

Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
 Data File : BM002230.D  
 Acq On : 05 Aug 2015 03:33  
 Operator : TP/UM  
 Sample : G3095-13RE  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 C01S4RE

## 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\_M\METHODS\SOM02.2-EPA-BM080415.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         | 3.499       | 133           | 138         | 144          | rBB      | 23242          | 31709         | 0.31%           | 0.036%        |
| 2         | 6.728       | 681           | 687         | 696          | rBB      | 152144         | 246073        | 2.39%           | 0.280%        |
| 3         | 6.863       | 705           | 710         | 719          | rBB      | 113943         | 173556        | 1.68%           | 0.197%        |
| 4         | 7.063       | 738           | 744         | 751          | rBV      | 170779         | 253284        | 2.46%           | 0.288%        |
| 5         | 7.528       | 816           | 823         | 831          | rVB      | 595323         | 925291        | 8.97%           | 1.052%        |
| 6         | 8.257       | 941           | 947         | 957          | rBV      | 197100         | 313034        | 3.03%           | 0.356%        |
| 7         | 8.692       | 1015          | 1021        | 1027         | rBV      | 154303         | 241309        | 2.34%           | 0.274%        |
| 8         | 9.410       | 1137          | 1143        | 1150         | rBB      | 117054         | 185559        | 1.80%           | 0.211%        |
| 9         | 9.957       | 1230          | 1236        | 1246         | rBV      | 207752         | 332758        | 3.23%           | 0.378%        |
| 10        | 10.316      | 1287          | 1297        | 1303         | rBV      | 843725         | 1401596       | 13.59%          | 1.593%        |
| 11        | 10.369      | 1303          | 1306        | 1313         | rVB      | 81327          | 116590        | 1.13%           | 0.133%        |
| 12        | 10.469      | 1316          | 1323        | 1340         | rBB      | 122965         | 211708        | 2.05%           | 0.241%        |
| 13        | 11.992      | 1577          | 1582        | 1588         | rBB      | 36289          | 53907         | 0.52%           | 0.061%        |
| 14        | 12.216      | 1615          | 1620        | 1626         | rBB      | 21250          | 31220         | 0.30%           | 0.035%        |
| 15        | 13.022      | 1751          | 1757        | 1763         | rBB2     | 15082          | 27931         | 0.27%           | 0.032%        |
| 16        | 13.451      | 1825          | 1830        | 1834         | rVB2     | 31070          | 40537         | 0.39%           | 0.046%        |
| 17        | 13.522      | 1834          | 1842        | 1847         | rBV      | 21185          | 34577         | 0.34%           | 0.039%        |
| 18        | 13.616      | 1853          | 1858        | 1863         | rVV      | 350360         | 493868        | 4.79%           | 0.561%        |
| 19        | 13.663      | 1863          | 1866        | 1872         | rVB      | 127743         | 161480        | 1.57%           | 0.184%        |
| 20        | 13.898      | 1900          | 1906        | 1909         | rBV      | 384166         | 616629        | 5.98%           | 0.701%        |
| 21        | 13.927      | 1909          | 1911        | 1918         | rVV      | 140744         | 166236        | 1.61%           | 0.189%        |
| 22        | 14.092      | 1934          | 1939        | 1945         | rVB2     | 25627          | 36699         | 0.36%           | 0.042%        |
| 23        | 14.210      | 1945          | 1959        | 1965         | rBV2     | 1196134        | 1855903       | 17.99%          | 2.110%        |
| 24        | 14.269      | 1965          | 1969        | 1978         | rVB      | 254312         | 358071        | 3.47%           | 0.407%        |
| 25        | 14.469      | 1999          | 2003        | 2007         | rVV2     | 41490          | 59336         | 0.58%           | 0.067%        |
| 26        | 14.516      | 2007          | 2011        | 2015         | rVB2     | 22879          | 30949         | 0.30%           | 0.035%        |
| 27        | 14.604      | 2021          | 2026        | 2031         | rBV      | 102064         | 145372        | 1.41%           | 0.165%        |
| 28        | 15.051      | 2097          | 2102        | 2105         | rVV3     | 26168          | 40300         | 0.39%           | 0.046%        |
| 29        | 15.204      | 2121          | 2128        | 2133         | rBV      | 499585         | 703724        | 6.82%           | 0.800%        |
| 30        | 15.263      | 2133          | 2138        | 2148         | rVB      | 233139         | 334413        | 3.24%           | 0.380%        |
| 31        | 15.357      | 2148          | 2154        | 2156         | rBV3     | 18085          | 30022         | 0.29%           | 0.034%        |
| 32        | 15.386      | 2156          | 2159        | 2162         | rVV      | 36384          | 45278         | 0.44%           | 0.051%        |
| 33        | 15.421      | 2162          | 2165        | 2169         | rVV      | 31123          | 46911         | 0.45%           | 0.053%        |
| 34        | 15.469      | 2169          | 2173        | 2176         | rVV3     | 28311          | 48111         | 0.47%           | 0.055%        |

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 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM080415.M  
 Title : SVOA CALIBRATION

|    |        |      |      |      |      |         |         |        |         |
|----|--------|------|------|------|------|---------|---------|--------|---------|
| 35 | 15.510 | 2176 | 2180 | 2183 | rVV2 | 21048   | 33505   | 0.32%  | 0.038%  |
| 36 | 15.557 | 2183 | 2188 | 2193 | rVB  | 50265   | 77148   | 0.75%  | 0.088%  |
| 37 | 15.704 | 2209 | 2213 | 2221 | rVB  | 51795   | 94698   | 0.92%  | 0.108%  |
| 38 | 15.939 | 2244 | 2253 | 2259 | rVV5 | 62933   | 146935  | 1.42%  | 0.167%  |
| 39 | 16.268 | 2297 | 2309 | 2314 | rBV3 | 59920   | 156623  | 1.52%  | 0.178%  |
| 40 | 16.316 | 2314 | 2317 | 2322 | rVV3 | 36157   | 54702   | 0.53%  | 0.062%  |
| 41 | 16.416 | 2331 | 2334 | 2338 | rVB  | 30640   | 41485   | 0.40%  | 0.047%  |
| 42 | 16.498 | 2345 | 2348 | 2351 | rVV2 | 36654   | 55562   | 0.54%  | 0.063%  |
| 43 | 16.533 | 2351 | 2354 | 2364 | rVV2 | 43523   | 88301   | 0.86%  | 0.100%  |
| 44 | 16.621 | 2365 | 2369 | 2376 | rVB  | 79512   | 112056  | 1.09%  | 0.127%  |
| 45 | 16.710 | 2376 | 2384 | 2389 | rBV3 | 107909  | 211923  | 2.05%  | 0.241%  |
| 46 | 16.780 | 2389 | 2396 | 2404 | rVB  | 147048  | 268536  | 2.60%  | 0.305%  |
| 47 | 16.968 | 2421 | 2428 | 2431 | rBV  | 1319667 | 2053644 | 19.91% | 2.334%  |
| 48 | 17.010 | 2431 | 2435 | 2440 | rVV  | 2913467 | 4042634 | 39.19% | 4.595%  |
| 49 | 17.063 | 2440 | 2444 | 2447 | rVV2 | 535964  | 772413  | 7.49%  | 0.878%  |
| 50 | 17.098 | 2447 | 2450 | 2455 | rVV  | 776172  | 998224  | 9.68%  | 1.135%  |
| 51 | 17.157 | 2455 | 2460 | 2466 | rVV2 | 50226   | 98694   | 0.96%  | 0.112%  |
| 52 | 17.374 | 2489 | 2497 | 2506 | rBV  | 186129  | 342671  | 3.32%  | 0.390%  |
| 53 | 17.480 | 2512 | 2515 | 2519 | rBV  | 60356   | 75093   | 0.73%  | 0.085%  |
| 54 | 17.545 | 2522 | 2526 | 2534 | rVV5 | 83271   | 154382  | 1.50%  | 0.175%  |
| 55 | 17.680 | 2546 | 2549 | 2555 | rVB  | 36885   | 60052   | 0.58%  | 0.068%  |
| 56 | 17.839 | 2571 | 2576 | 2580 | rBV  | 326192  | 483332  | 4.69%  | 0.549%  |
| 57 | 17.886 | 2580 | 2584 | 2589 | rVB  | 453800  | 633737  | 6.14%  | 0.720%  |
| 58 | 17.968 | 2594 | 2598 | 2603 | rVV  | 200840  | 307263  | 2.98%  | 0.349%  |
| 59 | 18.033 | 2604 | 2609 | 2613 | rVV2 | 717751  | 1177237 | 11.41% | 1.338%  |
| 60 | 18.068 | 2613 | 2615 | 2622 | rVB  | 213258  | 284677  | 2.76%  | 0.324%  |
| 61 | 18.339 | 2657 | 2661 | 2667 | rVV  | 282581  | 391983  | 3.80%  | 0.446%  |
| 62 | 18.398 | 2668 | 2671 | 2678 | rVB  | 128847  | 185225  | 1.80%  | 0.211%  |
| 63 | 18.592 | 2701 | 2704 | 2709 | rVB  | 80183   | 107756  | 1.04%  | 0.122%  |
| 64 | 18.645 | 2710 | 2713 | 2716 | rVV  | 77798   | 89155   | 0.86%  | 0.101%  |
| 65 | 18.680 | 2716 | 2719 | 2723 | rVB2 | 55412   | 76265   | 0.74%  | 0.087%  |
| 66 | 18.768 | 2729 | 2734 | 2738 | rBV  | 167761  | 306393  | 2.97%  | 0.348%  |
| 67 | 18.921 | 2755 | 2760 | 2766 | rBV2 | 151197  | 272169  | 2.64%  | 0.309%  |
| 68 | 19.051 | 2774 | 2782 | 2786 | rBV  | 6450272 | 9198283 | 89.17% | 10.456% |
| 69 | 19.104 | 2786 | 2791 | 2793 | rVV  | 65247   | 94724   | 0.92%  | 0.108%  |
| 70 | 19.139 | 2793 | 2797 | 2800 | rVV  | 106696  | 139753  | 1.35%  | 0.159%  |
| 71 | 19.280 | 2818 | 2821 | 2824 | rVB  | 137469  | 145298  | 1.41%  | 0.165%  |

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ClientSampleId :  
C01S4RE

## 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

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Peak separation: 5

Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM080415.M  
Title : SVOA CALIBRATION

|     |        |      |      |      |      |         |          |         |         |
|-----|--------|------|------|------|------|---------|----------|---------|---------|
| 72  | 19.415 | 2833 | 2844 | 2850 | rBV  | 5688828 | 10315727 | 100.00% | 11.726% |
| 73  | 19.474 | 2851 | 2854 | 2866 | rVB3 | 250040  | 533276   | 5.17%   | 0.606%  |
| 74  | 19.586 | 2869 | 2873 | 2877 | rVB  | 262829  | 353079   | 3.42%   | 0.401%  |
| 75  | 19.651 | 2881 | 2884 | 2888 | rVB  | 167279  | 200770   | 1.95%   | 0.228%  |
| 76  | 19.739 | 2892 | 2899 | 2904 | rBV2 | 282644  | 775751   | 7.52%   | 0.882%  |
| 77  | 19.904 | 2923 | 2927 | 2931 | rVB  | 960787  | 1290609  | 12.51%  | 1.467%  |
| 78  | 20.003 | 2940 | 2944 | 2948 | rBV  | 848273  | 1078102  | 10.45%  | 1.225%  |
| 79  | 20.062 | 2951 | 2954 | 2957 | rVV  | 372392  | 519179   | 5.03%   | 0.590%  |
| 80  | 20.092 | 2957 | 2959 | 2964 | rVB  | 284597  | 349105   | 3.38%   | 0.397%  |
| 81  | 20.203 | 2974 | 2978 | 2981 | rBV  | 189018  | 250000   | 2.42%   | 0.284%  |
| 82  | 20.245 | 2982 | 2985 | 2989 | rVB  | 338985  | 411648   | 3.99%   | 0.468%  |
| 83  | 20.656 | 3052 | 3055 | 3061 | rVB  | 290598  | 359111   | 3.48%   | 0.408%  |
| 84  | 20.815 | 3079 | 3082 | 3086 | rBV2 | 477184  | 624606   | 6.05%   | 0.710%  |
| 85  | 20.856 | 3086 | 3089 | 3092 | rVV  | 409691  | 474009   | 4.60%   | 0.539%  |
| 86  | 20.898 | 3093 | 3096 | 3101 | rVB2 | 374482  | 559164   | 5.42%   | 0.636%  |
| 87  | 21.168 | 3136 | 3142 | 3147 | rBV3 | 3681540 | 7250504  | 70.29%  | 8.242%  |
| 88  | 21.221 | 3147 | 3151 | 3160 | rVB  | 3322993 | 4491644  | 43.54%  | 5.106%  |
| 89  | 21.333 | 3166 | 3170 | 3176 | rVB  | 691731  | 880385   | 8.53%   | 1.001%  |
| 90  | 21.486 | 3192 | 3196 | 3201 | rBV2 | 339577  | 579619   | 5.62%   | 0.659%  |
| 91  | 21.715 | 3232 | 3235 | 3240 | rVB  | 443581  | 512327   | 4.97%   | 0.582%  |
| 92  | 21.868 | 3258 | 3261 | 3264 | rBV3 | 436417  | 633925   | 6.15%   | 0.721%  |
| 93  | 22.727 | 3400 | 3407 | 3411 | rBV  | 2459152 | 5453309  | 52.86%  | 6.199%  |
| 94  | 22.886 | 3430 | 3434 | 3444 | rVB  | 540342  | 931389   | 9.03%   | 1.059%  |
| 95  | 23.192 | 3480 | 3486 | 3491 | rBV  | 1356138 | 2446167  | 23.71%  | 2.781%  |
| 96  | 23.286 | 3496 | 3502 | 3511 | rVB  | 2289716 | 4418461  | 42.83%  | 5.022%  |
| 97  | 23.374 | 3512 | 3517 | 3521 | rVV  | 936768  | 1728802  | 16.76%  | 1.965%  |
| 98  | 23.421 | 3522 | 3525 | 3532 | rVB  | 762744  | 1278971  | 12.40%  | 1.454%  |
| 99  | 25.597 | 3886 | 3895 | 3903 | rVB2 | 1078317 | 3168522  | 30.72%  | 3.602%  |
| 100 | 26.280 | 4003 | 4011 | 4026 | rVB2 | 809057  | 2480870  | 24.05%  | 2.820%  |

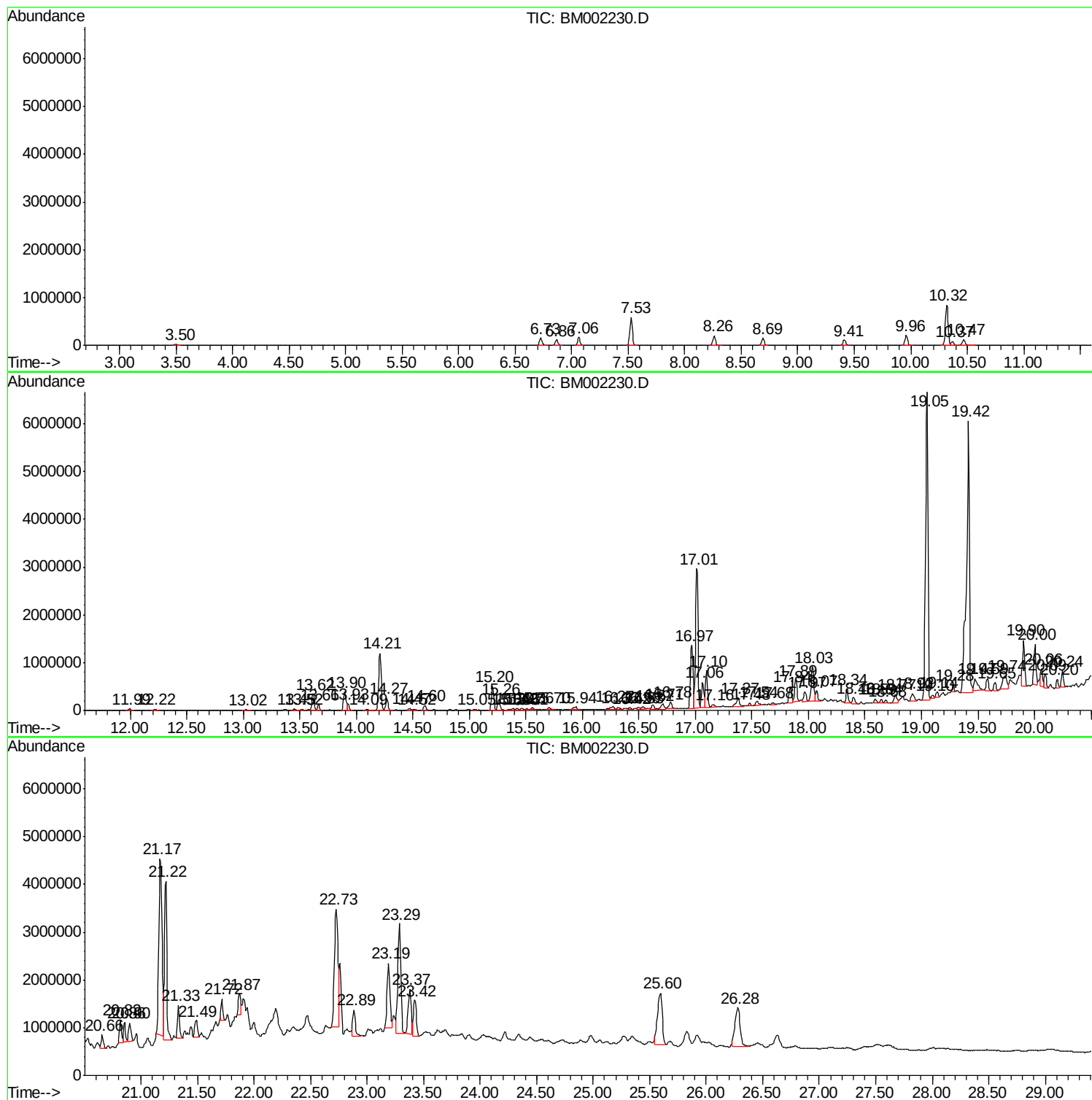
Sum of corrected areas: 87975503

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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

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



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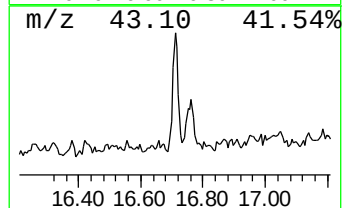
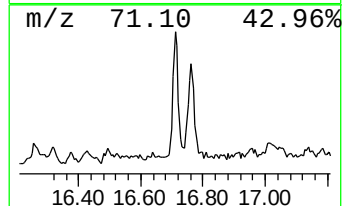
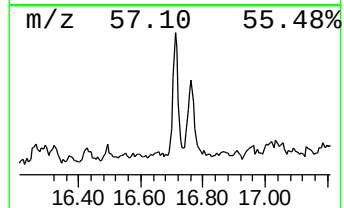
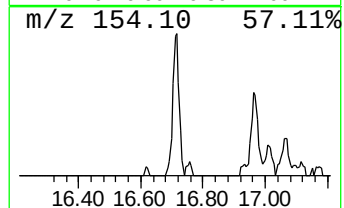
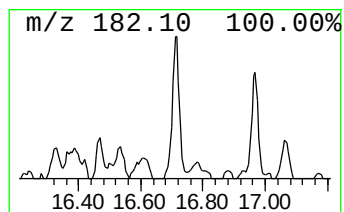
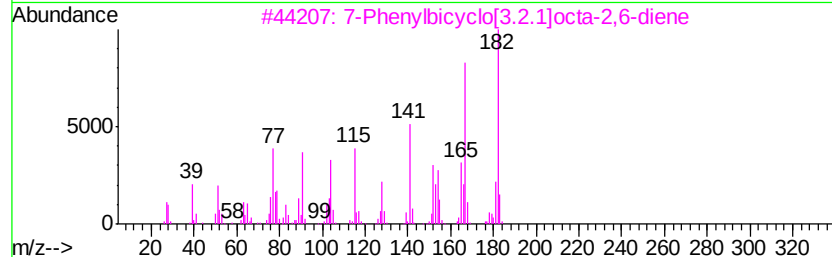
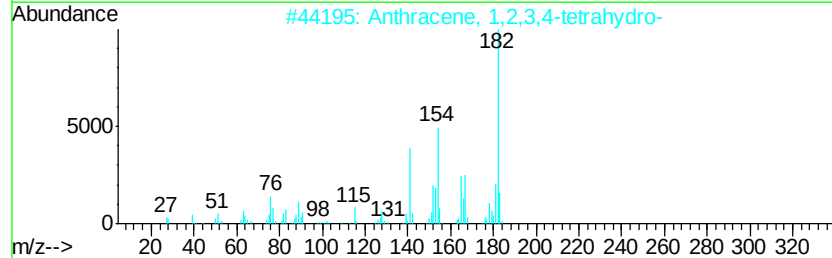
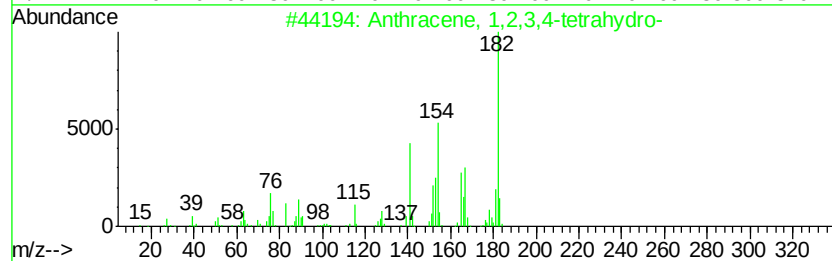
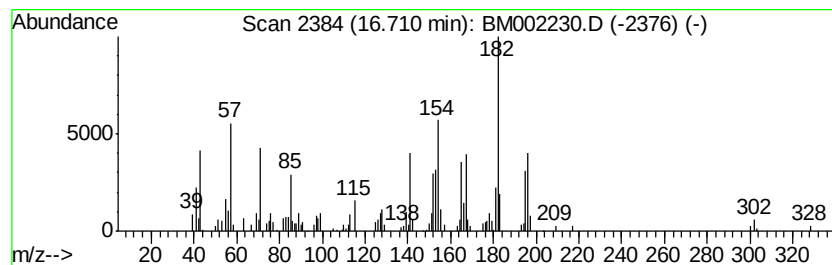
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 1 Anthracene, 1,2,3,4-tetrahy... Concentration Rank 15

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 16.71 | 2.06 ng/ul | 211923 | Phenanthrene-d10 | 16.97 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#         | Qual |
|------|----|-------------------------------------|-----|---------|--------------|------|
| 1    | 5  | Anthracene, 1,2,3,4-tetrahydro-     | 182 | C14H14  | 002141-42-6  | 97   |
| 2    |    | Anthracene, 1,2,3,4-tetrahydro-     | 182 | C14H14  | 002141-42-6  | 86   |
| 3    |    | 7-Phenylbicyclo[3.2.1]octa-2,6-d... | 182 | C14H14  | 1000201-01-7 | 60   |
| 4    |    | 1,1'-Biphenyl, 3,4'-dimethyl-       | 182 | C14H14  | 007383-90-6  | 50   |
| 5    |    | 1,1'-Biphenyl, 3,4'-dimethyl-       | 182 | C14H14  | 007383-90-6  | 50   |



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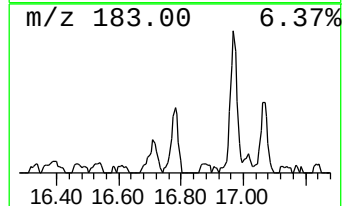
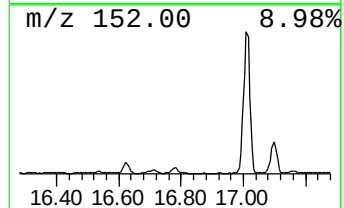
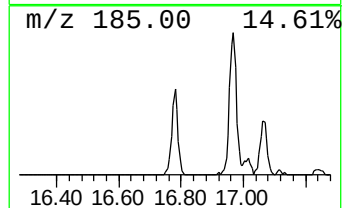
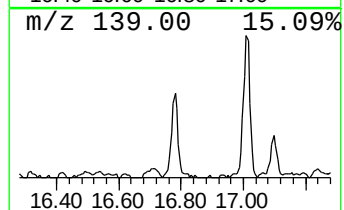
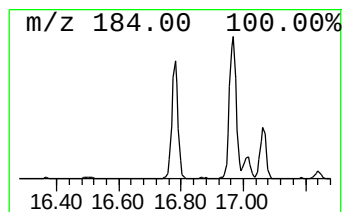
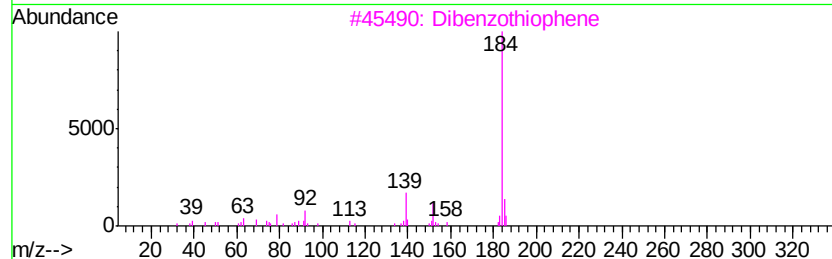
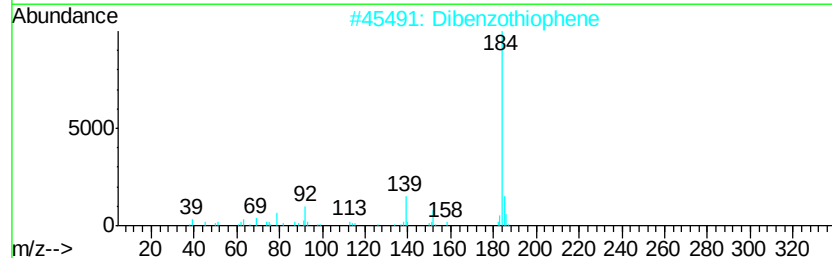
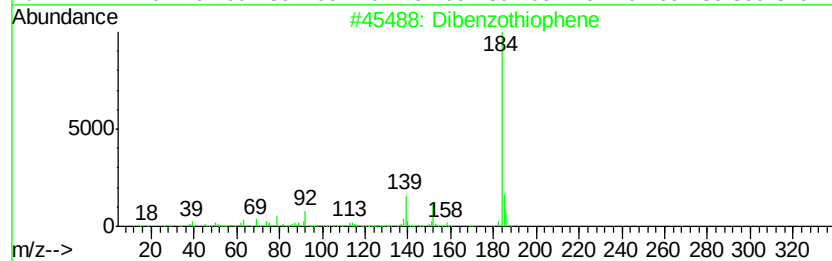
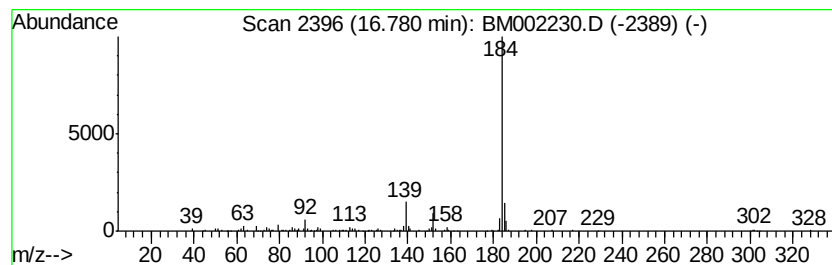
TIC Library : C:\DATABASE\NIST02.L  
 TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
 Peak Number 2 Dibenzothiophene Concentration Rank 12

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 16.78 | 2.62 ng/ul | 268536 | Phenanthrene-d10 | 16.97 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 96   |
| 2    |    | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 95   |
| 3    |    | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 94   |
| 4    |    | Naphtho[2,3-b]thiophene | 184 | C12H8S  | 000268-77-9 | 93   |
| 5    |    | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 93   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

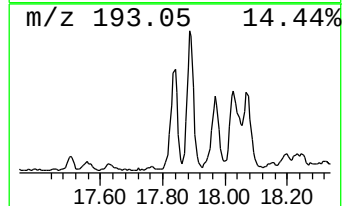
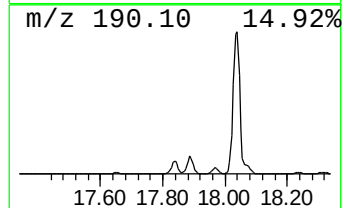
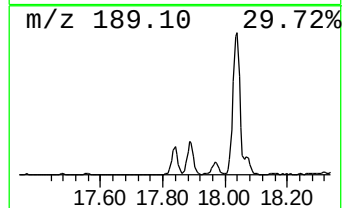
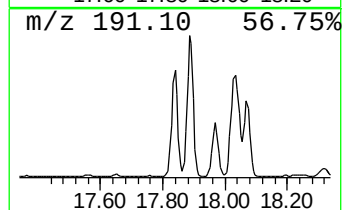
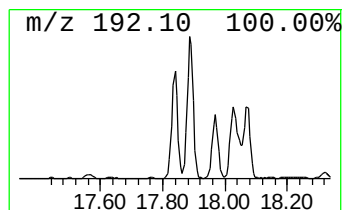
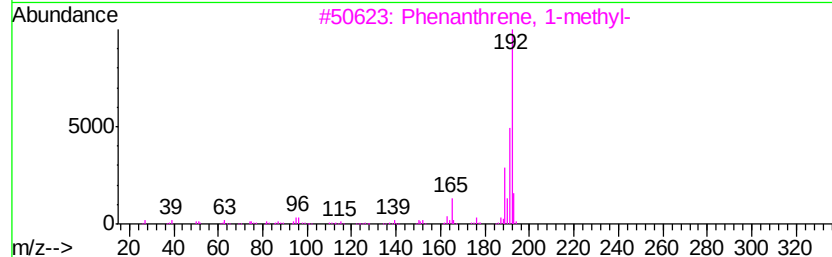
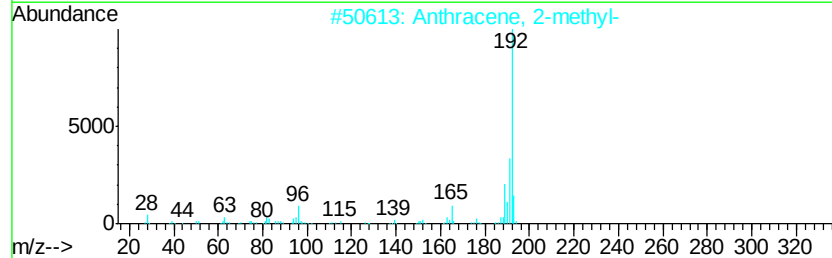
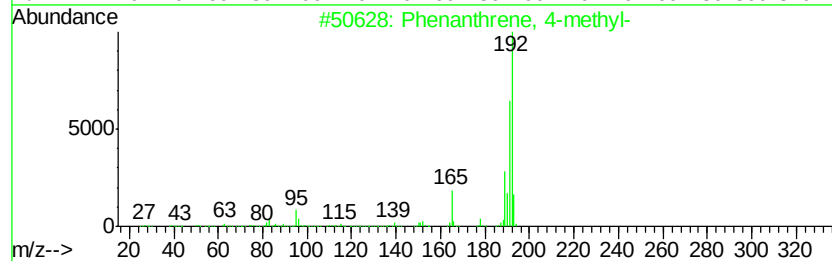
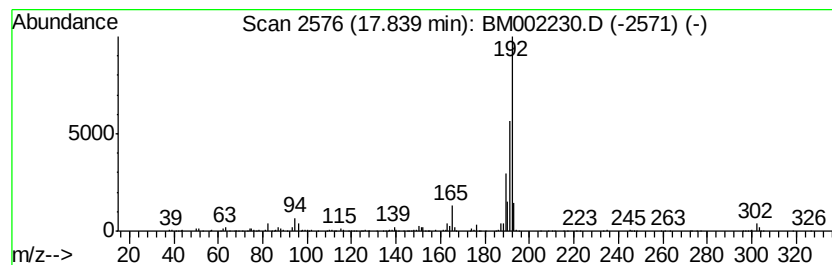
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TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 3 Phenanthrene, 4-methyl- Concentration Rank 4

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 17.84 | 4.71 ng/ul | 483332 | Phenanthrene-d10 | 16.97 |

| Hit# of | 5 | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 4-methyl- | 192 | C15H12  | 000832-64-4 | 95   |
| 2       |   | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 95   |
| 3       |   | Phenanthrene, 1-methyl- | 192 | C15H12  | 000832-69-9 | 93   |
| 4       |   | Anthracene, 9-methyl-   | 192 | C15H12  | 000779-02-2 | 91   |
| 5       |   | Anthracene, 1-methyl-   | 192 | C15H12  | 000610-48-0 | 91   |





Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

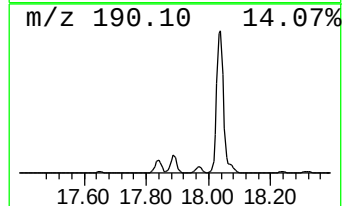
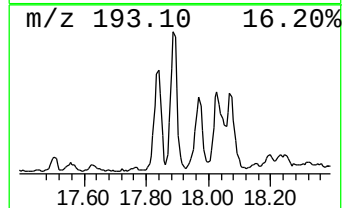
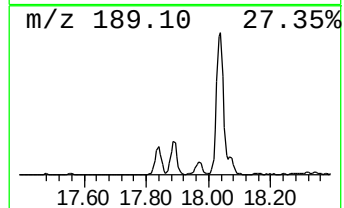
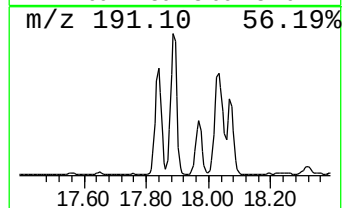
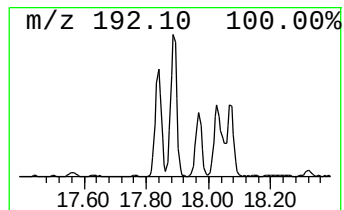
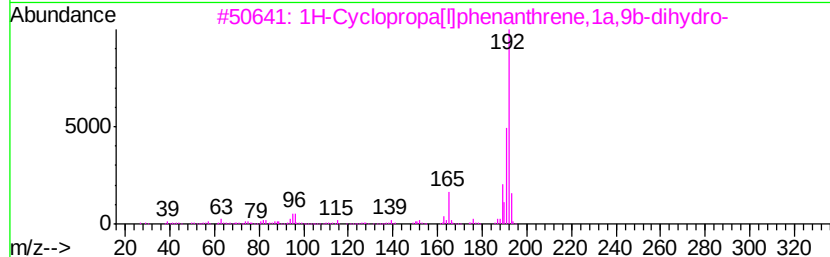
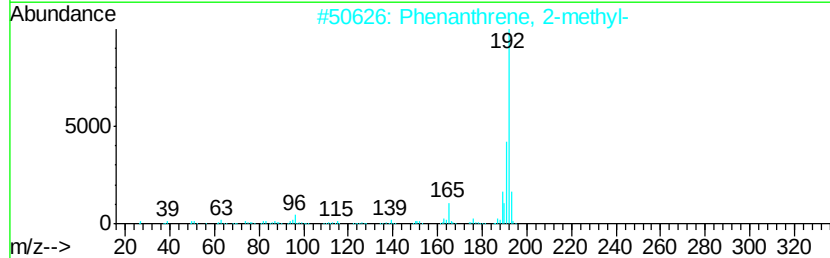
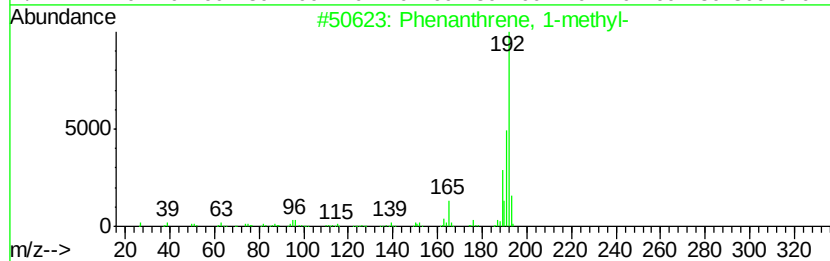
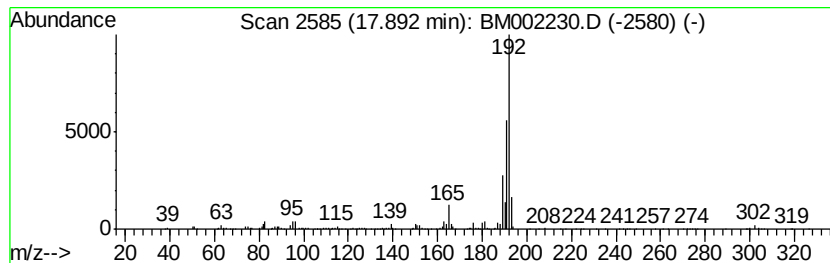
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 17.89 | 6.17 ng/ul | 633737 | Phenanthrene-d10 | 16.97 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 1-methyl-             | 192 | C15H12  | 000832-69-9 | 97   |
| 2       |   | Phenanthrene, 2-methyl-             | 192 | C15H12  | 002531-84-2 | 96   |
| 3       |   | 1H-Cyclopropa[1]phenanthrene,1a,... | 192 | C15H12  | 000949-41-7 | 96   |
| 4       |   | Phenanthrene, 2-methyl-             | 192 | C15H12  | 002531-84-2 | 95   |
| 5       |   | Phenanthrene, 2-methyl-             | 192 | C15H12  | 002531-84-2 | 95   |





Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

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Quant Title : SVOA CALIBRATION

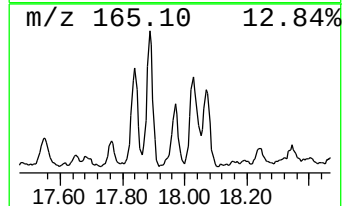
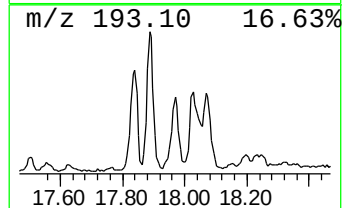
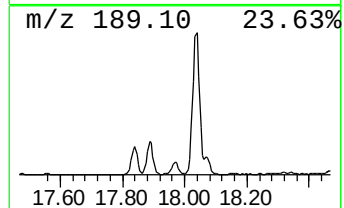
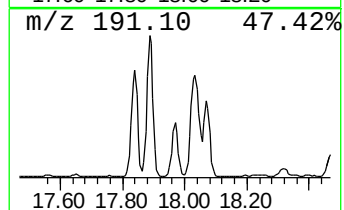
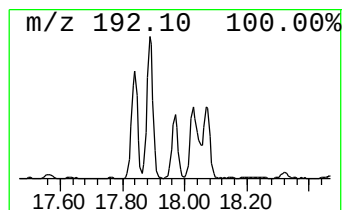
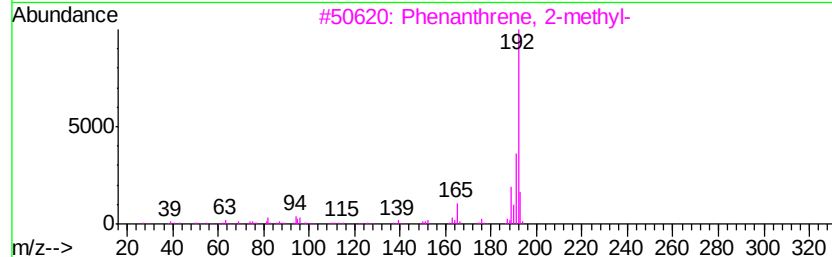
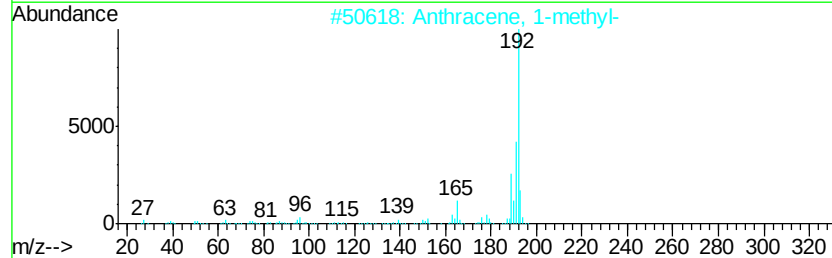
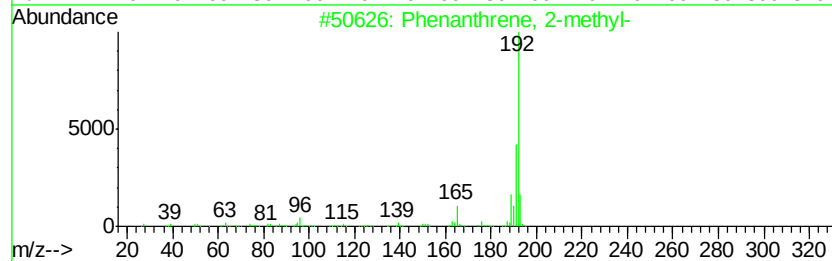
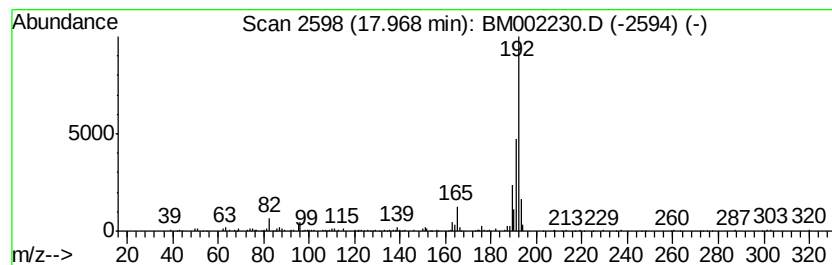
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 5 Phenanthrene, 2-methyl- Concentration Rank 7

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 17.97 | 2.99 ng/ul | 307263 | Phenanthrene-d10 | 16.97 |

| Hit# of | 5 | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 96   |
| 2       |   | Anthracene, 1-methyl-   | 192 | C15H12  | 000610-48-0 | 96   |
| 3       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 95   |
| 4       |   | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 94   |
| 5       |   | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 93   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

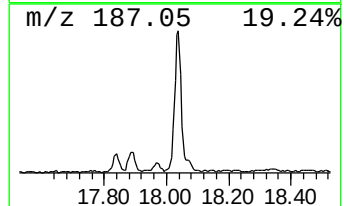
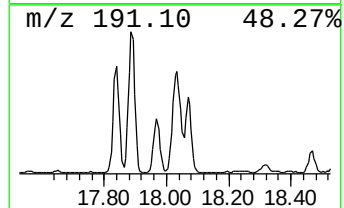
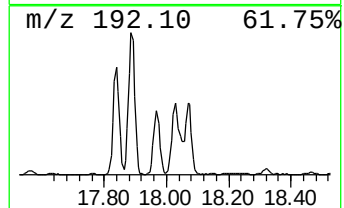
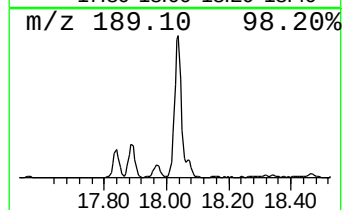
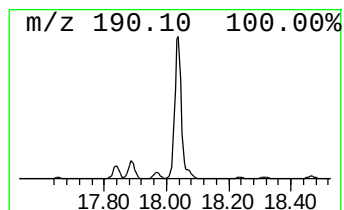
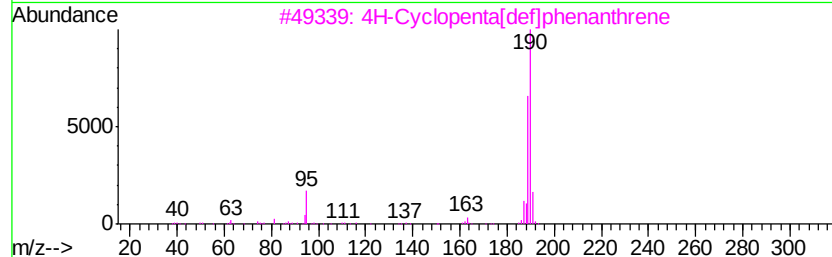
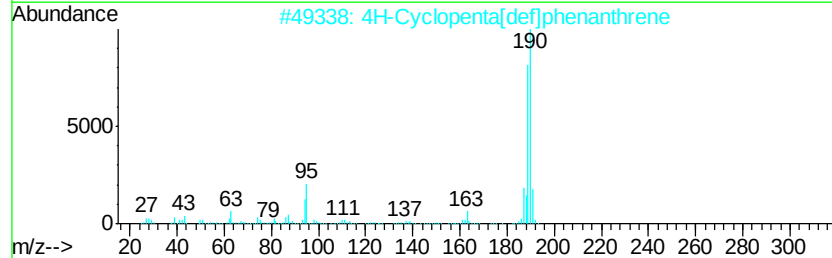
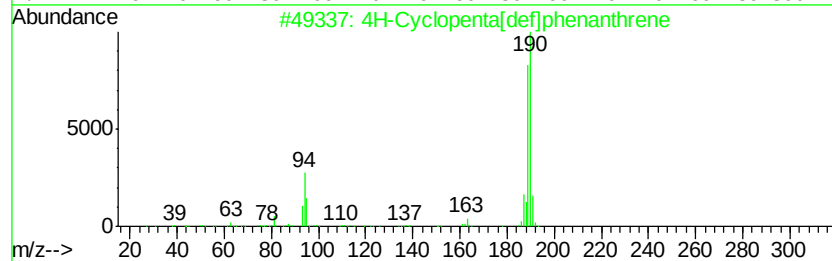
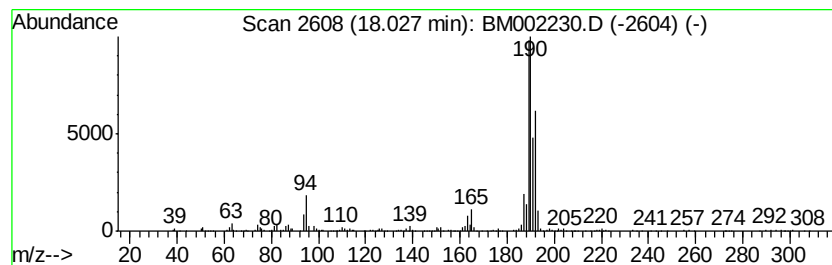
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 6 4H-Cyclopenta[def]phenanthrene Concentration Rank 1

| R.T.  | EstConc     | Area    | Relative to ISTD | R.T.  |
|-------|-------------|---------|------------------|-------|
| 18.03 | 11.46 ng/ul | 1177240 | Phenanthrene-d10 | 16.97 |

| Hit# | of | Tentative ID                        | MW  | MolForm    | CAS#        | Qual |
|------|----|-------------------------------------|-----|------------|-------------|------|
| 1    | 5  | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10     | 000203-64-5 | 87   |
| 2    |    | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10     | 000203-64-5 | 76   |
| 3    |    | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10     | 000203-64-5 | 72   |
| 4    |    | Methyl diselenide                   | 190 | C2H6Se2    | 007101-31-7 | 55   |
| 5    |    | Thiophene-3-carboxaldehyde, 5-ch... | 190 | C5H4BClO3S | 036155-87-0 | 52   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

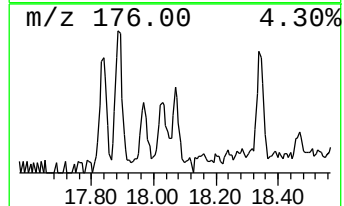
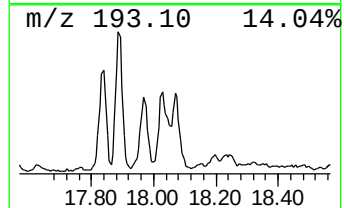
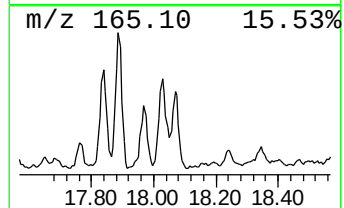
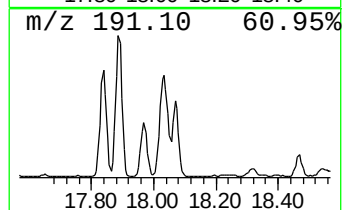
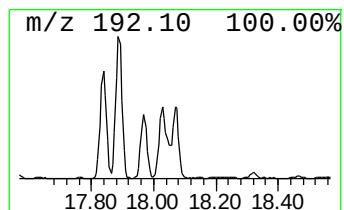
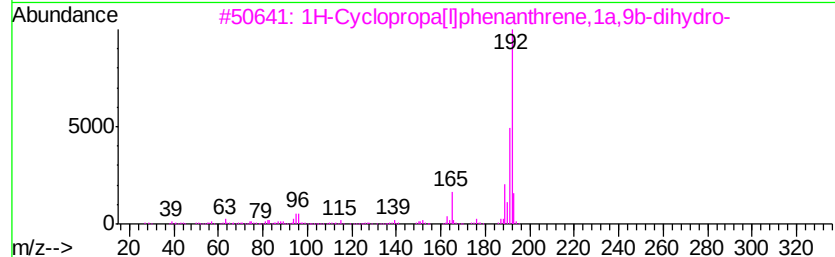
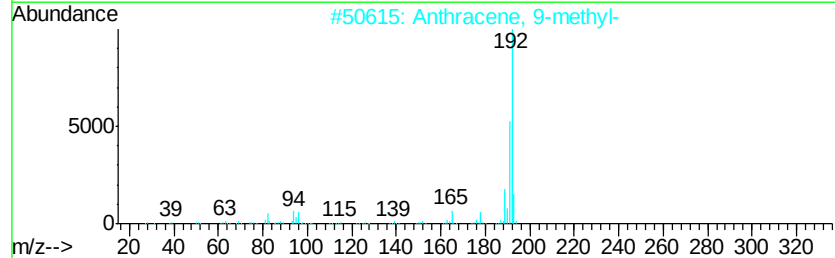
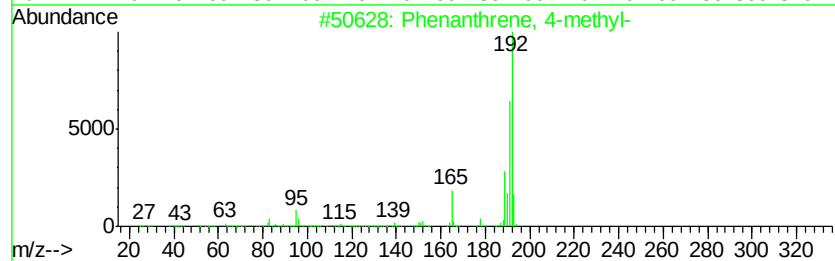
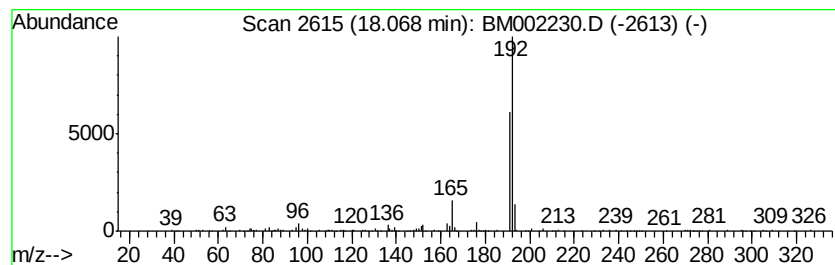
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 7 Anthracene, 9-methyl- Concentration Rank 10

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.07 | 2.77 ng/ul | 284677 | Phenanthrene-d10 | 16.97 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 4-methyl-             | 192 | C15H12  | 000832-64-4 | 93   |
| 2    |    | Anthracene, 9-methyl-               | 192 | C15H12  | 000779-02-2 | 91   |
| 3    |    | 1H-Cyclopropa[1]phenanthrene,1a,... | 192 | C15H12  | 000949-41-7 | 90   |
| 4    |    | 5H-Dibenzo[a,d]cycloheptene         | 192 | C15H12  | 000256-81-5 | 90   |
| 5    |    | 1H-Indene, 3-phenyl-                | 192 | C15H12  | 001961-97-3 | 87   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

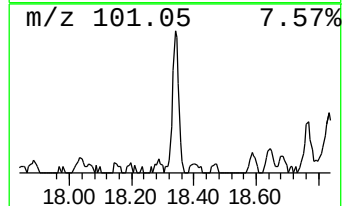
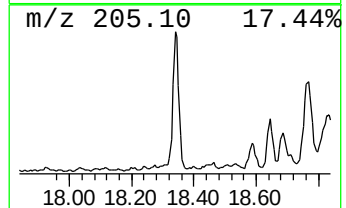
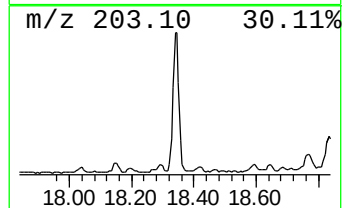
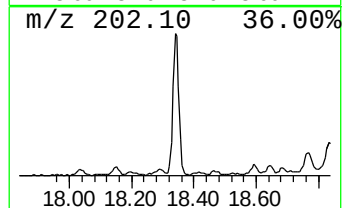
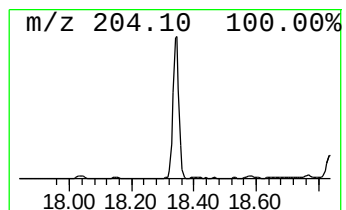
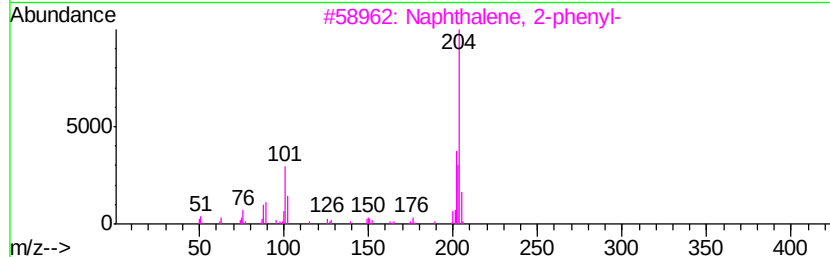
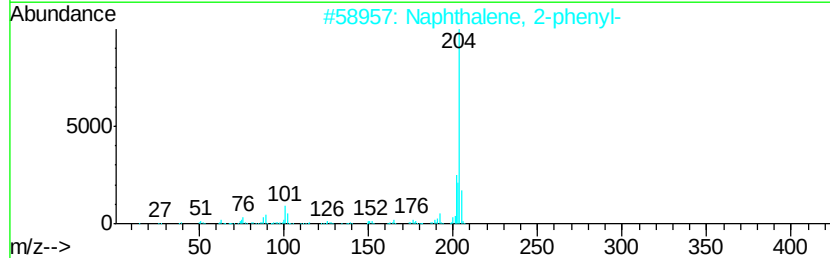
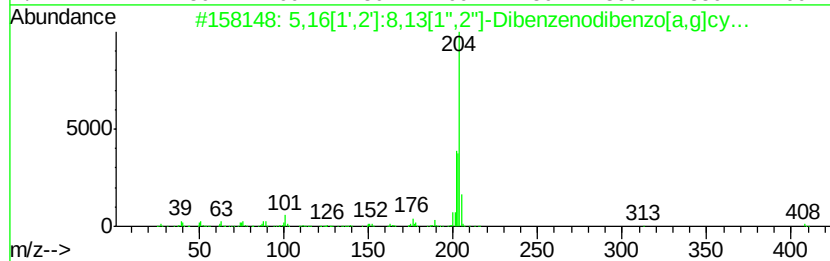
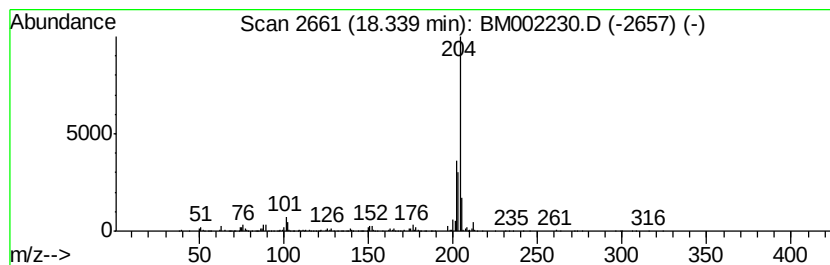
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 8 5,16[1',2']:8,13[1'',2'']-D... Concentration Rank 5

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.34 | 3.82 ng/ul | 391983 | Phenanthrene-d10 | 16.97 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------------------|-----|---------|-------------|------|
| 1    | 5  | 5,16[1',2']:8,13[1'',2'']-Dibenz... | 408 | C32H24  | 005672-97-9 | 87   |
| 2    |    | Naphthalene, 2-phenyl-              | 204 | C16H12  | 000612-94-2 | 81   |
| 3    |    | Naphthalene, 2-phenyl-              | 204 | C16H12  | 000612-94-2 | 81   |
| 4    |    | 2-Phenylnaphthalene                 | 204 | C16H12  | 035465-71-5 | 81   |
| 5    |    | Naphthalene, 2-phenyl-              | 204 | C16H12  | 000612-94-2 | 76   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

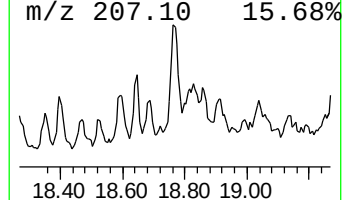
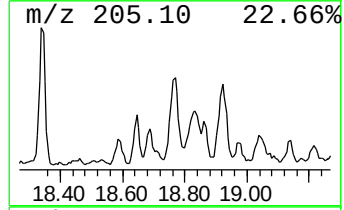
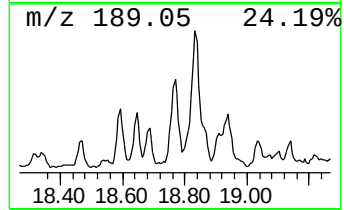
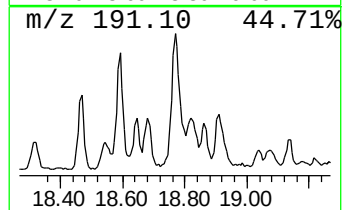
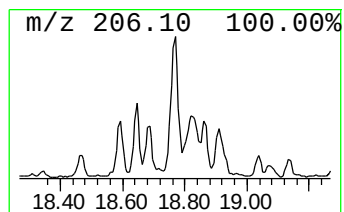
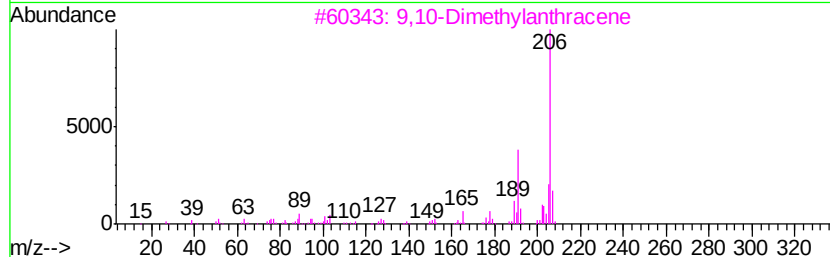
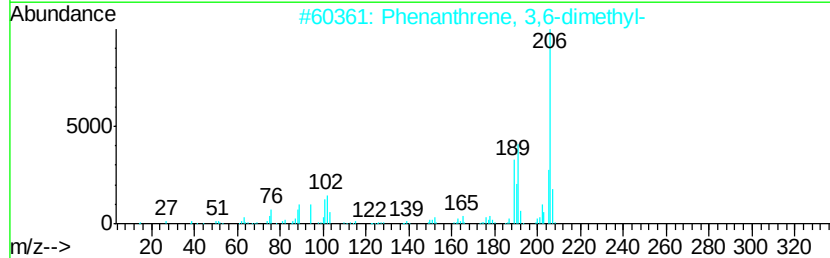
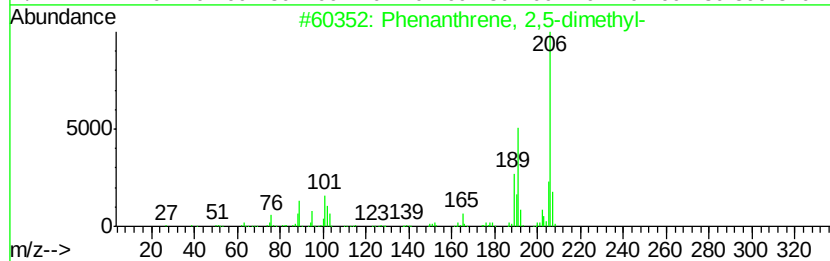
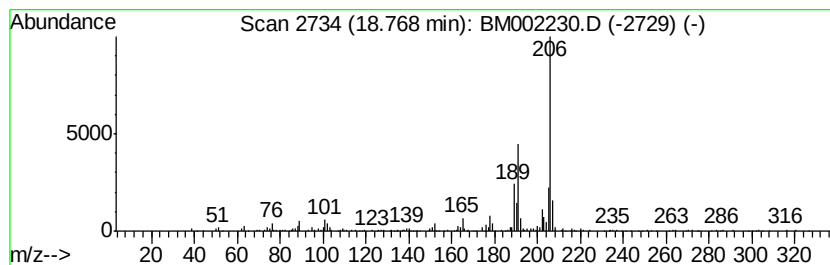
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 9 Phenanthrene, 2,5-dimethyl- Concentration Rank 8

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.77 | 2.98 ng/ul | 306393 | Phenanthrene-d10 | 16.97 |

| Hit# | of | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 2,5-dimethyl- | 206 | C16H14  | 003674-66-6 | 96   |
| 2    |    | Phenanthrene, 3,6-dimethyl- | 206 | C16H14  | 001576-67-6 | 93   |
| 3    |    | 9,10-Dimethylanthracene     | 206 | C16H14  | 000781-43-1 | 91   |
| 4    |    | Phenanthrene, 2,3-dimethyl- | 206 | C16H14  | 003674-65-5 | 90   |
| 5    |    | Anthracene, 1,4-dimethyl-   | 206 | C16H14  | 000781-92-0 | 90   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

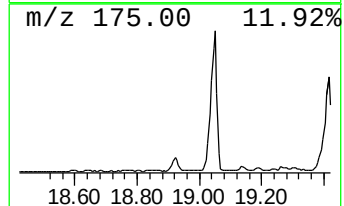
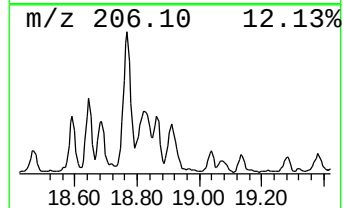
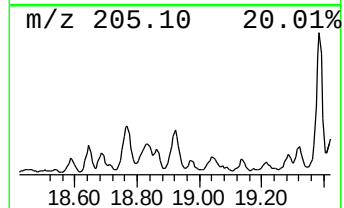
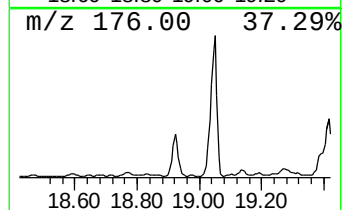
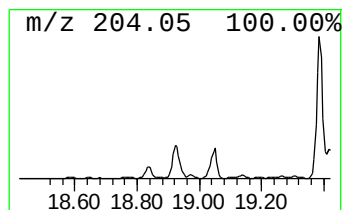
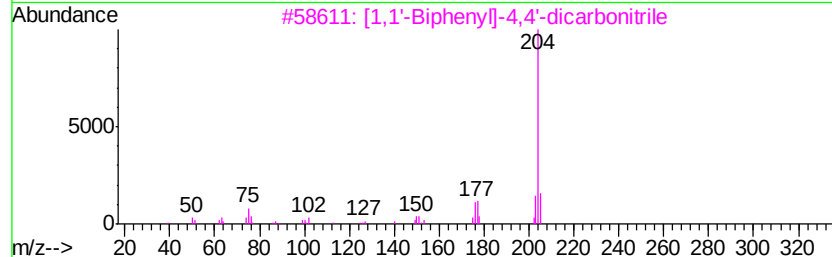
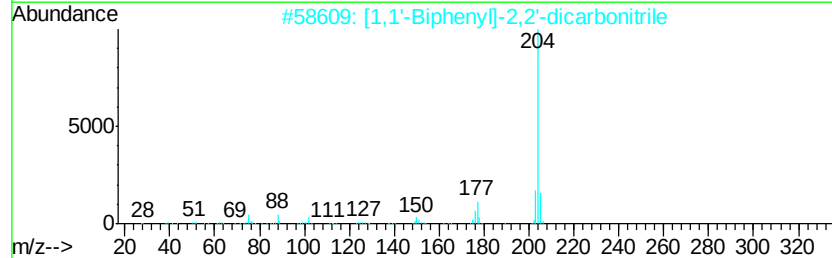
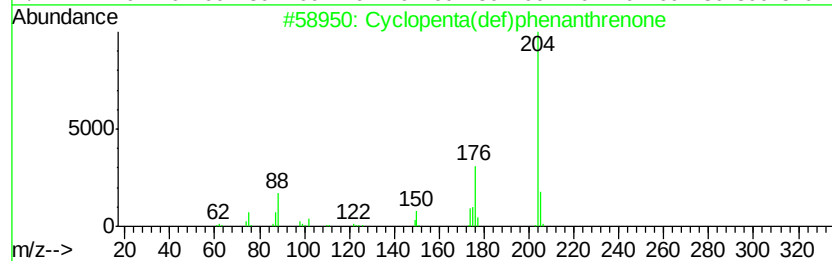
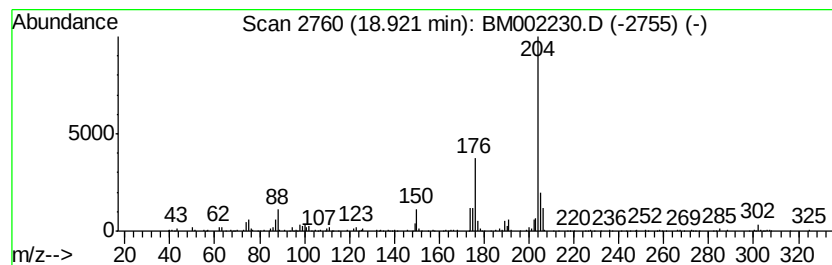
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 10 Cyclopenta(def)phenanthrenone Concentration Rank 11

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.92 | 2.65 ng/ul | 272169 | Phenanthrene-d10 | 16.97 |

| Hit# | of | Tentative ID                        | MW  | MolForm     | CAS#        | Qual |
|------|----|-------------------------------------|-----|-------------|-------------|------|
| 1    | 5  | Cyclopenta(def)phenanthrenone       | 204 | C15H8O      | 005737-13-3 | 93   |
| 2    |    | [1,1'-Biphenyl]-2,2'-dicarbonitrile | 204 | C14H8N2     | 004341-02-0 | 59   |
| 3    |    | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2     | 001591-30-6 | 59   |
| 4    |    | Galactopyranose, 1,2,3,4,6-penta... | 540 | C21H52O6Si5 | 001769-00-2 | 50   |
| 5    |    | [1,1'-Biphenyl]-2,2'-dicarbonitrile | 204 | C14H8N2     | 004341-02-0 | 50   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

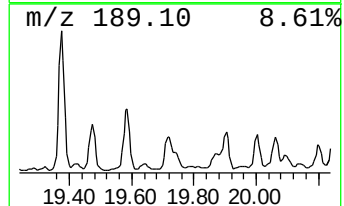
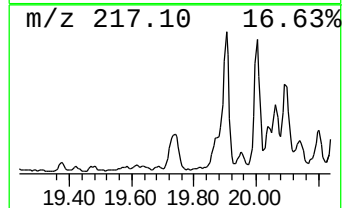
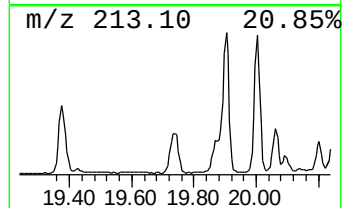
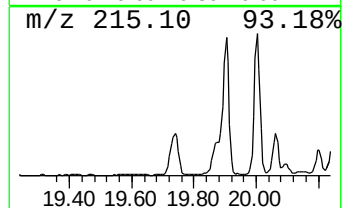
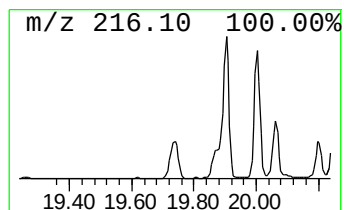
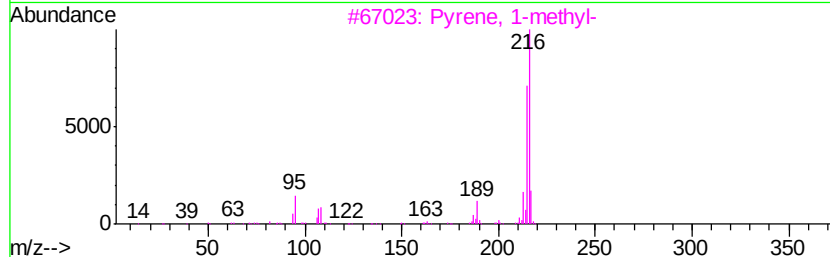
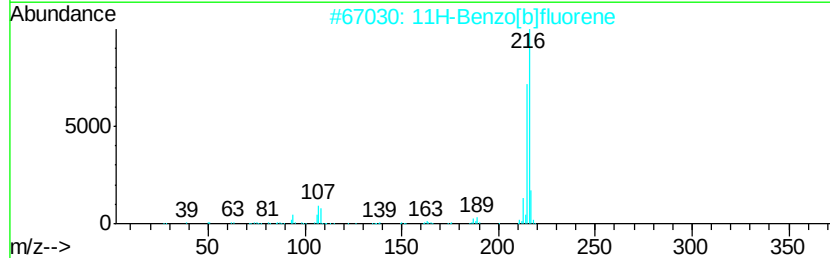
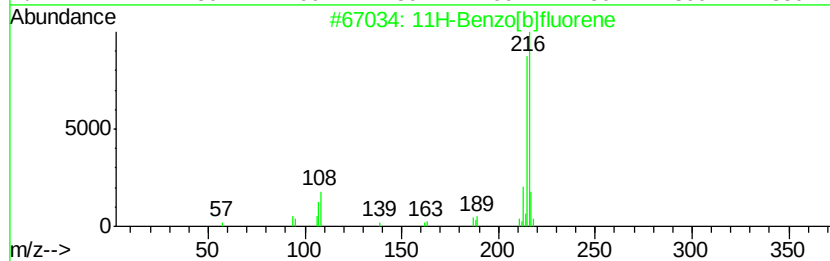
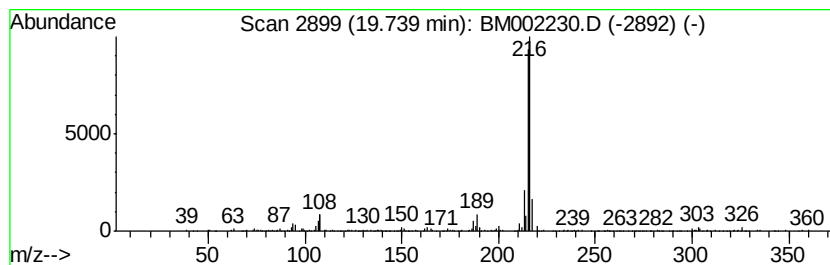
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 11 11H-Benzo[b]fluorene Concentration Rank 14

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 19.74 | 2.14 ng/ul | 775751 | Chrysene-d12     | 21.18 |

| Hit# | of | Tentative ID         | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------|-----|---------|-------------|------|
| 1    | 5  | 11H-Benzo[b]fluorene | 216 | C17H12  | 000243-17-4 | 91   |
| 2    |    | 11H-Benzo[b]fluorene | 216 | C17H12  | 000243-17-4 | 90   |
| 3    |    | Pyrene, 1-methyl-    | 216 | C17H12  | 002381-21-7 | 86   |
| 4    |    | Pyrene, 1-methyl-    | 216 | C17H12  | 002381-21-7 | 83   |
| 5    |    | 11H-Benzo[a]fluorene | 216 | C17H12  | 000238-84-6 | 83   |





Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

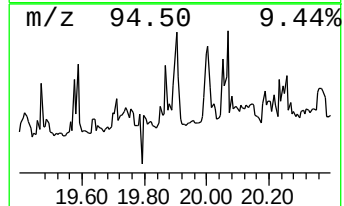
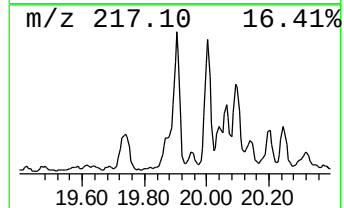
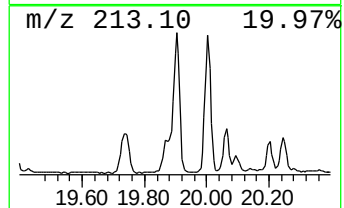
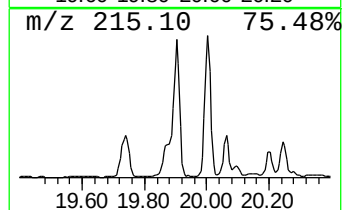
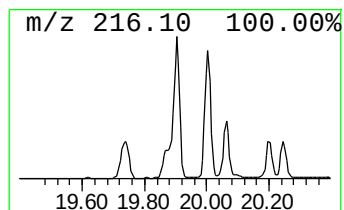
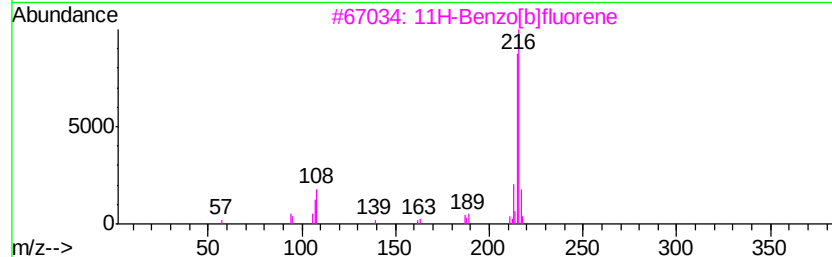
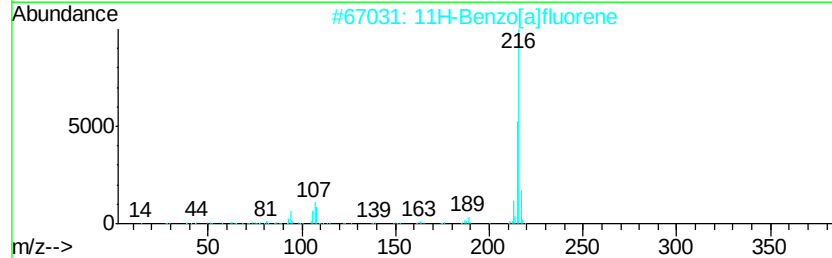
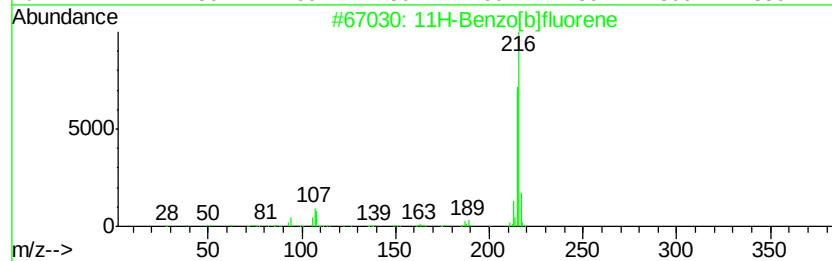
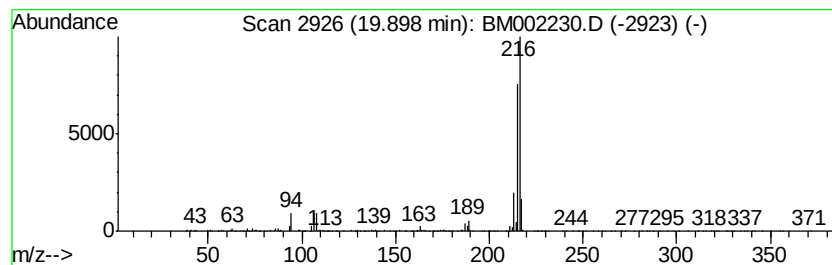
Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 12 11H-Benzo[a]fluorene Concentration Rank 6

| R.T.    | EstConc    | Area                 | Relative to ISTD | R.T.           |
|---------|------------|----------------------|------------------|----------------|
| 19.90   | 3.56 ng/ul | 1290610              | Chrysene-d12     | 21.18          |
| Hit# of | 5          | Tentative ID         | MW MolForm       | CAS# Qual      |
| 1       |            | 11H-Benzo[b]fluorene | 216 C17H12       | 000243-17-4 95 |
| 2       |            | 11H-Benzo[a]fluorene | 216 C17H12       | 000238-84-6 95 |
| 3       |            | 11H-Benzo[b]fluorene | 216 C17H12       | 000243-17-4 93 |
| 4       |            | 7H-Benzo[c]fluorene  | 216 C17H12       | 000205-12-9 90 |
| 5       |            | 11H-Benzo[b]fluorene | 216 C17H12       | 000243-17-4 87 |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

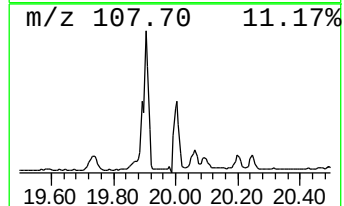
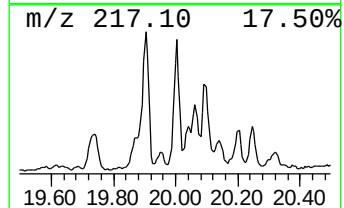
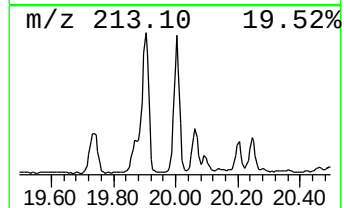
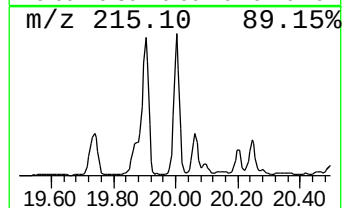
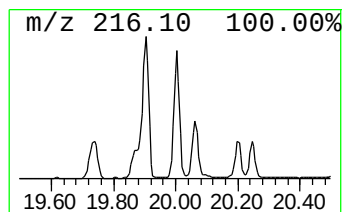
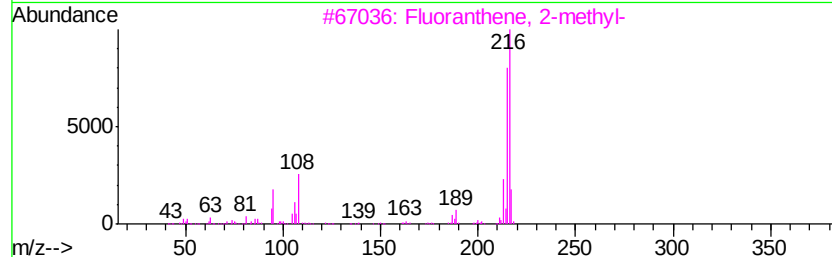
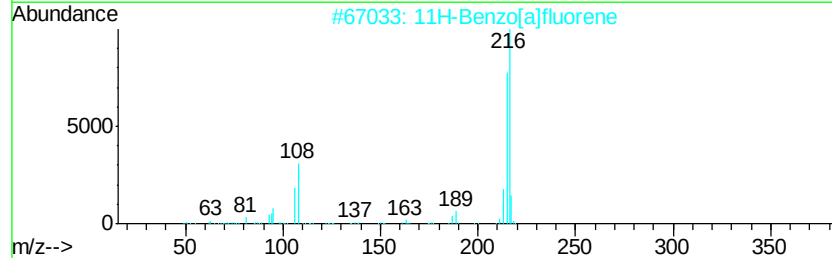
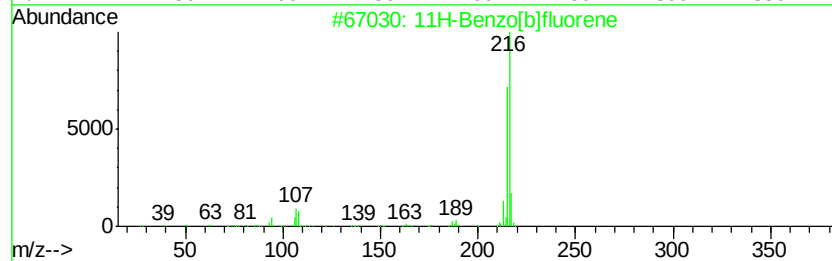
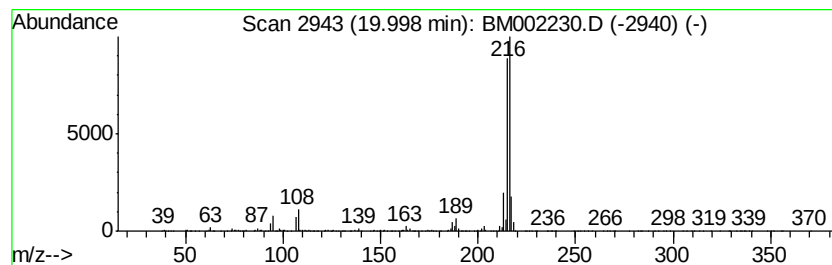
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 13 Fluoranthene, 2-methyl- Concentration Rank 9

| R.T.  | EstConc    | Area    | Relative to ISTD | R.T.  |
|-------|------------|---------|------------------|-------|
| 20.00 | 2.97 ng/ul | 1078100 | Chrysene-d12     | 21.18 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 94   |
| 2    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 93   |
| 3    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 91   |
| 4    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 87   |
| 5    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 76   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM080415\  
Data File : BM002230.D  
Acq On : 05 Aug 2015 03:33  
Operator : TP/UM  
Sample : G3095-13RE  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C01S4RE

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM080415.M  
Quant Title : SVOA CALIBRATION

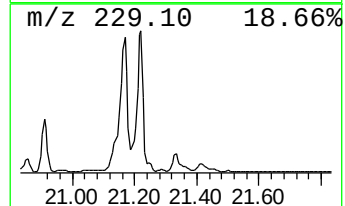
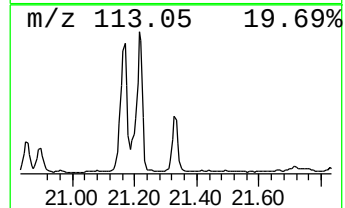
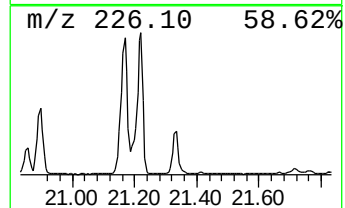
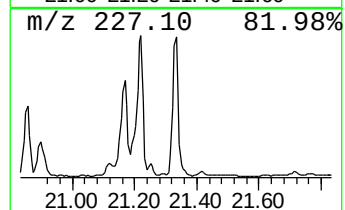
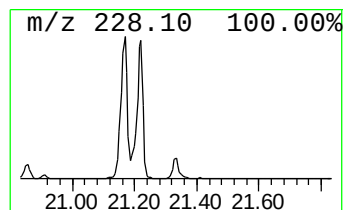
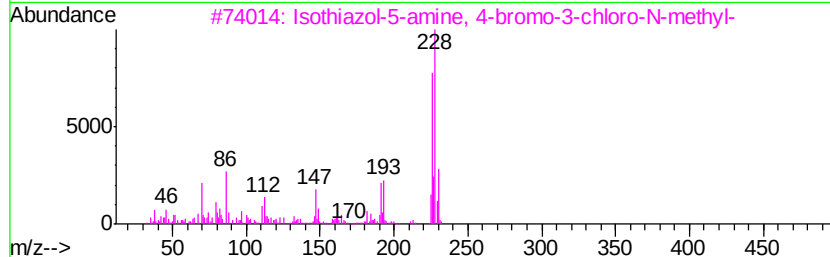
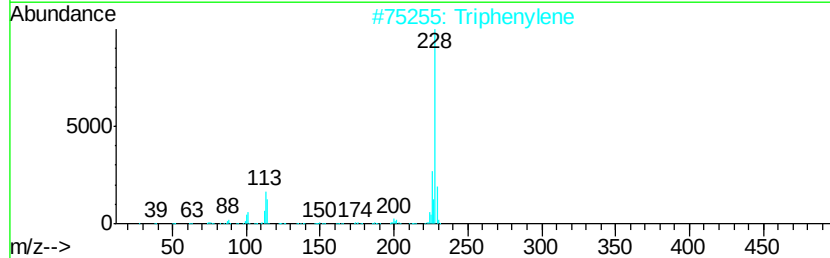
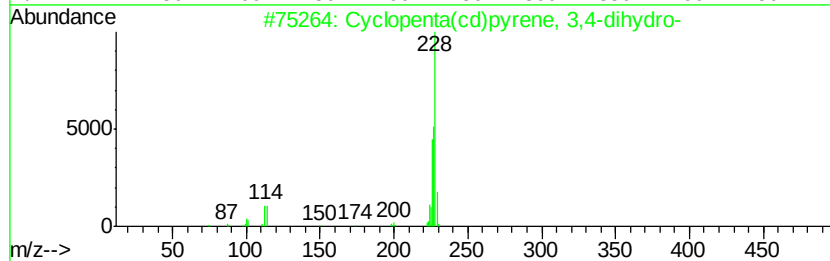
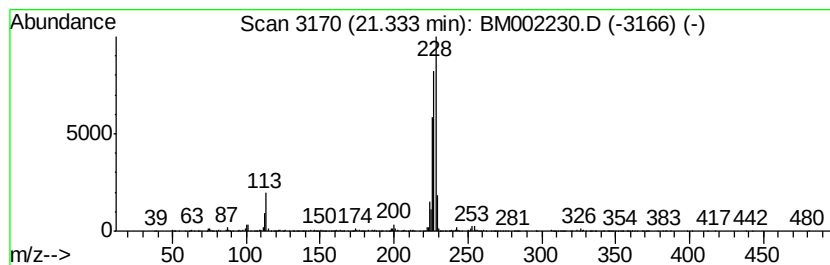
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 14 Cyclopenta(cd)pyrene, 3,4-d... Concentration Rank 13

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 21.33 | 2.43 ng/ul | 880385 | Chrysene-d12     | 21.18 |

| Hit# | of | Tentative ID                        | MW  | MolForm     | CAS#         | Qual |
|------|----|-------------------------------------|-----|-------------|--------------|------|
| 1    | 5  | Cyclopenta(cd)pyrene, 3,4-dihydro-  | 228 | C18H12      | 025732-74-5  | 95   |
| 2    |    | Triphenylene                        | 228 | C18H12      | 000217-59-4  | 43   |
| 3    |    | Isothiazol-5-amine, 4-bromo-3-ch... | 226 | C4H4BrClN2S | 1000272-59-9 | 43   |
| 4    |    | Benzo[cl]phenanthrene               | 228 | C18H12      | 000195-19-7  | 38   |
| 5    |    | 2-Nitrophenyl selenocyanate         | 228 | C7H4N2O2Se  | 051694-22-5  | 38   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM080415\  
 Data File : BM002230.D  
 Acq On : 05 Aug 2015 03:33  
 Operator : TP/UM  
 Sample : G3095-13RE  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 C01S4RE

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM080415.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 |
| Anthracene, 1,2,3... | 16.71 | 2.1     | ng/ul | 211923   | 4                     | 16.97 | 2053640 | 20.0 |
| Dibenzothiophene     | 16.78 | 2.6     | ng/ul | 268536   | 4                     | 16.97 | 2053640 | 20.0 |
| Phenanthrene, 4-m... | 17.84 | 4.7     | ng/ul | 483332   | 4                     | 16.97 | 2053640 | 20.0 |
| Phenanthrene, 1-m... | 17.89 | 6.2     | ng/ul | 633737   | 4                     | 16.97 | 2053640 | 20.0 |
| Phenanthrene, 2-m... | 17.97 | 3.0     | ng/ul | 307263   | 4                     | 16.97 | 2053640 | 20.0 |
| 4H-Cyclopenta[def... | 18.03 | 11.5    | ng/ul | 1177240  | 4                     | 16.97 | 2053640 | 20.0 |
| Anthracene, 9-met... | 18.07 | 2.8     | ng/ul | 284677   | 4                     | 16.97 | 2053640 | 20.0 |
| 5,16[1',2']:8,13[... | 18.34 | 3.8     | ng/ul | 391983   | 4                     | 16.97 | 2053640 | 20.0 |
| Phenanthrene, 2,5... | 18.77 | 3.0     | ng/ul | 306393   | 4                     | 16.97 | 2053640 | 20.0 |
| Cyclopenta(def)ph... | 18.92 | 2.6     | ng/ul | 272169   | 4                     | 16.97 | 2053640 | 20.0 |
| 11H-Benzo[b]fluorene | 19.74 | 2.1     | ng/ul | 775751   | 5                     | 21.18 | 7250500 | 20.0 |
| 11H-Benzo[a]fluorene | 19.90 | 3.6     | ng/ul | 1290610  | 5                     | 21.18 | 7250500 | 20.0 |
| Fluoranthene, 2-m... | 20.00 | 3.0     | ng/ul | 1078100  | 5                     | 21.18 | 7250500 | 20.0 |
| Cyclopenta(cd)pyr... | 21.33 | 2.4     | ng/ul | 880385   | 5                     | 21.18 | 7250500 | 20.0 |