

Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
 Data File : BF082347.D  
 Acq On : 17 Oct 2015 2:31  
 Operator : UM/IZ  
 Sample : G4009-03  
 Misc :  
 ALS Vial : 27 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 KW-3

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-BF101015.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         | 5.166       | 263           | 265         | 268          | rBV      | 646302         | 754610        | 24.43%          | 1.947%        |
| 2         | 5.588       | 299           | 302         | 304          | rBV      | 859234         | 1192156       | 38.59%          | 3.075%        |
| 3         | 6.606       | 389           | 391         | 393          | rBV      | 1355564        | 1346294       | 43.58%          | 3.473%        |
| 4         | 6.731       | 400           | 402         | 405          | rBV      | 951319         | 1324150       | 42.86%          | 3.416%        |
| 5         | 6.971       | 421           | 423         | 425          | rBV      | 228665         | 312326        | 10.11%          | 0.806%        |
| 6         | 7.120       | 434           | 436         | 439          | rBV      | 1272324        | 1078342       | 34.91%          | 2.782%        |
| 7         | 7.532       | 470           | 472         | 477          | rBV      | 877856         | 925162        | 29.95%          | 2.387%        |
| 8         | 8.240       | 533           | 534         | 539          | rBV2     | 353505         | 592022        | 19.16%          | 1.527%        |
| 9         | 8.960       | 594           | 597         | 599          | rBV      | 45428          | 59167         | 1.92%           | 0.153%        |
| 10        | 9.052       | 603           | 605         | 608          | rBV      | 65900          | 56155         | 1.82%           | 0.145%        |
| 11        | 9.315       | 626           | 628         | 630          | rBV      | 2001076        | 1616394       | 52.32%          | 4.170%        |
| 12        | 9.646       | 655           | 657         | 661          | rBV      | 38827          | 72560         | 2.35%           | 0.187%        |
| 13        | 9.703       | 661           | 662         | 665          | rVV      | 276225         | 285797        | 9.25%           | 0.737%        |
| 14        | 9.852       | 673           | 675         | 678          | rBV      | 98961          | 95793         | 3.10%           | 0.247%        |
| 15        | 9.898       | 678           | 679         | 682          | rBV2     | 84405          | 79498         | 2.57%           | 0.205%        |
| 16        | 9.989       | 685           | 687         | 689          | rVV      | 465161         | 593801        | 19.22%          | 1.532%        |
| 17        | 10.023      | 689           | 690         | 692          | rVB      | 226766         | 193124        | 6.25%           | 0.498%        |
| 18        | 10.195      | 703           | 705         | 707          | rBV      | 167805         | 163152        | 5.28%           | 0.421%        |
| 19        | 10.412      | 720           | 724         | 726          | rBV2     | 41524          | 60950         | 1.97%           | 0.157%        |
| 20        | 10.538      | 733           | 735         | 738          | rVB      | 248946         | 231025        | 7.48%           | 0.596%        |
| 21        | 10.629      | 738           | 743         | 744          | rVV2     | 37881          | 77375         | 2.50%           | 0.200%        |
| 22        | 10.698      | 746           | 749         | 751          | rVV2     | 74366          | 88243         | 2.86%           | 0.228%        |
| 23        | 10.778      | 755           | 756         | 759          | rVV2     | 869286         | 1190478       | 38.54%          | 3.071%        |
| 24        | 10.880      | 763           | 765         | 770          | rVB3     | 58178          | 84460         | 2.73%           | 0.218%        |
| 25        | 11.086      | 779           | 783         | 784          | rBV2     | 64541          | 90724         | 2.94%           | 0.234%        |
| 26        | 11.281      | 799           | 800         | 802          | rVV      | 139862         | 174141        | 5.64%           | 0.449%        |
| 27        | 11.338      | 802           | 805         | 807          | rVV2     | 222932         | 266871        | 8.64%           | 0.688%        |
| 28        | 11.372      | 807           | 808         | 812          | rVV2     | 123097         | 177780        | 5.75%           | 0.459%        |
| 29        | 11.509      | 815           | 820         | 822          | rVV2     | 2646109        | 3089205       | 100.00%         | 7.969%        |
| 30        | 11.555      | 822           | 824         | 826          | rVV      | 584437         | 558098        | 18.07%          | 1.440%        |
| 31        | 11.715      | 834           | 838         | 842          | rBV      | 294502         | 416549        | 13.48%          | 1.075%        |
| 32        | 11.772      | 842           | 843         | 845          | rVV      | 54482          | 53152         | 1.72%           | 0.137%        |
| 33        | 11.806      | 845           | 846         | 849          | rVB2     | 42007          | 65537         | 2.12%           | 0.169%        |
| 34        | 11.978      | 858           | 861         | 862          | rBV      | 300837         | 369101        | 11.95%          | 0.952%        |

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 ALS Vial : 27 Sample Multiplier: 1

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 ClientSampleId :  
 KW-3

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-BF101015.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |         |        |        |
|----|--------|------|------|------|------|---------|---------|--------|--------|
| 35 | 12.001 | 862  | 863  | 866  | rVV2 | 501974  | 629793  | 20.39% | 1.625% |
| 36 | 12.058 | 866  | 868  | 869  | rVV  | 105303  | 105315  | 3.41%  | 0.272% |
| 37 | 12.092 | 869  | 871  | 875  | rVB2 | 365003  | 533868  | 17.28% | 1.377% |
| 38 | 12.275 | 885  | 887  | 888  | rVV  | 196908  | 170341  | 5.51%  | 0.439% |
| 39 | 12.298 | 888  | 889  | 892  | rVB  | 110527  | 156427  | 5.06%  | 0.404% |
| 40 | 12.423 | 897  | 900  | 901  | rBV  | 58591   | 58369   | 1.89%  | 0.151% |
| 41 | 12.526 | 907  | 909  | 910  | rBV  | 115438  | 127646  | 4.13%  | 0.329% |
| 42 | 12.561 | 910  | 912  | 915  | rVB4 | 52375   | 124932  | 4.04%  | 0.322% |
| 43 | 12.618 | 915  | 917  | 919  | rVB  | 137406  | 149959  | 4.85%  | 0.387% |
| 44 | 12.698 | 921  | 924  | 926  | rBV  | 2343911 | 2211192 | 71.58% | 5.704% |
| 45 | 12.789 | 930  | 932  | 933  | rVB2 | 56337   | 66403   | 2.15%  | 0.171% |
| 46 | 12.846 | 933  | 937  | 938  | rBV3 | 81861   | 127668  | 4.13%  | 0.329% |
| 47 | 12.926 | 940  | 944  | 946  | rBV2 | 1811282 | 2043311 | 66.14% | 5.271% |
| 48 | 12.972 | 946  | 948  | 950  | rVB  | 99821   | 116226  | 3.76%  | 0.300% |
| 49 | 13.064 | 950  | 956  | 960  | rBV  | 1806649 | 1861635 | 60.26% | 4.803% |
| 50 | 13.144 | 960  | 963  | 965  | rBV2 | 133277  | 232805  | 7.54%  | 0.601% |
| 51 | 13.246 | 969  | 972  | 974  | rVB2 | 145698  | 308757  | 9.99%  | 0.797% |
| 52 | 13.315 | 977  | 978  | 980  | rBV  | 66655   | 89187   | 2.89%  | 0.230% |
| 53 | 13.361 | 980  | 982  | 985  | rVB3 | 144839  | 224020  | 7.25%  | 0.578% |
| 54 | 13.452 | 988  | 990  | 991  | rBV  | 76735   | 64267   | 2.08%  | 0.166% |
| 55 | 13.486 | 991  | 993  | 997  | rVB2 | 82225   | 101234  | 3.28%  | 0.261% |
| 56 | 13.566 | 997  | 1000 | 1003 | rVB4 | 23270   | 64291   | 2.08%  | 0.166% |
| 57 | 13.646 | 1003 | 1007 | 1009 | rBV4 | 35114   | 92241   | 2.99%  | 0.238% |
| 58 | 13.681 | 1009 | 1010 | 1014 | rVB2 | 48086   | 84120   | 2.72%  | 0.217% |
| 59 | 13.772 | 1016 | 1018 | 1021 | rVB  | 253013  | 246370  | 7.98%  | 0.636% |
| 60 | 13.886 | 1026 | 1028 | 1030 | rBV  | 214753  | 313151  | 10.14% | 0.808% |
| 61 | 13.921 | 1030 | 1031 | 1032 | rVB  | 114200  | 78284   | 2.53%  | 0.202% |
| 62 | 13.944 | 1032 | 1033 | 1034 | rBV  | 81433   | 90569   | 2.93%  | 0.234% |
| 63 | 13.989 | 1034 | 1037 | 1041 | rVB2 | 281274  | 532417  | 17.23% | 1.373% |
| 64 | 14.069 | 1041 | 1044 | 1047 | rBV  | 42929   | 66898   | 2.17%  | 0.173% |
| 65 | 14.149 | 1047 | 1051 | 1053 | rBV  | 1079502 | 1945109 | 62.96% | 5.018% |
| 66 | 14.184 | 1053 | 1054 | 1058 | rVB  | 843434  | 838671  | 27.15% | 2.164% |
| 67 | 14.264 | 1059 | 1061 | 1063 | rVB2 | 63318   | 74749   | 2.42%  | 0.193% |
| 68 | 14.321 | 1063 | 1066 | 1069 | rBV4 | 38796   | 101923  | 3.30%  | 0.263% |
| 69 | 14.401 | 1071 | 1073 | 1075 | rVB2 | 67306   | 70442   | 2.28%  | 0.182% |
| 70 | 14.527 | 1083 | 1084 | 1086 | rBV2 | 39496   | 57356   | 1.86%  | 0.148% |
| 71 | 14.572 | 1086 | 1088 | 1090 | rVB  | 165461  | 170947  | 5.53%  | 0.441% |

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 ALS Vial : 27 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 KW-3

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-BF101015.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|     |        |      |      |      |      |        |         |        |        |
|-----|--------|------|------|------|------|--------|---------|--------|--------|
| 72  | 14.607 | 1090 | 1091 | 1093 | rVB  | 70047  | 76837   | 2.49%  | 0.198% |
| 73  | 14.652 | 1093 | 1095 | 1098 | rBV3 | 55814  | 124719  | 4.04%  | 0.322% |
| 74  | 14.709 | 1098 | 1100 | 1103 | rVB3 | 56717  | 66693   | 2.16%  | 0.172% |
| 75  | 14.789 | 1106 | 1107 | 1110 | rVB2 | 57627  | 64995   | 2.10%  | 0.168% |
| 76  | 14.915 | 1115 | 1118 | 1119 | rBV2 | 71200  | 82440   | 2.67%  | 0.213% |
| 77  | 15.064 | 1129 | 1131 | 1132 | rBV  | 67655  | 64655   | 2.09%  | 0.167% |
| 78  | 15.098 | 1132 | 1134 | 1136 | rBV2 | 48178  | 69925   | 2.26%  | 0.180% |
| 79  | 15.132 | 1136 | 1137 | 1139 | rVB  | 70554  | 73873   | 2.39%  | 0.191% |
| 80  | 15.269 | 1146 | 1149 | 1153 | rBV  | 708104 | 1465855 | 47.45% | 3.782% |
| 81  | 15.372 | 1156 | 1158 | 1161 | rVB  | 132294 | 182023  | 5.89%  | 0.470% |
| 82  | 15.475 | 1164 | 1167 | 1170 | rBV3 | 33008  | 93770   | 3.04%  | 0.242% |
| 83  | 15.578 | 1173 | 1176 | 1179 | rVB  | 398627 | 544947  | 17.64% | 1.406% |
| 84  | 15.647 | 1179 | 1182 | 1185 | rBV  | 489902 | 631727  | 20.45% | 1.630% |
| 85  | 15.704 | 1185 | 1187 | 1189 | rBV  | 351240 | 566820  | 18.35% | 1.462% |
| 86  | 15.932 | 1205 | 1207 | 1210 | rVB2 | 41694  | 70679   | 2.29%  | 0.182% |
| 87  | 16.161 | 1224 | 1227 | 1231 | rBV  | 63628  | 145778  | 4.72%  | 0.376% |
| 88  | 16.870 | 1287 | 1289 | 1295 | rVB4 | 30955  | 104089  | 3.37%  | 0.269% |
| 89  | 17.018 | 1297 | 1302 | 1304 | rBV3 | 34822  | 106767  | 3.46%  | 0.275% |
| 90  | 17.213 | 1316 | 1319 | 1323 | rBV  | 206097 | 424447  | 13.74% | 1.095% |
| 91  | 17.361 | 1328 | 1332 | 1338 | rBV2 | 244347 | 585580  | 18.96% | 1.511% |
| 92  | 17.464 | 1338 | 1341 | 1344 | rBV3 | 32317  | 70070   | 2.27%  | 0.181% |
| 93  | 17.681 | 1355 | 1360 | 1365 | rBV  | 140418 | 392972  | 12.72% | 1.014% |
| 94  | 17.795 | 1366 | 1370 | 1377 | rVB7 | 36636  | 126753  | 4.10%  | 0.327% |
| 95  | 17.921 | 1377 | 1381 | 1385 | rBV  | 36255  | 94239   | 3.05%  | 0.243% |
| 96  | 18.195 | 1401 | 1405 | 1409 | rBV6 | 42127  | 108974  | 3.53%  | 0.281% |
| 97  | 18.447 | 1423 | 1427 | 1434 | rVB5 | 18167  | 65294   | 2.11%  | 0.168% |
| 98  | 18.824 | 1456 | 1460 | 1470 | rVB8 | 28384  | 125213  | 4.05%  | 0.323% |
| 99  | 19.990 | 1557 | 1562 | 1569 | rVB  | 28559  | 109469  | 3.54%  | 0.282% |
| 100 | 21.236 | 1667 | 1671 | 1676 | rVB4 | 16691  | 58850   | 1.91%  | 0.152% |

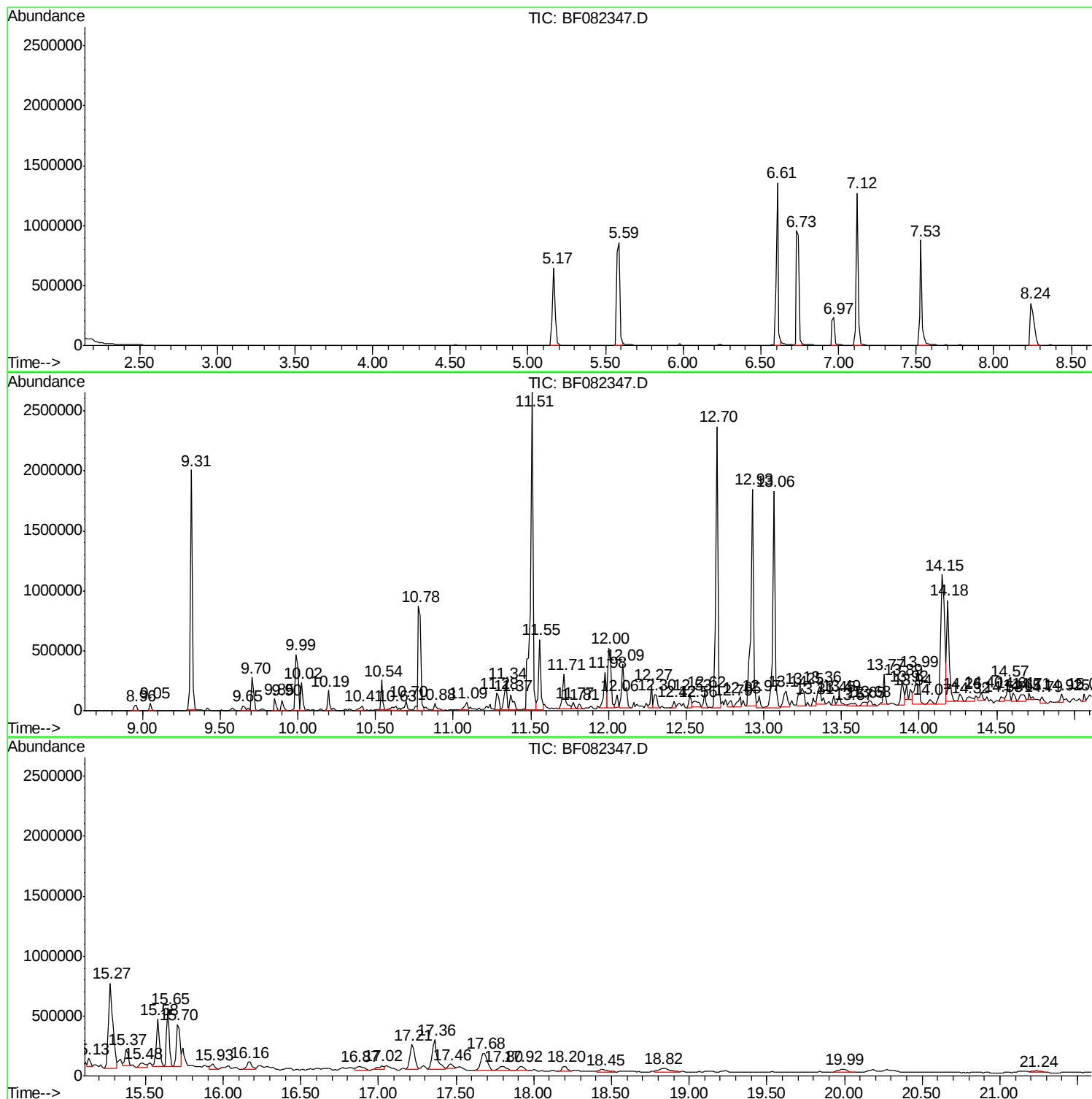
Sum of corrected areas: 38763538

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF101715\  
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Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
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KW-3

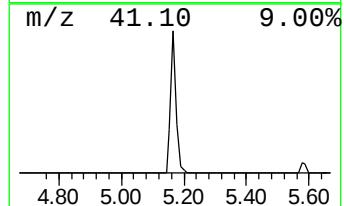
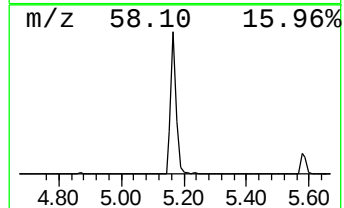
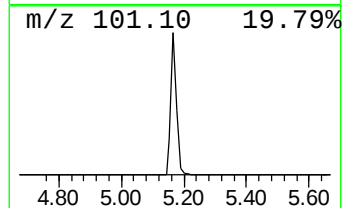
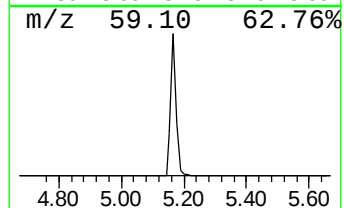
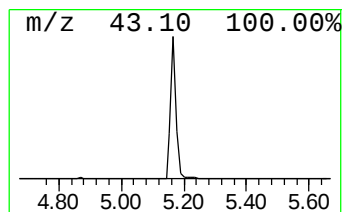
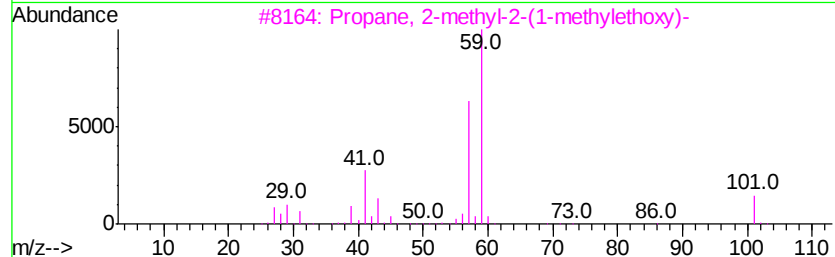
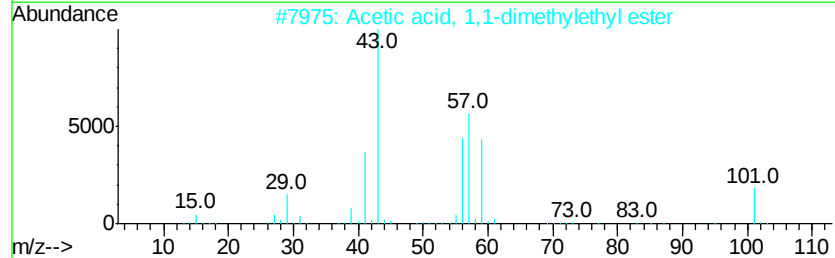
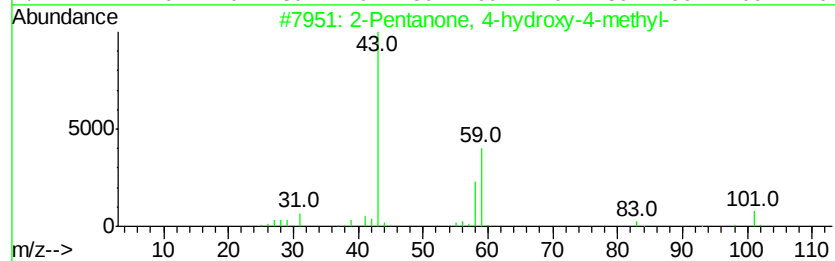
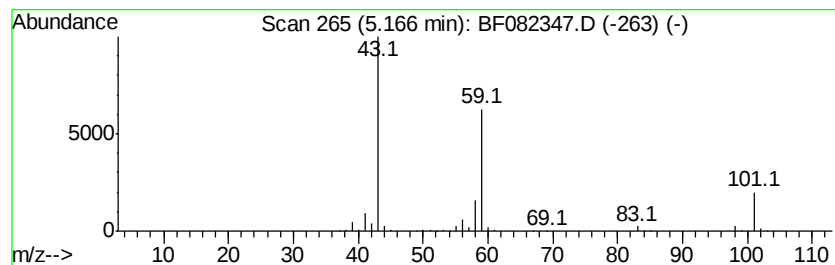
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 3

| R.T. | EstConc  | Area   | Relative to ISTD       | R.T. |
|------|----------|--------|------------------------|------|
| 5.17 | 48.32 ng | 754610 | 1,4-Dichlorobenzene-d4 | 6.97 |

| Hit# | of | 5 | Tentative ID                        | MW  | MolForm  | CAS#        | Qual |
|------|----|---|-------------------------------------|-----|----------|-------------|------|
| 1    |    |   | 2-Pentanone, 4-hydroxy-4-methyl-    | 116 | C6H12O2  | 000123-42-2 | 56   |
| 2    |    |   | Acetic acid, 1,1-dimethylethyl e... | 116 | C6H12O2  | 000540-88-5 | 39   |
| 3    |    |   | Propane, 2-methyl-2-(1-methyleth... | 116 | C7H16O   | 017348-59-3 | 36   |
| 4    |    |   | 3-Hexanol, 4-methyl-                | 116 | C7H16O   | 000615-29-2 | 28   |
| 5    |    |   | Acetic acid, cyano-, 1,1-dimethy... | 141 | C7H11NO2 | 001116-98-9 | 23   |



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Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

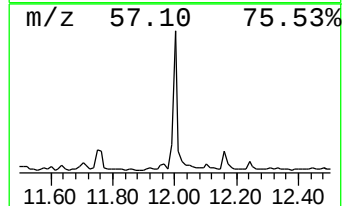
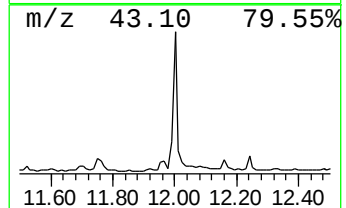
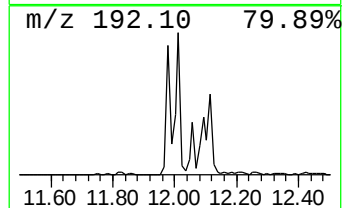
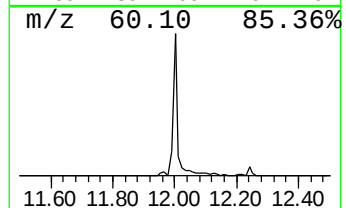
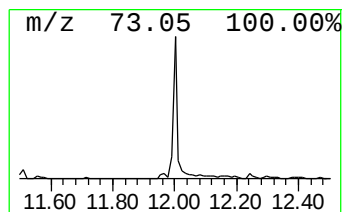
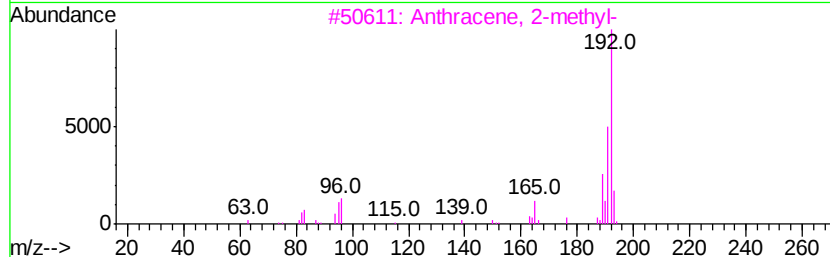
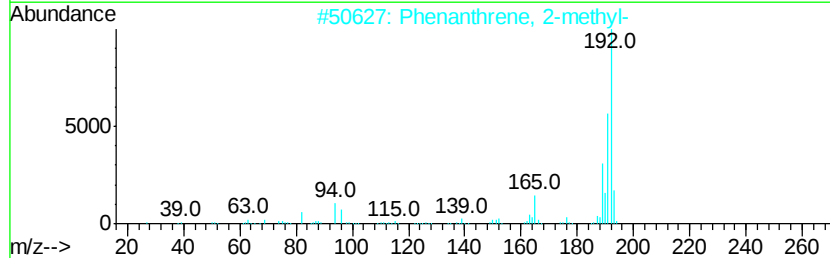
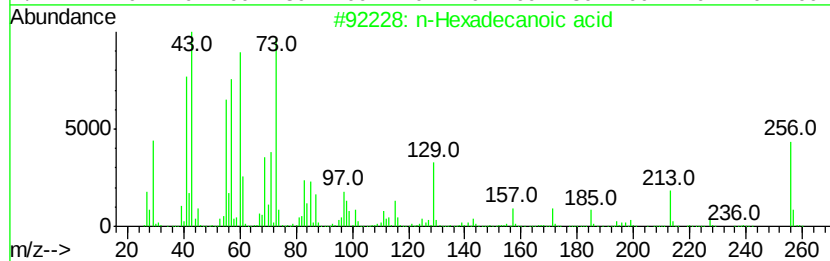
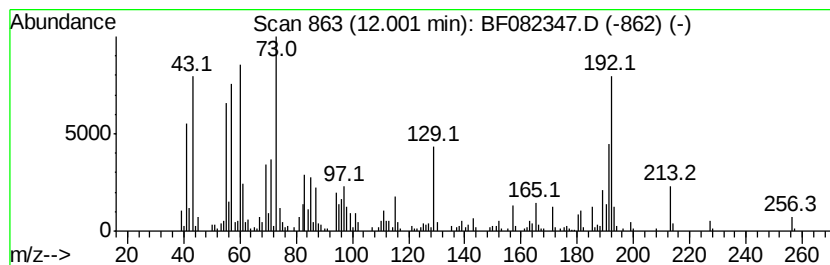
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 4 n-Hexadecanoic acid Concentration Rank 11

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.00 | 4.08 ng | 629793 | Phenanthrene-d10 | 11.49 |

| Hit# | of | Tentative ID            | MW  | MolForm  | CAS#        | Qual |
|------|----|-------------------------|-----|----------|-------------|------|
| 1    | 5  | n-Hexadecanoic acid     | 256 | C16H32O2 | 000057-10-3 | 95   |
| 2    |    | Phenanthrene, 2-methyl- | 192 | C15H12   | 002531-84-2 | 92   |
| 3    |    | Anthracene, 2-methyl-   | 192 | C15H12   | 000613-12-7 | 89   |
| 4    |    | Tridecanoic acid        | 214 | C13H26O2 | 000638-53-9 | 87   |
| 5    |    | Anthracene, 9-methyl-   | 192 | C15H12   | 000779-02-2 | 76   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

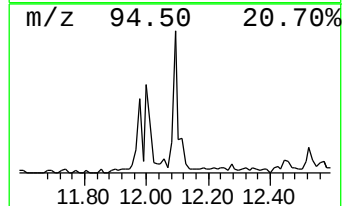
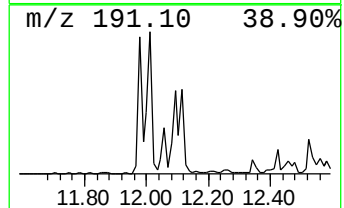
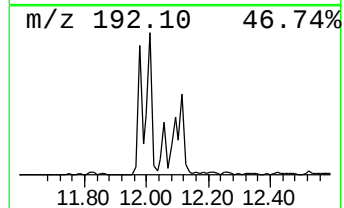
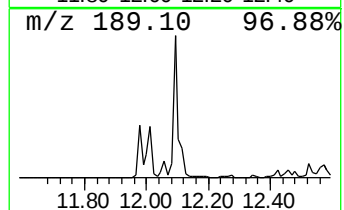
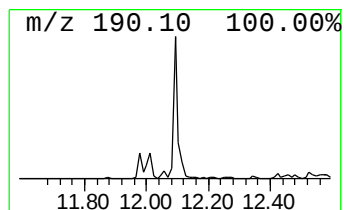
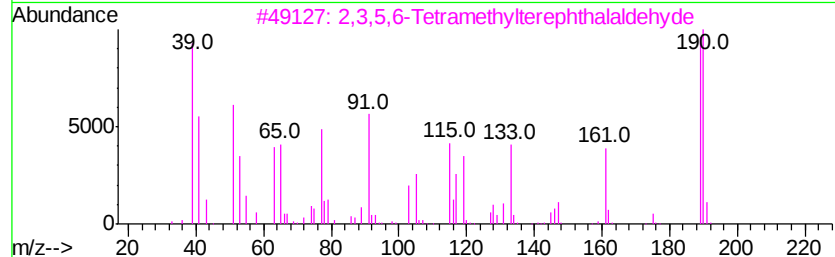
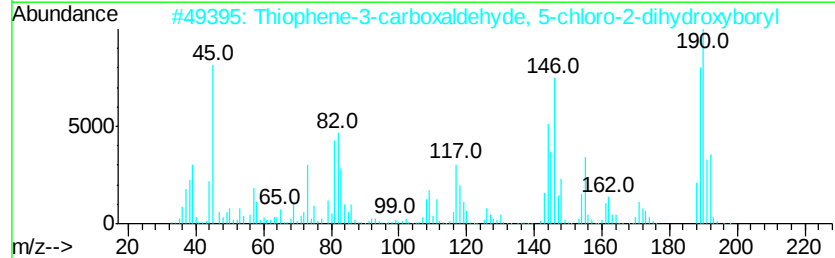
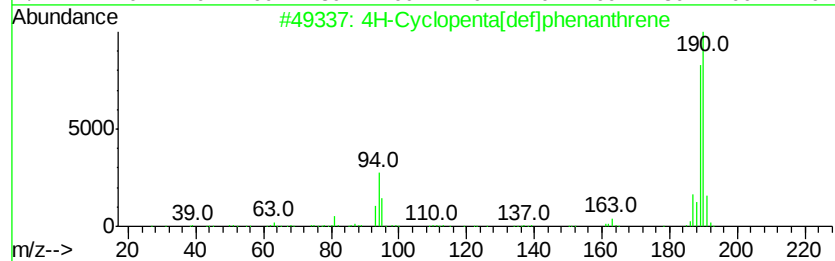
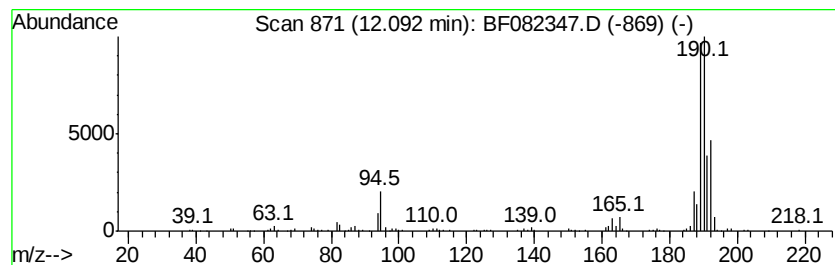
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 5 4H-Cyclopenta[def]phenanthrene Concentration Rank 16

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.09 | 3.46 ng | 533868 | Phenanthrene-d10 | 11.49 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm    | CAS#        | Qual |
|---------|---|-------------------------------------|-----|------------|-------------|------|
| 1       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10     | 000203-64-5 | 76   |
| 2       |   | Thiophene-3-carboxaldehyde, 5-ch... | 190 | C5H4BClO3S | 036155-87-0 | 53   |
| 3       |   | 2,3,5,6-Tetramethylterephthalald... | 190 | C12H14O2   | 007072-01-7 | 43   |
| 4       |   | 2,2'-Bis(4,5-dimethylimidazole)     | 190 | C10H14N4   | 069286-06-2 | 40   |
| 5       |   | 1,4-Naphthalenedione, 2,5-dihydr... | 190 | C10H6O4    | 004923-55-1 | 17   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

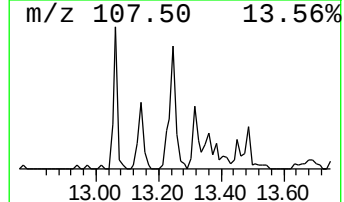
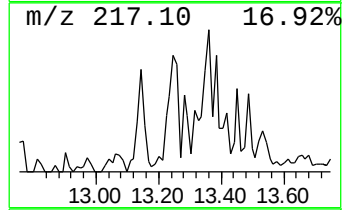
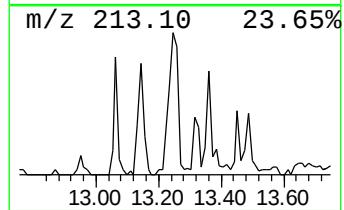
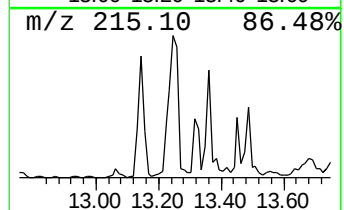
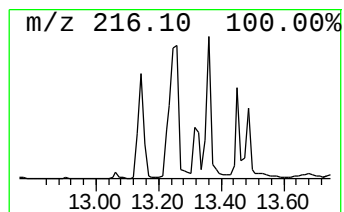
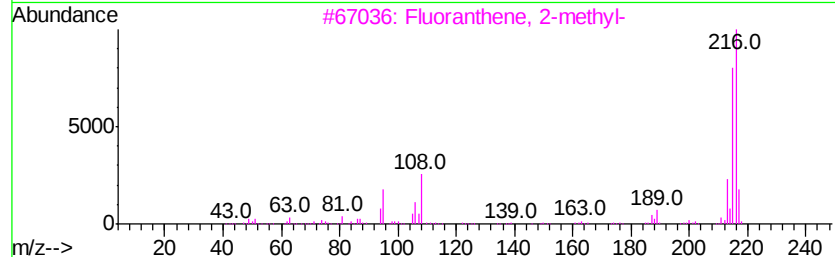
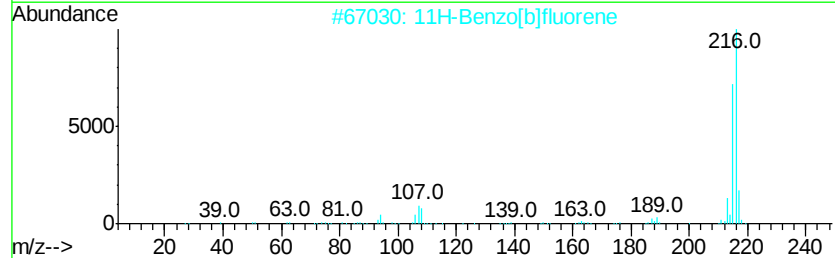
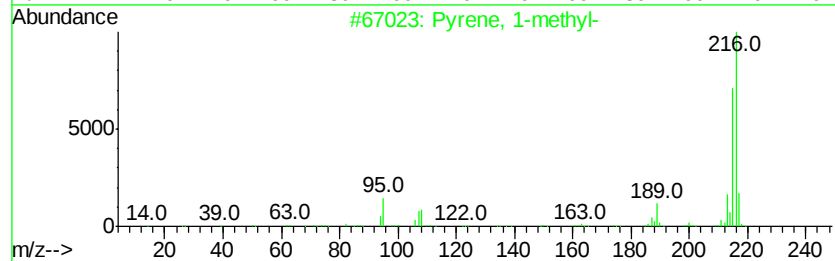
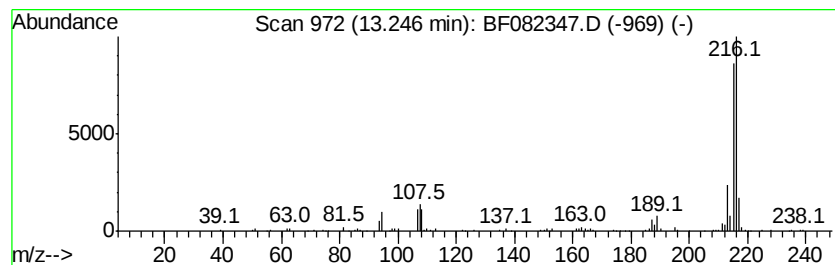
Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 6 Pyrene, 1-methyl- Concentration Rank 20

| R.T.      | EstConc                 | Area   | Relative to ISTD | R.T.        |      |
|-----------|-------------------------|--------|------------------|-------------|------|
| 13.25     | 3.17 ng                 | 308757 | Chrysene-d12     | 14.16       |      |
| Hit# of 5 | Tentative ID            | MW     | MolForm          | CAS#        | Qual |
| 1         | Pyrene, 1-methyl-       | 216    | C17H12           | 002381-21-7 | 94   |
| 2         | 11H-Benzo[b]fluorene    | 216    | C17H12           | 000243-17-4 | 93   |
| 3         | Fluoranthene, 2-methyl- | 216    | C17H12           | 033543-31-6 | 91   |
| 4         | 11H-Benzo[a]fluorene    | 216    | C17H12           | 000238-84-6 | 90   |
| 5         | 7H-Benzo[c]fluorene     | 216    | C17H12           | 000205-12-9 | 74   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

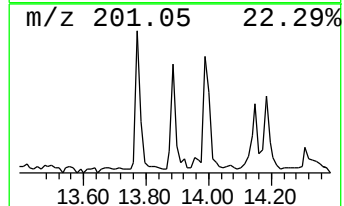
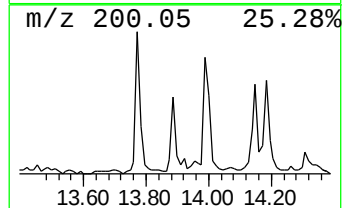
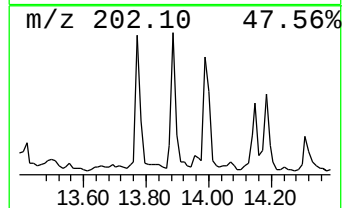
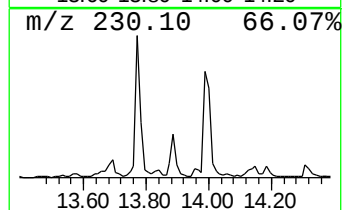
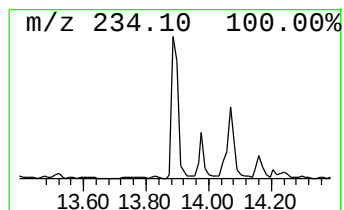
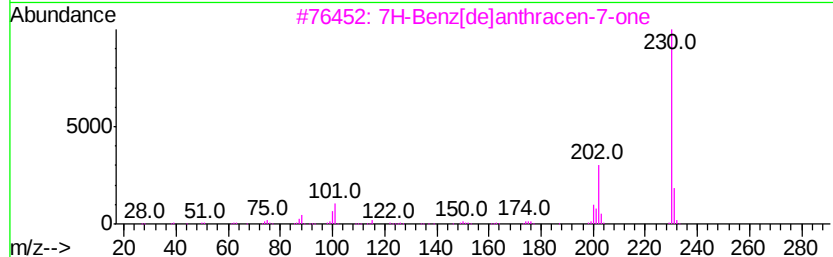
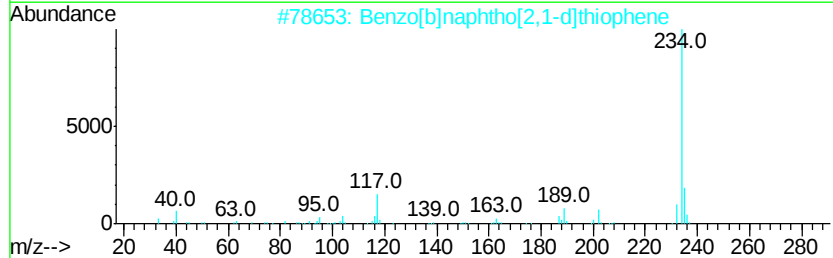
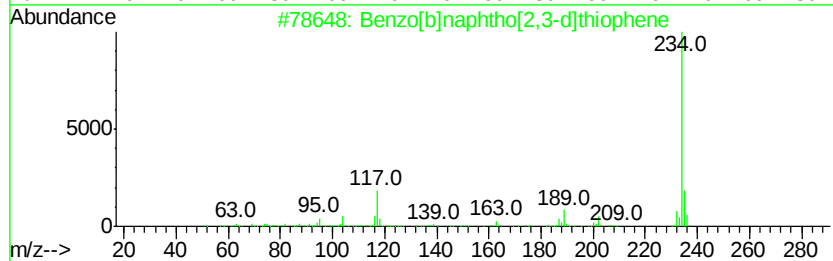
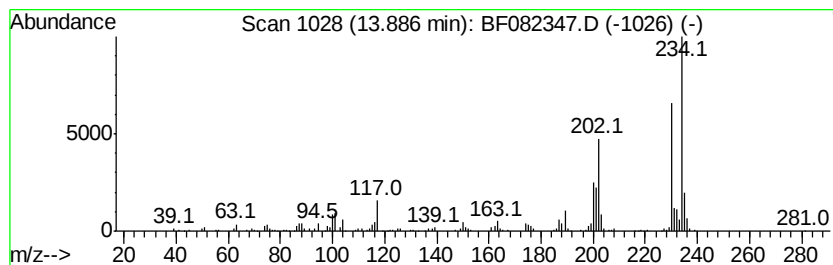
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 7 Benzo[b]naphtho[2,3-d]thiop... Concentration Rank 19

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 13.89 | 3.22 ng | 313151 | Chrysene-d12     | 14.16 |

| Hit# | of | Tentative ID                        | MW  | MolForm  | CAS#        | Qual |
|------|----|-------------------------------------|-----|----------|-------------|------|
| 1    | 5  | Benzo[b]naphtho[2,3-d]thiophene     | 234 | C16H10S  | 000243-46-9 | 90   |
| 2    |    | Benzo[b]naphtho[2,1-d]thiophene     | 234 | C16H10S  | 000239-35-0 | 86   |
| 3    |    | 7H-Benz[de]anthracen-7-one          | 230 | C17H10O  | 000082-05-3 | 81   |
| 4    |    | Benzo[b]naphtho[1,2-d]thiophene     | 234 | C16H10S  | 000205-43-6 | 46   |
| 5    |    | Quinoxalino[2,3-b]quinoxaline, 5... | 234 | C14H10N4 | 000531-46-4 | 35   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

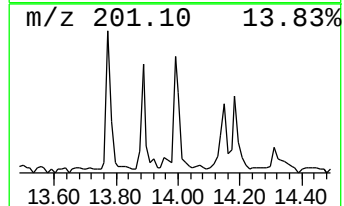
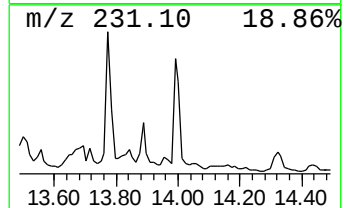
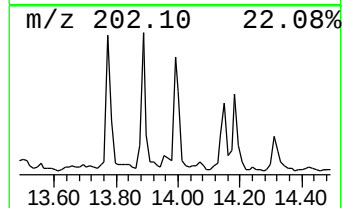
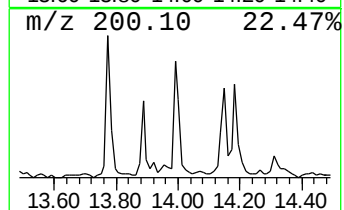
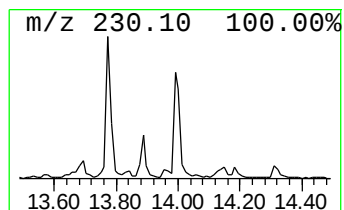
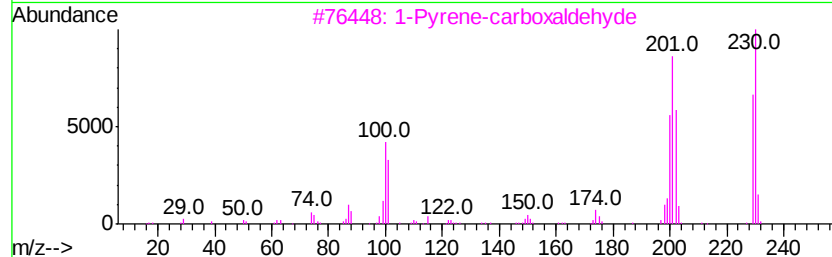
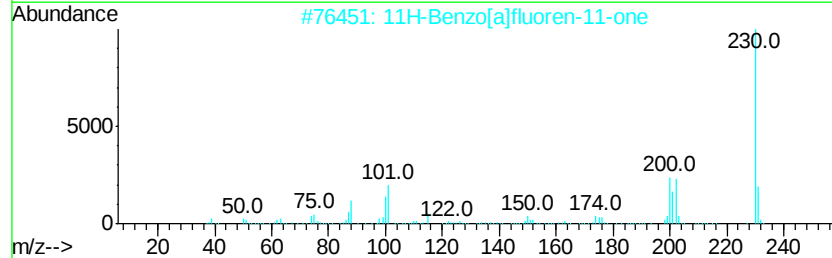
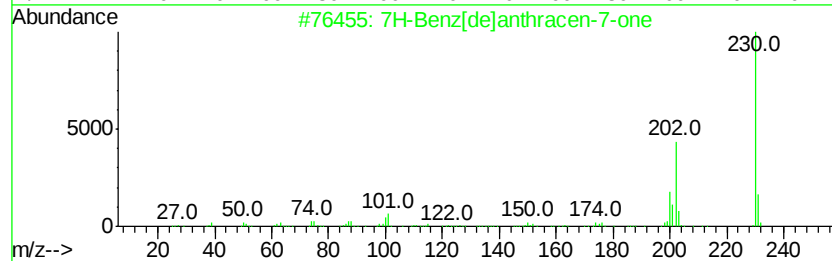
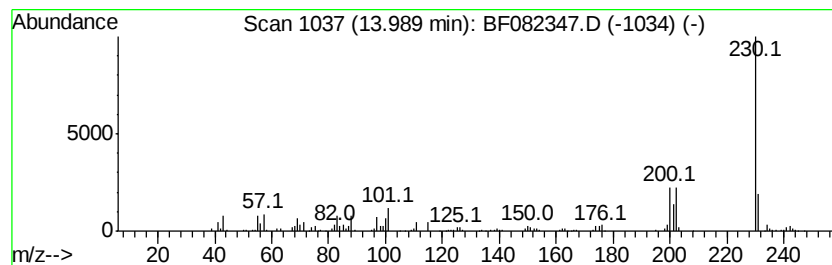
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 8 7H-Benz[de]anthracen-7-one Concentration Rank 7

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 13.99 | 5.47 ng | 532417 | Chrysene-d12     | 14.16 |

| Hit# | of                         | 5   | Tentative ID | MW          | MolForm | CAS# | Qual |
|------|----------------------------|-----|--------------|-------------|---------|------|------|
| 1    | 7H-Benz[de]anthracen-7-one | 230 | C17H10O      | 000082-05-3 | 90      |      |      |
| 2    | 11H-Benzo[a]fluoren-11-one | 230 | C17H10O      | 000479-79-8 | 86      |      |      |
| 3    | 1-Pvrene-carboxaldehyde    | 230 | C17H10O      | 003029-19-4 | 72      |      |      |
| 4    | o-Terphenyl                | 230 | C18H14       | 000084-15-1 | 53      |      |      |
| 5    | m-Terphenyl                | 230 | C18H14       | 000092-06-8 | 47      |      |      |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

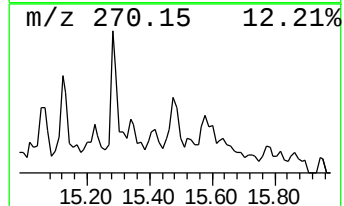
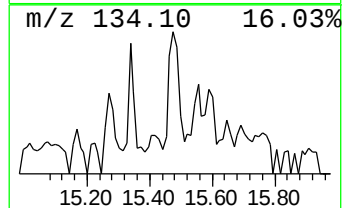
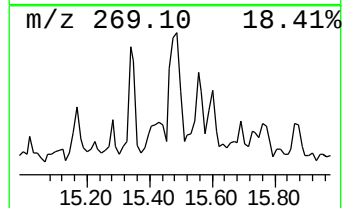
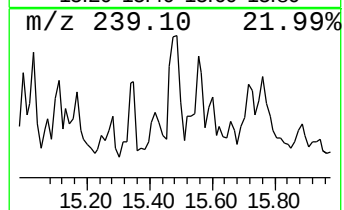
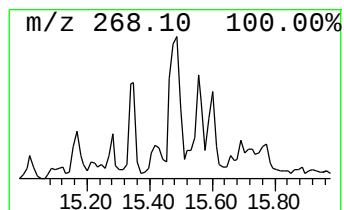
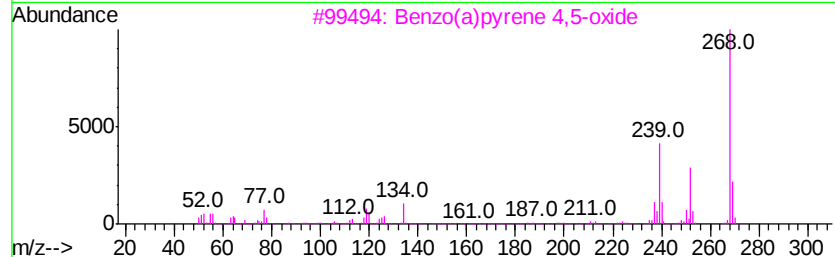
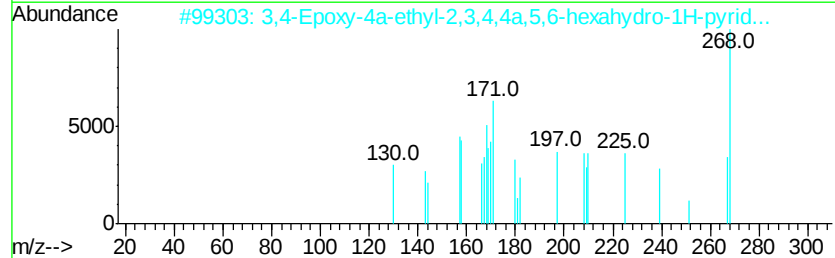
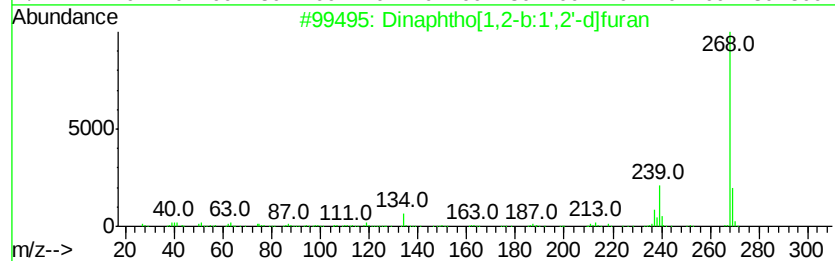
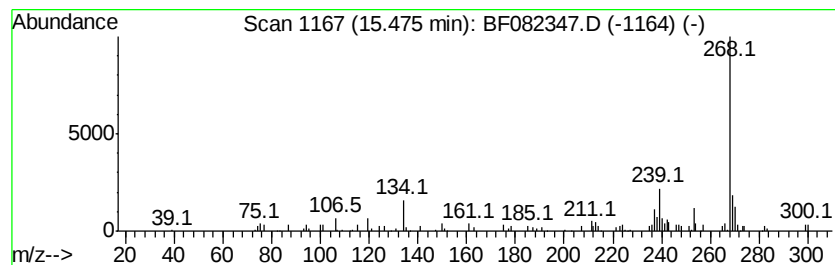
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 10 Dinaphtho[1,2-b:1',2'-d]furan Concentration Rank 18

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 15.48 | 3.31 ng | 93770 | Perylene-d12     | 15.70 |

| Hit# | of | Tentative ID                        | MW  | MolForm    | CAS#        | Qual |
|------|----|-------------------------------------|-----|------------|-------------|------|
| 1    | 5  | Dinaphtho[1,2-b:1',2'-d]furan       | 268 | C20H12O    | 000207-93-2 | 76   |
| 2    |    | 3,4-Epoxy-4a-ethyl-2,3,4,4a,5,6-... | 268 | C17H20N2O  | 080249-75-8 | 60   |
| 3    |    | Benzo(a)pyrene 4,5-oxide            | 268 | C20H12O    | 037574-47-3 | 59   |
| 4    |    | 9,10-Anthracenedione, 1,4-diamin... | 268 | C15H12N2O3 | 002872-48-2 | 58   |
| 5    |    | Dinaphtho[2,1-b:1',2'-d]furan       | 268 | C20H12O    | 000194-63-8 | 58   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

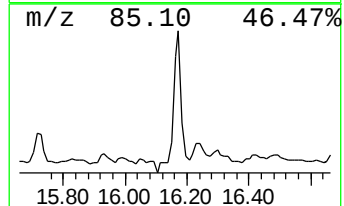
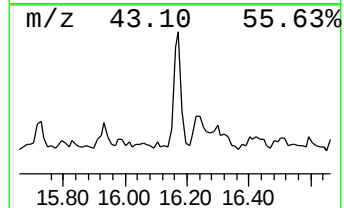
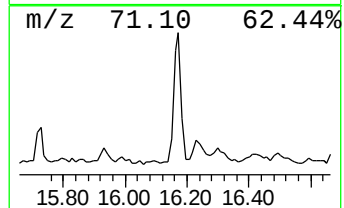
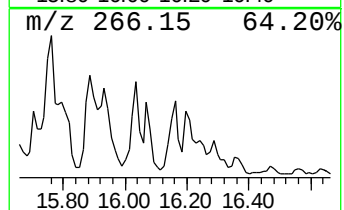
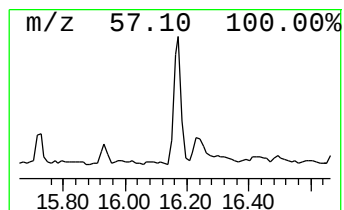
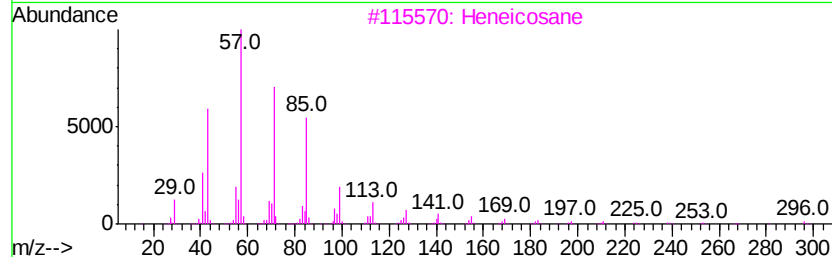
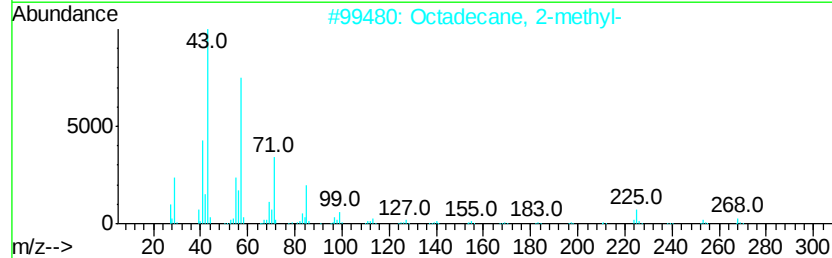
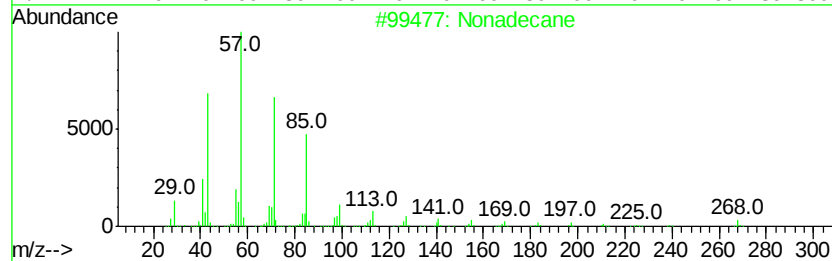
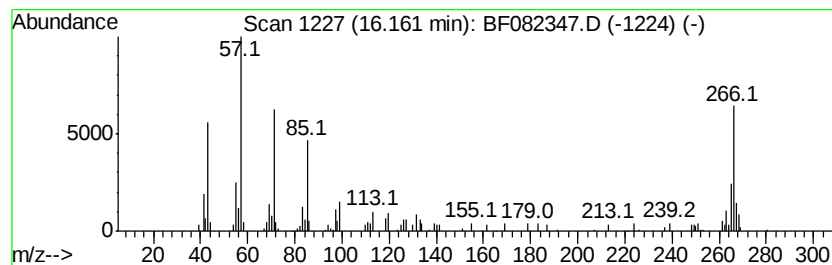
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 12 Nonadecane Concentration Rank 8

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 16.16 | 5.14 ng | 145778 | Perylene-d12     | 15.70 |

| Hit# | of | Tentative ID          | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------|-----|---------|-------------|------|
| 1    | 5  | Nonadecane            | 268 | C19H40  | 000629-92-5 | 89   |
| 2    |    | Octadecane, 2-methyl- | 268 | C19H40  | 001560-88-9 | 41   |
| 3    |    | Heneicosane           | 296 | C21H44  | 000629-94-7 | 41   |
| 4    |    | Dodecane, 1-iodo-     | 296 | C12H25I | 004292-19-7 | 41   |
| 5    |    | Heptadecane           | 240 | C17H36  | 000629-78-7 | 41   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

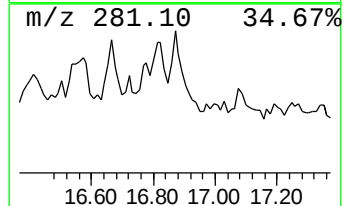
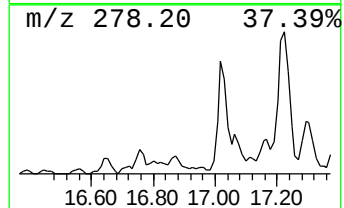
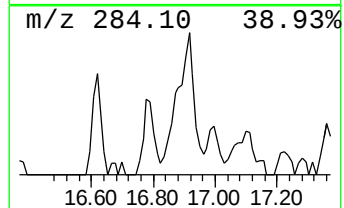
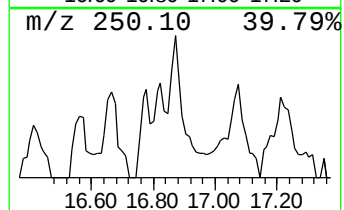
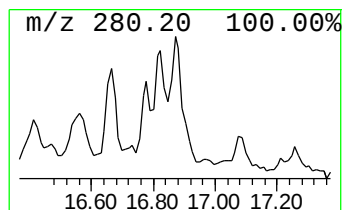
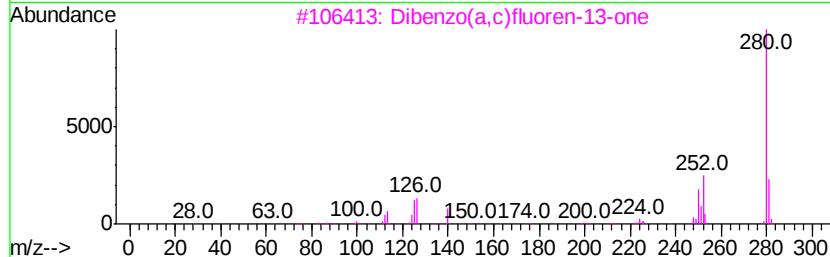
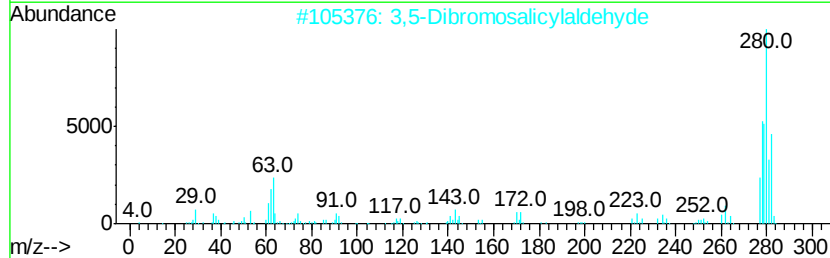
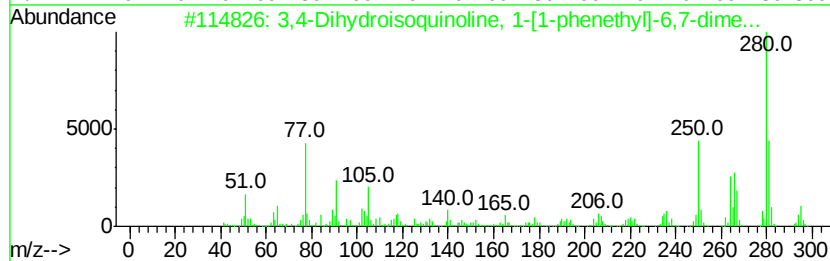
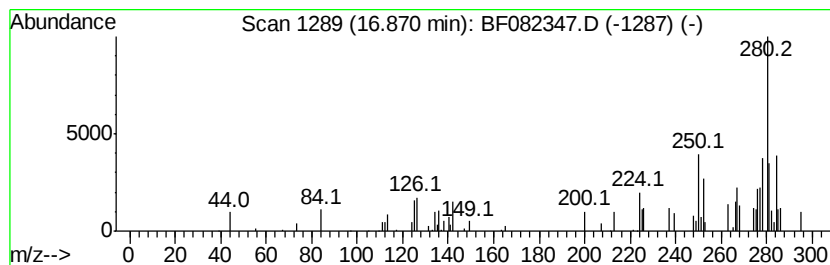
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 13 unknown16.87 Concentration Rank 15

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 16.87 | 3.67 ng | 104089 | Perylene-d12     | 15.70 |

| Hit# | of                                  | 5   | Tentative ID | MW           | MolForm | CAS# | Qual |
|------|-------------------------------------|-----|--------------|--------------|---------|------|------|
| 1    | 3,4-Dihydroisoquinoline, 1-[1-ph... | 295 | C19H21NO2    | 047206-48-4  | 38      |      |      |
| 2    | 3,5-Dibromosalicylaldehyde          | 278 | C7H4Br2O2    | 000090-59-5  | 38      |      |      |
| 3    | Dibenzo(a,c)fluoren-13-one          | 280 | C21H12O      | 063041-47-4  | 30      |      |      |
| 4    | 2-(4,5-Dihydro-3ah-cyclopenta[1,... | 280 | C11H11F3O3S  | 1000276-11-3 | 27      |      |      |
| 5    | Estra-1,3,5,7,9-pentaen-17-one, ... | 280 | C19H20O2     | 003907-67-3  | 27      |      |      |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

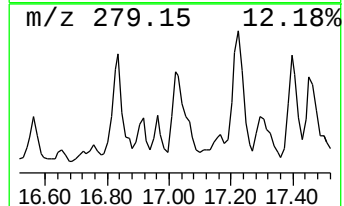
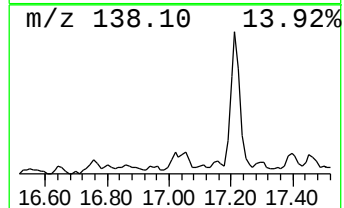
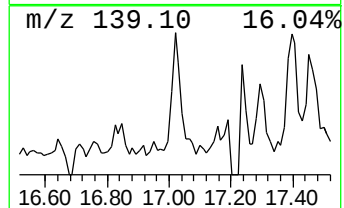
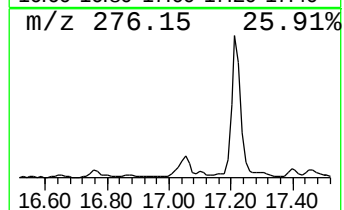
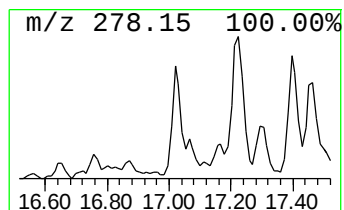
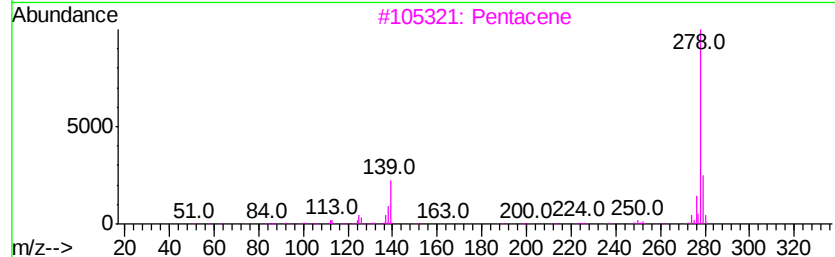
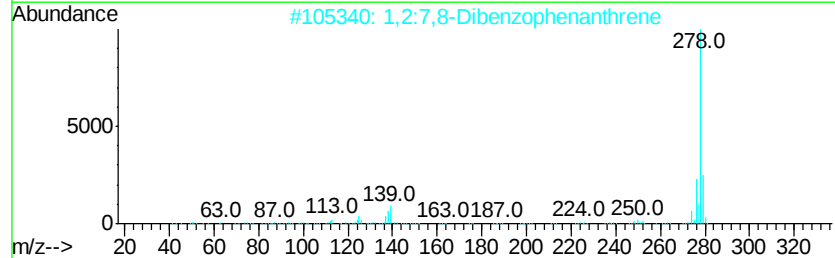
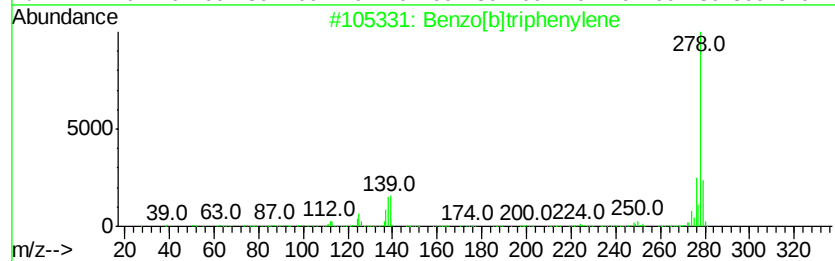
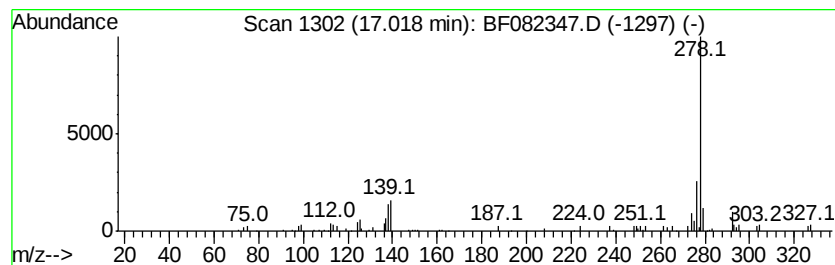
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 14 Benzo[b]triphenylene Concentration Rank 14

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 17.02 | 3.77 ng | 106767 | Perylene-d12     | 15.70 |

| Hit# | of | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[b]triphenylene        | 278 | C22H14  | 000215-58-7 | 64   |
| 2    |    | 1,2:7,8-Dibenzophenanthrene | 278 | C22H14  | 000213-46-7 | 52   |
| 3    |    | Pentacene                   | 278 | C22H14  | 000135-48-8 | 50   |
| 4    |    | Dibenz[a,h]anthracene       | 278 | C22H14  | 000053-70-3 | 50   |
| 5    |    | p-Bis(phenylethynyl)benzene | 278 | C22H14  | 001849-27-0 | 50   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

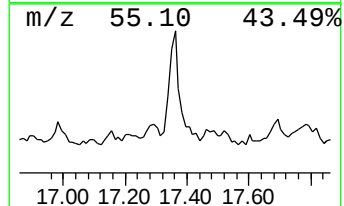
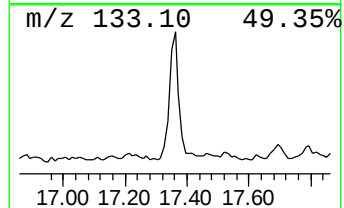
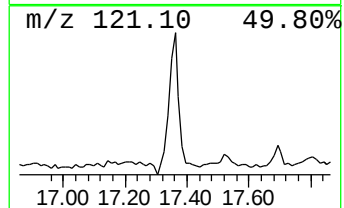
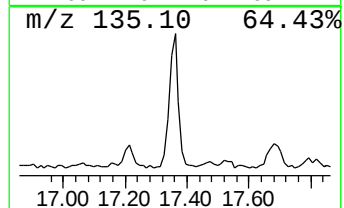
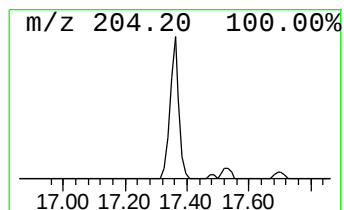
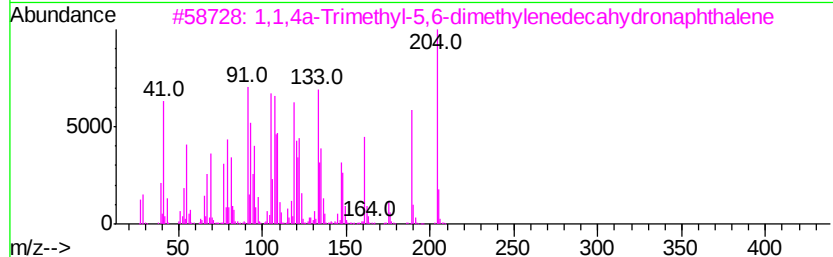
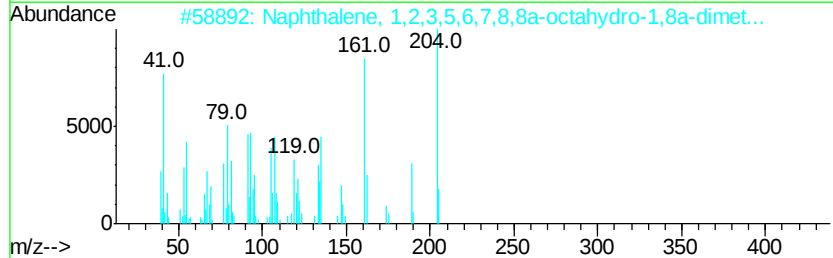
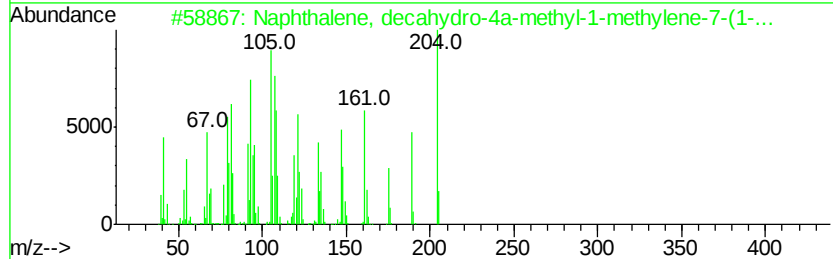
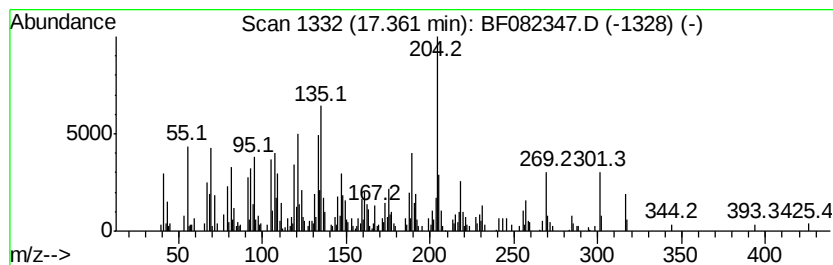
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 15 Naphthalene, decahydro-4a-m... Concentration Rank 4

| R.T.  | EstConc  | Area   | Relative to ISTD | R.T.  |
|-------|----------|--------|------------------|-------|
| 17.36 | 20.66 ng | 585580 | Perylene-d12     | 15.70 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#         | Qual |
|------|----|-------------------------------------|-----|---------|--------------|------|
| 1    | 5  | Naphthalene, decahydro-4a-methyl... | 204 | C15H24  | 017066-67-0  | 70   |
| 2    |    | Naphthalene, 1,2,3,5,6,7,8,8a-oc... | 204 | C15H24  | 004630-07-3  | 46   |
| 3    |    | 1,1,4a-Trimethyl-5,6-dimethylene... | 204 | C15H24  | 1000193-60-8 | 43   |
| 4    |    | 1H-Cycloprop[elazulene, 1a,2,3,4... | 204 | C15H24  | 000489-40-7  | 43   |
| 5    |    | 1,4-Dimethyl-8-isopropylidenetri... | 204 | C15H24  | 1000140-07-7 | 35   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

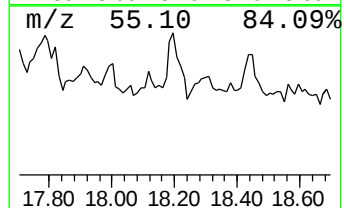
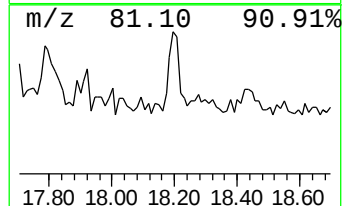
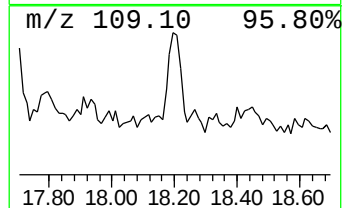
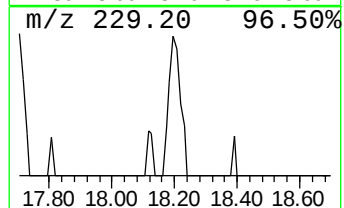
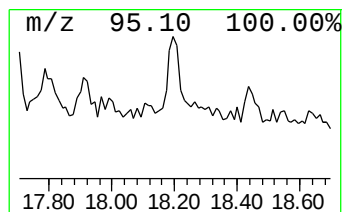
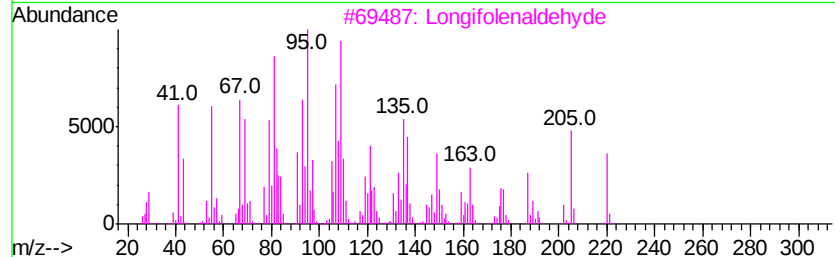
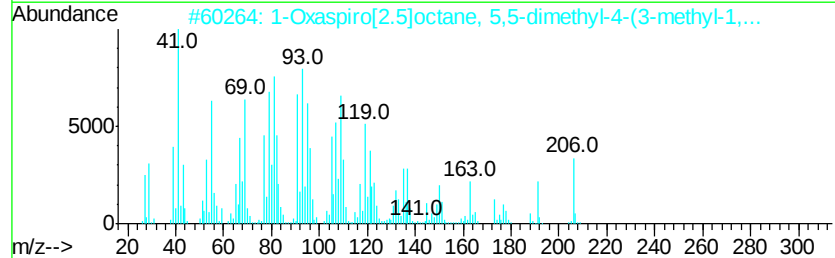
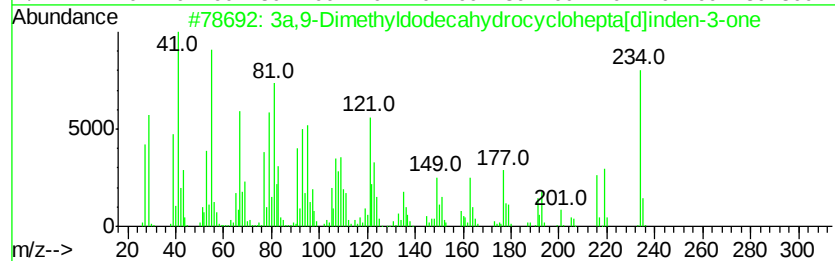
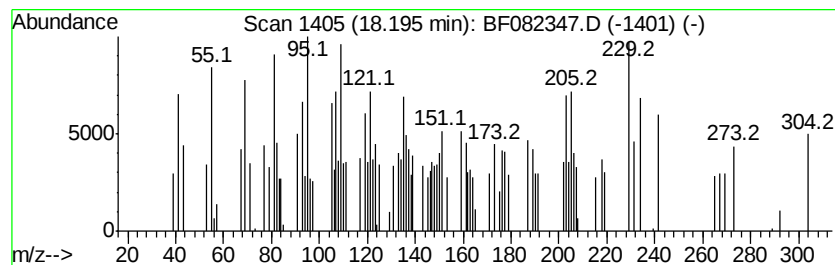
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 18 3a,9-Dimethyldodecahydrocyc... Concentration Rank 13

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 18.20 | 3.85 ng | 108974 | Perylene-d12     | 15.70 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#         | Qual |
|------|----|-------------------------------------|-----|---------|--------------|------|
| 1    | 5  | 3a,9-Dimethyldodecahydrocyclohep... | 234 | C16H26O | 1000189-38-7 | 55   |
| 2    |    | 1-Oxaspiro[2.5]octane, 5,5-dimet... | 206 | C14H22O | 1000195-92-1 | 48   |
| 3    |    | Longifolenaldehyde                  | 220 | C15H24O | 019890-84-7  | 20   |
| 4    |    | Alloaromadendrene oxide-(1)         | 220 | C15H24O | 1000156-12-8 | 18   |
| 5    |    | Diepicedrene-1-oxide                | 220 | C15H24O | 1000156-11-0 | 18   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

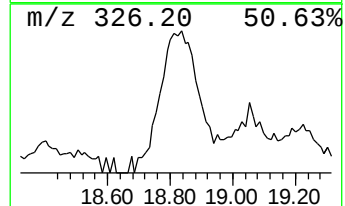
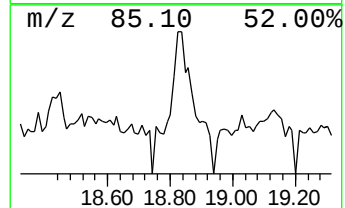
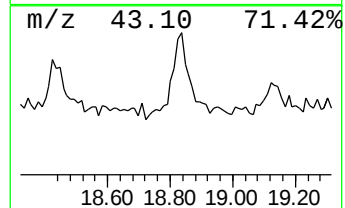
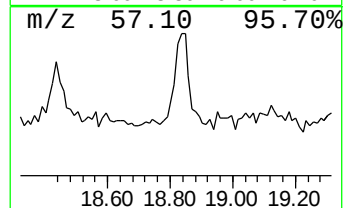
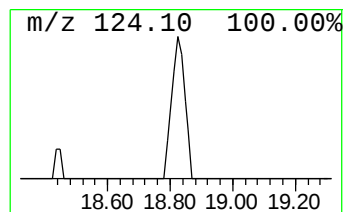
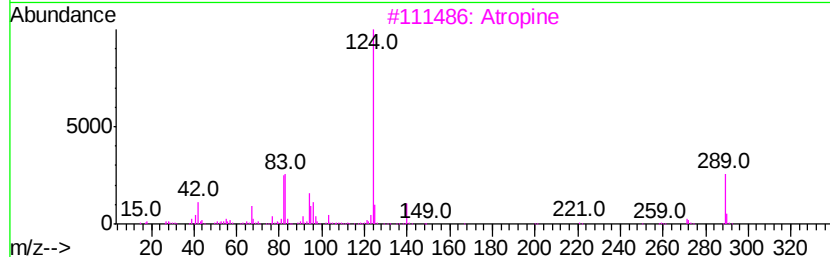
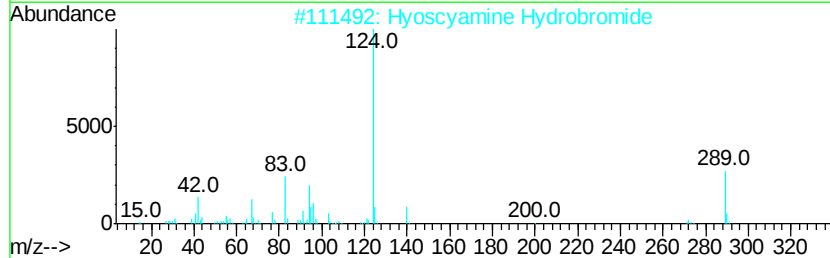
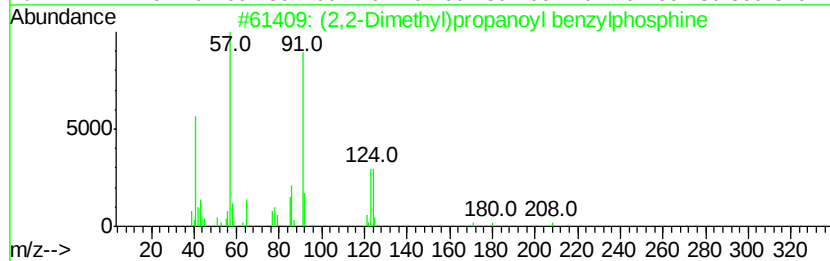
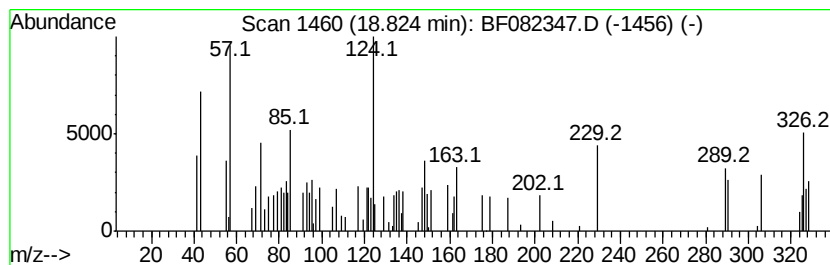
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 19 unknown18.82 Concentration Rank 10

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 18.82 | 4.42 ng | 125213 | Perylene-d12     | 15.70 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|------|----|-------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | (2,2-Dimethyl)propanoyl benzylph... | 208 | C12H17OP  | 054096-52-5 | 22   |
| 2    |    | Hyoscyamine Hydrobromide            | 289 | C17H23NO3 | 000306-03-6 | 18   |
| 3    |    | Atropine                            | 289 | C17H23NO3 | 000051-55-8 | 18   |
| 4    |    | Cyclohexanecarboxylic acid, 4-bu... | 290 | C18H26O3  | 067589-46-2 | 14   |
| 5    |    | Hyoscyamine                         | 289 | C17H23NO3 | 000101-31-5 | 14   |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF101715\  
Data File : BF082347.D  
Acq On : 17 Oct 2015 2:31  
Operator : UM/IZ  
Sample : G4009-03  
Misc :  
ALS Vial : 27 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
KW-3

Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF101015.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

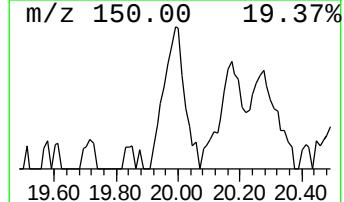
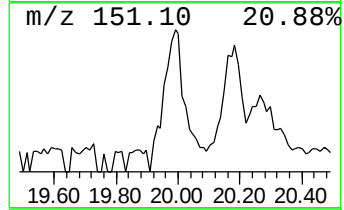
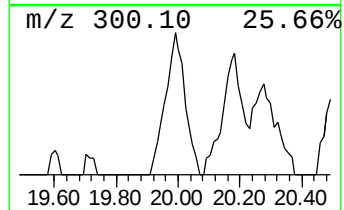
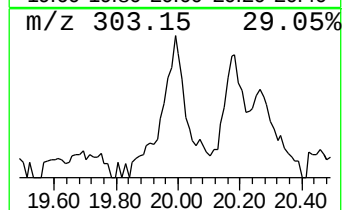
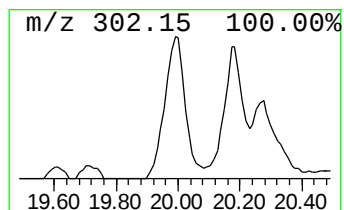
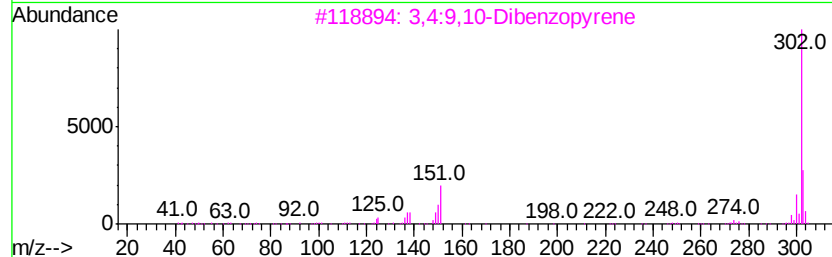
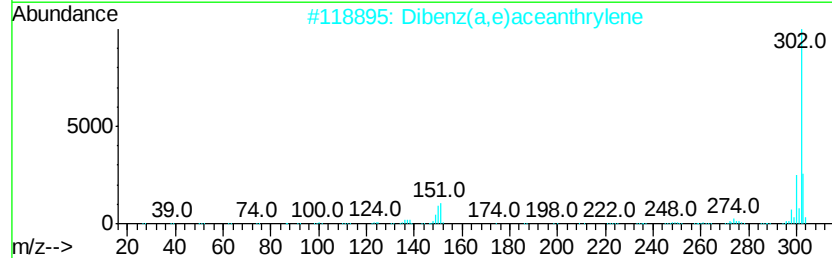
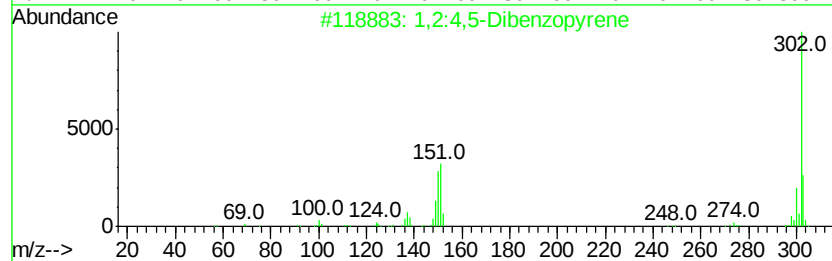
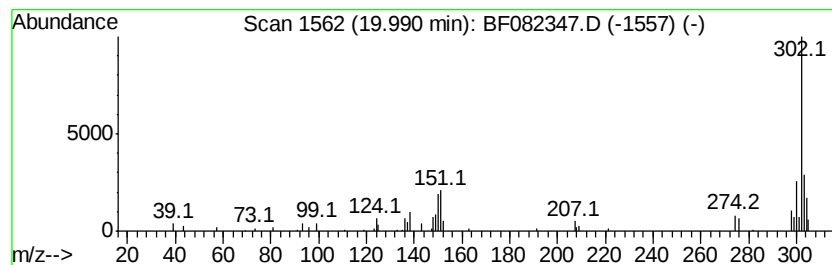
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 20 1,2:4,5-Dibenzopyrene Concentration Rank 12

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 19.99 | 3.86 ng | 109469 | Perylene-d12     | 15.70 |

| Hit# | of | 5 | Tentative ID              | MW  | MolForm | CAS#        | Qual |
|------|----|---|---------------------------|-----|---------|-------------|------|
| 1    |    |   | 1,2:4,5-Dibenzopyrene     | 302 | C24H14  | 000192-65-4 | 74   |
| 2    |    |   | Dibenz(a,e)aceanthrylene  | 302 | C24H14  | 005385-75-1 | 64   |
| 3    |    |   | 3,4:9,10-Dibenzopyrene    | 302 | C24H14  | 000189-55-9 | 62   |
| 4    |    |   | 3,4:8,9-Dibenzopyrene     | 302 | C24H14  | 000189-64-0 | 58   |
| 5    |    |   | Dibenzo[fg,op]naphthacene | 302 | C24H14  | 000192-51-8 | 53   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF101715\  
 Data File : BF082347.D  
 Acq On : 17 Oct 2015 2:31  
 Operator : UM/IZ  
 Sample : G4009-03  
 Misc :  
 ALS Vial : 27 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 KW-3

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF101015.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

TIC Library : C:\DATABASE\NIST02.L  
 TIC Integration Parameters: LSCINT.P

| TIC Top Hit name     | RT    | EstConc | Units | Response | --Internal Standard-- |       |         |      |
|----------------------|-------|---------|-------|----------|-----------------------|-------|---------|------|
|                      |       |         |       |          | #                     | RT    | Resp    | Conc |
| 2-Pentanone, 4-hy... | 5.17  | 48.3    | ng    | 754610   | 1                     | 6.97  | 312326  | 20.0 |
| n-Hexadecanoic acid  | 12.00 | 4.1     | ng    | 629793   | 4                     | 11.49 | 3089210 | 20.0 |
| 4H-Cyclopenta[def... | 12.09 | 3.5     | ng    | 533868   | 4                     | 11.49 | 3089210 | 20.0 |
| Pyrene, 1-methyl-    | 13.25 | 3.2     | ng    | 308757   | 5                     | 14.16 | 1945110 | 20.0 |
| Benzo[b]naphtho[2... | 13.89 | 3.2     | ng    | 313151   | 5                     | 14.16 | 1945110 | 20.0 |
| 7H-Benz[de]anthra... | 13.99 | 5.5     | ng    | 532417   | 5                     | 14.16 | 1945110 | 20.0 |
| Dinaphtho[1,2-b:1... | 15.48 | 3.3     | ng    | 93770    | 6                     | 15.70 | 566820  | 20.0 |
| Nonadecane           | 16.16 | 5.1     | ng    | 145778   | 6                     | 15.70 | 566820  | 20.0 |
| unknown16.87         | 16.87 | 3.7     | ng    | 104089   | 6                     | 15.70 | 566820  | 20.0 |
| Benzo[b]triphenylene | 17.02 | 3.8     | ng    | 106767   | 6                     | 15.70 | 566820  | 20.0 |
| Naphthalene, deca... | 17.36 | 20.7    | ng    | 585580   | 6                     | 15.70 | 566820  | 20.0 |
| 3a,9-Dimethyldode... | 18.20 | 3.9     | ng    | 108974   | 6                     | 15.70 | 566820  | 20.0 |
| unknown18.82         | 18.82 | 4.4     | ng    | 125213   | 6                     | 15.70 | 566820  | 20.0 |
| 1,2:4,5-Dibenzopy... | 19.99 | 3.9     | ng    | 109469   | 6                     | 15.70 | 566820  | 20.0 |