

Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
 Data File : BF101807.D  
 Acq On : 28 Dec 2017 17:25  
 Operator : SJ/JU  
 Sample : I6970-08  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 S2-5-10

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       | 491           | 495         | 518          | rBV      | 532379         | 981609        | 16.69%          | 1.070%        |
| 2         | 5.410       | 561           | 565         | 599          | rBV      | 2244072        | 3349380       | 56.94%          | 3.653%        |
| 3         | 6.434       | 735           | 739         | 756          | rBV      | 2885278        | 3611524       | 61.40%          | 3.938%        |
| 4         | 6.557       | 756           | 760         | 775          | rVB      | 3214895        | 3296603       | 56.05%          | 3.595%        |
| 5         | 6.781       | 795           | 798         | 807          | rBV      | 948473         | 933677        | 15.87%          | 1.018%        |
| 6         | 6.940       | 821           | 825         | 841          | rBV      | 2498763        | 2669847       | 45.39%          | 2.912%        |
| 7         | 7.357       | 892           | 896         | 914          | rBV      | 2040935        | 2260334       | 38.43%          | 2.465%        |
| 8         | 8.063       | 1013          | 1016        | 1019         | rBV      | 1253104        | 1155257       | 19.64%          | 1.260%        |
| 9         | 8.781       | 1135          | 1138        | 1144         | rBV      | 185947         | 185285        | 3.15%           | 0.202%        |
| 10        | 8.881       | 1151          | 1155        | 1160         | rBV      | 173902         | 170568        | 2.90%           | 0.186%        |
| 11        | 9.139       | 1194          | 1199        | 1202         | rBV      | 3634809        | 3391144       | 57.65%          | 3.698%        |
| 12        | 9.404       | 1240          | 1244        | 1249         | rBV      | 186475         | 271043        | 4.61%           | 0.296%        |
| 13        | 9.481       | 1252          | 1257        | 1259         | rVV      | 309856         | 337265        | 5.73%           | 0.368%        |
| 14        | 9.504       | 1259          | 1261        | 1264         | rVV      | 194525         | 207390        | 3.53%           | 0.226%        |
| 15        | 9.534       | 1264          | 1266        | 1272         | rVB      | 175547         | 173987        | 2.96%           | 0.190%        |
| 16        | 9.598       | 1272          | 1277        | 1284         | rVB      | 182263         | 273010        | 4.64%           | 0.298%        |
| 17        | 9.816       | 1304          | 1314        | 1317         | rBV      | 1179330        | 1262497       | 21.46%          | 1.377%        |
| 18        | 9.851       | 1317          | 1320        | 1324         | rVV      | 1065445        | 917548        | 15.60%          | 1.001%        |
| 19        | 9.922       | 1328          | 1332        | 1336         | rBV      | 144166         | 205410        | 3.49%           | 0.224%        |
| 20        | 9.975       | 1336          | 1341        | 1345         | rBV2     | 251790         | 276472        | 4.70%           | 0.301%        |
| 21        | 10.028      | 1345          | 1350        | 1353         | rVV2     | 418231         | 470738        | 8.00%           | 0.513%        |
| 22        | 10.063      | 1353          | 1356        | 1359         | rVB      | 179402         | 170495        | 2.90%           | 0.186%        |
| 23        | 10.133      | 1364          | 1368        | 1371         | rBV      | 178463         | 188136        | 3.20%           | 0.205%        |
| 24        | 10.163      | 1371          | 1373        | 1378         | rVB      | 136147         | 139198        | 2.37%           | 0.152%        |
| 25        | 10.228      | 1378          | 1384        | 1391         | rBV4     | 234277         | 469052        | 7.97%           | 0.512%        |
| 26        | 10.369      | 1401          | 1408        | 1413         | rBV      | 1137950        | 1118417       | 19.01%          | 1.220%        |
| 27        | 10.416      | 1413          | 1416        | 1417         | rBV      | 200373         | 149471        | 2.54%           | 0.163%        |
| 28        | 10.433      | 1417          | 1419        | 1420         | rVV      | 324513         | 251580        | 4.28%           | 0.274%        |
| 29        | 10.451      | 1420          | 1422        | 1424         | rVB2     | 301958         | 245925        | 4.18%           | 0.268%        |
| 30        | 10.528      | 1433          | 1435        | 1438         | rVB      | 277828         | 246267        | 4.19%           | 0.269%        |
| 31        | 10.616      | 1446          | 1450        | 1456         | rBV2     | 1307831        | 1516418       | 25.78%          | 1.654%        |
| 32        | 10.704      | 1462          | 1465        | 1468         | rBV      | 204318         | 233075        | 3.96%           | 0.254%        |
| 33        | 10.916      | 1495          | 1501        | 1504         | rBV2     | 386766         | 557456        | 9.48%           | 0.608%        |
| 34        | 10.945      | 1504          | 1506        | 1509         | rVV2     | 332842         | 335082        | 5.70%           | 0.365%        |

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 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 S2-5-10

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 | 10.998 | 1513 | 1515 | 1518 | rVB  | 256757  | 218388  | 3.71%   | 0.238% |
| 36 | 11.045 | 1521 | 1523 | 1525 | rVV  | 146806  | 145388  | 2.47%   | 0.159% |
| 37 | 11.157 | 1539 | 1542 | 1548 | rVB3 | 299161  | 393024  | 6.68%   | 0.429% |
| 38 | 11.210 | 1548 | 1551 | 1559 | rVB  | 486103  | 478395  | 8.13%   | 0.522% |
| 39 | 11.316 | 1565 | 1569 | 1570 | rBV  | 996038  | 938367  | 15.95%  | 1.023% |
| 40 | 11.345 | 1570 | 1574 | 1577 | rVV  | 4282450 | 5126361 | 87.15%  | 5.590% |
| 41 | 11.392 | 1577 | 1582 | 1586 | rVV  | 2318454 | 2248686 | 38.23%  | 2.452% |
| 42 | 11.422 | 1586 | 1587 | 1593 | rVV2 | 167919  | 309654  | 5.26%   | 0.338% |
| 43 | 11.475 | 1593 | 1596 | 1600 | rVV3 | 130071  | 209052  | 3.55%   | 0.228% |
| 44 | 11.557 | 1604 | 1610 | 1612 | rVV2 | 420435  | 539063  | 9.16%   | 0.588% |
| 45 | 11.598 | 1615 | 1617 | 1620 | rVV  | 301317  | 232926  | 3.96%   | 0.254% |
| 46 | 11.645 | 1620 | 1625 | 1633 | rVV4 | 170840  | 326144  | 5.54%   | 0.356% |
| 47 | 11.727 | 1636 | 1639 | 1644 | rBV2 | 104704  | 147369  | 2.51%   | 0.161% |
| 48 | 11.816 | 1651 | 1654 | 1656 | rBV  | 1234844 | 1096605 | 18.64%  | 1.196% |
| 49 | 11.845 | 1656 | 1659 | 1663 | rVB  | 1475906 | 1269892 | 21.59%  | 1.385% |
| 50 | 11.892 | 1664 | 1667 | 1670 | rVV  | 680000  | 604609  | 10.28%  | 0.659% |
| 51 | 11.927 | 1670 | 1673 | 1676 | rVV  | 1713763 | 2132613 | 36.26%  | 2.326% |
| 52 | 11.951 | 1676 | 1677 | 1681 | rVB  | 1069882 | 612094  | 10.41%  | 0.667% |
| 53 | 12.104 | 1700 | 1703 | 1708 | rBV  | 739418  | 725422  | 12.33%  | 0.791% |
| 54 | 12.163 | 1711 | 1713 | 1714 | rVV  | 184403  | 142997  | 2.43%   | 0.156% |
| 55 | 12.257 | 1724 | 1729 | 1732 | rBV  | 375695  | 351814  | 5.98%   | 0.384% |
| 56 | 12.292 | 1732 | 1735 | 1737 | rVV  | 215262  | 164897  | 2.80%   | 0.180% |
| 57 | 12.316 | 1737 | 1739 | 1743 | rVB  | 192028  | 167867  | 2.85%   | 0.183% |
| 58 | 12.363 | 1744 | 1747 | 1750 | rBV  | 716292  | 788253  | 13.40%  | 0.860% |
| 59 | 12.404 | 1750 | 1754 | 1756 | rVV2 | 277826  | 288708  | 4.91%   | 0.315% |
| 60 | 12.451 | 1760 | 1762 | 1763 | rBV  | 190257  | 164613  | 2.80%   | 0.180% |
| 61 | 12.545 | 1772 | 1778 | 1780 | rBV  | 3777313 | 4673571 | 79.46%  | 5.097% |
| 62 | 12.569 | 1780 | 1782 | 1784 | rVV  | 189716  | 170070  | 2.89%   | 0.185% |
| 63 | 12.592 | 1784 | 1786 | 1792 | rVB2 | 246184  | 334428  | 5.69%   | 0.365% |
| 64 | 12.686 | 1799 | 1802 | 1805 | rBV  | 419336  | 402639  | 6.85%   | 0.439% |
| 65 | 12.774 | 1810 | 1817 | 1821 | rVV  | 4045522 | 5881997 | 100.00% | 6.414% |
| 66 | 12.810 | 1821 | 1823 | 1827 | rVB  | 326134  | 333062  | 5.66%   | 0.363% |
| 67 | 12.892 | 1833 | 1837 | 1841 | rVV  | 2271097 | 2479592 | 42.16%  | 2.704% |
| 68 | 12.939 | 1842 | 1845 | 1848 | rVB  | 213379  | 219087  | 3.72%   | 0.239% |
| 69 | 12.986 | 1848 | 1853 | 1857 | rBV2 | 512711  | 769632  | 13.08%  | 0.839% |
| 70 | 13.092 | 1868 | 1871 | 1876 | rVB  | 1012052 | 1135630 | 19.31%  | 1.238% |
| 71 | 13.157 | 1879 | 1882 | 1885 | rVV  | 873943  | 756579  | 12.86%  | 0.825% |

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Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S2-5-10

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  | 13.198 | 1885 | 1889 | 1892 | rVV2 | 706556  | 743197  | 12.64% | 0.810% |
| 73  | 13.292 | 1902 | 1905 | 1907 | rBV  | 488083  | 454248  | 7.72%  | 0.495% |
| 74  | 13.321 | 1907 | 1910 | 1913 | rBV  | 523521  | 464527  | 7.90%  | 0.507% |
| 75  | 13.516 | 1941 | 1943 | 1949 | rVB2 | 184980  | 263358  | 4.48%  | 0.287% |
| 76  | 13.574 | 1949 | 1953 | 1956 | rBV2 | 170964  | 272422  | 4.63%  | 0.297% |
| 77  | 13.716 | 1972 | 1977 | 1978 | rBV  | 338291  | 358272  | 6.09%  | 0.391% |
| 78  | 13.733 | 1978 | 1980 | 1983 | rVV  | 639323  | 667549  | 11.35% | 0.728% |
| 79  | 13.769 | 1983 | 1986 | 1993 | rVV3 | 586692  | 975262  | 16.58% | 1.064% |
| 80  | 13.827 | 1994 | 1996 | 2000 | rVB  | 192422  | 210066  | 3.57%  | 0.229% |
| 81  | 13.963 | 2014 | 2019 | 2023 | rBV2 | 2405176 | 3844879 | 65.37% | 4.193% |
| 82  | 13.998 | 2023 | 2025 | 2028 | rVB  | 2273601 | 1868965 | 31.77% | 2.038% |
| 83  | 14.074 | 2035 | 2038 | 2042 | rVB  | 526572  | 440779  | 7.49%  | 0.481% |
| 84  | 14.357 | 2081 | 2086 | 2089 | rBV  | 625299  | 727021  | 12.36% | 0.793% |
| 85  | 14.386 | 2089 | 2091 | 2095 | rVB  | 284819  | 261842  | 4.45%  | 0.286% |
| 86  | 14.427 | 2095 | 2098 | 2100 | rBV  | 255484  | 250859  | 4.26%  | 0.274% |
| 87  | 14.457 | 2100 | 2103 | 2105 | rVB2 | 231354  | 205597  | 3.50%  | 0.224% |
| 88  | 14.480 | 2105 | 2107 | 2109 | rBV  | 288403  | 308685  | 5.25%  | 0.337% |
| 89  | 14.698 | 2138 | 2144 | 2149 | rBV5 | 179941  | 372175  | 6.33%  | 0.406% |
| 90  | 15.015 | 2193 | 2198 | 2201 | rBV  | 1567412 | 2434124 | 41.38% | 2.654% |
| 91  | 15.121 | 2213 | 2216 | 2222 | rVB  | 359218  | 396153  | 6.74%  | 0.432% |
| 92  | 15.315 | 2245 | 2249 | 2253 | rBV  | 975410  | 1201058 | 20.42% | 1.310% |
| 93  | 15.380 | 2256 | 2260 | 2266 | rVB  | 1503244 | 2010068 | 34.17% | 2.192% |
| 94  | 15.439 | 2266 | 2270 | 2273 | rBV  | 590807  | 740212  | 12.58% | 0.807% |
| 95  | 15.474 | 2273 | 2276 | 2281 | rVB2 | 367636  | 510965  | 8.69%  | 0.557% |
| 96  | 16.004 | 2363 | 2366 | 2370 | rVB  | 119294  | 148269  | 2.52%  | 0.162% |
| 97  | 16.921 | 2516 | 2522 | 2528 | rVB2 | 545069  | 1048708 | 17.83% | 1.144% |
| 98  | 17.086 | 2545 | 2550 | 2555 | rBV  | 145914  | 261471  | 4.45%  | 0.285% |
| 99  | 17.374 | 2592 | 2599 | 2608 | rVB  | 473514  | 996733  | 16.95% | 1.087% |
| 100 | 17.633 | 2637 | 2643 | 2650 | rVB  | 126314  | 261445  | 4.44%  | 0.285% |

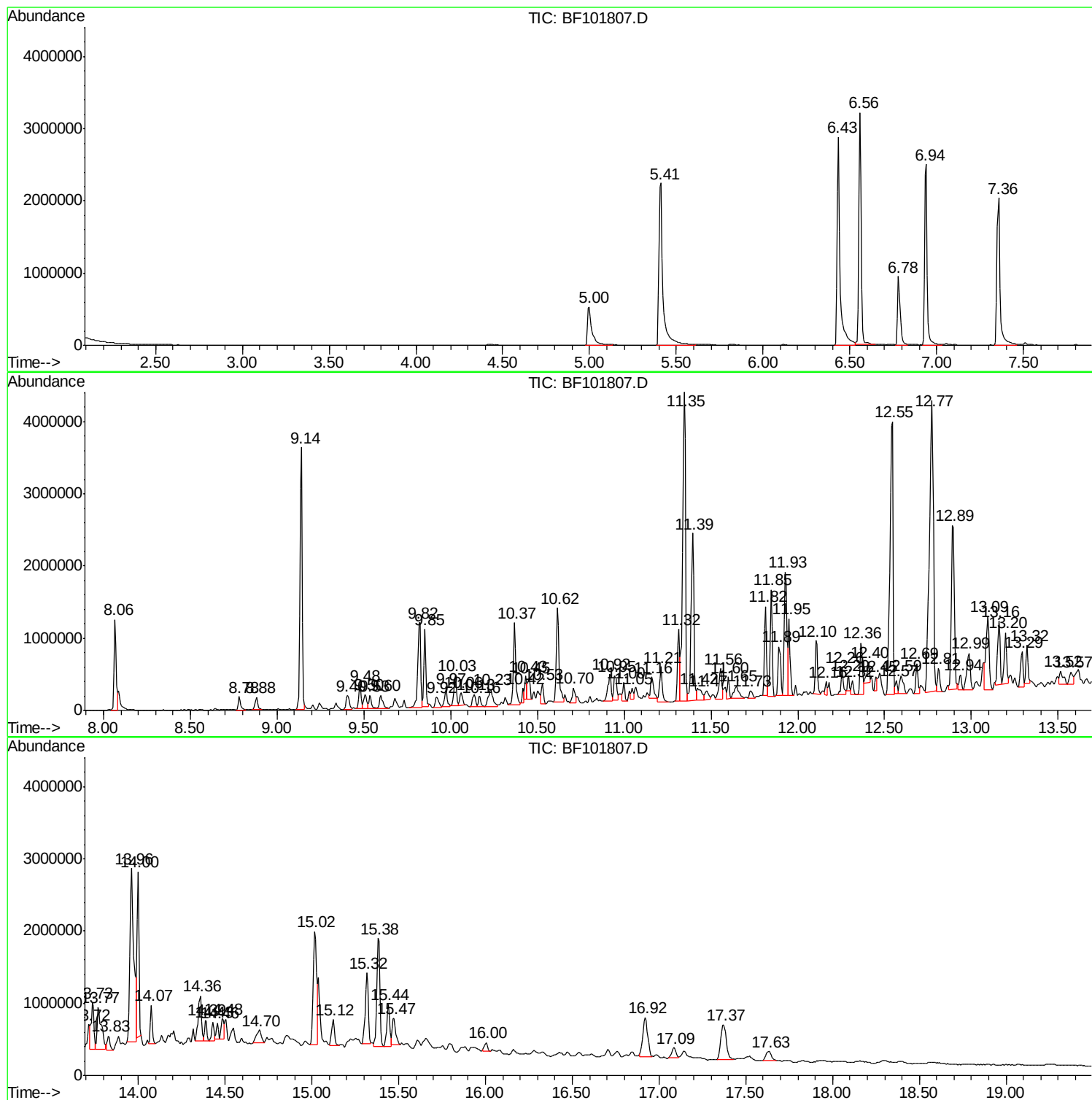
Sum of corrected areas: 91699557

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Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampled :  
S2-5-10

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



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
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Acq On : 28 Dec 2017 17:25  
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Misc :  
ALS Vial : 14 Sample Multiplier: 1

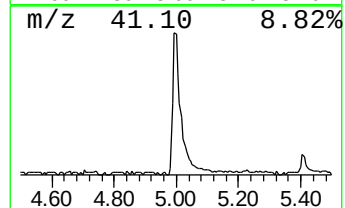
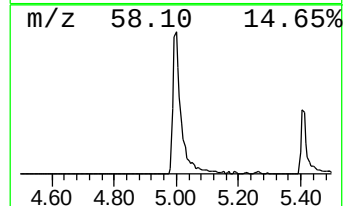
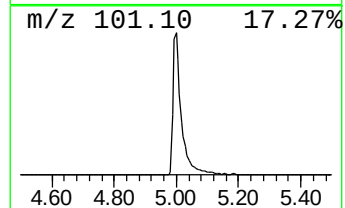
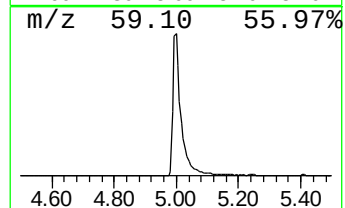
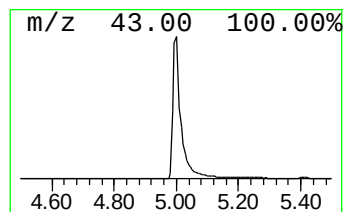
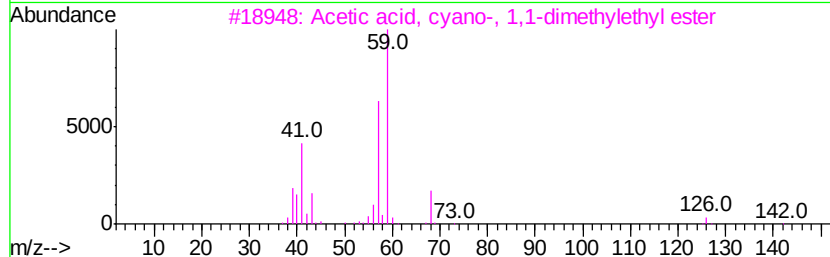
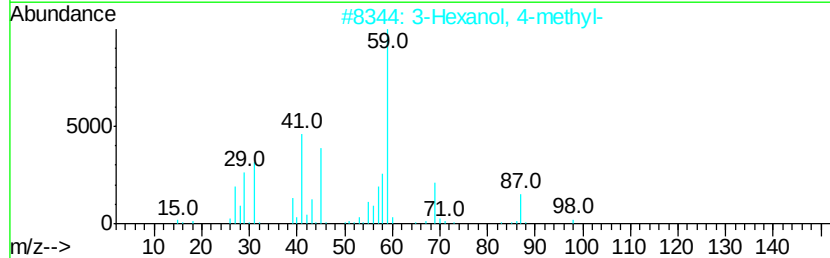
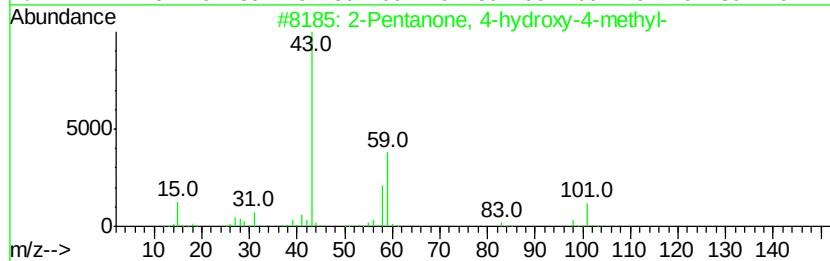
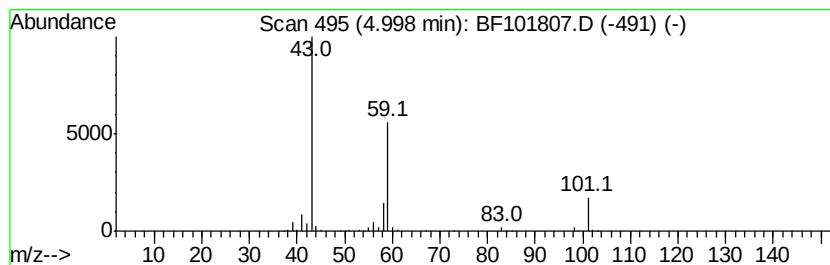
Instrument :  
BNA\_F  
ClientSampleId :  
S2-5-10

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 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 7

| R.T.      | EstConc                              | Area   | Relative to ISTD       | R.T.        |      |
|-----------|--------------------------------------|--------|------------------------|-------------|------|
| 5.00      | 21.03 ng                             | 981609 | 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         | 3-Hexanol, 4-methyl-                 | 116    | C7H16O                 | 000615-29-2 | 33   |
| 3         | Acetic acid, cyano-, 1,1-dimethyl... | 141    | C7H11NO2               | 001116-98-9 | 23   |
| 4         | 2,3-Butanedione, monooxime           | 101    | C4H7NO2                | 000057-71-6 | 9    |
| 5         | Propane, 1-ethoxy-2-methyl-          | 102    | C6H14O                 | 000627-02-1 | 9    |



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

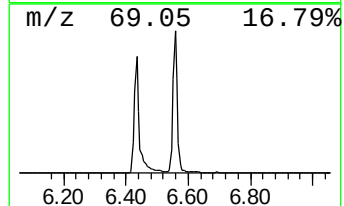
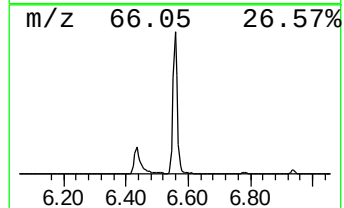
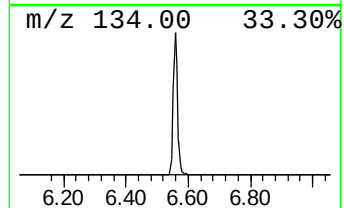
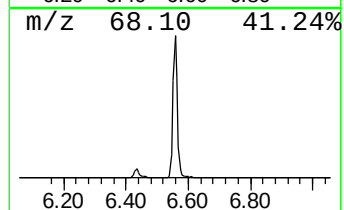
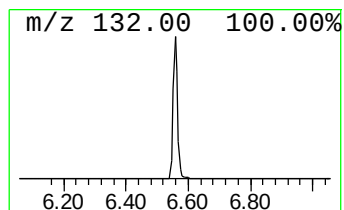
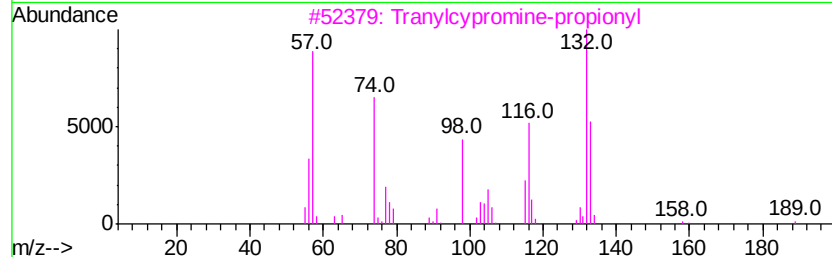
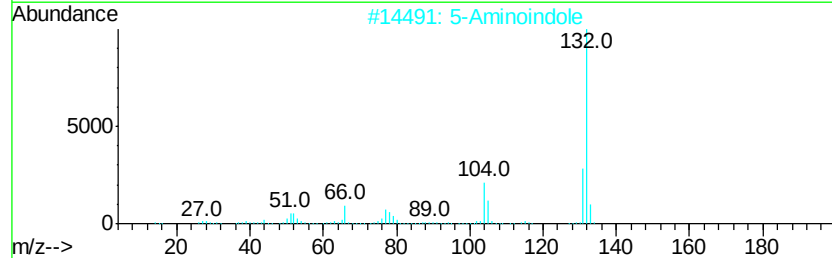
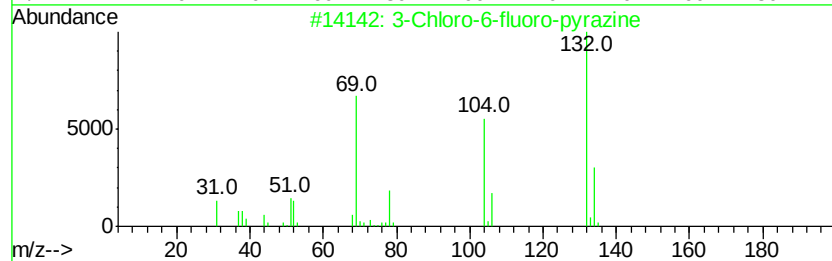
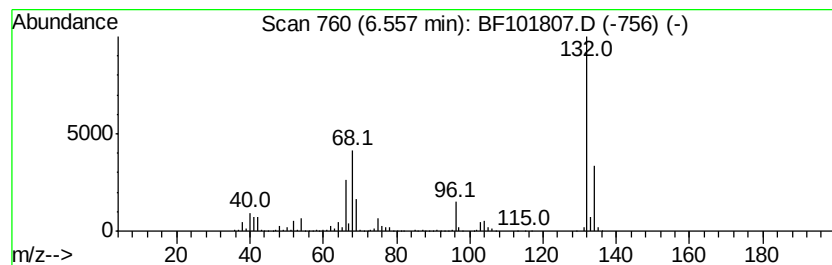
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 2 unknown6.56 Concentration Rank 1

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 6.56 | 70.62 ng | 3296600 | 1,4-Dichlorobenzene-d4 | 6.78 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 3-Chloro-6-fluoro-pyrazine          | 132 | C4H2ClFN2 | 1000146-10-7 | 35   |
| 2    |    | 5-Aminoindole                       | 132 | C8H8N2    | 005192-03-0  | 12   |
| 3    |    | Tranvlcypromine-propionyl           | 189 | C12H15NO  | 1000123-86-3 | 10   |
| 4    |    | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12    | 028749-81-7  | 9    |
| 5    |    | (E)-3-Chloro-2-methyl-2-pentenal    | 132 | C6H9ClO   | 031357-76-3  | 9    |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101807.D  
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Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

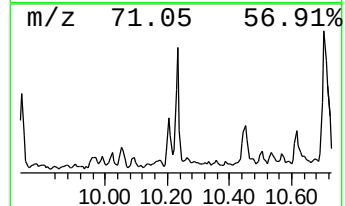
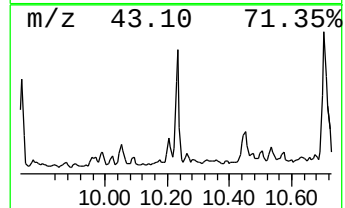
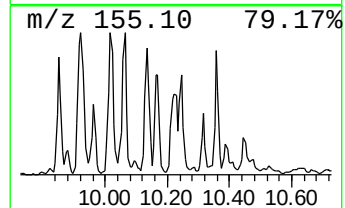
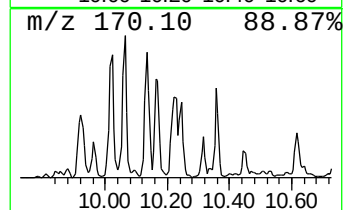
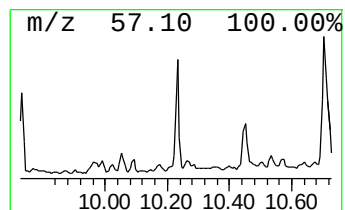
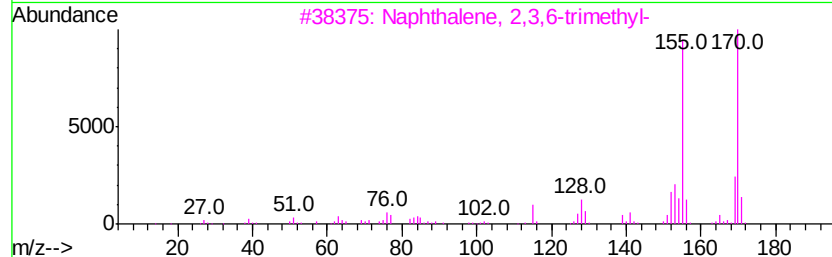
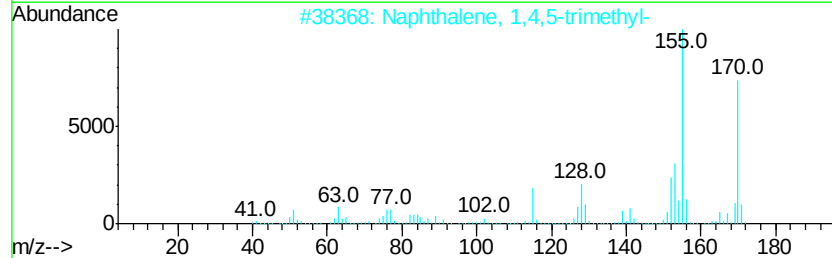
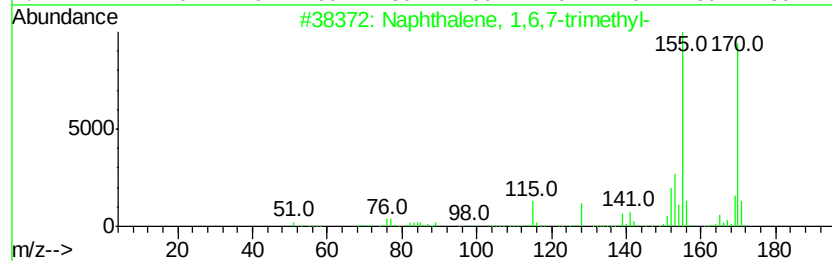
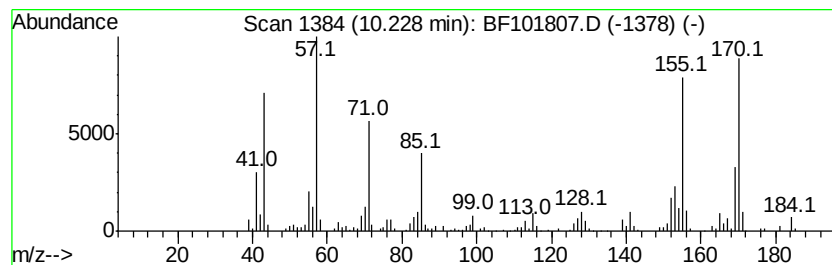
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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 4 Naphthalene, 1,6,7-trimethyl- Concentration Rank 17

| R.T.    | EstConc | Area                          | Relative to ISTD | R.T.           |
|---------|---------|-------------------------------|------------------|----------------|
| 10.23   | 7.43 ng | 469052                        | Acenaphthene-d10 | 9.82           |
| Hit# of | 5       | Tentative ID                  | MW MolForm       | CAS# Qual      |
| 1       |         | Naphthalene, 1,6,7-trimethyl- | 170 C13H14       | 002245-38-7 96 |
| 2       |         | Naphthalene, 1,4,5-trimethyl- | 170 C13H14       | 002131-41-1 93 |
| 3       |         | Naphthalene, 2,3,6-trimethyl- | 170 C13H14       | 000829-26-5 93 |
| 4       |         | 4,6,8-Trimethylazulene        | 170 C13H14       | 000941-81-1 86 |
| 5       |         | Naphthalene, 1,4,6-trimethyl- | 170 C13H14       | 002131-42-2 64 |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101807.D  
Acq On : 28 Dec 2017 17:25  
Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

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

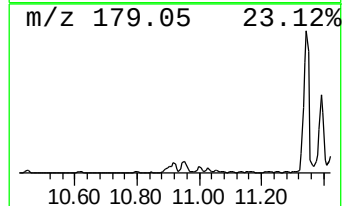
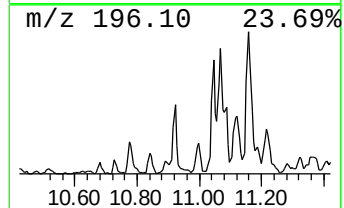
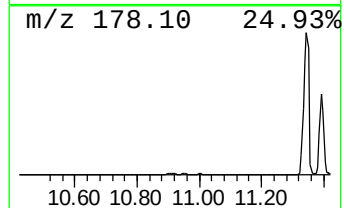
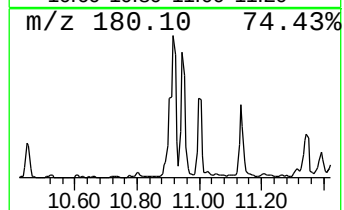
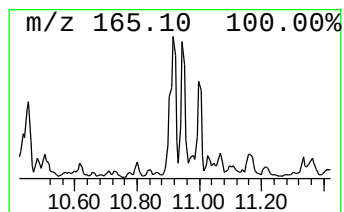
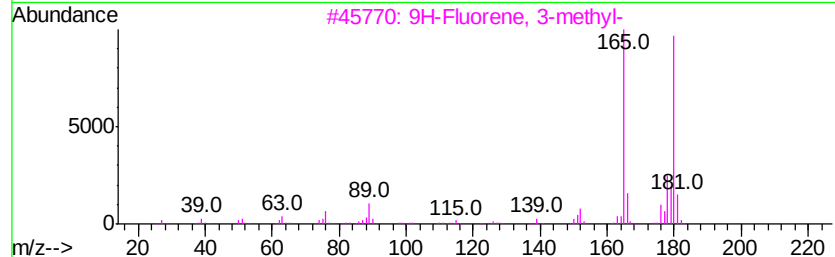
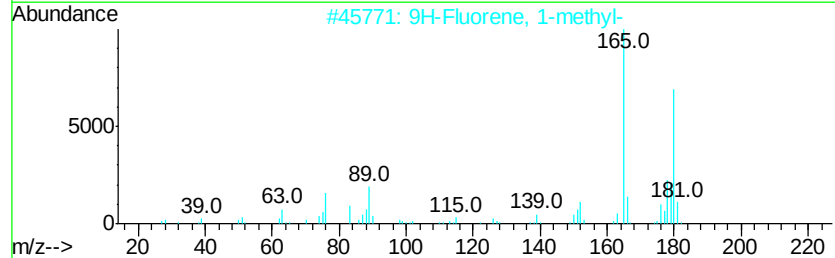
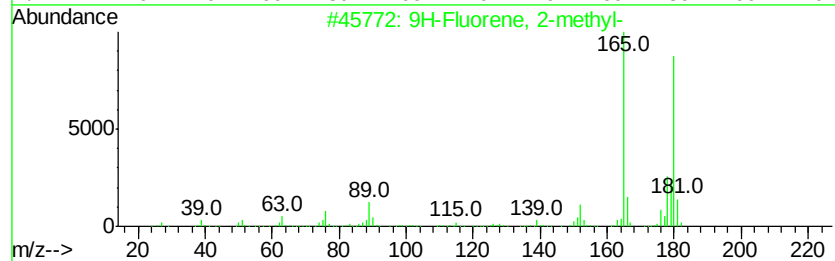
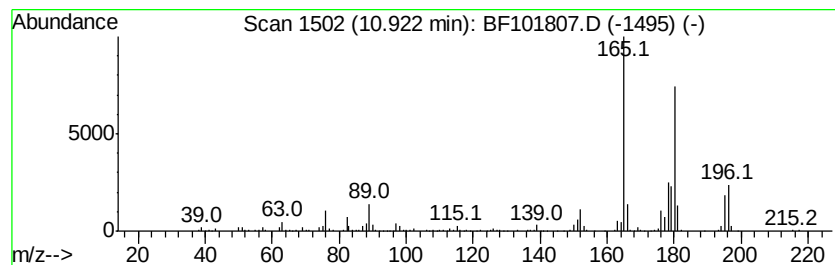
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TIC Integration Parameters: LSCINT.P

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Peak Number 5 9H-Fluorene, 2-methyl- Concentration Rank 12

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 10.92 | 11.88 ng | 557456 | Phenanthrene-d10 | 11.32 |

| Hit# of | 5                      | Tentative ID | MW  | MolForm | CAS#        | Qual |
|---------|------------------------|--------------|-----|---------|-------------|------|
| 1       | 9H-Fluorene, 2-methyl- |              | 180 | C14H12  | 001430-97-3 | 96   |
| 2       | 9H-Fluorene, 1-methyl- |              | 180 | C14H12  | 001730-37-6 | 96   |
| 3       | 9H-Fluorene, 3-methyl- |              | 180 | C14H12  | 002523-39-9 | 95   |
| 4       | 9H-Fluorene, 9-methyl- |              | 180 | C14H12  | 002523-37-7 | 93   |
| 5       | 9H-Fluorene, 4-methyl- |              | 180 | C14H12  | 001556-99-6 | 90   |





Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
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Operator : SJ/JU  
Sample : I6970-08  
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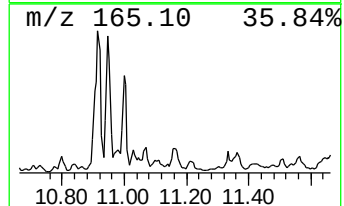
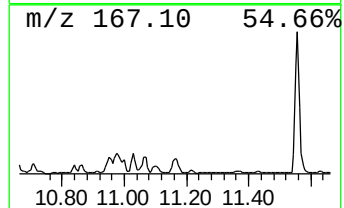
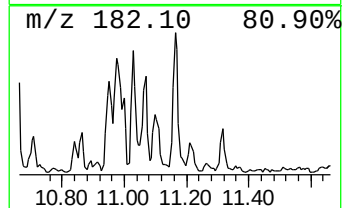
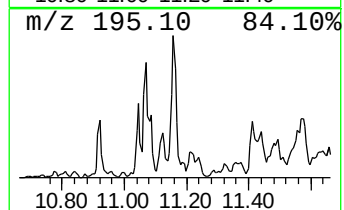
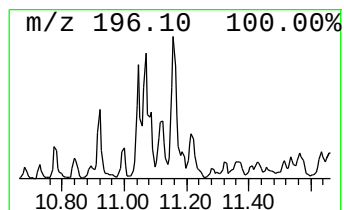
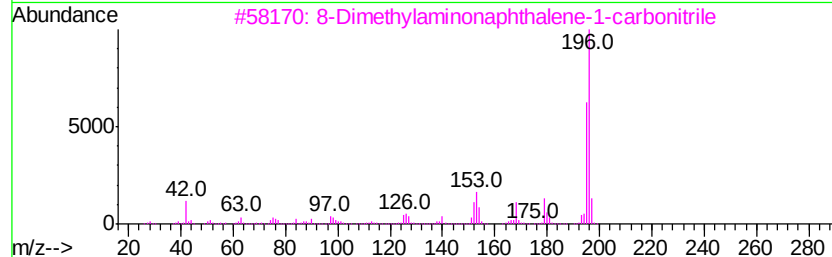
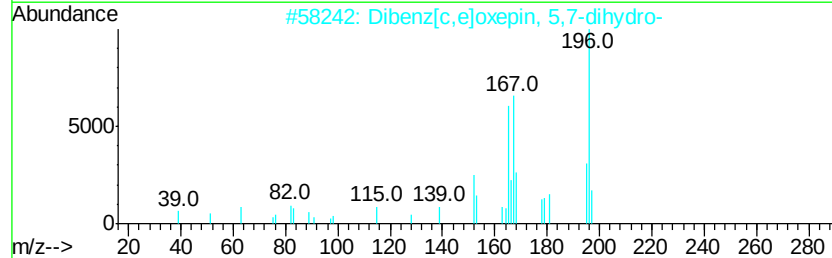
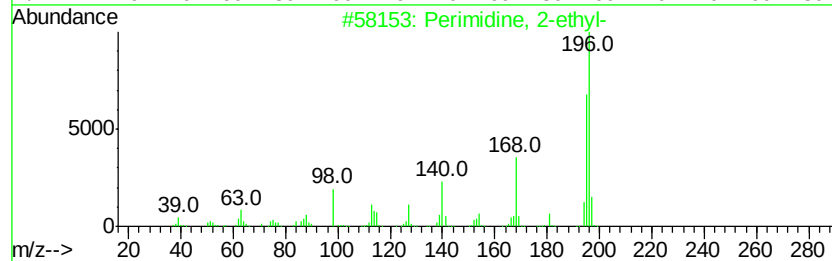
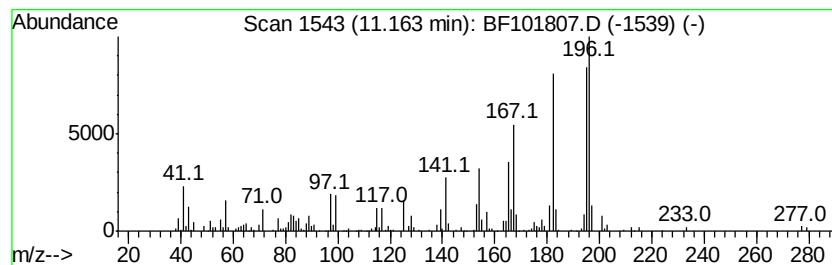
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ClientSampleId :  
S2-5-10

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 Perimidine, 2-ethyl- Concentration Rank 15

| R.T.    | EstConc | Area                                | Relative to ISTD | R.T.     |             |      |
|---------|---------|-------------------------------------|------------------|----------|-------------|------|
| 11.16   | 8.38 ng | 393024                              | Phenanthrene-d10 | 11.32    |             |      |
| Hit# of | 5       | Tentative ID                        | MW               | MolForm  | CAS#        | Qual |
| 1       |         | Perimidine, 2-ethyl-                | 196              | C13H12N2 | 028478-13-9 | 55   |
| 2       |         | Dibenz[c,e]oxepin, 5,7-dihydro-     | 196              | C14H12O  | 001136-22-7 | 46   |
| 3       |         | 8-Dimethylaminonaphthalene-1-car... | 196              | C13H12N2 | 128644-69-9 | 35   |
| 4       |         | 7-Methoxy-piperonylic acid          | 196              | C9H8O5   | 000526-34-1 | 27   |
| 5       |         | Phenol, 4-(2-phenylethenyl)-, (E)-  | 196              | C14H12O  | 006554-98-9 | 27   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101807.D  
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Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S2-5-10

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

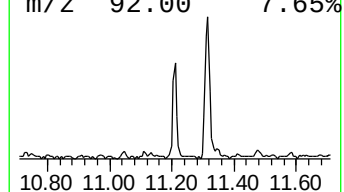
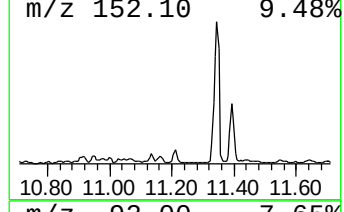
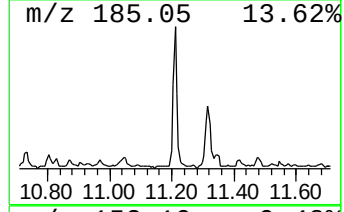
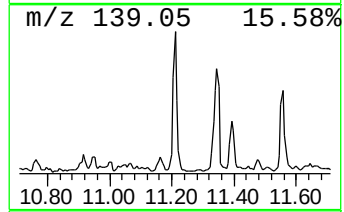
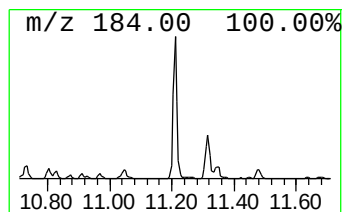
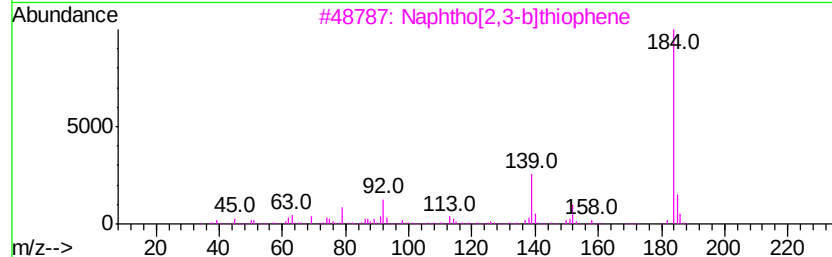
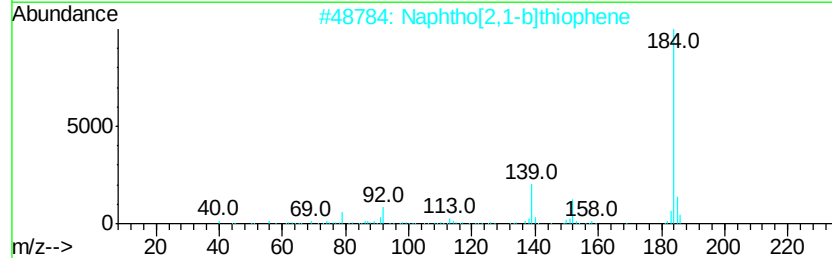
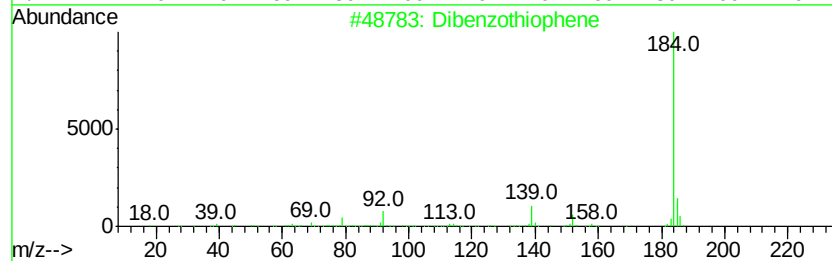
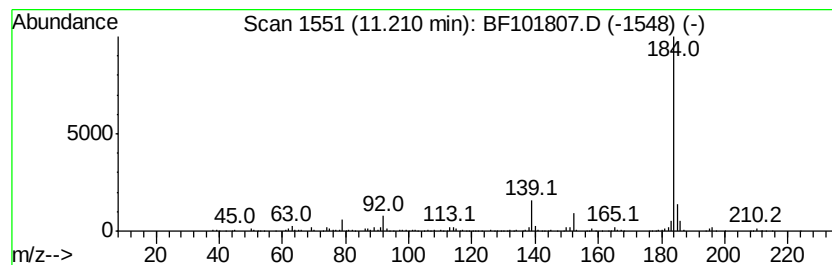
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 8 Dibenzothiophene Concentration Rank 14

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 11.21 | 10.20 ng | 478395 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 97   |
| 2    |    | Naphtho[2,1-b]thiophene | 184 | C12H8S  | 000233-02-3 | 95   |
| 3    |    | Naphtho[2,3-b]thiophene | 184 | C12H8S  | 000268-77-9 | 94   |
| 4    |    | Naphtho[1,2-b]thiophene | 184 | C12H8S  | 000234-41-3 | 93   |
| 5    |    | Azuleno(2,1-b)thiophene | 184 | C12H8S  | 000248-13-5 | 91   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
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Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
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ClientSampleId :  
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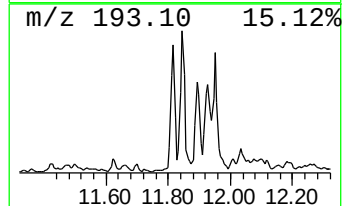
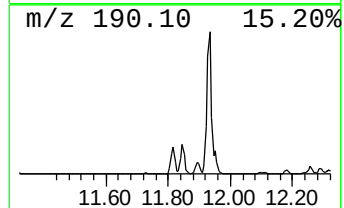
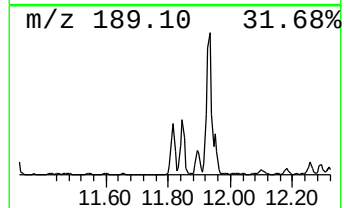
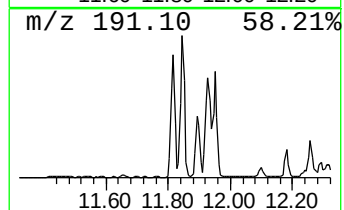
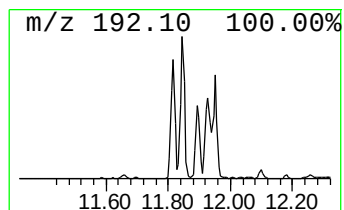
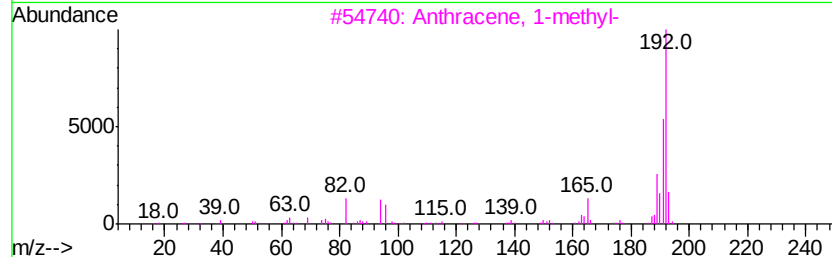
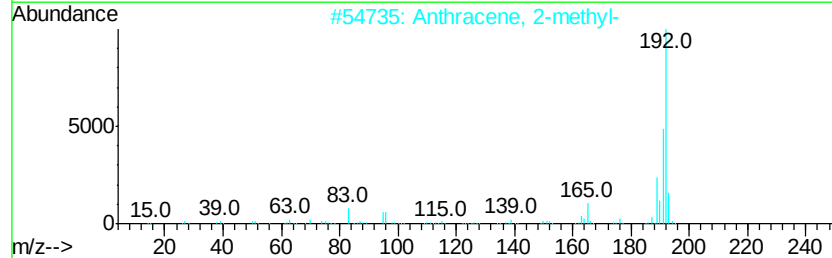
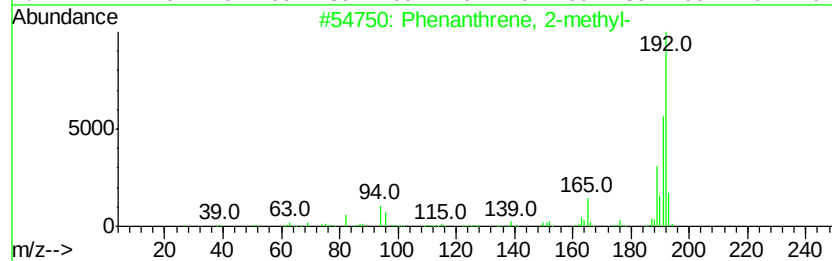
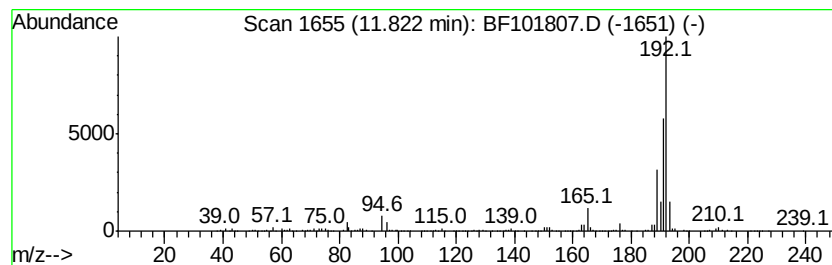
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TIC Integration Parameters: LSCINT.P

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

| R.T.  | EstConc  | Area    | Relative to ISTD | R.T.  |
|-------|----------|---------|------------------|-------|
| 11.82 | 23.37 ng | 1096610 | Phenanthrene-d10 | 11.32 |

| Hit# of | 5 | Tentative ID                           | MW  | MolForm | CAS#        | Qual |
|---------|---|----------------------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 2-methyl-                | 192 | C15H12  | 002531-84-2 | 98   |
| 2       |   | Anthracene, 2-methyl-                  | 192 | C15H12  | 000613-12-7 | 96   |
| 3       |   | Anthracene, 1-methyl-                  | 192 | C15H12  | 000610-48-0 | 95   |
| 4       |   | 1H-Cyclopropa[1,1]phenanthrene, 1a,... | 192 | C15H12  | 000949-41-7 | 95   |
| 5       |   | 1H-Indene, 1-phenyl-                   | 192 | C15H12  | 001961-96-2 | 94   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
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Sample : I6970-08  
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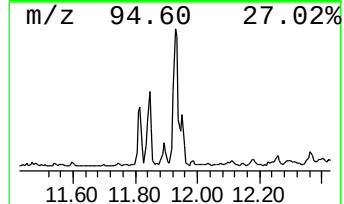
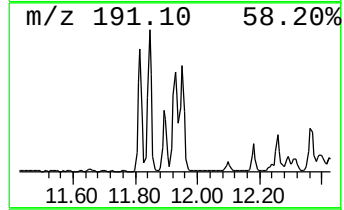
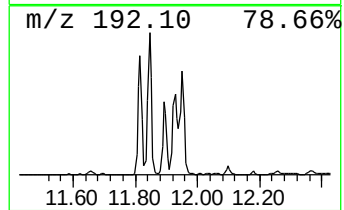
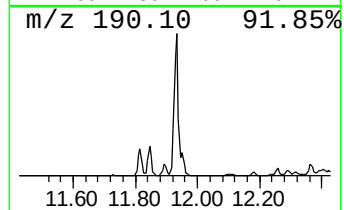
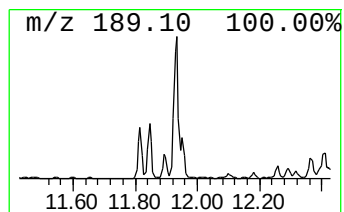
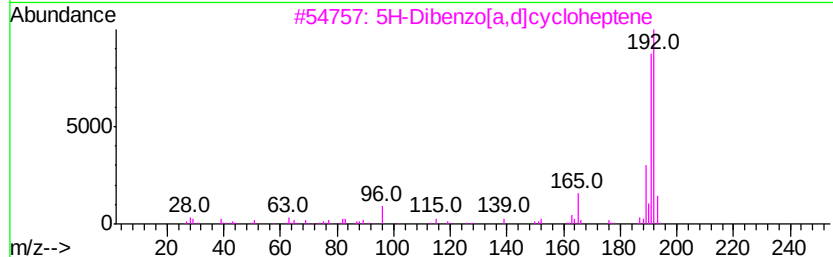
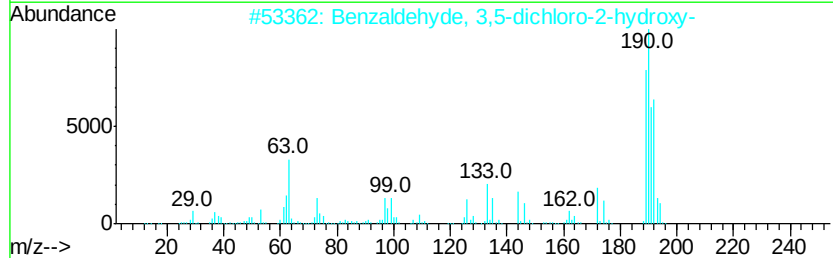
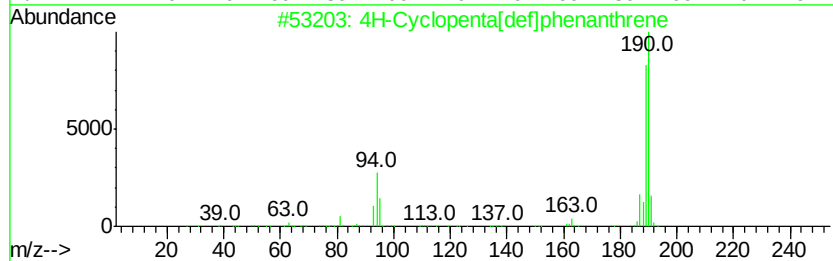
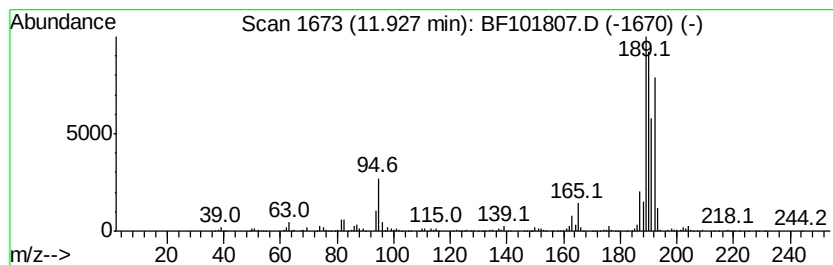
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF121417.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 12 4H-Cyclopenta[def]phenanthrene Concentration Rank 3

| R.T.      | EstConc                             | Area    | Relative to ISTD | R.T.        |      |
|-----------|-------------------------------------|---------|------------------|-------------|------|
| 11.93     | 45.45 ng                            | 2132610 | Phenanthrene-d10 | 11.32       |      |
| Hit# of 5 | Tentative ID                        | MW      | MolForm          | CAS#        | Qual |
| 1         | 4H-Cyclopenta[def]phenanthrene      | 190     | C15H10           | 000203-64-5 | 90   |
| 2         | Benzaldehyde, 3,5-dichloro-2-hyd... | 190     | C7H4Cl2O2        | 000090-60-8 | 72   |
| 3         | 5H-Dibenzof[a,d]cycloheptene        | 192     | C15H12           | 000256-81-5 | 42   |
| 4         | 1H-Indene, 2-phenyl-                | 192     | C15H12           | 004505-48-0 | 38   |
| 5         | Anthracene, 2-methyl-               | 192     | C15H12           | 000613-12-7 | 38   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
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Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

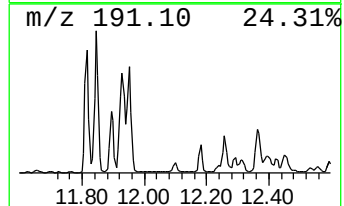
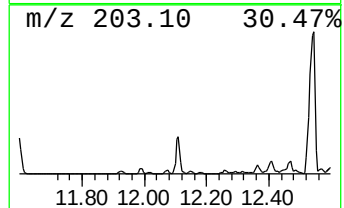
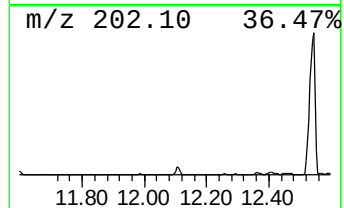
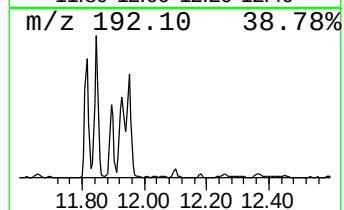
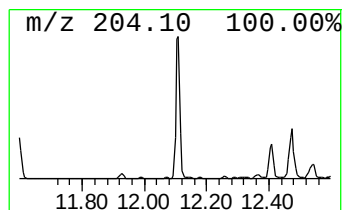
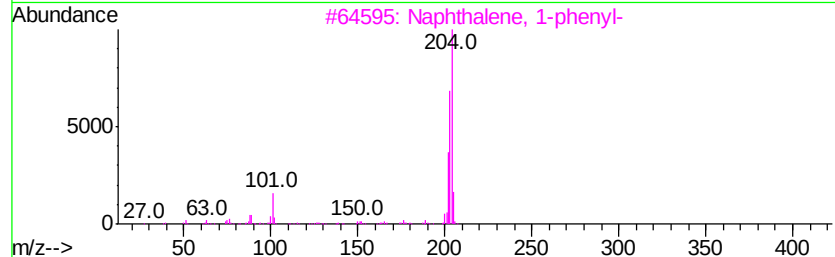
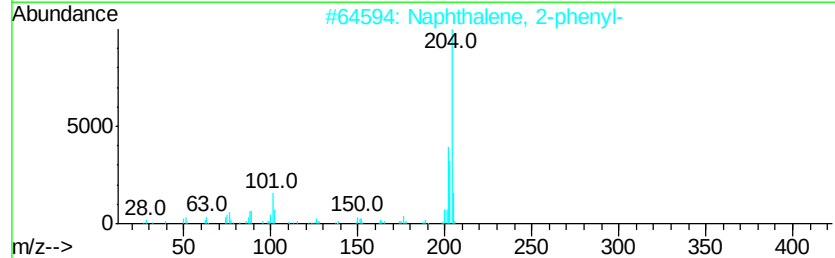
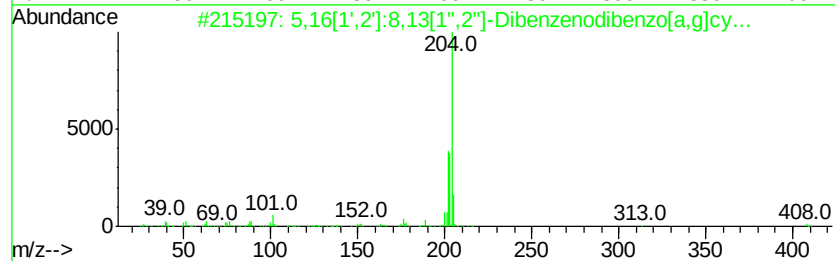
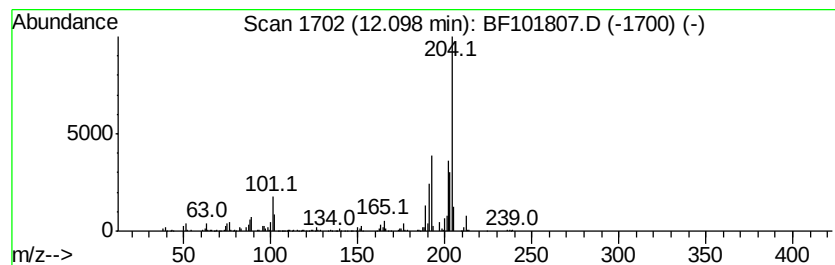
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 14 5,16[1',2']:8,13[1'',2'']-D... Concentration Rank 9

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 12.10 | 15.46 ng | 725422 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|------|----|-------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | 5,16[1',2']:8,13[1'',2'']-Dibenz... | 408 | C32H24    | 005672-97-9 | 86   |
| 2    |    | Naphthalene, 2-phenyl-              | 204 | C16H12    | 000612-94-2 | 83   |
| 3    |    | Naphthalene, 1-phenyl-              | 204 | C16H12    | 000605-02-7 | 78   |
| 4    |    | 9,10-Bis(bromomethyl)anthracene     | 362 | C16H12Br2 | 034373-96-1 | 58   |
| 5    |    | Acephenanthrylene, 4,5-dihydro-     | 204 | C16H12    | 006232-48-0 | 46   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
Data File : BF101807.D  
Acq On : 28 Dec 2017 17:25  
Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S2-5-10

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

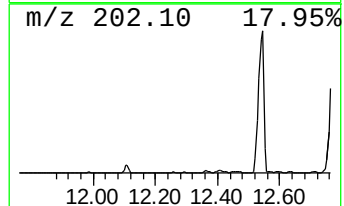
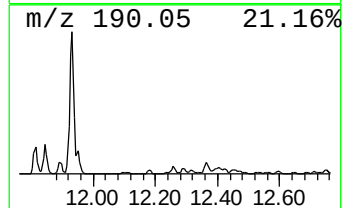
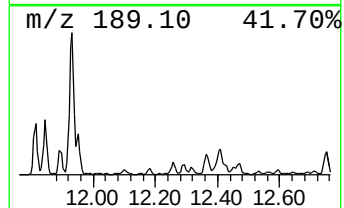
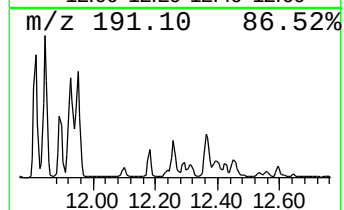
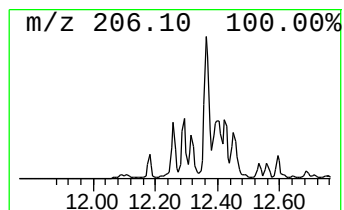
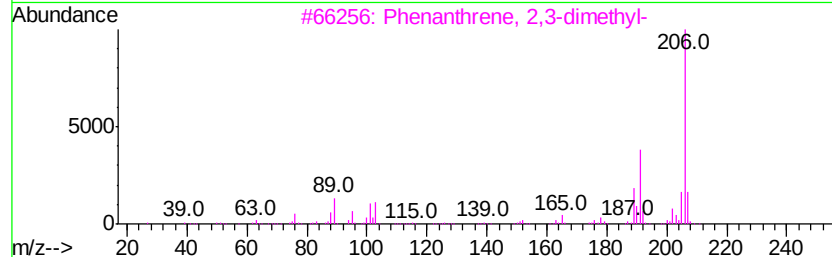
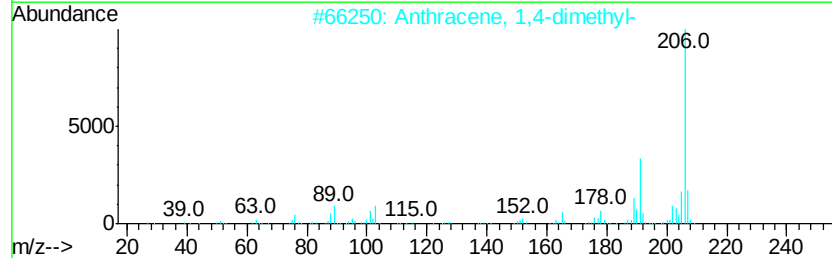
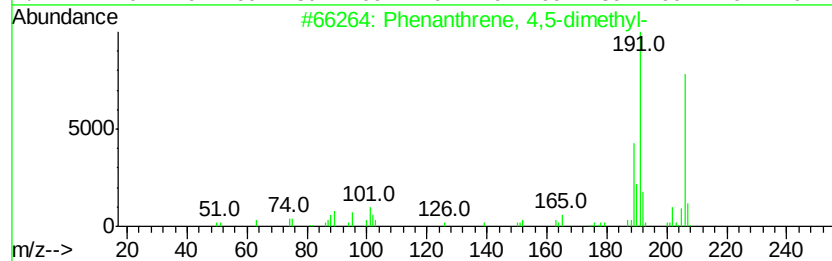
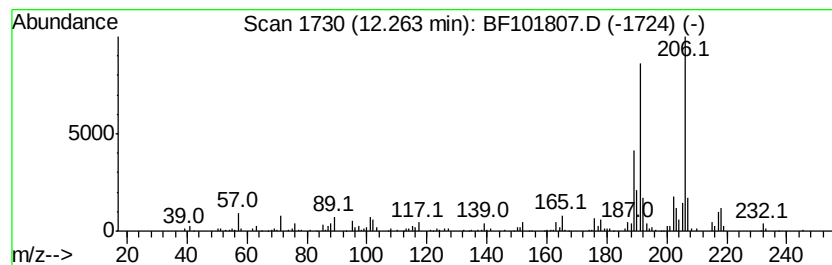
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 15 Phenanthrene, 4,5-dimethyl- Concentration Rank 16

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.26 | 7.50 ng | 351814 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                  | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 4,5-dimethyl-   | 206 | C16H14  | 003674-69-9 | 95   |
| 2    |    | Anthracene, 1,4-dimethyl-     | 206 | C16H14  | 000781-92-0 | 93   |
| 3    |    | Phenanthrene, 2,3-dimethyl-   | 206 | C16H14  | 003674-65-5 | 93   |
| 4    |    | Anthracene, 2-ethyl-          | 206 | C16H14  | 052251-71-5 | 90   |
| 5    |    | 1H-Indene, 2-methyl-3-phenyl- | 206 | C16H14  | 035099-60-6 | 89   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101807.D  
Acq On : 28 Dec 2017 17:25  
Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S2-5-10

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

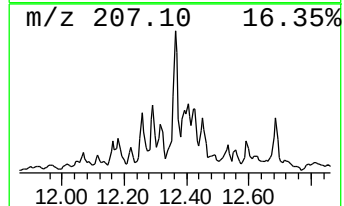
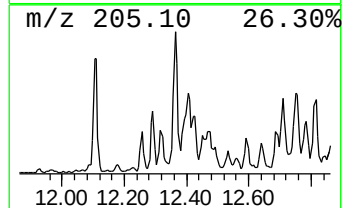
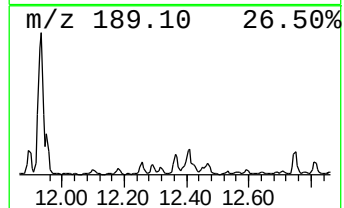
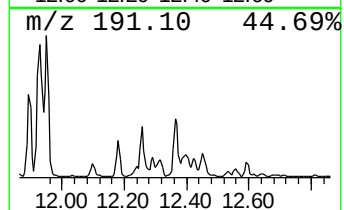
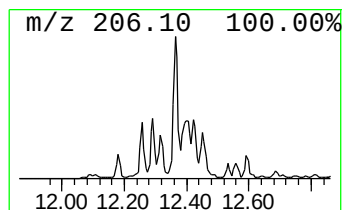
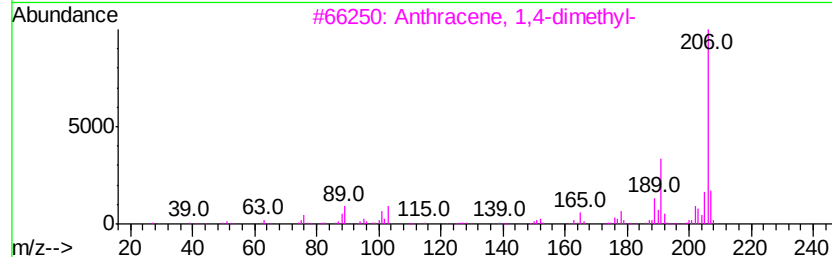
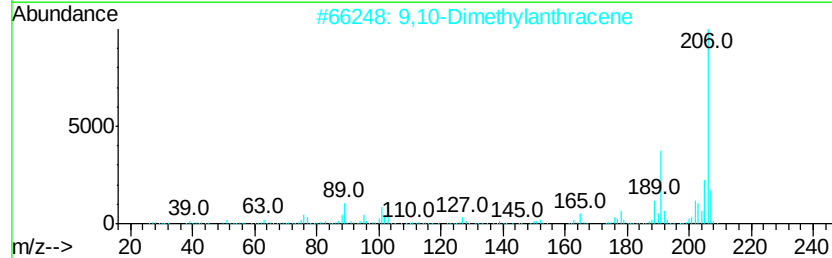
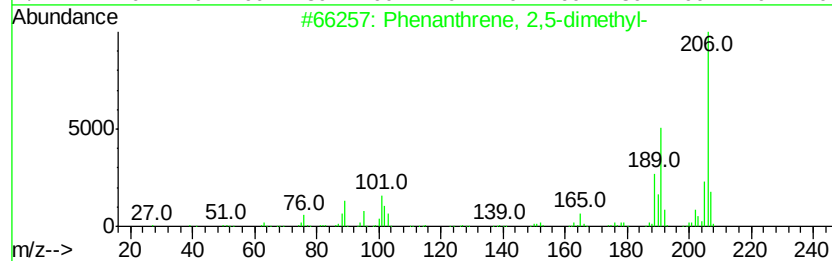
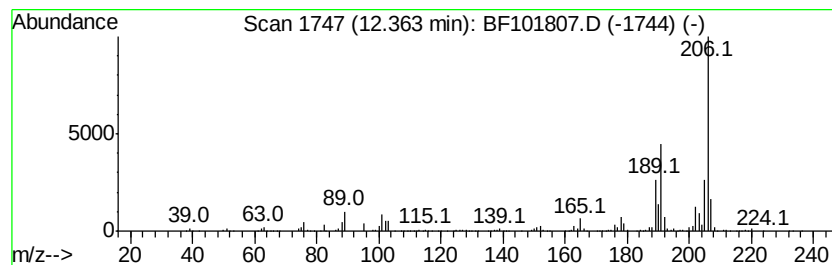
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 16 Phenanthrene, 2,5-dimethyl- Concentration Rank 8

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 12.36 | 16.80 ng | 788253 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 2,5-dimethyl- | 206 | C16H14  | 003674-66-6 | 97   |
| 2    |    | 9,10-Dimethylantracene      | 206 | C16H14  | 000781-43-1 | 93   |
| 3    |    | Anthracene, 1,4-dimethyl-   | 206 | C16H14  | 000781-92-0 | 93   |
| 4    |    | Phenanthrene, 1,7-dimethyl- | 206 | C16H14  | 000483-87-4 | 93   |
| 5    |    | di-p-Tolylacetylene         | 206 | C16H14  | 002789-88-0 | 93   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101807.D  
Acq On : 28 Dec 2017 17:25  
Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S2-5-10

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

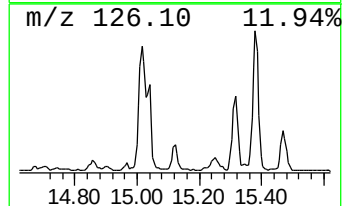
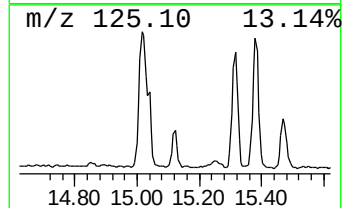
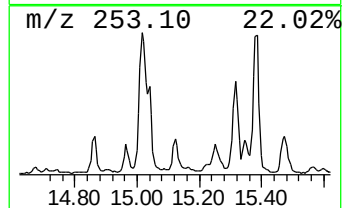
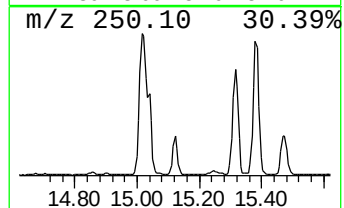
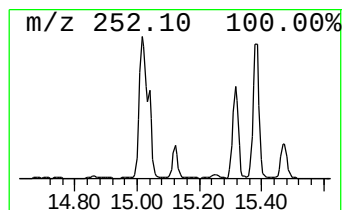
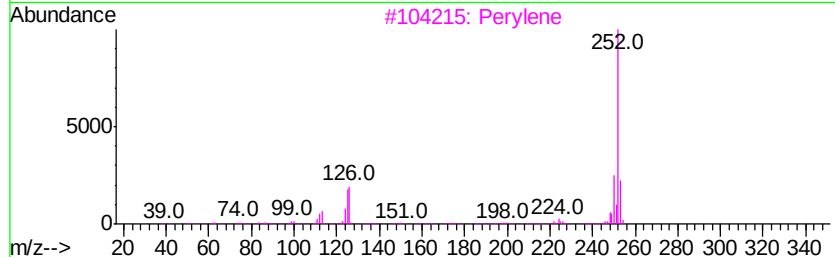
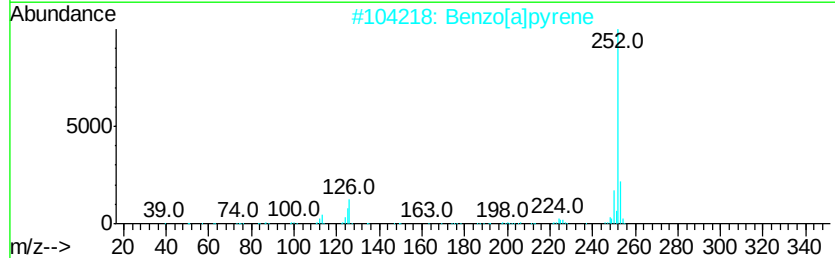
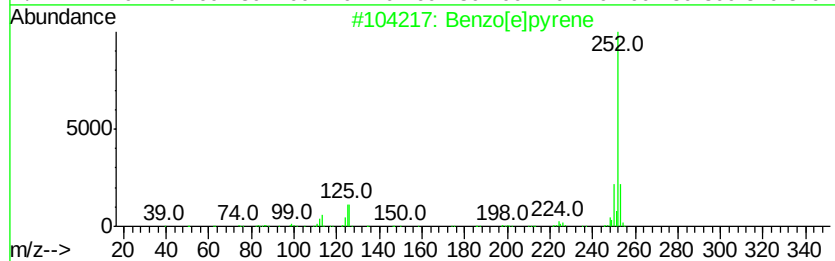
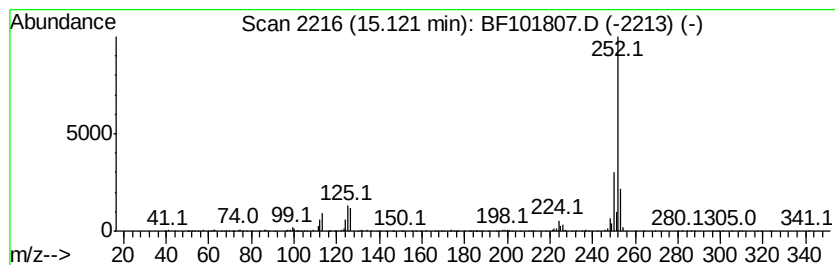
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 17 Benzo[e]pyrene Concentration Rank 13

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 15.12 | 10.70 ng | 396153 | Perylene-d12     | 15.44 |

| Hit# | of | Tentative ID              | MW  | MolForm | CAS#        | Qual |
|------|----|---------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[e]pyrene            | 252 | C20H12  | 000192-97-2 | 98   |
| 2    |    | Benzo[a]pyrene            | 252 | C20H12  | 000050-32-8 | 98   |
| 3    |    | Perylene                  | 252 | C20H12  | 000198-55-0 | 95   |
| 4    |    | Benzo[e]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 94   |
| 5    |    | Benzo[k]fluoranthene      | 252 | C20H12  | 000207-08-9 | 93   |





Data Path : Z:\HPCHEM1\BNA F\DATA\BF122817\  
Data File : BF101807.D  
Acq On : 28 Dec 2017 17:25  
Operator : SJ/JU  
Sample : I6970-08  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
S2-5-10

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

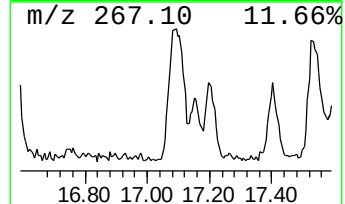
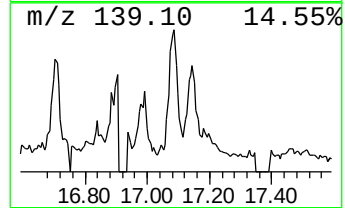
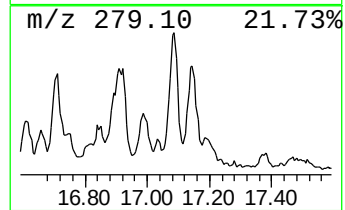
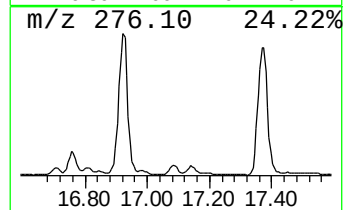
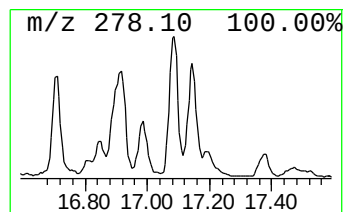
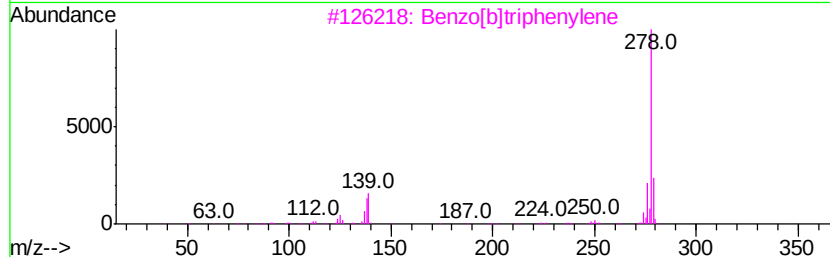
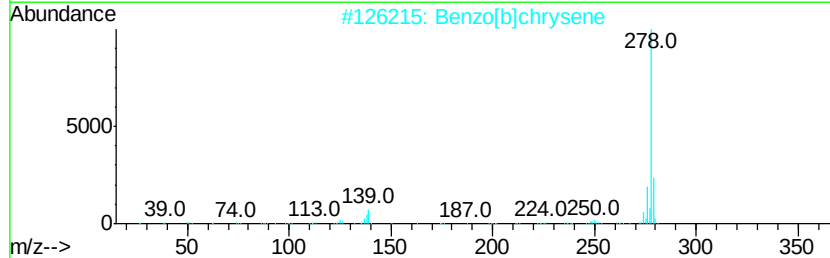
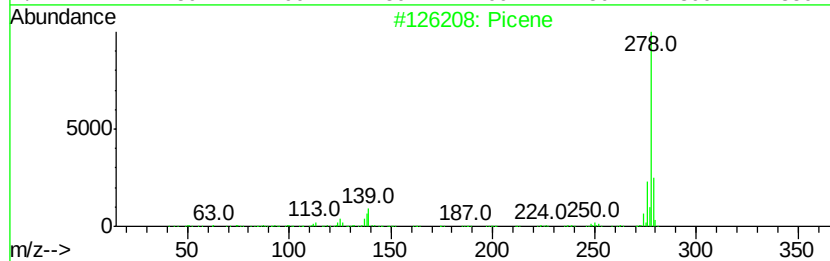
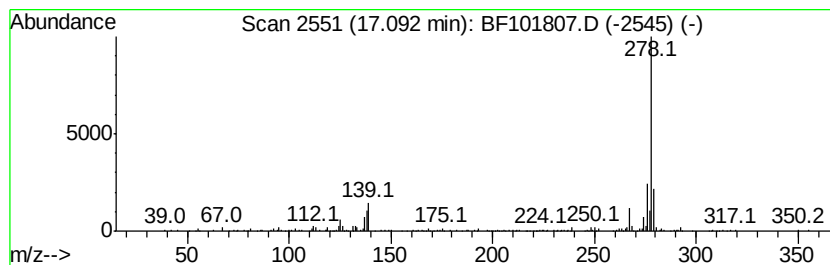
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 19 Picene Concentration Rank 19

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 17.09 | 7.06 ng | 261471 | Perylene-d12     | 15.44 |

| Hit# | of | 5 | Tentative ID          | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------|-----|---------|-------------|------|
| 1    |    |   | Picene                | 278 | C22H14  | 000213-46-7 | 99   |
| 2    |    |   | Benzo[b]chrysene      | 278 | C22H14  | 000214-17-5 | 98   |
| 3    |    |   | Benzo[b]triphenylene  | 278 | C22H14  | 000215-58-7 | 98   |
| 4    |    |   | Dibenz[a,h]anthracene | 278 | C22H14  | 000053-70-3 | 97   |
| 5    |    |   | Pentacene             | 278 | C22H14  | 000135-48-8 | 96   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF122817\  
 Data File : BF101807.D  
 Acq On : 28 Dec 2017 17:25  
 Operator : SJ/JU  
 Sample : I6970-08  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 S2-5-10

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  | 21.0    | ng    | 981609   | 1                     | 6.78  | 933677  | 20.0 |
| unknown6.56          | 6.56  | 70.6    | ng    | 3296600  | 1                     | 6.78  | 933677  | 20.0 |
| Naphthalene, 1,6,... | 10.23 | 7.4     | ng    | 469052   | 3                     | 9.82  | 1262500 | 20.0 |
| 9H-Fluorene, 2-me... | 10.92 | 11.9    | ng    | 557456   | 4                     | 11.32 | 938367  | 20.0 |
| Perimidine, 2-ethyl- | 11.16 | 8.4     | ng    | 393024   | 4                     | 11.32 | 938367  | 20.0 |
| Dibenzothiophene     | 11.21 | 10.2    | ng    | 478395   | 4                     | 11.32 | 938367  | 20.0 |
| Phenanthrene, 2-m... | 11.82 | 23.4    | ng    | 1096610  | 4                     | 11.32 | 938367  | 20.0 |
| 4H-Cyclopenta[def... | 11.93 | 45.5    | ng    | 2132610  | 4                     | 11.32 | 938367  | 20.0 |
| 5,16[1',2']:8,13[... | 12.10 | 15.5    | ng    | 725422   | 4                     | 11.32 | 938367  | 20.0 |
| Phenanthrene, 4,5... | 12.26 | 7.5     | ng    | 351814   | 4                     | 11.32 | 938367  | 20.0 |
| Phenanthrene, 2,5... | 12.36 | 16.8    | ng    | 788253   | 4                     | 11.32 | 938367  | 20.0 |
| Benzo[e]pyrene       | 15.12 | 10.7    | ng    | 396153   | 6                     | 15.44 | 740212  | 20.0 |
| Picene               | 17.09 | 7.1     | ng    | 261471   | 6                     | 15.44 | 740212  | 20.0 |