

Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
 Data File : BM014435.D  
 Acq On : 01 Mar 2018 11:44  
 Operator : SJ/JU  
 Sample : J1678-10 10X  
 Misc :  
 ALS Vial : 39 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 BE5W0

## Integration Parameters: LSCINT.P

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

Filtering: 5  
 Min Area: 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\SOM-EPA-BM021418.M  
 Title : SVOA CALIBRATION

Signal : TIC

| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 7.510       | 763           | 769         | 782          | rBV      | 465604         | 821936        | 7.89%           | 0.818%        |
| 2         | 8.257       | 888           | 896         | 903          | rBV4     | 53437          | 124183        | 1.19%           | 0.124%        |
| 3         | 8.686       | 961           | 969         | 978          | rBV3     | 56543          | 130295        | 1.25%           | 0.130%        |
| 4         | 9.957       | 1179          | 1185        | 1195         | rBV5     | 47061          | 132784        | 1.28%           | 0.132%        |
| 5         | 10.286      | 1231          | 1241        | 1246         | rBV      | 720750         | 1284105       | 12.33%          | 1.278%        |
| 6         | 10.333      | 1246          | 1249        | 1260         | rVB      | 181354         | 316153        | 3.04%           | 0.315%        |
| 7         | 11.963      | 1520          | 1526        | 1536         | rBV      | 110244         | 197699        | 1.90%           | 0.197%        |
| 8         | 12.180      | 1557          | 1563        | 1574         | rVB      | 106949         | 207706        | 1.99%           | 0.207%        |
| 9         | 13.486      | 1778          | 1785        | 1791         | rBV3     | 132538         | 261498        | 2.51%           | 0.260%        |
| 10        | 13.545      | 1791          | 1795        | 1799         | rVV3     | 72434          | 113593        | 1.09%           | 0.113%        |
| 11        | 13.598      | 1799          | 1804        | 1808         | rVV      | 139937         | 205760        | 1.98%           | 0.205%        |
| 12        | 13.727      | 1821          | 1826        | 1829         | rBV3     | 77559          | 112765        | 1.08%           | 0.112%        |
| 13        | 13.863      | 1843          | 1849        | 1852         | rBV      | 210218         | 337513        | 3.24%           | 0.336%        |
| 14        | 13.892      | 1852          | 1854        | 1862         | rVB      | 161206         | 227944        | 2.19%           | 0.227%        |
| 15        | 14.174      | 1888          | 1902        | 1908         | rBV2     | 1151251        | 1793926       | 17.23%          | 1.786%        |
| 16        | 14.239      | 1908          | 1913        | 1922         | rVB      | 378942         | 588718        | 5.65%           | 0.586%        |
| 17        | 14.386      | 1933          | 1938        | 1948         | rVB5     | 46829          | 128914        | 1.24%           | 0.128%        |
| 18        | 14.486      | 1948          | 1955        | 1961         | rBV4     | 66800          | 158105        | 1.52%           | 0.157%        |
| 19        | 14.580      | 1961          | 1971        | 1977         | rVV      | 300295         | 509152        | 4.89%           | 0.507%        |
| 20        | 14.657      | 1977          | 1984        | 1988         | rVV2     | 70721          | 119650        | 1.15%           | 0.119%        |
| 21        | 14.798      | 1999          | 2008        | 2014         | rBV2     | 70933          | 145046        | 1.39%           | 0.144%        |
| 22        | 15.174      | 2067          | 2072        | 2077         | rBV      | 231319         | 335196        | 3.22%           | 0.334%        |
| 23        | 15.233      | 2077          | 2082        | 2088         | rVV      | 455888         | 655968        | 6.30%           | 0.653%        |
| 24        | 15.392      | 2106          | 2109        | 2114         | rVB3     | 87588          | 125712        | 1.21%           | 0.125%        |
| 25        | 15.527      | 2128          | 2132        | 2140         | rVB      | 144103         | 267974        | 2.57%           | 0.267%        |
| 26        | 15.680      | 2154          | 2158        | 2165         | rVB2     | 133559         | 265124        | 2.55%           | 0.264%        |
| 27        | 15.768      | 2165          | 2173        | 2179         | rVB8     | 55238          | 143515        | 1.38%           | 0.143%        |
| 28        | 15.921      | 2192          | 2199        | 2207         | rVB6     | 82208          | 206903        | 1.99%           | 0.206%        |
| 29        | 16.245      | 2246          | 2254        | 2258         | rBV4     | 130504         | 285850        | 2.75%           | 0.285%        |
| 30        | 16.292      | 2258          | 2262        | 2267         | rVB3     | 106544         | 160017        | 1.54%           | 0.159%        |
| 31        | 16.509      | 2295          | 2299        | 2303         | rVB3     | 91196          | 121798        | 1.17%           | 0.121%        |
| 32        | 16.604      | 2310          | 2315        | 2319         | rVB      | 280415         | 411982        | 3.96%           | 0.410%        |
| 33        | 16.686      | 2321          | 2329        | 2336         | rBV5     | 136050         | 347617        | 3.34%           | 0.346%        |
| 34        | 16.757      | 2336          | 2341        | 2349         | rVB      | 329663         | 512309        | 4.92%           | 0.510%        |

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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\SOM-EPA-BM021418.M  
 Title : SVOA CALIBRATION

|    |        |      |      |      |      |         |          |         |         |
|----|--------|------|------|------|------|---------|----------|---------|---------|
| 35 | 16.939 | 2365 | 2372 | 2375 | rBV  | 1412444 | 2126926  | 20.43%  | 2.117%  |
| 36 | 16.980 | 2375 | 2379 | 2385 | rVV  | 6013222 | 8300078  | 79.72%  | 8.262%  |
| 37 | 17.033 | 2385 | 2388 | 2391 | rVV3 | 332380  | 535272   | 5.14%   | 0.533%  |
| 38 | 17.068 | 2391 | 2394 | 2400 | rVV  | 1159629 | 1561622  | 15.00%  | 1.555%  |
| 39 | 17.139 | 2400 | 2406 | 2410 | rVV3 | 111285  | 199908   | 1.92%   | 0.199%  |
| 40 | 17.351 | 2433 | 2442 | 2450 | rBV2 | 504054  | 1002296  | 9.63%   | 0.998%  |
| 41 | 17.456 | 2457 | 2460 | 2466 | rBV3 | 92271   | 145730   | 1.40%   | 0.145%  |
| 42 | 17.521 | 2466 | 2471 | 2479 | rVB3 | 190131  | 396375   | 3.81%   | 0.395%  |
| 43 | 17.662 | 2491 | 2495 | 2502 | rVB  | 123683  | 216755   | 2.08%   | 0.216%  |
| 44 | 17.739 | 2504 | 2508 | 2513 | rBV3 | 75028   | 114408   | 1.10%   | 0.114%  |
| 45 | 17.815 | 2513 | 2521 | 2524 | rBV  | 888504  | 1343455  | 12.90%  | 1.337%  |
| 46 | 17.862 | 2524 | 2529 | 2535 | rVB  | 1240637 | 1759942  | 16.90%  | 1.752%  |
| 47 | 17.945 | 2535 | 2543 | 2547 | rBV  | 408604  | 629041   | 6.04%   | 0.626%  |
| 48 | 18.003 | 2547 | 2553 | 2557 | rVV2 | 1167370 | 2066893  | 19.85%  | 2.057%  |
| 49 | 18.045 | 2557 | 2560 | 2567 | rVB  | 701266  | 951964   | 9.14%   | 0.948%  |
| 50 | 18.133 | 2570 | 2575 | 2578 | rBV3 | 110100  | 169259   | 1.63%   | 0.168%  |
| 51 | 18.174 | 2578 | 2582 | 2585 | rVB3 | 97556   | 111716   | 1.07%   | 0.111%  |
| 52 | 18.215 | 2585 | 2589 | 2594 | rBV6 | 103606  | 141962   | 1.36%   | 0.141%  |
| 53 | 18.321 | 2602 | 2607 | 2612 | rBV  | 540441  | 714174   | 6.86%   | 0.711%  |
| 54 | 18.380 | 2612 | 2617 | 2623 | rVB  | 580894  | 845357   | 8.12%   | 0.842%  |
| 55 | 18.568 | 2640 | 2649 | 2654 | rBV2 | 258922  | 540194   | 5.19%   | 0.538%  |
| 56 | 18.621 | 2654 | 2658 | 2661 | rVV  | 239207  | 303686   | 2.92%   | 0.302%  |
| 57 | 18.662 | 2661 | 2665 | 2669 | rVB2 | 192164  | 280631   | 2.70%   | 0.279%  |
| 58 | 18.745 | 2673 | 2679 | 2683 | rBV  | 572459  | 939142   | 9.02%   | 0.935%  |
| 59 | 18.803 | 2683 | 2689 | 2693 | rVV3 | 326581  | 736842   | 7.08%   | 0.733%  |
| 60 | 18.839 | 2693 | 2695 | 2698 | rVB  | 205096  | 194998   | 1.87%   | 0.194%  |
| 61 | 18.898 | 2698 | 2705 | 2711 | rBV3 | 465323  | 917377   | 8.81%   | 0.913%  |
| 62 | 19.015 | 2718 | 2725 | 2731 | rBV  | 8183247 | 10412104 | 100.00% | 10.365% |
| 63 | 19.080 | 2732 | 2736 | 2738 | rVV2 | 134954  | 168648   | 1.62%   | 0.168%  |
| 64 | 19.109 | 2738 | 2741 | 2746 | rVB  | 188942  | 247296   | 2.38%   | 0.246%  |
| 65 | 19.250 | 2759 | 2765 | 2769 | rVB2 | 254354  | 463595   | 4.45%   | 0.461%  |
| 66 | 19.292 | 2769 | 2772 | 2776 | rVB4 | 118252  | 161747   | 1.55%   | 0.161%  |
| 67 | 19.350 | 2776 | 2782 | 2783 | rBV  | 1479589 | 1956101  | 18.79%  | 1.947%  |
| 68 | 19.380 | 2783 | 2787 | 2795 | rVB  | 6972300 | 9229575  | 88.64%  | 9.188%  |
| 69 | 19.450 | 2795 | 2799 | 2804 | rBV2 | 362667  | 516273   | 4.96%   | 0.514%  |
| 70 | 19.556 | 2813 | 2817 | 2823 | rBV  | 301760  | 424951   | 4.08%   | 0.423%  |
| 71 | 19.627 | 2824 | 2829 | 2834 | rVB2 | 336286  | 544928   | 5.23%   | 0.542%  |

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Integrator: RTE  
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Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM-EPA-BM021418.M  
Title : SVOA CALIBRATION

|     |        |      |      |      |      |         |         |        |        |
|-----|--------|------|------|------|------|---------|---------|--------|--------|
| 72  | 19.709 | 2836 | 2843 | 2849 | rBV4 | 497462  | 1281193 | 12.30% | 1.275% |
| 73  | 19.845 | 2860 | 2866 | 2868 | rBV3 | 442123  | 796191  | 7.65%  | 0.793% |
| 74  | 19.880 | 2868 | 2872 | 2877 | rVB  | 826739  | 1255847 | 12.06% | 1.250% |
| 75  | 19.980 | 2885 | 2889 | 2892 | rBV  | 507879  | 652189  | 6.26%  | 0.649% |
| 76  | 20.039 | 2893 | 2899 | 2902 | rVB2 | 632680  | 1043765 | 10.02% | 1.039% |
| 77  | 20.115 | 2910 | 2912 | 2916 | rVB2 | 139791  | 146356  | 1.41%  | 0.146% |
| 78  | 20.174 | 2918 | 2922 | 2926 | rBV  | 428611  | 565972  | 5.44%  | 0.563% |
| 79  | 20.221 | 2926 | 2930 | 2935 | rVB  | 487415  | 644774  | 6.19%  | 0.642% |
| 80  | 20.433 | 2963 | 2966 | 2969 | rBV4 | 114979  | 193834  | 1.86%  | 0.193% |
| 81  | 20.503 | 2976 | 2978 | 2982 | rVB  | 157165  | 188735  | 1.81%  | 0.188% |
| 82  | 20.639 | 2997 | 3001 | 3006 | rVB  | 772799  | 929508  | 8.93%  | 0.925% |
| 83  | 20.797 | 3024 | 3028 | 3031 | rBV  | 632686  | 820250  | 7.88%  | 0.817% |
| 84  | 20.833 | 3031 | 3034 | 3037 | rVV  | 558308  | 606628  | 5.83%  | 0.604% |
| 85  | 20.874 | 3037 | 3041 | 3048 | rVV3 | 391522  | 802173  | 7.70%  | 0.799% |
| 86  | 20.939 | 3048 | 3052 | 3057 | rVB  | 715702  | 874838  | 8.40%  | 0.871% |
| 87  | 21.139 | 3079 | 3086 | 3092 | rBV2 | 3804289 | 7655023 | 73.52% | 7.620% |
| 88  | 21.192 | 3092 | 3095 | 3104 | rVB  | 3247421 | 3900691 | 37.46% | 3.883% |
| 89  | 21.303 | 3111 | 3114 | 3118 | rBV  | 390755  | 493010  | 4.73%  | 0.491% |
| 90  | 21.639 | 3168 | 3171 | 3174 | rBV3 | 261427  | 340475  | 3.27%  | 0.339% |
| 91  | 21.691 | 3177 | 3180 | 3184 | rVV  | 651575  | 908396  | 8.72%  | 0.904% |
| 92  | 21.744 | 3186 | 3189 | 3195 | rVB  | 346622  | 440026  | 4.23%  | 0.438% |
| 93  | 21.886 | 3210 | 3213 | 3216 | rBV2 | 276673  | 375434  | 3.61%  | 0.374% |
| 94  | 22.691 | 3344 | 3350 | 3354 | rBV  | 1759961 | 3788421 | 36.38% | 3.771% |
| 95  | 22.844 | 3374 | 3376 | 3382 | rVB  | 302420  | 433082  | 4.16%  | 0.431% |
| 96  | 23.144 | 3422 | 3427 | 3432 | rBV  | 954951  | 1627555 | 15.63% | 1.620% |
| 97  | 23.238 | 3438 | 3443 | 3452 | rVB  | 1552323 | 2629866 | 25.26% | 2.618% |
| 98  | 23.327 | 3454 | 3458 | 3463 | rVV2 | 808048  | 1453978 | 13.96% | 1.447% |
| 99  | 23.380 | 3463 | 3467 | 3474 | rVB2 | 448364  | 821552  | 7.89%  | 0.818% |
| 100 | 25.497 | 3822 | 3827 | 3836 | rVB  | 704075  | 1658979 | 15.93% | 1.651% |

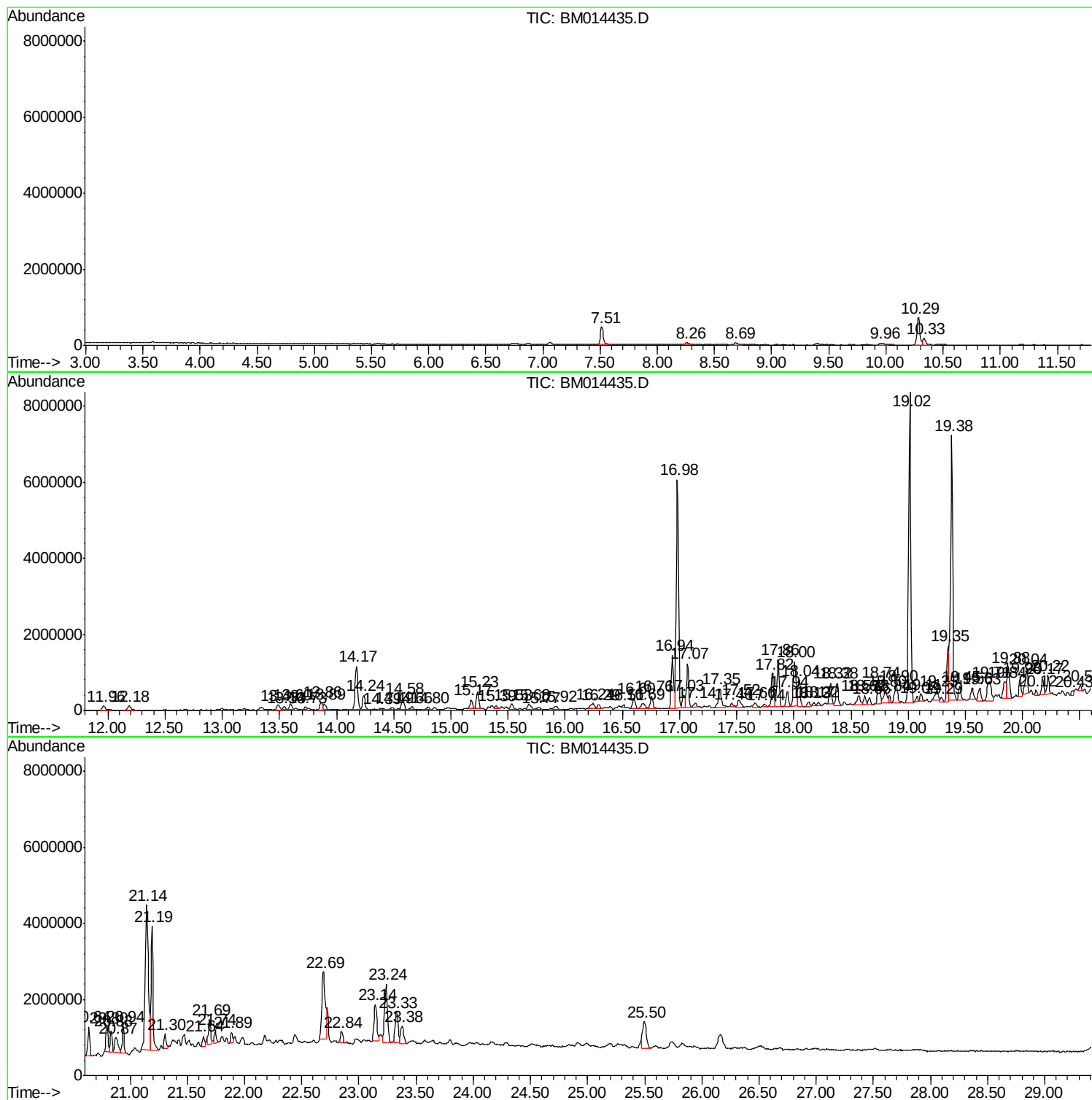
Sum of corrected areas: 100457372

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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

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



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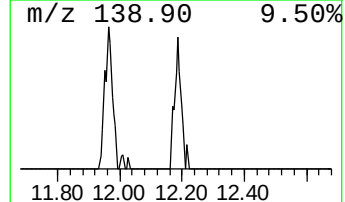
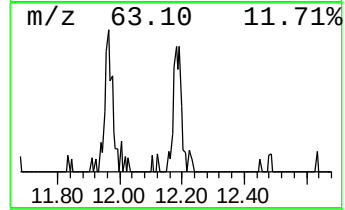
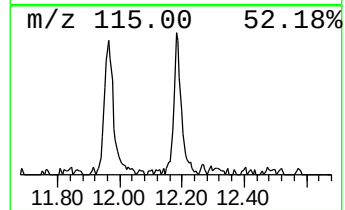
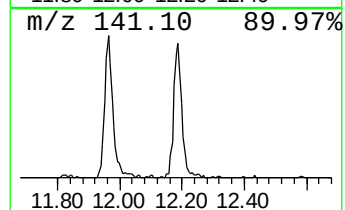
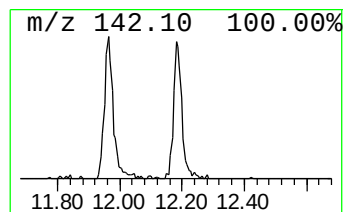
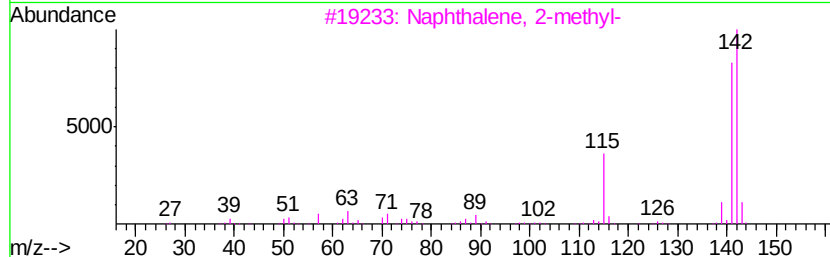
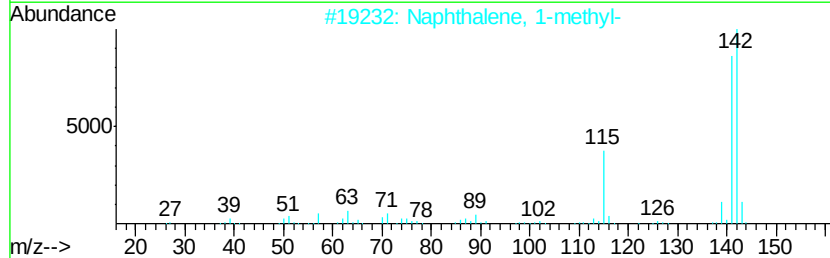
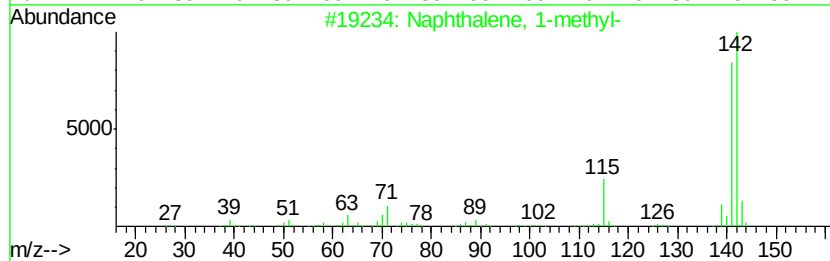
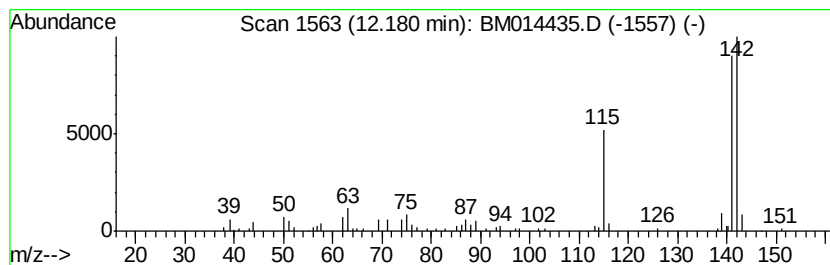
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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 1 Naphthalene, 1-methyl- Concentration Rank 20

| R.T.    | EstConc    | Area                                | Relative to ISTD | R.T.    |             |      |
|---------|------------|-------------------------------------|------------------|---------|-------------|------|
| 12.18   | 3.24 ng/ul | 207706                              | Naphthalene-d8   | 10.29   |             |      |
| Hit# of | 5          | Tentative ID                        | MW               | MolForm | CAS#        | Qual |
| 1       |            | Naphthalene, 1-methyl-              | 142              | C11H10  | 000090-12-0 | 95   |
| 2       |            | Naphthalene, 1-methyl-              | 142              | C11H10  | 000090-12-0 | 91   |
| 3       |            | Naphthalene, 2-methyl-              | 142              | C11H10  | 000091-57-6 | 91   |
| 4       |            | Benzocycloheptatriene               | 142              | C11H10  | 000264-09-5 | 90   |
| 5       |            | 1,4-Methanonaphthalene, 1,4-dihy... | 142              | C11H10  | 004453-90-1 | 87   |



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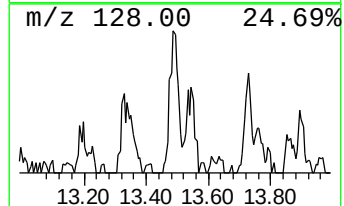
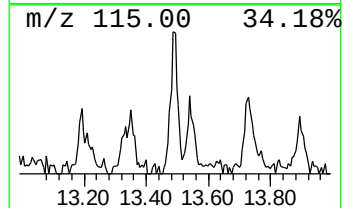
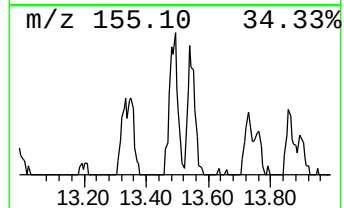
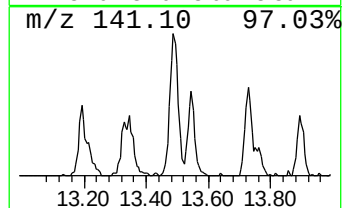
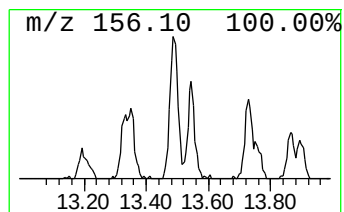
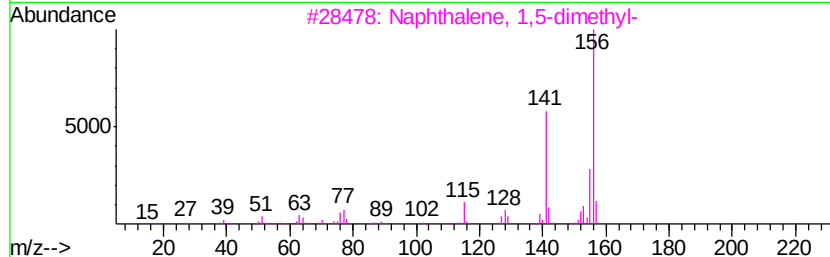
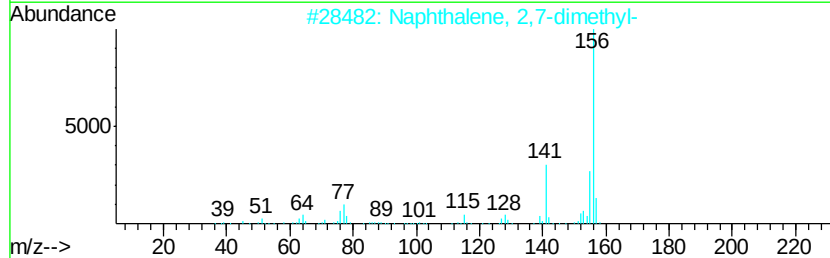
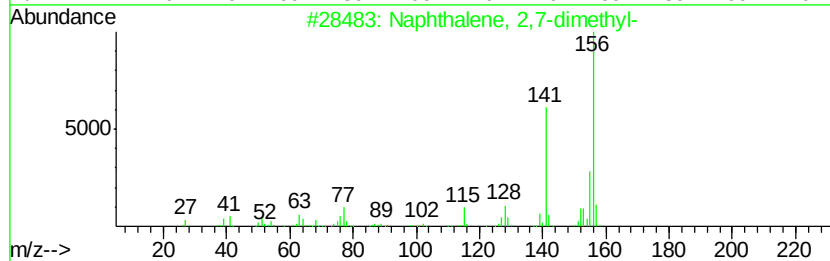
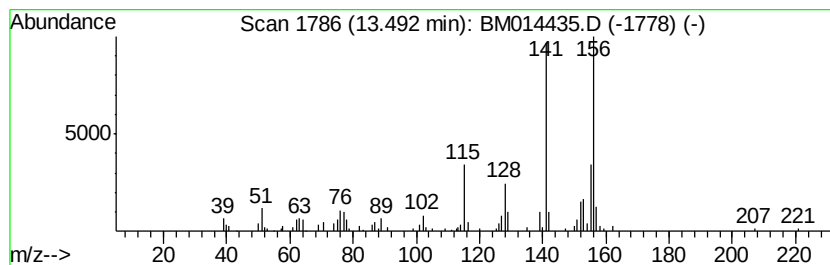
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TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 2 Naphthalene, 2,7-dimethyl- Concentration Rank 22

| R.T.    | EstConc    | Area                       | Relative to ISTD | R.T.           |
|---------|------------|----------------------------|------------------|----------------|
| 13.49   | 2.92 ng/ul | 261498                     | Acenaphthene-d10 | 14.17          |
| Hit# of | 5          | Tentative ID               | MW MolForm       | CAS# Qual      |
| 1       |            | Naphthalene, 2,7-dimethyl- | 156 C12H12       | 000582-16-1 96 |
| 2       |            | Naphthalene, 2,7-dimethyl- | 156 C12H12       | 000582-16-1 94 |
| 3       |            | Naphthalene, 1,5-dimethyl- | 156 C12H12       | 000571-61-9 93 |
| 4       |            | Naphthalene, 1,3-dimethyl- | 156 C12H12       | 000575-41-7 93 |
| 5       |            | Naphthalene, 1,6-dimethyl- | 156 C12H12       | 000575-43-9 91 |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

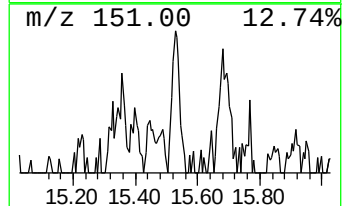
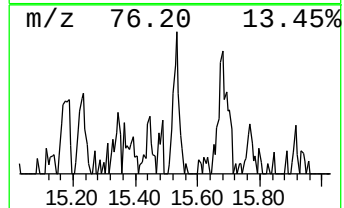
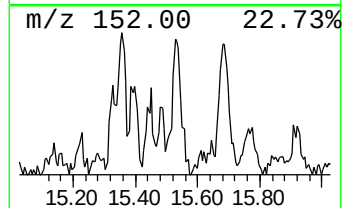
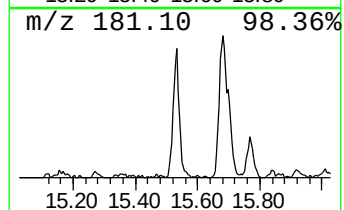
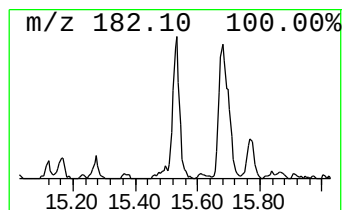
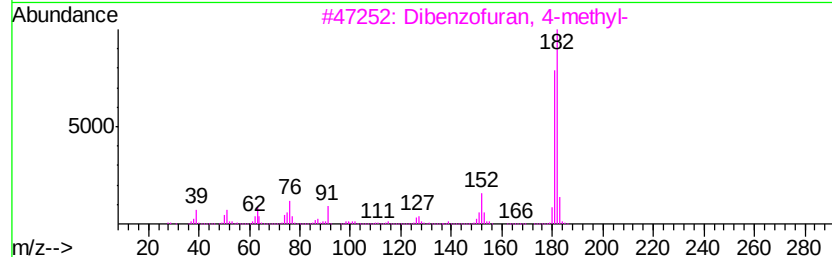
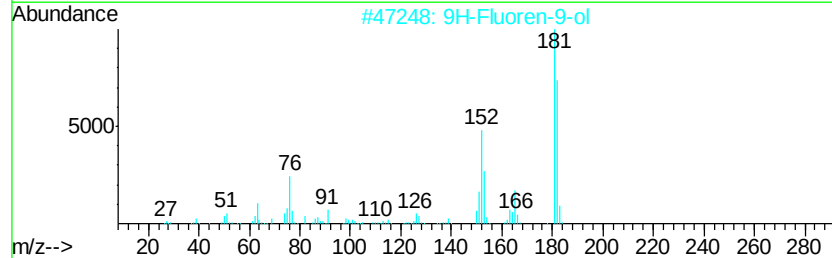
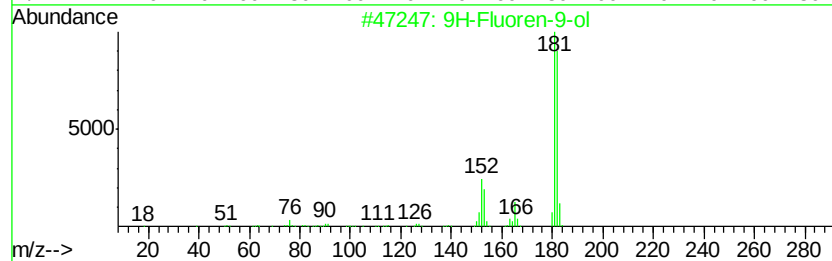
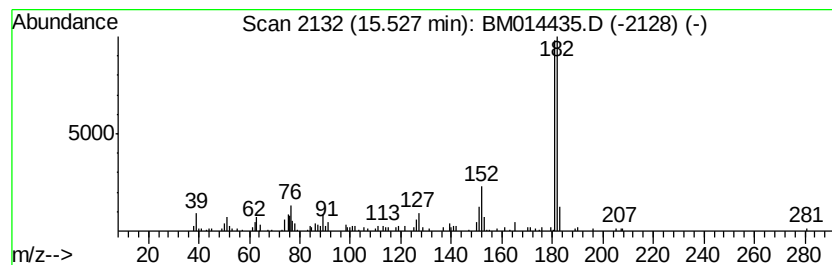
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ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

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

\*\*\*\*\*  
Peak Number 3 9H-Fluoren-9-ol Concentration Rank 21

| R.T.    | EstConc                          | Area         | Relative to ISTD | R.T.      |
|---------|----------------------------------|--------------|------------------|-----------|
| 15.53   | 2.99 ng/ul                       | 267974       | Acenaphthene-d10 | 14.17     |
| Hit# of | 5                                | Tentative ID | MW MolForm       | CAS# Qual |
| 1       | 9H-Fluoren-9-ol                  | 182 C13H10O  | 001689-64-1      | 80        |
| 2       | 9H-Fluoren-9-ol                  | 182 C13H10O  | 001689-64-1      | 78        |
| 3       | Dibenzofuran, 4-methyl-          | 182 C13H10O  | 007320-53-8      | 78        |
| 4       | [1,1'-Biphenyl]-4-carboxaldehyde | 182 C13H10O  | 003218-36-8      | 72        |
| 5       | [1,1'-Biphenyl]-4-carboxaldehyde | 182 C13H10O  | 003218-36-8      | 72        |





Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
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ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

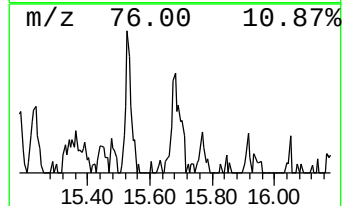
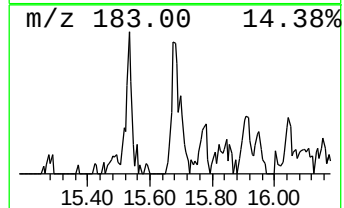
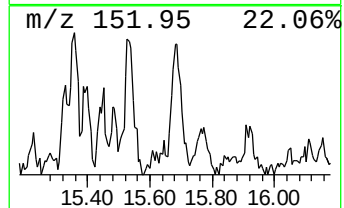
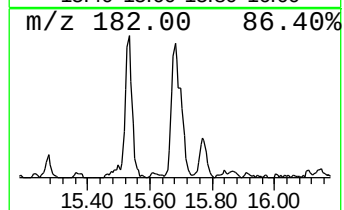
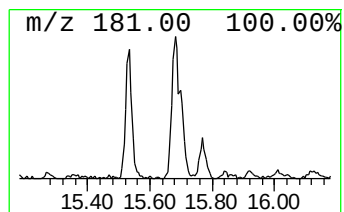
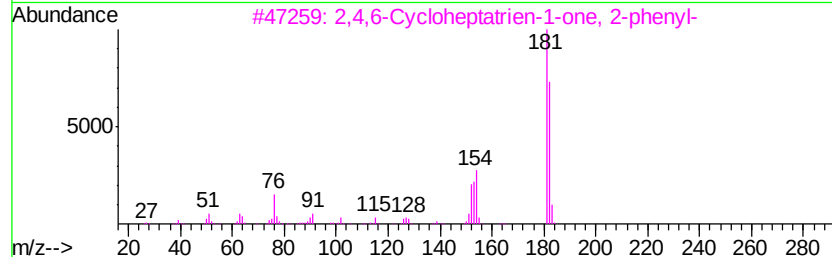
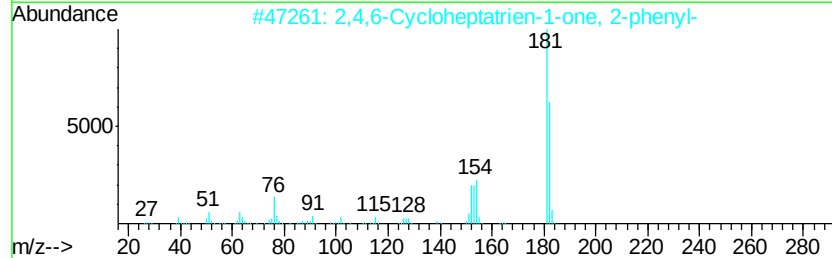
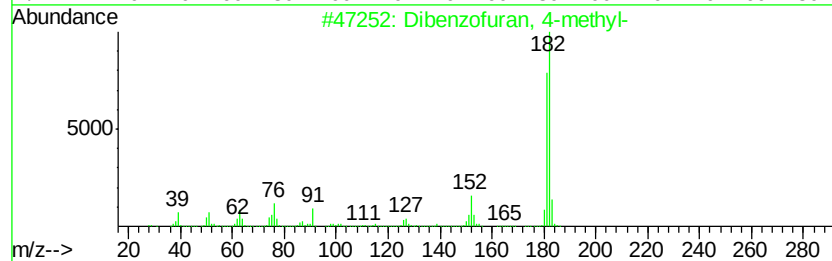
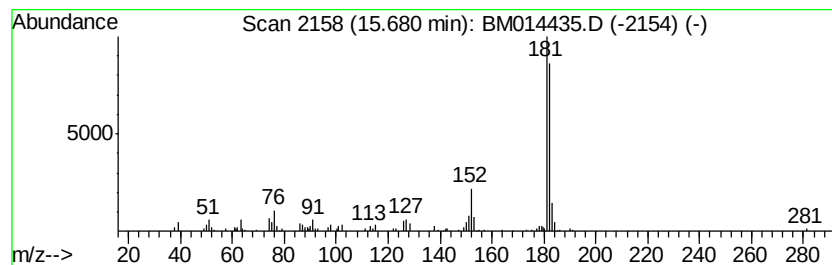
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TIC Integration Parameters: LSCINT.P

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Peak Number 4 Dibenzofuran, 4-methyl- Concentration Rank 27

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 15.68 | 2.49 ng/ul | 265124 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID                           | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------------------------|-----|---------|-------------|------|
| 1    | 5  | Dibenzofuran, 4-methyl-                | 182 | C13H10O | 007320-53-8 | 87   |
| 2    |    | 2,4,6-Cycloheptatrien-1-one, 2-phenyl- | 182 | C13H10O | 014562-09-5 | 87   |
| 3    |    | 2,4,6-Cycloheptatrien-1-one, 2-phenyl- | 182 | C13H10O | 014562-09-5 | 80   |
| 4    |    | 3-(2-Naphthyl)acrylaldehyde            | 182 | C13H10O | 020884-05-3 | 80   |
| 5    |    | [1,1'-Biphenyl]-4-carboxaldehyde       | 182 | C13H10O | 003218-36-8 | 74   |





Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
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ClientSampleId :  
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Quant Title : SVOA CALIBRATION

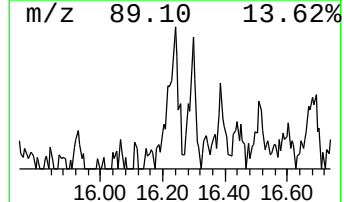
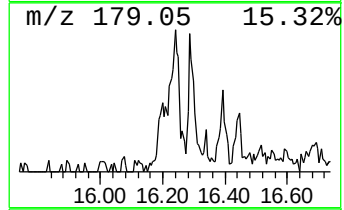
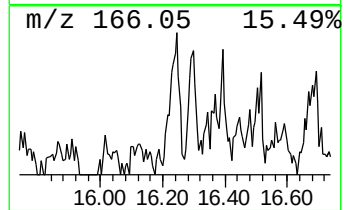
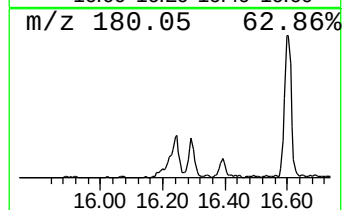
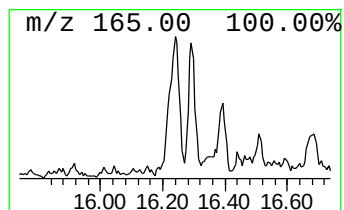
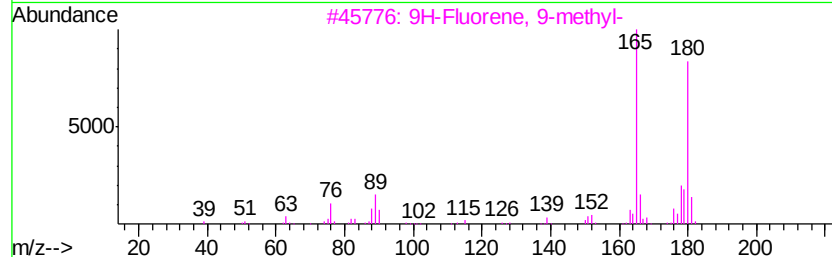
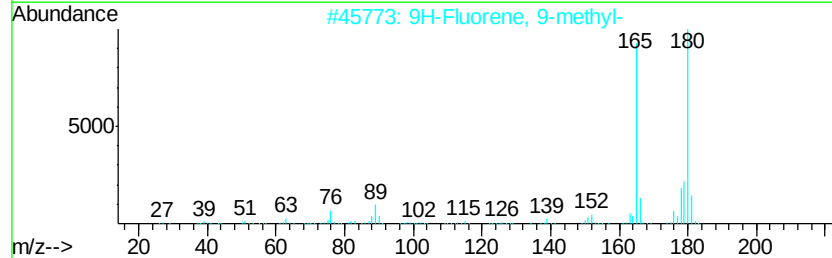
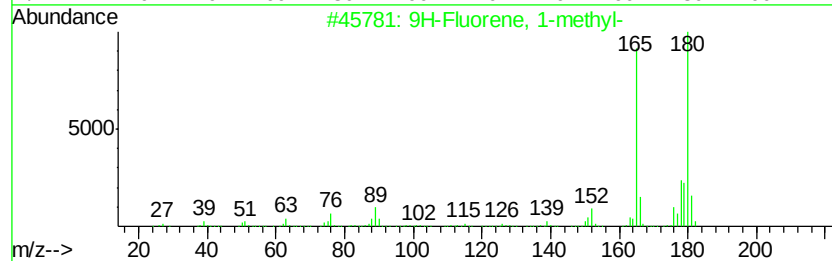
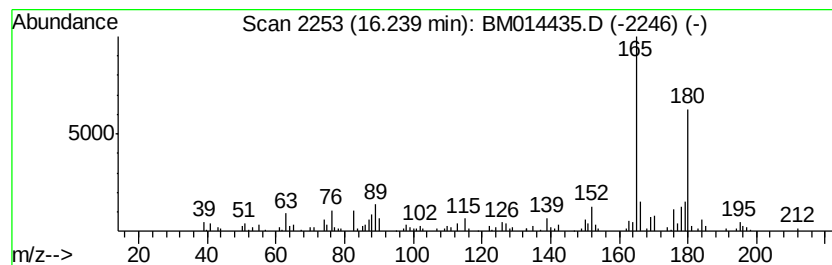
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TIC Integration Parameters: LSCINT.P

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Peak Number 5 9H-Fluorene, 1-methyl- Concentration Rank 25

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 16.24 | 2.69 ng/ul | 285850 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID           | MW  | MolForm | CAS#        | Qual |
|------|----|------------------------|-----|---------|-------------|------|
| 1    | 5  | 9H-Fluorene, 1-methyl- | 180 | C14H12  | 001730-37-6 | 78   |
| 2    |    | 9H-Fluorene, 9-methyl- | 180 | C14H12  | 002523-37-7 | 60   |
| 3    |    | 9H-Fluorene, 9-methyl- | 180 | C14H12  | 002523-37-7 | 60   |
| 4    |    | 9H-Fluorene, 2-methyl- | 180 | C14H12  | 001430-97-3 | 60   |
| 5    |    | 9H-Fluorene, 2-methyl- | 180 | C14H12  | 001430-97-3 | 60   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
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ClientSampleId :  
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Quant Title : SVOA CALIBRATION

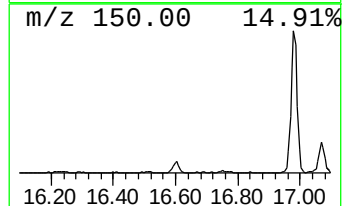
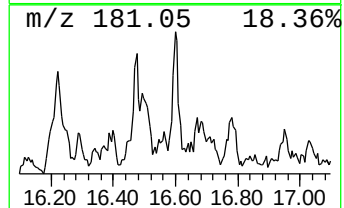
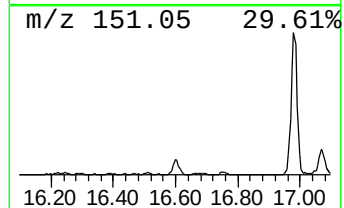
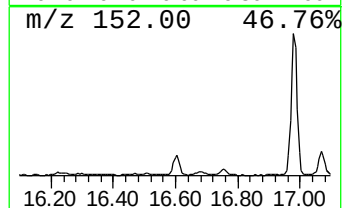
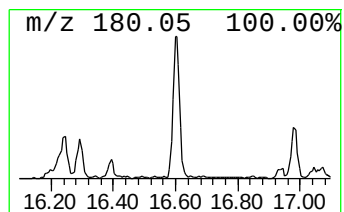
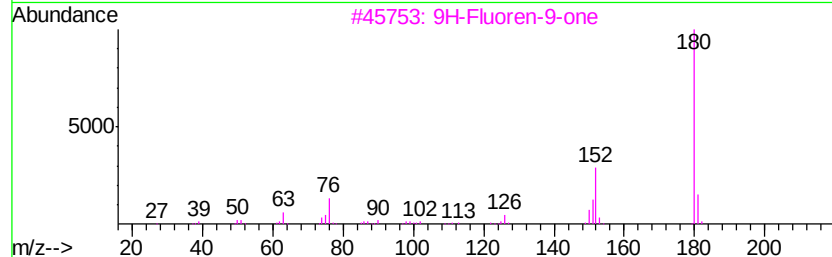
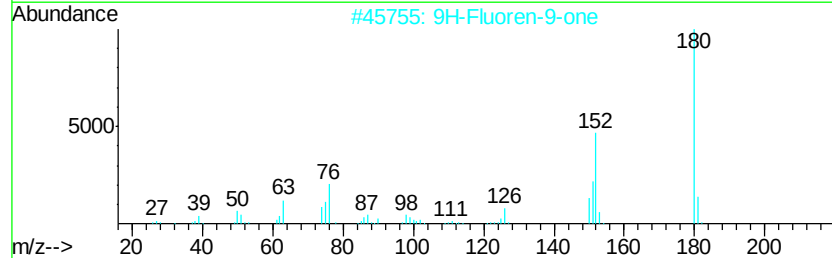
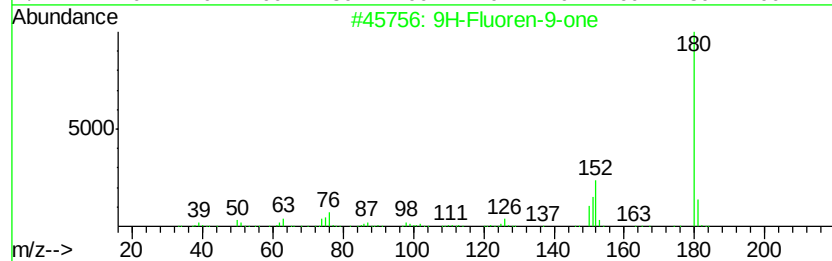
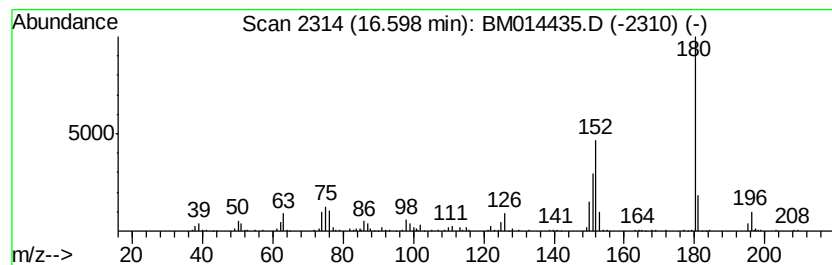
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 6 9H-Fluoren-9-one Concentration Rank 15

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 16.60 | 3.87 ng/ul | 411982 | Phenanthrene-d10 | 16.94 |

| Hit# of | 5                 | Tentative ID | MW  | MolForm | CAS#        | Qual |
|---------|-------------------|--------------|-----|---------|-------------|------|
| 1       | 9H-Fluoren-9-one  |              | 180 | C13H8O  | 000486-25-9 | 96   |
| 2       | 9H-Fluoren-9-one  |              | 180 | C13H8O  | 000486-25-9 | 93   |
| 3       | 9H-Fluoren-9-one  |              | 180 | C13H8O  | 000486-25-9 | 91   |
| 4       | Benzo[h]cinnoline |              | 180 | C12H8N2 | 000230-31-9 | 91   |
| 5       | Benzo[c]cinnoline |              | 180 | C12H8N2 | 000230-17-1 | 90   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
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Operator : SJ/JU  
Sample : J1678-10 10X  
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ALS Vial : 39 Sample Multiplier: 1

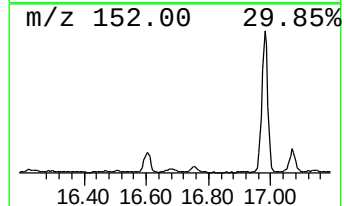
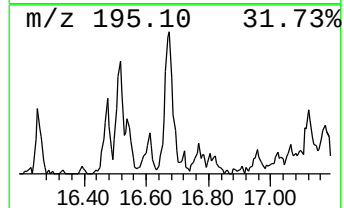
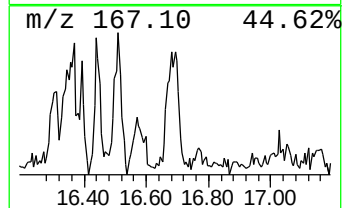
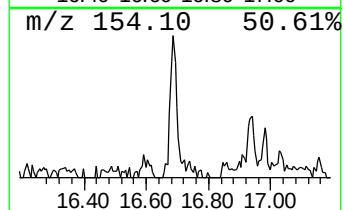
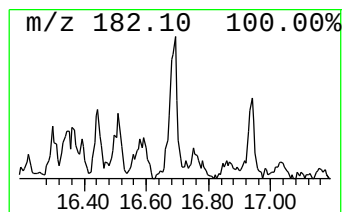
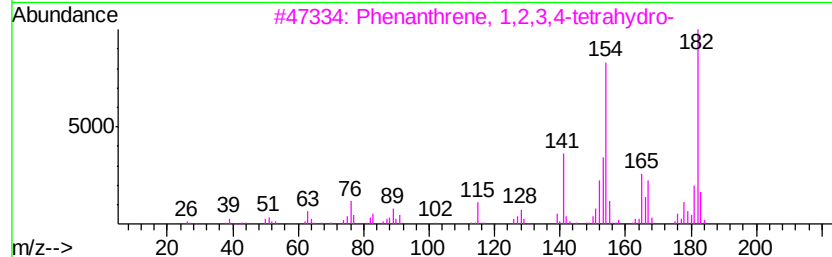
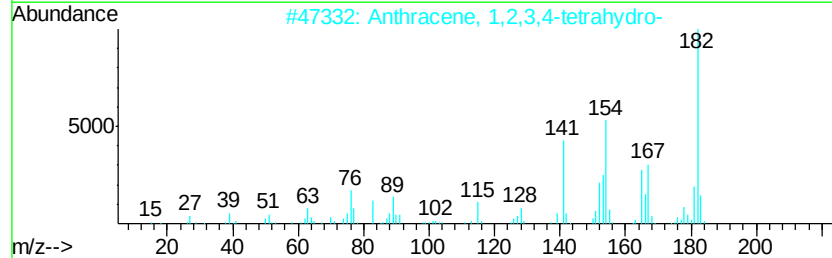
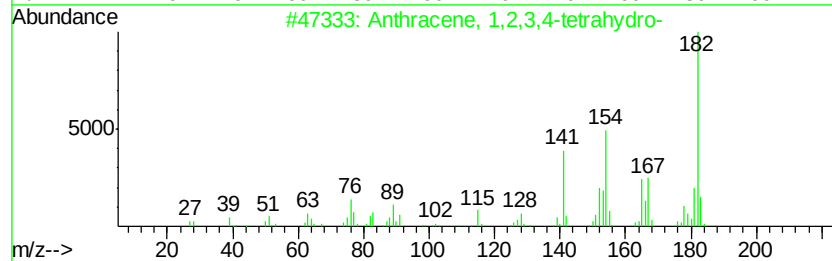
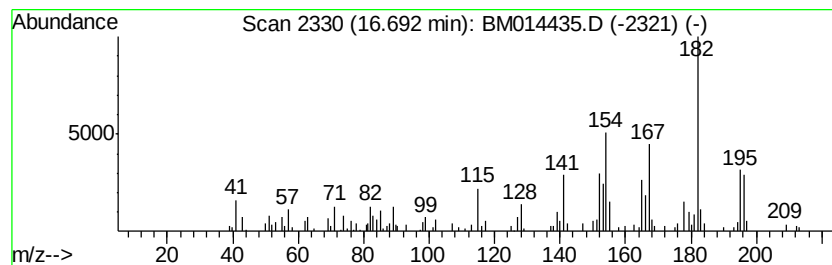
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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 7 Anthracene, 1,2,3,4-tetrahy... Concentration Rank 19

| R.T.  | EstConc    | Area   | Relative to ISTD                  |     | R.T.    |             |      |
|-------|------------|--------|-----------------------------------|-----|---------|-------------|------|
| 16.69 | 3.27 ng/ul | 347617 | Phenanthrene-d10                  |     | 16.94   |             |      |
| Hit#  | of         | 5      | Tentative ID                      | MW  | MolForm | CAS#        | Qual |
| 1     |            |        | Anthracene, 1,2,3,4-tetrahydro-   | 182 | C14H14  | 002141-42-6 | 55   |
| 2     |            |        | Anthracene, 1,2,3,4-tetrahydro-   | 182 | C14H14  | 002141-42-6 | 50   |
| 3     |            |        | Phenanthrene, 1,2,3,4-tetrahydro- | 182 | C14H14  | 001013-08-7 | 46   |
| 4     |            |        | Phenanthrene, 1,2,3,4-tetrahydro- | 182 | C14H14  | 001013-08-7 | 45   |
| 5     |            |        | Dibenz[c,e]oxepin, 5,7-dihydro-   | 196 | C14H12O | 001136-22-7 | 38   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
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ALS Vial : 39 Sample Multiplier: 1

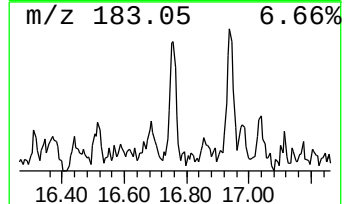
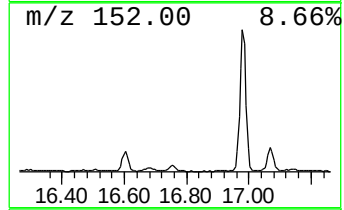
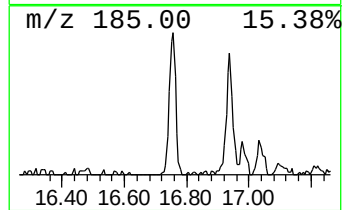
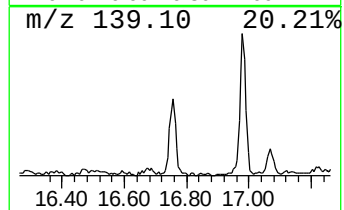
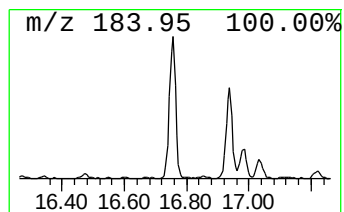
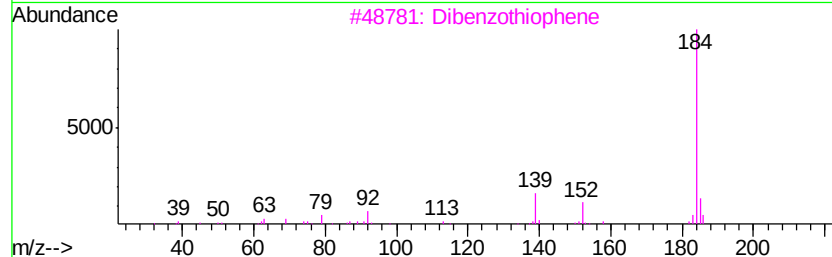
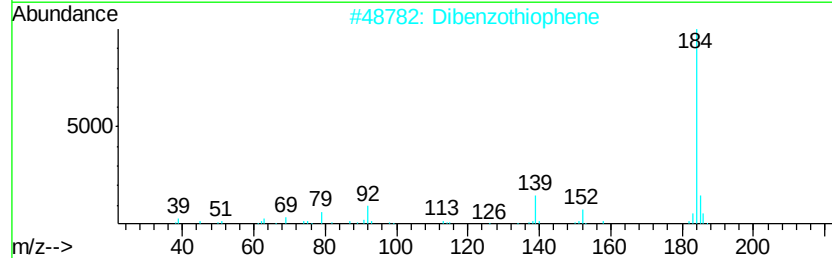
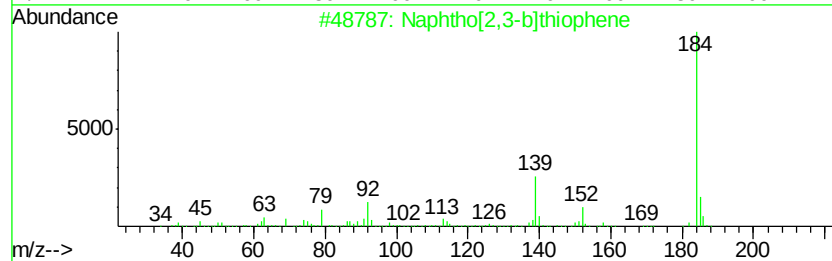
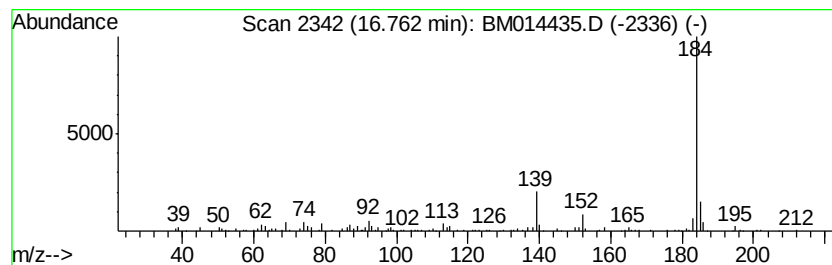
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ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 8 Naphtho[2,3-b]thiophene Concentration Rank 14

| R.T.    | EstConc    | Area                    | Relative to ISTD | R.T.    |             |      |
|---------|------------|-------------------------|------------------|---------|-------------|------|
| 16.76   | 4.82 ng/ul | 512309                  | Phenanthrene-d10 | 16.94   |             |      |
| Hit# of | 5          | Tentative ID            | MW               | MolForm | CAS#        | Qual |
| 1       |            | Naphtho[2,3-b]thiophene | 184              | C12H8S  | 000268-77-9 | 95   |
| 2       |            | Dibenzothiophene        | 184              | C12H8S  | 000132-65-0 | 94   |
| 3       |            | Dibenzothiophene        | 184              | C12H8S  | 000132-65-0 | 91   |
| 4       |            | Dibenzothiophene        | 184              | C12H8S  | 000132-65-0 | 91   |
| 5       |            | Naphtho[2,1-b]thiophene | 184              | C12H8S  | 000233-02-3 | 91   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
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Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

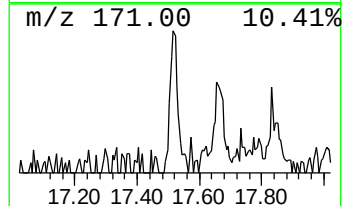
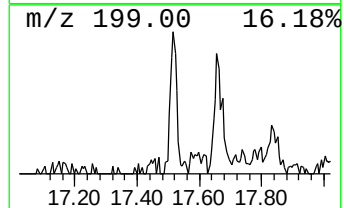
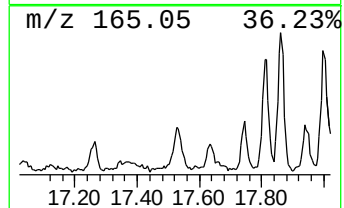
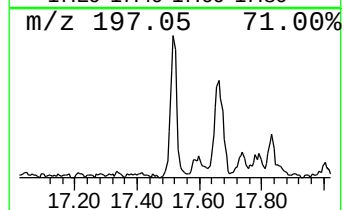
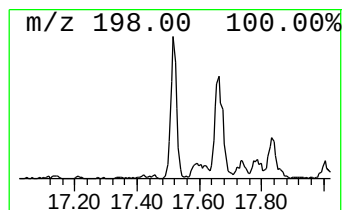
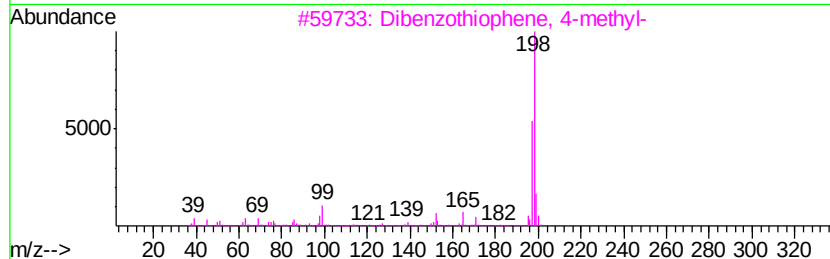
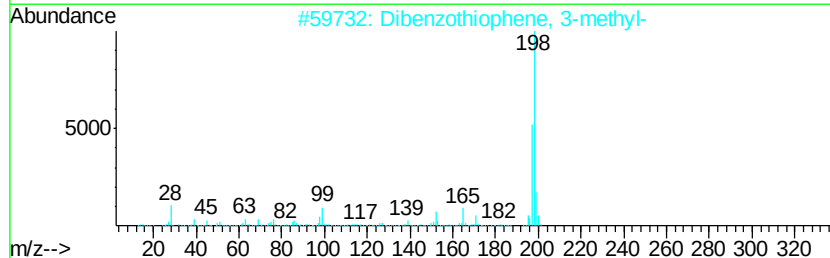
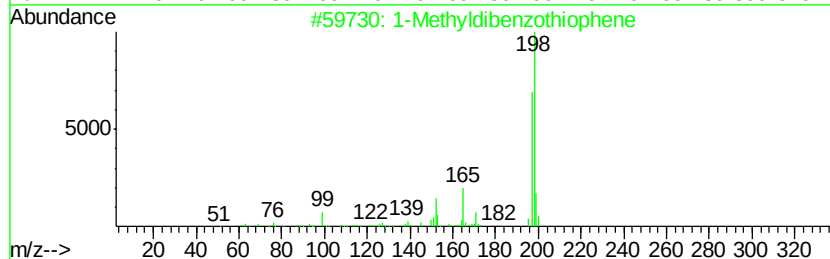
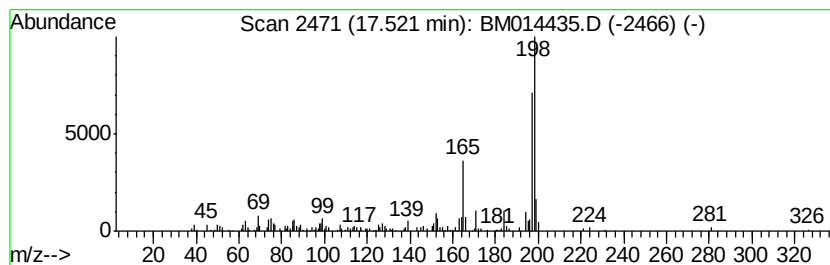
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TIC Integration Parameters: LSCINT.P

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Peak Number 9 1-Methyldibenzothiophene Concentration Rank 16

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 17.52 | 3.73 ng/ul | 396375 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------------------|-----|---------|-------------|------|
| 1    | 5  | 1-Methyldibenzothiophene            | 198 | C13H10S | 031317-07-4 | 93   |
| 2    |    | Dibenzothiophene, 3-methyl-         | 198 | C13H10S | 016587-52-3 | 81   |
| 3    |    | Dibenzothiophene, 4-methyl-         | 198 | C13H10S | 007372-88-5 | 68   |
| 4    |    | 4-Methylnaphtho[1,2-b]thiophene     | 198 | C13H10S | 067388-11-8 | 68   |
| 5    |    | Benzene, 1,1'-(1-fluoro-1,2-ethe... | 198 | C14H11F | 000671-19-2 | 58   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

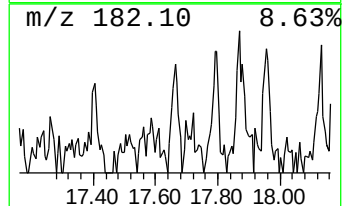
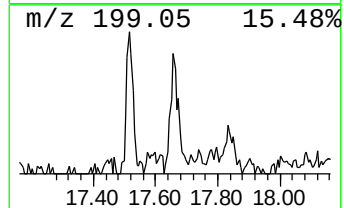
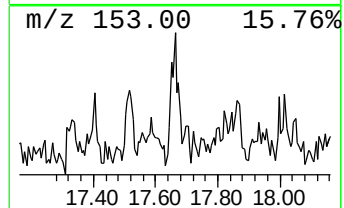
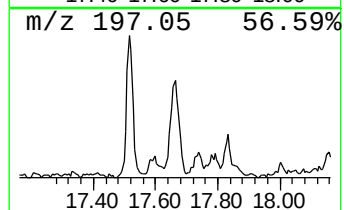
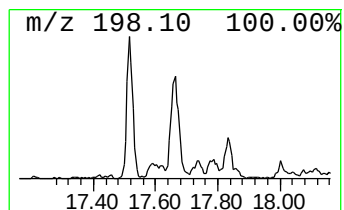
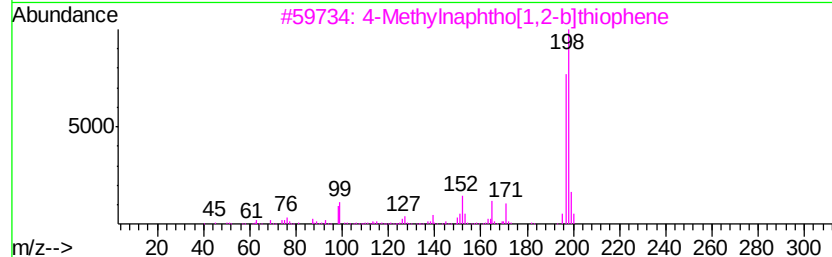
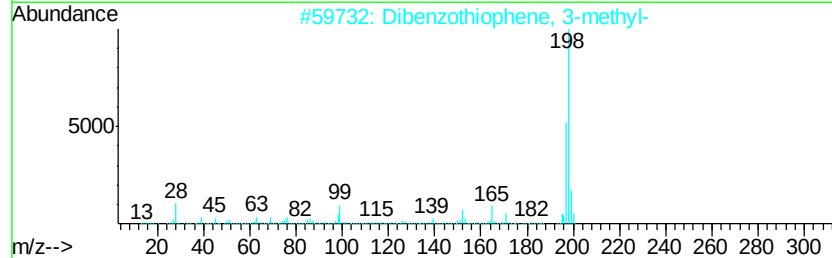
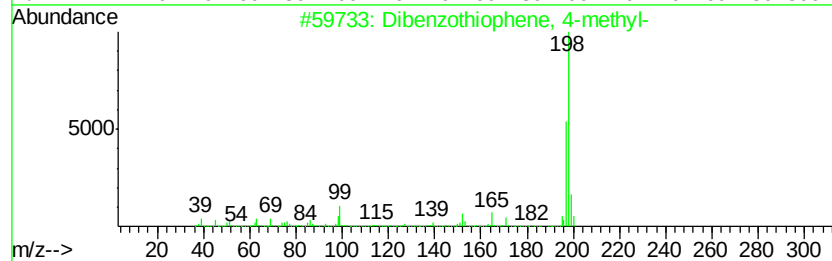
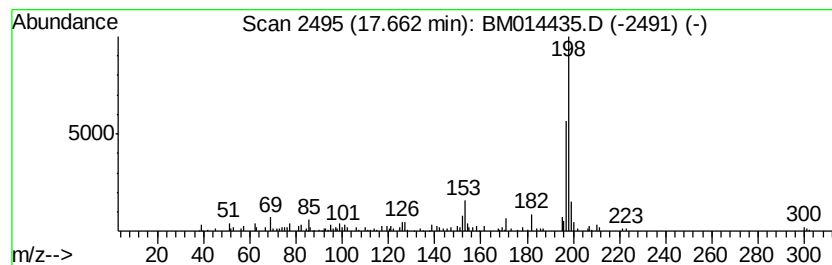
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 10 Dibenzothiophene, 4-methyl- Concentration Rank 34

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 17.66 | 2.04 ng/ul | 216755 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID                    | MW  | MolForm  | CAS#        | Qual |
|------|----|---------------------------------|-----|----------|-------------|------|
| 1    | 5  | Dibenzothiophene, 4-methyl-     | 198 | C13H10S  | 007372-88-5 | 90   |
| 2    |    | Dibenzothiophene, 3-methyl-     | 198 | C13H10S  | 016587-52-3 | 90   |
| 3    |    | 4-Methylnaphtho[1,2-b]thiophene | 198 | C13H10S  | 067388-11-8 | 87   |
| 4    |    | Benzenamine, 4,4'-methylenebis- | 198 | C13H14N2 | 000101-77-9 | 80   |
| 5    |    | Benzenamine, 4,4'-methylenebis- | 198 | C13H14N2 | 000101-77-9 | 80   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

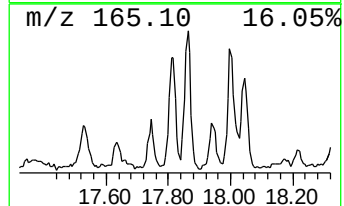
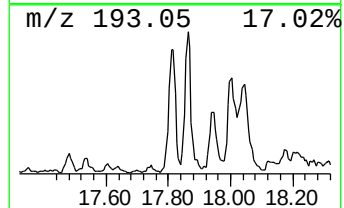
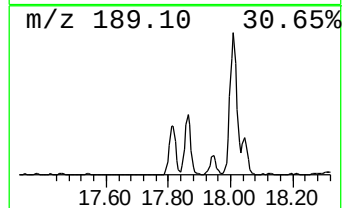
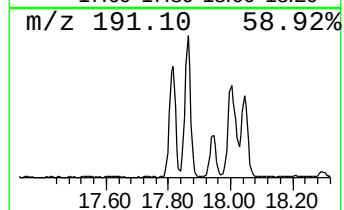
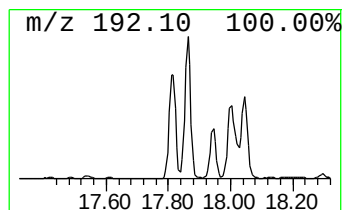
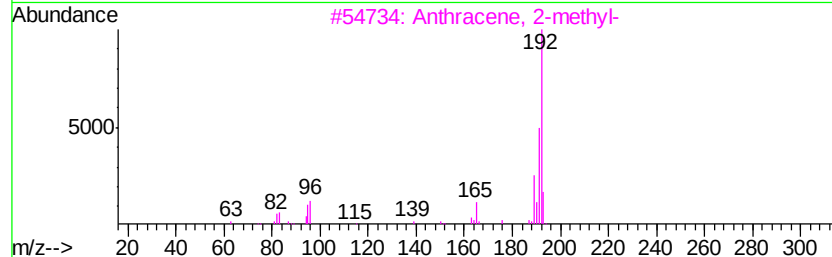
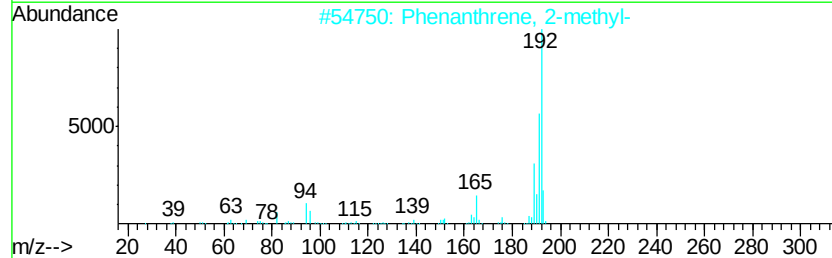
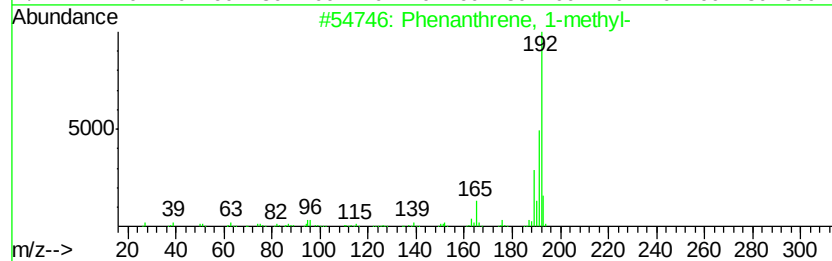
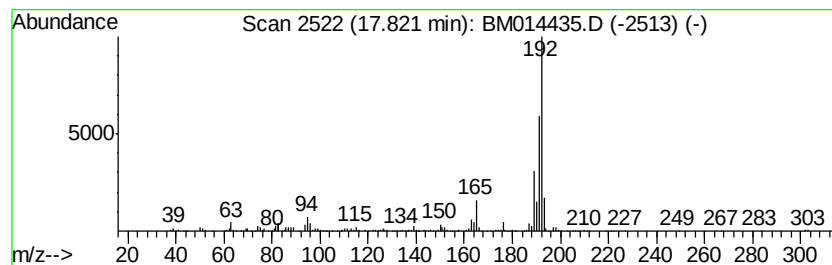
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 11 Phenanthrene, 1-methyl- Concentration Rank 3

| R.T.  | EstConc     | Area    | Relative to ISTD | R.T.  |
|-------|-------------|---------|------------------|-------|
| 17.82 | 12.63 ng/ul | 1343460 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 1-methyl- | 192 | C15H12  | 000832-69-9 | 97   |
| 2    |    | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 95   |
| 3    |    | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 95   |
| 4    |    | Anthracene, 1-methyl-   | 192 | C15H12  | 000610-48-0 | 94   |
| 5    |    | Phenanthrene, 4-methyl- | 192 | C15H12  | 000832-64-4 | 94   |





Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

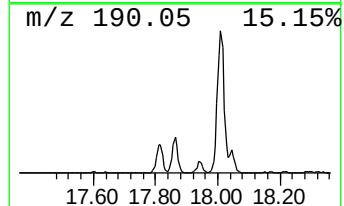
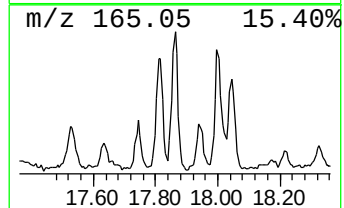
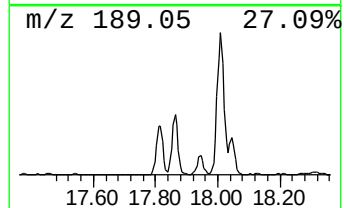
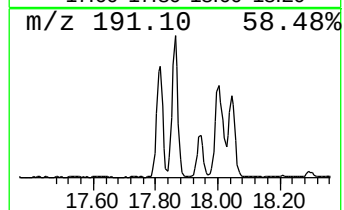
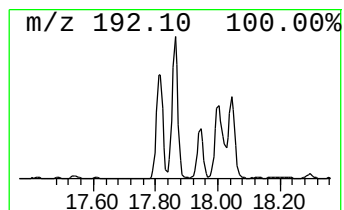
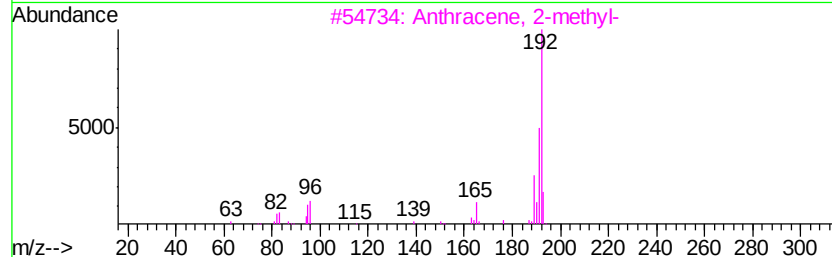
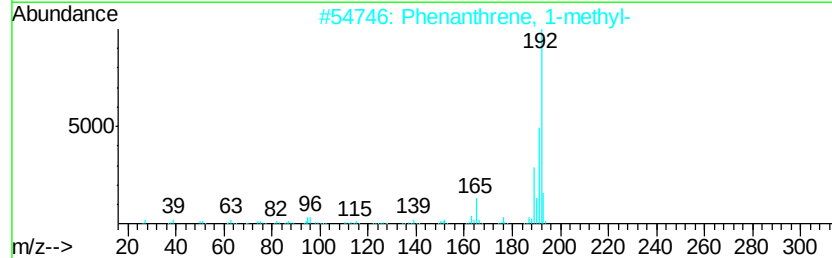
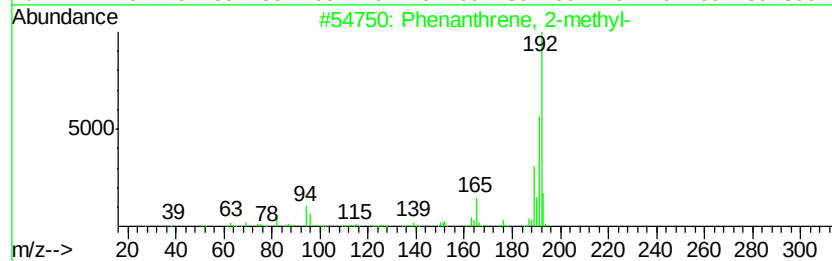
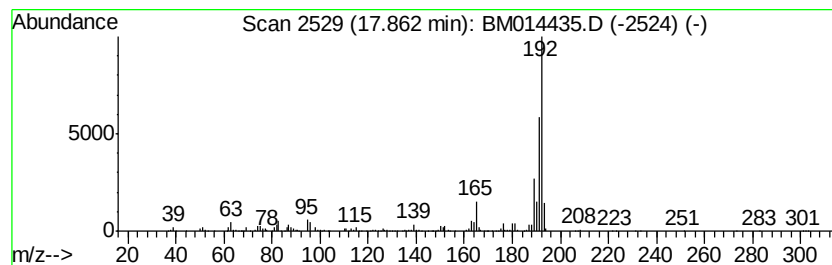
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 12 Phenanthrene, 2-methyl- Concentration Rank 2

| R.T.  | EstConc     | Area    | Relative to ISTD | R.T.  |
|-------|-------------|---------|------------------|-------|
| 17.86 | 16.55 ng/ul | 1759940 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 2-methyl- | 192 | C15H12  | 002531-84-2 | 97   |
| 2    |    | Phenanthrene, 1-methyl- | 192 | C15H12  | 000832-69-9 | 96   |
| 3    |    | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 96   |
| 4    |    | Anthracene, 2-methyl-   | 192 | C15H12  | 000613-12-7 | 95   |
| 5    |    | Anthracene, 1-methyl-   | 192 | C15H12  | 000610-48-0 | 95   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

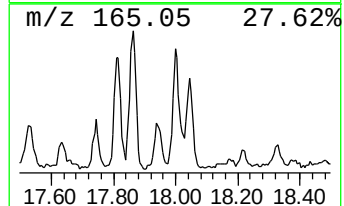
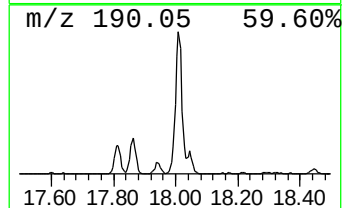
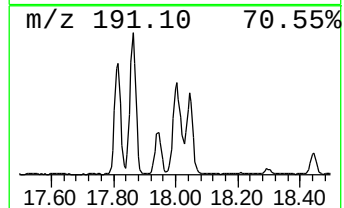
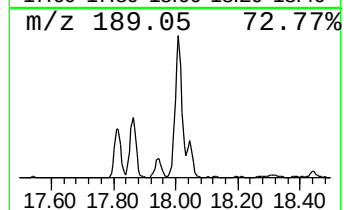
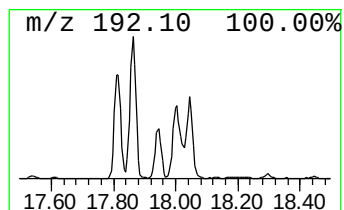
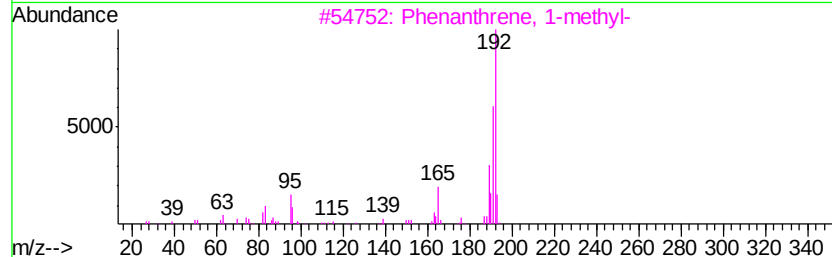
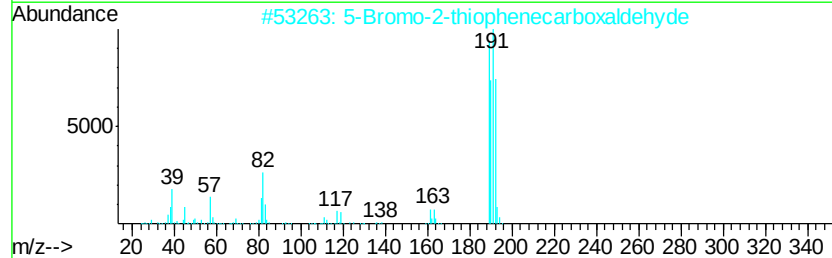
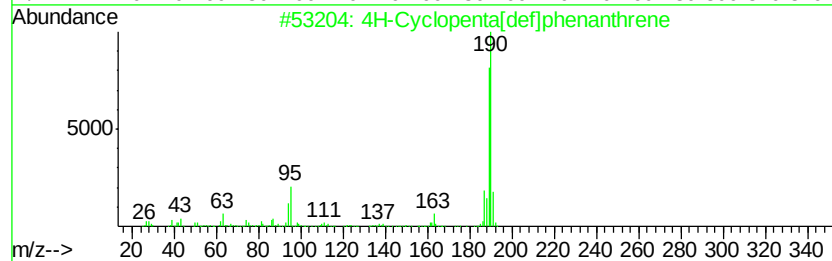
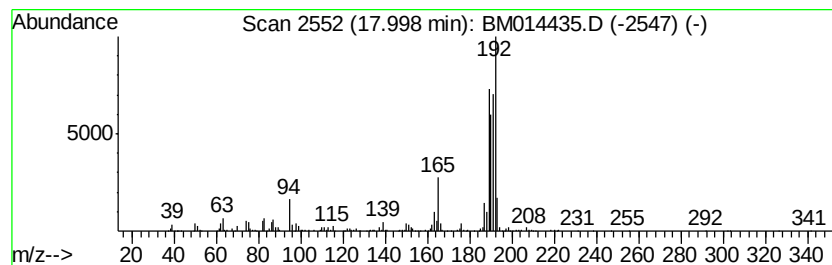
Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 14 4H-Cyclopenta[def]phenanthrene Concentration Rank 1

| R.T.    | EstConc     | Area                              | Relative to ISTD | R.T.     |             |      |
|---------|-------------|-----------------------------------|------------------|----------|-------------|------|
| 18.00   | 19.44 ng/ul | 2066890                           | Phenanthrene-d10 | 16.94    |             |      |
| Hit# of | 5           | Tentative ID                      | MW               | MolForm  | CAS#        | Qual |
| 1       |             | 4H-Cyclopenta[def]phenanthrene    | 190              | C15H10   | 000203-64-5 | 70   |
| 2       |             | 5-Bromo-2-thiophenecarboxaldehyde | 190              | C5H3BrOS | 004701-17-1 | 52   |
| 3       |             | Phenanthrene, 1-methyl-           | 192              | C15H12   | 000832-69-9 | 50   |
| 4       |             | Phenanthrene, 4-methyl-           | 192              | C15H12   | 000832-64-4 | 46   |
| 5       |             | Phenanthrene, 4-methyl-           | 192              | C15H12   | 000832-64-4 | 46   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

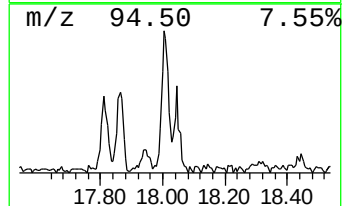
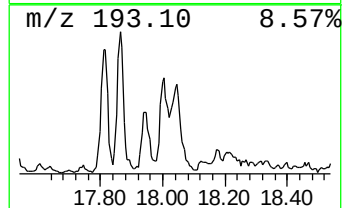
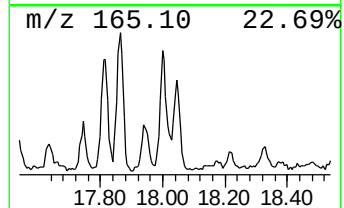
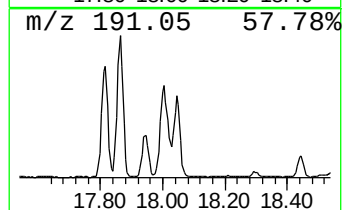
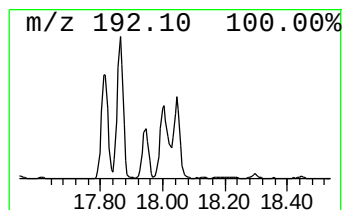
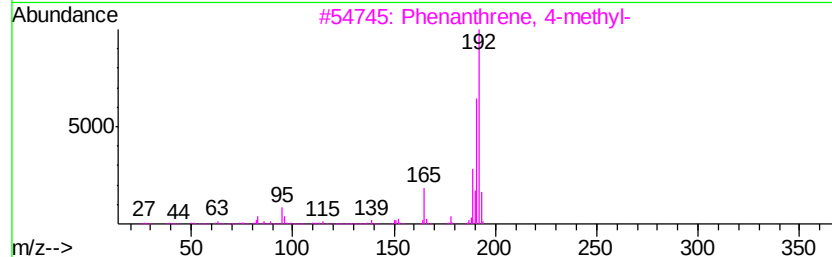
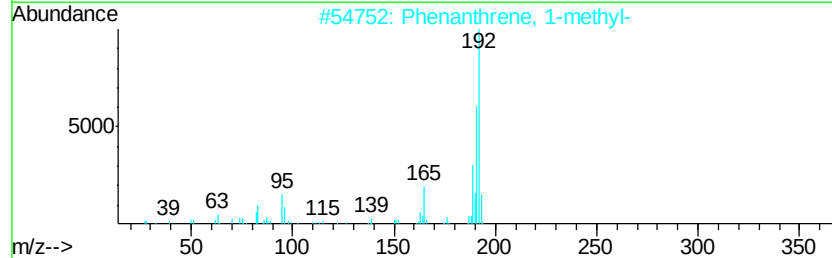
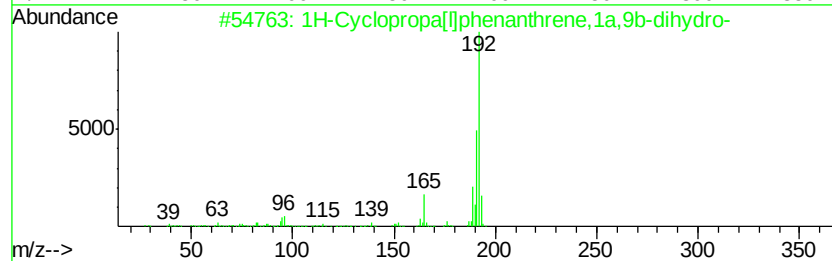
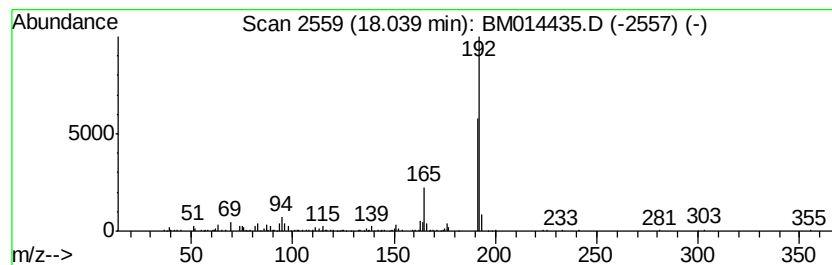
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 15 1H-Cyclopropa[l]phenanthren... Concentration Rank 5

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.04 | 8.95 ng/ul | 951964 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID                          | MW  | MolForm | CAS#        | Qual |
|------|----|---------------------------------------|-----|---------|-------------|------|
| 1    | 5  | 1H-Cyclopropa[l]phenanthrene, 1a, ... | 192 | C15H12  | 000949-41-7 | 90   |
| 2    |    | Phenanthrene, 1-methyl-               | 192 | C15H12  | 000832-69-9 | 90   |
| 3    |    | Phenanthrene, 4-methyl-               | 192 | C15H12  | 000832-64-4 | 87   |
| 4    |    | Phenanthrene, 1-methyl-               | 192 | C15H12  | 000832-69-9 | 87   |
| 5    |    | Anthracene, 1-methyl-                 | 192 | C15H12  | 000610-48-0 | 87   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

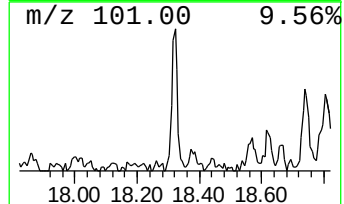
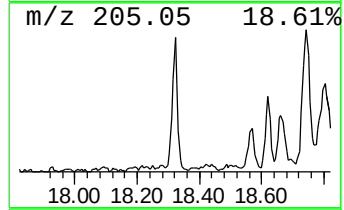
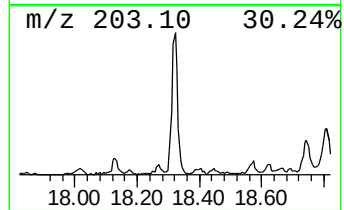
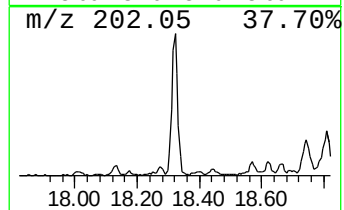
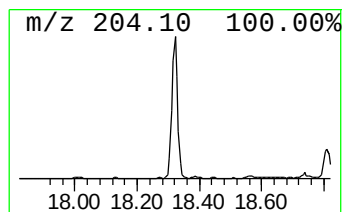
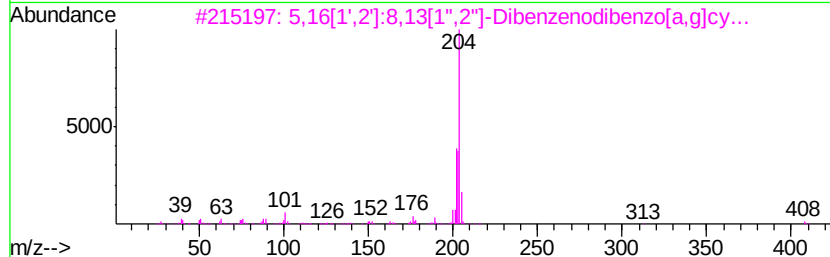
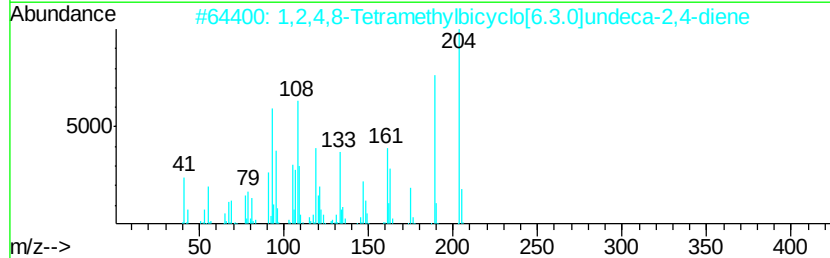
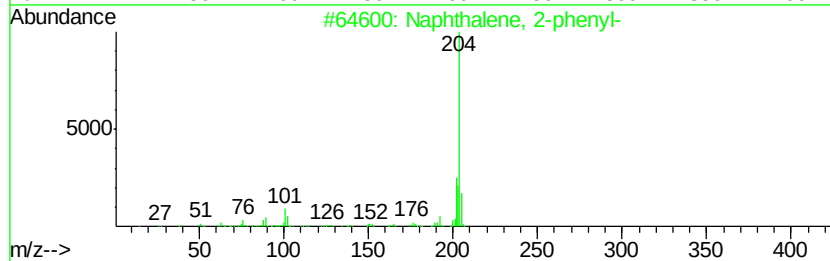
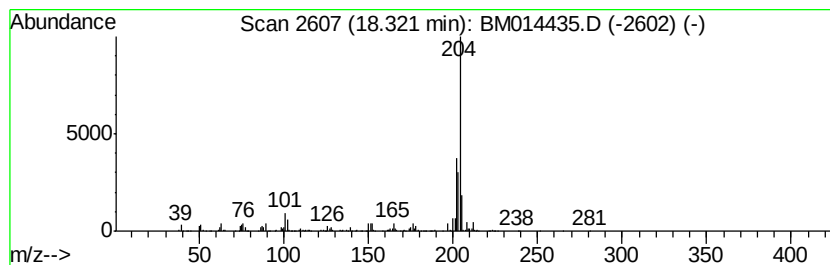
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 16 Naphthalene, 2-phenyl- Concentration Rank 10

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.32 | 6.72 ng/ul | 714174 | Phenanthrene-d10 | 16.94 |

| Hit# | of | 5 | Tentative ID                        | MW  | MolForm | CAS#        | Qual |
|------|----|---|-------------------------------------|-----|---------|-------------|------|
| 1    |    |   | Naphthalene, 2-phenyl-              | 204 | C16H12  | 000612-94-2 | 90   |
| 2    |    |   | 1,2,4,8-Tetramethylbicyclo[6.3.0... | 204 | C15H24  | 137235-51-9 | 86   |
| 3    |    |   | 5,16[1',2']8,13[1'',2'']-Dibenz...  | 408 | C32H24  | 005672-97-9 | 86   |
| 4    |    |   | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12  | 006572-60-7 | 81   |
| 5    |    |   | Naphthalene, 2-phenyl-              | 204 | C16H12  | 000612-94-2 | 81   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

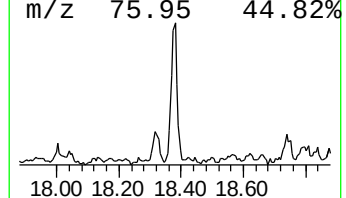
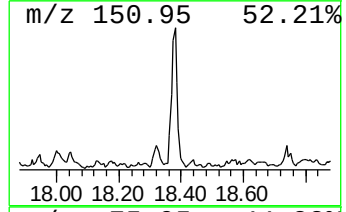
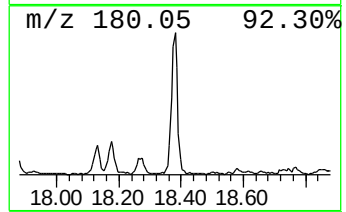
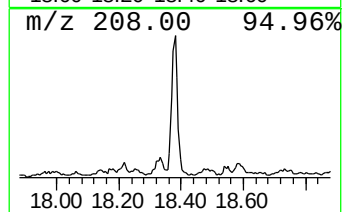
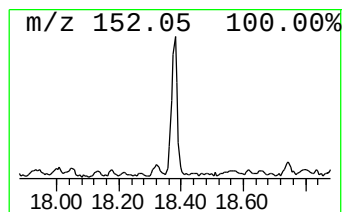
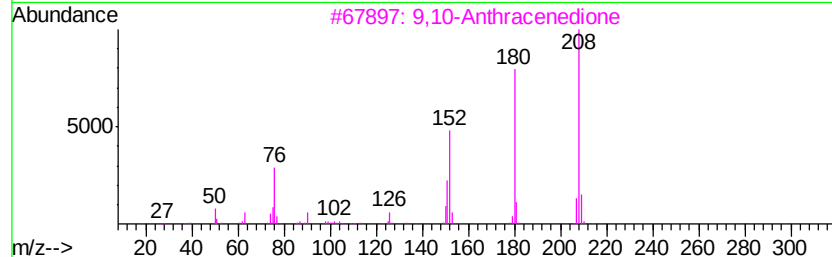
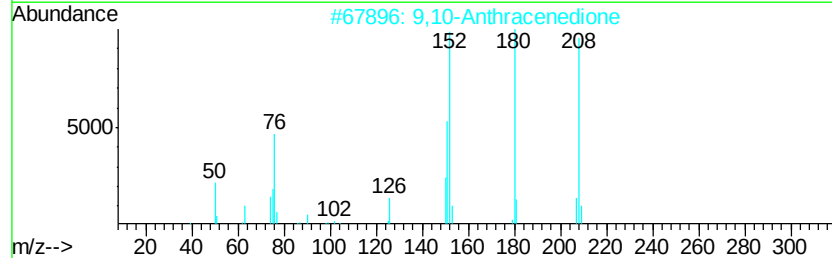
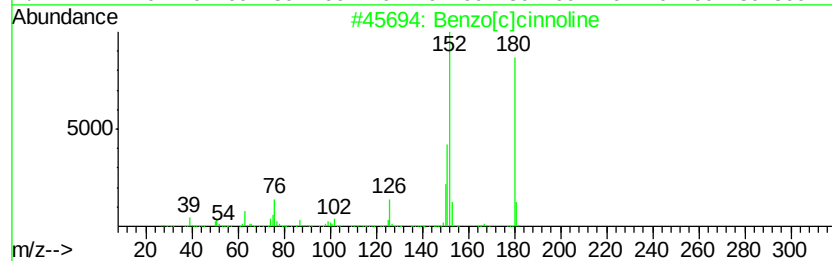
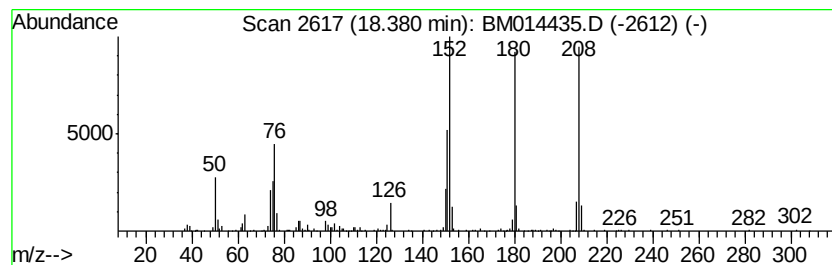
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 17 Benzo[c]cinnoline Concentration Rank 8

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.38 | 7.95 ng/ul | 845357 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID         | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[c]cinnoline    | 180 | C12H8N2 | 000230-17-1 | 96   |
| 2    |    | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 95   |
| 3    |    | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 93   |
| 4    |    | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 93   |
| 5    |    | Benzo[c]cinnoline    | 180 | C12H8N2 | 000230-17-1 | 83   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

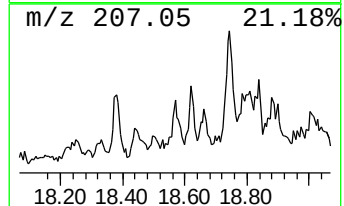
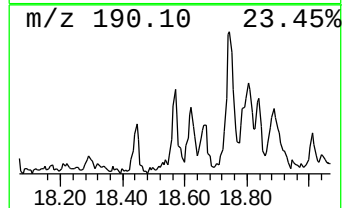
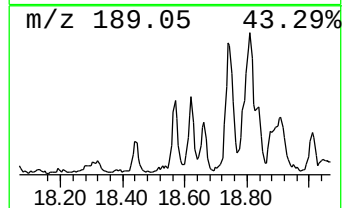
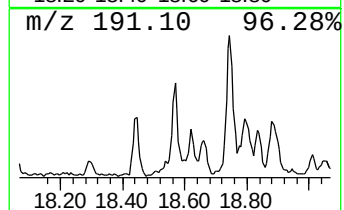
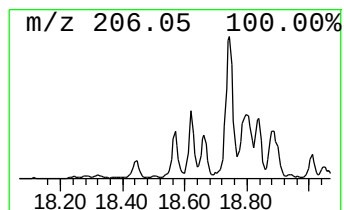
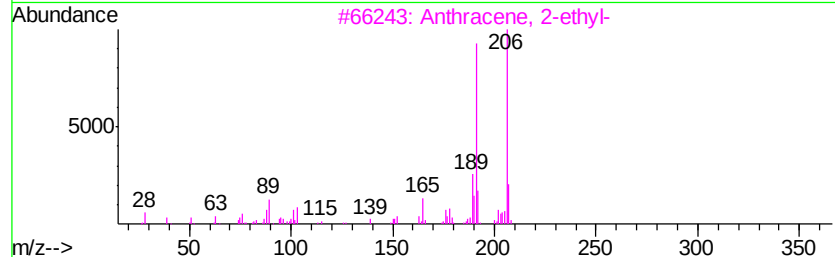
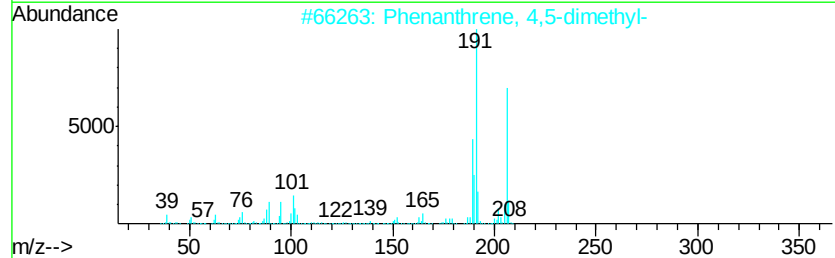
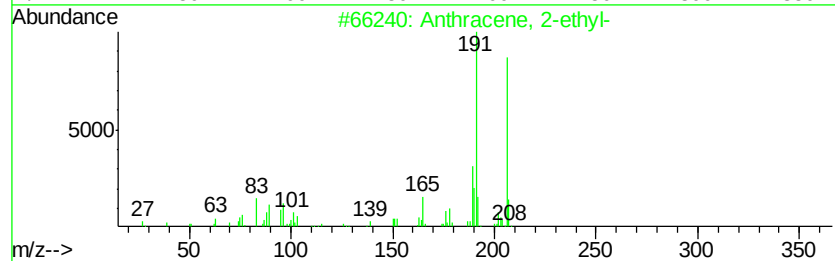
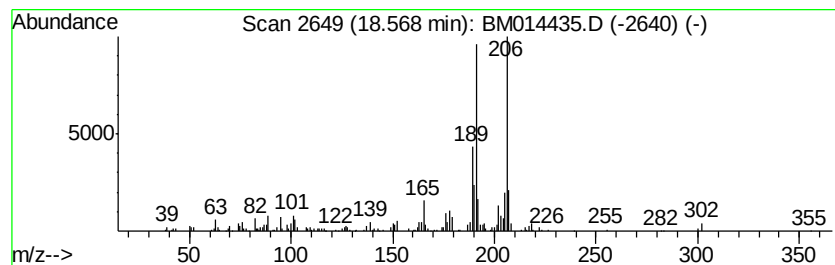
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TIC Integration Parameters: LSCINT.P

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Peak Number 18 Anthracene, 2-ethyl- Concentration Rank 13

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.57 | 5.08 ng/ul | 540194 | Phenanthrene-d10 | 16.94 |

| Hit# | of | 5 | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------------|-----|---------|-------------|------|
| 1    |    |   | Anthracene, 2-ethyl-        | 206 | C16H14  | 052251-71-5 | 97   |
| 2    |    |   | Phenanthrene, 4,5-dimethyl- | 206 | C16H14  | 003674-69-9 | 94   |
| 3    |    |   | Anthracene, 2-ethyl-        | 206 | C16H14  | 052251-71-5 | 94   |
| 4    |    |   | Phenanthrene, 4,5-dimethyl- | 206 | C16H14  | 003674-69-9 | 93   |
| 5    |    |   | Anthracene, 2-ethyl-        | 206 | C16H14  | 052251-71-5 | 93   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

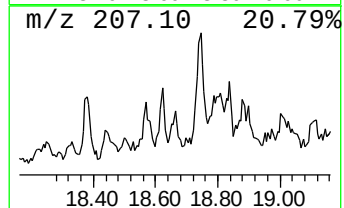
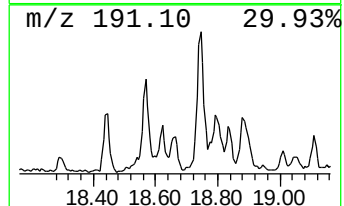
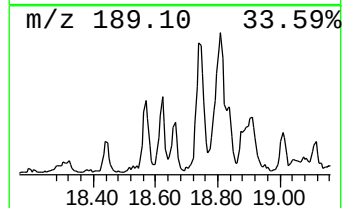
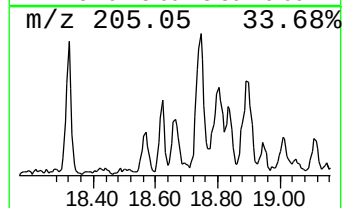
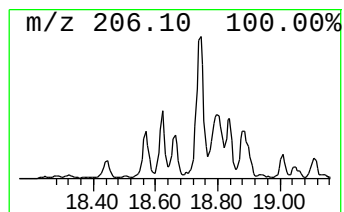
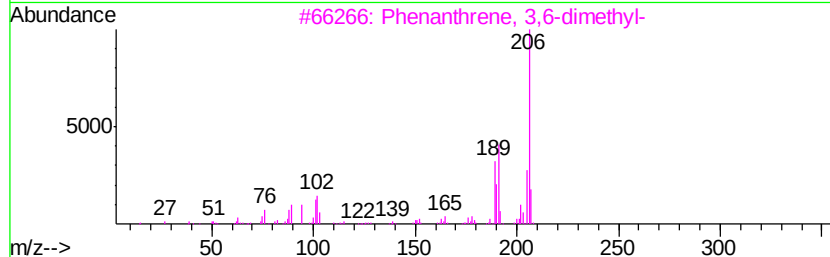
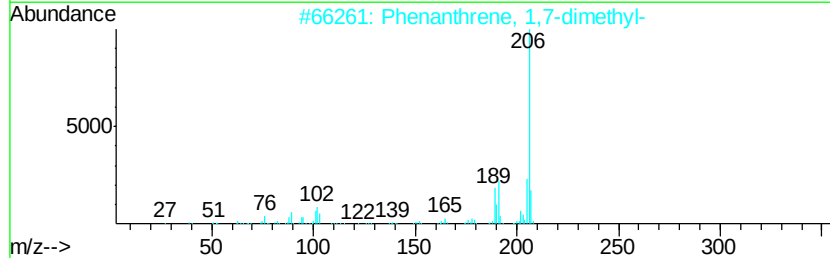
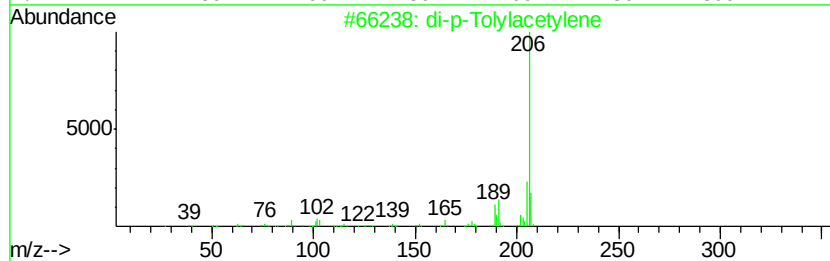
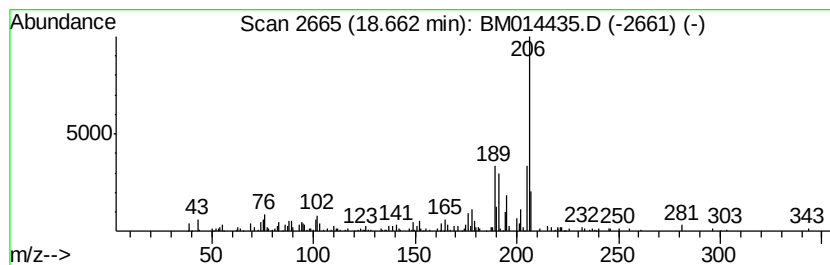
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 20 di-p-Tolylacetylene Concentration Rank 26

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.66 | 2.64 ng/ul | 280631 | Phenanthrene-d10 | 16.94 |

| Hit# | of | 5 | Tentative ID                | MW  | MolForm | CAS#        | Qual |
|------|----|---|-----------------------------|-----|---------|-------------|------|
| 1    |    |   | di-p-Tolylacetylene         | 206 | C16H14  | 002789-88-0 | 91   |
| 2    |    |   | Phenanthrene, 1,7-dimethyl- | 206 | C16H14  | 000483-87-4 | 76   |
| 3    |    |   | Phenanthrene, 3,6-dimethyl- | 206 | C16H14  | 001576-67-6 | 74   |
| 4    |    |   | Anthracene, 1,4-dimethyl-   | 206 | C16H14  | 000781-92-0 | 70   |
| 5    |    |   | di-p-Tolylacetylene         | 206 | C16H14  | 002789-88-0 | 68   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

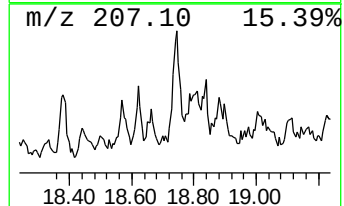
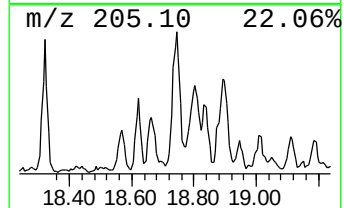
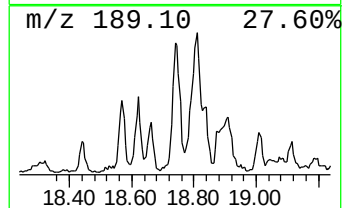
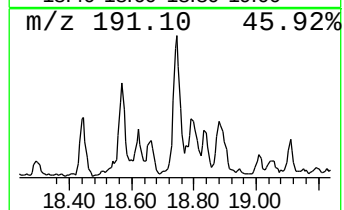
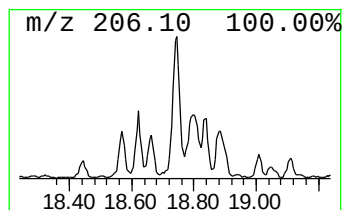
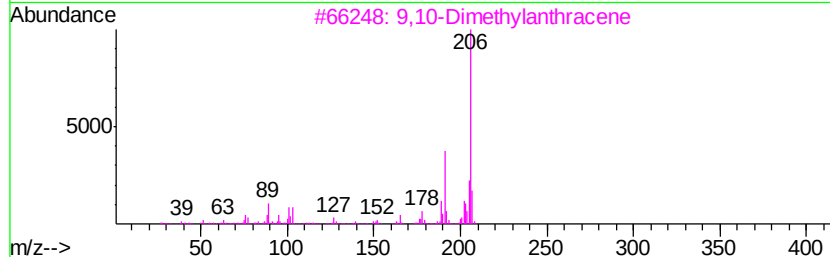
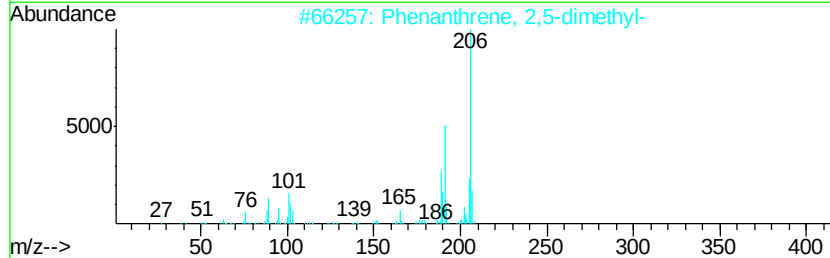
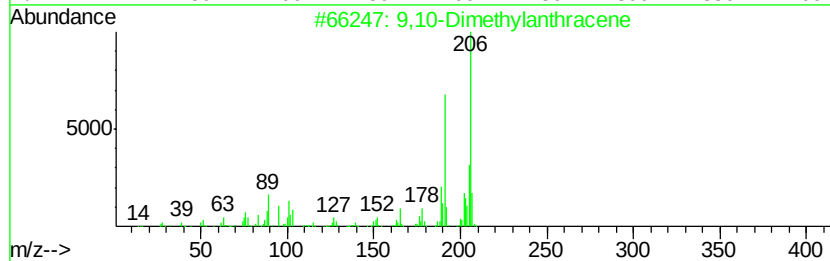
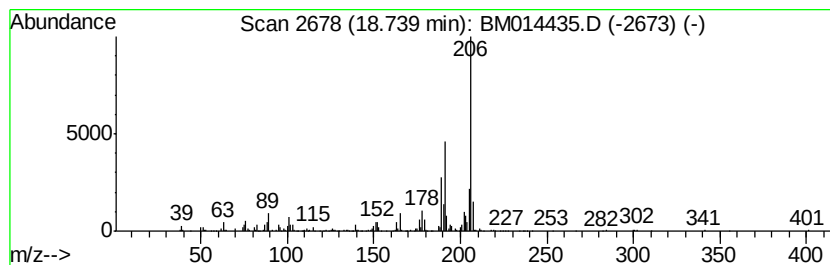
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 21 9,10-Dimethylantracene Concentration Rank 6

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.74 | 8.83 ng/ul | 939142 | Phenanthrene-d10 | 16.94 |

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





Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

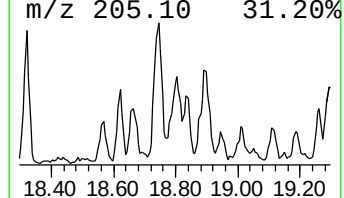
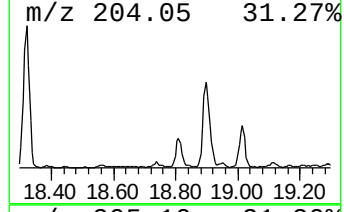
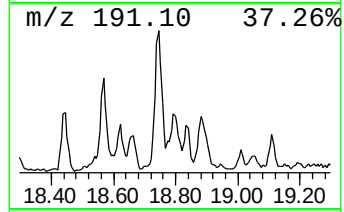
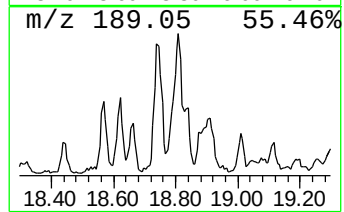
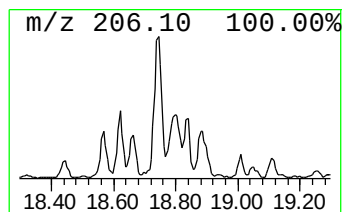
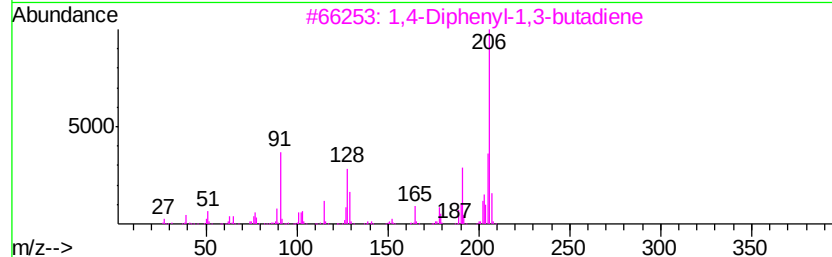
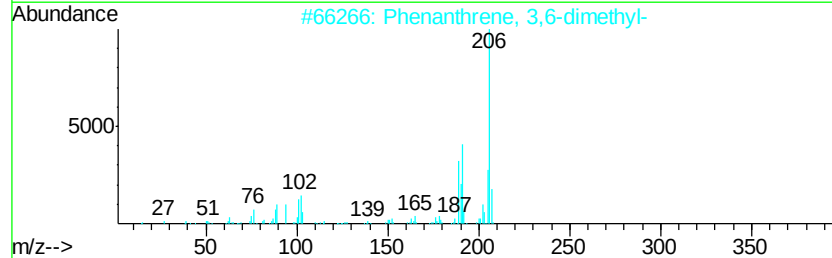
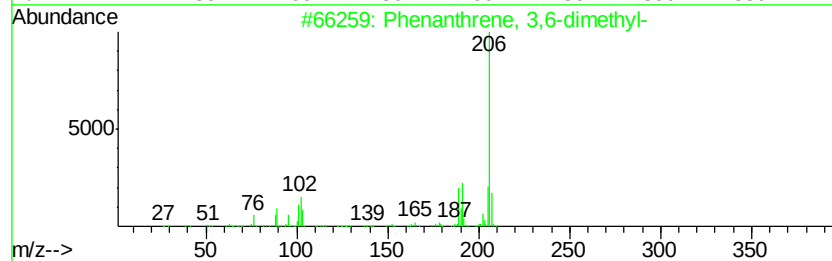
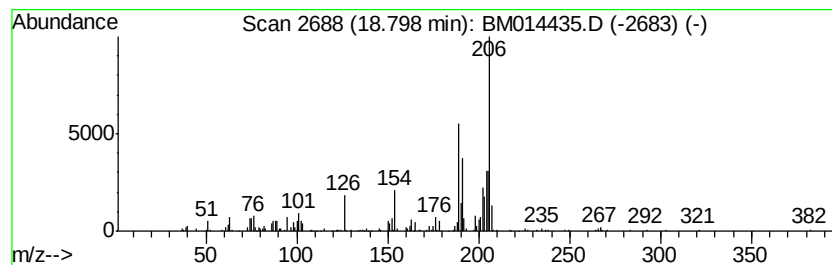
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 22 unknown-01 Concentration Rank 9

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.80 | 6.93 ng/ul | 736842 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID                 | MW  | MolForm | CAS#        | Qual |
|------|----|------------------------------|-----|---------|-------------|------|
| 1    | 5  | Phenanthrene, 3,6-dimethyl-  | 206 | C16H14  | 001576-67-6 | 38   |
| 2    |    | Phenanthrene, 3,6-dimethyl-  | 206 | C16H14  | 001576-67-6 | 38   |
| 3    |    | 1,4-Diphenyl-1,3-butadiene   | 206 | C16H14  | 000886-65-7 | 38   |
| 4    |    | Pyrene, 4,5,9,10-tetrahydro- | 206 | C16H14  | 000781-17-9 | 38   |
| 5    |    | Naphthalene, 2-phenyl-       | 204 | C16H12  | 000612-94-2 | 35   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

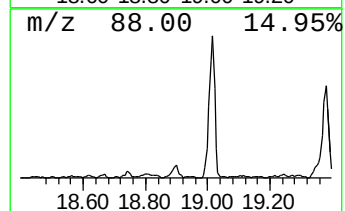
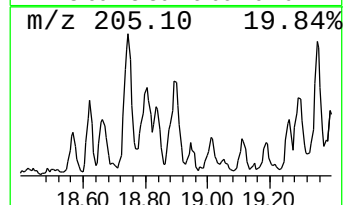
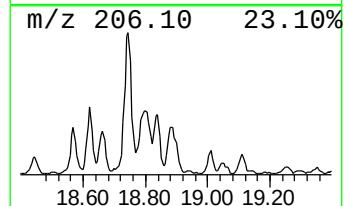
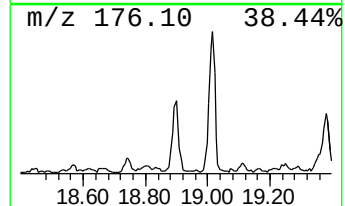
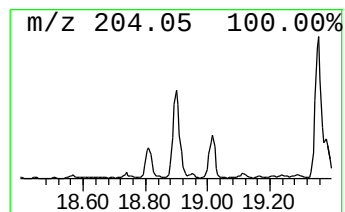
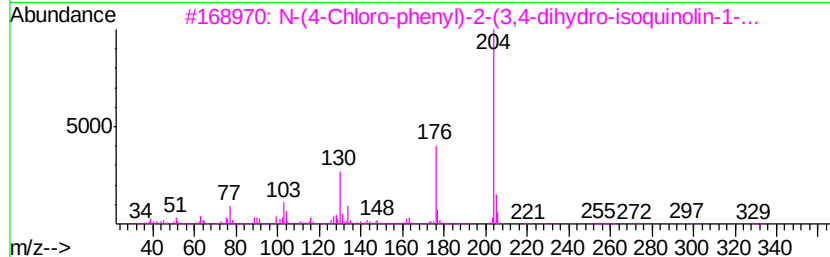
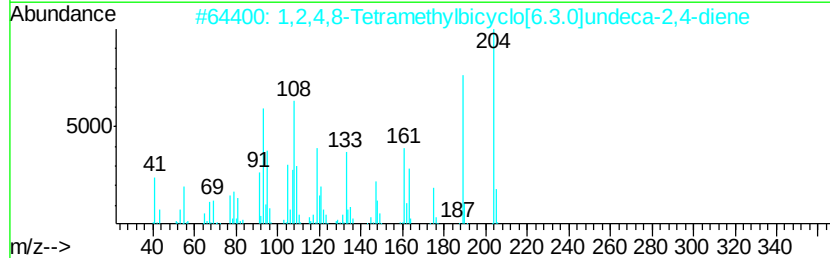
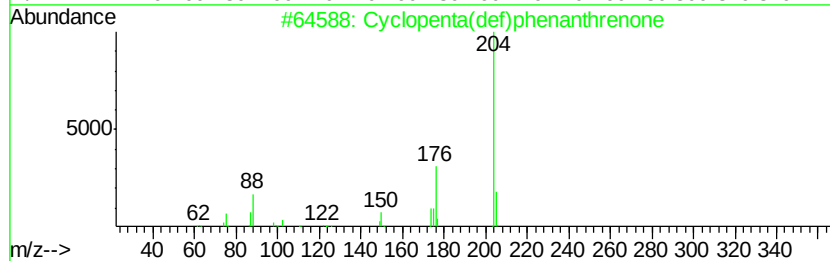
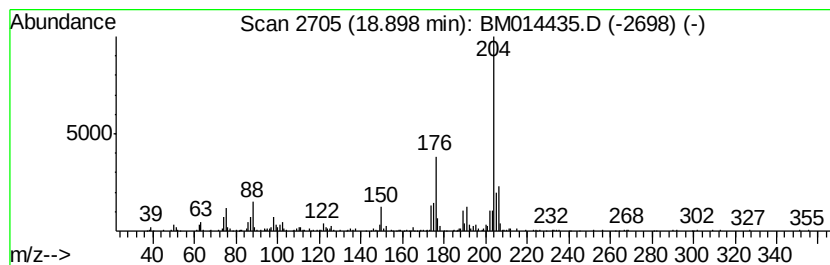
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 23 Cyclopenta(def)phenanthrenone Concentration Rank 7

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 18.90 | 8.63 ng/ul | 917377 | Phenanthrene-d10 | 16.94 |

| Hit# | of | Tentative ID                                                                  | MW  | MolForm      | CAS#         | Qual |
|------|----|-------------------------------------------------------------------------------|-----|--------------|--------------|------|
| 1    | 5  | Cyclopenta(def)phenanthrenone                                                 | 204 | C15H8O       | 005737-13-3  | 92   |
| 2    |    | 1,2,4,8-Tetramethylbicyclo[6.3.0]undeca-2,4-diene                             | 204 | C15H24       | 137235-51-9  | 87   |
| 3    |    | N-(4-Chloro-phenyl)-2-(3,4-dihydroisoquinolin-1-yl)-2-methylpropan-1-amine    | 330 | C17H15ClN2OS | 1000296-34-3 | 53   |
| 4    |    | 4(equat)-(but-3-en-1-ynyl)-2(axial)-methyl-2,3-dihydro-1H-benz[e][1,2]dioxole | 219 | C14H21NO     | 038423-22-2  | 50   |
| 5    |    | [1,1'-Biphenyl]-4,4'-dicarbonitrile                                           | 204 | C14H8N2      | 001591-30-6  | 38   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

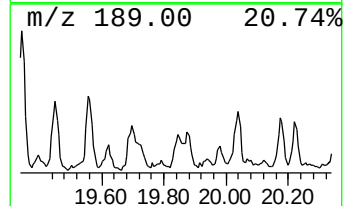
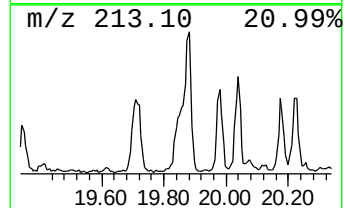
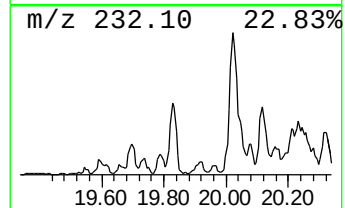
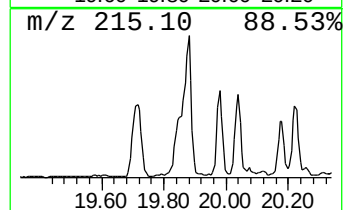
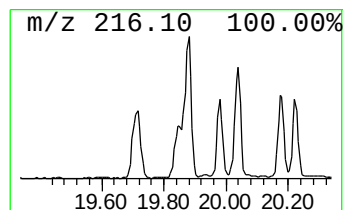
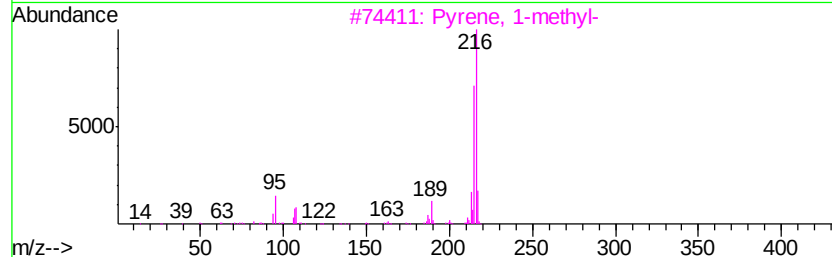
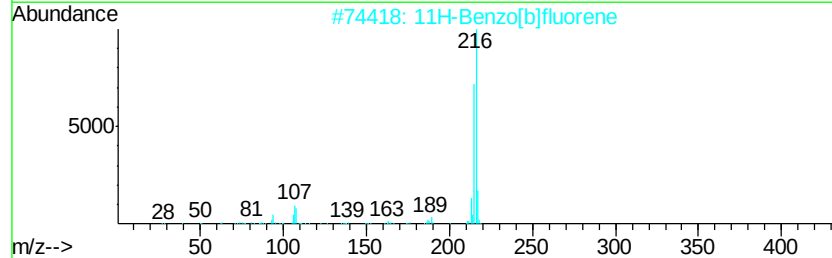
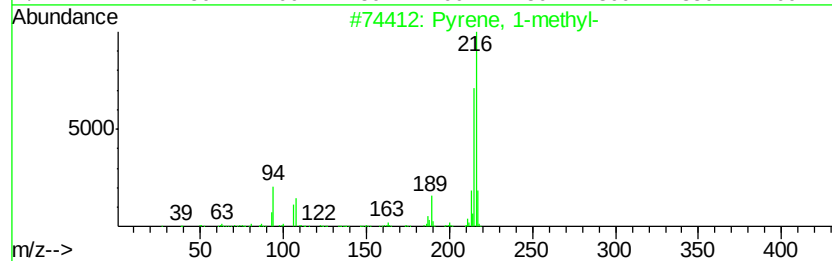
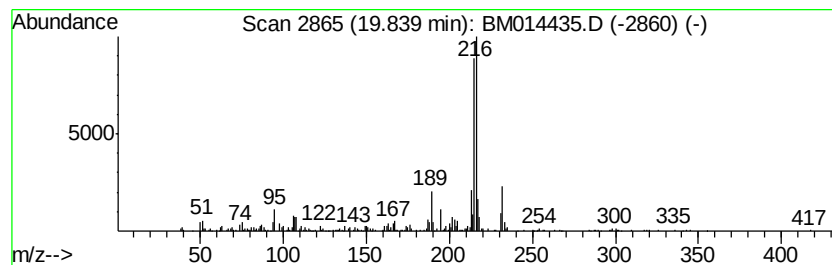
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TIC Integration Parameters: LSCINT.P

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Peak Number 25 Pyrene, 1-methyl- Concentration Rank 33

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 19.84 | 2.08 ng/ul | 796191 | Chrysene-d12     | 21.15 |

| Hit# | of | Tentative ID            | MW  | MolForm | CAS#        | Qual |
|------|----|-------------------------|-----|---------|-------------|------|
| 1    | 5  | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 90   |
| 2    |    | 11H-Benzo[b]fluorene    | 216 | C17H12  | 000243-17-4 | 87   |
| 3    |    | Pyrene, 1-methyl-       | 216 | C17H12  | 002381-21-7 | 87   |
| 4    |    | Fluoranthene, 2-methyl- | 216 | C17H12  | 033543-31-6 | 76   |
| 5    |    | 11H-Benzo[a]fluorene    | 216 | C17H12  | 000238-84-6 | 74   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
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Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

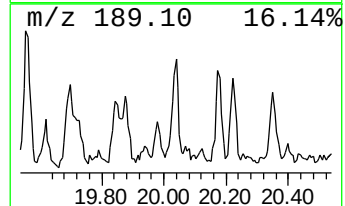
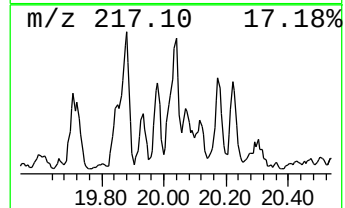
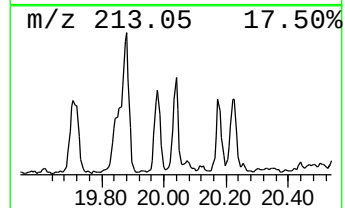
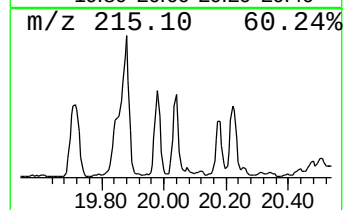
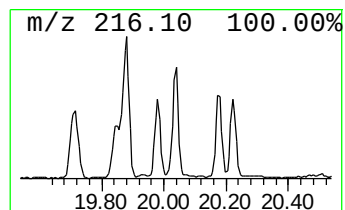
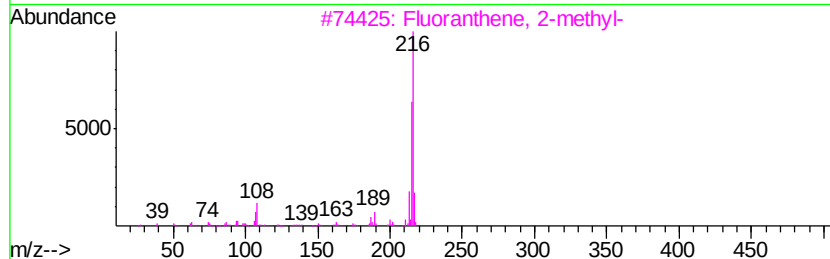
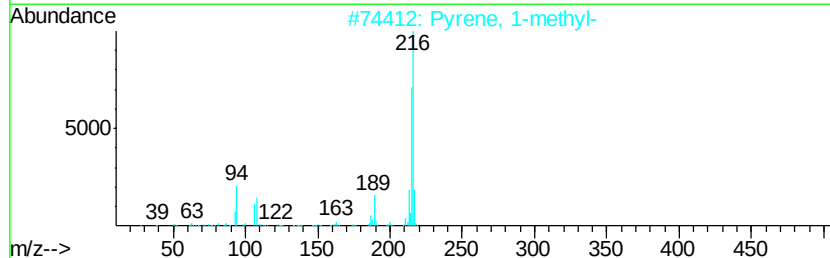
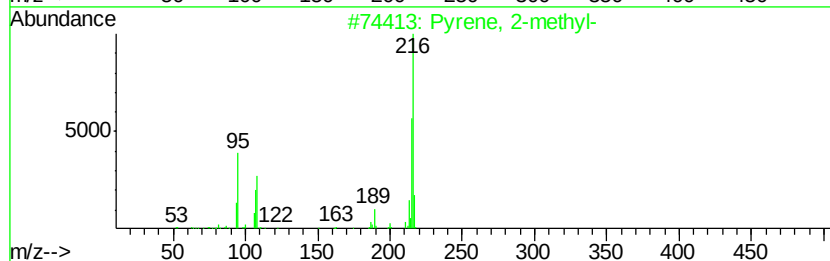
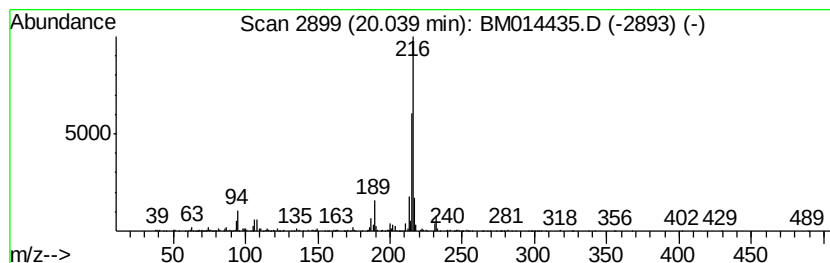
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ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

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

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Peak Number 27 Pyrene, 2-methyl- Concentration Rank 24

| R.T.    | EstConc                 | Area         | Relative to ISTD | R.T.      |
|---------|-------------------------|--------------|------------------|-----------|
| 20.04   | 2.73 ng/ul              | 1043770      | Chrysene-d12     | 21.15     |
| Hit# of | 5                       | Tentative ID | MW MolForm       | CAS# Qual |
| 1       | Pyrene, 2-methyl-       | 216 C17H12   | 003442-78-2      | 93        |
| 2       | Pyrene, 1-methyl-       | 216 C17H12   | 002381-21-7      | 91        |
| 3       | Fluoranthene, 2-methyl- | 216 C17H12   | 033543-31-6      | 89        |
| 4       | 11H-Benzofluorene       | 216 C17H12   | 000238-84-6      | 87        |
| 5       | Pyrene, 1-methyl-       | 216 C17H12   | 002381-21-7      | 81        |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

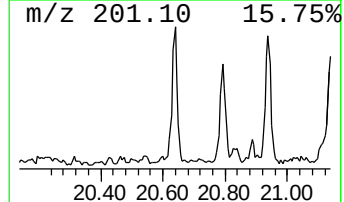
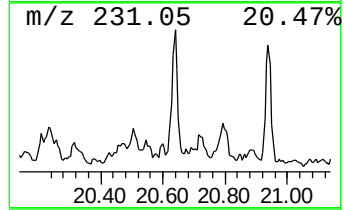
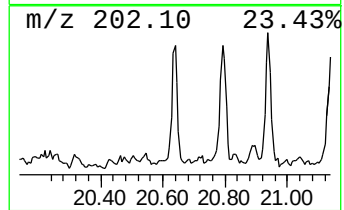
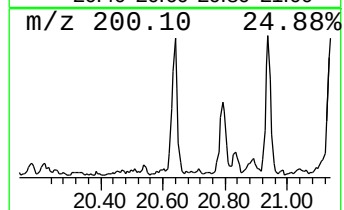
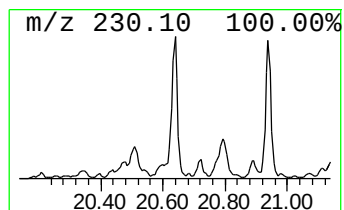
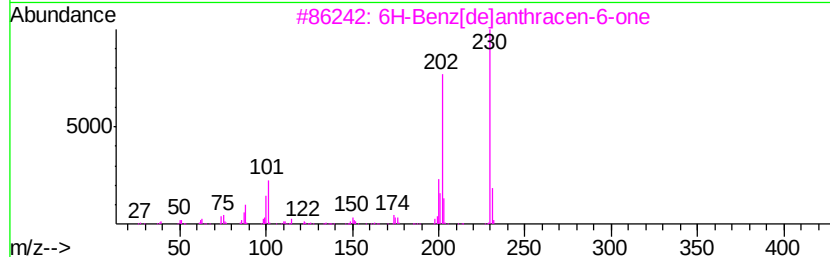
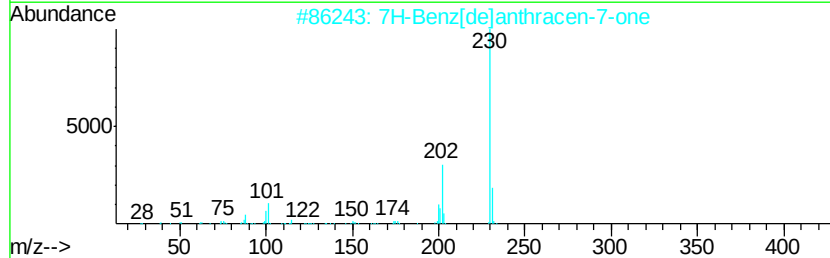
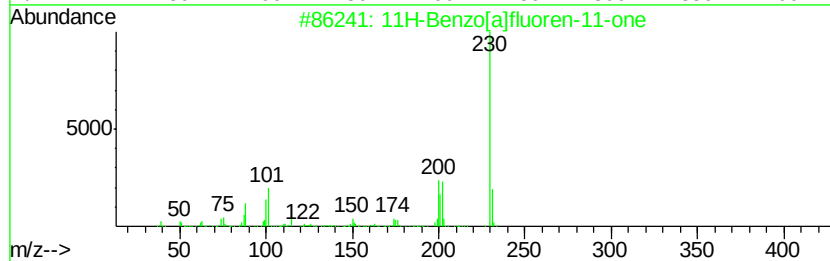
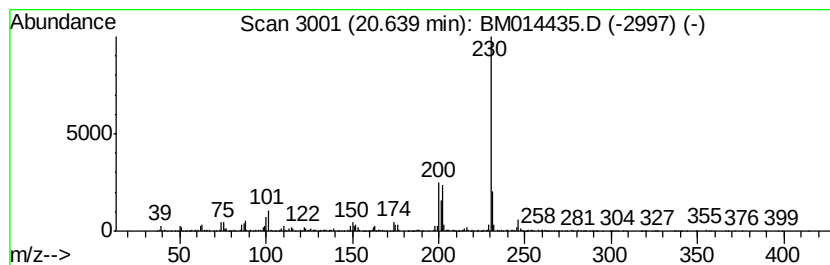
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 28 11H-Benzo[a]fluoren-11-one Concentration Rank 28

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 20.64 | 2.43 ng/ul | 929508 | Chrysene-d12     | 21.15 |

| Hit# | of | Tentative ID               | MW  | MolForm | CAS#        | Qual |
|------|----|----------------------------|-----|---------|-------------|------|
| 1    | 5  | 11H-Benzo[a]fluoren-11-one | 230 | C17H10O | 000479-79-8 | 96   |
| 2    |    | 7H-Benz[de]anthracen-7-one | 230 | C17H10O | 000082-05-3 | 76   |
| 3    |    | 6H-Benz[de]anthracen-6-one | 230 | C17H10O | 080252-14-8 | 76   |
| 4    |    | 7H-Benz[de]anthracen-7-one | 230 | C17H10O | 000082-05-3 | 76   |
| 5    |    | 4-Pyrenecarbaldehyde       | 230 | C17H10O | 022245-51-8 | 72   |



Data Path : Z:\HPCHEM1\BNA M\DATA\BM022818\  
Data File : BM014435.D  
Acq On : 01 Mar 2018 11:44  
Operator : SJ/JU  
Sample : J1678-10 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
BE5W0

Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM-EPA-BM021418.M  
Quant Title : SVOA CALIBRATION

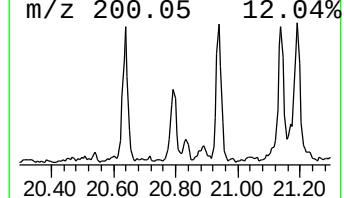
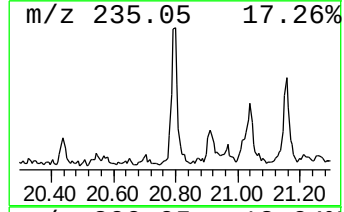
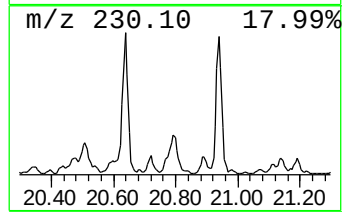
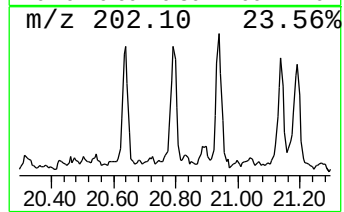
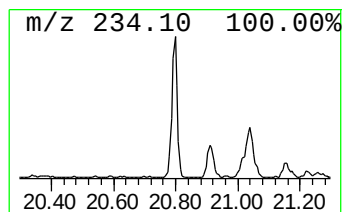
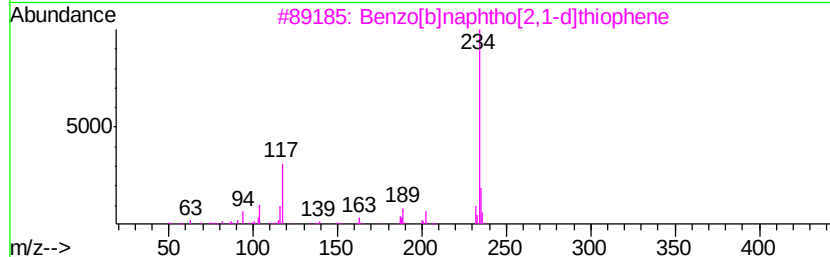
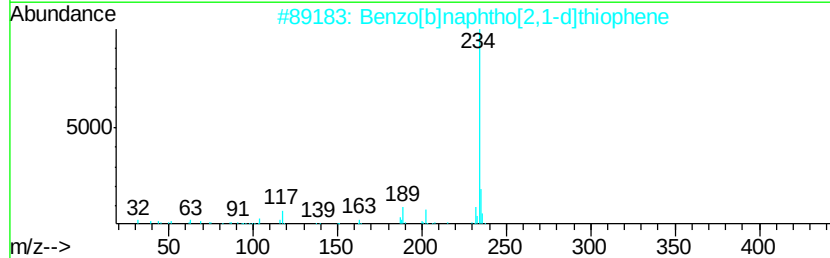
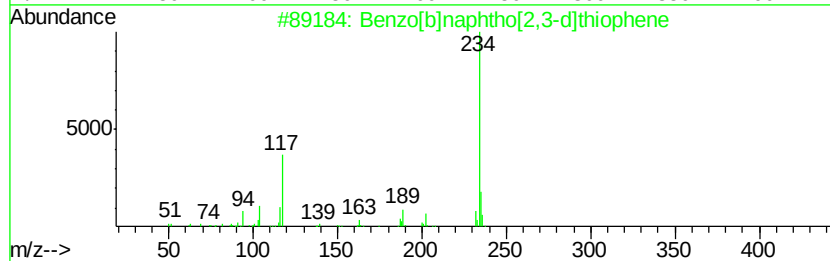
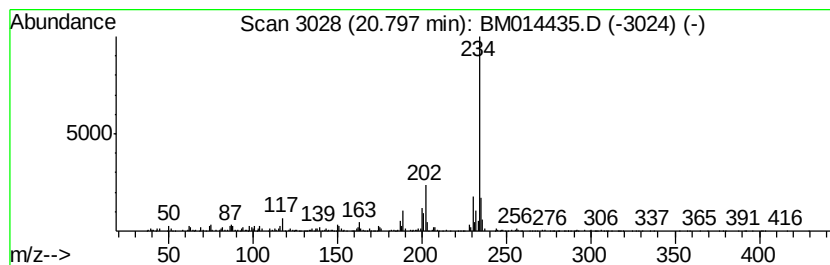
TIC Library : C:\DATABASE\NIST11.L  
TIC Integration Parameters: LSCINT.P

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Peak Number 29 Benzo[b]naphtho[2,3-d]thiop... Concentration Rank 31

| R.T.  | EstConc    | Area   | Relative to ISTD | R.T.  |
|-------|------------|--------|------------------|-------|
| 20.80 | 2.14 ng/ul | 820250 | Chrysene-d12     | 21.15 |

| Hit# | of | Tentative ID                    | MW  | MolForm | CAS#        | Qual |
|------|----|---------------------------------|-----|---------|-------------|------|
| 1    | 5  | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 76   |
| 2    |    | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 76   |
| 3    |    | Benzo[b]naphtho[2,1-d]thiophene | 234 | C16H10S | 000239-35-0 | 76   |
| 4    |    | Benzo[b]naphtho[2,3-d]thiophene | 234 | C16H10S | 000243-46-9 | 76   |
| 5    |    | Anthra(1,2-b)thiophene          | 234 | C16H10S | 000227-86-1 | 70   |



Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM022818\  
 Data File : BM014435.D  
 Acq On : 01 Mar 2018 11:44  
 Operator : SJ/JU  
 Sample : J1678-10 10X  
 Misc :  
 ALS Vial : 39 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 BE5W0

Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM-EPA-BM021418.M  
 Quant Title : SVOA CALIBRATION

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

| TIC Top Hit name      | RT    | EstConc | Units | Response | --Internal Standard-- |       |         |      |
|-----------------------|-------|---------|-------|----------|-----------------------|-------|---------|------|
|                       |       |         |       |          | #                     | RT    | Resp    | Conc |
| Naphthalene, 1-me...  | 12.18 | 3.2     | ng/ul | 207706   | 2                     | 10.29 | 1284110 | 20.0 |
| Naphthalene, 2,7-...  | 13.49 | 2.9     | ng/ul | 261498   | 3                     | 14.17 | 1793930 | 20.0 |
| 9H-Fluoren-9-ol       | 15.53 | 3.0     | ng/ul | 267974   | 3                     | 14.17 | 1793930 | 20.0 |
| Dibenzofuran, 4-m...  | 15.68 | 2.5     | ng/ul | 265124   | 4                     | 16.94 | 2126930 | 20.0 |
| 9H-Fluorene, 1-me...  | 16.24 | 2.7     | ng/ul | 285850   | 4                     | 16.94 | 2126930 | 20.0 |
| 9H-Fluoren-9-one      | 16.60 | 3.9     | ng/ul | 411982   | 4                     | 16.94 | 2126930 | 20.0 |
| Anthracene, 1,2,3...  | 16.69 | 3.3     | ng/ul | 347617   | 4                     | 16.94 | 2126930 | 20.0 |
| Naphtho[2,3-b]thi...  | 16.76 | 4.8     | ng/ul | 512309   | 4                     | 16.94 | 2126930 | 20.0 |
| 1-Methyldibenzoth...  | 17.52 | 3.7     | ng/ul | 396375   | 4                     | 16.94 | 2126930 | 20.0 |
| Dibenzothiophene,...  | 17.66 | 2.0     | ng/ul | 216755   | 4                     | 16.94 | 2126930 | 20.0 |
| Phenanthrene, 1-m...  | 17.82 | 12.6    | ng/ul | 1343460  | 4                     | 16.94 | 2126930 | 20.0 |
| Phenanthrene, 2-m...  | 17.86 | 16.6    | ng/ul | 1759940  | 4                     | 16.94 | 2126930 | 20.0 |
| 4H-Cyclopenta[def...  | 18.00 | 19.4    | ng/ul | 2066890  | 4                     | 16.94 | 2126930 | 20.0 |
| 1H-Cyclopropa[l]p...  | 18.04 | 8.9     | ng/ul | 951964   | 4                     | 16.94 | 2126930 | 20.0 |
| Naphthalene, 2-ph...  | 18.32 | 6.7     | ng/ul | 714174   | 4                     | 16.94 | 2126930 | 20.0 |
| Benzo[c]cinnoline     | 18.38 | 8.0     | ng/ul | 845357   | 4                     | 16.94 | 2126930 | 20.0 |
| Anthracene, 2-ethyl-  | 18.57 | 5.1     | ng/ul | 540194   | 4                     | 16.94 | 2126930 | 20.0 |
| di-p-Tolylacetylene   | 18.66 | 2.6     | ng/ul | 280631   | 4                     | 16.94 | 2126930 | 20.0 |
| 9,10-Dimethylanthe... | 18.74 | 8.8     | ng/ul | 939142   | 4                     | 16.94 | 2126930 | 20.0 |
| unknown-01            | 18.80 | 6.9     | ng/ul | 736842   | 4                     | 16.94 | 2126930 | 20.0 |
| Cyclopenta(def)ph...  | 18.90 | 8.6     | ng/ul | 917377   | 4                     | 16.94 | 2126930 | 20.0 |
| Pyrene, 1-methyl-     | 19.84 | 2.1     | ng/ul | 796191   | 5                     | 21.15 | 7655020 | 20.0 |
| Pyrene, 2-methyl-     | 20.04 | 2.7     | ng/ul | 1043770  | 5                     | 21.15 | 7655020 | 20.0 |
| 11H-Benzo[a]fluor...  | 20.64 | 2.4     | ng/ul | 929508   | 5                     | 21.15 | 7655020 | 20.0 |
| Benzo[b]naphtho[2...  | 20.80 | 2.1     | ng/ul | 820250   | 5                     | 21.15 | 7655020 | 20.0 |