

Data Path : Z:\SVOASRV\HPCHEM1\BNA\_F\DATA\BF082018\  
 Data File : BF108300.D  
 Acq On : 20 Aug 2018 19:51  
 Operator : JU/SJ  
 Sample : J4521-19 2X  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 72-11967

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:\SVOASRV\HPCHEM1\BNA\_F\METHODS\8270-BF080818.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         | 5.254       | 492           | 496         | 502          | rBV      | 103039         | 113141        | 1.91%           | 0.164%        |
| 2         | 5.642       | 557           | 562         | 565          | rBV      | 2097747        | 1908595       | 32.27%          | 2.774%        |
| 3         | 6.636       | 726           | 731         | 734          | rBV      | 2064108        | 2037811       | 34.46%          | 2.961%        |
| 4         | 6.784       | 752           | 756         | 760          | rBV      | 2376997        | 2029176       | 34.31%          | 2.949%        |
| 5         | 7.019       | 792           | 796         | 799          | rBV      | 1231209        | 1066191       | 18.03%          | 1.549%        |
| 6         | 7.172       | 818           | 822         | 826          | rBV      | 1898730        | 1569369       | 26.54%          | 2.281%        |
| 7         | 7.578       | 886           | 891         | 899          | rVB      | 1442249        | 1302033       | 22.02%          | 1.892%        |
| 8         | 8.301       | 1010          | 1014        | 1017         | rBV      | 1543139        | 1240185       | 20.97%          | 1.802%        |
| 9         | 9.372       | 1192          | 1196        | 1199         | rBV      | 2667896        | 2117824       | 35.81%          | 3.078%        |
| 10        | 9.436       | 1204          | 1207        | 1212         | rVB      | 80951          | 85168         | 1.44%           | 0.124%        |
| 11        | 9.713       | 1251          | 1254        | 1257         | rVV      | 95865          | 101237        | 1.71%           | 0.147%        |
| 12        | 9.760       | 1260          | 1262        | 1270         | rVB      | 218331         | 201944        | 3.41%           | 0.293%        |
| 13        | 9.919       | 1286          | 1289        | 1294         | rBV2     | 70796          | 73103         | 1.24%           | 0.106%        |
| 14        | 9.966       | 1294          | 1297        | 1302         | rVB      | 79107          | 75462         | 1.28%           | 0.110%        |
| 15        | 10.060      | 1310          | 1313        | 1317         | rBV      | 1226575        | 1157871       | 19.58%          | 1.683%        |
| 16        | 10.095      | 1317          | 1319        | 1322         | rVB      | 298197         | 218521        | 3.69%           | 0.318%        |
| 17        | 10.266      | 1344          | 1348        | 1351         | rVV2     | 122477         | 140927        | 2.38%           | 0.205%        |
| 18        | 10.371      | 1363          | 1366        | 1369         | rBV      | 68954          | 74367         | 1.26%           | 0.108%        |
| 19        | 10.466      | 1378          | 1382        | 1389         | rVB3     | 81458          | 111997        | 1.89%           | 0.163%        |
| 20        | 10.613      | 1403          | 1407        | 1412         | rVB      | 300376         | 287136        | 4.85%           | 0.417%        |
| 21        | 10.766      | 1428          | 1433        | 1437         | rVB3     | 117204         | 170091        | 2.88%           | 0.247%        |
| 22        | 10.854      | 1444          | 1448        | 1455         | rBV      | 1228596        | 1144543       | 19.35%          | 1.663%        |
| 23        | 10.954      | 1461          | 1465        | 1467         | rBV3     | 49977          | 76176         | 1.29%           | 0.111%        |
| 24        | 11.160      | 1494          | 1500        | 1503         | rBV2     | 147368         | 190383        | 3.22%           | 0.277%        |
| 25        | 11.189      | 1503          | 1505        | 1508         | rVV2     | 101728         | 98841         | 1.67%           | 0.144%        |
| 26        | 11.242      | 1512          | 1514        | 1517         | rVV      | 86257          | 76869         | 1.30%           | 0.112%        |
| 27        | 11.283      | 1517          | 1521        | 1523         | rVV3     | 83766          | 113090        | 1.91%           | 0.164%        |
| 28        | 11.313      | 1523          | 1526        | 1530         | rVV3     | 92419          | 117575        | 1.99%           | 0.171%        |
| 29        | 11.360      | 1531          | 1534        | 1538         | rVV3     | 97811          | 98535         | 1.67%           | 0.143%        |
| 30        | 11.395      | 1538          | 1540        | 1544         | rVV2     | 105627         | 127984        | 2.16%           | 0.186%        |
| 31        | 11.454      | 1547          | 1550        | 1556         | rVB      | 200465         | 179592        | 3.04%           | 0.261%        |
| 32        | 11.560      | 1564          | 1568        | 1570         | rBV      | 1254791        | 1189388       | 20.11%          | 1.728%        |
| 33        | 11.583      | 1570          | 1572        | 1576         | rVV      | 2755910        | 2419358       | 40.91%          | 3.516%        |
| 34        | 11.636      | 1578          | 1581        | 1584         | rVV      | 1163638        | 979998        | 16.57%          | 1.424%        |

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 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
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 ClientSampleId :  
 72-11967

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:\SVOASRV\HPCHEM1\BNA\_F\METHODS\8270-BF080818.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |         |         |        |
|----|--------|------|------|------|------|---------|---------|---------|--------|
| 35 | 11.666 | 1584 | 1586 | 1589 | rVV  | 92392   | 97927   | 1.66%   | 0.142% |
| 36 | 11.718 | 1591 | 1595 | 1600 | rVV4 | 42077   | 77028   | 1.30%   | 0.112% |
| 37 | 11.789 | 1603 | 1607 | 1611 | rVV2 | 105852  | 169118  | 2.86%   | 0.246% |
| 38 | 11.848 | 1615 | 1617 | 1620 | rVV  | 133919  | 110357  | 1.87%   | 0.160% |
| 39 | 11.889 | 1621 | 1624 | 1628 | rVB2 | 143005  | 143468  | 2.43%   | 0.208% |
| 40 | 11.971 | 1636 | 1638 | 1643 | rVB  | 72403   | 76871   | 1.30%   | 0.112% |
| 41 | 12.060 | 1650 | 1653 | 1656 | rBV  | 562830  | 504200  | 8.53%   | 0.733% |
| 42 | 12.089 | 1656 | 1658 | 1661 | rVB  | 765860  | 606579  | 10.26%  | 0.882% |
| 43 | 12.136 | 1661 | 1666 | 1669 | rBV  | 377678  | 350334  | 5.92%   | 0.509% |
| 44 | 12.177 | 1669 | 1673 | 1675 | rVV2 | 1099163 | 1190002 | 20.12%  | 1.729% |
| 45 | 12.195 | 1675 | 1676 | 1680 | rVB  | 419749  | 308242  | 5.21%   | 0.448% |
| 46 | 12.236 | 1680 | 1683 | 1686 | rBV3 | 72039   | 73597   | 1.24%   | 0.107% |
| 47 | 12.354 | 1700 | 1703 | 1706 | rBV  | 441171  | 387124  | 6.55%   | 0.563% |
| 48 | 12.383 | 1706 | 1708 | 1714 | rVB  | 246733  | 236304  | 4.00%   | 0.343% |
| 49 | 12.507 | 1727 | 1729 | 1732 | rVB  | 157180  | 118004  | 2.00%   | 0.171% |
| 50 | 12.536 | 1732 | 1734 | 1736 | rBV  | 153760  | 109438  | 1.85%   | 0.159% |
| 51 | 12.560 | 1736 | 1738 | 1741 | rVB2 | 128365  | 105713  | 1.79%   | 0.154% |
| 52 | 12.613 | 1743 | 1747 | 1750 | rBV  | 405466  | 476146  | 8.05%   | 0.692% |
| 53 | 12.654 | 1751 | 1754 | 1759 | rVB2 | 261213  | 365913  | 6.19%   | 0.532% |
| 54 | 12.707 | 1759 | 1763 | 1767 | rBV3 | 336314  | 415205  | 7.02%   | 0.603% |
| 55 | 12.789 | 1772 | 1777 | 1780 | rBV  | 5105005 | 5237217 | 88.55%  | 7.611% |
| 56 | 12.818 | 1780 | 1782 | 1784 | rVV  | 124834  | 100957  | 1.71%   | 0.147% |
| 57 | 12.842 | 1784 | 1786 | 1789 | rVB  | 159049  | 124737  | 2.11%   | 0.181% |
| 58 | 12.907 | 1794 | 1797 | 1799 | rBV3 | 68068   | 95724   | 1.62%   | 0.139% |
| 59 | 12.936 | 1799 | 1802 | 1804 | rBV  | 211908  | 170263  | 2.88%   | 0.247% |
| 60 | 13.024 | 1809 | 1817 | 1820 | rBV2 | 4474648 | 5914250 | 100.00% | 8.595% |
| 61 | 13.060 | 1820 | 1823 | 1827 | rVB2 | 325555  | 332329  | 5.62%   | 0.483% |
| 62 | 13.142 | 1827 | 1837 | 1840 | rBV2 | 1911431 | 2121464 | 35.87%  | 3.083% |
| 63 | 13.171 | 1840 | 1842 | 1846 | rVB  | 266484  | 228016  | 3.86%   | 0.331% |
| 64 | 13.230 | 1847 | 1852 | 1855 | rBV3 | 408481  | 694769  | 11.75%  | 1.010% |
| 65 | 13.312 | 1863 | 1866 | 1867 | rBV3 | 288607  | 281375  | 4.76%   | 0.409% |
| 66 | 13.342 | 1868 | 1871 | 1874 | rVB  | 1015463 | 918409  | 15.53%  | 1.335% |
| 67 | 13.407 | 1879 | 1882 | 1885 | rVV  | 835706  | 706223  | 11.94%  | 1.026% |
| 68 | 13.448 | 1885 | 1889 | 1891 | rVV2 | 622076  | 679117  | 11.48%  | 0.987% |
| 69 | 13.471 | 1891 | 1893 | 1895 | rVB  | 160090  | 119398  | 2.02%   | 0.174% |
| 70 | 13.501 | 1895 | 1898 | 1901 | rVB2 | 101472  | 97152   | 1.64%   | 0.141% |
| 71 | 13.542 | 1902 | 1905 | 1907 | rBV  | 364785  | 334038  | 5.65%   | 0.485% |

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 Misc :  
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Instrument :  
 BNA\_F  
 ClientSampleId :  
 72-11967

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

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

Method : Z:\SVOASRV\HPCHEM1\BNA\_F\METHODS\8270-BF080818.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|     |        |      |      |      |      |         |         |        |        |
|-----|--------|------|------|------|------|---------|---------|--------|--------|
| 72  | 13.571 | 1907 | 1910 | 1913 | rBV  | 405352  | 346130  | 5.85%  | 0.503% |
| 73  | 13.818 | 1949 | 1952 | 1955 | rBV3 | 150953  | 200640  | 3.39%  | 0.292% |
| 74  | 13.848 | 1955 | 1957 | 1962 | rVB  | 292413  | 310770  | 5.25%  | 0.452% |
| 75  | 13.965 | 1972 | 1977 | 1979 | rBV3 | 468538  | 586361  | 9.91%  | 0.852% |
| 76  | 13.989 | 1979 | 1981 | 1984 | rVV  | 502527  | 488959  | 8.27%  | 0.711% |
| 77  | 14.018 | 1984 | 1986 | 1990 | rVV2 | 451442  | 603588  | 10.21% | 0.877% |
| 78  | 14.060 | 1990 | 1993 | 2001 | rVB2 | 351974  | 481009  | 8.13%  | 0.699% |
| 79  | 14.212 | 2012 | 2019 | 2022 | rBV2 | 2826681 | 4027839 | 68.10% | 5.853% |
| 80  | 14.248 | 2022 | 2025 | 2031 | rVB  | 2412401 | 2308041 | 39.03% | 3.354% |
| 81  | 14.301 | 2031 | 2034 | 2036 | rBV2 | 127882  | 122178  | 2.07%  | 0.178% |
| 82  | 14.324 | 2036 | 2038 | 2042 | rVV  | 529518  | 509003  | 8.61%  | 0.740% |
| 83  | 14.365 | 2042 | 2045 | 2050 | rVV4 | 211854  | 350859  | 5.93%  | 0.510% |
| 84  | 14.442 | 2054 | 2058 | 2061 | rBV2 | 232299  | 332348  | 5.62%  | 0.483% |
| 85  | 14.471 | 2061 | 2063 | 2066 | rVV  | 123552  | 107730  | 1.82%  | 0.157% |
| 86  | 14.565 | 2077 | 2079 | 2081 | rBV  | 125796  | 105372  | 1.78%  | 0.153% |
| 87  | 14.601 | 2081 | 2085 | 2088 | rVV  | 456485  | 550615  | 9.31%  | 0.800% |
| 88  | 14.636 | 2089 | 2091 | 2095 | rVB  | 250635  | 239422  | 4.05%  | 0.348% |
| 89  | 14.707 | 2101 | 2103 | 2105 | rVV  | 174444  | 129443  | 2.19%  | 0.188% |
| 90  | 14.736 | 2106 | 2108 | 2110 | rVV2 | 260661  | 209299  | 3.54%  | 0.304% |
| 91  | 14.759 | 2110 | 2112 | 2116 | rVB  | 333941  | 296862  | 5.02%  | 0.431% |
| 92  | 14.807 | 2116 | 2120 | 2124 | rBV3 | 182789  | 252759  | 4.27%  | 0.367% |
| 93  | 15.318 | 2201 | 2207 | 2210 | rBV  | 1386096 | 2464019 | 41.66% | 3.581% |
| 94  | 15.430 | 2223 | 2226 | 2230 | rBV  | 355618  | 393103  | 6.65%  | 0.571% |
| 95  | 15.654 | 2259 | 2264 | 2270 | rVB  | 844682  | 1267973 | 21.44% | 1.843% |
| 96  | 15.724 | 2270 | 2276 | 2280 | rBV  | 1502691 | 1936076 | 32.74% | 2.814% |
| 97  | 15.789 | 2283 | 2287 | 2289 | rVV  | 485629  | 678165  | 11.47% | 0.986% |
| 98  | 15.818 | 2289 | 2292 | 2299 | rVB2 | 390279  | 597694  | 10.11% | 0.869% |
| 99  | 17.418 | 2558 | 2564 | 2572 | rVB2 | 519316  | 1117430 | 18.89% | 1.624% |
| 100 | 17.918 | 2643 | 2649 | 2660 | rVB  | 360938  | 826755  | 13.98% | 1.201% |

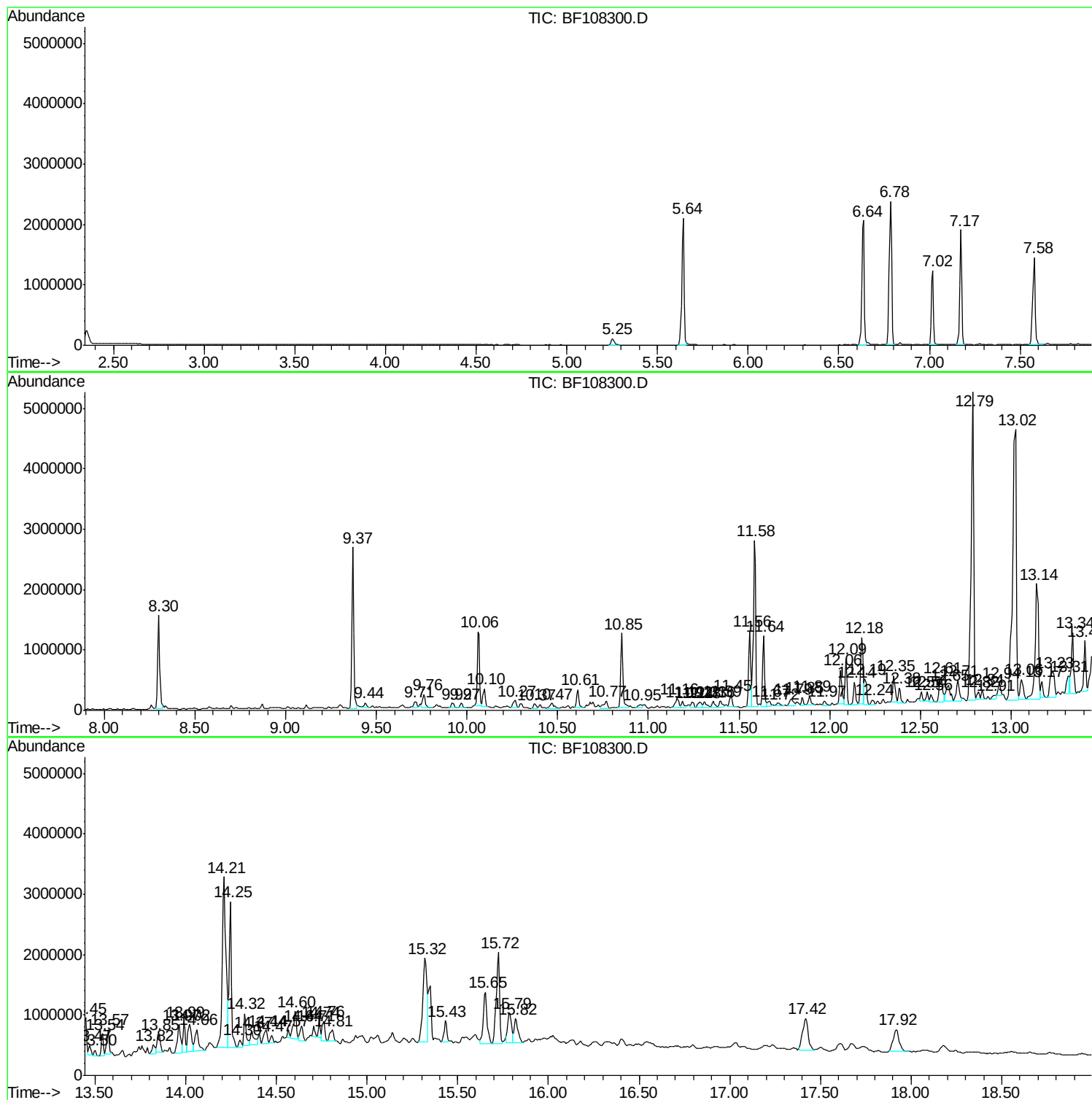
Sum of corrected areas: 68811931

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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF080818.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082018\  
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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

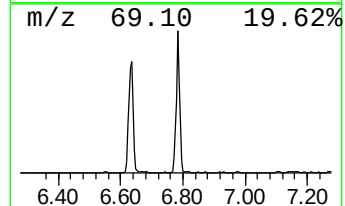
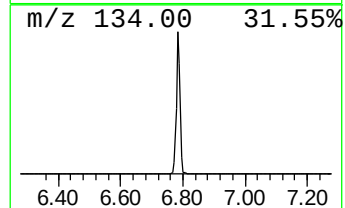
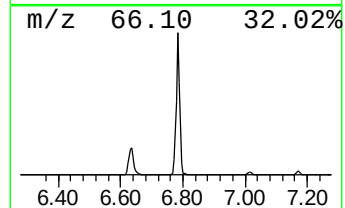
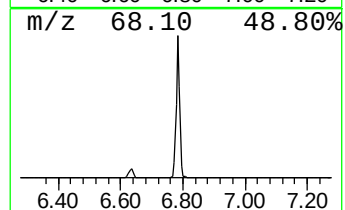
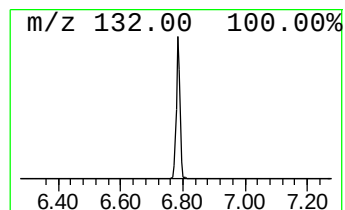
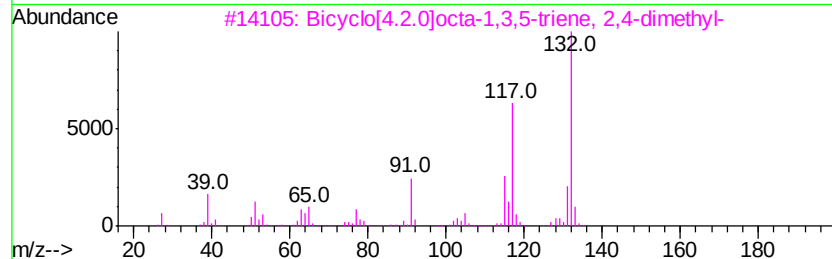
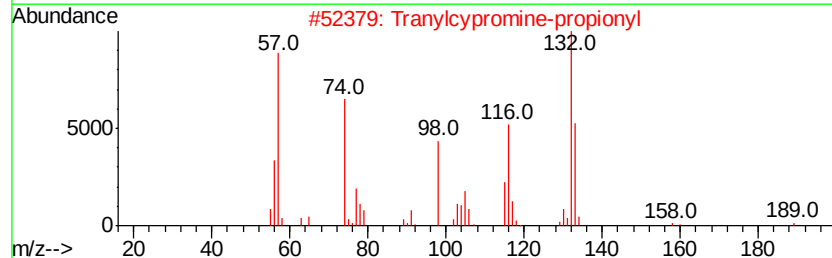
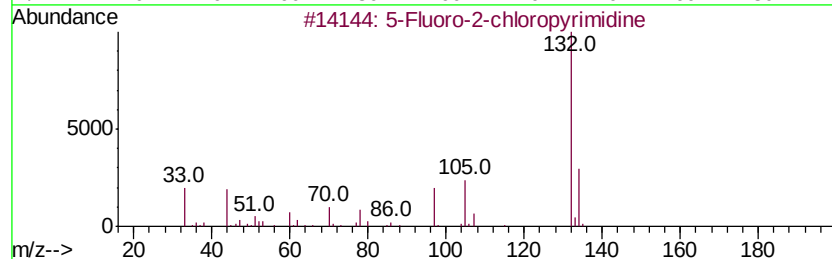
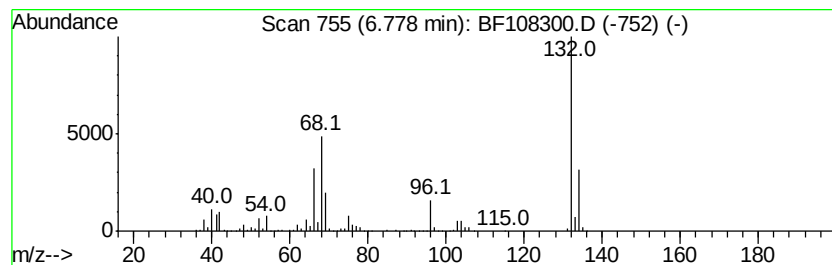
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 1 unknown6.78 Concentration Rank 1

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 6.78 | 38.06 ng | 2029180 | 1,4-Dichlorobenzene-d4 | 7.02 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 5-Fluoro-2-chloropyrimidine         | 132 | C4H2ClFN2 | 062802-42-0  | 16   |
| 2    |    | Tranlycypromine-propionyl           | 189 | C12H15NO  | 1000123-86-3 | 10   |
| 3    |    | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12    | 028749-81-7  | 9    |
| 4    |    | Benzene, 1-ethenyl-3,5-dimethyl-    | 132 | C10H12    | 005379-20-4  | 9    |
| 5    |    | 1-Methylpyrrolo[1,2-a]pyrazine      | 132 | C8H8N2    | 064608-59-9  | 9    |



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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

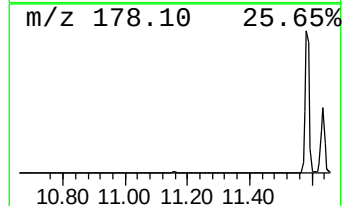
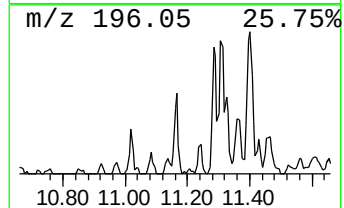
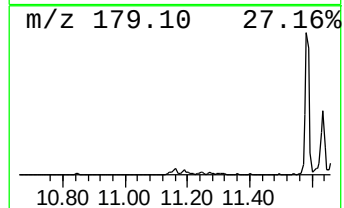
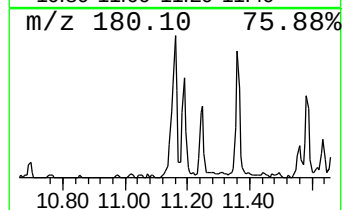
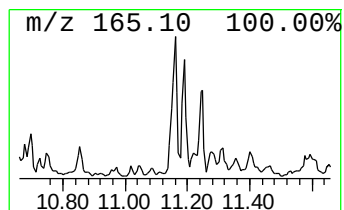
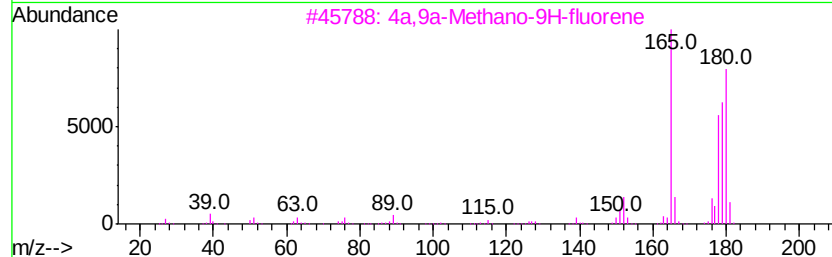
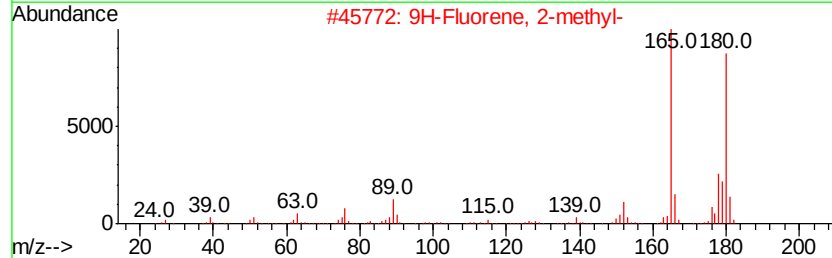
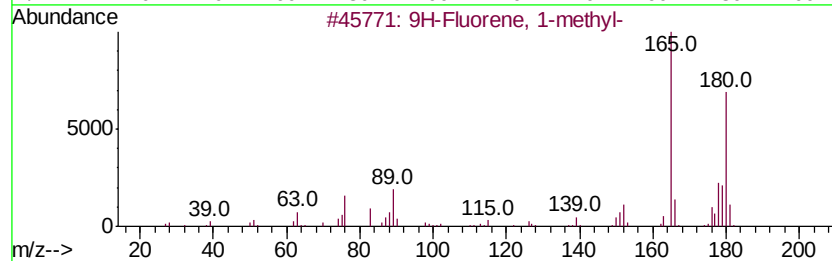
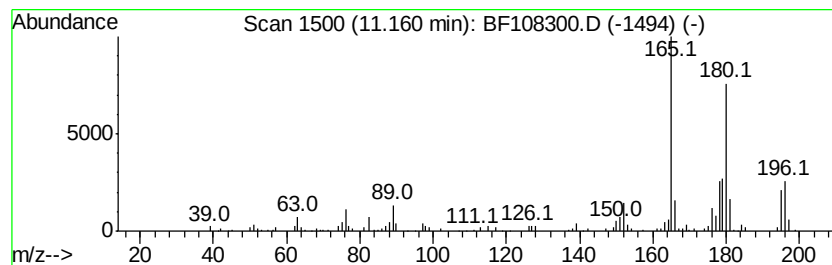
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 3 9H-Fluorene, 1-methyl- Concentration Rank 19

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.16 | 3.20 ng | 190383 | Phenanthrene-d10 | 11.56 |

| Hit# | of | Tentative ID              | MW  | MolForm | CAS#        | Qual |
|------|----|---------------------------|-----|---------|-------------|------|
| 1    | 5  | 9H-Fluorene, 1-methyl-    | 180 | C14H12  | 001730-37-6 | 96   |
| 2    |    | 9H-Fluorene, 2-methyl-    | 180 | C14H12  | 001430-97-3 | 96   |
| 3    |    | 4a,9a-Methano-9H-fluorene | 180 | C14H12  | 019540-84-2 | 83   |
| 4    |    | 9H-Fluorene, 3-methyl-    | 180 | C14H12  | 002523-39-9 | 70   |
| 5    |    | 9H-Fluorene, 9-methyl-    | 180 | C14H12  | 002523-37-7 | 62   |



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Operator : JU/SJ  
Sample : J4521-19 2X  
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ALS Vial : 12 Sample Multiplier: 1

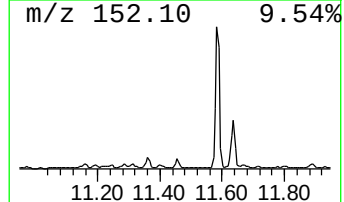
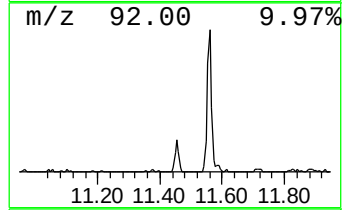
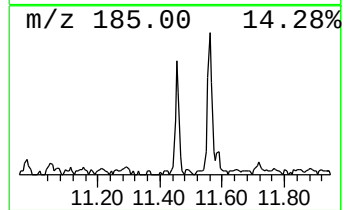
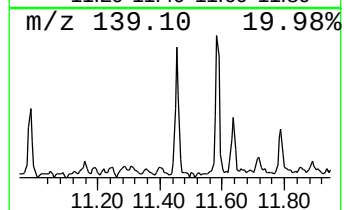
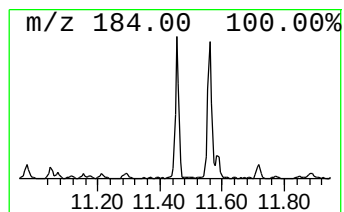
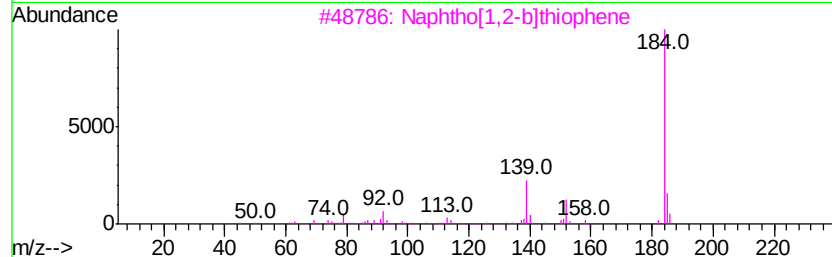
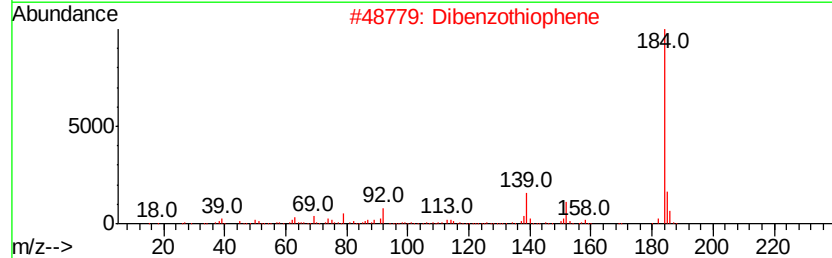
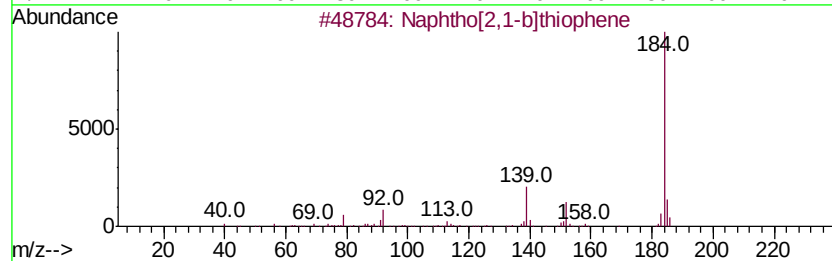
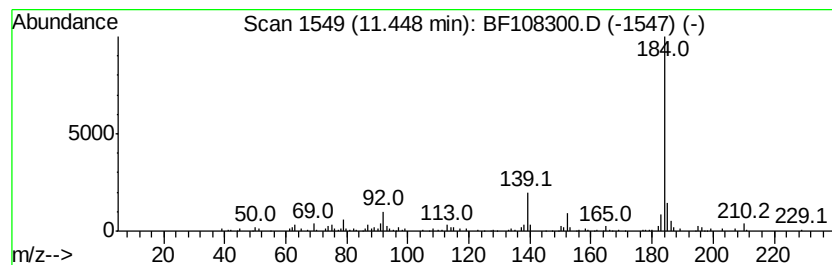
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ClientSampleId :  
72-11967

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF080818.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 4 Naphtho[2,1-b]thiophene Concentration Rank 20

| R.T.    | EstConc | Area                    | Relative to ISTD | R.T.           |
|---------|---------|-------------------------|------------------|----------------|
| 11.45   | 3.02 ng | 179592                  | Phenanthrene-d10 | 11.56          |
| Hit# of | 5       | Tentative ID            | MW MolForm       | CAS# Qual      |
| 1       |         | Naphtho[2,1-b]thiophene | 184 C12H8S       | 000233-02-3 96 |
| 2       |         | Dibenzothiophene        | 184 C12H8S       | 000132-65-0 96 |
| 3       |         | Naphtho[1,2-b]thiophene | 184 C12H8S       | 000234-41-3 95 |
| 4       |         | Naphtho[2,3-b]thiophene | 184 C12H8S       | 000268-77-9 93 |
| 5       |         | Azuleno(2,1-b)thiophene | 184 C12H8S       | 000248-13-5 90 |





Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082018\  
Data File : BF108300.D  
Acq On : 20 Aug 2018 19:51  
Operator : JU/SJ  
Sample : J4521-19 2X  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
72-11967

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF080818.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

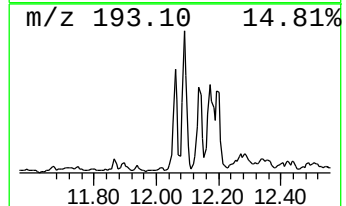
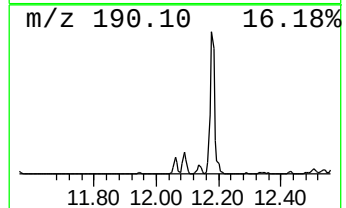
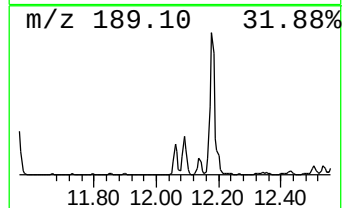
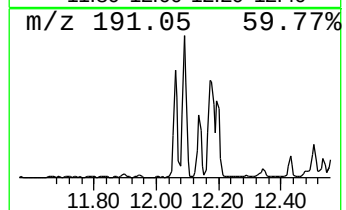
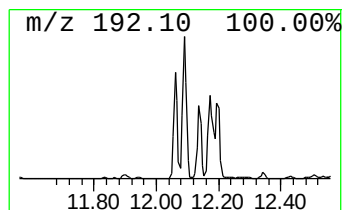
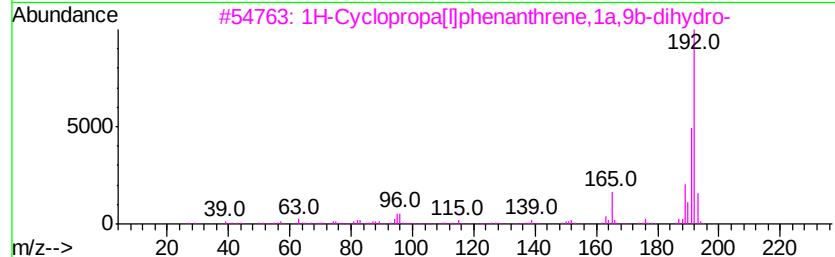
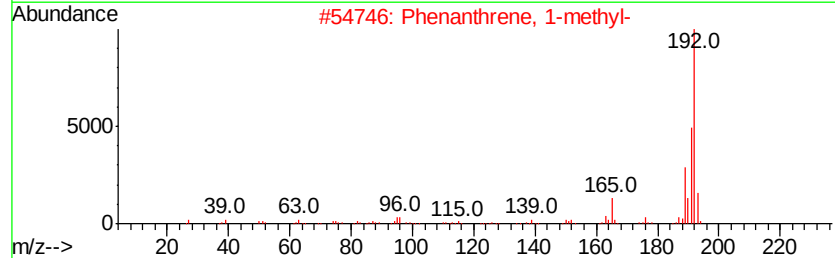
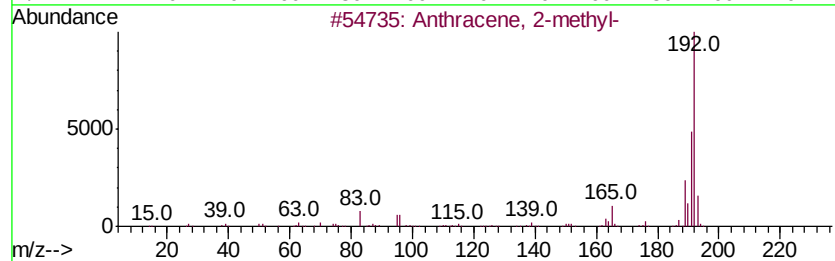
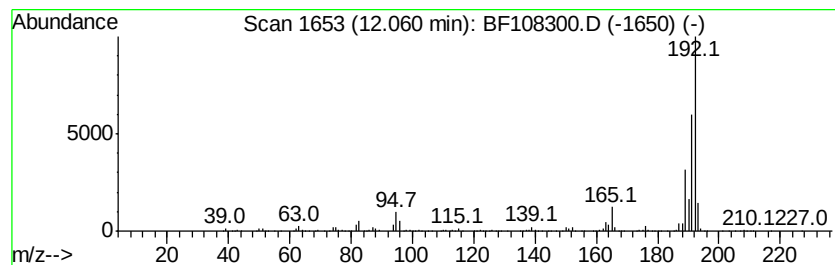
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 5 Anthracene, 2-methyl- Concentration Rank 7

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.06 | 8.48 ng | 504200 | Phenanthrene-d10 | 11.56 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------------------|-----|---------|-------------|------|
| 1       |   | Anthracene, 2-methyl-               | 192 | C15H12  | 000613-12-7 | 96   |
| 2       |   | Phenanthrene, 1-methyl-             | 192 | C15H12  | 000832-69-9 | 96   |
| 3       |   | 1H-Cyclopropa[1]phenanthrene,1a,... | 192 | C15H12  | 000949-41-7 | 95   |
| 4       |   | Phenanthrene, 2-methyl-             | 192 | C15H12  | 002531-84-2 | 95   |
| 5       |   | 1H-Indene, 1-phenyl-                | 192 | C15H12  | 001961-96-2 | 94   |





Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082018\  
Data File : BF108300.D  
Acq On : 20 Aug 2018 19:51  
Operator : JU/SJ  
Sample : J4521-19 2X  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
72-11967

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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

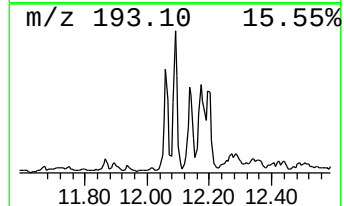
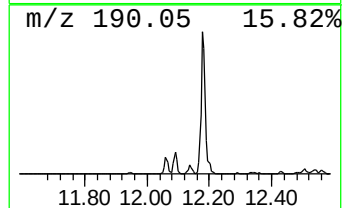
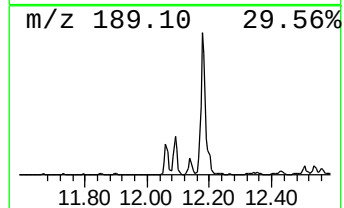
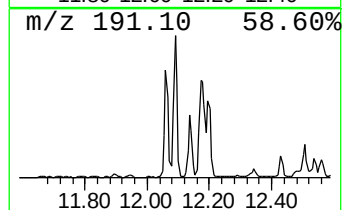
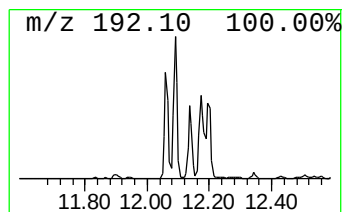
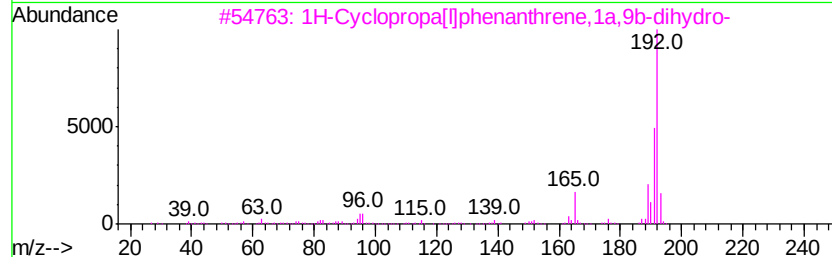
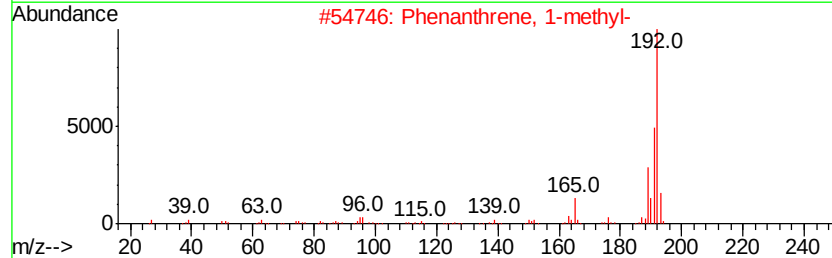
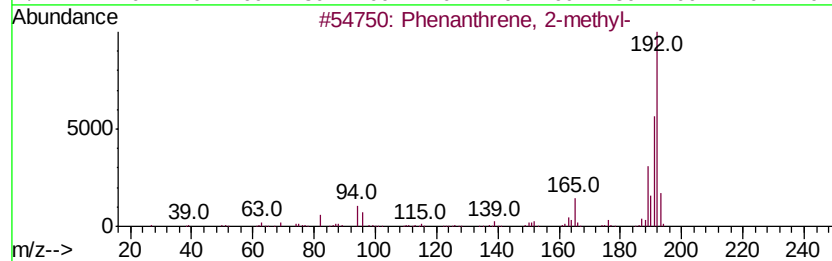
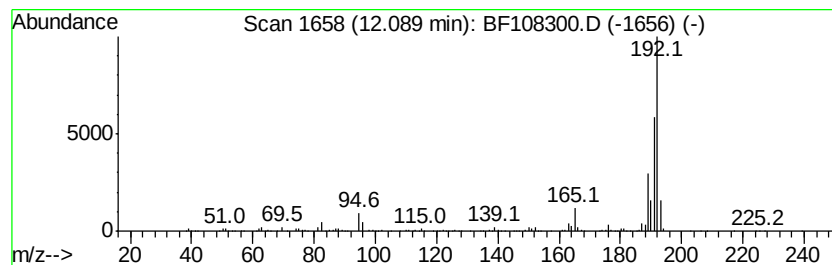
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TIC Integration Parameters: LSCINT.P

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

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 12.09 | 10.20 ng | 606579 | Phenanthrene-d10 | 11.56 |

| Hit# | of | 5 | Tentative ID                         | MW  | MolForm | CAS#        | Qual |
|------|----|---|--------------------------------------|-----|---------|-------------|------|
| 1    |    |   | Phenanthrene, 2-methyl-              | 192 | C15H12  | 002531-84-2 | 98   |
| 2    |    |   | Phenanthrene, 1-methyl-              | 192 | C15H12  | 000832-69-9 | 97   |
| 3    |    |   | 1H-Cyclopropa[1]phenanthrene, 1a,... | 192 | C15H12  | 000949-41-7 | 95   |
| 4    |    |   | Anthracene, 1-methyl-                | 192 | C15H12  | 000610-48-0 | 95   |
| 5    |    |   | 1H-Indene, 1-phenyl-                 | 192 | C15H12  | 001961-96-2 | 94   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082018\  
Data File : BF108300.D  
Acq On : 20 Aug 2018 19:51  
Operator : JU/SJ  
Sample : J4521-19 2X  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
72-11967

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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

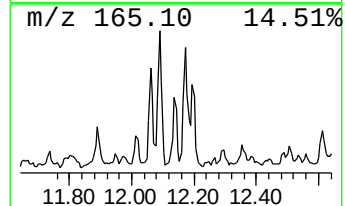
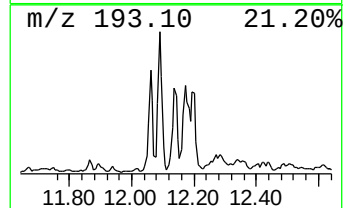
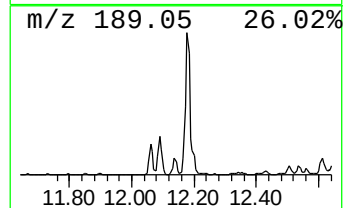
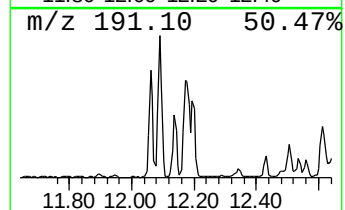
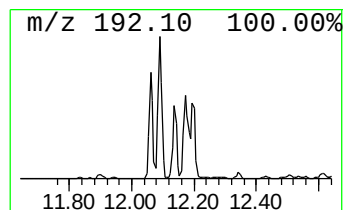
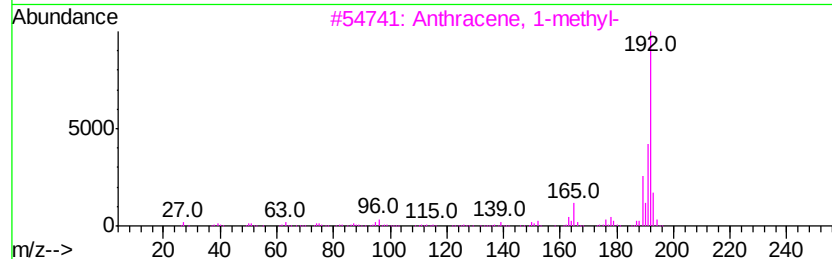
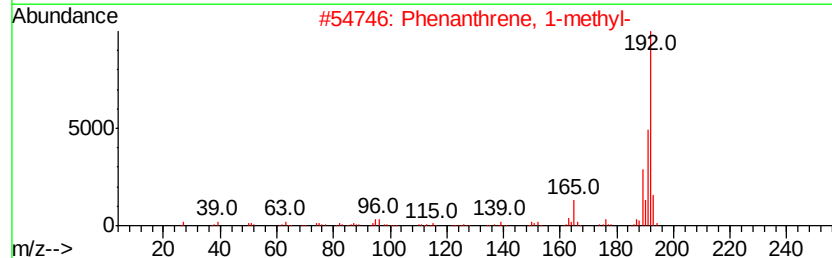
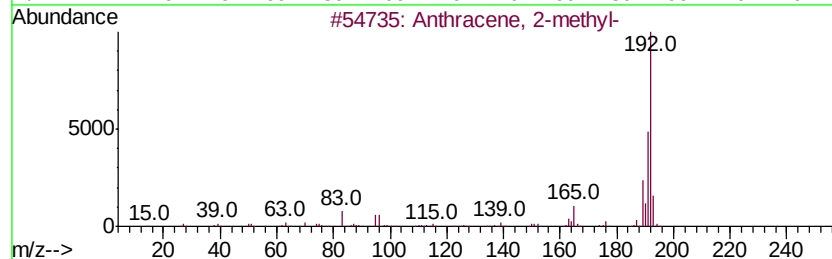
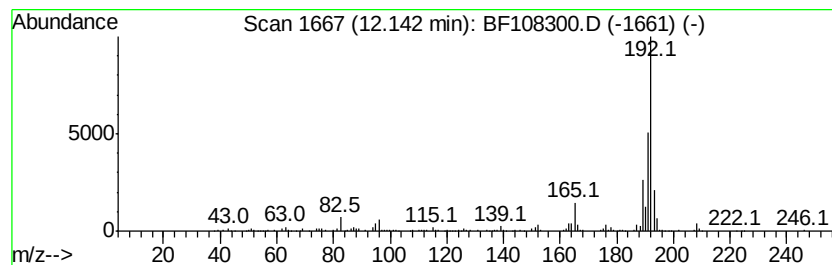
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 7 Phenanthrene, 1-methyl- Concentration Rank 12

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.14 | 5.89 ng | 350334 | Phenanthrene-d10 | 11.56 |

| Hit# | of | Tentative ID                         | MW  | MolForm | CAS#        | Qual |
|------|----|--------------------------------------|-----|---------|-------------|------|
| 1    | 5  | Anthracene, 2-methyl-                | 192 | C15H12  | 000613-12-7 | 96   |
| 2    |    | Phenanthrene, 1-methyl-              | 192 | C15H12  | 000832-69-9 | 96   |
| 3    |    | Anthracene, 1-methyl-                | 192 | C15H12  | 000610-48-0 | 96   |
| 4    |    | Phenanthrene, 2-methyl-              | 192 | C15H12  | 002531-84-2 | 96   |
| 5    |    | 1H-Cyclopropa[l]phenanthrene, 1a,... | 192 | C15H12  | 000949-41-7 | 95   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082018\  
Data File : BF108300.D  
Acq On : 20 Aug 2018 19:51  
Operator : JU/SJ  
Sample : J4521-19 2X  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
72-11967

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF080818.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

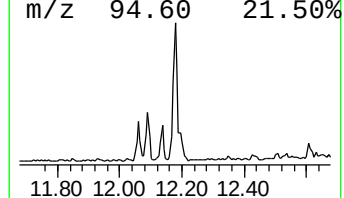
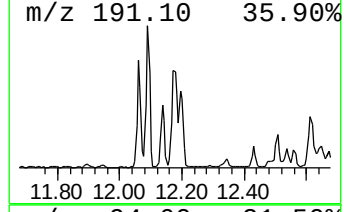
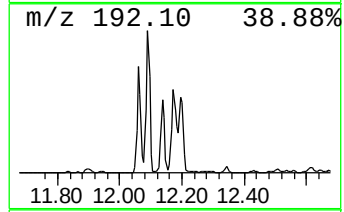
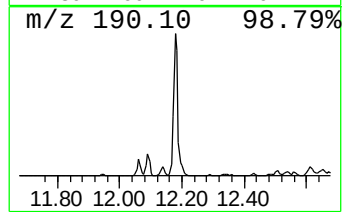
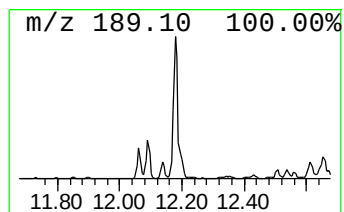
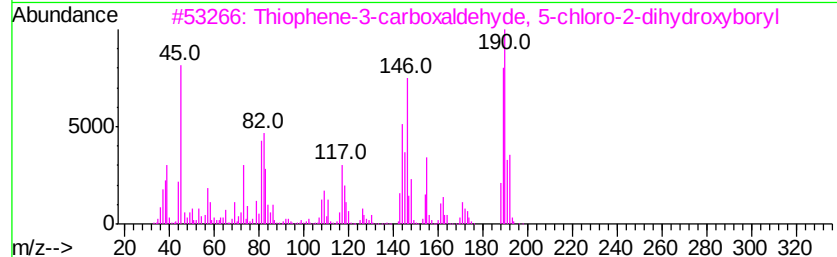
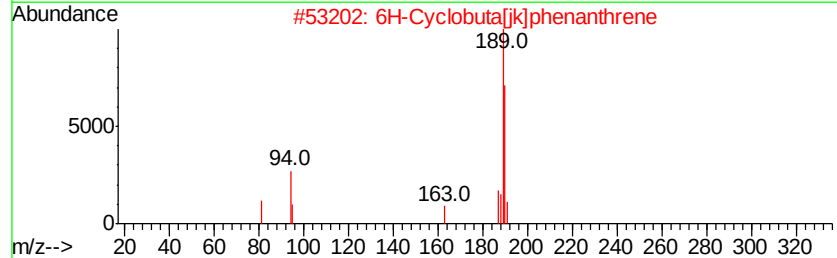
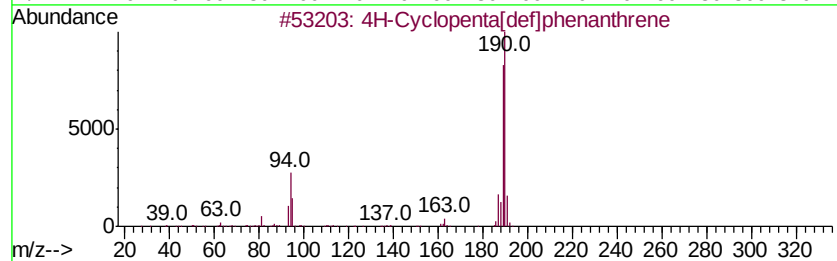
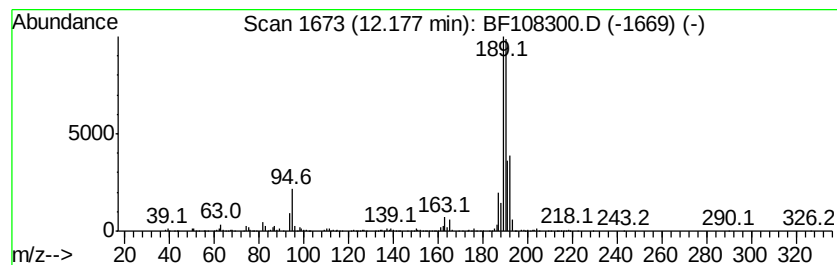
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 8 4H-Cyclopenta[def]phenanthrene Concentration Rank 4

| R.T.  | EstConc  | Area    | Relative to ISTD | R.T.  |
|-------|----------|---------|------------------|-------|
| 12.18 | 20.01 ng | 1190000 | Phenanthrene-d10 | 11.56 |

| Hit# | of | Tentative ID                       | MW  | MolForm    | CAS#        | Qual |
|------|----|------------------------------------|-----|------------|-------------|------|
| 1    | 5  | 4H-Cyclopenta[def]phenanthrene     | 190 | C15H10     | 000203-64-5 | 81   |
| 2    |    | 6H-Cyclobuta[ik]phenanthrene       | 190 | C15H10     | 083469-43-6 | 59   |
| 3    |    | Thiophene-3-carboxaldehyd, 5-ch... | 190 | C5H4BClO3S | 036155-87-0 | 52   |
| 4    |    | Methyl diselenide                  | 190 | C2H6Se2    | 007101-31-7 | 45   |
| 5    |    | 2,2'-Bis(4,5-dimethylimidazole)    | 190 | C10H14N4   | 069286-06-2 | 42   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082018\  
Data File : BF108300.D  
Acq On : 20 Aug 2018 19:51  
Operator : JU/SJ  
Sample : J4521-19 2X  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
72-11967

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF080818.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 1H-Cyclopropa[l]phenanthren... Concentration Rank 13

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.19 | 5.18 ng | 308242 | Phenanthrene-d10 | 11.56 |

| Hit# | of | 5 | Tentative ID                         | MW  | MolForm | CAS#        | Qual |
|------|----|---|--------------------------------------|-----|---------|-------------|------|
| 1    |    |   | Phenanthrene, 1-methyl-              | 192 | C15H12  | 000832-69-9 | 90   |
| 2    |    |   | Anthracene, 1-methyl-                | 192 | C15H12  | 000610-48-0 | 90   |
| 3    |    |   | 1H-Cyclopropa[l]phenanthrene, 1a,... | 192 | C15H12  | 000949-41-7 | 90   |
| 4    |    |   | Anthracene, 2-methyl-                | 192 | C15H12  | 000613-12-7 | 90   |
| 5    |    |   | Phenanthrene, 4-methyl-              | 192 | C15H12  | 000832-64-4 | 87   |

