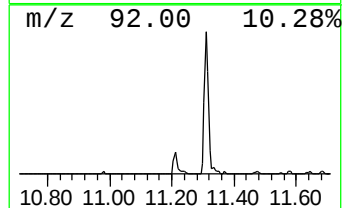
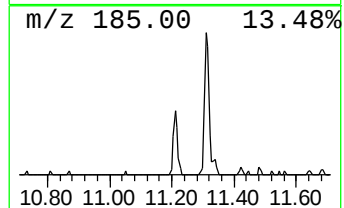
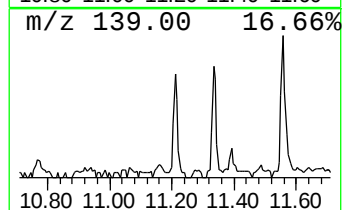
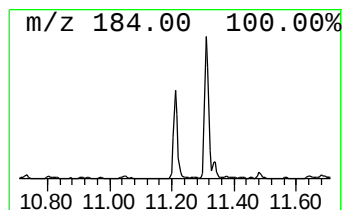
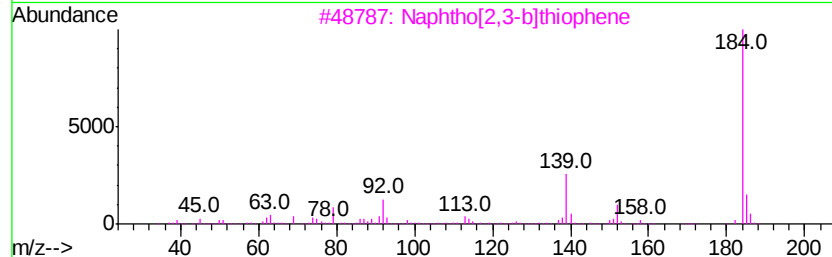
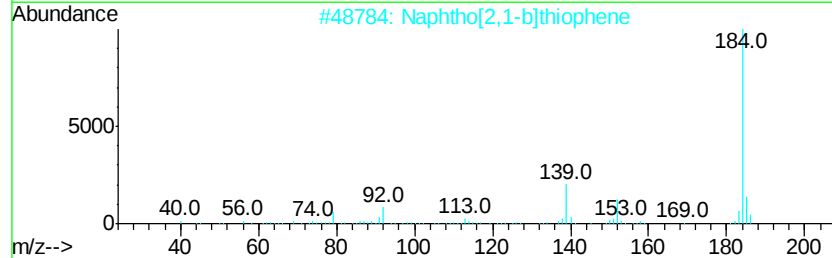
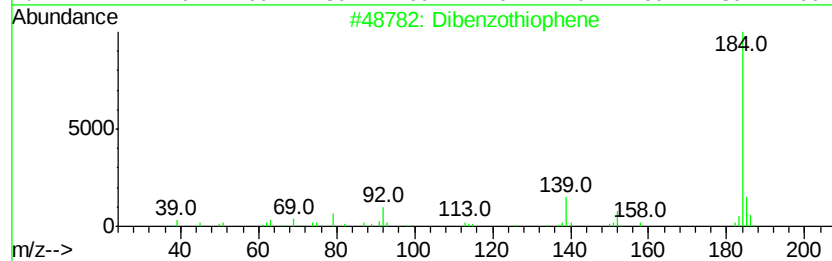
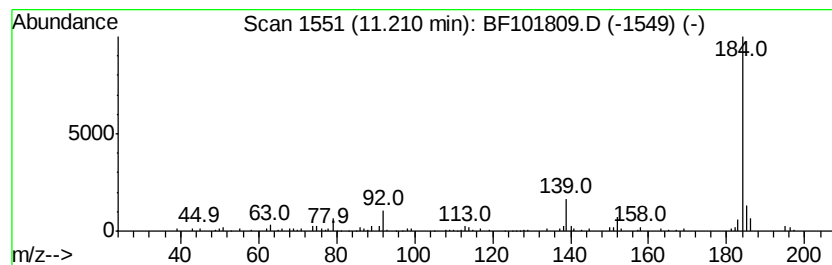
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 6 Dibenzothiophene Concentration Rank 13

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 11.21 | 2.05 ng | 96249 | Phenanthrene-d10 | 11.31 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | 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 | 93   |
| 4    |    | Azuleno(2,1-b)thiophene | 184 | C12H8S  | 000248-13-5 | 91   |
| 5    |    | 2-Dibenzofuranol        | 184 | C12H8O2 | 000086-77-1 | 64   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

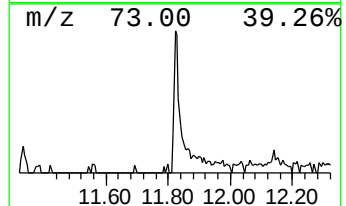
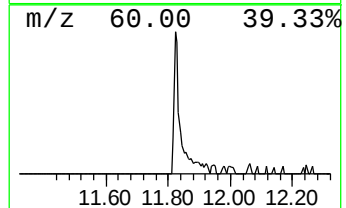
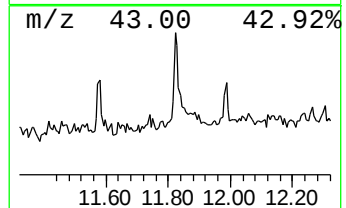
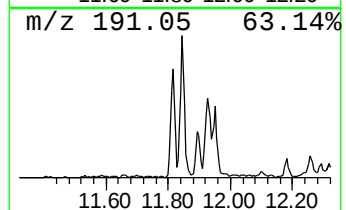
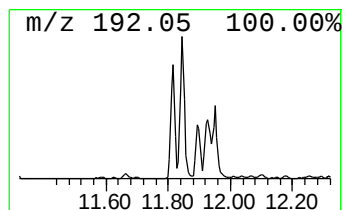
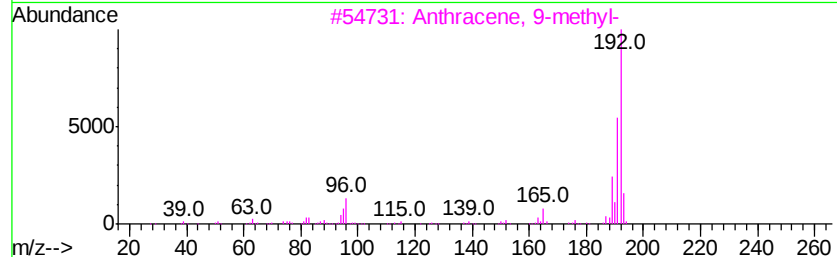
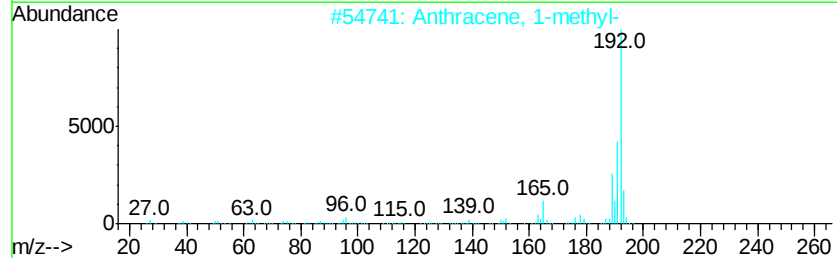
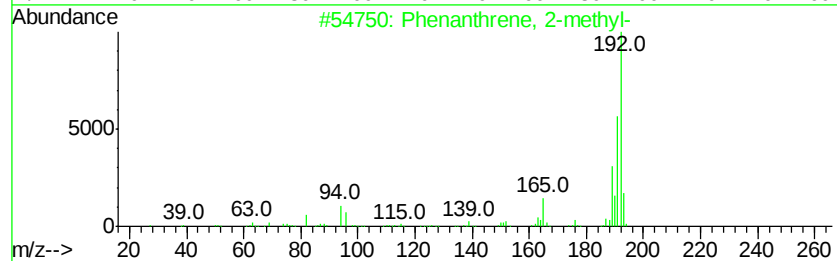
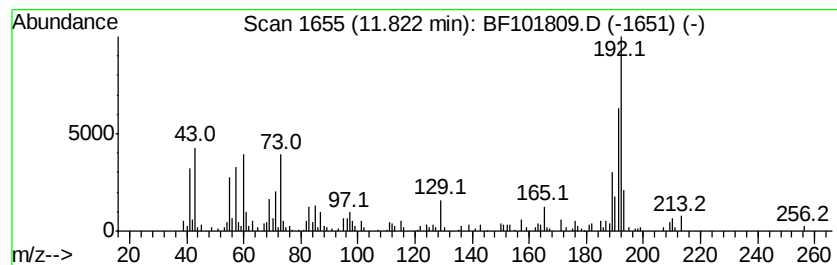
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 7 Phenanthrene, 2-methyl- Concentration Rank 7

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.82 | 4.46 ng | 209763 | Phenanthrene-d10 | 11.31 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 93   |
| 2    |    | Anthracene, 1-methyl-   | 192 | C15H12  | 000610-48-0 | 93   |
| 3    |    | Anthracene, 9-methyl-   | 192 | C15H12  | 000779-02-2 | 93   |
| 4    |    | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 91   |
| 5    |    | Phenanthrene, 1-methyl- | 192 | C15H12  | 000832-69-9 | 89   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

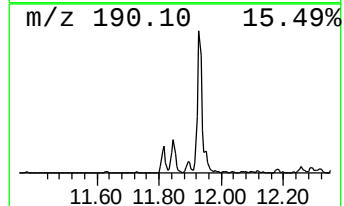
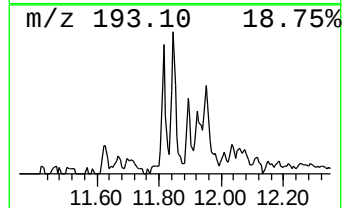
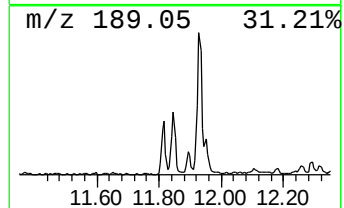
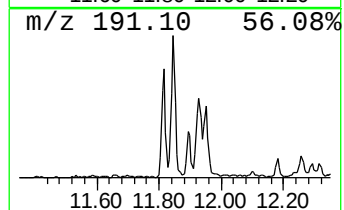
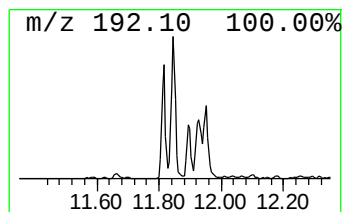
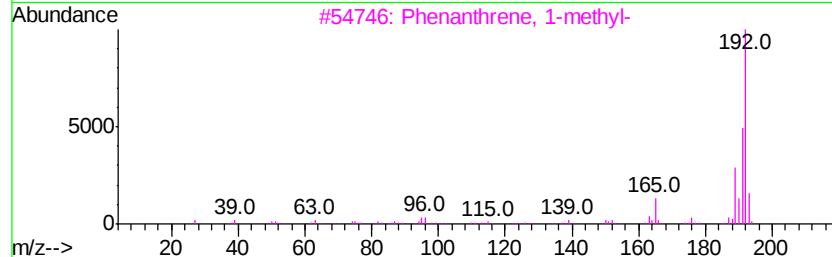
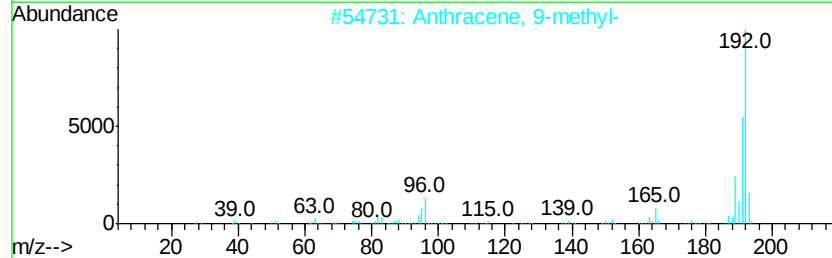
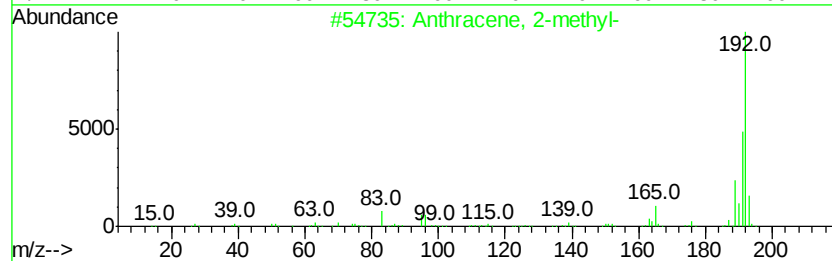
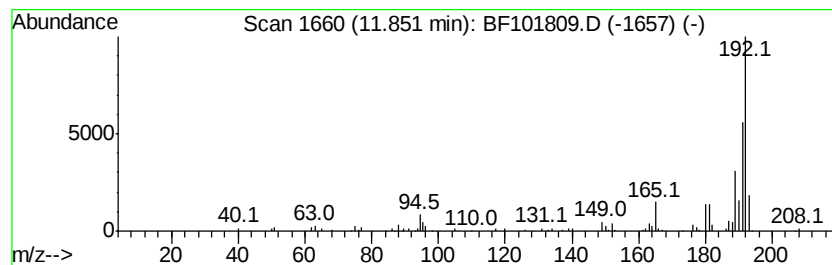
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 8 Anthracene, 2-methyl- Concentration Rank 8

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.85 | 4.02 ng | 189108 | Phenanthrene-d10 | 11.31 |

| Hit# of | 5 | Tentative ID                          | MW  | MolForm | CAS#        | Qual |
|---------|---|---------------------------------------|-----|---------|-------------|------|
| 1       |   | Anthracene, 2-methyl-                 | 192 | C15H12  | 000613-12-7 | 96   |
| 2       |   | Anthracene, 9-methyl-                 | 192 | C15H12  | 000779-02-2 | 91   |
| 3       |   | Phenanthrene, 1-methyl-               | 192 | C15H12  | 000832-69-9 | 90   |
| 4       |   | Anthracene, 1-methyl-                 | 192 | C15H12  | 000610-48-0 | 90   |
| 5       |   | 1H-Cyclopropa[1]phenanthrene, 1a, ... | 192 | C15H12  | 000949-41-7 | 90   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

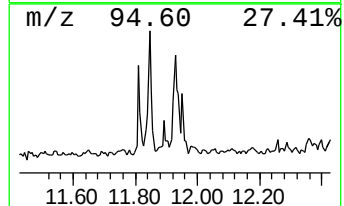
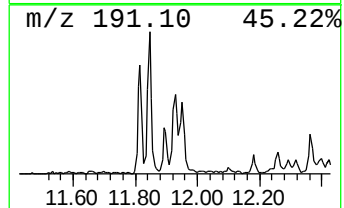
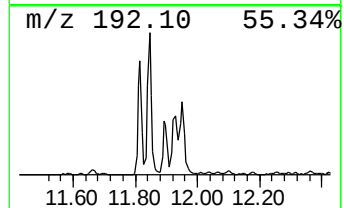
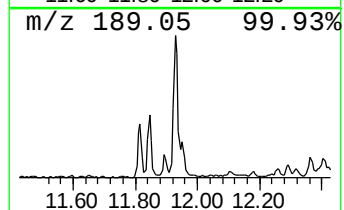
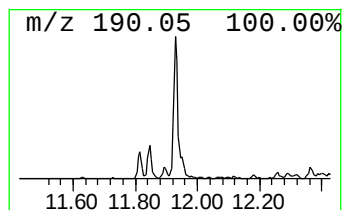
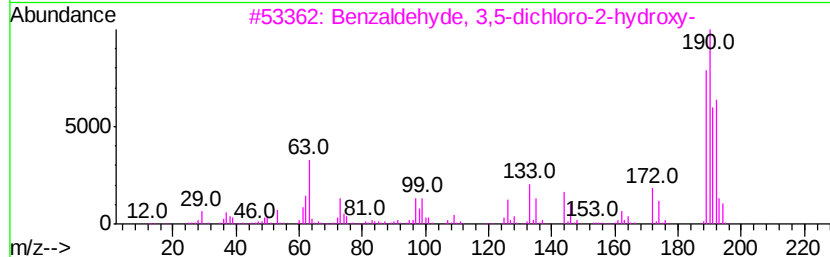
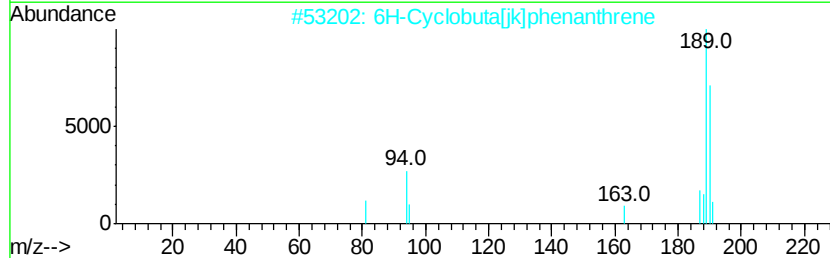
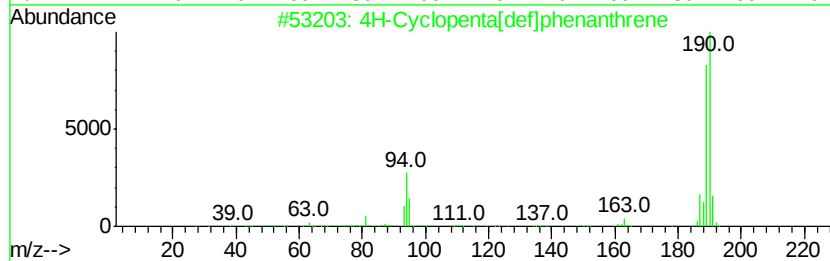
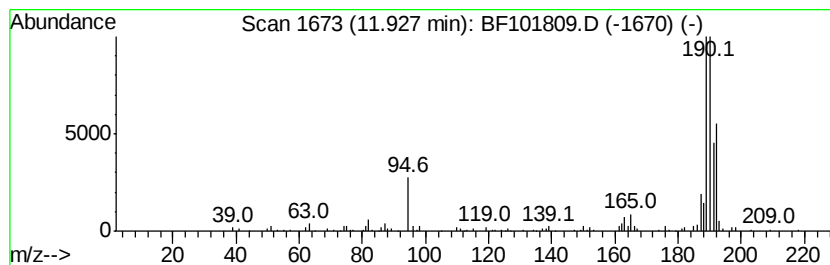
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 9 4H-Cyclopenta[def]phenanthrene Concentration Rank 6

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.93 | 4.48 ng | 210749 | Phenanthrene-d10 | 11.31 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm    | CAS#         | Qual |
|---------|---|-------------------------------------|-----|------------|--------------|------|
| 1       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10     | 000203-64-5  | 62   |
| 2       |   | 6H-Cyclobuta[ik]phenanthrene        | 190 | C15H10     | 083469-43-6  | 53   |
| 3       |   | Benzaldehyde, 3,5-dichloro-2-hyd... | 190 | C7H4Cl2O2  | 000090-60-8  | 50   |
| 4       |   | Methyl diselenide                   | 190 | C2H6Se2    | 007101-31-7  | 41   |
| 5       |   | Carbonic acid, ethyl 2-formyl-4,... | 262 | C10H8Cl2O4 | 1000331-34-4 | 40   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

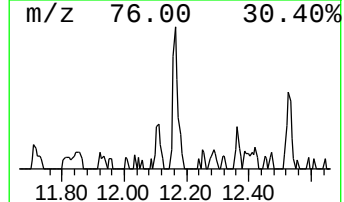
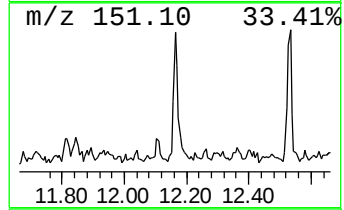
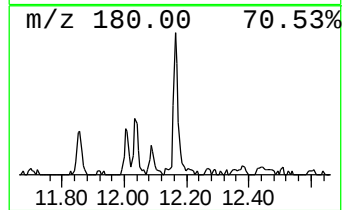
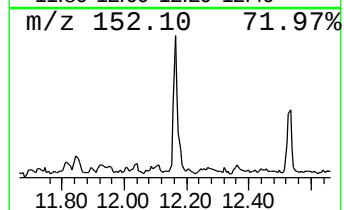
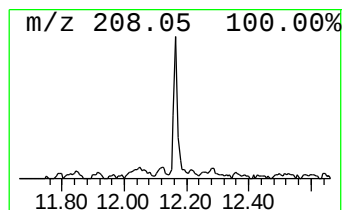
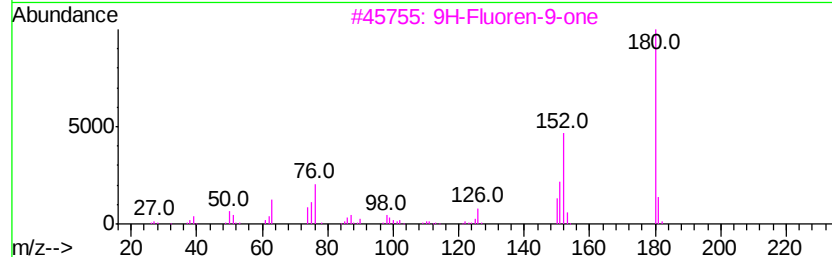
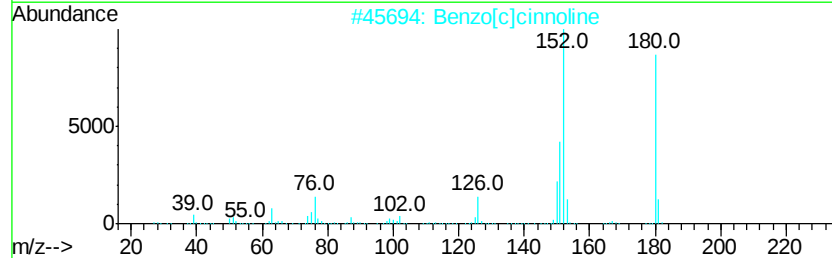
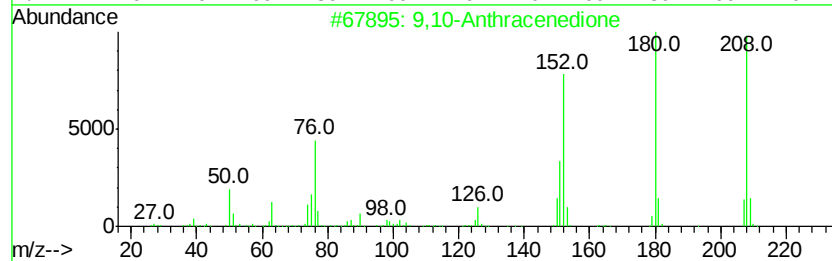
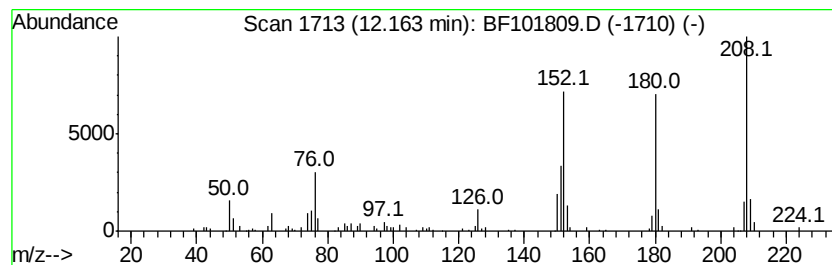
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 10 9,10-Anthracenedione Concentration Rank 14

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 12.16 | 2.04 ng | 96104 | Phenanthrene-d10 | 11.31 |

| Hit# | of | Tentative ID         | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------|-----|---------|-------------|------|
| 1    | 5  | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 97   |
| 2    |    | Benzo[c]cinnoline    | 180 | C12H8N2 | 000230-17-1 | 89   |
| 3    |    | 9H-Fluoren-9-one     | 180 | C13H8O  | 000486-25-9 | 55   |
| 4    |    | 1H-Phenalen-1-one    | 180 | C13H8O  | 000548-39-0 | 55   |
| 5    |    | 1,4-Anthracenedione  | 208 | C14H8O2 | 000635-12-1 | 53   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

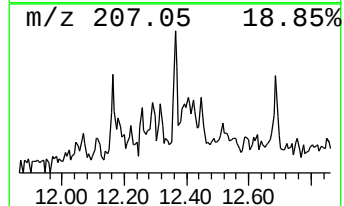
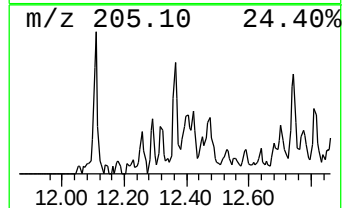
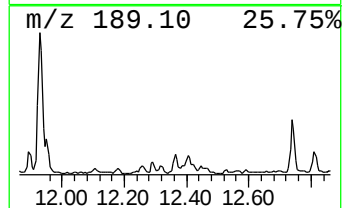
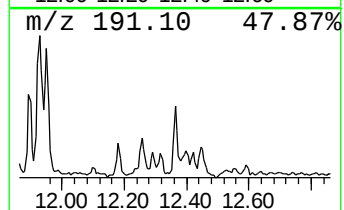
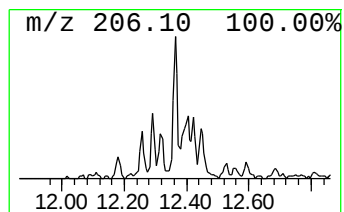
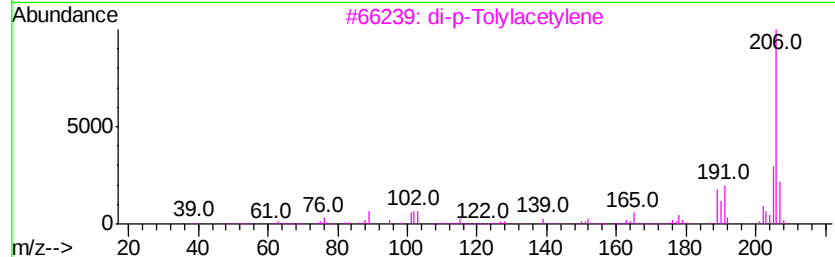
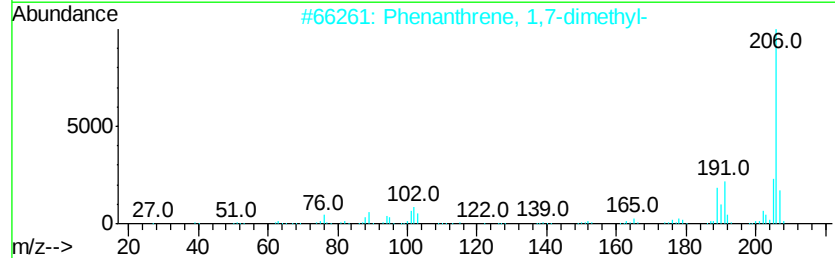
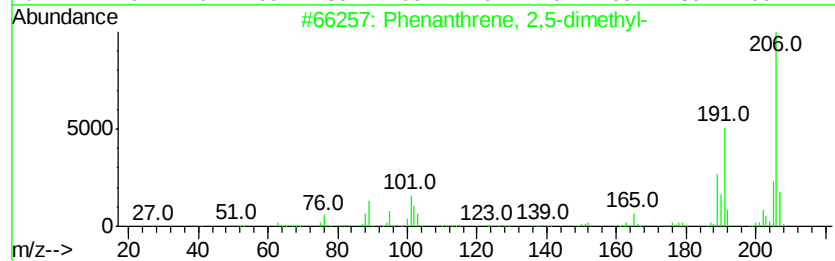
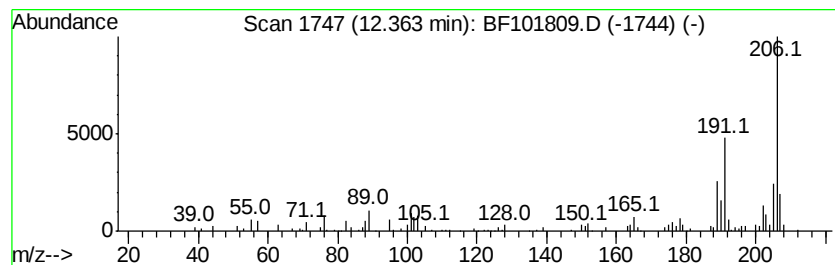
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 11 Phenanthrene, 2,5-dimethyl- Concentration Rank 11

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.36 | 2.26 ng | 106439 | Phenanthrene-d10 | 11.31 |

| Hit# | of | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 2,5-dimethyl- | 206 | C16H14  | 003674-66-6 | 96   |
| 2    |    | Phenanthrene, 1,7-dimethyl- | 206 | C16H14  | 000483-87-4 | 94   |
| 3    |    | di-p-Tolylacetvlene         | 206 | C16H14  | 002789-88-0 | 93   |
| 4    |    | Anthracene, 1,4-dimethyl-   | 206 | C16H14  | 000781-92-0 | 93   |
| 5    |    | 9,10-Dimethylantracene      | 206 | C16H14  | 000781-43-1 | 93   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

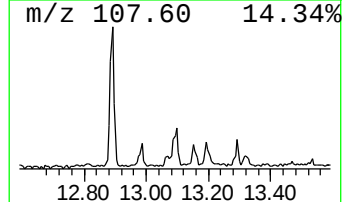
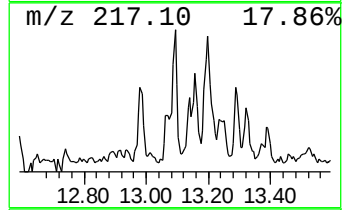
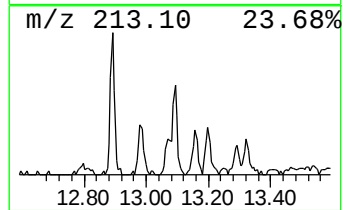
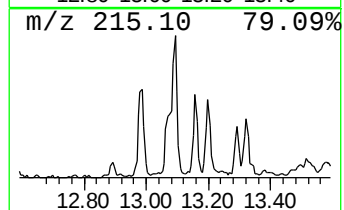
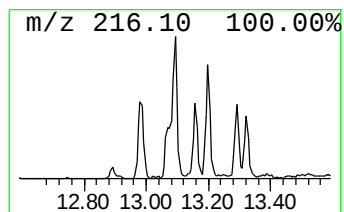
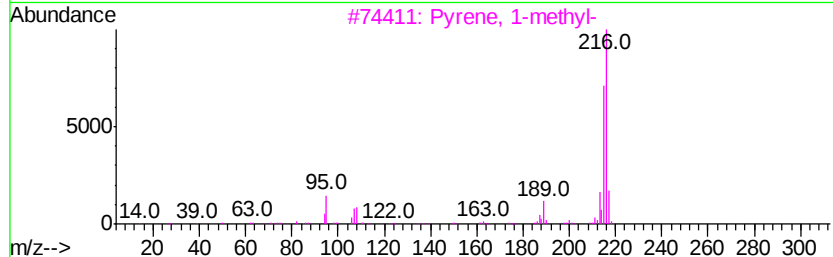
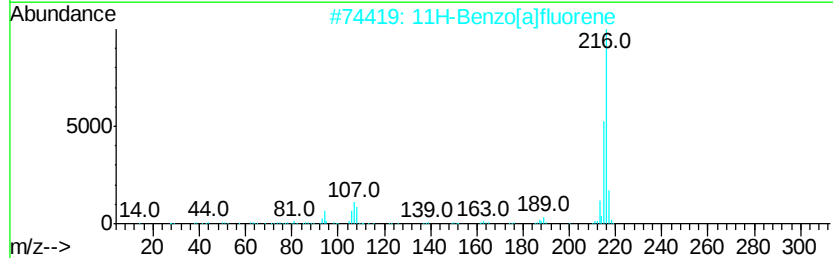
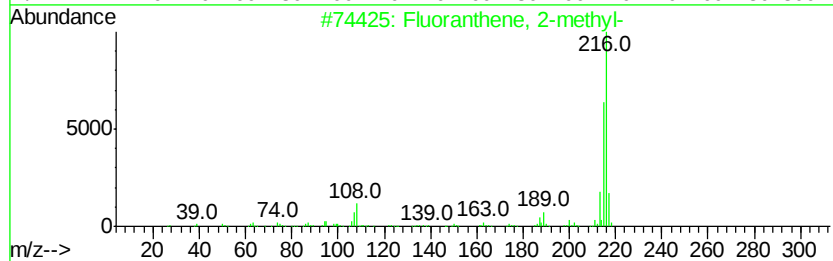
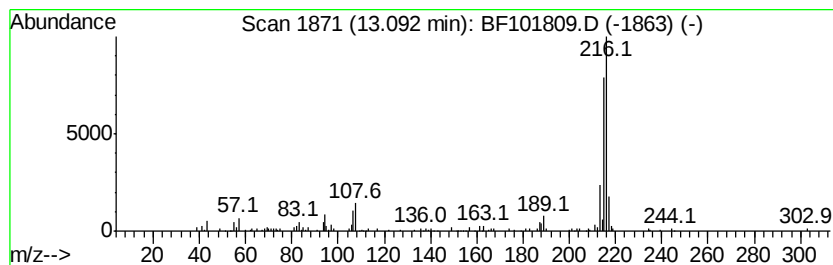
Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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 Fluoranthene, 2-methyl- Concentration Rank 9

| R.T.    | EstConc | Area                    | Relative to ISTD |         | R.T.        |      |
|---------|---------|-------------------------|------------------|---------|-------------|------|
| 13.09   | 3.04 ng | 200357                  | Chrysene-d12     |         | 13.96       |      |
| Hit# of | 5       | Tentative ID            | MW               | MolForm | CAS#        | Qual |
| 1       |         | Fluoranthene, 2-methyl- | 216              | C17H12  | 033543-31-6 | 95   |
| 2       |         | 11H-Benzo[a]fluorene    | 216              | C17H12  | 000238-84-6 | 93   |
| 3       |         | Pvrene, 1-methyl-       | 216              | C17H12  | 002381-21-7 | 93   |
| 4       |         | 11H-Benzo[b]fluorene    | 216              | C17H12  | 000243-17-4 | 90   |
| 5       |         | 7H-Benzo[c]fluorene     | 216              | C17H12  | 000205-12-9 | 81   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

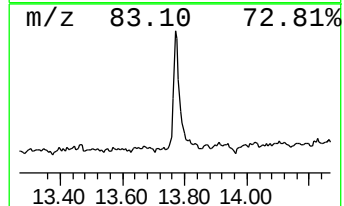
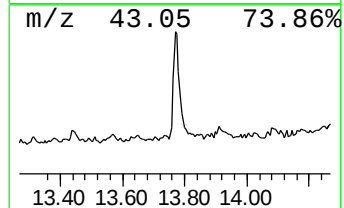
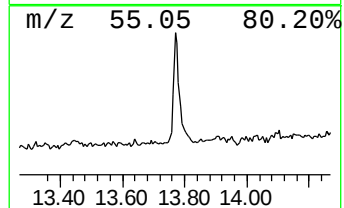
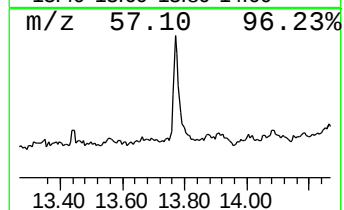
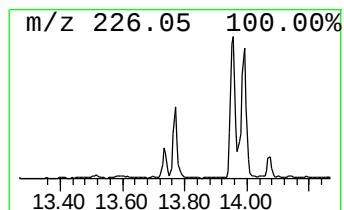
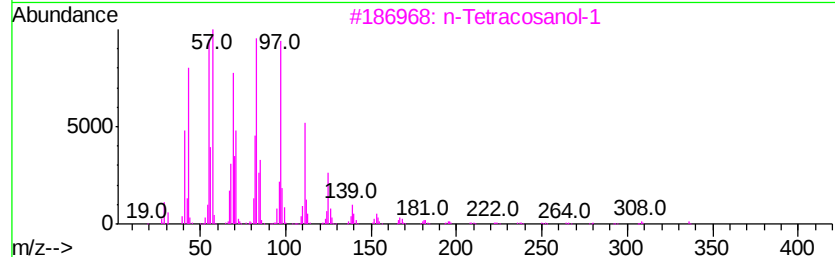
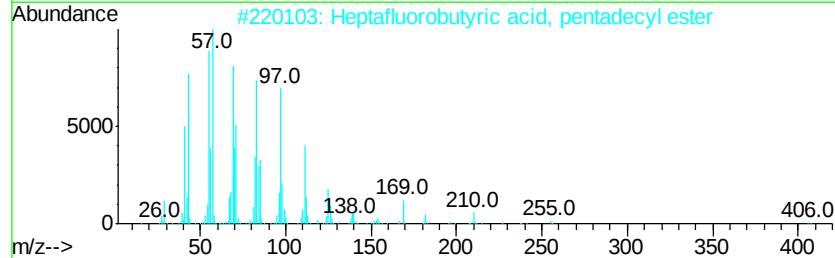
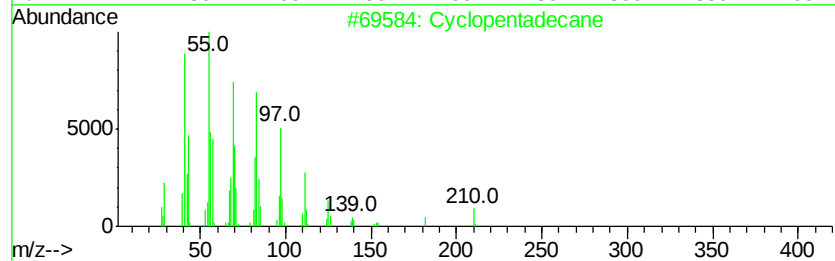
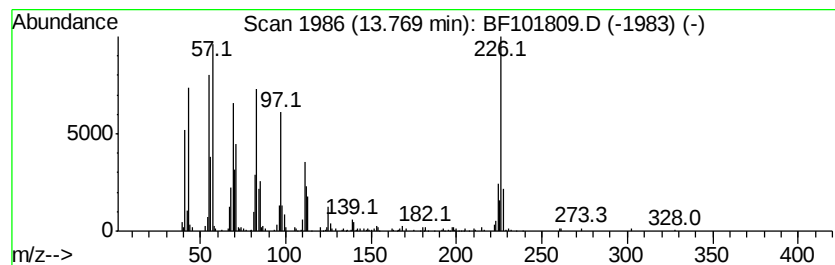
Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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 13 Cyclopentadecane Concentration Rank 4

| R.T.    | EstConc | Area                                | Relative to ISTD | R.T.            |
|---------|---------|-------------------------------------|------------------|-----------------|
| 13.77   | 6.32 ng | 416308                              | Chrysene-d12     | 13.96           |
| Hit# of | 5       | Tentative ID                        | MW MolForm       | CAS# Qual       |
| 1       |         | Cyclopentadecane                    | 210 C15H30       | 000295-48-7 86  |
| 2       |         | Heptafluorobutyric acid, pentade... | 424 C19H31F7O2   | 959261-23-5 78  |
| 3       |         | n-Tetracosanol-1                    | 354 C24H50O      | 000506-51-4 70  |
| 4       |         | Trichloroacetic acid, 4-hexadecy... | 386 C18H33Cl3O2  | 1000282-92-4 64 |
| 5       |         | Cyclohexadecane                     | 224 C16H32       | 000295-65-8 64  |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

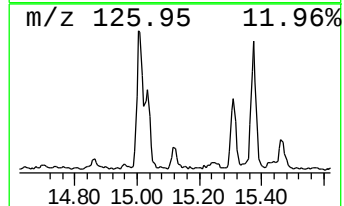
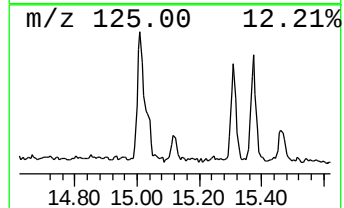
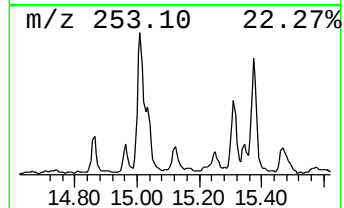
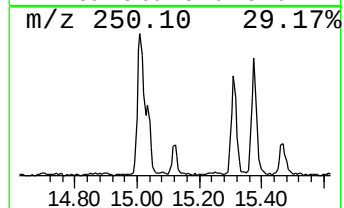
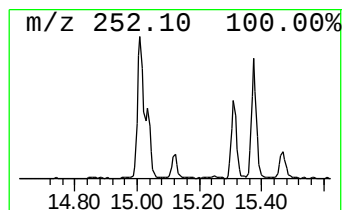
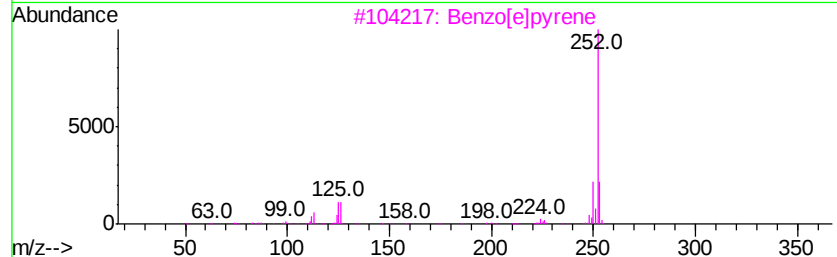
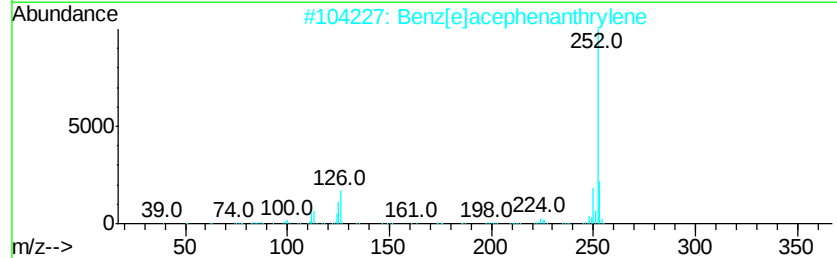
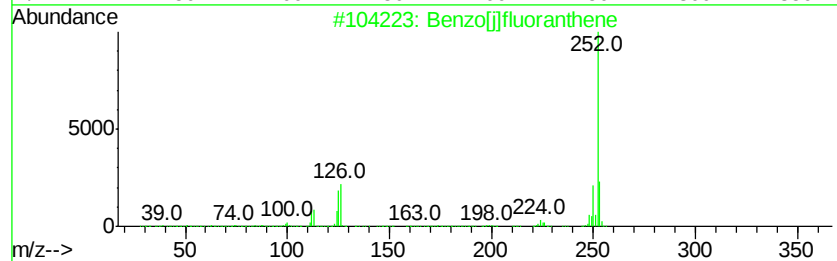
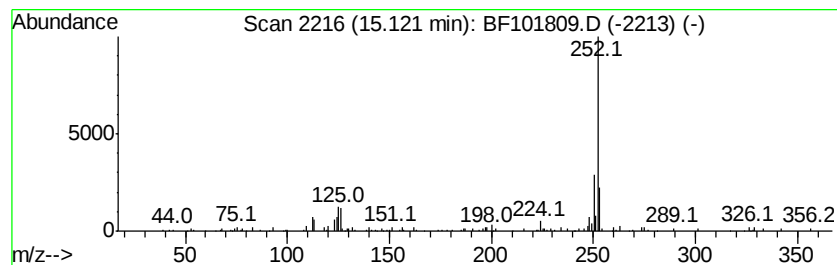
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 14 Benzo[j]fluoranthene Concentration Rank 15

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 15.12 | 2.01 ng | 72765 | Perylene-d12     | 15.43 |

| Hit# | of | 5 | Tentative ID              | MW  | MolForm | CAS#        | Qual |
|------|----|---|---------------------------|-----|---------|-------------|------|
| 1    |    |   | Benzo[il]fluoranthene     | 252 | C20H12  | 000205-82-3 | 96   |
| 2    |    |   | Benz[el]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 96   |
| 3    |    |   | Benzo[el]pyrene           | 252 | C20H12  | 000192-97-2 | 96   |
| 4    |    |   | Benzo[k]fluoranthene      | 252 | C20H12  | 000207-08-9 | 95   |
| 5    |    |   | Benzo[a]pyrene            | 252 | C20H12  | 000050-32-8 | 94   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101809.D  
Acq On : 28 Dec 2017 18:19  
Operator : SJ/JU  
Sample : I6970-10  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S4-5-10

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

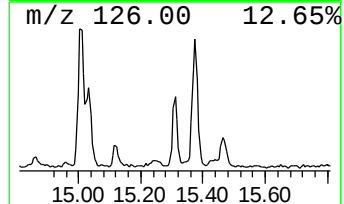
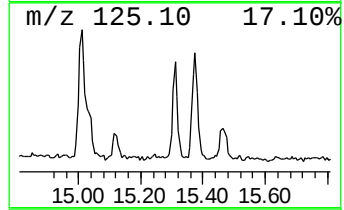
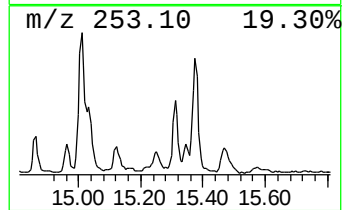
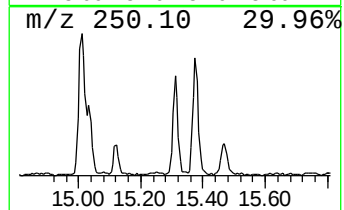
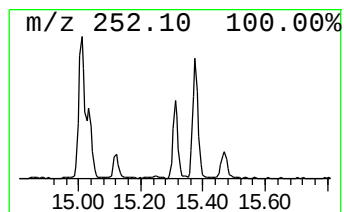
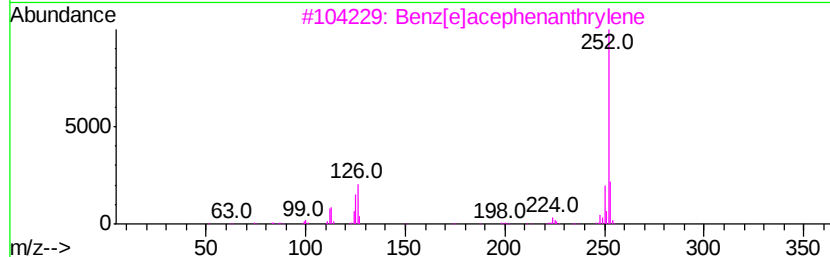
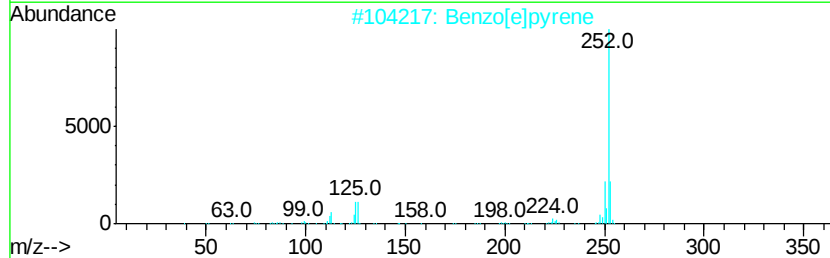
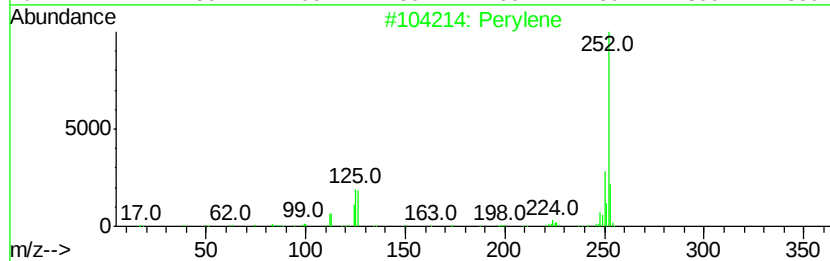
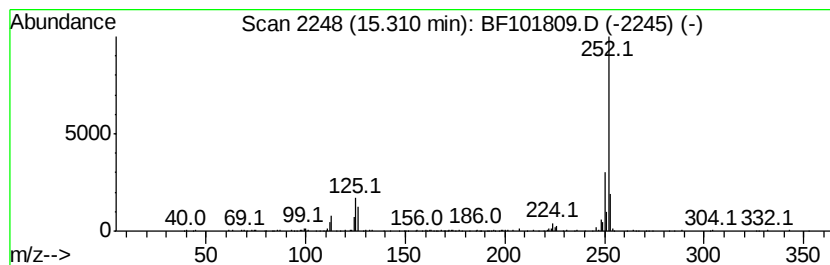
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 15 Perylene Concentration Rank 5

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 15.31 | 6.04 ng | 218566 | Perylene-d12     | 15.43 |

| Hit# | of | Tentative ID               | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------------|-----|---------|-------------|------|
| 1    | 5  | Perylene                   | 252 | C20H12  | 000198-55-0 | 98   |
| 2    |    | Benzo[el]pyrene            | 252 | C20H12  | 000192-97-2 | 98   |
| 3    |    | Benzo[el]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 93   |
| 4    |    | Benzo[k]fluoranthene       | 252 | C20H12  | 000207-08-9 | 93   |
| 5    |    | Benzo[a]pyrene             | 252 | C20H12  | 000050-32-8 | 86   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
 Data File : BF101809.D  
 Acq On : 28 Dec 2017 18:19  
 Operator : SJ/JU  
 Sample : I6970-10  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 S4-5-10

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  | 13.0    | ng    | 559896   | 1                     | 6.78  | 864269  | 20.0 |
| unknown6.56          | 6.56  | 73.3    | ng    | 3166620  | 1                     | 6.78  | 864269  | 20.0 |
| Eicosane             | 10.23 | 2.1     | ng    | 113331   | 3                     | 9.82  | 1082050 | 20.0 |
| Heptacosane          | 10.70 | 2.6     | ng    | 123872   | 4                     | 11.31 | 940416  | 20.0 |
| Dibenzothiophene     | 11.21 | 2.0     | ng    | 96249    | 4                     | 11.31 | 940416  | 20.0 |
| Phenanthrene, 2-m... | 11.82 | 4.5     | ng    | 209763   | 4                     | 11.31 | 940416  | 20.0 |
| Anthracene, 2-met... | 11.85 | 4.0     | ng    | 189108   | 4                     | 11.31 | 940416  | 20.0 |
| 4H-Cyclopenta[def... | 11.93 | 4.5     | ng    | 210749   | 4                     | 11.31 | 940416  | 20.0 |
| 9,10-Anthracenedione | 12.16 | 2.0     | ng    | 96104    | 4                     | 11.31 | 940416  | 20.0 |
| Phenanthrene, 2,5... | 12.36 | 2.3     | ng    | 106439   | 4                     | 11.31 | 940416  | 20.0 |
| Fluoranthene, 2-m... | 13.09 | 3.0     | ng    | 200357   | 5                     | 13.96 | 1317730 | 20.0 |
| Cyclopentadecane     | 13.77 | 6.3     | ng    | 416308   | 5                     | 13.96 | 1317730 | 20.0 |
| Benzo[j]fluoranthene | 15.12 | 2.0     | ng    | 72765    | 6                     | 15.43 | 723173  | 20.0 |
| Perylene             | 15.31 | 6.0     | ng    | 218566   | 6                     | 15.43 | 723173  | 20.0 |