

Data Path : Z:\HPCHEM1\BNA F\DATA\BF051517\  
 Data File : BF095147.D  
 Acq On : 16 May 2017 3:48  
 Operator : SJ/MA  
 Sample : I3140-06 20X  
 Misc :  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 BERM-1-2

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-BF050217.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         | 1.960       | 3             | 4           | 18           | rVB      | 216814         | 273745        | 36.98%          | 4.168%        |
| 2         | 7.495       | 942           | 945         | 948          | rBV2     | 13568          | 21804         | 2.95%           | 0.332%        |
| 3         | 7.778       | 989           | 993         | 1007         | rBV      | 235917         | 351272        | 47.46%          | 5.349%        |
| 4         | 8.025       | 1031          | 1035        | 1047         | rBV      | 28763          | 44591         | 6.02%           | 0.679%        |
| 5         | 9.795       | 1332          | 1336        | 1350         | rBV      | 315270         | 466205        | 62.98%          | 7.099%        |
| 6         | 11.577      | 1635          | 1639        | 1648         | rBV2     | 22613          | 44568         | 6.02%           | 0.679%        |
| 7         | 12.413      | 1777          | 1781        | 1788         | rBV      | 8741           | 14671         | 1.98%           | 0.223%        |
| 8         | 12.624      | 1812          | 1817        | 1837         | rBV2     | 303750         | 489455        | 66.12%          | 7.453%        |
| 9         | 15.030      | 2222          | 2226        | 2230         | rBV2     | 247841         | 324979        | 43.90%          | 4.948%        |
| 10        | 15.071      | 2230          | 2233        | 2244         | rVV      | 71214          | 123679        | 16.71%          | 1.883%        |
| 11        | 15.159      | 2244          | 2248        | 2261         | rVB      | 19669          | 36167         | 4.89%           | 0.551%        |
| 12        | 15.818      | 2357          | 2360        | 2365         | rBV2     | 6039           | 8970          | 1.21%           | 0.137%        |
| 13        | 15.859      | 2365          | 2367        | 2373         | rVV      | 7911           | 11182         | 1.51%           | 0.170%        |
| 14        | 15.965      | 2382          | 2385        | 2391         | rVV2     | 19617          | 33579         | 4.54%           | 0.511%        |
| 15        | 16.606      | 2491          | 2494        | 2499         | rBV2     | 6427           | 8846          | 1.20%           | 0.135%        |
| 16        | 16.730      | 2512          | 2515        | 2522         | rVB5     | 6889           | 10471         | 1.41%           | 0.159%        |
| 17        | 16.806      | 2524          | 2528        | 2543         | rVV      | 267364         | 359152        | 48.52%          | 5.469%        |
| 18        | 16.953      | 2547          | 2553        | 2557         | rVB2     | 5031           | 7868          | 1.06%           | 0.120%        |
| 19        | 17.112      | 2574          | 2580        | 2593         | rBV      | 307707         | 404679        | 54.67%          | 6.162%        |
| 20        | 17.306      | 2609          | 2613        | 2617         | rBV      | 10984          | 13854         | 1.87%           | 0.211%        |
| 21        | 17.348      | 2617          | 2620        | 2628         | rVV2     | 34997          | 47448         | 6.41%           | 0.722%        |
| 22        | 17.436      | 2628          | 2635        | 2643         | rVB4     | 16545          | 32772         | 4.43%           | 0.499%        |
| 23        | 17.548      | 2649          | 2654        | 2656         | rBV2     | 14651          | 24021         | 3.25%           | 0.366%        |
| 24        | 17.577      | 2656          | 2659        | 2664         | rVB2     | 34612          | 42686         | 5.77%           | 0.650%        |
| 25        | 17.665      | 2669          | 2674        | 2678         | rBV2     | 29475          | 34631         | 4.68%           | 0.527%        |
| 26        | 17.712      | 2678          | 2682        | 2688         | rBV4     | 31070          | 54015         | 7.30%           | 0.822%        |
| 27        | 17.824      | 2699          | 2701        | 2706         | rBV      | 12753          | 15154         | 2.05%           | 0.231%        |
| 28        | 17.865      | 2706          | 2708        | 2713         | rVB2     | 9846           | 11200         | 1.51%           | 0.171%        |
| 29        | 18.006      | 2728          | 2732        | 2737         | rVB4     | 6128           | 8457          | 1.14%           | 0.129%        |
| 30        | 18.259      | 2772          | 2775        | 2783         | rVB2     | 15807          | 26075         | 3.52%           | 0.397%        |
| 31        | 18.377      | 2788          | 2795        | 2798         | rBV      | 21687          | 31963         | 4.32%           | 0.487%        |
| 32        | 18.406      | 2798          | 2800        | 2803         | rVV2     | 29520          | 33403         | 4.51%           | 0.509%        |
| 33        | 18.442      | 2803          | 2806        | 2810         | rVV      | 29257          | 34889         | 4.71%           | 0.531%        |
| 34        | 18.477      | 2810          | 2812        | 2816         | rVB2     | 18876          | 21307         | 2.88%           | 0.324%        |

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Integration Parameters: rteint.p  
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 Sampling : 1  
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 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-BF050217.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

|    |        |      |      |      |      |        |        |         |         |
|----|--------|------|------|------|------|--------|--------|---------|---------|
| 35 | 18.536 | 2816 | 2822 | 2824 | rBV  | 15931  | 21232  | 2.87%   | 0.323%  |
| 36 | 18.600 | 2829 | 2833 | 2837 | rVB3 | 8797   | 9727   | 1.31%   | 0.148%  |
| 37 | 18.695 | 2841 | 2849 | 2853 | rBV2 | 477878 | 740207 | 100.00% | 11.271% |
| 38 | 18.730 | 2853 | 2855 | 2867 | rVV  | 189683 | 282085 | 38.11%  | 4.295%  |
| 39 | 18.830 | 2867 | 2872 | 2880 | rVV  | 49973  | 64410  | 8.70%   | 0.981%  |
| 40 | 18.924 | 2882 | 2888 | 2893 | rBV7 | 12427  | 24902  | 3.36%   | 0.379%  |
| 41 | 18.983 | 2895 | 2898 | 2903 | rVB2 | 23863  | 30925  | 4.18%   | 0.471%  |
| 42 | 19.036 | 2903 | 2907 | 2910 | rVB4 | 14267  | 21622  | 2.92%   | 0.329%  |
| 43 | 19.112 | 2916 | 2920 | 2923 | rBV4 | 4538   | 7955   | 1.07%   | 0.121%  |
| 44 | 19.159 | 2923 | 2928 | 2930 | rVV3 | 10711  | 15532  | 2.10%   | 0.237%  |
| 45 | 19.206 | 2930 | 2936 | 2940 | rVV2 | 41560  | 62987  | 8.51%   | 0.959%  |
| 46 | 19.247 | 2940 | 2943 | 2947 | rVB2 | 22482  | 27204  | 3.68%   | 0.414%  |
| 47 | 19.318 | 2952 | 2955 | 2958 | rVV3 | 22159  | 26706  | 3.61%   | 0.407%  |
| 48 | 19.353 | 2958 | 2961 | 2964 | rVV4 | 23211  | 35897  | 4.85%   | 0.547%  |
| 49 | 19.383 | 2964 | 2966 | 2969 | rVV4 | 22390  | 25024  | 3.38%   | 0.381%  |
| 50 | 19.412 | 2969 | 2971 | 2975 | rVB2 | 10445  | 10493  | 1.42%   | 0.160%  |
| 51 | 19.600 | 3000 | 3003 | 3005 | rBV4 | 6379   | 7953   | 1.07%   | 0.121%  |
| 52 | 19.630 | 3005 | 3008 | 3015 | rVB9 | 15264  | 24032  | 3.25%   | 0.366%  |
| 53 | 19.806 | 3035 | 3038 | 3043 | rBV2 | 31316  | 44245  | 5.98%   | 0.674%  |
| 54 | 19.865 | 3046 | 3048 | 3052 | rVB6 | 11526  | 10364  | 1.40%   | 0.158%  |
| 55 | 19.924 | 3052 | 3058 | 3059 | rBV5 | 10110  | 16208  | 2.19%   | 0.247%  |
| 56 | 19.965 | 3061 | 3065 | 3068 | rBV  | 277542 | 383604 | 51.82%  | 5.841%  |
| 57 | 20.077 | 3082 | 3084 | 3089 | rBV  | 49750  | 60178  | 8.13%   | 0.916%  |
| 58 | 20.171 | 3097 | 3100 | 3101 | rBV3 | 11155  | 11333  | 1.53%   | 0.173%  |
| 59 | 20.259 | 3110 | 3115 | 3119 | rBV  | 165619 | 193380 | 26.13%  | 2.945%  |
| 60 | 20.318 | 3121 | 3125 | 3130 | rBV  | 204683 | 227493 | 30.73%  | 3.464%  |
| 61 | 20.371 | 3130 | 3134 | 3138 | rBV  | 288739 | 349192 | 47.17%  | 5.317%  |
| 62 | 20.553 | 3161 | 3165 | 3168 | rBV4 | 11817  | 14734  | 1.99%   | 0.224%  |
| 63 | 21.383 | 3304 | 3306 | 3313 | rVB7 | 10830  | 19399  | 2.62%   | 0.295%  |
| 64 | 21.535 | 3328 | 3332 | 3335 | rBV4 | 13186  | 19060  | 2.57%   | 0.290%  |
| 65 | 21.618 | 3345 | 3346 | 3350 | rBV4 | 5602   | 8195   | 1.11%   | 0.125%  |
| 66 | 21.712 | 3357 | 3362 | 3370 | rVB2 | 71834  | 144809 | 19.56%  | 2.205%  |
| 67 | 21.865 | 3386 | 3388 | 3393 | rBV3 | 13347  | 16057  | 2.17%   | 0.244%  |
| 68 | 21.918 | 3395 | 3397 | 3401 | rVB5 | 11356  | 15337  | 2.07%   | 0.234%  |
| 69 | 22.100 | 3423 | 3428 | 3438 | rBV2 | 59999  | 127090 | 17.17%  | 1.935%  |

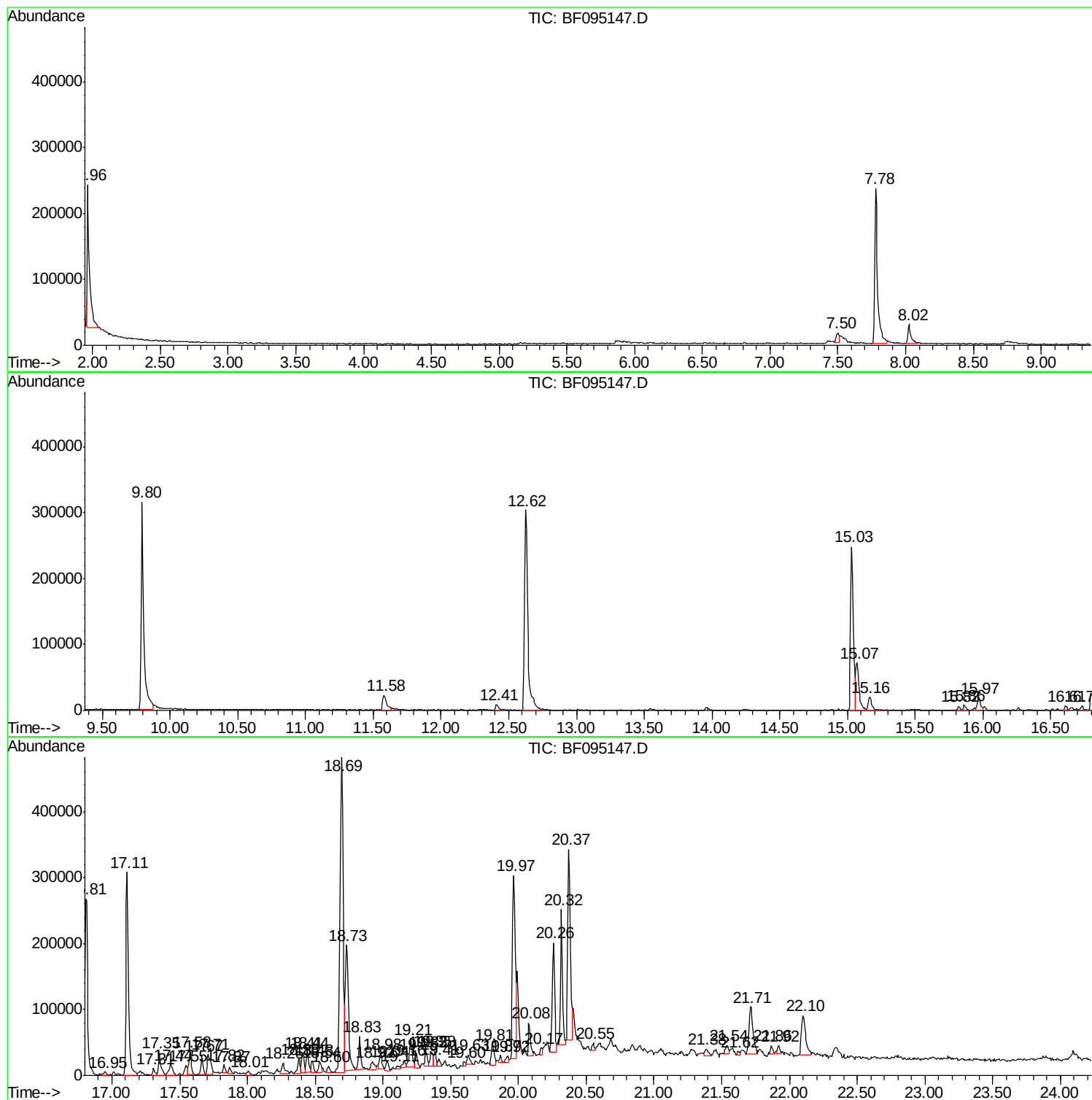
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ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
BERM-1-2

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF050217.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



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Misc :  
ALS Vial : 23 Sample Multiplier: 1

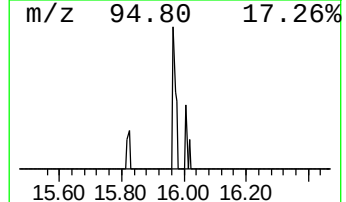
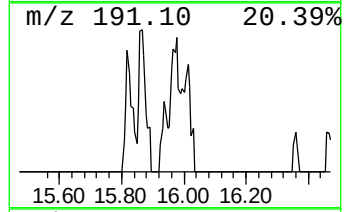
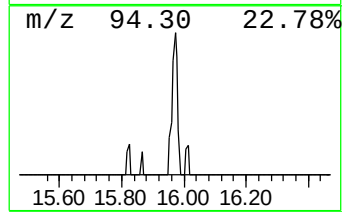
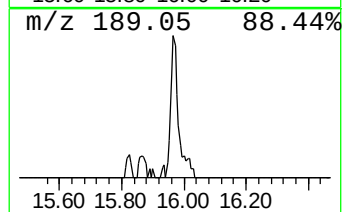
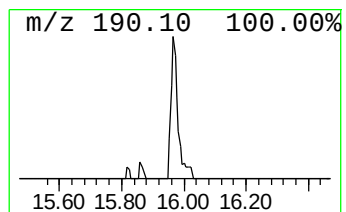
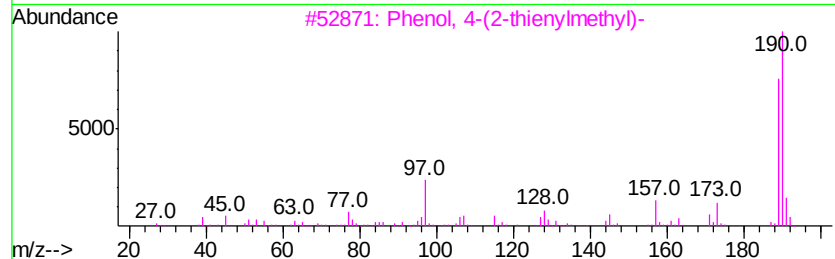
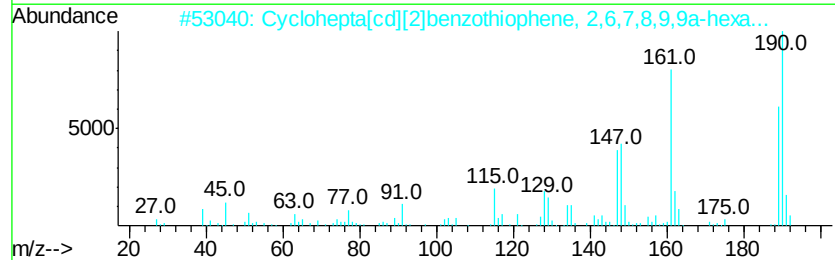
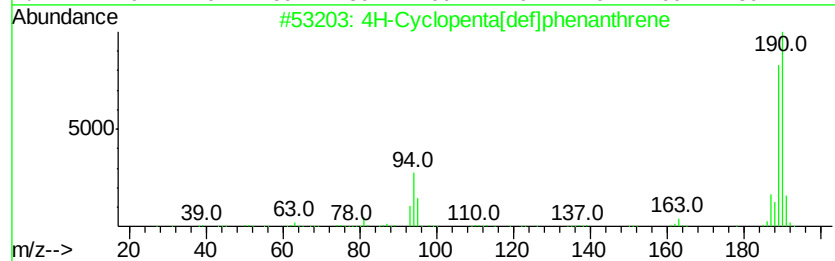
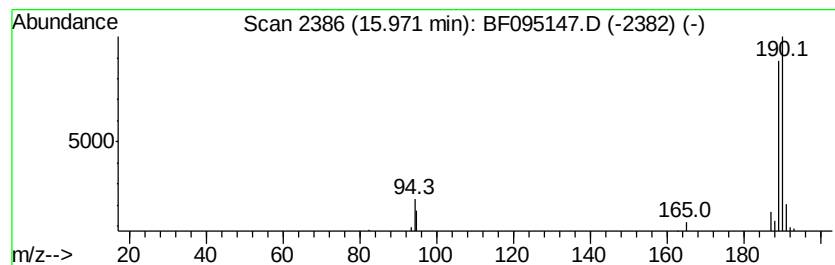
Instrument :  
BNA\_F  
ClientSampleId :  
BERM-1-2

Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF050217.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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

| R.T.    | EstConc                              | Area         | Relative to ISTD |              | R.T.  |      |
|---------|--------------------------------------|--------------|------------------|--------------|-------|------|
| 15.97   | 2.07 ng                              | 33579        | Phenanthrene-d10 |              | 15.03 |      |
| Hit# of | 5                                    | Tentative ID | MW               | MolForm      | CAS#  | Qual |
| 1       | 4H-Cyclopenta[def]phenanthrene       | 190          | C15H10           | 000203-64-5  | 90    |      |
| 2       | Cyclohepta[cd][2]benzothiophene,...  | 190          | C12H14S          | 199807-57-3  | 64    |      |
| 3       | Phenol, 4-(2-thienylmethyl)-         | 190          | C11H10OS         | 091680-55-6  | 64    |      |
| 4       | 2,2'-Bis(4,5-dimethylimidazole)      | 190          | C10H14N4         | 069286-06-2  | 50    |      |
| 5       | 8H-Cyclopenta[d][1,2,4]triazolo[...] | 190          | C9H10N4O         | 1000337-56-4 | 45    |      |



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Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF050217.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

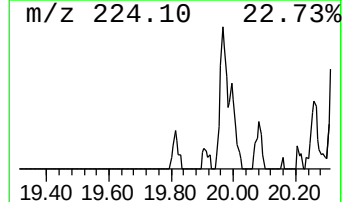
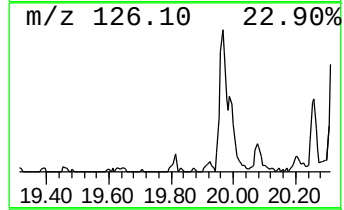
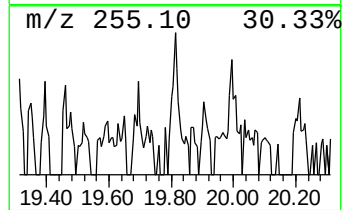
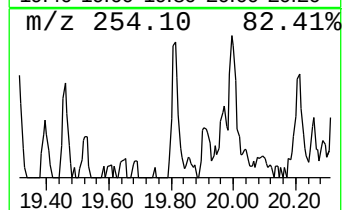
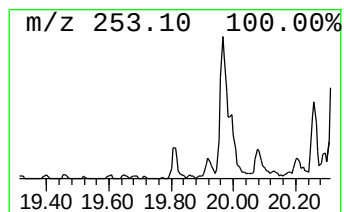
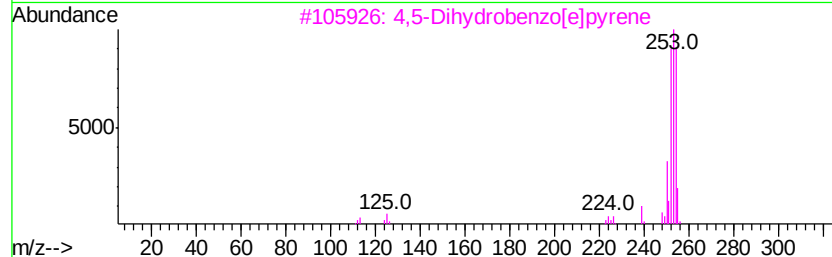
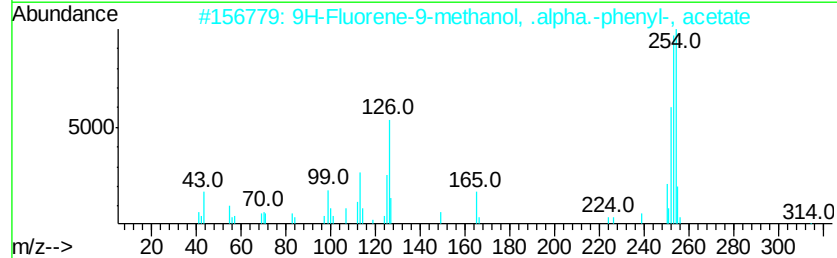
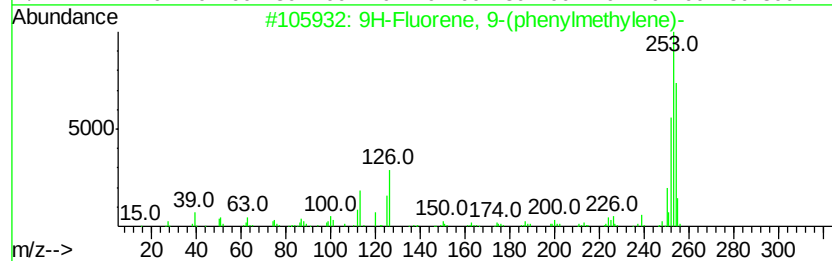
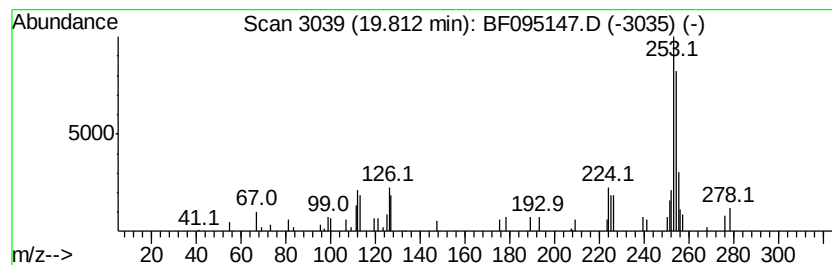
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 5 9H-Fluorene, 9-(phenylmethy... Concentration Rank 6

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 19.81 | 2.53 ng | 44245 | Perylene-d12     | 20.37 |

| Hit# of | 5                                   | Tentative ID | MW       | MolForm | CAS#        | Qual |
|---------|-------------------------------------|--------------|----------|---------|-------------|------|
| 1       | 9H-Fluorene, 9-(phenylmethylene)-   | 254          | C20H14   |         | 001836-87-9 | 76   |
| 2       | 9H-Fluorene-9-methanol, .alpha.-... | 314          | C22H18O2 |         | 063839-89-4 | 64   |
| 3       | 4,5-Dihydrobenzo[el]pyrene          | 254          | C20H14   |         | 095676-42-9 | 64   |
| 4       | 1H-Indene, 1,1'-(1,2-ethanedivli... | 254          | C20H14   |         | 072088-04-1 | 64   |
| 5       | 4,6'-Biazulenyl                     | 254          | C20H14   |         | 094154-49-1 | 62   |



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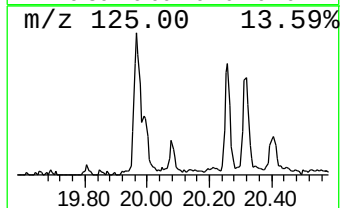
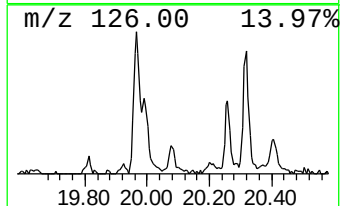
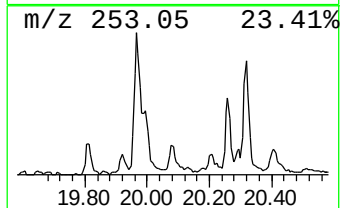
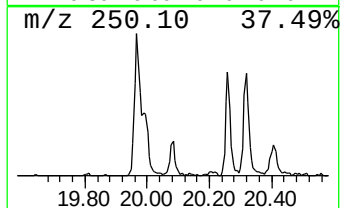
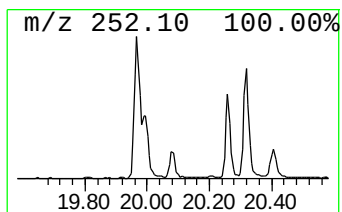
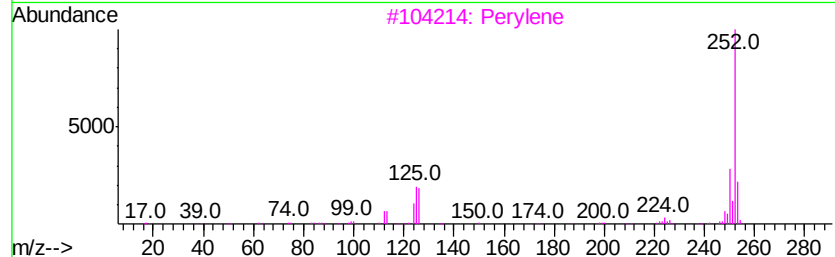
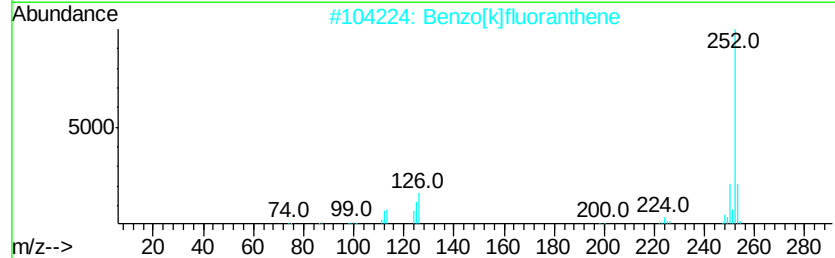
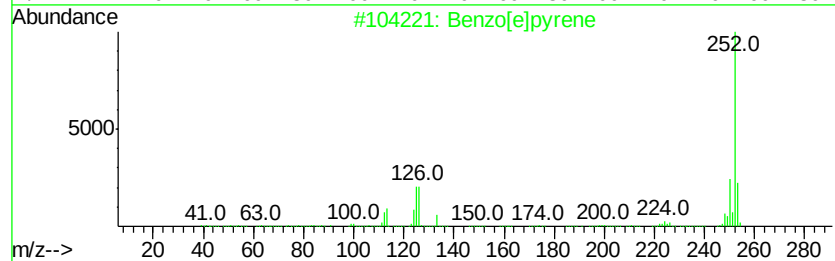
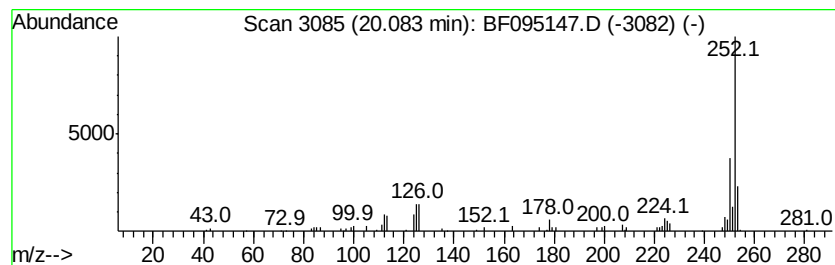
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 6 Benzo[e]pyrene Concentration Rank 4

| R.T.  | EstConc | Area  | Relative to ISTD | R.T.  |
|-------|---------|-------|------------------|-------|
| 20.08 | 3.45 ng | 60178 | Perylene-d12     | 20.37 |

| Hit# of | 5 | Tentative ID              | MW  | MolForm | CAS#        | Qual |
|---------|---|---------------------------|-----|---------|-------------|------|
| 1       |   | Benzo[e]pyrene            | 252 | C20H12  | 000192-97-2 | 90   |
| 2       |   | Benzo[k]fluoranthene      | 252 | C20H12  | 000207-08-9 | 90   |
| 3       |   | Perylene                  | 252 | C20H12  | 000198-55-0 | 90   |
| 4       |   | Benzo[e]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 83   |
| 5       |   | Benzo[j]fluoranthene      | 252 | C20H12  | 000205-82-3 | 81   |



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Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

| TIC Top Hit name     | RT    | EstConc | Units | Response | --Internal Standard-- |       |        |      |
|----------------------|-------|---------|-------|----------|-----------------------|-------|--------|------|
|                      |       |         |       |          | #                     | RT    | Resp   | Conc |
| 4H-Cyclopenta[def... | 15.97 | 2.1     | ng    | 33579    | 4                     | 15.03 | 324979 | 20.0 |
| 9H-Fluorene, 9-(p... | 19.81 | 2.5     | ng    | 44245    | 6                     | 20.37 | 349192 | 20.0 |
| Benzo[e]pyrene       | 20.08 | 3.5     | ng    | 60178    | 6                     | 20.37 | 349192 | 20.0 |