

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
 Data File : BF121110.D  
 Acq On : 29 Jul 2020 19:28  
 Operator : JU/CG  
 Sample : L3436-14 5X  
 Misc :  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 14

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-BF071620.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         | 5.416       | 562           | 566         | 576          | rVB      | 449873         | 437076        | 25.78%          | 2.078%        |
| 2         | 6.439       | 736           | 740         | 750          | rBV      | 462527         | 438893        | 25.89%          | 2.086%        |
| 3         | 6.639       | 769           | 774         | 778          | rBV3     | 24625          | 34758         | 2.05%           | 0.165%        |
| 4         | 6.804       | 798           | 802         | 805          | rBV      | 1019326        | 825037        | 48.67%          | 3.922%        |
| 5         | 7.063       | 843           | 846         | 852          | rBV2     | 22643          | 29138         | 1.72%           | 0.139%        |
| 6         | 7.363       | 893           | 897         | 902          | rVB      | 297987         | 251246        | 14.82%          | 1.194%        |
| 7         | 8.086       | 1015          | 1020        | 1022         | rBV      | 1301368        | 1043464       | 61.55%          | 4.960%        |
| 8         | 8.104       | 1022          | 1023        | 1027         | rVB      | 185079         | 140018        | 8.26%           | 0.666%        |
| 9         | 8.510       | 1089          | 1092        | 1094         | rBV      | 21948          | 19718         | 1.16%           | 0.094%        |
| 10        | 8.681       | 1117          | 1121        | 1123         | rBV      | 24853          | 24353         | 1.44%           | 0.116%        |
| 11        | 8.798       | 1138          | 1141        | 1144         | rVB      | 127623         | 94076         | 5.55%           | 0.447%        |
| 12        | 8.898       | 1154          | 1158        | 1162         | rVB      | 100276         | 89531         | 5.28%           | 0.426%        |
| 13        | 9.110       | 1191          | 1194        | 1199         | rBV3     | 30714          | 34541         | 2.04%           | 0.164%        |
| 14        | 9.157       | 1199          | 1202        | 1207         | rVV      | 672914         | 554932        | 32.73%          | 2.638%        |
| 15        | 9.239       | 1213          | 1216        | 1218         | rBV2     | 43129          | 45552         | 2.69%           | 0.217%        |
| 16        | 9.357       | 1234          | 1236        | 1242         | rVB      | 27536          | 31593         | 1.86%           | 0.150%        |
| 17        | 9.428       | 1243          | 1248        | 1251         | rBV      | 61605          | 85484         | 5.04%           | 0.406%        |
| 18        | 9.498       | 1257          | 1260        | 1262         | rBV      | 103709         | 86491         | 5.10%           | 0.411%        |
| 19        | 9.522       | 1262          | 1264        | 1266         | rVV      | 68384          | 51837         | 3.06%           | 0.246%        |
| 20        | 9.551       | 1266          | 1269        | 1273         | rVB2     | 126752         | 154603        | 9.12%           | 0.735%        |
| 21        | 9.616       | 1277          | 1280        | 1285         | rVB      | 57326          | 59399         | 3.50%           | 0.282%        |
| 22        | 9.698       | 1291          | 1294        | 1299         | rBV      | 175145         | 147319        | 8.69%           | 0.700%        |
| 23        | 9.751       | 1300          | 1303        | 1305         | rVV2     | 38426          | 43368         | 2.56%           | 0.206%        |
| 24        | 9.769       | 1305          | 1306        | 1311         | rVV      | 48896          | 44108         | 2.60%           | 0.210%        |
| 25        | 9.839       | 1311          | 1318        | 1321         | rVV      | 1329507        | 1129852       | 66.65%          | 5.371%        |
| 26        | 9.869       | 1321          | 1323        | 1327         | rVV      | 157834         | 142861        | 8.43%           | 0.679%        |
| 27        | 9.904       | 1327          | 1329        | 1332         | rVB4     | 24026          | 24149         | 1.42%           | 0.115%        |
| 28        | 9.945       | 1332          | 1336        | 1340         | rBV2     | 42095          | 51298         | 3.03%           | 0.244%        |
| 29        | 9.998       | 1340          | 1345        | 1346         | rBV3     | 23557          | 29683         | 1.75%           | 0.141%        |
| 30        | 10.039      | 1348          | 1352        | 1357         | rVV      | 126795         | 130839        | 7.72%           | 0.622%        |
| 31        | 10.080      | 1357          | 1359        | 1368         | rVB3     | 58631          | 56516         | 3.33%           | 0.269%        |
| 32        | 10.157      | 1368          | 1372        | 1374         | rBV2     | 60320          | 66182         | 3.90%           | 0.315%        |
| 33        | 10.180      | 1374          | 1376        | 1379         | rVV      | 37703          | 33703         | 1.99%           | 0.160%        |
| 34        | 10.245      | 1383          | 1387        | 1389         | rBV2     | 53026          | 60784         | 3.59%           | 0.289%        |

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 Sample : L3436-14 5X  
 Misc :  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
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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-BF071620.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |        |        |        |
|----|--------|------|------|------|------|---------|--------|--------|--------|
| 35 | 10.269 | 1389 | 1391 | 1393 | rVB2 | 54553   | 43392  | 2.56%  | 0.206% |
| 36 | 10.292 | 1393 | 1395 | 1397 | rBV  | 28094   | 20948  | 1.24%  | 0.100% |
| 37 | 10.386 | 1408 | 1411 | 1417 | rVB  | 200507  | 201912 | 11.91% | 0.960% |
| 38 | 10.451 | 1417 | 1422 | 1424 | rBV2 | 42802   | 55682  | 3.28%  | 0.265% |
| 39 | 10.492 | 1427 | 1429 | 1432 | rVV2 | 63290   | 62391  | 3.68%  | 0.297% |
| 40 | 10.539 | 1434 | 1437 | 1441 | rVB2 | 49923   | 53160  | 3.14%  | 0.253% |
| 41 | 10.622 | 1446 | 1451 | 1455 | rVV2 | 324491  | 339680 | 20.04% | 1.615% |
| 42 | 10.657 | 1455 | 1457 | 1464 | rVB4 | 17884   | 28528  | 1.68%  | 0.136% |
| 43 | 10.751 | 1469 | 1473 | 1480 | rVB3 | 109021  | 150022 | 8.85%  | 0.713% |
| 44 | 10.827 | 1480 | 1486 | 1488 | rBV3 | 27783   | 49583  | 2.92%  | 0.236% |
| 45 | 10.933 | 1500 | 1504 | 1506 | rBV2 | 68913   | 76735  | 4.53%  | 0.365% |
| 46 | 10.957 | 1506 | 1508 | 1511 | rVB3 | 45450   | 43118  | 2.54%  | 0.205% |
| 47 | 11.016 | 1516 | 1518 | 1521 | rVB2 | 37840   | 33399  | 1.97%  | 0.159% |
| 48 | 11.063 | 1524 | 1526 | 1528 | rBV2 | 19241   | 20850  | 1.23%  | 0.099% |
| 49 | 11.127 | 1535 | 1537 | 1541 | rVV2 | 39156   | 34439  | 2.03%  | 0.164% |
| 50 | 11.186 | 1542 | 1547 | 1550 | rVV4 | 54735   | 85146  | 5.02%  | 0.405% |
| 51 | 11.222 | 1550 | 1553 | 1558 | rVB  | 131486  | 136698 | 8.06%  | 0.650% |
| 52 | 11.322 | 1567 | 1570 | 1572 | rBV  | 1142237 | 980195 | 57.82% | 4.659% |
| 53 | 11.345 | 1572 | 1574 | 1578 | rVV  | 962542  | 796606 | 46.99% | 3.787% |
| 54 | 11.398 | 1580 | 1583 | 1586 | rVB  | 344235  | 267414 | 15.77% | 1.271% |
| 55 | 11.433 | 1586 | 1589 | 1592 | rBV  | 51477   | 57337  | 3.38%  | 0.273% |
| 56 | 11.551 | 1607 | 1609 | 1616 | rBV  | 67833   | 79773  | 4.71%  | 0.379% |
| 57 | 11.616 | 1618 | 1620 | 1623 | rVV  | 76416   | 58692  | 3.46%  | 0.279% |
| 58 | 11.651 | 1624 | 1626 | 1633 | rVB2 | 62494   | 60169  | 3.55%  | 0.286% |
| 59 | 11.822 | 1652 | 1655 | 1658 | rBV  | 167482  | 164795 | 9.72%  | 0.783% |
| 60 | 11.851 | 1658 | 1660 | 1664 | rVB  | 250085  | 211664 | 12.49% | 1.006% |
| 61 | 11.898 | 1665 | 1668 | 1671 | rBV  | 102545  | 88602  | 5.23%  | 0.421% |
| 62 | 11.933 | 1671 | 1674 | 1677 | rBV  | 285190  | 319363 | 18.84% | 1.518% |
| 63 | 11.998 | 1683 | 1685 | 1687 | rBV2 | 23460   | 24748  | 1.46%  | 0.118% |
| 64 | 12.027 | 1687 | 1690 | 1693 | rVV2 | 53689   | 58279  | 3.44%  | 0.277% |
| 65 | 12.057 | 1693 | 1695 | 1698 | rVB2 | 41358   | 37249  | 2.20%  | 0.177% |
| 66 | 12.121 | 1703 | 1706 | 1708 | rBV  | 98085   | 89555  | 5.28%  | 0.426% |
| 67 | 12.251 | 1726 | 1728 | 1729 | rBV  | 28383   | 21899  | 1.29%  | 0.104% |
| 68 | 12.269 | 1729 | 1731 | 1733 | rVB  | 53245   | 38584  | 2.28%  | 0.183% |
| 69 | 12.298 | 1733 | 1736 | 1739 | rBV  | 96127   | 99432  | 5.87%  | 0.473% |
| 70 | 12.374 | 1745 | 1749 | 1751 | rBV  | 160915  | 162083 | 9.56%  | 0.770% |
| 71 | 12.410 | 1751 | 1755 | 1761 | rVB5 | 139479  | 258048 | 15.22% | 1.227% |

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Instrument :  
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 ClientSampleId :  
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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-BF071620.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |         |         |        |
|----|--------|------|------|------|------|---------|---------|---------|--------|
| 72 | 12.457 | 1761 | 1763 | 1768 | rBV2 | 99793   | 116944  | 6.90%   | 0.556% |
| 73 | 12.533 | 1773 | 1776 | 1780 | rBV  | 1296337 | 1134325 | 66.91%  | 5.392% |
| 74 | 12.580 | 1781 | 1784 | 1785 | rBV2 | 47572   | 41709   | 2.46%   | 0.198% |
| 75 | 12.627 | 1790 | 1792 | 1795 | rBV  | 80660   | 73562   | 4.34%   | 0.350% |
| 76 | 12.686 | 1800 | 1802 | 1809 | rVB4 | 63055   | 92082   | 5.43%   | 0.438% |
| 77 | 12.763 | 1809 | 1815 | 1818 | rBV  | 1280780 | 1360839 | 80.27%  | 6.469% |
| 78 | 12.816 | 1822 | 1824 | 1828 | rVB2 | 62236   | 80027   | 4.72%   | 0.380% |
| 79 | 12.880 | 1833 | 1835 | 1836 | rVV  | 65733   | 50448   | 2.98%   | 0.240% |
| 80 | 12.904 | 1836 | 1839 | 1846 | rVB  | 613304  | 588878  | 34.74%  | 2.799% |
| 81 | 12.980 | 1849 | 1852 | 1856 | rBV2 | 80149   | 113246  | 6.68%   | 0.538% |
| 82 | 13.092 | 1868 | 1871 | 1874 | rVB  | 236336  | 220002  | 12.98%  | 1.046% |
| 83 | 13.157 | 1880 | 1882 | 1885 | rVB  | 192993  | 143827  | 8.48%   | 0.684% |
| 84 | 13.198 | 1885 | 1889 | 1892 | rBV2 | 154391  | 190166  | 11.22%  | 0.904% |
| 85 | 13.286 | 1902 | 1904 | 1907 | rVB  | 106278  | 78723   | 4.64%   | 0.374% |
| 86 | 13.316 | 1907 | 1909 | 1913 | rBV  | 110690  | 107966  | 6.37%   | 0.513% |
| 87 | 13.739 | 1979 | 1981 | 1983 | rBV  | 87163   | 62882   | 3.71%   | 0.299% |
| 88 | 13.963 | 2014 | 2019 | 2021 | rBV2 | 1268505 | 1695300 | 100.00% | 8.059% |
| 89 | 13.986 | 2021 | 2023 | 2026 | rVB  | 579520  | 433402  | 25.56%  | 2.060% |
| 90 | 14.992 | 2191 | 2194 | 2201 | rVB  | 505228  | 899297  | 53.05%  | 4.275% |
| 91 | 15.286 | 2242 | 2244 | 2250 | rVB  | 293352  | 368388  | 21.73%  | 1.751% |
| 92 | 15.351 | 2251 | 2255 | 2261 | rVB  | 416834  | 520685  | 30.71%  | 2.475% |
| 93 | 15.415 | 2262 | 2266 | 2268 | rBV  | 688632  | 862034  | 50.85%  | 4.098% |

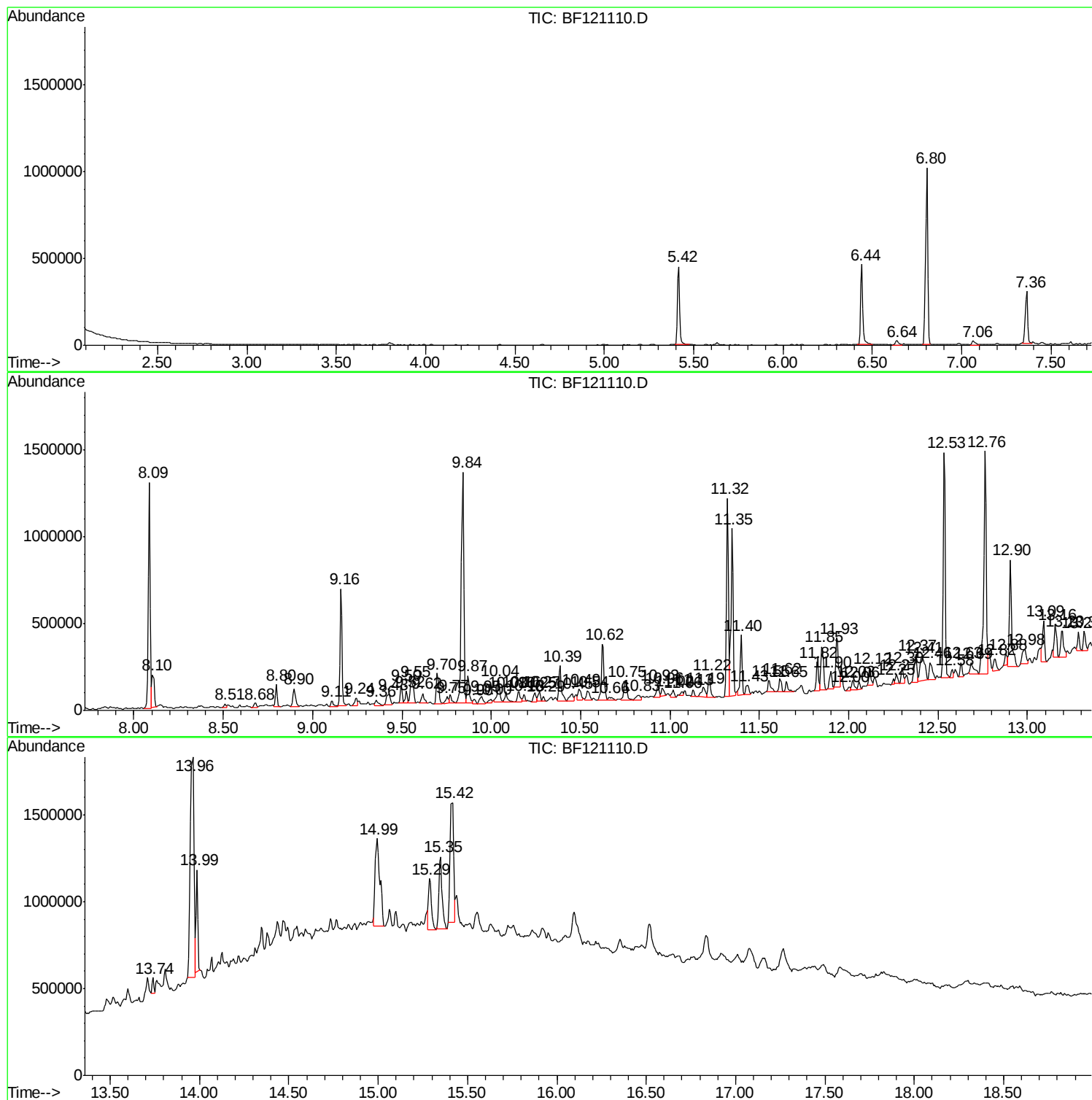
Sum of corrected areas: 21037304

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ALS Vial : 10 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampled :  
14

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.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\BF072920\  
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Sample : L3436-14 5X  
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Instrument :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

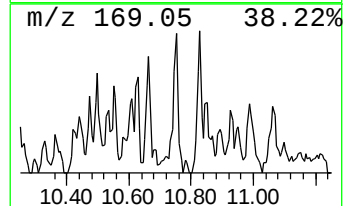
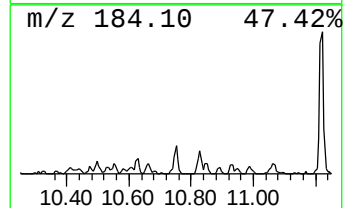
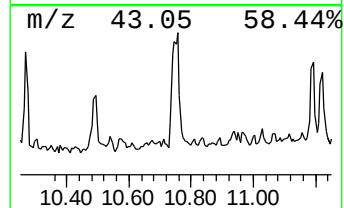
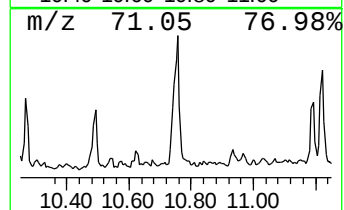
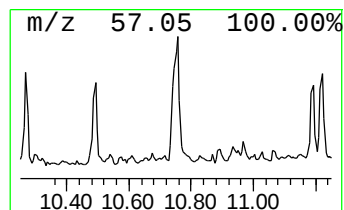
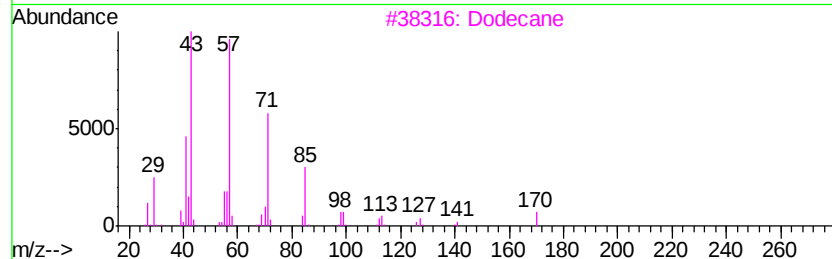
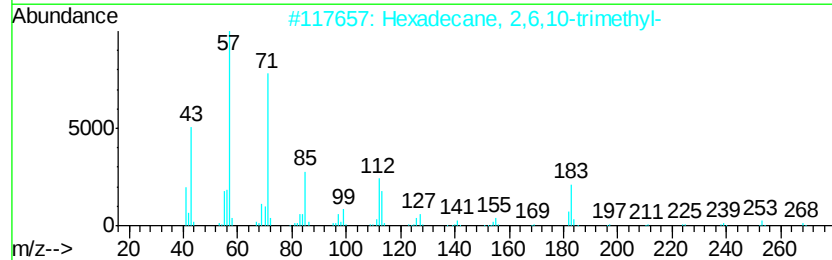
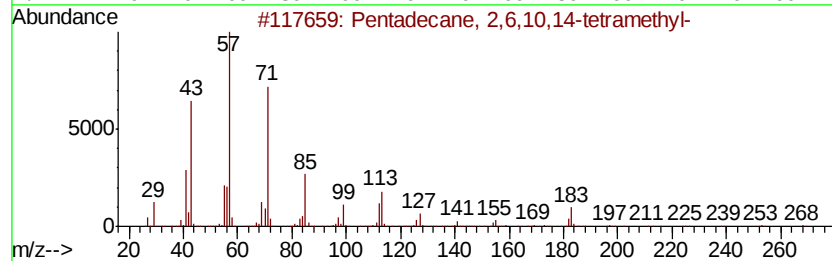
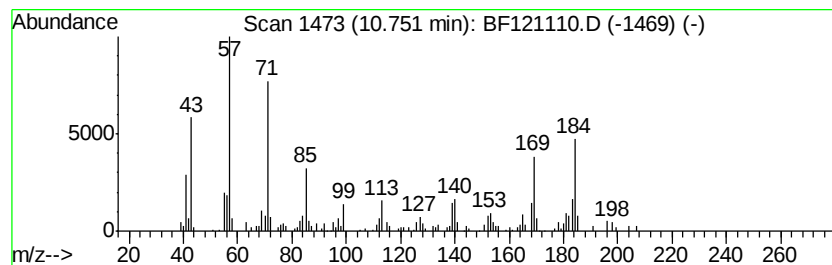
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 2 unknown10.75 Concentration Rank 7

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 10.75 | 3.06 ng | 150022 | Phenanthrene-d10 | 11.32 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------------------|-----|---------|-------------|------|
| 1       |   | Pentadecane, 2,6,10,14-tetramethyl- | 268 | C19H40  | 001921-70-6 | 45   |
| 2       |   | Hexadecane, 2,6,10-trimethyl-       | 268 | C19H40  | 055000-52-7 | 43   |
| 3       |   | Dodecane                            | 170 | C12H26  | 000112-40-3 | 41   |
| 4       |   | Hexadecane, 2,6,10,14-tetramethyl-  | 282 | C20H42  | 000638-36-8 | 38   |
| 5       |   | Octane, 2-methyl-                   | 128 | C9H20   | 003221-61-2 | 38   |



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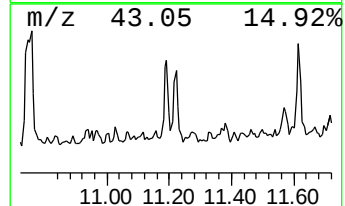
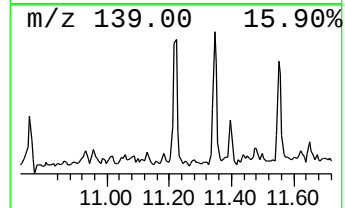
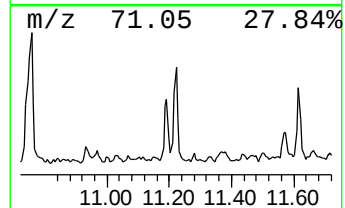
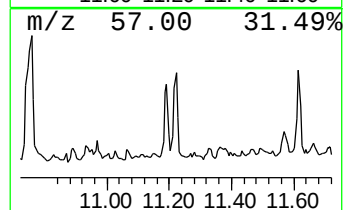
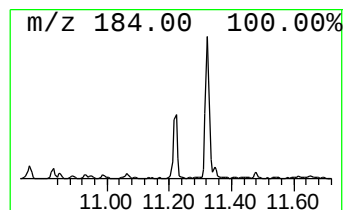
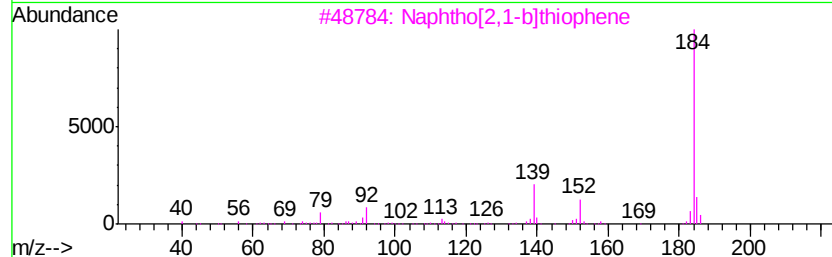
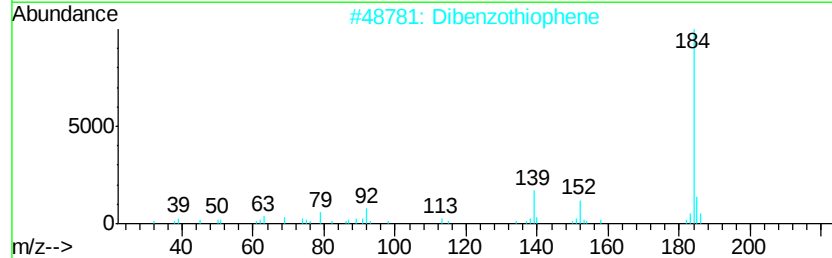
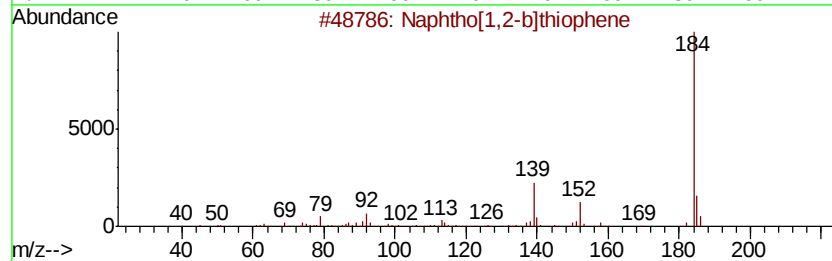
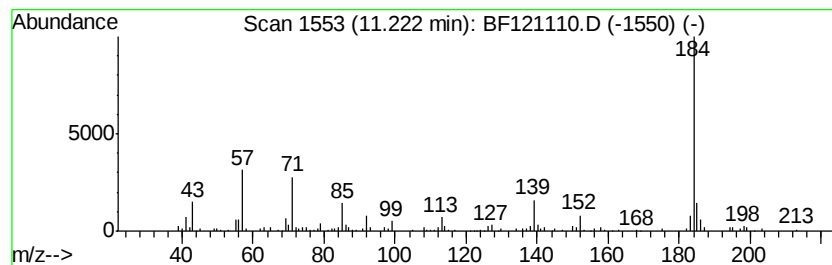
Instrument :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 3 Naphtho[1,2-b]thiophene Concentration Rank 8

| R.T.    | EstConc | Area                    | Relative to ISTD |         | R.T.        |      |
|---------|---------|-------------------------|------------------|---------|-------------|------|
| 11.22   | 2.79 ng | 136698                  | Phenanthrene-d10 |         | 11.32       |      |
| Hit# of | 5       | Tentative ID            | MW               | MolForm | CAS#        | Qual |
| 1       |         | Naphtho[1,2-b]thiophene | 184              | C12H8S  | 000234-41-3 | 93   |
| 2       |         | Dibenzothiophene        | 184              | C12H8S  | 000132-65-0 | 76   |
| 3       |         | Naphtho[2,1-b]thiophene | 184              | C12H8S  | 000233-02-3 | 76   |
| 4       |         | Azuleno(2,1-b)thiophene | 184              | C12H8S  | 000248-13-5 | 76   |
| 5       |         | Naphtho[2,3-b]thiophene | 184              | C12H8S  | 000268-77-9 | 70   |



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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

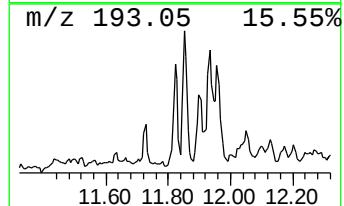
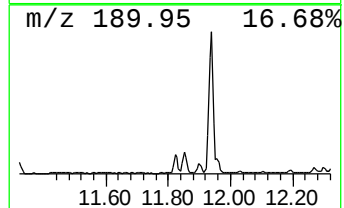
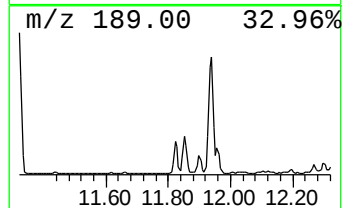
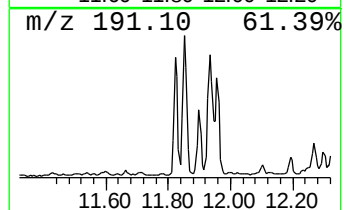
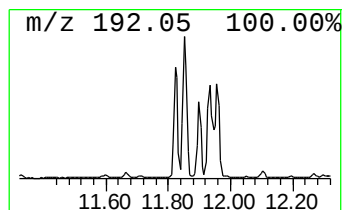
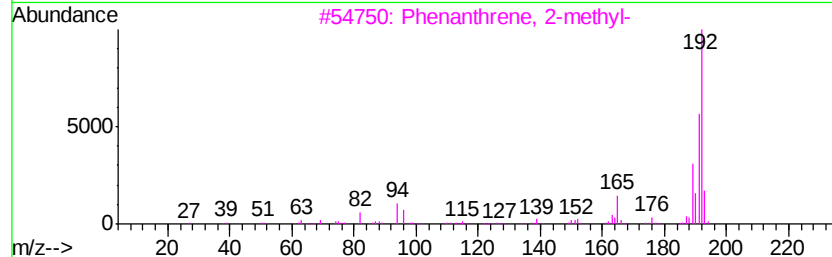
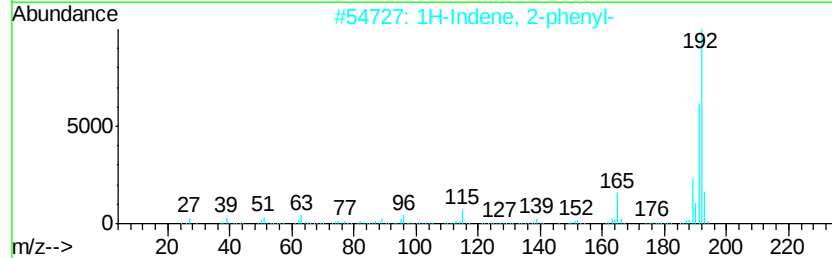
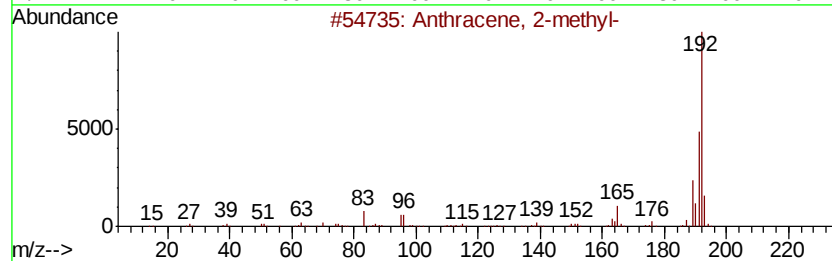
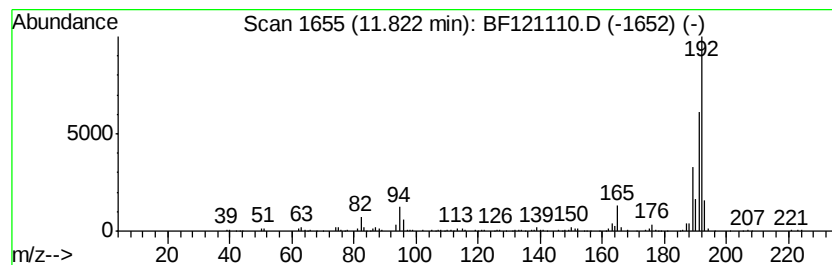
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TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 4 Anthracene, 2-methyl- Concentration Rank 5

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.82 | 3.36 ng | 164795 | Phenanthrene-d10 | 11.32 |

| Hit# of | 5 | Tentative ID                          | MW  | MolForm | CAS#        | Qual |
|---------|---|---------------------------------------|-----|---------|-------------|------|
| 1       |   | Anthracene, 2-methyl-                 | 192 | C15H12  | 000613-12-7 | 96   |
| 2       |   | 1H-Indene, 2-phenyl-                  | 192 | C15H12  | 004505-48-0 | 94   |
| 3       |   | Phenanthrene, 2-methyl-               | 192 | C15H12  | 002531-84-2 | 93   |
| 4       |   | Phenanthrene, 1-methyl-               | 192 | C15H12  | 000832-69-9 | 93   |
| 5       |   | 1H-Cyclopropa[1]phenanthrene, 1a, ... | 192 | C15H12  | 000949-41-7 | 92   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

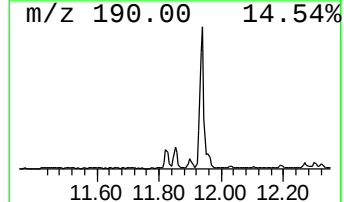
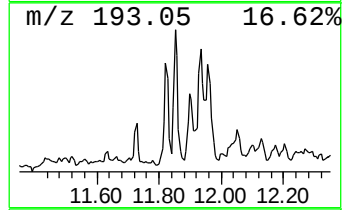
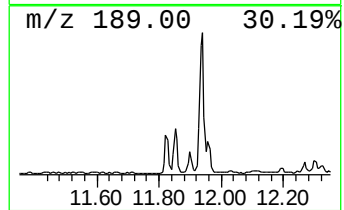
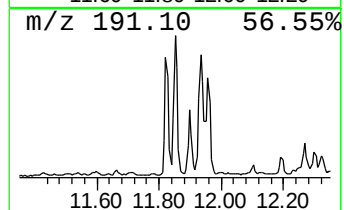
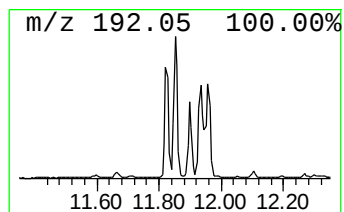
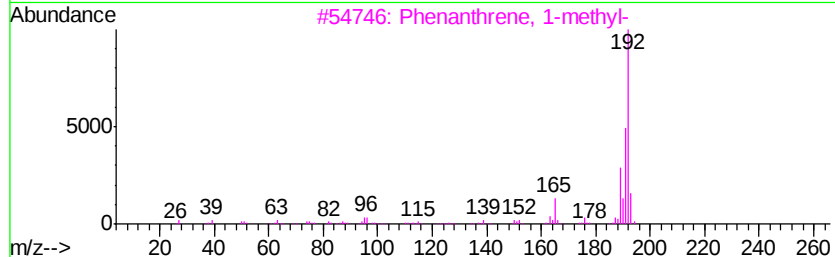
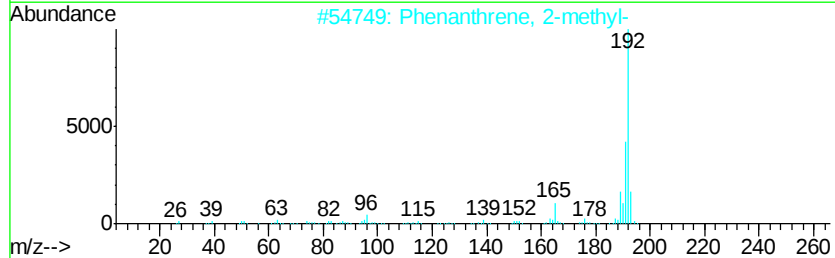
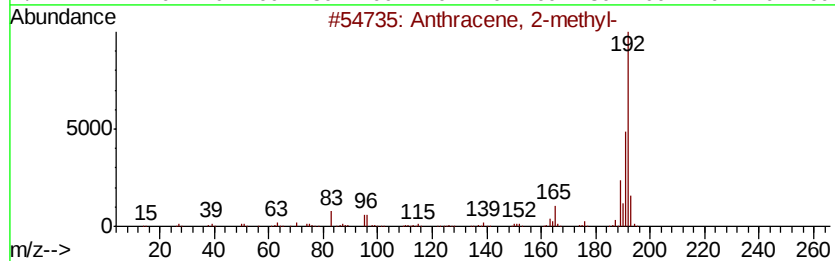
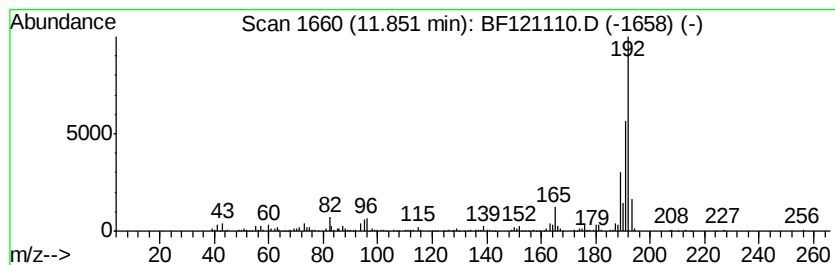
Instrument :  
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ClientSampleId :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 5 Phenanthrene, 2-methyl- Concentration Rank 4

| R.T.      | EstConc                             | Area   | Relative to ISTD |             | R.T.  |
|-----------|-------------------------------------|--------|------------------|-------------|-------|
| 11.85     | 4.32 ng                             | 211664 | Phenanthrene-d10 |             | 11.32 |
| Hit# of 5 | Tentative ID                        | MW     | MolForm          | CAS#        | Qual  |
| 1         | Anthracene, 2-methyl-               | 192    | C15H12           | 000613-12-7 | 97    |
| 2         | Phenanthrene, 2-methyl-             | 192    | C15H12           | 002531-84-2 | 97    |
| 3         | Phenanthrene, 1-methyl-             | 192    | C15H12           | 000832-69-9 | 97    |
| 4         | 1H-Cyclopropa[1]phenanthrene,1a,... | 192    | C15H12           | 000949-41-7 | 96    |
| 5         | Anthracene, 1-methyl-               | 192    | C15H12           | 000610-48-0 | 95    |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

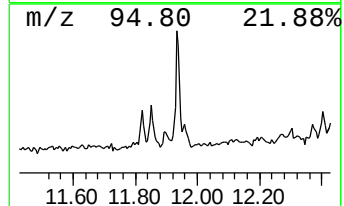
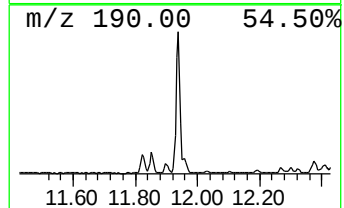
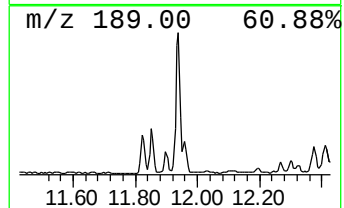
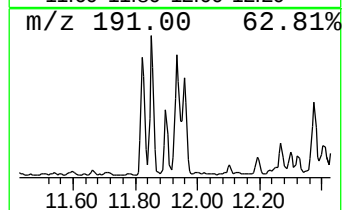
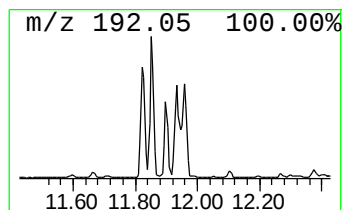
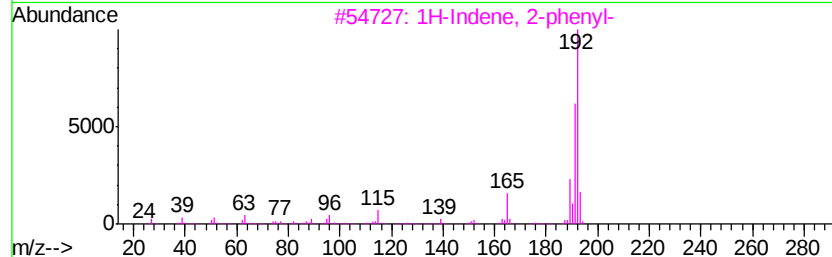
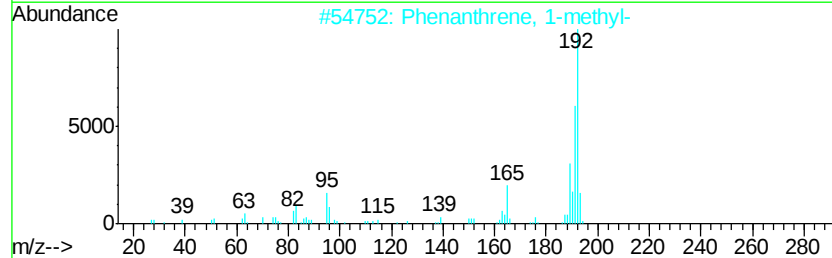
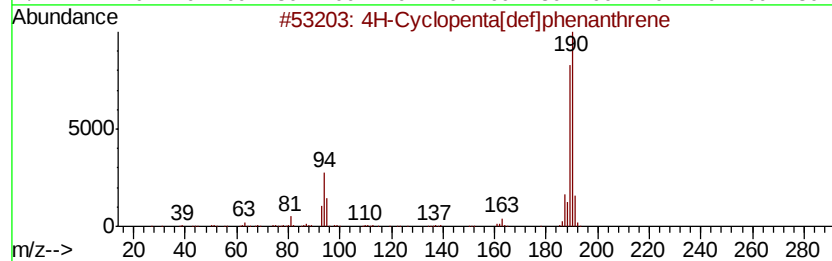
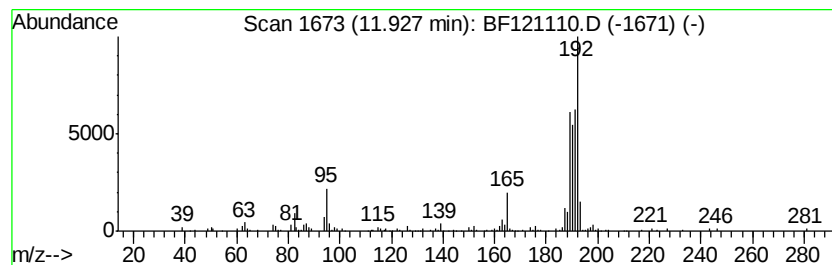
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ClientSampleId :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 6 4H-Cyclopenta[def]phenanthrene Concentration Rank 2

| R.T.      | EstConc                        | Area   | Relative to ISTD | R.T.        |      |
|-----------|--------------------------------|--------|------------------|-------------|------|
| 11.93     | 6.52 ng                        | 319363 | Phenanthrene-d10 | 11.32       |      |
| Hit# of 5 | Tentative ID                   | MW     | MolForm          | CAS#        | Qual |
| 1         | 4H-Cyclopenta[def]phenanthrene | 190    | C15H10           | 000203-64-5 | 64   |
| 2         | Phenanthrene, 1-methyl-        | 192    | C15H12           | 000832-69-9 | 42   |
| 3         | 1H-Indene, 2-phenyl-           | 192    | C15H12           | 004505-48-0 | 42   |
| 4         | 5H-Dibenzo[a,d]cycloheptene    | 192    | C15H12           | 000256-81-5 | 42   |
| 5         | Phenanthrene, 4-methyl-        | 192    | C15H12           | 000832-64-4 | 42   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

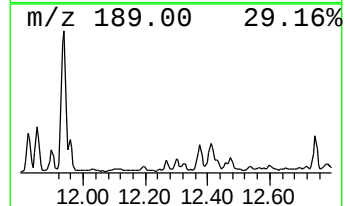
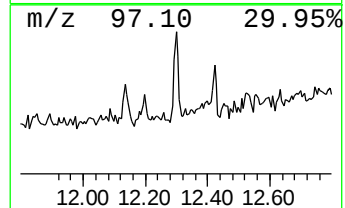
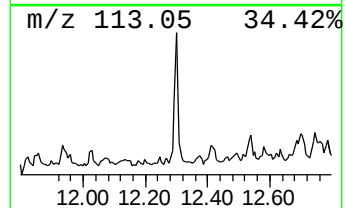
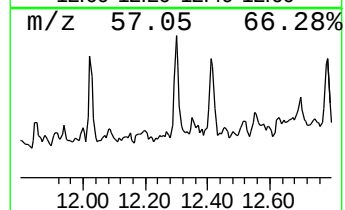
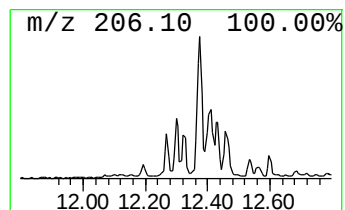
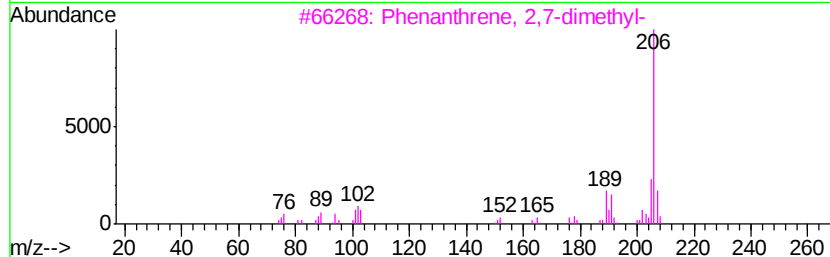
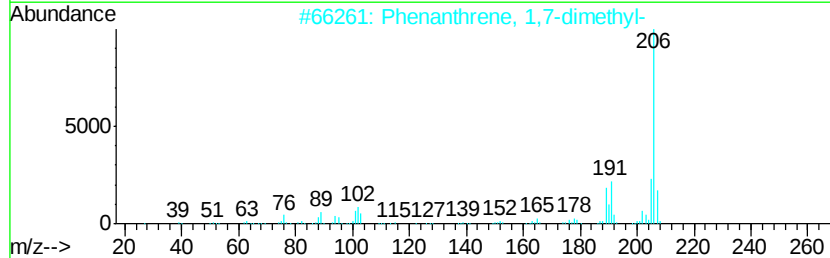
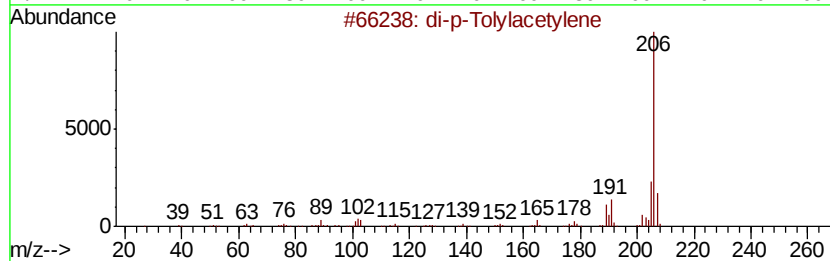
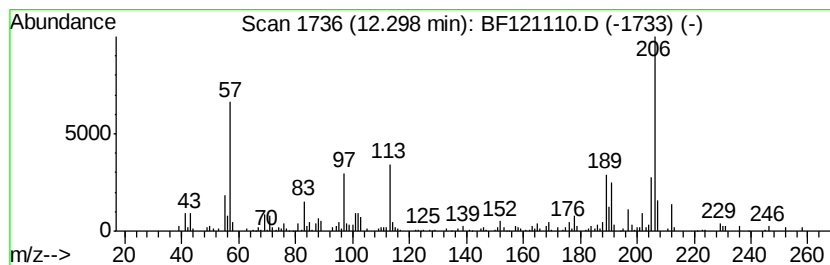
Instrument :  
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ClientSampleId :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 7 di-p-Tolylacetylene Concentration Rank 13

| R.T.      | EstConc                     | Area  | Relative to ISTD |             | R.T.  |
|-----------|-----------------------------|-------|------------------|-------------|-------|
| 12.30     | 2.03 ng                     | 99432 | Phenanthrene-d10 |             | 11.32 |
| Hit# of 5 | Tentative ID                | MW    | MolForm          | CAS#        | Qual  |
| 1         | di-p-Tolylacetylvene        | 206   | C16H14           | 002789-88-0 | 95    |
| 2         | Phenanthrene, 1,7-dimethyl- | 206   | C16H14           | 000483-87-4 | 83    |
| 3         | Phenanthrene, 2,7-dimethyl- | 206   | C16H14           | 001576-69-8 | 83    |
| 4         | Phenanthrene, 3,6-dimethyl- | 206   | C16H14           | 001576-67-6 | 64    |
| 5         | 1,4-Diphenyl-1,3-butadiene  | 206   | C16H14           | 000886-65-7 | 53    |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

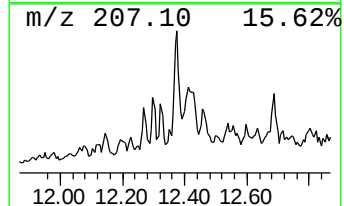
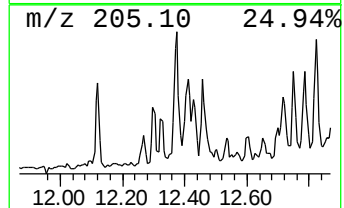
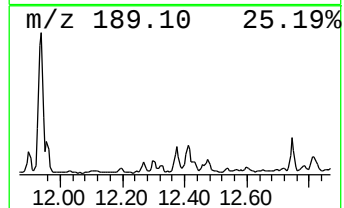
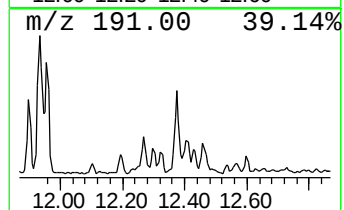
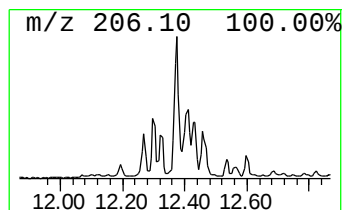
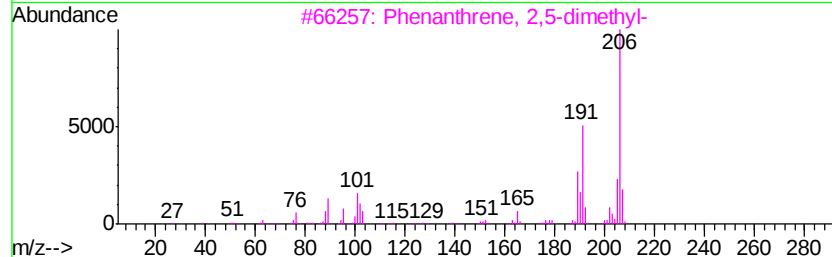
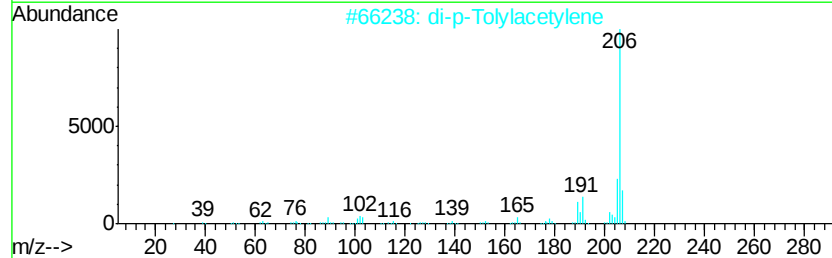
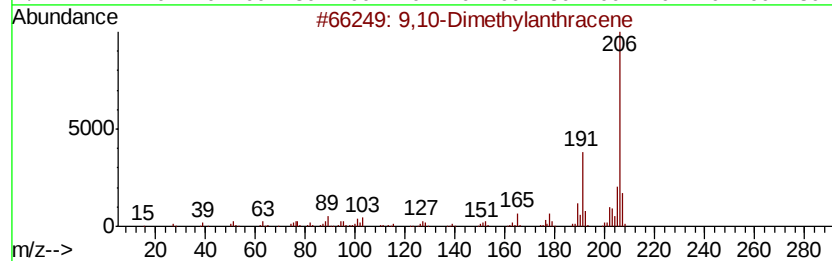
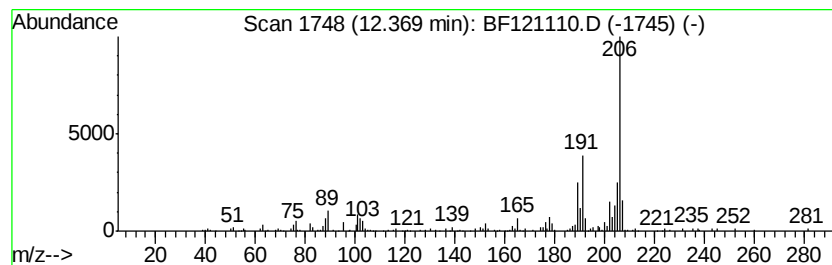
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 8 9,10-Dimethylantracene Concentration Rank 6

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.37 | 3.31 ng | 162083 | Phenanthrene-d10 | 11.32 |

| Hit# | of | 5 | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------------|-----|---------|-------------|------|
| 1    |    |   | 9,10-Dimethylantracene      | 206 | C16H14  | 000781-43-1 | 95   |
| 2    |    |   | di-p-Tolylacetylene         | 206 | C16H14  | 002789-88-0 | 91   |
| 3    |    |   | Phenanthrene, 2,5-dimethyl- | 206 | C16H14  | 003674-66-6 | 91   |
| 4    |    |   | Phenanthrene, 3,6-dimethyl- | 206 | C16H14  | 001576-67-6 | 90   |
| 5    |    |   | Anthracene, 1,4-dimethyl-   | 206 | C16H14  | 000781-92-0 | 86   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

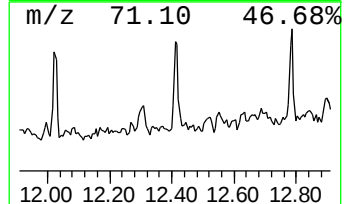
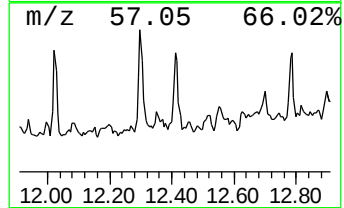
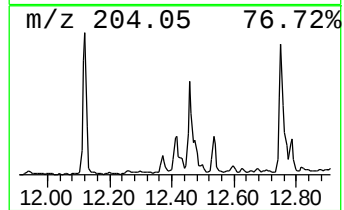
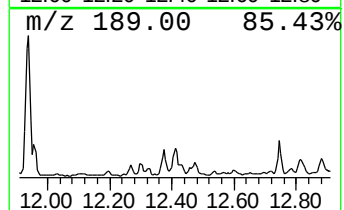
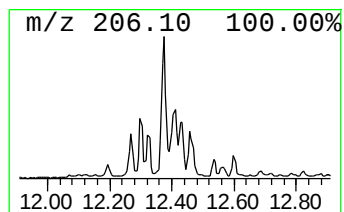
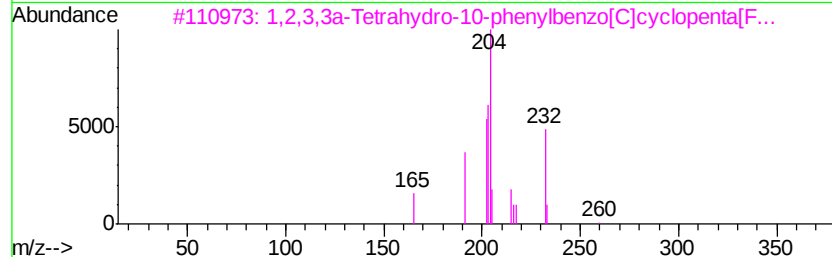
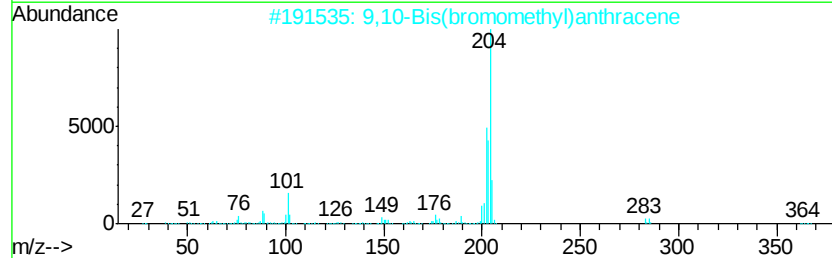
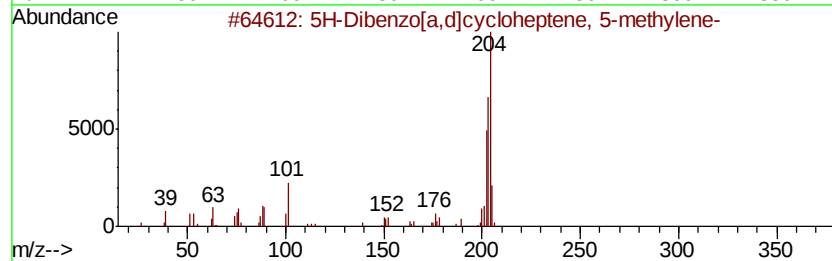
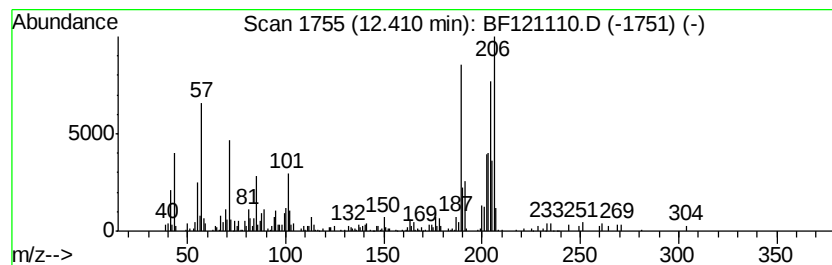
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TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 9 unknown12.41 Concentration Rank 3

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.41 | 5.27 ng | 258048 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 5H-Dibenzo[a,d]cycloheptene, 5-m... | 204 | C16H12    | 002975-79-3  | 47   |
| 2    |    | 9,10-Bis(bromomethyl)anthracene     | 362 | C16H12Br2 | 034373-96-1  | 38   |
| 3    |    | 1,2,3,3a-Tetrahydro-10-phenylben... | 260 | C18H16N2  | 028749-06-6  | 38   |
| 4    |    | 2,3-Bis(bromomethyl)phenanthrene    | 362 | C16H12Br2 | 1000261-29-6 | 35   |
| 5    |    | 9,10-di(Chloromethyl)anthracene     | 274 | C16H12Cl2 | 010387-13-0  | 35   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

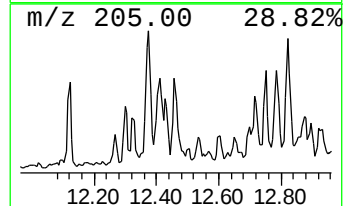
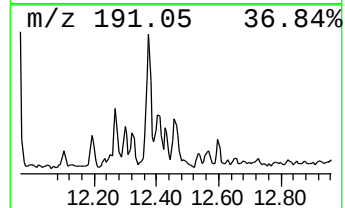
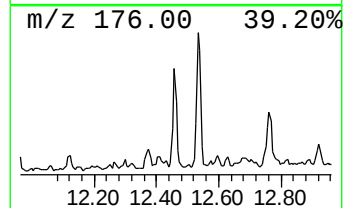
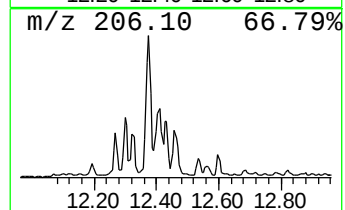
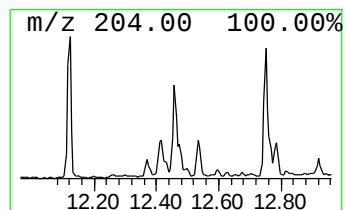
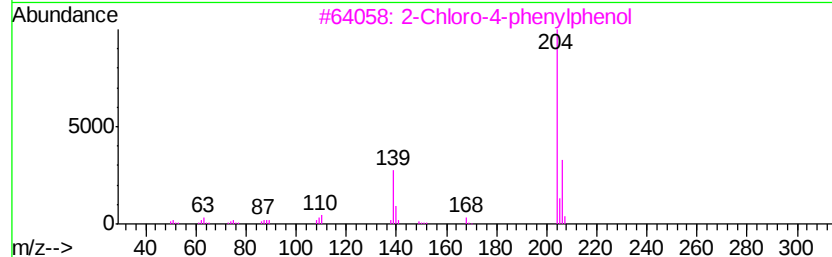
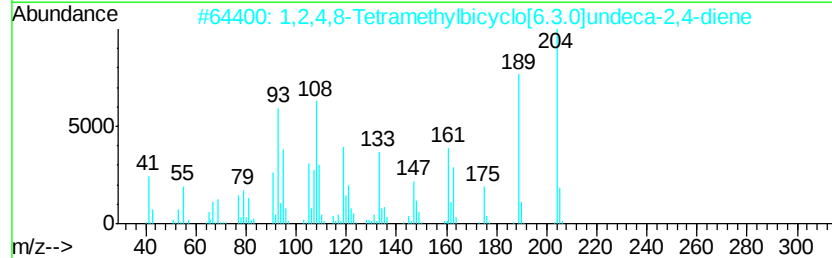
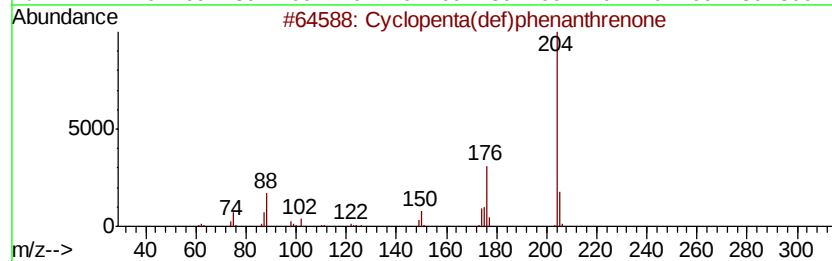
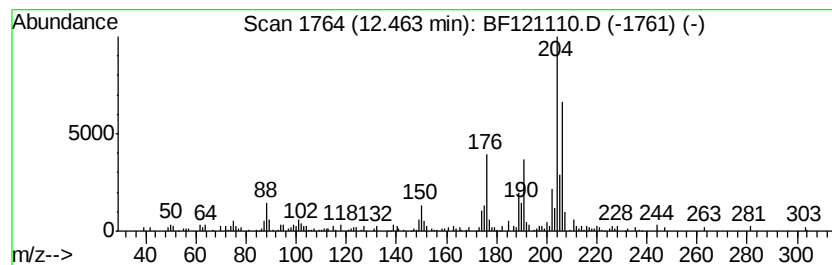
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 10 Cyclopenta(def)phenanthrenone Concentration Rank 10

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.46 | 2.39 ng | 116944 | Phenanthrene-d10 | 11.32 |

| Hit# | of | Tentative ID                                                   | MW  | MolForm  | CAS#         | Qual |
|------|----|----------------------------------------------------------------|-----|----------|--------------|------|
| 1    | 5  | Cyclopenta(def)phenanthrenone                                  | 204 | C15H8O   | 005737-13-3  | 91   |
| 2    |    | 1,2,4,8-Tetramethylbicyclo[6.3.0]undeca-2,4-diene              | 204 | C15H24   | 137235-51-9  | 45   |
| 3    |    | 2-Chloro-4-phenylphenol                                        | 204 | C12H9ClO | 000092-04-6  | 43   |
| 4    |    | 1,1,4a-Trimethyl-5,6-dimethylene-5,6,7,8-tetrahydronaphthalene | 204 | C15H24   | 1000193-60-8 | 42   |
| 5    |    | Tricyclo[8.2.2.2(4,7)]hexadeca-2,4,6,8-tetraene                | 204 | C16H12   | 006572-60-7  | 38   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
14

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

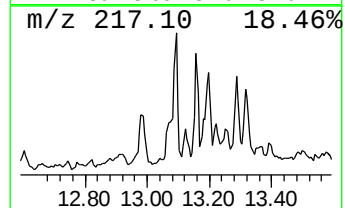
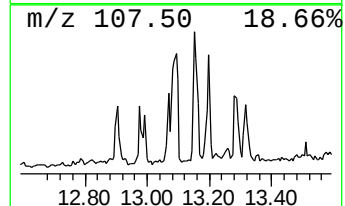
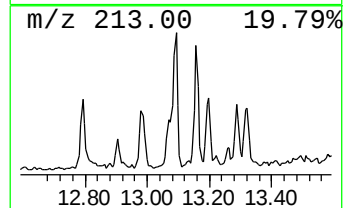
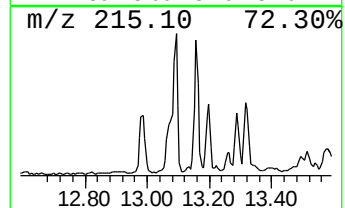
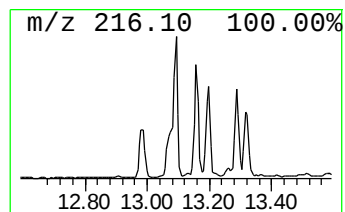
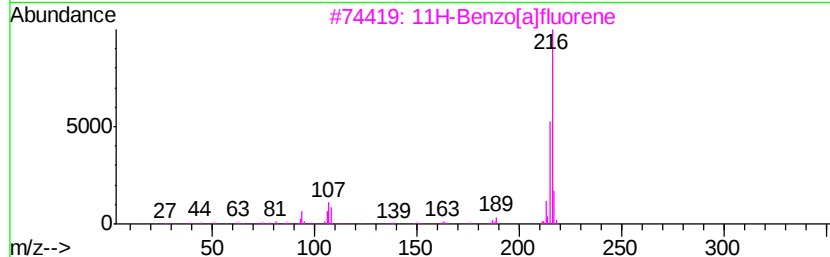
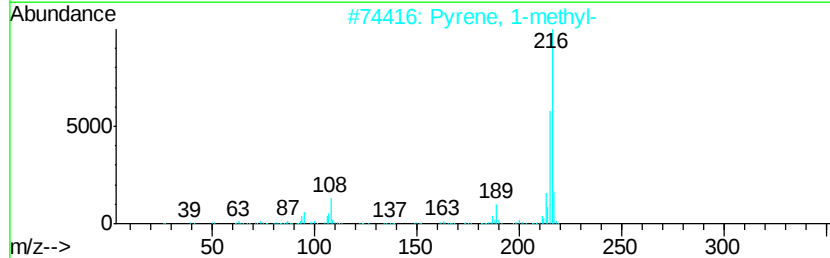
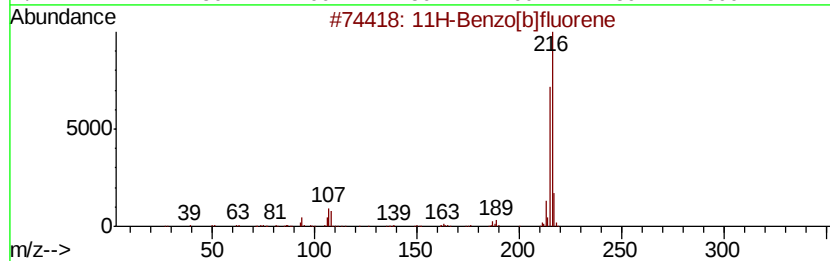
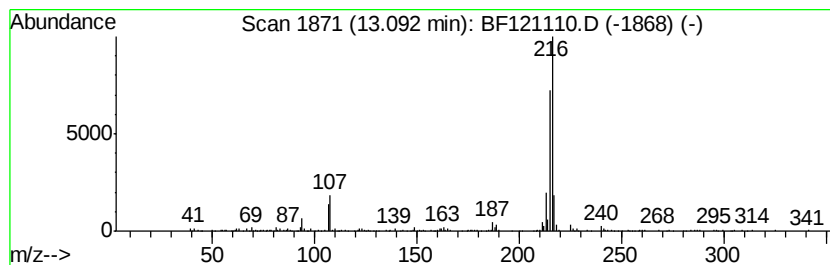
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 11 11H-Benzo[b]fluorene Concentration Rank 9

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 13.09 | 2.60 ng | 220002 | Chrysene-d12     | 13.96 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 93   |
| 2    |    | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 83   |
| 3    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 80   |
| 4    |    | Pyrene, 2-methyl-       | 216 | C17H12  | 003442-78-2 | 80   |
| 5    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 76   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
14

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

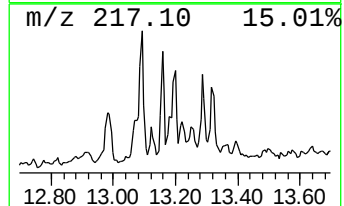
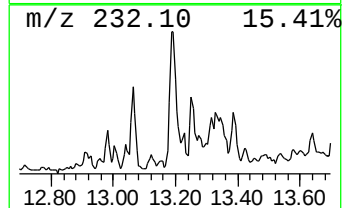
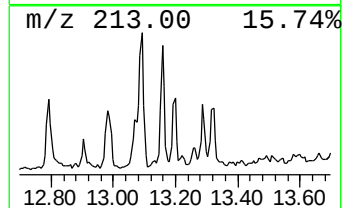
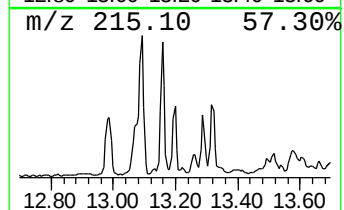
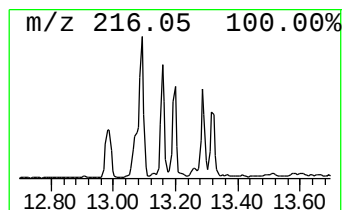
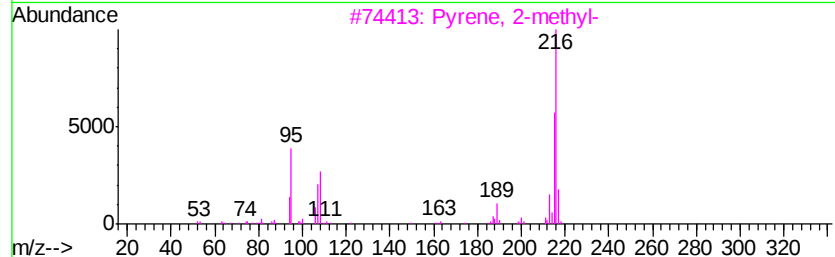
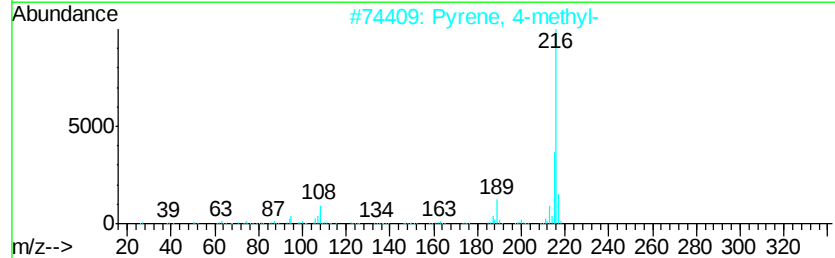
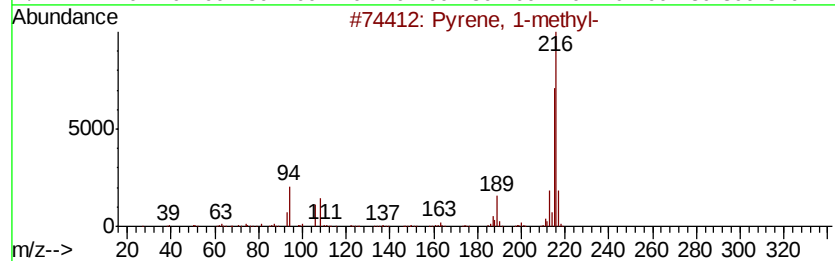
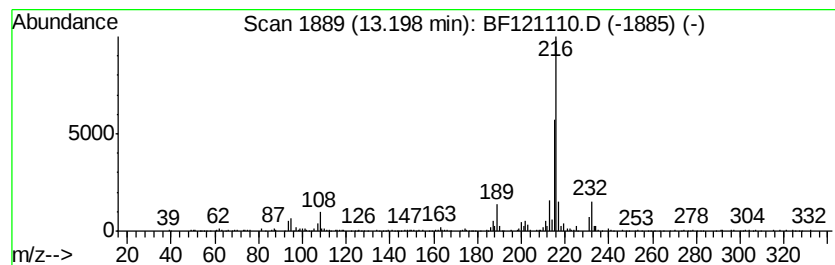
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 12 Pyrene, 1-methyl- Concentration Rank 12

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 13.20 | 2.24 ng | 190166 | Chrysene-d12     | 13.96 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 96   |
| 2    |    | Pyrene, 4-methyl-       | 216 | C17H12  | 003353-12-6 | 95   |
| 3    |    | Pyrene, 2-methyl-       | 216 | C17H12  | 003442-78-2 | 93   |
| 4    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 91   |
| 5    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 90   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF072920\  
Data File : BF121110.D  
Acq On : 29 Jul 2020 19:28  
Operator : JU/CG  
Sample : L3436-14 5X  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
14

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF071620.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

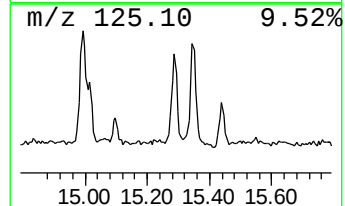
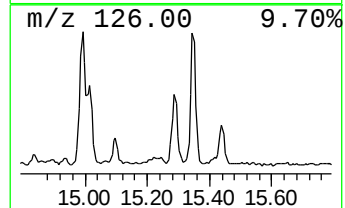
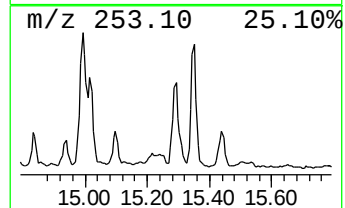
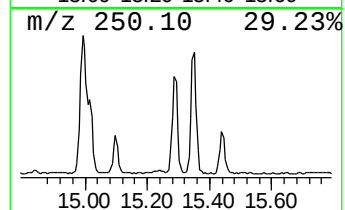
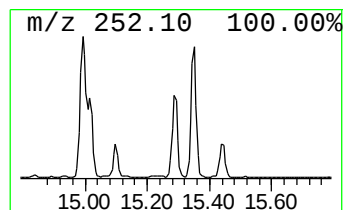
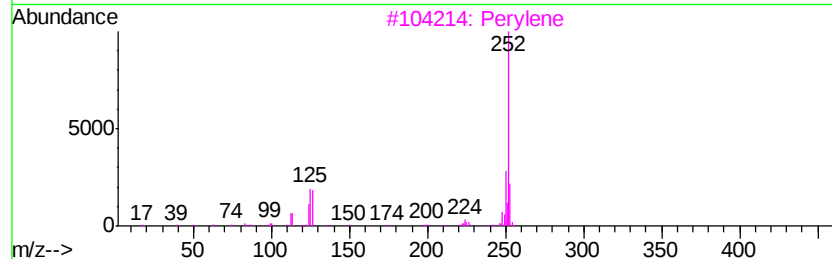
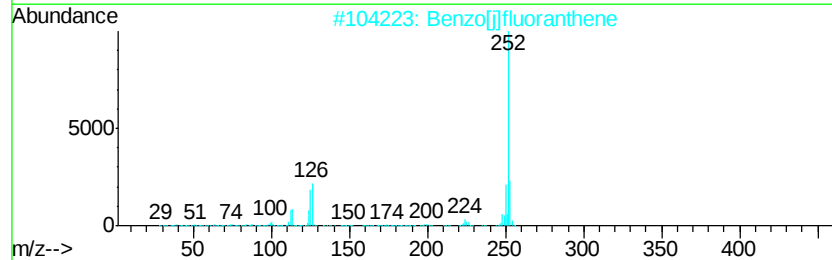
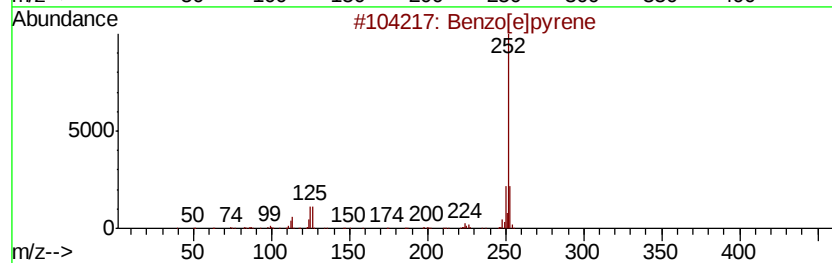
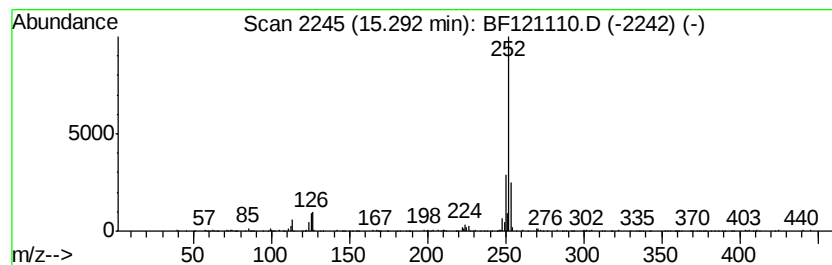
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 13 Benzo[e]pyrene Concentration Rank 1

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 15.29 | 8.55 ng | 368388 | Perylene-d12     | 15.41 |

| Hit# | of | 5 | Tentative ID         | MW  | MolForm | CAS#        | Qual |
|------|----|---|----------------------|-----|---------|-------------|------|
| 1    |    |   | Benzo[e]pyrene       | 252 | C20H12  | 000192-97-2 | 98   |
| 2    |    |   | Benzo[i]fluoranthene | 252 | C20H12  | 000205-82-3 | 93   |
| 3    |    |   | Perylene             | 252 | C20H12  | 000198-55-0 | 90   |
| 4    |    |   | Benzo[k]fluoranthene | 252 | C20H12  | 000207-08-9 | 89   |
| 5    |    |   | Benzo[a]pyrene       | 252 | C20H12  | 000050-32-8 | 89   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA\_F\DATA\BF072920\  
 Data File : BF121110.D  
 Acq On : 29 Jul 2020 19:28  
 Operator : JU/CG  
 Sample : L3436-14 5X  
 Misc :  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 14

Quant Method : Z:\SVOASRV\HPCHEM1\BNA\_F\METHODS\8270-BF071620.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 |
| unknown10.75         | 10.75 | 3.1 ng  |       | 150022   | 4                     | 11.32 | 980195  | 20.0 |
| Naphtho[1,2-b]thi... | 11.22 | 2.8 ng  |       | 136698   | 4                     | 11.32 | 980195  | 20.0 |
| Anthracene, 2-met... | 11.82 | 3.4 ng  |       | 164795   | 4                     | 11.32 | 980195  | 20.0 |
| Phenanthrene, 2-m... | 11.85 | 4.3 ng  |       | 211664   | 4                     | 11.32 | 980195  | 20.0 |
| 4H-Cyclopenta[def... | 11.93 | 6.5 ng  |       | 319363   | 4                     | 11.32 | 980195  | 20.0 |
| di-p-Tolylacetylene  | 12.30 | 2.0 ng  |       | 99432    | 4                     | 11.32 | 980195  | 20.0 |
| 9,10-Dimethylanth... | 12.37 | 3.3 ng  |       | 162083   | 4                     | 11.32 | 980195  | 20.0 |
| unknown12.41         | 12.41 | 5.3 ng  |       | 258048   | 4                     | 11.32 | 980195  | 20.0 |
| Cyclopenta(def)ph... | 12.46 | 2.4 ng  |       | 116944   | 4                     | 11.32 | 980195  | 20.0 |
| 11H-Benzo[b]fluorene | 13.09 | 2.6 ng  |       | 220002   | 5                     | 13.96 | 1695300 | 20.0 |
| Pyrene, 1-methyl-    | 13.20 | 2.2 ng  |       | 190166   | 5                     | 13.96 | 1695300 | 20.0 |
| Benzo[e]pyrene       | 15.29 | 8.6 ng  |       | 368388   | 6                     | 15.41 | 862034  | 20.0 |