

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
 Data File : BF087203.D  
 Acq On : 19 May 2016 23:03  
 Operator : UM/SJ  
 Sample : H3132-02  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 FB-BWR-BB-R10-C5-2(0-19FT)

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-BF051716.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         | 1.713       | 9             | 11          | 56           | rVB      | 1604814        | 3684525       | 77.30%          | 4.495%        |
| 2         | 4.696       | 269           | 272         | 287          | rBV      | 1642605        | 3085500       | 64.73%          | 3.764%        |
| 3         | 5.164       | 310           | 313         | 315          | rBV      | 3434155        | 4729865       | 99.22%          | 5.770%        |
| 4         | 5.553       | 345           | 347         | 357          | rVB      | 230373         | 276115        | 5.79%           | 0.337%        |
| 5         | 6.239       | 404           | 407         | 413          | rBV      | 4051410        | 4616706       | 96.85%          | 5.632%        |
| 6         | 6.342       | 413           | 416         | 418          | rBV      | 4835369        | 4766815       | 100.00%         | 5.815%        |
| 7         | 6.570       | 433           | 436         | 438          | rBV      | 729221         | 960014        | 20.14%          | 1.171%        |
| 8         | 6.719       | 447           | 449         | 452          | rBV      | 3111761        | 3256161       | 68.31%          | 3.972%        |
| 9         | 7.142       | 484           | 486         | 489          | rBV      | 2624748        | 2954959       | 61.99%          | 3.605%        |
| 10        | 7.850       | 546           | 548         | 554          | rBV      | 1272261        | 1381920       | 28.99%          | 1.686%        |
| 11        | 8.936       | 640           | 643         | 645          | rBV      | 4739856        | 4452099       | 93.40%          | 5.431%        |
| 12        | 9.268       | 670           | 672         | 673          | rBV      | 118028         | 137555        | 2.89%           | 0.168%        |
| 13        | 9.336       | 676           | 678         | 680          | rBV      | 668075         | 567896        | 11.91%          | 0.693%        |
| 14        | 9.382       | 680           | 682         | 685          | rVB      | 69408          | 98605         | 2.07%           | 0.120%        |
| 15        | 9.462       | 685           | 689         | 692          | rBV      | 233188         | 229071        | 4.81%           | 0.279%        |
| 16        | 9.553       | 695           | 697         | 698          | rBV      | 98462          | 120491        | 2.53%           | 0.147%        |
| 17        | 9.599       | 698           | 701         | 703          | rBV      | 1422549        | 1333992       | 27.98%          | 1.627%        |
| 18        | 9.633       | 703           | 704         | 706          | rVV      | 320153         | 245360        | 5.15%           | 0.299%        |
| 19        | 9.759       | 713           | 715         | 716          | rBV2     | 107307         | 120916        | 2.54%           | 0.148%        |
| 20        | 9.805       | 716           | 719         | 721          | rVB      | 191179         | 193010        | 4.05%           | 0.235%        |
| 21        | 9.851       | 721           | 723         | 726          | rVB2     | 53309          | 114673        | 2.41%           | 0.140%        |
| 22        | 10.011      | 734           | 737         | 738          | rBV2     | 70645          | 112911        | 2.37%           | 0.138%        |
| 23        | 10.045      | 738           | 740         | 742          | rVB      | 229541         | 198055        | 4.15%           | 0.242%        |
| 24        | 10.148      | 747           | 749         | 751          | rVV      | 331186         | 333891        | 7.00%           | 0.407%        |
| 25        | 10.205      | 752           | 754         | 755          | rVV2     | 100123         | 177156        | 3.72%           | 0.216%        |
| 26        | 10.228      | 755           | 756         | 757          | rVV      | 121232         | 106351        | 2.23%           | 0.130%        |
| 27        | 10.262      | 757           | 759         | 761          | rVV2     | 124505         | 222334        | 4.66%           | 0.271%        |
| 28        | 10.308      | 761           | 763         | 765          | rVB2     | 113437         | 168089        | 3.53%           | 0.205%        |
| 29        | 10.388      | 768           | 770         | 773          | rVV2     | 2202065        | 2671461       | 56.04%          | 3.259%        |
| 30        | 10.514      | 780           | 781         | 785          | rVB      | 263975         | 310390        | 6.51%           | 0.379%        |
| 31        | 10.696      | 793           | 797         | 798          | rBV2     | 132026         | 258006        | 5.41%           | 0.315%        |
| 32        | 10.719      | 798           | 799         | 802          | rVV      | 165287         | 209868        | 4.40%           | 0.256%        |
| 33        | 10.776      | 802           | 804         | 805          | rVB2     | 96027          | 105552        | 2.21%           | 0.129%        |
| 34        | 10.845      | 805           | 810         | 813          | rBV4     | 97693          | 283270        | 5.94%           | 0.346%        |

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Instrument :  
 BNA\_F  
 ClientSampleId :  
 FB-BWR-BB-R10-C5-2(0-19FT)

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-BF051716.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |         |         |        |        |
|----|--------|------|------|------|------|---------|---------|--------|--------|
| 35 | 10.936 | 816  | 818  | 819  | rBV  | 144560  | 158269  | 3.32%  | 0.193% |
| 36 | 10.971 | 819  | 821  | 826  | rVB2 | 237755  | 441093  | 9.25%  | 0.538% |
| 37 | 11.108 | 828  | 833  | 834  | rBV2 | 2236014 | 3502857 | 73.48% | 4.273% |
| 38 | 11.154 | 834  | 837  | 839  | rVV  | 844733  | 748938  | 15.71% | 0.914% |
| 39 | 11.188 | 839  | 840  | 843  | rVV  | 76447   | 125825  | 2.64%  | 0.154% |
| 40 | 11.325 | 849  | 852  | 855  | rBV3 | 102514  | 213406  | 4.48%  | 0.260% |
| 41 | 11.371 | 855  | 856  | 858  | rVV2 | 84754   | 132218  | 2.77%  | 0.161% |
| 42 | 11.405 | 858  | 859  | 864  | rVB  | 226711  | 252801  | 5.30%  | 0.308% |
| 43 | 11.485 | 864  | 866  | 868  | rBV  | 116214  | 152986  | 3.21%  | 0.187% |
| 44 | 11.576 | 872  | 874  | 875  | rBV  | 679723  | 628688  | 13.19% | 0.767% |
| 45 | 11.611 | 875  | 877  | 879  | rVV  | 628345  | 684119  | 14.35% | 0.835% |
| 46 | 11.656 | 879  | 881  | 882  | rVV  | 316329  | 286180  | 6.00%  | 0.349% |
| 47 | 11.691 | 882  | 884  | 888  | rVB2 | 933098  | 1571291 | 32.96% | 1.917% |
| 48 | 11.771 | 889  | 891  | 892  | rBV2 | 68686   | 96915   | 2.03%  | 0.118% |
| 49 | 11.794 | 892  | 893  | 896  | rVB2 | 84148   | 146109  | 3.07%  | 0.178% |
| 50 | 11.874 | 896  | 900  | 902  | rBV  | 438913  | 559811  | 11.74% | 0.683% |
| 51 | 11.908 | 902  | 903  | 905  | rVB  | 199794  | 167070  | 3.50%  | 0.204% |
| 52 | 11.942 | 905  | 906  | 908  | rBV  | 89847   | 97786   | 2.05%  | 0.119% |
| 53 | 12.022 | 910  | 913  | 914  | rBV2 | 199613  | 277171  | 5.81%  | 0.338% |
| 54 | 12.057 | 914  | 916  | 920  | rVB2 | 154119  | 295118  | 6.19%  | 0.360% |
| 55 | 12.125 | 920  | 922  | 924  | rBV  | 498771  | 624672  | 13.10% | 0.762% |
| 56 | 12.159 | 924  | 925  | 928  | rVB2 | 295791  | 426939  | 8.96%  | 0.521% |
| 57 | 12.217 | 928  | 930  | 934  | rVB2 | 324008  | 462424  | 9.70%  | 0.564% |
| 58 | 12.285 | 934  | 936  | 939  | rBV  | 2567575 | 2636564 | 55.31% | 3.216% |
| 59 | 12.354 | 939  | 942  | 946  | rVB4 | 100976  | 254899  | 5.35%  | 0.311% |
| 60 | 12.434 | 946  | 949  | 951  | rBV  | 189167  | 222946  | 4.68%  | 0.272% |
| 61 | 12.514 | 953  | 956  | 958  | rBV  | 2936328 | 3354523 | 70.37% | 4.092% |
| 62 | 12.571 | 959  | 961  | 963  | rVB2 | 168155  | 244707  | 5.13%  | 0.299% |
| 63 | 12.628 | 965  | 966  | 967  | rBV  | 117531  | 143658  | 3.01%  | 0.175% |
| 64 | 12.662 | 967  | 969  | 971  | rVV  | 2931124 | 2770224 | 58.11% | 3.380% |
| 65 | 12.731 | 972  | 975  | 979  | rBV2 | 317832  | 557968  | 11.71% | 0.681% |
| 66 | 12.845 | 981  | 985  | 986  | rVB2 | 441510  | 865433  | 18.16% | 1.056% |
| 67 | 12.902 | 988  | 990  | 992  | rVV  | 391842  | 394185  | 8.27%  | 0.481% |
| 68 | 12.937 | 992  | 993  | 997  | rVV2 | 350367  | 591916  | 12.42% | 0.722% |
| 69 | 13.028 | 1000 | 1001 | 1003 | rBV  | 221986  | 284162  | 5.96%  | 0.347% |
| 70 | 13.062 | 1003 | 1004 | 1006 | rBV  | 346472  | 286243  | 6.00%  | 0.349% |
| 71 | 13.211 | 1014 | 1017 | 1018 | rBV3 | 72000   | 150596  | 3.16%  | 0.184% |

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 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 FB-BWR-BB-R10-C5-2(0-19FT)

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-BF051716.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|     |        |      |      |      |      |         |         |        |        |
|-----|--------|------|------|------|------|---------|---------|--------|--------|
| 72  | 13.245 | 1018 | 1020 | 1025 | rVB3 | 98871   | 267997  | 5.62%  | 0.327% |
| 73  | 13.325 | 1025 | 1027 | 1028 | rBV2 | 96238   | 117672  | 2.47%  | 0.144% |
| 74  | 13.348 | 1028 | 1029 | 1033 | rVB  | 192561  | 273014  | 5.73%  | 0.333% |
| 75  | 13.451 | 1036 | 1038 | 1039 | rBV  | 288253  | 398497  | 8.36%  | 0.486% |
| 76  | 13.565 | 1046 | 1048 | 1052 | rBV2 | 181166  | 317441  | 6.66%  | 0.387% |
| 77  | 13.622 | 1052 | 1053 | 1056 | rVB  | 94229   | 110914  | 2.33%  | 0.135% |
| 78  | 13.702 | 1057 | 1060 | 1062 | rBV2 | 1688408 | 3001594 | 62.97% | 3.662% |
| 79  | 13.737 | 1062 | 1063 | 1065 | rVV  | 1245504 | 938735  | 19.69% | 1.145% |
| 80  | 13.805 | 1067 | 1069 | 1072 | rBV2 | 229834  | 305016  | 6.40%  | 0.372% |
| 81  | 13.874 | 1072 | 1075 | 1077 | rBV2 | 78232   | 180352  | 3.78%  | 0.220% |
| 82  | 14.057 | 1089 | 1091 | 1092 | rVV  | 128041  | 135117  | 2.83%  | 0.165% |
| 83  | 14.091 | 1092 | 1094 | 1096 | rVV  | 440980  | 543725  | 11.41% | 0.663% |
| 84  | 14.125 | 1096 | 1097 | 1098 | rVV  | 257182  | 207814  | 4.36%  | 0.254% |
| 85  | 14.182 | 1098 | 1102 | 1104 | rVV3 | 197580  | 479825  | 10.07% | 0.585% |
| 86  | 14.217 | 1104 | 1105 | 1108 | rVV2 | 235451  | 391435  | 8.21%  | 0.478% |
| 87  | 14.285 | 1110 | 1111 | 1114 | rVB2 | 135684  | 153708  | 3.22%  | 0.188% |
| 88  | 14.411 | 1120 | 1122 | 1126 | rBV4 | 92582   | 206193  | 4.33%  | 0.252% |
| 89  | 14.697 | 1145 | 1147 | 1152 | rBV  | 935570  | 1953047 | 40.97% | 2.383% |
| 90  | 14.788 | 1154 | 1155 | 1157 | rVB  | 202111  | 181509  | 3.81%  | 0.221% |
| 91  | 14.960 | 1167 | 1170 | 1172 | rVB  | 500130  | 699125  | 14.67% | 0.853% |
| 92  | 15.005 | 1172 | 1174 | 1177 | rBV  | 900767  | 1071839 | 22.49% | 1.308% |
| 93  | 15.063 | 1177 | 1179 | 1180 | rBV  | 571730  | 667255  | 14.00% | 0.814% |
| 94  | 16.285 | 1283 | 1286 | 1290 | rBV  | 358784  | 649824  | 13.63% | 0.793% |
| 95  | 16.434 | 1296 | 1299 | 1301 | rBV  | 99982   | 205244  | 4.31%  | 0.250% |
| 96  | 16.480 | 1301 | 1303 | 1306 | rVB2 | 69468   | 144511  | 3.03%  | 0.176% |
| 97  | 16.651 | 1315 | 1318 | 1324 | rVB  | 263465  | 526073  | 11.04% | 0.642% |
| 98  | 16.857 | 1334 | 1336 | 1341 | rVB3 | 92362   | 232853  | 4.88%  | 0.284% |
| 99  | 18.514 | 1477 | 1481 | 1491 | rVB  | 64508   | 221116  | 4.64%  | 0.270% |
| 100 | 19.463 | 1560 | 1564 | 1567 | rBV2 | 28433   | 94347   | 1.98%  | 0.115% |

Sum of corrected areas: 81970084



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ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

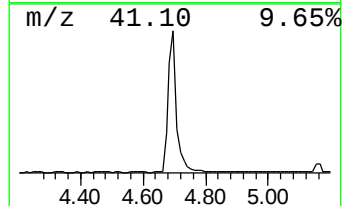
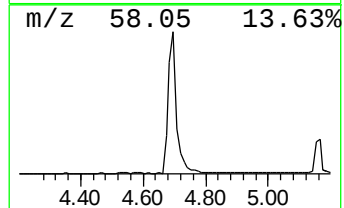
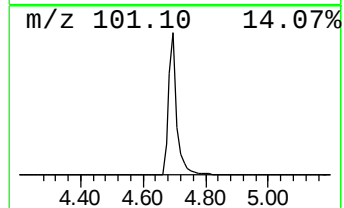
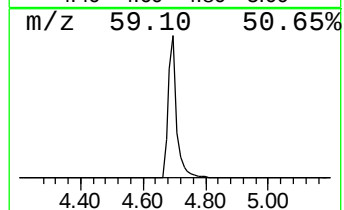
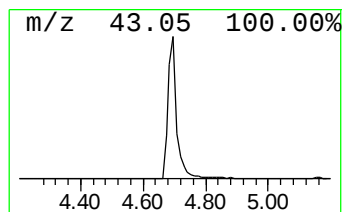
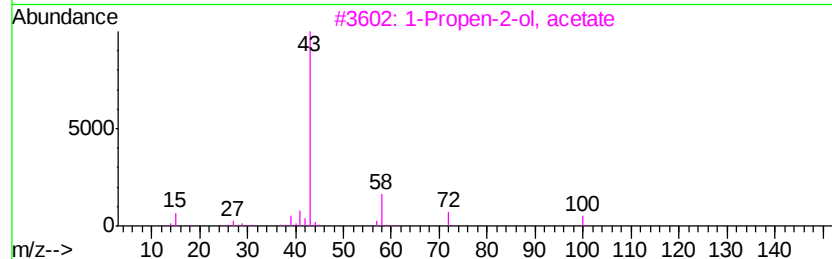
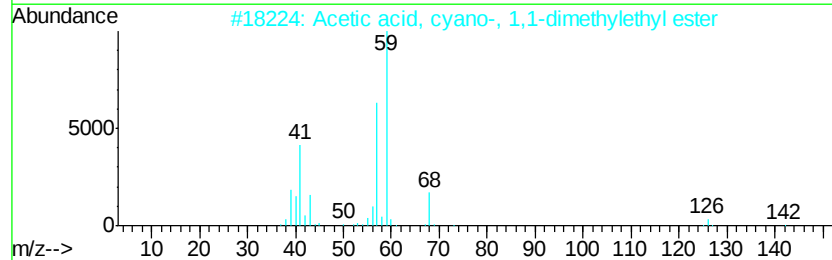
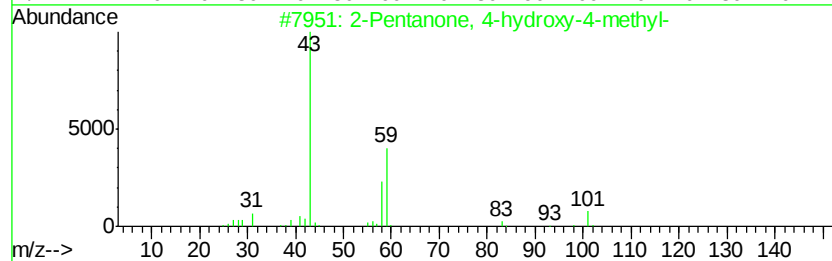
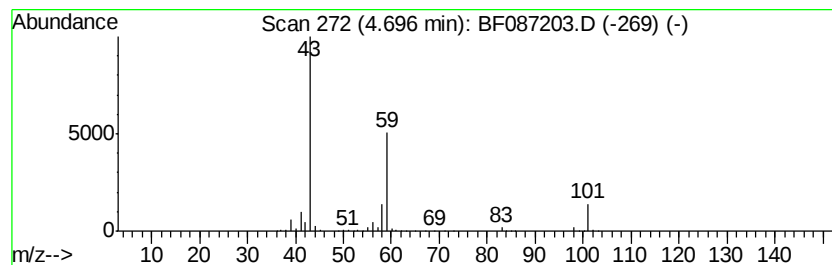
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 4.70 | 64.28 ng | 3085500 | 1,4-Dichlorobenzene-d4 | 6.57 |

| Hit# | of | Tentative ID                        | MW  | MolForm  | CAS#        | Qual |
|------|----|-------------------------------------|-----|----------|-------------|------|
| 1    | 5  | 2-Pentanone, 4-hydroxy-4-methyl-    | 116 | C6H12O2  | 000123-42-2 | 50   |
| 2    |    | Acetic acid, cyano-, 1,1-dimethy... | 141 | C7H11NO2 | 001116-98-9 | 25   |
| 3    |    | 1-Propen-2-ol, acetate              | 100 | C5H8O2   | 000108-22-5 | 10   |
| 4    |    | 2,3-Butanedione, monooxime          | 101 | C4H7NO2  | 000057-71-6 | 9    |
| 5    |    | Butyl aldoxime, 3-methyl-, syn-     | 101 | C5H11NO  | 005780-40-5 | 9    |



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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

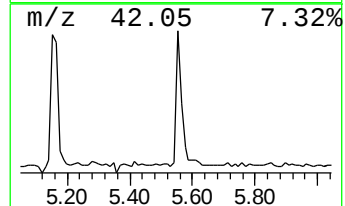
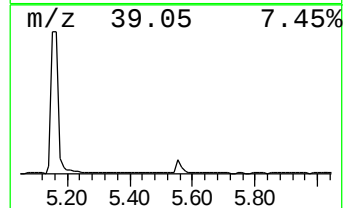
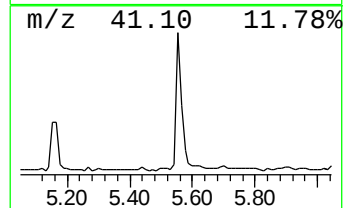
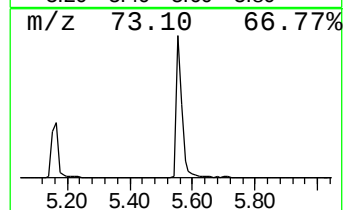
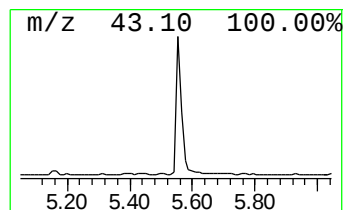
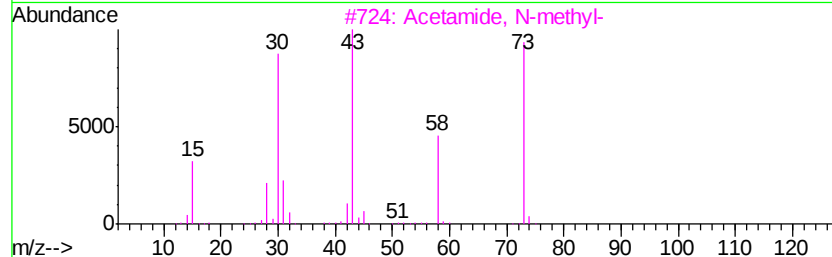
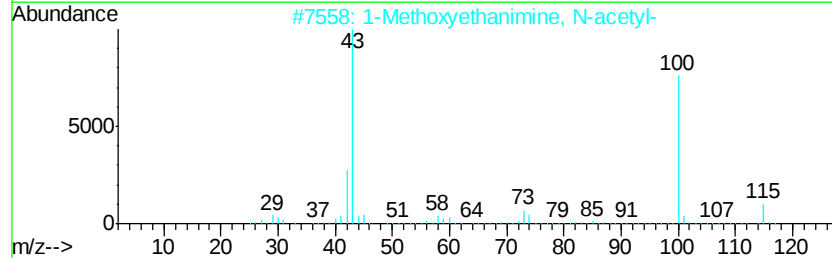
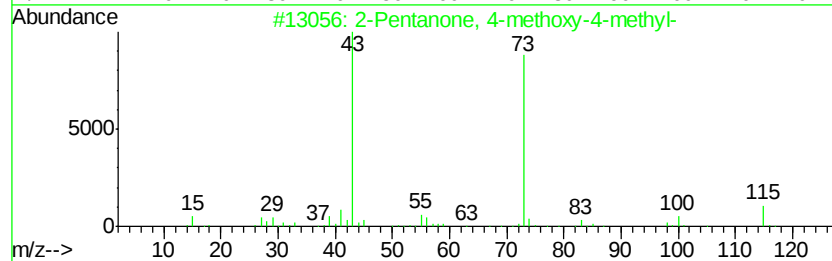
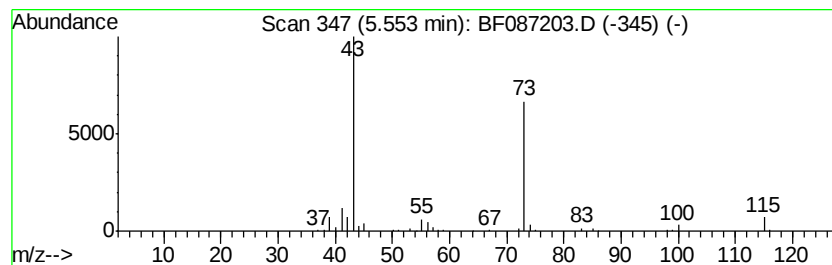
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 3 2-Pentanone, 4-methoxy-4-me... Concentration Rank 11

| R.T. | EstConc | Area   | Relative to ISTD       | R.T. |
|------|---------|--------|------------------------|------|
| 5.55 | 5.75 ng | 276115 | 1,4-Dichlorobenzene-d4 | 6.57 |

| Hit# | of | 5 | Tentative ID                     | MW  | MolForm  | CAS#        | Qual |
|------|----|---|----------------------------------|-----|----------|-------------|------|
| 1    |    |   | 2-Pentanone, 4-methoxy-4-methyl- | 130 | C7H14O2  | 000107-70-0 | 78   |
| 2    |    |   | 1-Methoxyethanimine, N-acetyl-   | 115 | C5H9NO2  | 099028-43-0 | 25   |
| 3    |    |   | Acetamide, N-methyl-             | 73  | C3H7NO   | 000079-16-3 | 25   |
| 4    |    |   | N-.alpha.-Acetylglycinamide      | 116 | C4H8N2O2 | 002620-63-5 | 23   |
| 5    |    |   | 2-Heptanone                      | 114 | C7H14O   | 000110-43-0 | 17   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

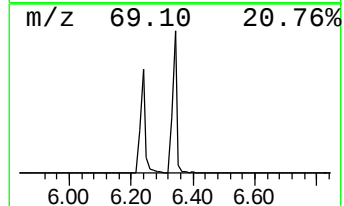
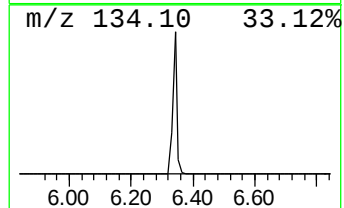
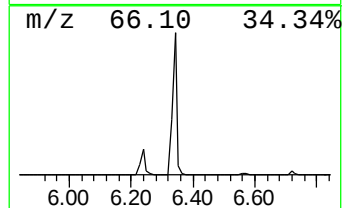
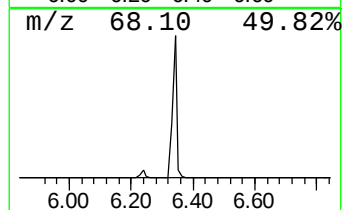
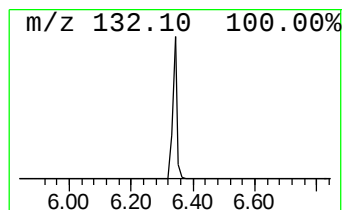
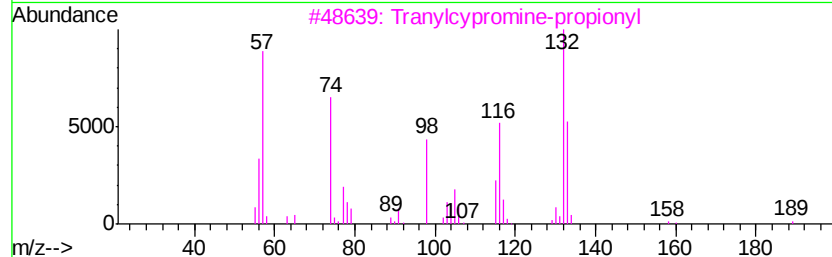
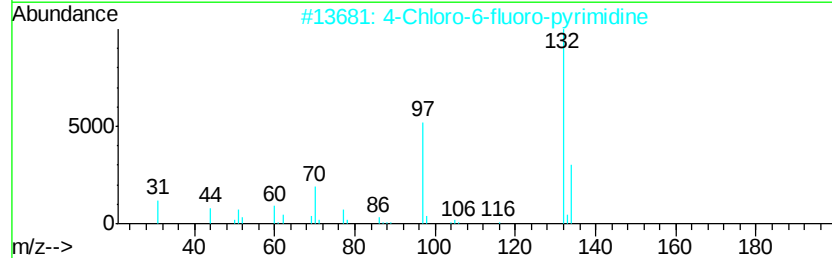
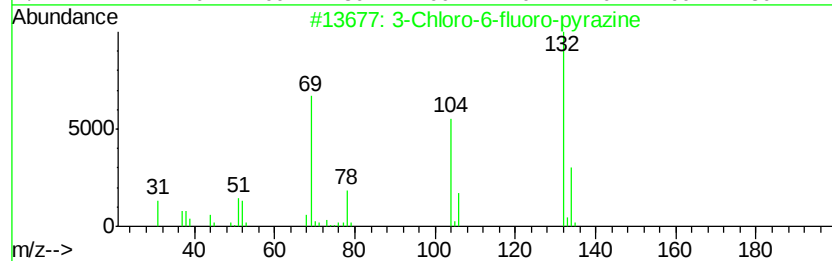
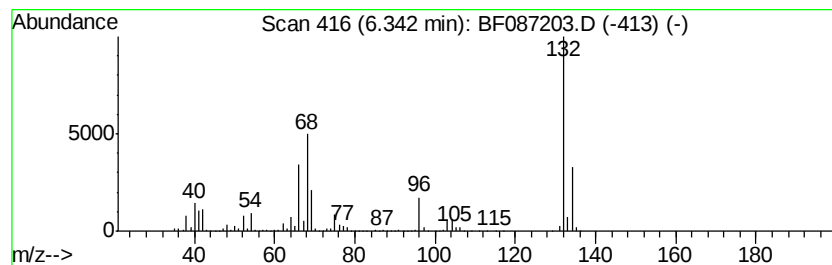
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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 4 unknown6.34 Concentration Rank 1

| R.T. | EstConc  | Area    | Relative to ISTD       | R.T. |
|------|----------|---------|------------------------|------|
| 6.34 | 99.31 ng | 4766820 | 1,4-Dichlorobenzene-d4 | 6.57 |

| Hit# | of | Tentative ID                 | MW  | MolForm   | CAS#         | Qual |
|------|----|------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 3-Chloro-6-fluoro-pyrazine   | 132 | C4H2ClFN2 | 1000146-10-7 | 27   |
| 2    |    | 4-Chloro-6-fluoro-pyrimidine | 132 | C4H2ClFN2 | 051422-01-6  | 27   |
| 3    |    | Tranylcypromine-propionyl    | 189 | C12H15NO  | 1000123-86-3 | 22   |
| 4    |    | 1H-Benzimidazole, 2-methyl-  | 132 | C8H8N2    | 000615-15-6  | 22   |
| 5    |    | 5-Fluoro-2-chloropyrimidine  | 132 | C4H2ClFN2 | 062802-42-0  | 16   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
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Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

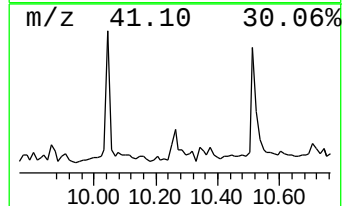
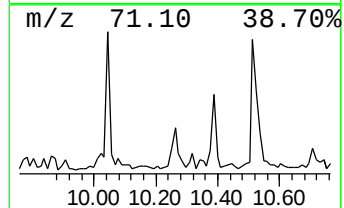
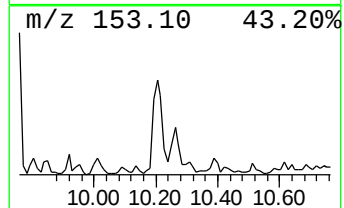
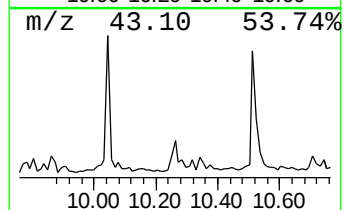
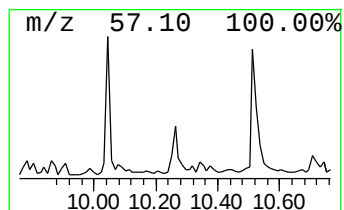
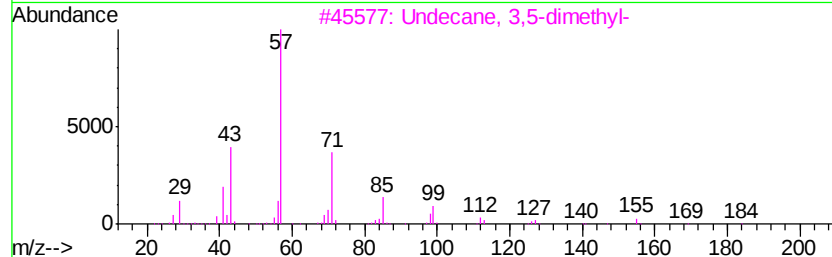
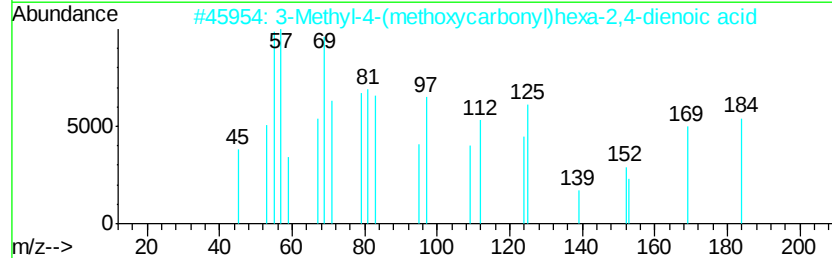
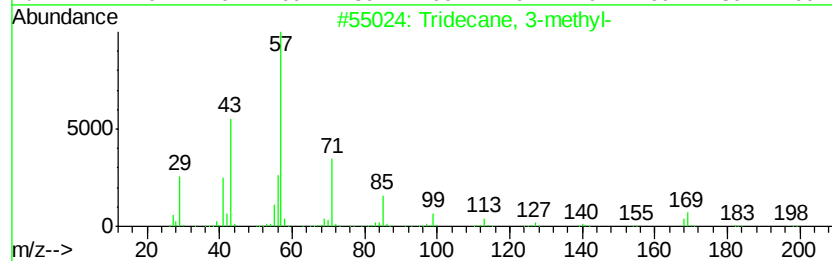
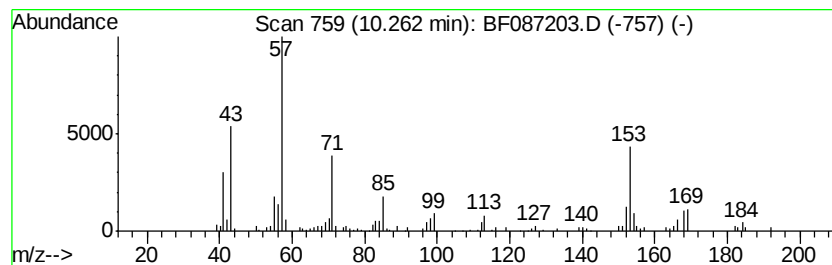
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ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.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 6 unknown10.26 Concentration Rank 20

| R.T.    | EstConc | Area                                | Relative to ISTD | R.T.            |
|---------|---------|-------------------------------------|------------------|-----------------|
| 10.26   | 3.33 ng | 222334                              | Acenaphthene-d10 | 9.60            |
| Hit# of | 5       | Tentative ID                        | MW MolForm       | CAS# Qual       |
| 1       |         | Tridecane, 3-methyl-                | 198 C14H30       | 006418-41-3 43  |
| 2       |         | 3-Methyl-4-(methoxycarbonyl)hexa... | 184 C9H12O4      | 1000104-10-8 42 |
| 3       |         | Undecane, 3,5-dimethyl-             | 184 C13H28       | 017312-81-1 38  |
| 4       |         | Pentadecane, 2,6,10-trimethyl-      | 254 C18H38       | 003892-00-0 38  |
| 5       |         | Decane, 2,6,8-trimethyl-            | 184 C13H28       | 062108-26-3 38  |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

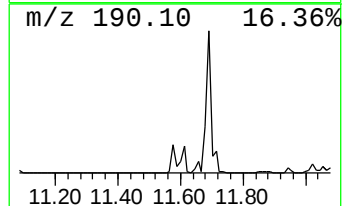
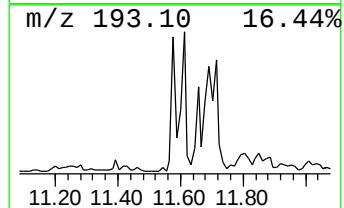
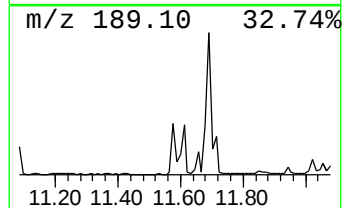
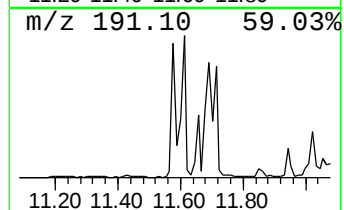
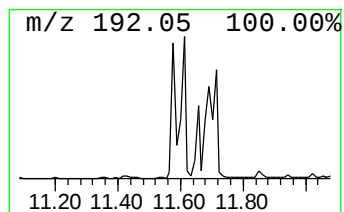
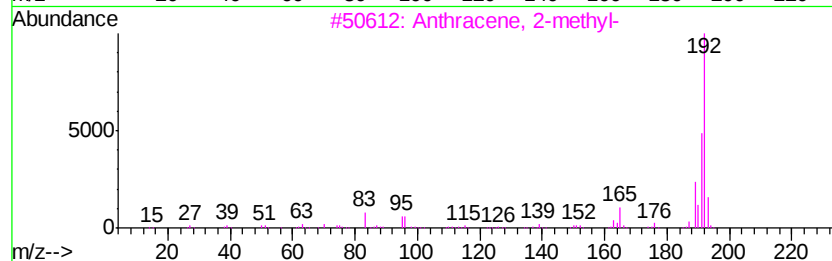
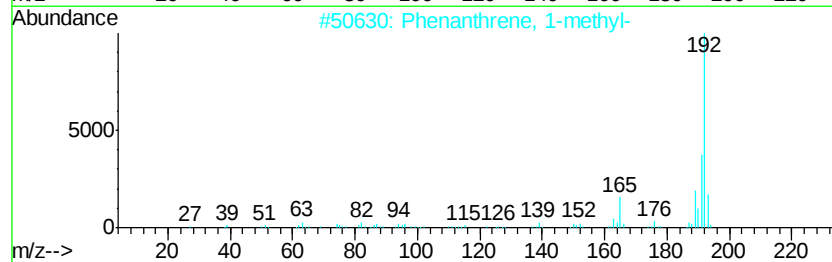
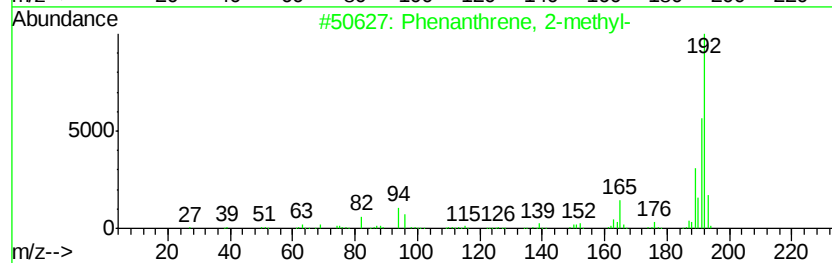
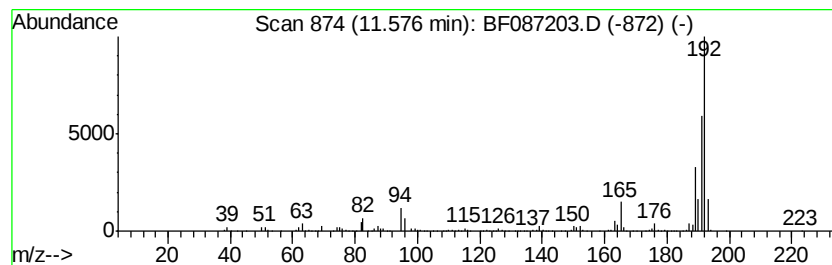
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FB-BWR-BB-R10-C5-2(0-19FT)

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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 7 Phenanthrene, 2-methyl- Concentration Rank 18

| R.T.      | EstConc                 | Area   | Relative to ISTD |             | R.T.  |
|-----------|-------------------------|--------|------------------|-------------|-------|
| 11.58     | 3.59 ng                 | 628688 | Phenanthrene-d10 |             | 11.07 |
| 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 | 95    |
| 3         | Anthracene, 2-methyl-   | 192    | C15H12           | 000613-12-7 | 95    |
| 4         | Phenanthrene, 4-methyl- | 192    | C15H12           | 000832-64-4 | 95    |
| 5         | Anthracene, 1-methyl-   | 192    | C15H12           | 000610-48-0 | 93    |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

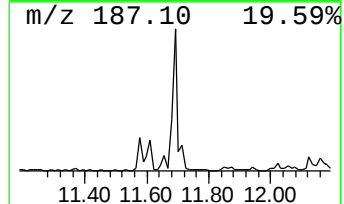
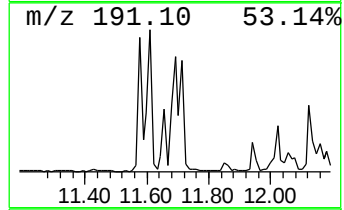
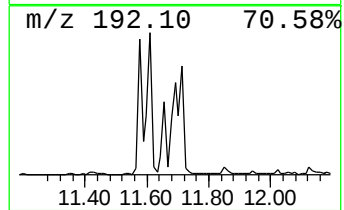
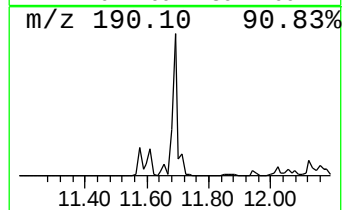
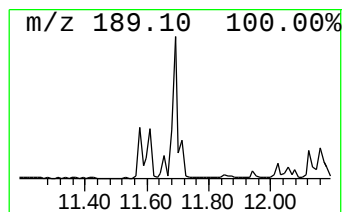
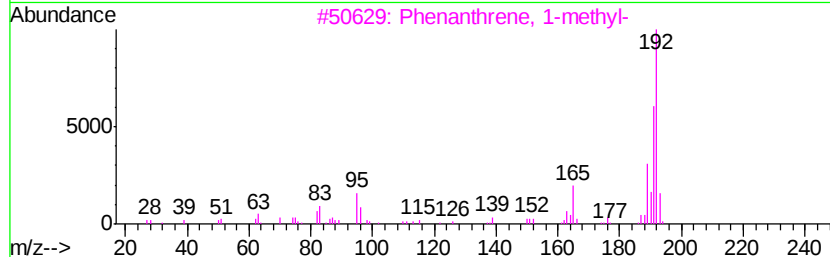
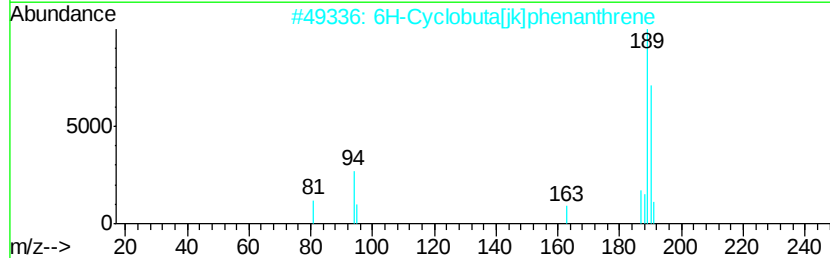
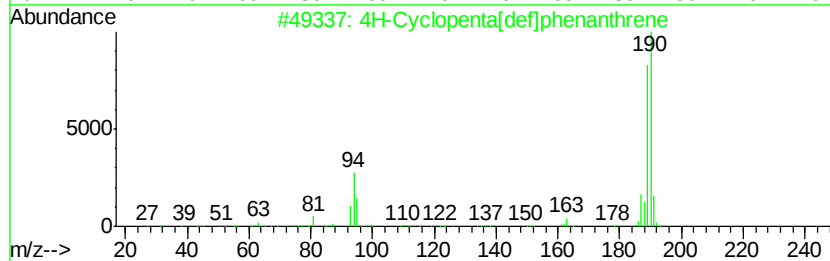
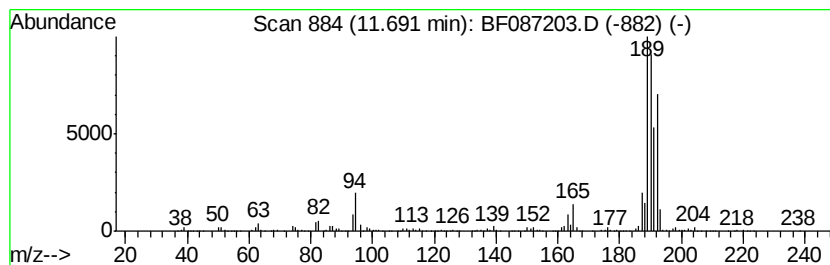
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 9 4H-Cyclopenta[def]phenanthrene Concentration Rank 5

| R.T.  | EstConc | Area    | Relative to ISTD | R.T.  |
|-------|---------|---------|------------------|-------|
| 11.69 | 8.97 ng | 1571290 | Phenanthrene-d10 | 11.07 |

| Hit# | of | Tentative ID                   | MW  | MolForm | CAS#        | Qual |
|------|----|--------------------------------|-----|---------|-------------|------|
| 1    | 5  | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10  | 000203-64-5 | 70   |
| 2    |    | 6H-Cyclobuta[jk]phenanthrene   | 190 | C15H10  | 083469-43-6 | 58   |
| 3    |    | Phenanthrene, 1-methyl-        | 192 | C15H12  | 000832-69-9 | 35   |
| 4    |    | Phenanthrene, 4-methyl-        | 192 | C15H12  | 000832-64-4 | 35   |
| 5    |    | Propyne, 1,3-diphenyl-         | 192 | C15H12  | 004980-70-5 | 30   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
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ClientSampleId :  
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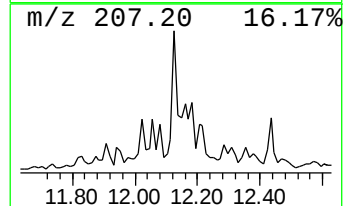
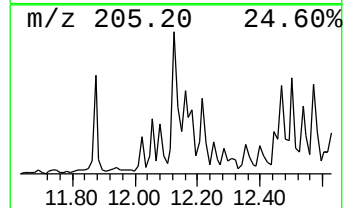
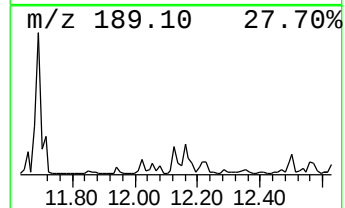
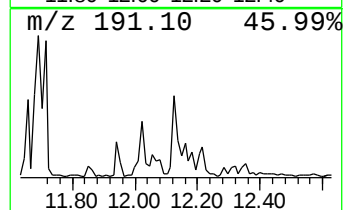
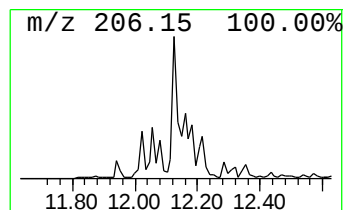
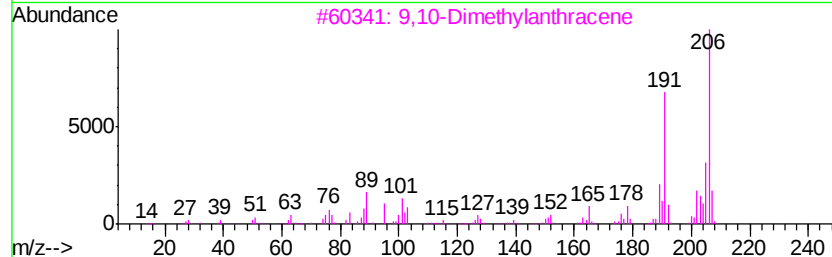
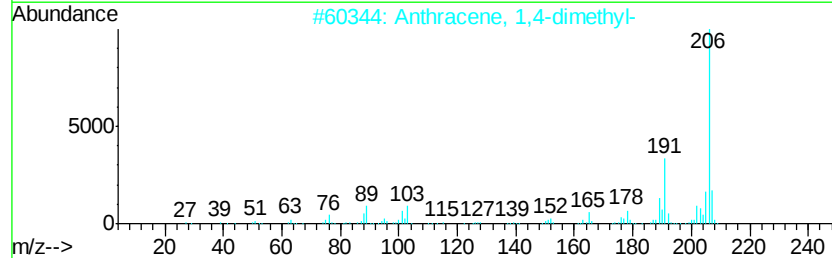
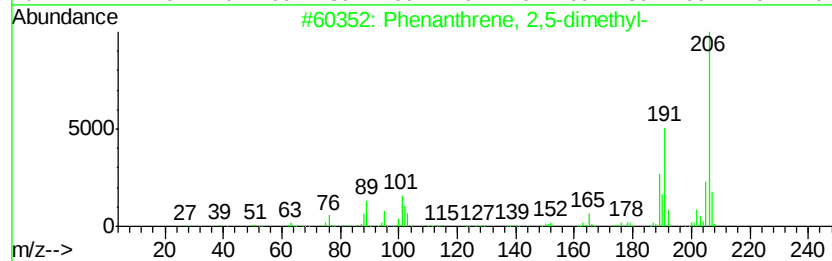
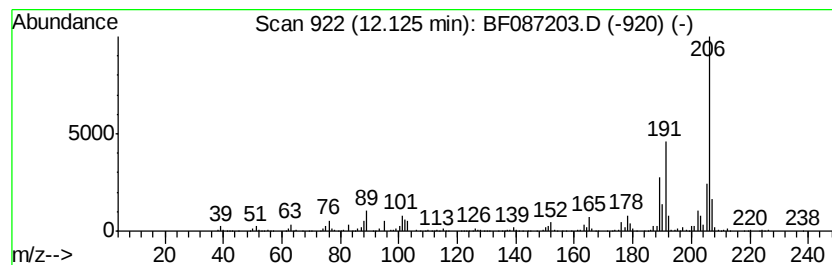
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TIC Integration Parameters: LSCINT.P

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Peak Number 10 Phenanthrene, 2,5-dimethyl- Concentration Rank 19

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 12.13 | 3.57 ng | 624672 | Phenanthrene-d10 | 11.07 |

| Hit# | of | 5 | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------------|-----|---------|-------------|------|
| 1    |    |   | Phenanthrene, 2,5-dimethyl- | 206 | C16H14  | 003674-66-6 | 98   |
| 2    |    |   | Anthracene, 1,4-dimethyl-   | 206 | C16H14  | 000781-92-0 | 93   |
| 3    |    |   | 9,10-Dimethylantracene      | 206 | C16H14  | 000781-43-1 | 93   |
| 4    |    |   | Phenanthrene, 2,3-dimethyl- | 206 | C16H14  | 003674-65-5 | 93   |
| 5    |    |   | Phenanthrene, 3,6-dimethyl- | 206 | C16H14  | 001576-67-6 | 93   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
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Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

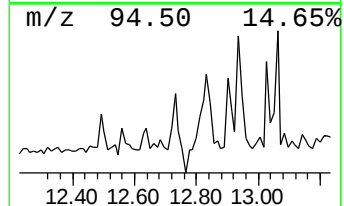
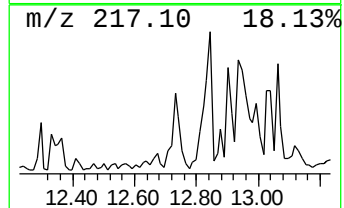
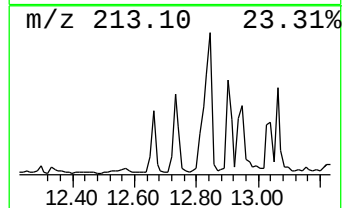
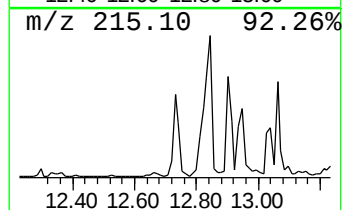
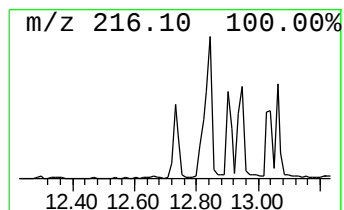
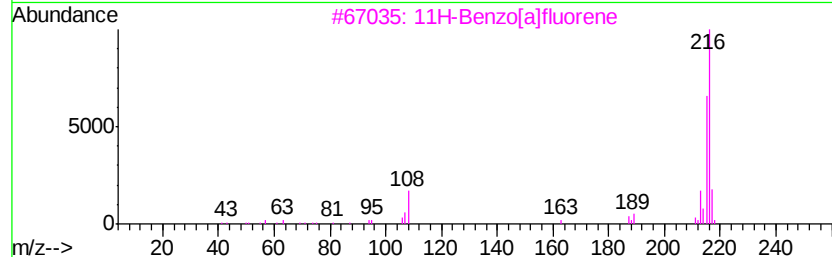
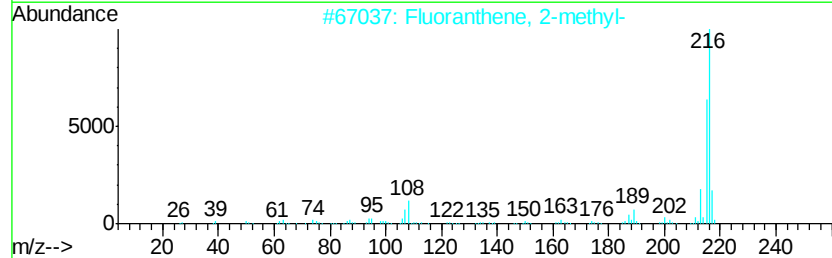
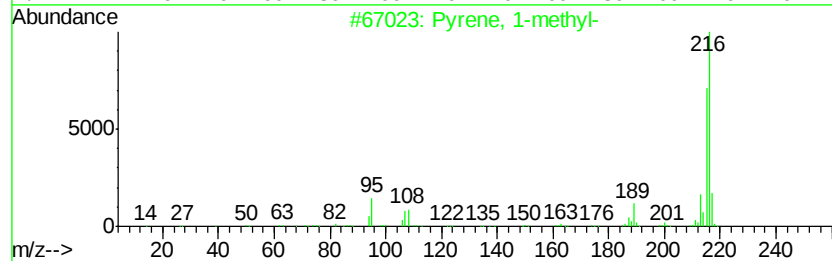
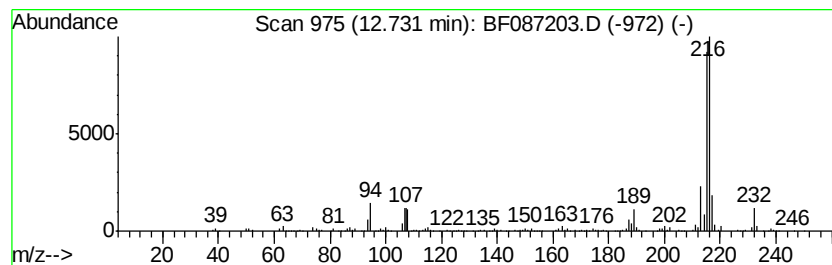
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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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Peak Number 11 Pyrene, 1-methyl- Concentration Rank 16

| R.T.      | EstConc                 | Area   | Relative to ISTD | R.T.        |      |
|-----------|-------------------------|--------|------------------|-------------|------|
| 12.73     | 3.72 ng                 | 557968 | Chrysene-d12     | 13.71       |      |
| Hit# of 5 | Tentative ID            | MW     | MolForm          | CAS#        | Qual |
| 1         | Pyrene, 1-methyl-       | 216    | C17H12           | 002381-21-7 | 96   |
| 2         | Fluoranthene, 2-methyl- | 216    | C17H12           | 033543-31-6 | 90   |
| 3         | 11H-Benzo[a]fluorene    | 216    | C17H12           | 000238-84-6 | 89   |
| 4         | Pyrene, 2-methyl-       | 216    | C17H12           | 003442-78-2 | 86   |
| 5         | 11H-Benzo[b]fluorene    | 216    | C17H12           | 000243-17-4 | 83   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
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ClientSampleId :  
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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

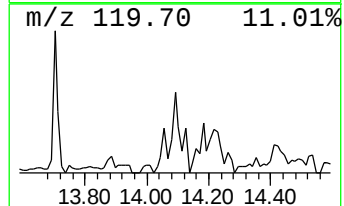
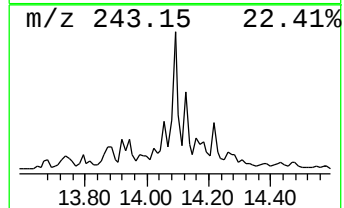
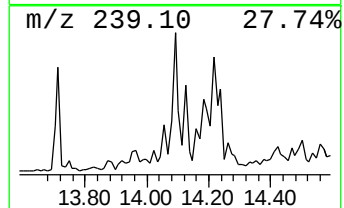
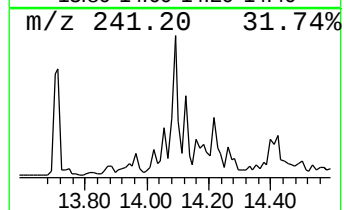
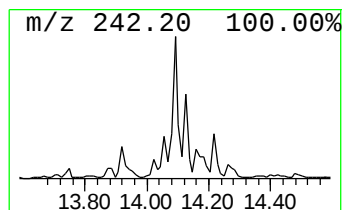
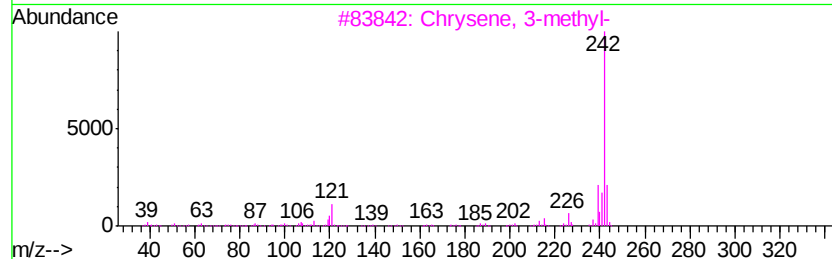
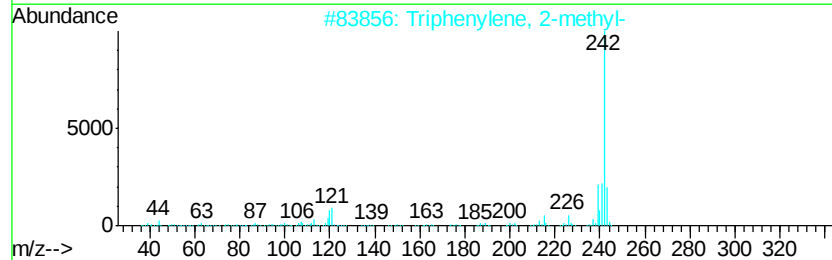
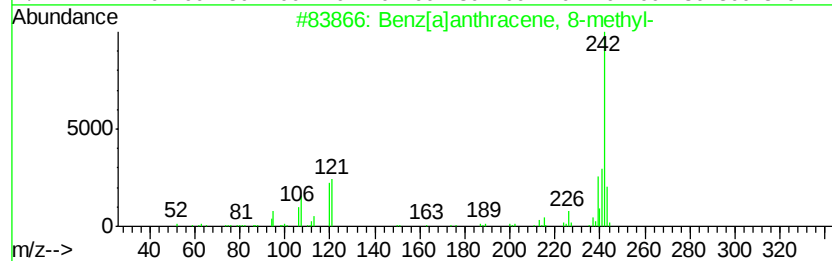
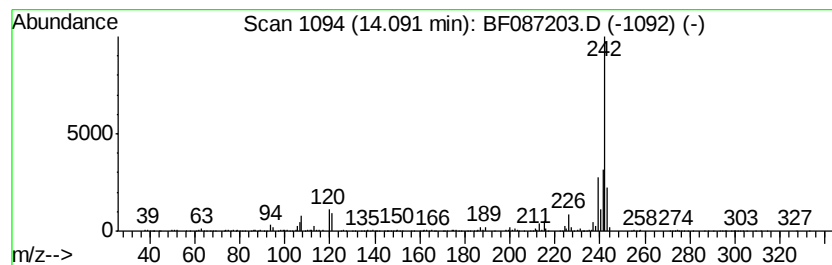
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 14 Benz[a]anthracene, 8-methyl- Concentration Rank 17

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 14.09 | 3.62 ng | 543725 | Chrysene-d12     | 13.71 |

| Hit# | of | 5 | Tentative ID                 | MW  | MolForm | CAS#        | Qual |
|------|----|---|------------------------------|-----|---------|-------------|------|
| 1    |    |   | Benz[a]anthracene, 8-methyl- | 242 | C19H14  | 002381-31-9 | 97   |
| 2    |    |   | Triphenylene, 2-methyl-      | 242 | C19H14  | 001705-84-6 | 97   |
| 3    |    |   | Chrysene, 3-methyl-          | 242 | C19H14  | 003351-31-3 | 94   |
| 4    |    |   | Benz[a]anthracene, 7-methyl- | 242 | C19H14  | 002541-69-7 | 94   |
| 5    |    |   | Chrysene, 2-methyl-          | 242 | C19H14  | 003351-32-4 | 93   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

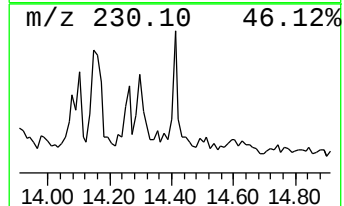
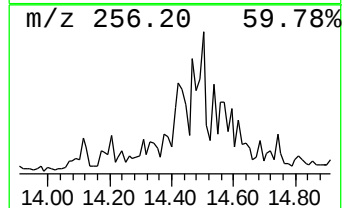
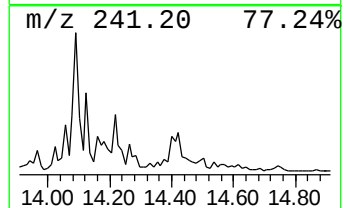
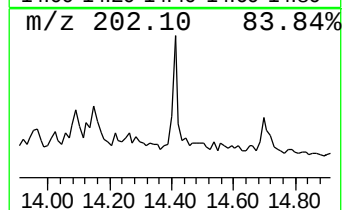
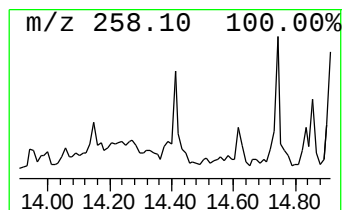
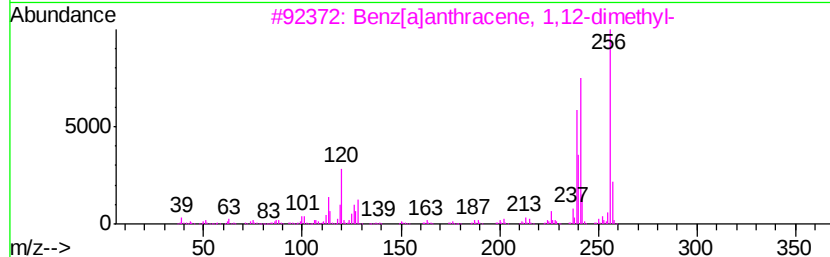
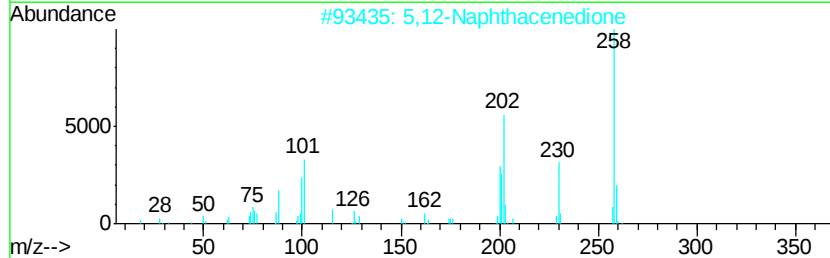
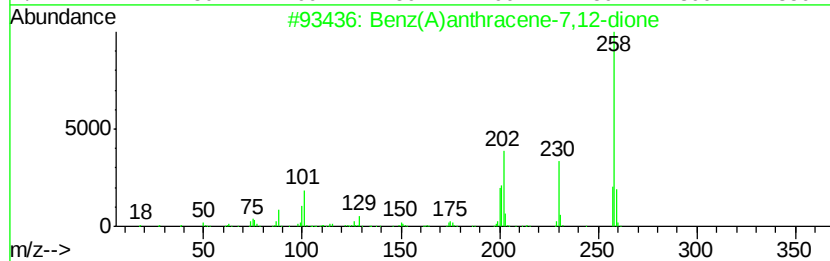
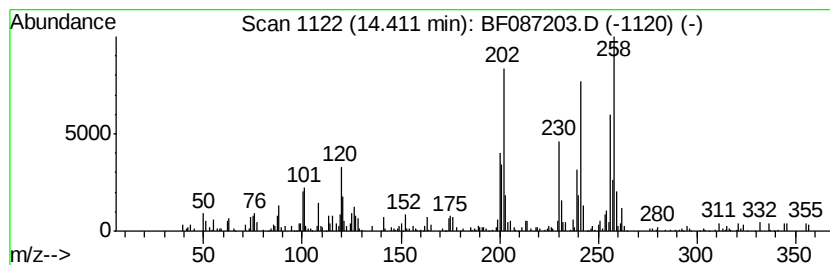
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 15 Benz(A)anthracene-7,12-dione Concentration Rank 8

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 14.41 | 6.18 ng | 206193 | Perylene-d12     | 15.06 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | Benz(A)anthracene-7,12-dione        | 258 | C18H10O2  | 002498-66-0  | 90   |
| 2    |    | 5,12-Naphthacenedione               | 258 | C18H10O2  | 001090-13-7  | 89   |
| 3    |    | Benz[a]anthracene, 1,12-dimethyl-   | 256 | C20H16    | 000313-74-6  | 46   |
| 4    |    | 1,8-Anthracenedinitrile, 9,10-di... | 258 | C16H6N2O2 | 090866-50-5  | 38   |
| 5    |    | 5,7-Dimethyl-6-phenyl-1,3-diazaa... | 258 | C16H22N2O | 1000216-37-9 | 30   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

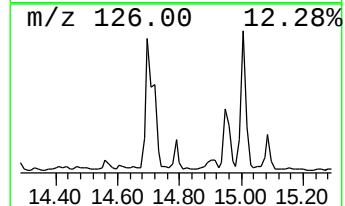
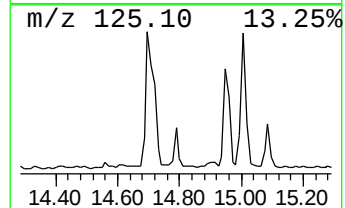
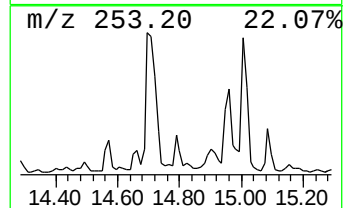
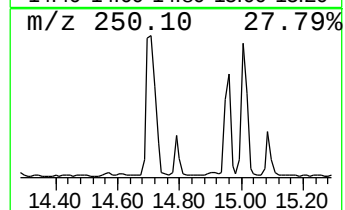
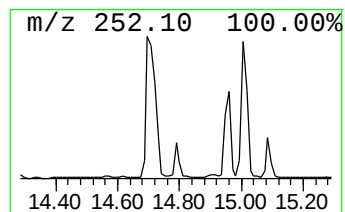
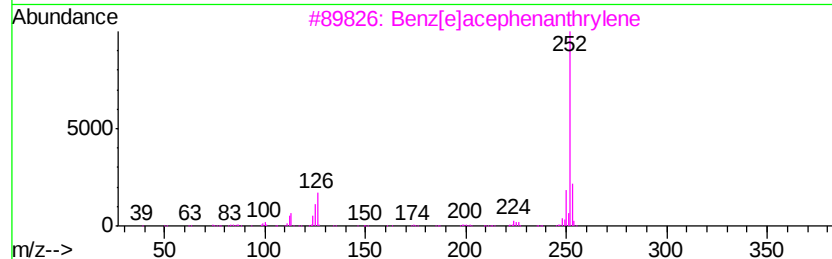
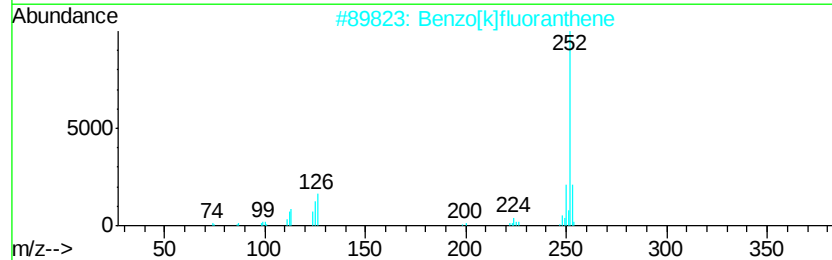
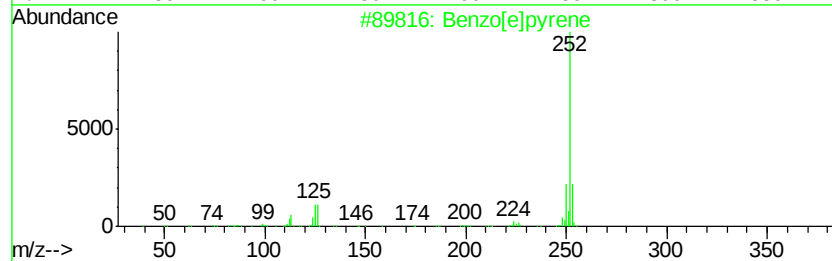
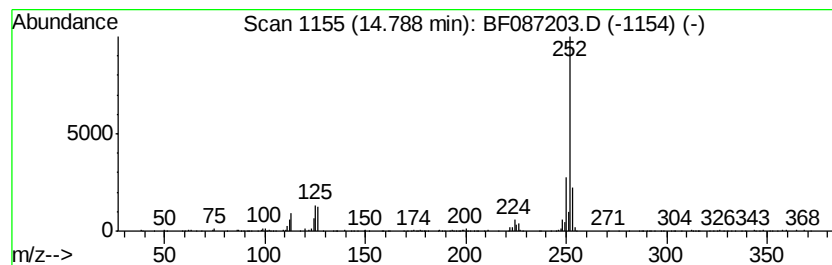
Instrument :  
BNA\_F  
ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

\*\*\*\*\*  
Peak Number 16 Benzo[e]pyrene Concentration Rank 12

| R.T.    | EstConc | Area                     | Relative to ISTD | R.T.           |
|---------|---------|--------------------------|------------------|----------------|
| 14.79   | 5.44 ng | 181509                   | Perylene-d12     | 15.06          |
| Hit# of | 5       | Tentative ID             | MW MolForm       | CAS# Qual      |
| 1       |         | Benzo[e]pyrene           | 252 C20H12       | 000192-97-2 98 |
| 2       |         | Benzo[k]fluoranthene     | 252 C20H12       | 000207-08-9 97 |
| 3       |         | Benz[e]acephenanthrylene | 252 C20H12       | 000205-99-2 95 |
| 4       |         | Perylene                 | 252 C20H12       | 000198-55-0 95 |
| 5       |         | Benzo[a]pyrene           | 252 C20H12       | 000050-32-8 94 |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

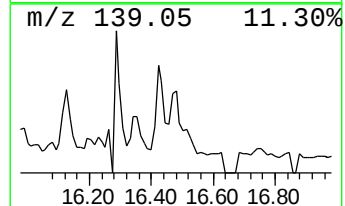
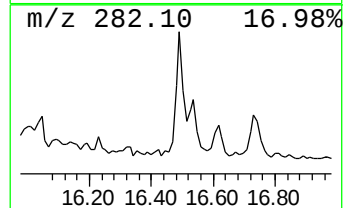
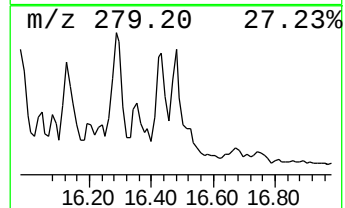
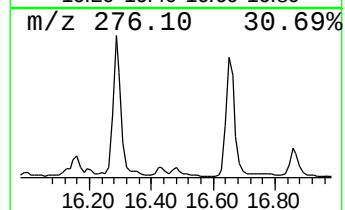
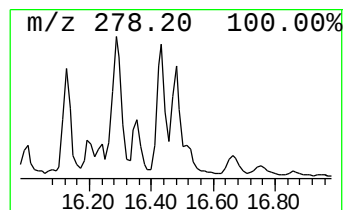
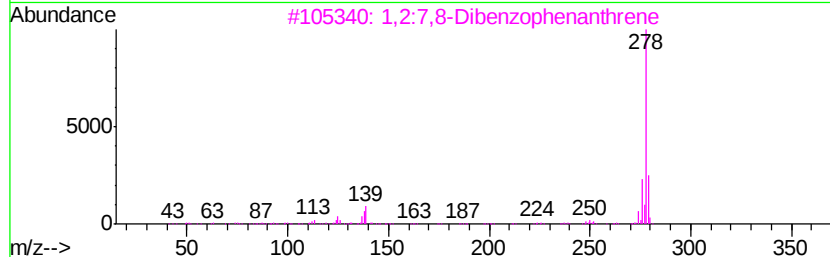
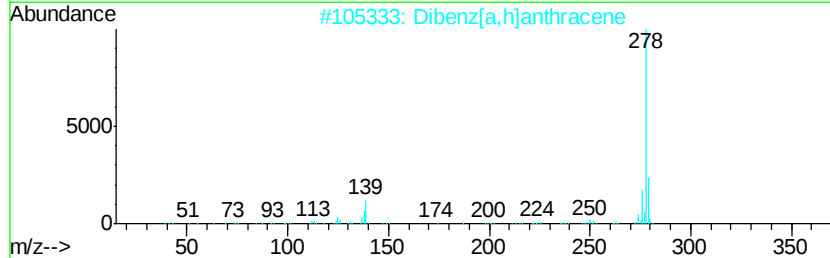
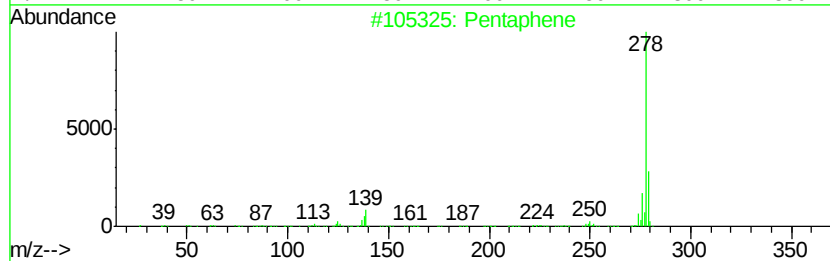
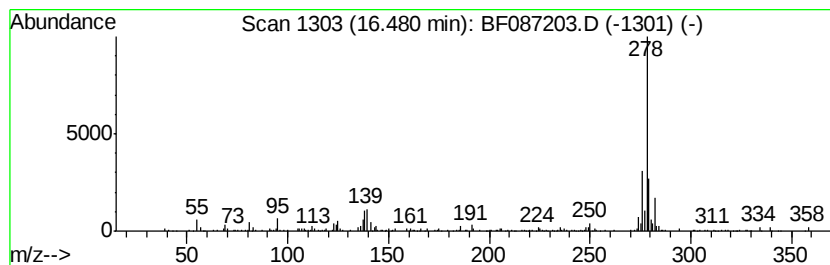
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 18 Pentaphene Concentration Rank 13

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 16.48 | 4.33 ng | 144511 | Perylene-d12     | 15.06 |

| Hit# | of | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------|-----|---------|-------------|------|
| 1    | 5  | Pentaphene                  | 278 | C22H14  | 000222-93-5 | 97   |
| 2    |    | Dibenz[a,h]anthracene       | 278 | C22H14  | 000053-70-3 | 93   |
| 3    |    | 1,2:7,8-Dibenzophenanthrene | 278 | C22H14  | 000213-46-7 | 93   |
| 4    |    | Pentacene                   | 278 | C22H14  | 000135-48-8 | 89   |
| 5    |    | Benzo[b]triphenylene        | 278 | C22H14  | 000215-58-7 | 89   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

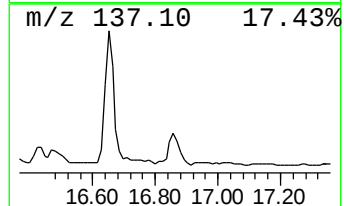
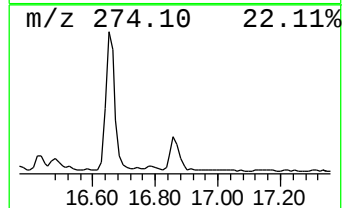
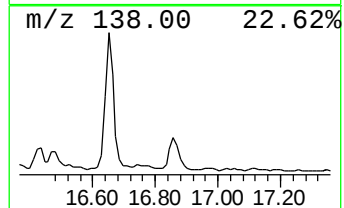
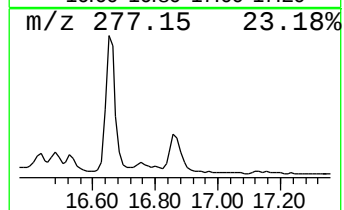
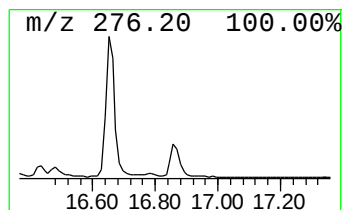
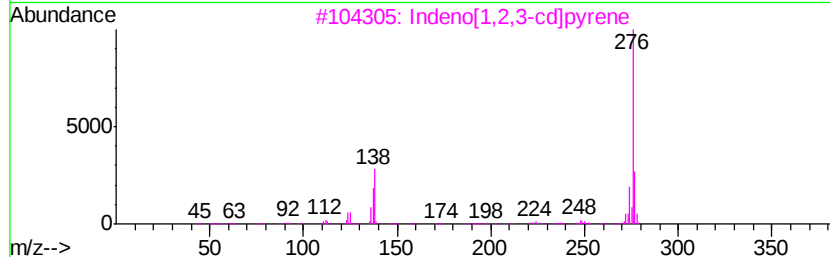
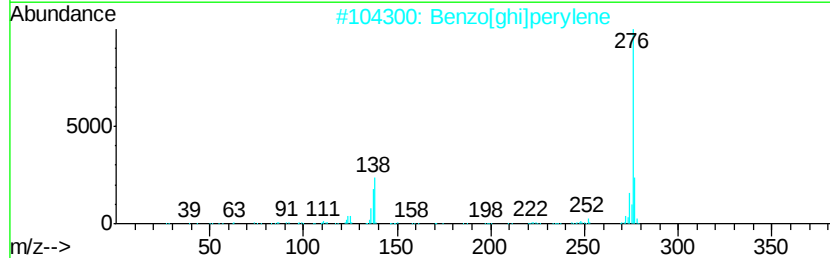
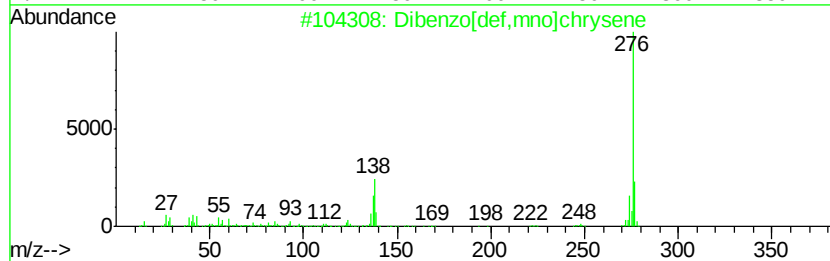
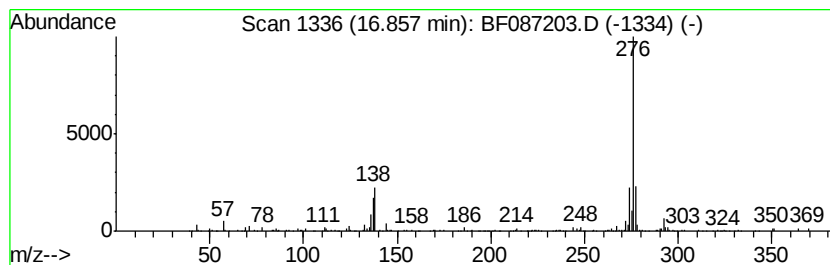
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 19 Dibenzo[def,mno]chrysene Concentration Rank 6

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 16.86 | 6.98 ng | 232853 | Perylene-d12     | 15.06 |

| Hit# | of | Tentative ID                        | MW  | MolForm     | CAS#         | Qual |
|------|----|-------------------------------------|-----|-------------|--------------|------|
| 1    | 5  | Dibenzo[def,mno]chrysene            | 276 | C22H12      | 000191-26-4  | 95   |
| 2    |    | Benzo[ghi]perylene                  | 276 | C22H12      | 000191-24-2  | 94   |
| 3    |    | Indeno[1,2,3-cd]pyrene              | 276 | C22H12      | 000193-39-5  | 93   |
| 4    |    | Phenol, 2-(4-chlorophenyliminome... | 276 | C13H9ClN2O3 | 1000262-90-3 | 53   |
| 5    |    | Naphthalen-1-yl-(3-nitro-benzyl)... | 276 | C17H12N2O2  | 200421-53-0  | 50   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
Data File : BF087203.D  
Acq On : 19 May 2016 23:03  
Operator : UM/SJ  
Sample : H3132-02  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

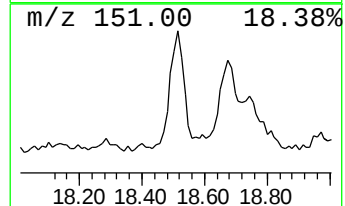
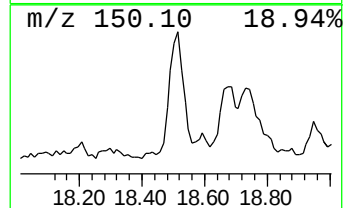
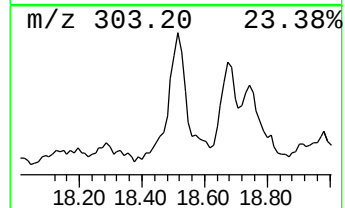
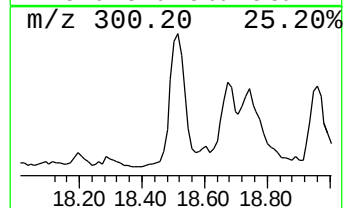
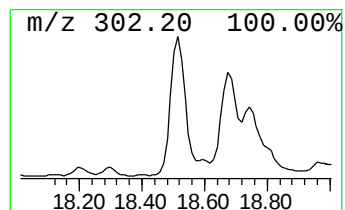
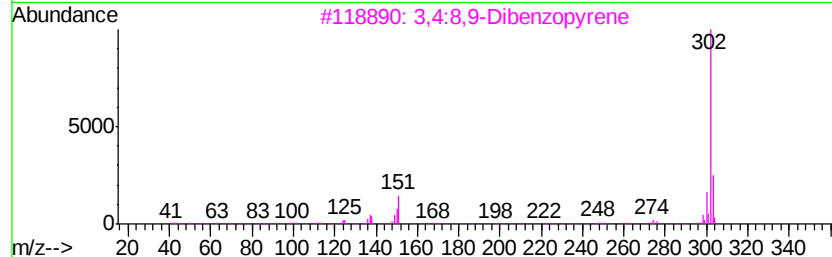
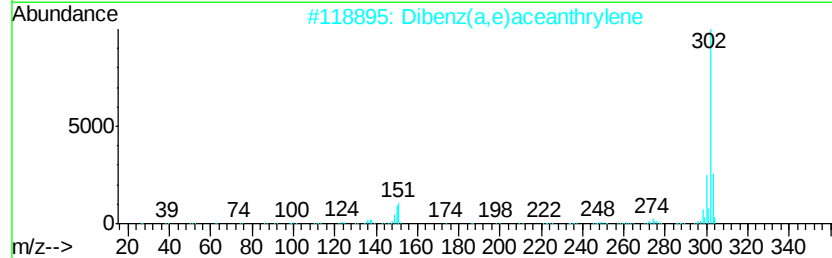
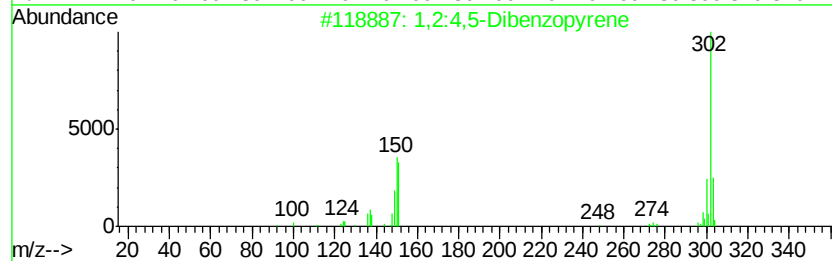
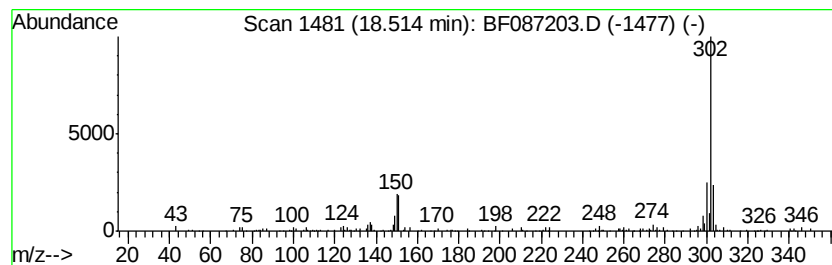
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 20 1,2:4,5-Dibenzopyrene Concentration Rank 7

| R.T.  | EstConc | Area   | Relative to ISTD | R.T.  |
|-------|---------|--------|------------------|-------|
| 18.51 | 6.63 ng | 221116 | Perylene-d12     | 15.06 |

| Hit# | of | 5 | Tentative ID             | MW  | MolForm | CAS#        | Qual |
|------|----|---|--------------------------|-----|---------|-------------|------|
| 1    |    |   | 1,2:4,5-Dibenzopyrene    | 302 | C24H14  | 000192-65-4 | 94   |
| 2    |    |   | Dibenz(a,e)aceanthrylene | 302 | C24H14  | 005385-75-1 | 93   |
| 3    |    |   | 3,4:8,9-Dibenzopyrene    | 302 | C24H14  | 000189-64-0 | 90   |
| 4    |    |   | 1,2:3,4-Dibenzopyrene    | 302 | C24H14  | 000191-30-0 | 70   |
| 5    |    |   | 3,4:9,10-Dibenzopyrene   | 302 | C24H14  | 000189-55-9 | 64   |



Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF051916\  
 Data File : BF087203.D  
 Acq On : 19 May 2016 23:03  
 Operator : UM/SJ  
 Sample : H3132-02  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 FB-BWR-BB-R10-C5-2(0-19FT)

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF051716.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... | 4.70  | 64.3    | ng    | 3085500  | 1                     | 6.57  | 960014  | 20.0 |
| 2-Pentanone, 4-me... | 5.55  | 5.8     | ng    | 276115   | 1                     | 6.57  | 960014  | 20.0 |
| unknown6.34          | 6.34  | 99.3    | ng    | 4766820  | 1                     | 6.57  | 960014  | 20.0 |
| unknown10.26         | 10.26 | 3.3     | ng    | 222334   | 3                     | 9.60  | 1333990 | 20.0 |
| Phenanthrene, 2-m... | 11.58 | 3.6     | ng    | 628688   | 4                     | 11.07 | 3502860 | 20.0 |
| 4H-Cyclopenta[def... | 11.69 | 9.0     | ng    | 1571290  | 4                     | 11.07 | 3502860 | 20.0 |
| Phenanthrene, 2,5... | 12.13 | 3.6     | ng    | 624672   | 4                     | 11.07 | 3502860 | 20.0 |
| Pyrene, 1-methyl-    | 12.73 | 3.7     | ng    | 557968   | 5                     | 13.71 | 3001590 | 20.0 |
| Benz[a]anthracene... | 14.09 | 3.6     | ng    | 543725   | 5                     | 13.71 | 3001590 | 20.0 |
| Benz(A)anthracene... | 14.41 | 6.2     | ng    | 206193   | 6                     | 15.06 | 667255  | 20.0 |
| Benzo[e]pyrene       | 14.79 | 5.4     | ng    | 181509   | 6                     | 15.06 | 667255  | 20.0 |
| Pentaphene           | 16.48 | 4.3     | ng    | 144511   | 6                     | 15.06 | 667255  | 20.0 |
| Dibenzo[def,mno]c... | 16.86 | 7.0     | ng    | 232853   | 6                     | 15.06 | 667255  | 20.0 |
| 1,2:4,5-Dibenzopy... | 18.51 | 6.6     | ng    | 221116   | 6                     | 15.06 | 667255  | 20.0 |