

Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
 Data File : BG021868.D  
 Acq On : 12 May 2016 14:34  
 Operator : UM/SJ  
 Sample : H2936-09 2X  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 D9WJ8

## 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-BG050916.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         | 7.323       | 755           | 763         | 772          | rBV2     | 61358          | 132172        | 1.38%           | 0.162%        |
| 2         | 7.494       | 783           | 792         | 806          | rBV      | 54867          | 116677        | 1.22%           | 0.143%        |
| 3         | 7.699       | 819           | 827         | 837          | rBV      | 81916          | 167107        | 1.75%           | 0.205%        |
| 4         | 8.175       | 900           | 908         | 924          | rBV      | 155242         | 326298        | 3.42%           | 0.401%        |
| 5         | 8.874       | 1020          | 1027        | 1037         | rBV2     | 90201          | 198333        | 2.08%           | 0.244%        |
| 6         | 9.344       | 1099          | 1107        | 1115         | rBV      | 59259          | 134017        | 1.40%           | 0.165%        |
| 7         | 10.067      | 1224          | 1230        | 1243         | rBV      | 52162          | 122011        | 1.28%           | 0.150%        |
| 8         | 10.608      | 1313          | 1322        | 1332         | rBV      | 104305         | 228803        | 2.40%           | 0.281%        |
| 9         | 10.990      | 1377          | 1387        | 1405         | rBV      | 302814         | 658994        | 6.90%           | 0.810%        |
| 10        | 11.131      | 1405          | 1411        | 1422         | rBV3     | 41197          | 118260        | 1.24%           | 0.145%        |
| 11        | 12.641      | 1663          | 1668        | 1675         | rBV2     | 6638           | 14408         | 0.15%           | 0.018%        |
| 12        | 12.858      | 1699          | 1705        | 1710         | rBV      | 6315           | 12382         | 0.13%           | 0.015%        |
| 13        | 14.192      | 1925          | 1932        | 1937         | rVV      | 244963         | 393146        | 4.12%           | 0.483%        |
| 14        | 14.239      | 1937          | 1940        | 1946         | rVV2     | 42466          | 70625         | 0.74%           | 0.087%        |
| 15        | 14.491      | 1975          | 1983        | 1994         | rBV      | 312259         | 556999        | 5.83%           | 0.684%        |
| 16        | 14.673      | 2008          | 2014        | 2018         | rBV2     | 12691          | 18884         | 0.20%           | 0.023%        |
| 17        | 14.797      | 2023          | 2035        | 2041         | rVV2     | 545051         | 973417        | 10.20%          | 1.196%        |
| 18        | 14.856      | 2041          | 2045        | 2053         | rVB      | 69329          | 125466        | 1.31%           | 0.154%        |
| 19        | 15.003      | 2063          | 2070        | 2079         | rBV4     | 18933          | 65602         | 0.69%           | 0.081%        |
| 20        | 15.196      | 2099          | 2103        | 2111         | rVB      | 8792           | 18682         | 0.20%           | 0.023%        |
| 21        | 15.614      | 2171          | 2174        | 2180         | rVB3     | 17829          | 26039         | 0.27%           | 0.032%        |
| 22        | 15.784      | 2191          | 2203        | 2209         | rBV      | 395997         | 670373        | 7.02%           | 0.824%        |
| 23        | 15.837      | 2209          | 2212        | 2218         | rVB2     | 29892          | 51811         | 0.54%           | 0.064%        |
| 24        | 15.913      | 2218          | 2225        | 2226         | rBV6     | 9879           | 17028         | 0.18%           | 0.021%        |
| 25        | 16.007      | 2237          | 2241        | 2252         | rVB7     | 12188          | 32184         | 0.34%           | 0.040%        |
| 26        | 16.483      | 2316          | 2322        | 2324         | rBV5     | 22170          | 38746         | 0.41%           | 0.048%        |
| 27        | 17.194      | 2437          | 2443        | 2451         | rVV2     | 14300          | 27282         | 0.29%           | 0.034%        |
| 28        | 17.288      | 2451          | 2459        | 2464         | rVV4     | 25012          | 66001         | 0.69%           | 0.081%        |
| 29        | 17.359      | 2467          | 2471        | 2476         | rVB      | 20422          | 34563         | 0.36%           | 0.042%        |
| 30        | 17.535      | 2494          | 2501        | 2505         | rBV      | 611690         | 1061051       | 11.12%          | 1.304%        |
| 31        | 17.582      | 2505          | 2509        | 2514         | rVV      | 498595         | 848144        | 8.88%           | 1.042%        |
| 32        | 17.635      | 2514          | 2518        | 2531         | rVV2     | 370088         | 819468        | 8.58%           | 1.007%        |
| 33        | 17.729      | 2531          | 2534        | 2543         | rVB2     | 19583          | 43643         | 0.46%           | 0.054%        |
| 34        | 17.940      | 2557          | 2570        | 2580         | rBV2     | 86194          | 232557        | 2.44%           | 0.286%        |

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 Max Peaks: 100  
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 Peak separation: 5

Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
 Title : SVOA CALIBRATION

|    |        |      |      |      |      |         |         |        |        |
|----|--------|------|------|------|------|---------|---------|--------|--------|
| 35 | 18.105 | 2594 | 2598 | 2604 | rVB2 | 48996   | 72623   | 0.76%  | 0.089% |
| 36 | 18.263 | 2620 | 2625 | 2632 | rVB9 | 5034    | 12644   | 0.13%  | 0.016% |
| 37 | 18.410 | 2644 | 2650 | 2654 | rBV  | 58376   | 101128  | 1.06%  | 0.124% |
| 38 | 18.457 | 2654 | 2658 | 2667 | rVB2 | 80559   | 143801  | 1.51%  | 0.177% |
| 39 | 18.540 | 2667 | 2672 | 2677 | rVB2 | 23026   | 35723   | 0.37%  | 0.044% |
| 40 | 18.604 | 2677 | 2683 | 2688 | rBV3 | 109018  | 224394  | 2.35%  | 0.276% |
| 41 | 18.710 | 2695 | 2701 | 2705 | rBV4 | 10798   | 20485   | 0.21%  | 0.025% |
| 42 | 18.757 | 2705 | 2709 | 2713 | rBV4 | 10952   | 19813   | 0.21%  | 0.024% |
| 43 | 18.904 | 2729 | 2734 | 2738 | rBV  | 33110   | 53477   | 0.56%  | 0.066% |
| 44 | 18.945 | 2738 | 2741 | 2747 | rVB4 | 15017   | 25085   | 0.26%  | 0.031% |
| 45 | 19.145 | 2771 | 2775 | 2780 | rVV4 | 19526   | 29590   | 0.31%  | 0.036% |
| 46 | 19.198 | 2780 | 2784 | 2787 | rVV4 | 12355   | 17325   | 0.18%  | 0.021% |
| 47 | 19.233 | 2787 | 2790 | 2796 | rVB4 | 13250   | 20303   | 0.21%  | 0.025% |
| 48 | 19.321 | 2799 | 2805 | 2810 | rBV2 | 37708   | 74955   | 0.79%  | 0.092% |
| 49 | 19.386 | 2810 | 2816 | 2823 | rVB4 | 21959   | 55067   | 0.58%  | 0.068% |
| 50 | 19.462 | 2823 | 2829 | 2835 | rBV3 | 30574   | 63158   | 0.66%  | 0.078% |
| 51 | 19.527 | 2836 | 2840 | 2843 | rBV  | 21356   | 30872   | 0.32%  | 0.038% |
| 52 | 19.585 | 2843 | 2850 | 2856 | rBV  | 1928271 | 3040072 | 31.85% | 3.735% |
| 53 | 19.679 | 2862 | 2866 | 2870 | rVB3 | 31532   | 48324   | 0.51%  | 0.059% |
| 54 | 19.767 | 2877 | 2881 | 2883 | rBV3 | 15263   | 23502   | 0.25%  | 0.029% |
| 55 | 19.826 | 2885 | 2891 | 2899 | rVB2 | 74308   | 157621  | 1.65%  | 0.194% |
| 56 | 19.914 | 2899 | 2906 | 2907 | rBV2 | 861619  | 1152781 | 12.08% | 1.416% |
| 57 | 19.944 | 2907 | 2911 | 2918 | rVV  | 1941796 | 3238403 | 33.92% | 3.978% |
| 58 | 20.008 | 2918 | 2922 | 2931 | rVB  | 65401   | 116043  | 1.22%  | 0.143% |
| 59 | 20.120 | 2935 | 2941 | 2945 | rBV  | 73347   | 120196  | 1.26%  | 0.148% |
| 60 | 20.179 | 2945 | 2951 | 2958 | rBV  | 174350  | 286674  | 3.00%  | 0.352% |
| 61 | 20.261 | 2958 | 2965 | 2971 | rBV5 | 138535  | 321874  | 3.37%  | 0.395% |
| 62 | 20.320 | 2971 | 2975 | 2980 | rVB  | 89155   | 127552  | 1.34%  | 0.157% |
| 63 | 20.426 | 2981 | 2993 | 2999 | rBV  | 417990  | 959990  | 10.06% | 1.179% |
| 64 | 20.525 | 3005 | 3010 | 3015 | rBV  | 334088  | 560539  | 5.87%  | 0.689% |
| 65 | 20.590 | 3016 | 3021 | 3024 | rVV2 | 173950  | 319668  | 3.35%  | 0.393% |
| 66 | 20.625 | 3024 | 3027 | 3031 | rVB  | 112891  | 152698  | 1.60%  | 0.188% |
| 67 | 20.725 | 3039 | 3044 | 3048 | rBV  | 179737  | 280789  | 2.94%  | 0.345% |
| 68 | 20.772 | 3048 | 3052 | 3061 | rVB  | 148562  | 262462  | 2.75%  | 0.322% |
| 69 | 21.031 | 3092 | 3096 | 3097 | rBV4 | 39603   | 51582   | 0.54%  | 0.063% |
| 70 | 21.072 | 3099 | 3103 | 3112 | rVB2 | 171275  | 348306  | 3.65%  | 0.428% |
| 71 | 21.160 | 3112 | 3118 | 3121 | rBV4 | 75089   | 160046  | 1.68%  | 0.197% |

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## Integration Parameters: LSCINT.P

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Peak Location: TOP

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Peak separation: 5

Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Title : SVOA CALIBRATION

|     |        |      |      |      |      |         |         |         |         |
|-----|--------|------|------|------|------|---------|---------|---------|---------|
| 72  | 21.201 | 3121 | 3125 | 3132 | rVB2 | 109209  | 230763  | 2.42%   | 0.283%  |
| 73  | 21.395 | 3149 | 3158 | 3162 | rBV  | 419937  | 885016  | 9.27%   | 1.087%  |
| 74  | 21.436 | 3162 | 3165 | 3169 | rVB  | 213132  | 286990  | 3.01%   | 0.353%  |
| 75  | 21.495 | 3169 | 3175 | 3180 | rBV3 | 290550  | 582798  | 6.11%   | 0.716%  |
| 76  | 21.695 | 3197 | 3209 | 3215 | rBV2 | 471991  | 1042608 | 10.92%  | 1.281%  |
| 77  | 21.812 | 3217 | 3229 | 3236 | rVV3 | 2283639 | 6646157 | 69.62%  | 8.165%  |
| 78  | 21.877 | 3236 | 3240 | 3253 | rVB  | 2039809 | 3999959 | 41.90%  | 4.914%  |
| 79  | 22.030 | 3261 | 3266 | 3273 | rBV  | 347030  | 642116  | 6.73%   | 0.789%  |
| 80  | 22.182 | 3287 | 3292 | 3297 | rVB  | 277214  | 472045  | 4.94%   | 0.580%  |
| 81  | 22.247 | 3297 | 3303 | 3310 | rVV3 | 451158  | 954337  | 10.00%  | 1.172%  |
| 82  | 22.312 | 3310 | 3314 | 3325 | rVB6 | 84161   | 203772  | 2.13%   | 0.250%  |
| 83  | 22.576 | 3351 | 3359 | 3365 | rVV2 | 267788  | 696094  | 7.29%   | 0.855%  |
| 84  | 22.652 | 3367 | 3372 | 3379 | rVB  | 174853  | 378026  | 3.96%   | 0.464%  |
| 85  | 22.799 | 3393 | 3397 | 3402 | rVB2 | 108806  | 205241  | 2.15%   | 0.252%  |
| 86  | 22.864 | 3402 | 3408 | 3412 | rVV2 | 196386  | 459325  | 4.81%   | 0.564%  |
| 87  | 22.911 | 3412 | 3416 | 3425 | rVB4 | 285877  | 661025  | 6.92%   | 0.812%  |
| 88  | 23.005 | 3425 | 3432 | 3447 | rVB5 | 156477  | 485124  | 5.08%   | 0.596%  |
| 89  | 23.728 | 3547 | 3555 | 3563 | rBV3 | 188825  | 582455  | 6.10%   | 0.716%  |
| 90  | 24.127 | 3609 | 3623 | 3630 | rBV  | 2429415 | 9546026 | 100.00% | 11.728% |
| 91  | 24.374 | 3658 | 3665 | 3675 | rVB  | 342814  | 878745  | 9.21%   | 1.080%  |
| 92  | 24.597 | 3695 | 3703 | 3712 | rBV4 | 120104  | 423130  | 4.43%   | 0.520%  |
| 93  | 24.879 | 3739 | 3751 | 3766 | rBV2 | 1437961 | 5623653 | 58.91%  | 6.909%  |
| 94  | 25.044 | 3767 | 3779 | 3789 | rVB  | 2155945 | 6999809 | 73.33%  | 8.599%  |
| 95  | 25.179 | 3794 | 3802 | 3808 | rVV  | 416349  | 1257901 | 13.18%  | 1.545%  |
| 96  | 25.267 | 3809 | 3817 | 3830 | rVB3 | 762385  | 2572839 | 26.95%  | 3.161%  |
| 97  | 26.289 | 3979 | 3991 | 4000 | rBV4 | 85286   | 411763  | 4.31%   | 0.506%  |
| 98  | 26.612 | 4040 | 4046 | 4057 | rVB4 | 134369  | 420161  | 4.40%   | 0.516%  |
| 99  | 29.068 | 4445 | 4464 | 4482 | rVB3 | 1225164 | 7387172 | 77.38%  | 9.075%  |
| 100 | 30.267 | 4645 | 4668 | 4680 | rBV2 | 904078  | 5312654 | 55.65%  | 6.527%  |

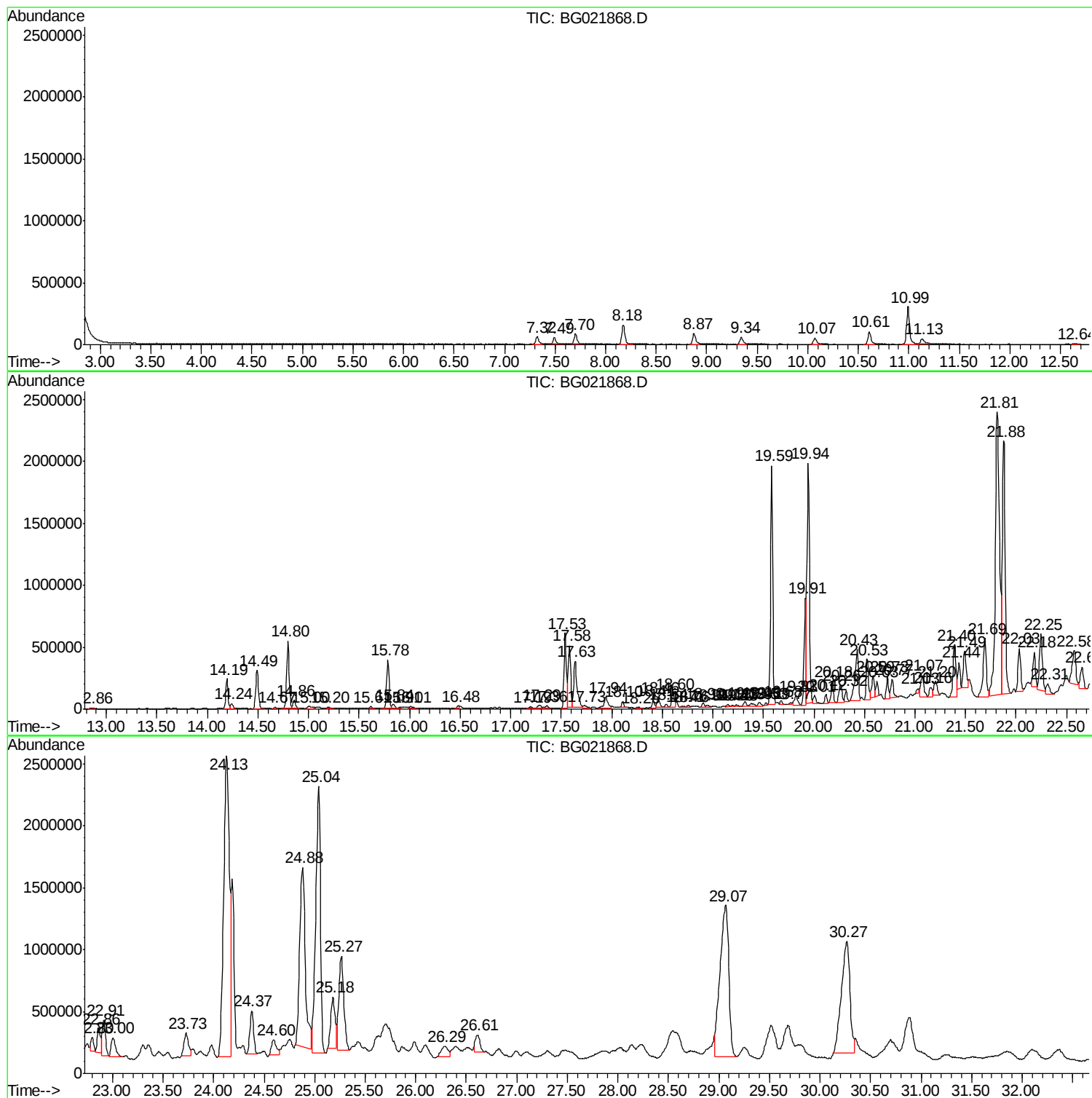
Sum of corrected areas: 81398442

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Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

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



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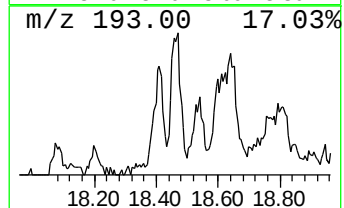
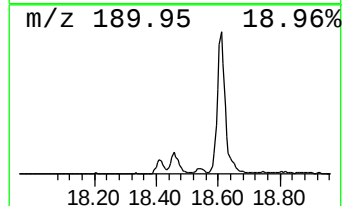
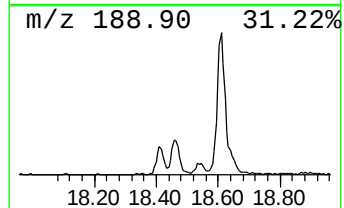
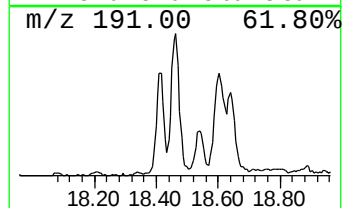
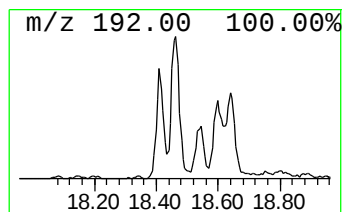
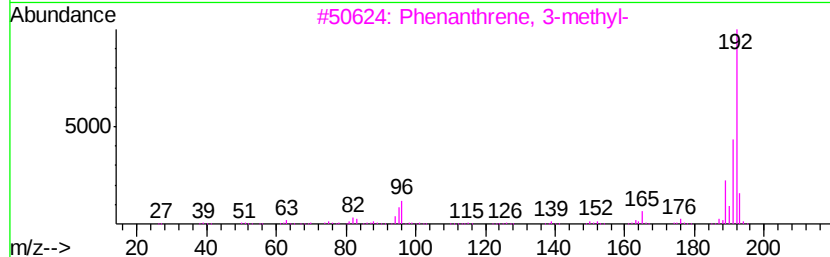
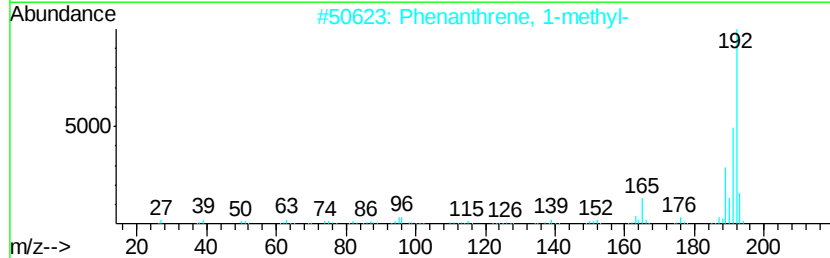
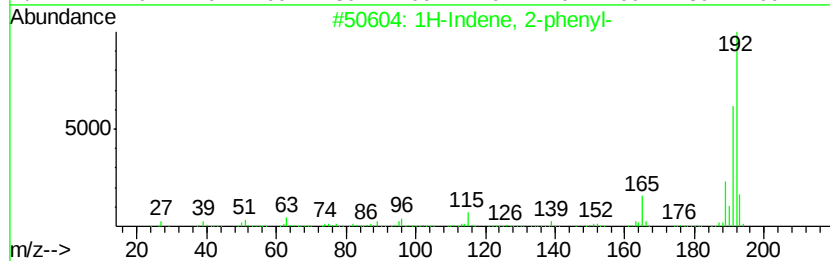
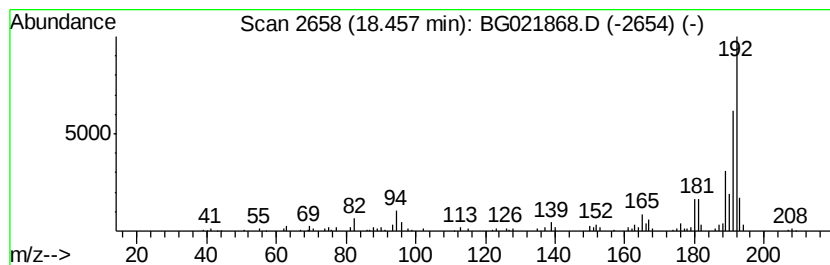
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Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 1 1H-Indene, 2-phenyl- Concentration Rank 11

| R.T.      | EstConc                 | Area   | Relative to ISTD | R.T.        |      |
|-----------|-------------------------|--------|------------------|-------------|------|
| 18.46     | 2.71 ng/ul              | 143801 | Phenanthrene-d10 | 17.53       |      |
| Hit# of 5 | Tentative ID            | MW     | MolForm          | CAS#        | Qual |
| 1         | 1H-Indene, 2-phenyl-    | 192    | C15H12           | 004505-48-0 | 86   |
| 2         | Phenanthrene, 1-methyl- | 192    | C15H12           | 000832-69-9 | 86   |
| 3         | Phenanthrene, 3-methyl- | 192    | C15H12           | 000832-71-3 | 76   |
| 4         | Phenanthrene, 2-methyl- | 192    | C15H12           | 002531-84-2 | 76   |
| 5         | Anthracene, 9-methyl-   | 192    | C15H12           | 000779-02-2 | 76   |



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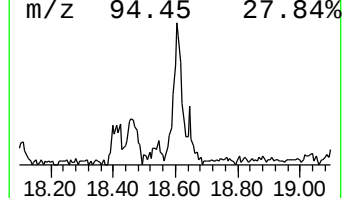
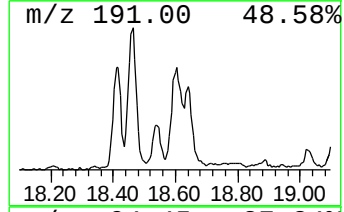
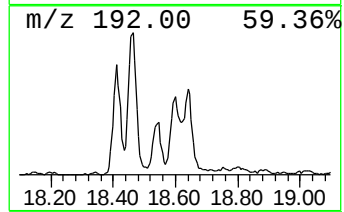
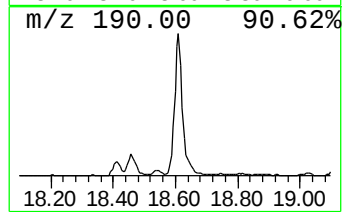
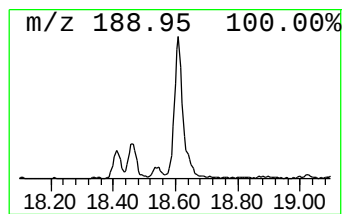
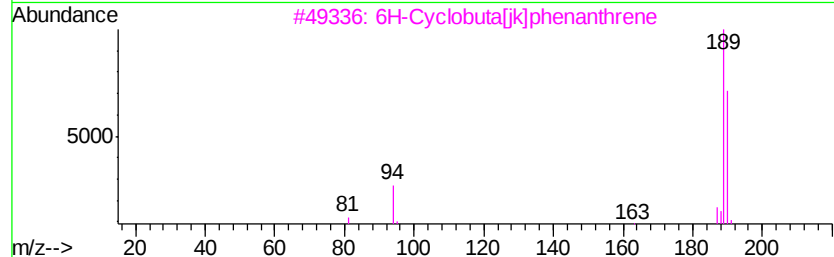
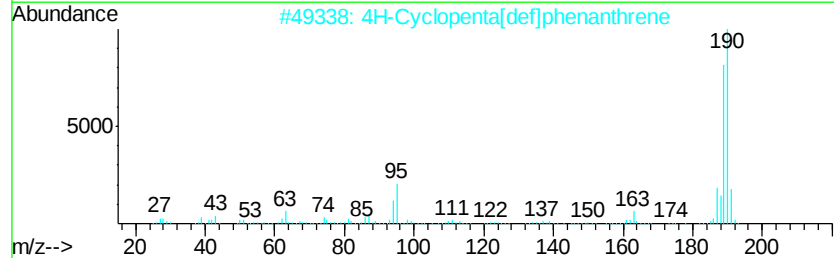
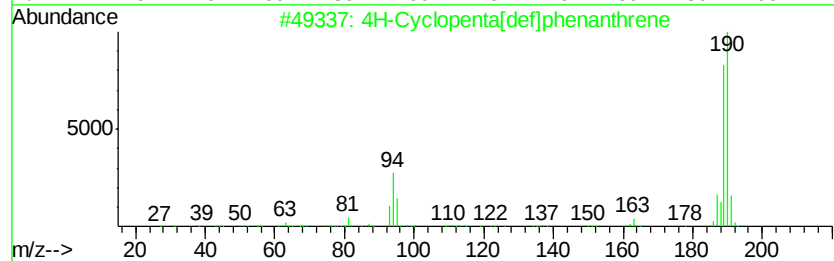
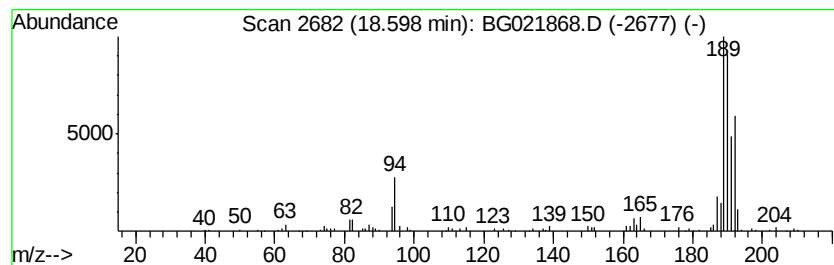
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 2 4H-Cyclopenta[def]phenanthrene Concentration Rank 8

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.60 | 4.23 ng/ul | 224394 | Phenanthrene-d10 | 17.53 |

| Hit# | of | Tentative ID                    | MW  | MolForm  | CAS#        | Qual |
|------|----|---------------------------------|-----|----------|-------------|------|
| 1    | 5  | 4H-Cyclopenta[def]phenanthrene  | 190 | C15H10   | 000203-64-5 | 95   |
| 2    |    | 4H-Cyclopenta[def]phenanthrene  | 190 | C15H10   | 000203-64-5 | 70   |
| 3    |    | 6H-Cyclobuta[jk]phenanthrene    | 190 | C15H10   | 083469-43-6 | 64   |
| 4    |    | 4H-Cyclopenta[def]phenanthrene  | 190 | C15H10   | 000203-64-5 | 64   |
| 5    |    | 2,2'-Bis(4,5-dimethylimidazole) | 190 | C10H14N4 | 069286-06-2 | 45   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

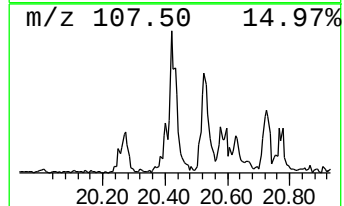
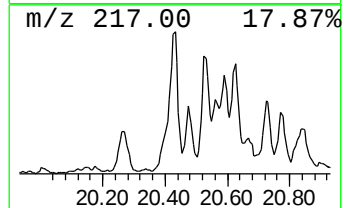
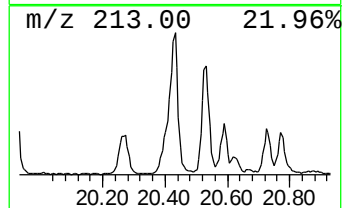
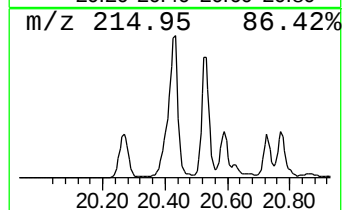
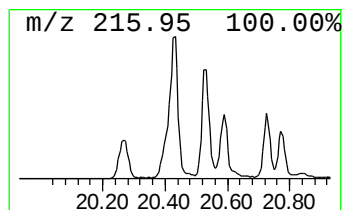
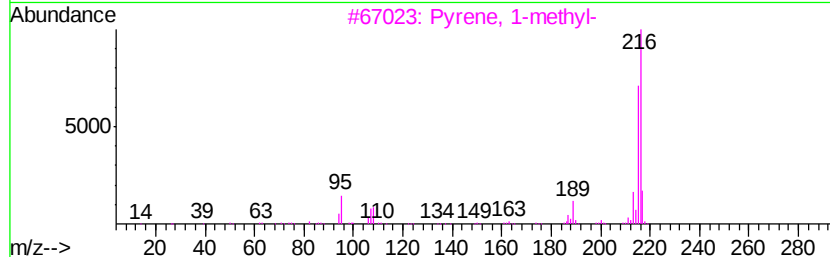
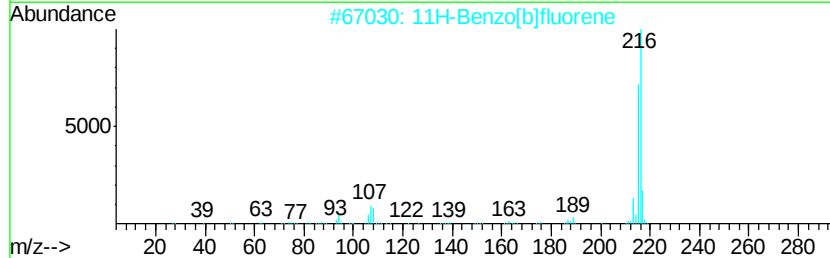
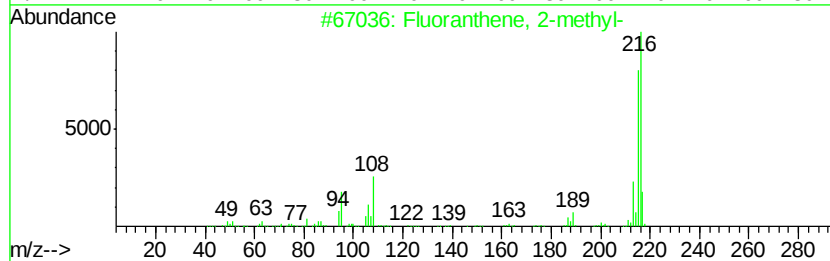
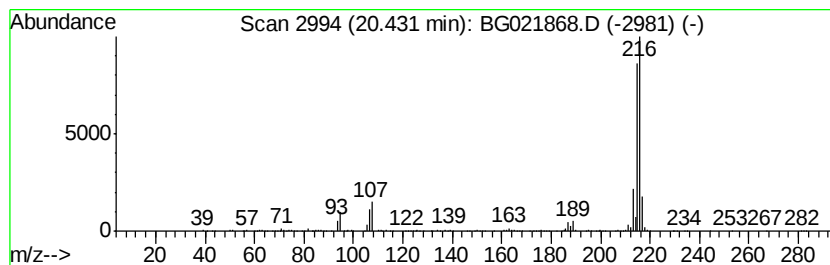
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 3 Fluoranthene, 2-methyl- Concentration Rank 9

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 20.43 | 2.89 ng/ul | 959990 | Chrysene-d12     | 21.83 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 95   |
| 2    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 94   |
| 3    |    | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 93   |
| 4    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 87   |
| 5    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 87   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

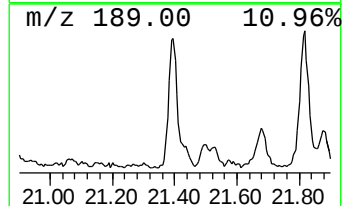
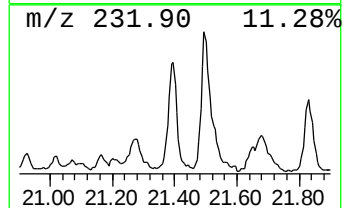
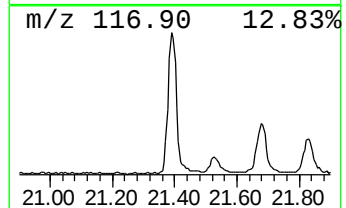
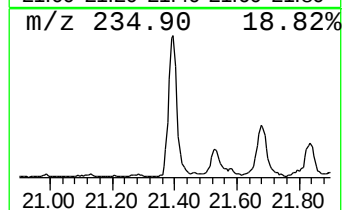
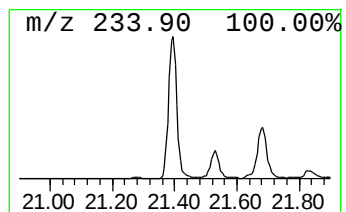
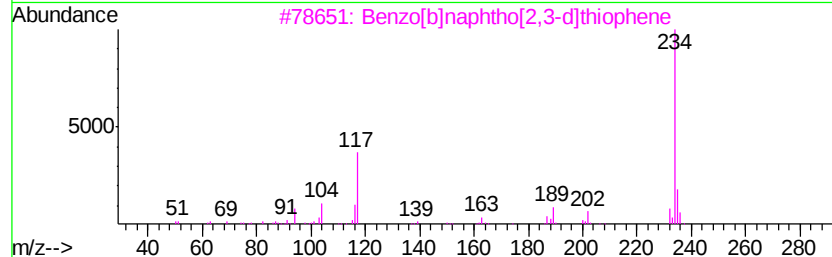
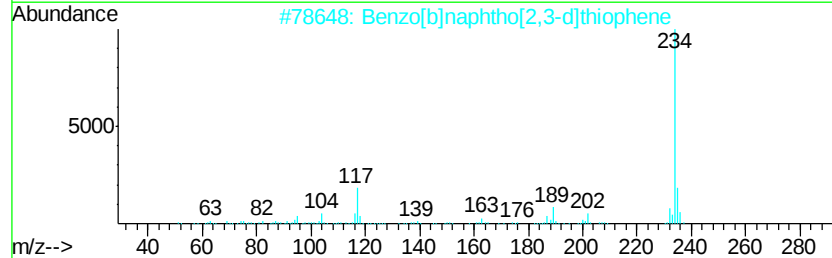
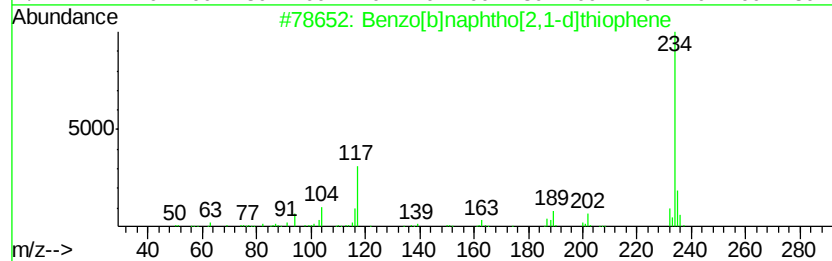
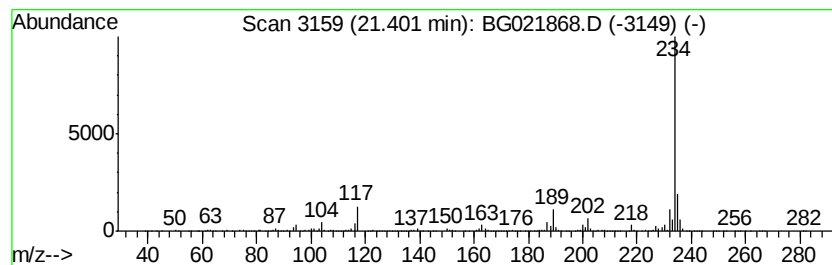
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 4 Benzo[b]naphtho[2,1-d]thiop... Concentration Rank 12

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 21.40 | 2.66 ng/ul | 885016 | Chrysene-d12     | 21.83 |

| Hit# | of | Tentative ID                    | MW  | MolForm | CAS#        | Qual |
|------|----|---------------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 97   |
| 2    |    | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 96   |
| 3    |    | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 96   |
| 4    |    | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 94   |
| 5    |    | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 94   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

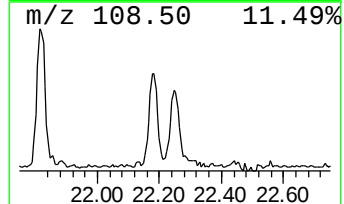
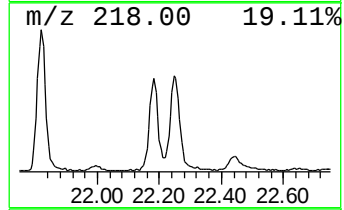
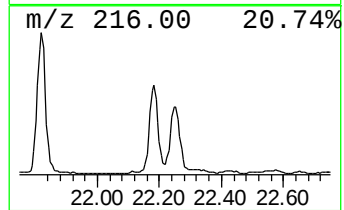
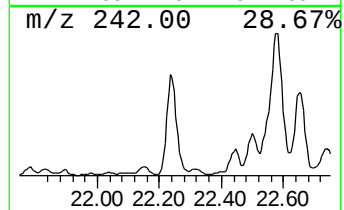
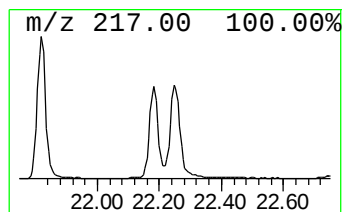
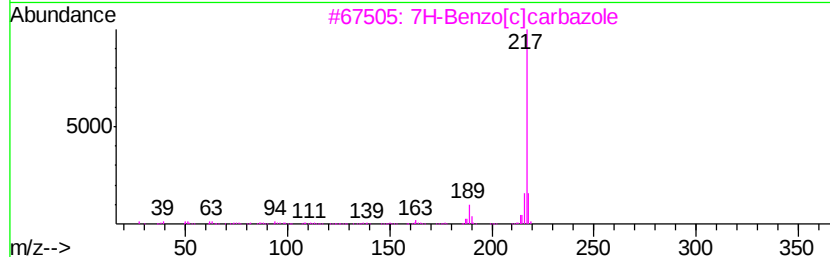
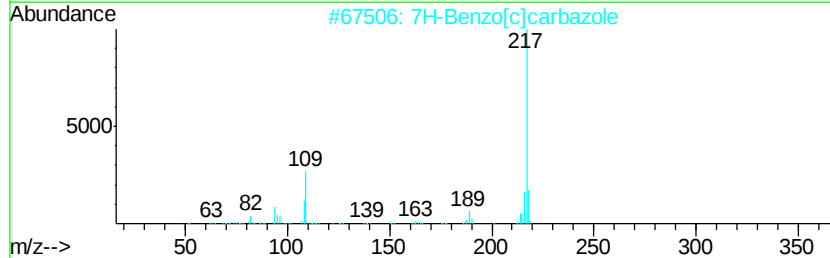
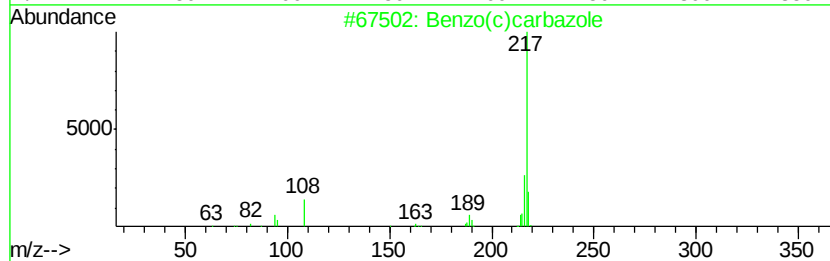
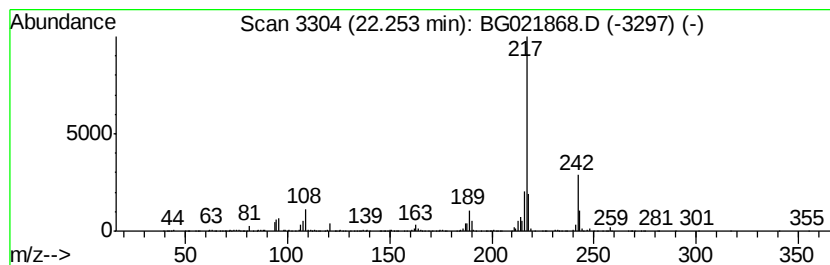
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 5 Benzo(c)carbazole Concentration Rank 10

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 22.25 | 2.87 ng/ul | 954337 | Chrysene-d12     | 21.83 |

| Hit# | of | Tentative ID          | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo(c)carbazole     | 217 | C16H11N | 034777-33-8 | 93   |
| 2    |    | 7H-Benzo[c]carbazole  | 217 | C16H11N | 000205-25-4 | 70   |
| 3    |    | 7H-Benzo[c]carbazole  | 217 | C16H11N | 000205-25-4 | 64   |
| 4    |    | 11H-Benzo[a]carbazole | 217 | C16H11N | 000239-01-0 | 64   |
| 5    |    | 11H-Benzo[a]carbazole | 217 | C16H11N | 000239-01-0 | 64   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

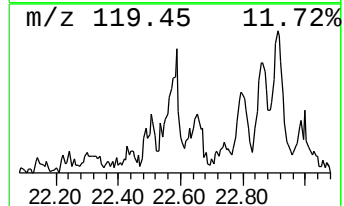
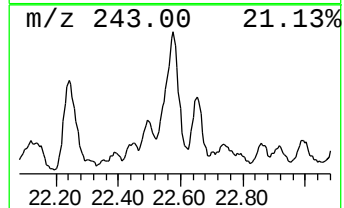
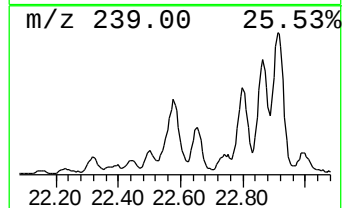
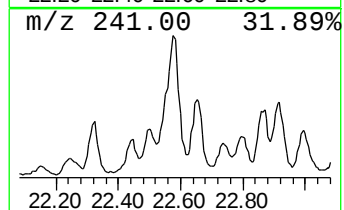
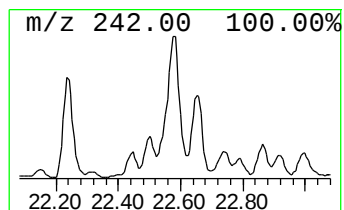
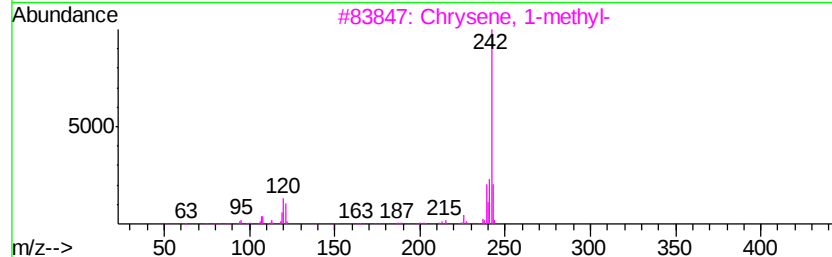
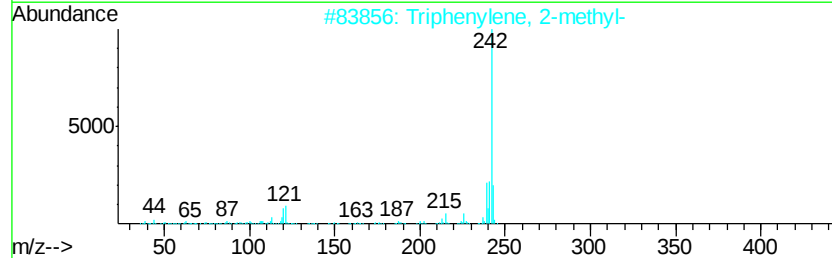
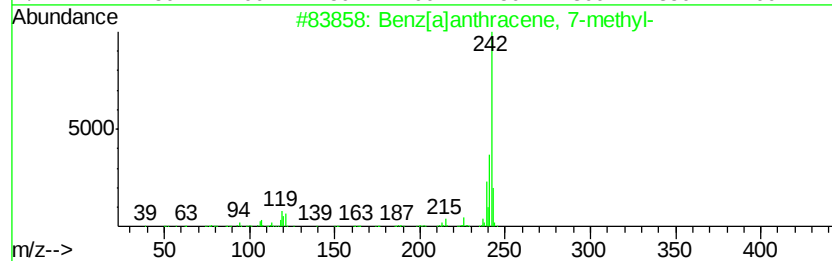
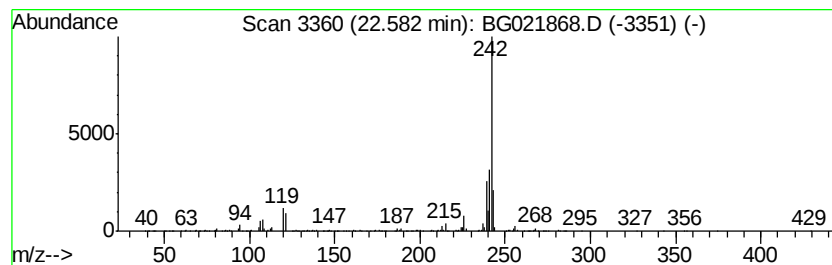
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 6 Benz[a]anthracene, 7-methyl- Concentration Rank 13

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 22.58 | 2.09 ng/ul | 696094 | Chrysene-d12     | 21.83 |

| Hit# | of | Tentative ID                 | MW  | MolForm | CAS#        | Qual |
|------|----|------------------------------|-----|---------|-------------|------|
| 1    | 5  | Benz[a]anthracene, 7-methyl- | 242 | C19H14  | 002541-69-7 | 96   |
| 2    |    | Triphenylene, 2-methyl-      | 242 | C19H14  | 001705-84-6 | 95   |
| 3    |    | Chrysene, 1-methyl-          | 242 | C19H14  | 003351-28-8 | 94   |
| 4    |    | Benz[a]anthracene, 8-methyl- | 242 | C19H14  | 002381-31-9 | 93   |
| 5    |    | Benz[a]anthracene, 7-methyl- | 242 | C19H14  | 002541-69-7 | 93   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

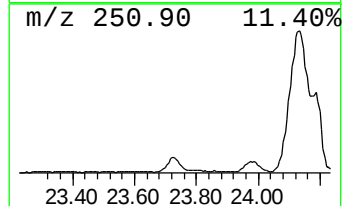
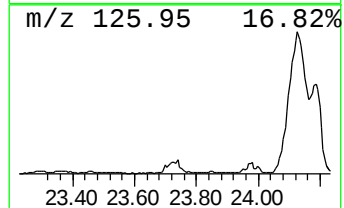
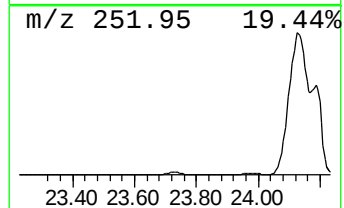
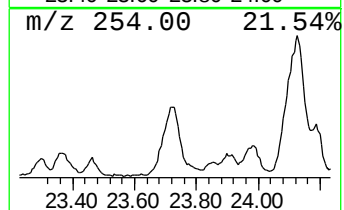
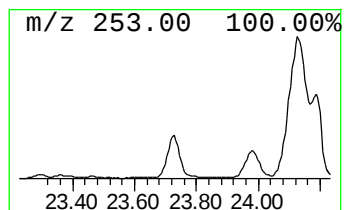
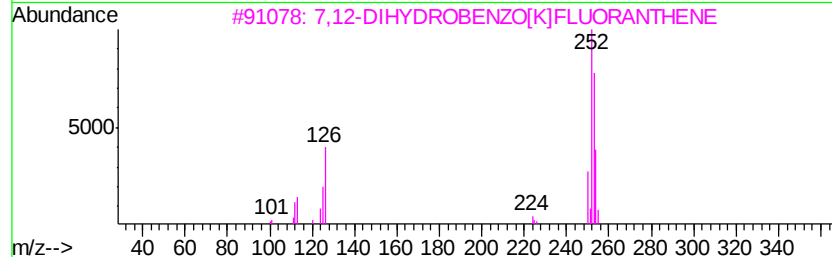
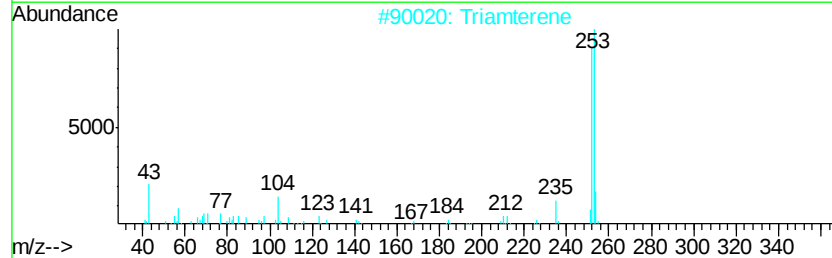
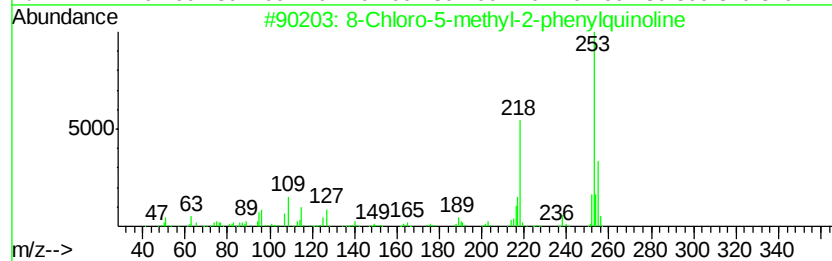
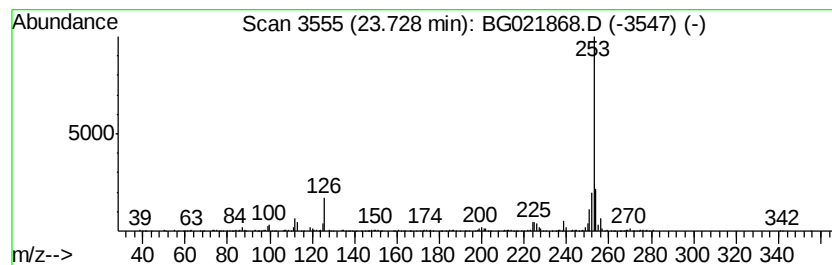
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 7 8-Chloro-5-methyl-2-phenylq... Concentration Rank 4

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 23.73 | 9.26 ng/ul | 582455 | Perylene-d12     | 25.18 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | 8-Chloro-5-methyl-2-phenylquinoline | 253 | C16H12ClN | 025413-16-5  | 64   |
| 2    |    | Triamterene                         | 253 | C12H11N7  | 000396-01-0  | 52   |
| 3    |    | 7,12-DIHYDROBENZO[K]FLUORANTHENE    | 254 | C20H14    | 1000080-17-7 | 50   |
| 4    |    | 2,5-Cyclohexadien-1-one, 2,5-dim... | 253 | C17H19NO  | 054245-93-1  | 45   |
| 5    |    | 2(1H)-Quinolinone, 3-hydroxy-4-(... | 253 | C15H11NO3 | 014484-44-7  | 42   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

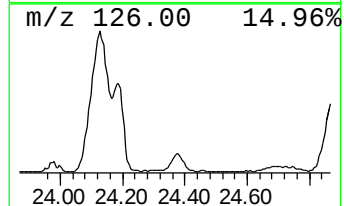
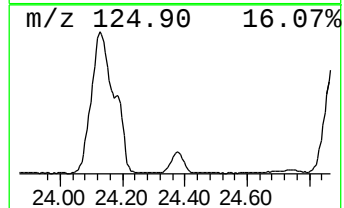
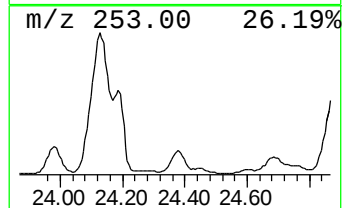
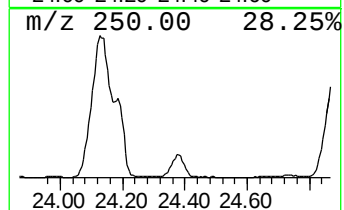
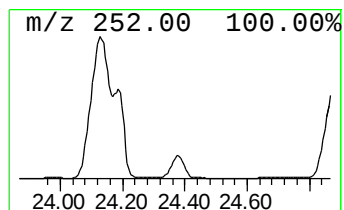
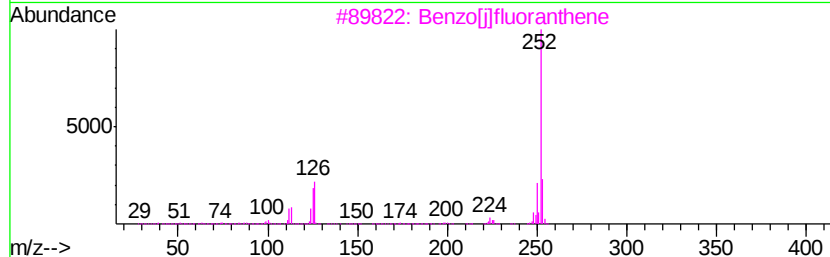
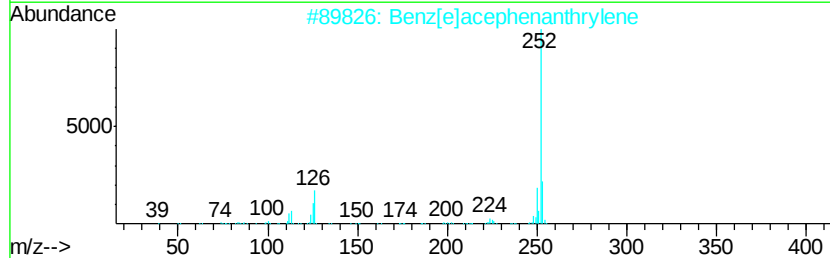
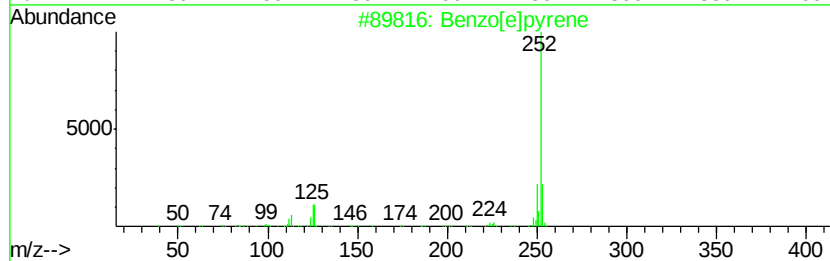
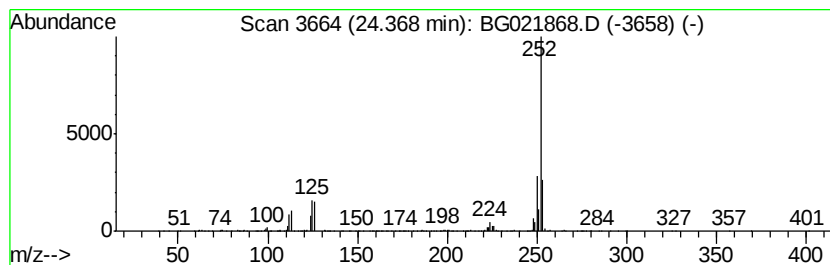
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 8 Benzo[e]pyrene Concentration Rank 3

| R.T.  | EstConc     | Area   | Relative to ISTD | R.T.  |
|-------|-------------|--------|------------------|-------|
| 24.37 | 13.97 ng/ul | 878745 | Perylene-d12     | 25.18 |

| Hit# | of | Tentative ID             | MW  | MolForm | CAS#        | Qual |
|------|----|--------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[e]pyrene           | 252 | C20H12  | 000192-97-2 | 94   |
| 2    |    | Benz[e]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 94   |
| 3    |    | Benzo[j]fluoranthene     | 252 | C20H12  | 000205-82-3 | 93   |
| 4    |    | Benzo[k]fluoranthene     | 252 | C20H12  | 000207-08-9 | 93   |
| 5    |    | Benz[e]acephenanthrylene | 252 | C20H12  | 000205-99-2 | 93   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

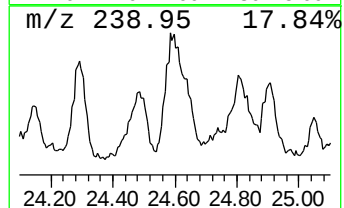
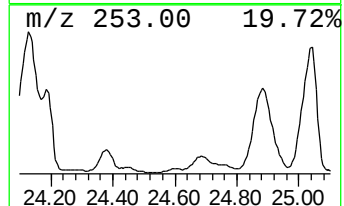
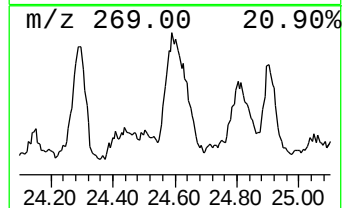
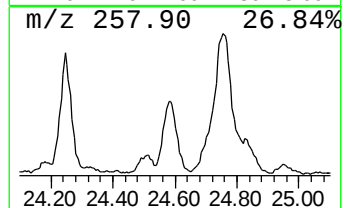
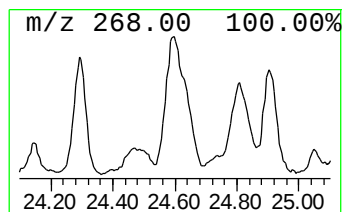
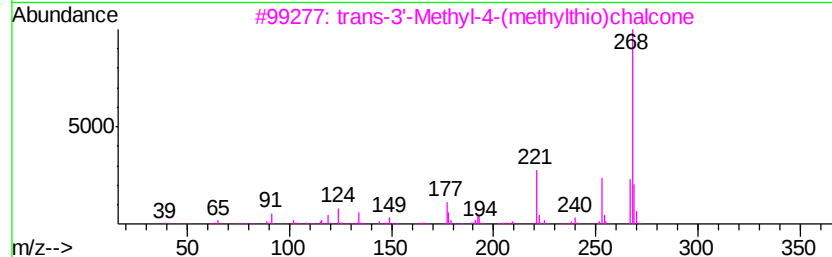
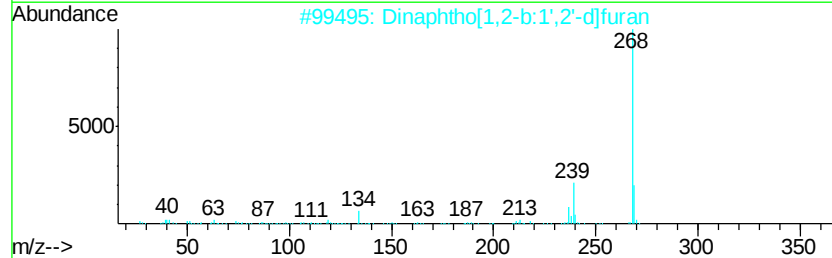
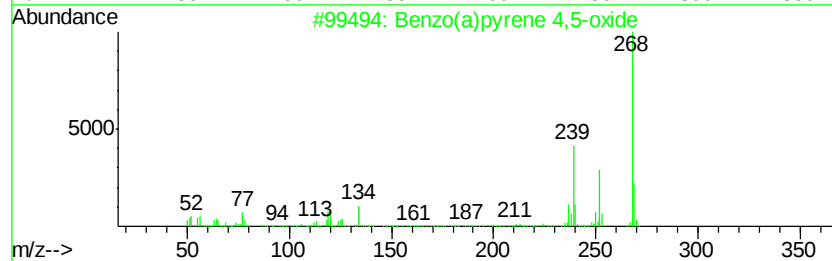
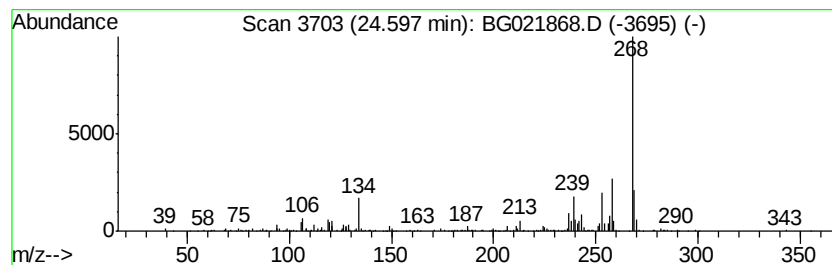
Instrument :  
BNA\_G  
ClientSampled :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 9 Benzo(a)pyrene 4,5-oxide Concentration Rank 5

| R.T.    | EstConc                             | Area         | Relative to ISTD | R.T.      |
|---------|-------------------------------------|--------------|------------------|-----------|
| 24.60   | 6.73 ng/ul                          | 423130       | Perylene-d12     | 25.18     |
| Hit# of | 5                                   | Tentative ID | MW MolForm       | CAS# Qual |
| 1       | Benzo(a)pyrene 4,5-oxide            | 268 C20H12O  | 037574-47-3      | 76        |
| 2       | Dinaphtho[1,2-b:1',2'-d]furan       | 268 C20H12O  | 000207-93-2      | 70        |
| 3       | trans-3'-Methyl-4-(methylthio)ch... | 268 C17H16OS | 131316-14-8      | 64        |
| 4       | trans-4'-Methyl-4-(methylthio)ch... | 268 C17H16OS | 126443-27-4      | 64        |
| 5       | Dinaphtho[2,1-b:1',2'-d]furan       | 268 C20H12O  | 000194-63-8      | 58        |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

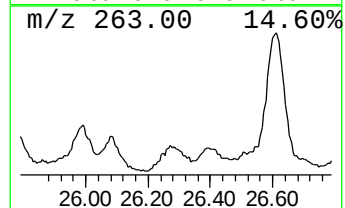
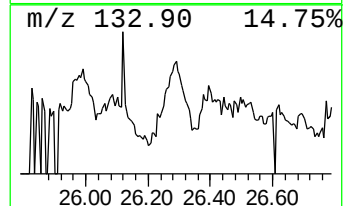
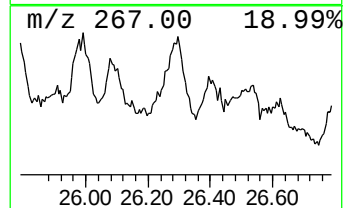
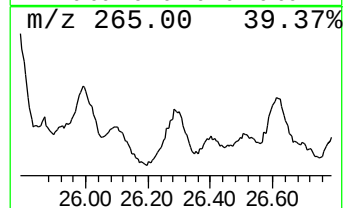
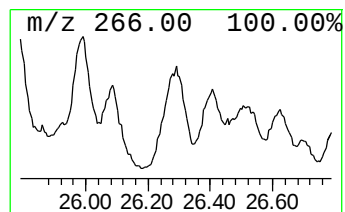
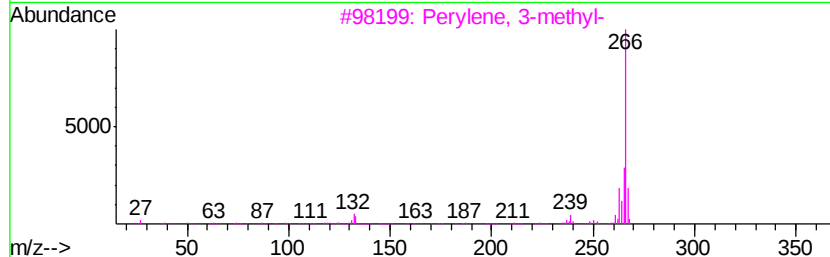
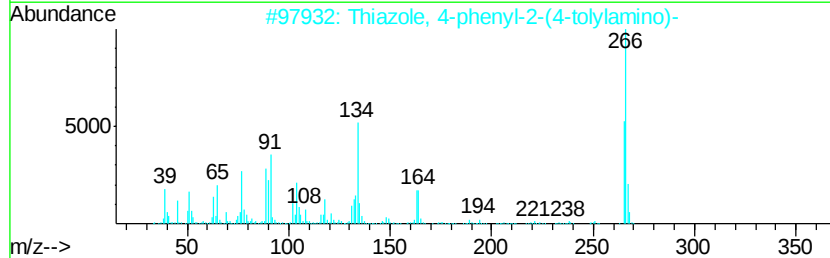
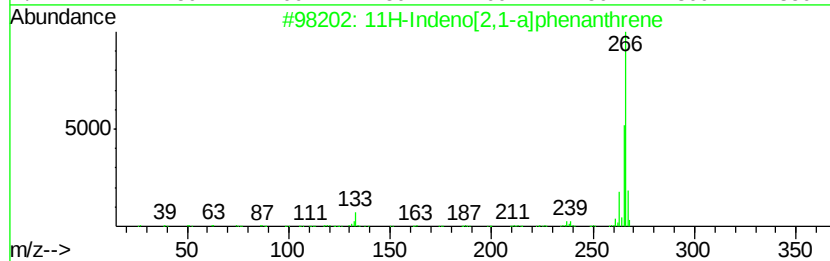
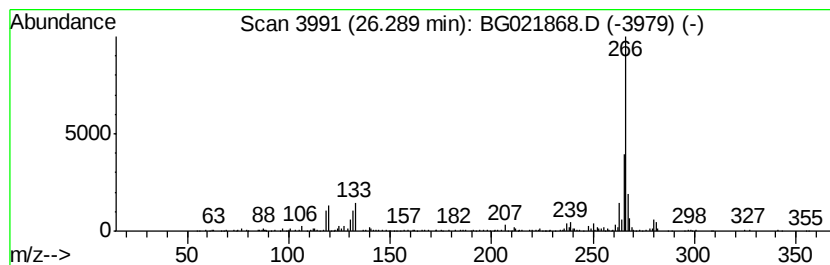
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 12 11H-Indeno[2,1-a]phenanthrene Concentration Rank 7

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 26.29 | 6.55 ng/ul | 411763 | Perylene-d12     | 25.18 |

| Hit# | of | Tentative ID                        | MW  | MolForm    | CAS#         | Qual |
|------|----|-------------------------------------|-----|------------|--------------|------|
| 1    | 5  | 11H-Indeno[2,1-a]phenanthrene       | 266 | C21H14     | 000220-97-3  | 93   |
| 2    |    | Thiazole, 4-phenyl-2-(4-tolylami... | 266 | C16H14N2S  | 016098-04-7  | 81   |
| 3    |    | Perylene, 3-methyl-                 | 266 | C21H14     | 024471-47-4  | 81   |
| 4    |    | 6-Ethylphenazine-1-carboxylic ac... | 266 | C16H14N2O2 | 261351-38-6  | 64   |
| 5    |    | Imidazole, 1-(9-borabicyclo[3.3.... | 266 | C17H23BN2  | 1000162-57-9 | 64   |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

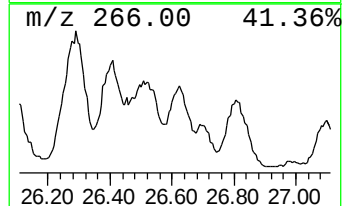
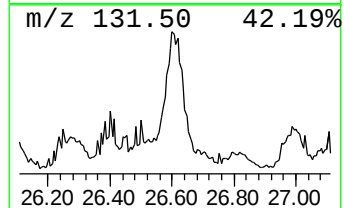
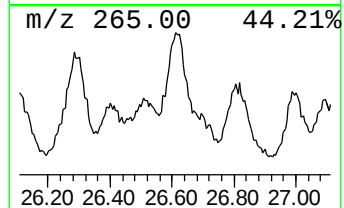
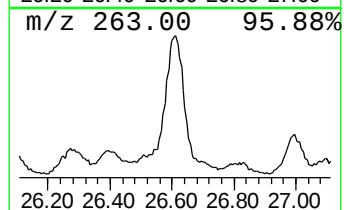
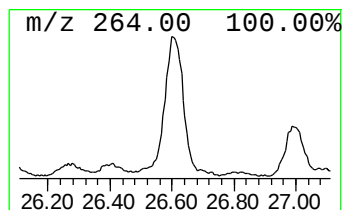
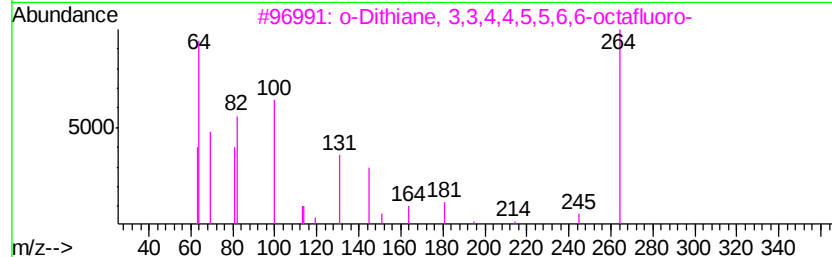
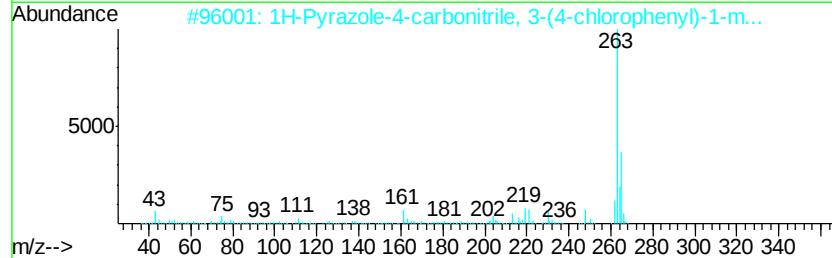
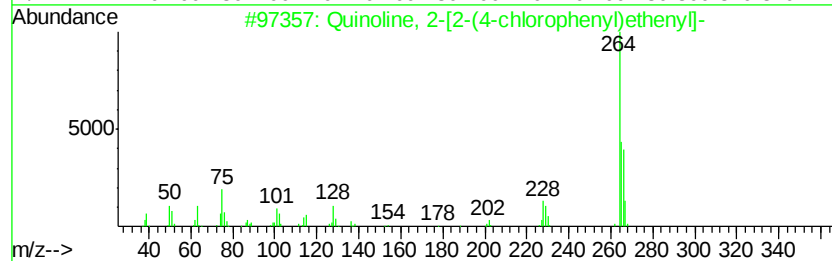
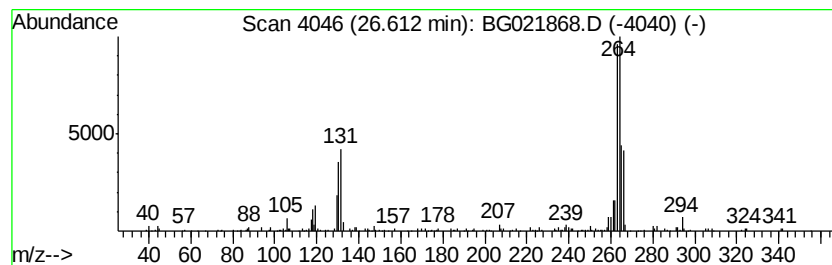
Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 13 unknown-01 Concentration Rank 6

| R.T.    | EstConc                             | Area         | Relative to ISTD | R.T.        |      |      |
|---------|-------------------------------------|--------------|------------------|-------------|------|------|
| 26.61   | 6.68 ng/ul                          | 420161       | Perylene-d12     | 25.18       |      |      |
| Hit# of | 5                                   | Tentative ID | MW               | MolForm     | CAS# | Qual |
| 1       | Quinoline, 2-[2-(4-chlorophenyl)... | 265          | C17H12ClN        | 005392-19-8 | 38   |      |
| 2       | 1H-Pyrazole-4-carbonitrile, 3-(4... | 263          | C12H10ClN3S      | 068364-67-0 | 30   |      |
| 3       | o-Dithiane, 3,3,4,4,5,5,6,6-octa... | 264          | C4F8S2           | 024345-57-1 | 22   |      |
| 4       | 10H-Phenothiazine, 2-chloro-7-me... | 263          | C13H10ClNOS      | 001730-44-5 | 17   |      |
| 5       | 4-Benzylidene-1-phenyl-3,5-dioxo... | 264          | C16H12N2O2       | 015083-26-8 | 16   |      |



Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG051216\  
Data File : BG021868.D  
Acq On : 12 May 2016 14:34  
Operator : UM/SJ  
Sample : H2936-09 2X  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
D9WJ8

Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG050916.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 |
| 1H-Indene, 2-phenyl- | 18.46 | 2.7     | ng/ul | 143801   | 4                     | 17.53 | 1061050 | 20.0 |
| 4H-Cyclopenta[def... | 18.60 | 4.2     | ng/ul | 224394   | 4                     | 17.53 | 1061050 | 20.0 |
| Fluoranthene, 2-m... | 20.43 | 2.9     | ng/ul | 959990   | 5                     | 21.83 | 6646160 | 20.0 |
| Benzo[b]naphtho[2... | 21.40 | 2.7     | ng/ul | 885016   | 5                     | 21.83 | 6646160 | 20.0 |
| Benzo(c)carbazole    | 22.25 | 2.9     | ng/ul | 954337   | 5                     | 21.83 | 6646160 | 20.0 |
| Benz[a]anthracene... | 22.58 | 2.1     | ng/ul | 696094   | 5                     | 21.83 | 6646160 | 20.0 |
| 8-Chloro-5-methyl... | 23.73 | 9.3     | ng/ul | 582455   | 6                     | 25.18 | 1257900 | 20.0 |
| Benzo[e]pyrene       | 24.37 | 14.0    | ng/ul | 878745   | 6                     | 25.18 | 1257900 | 20.0 |
| Benzo(a)pyrene 4,... | 24.60 | 6.7     | ng/ul | 423130   | 6                     | 25.18 | 1257900 | 20.0 |
| 11H-Indeno[2,1-a]... | 26.29 | 6.5     | ng/ul | 411763   | 6                     | 25.18 | 1257900 | 20.0 |
| unknown-01           | 26.61 | 6.7     | ng/ul | 420161   | 6                     | 25.18 | 1257900 | 20.0 |