LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

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-BG120215.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 | 5.191 | 394 | 400 | 408 | rVB | 42009 | 64030 | 3.19% | 0.469% |
| 2 | 5.655 | 473 | 479 | 488 | rVB | 177137 | 282367 | 14.07% | 2.069% |
| 3 | 7.259 | 745 | 752 | 762 | rBV | 116549 | 209089 | 10.42% | 1.532% |
| 4 | 7.641 | 810 | 817 | 827 | rBV | 380355 | 641103 | 31.96% | 4.699% |
| 5 | 8.117 | 890 | 898 | 904 | rBV | 100204 | 167617 | 8.36% | 1.228% |
| 6 | 8.440 | 945 | 953 | 963 | rBV | 374811 | 639790 | 31.89% | 4.689% |
| 7 | 9.281 | 1087 | 1096 | 1105 | rBV | 326014 | 583312 | 29.08% | 4.275% |
| 8 | 10.932 | 1369 | 1377 | 1389 | rVB | 141822 | 258676 | 12.89% | 1.896% |
| 9 | 13.376 | 1784 | 1793 | 1799 | rBV | 988264 | 1580143 | 78.76% | 11.581% |
| 10 | 14.192 | 1926 | 1932 | 1936 | rBV2 | 31258 | 45140 | 2.25% | 0.331% |
| 11 | 14.633 | 2003 | 2007 | 2011 | rVB2 | 27618 | 34682 | 1.73% | 0.254% |
| 12 | 14.745 | 2016 | 2026 | 2035 | rBV2 | 261783 | 424854 | 21.18% | 3.114% |
| 13 | 15.579 | 2164 | 2168 | 2174 | rVB | 44283 | 54244 | 2.70% | 0.398% |
| 14 | 15.990 | 2229 | 2238 | 2241 | rBV3 | 15349 | 29220 | 1.46% | 0.214% |
| 15 | 16.225 | 2271 | 2278 | 2290 | rBV | 838074 | 1275295 | 63.57% | 9.346% |
| 16 | 16.443 | 2310 | 2315 | 2317 | rBV | 48463 | 61380 | 3.06% | 0.450% |
| 17 | 16.466 | 2317 | 2319 | 2324 | rVB3 | 25843 | 31805 | 1.59% | 0.233% |
| 18 | 16.560 | 2331 | 2335 | 2340 | rBV2 | 16143 | 23631 | 1.18% | 0.173% |
| 19 | 16.619 | 2340 | 2345 | 2350 | rBV3 | 17647 | 32241 | 1.61% | 0.236% |
| 20 | 16.684 | 2352 | 2356 | 2359 | rVB2 | 17287 | 23420 | 1.17% | 0.172% |
| 21 | 16.795 | 2367 | 2375 | 2378 | rBV5 | 10055 | 26878 | 1.34% | 0.197% |
| 22 | 16.883 | 2385 | 2390 | 2396 | rVB7 | 17504 | 40595 | 2.02% | 0.298% |
| 23 | 16.948 | 2396 | 2401 | 2406 | rBV | 28774 | 42872 | 2.14% | 0.314% |
| 24 | 17.019 | 2410 | 2413 | 2418 | rVB3 | 16272 | 21194 | 1.06% | 0.155% |
| 25 | 17.236 | 2445 | 2450 | 2454 | rVV | 31290 | 37739 | 1.88% | 0.277% |
| 26 | 17.489 | 2486 | 2493 | 2501 | rBV | 367093 | 552441 | 27.54% | 4.049% |
| 27 | 18.364 | 2634 | 2642 | 2650 | rBV2 | 99475 | 148591 | 7.41% | 1.089% |
| 28 | 18.664 | 2689 | 2693 | 2697 | rBV2 | 14921 | 20475 | 1.02% | 0.150% |
| 29 | 18.969 | 2742 | 2745 | 2749 | rBV | 15589 | 20581 | 1.03% | 0.151% |
| 30 | 19.134 | 2770 | 2773 | 2777 | rBV3 | 14138 | 24064 | 1.20% | 0.176% |
| 31 | 19.222 | 2783 | 2788 | 2793 | rBV2 | 55159 | 75954 | 3.79% | 0.557% |
| 32 | 19.287 | 2795 | 2799 | 2806 | rVB3 | 19924 | 35348 | 1.76% | 0.259% |
| 33 | 19.486 | 2828 | 2833 | 2835 | rBV4 | 25077 | 36430 | 1.82% | 0.267% |
| 34 | 19.539 | 2835 | 2842 | 2846 | rVB2 | 49839 | 103695 | 5.17% | 0.760% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

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-BG120215.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 19.633 | 2854 | 2858 | 2866 | rBV | 93101 | 140546 | 7.01% | 1.030% |
| 36 | 19.721 | 2869 | 2873 | 2877 | rVV4 | 22248 | 36094 | 1.80% | 0.265% |
| 37 | 19.762 | 2877 | 2880 | 2888 | rVV3 | 35983 | 63953 | 3.19% | 0.469% |
| 38 | 19.833 | 2888 | 2892 | 2894 | rVV2 | 16092 | 20528 | 1.02% | 0.150% |
| 39 | 19.862 | 2894 | 2897 | 2899 | rVV4 | 22073 | 28690 | 1.43% | 0.210% |
| 40 | 19.898 | 2899 | 2903 | 2907 | rVB2 | 45876 | 60457 | 3.01% | 0.443% |
| 41 | 20.091 | 2930 | 2936 | 2941 | rBV | 1534721 | 2006162 | 100.00% | 14.703% |
| 42 | 20.297 | 2967 | 2971 | 2976 | rBV | 55796 | 68751 | 3.43% | 0.504% |
| 43 | 20.391 | 2985 | 2987 | 2991 | rVB4 | 14504 | 20142 | 1.00% | 0.148% |
| 44 | 20.509 | 3004 | 3007 | 3010 | rVB2 | 21456 | 25350 | 1.26% | 0.186% |
| 45 | 20.750 | 3044 | 3048 | 3049 | rBV2 | 25298 | 30858 | 1.54% | 0.226% |
| 46 | 20.773 | 3049 | 3052 | 3059 | rVB | 98497 | 140257 | 6.99% | 1.028% |
| 47 | 20.855 | 3059 | 3066 | 3075 | rBV3 | 86156 | 177282 | 8.84% | 1.299% |
| 48 | 20.990 | 3085 | 3089 | 3094 | rBV2 | 66662 | 125081 | 6.23% | 0.917% |
| 49 | 21.037 | 3094 | 3097 | 3101 | rVV | 119409 | 153162 | 7.63% | 1.123% |
| 50 | 21.079 | 3101 | 3104 | 3106 | rVV2 | 23404 | 28605 | 1.43% | 0.210% |
| 51 | 21.108 | 3106 | 3109 | 3113 | rVB2 | 53730 | 70351 | 3.51% | 0.516% |
| 52 | 21.302 | 3137 | 3142 | 3145 | rVV6 | 12775 | 23956 | 1.19% | 0.176% |
| 53 | 21.361 | 3146 | 3152 | 3155 | rVV2 | 59602 | 107700 | 5.37% | 0.789% |
| 54 | 21.396 | 3155 | 3158 | 3167 | rVB3 | 71733 | 117541 | 5.86% | 0.861% |
| 55 | 21.549 | 3176 | 3184 | 3193 | rBV | 114707 | 225929 | 11.26% | 1.656% |
| 56 | 21.625 | 3193 | 3197 | 3201 | rBV3 | 51826 | 92641 | 4.62% | 0.679% |
| 57 | 21.760 | 3214 | 3220 | 3228 | rVB | 426737 | 733778 | 36.58% | 5.378% |
| 58 | 22.107 | 3275 | 3279 | 3288 | rVB | 81384 | 119403 | 5.95% | 0.875% |
| 59 | 22.189 | 3288 | 3293 | 3294 | rBV5 | 16139 | 25339 | 1.26% | 0.186% |
| 60 | 22.371 | 3321 | 3324 | 3331 | rVB2 | 33423 | 57682 | 2.88% | 0.423% |
| 61 | 22.677 | 3371 | 3376 | 3377 | rBV4 | 12662 | 20360 | 1.01% | 0.149% |
| 62 | 22.730 | 3380 | 3385 | 3391 | rVB | 78060 | 130723 | 6.52% | 0.958% |
| 63 | 22.853 | 3404 | 3406 | 3411 | rVB3 | 17357 | 26724 | 1.33% | 0.196% |
| 64 | 23.047 | 3433 | 3439 | 3441 | rBV3 | 43705 | 88592 | 4.42% | 0.649% |
| 65 | 23.082 | 3441 | 3445 | 3453 | rVB | 85157 | 154727 | 7.71% | 1.134% |
| 66 | 23.188 | 3461 | 3463 | 3471 | rVB4 | 32311 | 55169 | 2.75% | 0.404% |
| 67 | 23.846 | 3569 | 3575 | 3584 | rVB4 | 39839 | 103133 | 5.14% | 0.756% |
| 68 | 25.044 | 3769 | 3779 | 3790 | rVB2 | 232309 | 659878 | 32.89% | 4.836% |
| 69 | 30.526 | 4702 | 4712 | 4715 | rBV9 | 20112 | 56230 | 2.80% | 0.412% |

Sum of corrected areas: 13644670

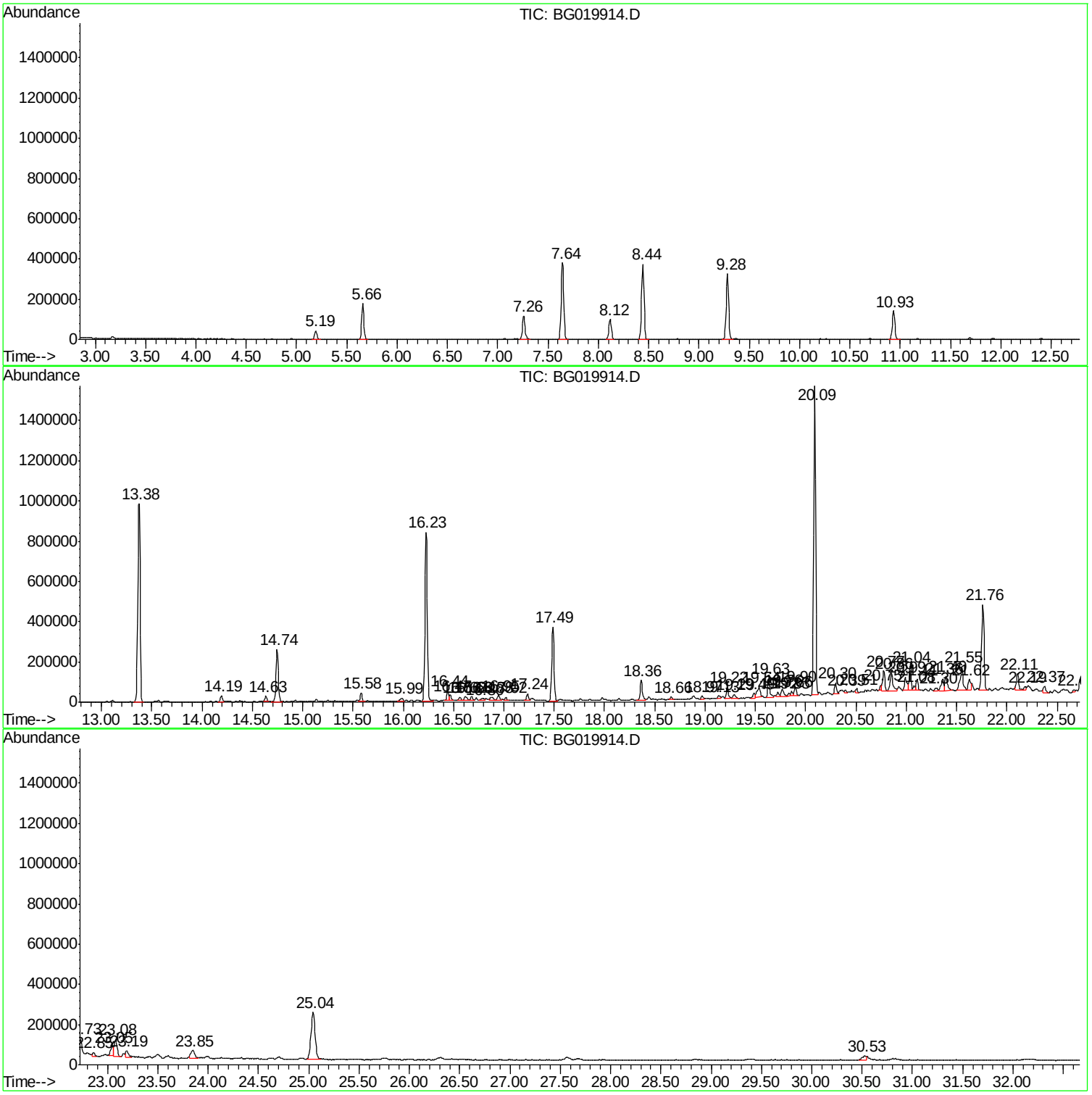
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.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\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

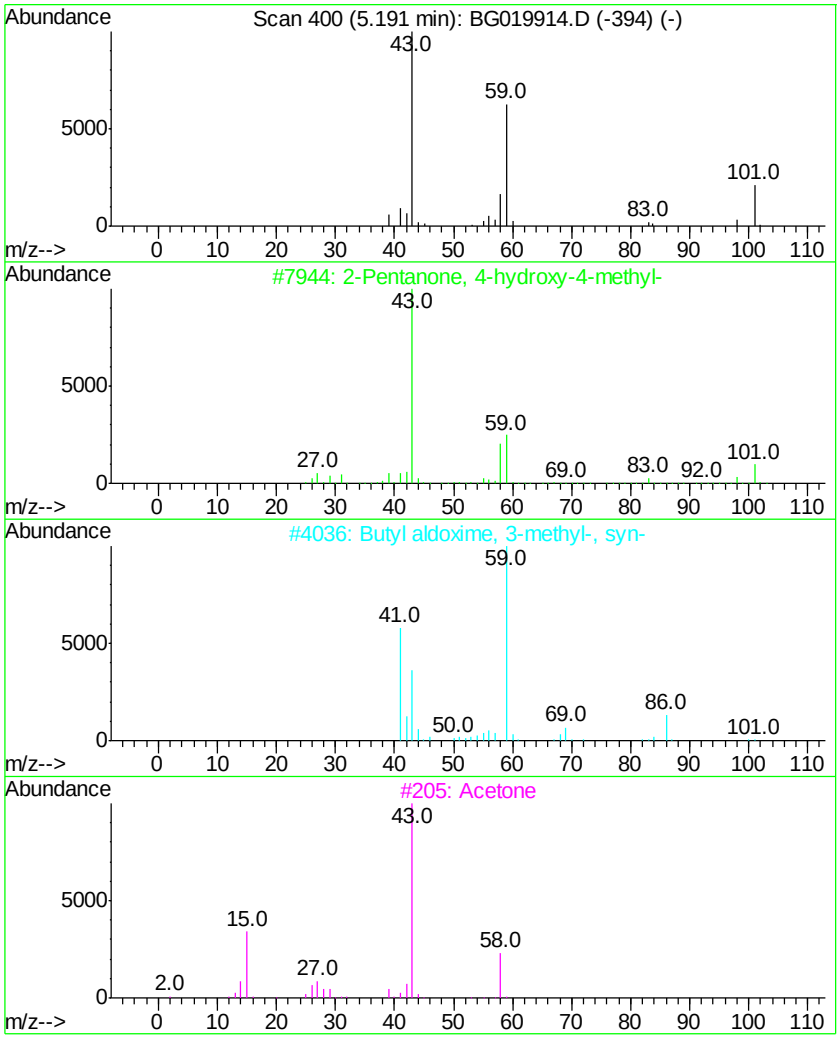
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

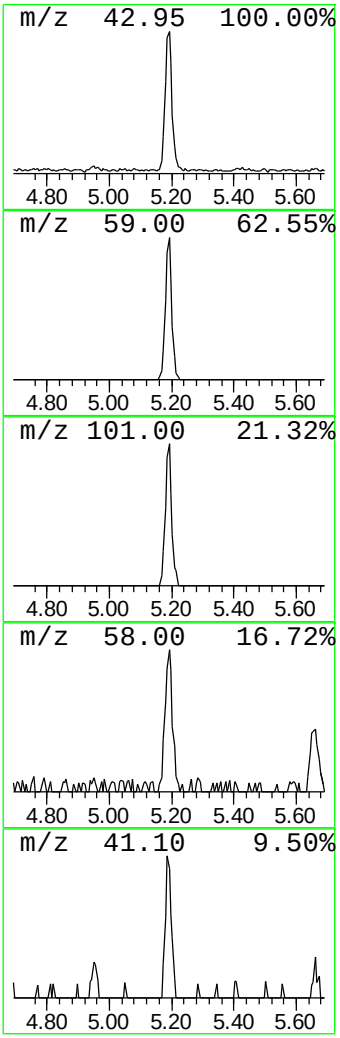
**********

Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.19 | 7.64 ng | 64030 | 1,4-Dichlorobenzene-d4 | 8.12 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 72 |
| 2 | Butyl aldoxime, 3-methyl-, syn- | 101 | C5H11NO | 005780-40-5 | 32 |
| 3 | Acetone | 58 | C3H6O | 000067-64-1 | 9 |
| 4 | Hexane, 1-ethoxy- | 130 | C8H18O | 005756-43-4 | 9 |
| 5 | Propane, 2-methoxy- | 74 | C4H10O | 000598-53-8 | 9 |



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

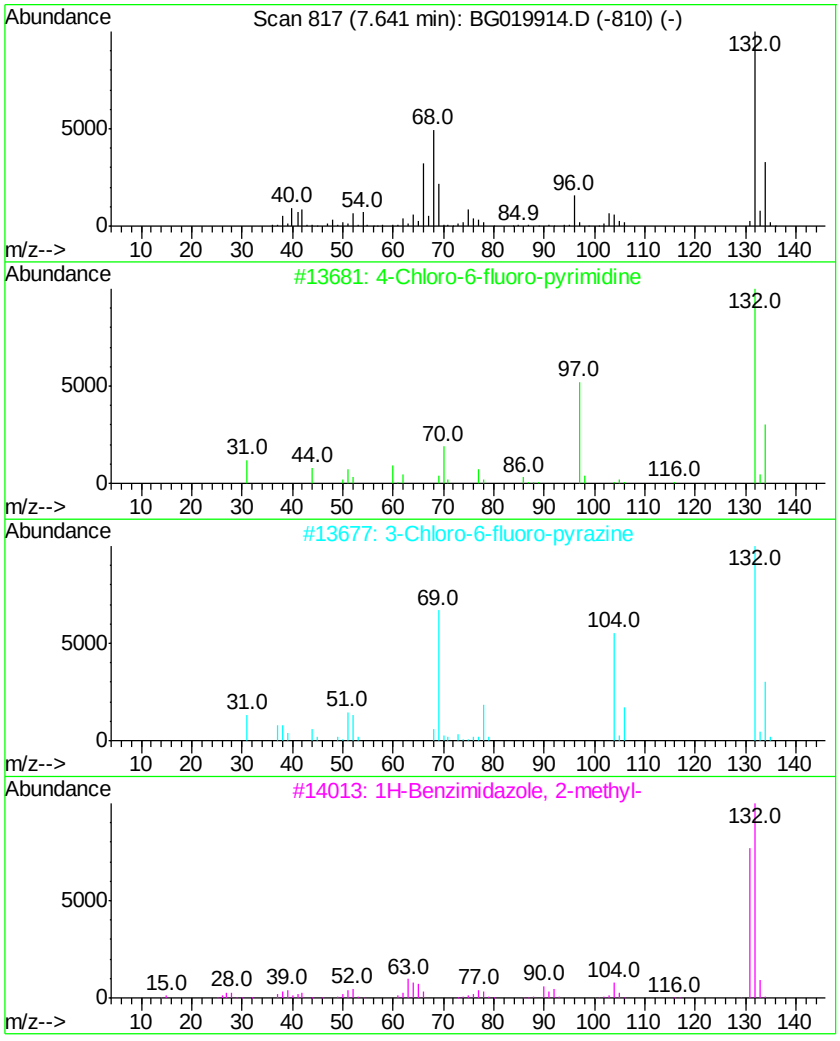
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

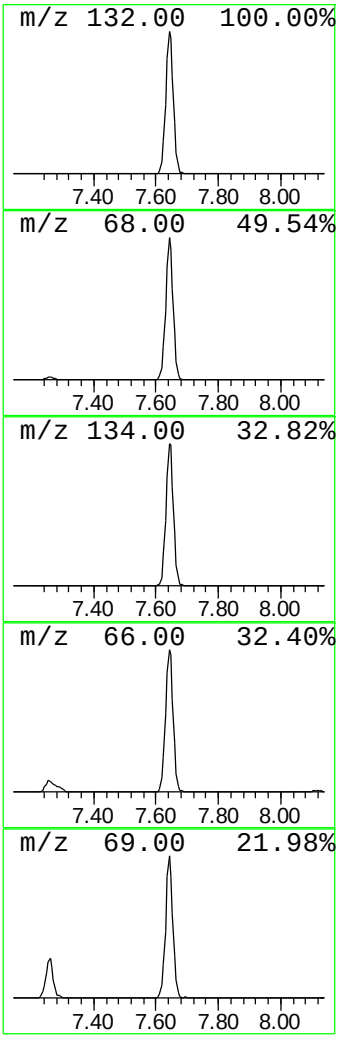
**********

Peak Number 2 unknown7.64 Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.64 | 76.50 ng | 641103 | 1,4-Dichlorobenzene-d4 | 8.12 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4-Chloro-6-fluoro-pyrimidine | 132 | C4H2ClFN2 | 051422-01-6 | 27 |
| 2 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 27 |
| 3 | 1H-Benzimidazole, 2-methyl- | 132 | C8H8N2 | 000615-15-6 | 22 |
| 4 | 5-Aminoindole | 132 | C8H8N2 | 005192-03-0 | 22 |
| 5 | 5-Fluoro-2-chloropyrimidine | 132 | C4H2ClFN2 | 062802-42-0 | 12 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

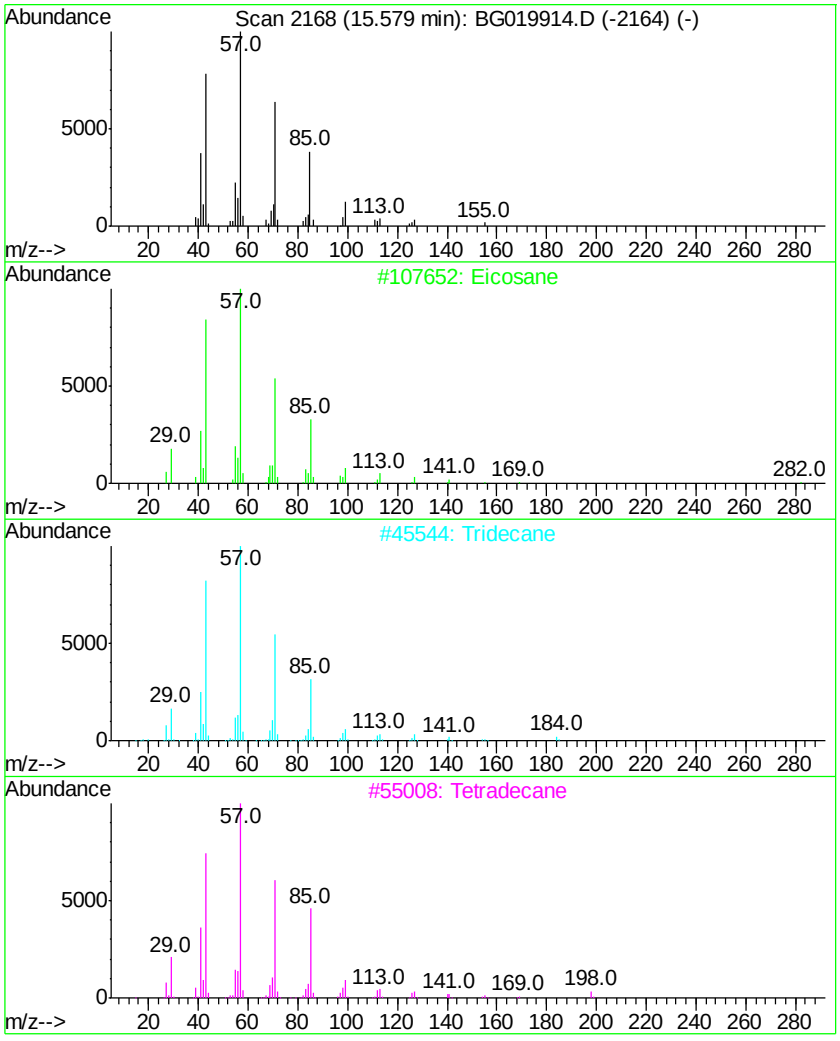
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

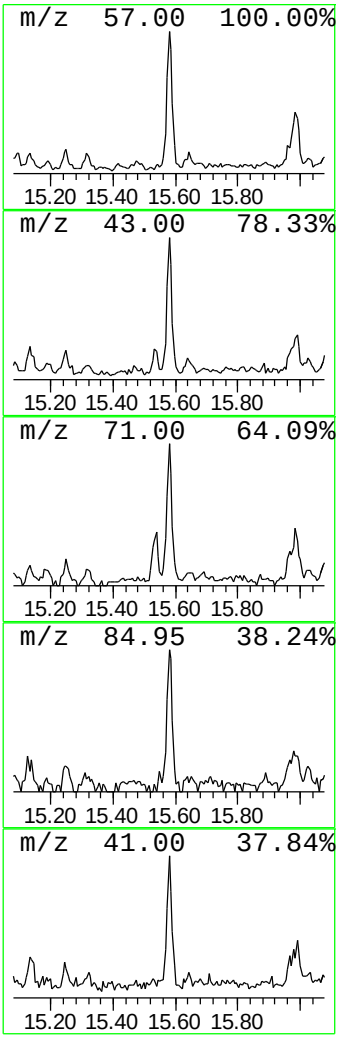
**********

Peak Number 4 Eicosane Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.58 | 2.55 ng | 54244 | Acenaphthene-d10 | 14.74 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Eicosane | 282 | C20H42 | 000112-95-8 | 91 |
| 2 | Tridecane | 184 | C13H28 | 000629-50-5 | 90 |
| 3 | Tetradecane | 198 | C14H30 | 000629-59-4 | 90 |
| 4 | Hexadecane | 226 | C16H34 | 000544-76-3 | 90 |
| 5 | 10-Methylnonadecane | 282 | C20H42 | 056862-62-5 | 83 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

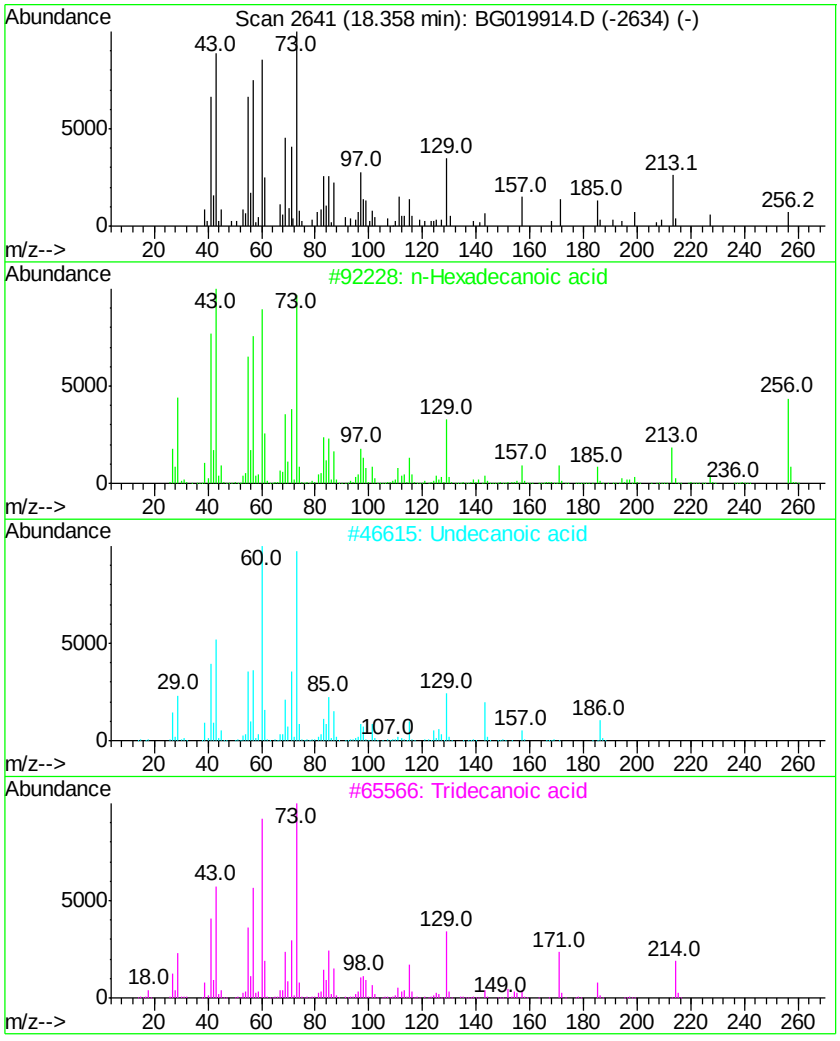
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

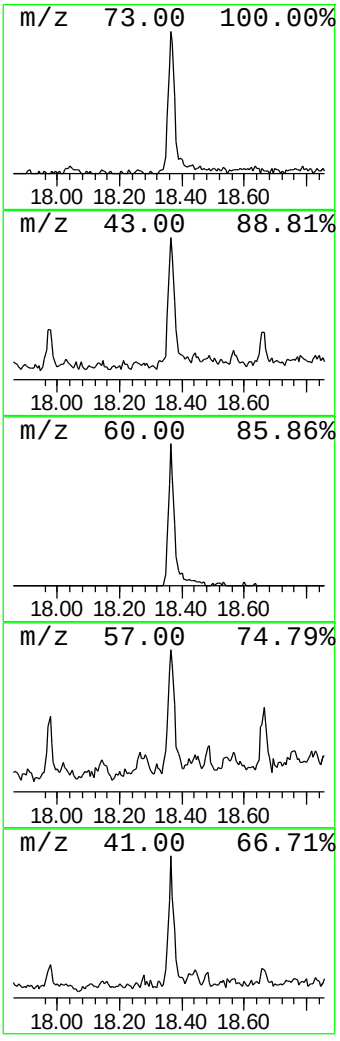
**********

Peak Number 5 n-Hexadecanoic acid Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 18.36 | 5.38 ng | 148591 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 97 |
| 2 | Undecanoic acid | 186 | C11H22O2 | 000112-37-8 | 81 |
| 3 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 80 |
| 4 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 80 |
| 5 | Dodecanoic acid | 200 | C12H24O2 | 000143-07-7 | 70 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

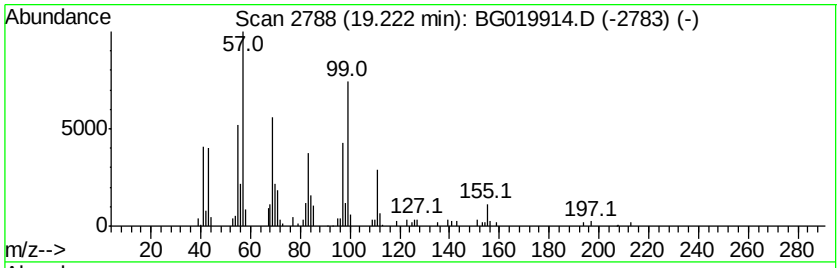
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

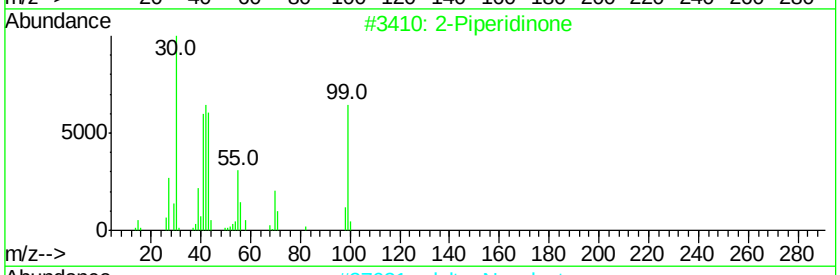
**********

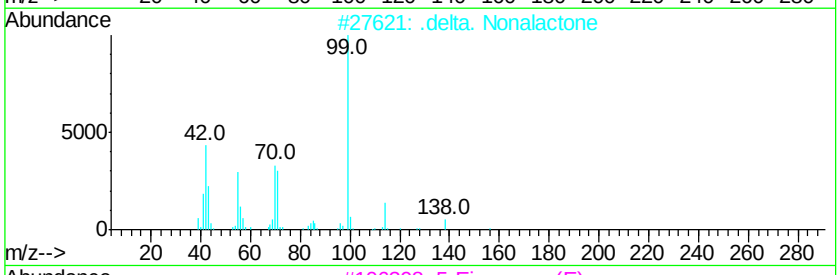
Peak Number 6 unknown19.22 Concentration Rank 18

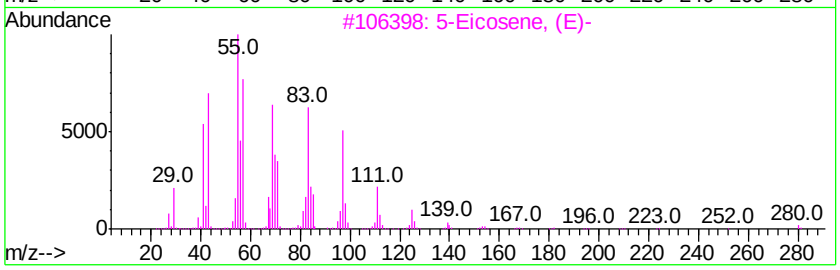
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.22 | 2.75 ng | 75954 | Phenanthrene-d10 | 17.49 |

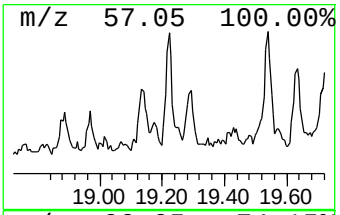
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Piperidinone | 99 | C5H9NO | 000675-20-7 | 38 |
| 2 | .delta. Nonalactone | 156 | C9H16O2 | 003301-94-8 | 35 |
| 3 | 5-Eicosene, (E)- | 280 | C20H40 | 074685-30-6 | 35 |
| 4 | 1-Octadecene | 252 | C18H36 | 000112-88-9 | 30 |
| 5 | 9-Eicosene, (E)- | 280 | C20H40 | 074685-29-3 | 30 |

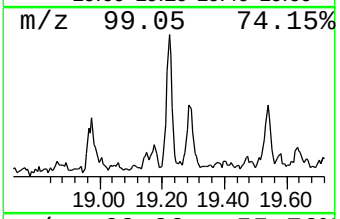


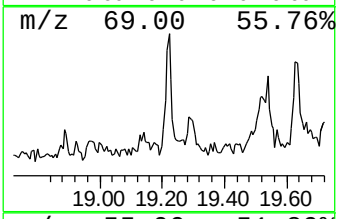



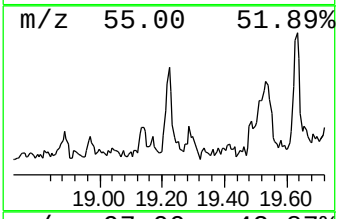



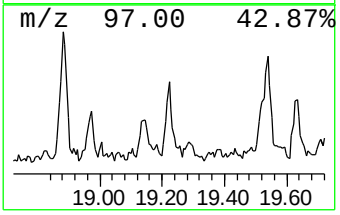



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

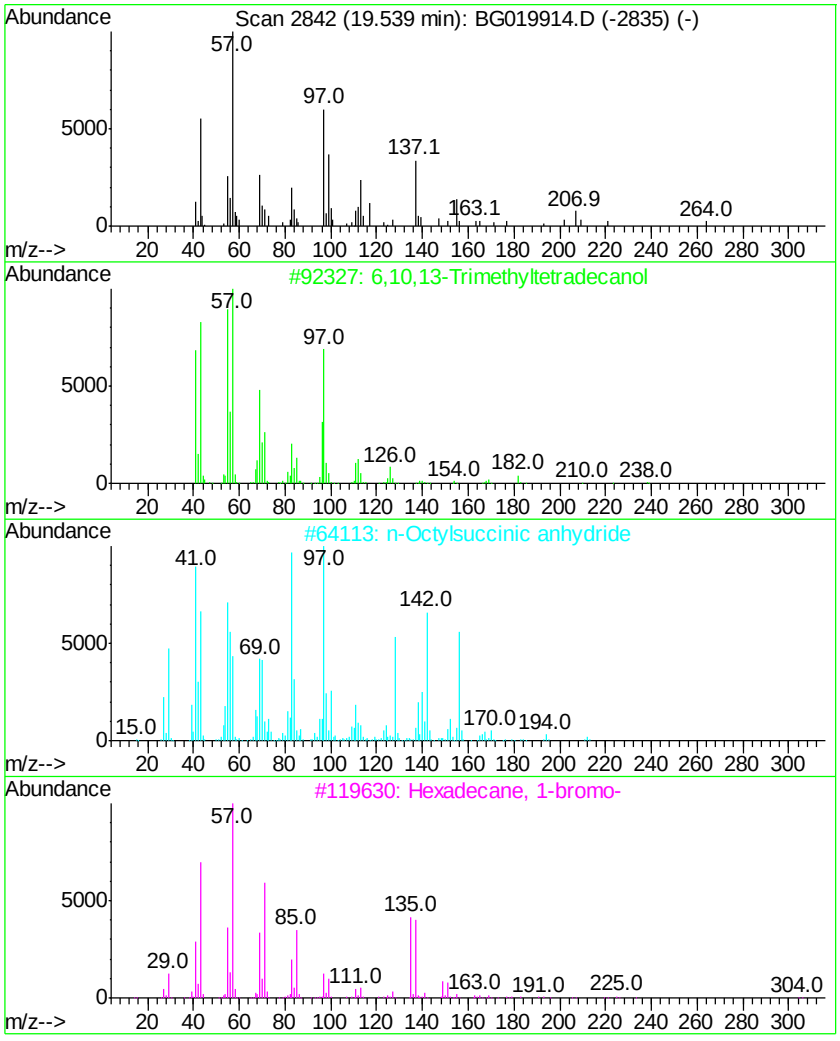
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

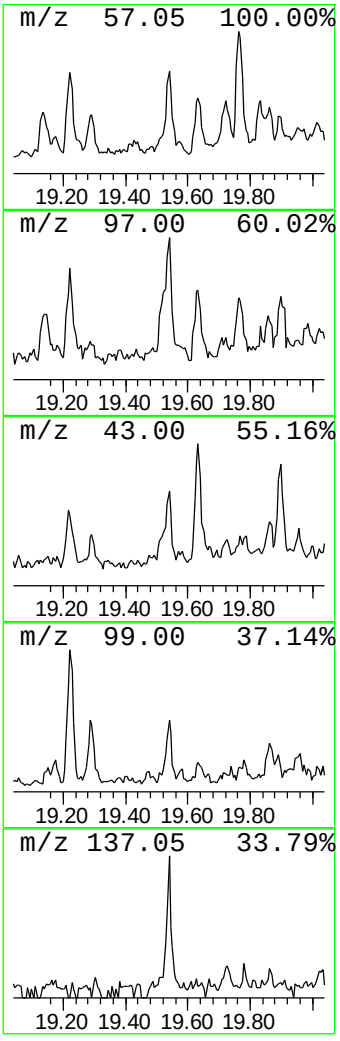
**********

Peak Number 7 unknown19.54 Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.54 | 3.75 ng | 103695 | Phenanthrene-d10 | 17.49 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 6,10,13-Trimethyltetradecanol | 256 | C17H36O | 1000131-71-0 | 25 |
| 2 | n-Octylsuccinic anhydride | 212 | C12H20O3 | 004200-92-4 | 14 |
| 3 | Hexadecane, 1-bromo- | 304 | C16H33Br | 000112-82-3 | 12 |
| 4 | 2-Hexenoic acid, ethyl ester | 142 | C8H14O2 | 001552-67-6 | 12 |
| 5 | 3-Aziridinopropionaldehyde carbe... | 185 | C8H15N3O2 | 1000255-13-6 | 12 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

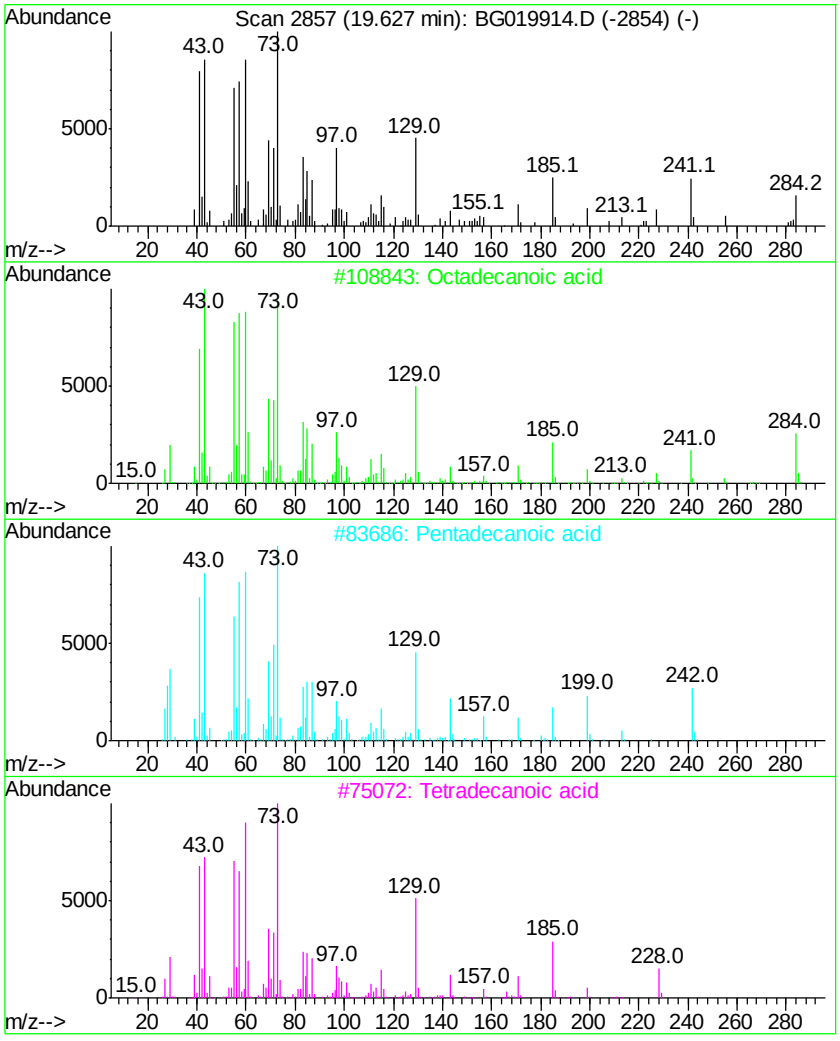
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

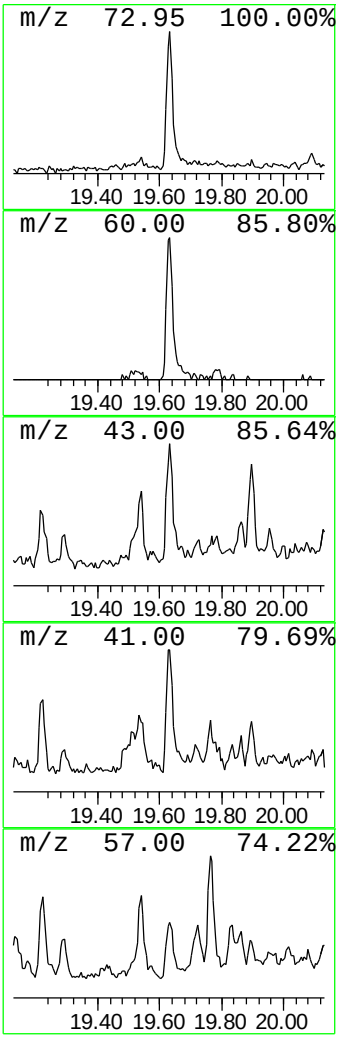
**********

Peak Number 8 Octadecanoic acid Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.63 | 3.83 ng | 140546 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Octadecanoic acid | 284 | C18H36O2 | 000057-11-4 | 99 |
| 2 | Pentadecanoic acid | 242 | C15H30O2 | 001002-84-2 | 90 |
| 3 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 53 |
| 4 | n-Decanoic acid | 172 | C10H20O2 | 000334-48-5 | 50 |
| 5 | Undecanoic acid | 186 | C11H22O2 | 000112-37-8 | 43 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.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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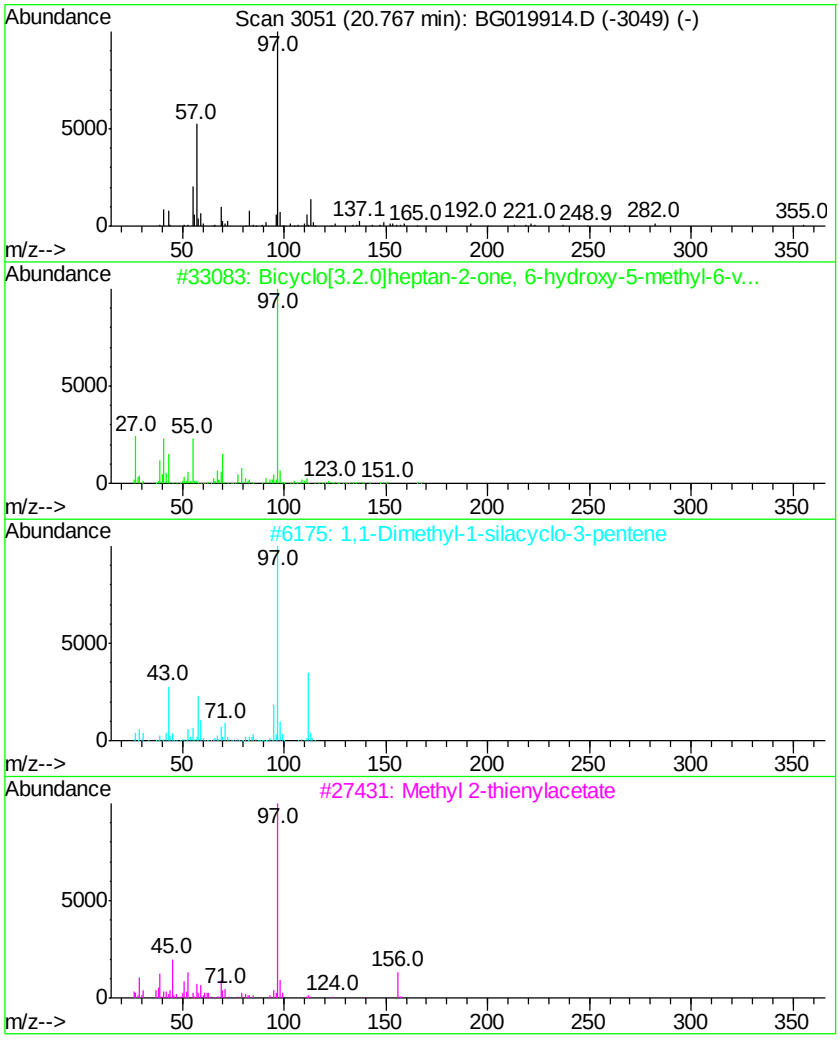
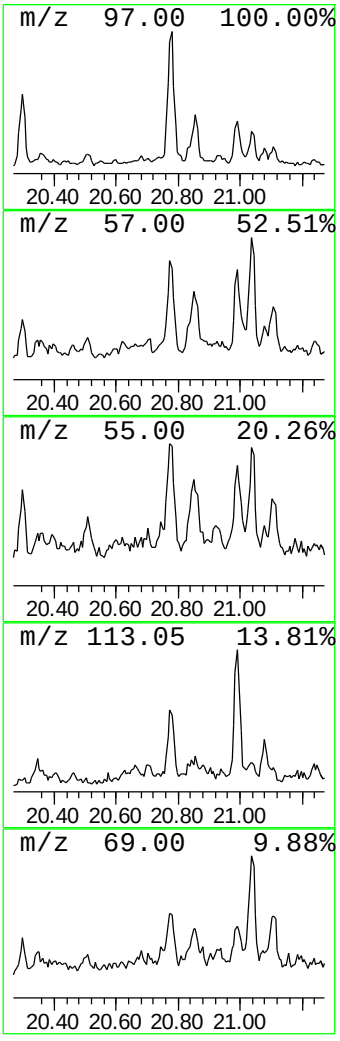
Peak Number 9 Bicyclo[3.2.0]heptan-2-one,... Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 20.77 | 3.82 ng | 140257 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Bicyclo[3.2.0]heptan-2-one, 6-hy... | 166 | C10H14O2 | 1000154-96-8 | 59 |
| 2 | 1,1-Dimethyl-1-silacyclo-3-pentene | 112 | C6H12Si | 016054-12-9 | 53 |
| 3 | Methyl 2-thienylacetate | 156 | C7H8O2S | 019432-68-9 | 42 |
| 4 | Thiophene, 3-ethyl- | 112 | C6H8S | 001795-01-3 | 38 |
| 5 | Cyclohexanone, 3-butyl- | 154 | C10H18O | 039178-69-3 | 36 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

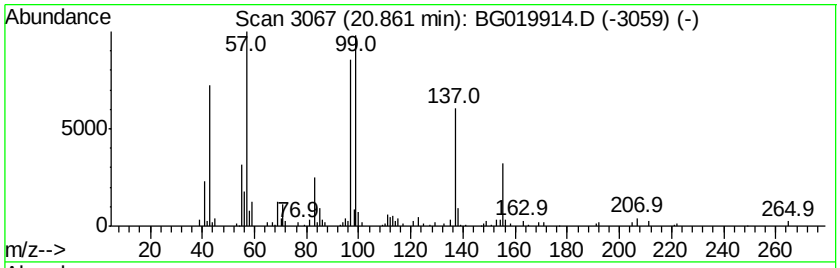
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

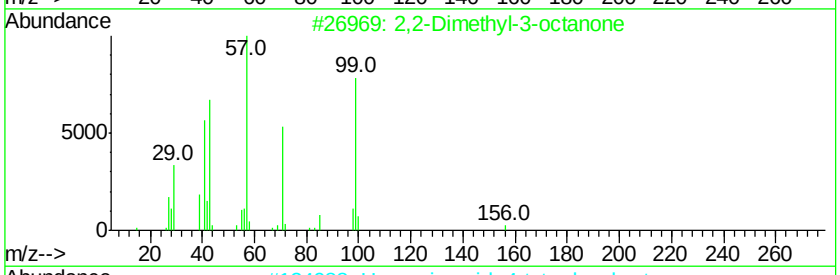
**********

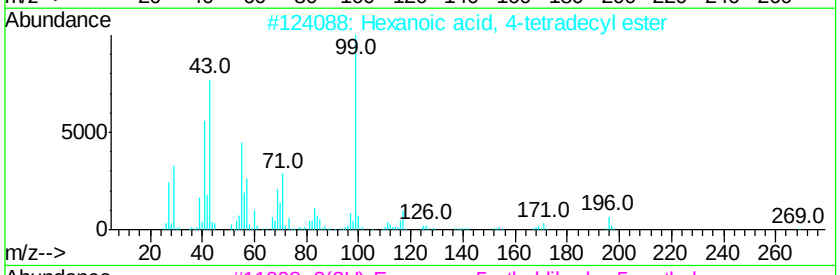
Peak Number 10 unknown20.86 Concentration Rank 6

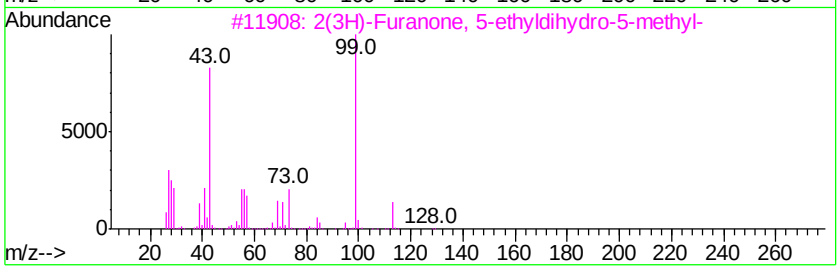
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 20.86 | 4.83 ng | 177282 | Chrysene-d12 | 21.76 |

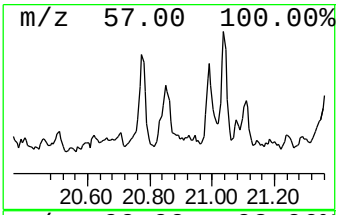
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,2-Dimethyl-3-octanone | 156 | C10H20O | 005340-64-7 | 30 |
| 2 | Hexanoic acid, 4-tetradecyl ester | 312 | C20H40O2 | 1000279-29-8 | 27 |
| 3 | 2(3H)-Furanone, 5-ethyldihydro-5... | 128 | C7H12O2 | 002865-82-9 | 27 |
| 4 | Piperazine, 1-methyl-4-nitroso- | 129 | C5H11N3O | 016339-07-4 | 22 |
| 5 | Cyclohexanone, 3-butyl- | 154 | C10H18O | 039178-69-3 | 22 |

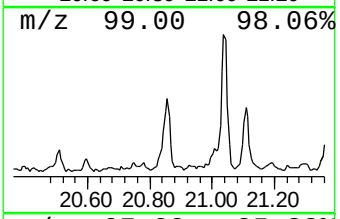


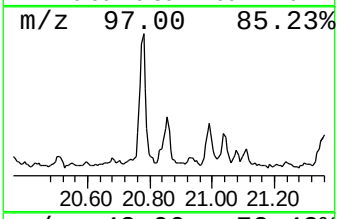



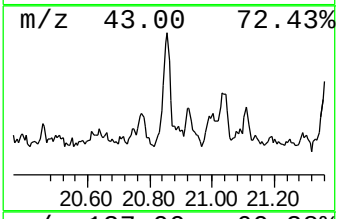



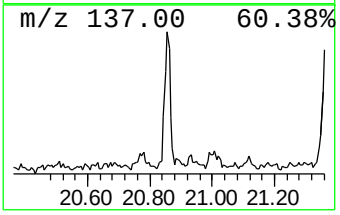



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

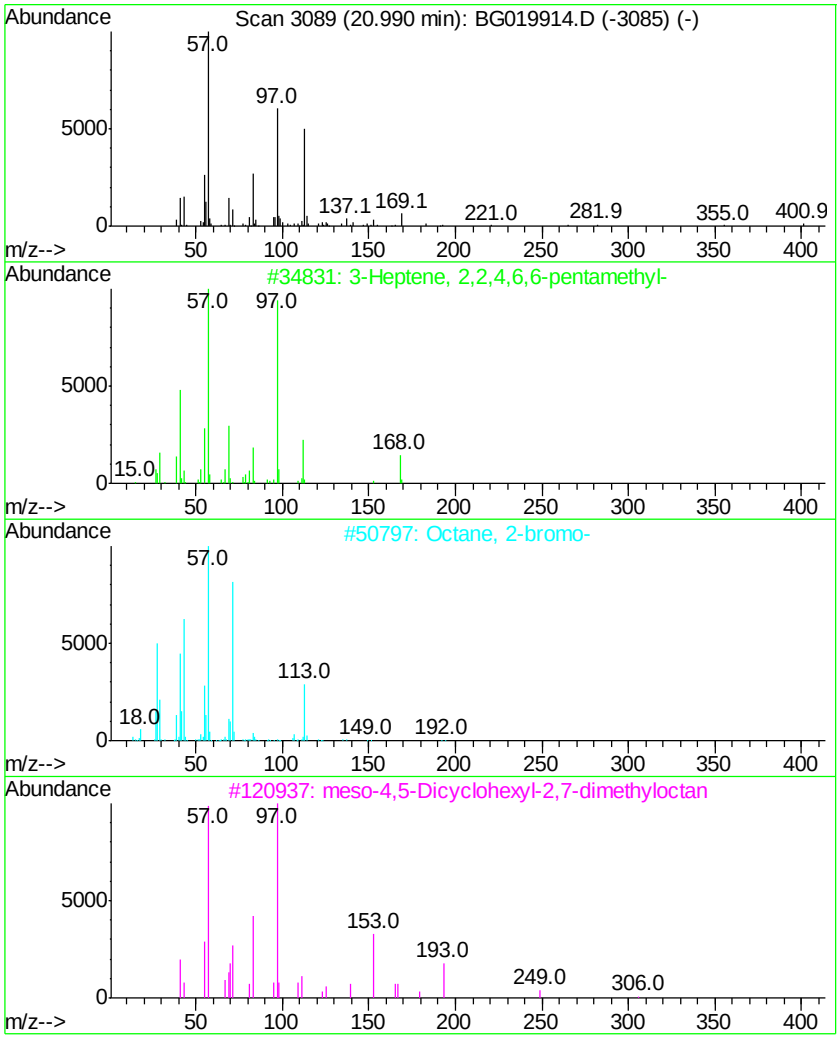
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

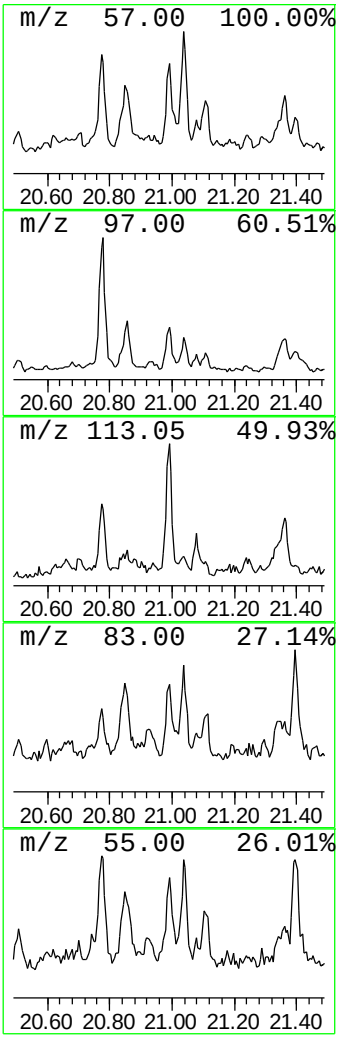
**********

Peak Number 11 unknown20.99 Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 20.99 | 3.41 ng | 125081 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Heptene, 2,2,4,6,6-pentamethyl- | 168 | C12H24 | 000123-48-8 | 25 |
| 2 | Octane, 2-bromo- | 192 | C8H17Br | 000557-35-7 | 25 |
| 3 | meso-4,5-Dicyclohexyl-2,7-dimeth... | 306 | C22H42 | 065149-86-2 | 25 |
| 4 | Triallylmethylsilane | 166 | C10H18Si | 001112-91-0 | 17 |
| 5 | Methylphosphonic acid, di(2-meth... | 208 | C9H21O3P | 105263-11-4 | 12 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

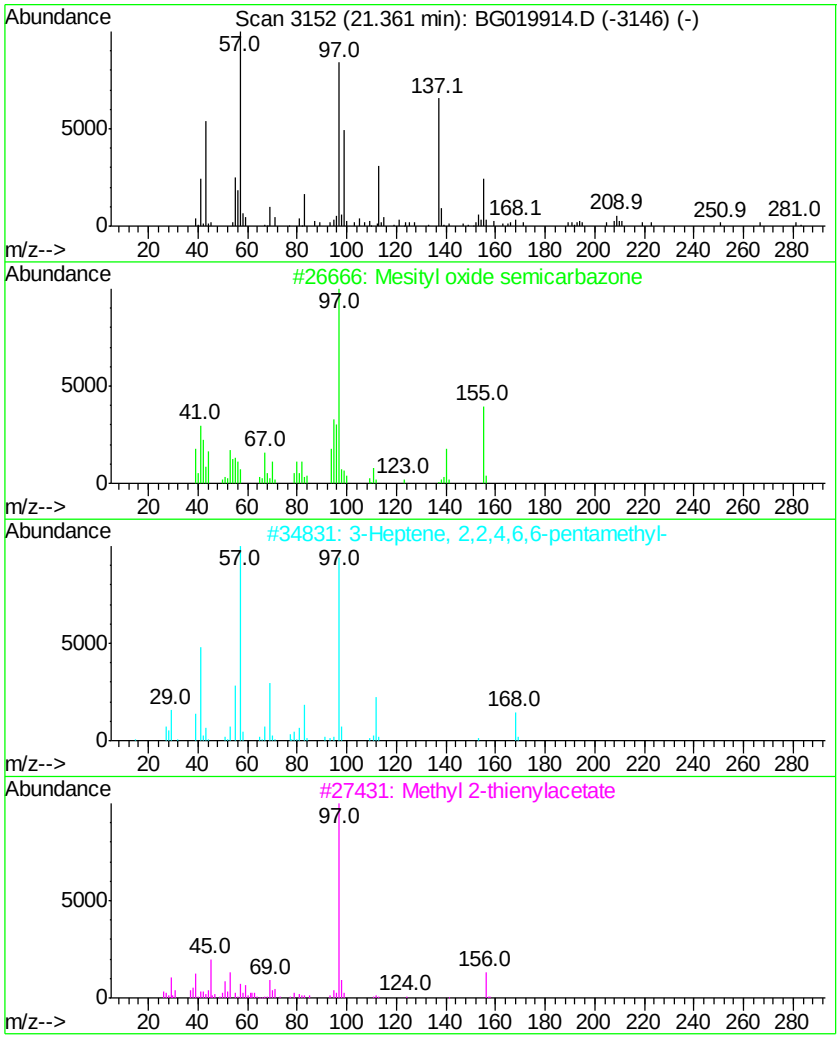
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

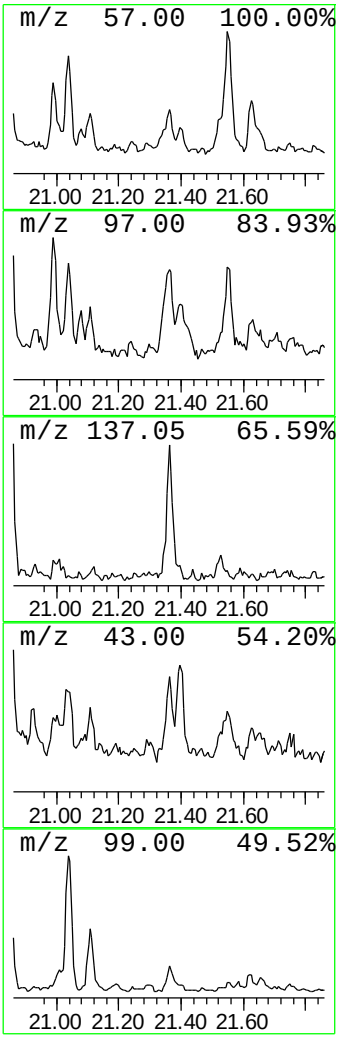
**********

Peak Number 13 unknown21.36 Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 21.36 | 2.94 ng | 107700 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Mesityl oxide semicarbazone | 155 | C7H13N3O | 003780-62-9 | 35 |
| 2 | 3-Heptene, 2,2,4,6,6-pentamethyl- | 168 | C12H24 | 000123-48-8 | 27 |
| 3 | Methyl 2-thienylacetate | 156 | C7H8O2S | 019432-68-9 | 25 |
| 4 | 3-Cyclohexene-1-carboxylic acid,... | 273 | C17H23NO2 | 051931-66-9 | 22 |
| 5 | Ethyl 2,2,3,3-tetramethylcyclopr... | 170 | C10H18O2 | 000771-10-8 | 16 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

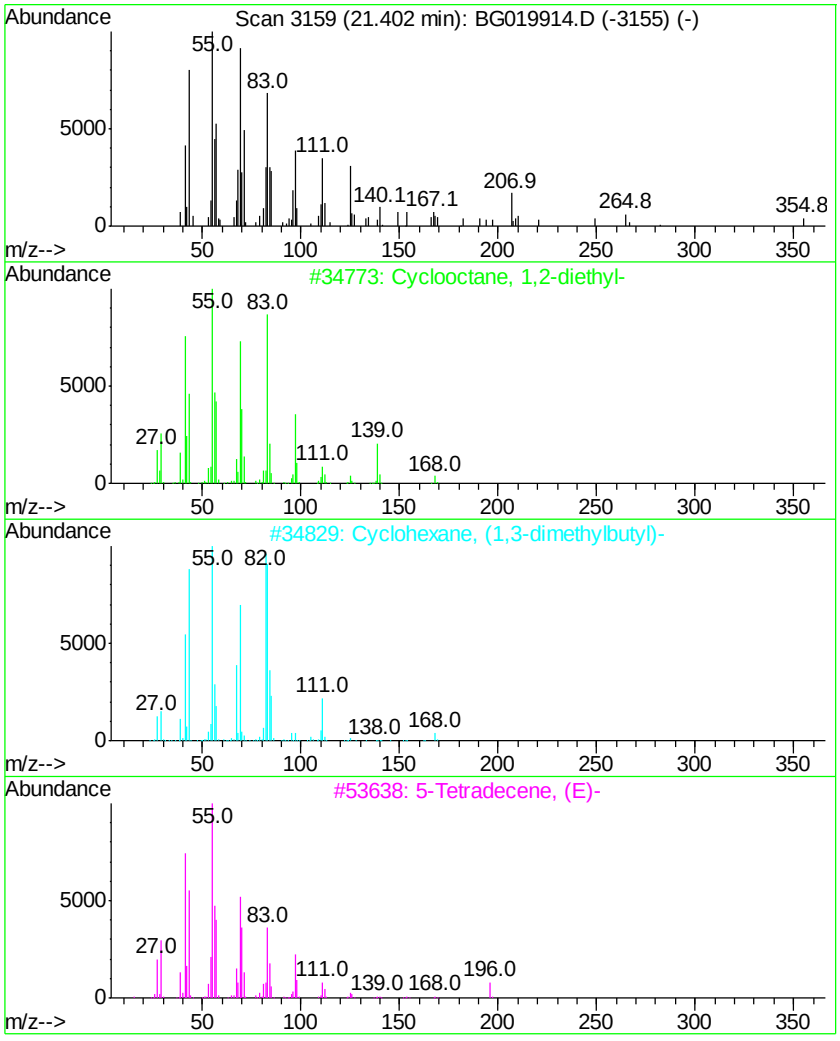
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

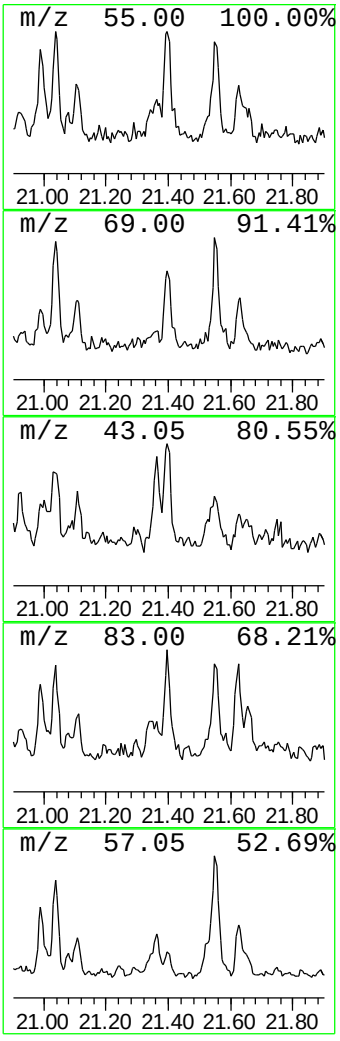
**********

Peak Number 14 Cyclooctane, 1,2-diethyl- Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 21.40 | 3.20 ng | 117541 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclooctane, 1,2-diethyl- | 168 | C12H24 | 023609-46-3 | 86 |
| 2 | Cyclohexane, (1,3-dimethylbutyl)- | 168 | C12H24 | 061142-19-6 | 49 |
| 3 | 5-Tetradecene, (E)- | 196 | C14H28 | 041446-66-6 | 46 |
| 4 | Cyclododecane | 168 | C12H24 | 000294-62-2 | 42 |
| 5 | 1-Octadecene | 252 | C18H36 | 000112-88-9 | 42 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

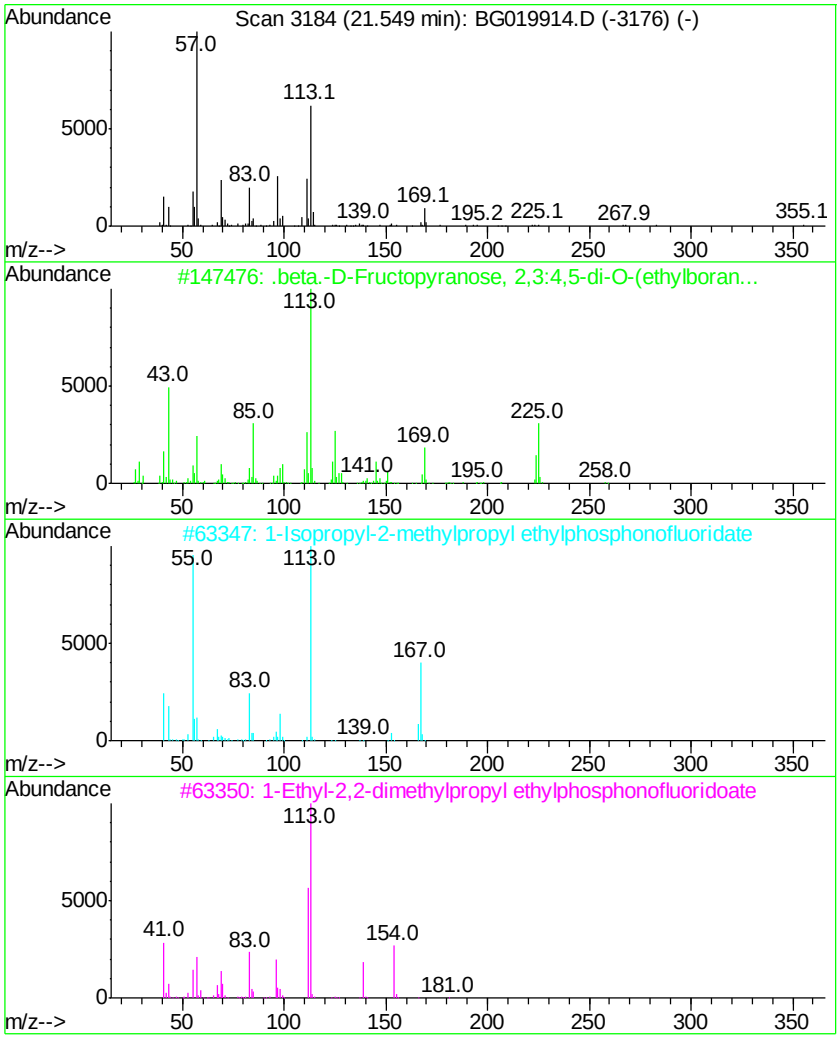
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

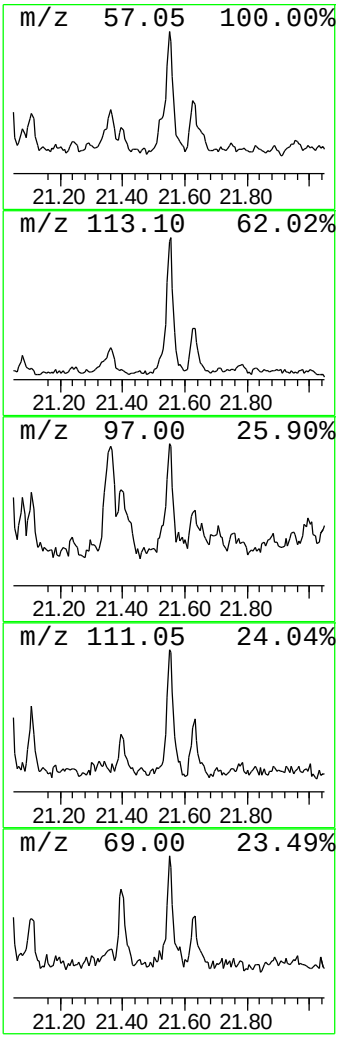
**********

Peak Number 15 unknown21.55 Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 21.55 | 6.16 ng | 225929 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | .beta.-D-Fructopyranose, 2,3:4,5... | 368 | C17H30B2O7 | 1000156-76-8 | 32 |
| 2 | 1-Isopropyl-2-methylpropyl ethyl... | 210 | C9H20FO2P | 1000298-33-2 | 23 |
| 3 | 1-Ethyl-2,2-dimethylpropyl ethyl... | 210 | C9H20FO2P | 1000298-32-8 | 23 |
| 4 | Silane, butyldichloromethyl- | 170 | C5H12Cl2Si | 018147-23-4 | 22 |
| 5 | 1H-Azepin-1-amine, hexahydro-N-(... | 168 | C10H20N2 | 028075-23-2 | 18 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

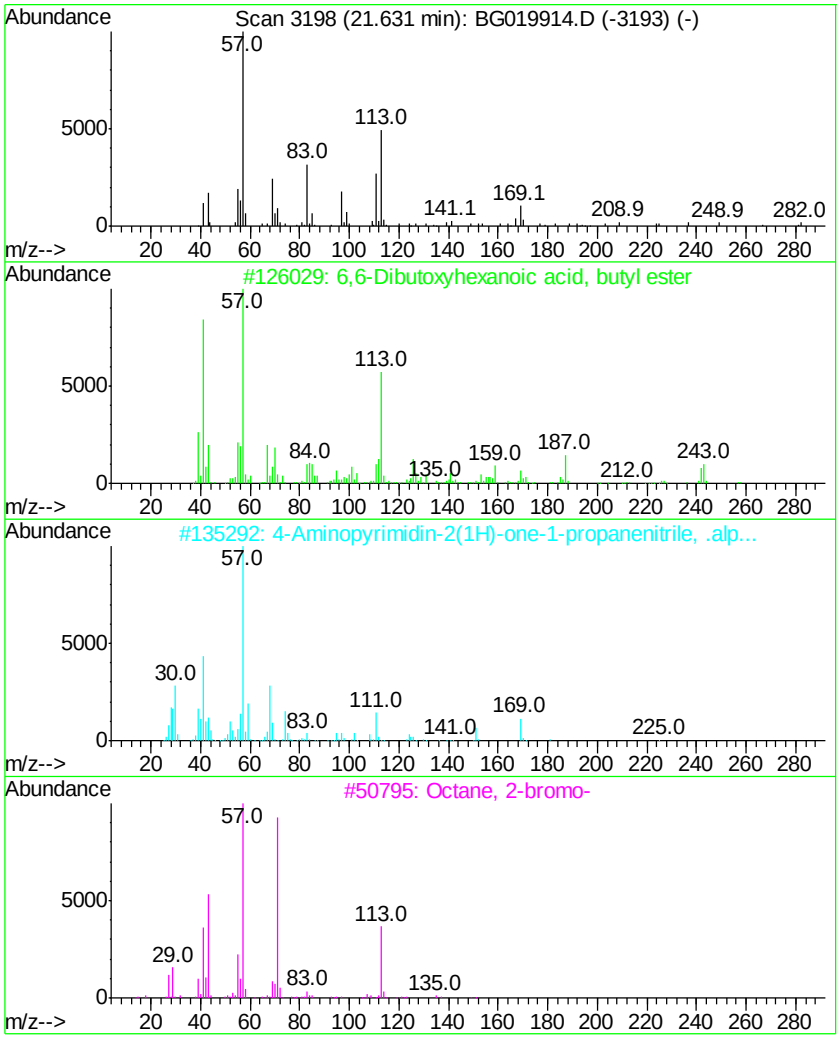
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

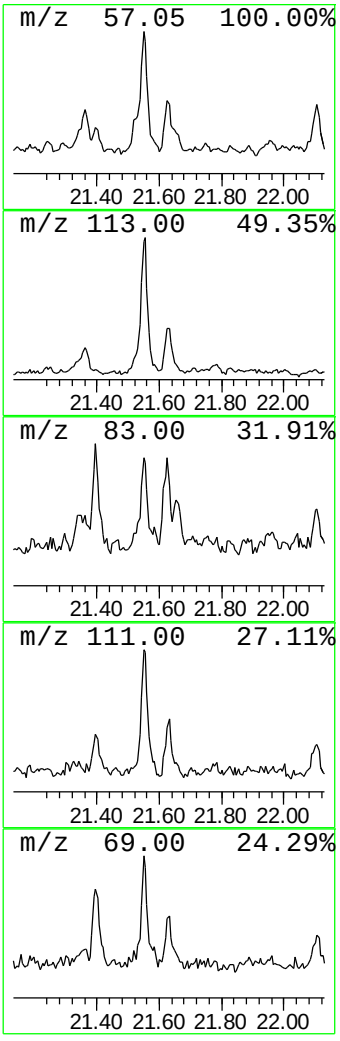
**********

Peak Number 16 unknown21.63 Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 21.63 | 2.53 ng | 92641 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 6,6-Dibutoxyhexanoic acid, butyl... | 316 | C18H36O4 | 1000280-29-0 | 25 |
| 2 | 4-Aminopyrimidin-2(1H)-one-1-pro... | 336 | C14H20N6O4 | 1000194-87-9 | 22 |
| 3 | Octane, 2-bromo- | 192 | C8H17Br | 000557-35-7 | 16 |
| 4 | Thiocyanic acid, 1,1,3,3-tetrame... | 171 | C9H17NS | 089601-36-5 | 16 |
| 5 | Piperidine-2,5-dione | 113 | C5H7NO2 | 052065-78-8 | 14 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.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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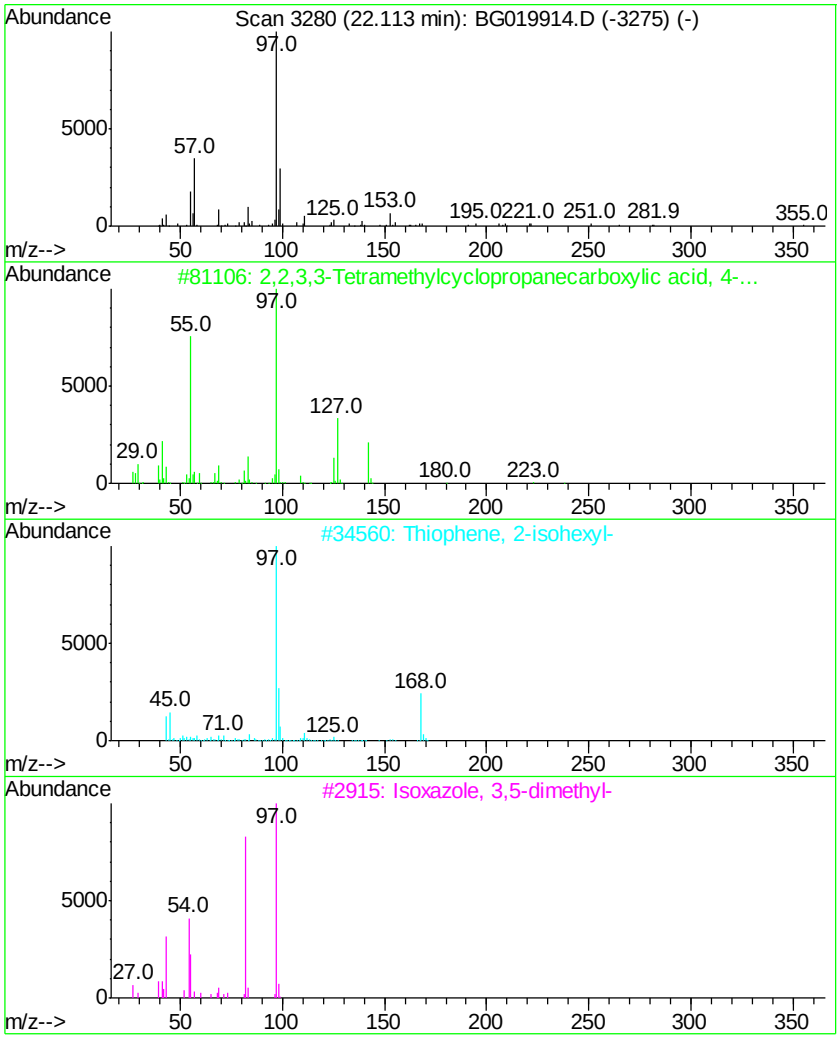
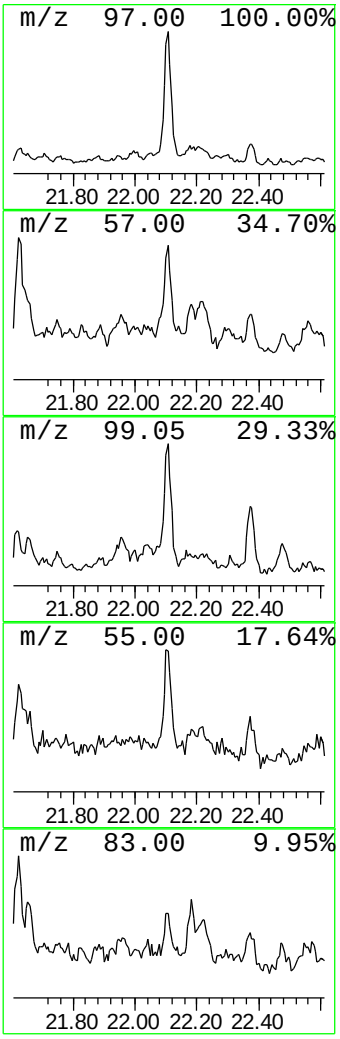
Peak Number 17 unknown22.11 Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 22.11 | 3.25 ng | 119403 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,2,3,3-Tetramethylcyclopropanec... | 238 | C15H26O2 | 1000221-97-5 | 42 |
| 2 | Thiophene, 2-isohexyl- | 168 | C10H16S | 004861-59-0 | 40 |
| 3 | Isoxazole, 3,5-dimethyl- | 97 | C5H7NO | 000300-87-8 | 40 |
| 4 | 2H-Pyran-2-one, 5,6-dihydro-6-pe... | 168 | C10H16O2 | 054814-64-1 | 40 |
| 5 | 2-Butyne-1,4-diamine, N,N'-diethyl- | 140 | C8H16N2 | 000112-22-1 | 37 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.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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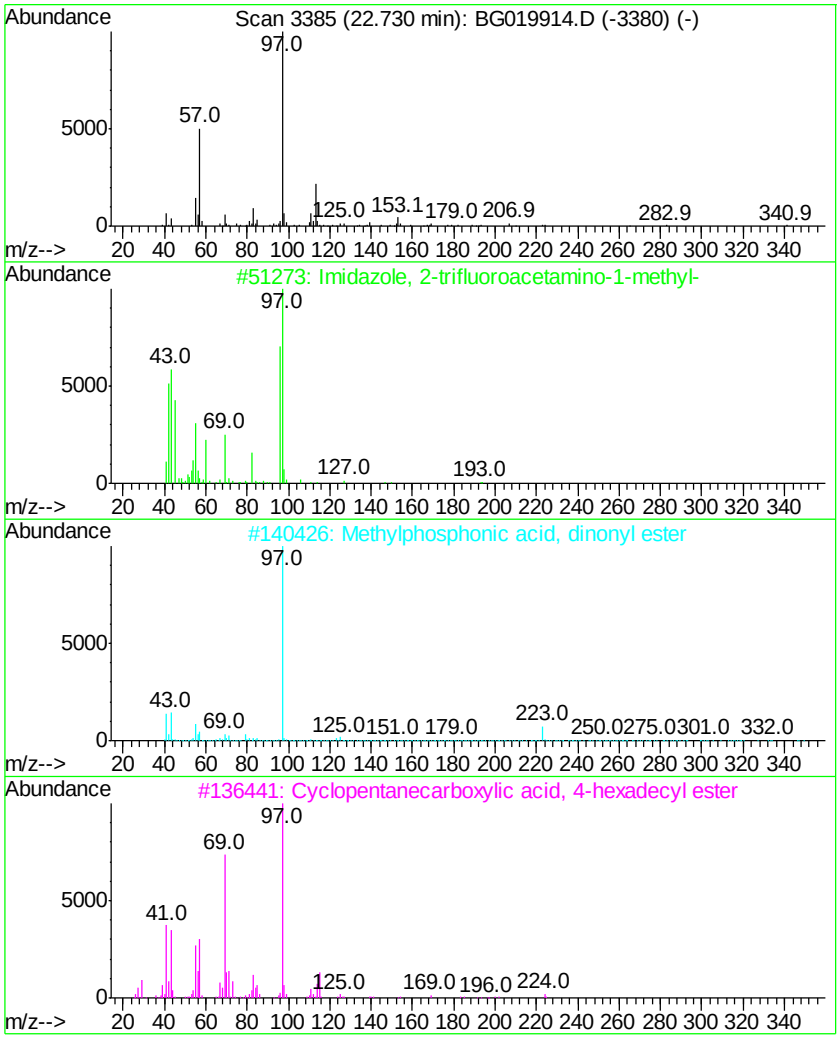
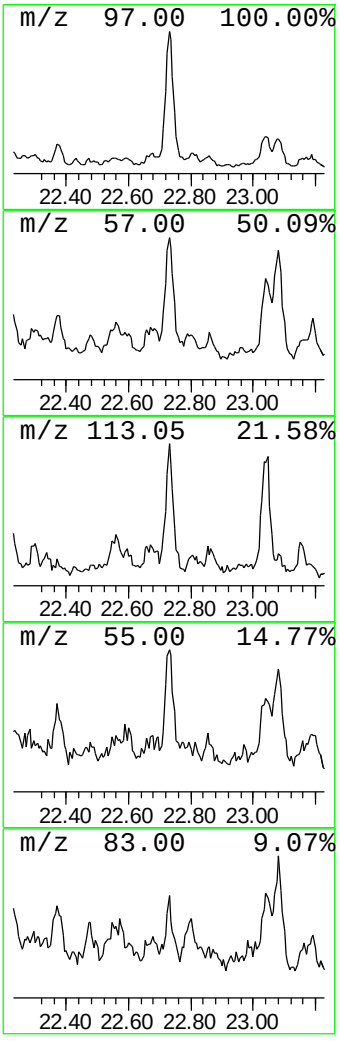
Peak Number 18 unknown22.73 Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 22.73 | 3.56 ng | 130723 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Imidazole, 2-trifluoroacetamino-... | 193 | C6H6F3N3O | 1000126-50-6 | 47 |
| 2 | Methylphosphonic acid, dinonyl e... | 348 | C19H41O3P | 095428-88-9 | 47 |
| 3 | Cyclopentanecarboxylic acid, 4-h... | 338 | C22H42O2 | 1000282-77-5 | 42 |
| 4 | 4-Methyl-2,3-hexadien-1-ol | 112 | C7H12O | 1000196-09-6 | 38 |
| 5 | Cyclohexene, 1-(1,1-dimethyletho... | 168 | C11H20O | 040648-24-6 | 33 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.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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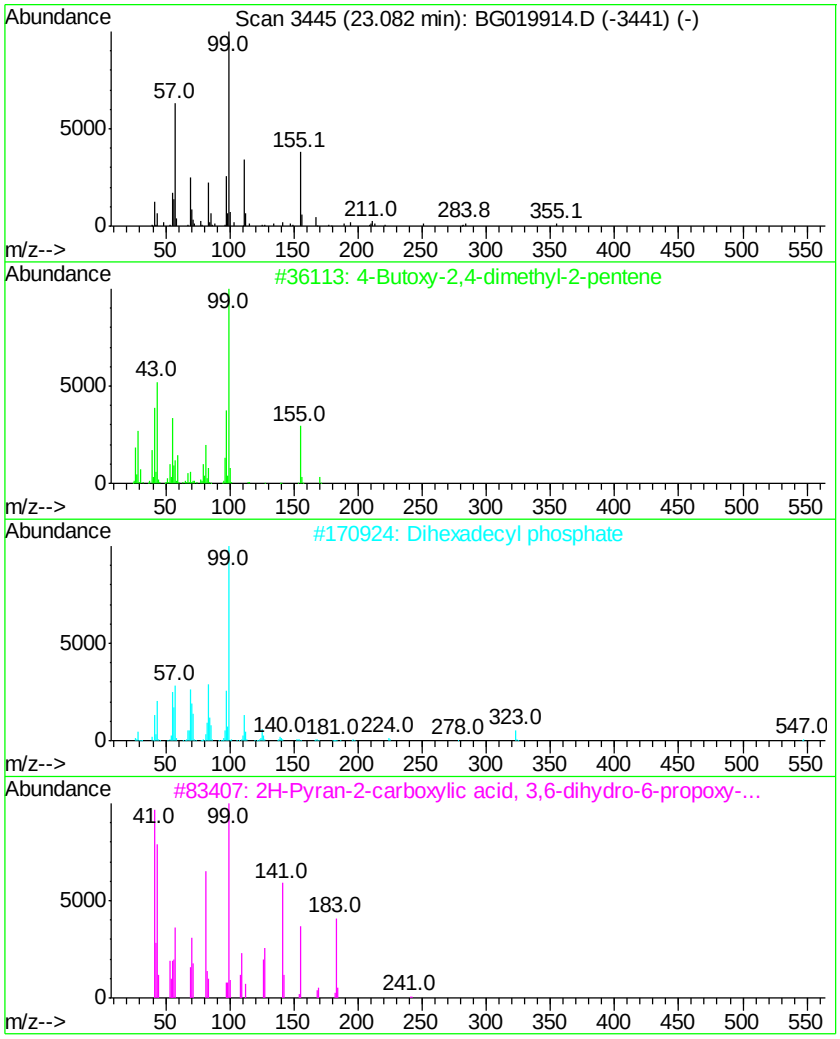
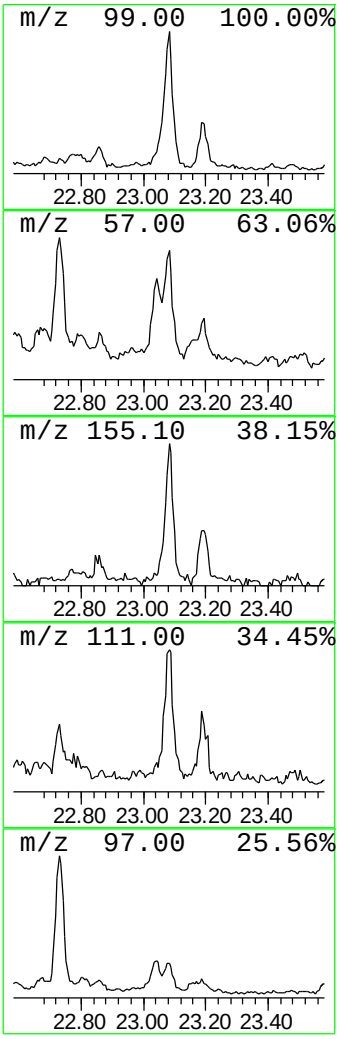
Peak Number 19 Dihexadecyl phosphate Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 23.08 | 4.22 ng | 154727 | Chrysene-d12 | 21.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4-Butoxy-2,4-dimethyl-2-pentene | 170 | C11H22O | 1000159-08-7 | 59 |
| 2 | Dihexadecyl phosphate | 546 | C32H67O4P | 002197-63-9 | 50 |
| 3 | 2H-Pyran-2-carboxylic acid, 3,6-... | 242 | C13H22O4 | 026608-37-7 | 38 |
| 4 | Hexanoic acid, 4-tridecyl ester | 298 | C19H38O2 | 1000279-29-3 | 35 |
| 5 | 2-Oxacyclo[4,4,0]decane, 10-hydr... | 195 | C11H17NO2 | 1000130-46-5 | 33 |



Data Path : Z:\HPCHEM1\BNA G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.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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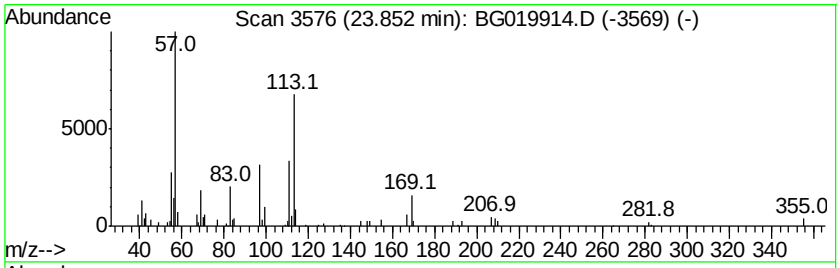
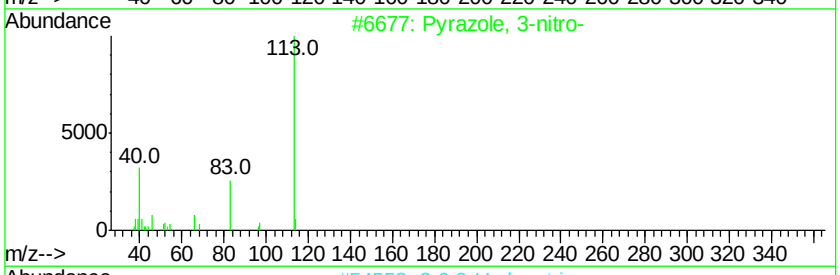
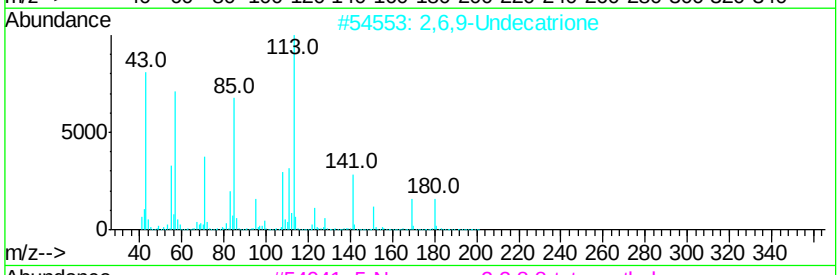
Peak Number 20 unknown23.85 Concentration Rank 16

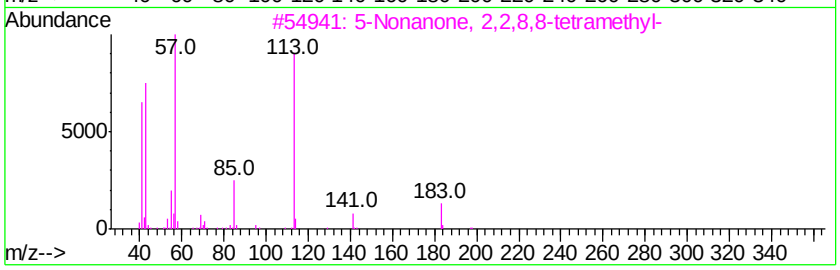
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 23.85 | 3.13 ng | 103133 | Perylene-d12 | 25.04 |

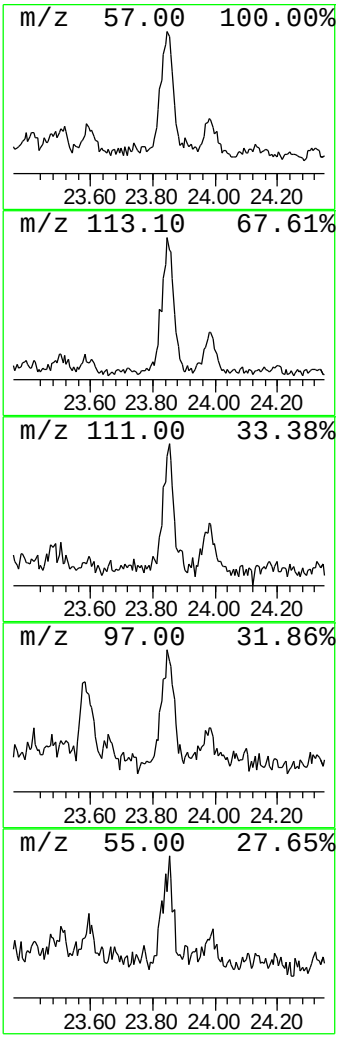
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pyrazole, 3-nitro- | 113 | C3H3N3O2 | 026621-44-3 | 25 |
| 2 | 2,6,9-Undecatrione | 198 | C11H18O3 | 078975-91-4 | 25 |
| 3 | 5-Nonanone, 2,2,8,8-tetramethyl- | 198 | C13H26O | 005709-95-5 | 16 |
| 4 | 4-Fluoro-6-aminopyrimidine | 113 | C4H4FN3 | 051421-96-6 | 14 |
| 5 | Bicyclo[3.2.1]oct-2-ene, 3-chloro- | 142 | C8H11Cl | 035242-17-2 | 14 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_G\DATA\BG120415\
Data File : BG019914.D
Acq On : 4 Dec 2015 21:04
Operator : UM/NP
Sample : G4642-05
Misc :
ALS Vial : 7 Sample Multiplier: 1

**Instrument :** BNA_G
**ClientSampleId :** TW-11

Quant Method : Z:\HPCHEM1\BNA_G\METHODS\8270-BG120215.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 |
| 2-Pentanone, 4-hy... | 5.19 | 7.6 | ng | 64030 | 1 | 8.12 | 167617 | 20.0 |
| unknown7.64 | 7.64 | 76.5 | ng | 641103 | 1 | 8.12 | 167617 | 20.0 |
| Eicosane | 15.58 | 2.5 | ng | 54244 | 3 | 14.74 | 424854 | 20.0 |
| n-Hexadecanoic acid | 18.36 | 5.4 | ng | 148591 | 4 | 17.49 | 552441 | 20.0 |
| unknown19.22 | 19.22 | 2.8 | ng | 75954 | 4 | 17.49 | 552441 | 20.0 |
| unknown19.54 | 19.54 | 3.8 | ng | 103695 | 4 | 17.49 | 552441 | 20.0 |
| Octadecanoic acid | 19.63 | 3.8 | ng | 140546 | 5 | 21.76 | 733778 | 20.0 |
| Bicyclo[3.2.0]hep... | 20.77 | 3.8 | ng | 140257 | 5 | 21.76 | 733778 | 20.0 |
| unknown20.86 | 20.86 | 4.8 | ng | 177282 | 5 | 21.76 | 733778 | 20.0 |
| unknown20.99 | 20.99 | 3.4 | ng | 125081 | 5 | 21.76 | 733778 | 20.0 |
| unknown21.36 | 21.36 | 2.9 | ng | 107700 | 5 | 21.76 | 733778 | 20.0 |
| Cyclooctane, 1,2-... | 21.40 | 3.2 | ng | 117541 | 5 | 21.76 | 733778 | 20.0 |
| unknown21.55 | 21.55 | 6.2 | ng | 225929 | 5 | 21.76 | 733778 | 20.0 |
| unknown21.63 | 21.63 | 2.5 | ng | 92641 | 5 | 21.76 | 733778 | 20.0 |
| unknown22.11 | 22.11 | 3.3 | ng | 119403 | 5 | 21.76 | 733778 | 20.0 |
| unknown22.73 | 22.73 | 3.6 | ng | 130723 | 5 | 21.76 | 733778 | 20.0 |
| Dihexadecyl phosp... | 23.08 | 4.2 | ng | 154727 | 5 | 21.76 | 733778 | 20.0 |
| unknown23.85 | 23.85 | 3.1 | ng | 103133 | 6 | 25.04 | 659878 | 20.0 |