

Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
 Data File : BG020796.D  
 Acq On : 4 Feb 2016 21:45  
 Operator : SJ/IZ  
 Sample : H1334-19  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 BBG16

## Integration Parameters: LSCINT.P

Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0

Filtering: 5  
 Min Area: 0.1 % 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\_G\METHODS\SOM02.2-EPA-BG012716.M  
 Title : SVOA 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         | 3.034       | 30            | 33          | 37           | rVB3     | 2432           | 3507          | 0.73%           | 0.055%        |
| 2         | 3.263       | 66            | 72          | 80           | rBV      | 73940          | 133290        | 27.72%          | 2.105%        |
| 3         | 3.340       | 80            | 85          | 97           | rVB      | 99591          | 142835        | 29.70%          | 2.256%        |
| 4         | 5.325       | 418           | 423         | 430          | rBV2     | 2421           | 3831          | 0.80%           | 0.061%        |
| 5         | 7.411       | 772           | 778         | 785          | rVB      | 37043          | 62408         | 12.98%          | 0.986%        |
| 6         | 7.587       | 800           | 808         | 817          | rVB      | 35712          | 58644         | 12.19%          | 0.926%        |
| 7         | 7.804       | 838           | 845         | 852          | rVV      | 39853          | 66145         | 13.75%          | 1.045%        |
| 8         | 8.280       | 919           | 926         | 935          | rVB      | 65939          | 112218        | 23.33%          | 1.772%        |
| 9         | 8.967       | 1036          | 1043        | 1050         | rVB      | 47177          | 80701         | 16.78%          | 1.275%        |
| 10        | 9.443       | 1118          | 1124        | 1131         | rBV      | 36101          | 62445         | 12.98%          | 0.986%        |
| 11        | 10.171      | 1242          | 1248        | 1254         | rBV      | 24023          | 40620         | 8.45%           | 0.642%        |
| 12        | 10.712      | 1332          | 1340        | 1349         | rVB      | 48632          | 84995         | 17.67%          | 1.342%        |
| 13        | 11.106      | 1399          | 1407        | 1413         | rBV      | 108884         | 196150        | 40.79%          | 3.098%        |
| 14        | 11.153      | 1413          | 1415        | 1420         | rVB      | 2513           | 3721          | 0.77%           | 0.059%        |
| 15        | 11.229      | 1420          | 1428        | 1436         | rBB      | 47513          | 84605         | 17.59%          | 1.336%        |
| 16        | 12.739      | 1680          | 1685        | 1691         | rVB      | 2883           | 4508          | 0.94%           | 0.071%        |
| 17        | 12.950      | 1718          | 1721        | 1726         | rVB      | 2608           | 3993          | 0.83%           | 0.063%        |
| 18        | 14.213      | 1930          | 1936        | 1941         | rBV2     | 2316           | 4078          | 0.85%           | 0.064%        |
| 19        | 14.284      | 1941          | 1948        | 1952         | rVV      | 95710          | 138996        | 28.90%          | 2.195%        |
| 20        | 14.331      | 1952          | 1956        | 1961         | rVB      | 36101          | 50661         | 10.53%          | 0.800%        |
| 21        | 14.583      | 1993          | 1999        | 2014         | rVB      | 124577         | 192073        | 39.94%          | 3.033%        |
| 22        | 14.759      | 2025          | 2029        | 2033         | rVB      | 4061           | 4925          | 1.02%           | 0.078%        |
| 23        | 14.889      | 2041          | 2051        | 2057         | rBV2     | 172395         | 271802        | 56.52%          | 4.293%        |
| 24        | 14.947      | 2057          | 2061        | 2066         | rVB      | 6827           | 10401         | 2.16%           | 0.164%        |
| 25        | 15.047      | 2073          | 2078        | 2083         | rBV      | 27530          | 41075         | 8.54%           | 0.649%        |
| 26        | 15.282      | 2110          | 2118        | 2123         | rBV      | 7679           | 11732         | 2.44%           | 0.185%        |
| 27        | 15.658      | 2177          | 2182        | 2186         | rBV3     | 1573           | 2850          | 0.59%           | 0.045%        |
| 28        | 15.705      | 2186          | 2190        | 2194         | rVB2     | 7351           | 8677          | 1.80%           | 0.137%        |
| 29        | 15.870      | 2211          | 2218        | 2224         | rBV      | 155832         | 228316        | 47.48%          | 3.606%        |
| 30        | 15.928      | 2224          | 2228        | 2232         | rVV      | 12314          | 17604         | 3.66%           | 0.278%        |
| 31        | 15.975      | 2232          | 2236        | 2241         | rVB      | 13799          | 17329         | 3.60%           | 0.274%        |
| 32        | 16.093      | 2252          | 2256        | 2259         | rBV4     | 2508           | 4078          | 0.85%           | 0.064%        |
| 33        | 16.216      | 2273          | 2277        | 2282         | rVB      | 4385           | 6128          | 1.27%           | 0.097%        |
| 34        | 16.363      | 2298          | 2302        | 2309         | rVB2     | 4640           | 7931          | 1.65%           | 0.125%        |

Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
 Data File : BG020796.D  
 Acq On : 4 Feb 2016 21:45  
 Operator : SJ/IZ  
 Sample : H1334-19  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 BBG16

## Integration Parameters: LSCINT.P

Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0

Filtering: 5  
 Min Area: 0.1 % 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\_G\METHODS\SOM02.2-EPA-BG012716.M  
 Title : SVOA CALIBRATION

|    |        |      |      |      |      |        |        |        |        |
|----|--------|------|------|------|------|--------|--------|--------|--------|
| 35 | 16.563 | 2332 | 2336 | 2339 | rBV  | 6524   | 8515   | 1.77%  | 0.134% |
| 36 | 16.592 | 2339 | 2341 | 2345 | rVB3 | 4363   | 4607   | 0.96%  | 0.073% |
| 37 | 16.909 | 2389 | 2395 | 2396 | rBV2 | 2487   | 3369   | 0.70%  | 0.053% |
| 38 | 16.927 | 2396 | 2398 | 2402 | rVV3 | 4222   | 4797   | 1.00%  | 0.076% |
| 39 | 16.974 | 2402 | 2406 | 2412 | rVB  | 2201   | 2860   | 0.59%  | 0.045% |
| 40 | 17.150 | 2428 | 2436 | 2439 | rBV3 | 2916   | 5131   | 1.07%  | 0.081% |
| 41 | 17.191 | 2439 | 2443 | 2445 | rBV2 | 1998   | 2638   | 0.55%  | 0.042% |
| 42 | 17.274 | 2451 | 2457 | 2463 | rVB  | 6380   | 9771   | 2.03%  | 0.154% |
| 43 | 17.356 | 2465 | 2471 | 2476 | rBV3 | 6306   | 9778   | 2.03%  | 0.154% |
| 44 | 17.444 | 2482 | 2486 | 2491 | rVB  | 6478   | 8668   | 1.80%  | 0.137% |
| 45 | 17.620 | 2510 | 2516 | 2520 | rBV2 | 184527 | 284673 | 59.19% | 4.496% |
| 46 | 17.667 | 2520 | 2524 | 2528 | rVB  | 157338 | 232023 | 48.25% | 3.664% |
| 47 | 17.720 | 2528 | 2533 | 2537 | rBV2 | 149732 | 219059 | 45.55% | 3.460% |
| 48 | 17.802 | 2543 | 2547 | 2552 | rVB2 | 2881   | 5261   | 1.09%  | 0.083% |
| 49 | 18.020 | 2578 | 2584 | 2587 | rBV2 | 7397   | 11326  | 2.36%  | 0.179% |
| 50 | 18.090 | 2593 | 2596 | 2600 | rVB2 | 2395   | 3532   | 0.73%  | 0.056% |
| 51 | 18.137 | 2600 | 2604 | 2608 | rBV  | 4500   | 5879   | 1.22%  | 0.093% |
| 52 | 18.196 | 2610 | 2614 | 2623 | rVB2 | 3818   | 6487   | 1.35%  | 0.102% |
| 53 | 18.343 | 2635 | 2639 | 2642 | rBV  | 2164   | 2832   | 0.59%  | 0.045% |
| 54 | 18.490 | 2657 | 2664 | 2668 | rVV2 | 35355  | 57943  | 12.05% | 0.915% |
| 55 | 18.537 | 2668 | 2672 | 2678 | rVV  | 37174  | 55396  | 11.52% | 0.875% |
| 56 | 18.619 | 2681 | 2686 | 2691 | rBV  | 8465   | 11927  | 2.48%  | 0.188% |
| 57 | 18.683 | 2691 | 2697 | 2701 | rVV2 | 34499  | 70149  | 14.59% | 1.108% |
| 58 | 18.719 | 2701 | 2703 | 2709 | rVB  | 21513  | 24711  | 5.14%  | 0.390% |
| 59 | 18.772 | 2709 | 2712 | 2718 | rBV4 | 2835   | 4246   | 0.88%  | 0.067% |
| 60 | 18.977 | 2742 | 2747 | 2750 | rBV  | 20285  | 28856  | 6.00%  | 0.456% |
| 61 | 19.018 | 2750 | 2754 | 2760 | rVB3 | 24482  | 40303  | 8.38%  | 0.637% |
| 62 | 19.101 | 2765 | 2768 | 2774 | rBV3 | 2232   | 4050   | 0.84%  | 0.064% |
| 63 | 19.218 | 2780 | 2788 | 2793 | rBV4 | 8187   | 14704  | 3.06%  | 0.232% |
| 64 | 19.271 | 2793 | 2797 | 2800 | rBV  | 9230   | 9864   | 2.05%  | 0.156% |
| 65 | 19.312 | 2800 | 2804 | 2809 | rVB2 | 6972   | 9316   | 1.94%  | 0.147% |
| 66 | 19.388 | 2811 | 2817 | 2822 | rBV2 | 24237  | 38956  | 8.10%  | 0.615% |
| 67 | 19.453 | 2822 | 2828 | 2831 | rBV5 | 9603   | 20242  | 4.21%  | 0.320% |
| 68 | 19.529 | 2837 | 2841 | 2851 | rBV3 | 14941  | 29803  | 6.20%  | 0.471% |
| 69 | 19.653 | 2853 | 2862 | 2868 | rBV  | 284634 | 395822 | 82.31% | 6.251% |
| 70 | 19.712 | 2868 | 2872 | 2874 | rBV  | 5292   | 6664   | 1.39%  | 0.105% |
| 71 | 19.747 | 2874 | 2878 | 2884 | rVB4 | 11197  | 16758  | 3.48%  | 0.265% |

Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
 Data File : BG020796.D  
 Acq On : 4 Feb 2016 21:45  
 Operator : SJ/IZ  
 Sample : H1334-19  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 BBG16

## Integration Parameters: LSCINT.P

Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0

Filtering: 5  
 Min Area: 0.1 % 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\_G\METHODS\SOM02.2-EPA-BG012716.M  
 Title : SVOA CALIBRATION

|     |        |      |      |      |      |        |        |         |        |
|-----|--------|------|------|------|------|--------|--------|---------|--------|
| 72  | 19.800 | 2884 | 2887 | 2890 | rBV2 | 4682   | 7049   | 1.47%   | 0.111% |
| 73  | 19.841 | 2890 | 2894 | 2898 | rVV3 | 7870   | 10049  | 2.09%   | 0.159% |
| 74  | 19.894 | 2898 | 2903 | 2912 | rVB6 | 10190  | 21112  | 4.39%   | 0.333% |
| 75  | 19.982 | 2912 | 2918 | 2921 | rBV3 | 206079 | 340136 | 70.73%  | 5.372% |
| 76  | 20.017 | 2921 | 2924 | 2930 | rVB  | 218197 | 295305 | 61.41%  | 4.664% |
| 77  | 20.082 | 2930 | 2935 | 2940 | rVB2 | 16475  | 25507  | 5.30%   | 0.403% |
| 78  | 20.129 | 2940 | 2943 | 2944 | rBV2 | 2871   | 2856   | 0.59%   | 0.045% |
| 79  | 20.181 | 2949 | 2952 | 2958 | rVB  | 13678  | 19213  | 4.00%   | 0.303% |
| 80  | 20.246 | 2958 | 2963 | 2969 | rVB3 | 8559   | 15663  | 3.26%   | 0.247% |
| 81  | 20.328 | 2970 | 2977 | 2984 | rBV5 | 19674  | 53469  | 11.12%  | 0.844% |
| 82  | 20.463 | 2995 | 3000 | 3001 | rVV3 | 14280  | 22261  | 4.63%   | 0.352% |
| 83  | 20.493 | 3002 | 3005 | 3013 | rVB  | 39248  | 58138  | 12.09%  | 0.918% |
| 84  | 20.593 | 3019 | 3022 | 3026 | rBV2 | 19833  | 25626  | 5.33%   | 0.405% |
| 85  | 20.651 | 3026 | 3032 | 3037 | rVV2 | 26061  | 42398  | 8.82%   | 0.670% |
| 86  | 20.798 | 3052 | 3057 | 3060 | rBV2 | 16959  | 25440  | 5.29%   | 0.402% |
| 87  | 20.839 | 3061 | 3064 | 3068 | rVV3 | 15026  | 19513  | 4.06%   | 0.308% |
| 88  | 21.268 | 3133 | 3137 | 3143 | rVB  | 23116  | 39550  | 8.22%   | 0.625% |
| 89  | 21.462 | 3162 | 3170 | 3174 | rBV3 | 18047  | 45604  | 9.48%   | 0.720% |
| 90  | 21.509 | 3174 | 3178 | 3182 | rVV  | 36069  | 55823  | 11.61%  | 0.882% |
| 91  | 21.562 | 3183 | 3187 | 3191 | rVV3 | 18048  | 34835  | 7.24%   | 0.550% |
| 92  | 21.615 | 3192 | 3196 | 3205 | rVB3 | 23868  | 43224  | 8.99%   | 0.683% |
| 93  | 21.897 | 3236 | 3244 | 3250 | rBV2 | 197181 | 480908 | 100.00% | 7.595% |
| 94  | 21.950 | 3250 | 3253 | 3262 | rVB  | 81697  | 138423 | 28.78%  | 2.186% |
| 95  | 22.320 | 3314 | 3316 | 3324 | rVB7 | 10470  | 17369  | 3.61%   | 0.274% |
| 96  | 22.737 | 3383 | 3387 | 3394 | rVB6 | 15051  | 29632  | 6.16%   | 0.468% |
| 97  | 24.200 | 3630 | 3636 | 3645 | rBV2 | 40543  | 138443 | 28.79%  | 2.186% |
| 98  | 24.969 | 3762 | 3767 | 3773 | rBV2 | 17048  | 36467  | 7.58%   | 0.576% |
| 99  | 25.051 | 3773 | 3781 | 3788 | rBV  | 71246  | 188819 | 39.26%  | 2.982% |
| 100 | 25.286 | 3812 | 3821 | 3830 | rBV3 | 90034  | 264803 | 55.06%  | 4.182% |

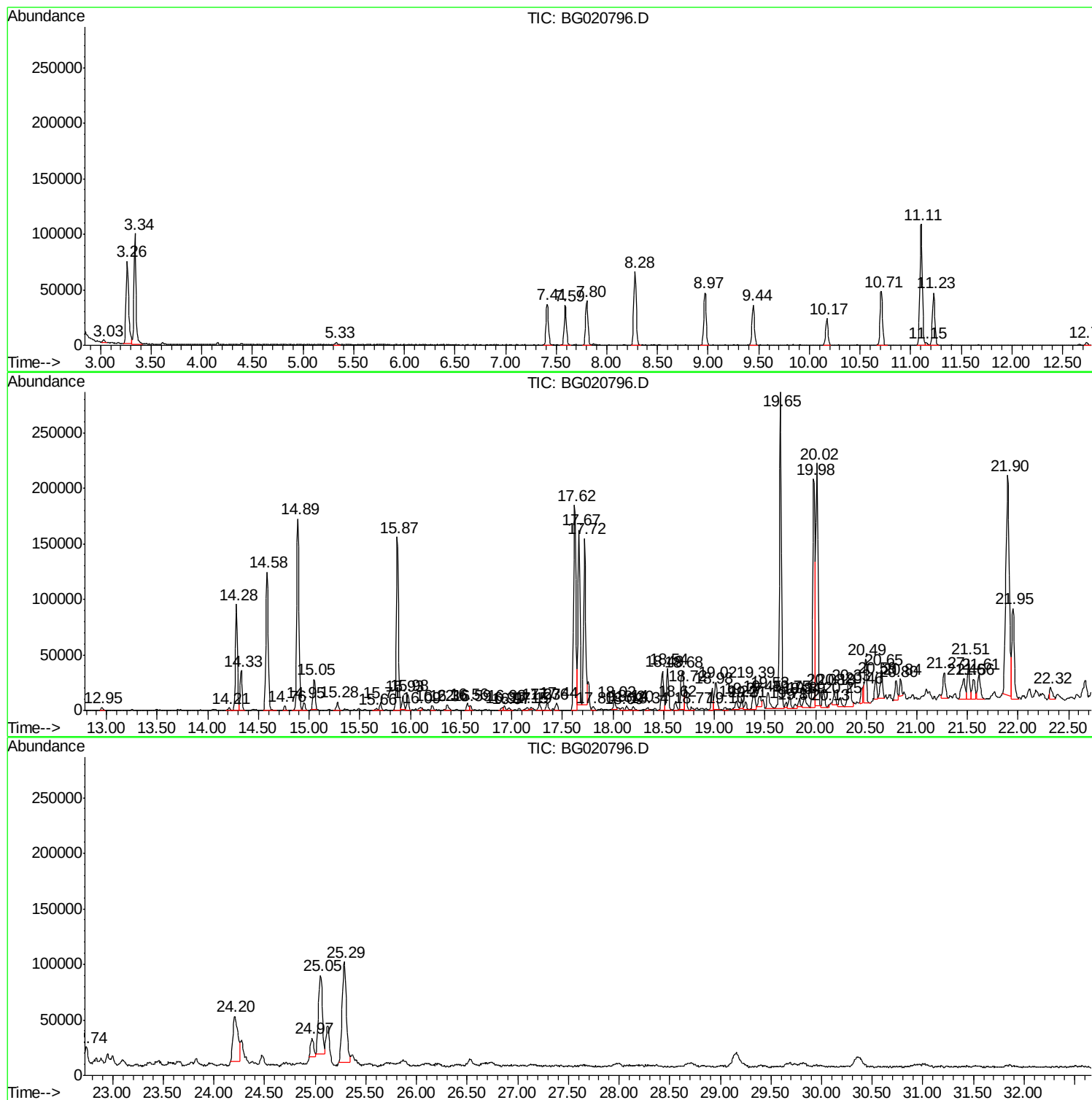
Sum of corrected areas: 6331823

Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

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



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

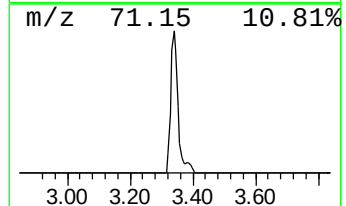
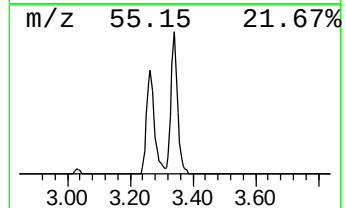
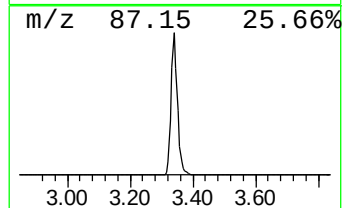
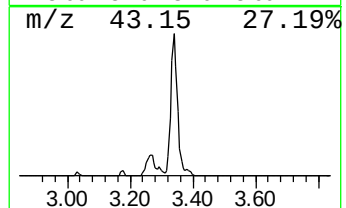
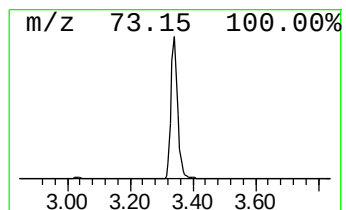
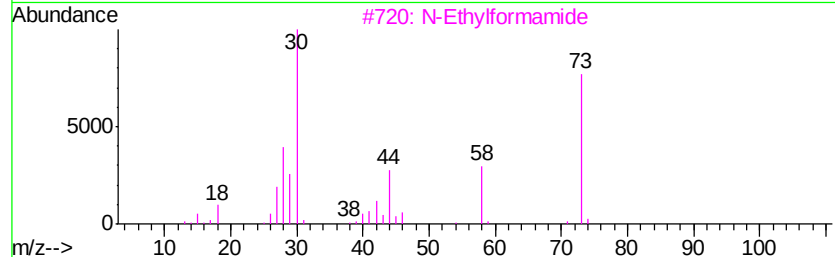
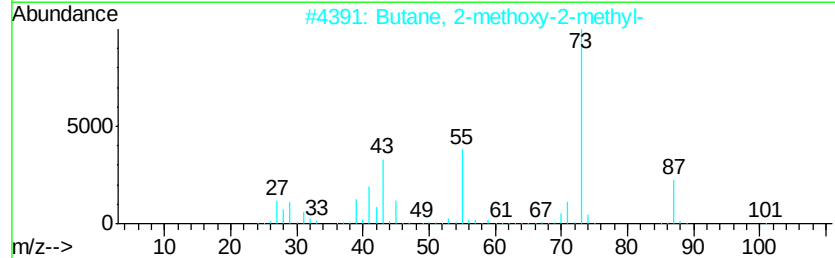
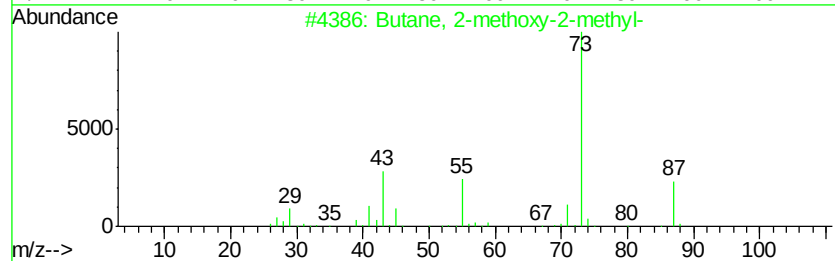
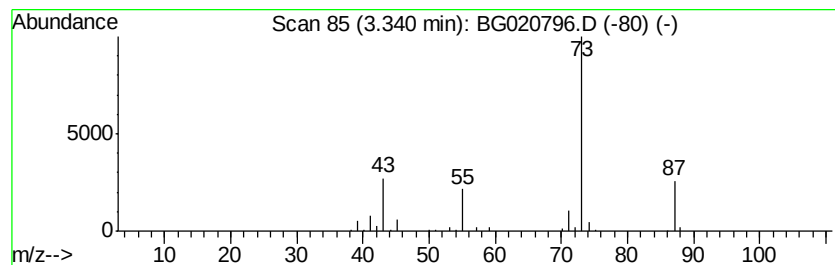
Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

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

\*\*\*\*\*  
Peak Number 2 Butane, 2-methoxy-2-methyl- Concentration Rank 1

| R.T. | EstConc     | Area   | Relative to ISTD       | R.T. |
|------|-------------|--------|------------------------|------|
| 3.34 | 25.46 ng/ul | 142835 | 1,4-Dichlorobenzene-d4 | 8.27 |

| Hit# | of | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------|-----|---------|-------------|------|
| 1    | 5  | Butane, 2-methoxy-2-methyl- | 102 | C6H14O  | 000994-05-8 | 83   |
| 2    |    | Butane, 2-methoxy-2-methyl- | 102 | C6H14O  | 000994-05-8 | 64   |
| 3    |    | N-Ethylformamide            | 73  | C3H7NO  | 000627-45-2 | 9    |
| 4    |    | Acetamide, N-ethyl-         | 87  | C4H9NO  | 000625-50-3 | 9    |
| 5    |    | Acetamide, N-ethyl-         | 87  | C4H9NO  | 000625-50-3 | 9    |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

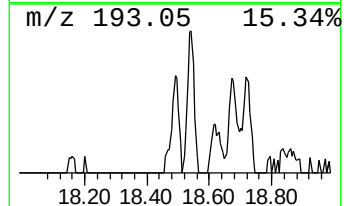
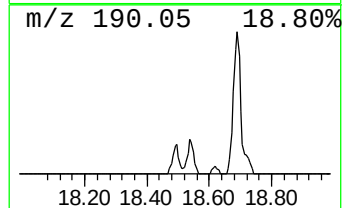
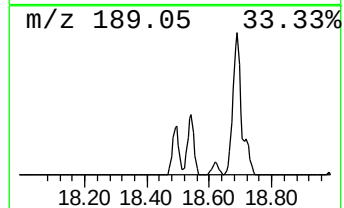
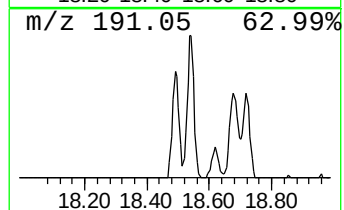
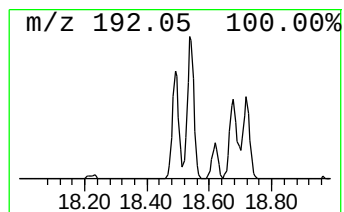
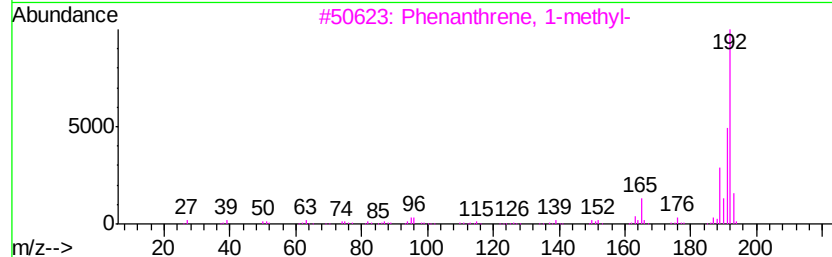
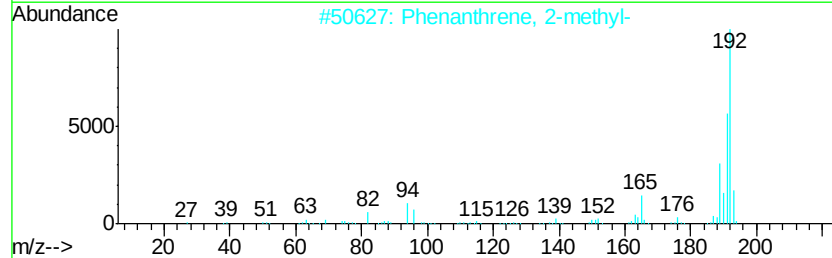
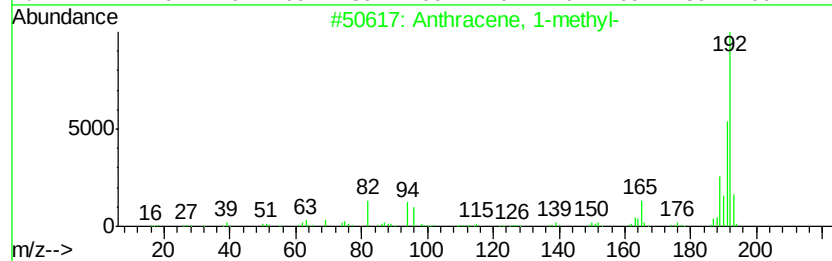
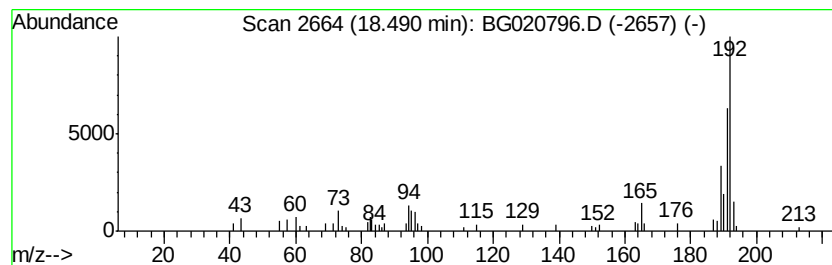
Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

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

\*\*\*\*\*  
Peak Number 3 Anthracene, 1-methyl- Concentration Rank 4

| R.T.      | EstConc                 | Area  | Relative to ISTD | R.T.        |      |
|-----------|-------------------------|-------|------------------|-------------|------|
| 18.49     | 4.07 ng/ul              | 57943 | Phenanthrene-d10 | 17.62       |      |
| Hit# of 5 | Tentative ID            | MW    | MolForm          | CAS#        | Qual |
| 1         | Anthracene, 1-methyl-   | 192   | C15H12           | 000610-48-0 | 98   |
| 2         | Phenanthrene, 2-methyl- | 192   | C15H12           | 002531-84-2 | 97   |
| 3         | Phenanthrene, 1-methyl- | 192   | C15H12           | 000832-69-9 | 96   |
| 4         | Anthracene, 2-methyl-   | 192   | C15H12           | 000613-12-7 | 96   |
| 5         | Anthracene, 1-methyl-   | 192   | C15H12           | 000610-48-0 | 95   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

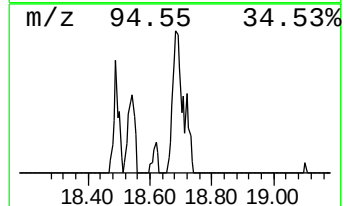
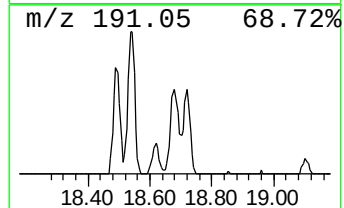
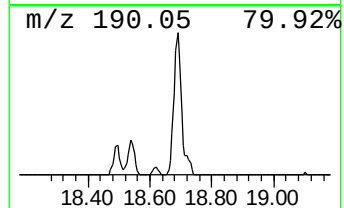
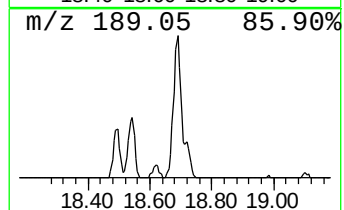
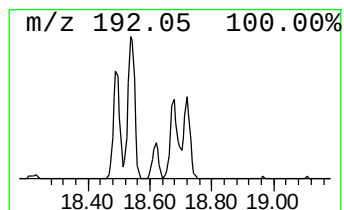
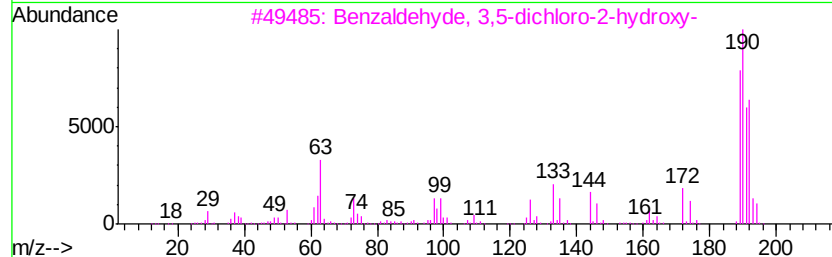
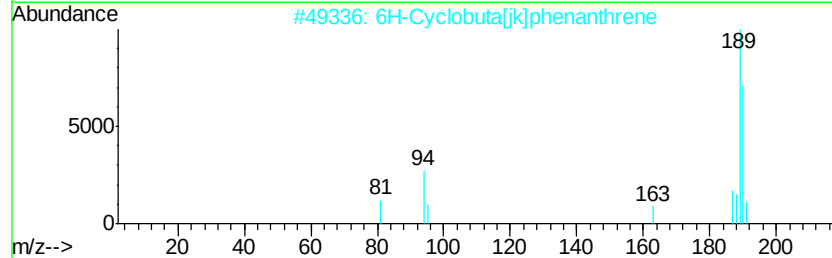
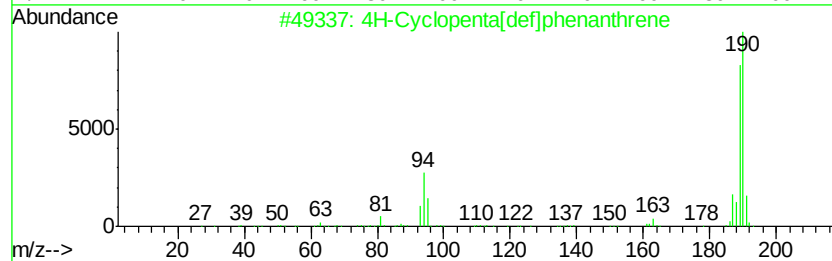
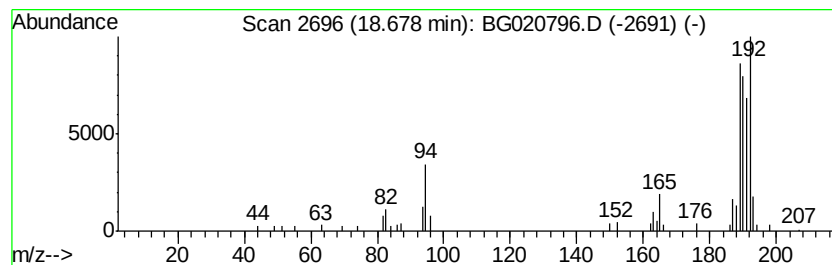
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 5 4H-Cyclopenta[def]phenanthrene Concentration Rank 3

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 18.68 | 4.93 ng/ul | 70149 | Phenanthrene-d10 | 17.62 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm   | CAS#        | Qual |
|---------|---|-------------------------------------|-----|-----------|-------------|------|
| 1       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10    | 000203-64-5 | 70   |
| 2       |   | 6H-Cyclobuta[ik]phenanthrene        | 190 | C15H10    | 083469-43-6 | 58   |
| 3       |   | Benzaldehyde, 3,5-dichloro-2-hyd... | 190 | C7H4Cl2O2 | 000090-60-8 | 53   |
| 4       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10    | 000203-64-5 | 49   |
| 5       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10    | 000203-64-5 | 43   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

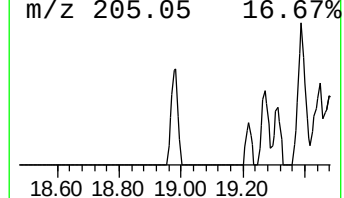
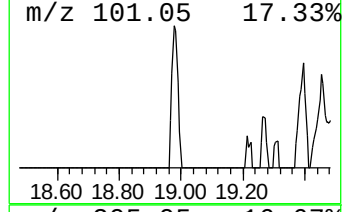
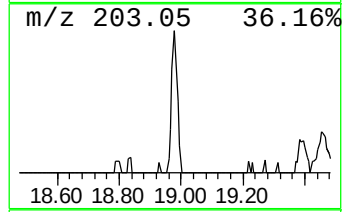
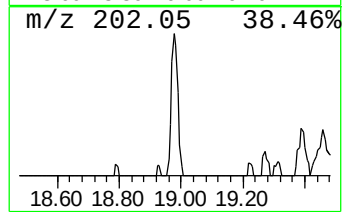
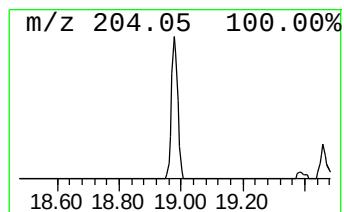
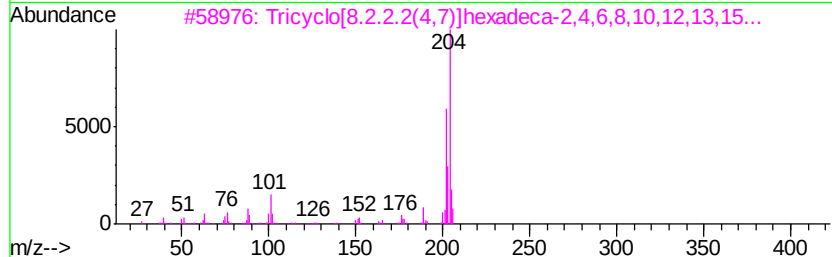
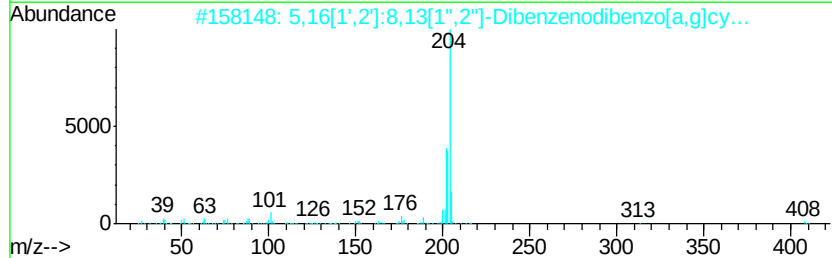
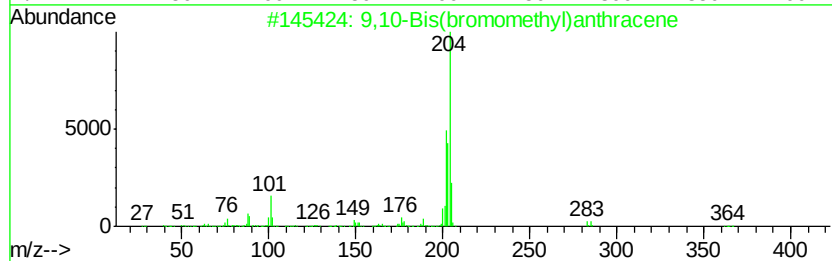
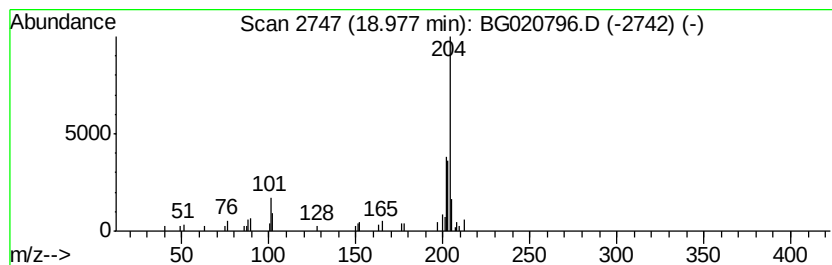
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 6 9,10-Bis(bromomethyl)anthra... Concentration Rank 13

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 18.98 | 2.03 ng/ul | 28856 | Phenanthrene-d10 | 17.62 |

| Hit# | of | Tentative ID                          | MW  | MolForm   | CAS#        | Qual |
|------|----|---------------------------------------|-----|-----------|-------------|------|
| 1    | 5  | 9,10-Bis(bromomethyl)anthracene       | 362 | C16H12Br2 | 034373-96-1 | 86   |
| 2    |    | 5,16[1',2'] : 8,13[1'',2'']-Dibenz... | 408 | C32H24    | 005672-97-9 | 72   |
| 3    |    | Tricyclo[8.2.2.2(4,7)]hexadeca-2...   | 204 | C16H12    | 006572-60-7 | 70   |
| 4    |    | 2-Phenyl naphthalene                  | 204 | C16H12    | 035465-71-5 | 70   |
| 5    |    | Naphthalene, 2-phenyl-                | 204 | C16H12    | 000612-94-2 | 70   |





Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

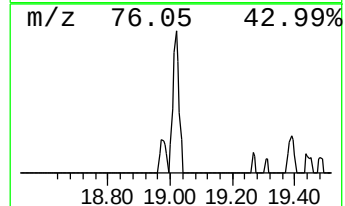
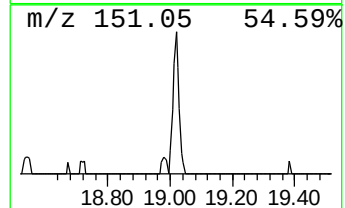
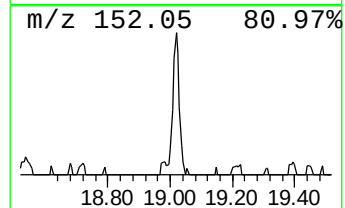
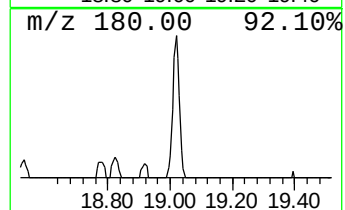
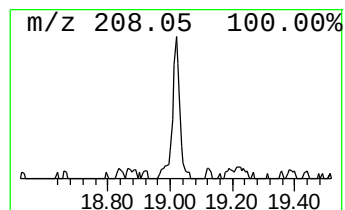
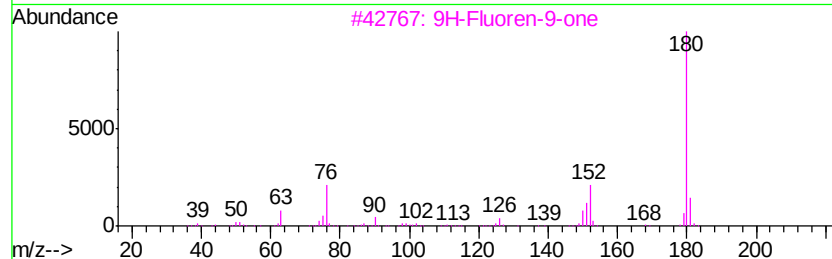
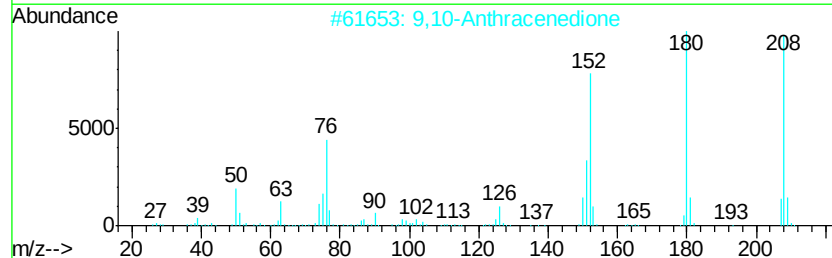
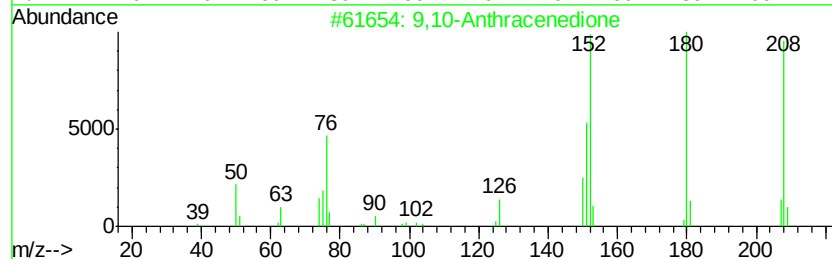
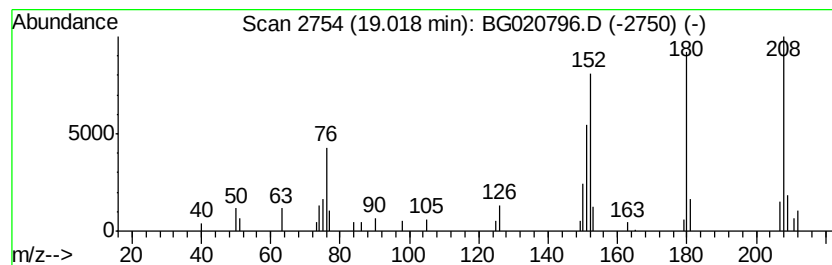
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 7 9,10-Anthracenedione Concentration Rank 6

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 19.02 | 2.83 ng/ul | 40303 | Phenanthrene-d10 | 17.62 |

| Hit# | of | Tentative ID         | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------|-----|---------|-------------|------|
| 1    | 5  | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 95   |
| 2    |    | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 94   |
| 3    |    | 9H-Fluoren-9-one     | 180 | C13H8O  | 000486-25-9 | 83   |
| 4    |    | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 76   |
| 5    |    | 9H-Fluoren-9-one     | 180 | C13H8O  | 000486-25-9 | 60   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

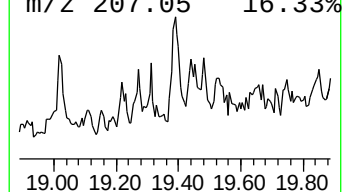
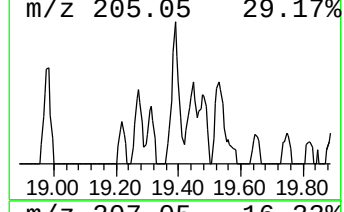
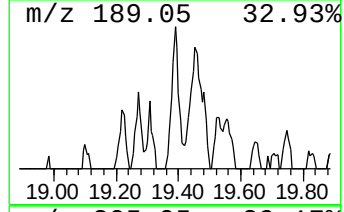
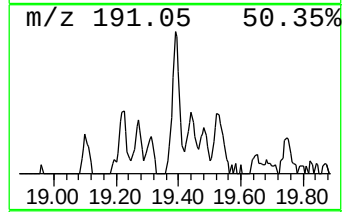
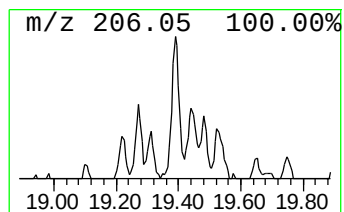
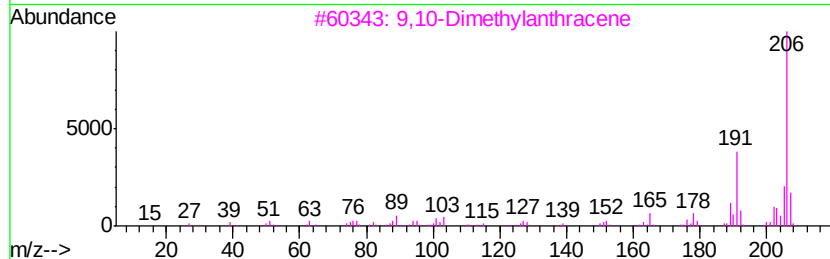
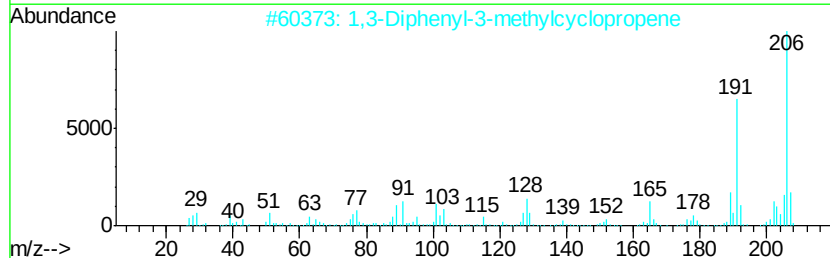
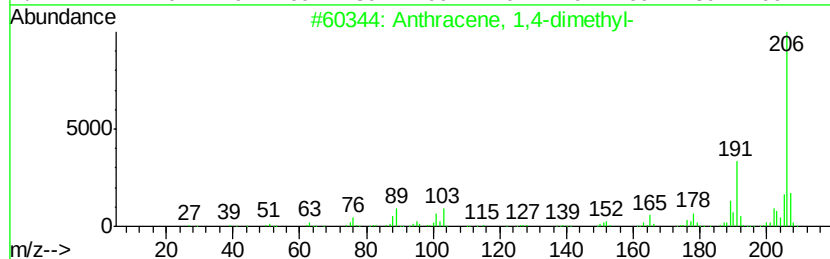
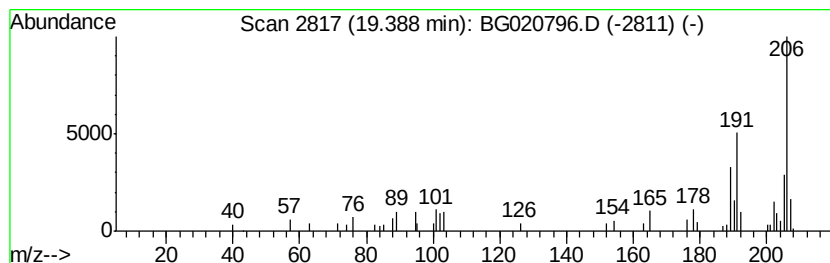
Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

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

\*\*\*\*\*  
Peak Number 8 Anthracene, 1,4-dimethyl- Concentration Rank 8

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 19.39 | 2.74 ng/ul | 38956 | Phenanthrene-d10 | 17.62 |

| Hit# | of | Tentative ID                      | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------------|-----|---------|-------------|------|
| 1    | 5  | Anthracene, 1,4-dimethyl-         | 206 | C16H14  | 000781-92-0 | 95   |
| 2    |    | 1,3-Diphenyl-3-methylcyclopropene | 206 | C16H14  | 086544-79-8 | 95   |
| 3    |    | 9,10-Dimethylantracene            | 206 | C16H14  | 000781-43-1 | 94   |
| 4    |    | 9,10-Dimethylantracene            | 206 | C16H14  | 000781-43-1 | 94   |
| 5    |    | Phenanthrene, 2,5-dimethyl-       | 206 | C16H14  | 003674-66-6 | 94   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

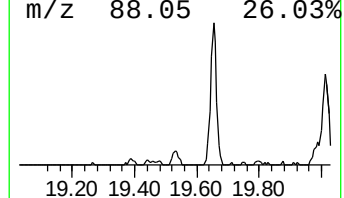
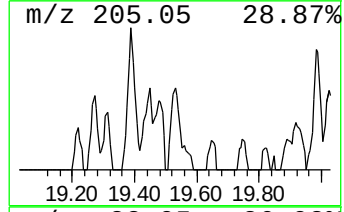
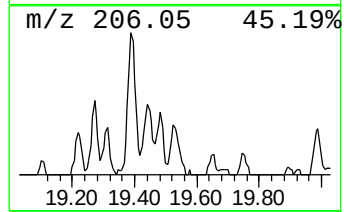
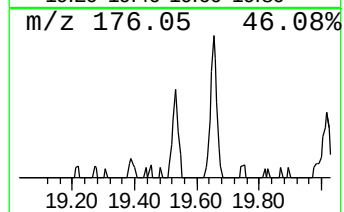
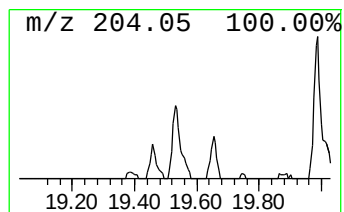
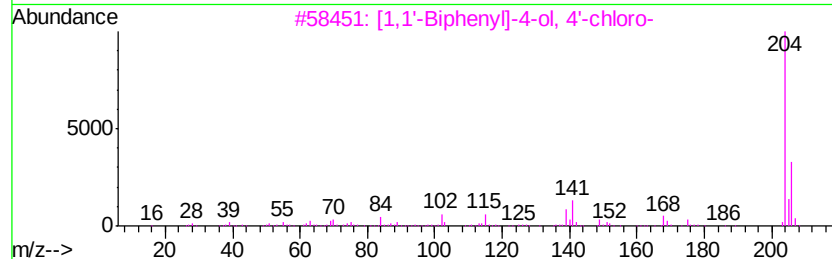
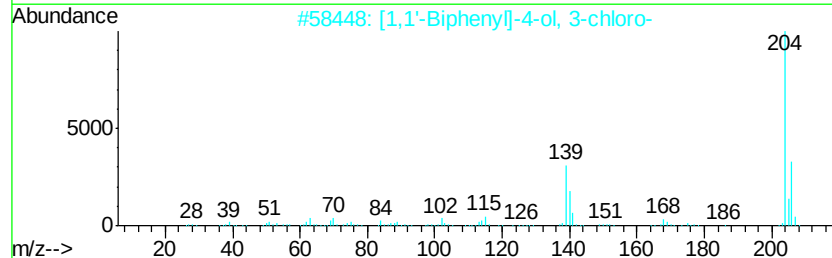
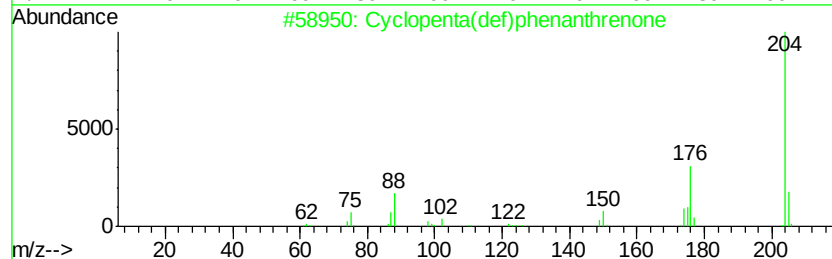
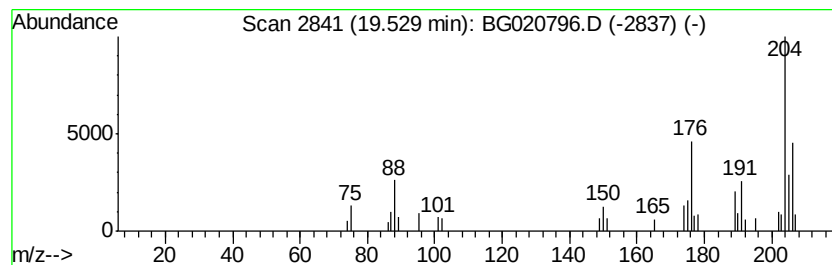
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 9 Cyclopenta(def)phenanthrene Concentration Rank 12

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 19.53 | 2.09 ng/ul | 29803 | Phenanthrene-d10 | 17.62 |

| Hit# | of | Tentative ID                     | MW  | MolForm  | CAS#        | Qual |
|------|----|----------------------------------|-----|----------|-------------|------|
| 1    | 5  | Cyclopenta(def)phenanthrene      | 204 | C15H8O   | 005737-13-3 | 55   |
| 2    |    | [1,1'-Biphenyl]-4-ol, 3-chloro-  | 204 | C12H9ClO | 000092-04-6 | 43   |
| 3    |    | [1,1'-Biphenyl]-4-ol, 4'-chloro- | 204 | C12H9ClO | 028034-99-3 | 38   |
| 4    |    | [1,1'-Biphenyl]-4-ol, 4'-chloro- | 204 | C12H9ClO | 028034-99-3 | 38   |
| 5    |    | Benzene, 1-chloro-3-phenoxy-     | 204 | C12H9ClO | 006452-49-9 | 38   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

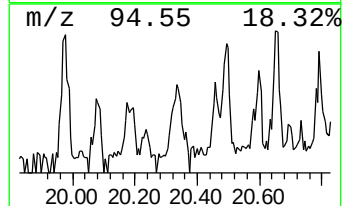
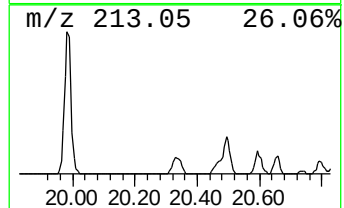
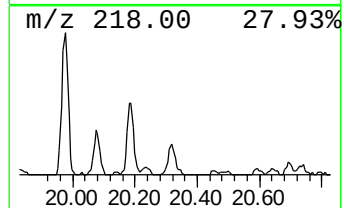
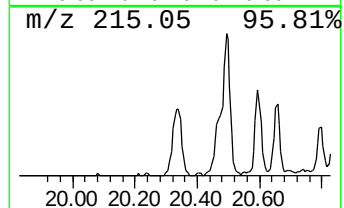
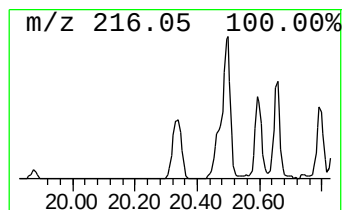
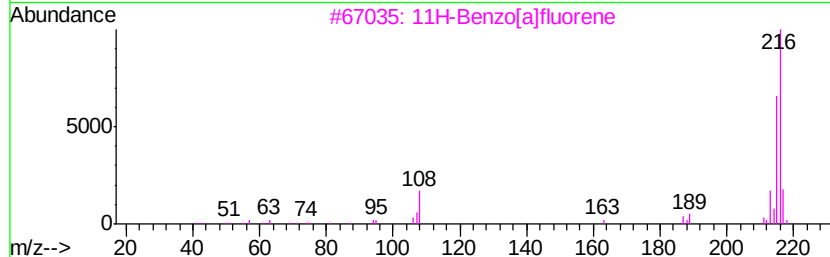
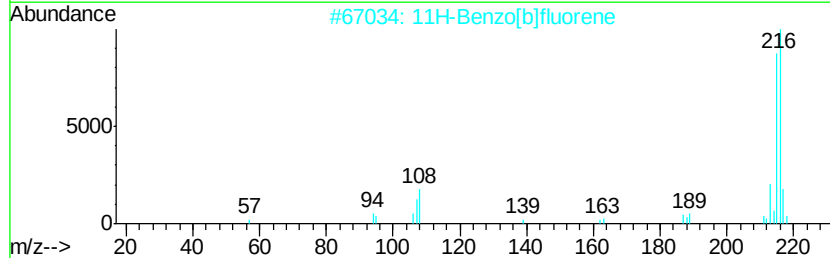
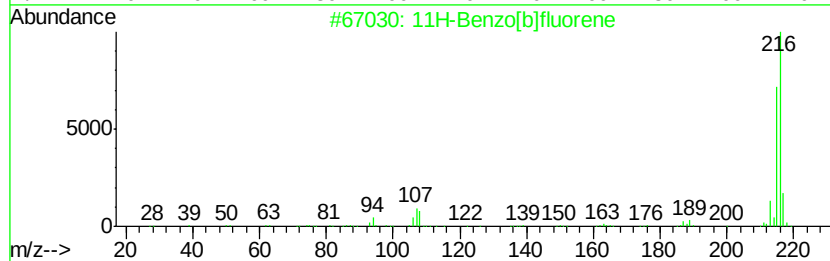
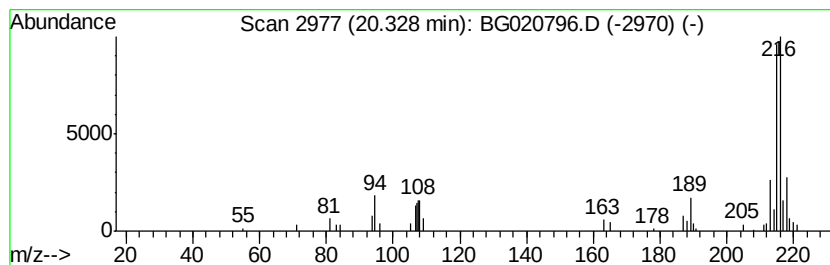
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 10 11H-Benzo[b]fluorene Concentration Rank 11

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 20.33 | 2.22 ng/ul | 53469 | Chrysene-d12     | 21.90 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 81   |
| 2    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 81   |
| 3    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 68   |
| 4    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 68   |
| 5    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 68   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

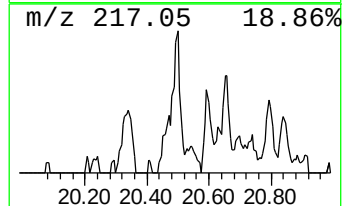
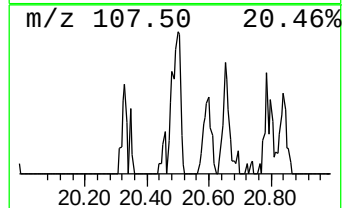
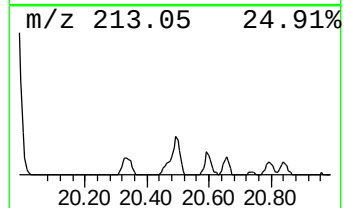
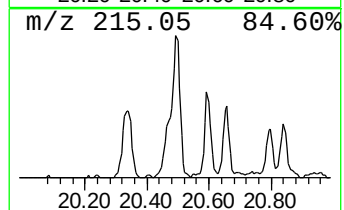
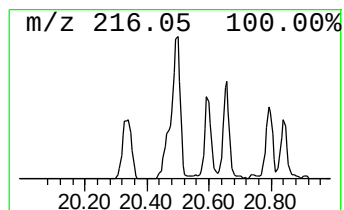
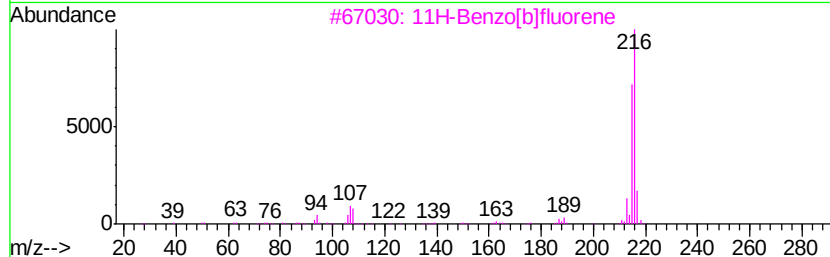
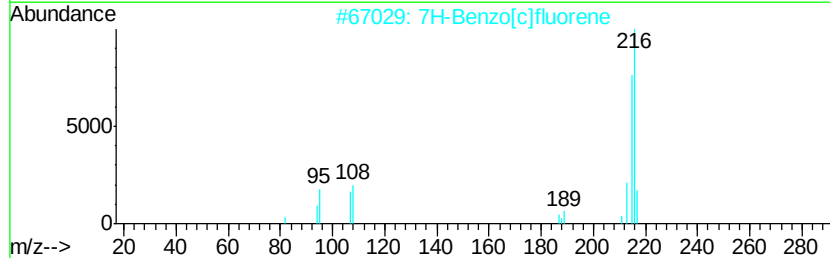
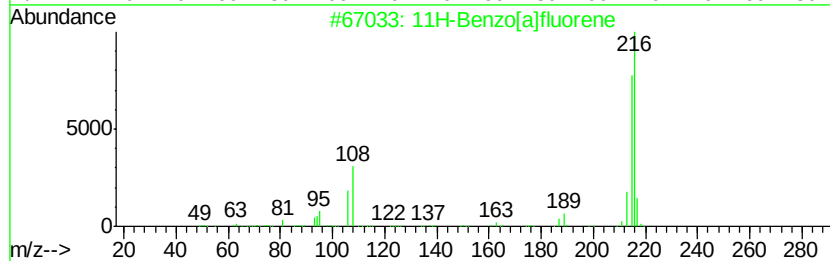
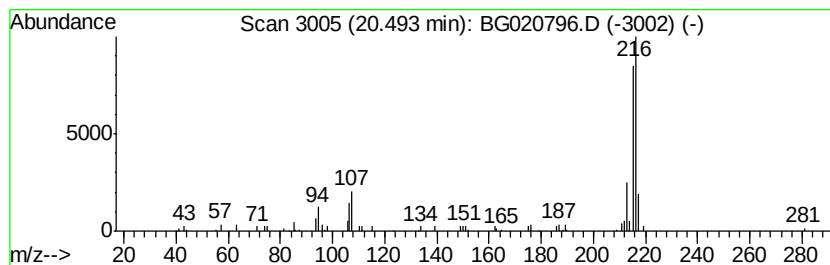
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 11 11H-Benzo[a]fluorene Concentration Rank 9

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 20.49 | 2.42 ng/ul | 58138 | Chrysene-d12     | 21.90 |

| Hit# | of | Tentative ID         | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------|-----|---------|-------------|------|
| 1    | 5  | 11H-Benzo[a]fluorene | 216 | C17H12  | 000238-84-6 | 83   |
| 2    |    | 7H-Benzo[c]fluorene  | 216 | C17H12  | 000205-12-9 | 72   |
| 3    |    | 11H-Benzo[b]fluorene | 216 | C17H12  | 000243-17-4 | 72   |
| 4    |    | 11H-Benzo[b]fluorene | 216 | C17H12  | 000243-17-4 | 64   |
| 5    |    | 11H-Benzo[b]fluorene | 216 | C17H12  | 000243-17-4 | 59   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

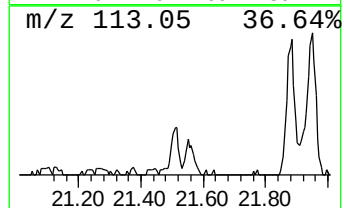
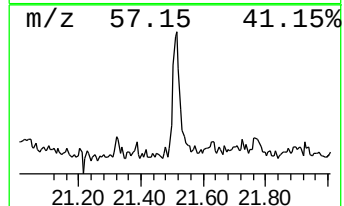
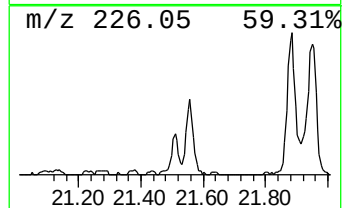
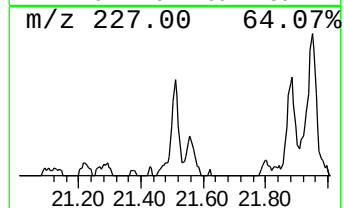
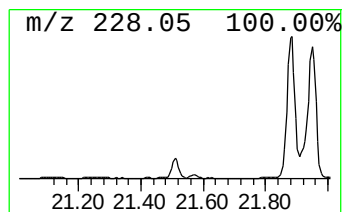
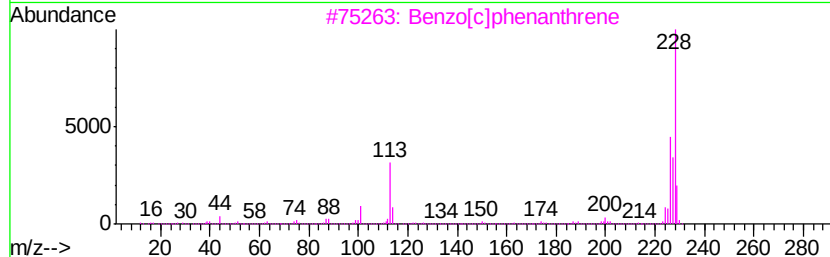
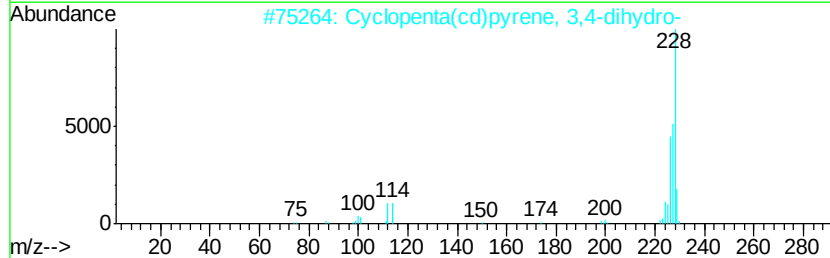
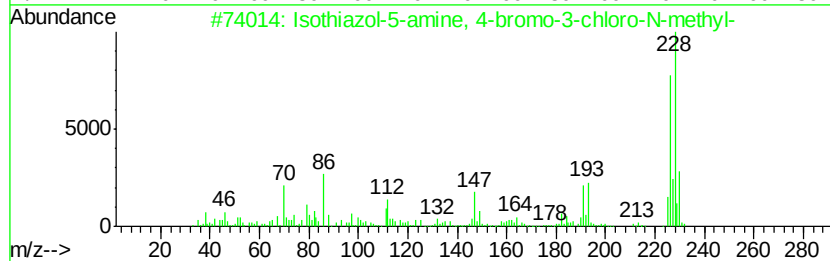
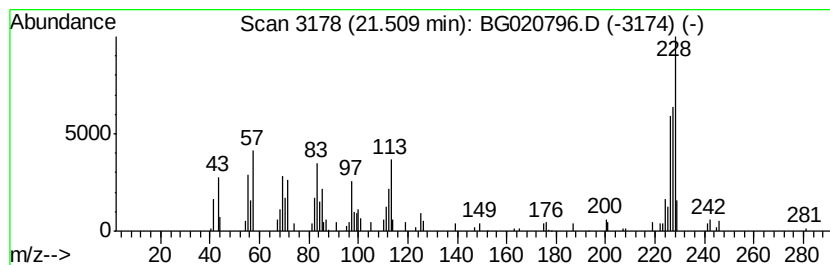
Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

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

\*\*\*\*\*  
Peak Number 12 unknown-01 Concentration Rank 10

| R.T.    | EstConc    | Area                                | Relative to ISTD | R.T.        |              |      |
|---------|------------|-------------------------------------|------------------|-------------|--------------|------|
| 21.51   | 2.32 ng/ul | 55823                               | Chrysene-d12     | 21.90       |              |      |
| Hit# of | 5          | Tentative ID                        | MW               | MolForm     | CAS#         | Qual |
| 1       |            | Isothiazol-5-amine, 4-bromo-3-ch... | 226              | C4H4BrClN2S | 1000272-59-9 | 46   |
| 2       |            | Cyclopenta(cd)pyrene, 3,4-dihydro-  | 228              | C18H12      | 025732-74-5  | 38   |
| 3       |            | Benzo[c]phenanthrene                | 228              | C18H12      | 000195-19-7  | 38   |
| 4       |            | Diphenylvinylphosphine oxide        | 228              | C14H13OP    | 002096-78-8  | 35   |
| 5       |            | Benzo[c]phenanthrene                | 228              | C18H12      | 000195-19-7  | 32   |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA CALIBRATION

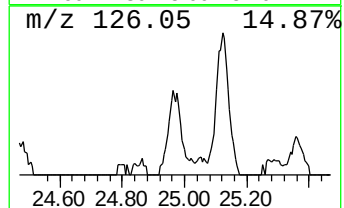
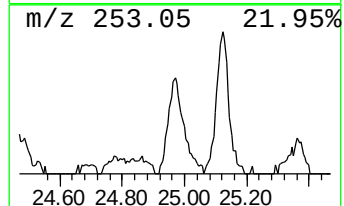
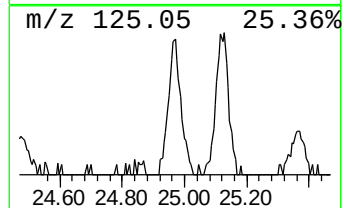
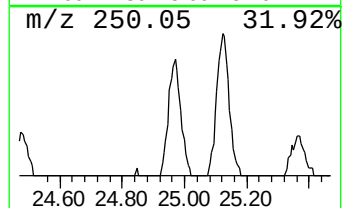
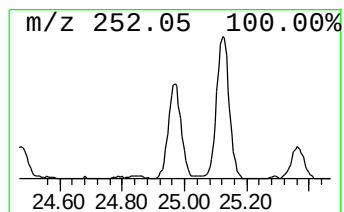
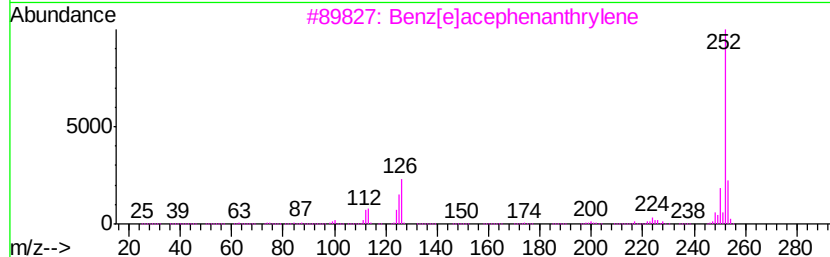
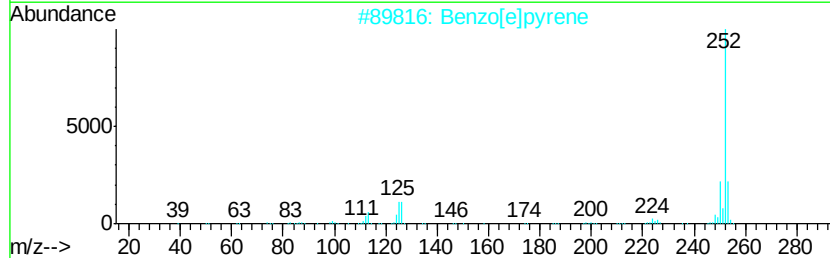
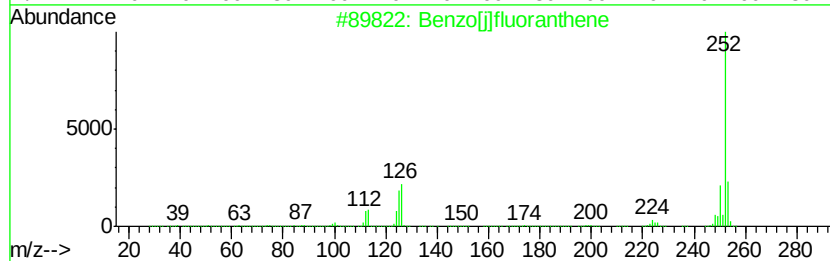
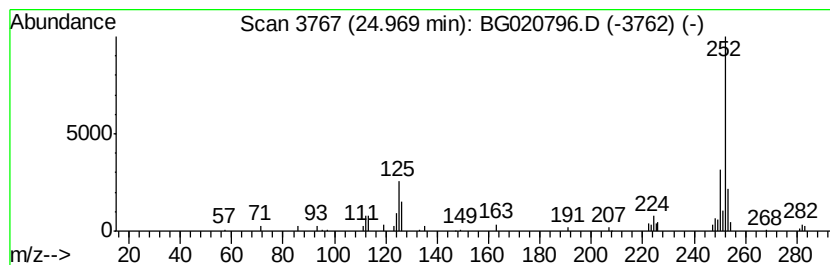
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 13 Benzo[j]fluoranthene Concentration Rank 7

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 24.97 | 2.75 ng/ul | 36467 | Perylene-d12     | 25.29 |

| Hit# | of | 5 | Tentative ID              | MW  | MolForm | CAS#        | Qual |
|------|----|---|---------------------------|-----|---------|-------------|------|
| 1    |    |   | Benzo[i]fluoranthene      | 252 | C20H12  | 000205-82-3 | 91   |
| 2    |    |   | Benzo[e]pyrene            | 252 | C20H12  | 000192-97-2 | 91   |
| 3    |    |   | Benzo[a]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 90   |
| 4    |    |   | Perylene                  | 252 | C20H12  | 000198-55-0 | 81   |
| 5    |    |   | Benzo[e]pyrene            | 252 | C20H12  | 000192-97-2 | 81   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG020416\  
Data File : BG020796.D  
Acq On : 4 Feb 2016 21:45  
Operator : SJ/IZ  
Sample : H1334-19  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
BBG16

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG012716.M  
Quant Title : SVOA 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 |
| Butane, 2-methoxy... | 3.34  | 25.5    | ng/ul | 142835   | 1                     | 8.27  | 112218 | 20.0 |
| Anthracene, 1-met... | 18.49 | 4.1     | ng/ul | 57943    | 4                     | 17.62 | 284673 | 20.0 |
| 4H-Cyclopenta[def... | 18.68 | 4.9     | ng/ul | 70149    | 4                     | 17.62 | 284673 | 20.0 |
| 9,10-Bis(bromomet... | 18.98 | 2.0     | ng/ul | 28856    | 4                     | 17.62 | 284673 | 20.0 |
| 9,10-Anthracenedione | 19.02 | 2.8     | ng/ul | 40303    | 4                     | 17.62 | 284673 | 20.0 |
| Anthracene, 1,4-d... | 19.39 | 2.7     | ng/ul | 38956    | 4                     | 17.62 | 284673 | 20.0 |
| Cyclopenta(def)ph... | 19.53 | 2.1     | ng/ul | 29803    | 4                     | 17.62 | 284673 | 20.0 |
| 11H-Benzo[b]fluorene | 20.33 | 2.2     | ng/ul | 53469    | 5                     | 21.90 | 480908 | 20.0 |
| 11H-Benzo[a]fluorene | 20.49 | 2.4     | ng/ul | 58138    | 5                     | 21.90 | 480908 | 20.0 |
| unknown-01           | 21.51 | 2.3     | ng/ul | 55823    | 5                     | 21.90 | 480908 | 20.0 |
| Benzo[j]fluoranthene | 24.97 | 2.8     | ng/ul | 36467    | 6                     | 25.29 | 264803 | 20.0 |