LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

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

Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.985 | 19 | 25 | 39 | rVB | 492759 | 788152 | 39.21% | 3.480% |
| 2 | 5.664 | 473 | 481 | 491 | rBV | 160384 | 309415 | 15.39% | 1.366% |
| 3 | 7.280 | 745 | 756 | 767 | rBV | 191425 | 387714 | 19.29% | 1.712% |
| 4 | 7.650 | 810 | 819 | 828 | rBV | 211105 | 420691 | 20.93% | 1.858% |
| 5 | 8.120 | 891 | 899 | 910 | rBV | 126039 | 245046 | 12.19% | 1.082% |
| 6 | 8.443 | 945 | 954 | 963 | rBV | 171842 | 345560 | 17.19% | 1.526% |
| 7 | 9.289 | 1090 | 1098 | 1111 | rBV | 117445 | 252492 | 12.56% | 1.115% |
| 8 | 10.935 | 1371 | 1378 | 1385 | rBV | 219307 | 446578 | 22.22% | 1.972% |
| 9 | 12.586 | 1654 | 1659 | 1666 | rBV | 12014 | 22390 | 1.11% | 0.099% |
| 10 | 13.367 | 1784 | 1792 | 1805 | rBV | 426624 | 738449 | 36.73% | 3.261% |
| 11 | 14.072 | 1905 | 1912 | 1917 | rBV4 | 9790 | 20188 | 1.00% | 0.089% |
| 12 | 14.190 | 1925 | 1932 | 1940 | rVB | 64830 | 110123 | 5.48% | 0.486% |
| 13 | 14.478 | 1975 | 1981 | 1984 | rBV3 | 11305 | 21082 | 1.05% | 0.093% |
| 14 | 14.748 | 2017 | 2027 | 2033 | rBV2 | 360870 | 618946 | 30.79% | 2.733% |
| 15 | 14.812 | 2033 | 2038 | 2044 | rVB | 63443 | 111592 | 5.55% | 0.493% |
| 16 | 15.141 | 2088 | 2094 | 2102 | rBV | 35351 | 63900 | 3.18% | 0.282% |
| 17 | 15.788 | 2198 | 2204 | 2214 | rVB | 69690 | 124827 | 6.21% | 0.551% |
| 18 | 16.082 | 2250 | 2254 | 2261 | rVB2 | 16344 | 29433 | 1.46% | 0.130% |
| 19 | 16.234 | 2274 | 2280 | 2290 | rBV2 | 334791 | 599258 | 29.81% | 2.646% |
| 20 | 16.792 | 2372 | 2375 | 2379 | rVV4 | 18325 | 28408 | 1.41% | 0.125% |
| 21 | 17.022 | 2405 | 2414 | 2416 | rBV9 | 12668 | 30642 | 1.52% | 0.135% |
| 22 | 17.057 | 2416 | 2420 | 2429 | rVB6 | 11692 | 26610 | 1.32% | 0.117% |
| 23 | 17.151 | 2429 | 2436 | 2441 | rVB3 | 20519 | 41353 | 2.06% | 0.183% |
| 24 | 17.215 | 2442 | 2447 | 2452 | rBV4 | 27243 | 51162 | 2.55% | 0.226% |
| 25 | 17.310 | 2459 | 2463 | 2472 | rVB | 39455 | 68492 | 3.41% | 0.302% |
| 26 | 17.492 | 2487 | 2494 | 2497 | rBV | 365480 | 628383 | 31.26% | 2.775% |
| 27 | 17.533 | 2497 | 2501 | 2508 | rVV | 718854 | 1193017 | 59.35% | 5.268% |
| 28 | 17.621 | 2511 | 2516 | 2523 | rVB | 160511 | 271902 | 13.53% | 1.201% |
| 29 | 17.897 | 2555 | 2563 | 2569 | rBV2 | 60324 | 137716 | 6.85% | 0.608% |
| 30 | 18.003 | 2578 | 2581 | 2587 | rVB3 | 15375 | 23927 | 1.19% | 0.106% |
| 31 | 18.067 | 2590 | 2592 | 2599 | rVB6 | 16201 | 26360 | 1.31% | 0.116% |
| 32 | 18.367 | 2635 | 2643 | 2646 | rBV | 92251 | 158534 | 7.89% | 0.700% |
| 33 | 18.414 | 2646 | 2651 | 2658 | rVB | 132187 | 220514 | 10.97% | 0.974% |
| 34 | 18.490 | 2659 | 2664 | 2669 | rBV | 46561 | 81240 | 4.04% | 0.359% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

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

Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 18.561 | 2669 | 2676 | 2680 | rBV3 | 165417 | 346309 | 17.23% | 1.529% |
| 36 | 18.855 | 2721 | 2726 | 2730 | rBV | 72755 | 109297 | 5.44% | 0.483% |
| 37 | 18.902 | 2730 | 2734 | 2740 | rVB | 40937 | 65060 | 3.24% | 0.287% |
| 38 | 19.096 | 2761 | 2767 | 2771 | rBV5 | 35396 | 67902 | 3.38% | 0.300% |
| 39 | 19.266 | 2792 | 2796 | 2801 | rBV3 | 66981 | 121383 | 6.04% | 0.536% |
| 40 | 19.419 | 2816 | 2822 | 2830 | rBV2 | 54205 | 113305 | 5.64% | 0.500% |
| 41 | 19.536 | 2835 | 2842 | 2848 | rBV | 1276425 | 2010252 | 100.00% | 8.877% |
| 42 | 19.630 | 2855 | 2858 | 2863 | rVB3 | 28367 | 36917 | 1.84% | 0.163% |
| 43 | 19.777 | 2881 | 2883 | 2891 | rVB2 | 43641 | 72601 | 3.61% | 0.321% |
| 44 | 19.865 | 2893 | 2898 | 2899 | rVV | 207075 | 275996 | 13.73% | 1.219% |
| 45 | 19.901 | 2899 | 2904 | 2911 | rVV | 1216733 | 1949785 | 96.99% | 8.610% |
| 46 | 19.965 | 2911 | 2915 | 2921 | rVB | 63755 | 108590 | 5.40% | 0.479% |
| 47 | 20.083 | 2929 | 2935 | 2941 | rBV | 839814 | 1229350 | 61.15% | 5.428% |
| 48 | 20.136 | 2941 | 2944 | 2949 | rVB2 | 58259 | 91279 | 4.54% | 0.403% |
| 49 | 20.224 | 2952 | 2959 | 2964 | rBV4 | 88172 | 208820 | 10.39% | 0.922% |
| 50 | 20.382 | 2975 | 2986 | 2992 | rBV | 156242 | 403527 | 20.07% | 1.782% |
| 51 | 20.482 | 2999 | 3003 | 3007 | rBV | 118137 | 188713 | 9.39% | 0.833% |
| 52 | 20.541 | 3010 | 3013 | 3017 | rVB | 93575 | 140815 | 7.00% | 0.622% |
| 53 | 20.682 | 3033 | 3037 | 3041 | rBV | 83843 | 136119 | 6.77% | 0.601% |
| 54 | 20.729 | 3042 | 3045 | 3055 | rVB | 84704 | 144818 | 7.20% | 0.639% |
| 55 | 21.152 | 3113 | 3117 | 3124 | rVB | 82065 | 150124 | 7.47% | 0.663% |
| 56 | 21.340 | 3146 | 3149 | 3153 | rBV | 43410 | 64079 | 3.19% | 0.283% |
| 57 | 21.381 | 3153 | 3156 | 3160 | rVB | 85597 | 123162 | 6.13% | 0.544% |
| 58 | 21.434 | 3161 | 3165 | 3170 | rBV2 | 67538 | 111749 | 5.56% | 0.493% |
| 59 | 21.757 | 3212 | 3220 | 3226 | rBV3 | 635701 | 1738828 | 86.50% | 7.678% |
| 60 | 21.816 | 3226 | 3230 | 3241 | rVB | 462673 | 892347 | 44.39% | 3.940% |
| 61 | 21.969 | 3253 | 3256 | 3264 | rVB | 77701 | 134531 | 6.69% | 0.594% |
| 62 | 24.031 | 3597 | 3607 | 3624 | rBV | 290510 | 1426590 | 70.97% | 6.299% |
| 63 | 24.771 | 3725 | 3733 | 3745 | rVB2 | 159071 | 522355 | 25.98% | 2.307% |
| 64 | 24.918 | 3749 | 3758 | 3769 | rVV | 237104 | 744648 | 37.04% | 3.288% |
| 65 | 25.077 | 3778 | 3785 | 3793 | rBV2 | 103546 | 273525 | 13.61% | 1.208% |

Sum of corrected areas: 22646872

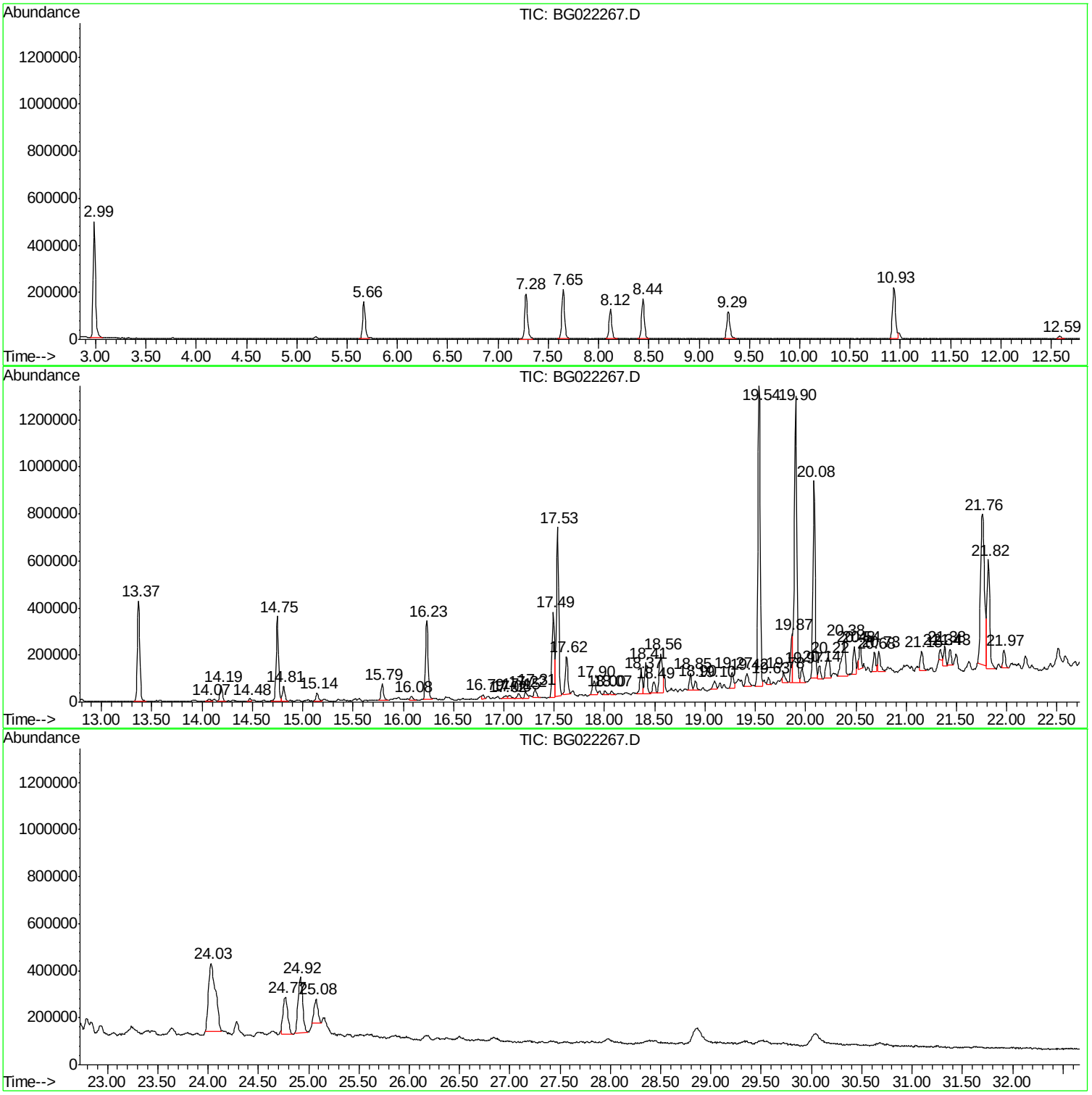
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

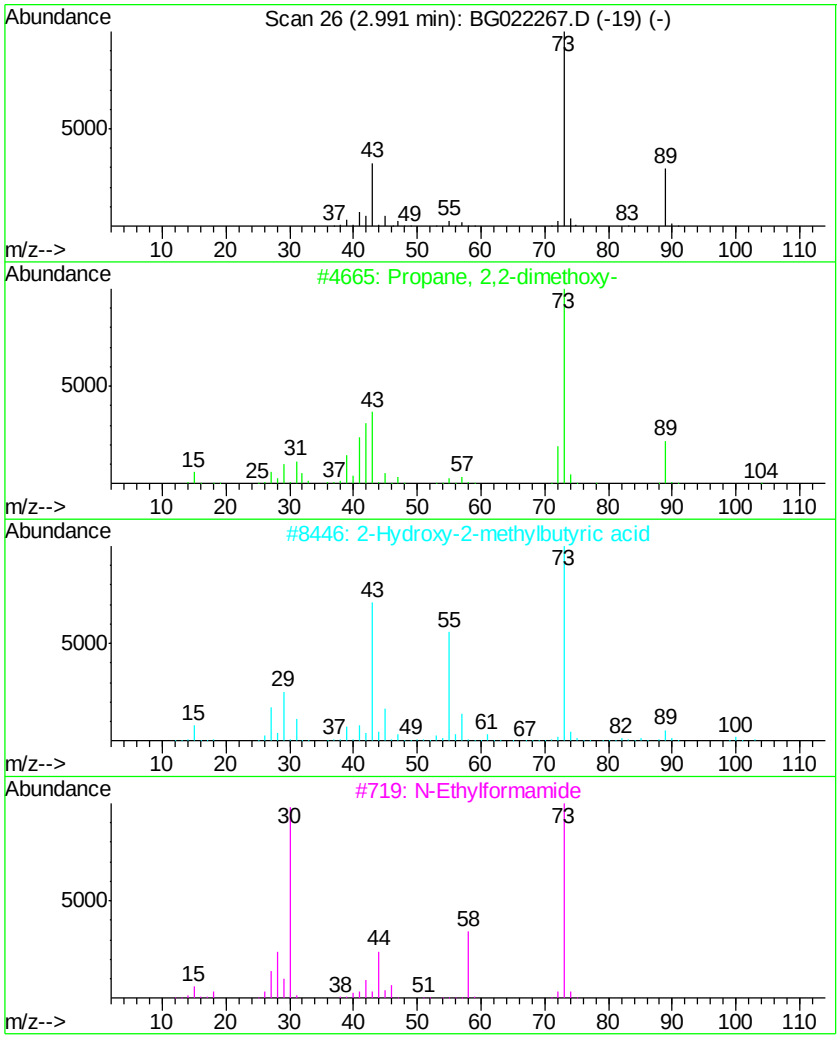
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

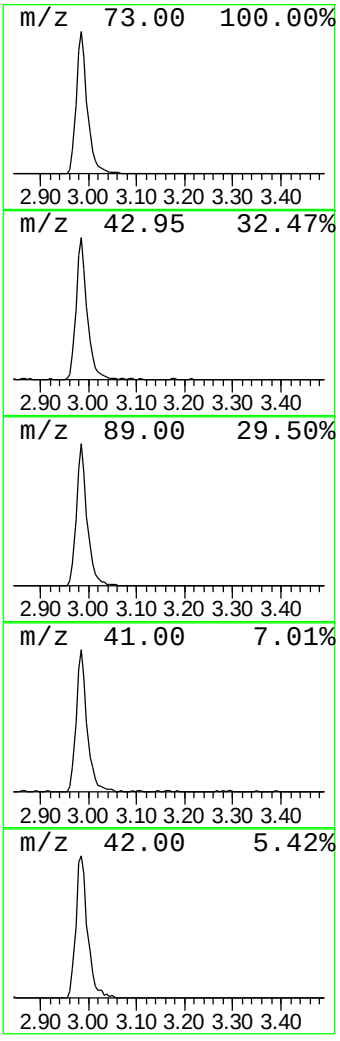
**********

Peak Number 1 unknown2.99 Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 2.99 | 64.33 ng | 788152 | 1,4-Dichlorobenzene-d4 | 8.12 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Propane, 2,2-dimethoxy- | 104 | C5H12O2 | 000077-76-9 | 45 |
| 2 | 2-Hydroxy-2-methylbutyric acid | 118 | C5H10O3 | 003739-30-8 | 9 |
| 3 | N-Ethylformamide | 73 | C3H7NO | 000627-45-2 | 7 |
| 4 | Methane, isothiocyanato- | 73 | C2H3NS | 000556-61-6 | 7 |
| 5 | 1,3,5-Trioxane | 90 | C3H6O3 | 000110-88-3 | 4 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

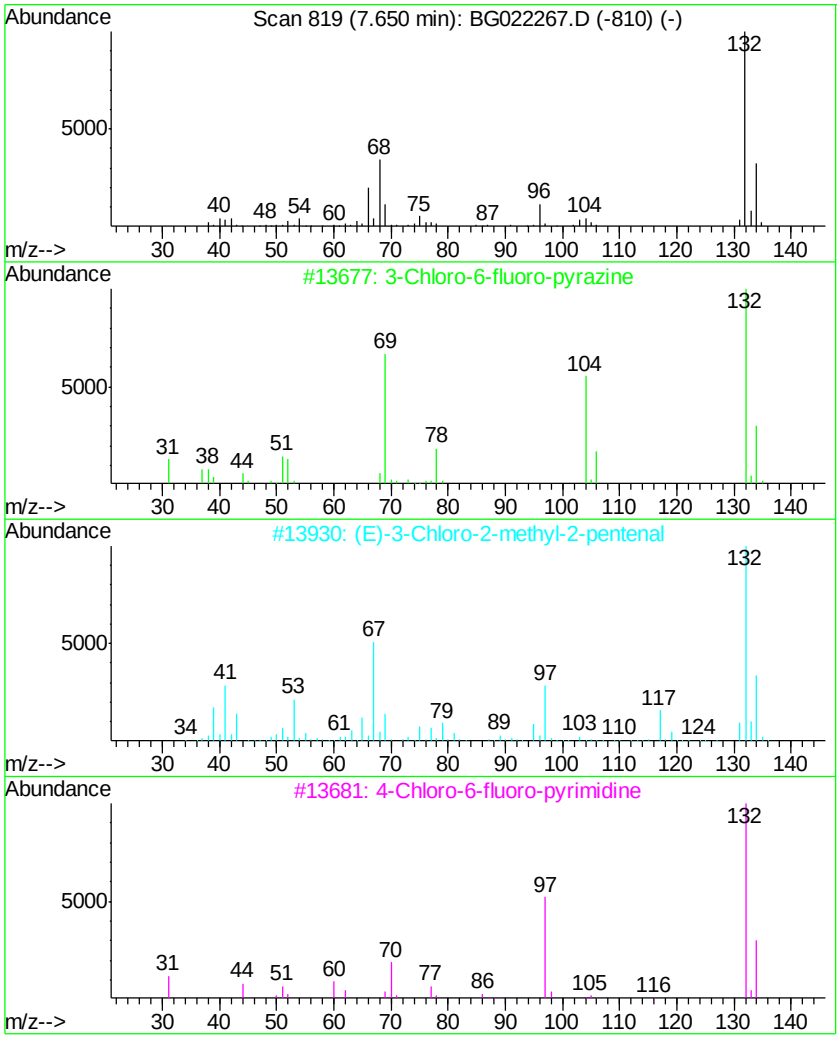
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

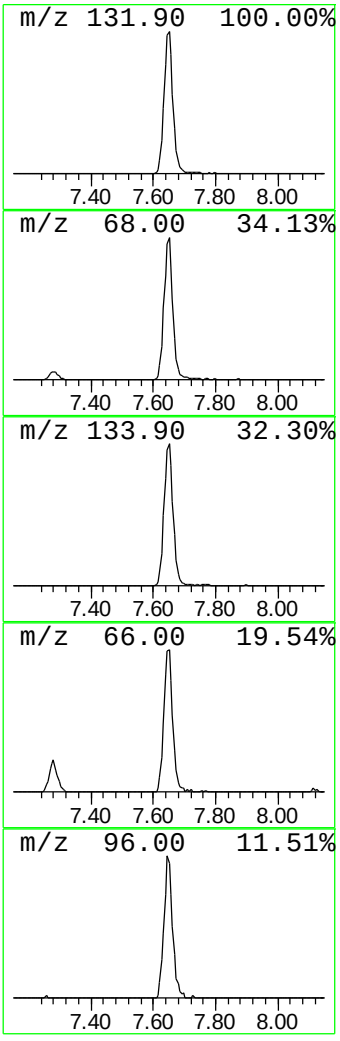
**********

Peak Number 2 unknown7.65 Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.65 | 34.34 ng | 420691 | 1,4-Dichlorobenzene-d4 | 8.12 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 25 |
| 2 | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO | 031357-76-3 | 17 |
| 3 | 4-Chloro-6-fluoro-pyrimidine | 132 | C4H2ClFN2 | 051422-01-6 | 9 |
| 4 | Tranylcypromine-propionyl | 189 | C12H15NO | 1000123-86-3 | 9 |
| 5 | 5-Fluoro-2-chloropyrimidine | 132 | C4H2ClFN2 | 062802-42-0 | 9 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

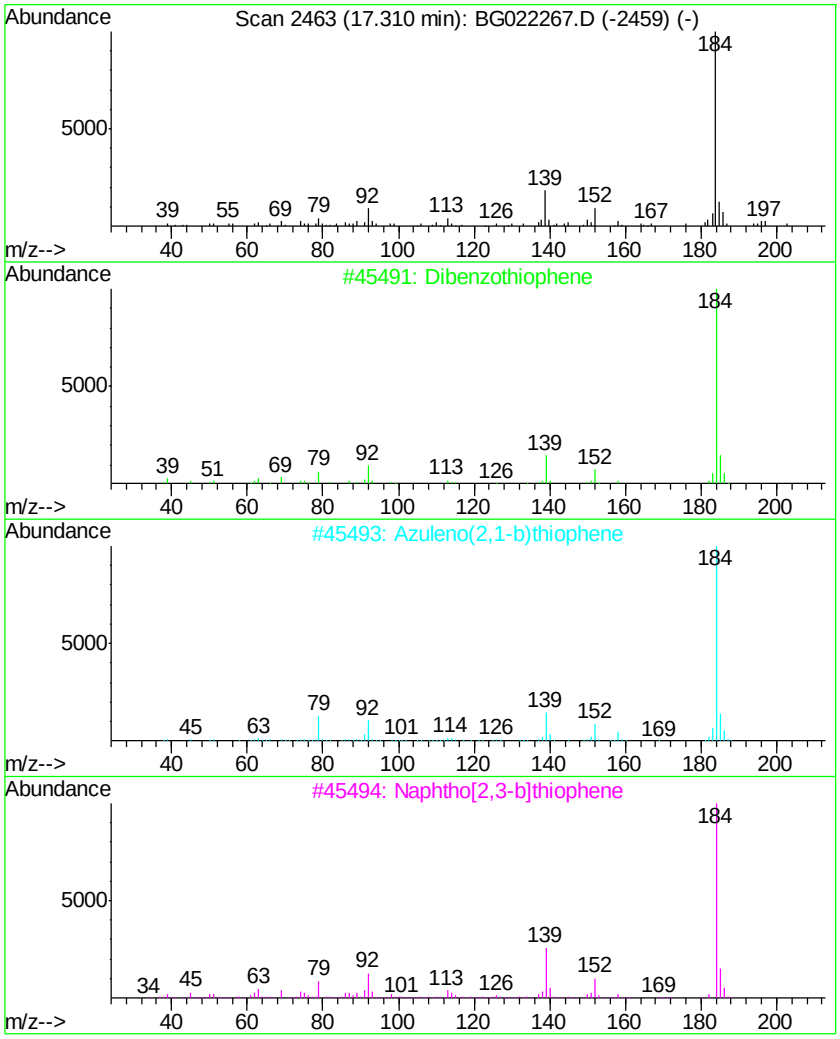
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

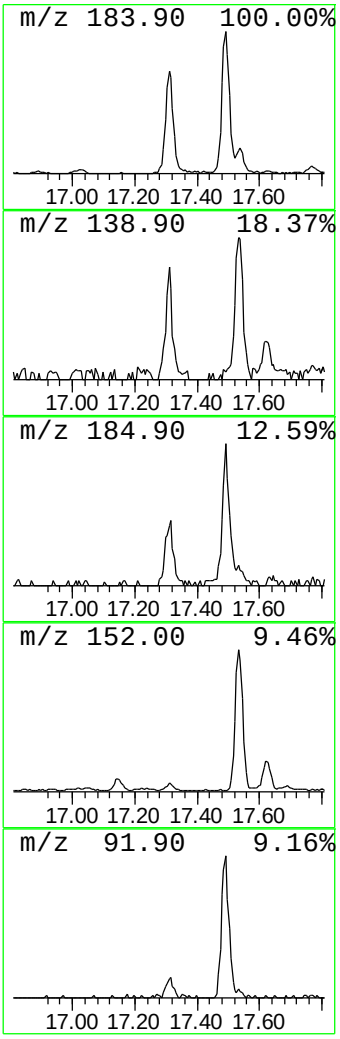
**********

Peak Number 5 Dibenzothiophene Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 17.31 | 2.18 ng | 68492 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dibenzothiophene | 184 | C12H8S | 000132-65-0 | 97 |
| 2 | Azuleno(2,1-b)thiophene | 184 | C12H8S | 000248-13-5 | 94 |
| 3 | Naphtho[2,3-b]thiophene | 184 | C12H8S | 000268-77-9 | 93 |
| 4 | Dibenzothiophene, 5-oxide | 200 | C12H8OS | 001013-23-6 | 78 |
| 5 | Benzidine | 184 | C12H12N2 | 000092-87-5 | 64 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

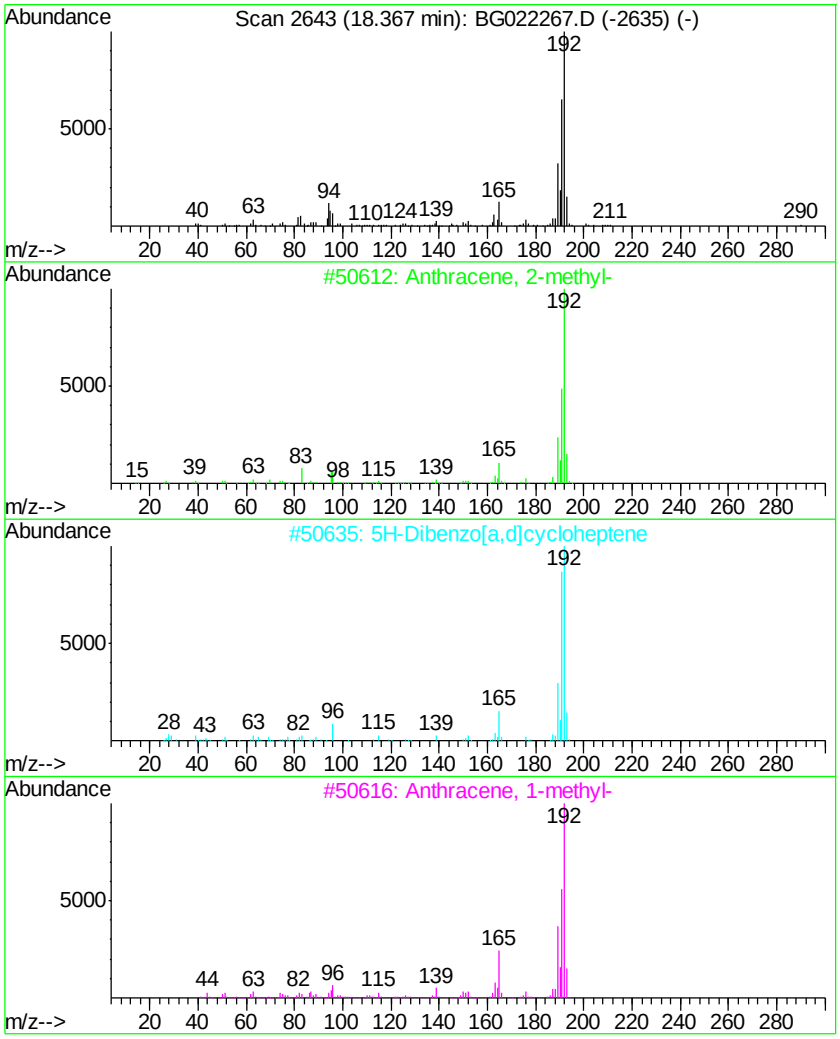
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

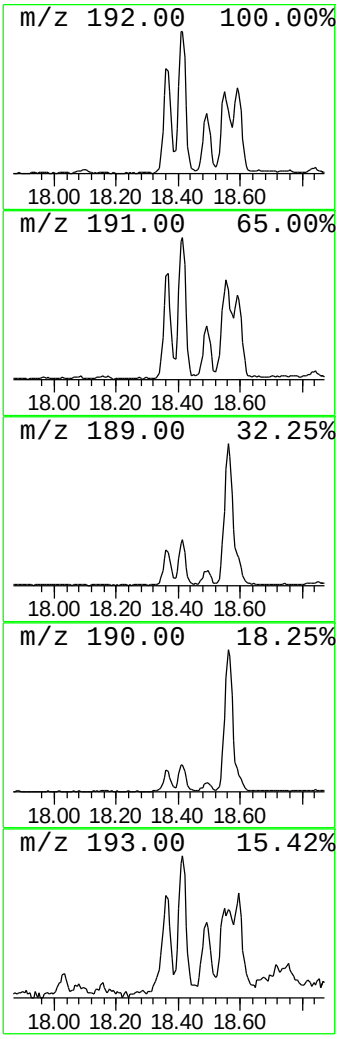
**********

Peak Number 6 Anthracene, 2-methyl- Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 18.37 | 5.05 ng | 158534 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 96 |
| 2 | 5H-Dibenzo[a,d]cycloheptene | 192 | C15H12 | 000256-81-5 | 95 |
| 3 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 95 |
| 4 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 95 |
| 5 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 94 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

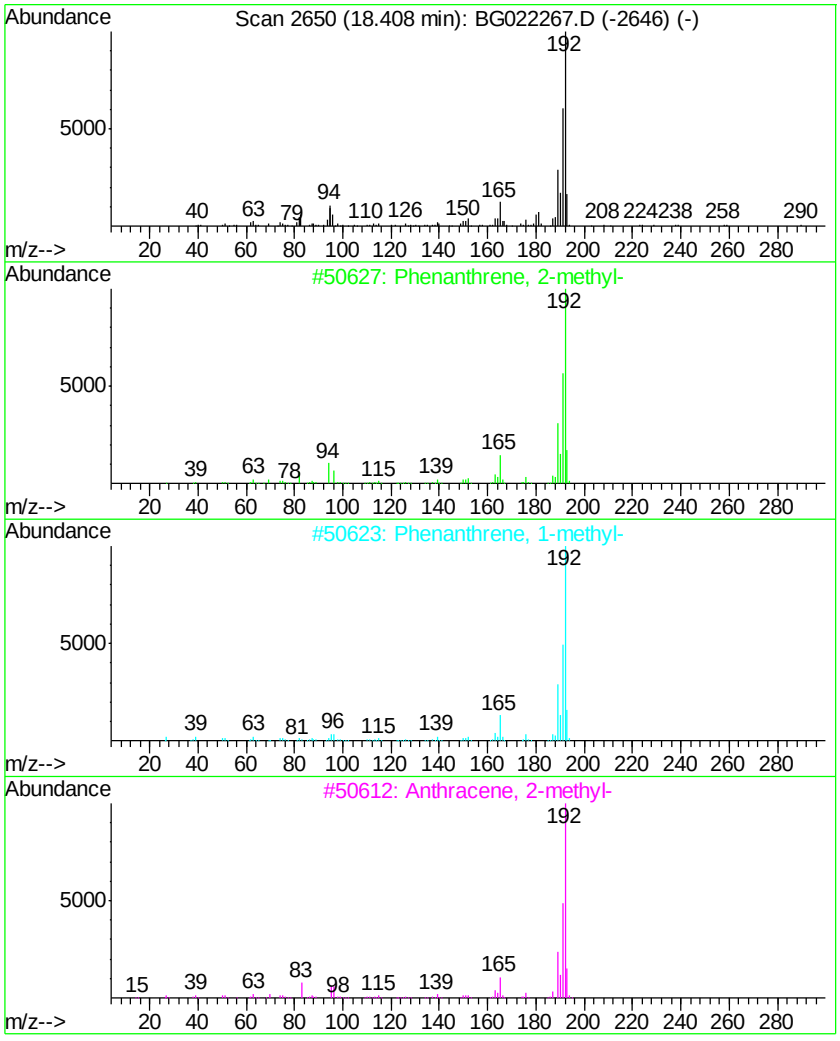
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

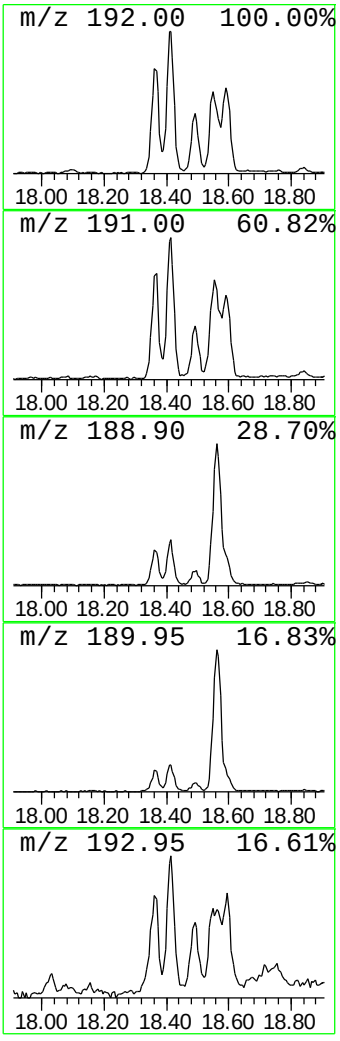
**********

Peak Number 7 Phenanthrene, 2-methyl- Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 18.41 | 7.02 ng | 220514 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 97 |
| 2 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 97 |
| 3 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 97 |
| 4 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 95 |
| 5 | 5H-Dibenzo[a,d]cycloheptene | 192 | C15H12 | 000256-81-5 | 93 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

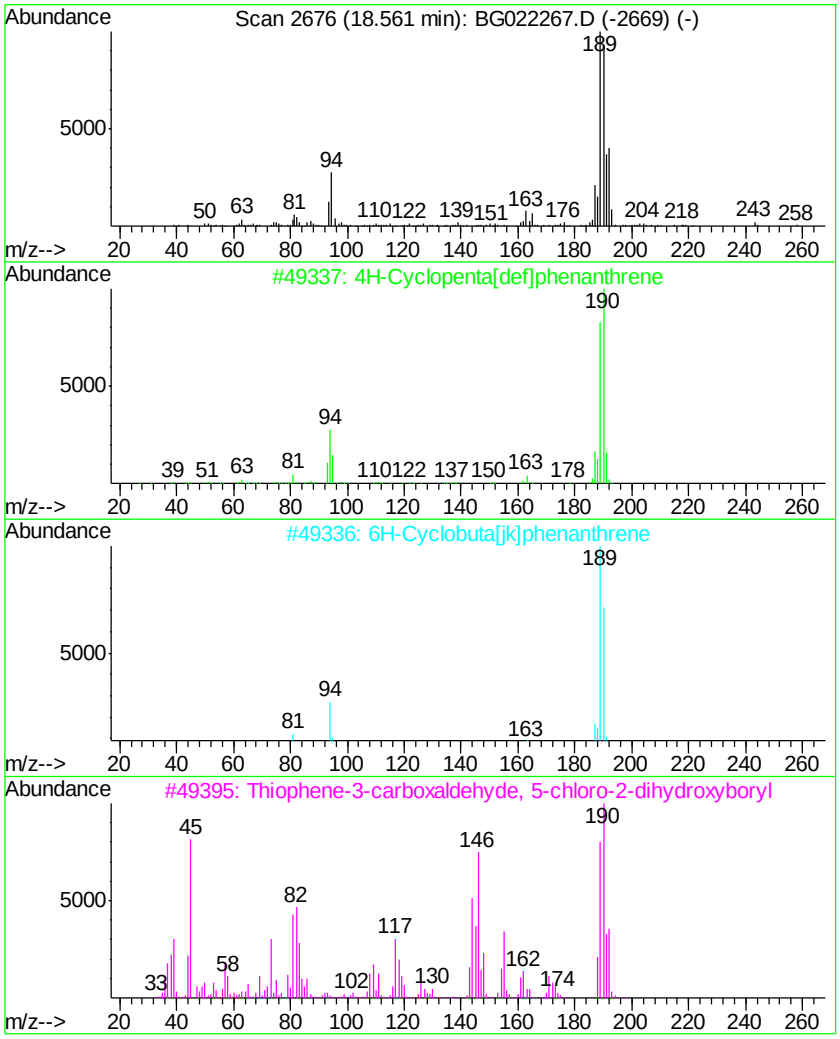
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

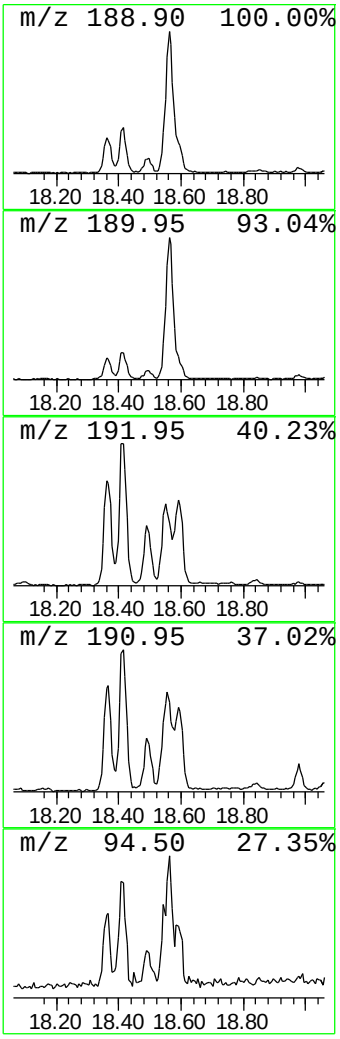
**********

Peak Number 9 4H-Cyclopenta[def]phenanthrene Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 18.56 | 11.02 ng | 346309 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10 | 000203-64-5 | 93 |
| 2 | 6H-Cyclobuta[jk]phenanthrene | 190 | C15H10 | 083469-43-6 | 59 |
| 3 | Thiophene-3-carboxaldehyde, 5-ch... | 190 | C5H4BClO3S | 036155-87-0 | 52 |
| 4 | 2,3,5,6-Tetramethylterephthalald... | 190 | C12H14O2 | 007072-01-7 | 47 |
| 5 | 2,2'-Bis(4,5-dimethylimidazole) | 190 | C10H14N4 | 069286-06-2 | 42 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

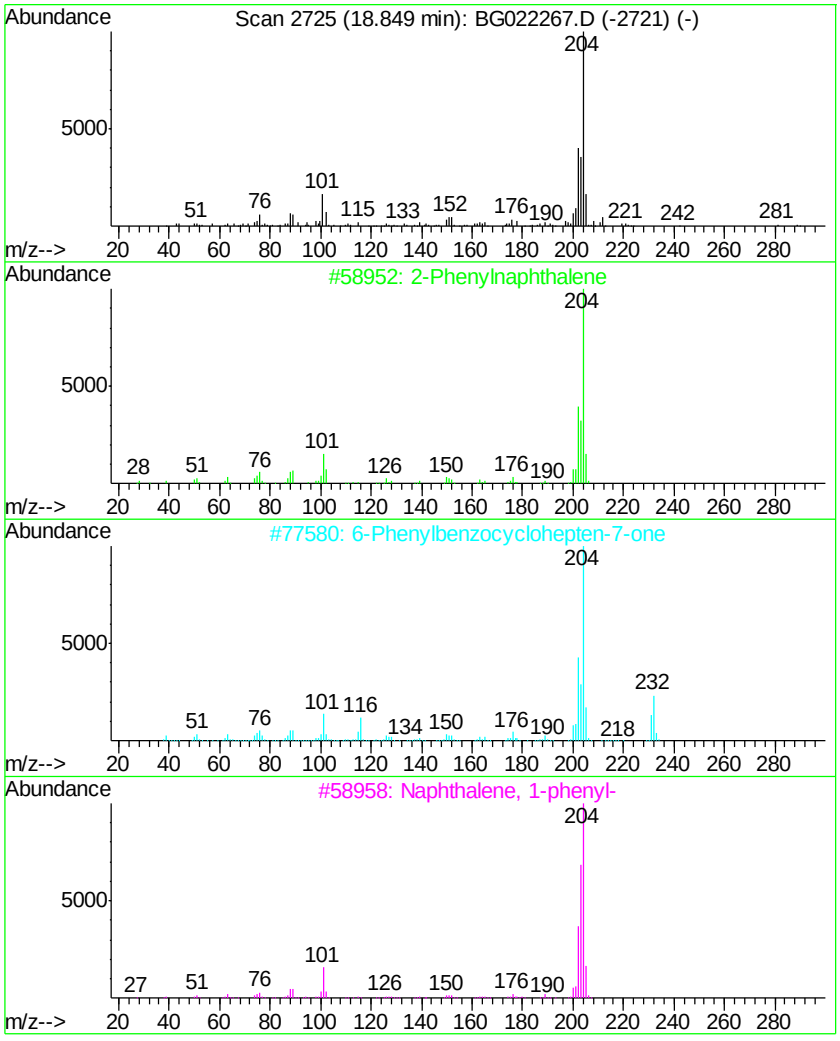
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

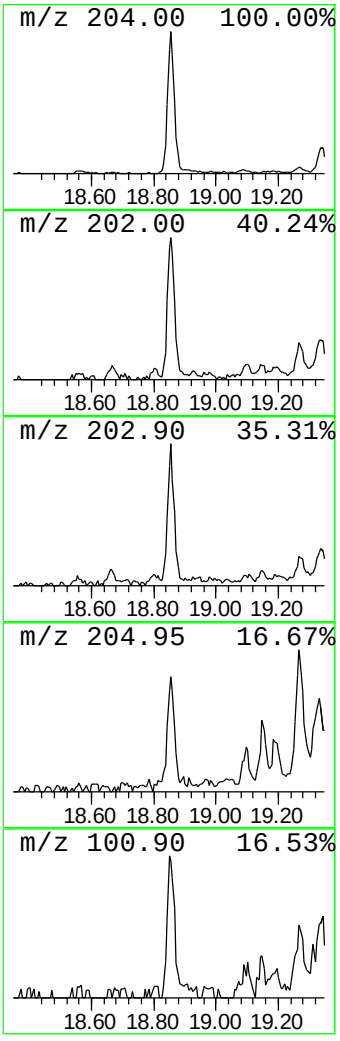
**********

Peak Number 10 2-Phenylnaphthalene Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 18.85 | 3.48 ng | 109297 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Phenylnaphthalene | 204 | C16H12 | 035465-71-5 | 96 |
| 2 | 6-Phenylbenzocyclohepten-7-one | 232 | C17H12O | 093327-56-1 | 86 |
| 3 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 83 |
| 4 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 76 |
| 5 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 76 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

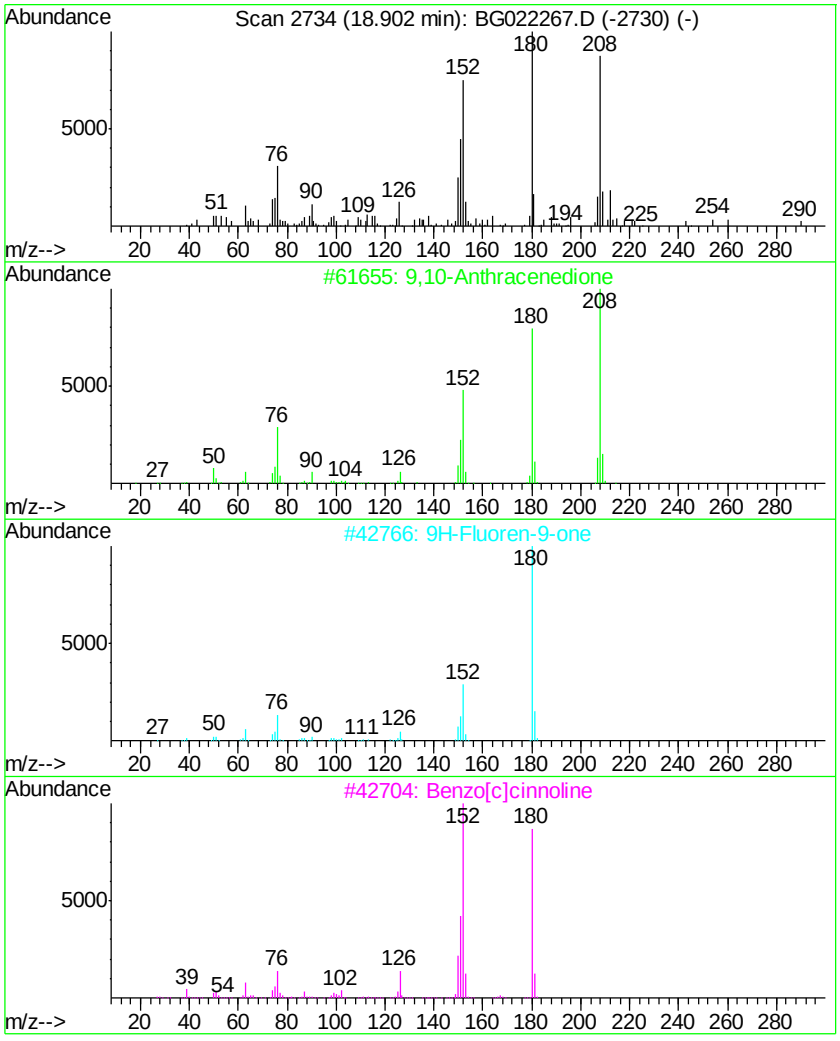
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

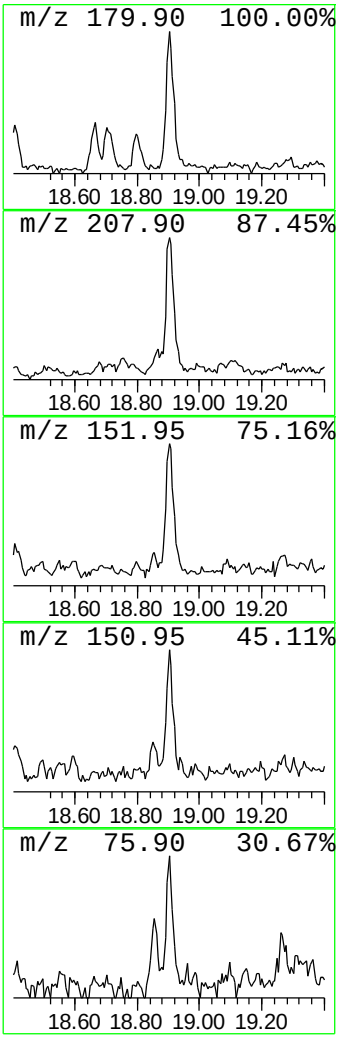
**********

Peak Number 11 9,10-Anthracenedione Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 18.90 | 2.07 ng | 65060 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9,10-Anthracenedione | 208 | C14H8O2 | 000084-65-1 | 95 |
| 2 | 9H-Fluoren-9-one | 180 | C13H8O | 000486-25-9 | 83 |
| 3 | Benzo[c]cinnoline | 180 | C12H8N2 | 000230-17-1 | 64 |
| 4 | Benzo[h]cinnoline | 180 | C12H8N2 | 000230-31-9 | 60 |
| 5 | 1H-Phenalen-1-one | 180 | C13H8O | 000548-39-0 | 60 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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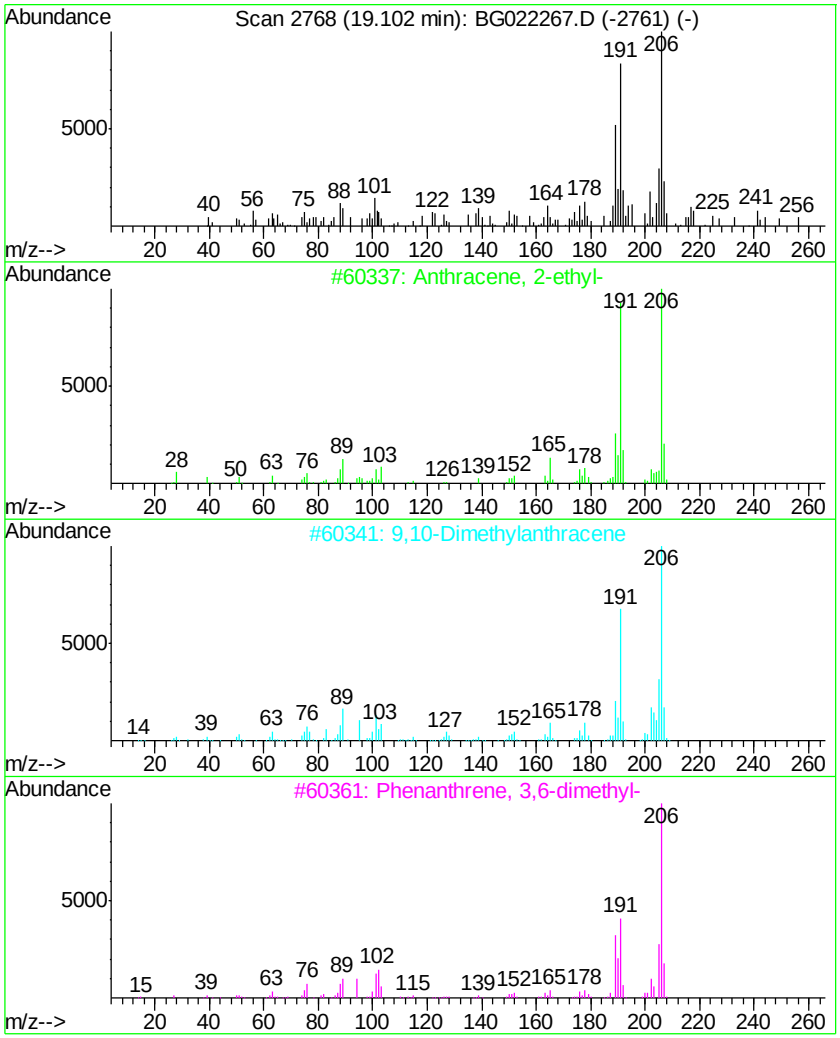
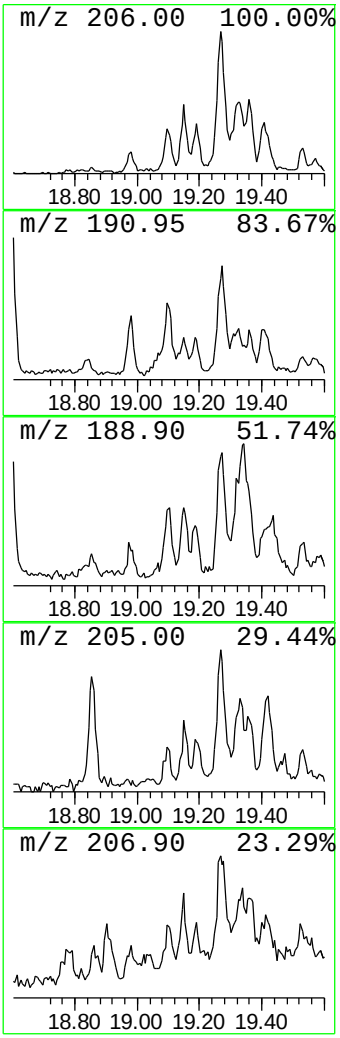
Peak Number 12 Anthracene, 2-ethyl- Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.10 | 2.16 ng | 67902 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 2-ethyl- | 206 | C16H14 | 052251-71-5 | 94 |
| 2 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 89 |
| 3 | Phenanthrene, 3,6-dimethyl- | 206 | C16H14 | 001576-67-6 | 89 |
| 4 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 89 |
| 5 | Phenanthrene, 4,5-dimethyl- | 206 | C16H14 | 003674-69-9 | 87 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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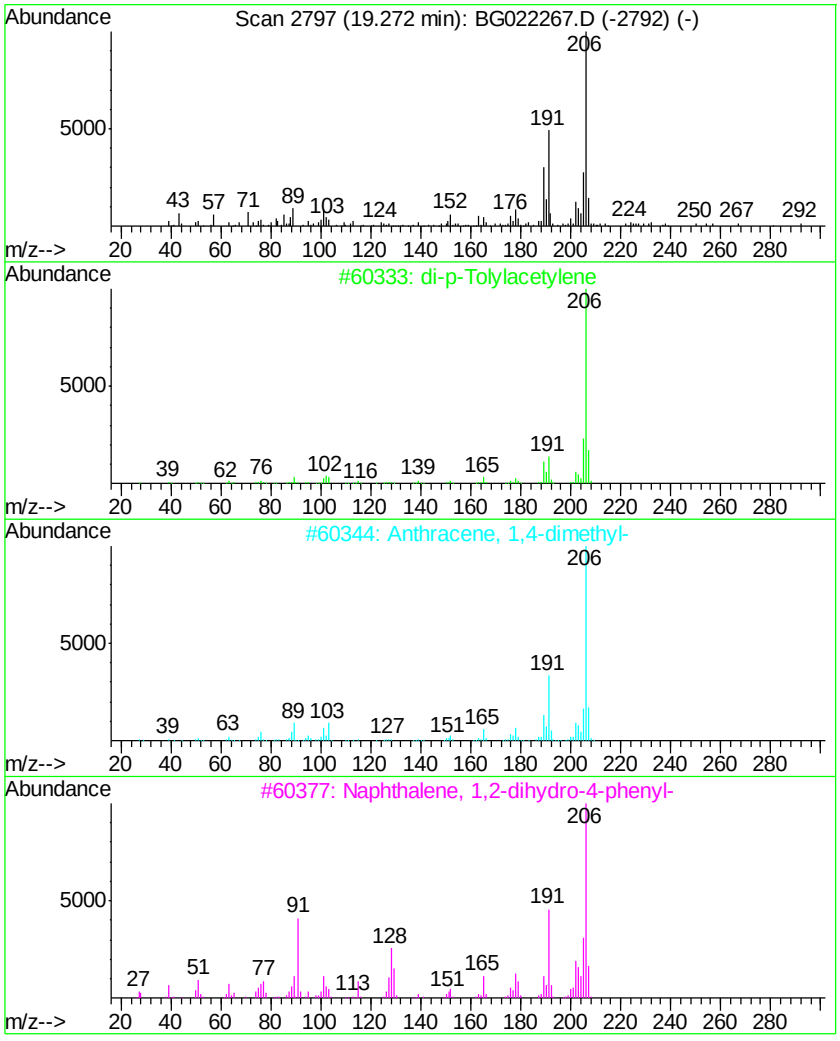
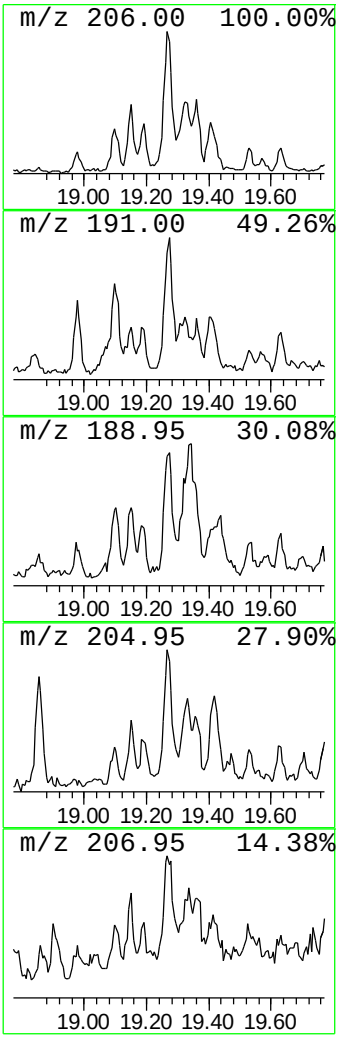
Peak Number 13 di-p-Tolylacetylene Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.27 | 3.86 ng | 121383 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | di-p-Tolylacetylene | 206 | C16H14 | 002789-88-0 | 94 |
| 2 | Anthracene, 1,4-dimethyl- | 206 | C16H14 | 000781-92-0 | 93 |
| 3 | Naphthalene, 1,2-dihydro-4-phenyl- | 206 | C16H14 | 007469-40-1 | 91 |
| 4 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 90 |
| 5 | [14]Annulene, 1,6:8,13-bis(metha... | 206 | C16H14 | 085385-68-8 | 90 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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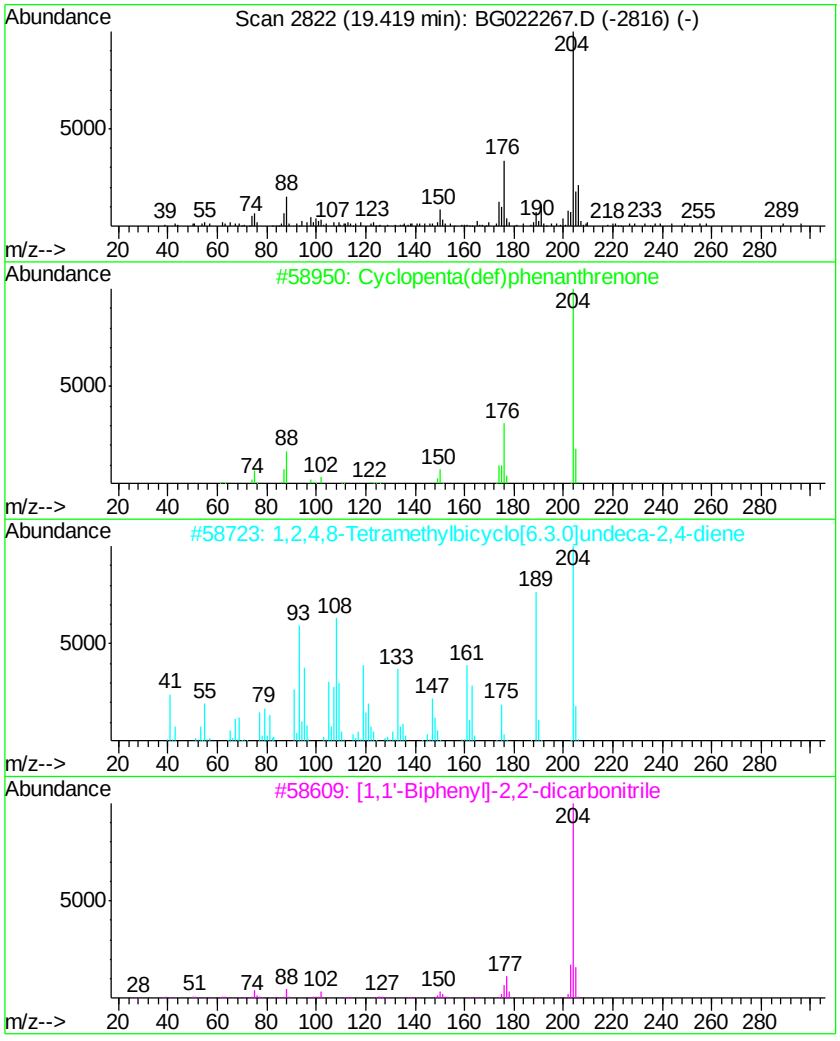
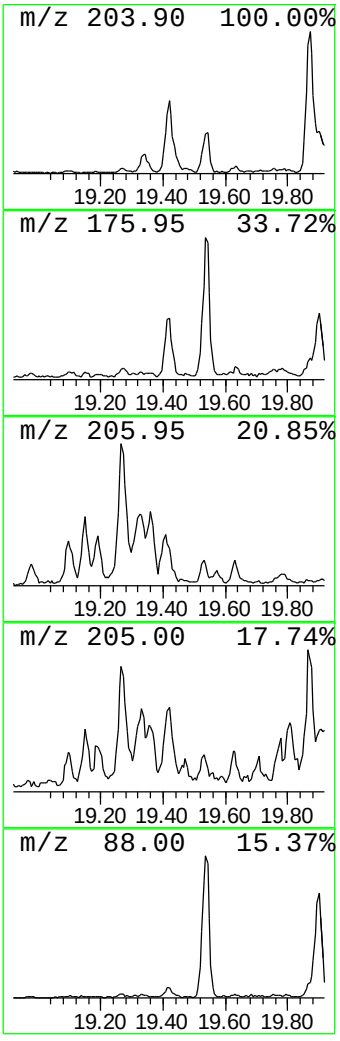
Peak Number 14 Cyclopenta(def)phenanthrenone Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.42 | 3.61 ng | 113305 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 96 |
| 2 | 1,2,4,8-Tetramethylbicyclo[6.3.0... | 204 | C15H24 | 137235-51-9 | 49 |
| 3 | [1,1'-Biphenyl]-2,2'-dicarbonitrile | 204 | C14H8N2 | 004341-02-0 | 49 |
| 4 | 1,4-Naphthalenedione, 2-hydroxy-... | 204 | C11H8O4 | 005257-83-0 | 47 |
| 5 | [1,1'-Biphenyl]-2-ol, 5-chloro- | 204 | C12H9ClO | 000607-12-5 | 47 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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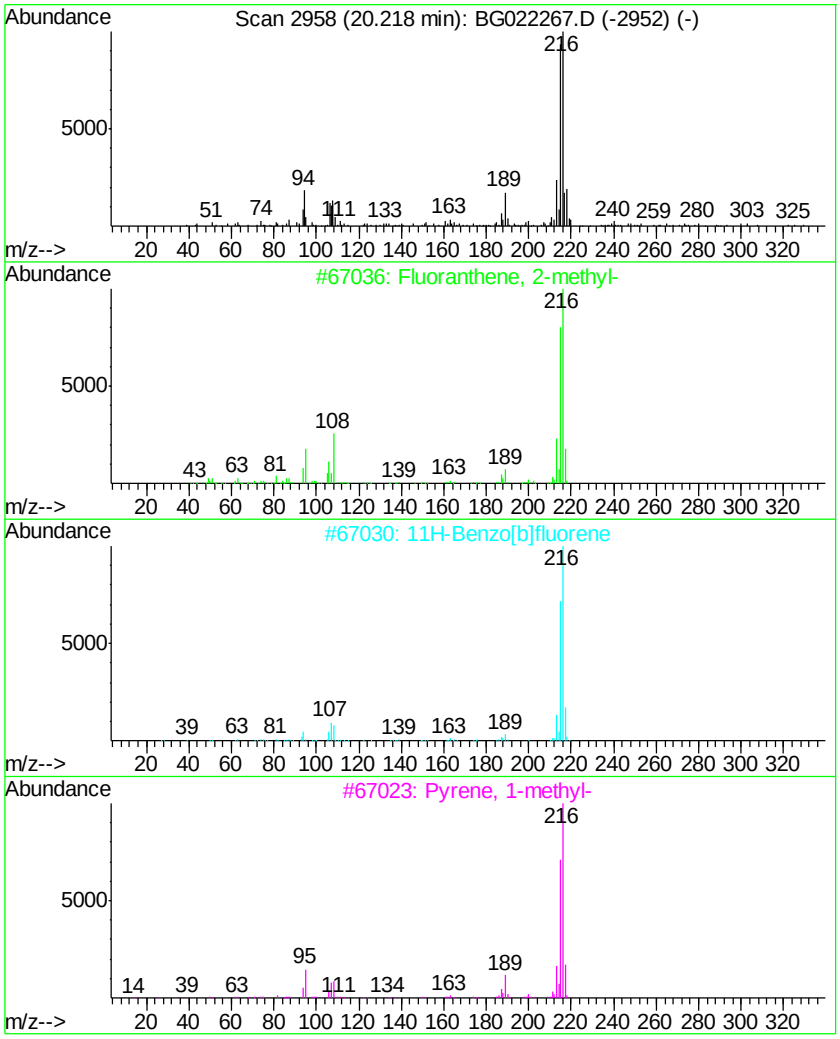
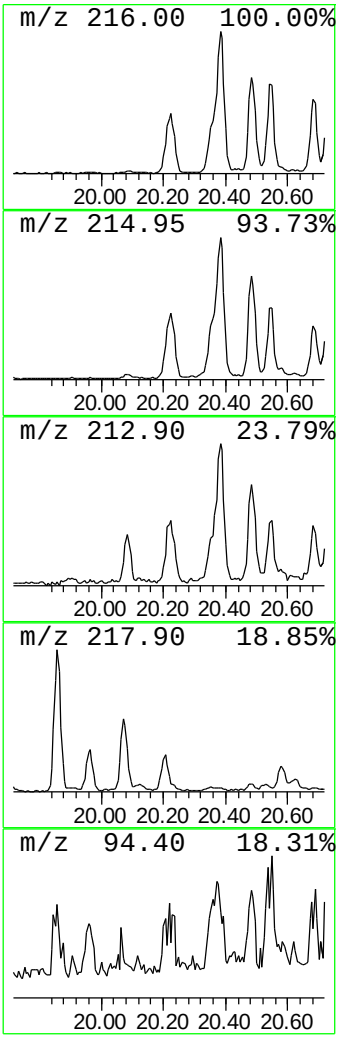
Peak Number 15 Fluoranthene, 2-methyl- Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 20.22 | 2.40 ng | 208820 | Chrysene-d12 | 21.77 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 94 |
| 2 | 11H-Benzo[b]fluorene | 216 | C17H12 | 000243-17-4 | 94 |
| 3 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 83 |
| 4 | 7H-Benzo[c]fluorene | 216 | C17H12 | 000205-12-9 | 83 |
| 5 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 81 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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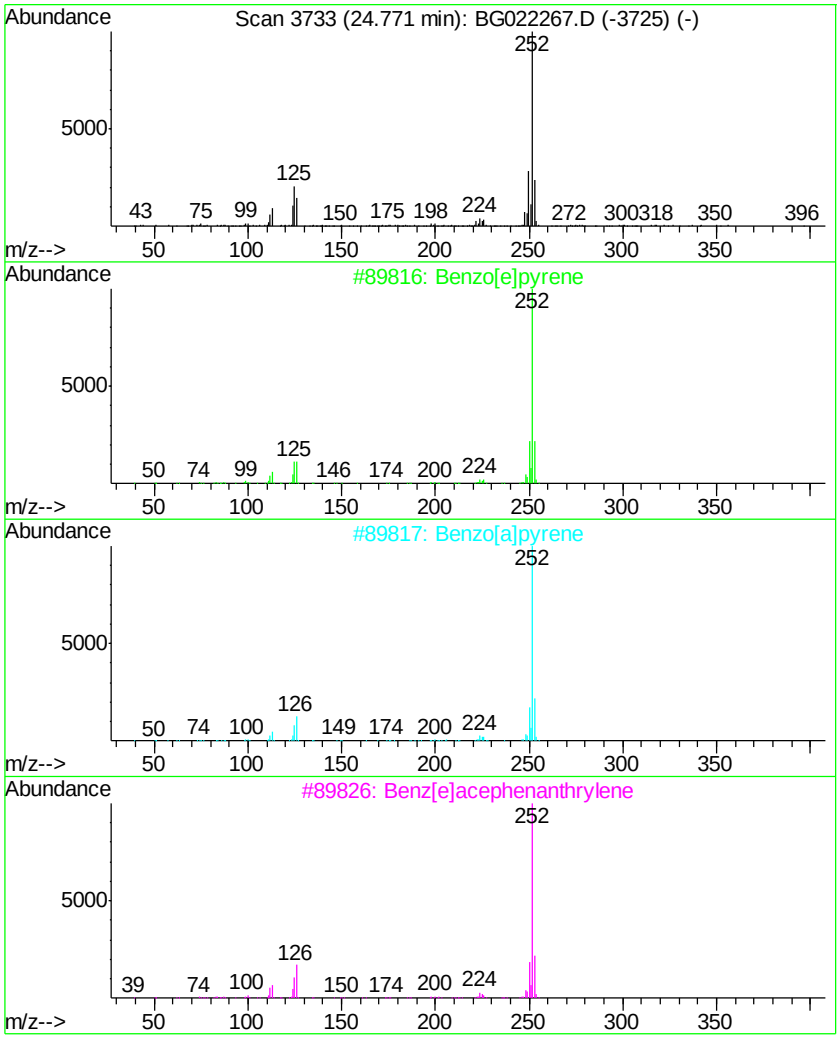
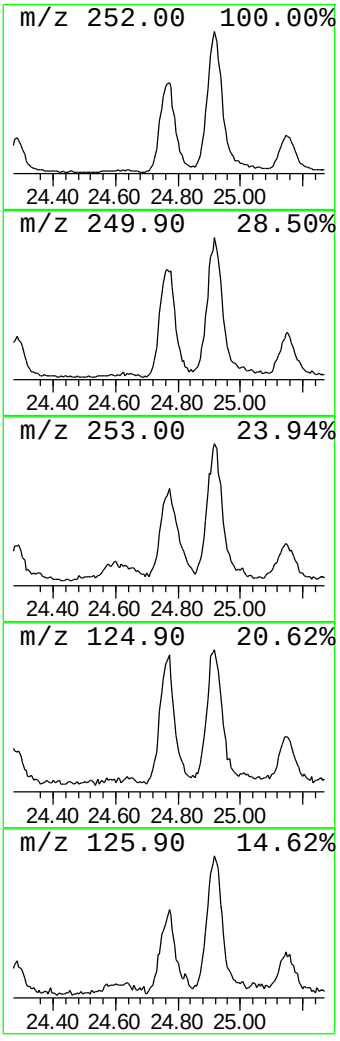
Peak Number 18 Benzo[e]pyrene Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 24.77 | 38.19 ng | 522355 | Perylene-d12 | 25.08 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 96 |
| 2 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 94 |
| 3 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 93 |
| 4 | Perylene | 252 | C20H12 | 000198-55-0 | 93 |
| 5 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 93 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_G\DATA\BG060916\
Data File : BG022267.D
Acq On : 9 Jun 2016 13:53
Operator : UM/SJ
Sample : H3402-13 2X
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** SS-46

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG060616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| unknown2.99 | 2.99 | 64.3 | ng | 788152 | 1 | 8.12 | 245046 | 20.0 |
| unknown7.65 | 7.65 | 34.3 | ng | 420691 | 1 | 8.12 | 245046 | 20.0 |
| Dibenzothiophene | 17.31 | 2.2 | ng | 68492 | 4 | 17.49 | 628383 | 20.0 |
| Anthracene, 2-met... | 18.37 | 5.0 | ng | 158534 | 4 | 17.49 | 628383 | 20.0 |
| Phenanthrene, 2-m... | 18.41 | 7.0 | ng | 220514 | 4 | 17.49 | 628383 | 20.0 |
| 4H-Cyclopenta[def... | 18.56 | 11.0 | ng | 346309 | 4 | 17.49 | 628383 | 20.0 |
| 2-Phenylnaphthalene | 18.85 | 3.5 | ng | 109297 | 4 | 17.49 | 628383 | 20.0 |
| 9,10-Anthracenedione | 18.90 | 2.1 | ng | 65060 | 4 | 17.49 | 628383 | 20.0 |
| Anthracene, 2-ethyl- | 19.10 | 2.2 | ng | 67902 | 4 | 17.49 | 628383 | 20.0 |
| di-p-Tolylacetylene | 19.27 | 3.9 | ng | 121383 | 4 | 17.49 | 628383 | 20.0 |
| Cyclopenta(def)ph... | 19.42 | 3.6 | ng | 113305 | 4 | 17.49 | 628383 | 20.0 |
| Fluoranthene, 2-m... | 20.22 | 2.4 | ng | 208820 | 5 | 21.77 | 1738830 | 20.0 |
| Benzo[e]pyrene | 24.77 | 38.2 | ng | 522355 | 6 | 25.08 | 273525 | 20.0 |