

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
 Data File : BF089676.D  
 Acq On : 8 Aug 2016 23:30  
 Operator : UM/SJ  
 Sample : H4331-12  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 WC2-GRAB

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

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

Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

Signal : TIC

| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 4.627       | 263           | 266         | 286          | rVB      | 100246         | 246236        | 20.91%          | 1.235%        |
| 2         | 5.302       | 323           | 325         | 348          | rBV      | 494640         | 967887        | 82.20%          | 4.856%        |
| 3         | 6.959       | 468           | 470         | 477          | rVV      | 647626         | 988111        | 83.92%          | 4.957%        |
| 4         | 7.073       | 477           | 480         | 486          | rVV      | 675528         | 1110675       | 94.33%          | 5.572%        |
| 5         | 7.153       | 486           | 487         | 492          | rVB      | 18224          | 25451         | 2.16%           | 0.128%        |
| 6         | 7.416       | 508           | 510         | 517          | rBV      | 132820         | 239306        | 20.32%          | 1.201%        |
| 7         | 7.519       | 517           | 519         | 522          | rVB      | 8366           | 13684         | 1.16%           | 0.069%        |
| 8         | 7.656       | 528           | 531         | 543          | rBV      | 628681         | 821801        | 69.80%          | 4.123%        |
| 9         | 7.965       | 555           | 558         | 561          | rVB      | 10467          | 14356         | 1.22%           | 0.072%        |
| 10        | 8.330       | 587           | 590         | 600          | rBV      | 410133         | 607267        | 51.58%          | 3.047%        |
| 11        | 8.673       | 616           | 620         | 622          | rBV2     | 6587           | 14653         | 1.24%           | 0.074%        |
| 12        | 9.451       | 685           | 688         | 694          | rBV      | 243560         | 378569        | 32.15%          | 1.899%        |
| 13        | 10.616      | 788           | 790         | 795          | rBB      | 10471          | 17516         | 1.49%           | 0.088%        |
| 14        | 10.765      | 801           | 803         | 808          | rBB      | 12409          | 19271         | 1.64%           | 0.097%        |
| 15        | 11.222      | 840           | 843         | 846          | rBV      | 695173         | 1052040       | 89.35%          | 5.278%        |
| 16        | 11.736      | 886           | 888         | 891          | rBV2     | 39739          | 52204         | 4.43%           | 0.262%        |
| 17        | 11.919      | 901           | 904         | 911          | rBV      | 204167         | 269585        | 22.90%          | 1.353%        |
| 18        | 12.045      | 912           | 915         | 919          | rVB      | 23910          | 39496         | 3.35%           | 0.198%        |
| 19        | 12.262      | 932           | 934         | 937          | rBV      | 255100         | 409518        | 34.78%          | 2.055%        |
| 20        | 12.319      | 937           | 939         | 943          | rVB      | 78112          | 100083        | 8.50%           | 0.502%        |
| 21        | 12.617      | 963           | 965         | 970          | rBV      | 28268          | 53888         | 4.58%           | 0.270%        |
| 22        | 12.834      | 978           | 984         | 985          | rBV2     | 4368           | 13179         | 1.12%           | 0.066%        |
| 23        | 13.131      | 1005          | 1010        | 1011         | rBV      | 19746          | 30836         | 2.62%           | 0.155%        |
| 24        | 13.154      | 1011          | 1012        | 1018         | rVV      | 57197          | 96726         | 8.21%           | 0.485%        |
| 25        | 13.268      | 1018          | 1022        | 1023         | rVV3     | 7497           | 16654         | 1.41%           | 0.084%        |
| 26        | 13.440      | 1035          | 1037        | 1039         | rBV      | 13990          | 24568         | 2.09%           | 0.123%        |
| 27        | 13.554      | 1045          | 1047        | 1053         | rBV2     | 429785         | 622748        | 52.89%          | 3.124%        |
| 28        | 13.897      | 1075          | 1077        | 1082         | rBV      | 24486          | 44089         | 3.74%           | 0.221%        |
| 29        | 14.057      | 1088          | 1091        | 1093         | rBV2     | 10918          | 22633         | 1.92%           | 0.114%        |
| 30        | 14.102      | 1093          | 1095        | 1098         | rVB2     | 7739           | 12105         | 1.03%           | 0.061%        |
| 31        | 14.285      | 1109          | 1111        | 1113         | rBV      | 8874           | 14390         | 1.22%           | 0.072%        |
| 32        | 14.377      | 1117          | 1119        | 1122         | rVV      | 22482          | 33375         | 2.83%           | 0.167%        |
| 33        | 14.491      | 1127          | 1129        | 1134         | rVB      | 34290          | 45957         | 3.90%           | 0.231%        |
| 34        | 14.628      | 1139          | 1141        | 1142         | rBV      | 15105          | 17332         | 1.47%           | 0.087%        |

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
 Data File : BF089676.D  
 Acq On : 8 Aug 2016 23:30  
 Operator : UM/SJ  
 Sample : H4331-12  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 WC2-GRAB

Integration Parameters: rteint.p

Integrator: RTE

Smoothing : ON

Sampling : 1

Start Thrs: 0.2

Stop Thrs : 0

Filtering: 5

Min Area: 3 % of largest Peak

Max Peaks: 100

Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |        |         |         |        |
|----|--------|------|------|------|------|--------|---------|---------|--------|
| 35 | 14.662 | 1142 | 1144 | 1145 | rVV  | 236986 | 316650  | 26.89%  | 1.589% |
| 36 | 14.708 | 1145 | 1148 | 1150 | rVV  | 752771 | 1177440 | 100.00% | 5.907% |
| 37 | 14.788 | 1152 | 1155 | 1161 | rVV  | 132405 | 232507  | 19.75%  | 1.166% |
| 38 | 15.085 | 1178 | 1181 | 1187 | rBV  | 30692  | 64487   | 5.48%   | 0.324% |
| 39 | 15.200 | 1189 | 1191 | 1193 | rVB  | 11641  | 15660   | 1.33%   | 0.079% |
| 40 | 15.314 | 1198 | 1201 | 1205 | rVB2 | 9382   | 22656   | 1.92%   | 0.114% |
| 41 | 15.463 | 1211 | 1214 | 1216 | rBV  | 70665  | 91210   | 7.75%   | 0.458% |
| 42 | 15.497 | 1216 | 1217 | 1222 | rVV  | 72456  | 113828  | 9.67%   | 0.571% |
| 43 | 15.577 | 1222 | 1224 | 1225 | rVV  | 25578  | 34004   | 2.89%   | 0.171% |
| 44 | 15.611 | 1225 | 1227 | 1229 | rVV  | 100588 | 153057  | 13.00%  | 0.768% |
| 45 | 15.680 | 1229 | 1233 | 1237 | rVB2 | 74869  | 178552  | 15.16%  | 0.896% |
| 46 | 15.908 | 1251 | 1253 | 1255 | rVV  | 45514  | 66527   | 5.65%   | 0.334% |
| 47 | 15.954 | 1255 | 1257 | 1261 | rVB  | 41219  | 61246   | 5.20%   | 0.307% |
| 48 | 16.125 | 1270 | 1272 | 1273 | rBV  | 10253  | 14583   | 1.24%   | 0.073% |
| 49 | 16.171 | 1273 | 1276 | 1277 | rVV  | 11303  | 16941   | 1.44%   | 0.085% |
| 50 | 16.263 | 1282 | 1284 | 1286 | rBV  | 25699  | 39822   | 3.38%   | 0.200% |
| 51 | 16.308 | 1286 | 1288 | 1293 | rVV4 | 19510  | 48223   | 4.10%   | 0.242% |
| 52 | 16.377 | 1293 | 1294 | 1299 | rVB2 | 36579  | 63551   | 5.40%   | 0.319% |
| 53 | 16.468 | 1299 | 1302 | 1305 | rBV  | 842447 | 1144564 | 97.21%  | 5.742% |
| 54 | 16.571 | 1309 | 1311 | 1313 | rBV2 | 36292  | 61617   | 5.23%   | 0.309% |
| 55 | 16.606 | 1313 | 1314 | 1317 | rVB  | 71168  | 62315   | 5.29%   | 0.313% |
| 56 | 16.663 | 1317 | 1319 | 1324 | rBV3 | 25873  | 65988   | 5.60%   | 0.331% |
| 57 | 16.777 | 1326 | 1329 | 1334 | rVV  | 778358 | 1119852 | 95.11%  | 5.618% |
| 58 | 16.857 | 1334 | 1336 | 1338 | rVB2 | 18416  | 25053   | 2.13%   | 0.126% |
| 59 | 16.960 | 1343 | 1345 | 1347 | rBV  | 36847  | 44305   | 3.76%   | 0.222% |
| 60 | 17.028 | 1348 | 1351 | 1354 | rVV  | 568304 | 689523  | 58.56%  | 3.459% |
| 61 | 17.097 | 1354 | 1357 | 1360 | rVB2 | 29875  | 57571   | 4.89%   | 0.289% |
| 62 | 17.143 | 1360 | 1361 | 1363 | rVB  | 11173  | 12336   | 1.05%   | 0.062% |
| 63 | 17.211 | 1363 | 1367 | 1368 | rBV2 | 32340  | 62455   | 5.30%   | 0.313% |
| 64 | 17.234 | 1368 | 1369 | 1373 | rVB  | 52287  | 67436   | 5.73%   | 0.338% |
| 65 | 17.326 | 1373 | 1377 | 1379 | rBV  | 43220  | 58163   | 4.94%   | 0.292% |
| 66 | 17.371 | 1379 | 1381 | 1389 | rBV3 | 60203  | 156759  | 13.31%  | 0.786% |
| 67 | 17.486 | 1389 | 1391 | 1393 | rVB  | 26639  | 29259   | 2.48%   | 0.147% |
| 68 | 17.520 | 1393 | 1394 | 1398 | rBV  | 13917  | 26027   | 2.21%   | 0.131% |
| 69 | 17.691 | 1407 | 1409 | 1412 | rVB  | 77802  | 113168  | 9.61%   | 0.568% |
| 70 | 17.886 | 1424 | 1426 | 1427 | rBV2 | 12015  | 21699   | 1.84%   | 0.109% |
| 71 | 17.909 | 1427 | 1428 | 1431 | rVV  | 37358  | 56467   | 4.80%   | 0.283% |

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
 Data File : BF089676.D  
 Acq On : 8 Aug 2016 23:30  
 Operator : UM/SJ  
 Sample : H4331-12  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 WC2-GRAB

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

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

Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|     |        |      |      |      |      |        |        |        |        |
|-----|--------|------|------|------|------|--------|--------|--------|--------|
| 72  | 18.046 | 1437 | 1440 | 1441 | rBV  | 44294  | 82845  | 7.04%  | 0.416% |
| 73  | 18.137 | 1446 | 1448 | 1451 | rVV2 | 40552  | 61237  | 5.20%  | 0.307% |
| 74  | 18.194 | 1451 | 1453 | 1455 | rVV  | 50406  | 79624  | 6.76%  | 0.399% |
| 75  | 18.240 | 1455 | 1457 | 1458 | rVV  | 12662  | 17533  | 1.49%  | 0.088% |
| 76  | 18.297 | 1460 | 1462 | 1464 | rVV  | 38347  | 68404  | 5.81%  | 0.343% |
| 77  | 18.354 | 1464 | 1467 | 1469 | rVV2 | 425255 | 776338 | 65.93% | 3.895% |
| 78  | 18.400 | 1469 | 1471 | 1474 | rVV  | 359841 | 511728 | 43.46% | 2.567% |
| 79  | 18.491 | 1477 | 1479 | 1482 | rVB  | 55099  | 73765  | 6.26%  | 0.370% |
| 80  | 18.640 | 1490 | 1492 | 1494 | rVB2 | 26755  | 35750  | 3.04%  | 0.179% |
| 81  | 18.686 | 1494 | 1496 | 1499 | rBV2 | 24441  | 37528  | 3.19%  | 0.188% |
| 82  | 18.869 | 1506 | 1512 | 1514 | rBV2 | 61616  | 134645 | 11.44% | 0.676% |
| 83  | 18.983 | 1520 | 1522 | 1526 | rBV4 | 39441  | 85499  | 7.26%  | 0.429% |
| 84  | 19.280 | 1546 | 1548 | 1552 | rBV4 | 28327  | 61540  | 5.23%  | 0.309% |
| 85  | 19.463 | 1562 | 1564 | 1567 | rBV  | 44151  | 73032  | 6.20%  | 0.366% |
| 86  | 19.623 | 1576 | 1578 | 1584 | rBV  | 364826 | 787261 | 66.86% | 3.950% |
| 87  | 19.737 | 1586 | 1588 | 1591 | rVB  | 62443  | 79855  | 6.78%  | 0.401% |
| 88  | 19.806 | 1592 | 1594 | 1596 | rBV  | 36457  | 59016  | 5.01%  | 0.296% |
| 89  | 19.909 | 1601 | 1603 | 1607 | rBV  | 183228 | 265594 | 22.56% | 1.332% |
| 90  | 19.977 | 1607 | 1609 | 1612 | rBV  | 247882 | 345957 | 29.38% | 1.736% |
| 91  | 20.034 | 1612 | 1614 | 1615 | rBV  | 161879 | 248461 | 21.10% | 1.247% |
| 92  | 20.492 | 1652 | 1654 | 1657 | rVB  | 120547 | 163532 | 13.89% | 0.820% |
| 93  | 21.200 | 1714 | 1716 | 1721 | rVB2 | 149099 | 284589 | 24.17% | 1.428% |
| 94  | 21.349 | 1727 | 1729 | 1731 | rVV  | 22948  | 34131  | 2.90%  | 0.171% |
| 95  | 21.395 | 1731 | 1733 | 1737 | rVB  | 31757  | 54750  | 4.65%  | 0.275% |
| 96  | 21.543 | 1743 | 1746 | 1751 | rBV  | 115968 | 207902 | 17.66% | 1.043% |
| 97  | 21.737 | 1761 | 1763 | 1769 | rVB2 | 26068  | 68693  | 5.83%  | 0.345% |
| 98  | 23.269 | 1893 | 1897 | 1906 | rBV  | 20287  | 81340  | 6.91%  | 0.408% |
| 99  | 23.440 | 1908 | 1912 | 1928 | rVB3 | 15994  | 105084 | 8.92%  | 0.527% |
| 100 | 24.138 | 1970 | 1973 | 1976 | rBV3 | 8675   | 24927  | 2.12%  | 0.125% |

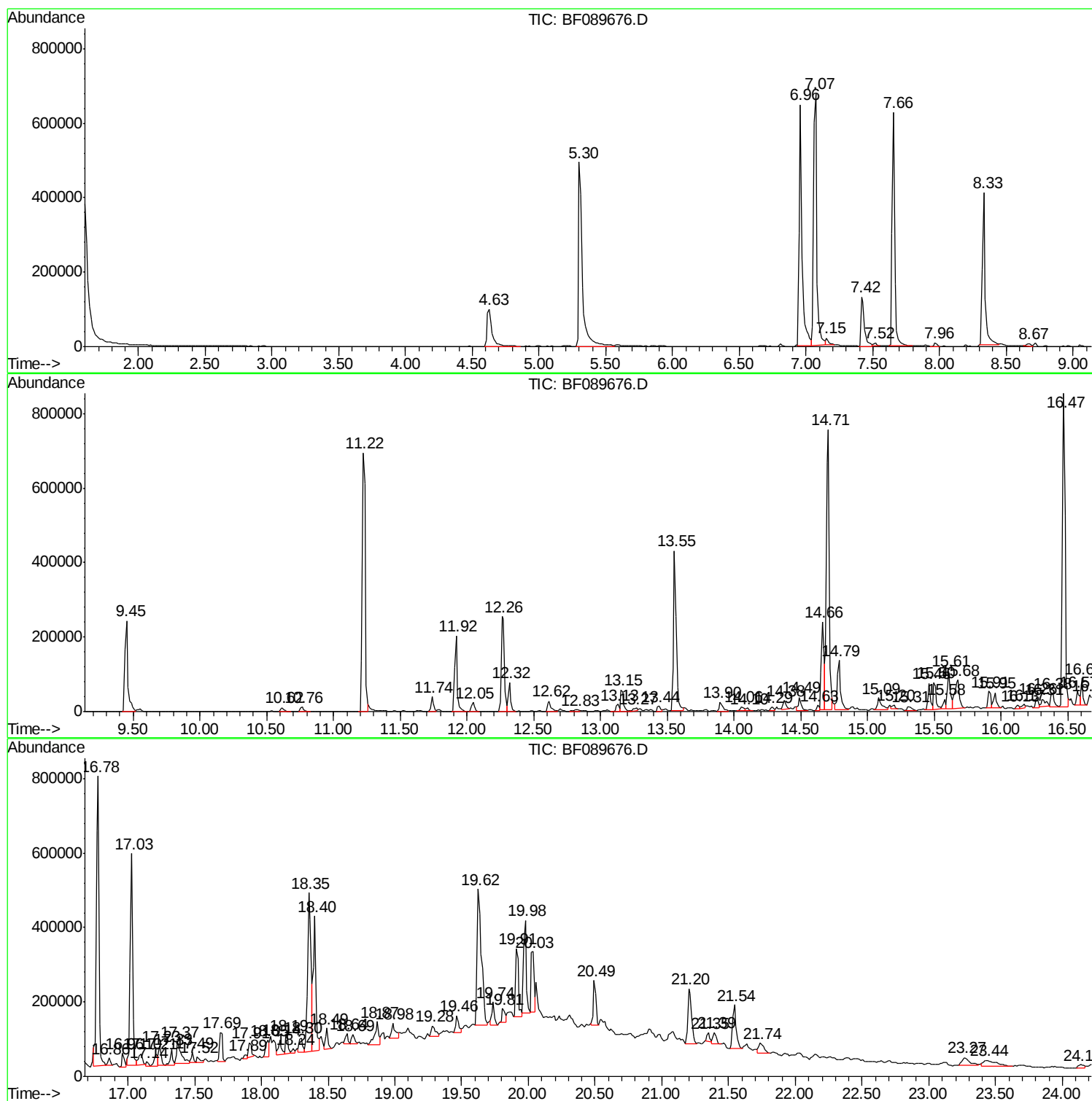
Sum of corrected areas: 19932250

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

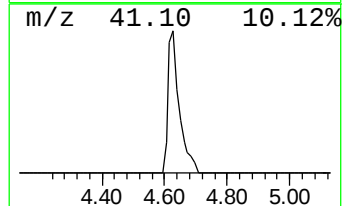
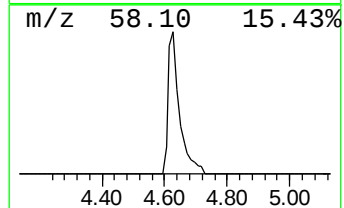
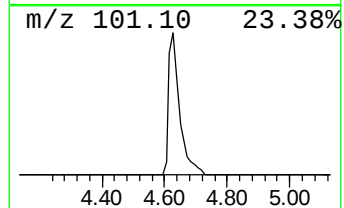
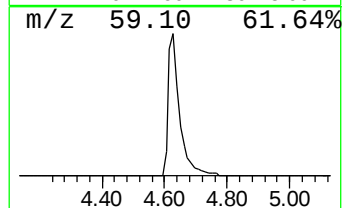
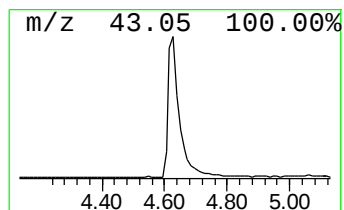
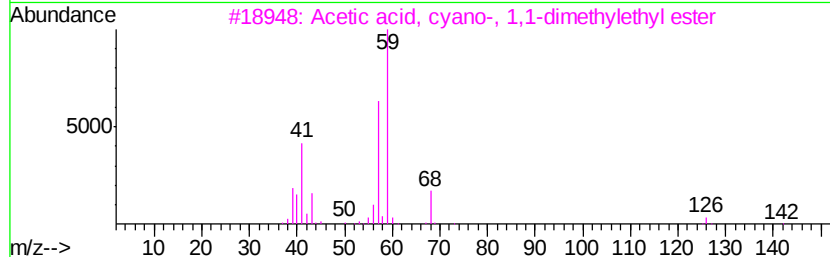
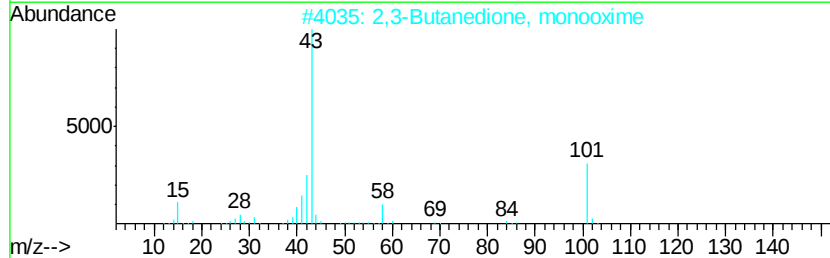
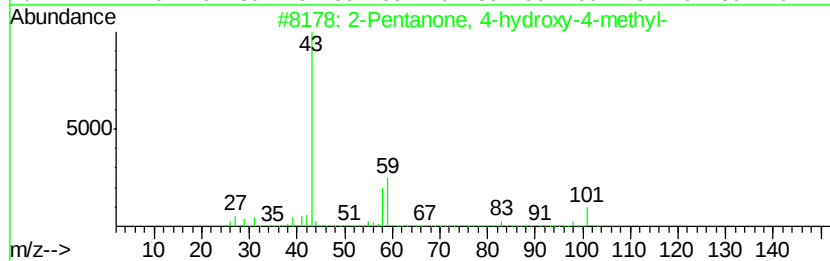
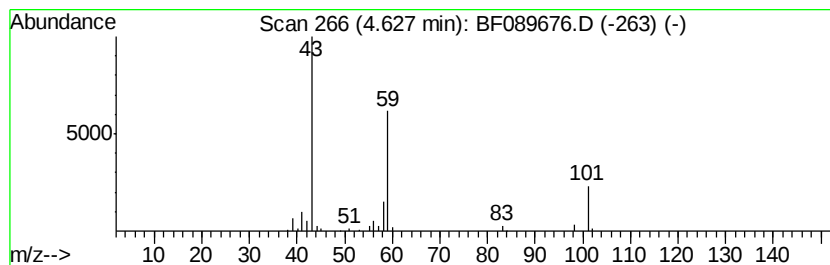
Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 4

| R.T. | EstConc  | Area   | Relative to ISTD       | R.T. |
|------|----------|--------|------------------------|------|
| 4.63 | 20.58 ng | 246236 | 1,4-Dichlorobenzene-d4 | 7.43 |

| Hit# | of | Tentative ID                        | MW  | MolForm  | CAS#        | Qual |
|------|----|-------------------------------------|-----|----------|-------------|------|
| 1    | 5  | 2-Pentanone, 4-hydroxy-4-methyl-    | 116 | C6H12O2  | 000123-42-2 | 56   |
| 2    |    | 2,3-Butanedione, monooxime          | 101 | C4H7NO2  | 000057-71-6 | 17   |
| 3    |    | Acetic acid, cyano-, 1,1-dimethy... | 141 | C7H11NO2 | 001116-98-9 | 17   |
| 4    |    | 5-Hexen-2-one                       | 98  | C6H10O   | 000109-49-9 | 9    |
| 5    |    | Butane, 1-ethoxy-                   | 102 | C6H14O   | 000628-81-9 | 9    |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

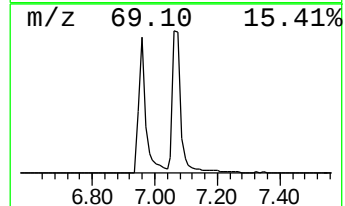
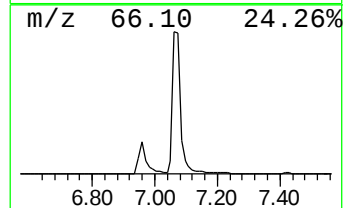
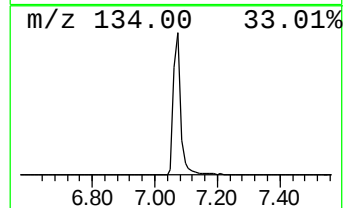
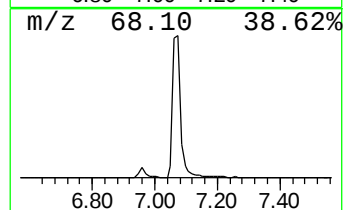
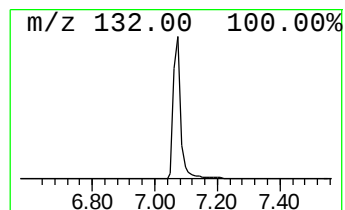
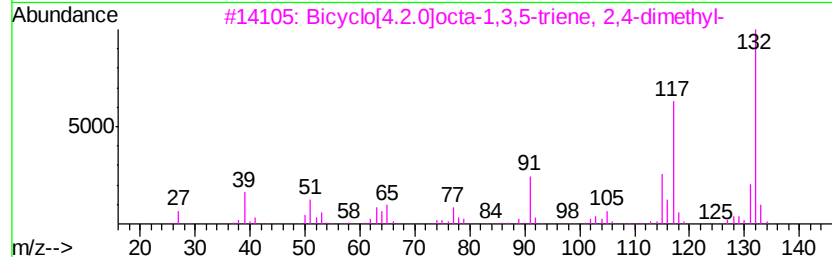
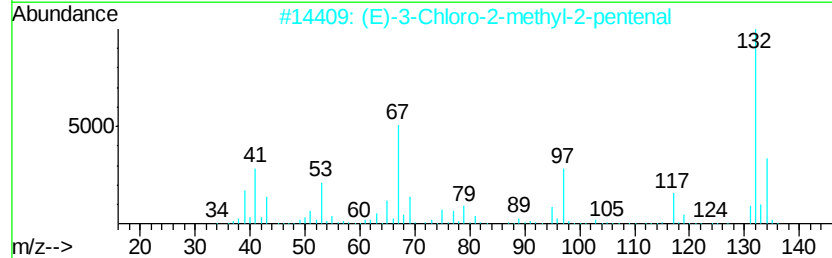
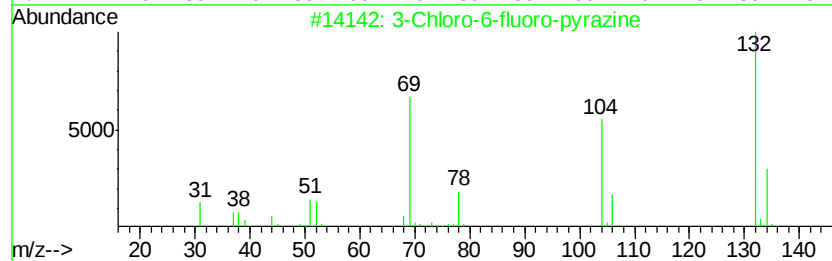
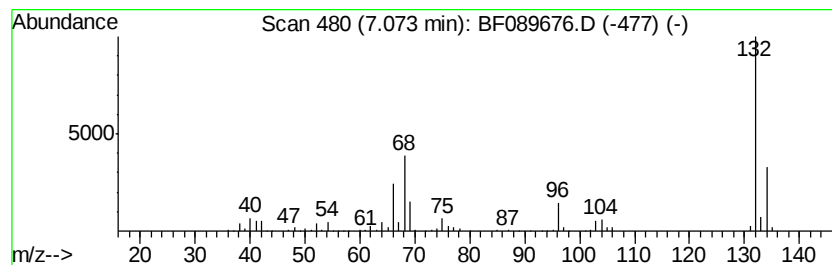
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 2 unknown7.07 Concentration Rank 1

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 7.07 | 92.82 ng | 1110680 | 1,4-Dichlorobenzene-d4 | 7.43 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 3-Chloro-6-fluoro-pyrazine          | 132 | C4H2ClFN2 | 1000146-10-7 | 27   |
| 2    |    | (E)-3-Chloro-2-methyl-2-pentenal    | 132 | C6H9ClO   | 031357-76-3  | 17   |
| 3    |    | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12    | 028749-81-7  | 9    |
| 4    |    | Imidazole, 4,5-dicyano-1-methyl-    | 132 | C6H4N4    | 019485-35-9  | 9    |
| 5    |    | 2H-Cyclopenta[d]pyridazine, 2-me... | 132 | C8H8N2    | 022291-85-6  | 9    |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

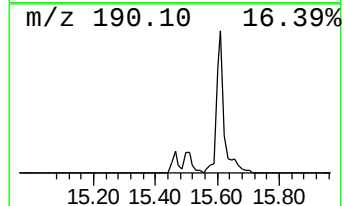
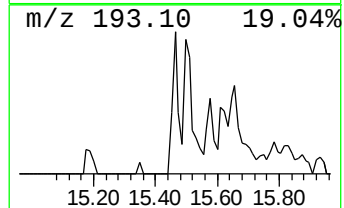
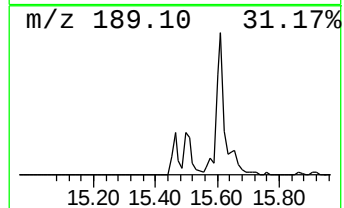
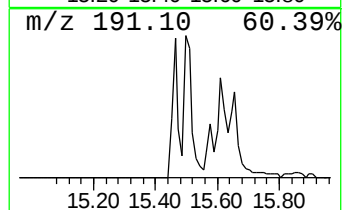
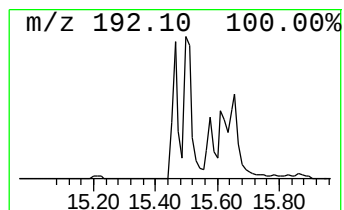
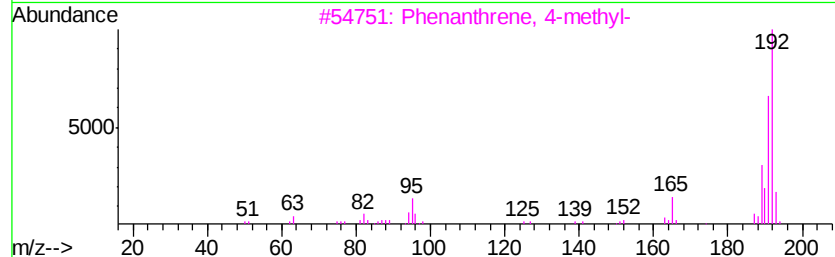
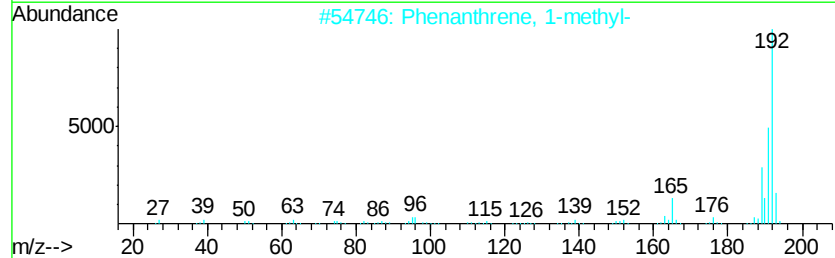
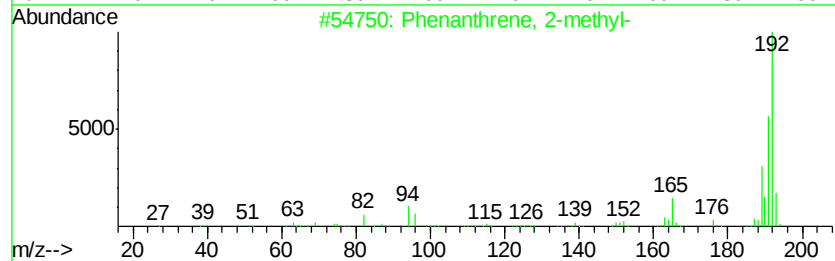
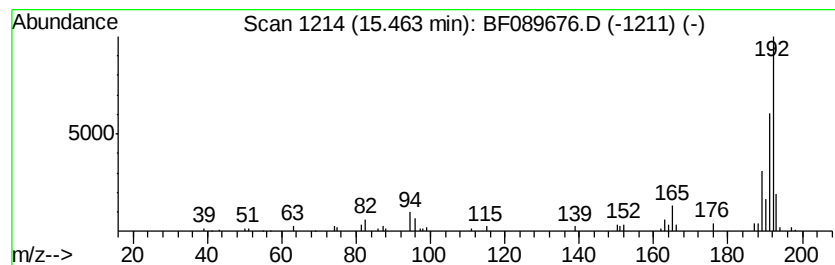
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 4 Phenanthrene, 2-methyl- Concentration Rank 13

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 15.46 | 5.76 ng | 91210 | Phenanthrene-d10 | 14.66 |

| Hit# of | 5 | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 98   |
| 2       |   | Phenanthrene, 1-methyl- | 192 | C15H12  | 000832-69-9 | 97   |
| 3       |   | Phenanthrene, 4-methyl- | 192 | C15H12  | 000832-64-4 | 95   |
| 4       |   | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 95   |
| 5       |   | Anthracene, 9-methyl-   | 192 | C15H12  | 000779-02-2 | 95   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

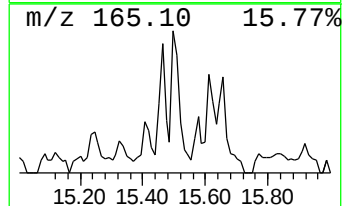
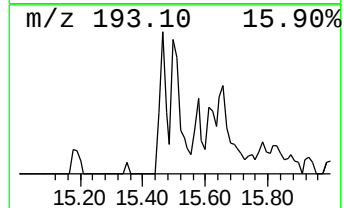
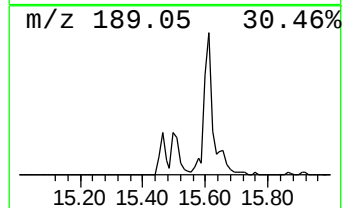
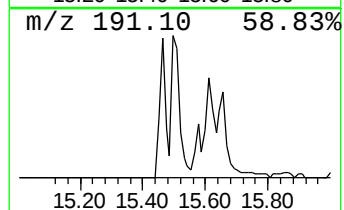
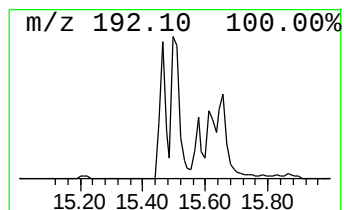
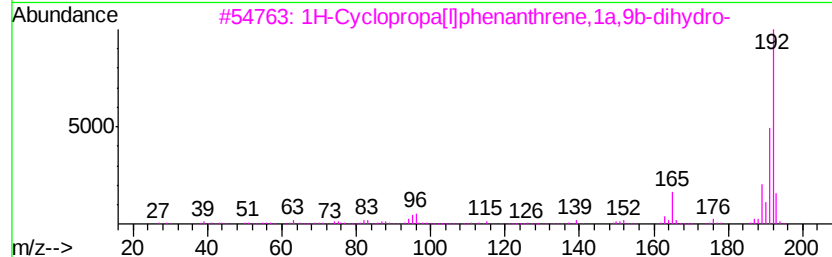
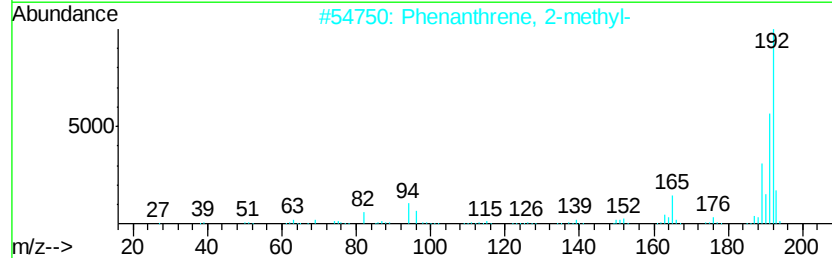
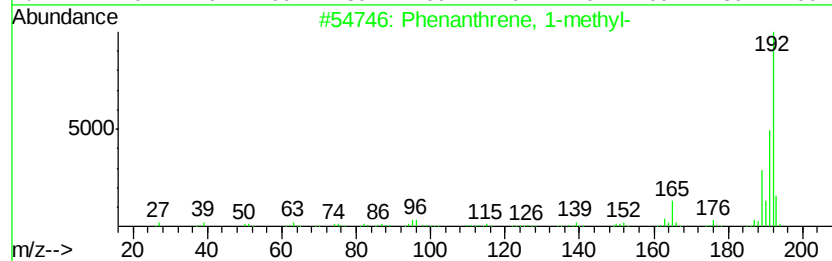
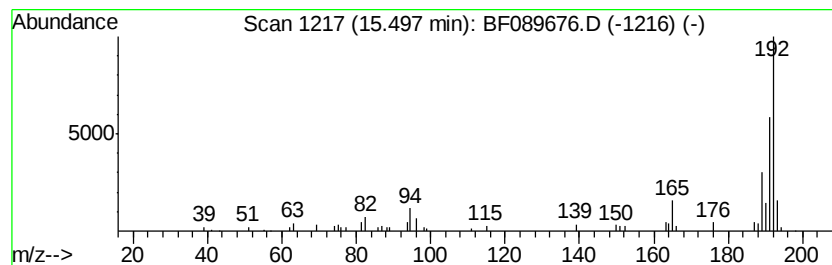
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 5 Phenanthrene, 1-methyl- Concentration Rank 9

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 15.50 | 7.19 ng | 113828 | Phenanthrene-d10 | 14.66 |

| Hit# of | 5 | Tentative ID                          | MW  | MolForm | CAS#        | Qual |
|---------|---|---------------------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 1-methyl-               | 192 | C15H12  | 000832-69-9 | 97   |
| 2       |   | Phenanthrene, 2-methyl-               | 192 | C15H12  | 002531-84-2 | 96   |
| 3       |   | 1H-Cyclopropa[1]phenanthrene, 1a, ... | 192 | C15H12  | 000949-41-7 | 96   |
| 4       |   | Anthracene, 2-methyl-                 | 192 | C15H12  | 000613-12-7 | 96   |
| 5       |   | Phenanthrene, 4-methyl-               | 192 | C15H12  | 000832-64-4 | 94   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

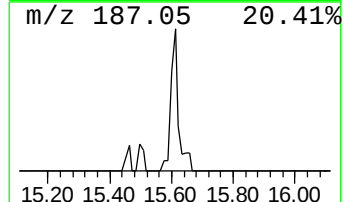
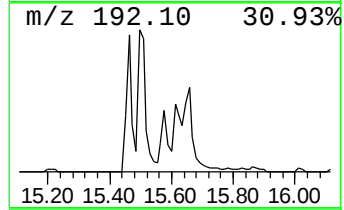
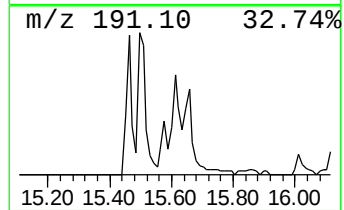
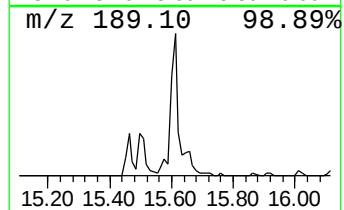
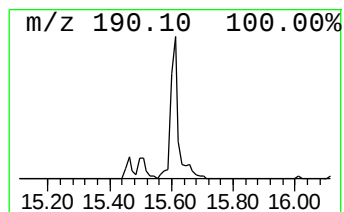
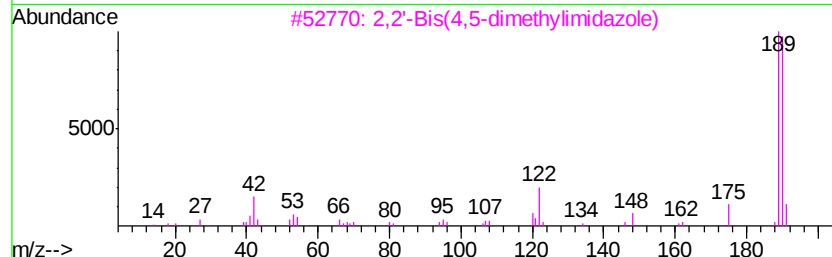
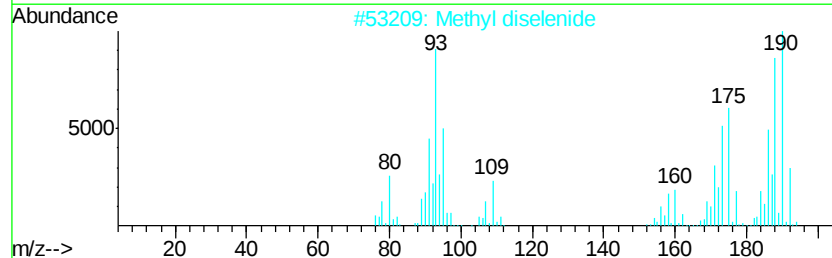
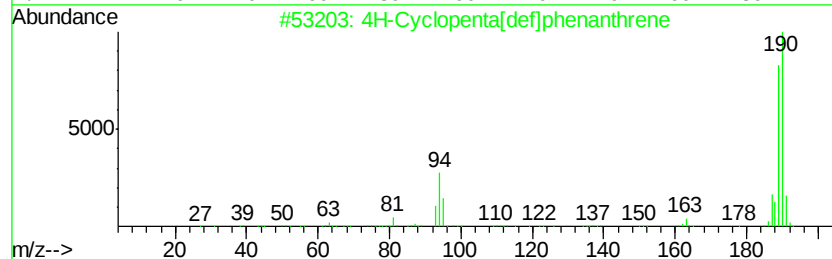
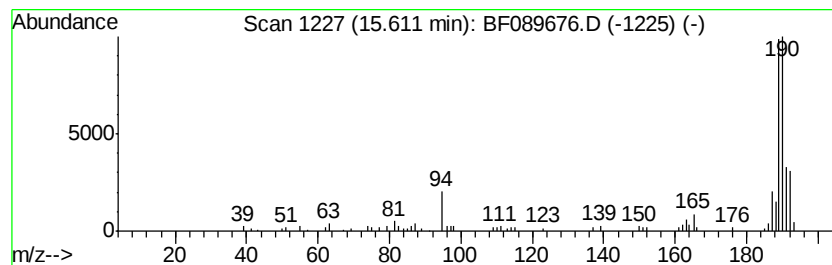
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 6 4H-Cyclopenta[def]phenanthrene Concentration Rank 7

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 15.61 | 9.67 ng | 153057 | Phenanthrene-d10 | 14.66 |

| Hit# | of | 5 | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|------|----|---|-------------------------------------|-----|-----------|-------------|------|
| 1    |    |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10    | 000203-64-5 | 76   |
| 2    |    |   | Methyl diselenide                   | 190 | C2H6Se2   | 007101-31-7 | 49   |
| 3    |    |   | 2,2'-Bis(4,5-dimethylimidazole)     | 190 | C10H14N4  | 069286-06-2 | 47   |
| 4    |    |   | 6H-Cyclobuta[jk]phenanthrene        | 190 | C15H10    | 083469-43-6 | 45   |
| 5    |    |   | Pyrazole-4-carboxaldehyde, 3-(4-... | 190 | C10H7FN2O | 306936-57-2 | 28   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

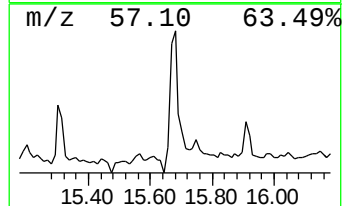
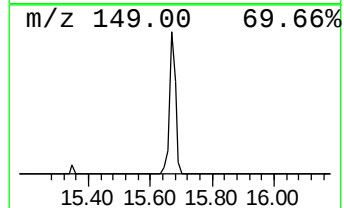
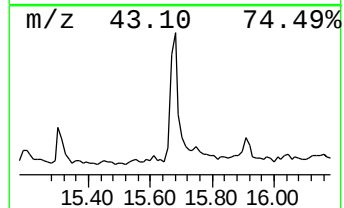
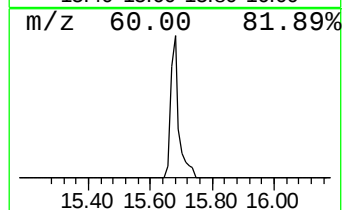
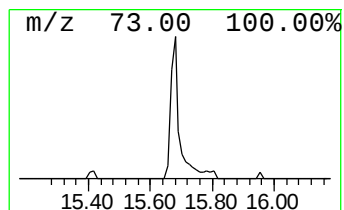
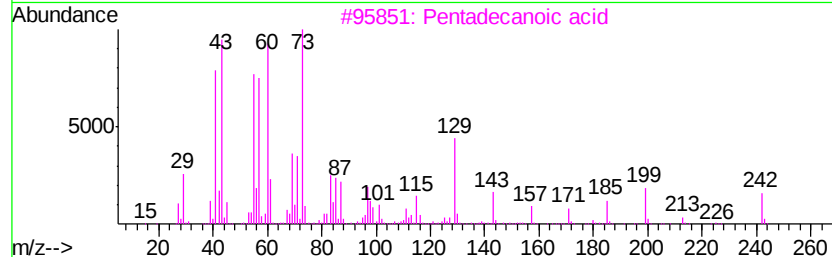
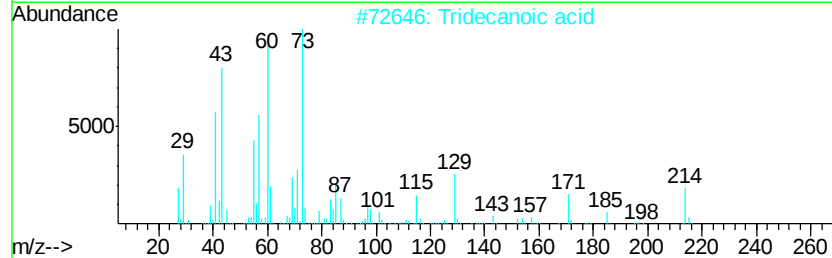
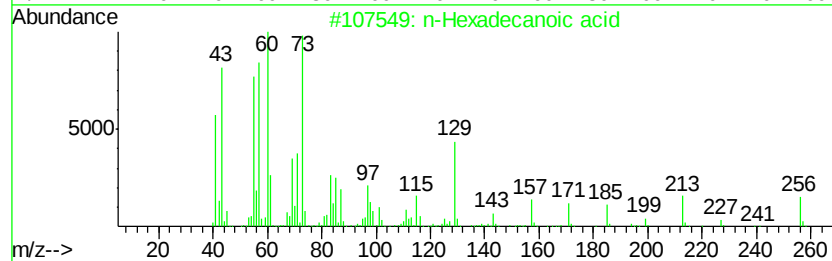
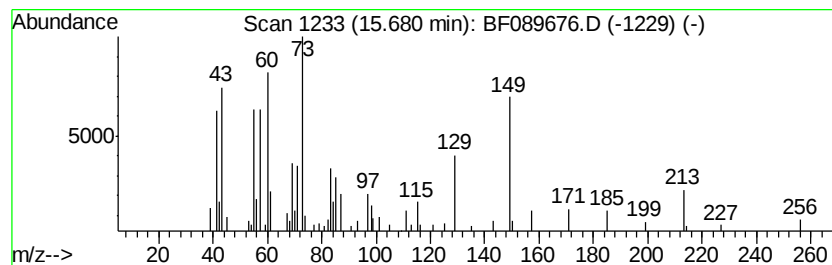
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 7 n-Hexadecanoic acid Concentration Rank 6

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 15.68 | 11.28 ng | 178552 | Phenanthrene-d10 | 14.66 |

| Hit# of | 5 | Tentative ID        | MW  | MolForm  | CAS#        | Qual |
|---------|---|---------------------|-----|----------|-------------|------|
| 1       |   | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 98   |
| 2       |   | Tridecanoic acid    | 214 | C13H26O2 | 000638-53-9 | 76   |
| 3       |   | Pentadecanoic acid  | 242 | C15H30O2 | 001002-84-2 | 68   |
| 4       |   | Tetradecanoic acid  | 228 | C14H28O2 | 000544-63-8 | 53   |
| 5       |   | n-Decanoic acid     | 172 | C10H20O2 | 000334-48-5 | 47   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

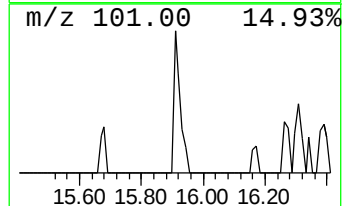
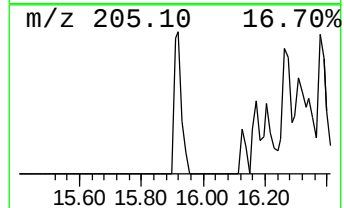
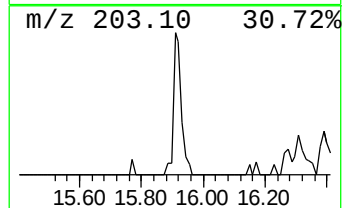
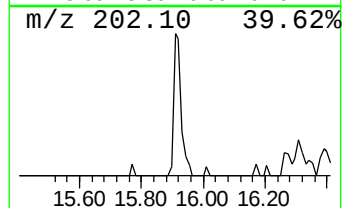
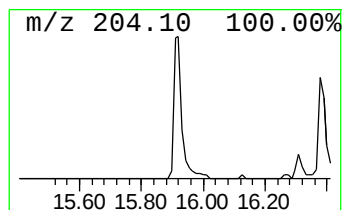
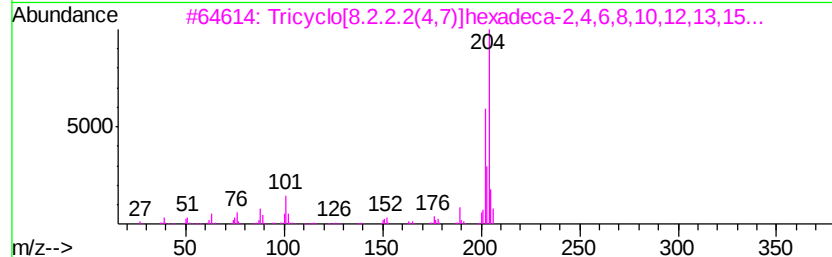
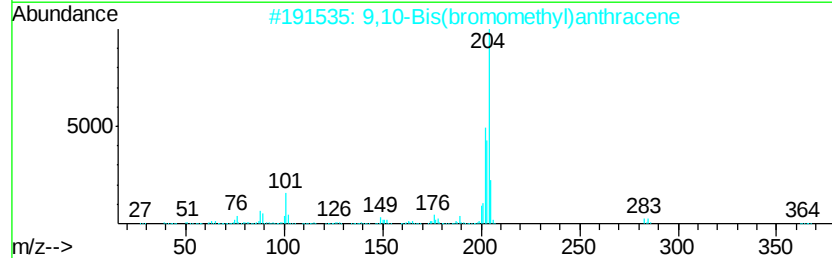
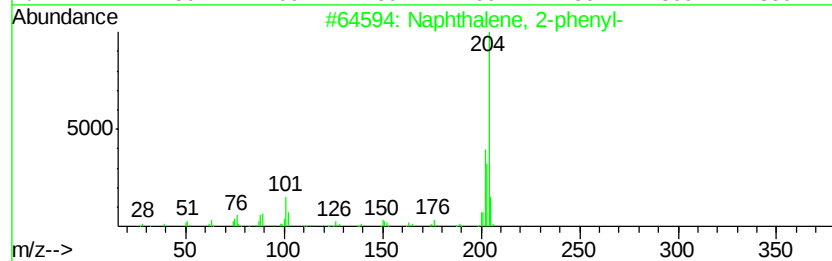
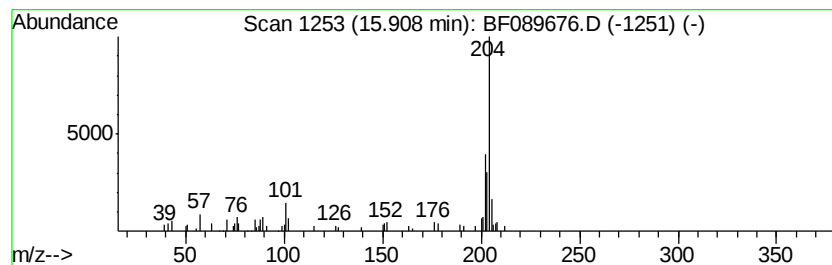
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 8 Naphthalene, 2-phenyl- Concentration Rank 18

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 15.91 | 4.20 ng | 66527 | Phenanthrene-d10 | 14.66 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|------|----|-------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | Naphthalene, 2-phenyl-              | 204 | C16H12    | 000612-94-2 | 93   |
| 2    |    | 9,10-Bis(bromomethyl)anthracene     | 362 | C16H12Br2 | 034373-96-1 | 87   |
| 3    |    | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12    | 006572-60-7 | 86   |
| 4    |    | 5H-Dibenzo[a,d]cycloheptene, 5-m... | 204 | C16H12    | 002975-79-3 | 78   |
| 5    |    | Naphthalene, 1-phenyl-              | 204 | C16H12    | 000605-02-7 | 60   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

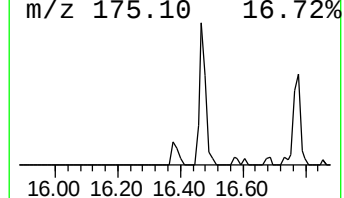
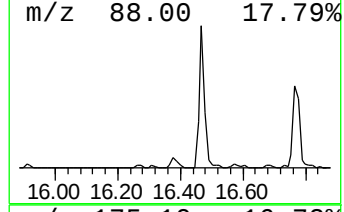
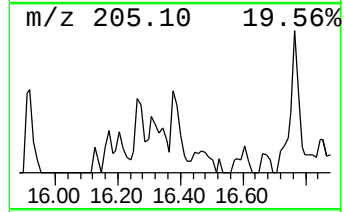
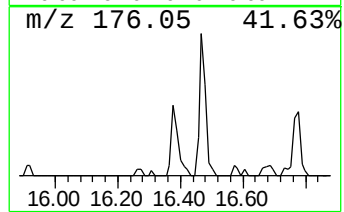
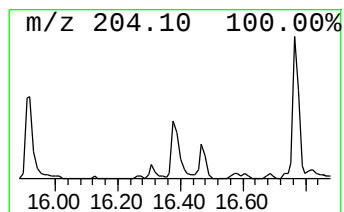
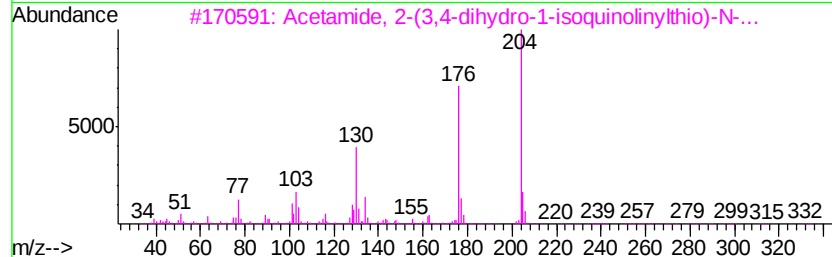
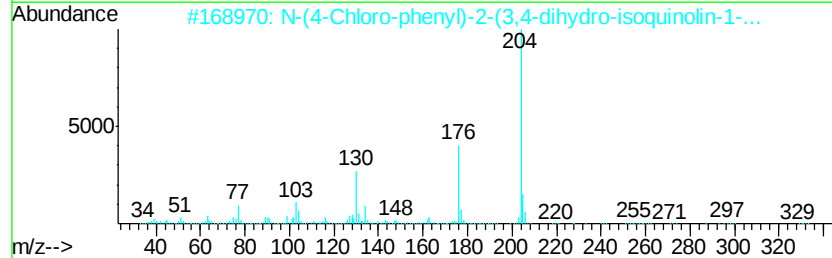
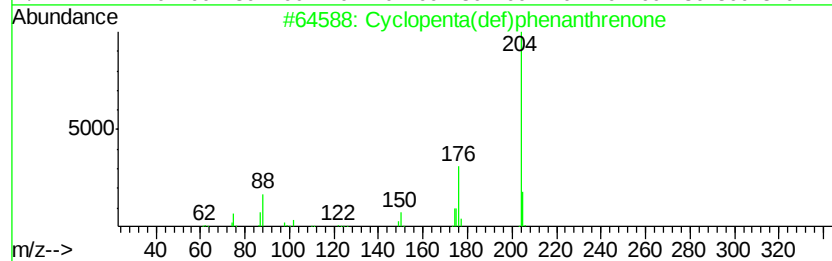
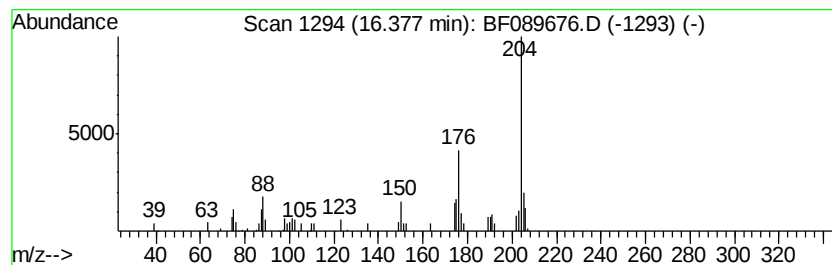
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 9 Cyclopenta(def)phenanthrenone Concentration Rank 20

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 16.38 | 4.01 ng | 63551 | Phenanthrene-d10 | 14.66 |

| Hit# | of | Tentative ID                        | MW  | MolForm      | CAS#         | Qual |
|------|----|-------------------------------------|-----|--------------|--------------|------|
| 1    | 5  | Cyclopenta(def)phenanthrenone       | 204 | C15H8O       | 005737-13-3  | 90   |
| 2    |    | N-(4-Chloro-phenyl)-2-(3,4-dihyd... | 330 | C17H15ClN2OS | 1000296-34-3 | 64   |
| 3    |    | Acetamide, 2-(3,4-dihydro-1-isoq... | 332 | C17H14F2N2OS | 1000270-76-1 | 59   |
| 4    |    | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2      | 001591-30-6  | 52   |
| 5    |    | 6-Cyanophenanthridine               | 204 | C14H8N2      | 002176-28-5  | 49   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

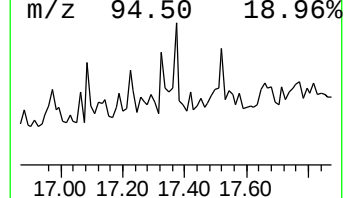
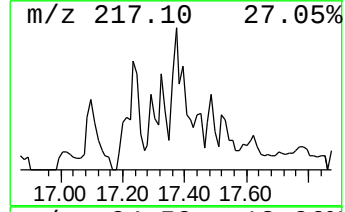
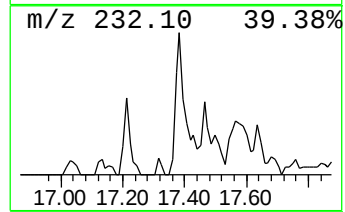
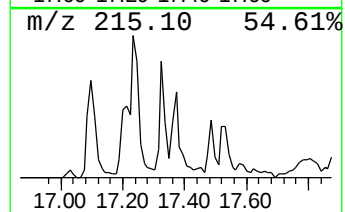
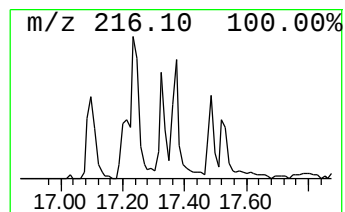
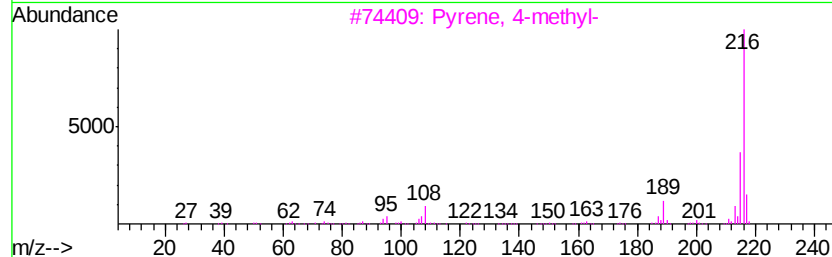
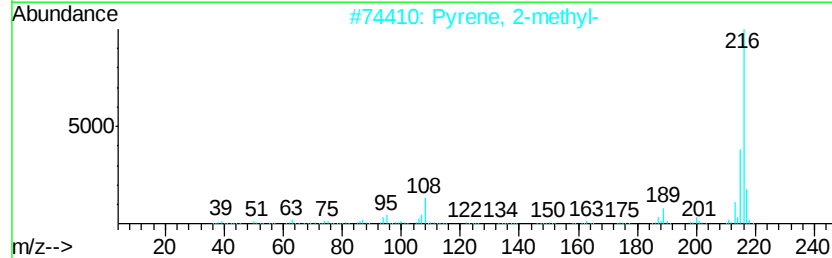
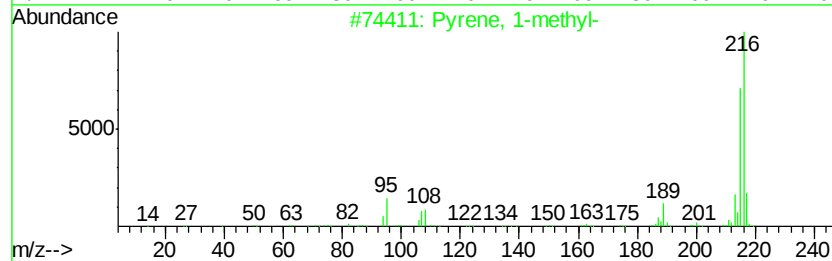
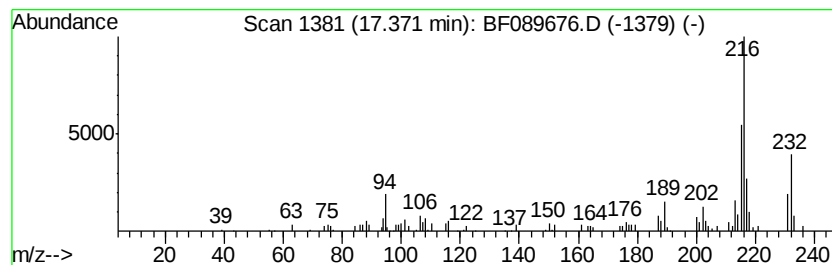
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 10 Pyrene, 1-methyl- Concentration Rank 19

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 17.37 | 4.04 ng | 156759 | Chrysene-d12     | 18.37 |

| Hit# | of | 5 | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|---|-------------------------|-----|---------|-------------|------|
| 1    |    |   | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 60   |
| 2    |    |   | Pyrene, 2-methyl-       | 216 | C17H12  | 003442-78-2 | 53   |
| 3    |    |   | Pyrene, 4-methyl-       | 216 | C17H12  | 003353-12-6 | 49   |
| 4    |    |   | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 46   |
| 5    |    |   | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 46   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

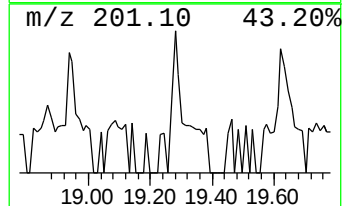
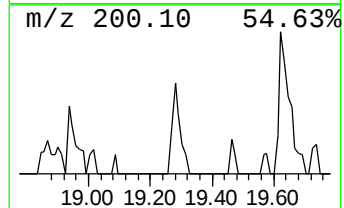
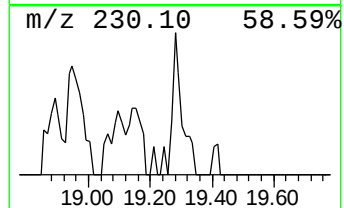
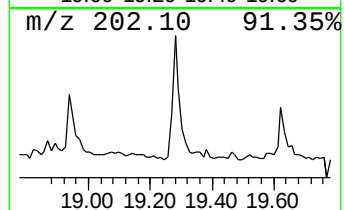
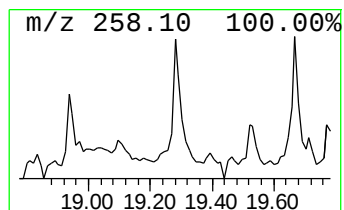
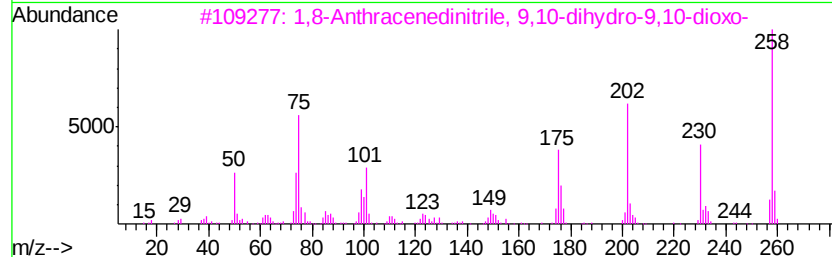
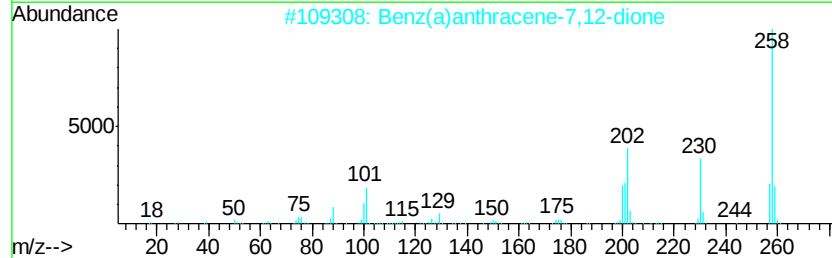
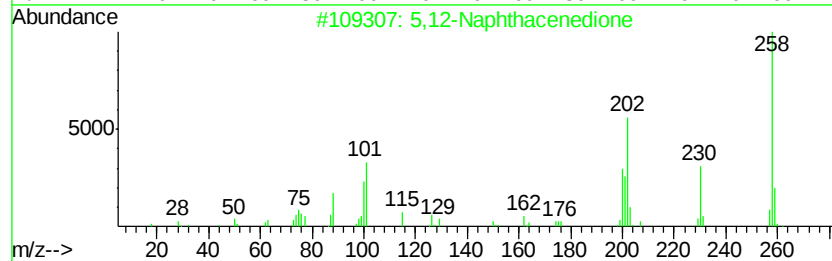
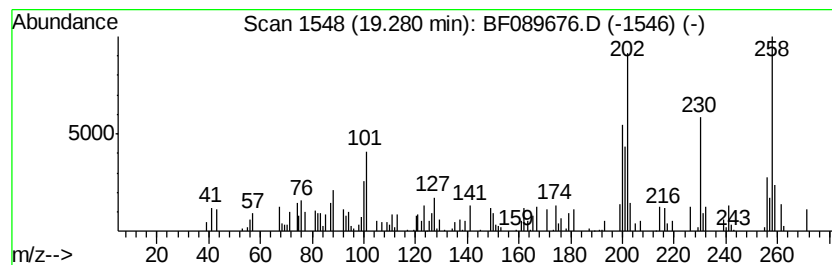
Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 11 5,12-Naphthacenedione Concentration Rank 15

| R.T.      | EstConc                             | Area  | Relative to ISTD | R.T.        |      |
|-----------|-------------------------------------|-------|------------------|-------------|------|
| 19.28     | 4.95 ng                             | 61540 | Perylene-d12     | 20.03       |      |
| Hit# of 5 | Tentative ID                        | MW    | MolForm          | CAS#        | Qual |
| 1         | 5,12-Naphthacenedione               | 258   | C18H10O2         | 001090-13-7 | 93   |
| 2         | Benz(a)anthracene-7,12-dione        | 258   | C18H10O2         | 002498-66-0 | 93   |
| 3         | 1,8-Anthracenedinitrile, 9,10-di... | 258   | C16H6N2O2        | 090866-50-5 | 86   |
| 4         | 1-Pyrenecarboxaldehyde              | 230   | C17H10O          | 003029-19-4 | 50   |
| 5         | 7H-Benz[de]anthracen-7-one          | 230   | C17H10O          | 000082-05-3 | 50   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

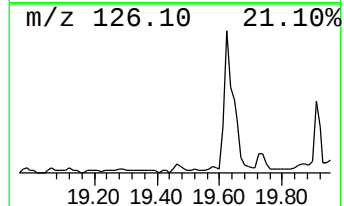
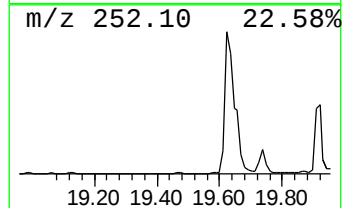
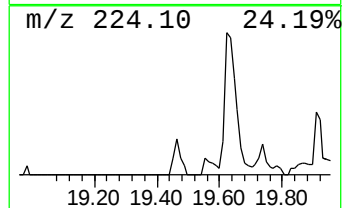
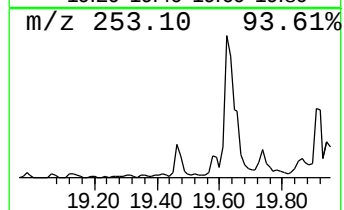
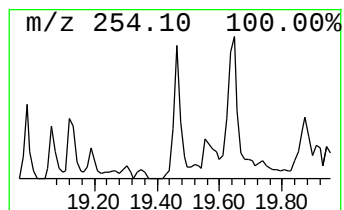
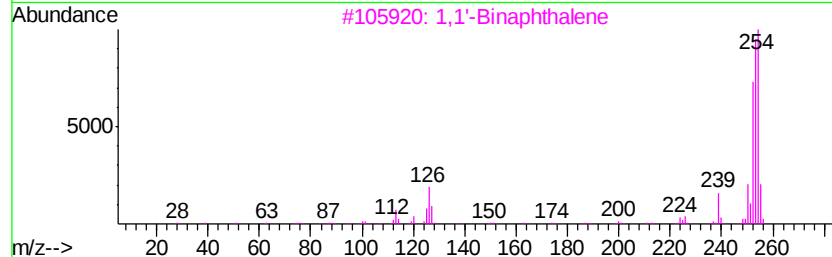
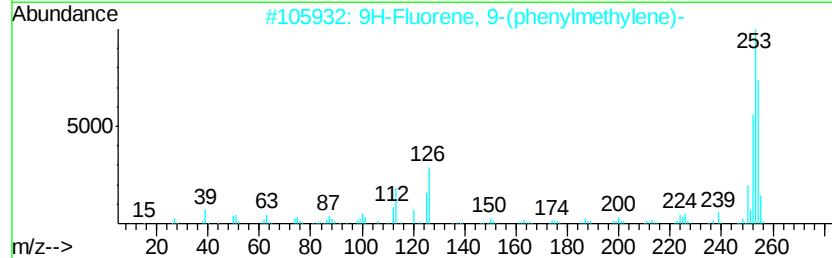
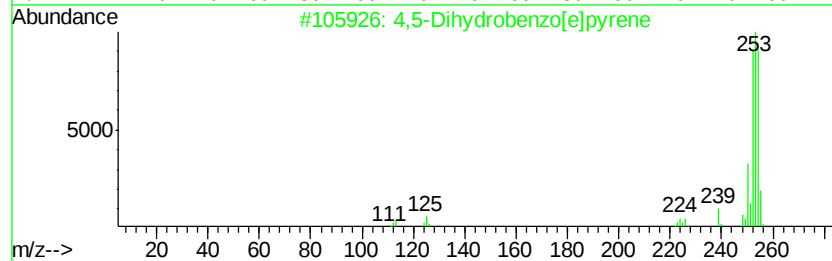
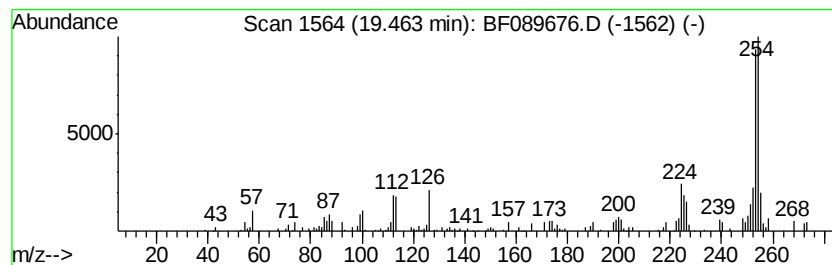
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 12 4,5-Dihydrobenzo[e]pyrene Concentration Rank 12

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 19.46 | 5.88 ng | 73032 | Perylene-d12     | 20.03 |

| Hit# | of | 5 | Tentative ID                      | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------------------|-----|---------|-------------|------|
| 1    |    |   | 4,5-Dihydrobenzo[e]pyrene         | 254 | C20H14  | 095676-42-9 | 76   |
| 2    |    |   | 9H-Fluorene, 9-(phenylmethylene)- | 254 | C20H14  | 001836-87-9 | 74   |
| 3    |    |   | 1,1'-Binaphthalene                | 254 | C20H14  | 000604-53-5 | 72   |
| 4    |    |   | 4,6'-Biazulenyl                   | 254 | C20H14  | 094154-49-1 | 72   |
| 5    |    |   | Benzo[a]pyrene, 4,5-dihydro-      | 254 | C20H14  | 057652-66-1 | 70   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

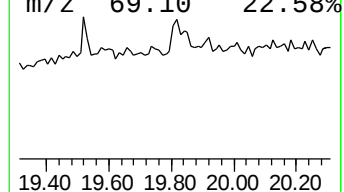
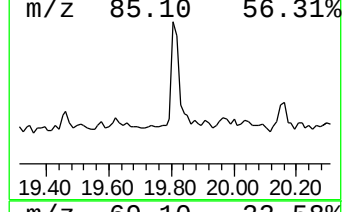
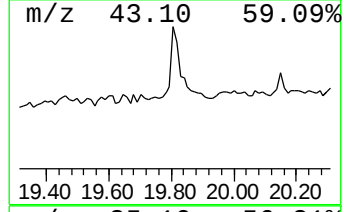
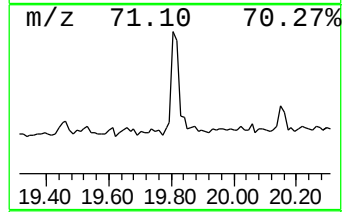
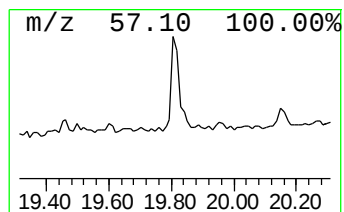
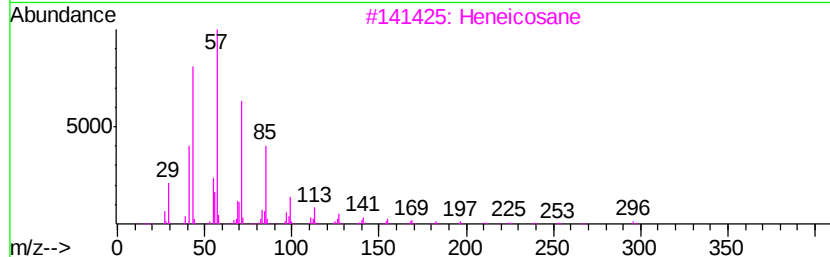
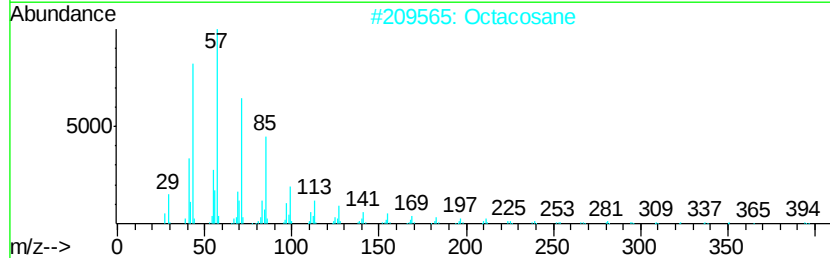
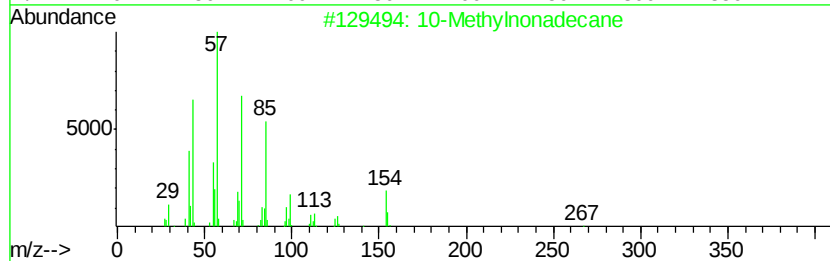
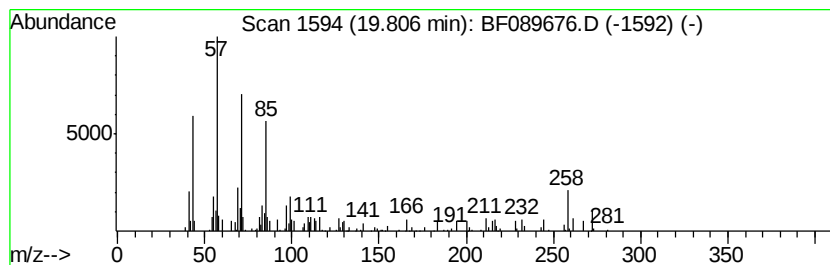
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 14 unknown19.81 Concentration Rank 16

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 19.81 | 4.75 ng | 59016 | Perylene-d12     | 20.03 |

| Hit# | of                  | 5 | Tentative ID | MW  | MolForm | CAS#        | Qual |
|------|---------------------|---|--------------|-----|---------|-------------|------|
| 1    | 10-Methylnonadecane |   |              | 282 | C20H42  | 056862-62-5 | 46   |
| 2    | Octacosane          |   |              | 394 | C28H58  | 000630-02-4 | 43   |
| 3    | Heneicosane         |   |              | 296 | C21H44  | 000629-94-7 | 43   |
| 4    | Decane, 1-iodo-     |   |              | 268 | C10H21I | 002050-77-3 | 43   |
| 5    | Pentacosane         |   |              | 352 | C25H52  | 000629-99-2 | 43   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

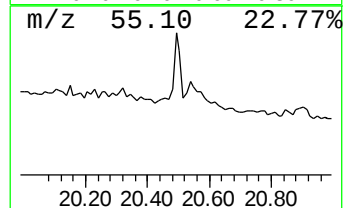
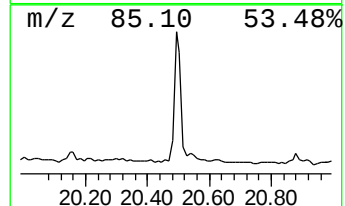
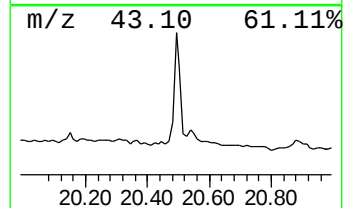
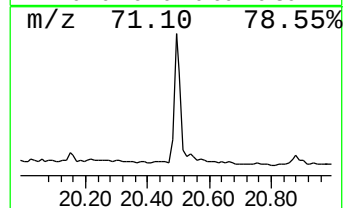
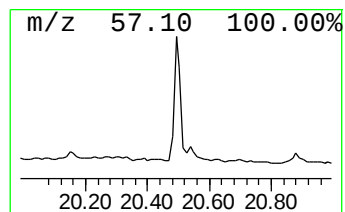
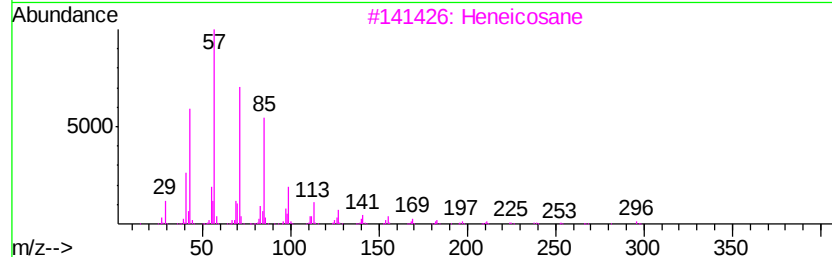
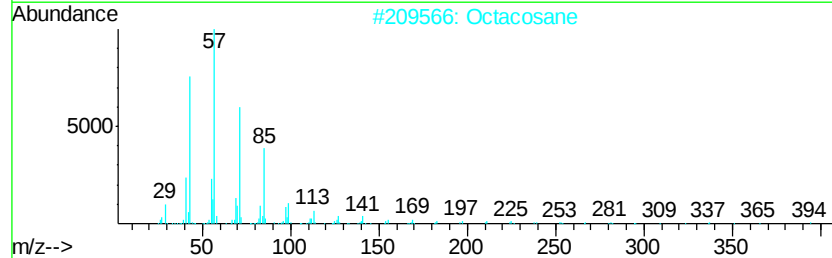
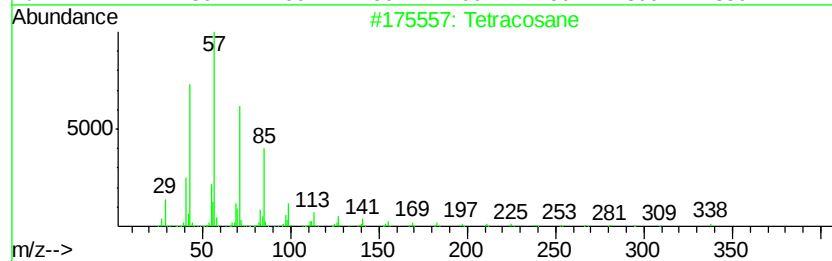
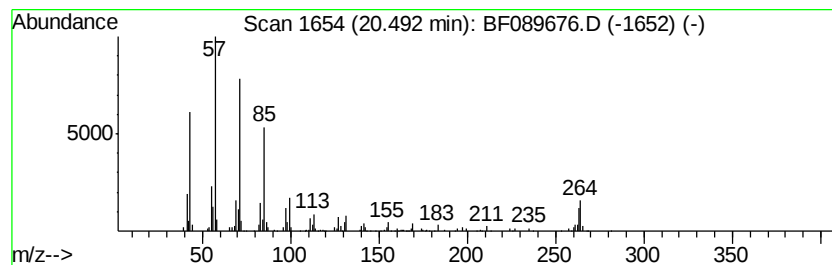
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 16 Tetracosane Concentration Rank 5

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 20.49 | 13.16 ng | 163532 | Perylene-d12     | 20.03 |

| Hit# | of | 5 | Tentative ID | MW  | MolForm | CAS#        | Qual |
|------|----|---|--------------|-----|---------|-------------|------|
| 1    |    |   | Tetracosane  | 338 | C24H50  | 000646-31-1 | 87   |
| 2    |    |   | Octacosane   | 394 | C28H58  | 000630-02-4 | 87   |
| 3    |    |   | Heneicosane  | 296 | C21H44  | 000629-94-7 | 87   |
| 4    |    |   | Hexacosane   | 366 | C26H54  | 000630-01-3 | 87   |
| 5    |    |   | Heptacosane  | 380 | C27H56  | 000593-49-7 | 83   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

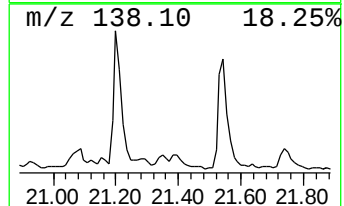
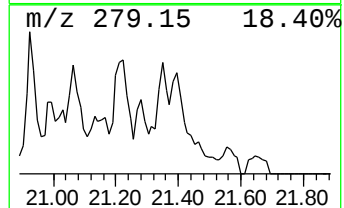
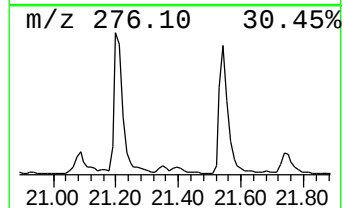
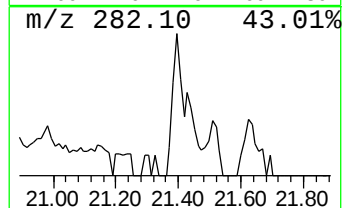
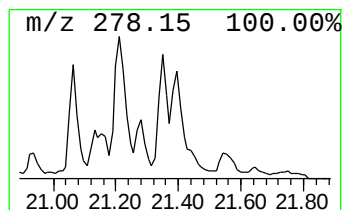
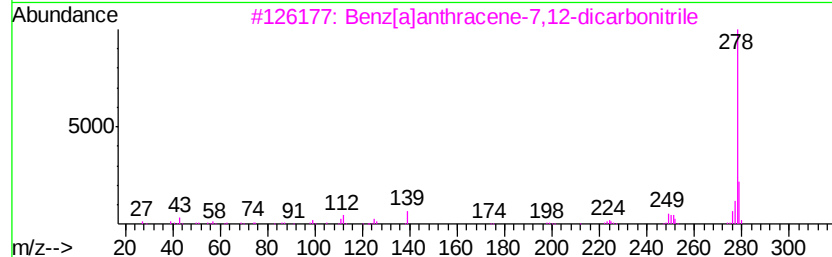
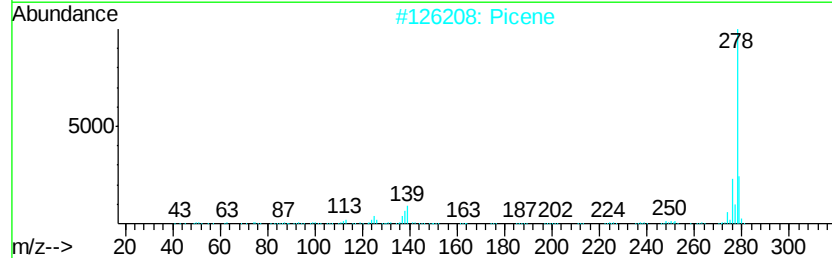
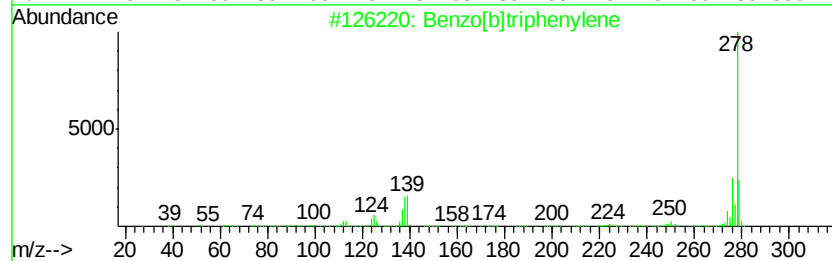
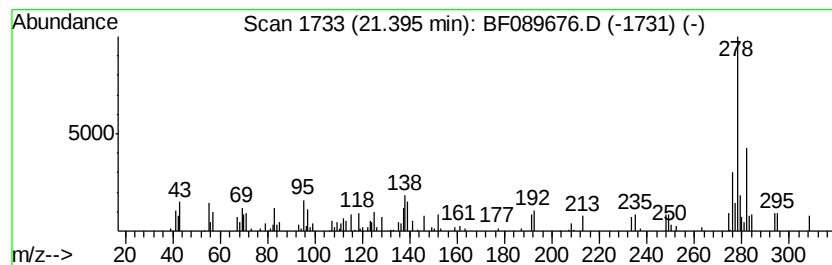
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 17 unknown21.39 Concentration Rank 17

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 21.39 | 4.41 ng | 54750 | Perylene-d12     | 20.03 |

| Hit# | of | 5 | Tentative ID                        | MW  | MolForm  | CAS#        | Qual |
|------|----|---|-------------------------------------|-----|----------|-------------|------|
| 1    |    |   | Benzo[b]triphenylene                | 278 | C22H14   | 000215-58-7 | 46   |
| 2    |    |   | Picene                              | 278 | C22H14   | 000213-46-7 | 41   |
| 3    |    |   | Benz[a]anthracene-7,12-dicarboni... | 278 | C20H10N2 | 035215-32-8 | 38   |
| 4    |    |   | Dibenz[a,h]anthracene               | 278 | C22H14   | 000053-70-3 | 38   |
| 5    |    |   | Estra-1,3,5,7,9,15-hexaen-17-one... | 278 | C19H18O2 | 056588-53-5 | 38   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

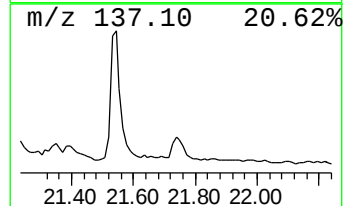
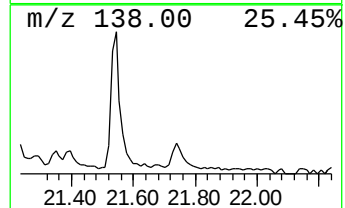
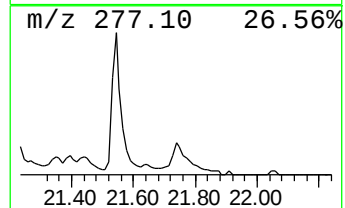
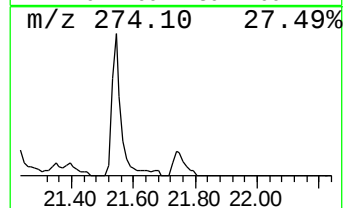
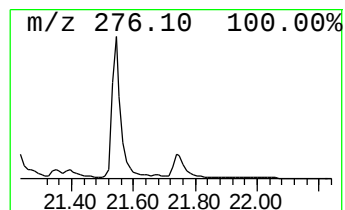
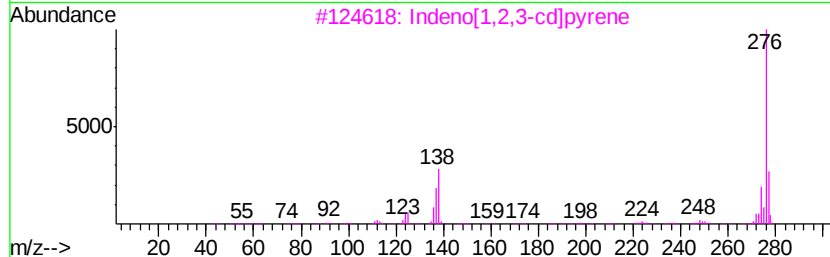
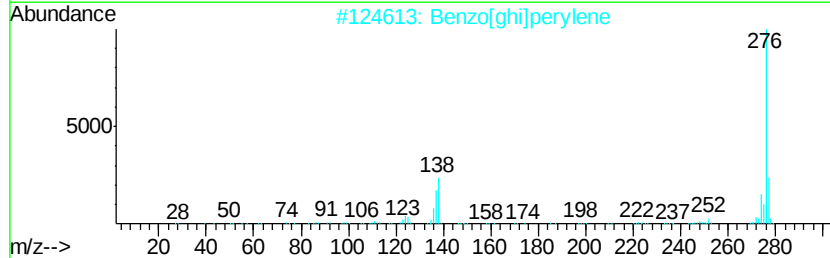
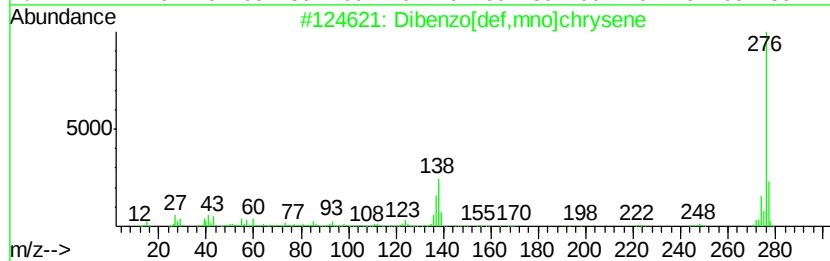
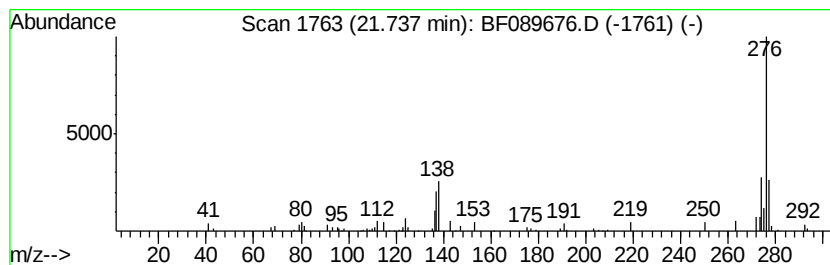
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 18 Dibenzo[def,mno]chrysene Concentration Rank 14

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 21.74 | 5.53 ng | 68693 | Perylene-d12     | 20.03 |

| Hit# | of | 5 | Tentative ID                        | MW  | MolForm    | CAS#        | Qual |
|------|----|---|-------------------------------------|-----|------------|-------------|------|
| 1    |    |   | Dibenzo[def,mno]chrysene            | 276 | C22H12     | 000191-26-4 | 94   |
| 2    |    |   | Benzo[ghi]perylene                  | 276 | C22H12     | 000191-24-2 | 93   |
| 3    |    |   | Indeno[1,2,3-cd]pyrene              | 276 | C22H12     | 000193-39-5 | 91   |
| 4    |    |   | Indeno[1,2,3-cd]fluoranthene        | 276 | C22H12     | 000193-43-1 | 81   |
| 5    |    |   | Naphthalen-1-yl-(3-nitro-benzyl)... | 276 | C17H12N2O2 | 200421-53-0 | 43   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

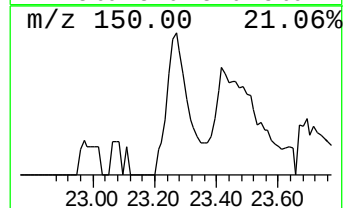
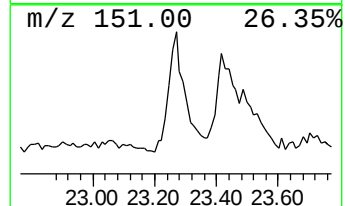
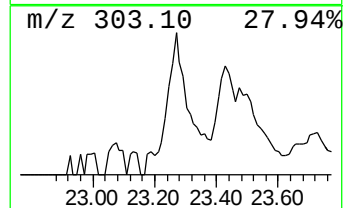
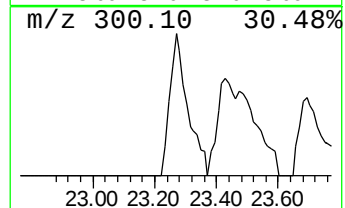
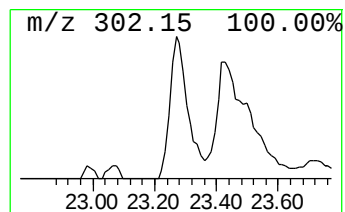
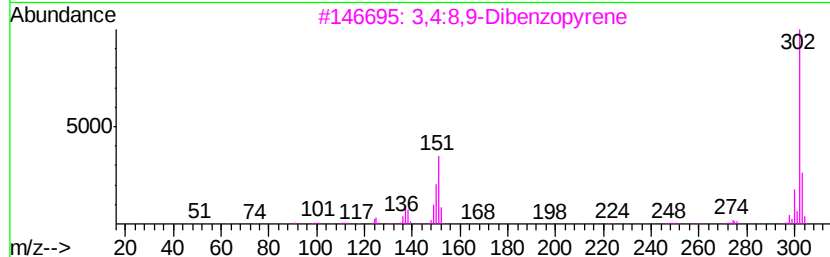
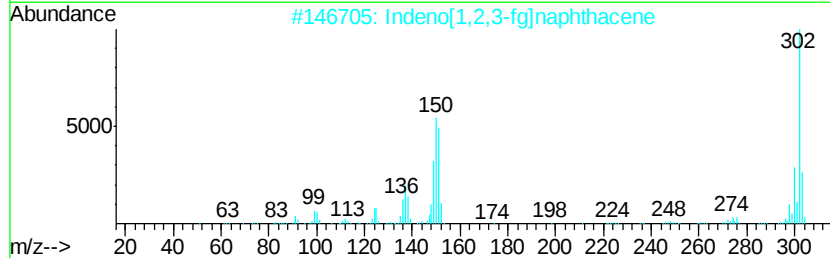
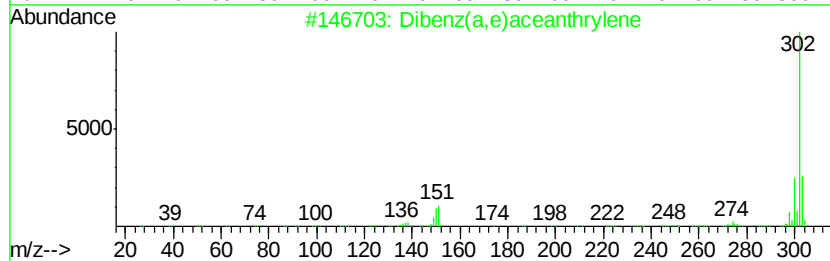
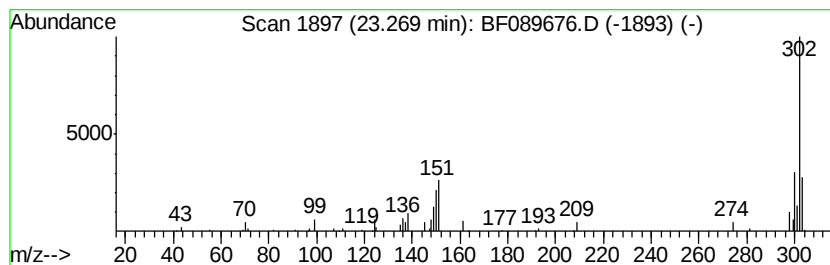
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 19 Dibenz(a,e)aceanthrylene Concentration Rank 10

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 23.27 | 6.55 ng | 81340 | Perylene-d12     | 20.03 |

| Hit# | of | 5 | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------------|-----|---------|-------------|------|
| 1    |    |   | Dibenz(a,e)aceanthrylene    | 302 | C24H14  | 005385-75-1 | 87   |
| 2    |    |   | Indeno[1,2,3-fg]naphthacene | 302 | C24H14  | 000203-11-2 | 87   |
| 3    |    |   | 3,4:8,9-Dibenzopyrene       | 302 | C24H14  | 000189-64-0 | 74   |
| 4    |    |   | 1,2:4,5-Dibenzopyrene       | 302 | C24H14  | 000192-65-4 | 74   |
| 5    |    |   | Dibenzo(a,i)pyrene          | 302 | C24H14  | 000189-55-9 | 74   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
Data File : BF089676.D  
Acq On : 8 Aug 2016 23:30  
Operator : UM/SJ  
Sample : H4331-12  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

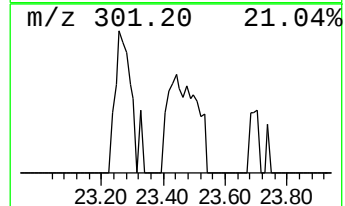
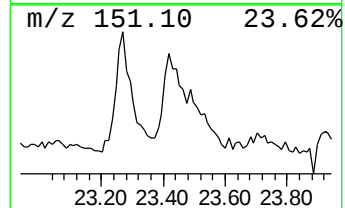
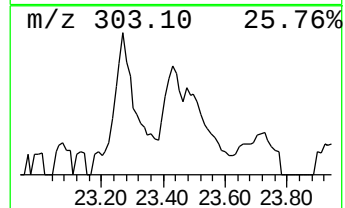
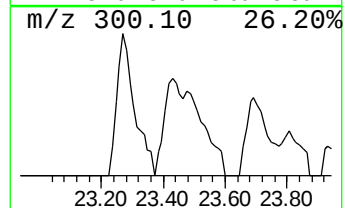
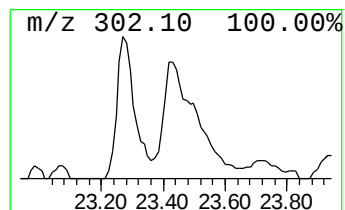
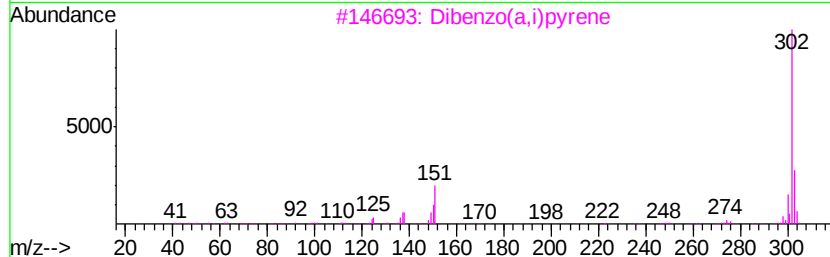
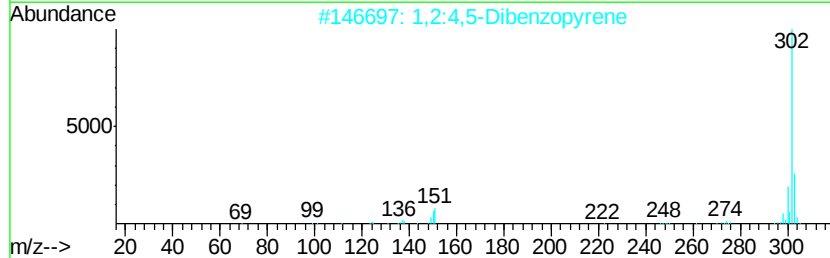
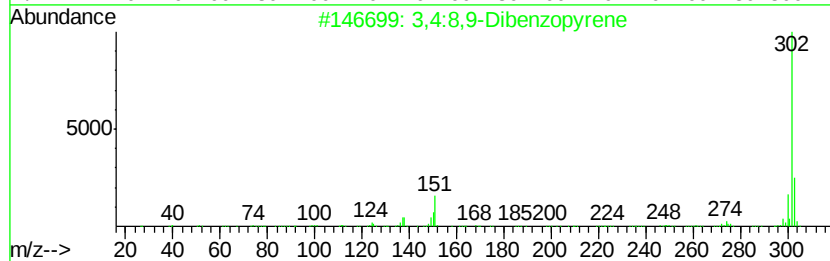
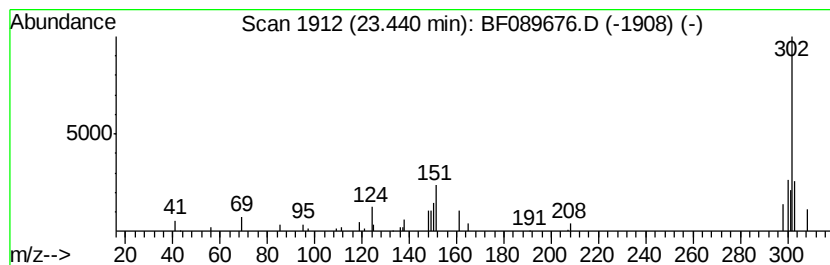
TIC Library : C:\Database\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 20 3,4:8,9-Dibenzopyrene Concentration Rank 8

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 23.44 | 8.46 ng | 105084 | Perylene-d12     | 20.03 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 3,4:8,9-Dibenzopyrene               | 302 | C24H14    | 000189-64-0  | 52   |
| 2    |    | 1,2:4,5-Dibenzopyrene               | 302 | C24H14    | 000192-65-4  | 50   |
| 3    |    | Dibenzo(a,i)pyrene                  | 302 | C24H14    | 000189-55-9  | 50   |
| 4    |    | 1H-Imidazo[4,5-b]phenazine, 2-(2... | 302 | C17H10N4S | 1000319-15-8 | 47   |
| 5    |    | 1,2,9,10-Dibenzopyrene              | 302 | C24H14    | 000191-30-0  | 47   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF080816\  
 Data File : BF089676.D  
 Acq On : 8 Aug 2016 23:30  
 Operator : UM/SJ  
 Sample : H4331-12  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 WC2-GRAB

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF080416.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

| TIC Top Hit name     | RT    | EstConc | Units | Response | --Internal Standard-- |       |        |      |
|----------------------|-------|---------|-------|----------|-----------------------|-------|--------|------|
|                      |       |         |       |          | #                     | RT    | Resp   | Conc |
| 2-Pentanone, 4-hy... | 4.63  | 20.6    | ng    | 246236   | 1                     | 7.43  | 239306 | 20.0 |
| unknown7.07          | 7.07  | 92.8    | ng    | 1110680  | 1                     | 7.43  | 239306 | 20.0 |
| Phenanthrene, 2-m... | 15.46 | 5.8     | ng    | 91210    | 4                     | 14.66 | 316650 | 20.0 |
| Phenanthrene, 1-m... | 15.50 | 7.2     | ng    | 113828   | 4                     | 14.66 | 316650 | 20.0 |
| 4H-Cyclopenta[def... | 15.61 | 9.7     | ng    | 153057   | 4                     | 14.66 | 316650 | 20.0 |
| n-Hexadecanoic acid  | 15.68 | 11.3    | ng    | 178552   | 4                     | 14.66 | 316650 | 20.0 |
| Naphthalene, 2-ph... | 15.91 | 4.2     | ng    | 66527    | 4                     | 14.66 | 316650 | 20.0 |
| Cyclopenta(def)ph... | 16.38 | 4.0     | ng    | 63551    | 4                     | 14.66 | 316650 | 20.0 |
| Pyrene, 1-methyl-    | 17.37 | 4.0     | ng    | 156759   | 5                     | 18.37 | 776338 | 20.0 |
| 5,12-Naphthacened... | 19.28 | 5.0     | ng    | 61540    | 6                     | 20.03 | 248461 | 20.0 |
| 4,5-Dihydrobenzo[... | 19.46 | 5.9     | ng    | 73032    | 6                     | 20.03 | 248461 | 20.0 |
| unknown19.81         | 19.81 | 4.8     | ng    | 59016    | 6                     | 20.03 | 248461 | 20.0 |
| Tetracosane          | 20.49 | 13.2    | ng    | 163532   | 6                     | 20.03 | 248461 | 20.0 |
| unknown21.39         | 21.39 | 4.4     | ng    | 54750    | 6                     | 20.03 | 248461 | 20.0 |
| Dibenzo[def,mno]c... | 21.74 | 5.5     | ng    | 68693    | 6                     | 20.03 | 248461 | 20.0 |
| Dibenz(a,e)aceant... | 23.27 | 6.5     | ng    | 81340    | 6                     | 20.03 | 248461 | 20.0 |
| 3,4:8,9-Dibenzopy... | 23.44 | 8.5     | ng    | 105084   | 6                     | 20.03 | 248461 | 20.0 |