

Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
 Data File : BM002825.D  
 Acq On : 02 Oct 2015 04:04  
 Operator : UM/IZ  
 Sample : G3798-23DL 2X  
 Misc :  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 D9G75DL

## 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-BM092915.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         | 3.358       | 38            | 46          | 51           | rBV      | 88047          | 197995        | 5.82%           | 0.585%        |
| 2         | 3.405       | 51            | 54          | 56           | rVV      | 19989          | 26965         | 0.79%           | 0.080%        |
| 3         | 3.446       | 56            | 61          | 69           | rVB      | 560082         | 865559        | 25.46%          | 2.557%        |
| 4         | 4.369       | 212           | 218         | 226          | rBV      | 23684          | 37715         | 1.11%           | 0.111%        |
| 5         | 7.810       | 797           | 803         | 813          | rVB      | 52121          | 90340         | 2.66%           | 0.267%        |
| 6         | 7.981       | 826           | 832         | 839          | rBV      | 46179          | 77051         | 2.27%           | 0.228%        |
| 7         | 8.204       | 864           | 870         | 878          | rBV      | 60366          | 99306         | 2.92%           | 0.293%        |
| 8         | 8.687       | 945           | 952         | 960          | rVB      | 222221         | 374257        | 11.01%          | 1.106%        |
| 9         | 9.387       | 1066          | 1071        | 1082         | rBV      | 60151          | 102023        | 3.00%           | 0.301%        |
| 10        | 9.881       | 1148          | 1155        | 1164         | rBV      | 52816          | 89120         | 2.62%           | 0.263%        |
| 11        | 10.610      | 1273          | 1279        | 1286         | rBV      | 38920          | 64245         | 1.89%           | 0.190%        |
| 12        | 11.157      | 1365          | 1372        | 1378         | rBV      | 67277          | 110732        | 3.26%           | 0.327%        |
| 13        | 11.222      | 1378          | 1383        | 1392         | rVB      | 17322          | 30796         | 0.91%           | 0.091%        |
| 14        | 11.545      | 1430          | 1438        | 1444         | rBV      | 312703         | 556480        | 16.37%          | 1.644%        |
| 15        | 11.675      | 1453          | 1460        | 1473         | rBV2     | 44347          | 100013        | 2.94%           | 0.296%        |
| 16        | 14.663      | 1962          | 1968        | 1972         | rVV      | 135440         | 192762        | 5.67%           | 0.570%        |
| 17        | 14.704      | 1972          | 1975        | 1981         | rVB      | 87598          | 118951        | 3.50%           | 0.351%        |
| 18        | 14.986      | 2017          | 2023        | 2037         | rVB      | 161735         | 256625        | 7.55%           | 0.758%        |
| 19        | 15.280      | 2067          | 2073        | 2079         | rBV2     | 441130         | 678928        | 19.97%          | 2.006%        |
| 20        | 15.345      | 2079          | 2084        | 2090         | rVB      | 67564          | 97282         | 2.86%           | 0.287%        |
| 21        | 15.463      | 2100          | 2104        | 2116         | rBV      | 24545          | 44657         | 1.31%           | 0.132%        |
| 22        | 15.668      | 2132          | 2139        | 2145         | rBV      | 31176          | 46673         | 1.37%           | 0.138%        |
| 23        | 16.257      | 2233          | 2239        | 2244         | rBV      | 209389         | 309950        | 9.12%           | 0.916%        |
| 24        | 16.310      | 2244          | 2248        | 2256         | rVB      | 82714          | 118153        | 3.47%           | 0.349%        |
| 25        | 16.380      | 2256          | 2260        | 2265         | rBV3     | 15893          | 23816         | 0.70%           | 0.070%        |
| 26        | 16.592      | 2293          | 2296        | 2301         | rVB      | 15252          | 18841         | 0.55%           | 0.056%        |
| 27        | 16.733      | 2316          | 2320        | 2328         | rBV      | 14328          | 27985         | 0.82%           | 0.083%        |
| 28        | 16.880      | 2340          | 2345        | 2353         | rVB      | 7304           | 13934         | 0.41%           | 0.041%        |
| 29        | 17.174      | 2389          | 2395        | 2400         | rBV3     | 20153          | 31810         | 0.94%           | 0.094%        |
| 30        | 17.292      | 2404          | 2415        | 2420         | rVB2     | 14571          | 27120         | 0.80%           | 0.080%        |
| 31        | 17.551      | 2455          | 2459        | 2469         | rVV4     | 8492           | 19150         | 0.56%           | 0.057%        |
| 32        | 17.657      | 2469          | 2477        | 2482         | rVV      | 42235          | 67720         | 1.99%           | 0.200%        |
| 33        | 17.710      | 2482          | 2486        | 2490         | rVV2     | 11952          | 21382         | 0.63%           | 0.063%        |
| 34        | 17.815      | 2497          | 2504        | 2513         | rVB      | 58390          | 82833         | 2.44%           | 0.245%        |

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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-BM092915.M  
 Title : SVOA CALIBRATION

|    |        |      |      |      |      |         |         |         |         |
|----|--------|------|------|------|------|---------|---------|---------|---------|
| 35 | 17.992 | 2528 | 2534 | 2538 | rBV  | 497553  | 800275  | 23.54%  | 2.365%  |
| 36 | 18.039 | 2538 | 2542 | 2547 | rVV  | 1260613 | 1792138 | 52.71%  | 5.295%  |
| 37 | 18.092 | 2547 | 2551 | 2554 | rVV  | 232608  | 338491  | 9.95%   | 1.000%  |
| 38 | 18.127 | 2554 | 2557 | 2563 | rVV  | 173092  | 239701  | 7.05%   | 0.708%  |
| 39 | 18.186 | 2563 | 2567 | 2575 | rVB  | 22459   | 34393   | 1.01%   | 0.102%  |
| 40 | 18.386 | 2594 | 2601 | 2608 | rBV  | 119884  | 195384  | 5.75%   | 0.577%  |
| 41 | 18.486 | 2614 | 2618 | 2622 | rBV  | 17740   | 26262   | 0.77%   | 0.078%  |
| 42 | 18.568 | 2627 | 2632 | 2636 | rVV2 | 12931   | 18129   | 0.53%   | 0.054%  |
| 43 | 18.845 | 2673 | 2679 | 2683 | rBV  | 96718   | 135956  | 4.00%   | 0.402%  |
| 44 | 18.892 | 2683 | 2687 | 2695 | rVB  | 135763  | 192785  | 5.67%   | 0.570%  |
| 45 | 18.974 | 2695 | 2701 | 2705 | rBV  | 30389   | 44357   | 1.30%   | 0.131%  |
| 46 | 19.045 | 2705 | 2713 | 2724 | rVB2 | 194212  | 399496  | 11.75%  | 1.180%  |
| 47 | 19.180 | 2732 | 2736 | 2740 | rVB2 | 10968   | 13729   | 0.40%   | 0.041%  |
| 48 | 19.315 | 2754 | 2759 | 2764 | rBV  | 105946  | 146183  | 4.30%   | 0.432%  |
| 49 | 19.380 | 2764 | 2770 | 2776 | rVV  | 186176  | 262921  | 7.73%   | 0.777%  |
| 50 | 19.556 | 2793 | 2800 | 2805 | rBV3 | 28888   | 44980   | 1.32%   | 0.133%  |
| 51 | 19.609 | 2805 | 2809 | 2812 | rBV  | 19485   | 23822   | 0.70%   | 0.070%  |
| 52 | 19.645 | 2812 | 2815 | 2822 | rVB  | 17776   | 22393   | 0.66%   | 0.066%  |
| 53 | 19.721 | 2823 | 2828 | 2833 | rBV  | 42493   | 67781   | 1.99%   | 0.200%  |
| 54 | 19.774 | 2833 | 2837 | 2840 | rBV4 | 19815   | 39783   | 1.17%   | 0.118%  |
| 55 | 19.880 | 2848 | 2855 | 2862 | rBV2 | 64169   | 113465  | 3.34%   | 0.335%  |
| 56 | 19.998 | 2865 | 2875 | 2880 | rVV  | 2459657 | 3400220 | 100.00% | 10.046% |
| 57 | 20.086 | 2884 | 2890 | 2895 | rVB3 | 30609   | 60373   | 1.78%   | 0.178%  |
| 58 | 20.139 | 2895 | 2899 | 2902 | rBV2 | 18501   | 28157   | 0.83%   | 0.083%  |
| 59 | 20.180 | 2902 | 2906 | 2909 | rVV2 | 29620   | 44831   | 1.32%   | 0.132%  |
| 60 | 20.239 | 2909 | 2916 | 2922 | rVB2 | 73668   | 133004  | 3.91%   | 0.393%  |
| 61 | 20.321 | 2922 | 2930 | 2932 | rBV3 | 487989  | 946034  | 27.82%  | 2.795%  |
| 62 | 20.351 | 2932 | 2935 | 2941 | rVV  | 1812360 | 2541255 | 74.74%  | 7.508%  |
| 63 | 20.403 | 2941 | 2944 | 2949 | rVB2 | 72185   | 101416  | 2.98%   | 0.300%  |
| 64 | 20.515 | 2958 | 2963 | 2967 | rVB  | 98937   | 127197  | 3.74%   | 0.376%  |
| 65 | 20.586 | 2971 | 2975 | 2979 | rVB  | 41713   | 58679   | 1.73%   | 0.173%  |
| 66 | 20.651 | 2981 | 2986 | 2993 | rVV2 | 99503   | 210923  | 6.20%   | 0.623%  |
| 67 | 20.715 | 2993 | 2997 | 3001 | rVV  | 40671   | 58576   | 1.72%   | 0.173%  |
| 68 | 20.821 | 3002 | 3015 | 3021 | rVB2 | 254639  | 492923  | 14.50%  | 1.456%  |
| 69 | 20.915 | 3026 | 3031 | 3035 | rBV2 | 187930  | 276245  | 8.12%   | 0.816%  |
| 70 | 20.951 | 3035 | 3037 | 3039 | rVV2 | 56301   | 71390   | 2.10%   | 0.211%  |
| 71 | 20.980 | 3039 | 3042 | 3045 | rVV  | 112543  | 151225  | 4.45%   | 0.447%  |

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Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
 Title : SVOA CALIBRATION

|     |        |      |      |      |      |         |         |        |        |
|-----|--------|------|------|------|------|---------|---------|--------|--------|
| 72  | 21.009 | 3045 | 3047 | 3050 | rVV2 | 57051   | 62032   | 1.82%  | 0.183% |
| 73  | 21.045 | 3050 | 3053 | 3058 | rVB3 | 34060   | 51820   | 1.52%  | 0.153% |
| 74  | 21.115 | 3061 | 3065 | 3069 | rBV  | 62925   | 99475   | 2.93%  | 0.294% |
| 75  | 21.162 | 3070 | 3073 | 3083 | rVB  | 71958   | 112054  | 3.30%  | 0.331% |
| 76  | 21.239 | 3083 | 3086 | 3089 | rBV5 | 22312   | 34870   | 1.03%  | 0.103% |
| 77  | 21.503 | 3128 | 3131 | 3134 | rBV4 | 26409   | 41486   | 1.22%  | 0.123% |
| 78  | 21.550 | 3135 | 3139 | 3144 | rVV  | 136489  | 195233  | 5.74%  | 0.577% |
| 79  | 21.715 | 3159 | 3167 | 3170 | rBV2 | 218138  | 407508  | 11.98% | 1.204% |
| 80  | 21.750 | 3170 | 3173 | 3177 | rVB  | 149614  | 182734  | 5.37%  | 0.540% |
| 81  | 21.797 | 3177 | 3181 | 3185 | rBV2 | 208761  | 315764  | 9.29%  | 0.933% |
| 82  | 21.845 | 3185 | 3189 | 3195 | rVB2 | 160324  | 255210  | 7.51%  | 0.754% |
| 83  | 21.903 | 3195 | 3199 | 3202 | rBV  | 73039   | 94964   | 2.79%  | 0.281% |
| 84  | 22.068 | 3217 | 3227 | 3233 | rBV3 | 1101335 | 2773510 | 81.57% | 8.195% |
| 85  | 22.121 | 3233 | 3236 | 3245 | rVB  | 951006  | 1342416 | 39.48% | 3.966% |
| 86  | 22.250 | 3254 | 3258 | 3264 | rBV  | 160944  | 239489  | 7.04%  | 0.708% |
| 87  | 22.309 | 3265 | 3268 | 3274 | rBV2 | 59483   | 105939  | 3.12%  | 0.313% |
| 88  | 22.421 | 3283 | 3287 | 3293 | rBV  | 145556  | 225904  | 6.64%  | 0.667% |
| 89  | 22.686 | 3329 | 3332 | 3337 | rVB  | 98772   | 133775  | 3.93%  | 0.395% |
| 90  | 23.015 | 3384 | 3388 | 3394 | rVB  | 73926   | 120928  | 3.56%  | 0.357% |
| 91  | 23.574 | 3479 | 3483 | 3494 | rVB2 | 66608   | 140394  | 4.13%  | 0.415% |
| 92  | 23.874 | 3526 | 3534 | 3539 | rBV  | 793000  | 2068832 | 60.84% | 6.113% |
| 93  | 24.068 | 3562 | 3567 | 3574 | rBV  | 107720  | 202387  | 5.95%  | 0.598% |
| 94  | 24.439 | 3623 | 3630 | 3635 | rBV  | 449243  | 918364  | 27.01% | 2.713% |
| 95  | 24.497 | 3636 | 3640 | 3643 | rVV  | 171902  | 316349  | 9.30%  | 0.935% |
| 96  | 24.556 | 3644 | 3650 | 3659 | rVV  | 594022  | 1290854 | 37.96% | 3.814% |
| 97  | 24.668 | 3662 | 3669 | 3674 | rVV  | 415489  | 948825  | 27.90% | 2.803% |
| 98  | 24.721 | 3674 | 3678 | 3686 | rVB  | 176650  | 391172  | 11.50% | 1.156% |
| 99  | 27.385 | 4120 | 4131 | 4141 | rVB2 | 339433  | 1158238 | 34.06% | 3.422% |
| 100 | 28.232 | 4265 | 4275 | 4295 | rVB  | 235941  | 938681  | 27.61% | 2.773% |

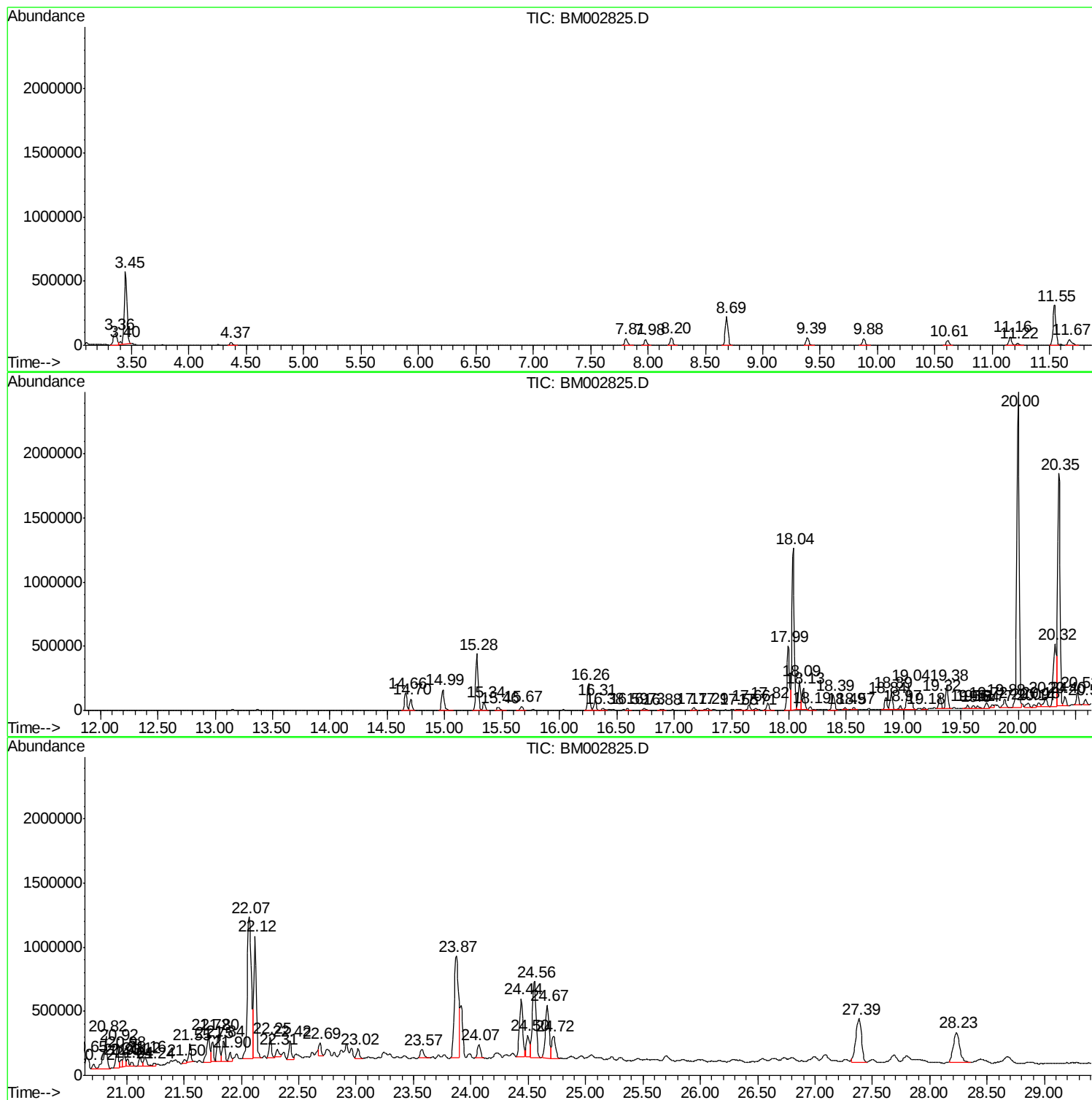
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Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

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



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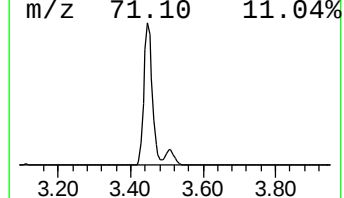
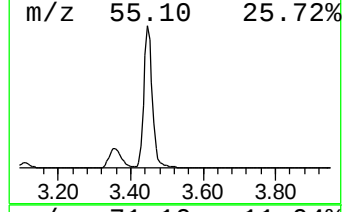
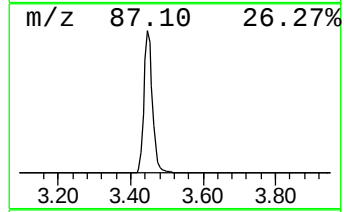
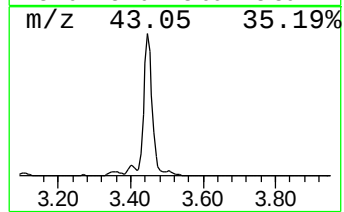
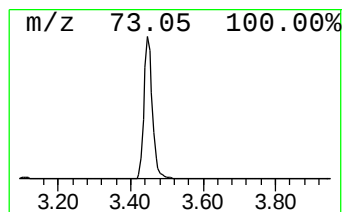
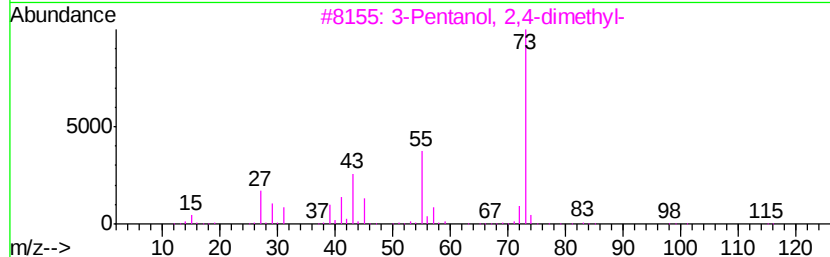
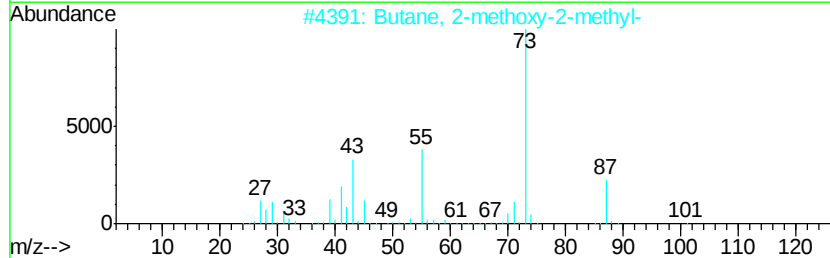
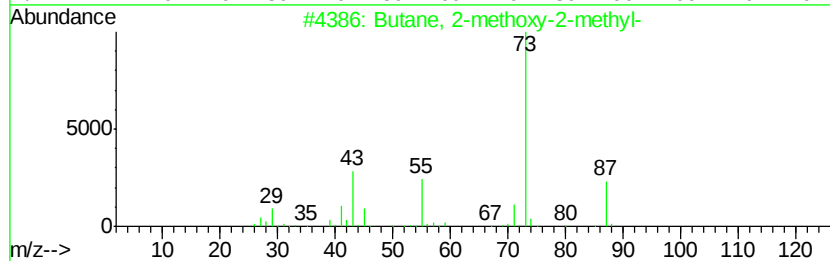
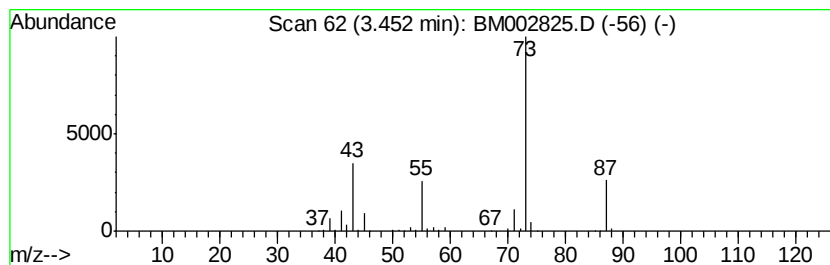
Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

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

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

| R.T. | EstConc     | Area   | Relative to ISTD       | R.T. |
|------|-------------|--------|------------------------|------|
| 3.45 | 46.25 ng/ul | 865559 | 1,4-Dichlorobenzene-d4 | 8.69 |

| Hit# | of | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|-----------------------------|-----|---------|-------------|------|
| 1    | 5  | Butane, 2-methoxy-2-methyl- | 102 | C6H14O  | 000994-05-8 | 78   |
| 2    |    | Butane, 2-methoxy-2-methyl- | 102 | C6H14O  | 000994-05-8 | 56   |
| 3    |    | 3-Pentanol, 2,4-dimethyl-   | 116 | C7H16O  | 000600-36-2 | 37   |
| 4    |    | 1,3-Dioxolane, 2-methyl-    | 88  | C4H8O2  | 000497-26-7 | 25   |
| 5    |    | Pentane, 3-methoxy-         | 102 | C6H14O  | 036839-67-5 | 17   |



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Quant Title : SVOA CALIBRATION

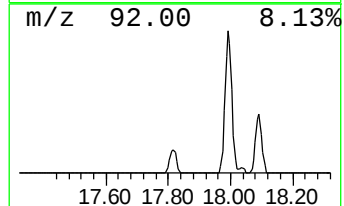
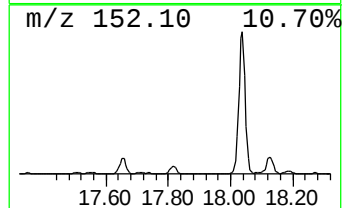
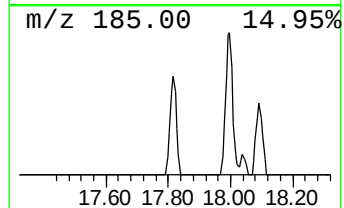
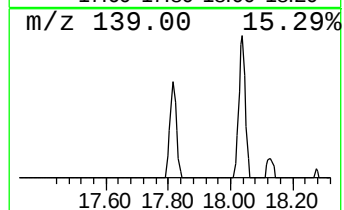
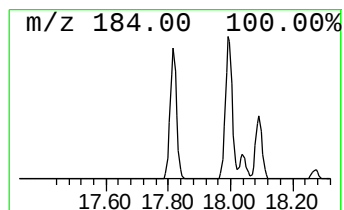
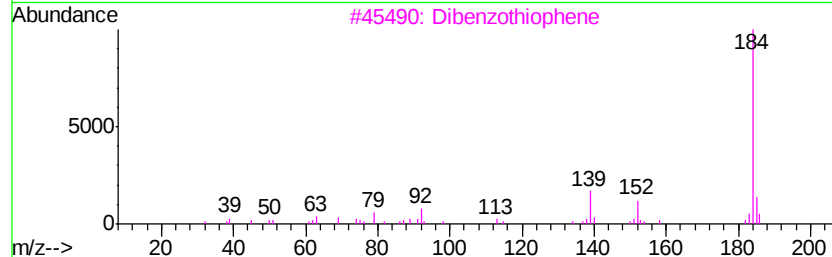
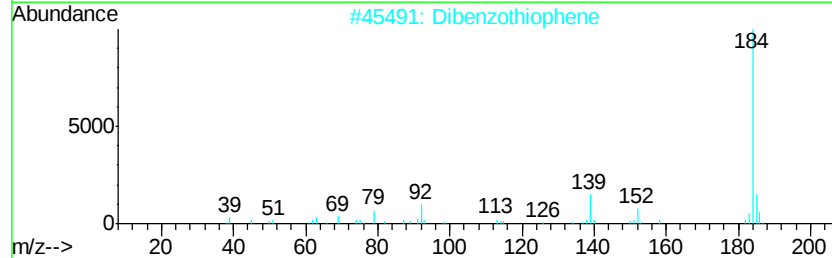
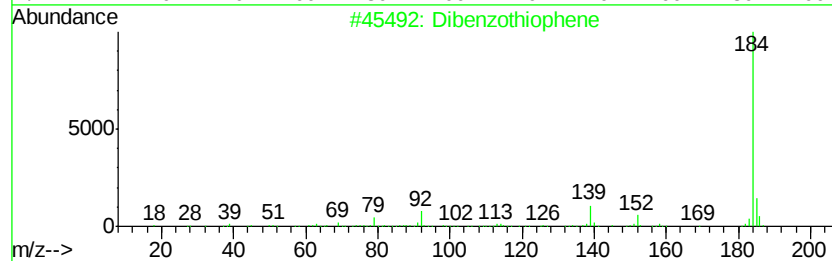
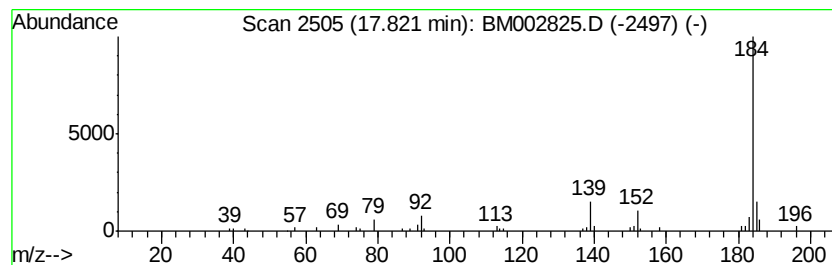
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 4 Dibenzothiophene Concentration Rank 16

| R.T.  | EstConc    | Area  | Relative to ISTD | R.T.  |
|-------|------------|-------|------------------|-------|
| 17.82 | 2.07 ng/ul | 82833 | Phenanthrene-d10 | 17.99 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 97   |
| 2    |    | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 96   |
| 3    |    | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 95   |
| 4    |    | Dibenzothiophene        | 184 | C12H8S  | 000132-65-0 | 94   |
| 5    |    | Naphtho[2,3-b]thiophene | 184 | C12H8S  | 000268-77-9 | 93   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

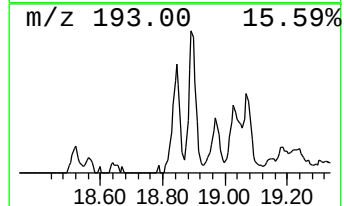
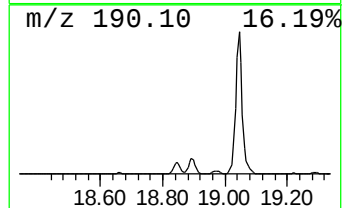
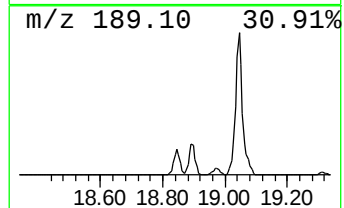
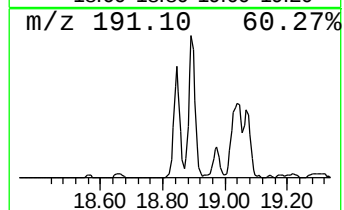
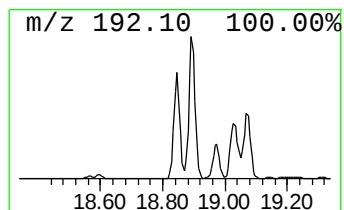
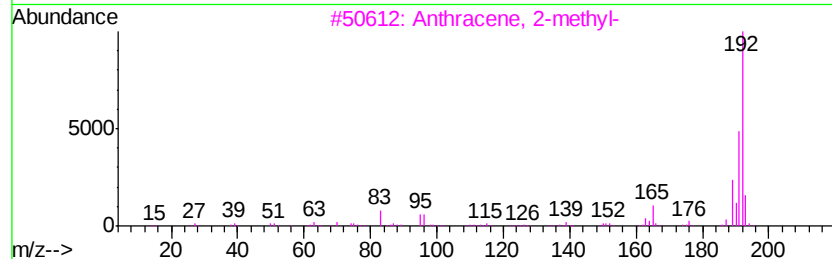
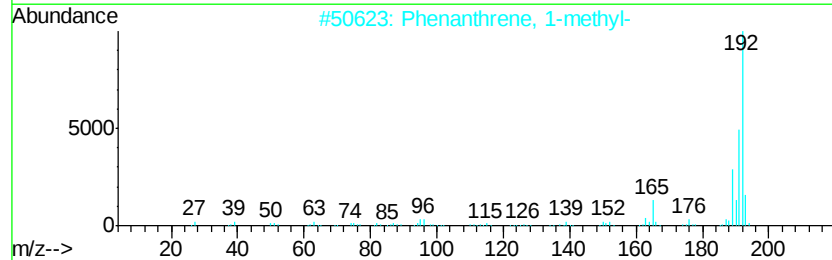
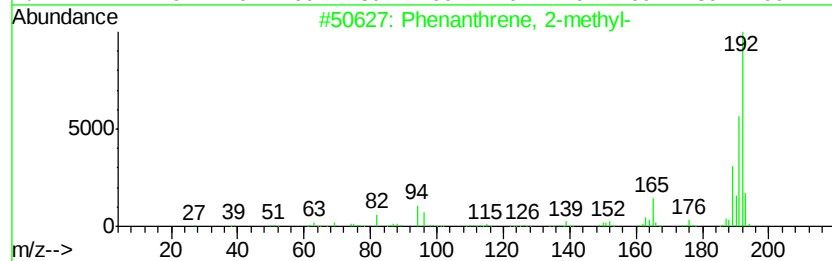
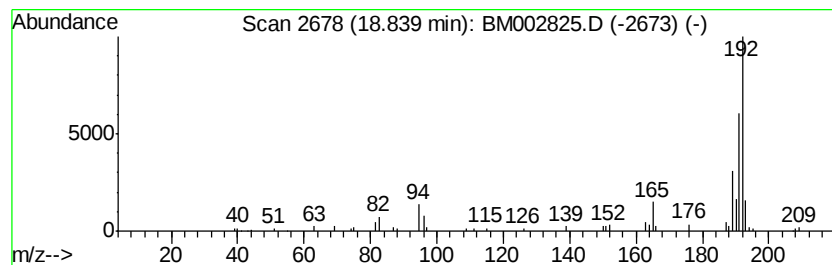
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TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 5 Phenanthrene, 2-methyl- Concentration Rank 11

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.84 | 3.40 ng/ul | 135956 | Phenanthrene-d10 | 17.99 |

| Hit# of | 5 | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 98   |
| 2       |   | Phenanthrene, 1-methyl- | 192 | C15H12  | 000832-69-9 | 96   |
| 3       |   | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 96   |
| 4       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 95   |
| 5       |   | Anthracene, 9-methyl-   | 192 | C15H12  | 000779-02-2 | 95   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

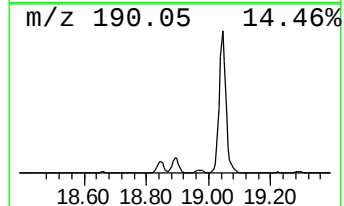
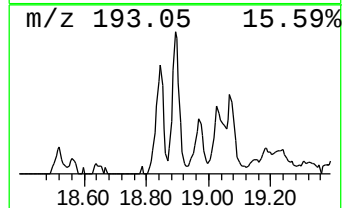
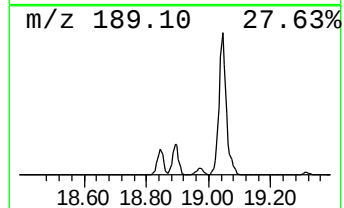
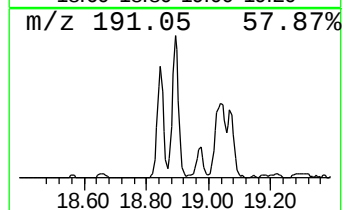
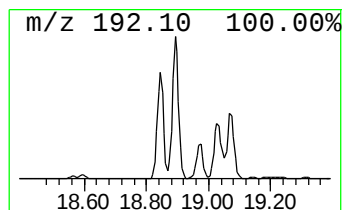
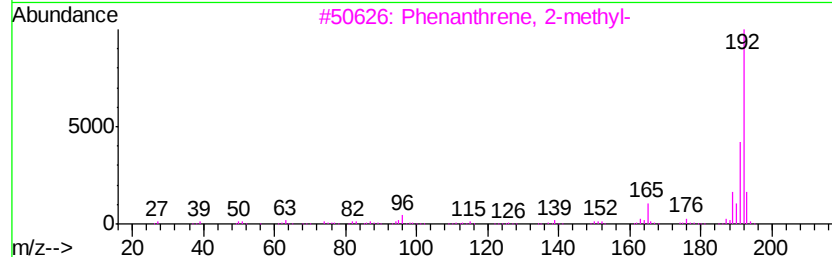
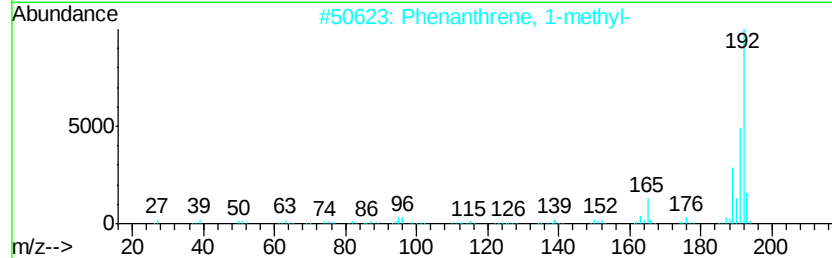
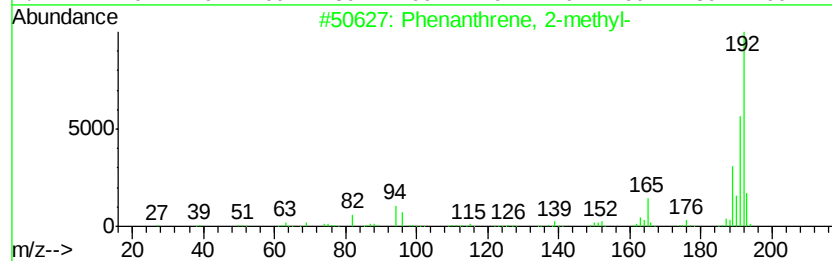
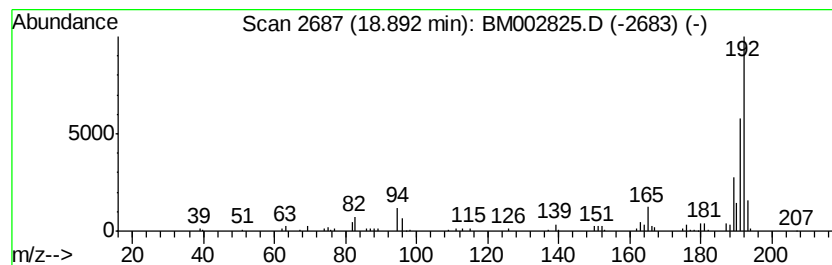
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TIC Integration Parameters: LSCINT.P

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Peak Number 6 Phenanthrene, 1-methyl- Concentration Rank 7

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.89 | 4.82 ng/ul | 192785 | Phenanthrene-d10 | 17.99 |

| Hit# of | 5 | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|---------|---|-------------------------|-----|---------|-------------|------|
| 1       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 98   |
| 2       |   | Phenanthrene, 1-methyl- | 192 | C15H12  | 000832-69-9 | 97   |
| 3       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 96   |
| 4       |   | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 96   |
| 5       |   | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 95   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

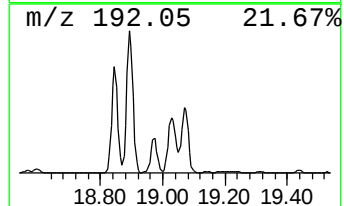
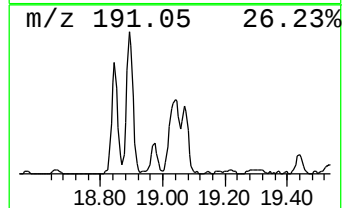
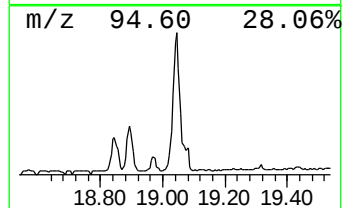
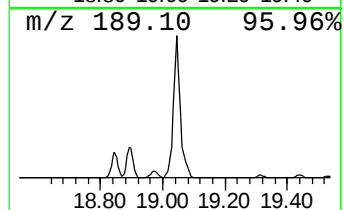
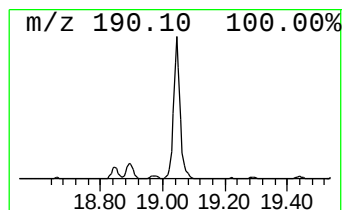
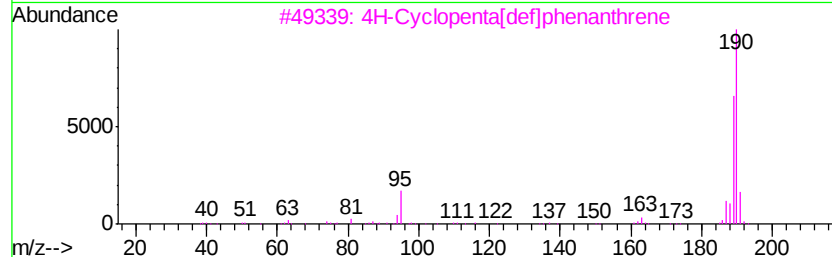
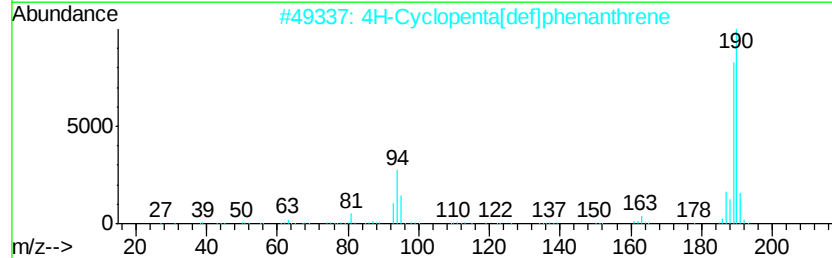
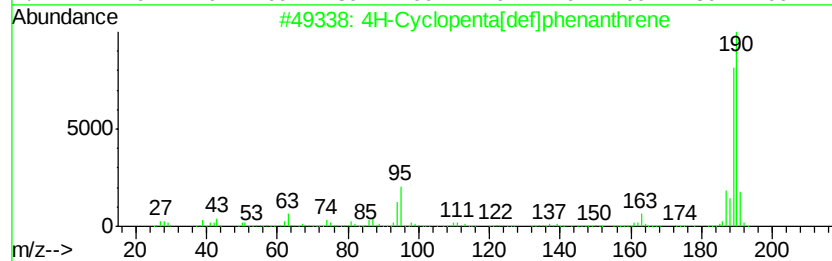
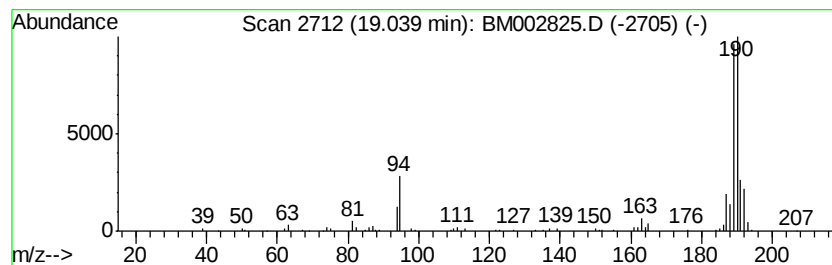
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 7 4H-Cyclopenta[def]phenanthrene Concentration Rank 4

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 19.04 | 9.98 ng/ul | 399496 | Phenanthrene-d10 | 17.99 |

| Hit# of | 5 | Tentative ID                        | MW  | MolForm  | CAS#        | Qual |
|---------|---|-------------------------------------|-----|----------|-------------|------|
| 1       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10   | 000203-64-5 | 93   |
| 2       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10   | 000203-64-5 | 90   |
| 3       |   | 4H-Cyclopenta[def]phenanthrene      | 190 | C15H10   | 000203-64-5 | 87   |
| 4       |   | Phenol, 4-(2-thienylmethyl)-        | 190 | C11H10OS | 091680-55-6 | 59   |
| 5       |   | 2,3,5,6-Tetramethylterephthalald... | 190 | C12H14O2 | 007072-01-7 | 50   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

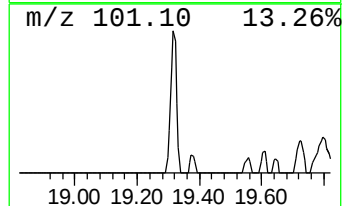
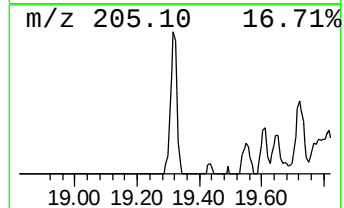
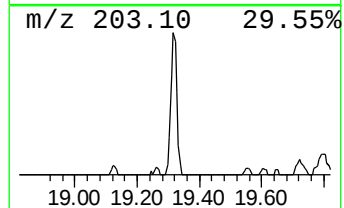
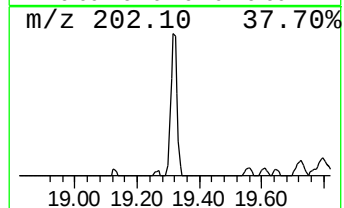
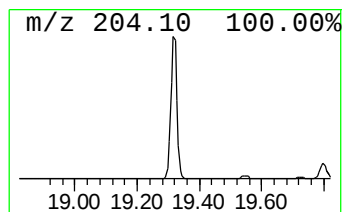
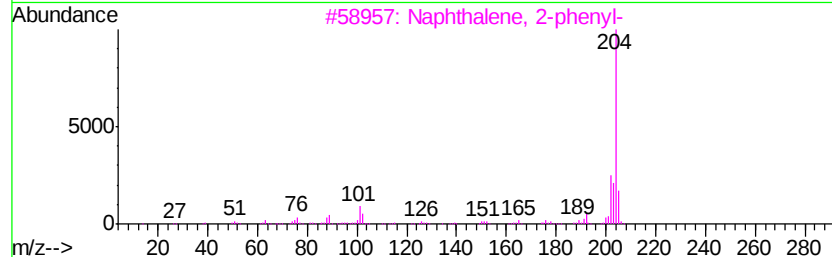
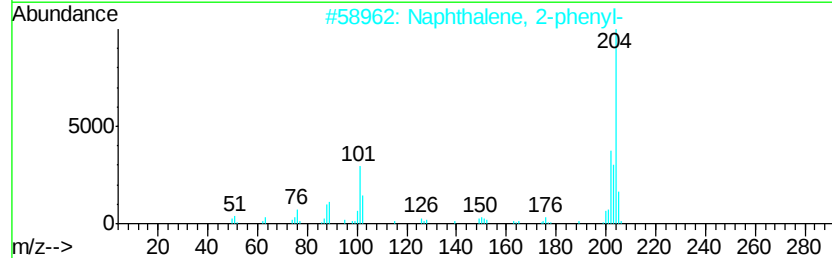
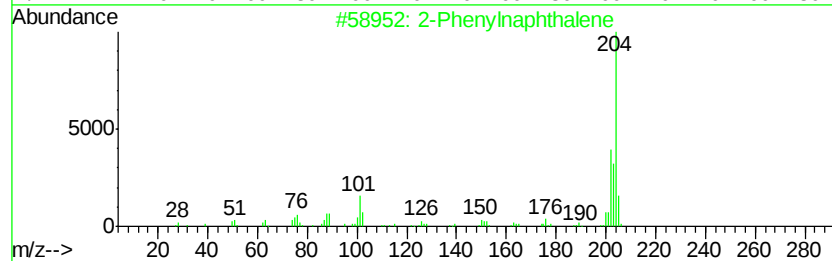
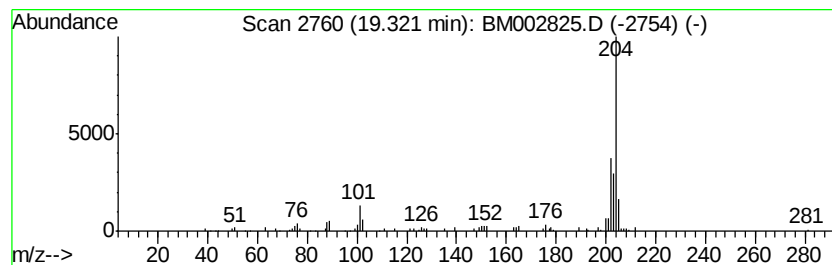
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 8 2-Phenylnaphthalene Concentration Rank 9

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 19.32 | 3.65 ng/ul | 146183 | Phenanthrene-d10 | 17.99 |

| Hit# of | 5 | Tentative ID                   | MW  | MolForm | CAS#        | Qual |
|---------|---|--------------------------------|-----|---------|-------------|------|
| 1       |   | 2-Phenylnaphthalene            | 204 | C16H12  | 035465-71-5 | 96   |
| 2       |   | Naphthalene, 2-phenyl-         | 204 | C16H12  | 000612-94-2 | 94   |
| 3       |   | Naphthalene, 2-phenyl-         | 204 | C16H12  | 000612-94-2 | 94   |
| 4       |   | Naphthalene, 2-phenyl-         | 204 | C16H12  | 000612-94-2 | 90   |
| 5       |   | 6-Phenylbenzocyclohepten-7-one | 232 | C17H12O | 093327-56-1 | 90   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

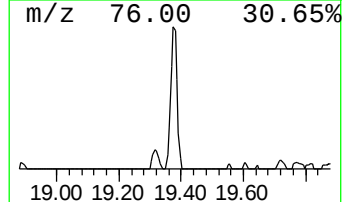
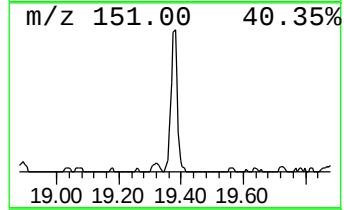
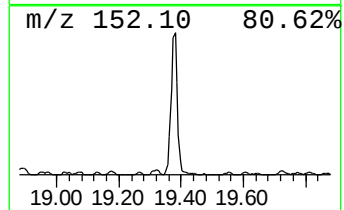
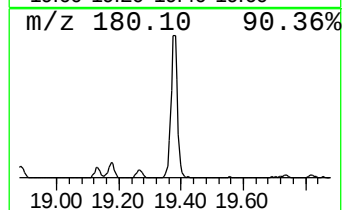
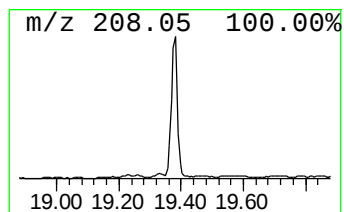
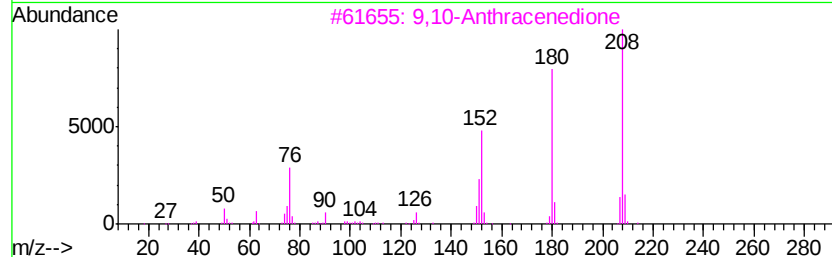
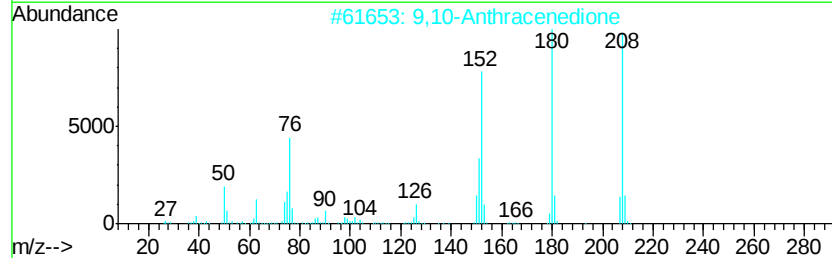
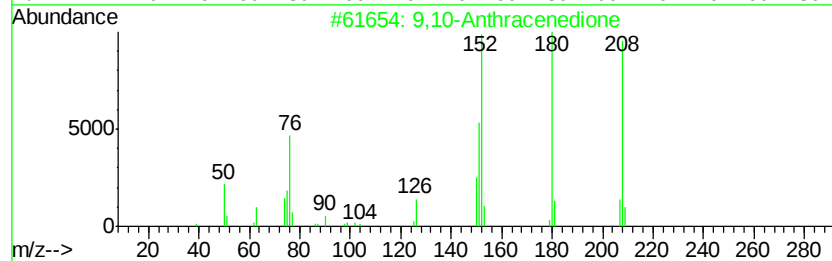
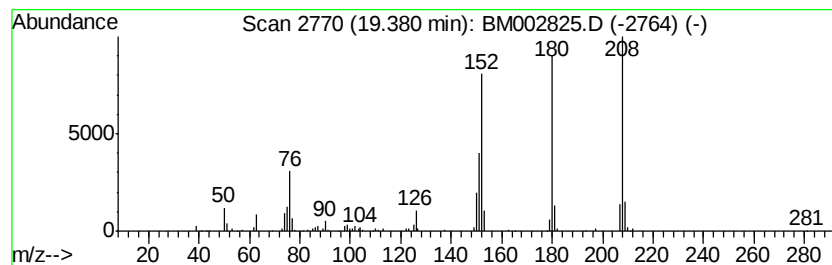
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 19.38 | 6.57 ng/ul | 262921 | Phenanthrene-d10 | 17.99 |

| Hit# | of | Tentative ID         | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------|-----|---------|-------------|------|
| 1    | 5  | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 97   |
| 2    |    | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 97   |
| 3    |    | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 96   |
| 4    |    | 9H-Fluoren-9-one     | 180 | C13H8O  | 000486-25-9 | 70   |
| 5    |    | Benzo[c]cinnoline    | 180 | C12H8N2 | 000230-17-1 | 70   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

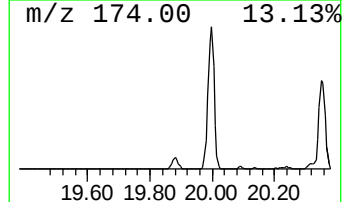
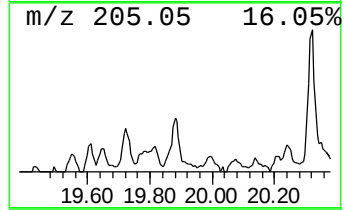
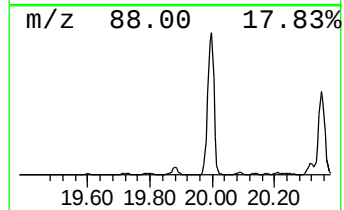
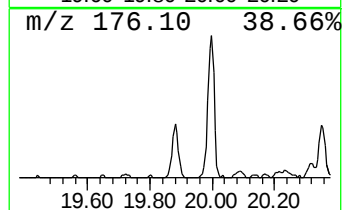
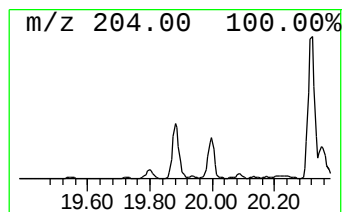
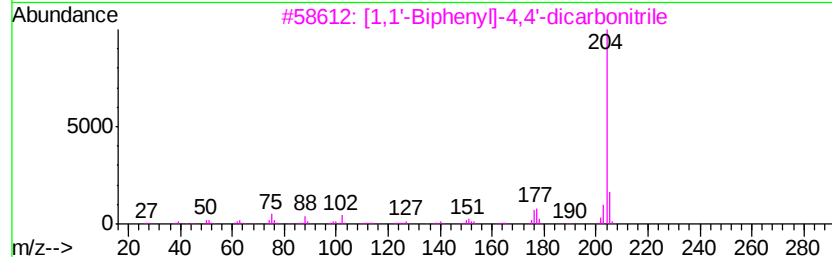
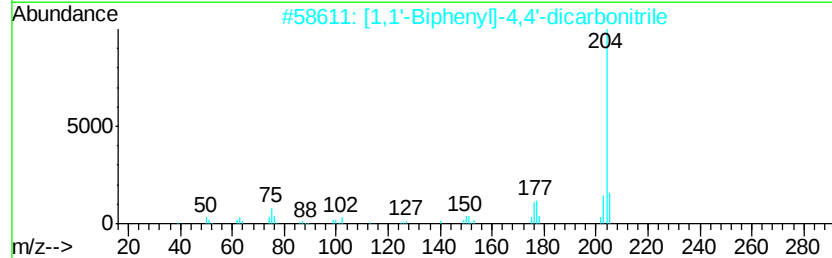
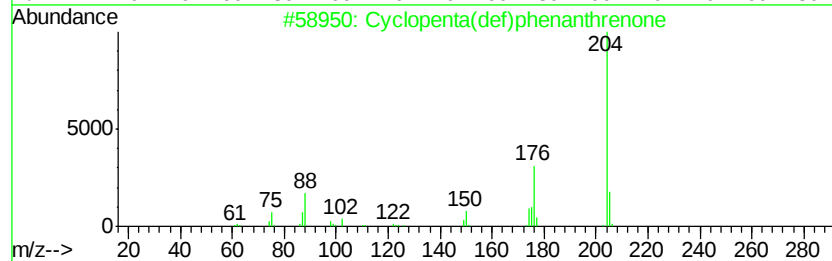
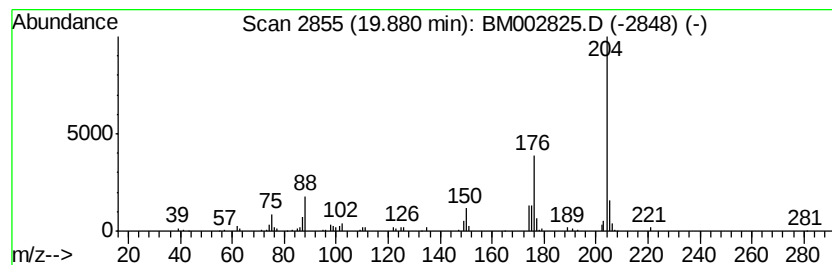
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TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 10 Cyclopenta(def)phenanthrenone Concentration Rank 14

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 19.88 | 2.84 ng/ul | 113465 | Phenanthrene-d10 | 17.99 |

| Hit# | of | Tentative ID                        | MW  | MolForm   | CAS#         | Qual |
|------|----|-------------------------------------|-----|-----------|--------------|------|
| 1    | 5  | Cyclopenta(def)phenanthrenone       | 204 | C15H8O    | 005737-13-3  | 96   |
| 2    |    | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2   | 001591-30-6  | 58   |
| 3    |    | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2   | 001591-30-6  | 47   |
| 4    |    | (E)-Ethyl 3-oxo-2-(pyrid-2-yl)me... | 219 | C12H13NO3 | 1000147-59-7 | 45   |
| 5    |    | 4(equat)-(but-3-en-1-ynyl)-2(axi... | 219 | C14H21NO  | 038423-22-2  | 42   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

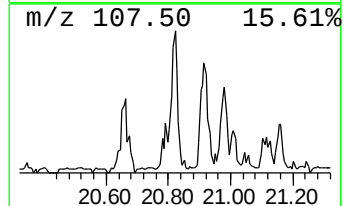
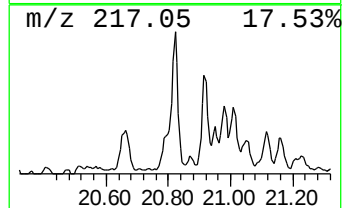
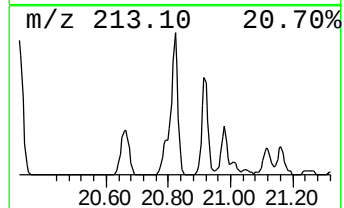
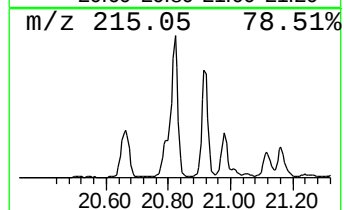
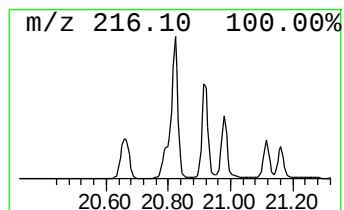
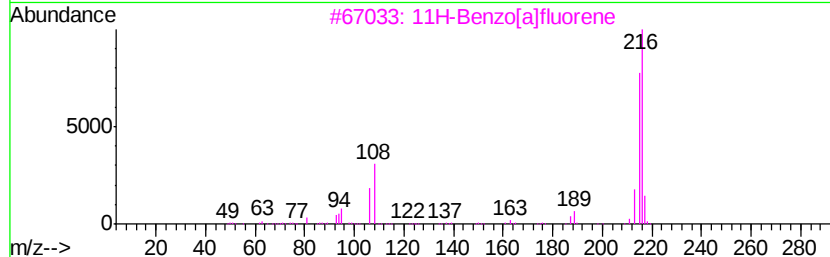
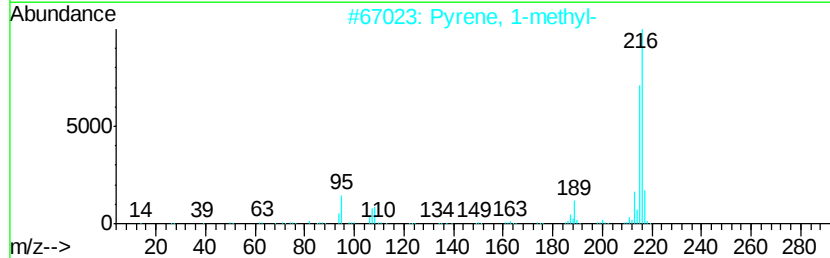
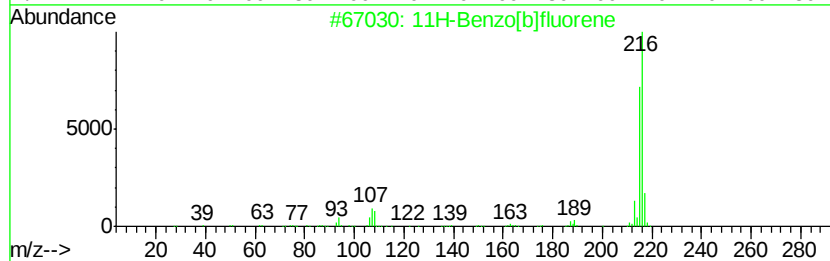
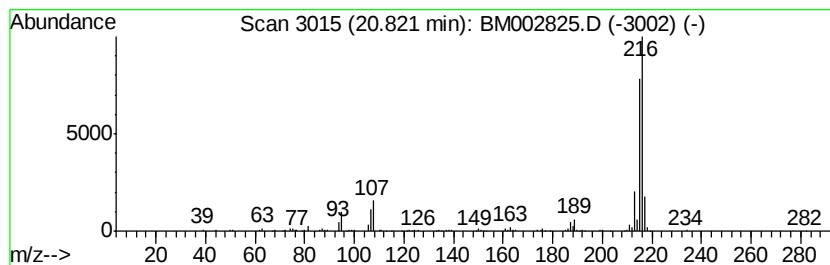
Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

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

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

| R.T.    | EstConc    | Area                    | Relative to ISTD | R.T.    |             |      |
|---------|------------|-------------------------|------------------|---------|-------------|------|
| 20.82   | 3.55 ng/ul | 492923                  | Chrysene-d12     | 22.08   |             |      |
| Hit# of | 5          | Tentative ID            | MW               | MolForm | CAS#        | Qual |
| 1       |            | 11H-Benzo[b]fluorene    | 216              | C17H12  | 000243-17-4 | 95   |
| 2       |            | Pyrene, 1-methyl-       | 216              | C17H12  | 002381-21-7 | 93   |
| 3       |            | 11H-Benzo[a]fluorene    | 216              | C17H12  | 000238-84-6 | 91   |
| 4       |            | Fluoranthene, 2-methyl- | 216              | C17H12  | 033543-31-6 | 91   |
| 5       |            | 11H-Benzo[a]fluorene    | 216              | C17H12  | 000238-84-6 | 90   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

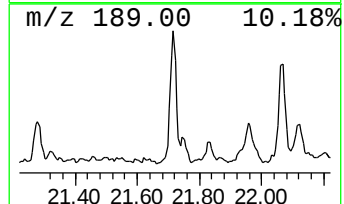
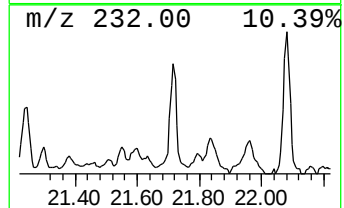
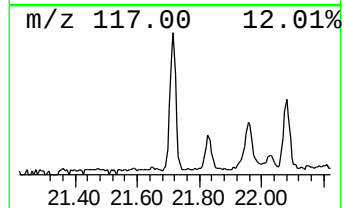
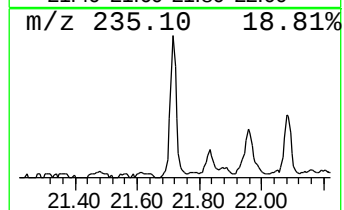
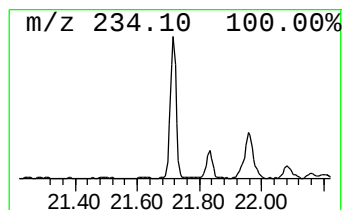
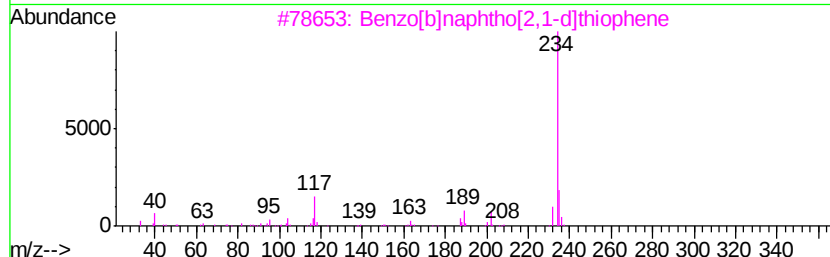
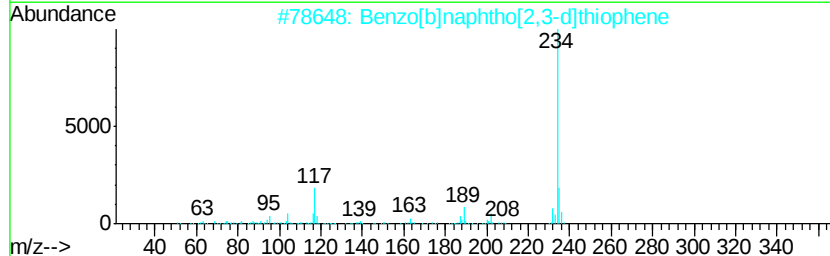
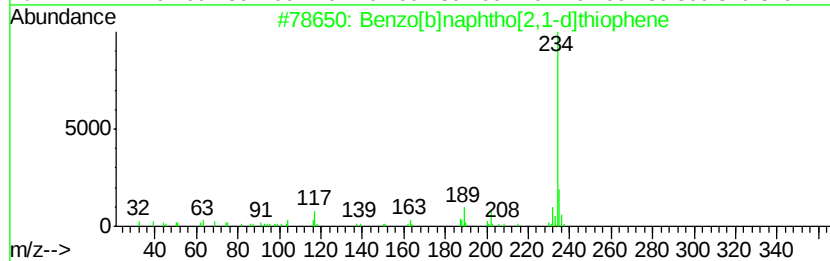
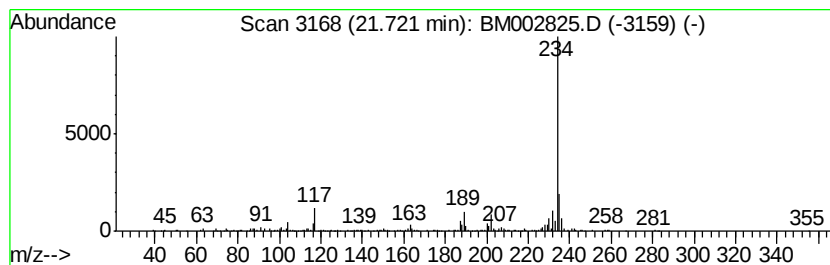
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 12 Benzo[b]naphtho[2,1-d]thiop... Concentration Rank 13

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 21.72 | 2.94 ng/u1 | 407508 | Chrysene-d12     | 22.08 |

| 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 | 95   |
| 3    |    | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 94   |
| 4    |    | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 94   |
| 5    |    | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 94   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

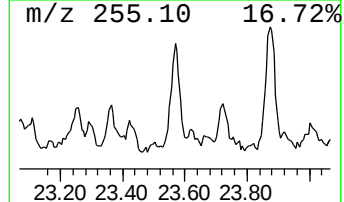
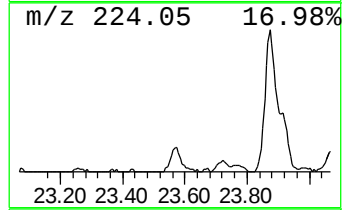
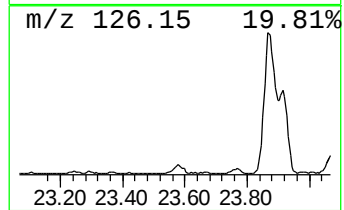
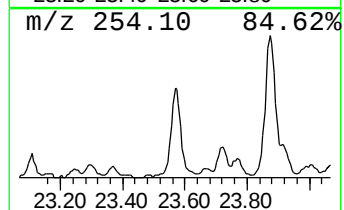
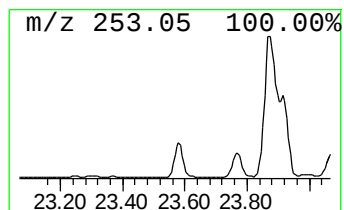
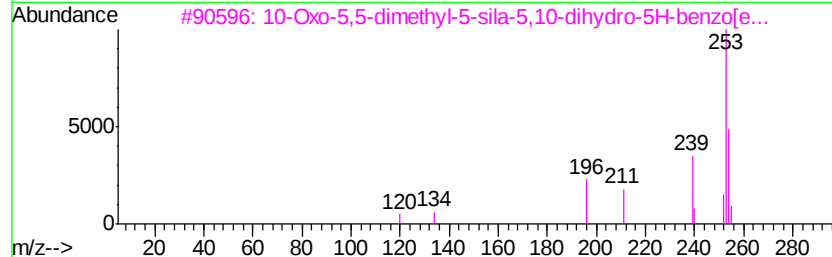
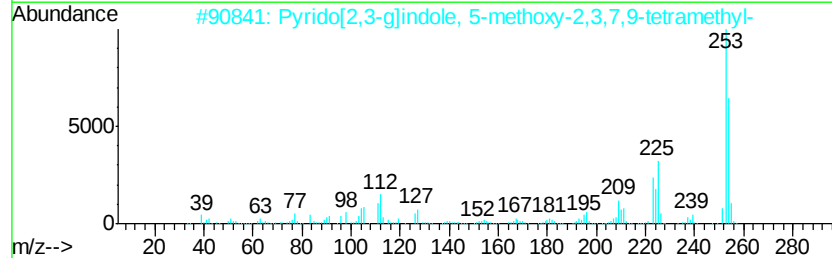
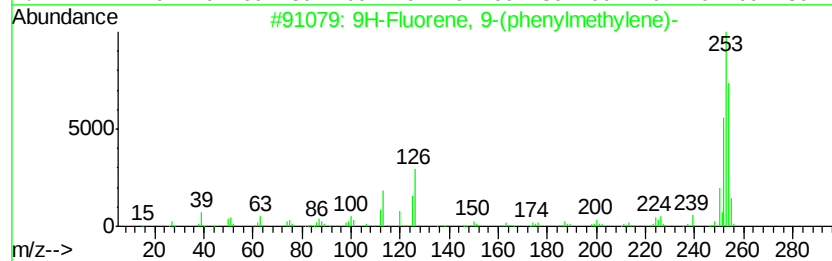
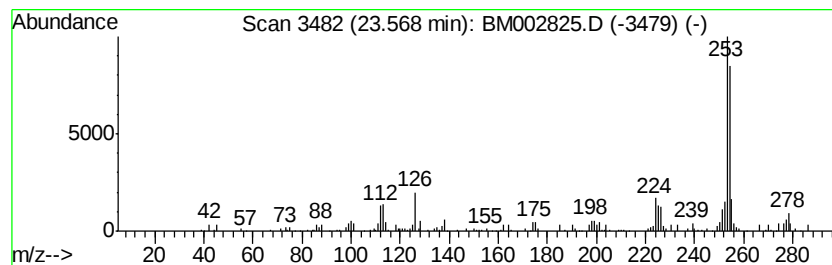
TIC Library : C:\DATABASE\NIST02.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 14 9H-Fluorene, 9-(phenylmethy... Concentration Rank 12

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 23.57 | 2.96 ng/ul | 140394 | Perylene-d12     | 24.66 |

| Hit# | of | Tentative ID                        | MW  | MolForm     | CAS#         | Qual |
|------|----|-------------------------------------|-----|-------------|--------------|------|
| 1    | 5  | 9H-Fluorene, 9-(phenylmethylene)-   | 254 | C20H14      | 001836-87-9  | 68   |
| 2    |    | Pyrido[2,3-g]indole, 5-methoxy-2... | 254 | C16H18N2O   | 201991-45-9  | 68   |
| 3    |    | 10-Oxo-5,5-dimethyl-5-sila-5,10-... | 254 | C14H14N2OSi | 089052-45-9  | 64   |
| 4    |    | 1,2-Dihydrobenzo[b]fluoranthene     | 254 | C20H14      | 100516-13-0  | 53   |
| 5    |    | Benzofuran-5,6-diol-3-one, 2-ben... | 254 | C15H10O4    | 1000128-65-2 | 52   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM100115\  
Data File : BM002825.D  
Acq On : 02 Oct 2015 04:04  
Operator : UM/IZ  
Sample : G3798-23DL 2X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
D9G75DL

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM092915.M  
Quant Title : SVOA CALIBRATION

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

| TIC Top Hit name     | RT    | EstConc | Units | Response | --Internal Standard-- |       |         |      |
|----------------------|-------|---------|-------|----------|-----------------------|-------|---------|------|
|                      |       |         |       |          | #                     | RT    | Resp    | Conc |
| Butane, 2-methoxy... | 3.45  | 46.3    | ng/ul | 865559   | 1                     | 8.69  | 374257  | 20.0 |
| Dibenzothiophene     | 17.82 | 2.1     | ng/ul | 82833    | 4                     | 17.99 | 800275  | 20.0 |
| Phenanthrene, 2-m... | 18.84 | 3.4     | ng/ul | 135956   | 4                     | 17.99 | 800275  | 20.0 |
| Phenanthrene, 1-m... | 18.89 | 4.8     | ng/ul | 192785   | 4                     | 17.99 | 800275  | 20.0 |
| 4H-Cyclopenta[def... | 19.04 | 10.0    | ng/ul | 399496   | 4                     | 17.99 | 800275  | 20.0 |
| 2-Phenylnaphthalene  | 19.32 | 3.6     | ng/ul | 146183   | 4                     | 17.99 | 800275  | 20.0 |
| 9,10-Anthracenedione | 19.38 | 6.6     | ng/ul | 262921   | 4                     | 17.99 | 800275  | 20.0 |
| Cyclopenta(def)ph... | 19.88 | 2.8     | ng/ul | 113465   | 4                     | 17.99 | 800275  | 20.0 |
| 11H-Benzo[b]fluorene | 20.82 | 3.5     | ng/ul | 492923   | 5                     | 22.08 | 2773510 | 20.0 |
| Benzo[b]naphtho[2... | 21.72 | 2.9     | ng/ul | 407508   | 5                     | 22.08 | 2773510 | 20.0 |
| 9H-Fluorene, 9-(p... | 23.57 | 3.0     | ng/ul | 140394   | 6                     | 24.66 | 948825  | 20.0 |