

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
 Data File : BF112690.D  
 Acq On : 25 Feb 2019 14:14  
 Operator : JU/SJ  
 Sample : K1595-05  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 TP-E-WALL-GRADE-BEAM

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-BF012519.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         | 5.398       | 559           | 563         | 570          | rBV      | 13072          | 20385         | 1.78%           | 0.155%        |
| 2         | 5.457       | 570           | 573         | 591          | rBV      | 552316         | 883865        | 77.04%          | 6.738%        |
| 3         | 5.651       | 603           | 606         | 610          | rBV4     | 12473          | 14458         | 1.26%           | 0.110%        |
| 4         | 6.340       | 720           | 723         | 726          | rBV      | 16572          | 13170         | 1.15%           | 0.100%        |
| 5         | 6.416       | 734           | 736         | 741          | rVB      | 15961          | 13752         | 1.20%           | 0.105%        |
| 6         | 6.481       | 744           | 747         | 763          | rBV      | 694100         | 1005836       | 87.67%          | 7.668%        |
| 7         | 6.598       | 763           | 767         | 772          | rVV      | 1035166        | 1083221       | 94.42%          | 8.257%        |
| 8         | 6.645       | 772           | 775         | 780          | rVV3     | 58918          | 80188         | 6.99%           | 0.611%        |
| 9         | 6.693       | 780           | 783         | 788          | rVB4     | 9594           | 12994         | 1.13%           | 0.099%        |
| 10        | 6.816       | 800           | 804         | 810          | rBV      | 305067         | 286484        | 24.97%          | 2.184%        |
| 11        | 6.969       | 827           | 830         | 844          | rVB      | 930424         | 814233        | 70.97%          | 6.207%        |
| 12        | 7.087       | 847           | 850         | 853          | rVV2     | 15926          | 19564         | 1.71%           | 0.149%        |
| 13        | 7.134       | 855           | 858         | 864          | rVB2     | 15085          | 18769         | 1.64%           | 0.143%        |
| 14        | 7.381       | 897           | 900         | 912          | rBV      | 556702         | 633893        | 55.25%          | 4.832%        |
| 15        | 7.675       | 947           | 950         | 954          | rBV      | 37703          | 41971         | 3.66%           | 0.320%        |
| 16        | 8.098       | 1019          | 1022        | 1035         | rVB      | 337766         | 376748        | 32.84%          | 2.872%        |
| 17        | 8.310       | 1055          | 1058        | 1065         | rBV      | 33699          | 33320         | 2.90%           | 0.254%        |
| 18        | 8.369       | 1065          | 1068        | 1076         | rVV      | 36967          | 42498         | 3.70%           | 0.324%        |
| 19        | 8.816       | 1138          | 1144        | 1149         | rBV4     | 20404          | 32843         | 2.86%           | 0.250%        |
| 20        | 8.910       | 1156          | 1160        | 1163         | rBV      | 20042          | 18109         | 1.58%           | 0.138%        |
| 21        | 9.086       | 1186          | 1190        | 1193         | rBV      | 14626          | 12918         | 1.13%           | 0.098%        |
| 22        | 9.169       | 1200          | 1204        | 1214         | rBV      | 1177243        | 1147260       | 100.00%         | 8.746%        |
| 23        | 9.275       | 1220          | 1222        | 1228         | rVB3     | 9963           | 14544         | 1.27%           | 0.111%        |
| 24        | 9.445       | 1246          | 1251        | 1255         | rBV3     | 12112          | 18385         | 1.60%           | 0.140%        |
| 25        | 9.510       | 1258          | 1262        | 1265         | rBV      | 17213          | 18722         | 1.63%           | 0.143%        |
| 26        | 9.563       | 1268          | 1271        | 1278         | rVB      | 71866          | 72041         | 6.28%           | 0.549%        |
| 27        | 9.851       | 1311          | 1320        | 1323         | rBV      | 417813         | 417336        | 36.38%          | 3.181%        |
| 28        | 9.881       | 1323          | 1325        | 1333         | rVB2     | 42844          | 47733         | 4.16%           | 0.364%        |
| 29        | 10.063      | 1351          | 1356        | 1359         | rBV2     | 14924          | 20692         | 1.80%           | 0.158%        |
| 30        | 10.404      | 1410          | 1414        | 1419         | rVB2     | 34240          | 36721         | 3.20%           | 0.280%        |
| 31        | 10.463      | 1419          | 1424        | 1426         | rBV3     | 7477           | 11740         | 1.02%           | 0.089%        |
| 32        | 10.645      | 1451          | 1455        | 1465         | rBV      | 579862         | 623316        | 54.33%          | 4.752%        |
| 33        | 10.928      | 1498          | 1503        | 1505         | rBV      | 16092          | 15378         | 1.34%           | 0.117%        |
| 34        | 11.157      | 1537          | 1542        | 1545         | rBV2     | 15423          | 21303         | 1.86%           | 0.162%        |

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 TP-E-WALL-GRADE-BEAM

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-BF012519.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |        |        |        |        |
|----|--------|------|------|------|------|--------|--------|--------|--------|
| 35 | 11.180 | 1545 | 1546 | 1551 | rVV3 | 12137  | 14591  | 1.27%  | 0.111% |
| 36 | 11.239 | 1553 | 1556 | 1559 | rVB  | 14375  | 15851  | 1.38%  | 0.121% |
| 37 | 11.339 | 1569 | 1573 | 1575 | rBV  | 360453 | 352211 | 30.70% | 2.685% |
| 38 | 11.363 | 1575 | 1577 | 1582 | rVV  | 339630 | 300083 | 26.16% | 2.288% |
| 39 | 11.416 | 1582 | 1586 | 1592 | rVB  | 57139  | 61131  | 5.33%  | 0.466% |
| 40 | 11.586 | 1610 | 1615 | 1618 | rBV2 | 24831  | 30299  | 2.64%  | 0.231% |
| 41 | 11.851 | 1655 | 1660 | 1662 | rBV2 | 72069  | 108839 | 9.49%  | 0.830% |
| 42 | 11.869 | 1662 | 1663 | 1669 | rVB2 | 73378  | 77122  | 6.72%  | 0.588% |
| 43 | 11.951 | 1674 | 1677 | 1680 | rVV  | 54546  | 62713  | 5.47%  | 0.478% |
| 44 | 11.975 | 1680 | 1681 | 1685 | rVB  | 28475  | 19996  | 1.74%  | 0.152% |
| 45 | 12.133 | 1705 | 1708 | 1712 | rBV2 | 35877  | 35103  | 3.06%  | 0.268% |
| 46 | 12.186 | 1714 | 1717 | 1724 | rVB4 | 21483  | 30421  | 2.65%  | 0.232% |
| 47 | 12.280 | 1731 | 1733 | 1737 | rBV4 | 11497  | 13187  | 1.15%  | 0.101% |
| 48 | 12.345 | 1741 | 1744 | 1748 | rVB2 | 24347  | 20477  | 1.78%  | 0.156% |
| 49 | 12.386 | 1748 | 1751 | 1755 | rBV3 | 30848  | 36724  | 3.20%  | 0.280% |
| 50 | 12.498 | 1764 | 1770 | 1774 | rVB6 | 13814  | 21716  | 1.89%  | 0.166% |
| 51 | 12.551 | 1776 | 1779 | 1783 | rBV  | 330916 | 332427 | 28.98% | 2.534% |
| 52 | 12.639 | 1791 | 1794 | 1797 | rBV5 | 23139  | 26240  | 2.29%  | 0.200% |
| 53 | 12.710 | 1801 | 1806 | 1808 | rBV2 | 19592  | 24493  | 2.13%  | 0.187% |
| 54 | 12.780 | 1812 | 1818 | 1823 | rBV  | 271224 | 339450 | 29.59% | 2.588% |
| 55 | 12.833 | 1825 | 1827 | 1833 | rVB4 | 24852  | 26069  | 2.27%  | 0.199% |
| 56 | 12.910 | 1836 | 1840 | 1846 | rBV  | 935729 | 815223 | 71.06% | 6.214% |
| 57 | 13.004 | 1851 | 1856 | 1859 | rVB4 | 20902  | 38068  | 3.32%  | 0.290% |
| 58 | 13.045 | 1861 | 1863 | 1867 | rBV4 | 16485  | 18855  | 1.64%  | 0.144% |
| 59 | 13.116 | 1872 | 1875 | 1879 | rVB3 | 38572  | 46575  | 4.06%  | 0.355% |
| 60 | 13.180 | 1883 | 1886 | 1889 | rBV  | 21131  | 19060  | 1.66%  | 0.145% |
| 61 | 13.216 | 1889 | 1892 | 1896 | rVV3 | 20869  | 27338  | 2.38%  | 0.208% |
| 62 | 13.310 | 1906 | 1908 | 1910 | rBV2 | 17164  | 15568  | 1.36%  | 0.119% |
| 63 | 13.345 | 1911 | 1914 | 1916 | rVV3 | 21345  | 22001  | 1.92%  | 0.168% |
| 64 | 13.374 | 1916 | 1919 | 1923 | rVB  | 112244 | 104880 | 9.14%  | 0.800% |
| 65 | 13.739 | 1978 | 1981 | 1982 | rBV  | 29541  | 28313  | 2.47%  | 0.216% |
| 66 | 13.804 | 1987 | 1992 | 1997 | rVV5 | 45836  | 90524  | 7.89%  | 0.690% |
| 67 | 13.845 | 1997 | 1999 | 2004 | rVB  | 32688  | 33950  | 2.96%  | 0.259% |
| 68 | 13.933 | 2011 | 2014 | 2016 | rBV3 | 22964  | 25058  | 2.18%  | 0.191% |
| 69 | 13.980 | 2017 | 2022 | 2025 | rVV2 | 432241 | 554194 | 48.31% | 4.225% |
| 70 | 14.010 | 2025 | 2027 | 2033 | rVB  | 144759 | 146325 | 12.75% | 1.115% |
| 71 | 14.086 | 2038 | 2040 | 2043 | rBV  | 26837  | 28896  | 2.52%  | 0.220% |

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ALS Vial : 7 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

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-BF012519.M  
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |        |        |        |        |
|----|--------|------|------|------|------|--------|--------|--------|--------|
| 72 | 14.157 | 2048 | 2052 | 2056 | rBV2 | 44321  | 55600  | 4.85%  | 0.424% |
| 73 | 14.410 | 2093 | 2095 | 2098 | rVB2 | 36798  | 30560  | 2.66%  | 0.233% |
| 74 | 14.710 | 2144 | 2146 | 2152 | rVB4 | 46865  | 52761  | 4.60%  | 0.402% |
| 75 | 15.033 | 2196 | 2201 | 2212 | rBV2 | 184587 | 409409 | 35.69% | 3.121% |
| 76 | 15.333 | 2248 | 2252 | 2256 | rBV  | 86103  | 113144 | 9.86%  | 0.863% |
| 77 | 15.398 | 2259 | 2263 | 2268 | rVB2 | 130233 | 199311 | 17.37% | 1.519% |
| 78 | 15.457 | 2269 | 2273 | 2277 | rBV  | 208092 | 267657 | 23.33% | 2.040% |
| 79 | 16.315 | 2416 | 2419 | 2425 | rVB2 | 24177  | 37636  | 3.28%  | 0.287% |
| 80 | 17.409 | 2602 | 2605 | 2616 | rVB2 | 30906  | 63700  | 5.55%  | 0.486% |

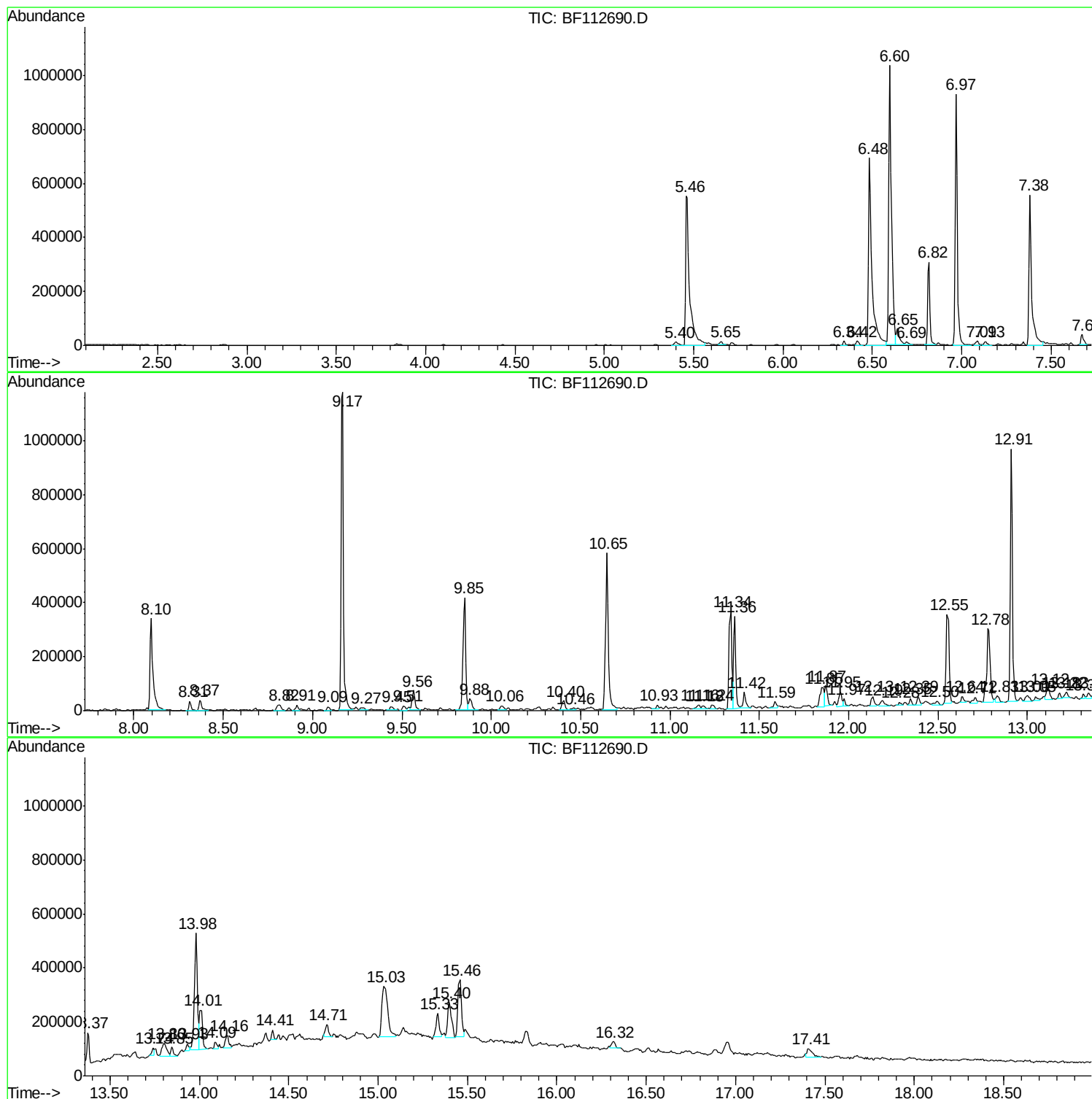
Sum of corrected areas: 13118139

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
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Instrument :  
BNA\_F  
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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.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\BF022519\  
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Instrument :  
BNA\_F  
ClientSampleId :  
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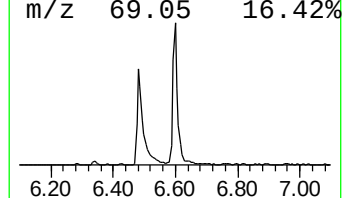
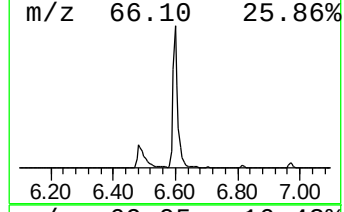
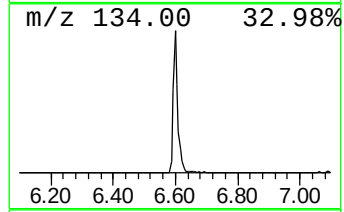
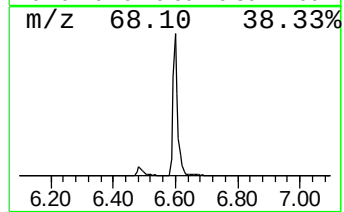
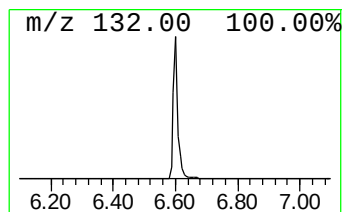
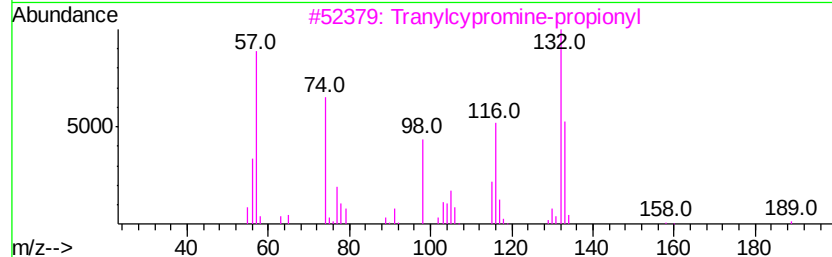
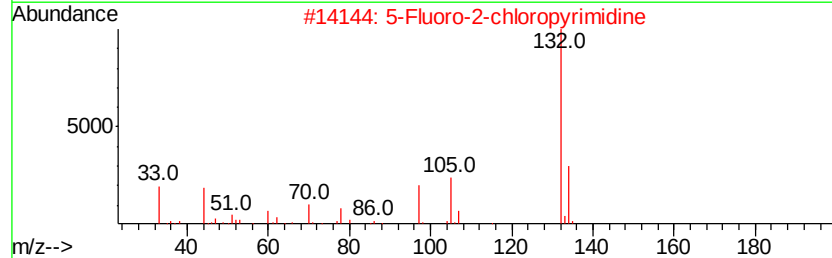
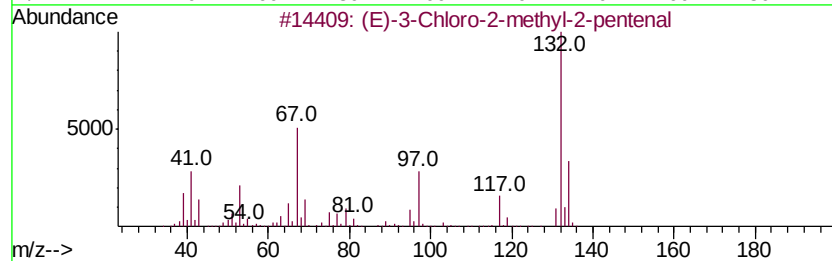
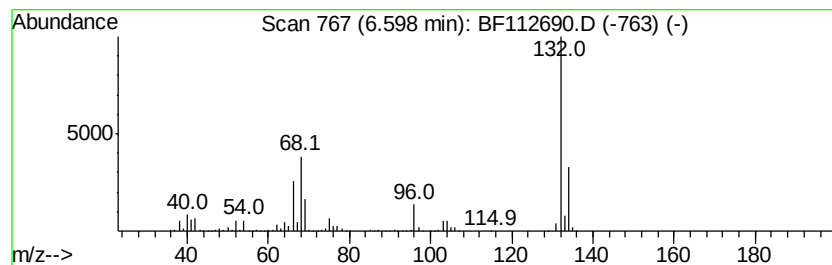
Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 1 unknown6.60 Concentration Rank 1

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 6.60 | 75.62 ng | 1083220 | 1,4-Dichlorobenzene-d4 | 6.82 |

| Hit# | of | Tentative ID                     | MW  | MolForm   | CAS#         | Qual |
|------|----|----------------------------------|-----|-----------|--------------|------|
| 1    | 5  | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO   | 031357-76-3  | 16   |
| 2    |    | 5-Fluoro-2-chloropyrimidine      | 132 | C4H2ClFN2 | 062802-42-0  | 12   |
| 3    |    | Tranvlcypropine-propionyl        | 189 | C12H15NO  | 1000123-86-3 | 12   |
| 4    |    | (5-Methyl-2-pyridyl)acetonitrile | 132 | C8H8N2    | 1000241-93-9 | 10   |
| 5    |    | Xenon                            | 132 | Xe        | 007440-63-3  | 9    |



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Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

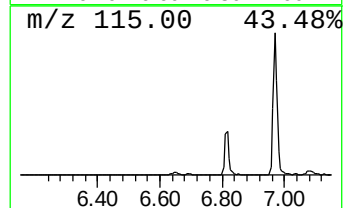
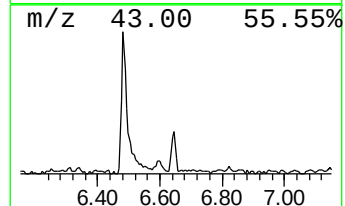
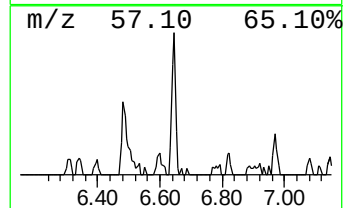
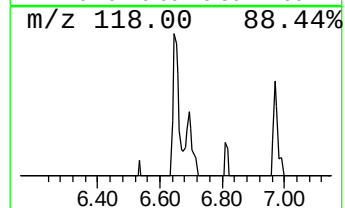
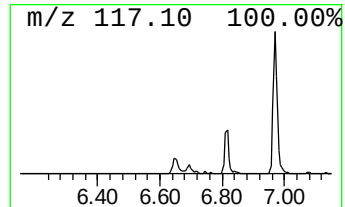
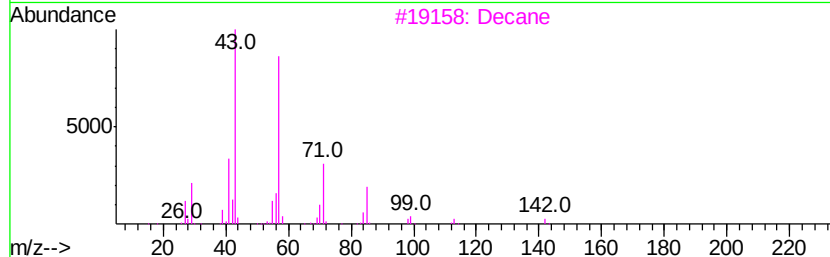
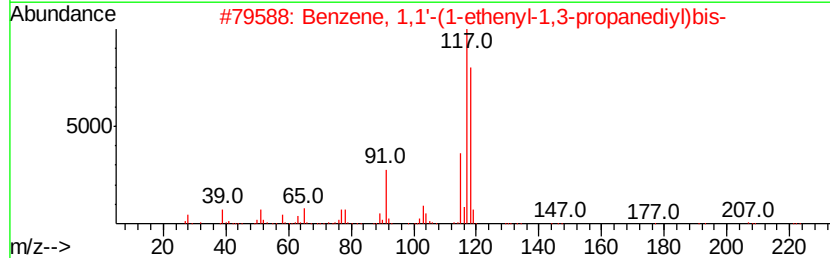
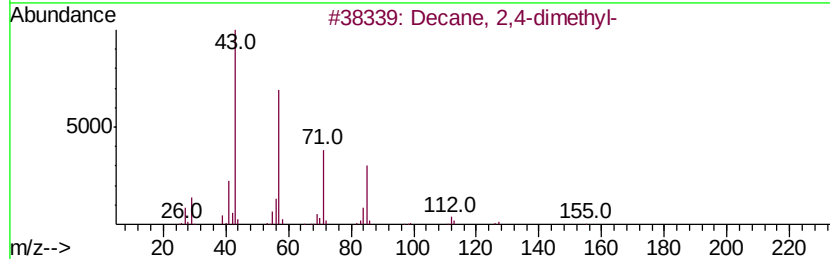
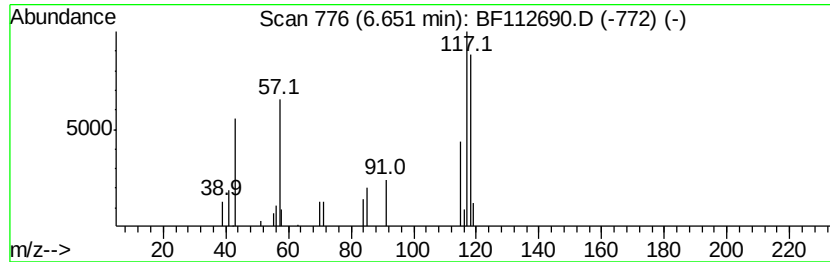
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 2 unknown6.65 Concentration Rank 5

| R.T. | EstConc | Area  | Relative to ISTD       | R.T. |
|------|---------|-------|------------------------|------|
| 6.65 | 5.60 ng | 80188 | 1,4-Dichlorobenzene-d4 | 6.82 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------------------|-----|---------|-------------|------|
| 1    | 5  | Decane, 2,4-dimethyl-               | 170 | C12H26  | 002801-84-5 | 38   |
| 2    |    | Benzene, 1,1'-(1-ethenyl-1,3-pro... | 222 | C17H18  | 061141-97-7 | 32   |
| 3    |    | Decane                              | 142 | C10H22  | 000124-18-5 | 32   |
| 4    |    | Ether, 6-methylheptyl vinyl         | 156 | C10H20O | 010573-35-0 | 27   |
| 5    |    | Benzene, 2-propenyl-                | 118 | C9H10   | 000300-57-2 | 27   |



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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

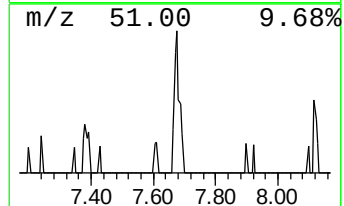
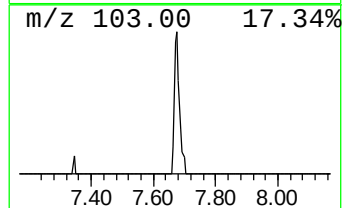
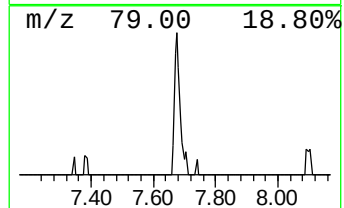
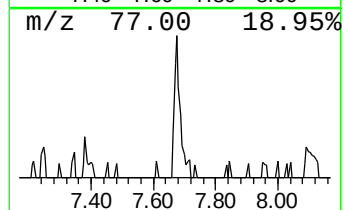
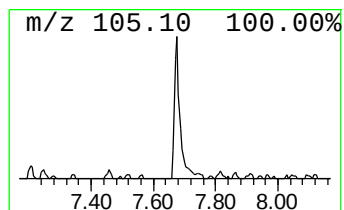
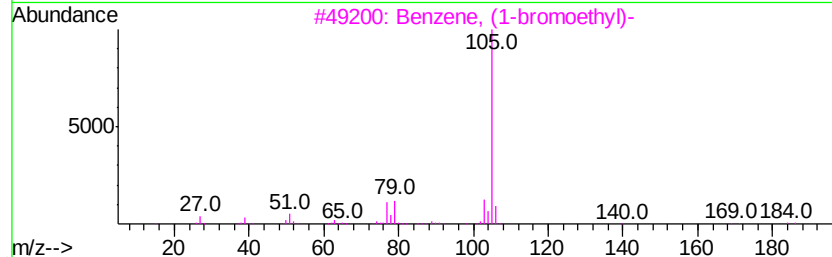
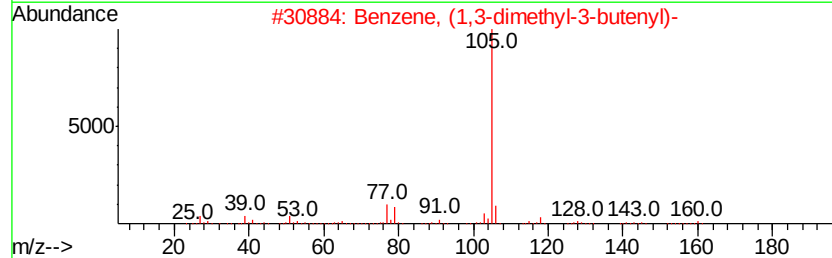
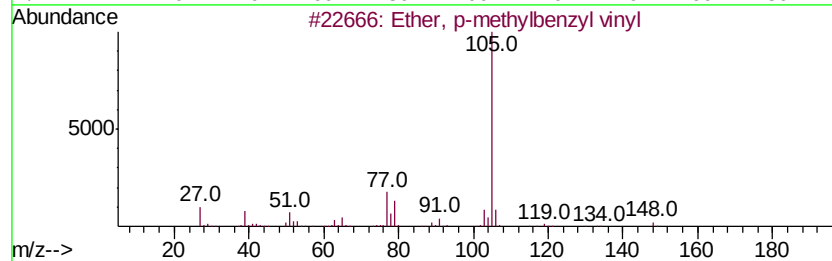
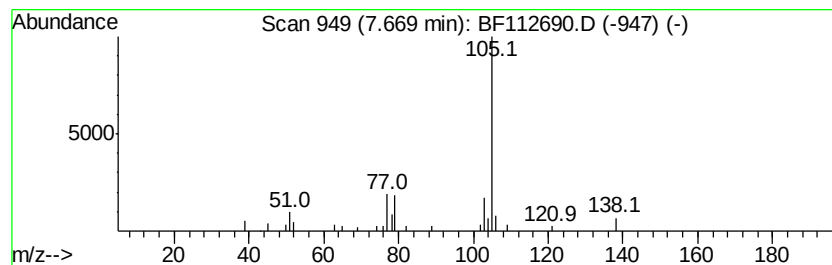
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TIC Integration Parameters: LSCINT.P

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Peak Number 4 Ether, p-methylbenzyl vinyl Concentration Rank 11

| R.T. | EstConc | Area  | Relative to ISTD | R.T. |
|------|---------|-------|------------------|------|
| 7.67 | 2.23 ng | 41971 | Naphthalene-d8   | 8.10 |

| Hit# | of | Tentative ID                       | MW  | MolForm  | CAS#         | Qual |
|------|----|------------------------------------|-----|----------|--------------|------|
| 1    | 5  | Ether, p-methylbenzyl vinyl        | 148 | C10H12O  | 026437-10-5  | 78   |
| 2    |    | Benzene, (1,3-dimethyl-3-butenyl)- | 160 | C12H16   | 056851-51-5  | 64   |
| 3    |    | Benzene, (1-bromoethyl)-           | 184 | C8H9Br   | 000585-71-7  | 64   |
| 4    |    | Benzene, 1-(bromomethyl)-4-methyl- | 184 | C8H9Br   | 000104-81-4  | 59   |
| 5    |    | 3-Phenylpropanoic anhydride        | 282 | C18H18O3 | 1000333-89-6 | 56   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
Acq On : 25 Feb 2019 14:14  
Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

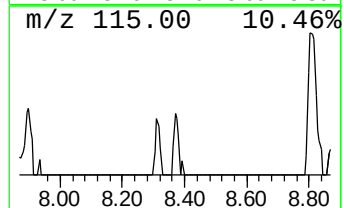
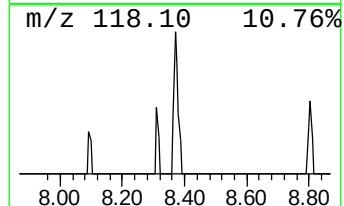
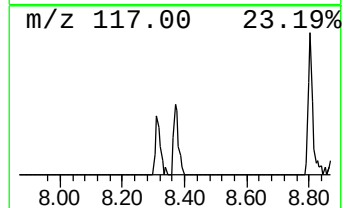
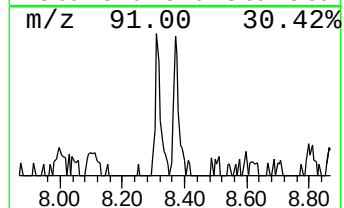
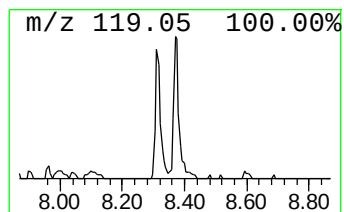
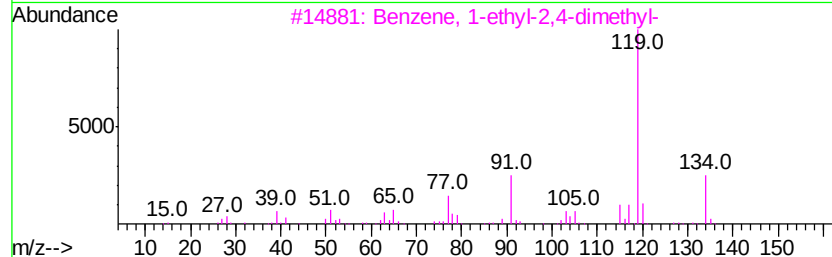
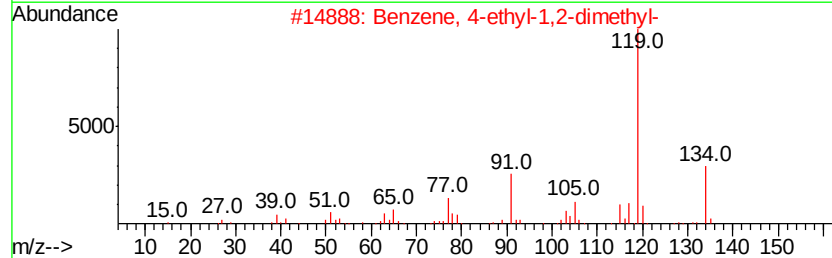
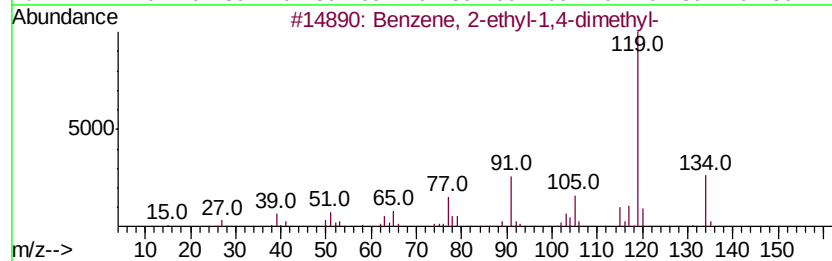
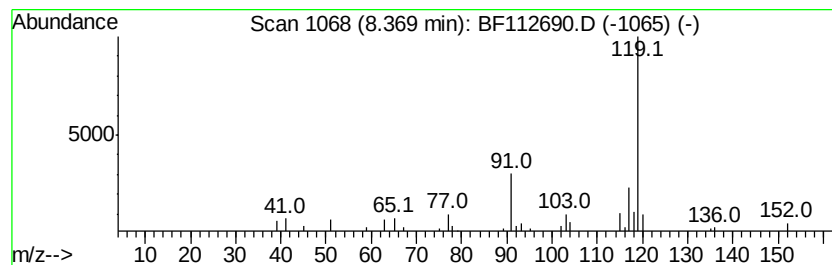
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TIC Integration Parameters: LSCINT.P

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Peak Number 5 Benzene, 2-ethyl-1,4-dimethyl- Concentration Rank 10

| R.T. | EstConc | Area  | Relative to ISTD | R.T. |
|------|---------|-------|------------------|------|
| 8.37 | 2.26 ng | 42498 | Napthalene-d8    | 8.10 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzene, 2-ethyl-1,4-dimethyl-      | 134 | C10H14  | 001758-88-9 | 72   |
| 2    |    | Benzene, 4-ethyl-1,2-dimethyl-      | 134 | C10H14  | 000934-80-5 | 72   |
| 3    |    | Benzene, 1-ethyl-2,4-dimethyl-      | 134 | C10H14  | 000874-41-9 | 72   |
| 4    |    | Benzene, 2-ethyl-1,3-dimethyl-      | 134 | C10H14  | 002870-04-4 | 72   |
| 5    |    | Benzene, 1-methyl-3-(1-methyleth... | 134 | C10H14  | 000535-77-3 | 64   |





Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
Acq On : 25 Feb 2019 14:14  
Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

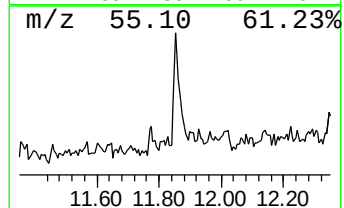
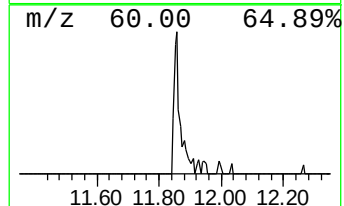
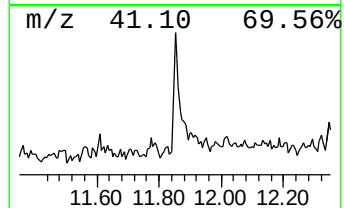
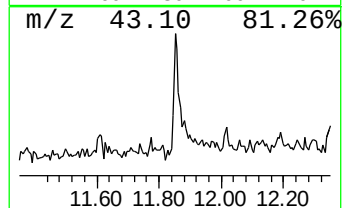
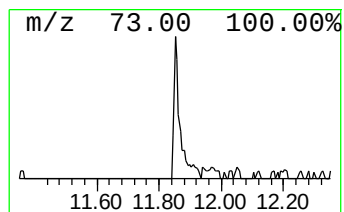
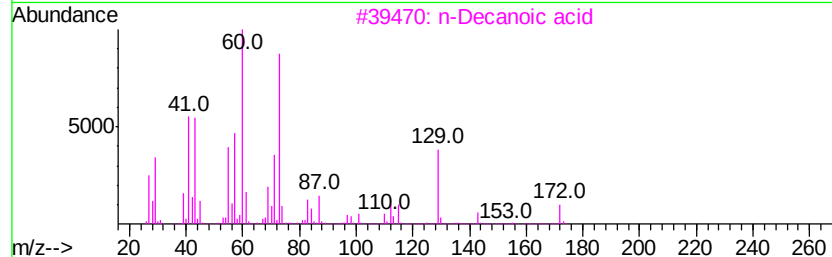
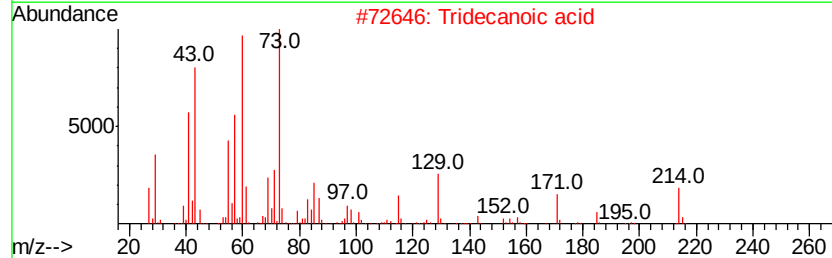
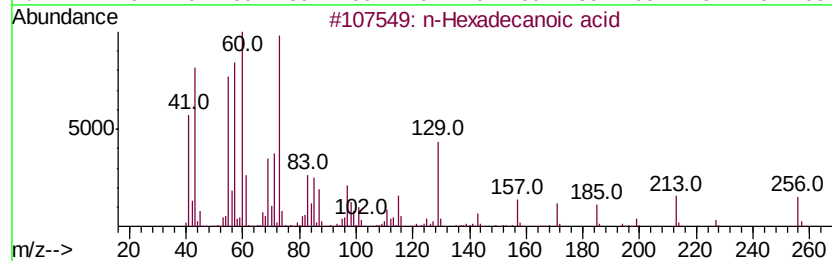
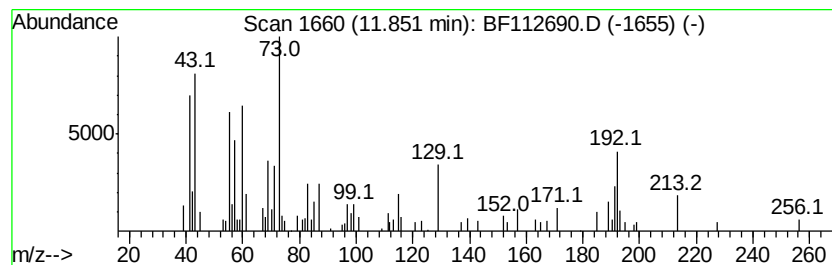
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 6 unknown11.85 Concentration Rank 4

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 11.85 | 6.18 ng | 108839 | Phenanthrene-d10 | 11.34 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | n-Hexadecanoic acid                 | 256 | C16H32O2  | 000057-10-3  | 41   |
| 2    |    | Tridecanoic acid                    | 214 | C13H26O2  | 000638-53-9  | 38   |
| 3    |    | n-Decanoic acid                     | 172 | C10H20O2  | 000334-48-5  | 35   |
| 4    |    | Trehalose                           | 342 | C12H22O11 | 000099-20-7  | 27   |
| 5    |    | Methyl d-glycero-.beta.-d-gulo-h... | 224 | C8H16O7   | 1000130-15-2 | 27   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
Acq On : 25 Feb 2019 14:14  
Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

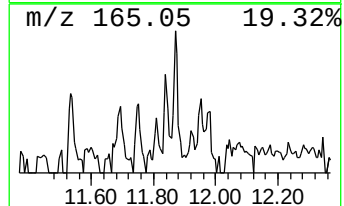
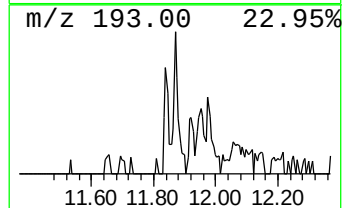
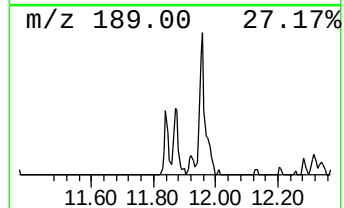
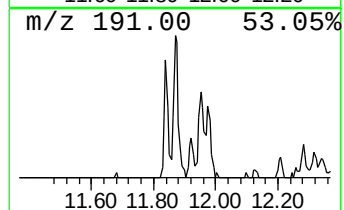
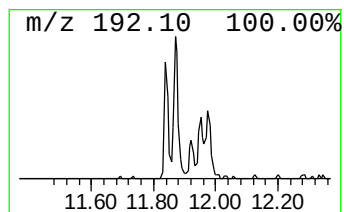
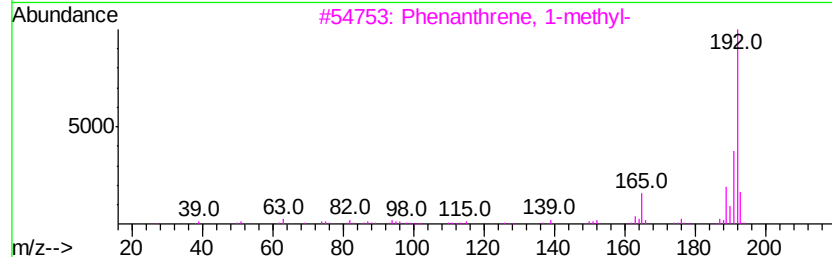
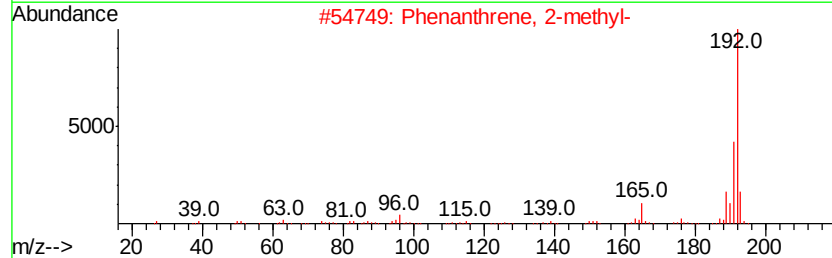
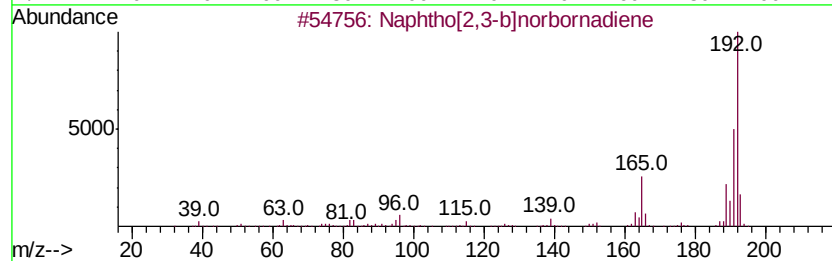
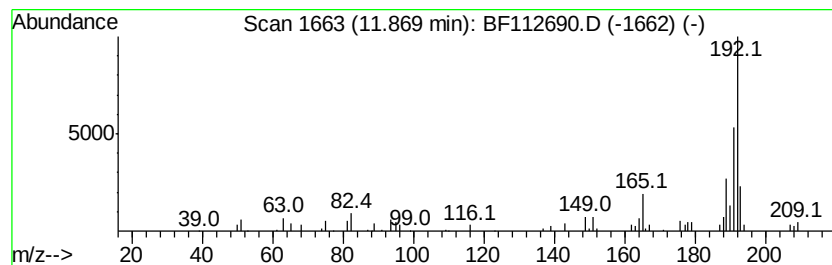
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 7 Naphtho[2,3-b]norbornadiene Concentration Rank 6

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 11.87 | 4.38 ng | 77122 | Phenanthrene-d10 | 11.34 |

| Hit# | of | 5 | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------------|-----|---------|-------------|------|
| 1    |    |   | Naphtho[2,3-b]norbornadiene | 192 | C15H12  | 107426-38-0 | 83   |
| 2    |    |   | Phenanthrene, 2-methyl-     | 192 | C15H12  | 002531-84-2 | 81   |
| 3    |    |   | Phenanthrene, 1-methyl-     | 192 | C15H12  | 000832-69-9 | 80   |
| 4    |    |   | Anthracene, 9-methyl-       | 192 | C15H12  | 000779-02-2 | 80   |
| 5    |    |   | Anthracene, 1-methyl-       | 192 | C15H12  | 000610-48-0 | 74   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
Acq On : 25 Feb 2019 14:14  
Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

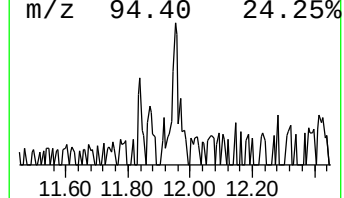
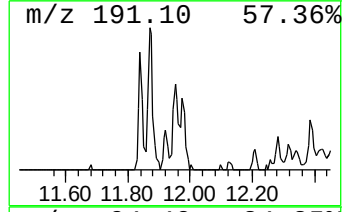
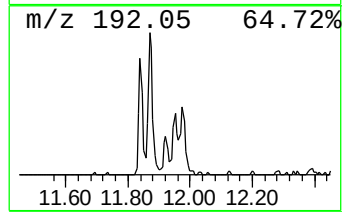
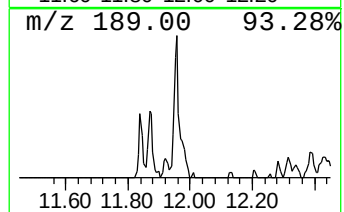
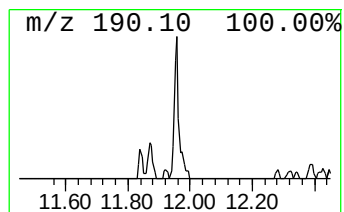
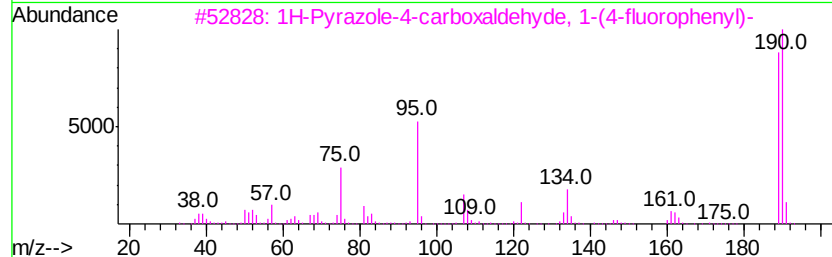
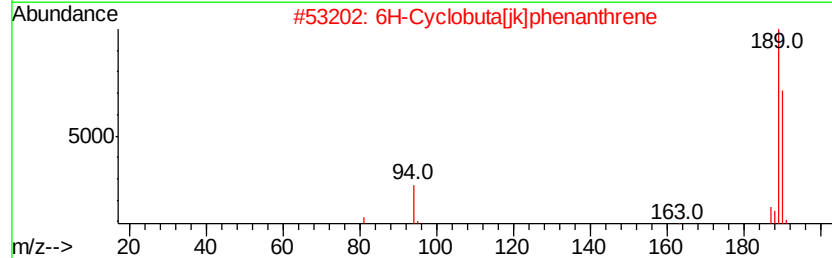
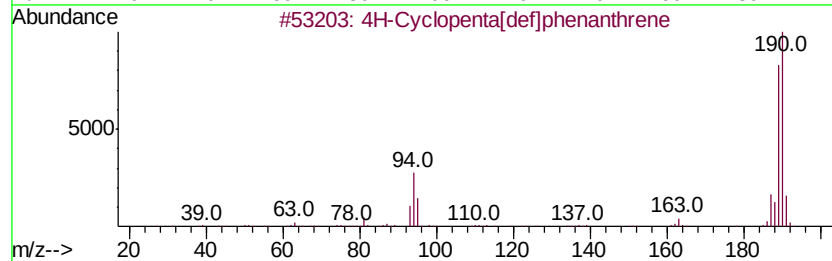
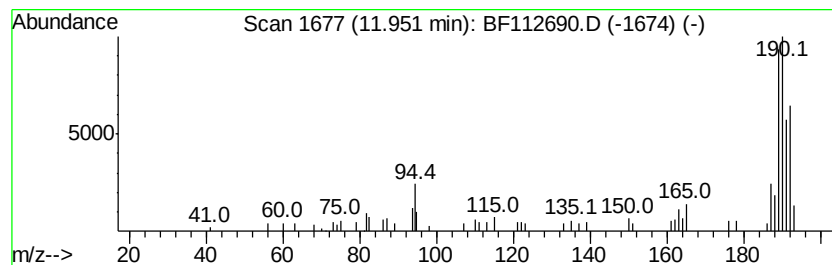
Instrument :  
BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 8 4H-Cyclopenta[def]phenanthrene Concentration Rank 7

| R.T.      | EstConc                                           | Area  | Relative to ISTD | R.T.         |      |
|-----------|---------------------------------------------------|-------|------------------|--------------|------|
| 11.95     | 3.56 ng                                           | 62713 | Phenanthrene-d10 | 11.34        |      |
| Hit# of 5 | Tentative ID                                      | MW    | MolForm          | CAS#         | Qual |
| 1         | 4H-Cyclopenta[def]phenanthrene                    | 190   | C15H10           | 000203-64-5  | 53   |
| 2         | 6H-Cyclobuta[i]kphenanthrene                      | 190   | C15H10           | 083469-43-6  | 50   |
| 3         | 1H-Pyrazole-4-carboxaldehyde, 1-(4-fluorophenyl)- | 190   | C10H7FN2O        | 1000338-05-6 | 38   |
| 4         | Pyrazole-4-carboxaldehyde, 3-(4-fluorophenyl)-    | 190   | C10H7FN2O        | 306936-57-2  | 38   |
| 5         | 5-Bromofuroic acid                                | 190   | C5H3BrO3         | 000585-70-6  | 27   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
Acq On : 25 Feb 2019 14:14  
Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

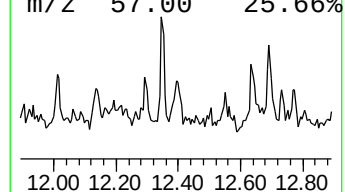
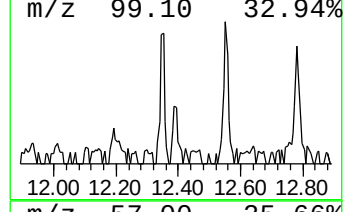
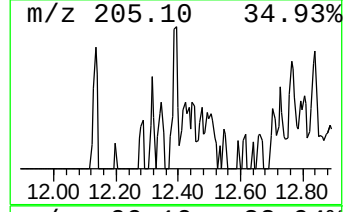
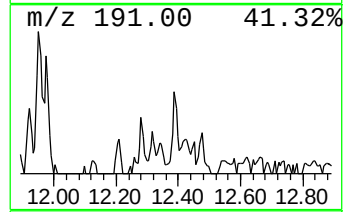
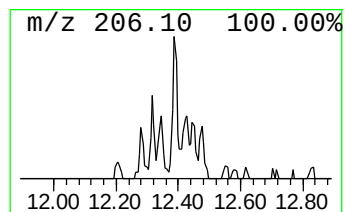
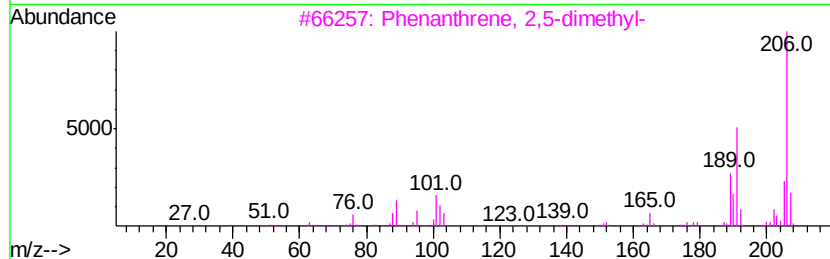
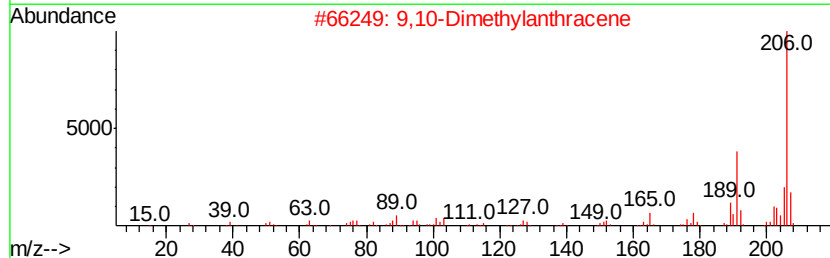
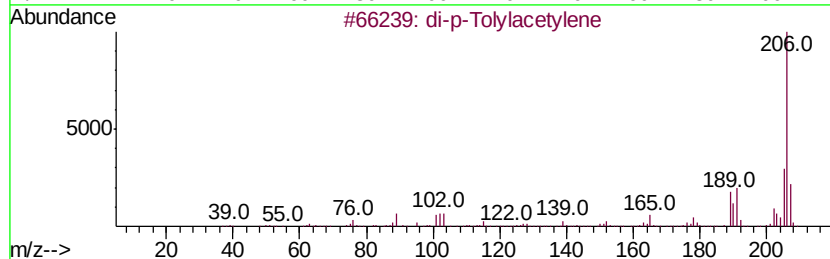
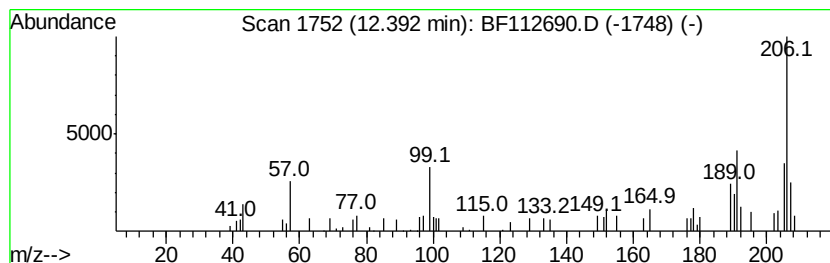
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BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 9 di-p-Tolylacetylene Concentration Rank 12

| R.T.      | EstConc                            | Area  | Relative to ISTD | R.T.        |      |
|-----------|------------------------------------|-------|------------------|-------------|------|
| 12.39     | 2.09 ng                            | 36724 | Phenanthrene-d10 | 11.34       |      |
| Hit# of 5 | Tentative ID                       | MW    | MolForm          | CAS#        | Qual |
| 1         | di-p-Tolylacetylvene               | 206   | C16H14           | 002789-88-0 | 93   |
| 2         | 9,10-Dimethylantracene             | 206   | C16H14           | 000781-43-1 | 93   |
| 3         | Phenanthrene, 2,5-dimethyl-        | 206   | C16H14           | 003674-66-6 | 87   |
| 4         | Phenanthrene, 3,6-dimethyl-        | 206   | C16H14           | 001576-67-6 | 76   |
| 5         | Naphthalene, 1,2-dihydro-4-phenyl- | 206   | C16H14           | 007469-40-1 | 76   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
Acq On : 25 Feb 2019 14:14  
Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

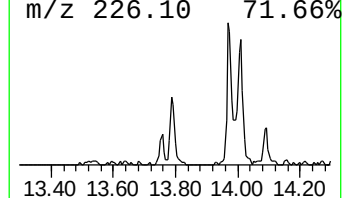
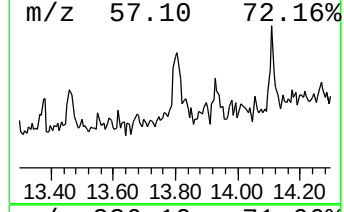
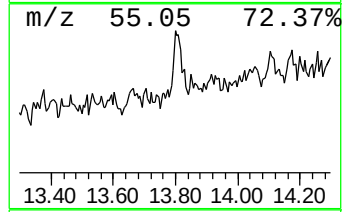
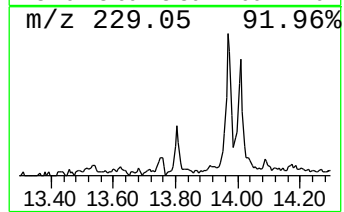
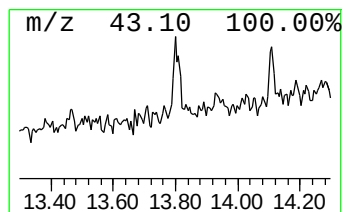
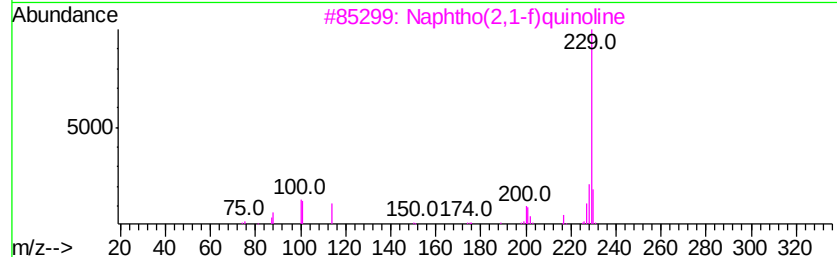
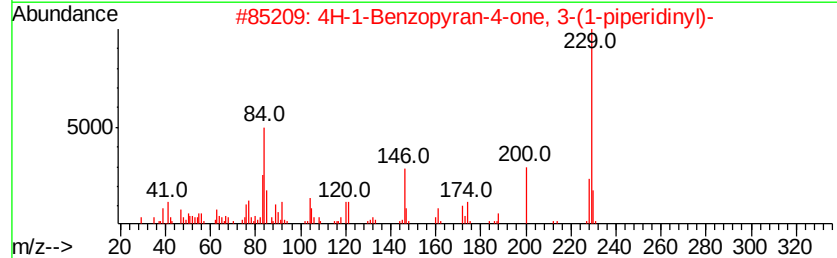
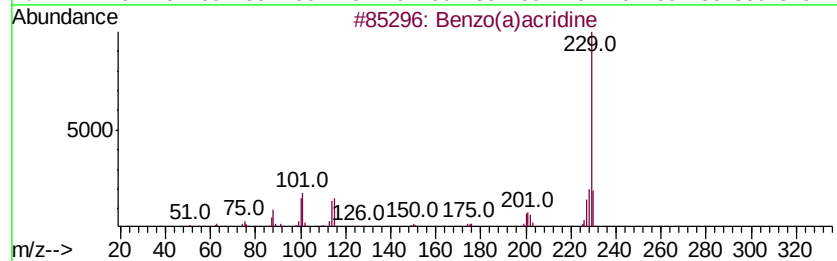
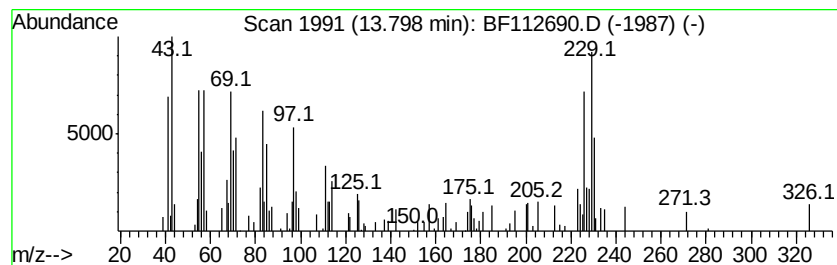
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BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.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 unknown13.80 Concentration Rank 8

| R.T.    | EstConc | Area                                | Relative to ISTD | R.T.            |
|---------|---------|-------------------------------------|------------------|-----------------|
| 13.80   | 3.27 ng | 90524                               | Chrysene-d12     | 13.98           |
| Hit# of | 5       | Tentative ID                        | MW MolForm       | CAS# Qual       |
| 1       |         | Benzo(a)acridine                    | 229 C17H11N      | 000225-11-6 49  |
| 2       |         | 4H-1-Benzopyran-4-one, 3-(1-pipe... | 229 C14H15N02    | 040302-79-2 47  |
| 3       |         | Naphtho(2,1-f)quinoline             | 229 C17H11N      | 000218-08-6 46  |
| 4       |         | (Z,Z)-3-Methyl-3H-cyclonona(def)... | 230 C18H14       | 110823-80-8 42  |
| 5       |         | Pyrazin-2(1H)-one, 5,6-dihydro-3... | 230 C13H14N2O2   | 1000260-62-0 35 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
Data File : BF112690.D  
Acq On : 25 Feb 2019 14:14  
Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

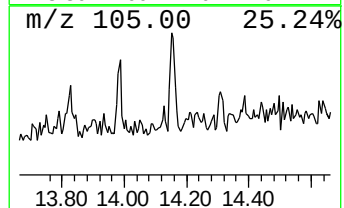
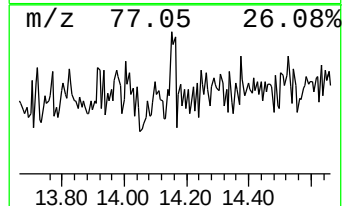
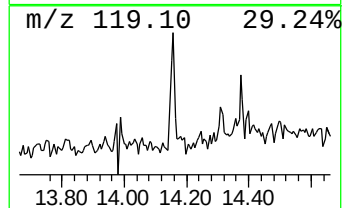
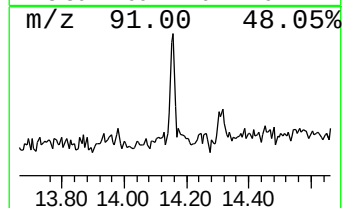
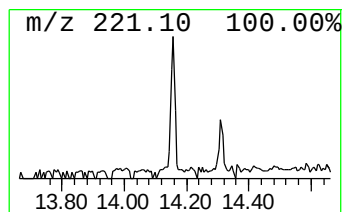
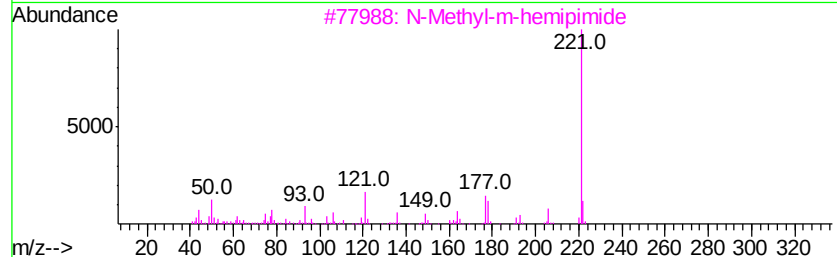
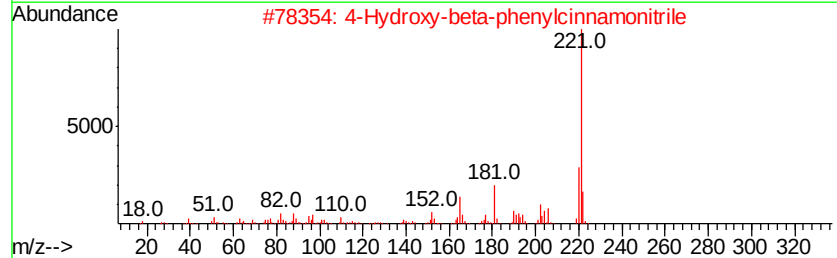
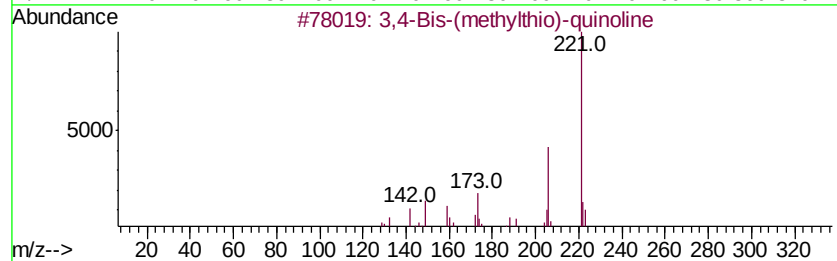
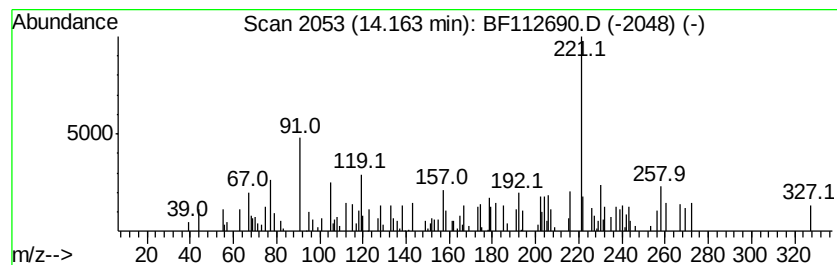
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BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.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 unknown14.16 Concentration Rank 13

| R.T.  | EstConc                             | Area  | Relative to ISTD |              | R.T.    |      |      |
|-------|-------------------------------------|-------|------------------|--------------|---------|------|------|
| 14.16 | 2.01 ng                             | 55600 | Chrysene-d12     |              | 13.98   |      |      |
| Hit#  | of                                  | 5     | Tentative ID     | MW           | MolForm | CAS# | Qual |
| 1     | 3,4-Bis-(methylthio)-quinoline      | 221   | C11H11NS2        | 074579-34-3  | 46      |      |      |
| 2     | 4-Hydroxy-beta-phenylcinnamitrile   | 221   | C15H11NO         | 016281-90-6  | 41      |      |      |
| 3     | N-Methyl-m-hemipimide               | 221   | C11H11N04        | 092288-92-1  | 38      |      |      |
| 4     | (E)-2-Hydroxy-4'-cyano-stilbene     | 221   | C15H11NO         | 1000147-85-5 | 37      |      |      |
| 5     | 1H-Indene, 2,3-dihydro-1,1,3-tri... | 236   | C18H20           | 003910-35-8  | 37      |      |      |



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Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

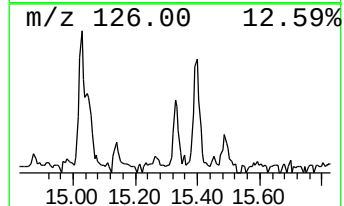
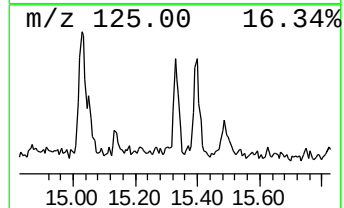
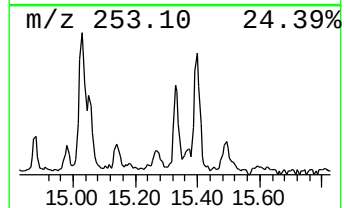
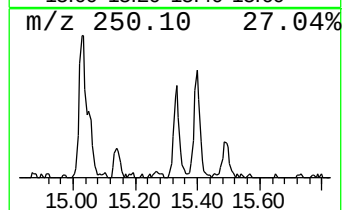
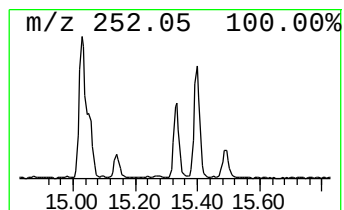
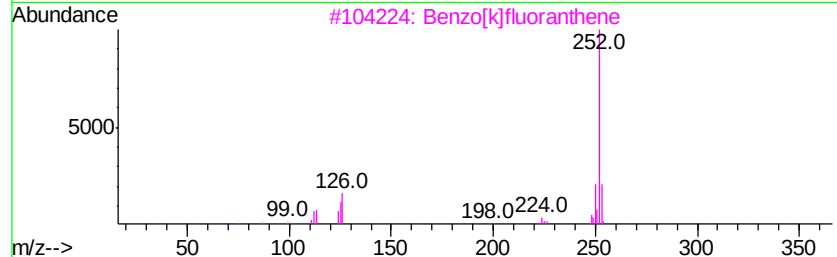
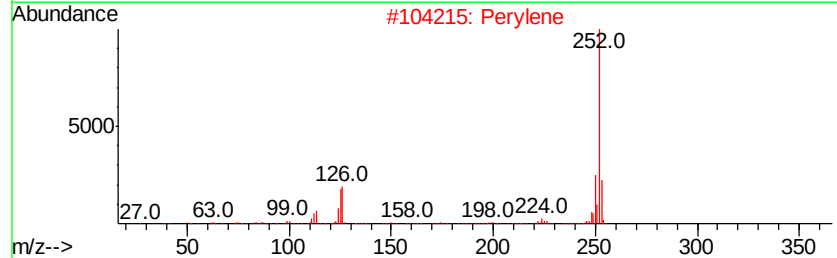
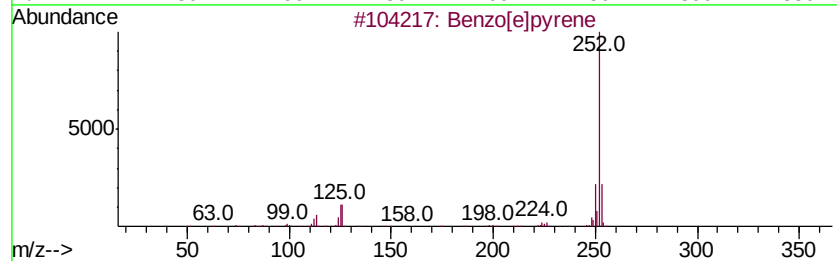
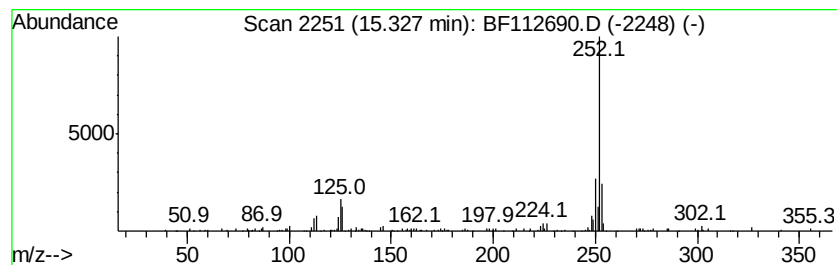
Instrument :  
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ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.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 Benzo[e]pyrene Concentration Rank 3

| R.T.      | EstConc                   | Area   | Relative to ISTD | R.T.        |      |
|-----------|---------------------------|--------|------------------|-------------|------|
| 15.33     | 8.45 ng                   | 113144 | Perylene-d12     | 15.46       |      |
| Hit# of 5 | Tentative ID              | MW     | MolForm          | CAS#        | Qual |
| 1         | Benzo[el]pyrene           | 252    | C20H12           | 000192-97-2 | 98   |
| 2         | Perylene                  | 252    | C20H12           | 000198-55-0 | 95   |
| 3         | Benzo[k]fluoranthene      | 252    | C20H12           | 000207-08-9 | 93   |
| 4         | Benz[el]acephenanthrylene | 252    | C20H12           | 000205-99-2 | 92   |
| 5         | Benzo[j]fluoranthene      | 252    | C20H12           | 000205-82-3 | 83   |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF022519\  
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Operator : JU/SJ  
Sample : K1595-05  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

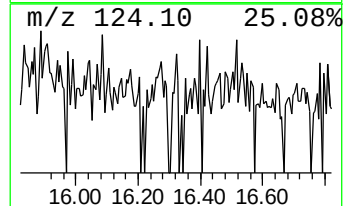
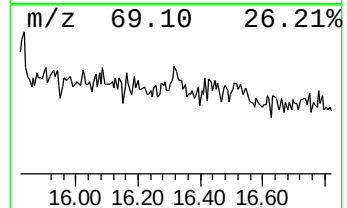
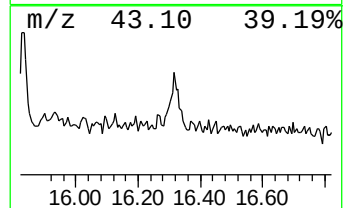
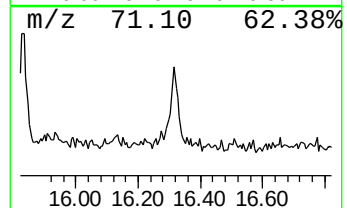
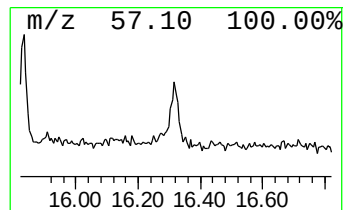
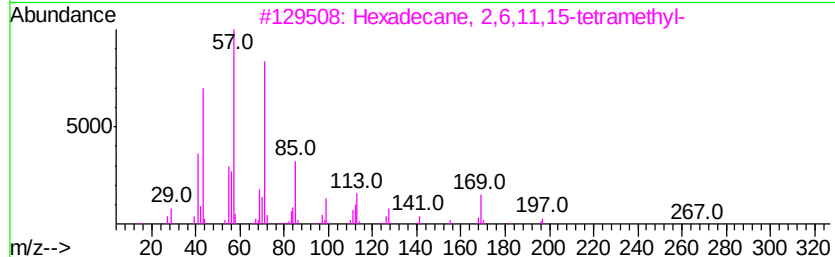
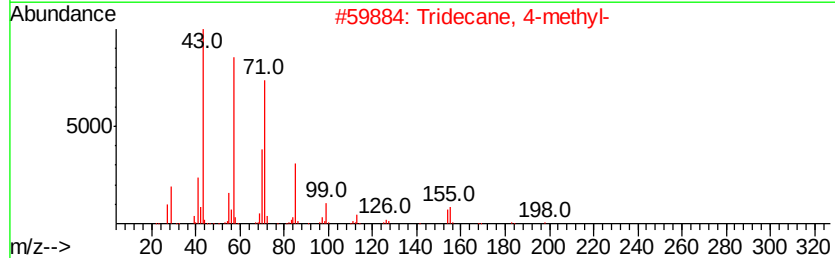
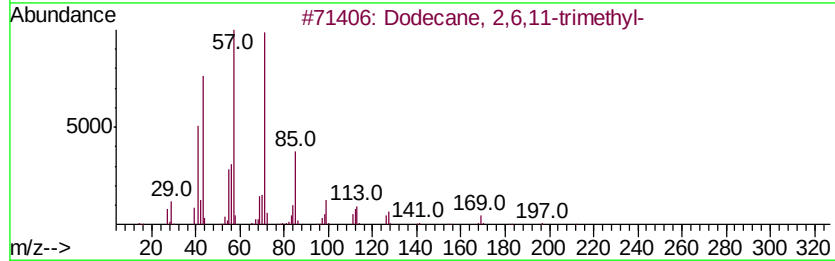
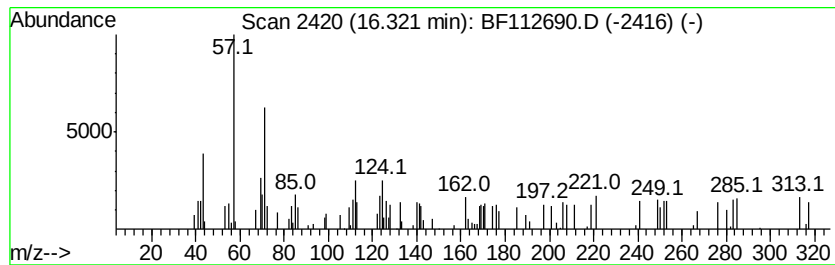
Instrument :  
BNA\_F  
ClientSampleId :  
TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.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 unknown16.32 Concentration Rank 9

| R.T.      | EstConc                            | Area  | Relative to ISTD | R.T.        |      |
|-----------|------------------------------------|-------|------------------|-------------|------|
| 16.32     | 2.81 ng                            | 37636 | Perylene-d12     | 15.46       |      |
| Hit# of 5 | Tentative ID                       | MW    | MolForm          | CAS#        | Qual |
| 1         | Dodecane, 2,6,11-trimethyl-        | 212   | C15H32           | 031295-56-4 | 43   |
| 2         | Tridecane, 4-methyl-               | 198   | C14H30           | 026730-12-1 | 43   |
| 3         | Hexadecane, 2,6,11,15-tetramethyl- | 282   | C20H42           | 000504-44-9 | 43   |
| 4         | Dodecane, 2,6,10-trimethyl-        | 212   | C15H32           | 003891-98-3 | 43   |
| 5         | Disulfide, bis(1,1-dimethylpropyl) | 206   | C10H22S2         | 034965-30-5 | 38   |





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 Sample : K1595-05  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 TP-E-WALL-GRADE-BEAM

Quant Method : Z:\SVOASRV\HPCHEM1\BNA\_F\METHODS\8270-BF012519.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 |
| unknown6.60          | 6.60  | 75.6    | ng    | 1083220  | 1                     | 6.82  | 286484 | 20.0 |
| unknown6.65          | 6.65  | 5.6     | ng    | 80188    | 1                     | 6.82  | 286484 | 20.0 |
| Ether, p-methylbe... | 7.67  | 2.2     | ng    | 41971    | 2                     | 8.10  | 376748 | 20.0 |
| Benzene, 2-ethyl-... | 8.37  | 2.3     | ng    | 42498    | 2                     | 8.10  | 376748 | 20.0 |
| unknown11.85         | 11.85 | 6.2     | ng    | 108839   | 4                     | 11.34 | 352211 | 20.0 |
| Naphtho[2,3-b]nor... | 11.87 | 4.4     | ng    | 77122    | 4                     | 11.34 | 352211 | 20.0 |
| 4H-Cyclopenta[def... | 11.95 | 3.6     | ng    | 62713    | 4                     | 11.34 | 352211 | 20.0 |
| di-p-Tolylacetylene  | 12.39 | 2.1     | ng    | 36724    | 4                     | 11.34 | 352211 | 20.0 |
| unknown13.80         | 13.80 | 3.3     | ng    | 90524    | 5                     | 13.98 | 554194 | 20.0 |
| unknown14.16         | 14.16 | 2.0     | ng    | 55600    | 5                     | 13.98 | 554194 | 20.0 |
| Benzo[e]pyrene       | 15.33 | 8.4     | ng    | 113144   | 6                     | 15.46 | 267657 | 20.0 |
| unknown16.32         | 16.32 | 2.8     | ng    | 37636    | 6                     | 15.46 | 267657 | 20.0 |