

Data Path : Z:\SVOASRV\HPCHEM1\BNA\_F\DATA\BF071118\  
 Data File : BF107301.D  
 Acq On : 11 Jul 2018 15:45  
 Operator : JU/SJ  
 Sample : J3933-03 5X  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 EP-3-6

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-BF061918.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         | 5.148       | 475           | 478         | 489          | rBB      | 34670          | 36008         | 1.84%           | 0.157%        |
| 2         | 5.572       | 547           | 550         | 568          | rBV      | 259601         | 284520        | 14.52%          | 1.239%        |
| 3         | 6.578       | 718           | 721         | 737          | rBV      | 257670         | 288639        | 14.73%          | 1.257%        |
| 4         | 6.707       | 740           | 743         | 751          | rBV      | 360490         | 303950        | 15.51%          | 1.324%        |
| 5         | 6.931       | 777           | 781         | 788          | rBV      | 377517         | 330937        | 16.89%          | 1.441%        |
| 6         | 7.084       | 803           | 807         | 815          | rBV      | 286248         | 236600        | 12.08%          | 1.030%        |
| 7         | 7.495       | 873           | 877         | 889          | rBV      | 186465         | 175298        | 8.95%           | 0.763%        |
| 8         | 8.213       | 995           | 999         | 1015         | rBV      | 445991         | 406653        | 20.75%          | 1.771%        |
| 9         | 9.289       | 1178          | 1182        | 1191         | rBV      | 345111         | 287832        | 14.69%          | 1.253%        |
| 10        | 9.683       | 1247          | 1249        | 1255         | rVB      | 46050          | 37062         | 1.89%           | 0.161%        |
| 11        | 9.978       | 1296          | 1299        | 1303         | rBV2     | 442751         | 372153        | 18.99%          | 1.621%        |
| 12        | 10.013      | 1303          | 1305        | 1308         | rVB      | 30230          | 24787         | 1.27%           | 0.108%        |
| 13        | 10.530      | 1389          | 1393        | 1399         | rVB2     | 32113          | 28875         | 1.47%           | 0.126%        |
| 14        | 10.778      | 1430          | 1435        | 1440         | rBV2     | 173751         | 156215        | 7.97%           | 0.680%        |
| 15        | 11.077      | 1480          | 1486        | 1489         | rBV3     | 18573          | 26052         | 1.33%           | 0.113%        |
| 16        | 11.283      | 1516          | 1521        | 1524         | rBV      | 32974          | 32292         | 1.65%           | 0.141%        |
| 17        | 11.313      | 1524          | 1526        | 1533         | rVV5     | 14569          | 23399         | 1.19%           | 0.102%        |
| 18        | 11.372      | 1533          | 1536        | 1542         | rVB      | 38676          | 34721         | 1.77%           | 0.151%        |
| 19        | 11.477      | 1550          | 1554        | 1556         | rBV      | 426748         | 379639        | 19.38%          | 1.653%        |
| 20        | 11.501      | 1556          | 1558        | 1562         | rVV      | 805524         | 644872        | 32.91%          | 2.808%        |
| 21        | 11.554      | 1562          | 1567        | 1571         | rVV      | 222499         | 185096        | 9.45%           | 0.806%        |
| 22        | 11.713      | 1589          | 1594        | 1597         | rBV2     | 69132          | 80969         | 4.13%           | 0.353%        |
| 23        | 11.766      | 1601          | 1603        | 1605         | rVV      | 33494          | 22820         | 1.16%           | 0.099%        |
| 24        | 11.813      | 1608          | 1611        | 1615         | rVB2     | 31030          | 36347         | 1.86%           | 0.158%        |
| 25        | 11.889      | 1619          | 1624        | 1629         | rVB4     | 14828          | 27564         | 1.41%           | 0.120%        |
| 26        | 11.942      | 1629          | 1633        | 1636         | rBV3     | 15653          | 20689         | 1.06%           | 0.090%        |
| 27        | 11.977      | 1636          | 1639        | 1642         | rVV      | 180232         | 168394        | 8.59%           | 0.733%        |
| 28        | 12.007      | 1642          | 1644        | 1647         | rVB      | 232913         | 192973        | 9.85%           | 0.840%        |
| 29        | 12.054      | 1647          | 1652        | 1655         | rBV      | 100534         | 91198         | 4.65%           | 0.397%        |
| 30        | 12.095      | 1655          | 1659        | 1661         | rVV2     | 247513         | 306713        | 15.65%          | 1.336%        |
| 31        | 12.119      | 1661          | 1663        | 1666         | rVB      | 145175         | 118534        | 6.05%           | 0.516%        |
| 32        | 12.272      | 1686          | 1689        | 1693         | rBV      | 152675         | 133126        | 6.79%           | 0.580%        |
| 33        | 12.313      | 1693          | 1696        | 1699         | rVV      | 98820          | 86578         | 4.42%           | 0.377%        |
| 34        | 12.424      | 1710          | 1715        | 1718         | rBV2     | 66227          | 81769         | 4.17%           | 0.356%        |

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 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 EP-3-6

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-BF061918.M

Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |         |         |        |
|----|--------|------|------|------|------|---------|---------|---------|--------|
| 35 | 12.454 | 1718 | 1720 | 1722 | rVV  | 57543   | 45999   | 2.35%   | 0.200% |
| 36 | 12.483 | 1722 | 1725 | 1727 | rVB  | 44106   | 41794   | 2.13%   | 0.182% |
| 37 | 12.530 | 1729 | 1733 | 1736 | rBV  | 180156  | 194895  | 9.95%   | 0.849% |
| 38 | 12.572 | 1736 | 1740 | 1745 | rVV3 | 104946  | 176112  | 8.99%   | 0.767% |
| 39 | 12.630 | 1745 | 1750 | 1758 | rVB2 | 128849  | 178694  | 9.12%   | 0.778% |
| 40 | 12.707 | 1758 | 1763 | 1766 | rBV  | 1600007 | 1577271 | 80.50%  | 6.868% |
| 41 | 12.736 | 1766 | 1768 | 1770 | rVV  | 36544   | 28204   | 1.44%   | 0.123% |
| 42 | 12.760 | 1770 | 1772 | 1776 | rVB2 | 70253   | 63556   | 3.24%   | 0.277% |
| 43 | 12.795 | 1776 | 1778 | 1781 | rBV3 | 17203   | 19765   | 1.01%   | 0.086% |
| 44 | 12.854 | 1783 | 1788 | 1790 | rVV3 | 88020   | 112022  | 5.72%   | 0.488% |
| 45 | 12.871 | 1790 | 1791 | 1795 | rVB3 | 36268   | 32289   | 1.65%   | 0.141% |
| 46 | 12.936 | 1795 | 1802 | 1806 | rBV  | 1574488 | 1911862 | 97.58%  | 8.325% |
| 47 | 12.977 | 1806 | 1809 | 1813 | rVB  | 116574  | 120909  | 6.17%   | 0.526% |
| 48 | 13.060 | 1813 | 1823 | 1826 | rBV2 | 380633  | 453437  | 23.14%  | 1.974% |
| 49 | 13.095 | 1826 | 1829 | 1833 | rVB  | 110320  | 120681  | 6.16%   | 0.526% |
| 50 | 13.148 | 1833 | 1838 | 1843 | rBV2 | 174155  | 328337  | 16.76%  | 1.430% |
| 51 | 13.195 | 1843 | 1846 | 1849 | rVV3 | 20888   | 32660   | 1.67%   | 0.142% |
| 52 | 13.236 | 1849 | 1853 | 1854 | rVV3 | 138282  | 163987  | 8.37%   | 0.714% |
| 53 | 13.260 | 1854 | 1857 | 1860 | rVB  | 193827  | 217459  | 11.10%  | 0.947% |
| 54 | 13.324 | 1865 | 1868 | 1870 | rBV  | 100885  | 76765   | 3.92%   | 0.334% |
| 55 | 13.366 | 1870 | 1875 | 1878 | rBV2 | 230604  | 264857  | 13.52%  | 1.153% |
| 56 | 13.419 | 1881 | 1884 | 1886 | rVB2 | 40182   | 32449   | 1.66%   | 0.141% |
| 57 | 13.460 | 1888 | 1891 | 1893 | rBV  | 187733  | 163920  | 8.37%   | 0.714% |
| 58 | 13.489 | 1893 | 1896 | 1899 | rVB  | 177312  | 142393  | 7.27%   | 0.620% |
| 59 | 13.554 | 1904 | 1907 | 1908 | rBV2 | 30699   | 25863   | 1.32%   | 0.113% |
| 60 | 13.571 | 1908 | 1910 | 1914 | rVB2 | 33377   | 31250   | 1.59%   | 0.136% |
| 61 | 13.636 | 1918 | 1921 | 1922 | rBV2 | 26280   | 27900   | 1.42%   | 0.121% |
| 62 | 13.683 | 1927 | 1929 | 1931 | rVV  | 50443   | 46206   | 2.36%   | 0.201% |
| 63 | 13.707 | 1931 | 1933 | 1935 | rVB2 | 31856   | 24777   | 1.26%   | 0.108% |
| 64 | 13.777 | 1941 | 1945 | 1948 | rBV  | 212360  | 197209  | 10.07%  | 0.859% |
| 65 | 13.830 | 1952 | 1954 | 1957 | rVB  | 38793   | 38545   | 1.97%   | 0.168% |
| 66 | 13.883 | 1958 | 1963 | 1965 | rBV  | 253720  | 267824  | 13.67%  | 1.166% |
| 67 | 13.907 | 1965 | 1967 | 1970 | rVB  | 236653  | 181785  | 9.28%   | 0.792% |
| 68 | 13.936 | 1970 | 1972 | 1978 | rBV3 | 190591  | 262835  | 13.41%  | 1.145% |
| 69 | 13.989 | 1978 | 1981 | 1987 | rVB  | 216977  | 224892  | 11.48%  | 0.979% |
| 70 | 14.054 | 1987 | 1992 | 1995 | rBV  | 70455   | 118158  | 6.03%   | 0.515% |
| 71 | 14.130 | 1998 | 2005 | 2009 | rBV2 | 1160651 | 1959305 | 100.00% | 8.532% |

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Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

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-BF061918.M  
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |        |         |        |        |
|----|--------|------|------|------|------|--------|---------|--------|--------|
| 72 | 14.171 | 2009 | 2012 | 2014 | rVB  | 986758 | 917816  | 46.84% | 3.997% |
| 73 | 14.248 | 2022 | 2025 | 2028 | rBV  | 165731 | 129981  | 6.63%  | 0.566% |
| 74 | 14.295 | 2030 | 2033 | 2034 | rBV2 | 74039  | 72852   | 3.72%  | 0.317% |
| 75 | 14.371 | 2042 | 2046 | 2048 | rBV2 | 104236 | 130914  | 6.68%  | 0.570% |
| 76 | 14.401 | 2048 | 2051 | 2058 | rVB4 | 95530  | 182405  | 9.31%  | 0.794% |
| 77 | 14.489 | 2064 | 2066 | 2068 | rBV2 | 92360  | 78606   | 4.01%  | 0.342% |
| 78 | 14.530 | 2068 | 2073 | 2076 | rVV  | 278993 | 307900  | 15.71% | 1.341% |
| 79 | 14.565 | 2076 | 2079 | 2083 | rVB  | 117838 | 103661  | 5.29%  | 0.451% |
| 80 | 14.607 | 2083 | 2086 | 2088 | rBV2 | 94071  | 109658  | 5.60%  | 0.478% |
| 81 | 14.630 | 2088 | 2090 | 2092 | rVB3 | 65909  | 58441   | 2.98%  | 0.254% |
| 82 | 14.660 | 2092 | 2095 | 2097 | rBV  | 111714 | 98695   | 5.04%  | 0.430% |
| 83 | 14.865 | 2127 | 2130 | 2133 | rBV2 | 87019  | 112152  | 5.72%  | 0.488% |
| 84 | 15.054 | 2158 | 2162 | 2165 | rBV  | 119993 | 126405  | 6.45%  | 0.550% |
| 85 | 15.230 | 2186 | 2192 | 2195 | rBV  | 801837 | 1417916 | 72.37% | 6.174% |
| 86 | 15.342 | 2207 | 2211 | 2214 | rBV  | 173841 | 208506  | 10.64% | 0.908% |
| 87 | 15.554 | 2242 | 2247 | 2253 | rVB  | 513070 | 678368  | 34.62% | 2.954% |
| 88 | 15.624 | 2253 | 2259 | 2265 | rBV  | 707441 | 967140  | 49.36% | 4.211% |
| 89 | 15.683 | 2265 | 2269 | 2272 | rBV  | 322746 | 424199  | 21.65% | 1.847% |
| 90 | 15.718 | 2272 | 2275 | 2281 | rVB2 | 226752 | 309759  | 15.81% | 1.349% |
| 91 | 17.271 | 2532 | 2539 | 2546 | rBV  | 259661 | 532399  | 27.17% | 2.318% |
| 92 | 17.765 | 2616 | 2623 | 2632 | rVB  | 178294 | 426785  | 21.78% | 1.858% |

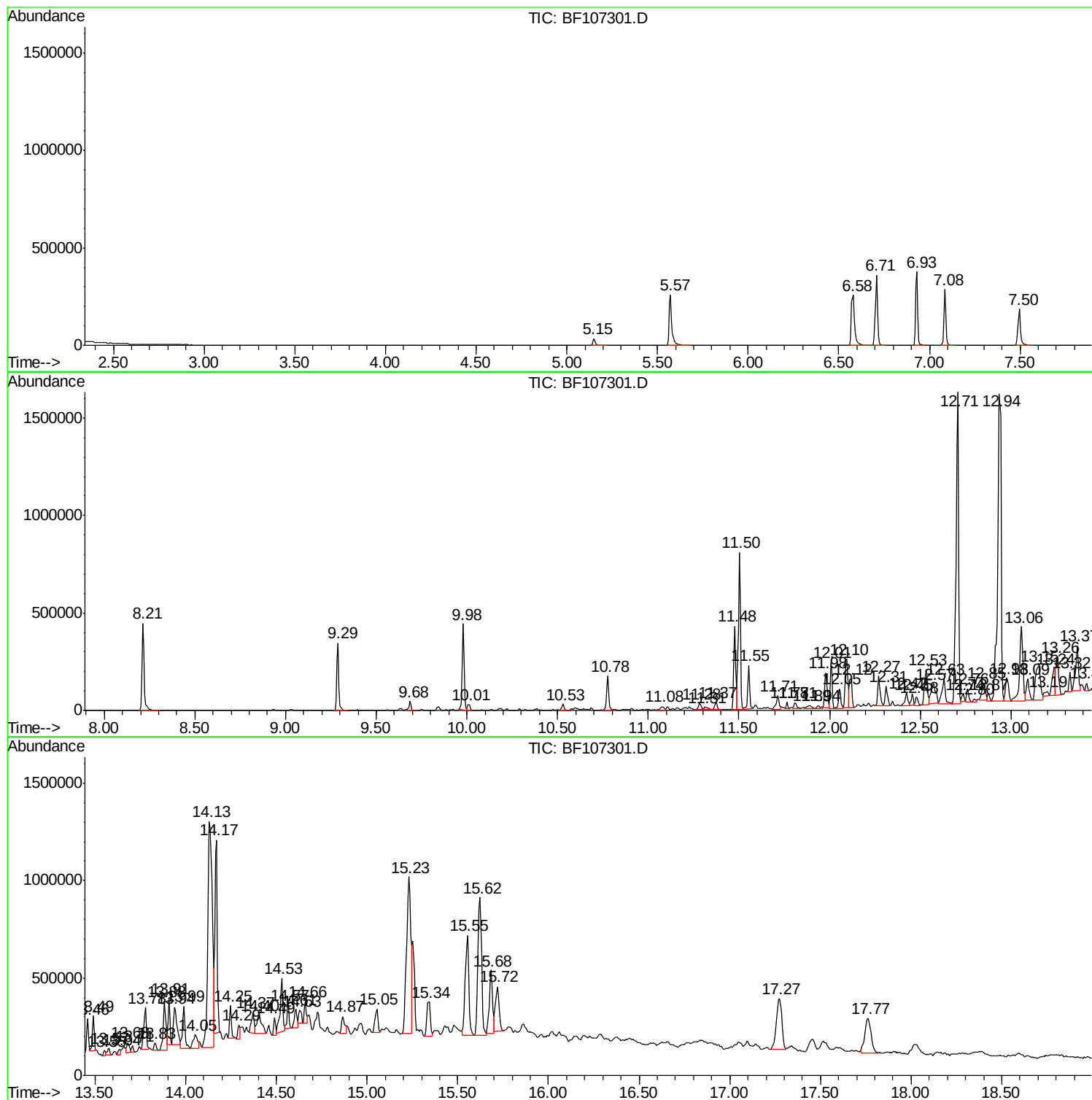
Sum of corrected areas: 22964698

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
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Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.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\BF071118\  
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Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

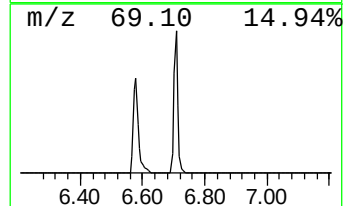
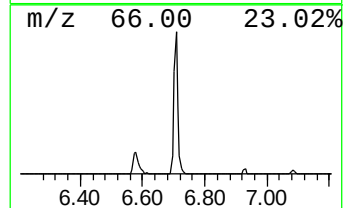
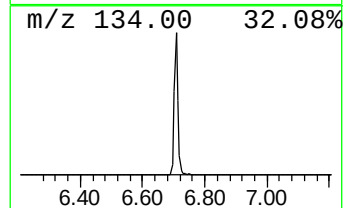
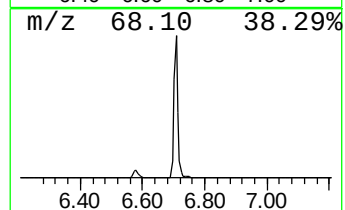
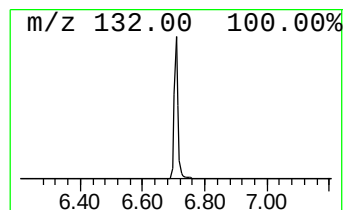
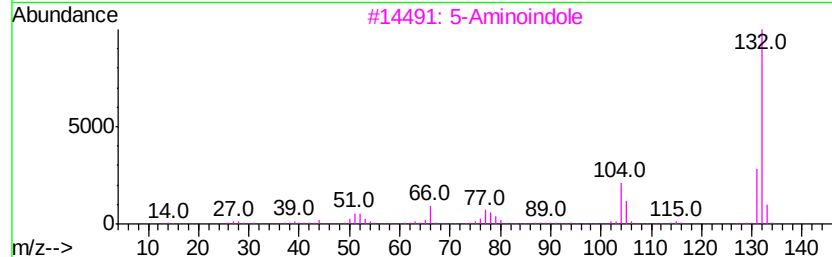
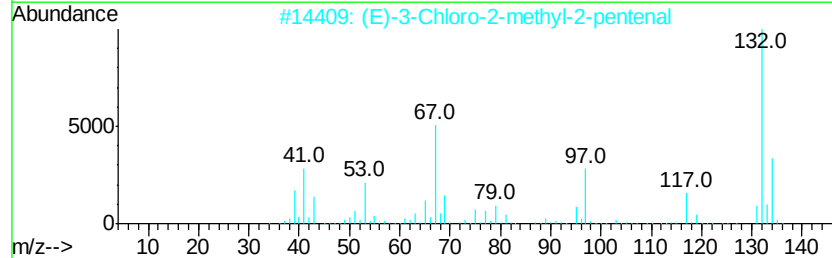
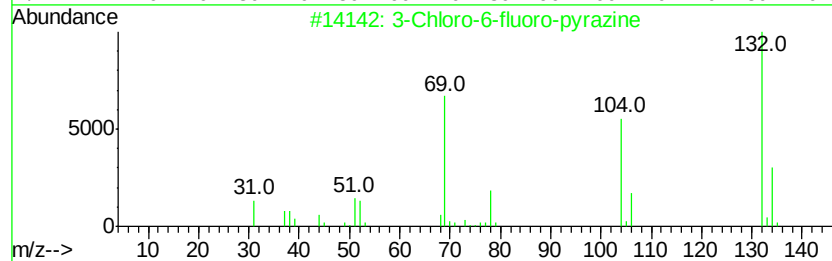
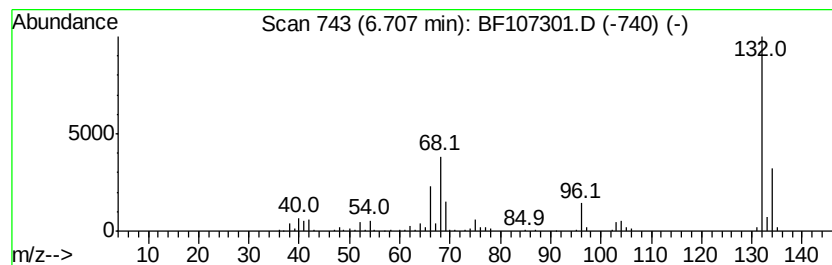
Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 1 unknown6.71 Concentration Rank 2

| R.T. | EstConc  | Area   | Relative to ISTD       | R.T. |
|------|----------|--------|------------------------|------|
| 6.71 | 18.37 ng | 303950 | 1,4-Dichlorobenzene-d4 | 6.93 |

| Hit# | of | 5 | Tentative ID                     | MW  | MolForm   | CAS#         | Qual |
|------|----|---|----------------------------------|-----|-----------|--------------|------|
| 1    |    |   | 3-Chloro-6-fluoro-pyrazine       | 132 | C4H2ClFN2 | 1000146-10-7 | 27   |
| 2    |    |   | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO   | 031357-76-3  | 16   |
| 3    |    |   | 5-Aminoindole                    | 132 | C8H8N2    | 005192-03-0  | 12   |
| 4    |    |   | 1H-Benzimidazole, 2-methyl-      | 132 | C8H8N2    | 000615-15-6  | 10   |
| 5    |    |   | (5-Methyl-2-pyridyl)acetonitrile | 132 | C8H8N2    | 1000241-93-9 | 9    |



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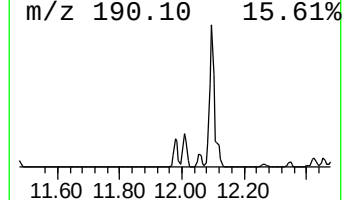
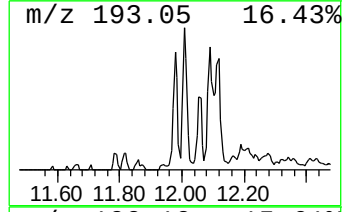
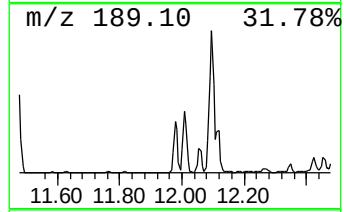
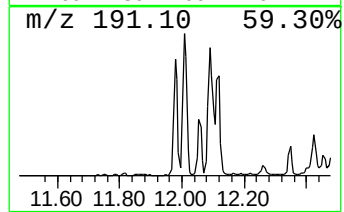
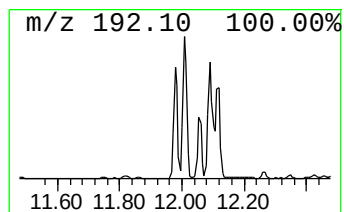
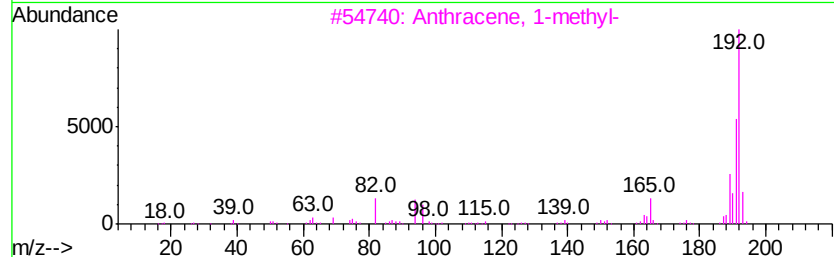
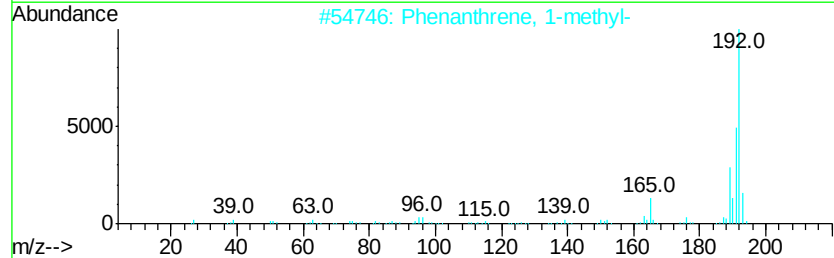
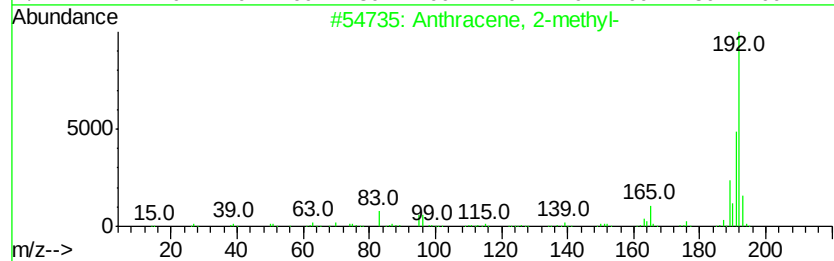
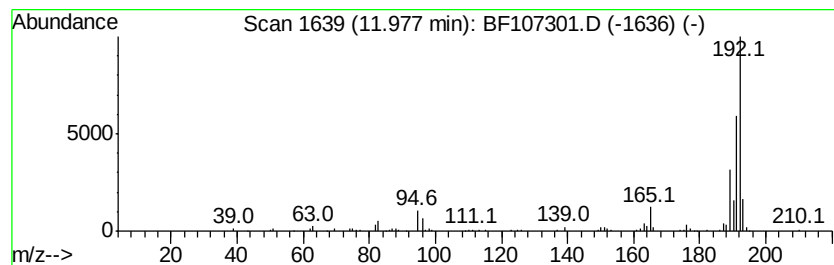
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 3 Anthracene, 2-methyl- Concentration Rank 10

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.98 | 8.87 ng | 168394 | Phenanthrene-d10 | 11.48 |

| 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    |    | Anthracene, 9-methyl-   | 192 | C15H12  | 000779-02-2 | 96   |



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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

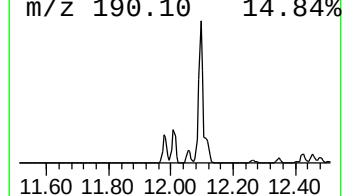
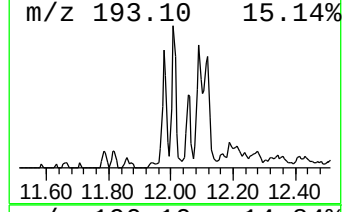
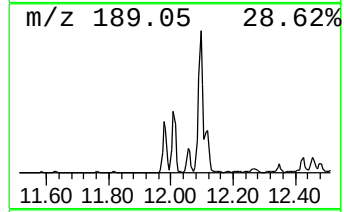
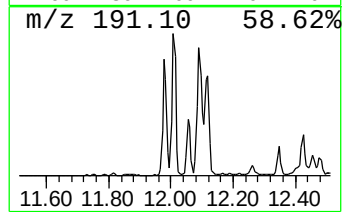
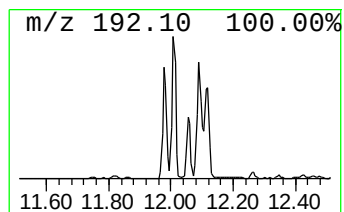
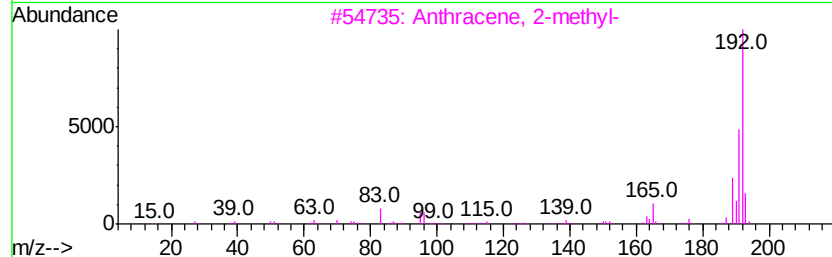
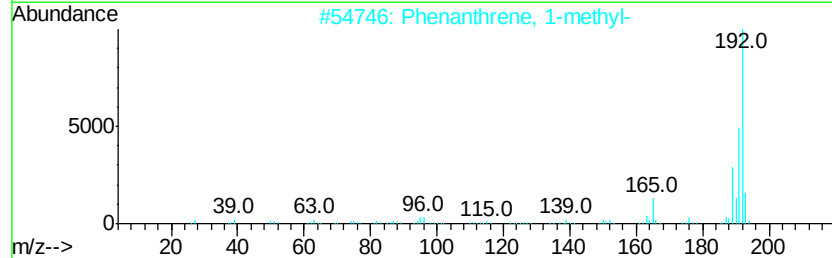
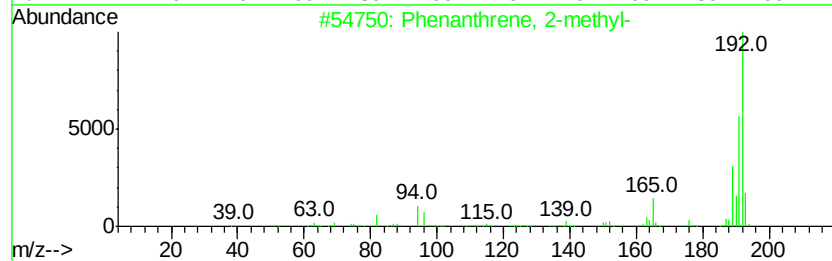
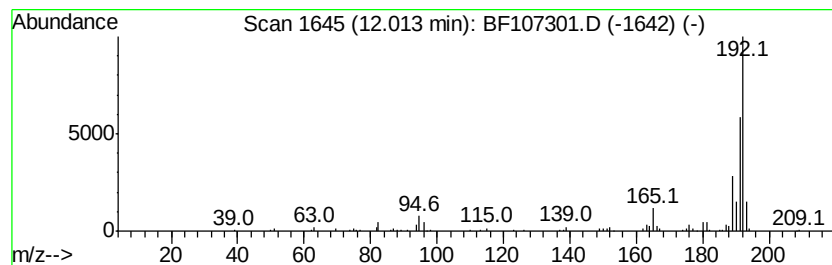
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TIC Integration Parameters: LSCINT.P

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Peak Number 4 Phenanthrene, 2-methyl- Concentration Rank 6

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 12.01 | 10.17 ng | 192973 | Phenanthrene-d10 | 11.48 |

| 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       |   | Anthracene, 2-methyl-                  | 192 | C15H12  | 000613-12-7 | 96   |
| 4       |   | 1H-Cyclopropa[1,1]phenanthrene, 1a,... | 192 | C15H12  | 000949-41-7 | 96   |
| 5       |   | Anthracene, 1-methyl-                  | 192 | C15H12  | 000610-48-0 | 96   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

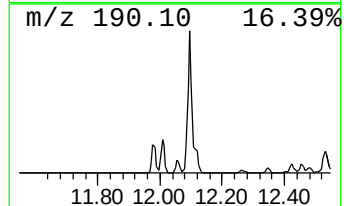
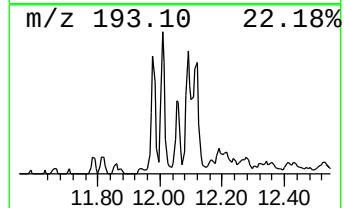
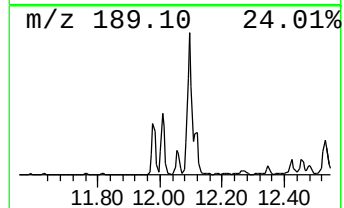
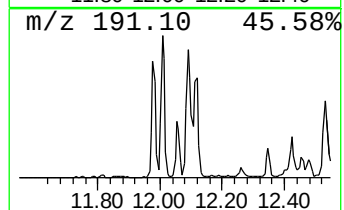
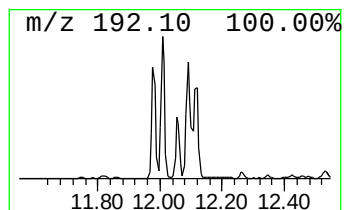
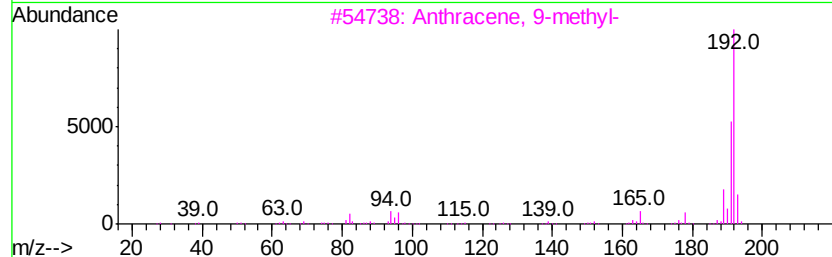
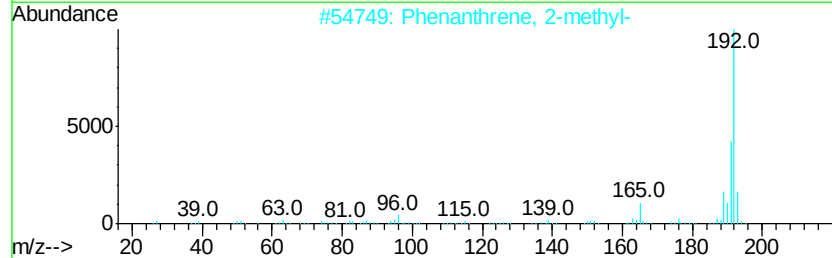
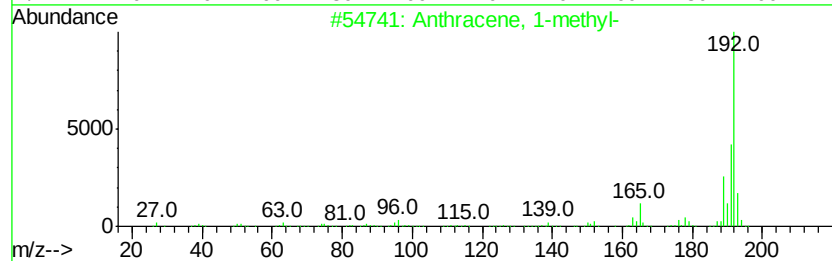
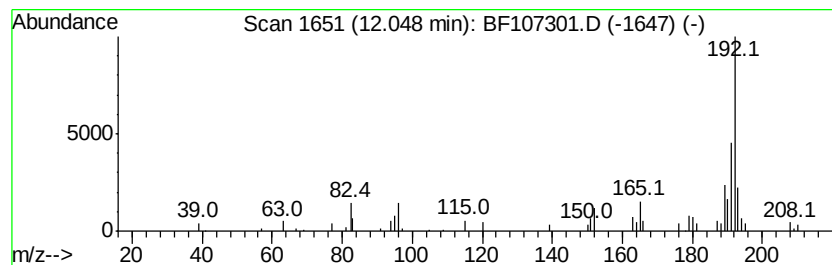
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TIC Integration Parameters: LSCINT.P

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Peak Number 5 Anthracene, 1-methyl- Concentration Rank 14

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 12.05 | 4.80 ng | 91198 | Phenanthrene-d10 | 11.48 |

| Hit# of | 5 | Tentative ID                          | MW  | MolForm | CAS#        | Qual |
|---------|---|---------------------------------------|-----|---------|-------------|------|
| 1       |   | Anthracene, 1-methyl-                 | 192 | C15H12  | 000610-48-0 | 96   |
| 2       |   | Phenanthrene, 2-methyl-               | 192 | C15H12  | 002531-84-2 | 95   |
| 3       |   | Anthracene, 9-methyl-                 | 192 | C15H12  | 000779-02-2 | 95   |
| 4       |   | Phenanthrene, 1-methyl-               | 192 | C15H12  | 000832-69-9 | 94   |
| 5       |   | 1H-Cyclopropa[l]phenanthrene, 1a, ... | 192 | C15H12  | 000949-41-7 | 94   |





Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

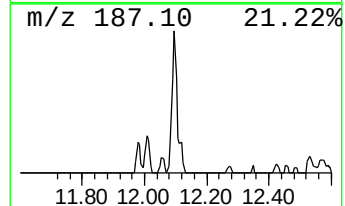
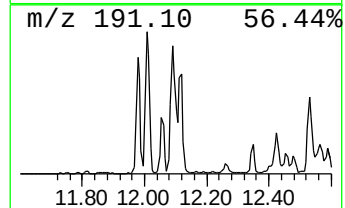
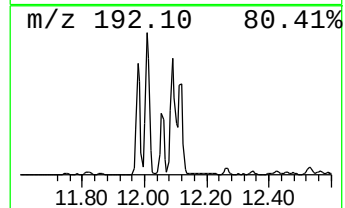
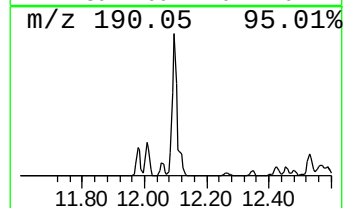
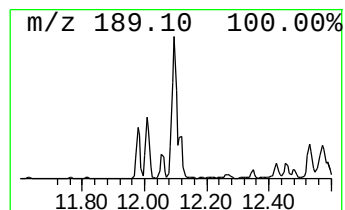
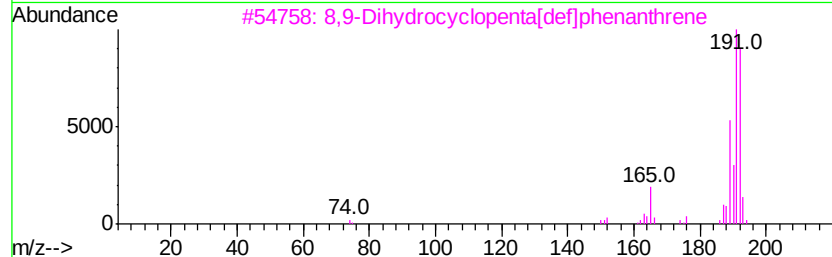
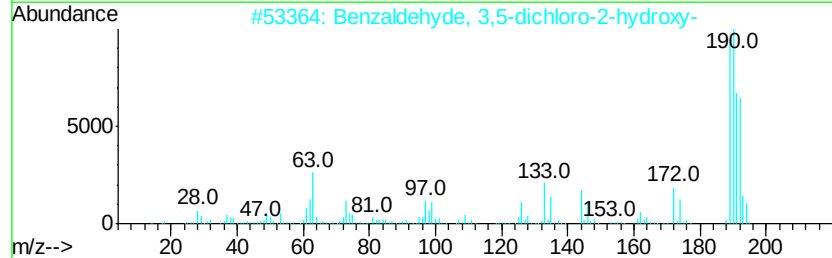
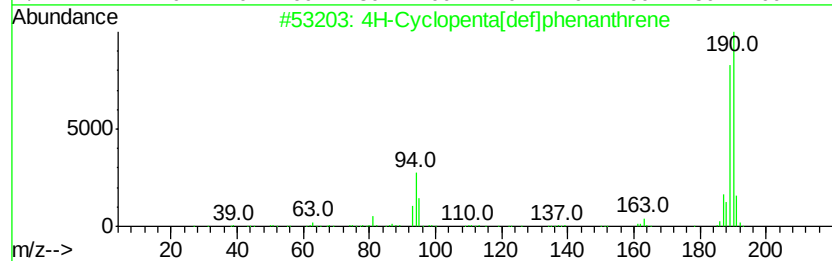
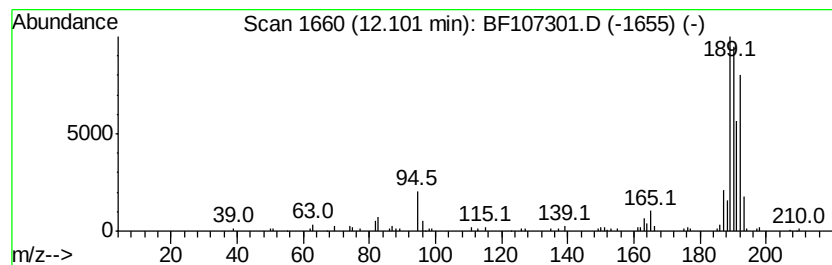
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 6 4H-Cyclopenta[def]phenanthrene Concentration Rank 3

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 12.10 | 16.16 ng | 306713 | Phenanthrene-d10 | 11.48 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|---------|---|-------------------------------------|-----|-----------|-------------|------|
| 1       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10    | 000203-64-5 | 91   |
| 2       |   | Benzaldehyde, 3,5-dichloro-2-hyd... | 190 | C7H4Cl2O2 | 000090-60-8 | 72   |
| 3       |   | 8,9-Dihydrocyclopenta[def]phenan... | 192 | C15H12    | 027410-55-5 | 42   |
| 4       |   | Phenanthrene, 4-methyl-             | 192 | C15H12    | 000832-64-4 | 42   |
| 5       |   | 5H-Dibenzo[a,d]cycloheptene         | 192 | C15H12    | 000256-81-5 | 42   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

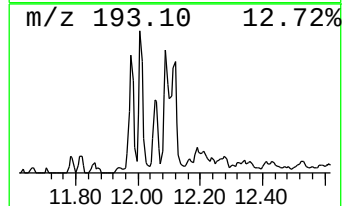
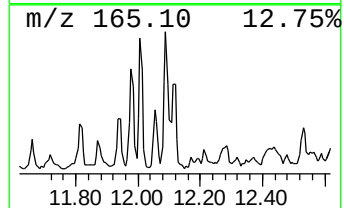
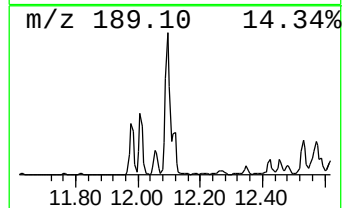
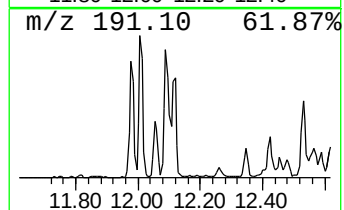
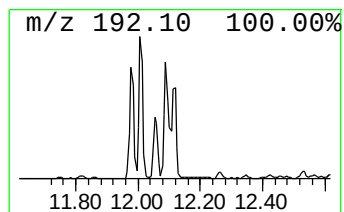
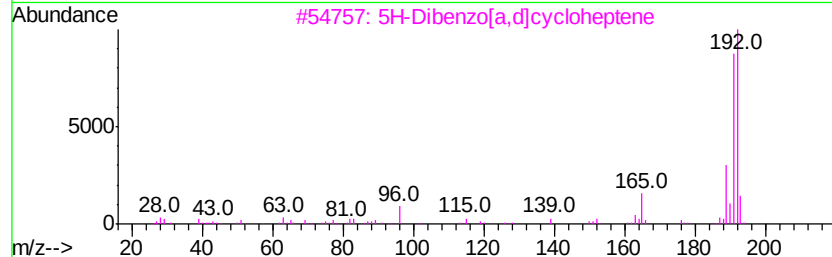
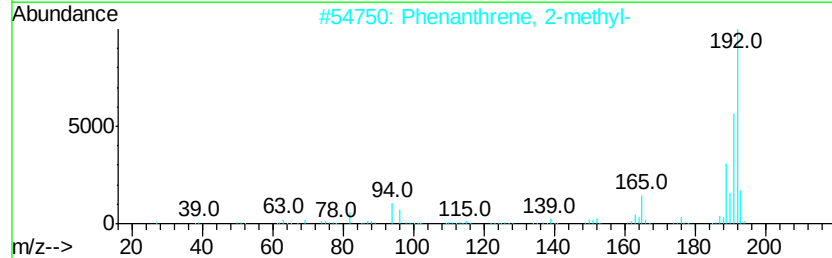
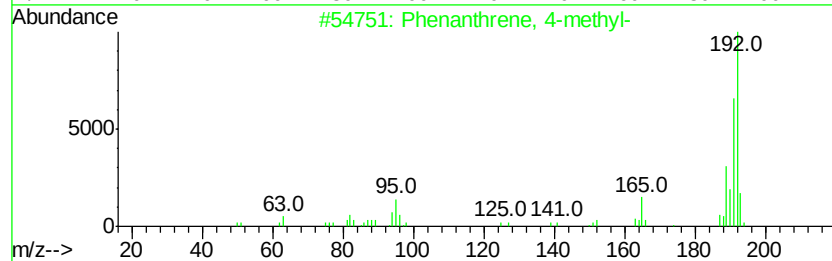
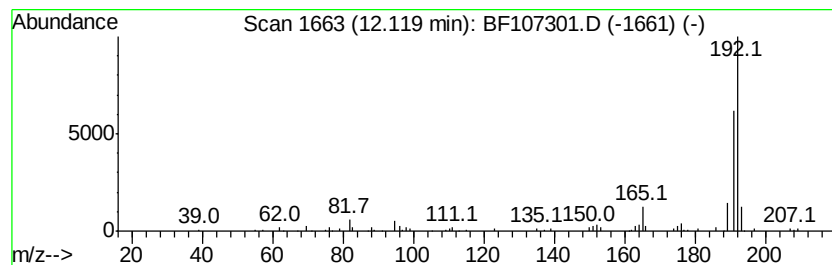
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 7 Phenanthrene, 4-methyl- Concentration Rank 12

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.12 | 6.24 ng | 118534 | Phenanthrene-d10 | 11.48 |

| Hit# | of | 5 | Tentative ID                 | MW  | MolForm | CAS#        | Qual |
|------|----|---|------------------------------|-----|---------|-------------|------|
| 1    |    |   | Phenanthrene, 4-methyl-      | 192 | C15H12  | 000832-64-4 | 87   |
| 2    |    |   | Phenanthrene, 2-methyl-      | 192 | C15H12  | 002531-84-2 | 86   |
| 3    |    |   | 5H-Dibenzof[a,d]cycloheptene | 192 | C15H12  | 000256-81-5 | 80   |
| 4    |    |   | 1H-Indene, 2-phenyl-         | 192 | C15H12  | 004505-48-0 | 80   |
| 5    |    |   | Anthracene, 9-methyl-        | 192 | C15H12  | 000779-02-2 | 80   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

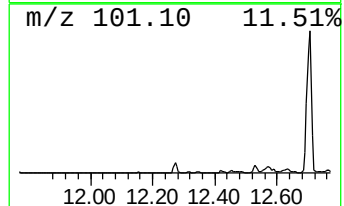
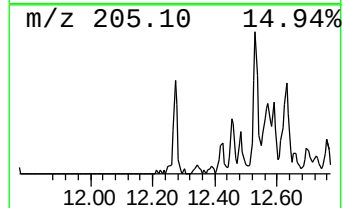
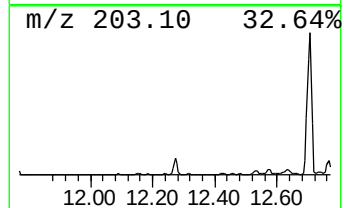
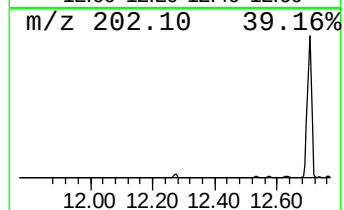
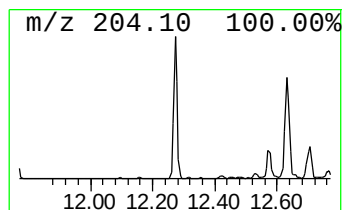
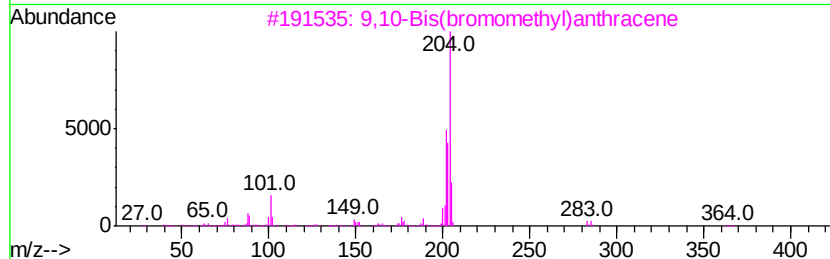
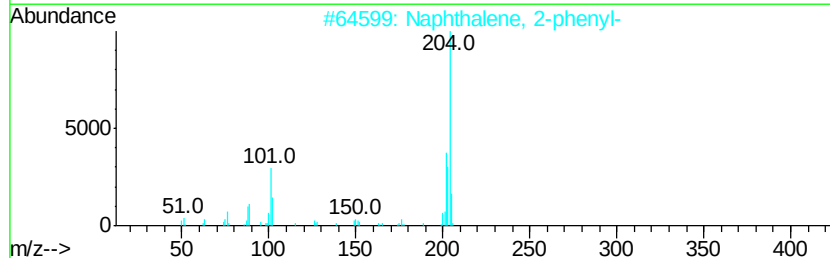
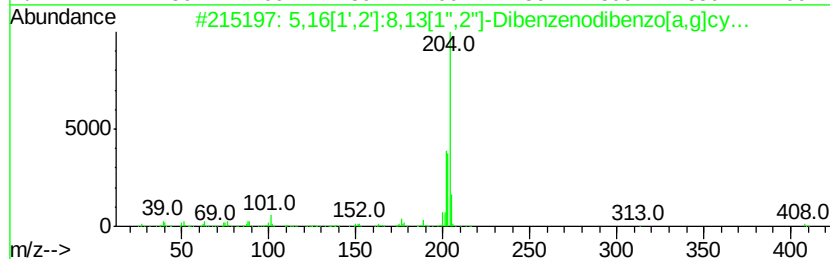
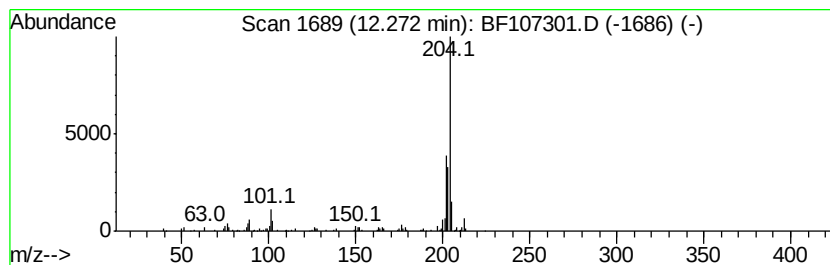
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 8 5,16[1',2']:8,13[1'',2'']-D... Concentration Rank 11

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.27 | 7.01 ng | 133126 | Phenanthrene-d10 | 11.48 |

| Hit# | of                                  | 5         | Tentative ID | MW        | MolForm    | CAS#        | Qual   |             |    |
|------|-------------------------------------|-----------|--------------|-----------|------------|-------------|--------|-------------|----|
| 1    | 5,16                                | [1',2']   | :8,13        | [1'',2''] | -Dibenz... | 408         | C32H24 | 005672-97-9 | 87 |
| 2    | Naphthalene,                        | 2-phenyl- |              | 204       | C16H12     | 000612-94-2 | 70     |             |    |
| 3    | 9,10-Bis(bromomethyl)anthracene     |           |              | 362       | C16H12Br2  | 034373-96-1 | 70     |             |    |
| 4    | Tricyclo[8.2.2.2(4,7)]hexadeca-2... |           |              | 204       | C16H12     | 006572-60-7 | 58     |             |    |
| 5    | Naphthalene,                        | 1-phenyl- |              | 204       | C16H12     | 000605-02-7 | 55     |             |    |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

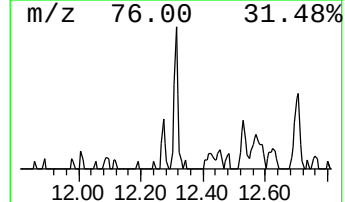
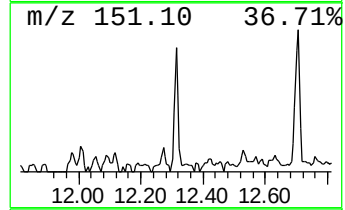
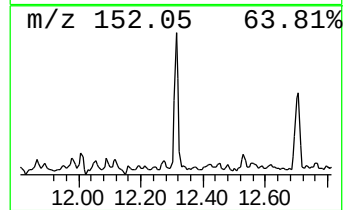
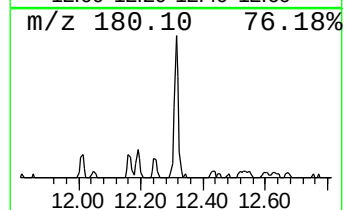
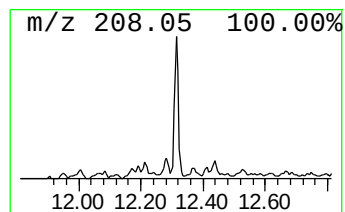
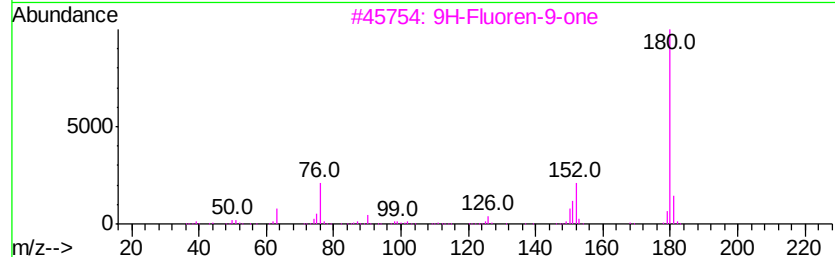
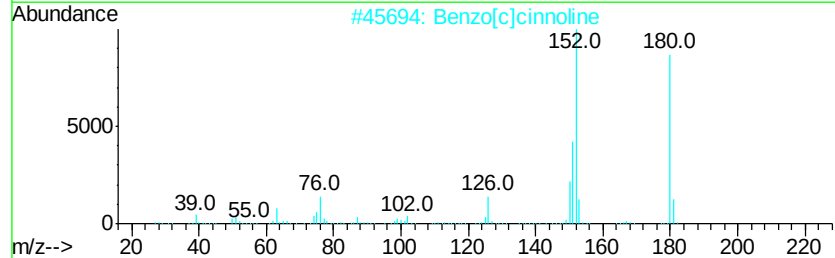
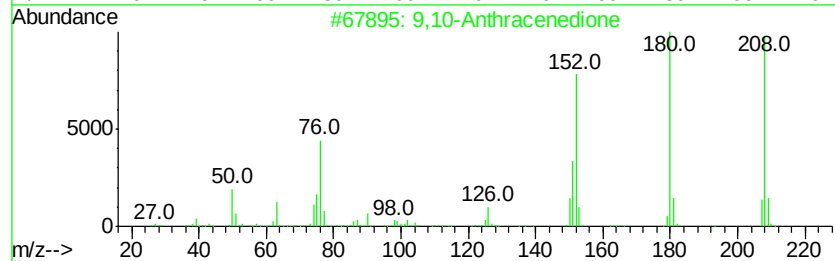
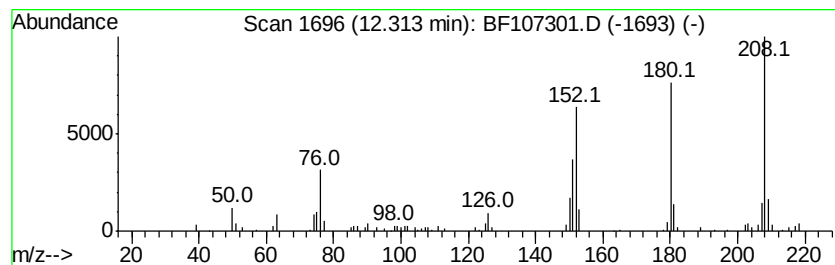
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 9 9,10-Anthracenedione Concentration Rank 15

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 12.31 | 4.56 ng | 86578 | Phenanthrene-d10 | 11.48 |

| 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 | 91   |
| 3    |    | 9H-Fluoren-9-one     | 180 | C13H8O  | 000486-25-9 | 60   |
| 4    |    | 1H-Phenalen-1-one    | 180 | C13H8O  | 000548-39-0 | 60   |
| 5    |    | 1,4-Anthracenedione  | 208 | C14H8O2 | 000635-12-1 | 52   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

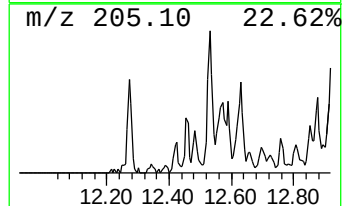
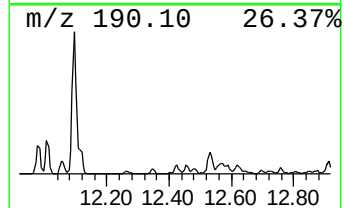
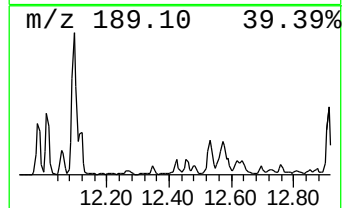
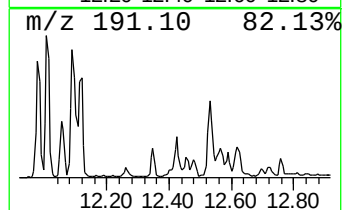
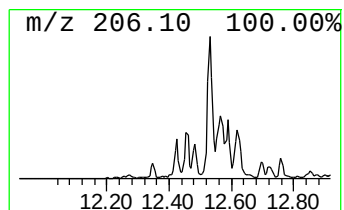
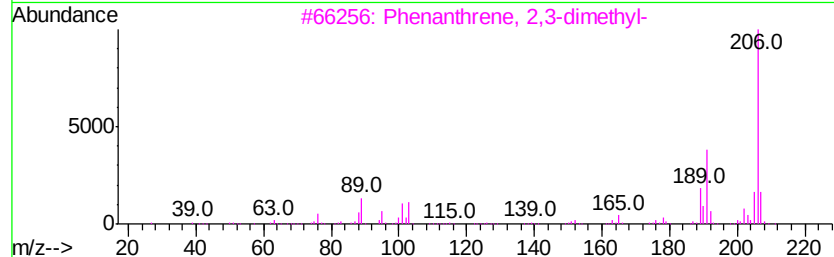
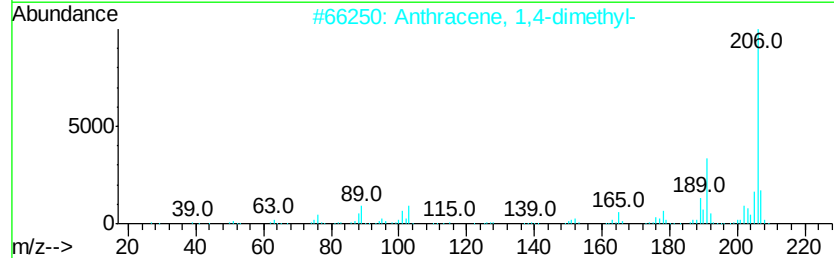
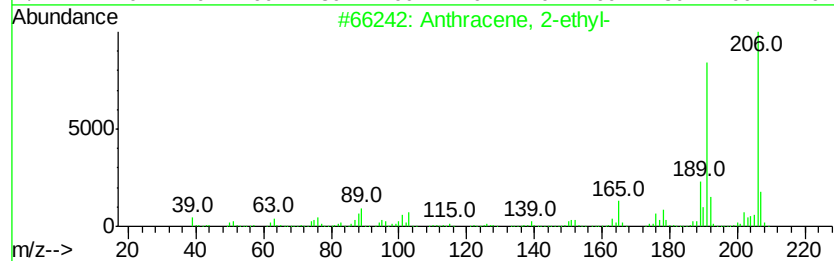
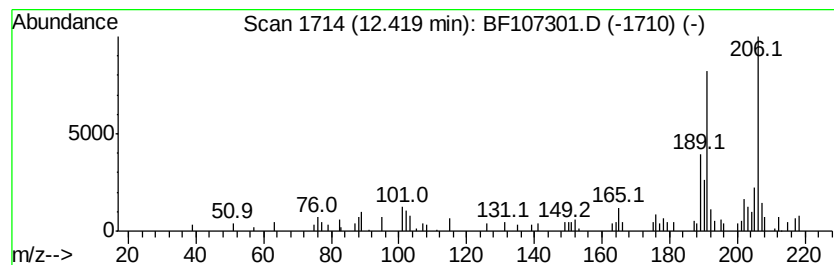
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BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.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 Anthracene, 2-ethyl- Concentration Rank 16

| R.T.    | EstConc | Area                          | Relative to ISTD |         | R.T.        |      |
|---------|---------|-------------------------------|------------------|---------|-------------|------|
| 12.42   | 4.31 ng | 81769                         | Phenanthrene-d10 |         | 11.48       |      |
| Hit# of | 5       | Tentative ID                  | MW               | MolForm | CAS#        | Qual |
| 1       |         | Anthracene, 2-ethyl-          | 206              | C16H14  | 052251-71-5 | 95   |
| 2       |         | Anthracene, 1,4-dimethyl-     | 206              | C16H14  | 000781-92-0 | 94   |
| 3       |         | Phenanthrene, 2,3-dimethyl-   | 206              | C16H14  | 003674-65-5 | 91   |
| 4       |         | Phenanthrene, 4,5-dimethyl-   | 206              | C16H14  | 003674-69-9 | 90   |
| 5       |         | 1H-Indene, 2-methyl-3-phenyl- | 206              | C16H14  | 035099-60-6 | 90   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

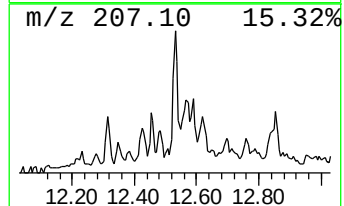
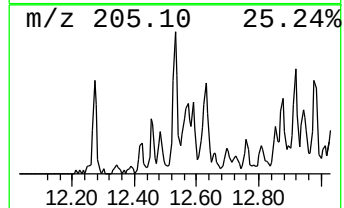
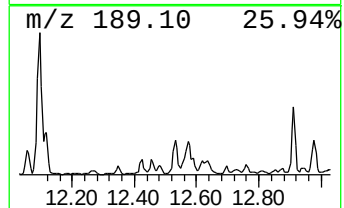
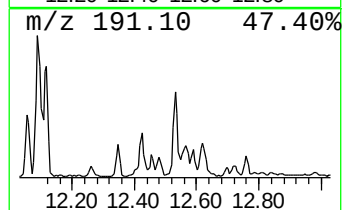
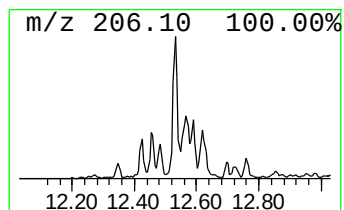
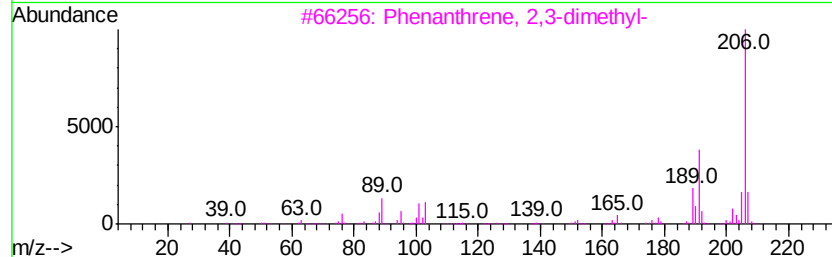
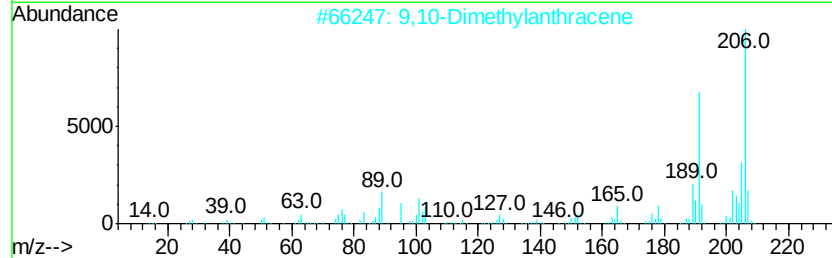
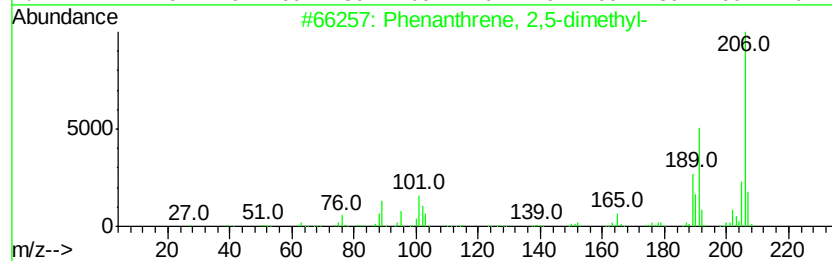
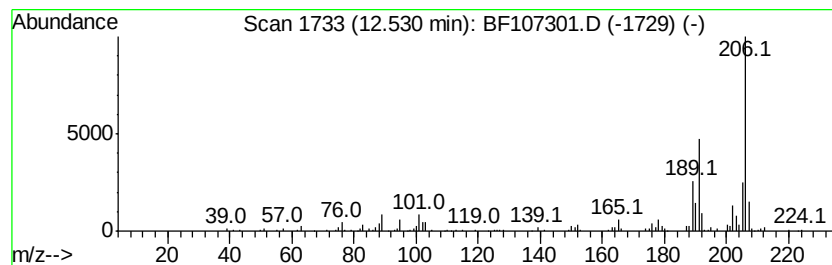
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TIC Integration Parameters: LSCINT.P

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

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 12.53 | 10.27 ng | 194895 | Phenanthrene-d10 | 11.48 |

| Hit# | of | Tentative ID                      | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 2,5-dimethyl-       | 206 | C16H14  | 003674-66-6 | 98   |
| 2    |    | 9,10-Dimethylantracene            | 206 | C16H14  | 000781-43-1 | 93   |
| 3    |    | Phenanthrene, 2,3-dimethyl-       | 206 | C16H14  | 003674-65-5 | 93   |
| 4    |    | 1,3-Diphenyl-3-methylcyclopropene | 206 | C16H14  | 086544-79-8 | 90   |
| 5    |    | Phenanthrene, 1,7-dimethyl-       | 206 | C16H14  | 000483-87-4 | 89   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

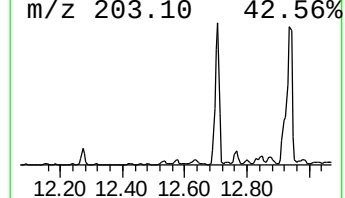
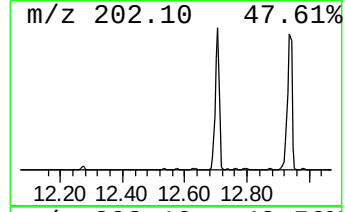
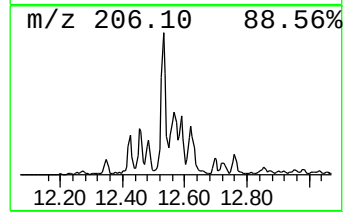
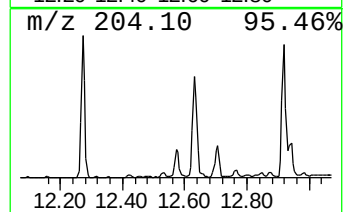
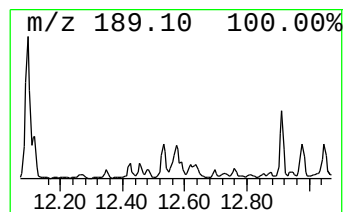
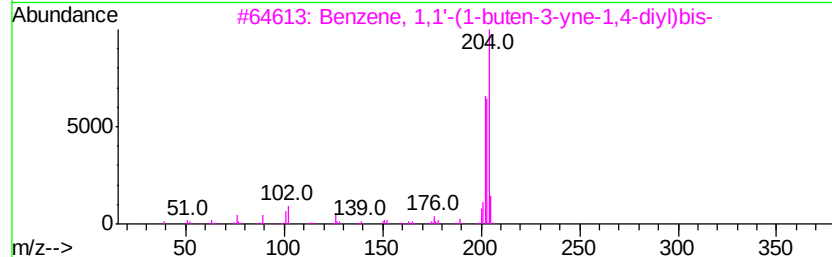
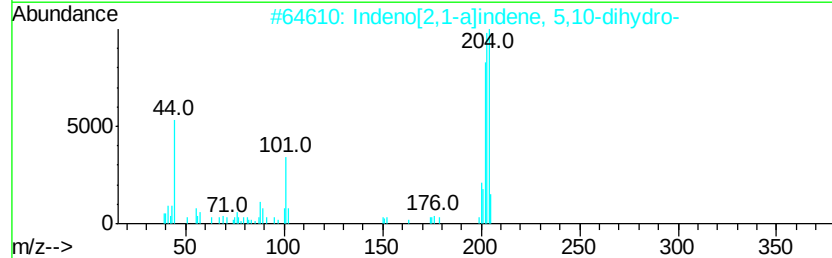
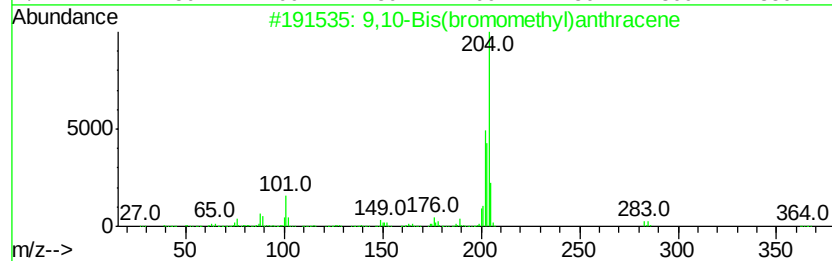
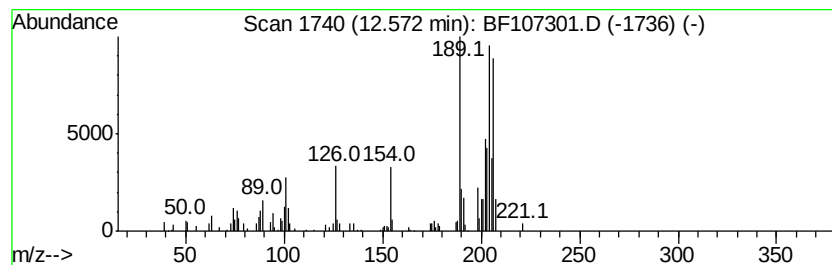
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 12 unknown12.57 Concentration Rank 9

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.57 | 9.28 ng | 176112 | Phenanthrene-d10 | 11.48 |

| Hit# | of | Tentative ID                               | MW  | MolForm   | CAS#        | Qual |
|------|----|--------------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | 9,10-Bis(bromomethyl)anthracene            | 362 | C16H12Br2 | 034373-96-1 | 27   |
| 2    |    | Indeno[2,1-a]indene, 5,10-dihydro-         | 204 | C16H12    | 006543-29-9 | 25   |
| 3    |    | Benzene, 1,1'-(1-buten-3-yne-1,4-diyl)bis- | 204 | C16H12    | 013141-45-2 | 18   |
| 4    |    | Naphthalene, 1-phenyl-                     | 204 | C16H12    | 000605-02-7 | 15   |
| 5    |    | 1,3-Butadiene, 1,4-diphenyl-, (E)-         | 206 | C16H14    | 000538-81-8 | 15   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

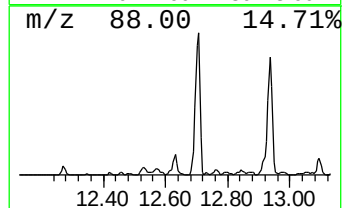
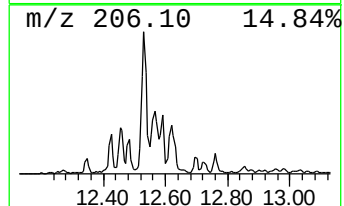
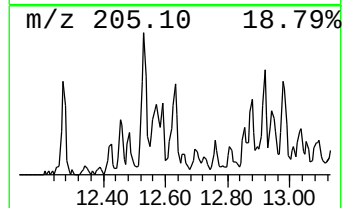
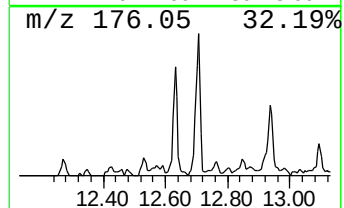
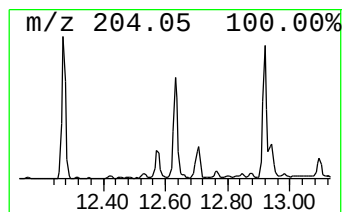
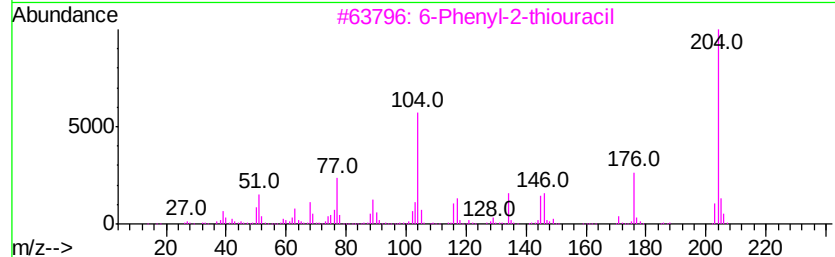
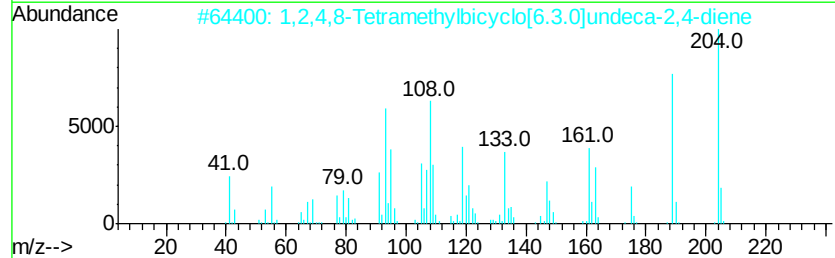
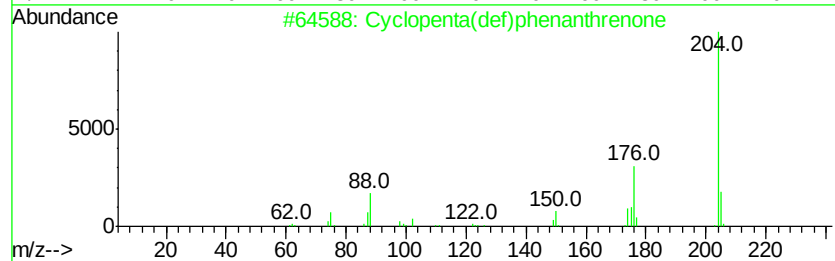
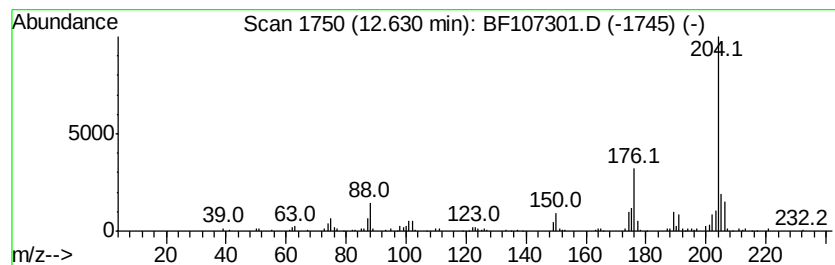
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 13 Cyclopenta(def)phenanthrenone Concentration Rank 8

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.63 | 9.41 ng | 178694 | Phenanthrene-d10 | 11.48 |

| Hit# | of | Tentative ID                                      | MW  | MolForm   | CAS#        | Qual |
|------|----|---------------------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | Cyclopenta(def)phenanthrenone                     | 204 | C15H8O    | 005737-13-3 | 97   |
| 2    |    | 1,2,4,8-Tetramethylbicyclo[6.3.0]undeca-2,4-diene | 204 | C15H24    | 137235-51-9 | 60   |
| 3    |    | 6-Phenyl-2-thiouracil                             | 204 | C10H8N2OS | 005590-94-3 | 53   |
| 4    |    | 3,4-Biphenyldicarbonitrile                        | 204 | C14H8N2   | 004128-63-6 | 50   |
| 5    |    | [1,1'-Biphenyl]-2,2'-dicarbonitrile               | 204 | C14H8N2   | 004341-02-0 | 47   |





Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

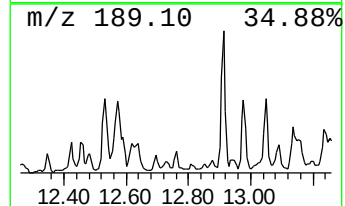
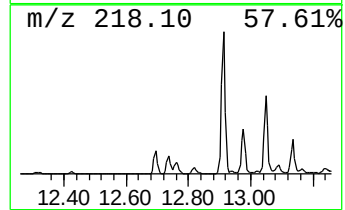
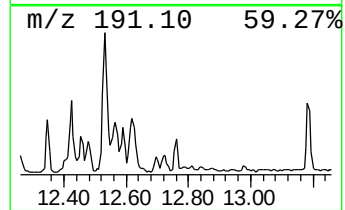
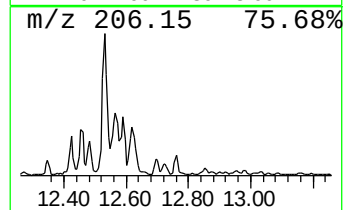
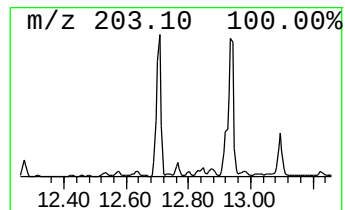
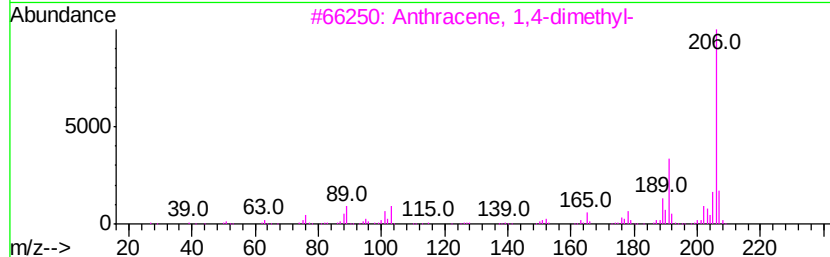
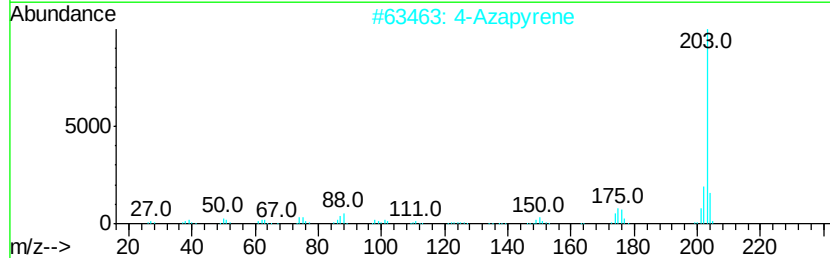
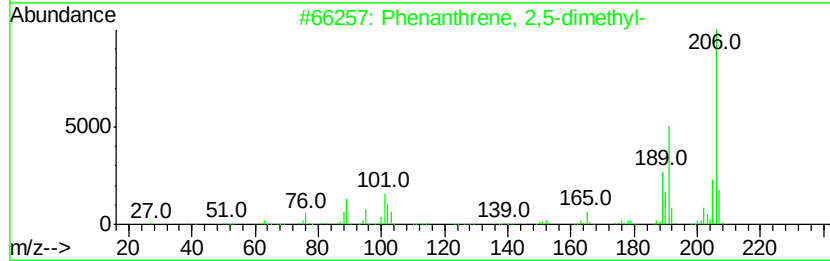
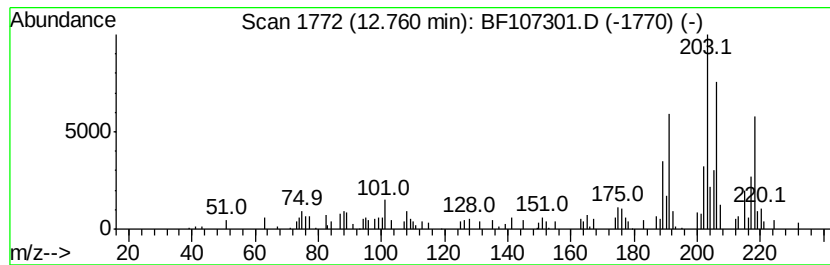
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 14 unknown12.76 Concentration Rank 18

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 12.76 | 3.35 ng | 63556 | Phenanthrene-d10 | 11.48 |

| Hit# | of | 5 | Tentative ID                 | MW  | MolForm | CAS#        | Qual |
|------|----|---|------------------------------|-----|---------|-------------|------|
| 1    |    |   | Phenanthrene, 2,5-dimethyl-  | 206 | C16H14  | 003674-66-6 | 38   |
| 2    |    |   | 4-Azapyrene                  | 203 | C15H9N  | 000194-03-6 | 38   |
| 3    |    |   | Anthracene, 1,4-dimethyl-    | 206 | C16H14  | 000781-92-0 | 38   |
| 4    |    |   | Pyrene, 4,5,9,10-tetrahydro- | 206 | C16H14  | 000781-17-9 | 35   |
| 5    |    |   | 9-Anthracenecarbonitrile     | 203 | C15H9N  | 001210-12-4 | 35   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

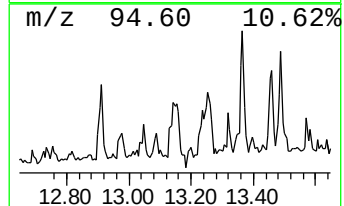
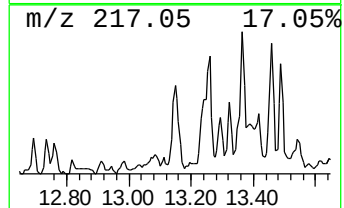
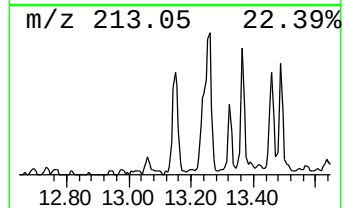
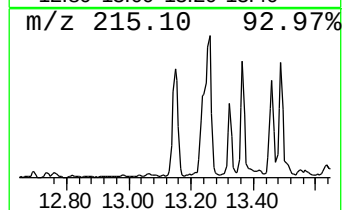
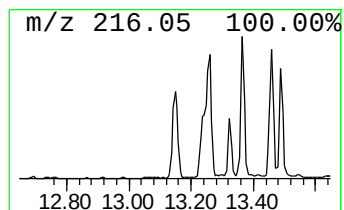
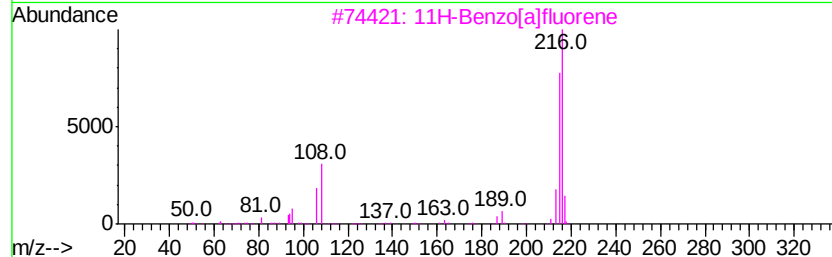
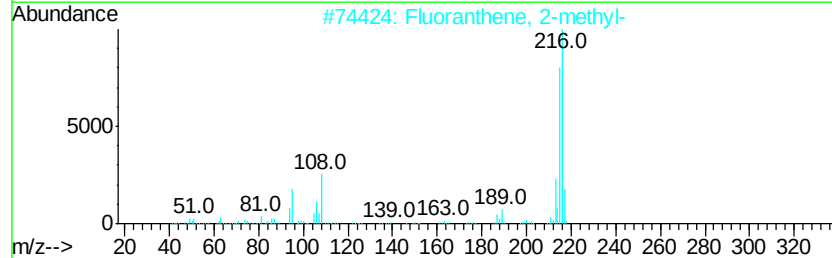
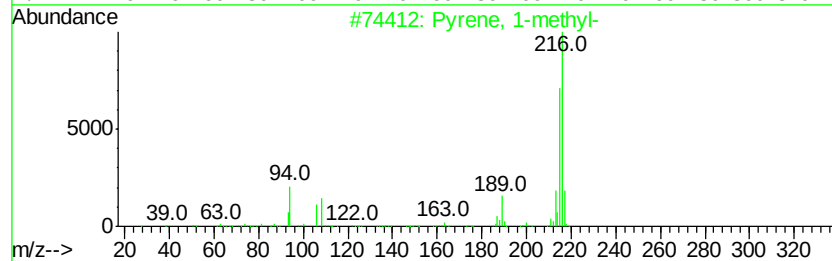
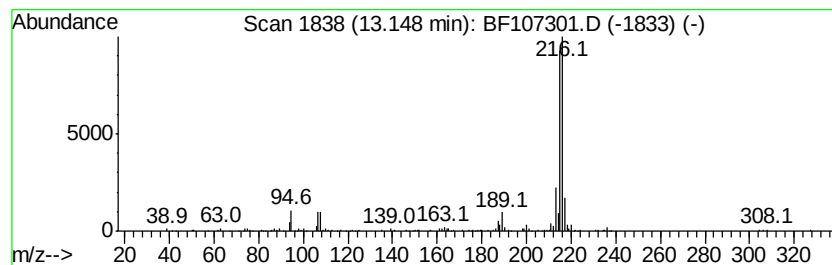
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 15 Pyrene, 1-methyl- Concentration Rank 17

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 13.15 | 3.35 ng | 328337 | Chrysene-d12     | 14.14 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 93   |
| 2    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 91   |
| 3    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 87   |
| 4    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 87   |
| 5    |    | Pyrene, 2-methyl-       | 216 | C17H12  | 003442-78-2 | 86   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

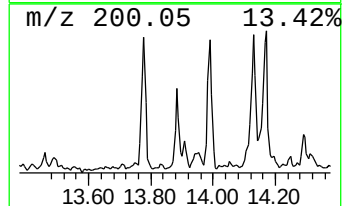
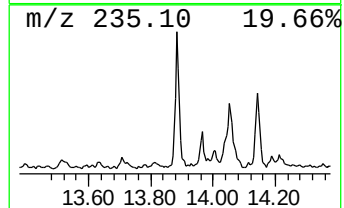
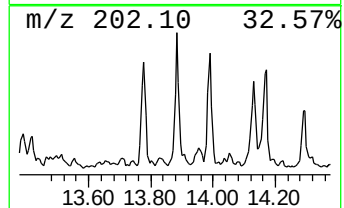
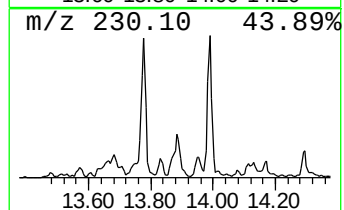
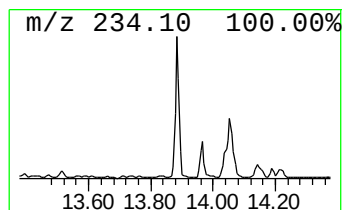
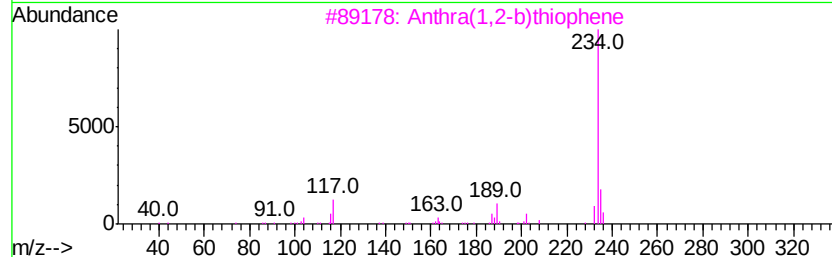
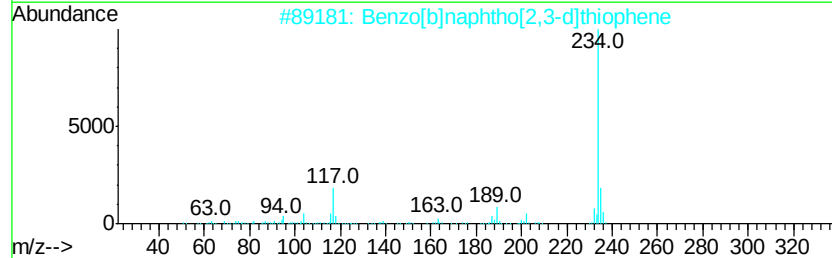
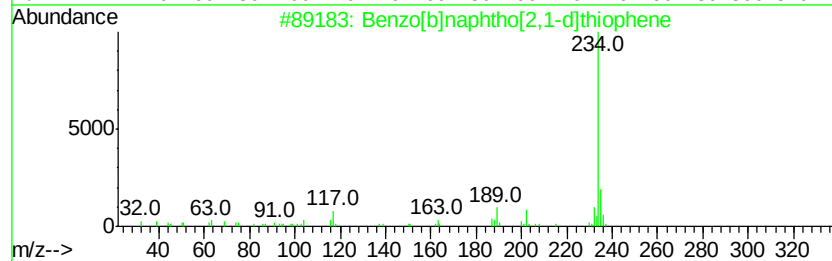
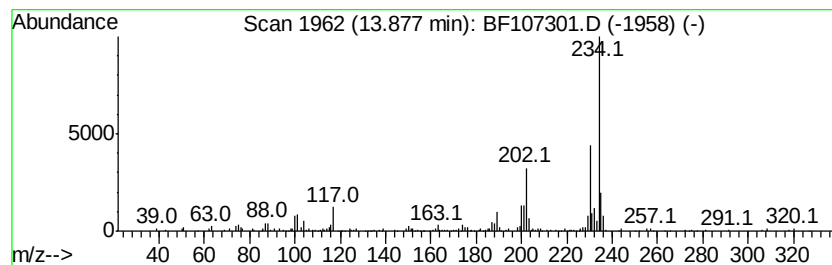
Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.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 Benzo[b]naphtho[2,1-d]thiop... Concentration Rank 20

| R.T.    | EstConc | Area                                | Relative to ISTD |          | R.T.        |      |
|---------|---------|-------------------------------------|------------------|----------|-------------|------|
| 13.88   | 2.73 ng | 267824                              | Chrysene-d12     |          | 14.14       |      |
| Hit# of | 5       | Tentative ID                        | MW               | MolForm  | CAS#        | Qual |
| 1       |         | Benzo[b]naphtho[2,1-d]thiophene     | 234              | C16H10S  | 000239-35-0 | 93   |
| 2       |         | Benzo[b]naphtho[2,3-d]thiophene     | 234              | C16H10S  | 000243-46-9 | 83   |
| 3       |         | Anthra(1,2-b)thiophene              | 234              | C16H10S  | 000227-86-1 | 83   |
| 4       |         | Benzo[b]naphtho[1,2-d]thiophene     | 234              | C16H10S  | 000205-43-6 | 53   |
| 5       |         | Quinoxalino[2,3-b]quinoxaline, 5... | 234              | C14H10N4 | 000531-46-4 | 46   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampled :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

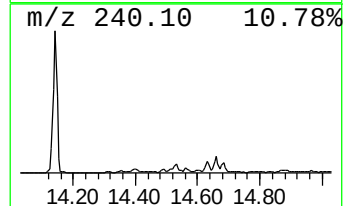
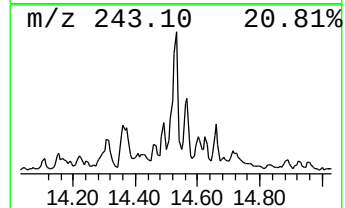
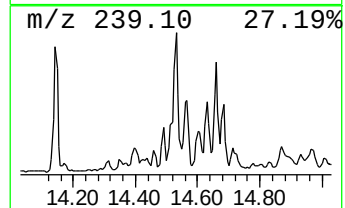
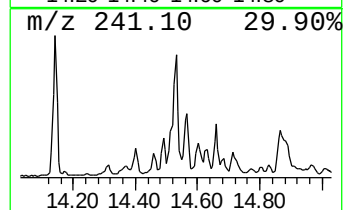
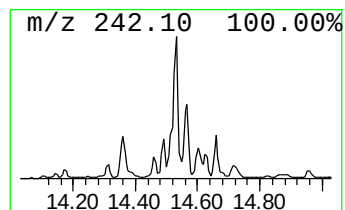
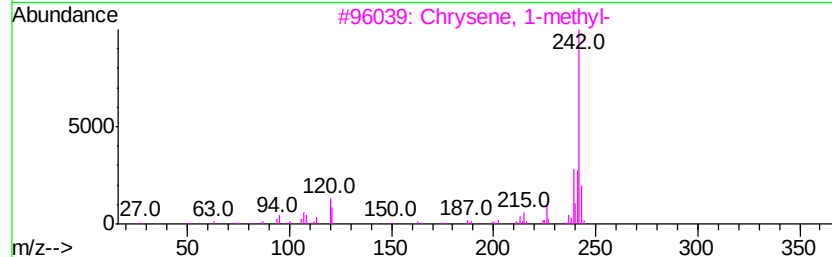
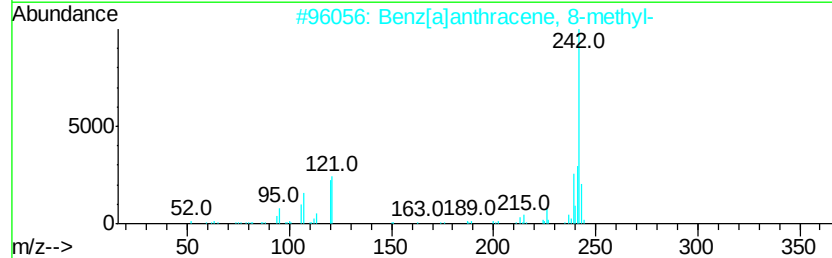
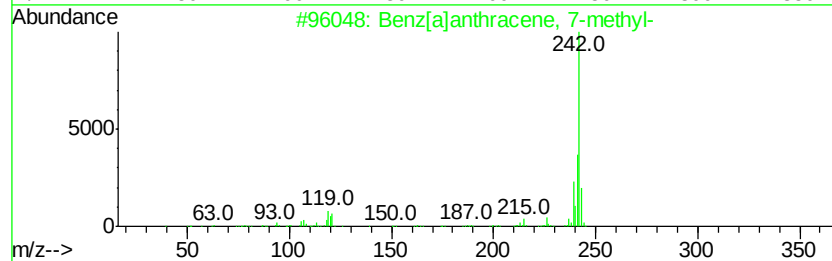
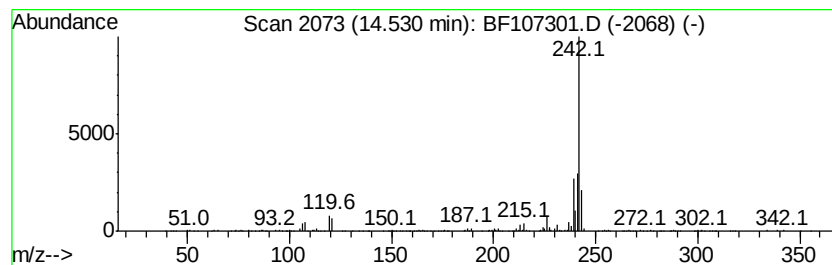
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 17 Benz[a]anthracene, 7-methyl- Concentration Rank 19

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 14.53 | 3.14 ng | 307900 | Chrysene-d12     | 14.14 |

| Hit# | of | 5 | Tentative ID                 | MW  | MolForm | CAS#        | Qual |
|------|----|---|------------------------------|-----|---------|-------------|------|
| 1    |    |   | Benz[a]anthracene, 7-methyl- | 242 | C19H14  | 002541-69-7 | 96   |
| 2    |    |   | Benz[a]anthracene, 8-methyl- | 242 | C19H14  | 002381-31-9 | 93   |
| 3    |    |   | Chrysene, 1-methyl-          | 242 | C19H14  | 003351-28-8 | 93   |
| 4    |    |   | 2-Methylchrysene             | 242 | C19H14  | 003351-32-4 | 93   |
| 5    |    |   | Triphenylene, 2-methyl-      | 242 | C19H14  | 001705-84-6 | 91   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

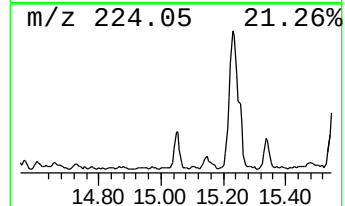
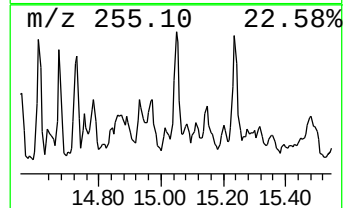
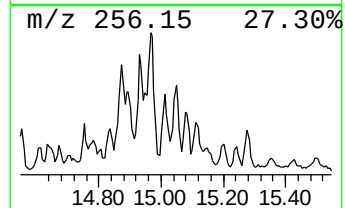
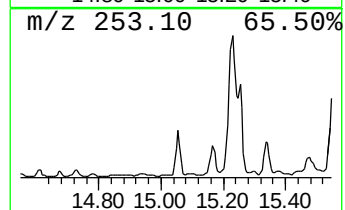
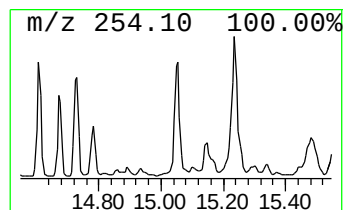
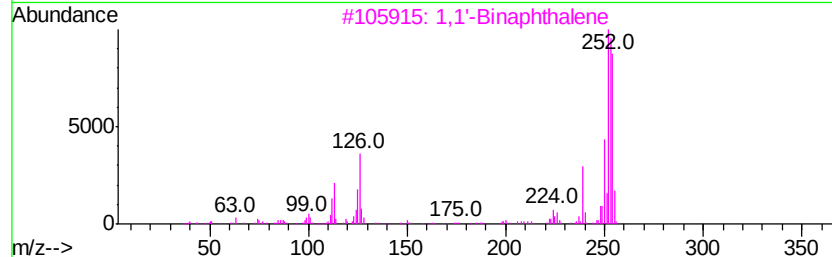
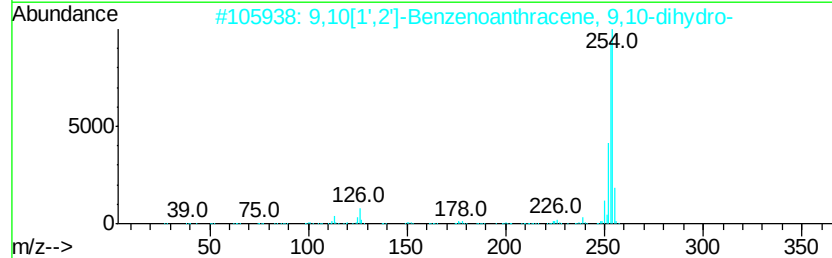
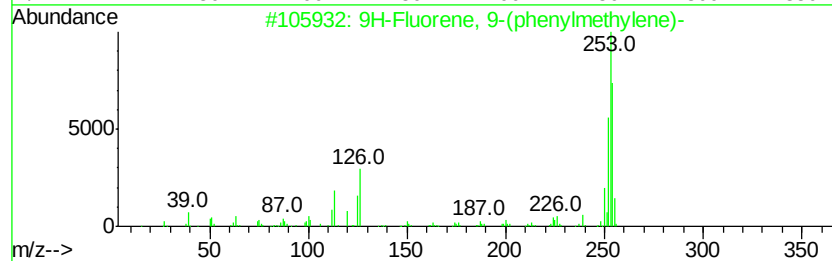
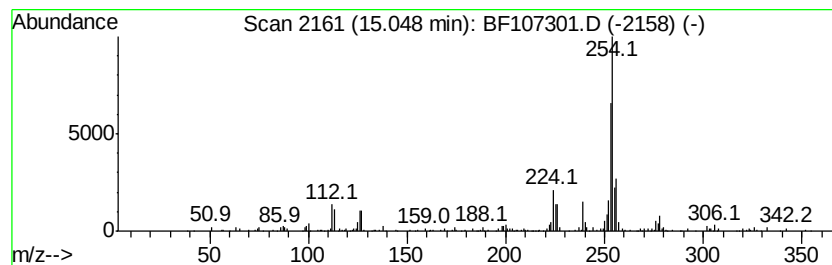
Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.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 18 9H-Fluorene, 9-(phenylmethy... Concentration Rank 13

| R.T.    | EstConc                             | Area          | Relative to ISTD | R.T.      |
|---------|-------------------------------------|---------------|------------------|-----------|
| 15.05   | 5.96 ng                             | 126405        | Perylene-d12     | 15.68     |
| Hit# of | 5                                   | Tentative ID  | MW MolForm       | CAS# Qual |
| 1       | 9H-Fluorene, 9-(phenylmethylen)-    | 254 C20H14    | 001836-87-9      | 76        |
| 2       | 9,10[1',2']-Benzenoanthracene, 9... | 254 C20H14    | 000477-75-8      | 68        |
| 3       | 1,1'-Binaphthalene                  | 254 C20H14    | 000604-53-5      | 64        |
| 4       | 3H-Pyrrolo[3,2-f]quinoline, 5-me... | 254 C16H18N2O | 1000350-44-1     | 64        |
| 5       | 1,2'-Binaphthalene                  | 254 C20H14    | 004325-74-0      | 64        |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF071118\  
Data File : BF107301.D  
Acq On : 11 Jul 2018 15:45  
Operator : JU/SJ  
Sample : J3933-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF061918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

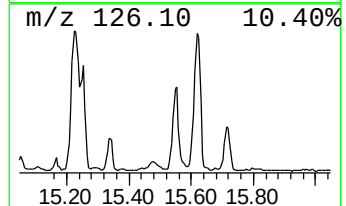
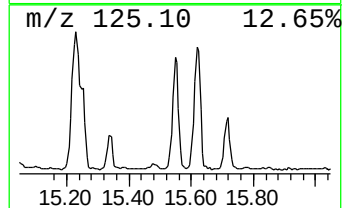
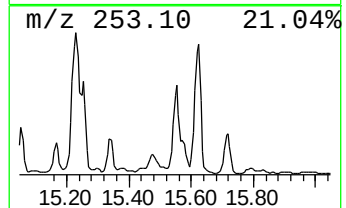
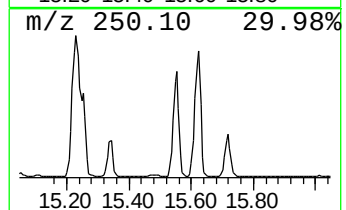
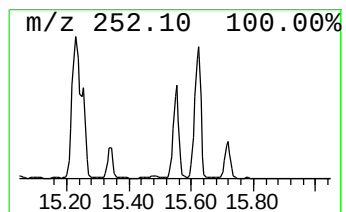
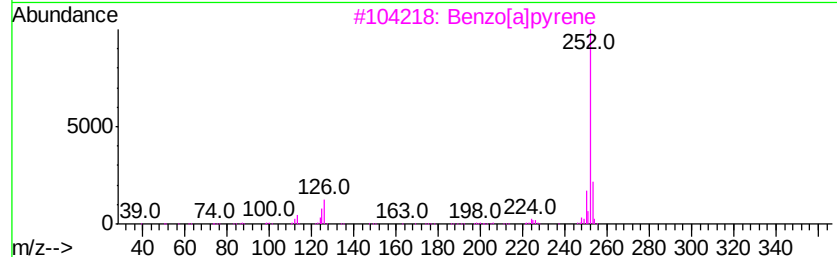
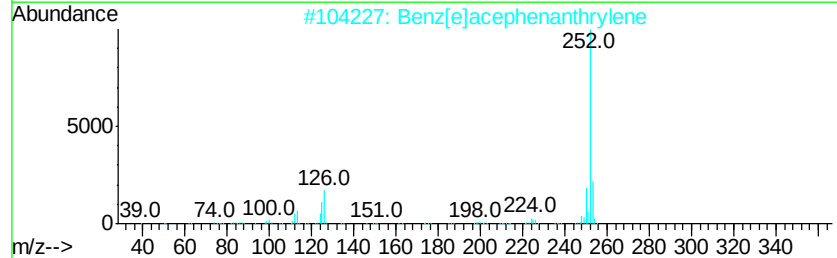
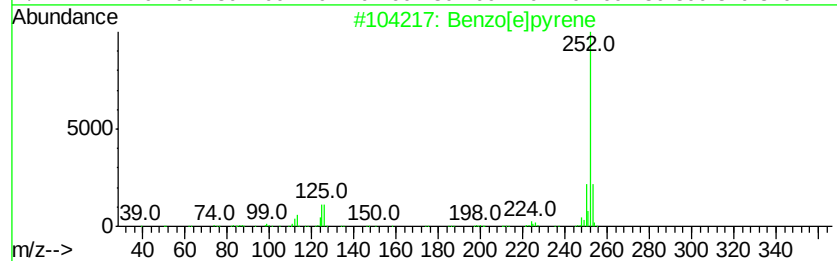
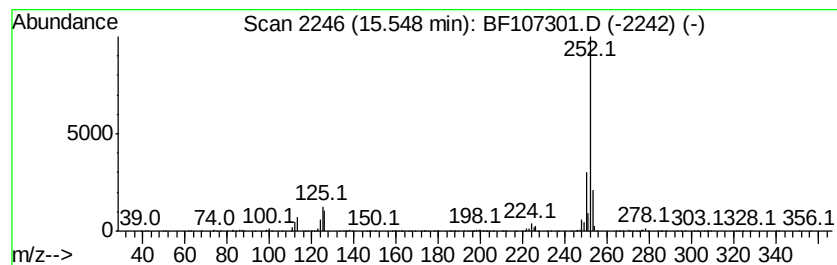
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 20 Benzo[e]pyrene Concentration Rank 1

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 15.55 | 31.98 ng | 678368 | Perylene-d12     | 15.68 |

| Hit# | of | Tentative ID              | MW  | MolForm | CAS#        | Qual |
|------|----|---------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[e]bpvrene           | 252 | C20H12  | 000192-97-2 | 98   |
| 2    |    | Benzo[e]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 96   |
| 3    |    | Benzo[a]bpvrene           | 252 | C20H12  | 000050-32-8 | 94   |
| 4    |    | Benzo[i]lfluoranthene     | 252 | C20H12  | 000205-82-3 | 94   |
| 5    |    | Perylene                  | 252 | C20H12  | 000198-55-0 | 93   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA\_F\DATA\BF071118\  
 Data File : BF107301.D  
 Acq On : 11 Jul 2018 15:45  
 Operator : JU/SJ  
 Sample : J3933-03 5X  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 EP-3-6

Quant Method : Z:\SVOASRV\HPCHEM1\BNA\_F\METHODS\8270-BF061918.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 |
| unknown6.71          | 6.71  | 18.4    | ng    | 303950   | 1                     | 6.93  | 330937  | 20.0 |
| Anthracene, 2-met... | 11.98 | 8.9     | ng    | 168394   | 4                     | 11.48 | 379639  | 20.0 |
| Phenanthrene, 2-m... | 12.01 | 10.2    | ng    | 192973   | 4                     | 11.48 | 379639  | 20.0 |
| Anthracene, 1-met... | 12.05 | 4.8     | ng    | 91198    | 4                     | 11.48 | 379639  | 20.0 |
| 4H-Cyclopenta[def... | 12.10 | 16.2    | ng    | 306713   | 4                     | 11.48 | 379639  | 20.0 |
| Phenanthrene, 4-m... | 12.12 | 6.2     | ng    | 118534   | 4                     | 11.48 | 379639  | 20.0 |
| 5,16[1',2']:8,13[... | 12.27 | 7.0     | ng    | 133126   | 4                     | 11.48 | 379639  | 20.0 |
| 9,10-Anthracenedione | 12.31 | 4.6     | ng    | 86578    | 4                     | 11.48 | 379639  | 20.0 |
| Anthracene, 2-ethyl- | 12.42 | 4.3     | ng    | 81769    | 4                     | 11.48 | 379639  | 20.0 |
| Phenanthrene, 2,5... | 12.53 | 10.3    | ng    | 194895   | 4                     | 11.48 | 379639  | 20.0 |
| unknown12.57         | 12.57 | 9.3     | ng    | 176112   | 4                     | 11.48 | 379639  | 20.0 |
| Cyclopenta(def)ph... | 12.63 | 9.4     | ng    | 178694   | 4                     | 11.48 | 379639  | 20.0 |
| unknown12.76         | 12.76 | 3.4     | ng    | 63556    | 4                     | 11.48 | 379639  | 20.0 |
| Pyrene, 1-methyl-    | 13.15 | 3.4     | ng    | 328337   | 5                     | 14.14 | 1959310 | 20.0 |
| Benzo[b]naphtho[2... | 13.88 | 2.7     | ng    | 267824   | 5                     | 14.14 | 1959310 | 20.0 |
| Benz[a]anthracene... | 14.53 | 3.1     | ng    | 307900   | 5                     | 14.14 | 1959310 | 20.0 |
| 9H-Fluorene, 9-(p... | 15.05 | 6.0     | ng    | 126405   | 6                     | 15.68 | 424199  | 20.0 |
| Benzo[e]pyrene       | 15.55 | 32.0    | ng    | 678368   | 6                     | 15.68 | 424199  | 20.0 |