LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

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_F\METHODS\8270-BF112115.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 | 2.273 | 23 | 25 | 32 | rVB | 49166 | 103463 | 1.47% | 0.134% |
| 2 | 3.324 | 113 | 117 | 121 | rVB | 36149 | 86950 | 1.24% | 0.113% |
| 3 | 4.101 | 177 | 185 | 194 | rBV4 | 35613 | 178914 | 2.55% | 0.232% |
| 4 | 4.753 | 240 | 242 | 252 | rVB | 2013172 | 3769368 | 53.69% | 4.891% |
| 5 | 5.142 | 272 | 276 | 281 | rBV2 | 134677 | 231613 | 3.30% | 0.301% |
| 6 | 5.222 | 281 | 283 | 296 | rBV | 4754768 | 5686023 | 80.99% | 7.378% |
| 7 | 5.416 | 296 | 300 | 303 | rBV | 176725 | 230421 | 3.28% | 0.299% |
| 8 | 6.022 | 348 | 353 | 356 | rBV5 | 32072 | 106593 | 1.52% | 0.138% |
| 9 | 6.205 | 368 | 369 | 373 | rBV | 59896 | 106154 | 1.51% | 0.138% |
| 10 | 6.285 | 373 | 376 | 383 | rVV | 4361492 | 6112040 | 87.05% | 7.931% |
| 11 | 6.387 | 383 | 385 | 388 | rVV | 5807621 | 5939920 | 84.60% | 7.707% |
| 12 | 6.433 | 388 | 389 | 391 | rVV | 185951 | 198975 | 2.83% | 0.258% |
| 13 | 6.479 | 391 | 393 | 395 | rVV | 118497 | 202011 | 2.88% | 0.262% |
| 14 | 6.525 | 395 | 397 | 400 | rVB | 76746 | 113793 | 1.62% | 0.148% |
| 15 | 6.605 | 402 | 404 | 407 | rVB | 1085342 | 1132224 | 16.13% | 1.469% |
| 16 | 6.673 | 407 | 410 | 411 | rBV | 102688 | 101435 | 1.44% | 0.132% |
| 17 | 6.765 | 416 | 418 | 421 | rBV | 4496004 | 4263669 | 60.73% | 5.532% |
| 18 | 6.845 | 423 | 425 | 429 | rVB4 | 55433 | 111265 | 1.58% | 0.144% |
| 19 | 6.902 | 429 | 430 | 432 | rBV | 139145 | 143563 | 2.04% | 0.186% |
| 20 | 6.947 | 432 | 434 | 435 | rBV2 | 67600 | 95568 | 1.36% | 0.124% |
| 21 | 6.970 | 435 | 436 | 439 | rVB | 142011 | 119829 | 1.71% | 0.155% |
| 22 | 7.027 | 439 | 441 | 443 | rBV2 | 123948 | 193217 | 2.75% | 0.251% |
| 23 | 7.062 | 443 | 444 | 451 | rVB | 325239 | 500820 | 7.13% | 0.650% |
| 24 | 7.176 | 451 | 454 | 457 | rBV | 2815591 | 4047998 | 57.66% | 5.252% |
| 25 | 7.325 | 461 | 467 | 468 | rBV5 | 61011 | 212563 | 3.03% | 0.276% |
| 26 | 7.347 | 468 | 469 | 472 | rVB2 | 87011 | 86254 | 1.23% | 0.112% |
| 27 | 7.462 | 476 | 479 | 481 | rVB2 | 71641 | 110709 | 1.58% | 0.144% |
| 28 | 7.496 | 481 | 482 | 483 | rBV | 68670 | 72189 | 1.03% | 0.094% |
| 29 | 7.588 | 487 | 490 | 493 | rBV2 | 877840 | 1790423 | 25.50% | 2.323% |
| 30 | 7.645 | 493 | 495 | 497 | rVB | 197935 | 210287 | 3.00% | 0.273% |
| 31 | 7.725 | 497 | 502 | 505 | rVB2 | 1089345 | 2013852 | 28.68% | 2.613% |
| 32 | 7.782 | 505 | 507 | 509 | rBV | 413638 | 469348 | 6.69% | 0.609% |
| 33 | 7.839 | 510 | 512 | 514 | rBV | 194515 | 159490 | 2.27% | 0.207% |
| 34 | 7.896 | 514 | 517 | 519 | rBV | 1725662 | 2052063 | 29.23% | 2.663% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

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_F\METHODS\8270-BF112115.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 7.965 | 519 | 523 | 527 | rVB4 | 285641 | 819368 | 11.67% | 1.063% |
| 36 | 8.056 | 527 | 531 | 533 | rBV2 | 1559781 | 2495449 | 35.54% | 3.238% |
| 37 | 8.159 | 538 | 540 | 541 | rBV | 466086 | 471548 | 6.72% | 0.612% |
| 38 | 8.193 | 541 | 543 | 547 | rVV3 | 161474 | 247505 | 3.53% | 0.321% |
| 39 | 8.285 | 548 | 551 | 556 | rVV | 727573 | 886823 | 12.63% | 1.151% |
| 40 | 8.388 | 556 | 560 | 565 | rVB2 | 574191 | 1186720 | 16.90% | 1.540% |
| 41 | 8.479 | 565 | 568 | 571 | rBV2 | 185343 | 353696 | 5.04% | 0.459% |
| 42 | 8.605 | 577 | 579 | 581 | rVB3 | 126286 | 180216 | 2.57% | 0.234% |
| 43 | 8.650 | 581 | 583 | 584 | rBV2 | 112129 | 124419 | 1.77% | 0.161% |
| 44 | 8.708 | 586 | 588 | 592 | rVV4 | 108693 | 182481 | 2.60% | 0.237% |
| 45 | 8.776 | 592 | 594 | 595 | rVV | 73348 | 101149 | 1.44% | 0.131% |
| 46 | 8.799 | 595 | 596 | 597 | rVV | 148651 | 198338 | 2.82% | 0.257% |
| 47 | 8.833 | 597 | 599 | 601 | rVV2 | 286529 | 468780 | 6.68% | 0.608% |
| 48 | 8.902 | 604 | 605 | 607 | rVV2 | 202574 | 208441 | 2.97% | 0.270% |
| 49 | 8.982 | 609 | 612 | 614 | rVV | 6450783 | 7020897 | 100.00% | 9.110% |
| 50 | 9.051 | 614 | 618 | 624 | rVV2 | 730563 | 1293482 | 18.42% | 1.678% |
| 51 | 9.142 | 624 | 626 | 628 | rVV2 | 144156 | 256084 | 3.65% | 0.332% |
| 52 | 9.176 | 628 | 629 | 632 | rVV2 | 191406 | 251651 | 3.58% | 0.327% |
| 53 | 9.233 | 632 | 634 | 636 | rVV3 | 94402 | 207254 | 2.95% | 0.269% |
| 54 | 9.302 | 638 | 640 | 645 | rVB4 | 188563 | 359786 | 5.12% | 0.467% |
| 55 | 9.393 | 645 | 648 | 650 | rBV4 | 64650 | 156063 | 2.22% | 0.202% |
| 56 | 9.553 | 660 | 662 | 664 | rVB3 | 60595 | 79315 | 1.13% | 0.103% |
| 57 | 9.599 | 664 | 666 | 668 | rVV3 | 80685 | 132575 | 1.89% | 0.172% |
| 58 | 9.645 | 668 | 670 | 673 | rVV | 1819101 | 1731880 | 24.67% | 2.247% |
| 59 | 9.725 | 674 | 677 | 680 | rVB3 | 67928 | 140665 | 2.00% | 0.183% |
| 60 | 9.896 | 689 | 692 | 697 | rVB3 | 74558 | 156617 | 2.23% | 0.203% |
| 61 | 10.022 | 701 | 703 | 706 | rBV4 | 77514 | 159822 | 2.28% | 0.207% |
| 62 | 10.079 | 706 | 708 | 712 | rVB4 | 41211 | 87052 | 1.24% | 0.113% |
| 63 | 10.251 | 721 | 723 | 725 | rVB | 77003 | 84936 | 1.21% | 0.110% |
| 64 | 10.434 | 736 | 739 | 742 | rVB | 3585844 | 4075108 | 58.04% | 5.288% |
| 65 | 10.571 | 749 | 751 | 756 | rVB4 | 65981 | 111802 | 1.59% | 0.145% |
| 66 | 10.662 | 756 | 759 | 761 | rBV | 69120 | 106975 | 1.52% | 0.139% |
| 67 | 11.119 | 797 | 799 | 802 | rBV | 1882347 | 1679390 | 23.92% | 2.179% |
| 68 | 11.176 | 802 | 804 | 810 | rVB3 | 37286 | 70315 | 1.00% | 0.091% |
| 69 | 11.679 | 846 | 848 | 852 | rBV2 | 319116 | 429959 | 6.12% | 0.558% |
| 70 | 12.377 | 906 | 909 | 912 | rBV3 | 30851 | 91950 | 1.31% | 0.119% |
| 71 | 12.457 | 914 | 916 | 923 | rBV | 369723 | 421681 | 6.01% | 0.547% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

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_F\METHODS\8270-BF112115.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 12.708 | 935 | 938 | 941 | rBV | 5367485 | 6403255 | 91.20% | 8.309% |
| 73 | 13.622 | 1016 | 1018 | 1022 | rVB2 | 63752 | 95995 | 1.37% | 0.125% |
| 74 | 13.748 | 1026 | 1029 | 1031 | rBV | 1507619 | 1508562 | 21.49% | 1.957% |
| 75 | 15.097 | 1145 | 1147 | 1150 | rBV | 738769 | 1077492 | 15.35% | 1.398% |

Sum of corrected areas: 77068500

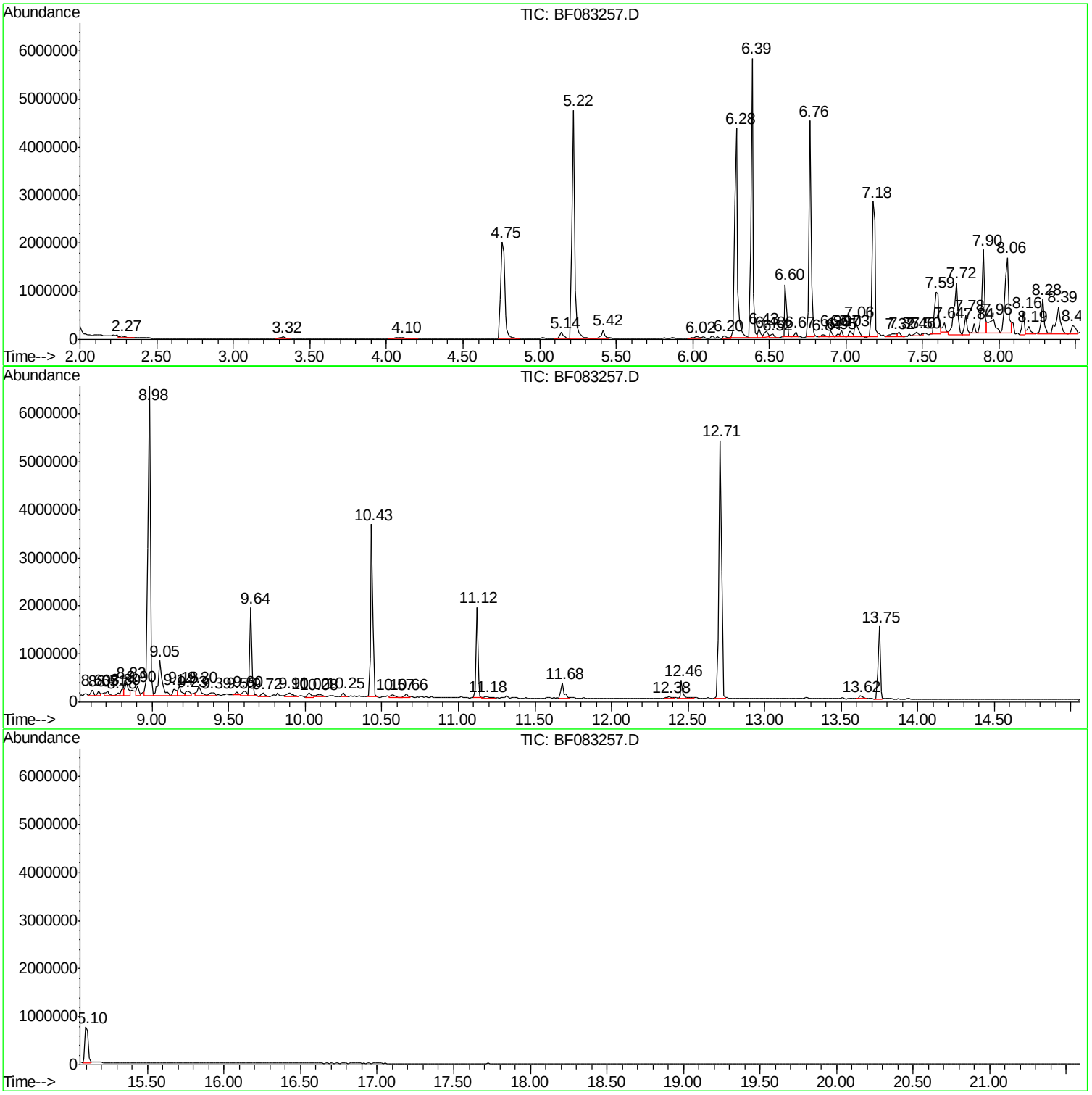
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

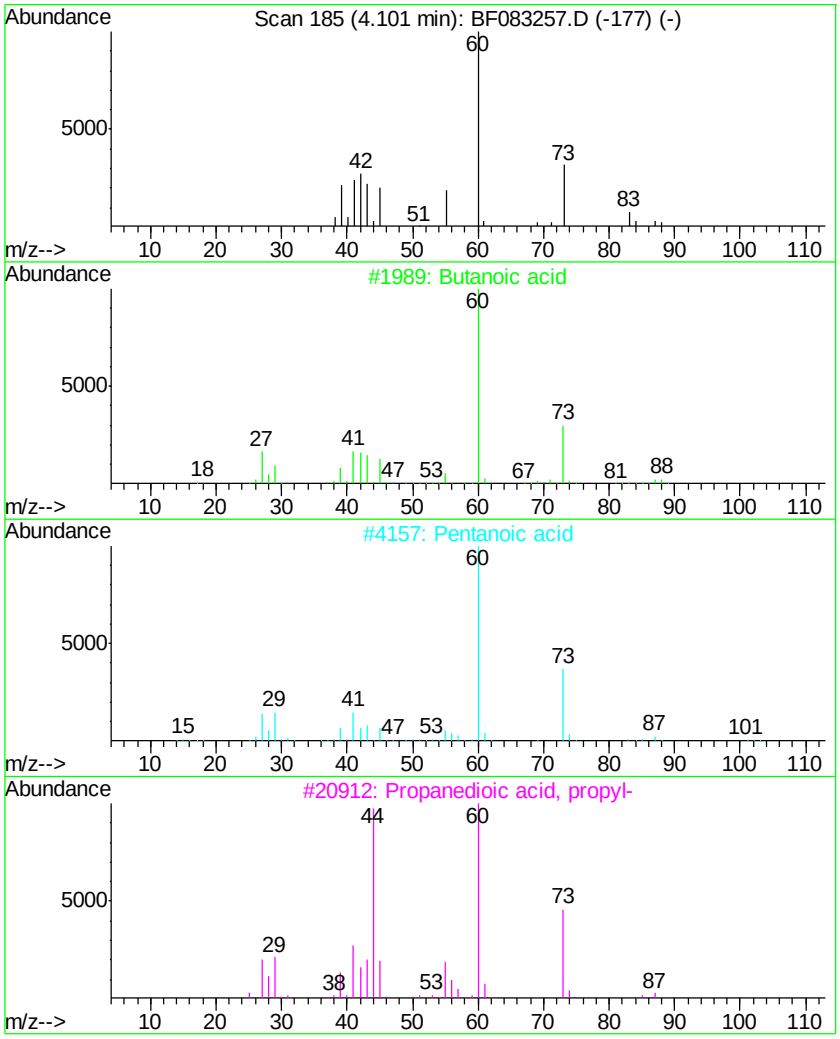
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

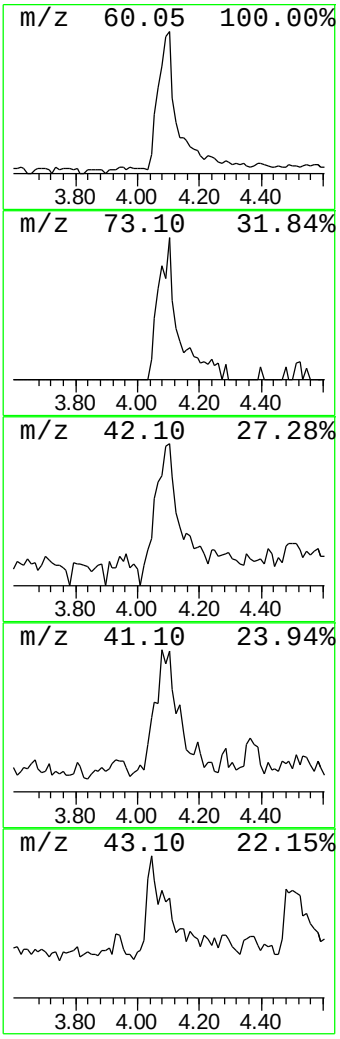
**********

Peak Number 1 Butanoic acid Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 4.10 | 3.16 ng | 178914 | 1,4-Dichlorobenzene-d4 | 6.60 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Butanoic acid | 88 | C4H8O2 | 000107-92-6 | 64 |
| 2 | Pentanoic acid | 102 | C5H10O2 | 000109-52-4 | 9 |
| 3 | Propanedioic acid, propyl- | 146 | C6H10O4 | 000616-62-6 | 9 |
| 4 | 4-Bromobutyric acid | 166 | C4H7BrO2 | 002623-87-2 | 9 |
| 5 | Benserazide | 257 | C10H15N3O5 | 000322-35-0 | 9 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

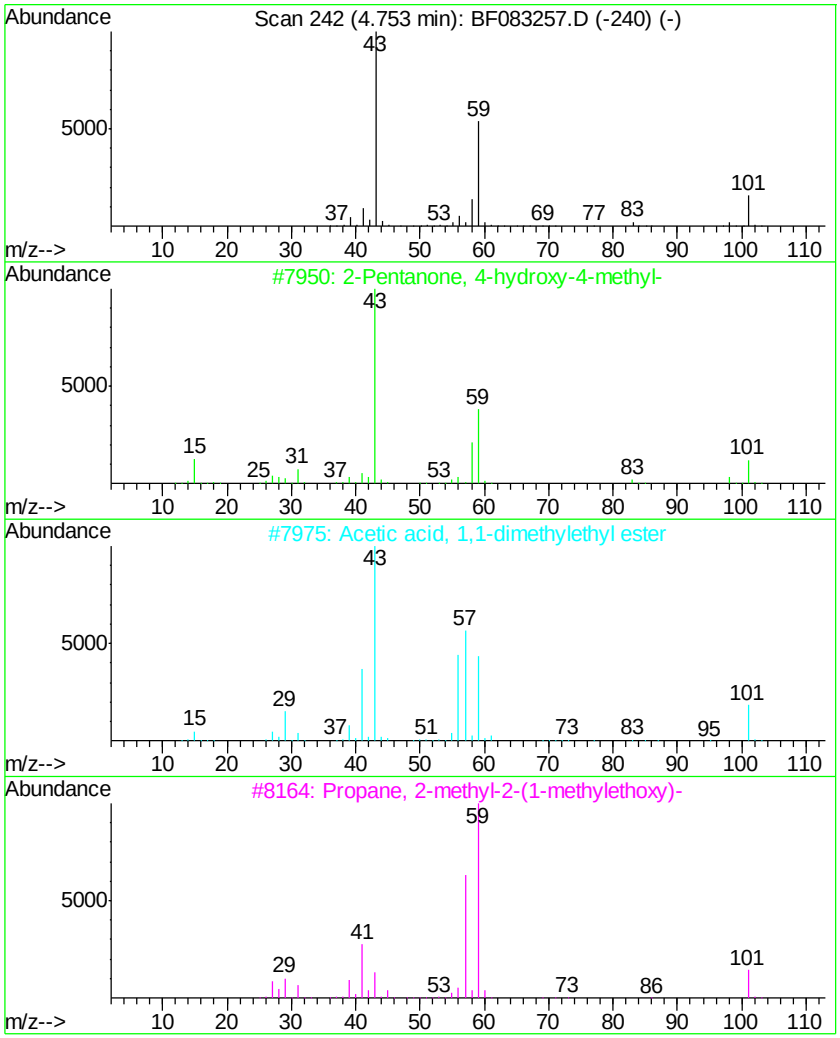
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

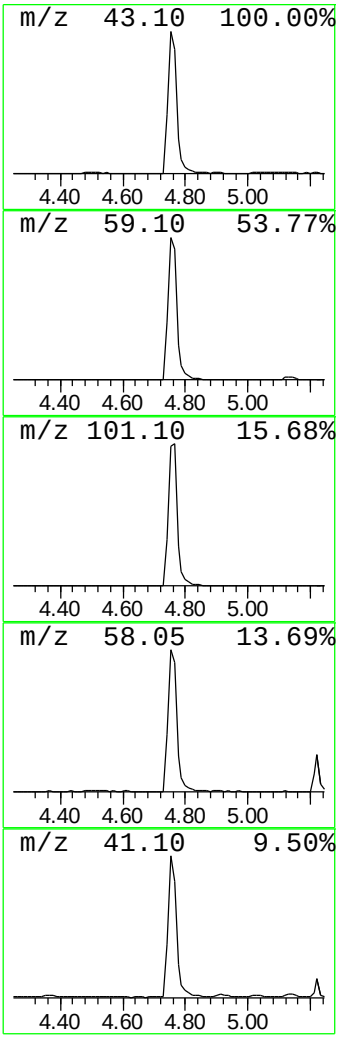
**********

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

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 4.75 | 66.58 ng | 3769370 | 1,4-Dichlorobenzene-d4 | 6.60 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 64 |
| 2 | Acetic acid, 1,1-dimethylethyl e... | 116 | C6H12O2 | 000540-88-5 | 39 |
| 3 | Propane, 2-methyl-2-(1-methyleth... | 116 | C7H16O | 017348-59-3 | 36 |
| 4 | 2-Hexanol, 2-methyl- | 116 | C7H16O | 000625-23-0 | 33 |
| 5 | 3-Hexanol, 4-methyl- | 116 | C7H16O | 000615-29-2 | 33 |



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

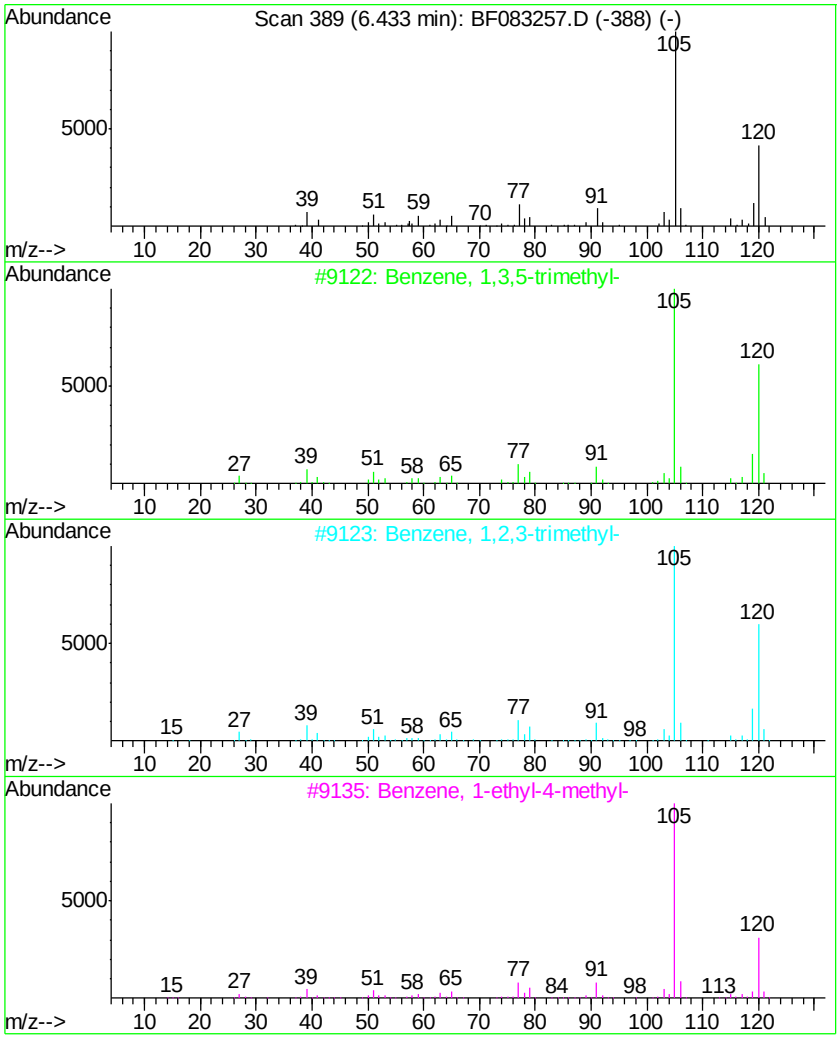
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

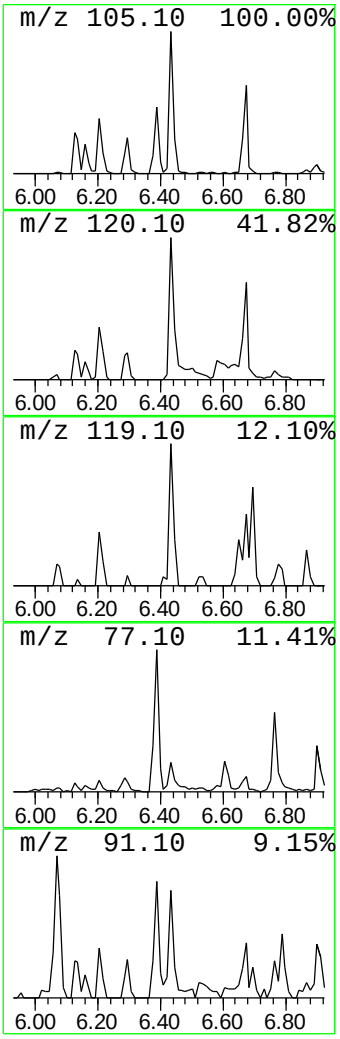
**********

Peak Number 6 Benzene, 1,3,5-trimethyl- Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.43 | 3.51 ng | 198975 | 1,4-Dichlorobenzene-d4 | 6.60 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1,3,5-trimethyl- | 120 | C9H12 | 000108-67-8 | 95 |
| 2 | Benzene, 1,2,3-trimethyl- | 120 | C9H12 | 000526-73-8 | 93 |
| 3 | Benzene, 1-ethyl-4-methyl- | 120 | C9H12 | 000622-96-8 | 90 |
| 4 | Benzene, 1,2,4-trimethyl- | 120 | C9H12 | 000095-63-6 | 87 |
| 5 | Benzene, 1-ethyl-3-methyl- | 120 | C9H12 | 000620-14-4 | 87 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

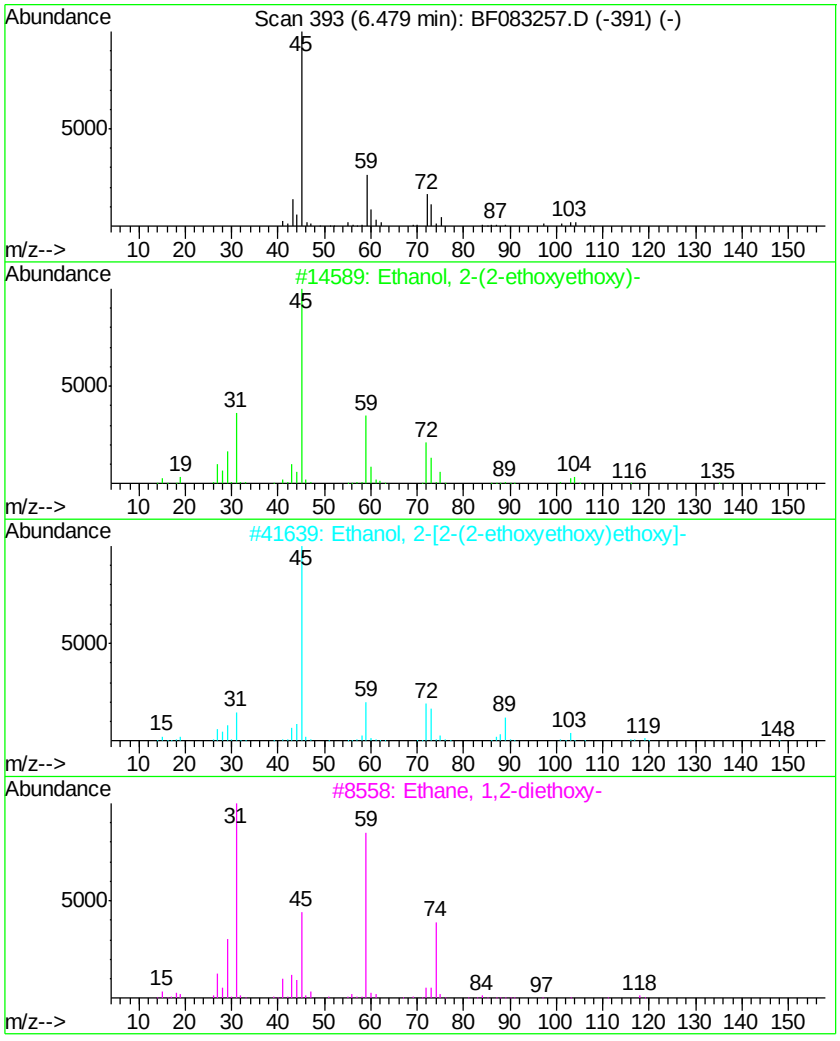
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

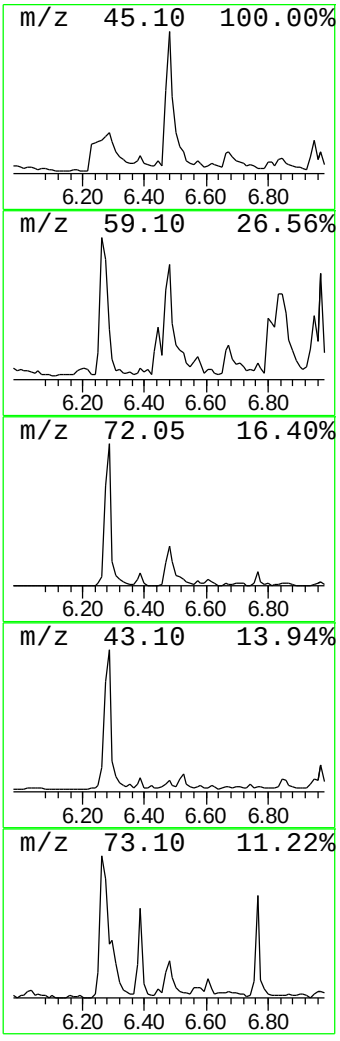
**********

Peak Number 7 Ethanol, 2-(2-ethoxyethoxy)- Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.48 | 3.57 ng | 202011 | 1,4-Dichlorobenzene-d4 | 6.60 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Ethanol, 2-(2-ethoxyethoxy)- | 134 | C6H14O3 | 000111-90-0 | 74 |
| 2 | Ethanol, 2-[2-(2-ethoxyethoxy)et... | 178 | C8H18O4 | 000112-50-5 | 50 |
| 3 | Ethane, 1,2-diethoxy- | 118 | C6H14O2 | 000629-14-1 | 39 |
| 4 | Ethanol, 2-[2-(2-propenyloxy)eth... | 146 | C7H14O3 | 015075-50-0 | 36 |
| 5 | Methoxyacetic acid, butyl ester | 146 | C7H14O3 | 017640-22-1 | 33 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

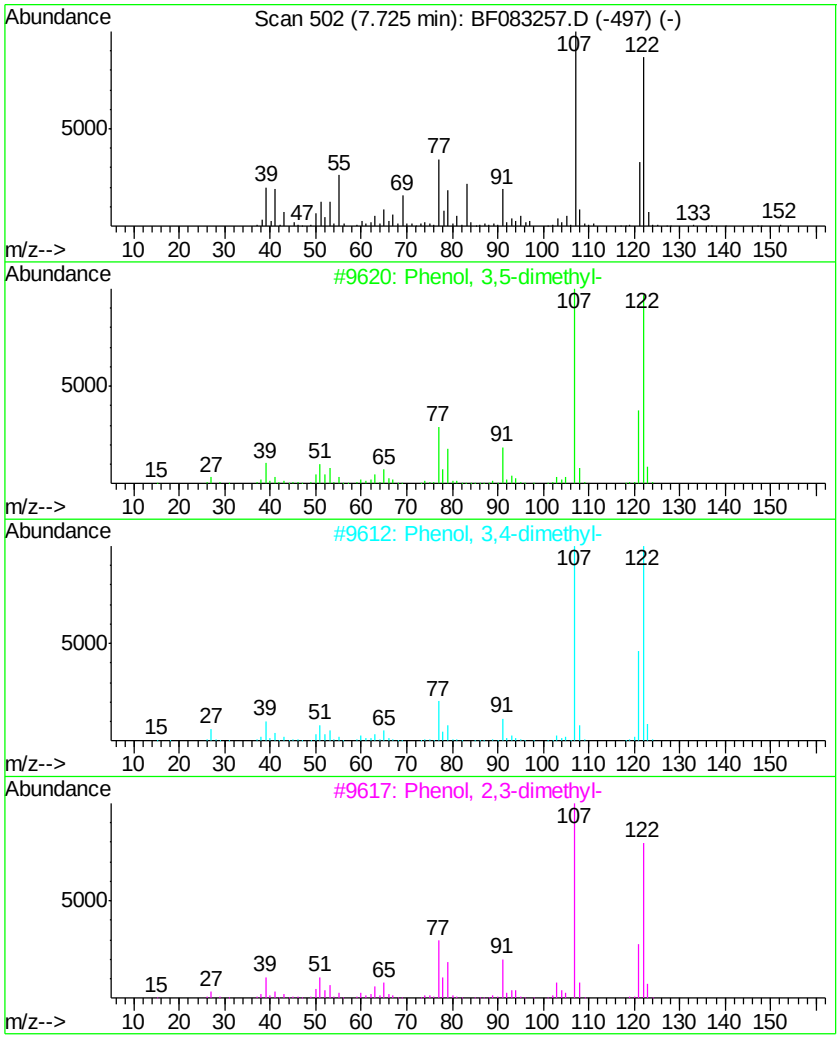
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

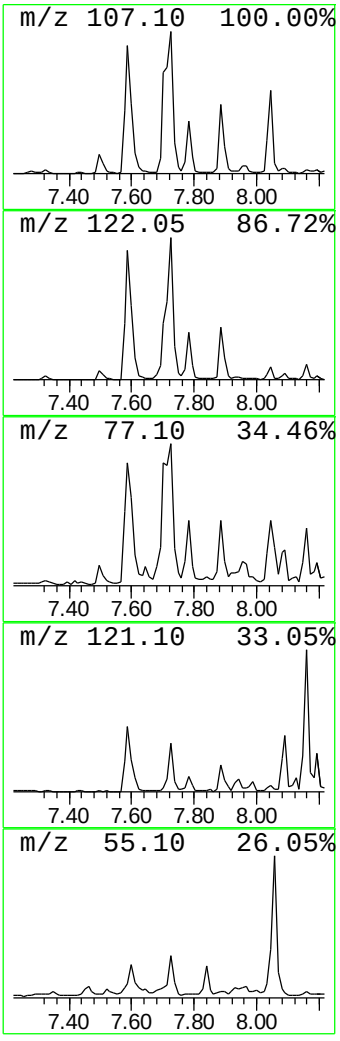
**********

Peak Number 9 Phenol, 3,5-dimethyl- Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.72 | 19.63 ng | 2013850 | Naphthalene-d8 | 7.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenol, 3,5-dimethyl- | 122 | C8H10O | 000108-68-9 | 96 |
| 2 | Phenol, 3,4-dimethyl- | 122 | C8H10O | 000095-65-8 | 90 |
| 3 | Phenol, 2,3-dimethyl- | 122 | C8H10O | 000526-75-0 | 87 |
| 4 | Phenol, 2,4-dimethyl- | 122 | C8H10O | 000105-67-9 | 87 |
| 5 | Phenol, 2-ethyl- | 122 | C8H10O | 000090-00-6 | 87 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

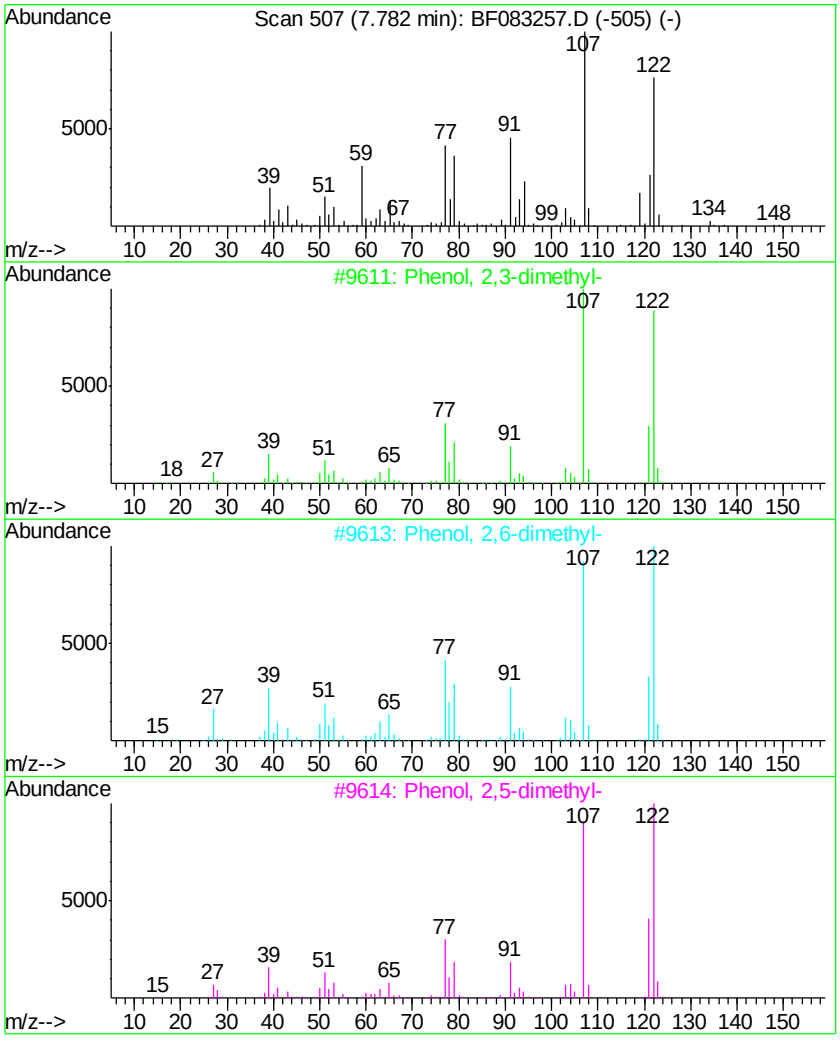
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

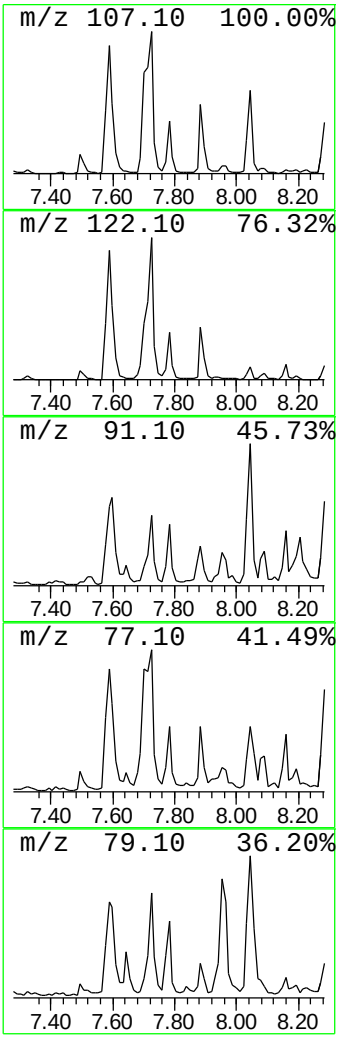
**********

Peak Number 10 Phenol, 2,3-dimethyl- Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.78 | 4.57 ng | 469348 | Naphthalene-d8 | 7.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenol, 2,3-dimethyl- | 122 | C8H10O | 000526-75-0 | 93 |
| 2 | Phenol, 2,6-dimethyl- | 122 | C8H10O | 000576-26-1 | 86 |
| 3 | Phenol, 2,5-dimethyl- | 122 | C8H10O | 000095-87-4 | 83 |
| 4 | Phenol, 2,4-dimethyl- | 122 | C8H10O | 000105-67-9 | 83 |
| 5 | Phenol, 3,5-dimethyl- | 122 | C8H10O | 000108-68-9 | 81 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

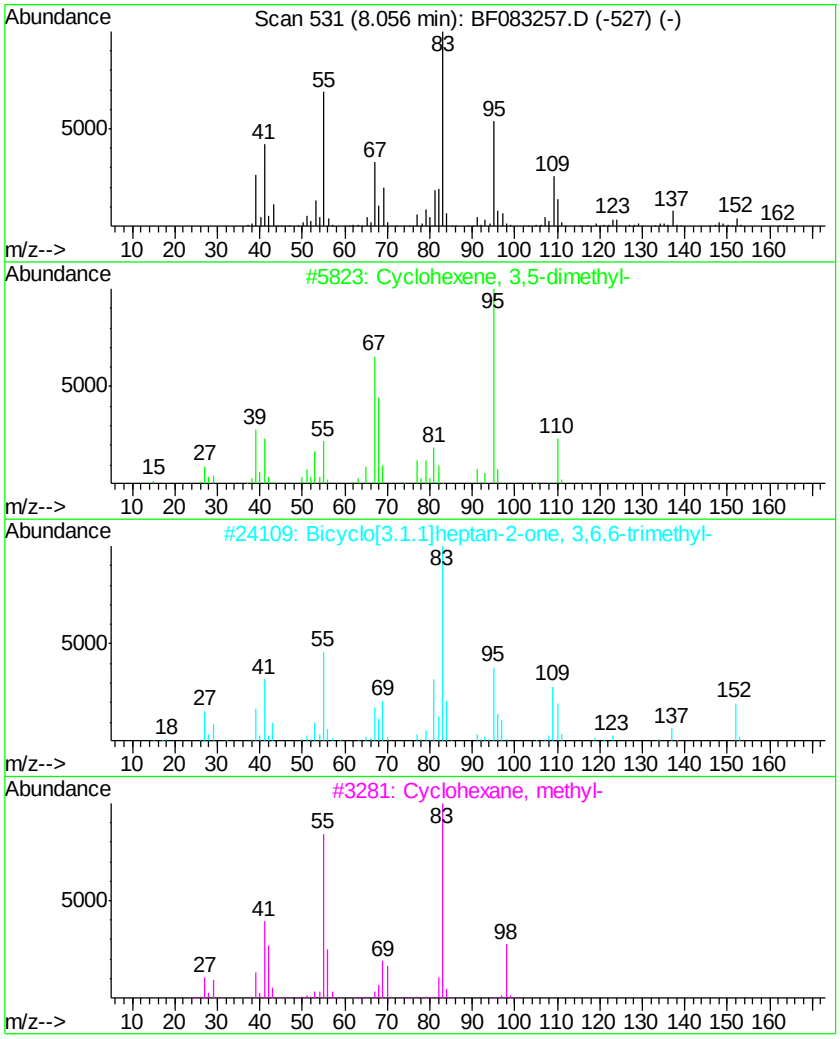
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

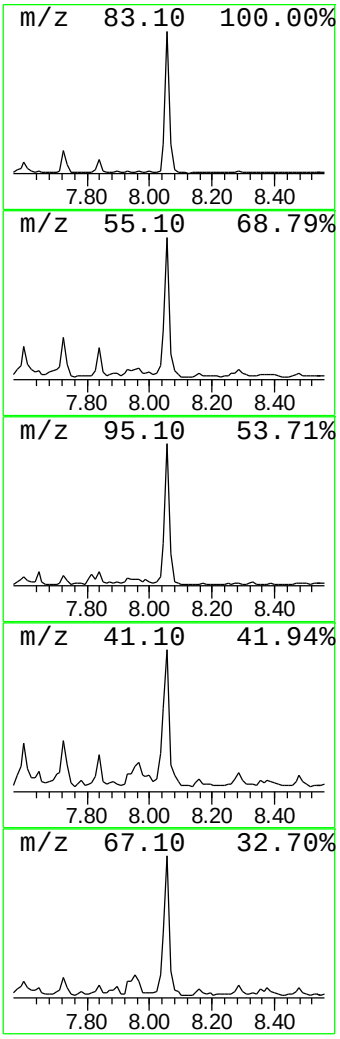
**********

Peak Number 11 unknown8.06 Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.06 | 24.32 ng | 2495450 | Naphthalene-d8 | 7.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclohexene, 3,5-dimethyl- | 110 | C8H14 | 000823-17-6 | 38 |
| 2 | Bicyclo[3.1.1]heptan-2-one, 3,6,... | 152 | C10H16O | 016022-08-5 | 35 |
| 3 | Cyclohexane, methyl- | 98 | C7H14 | 000108-87-2 | 35 |
| 4 | 1,3-Dimethyl-1-cyclohexene | 110 | C8H14 | 002808-76-6 | 30 |
| 5 | Bicyclo[3.1.0]hexane, 1,5-dimethyl- | 110 | C8H14 | 1000142-17-5 | 30 |



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Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

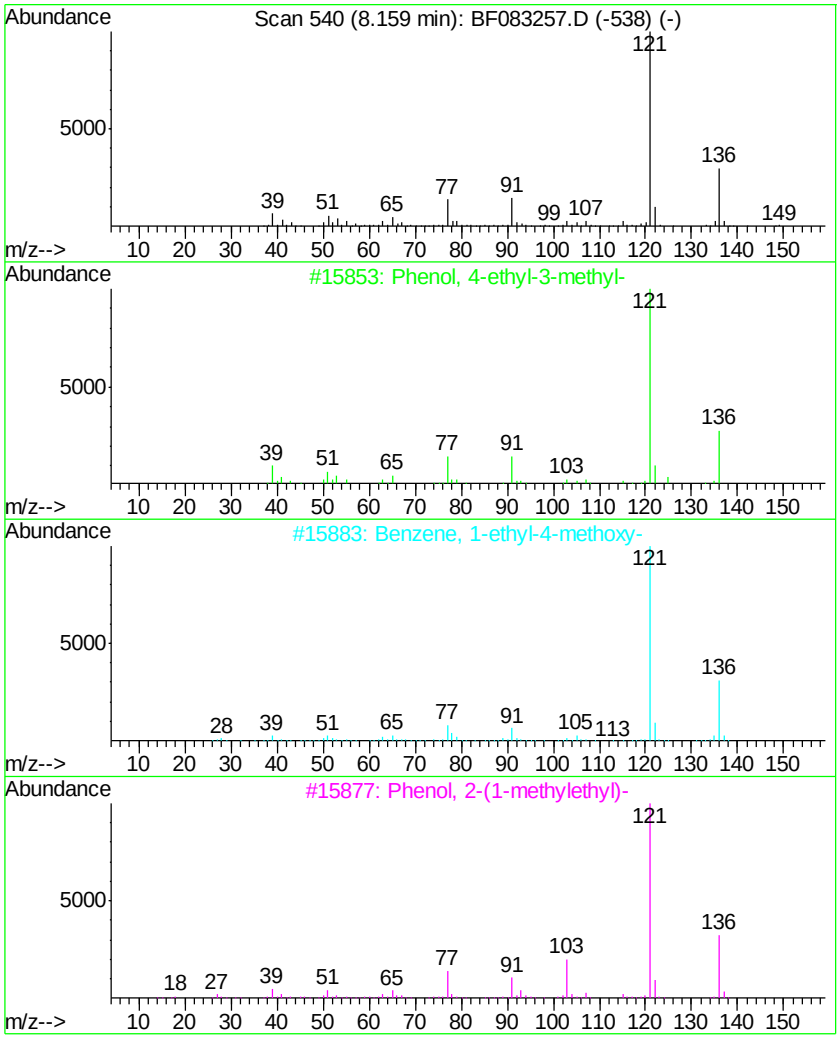
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

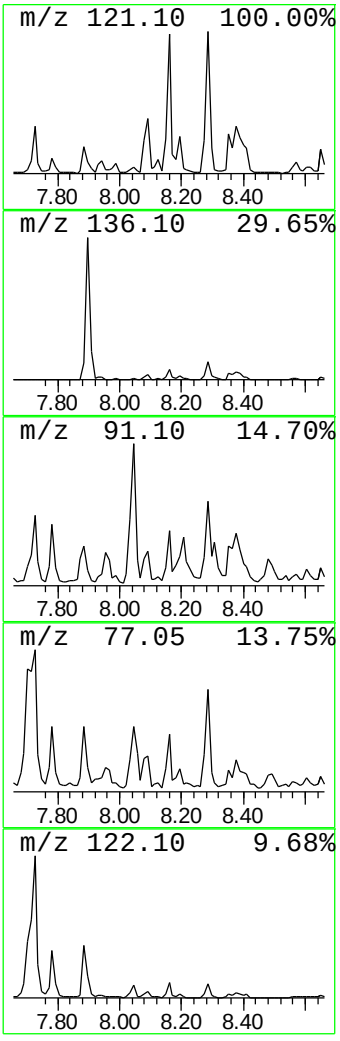
**********

Peak Number 12 Phenol, 4-ethyl-3-methyl- Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.16 | 4.60 ng | 471548 | Naphthalene-d8 | 7.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenol, 4-ethyl-3-methyl- | 136 | C9H12O | 001123-94-0 | 95 |
| 2 | Benzene, 1-ethyl-4-methoxy- | 136 | C9H12O | 001515-95-3 | 91 |
| 3 | Phenol, 2-(1-methylethyl)- | 136 | C9H12O | 000088-69-7 | 91 |
| 4 | Phenol, 3-ethyl-5-methyl- | 136 | C9H12O | 000698-71-5 | 91 |
| 5 | Phenol, 2-ethyl-5-methyl- | 136 | C9H12O | 001687-61-2 | 91 |



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Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

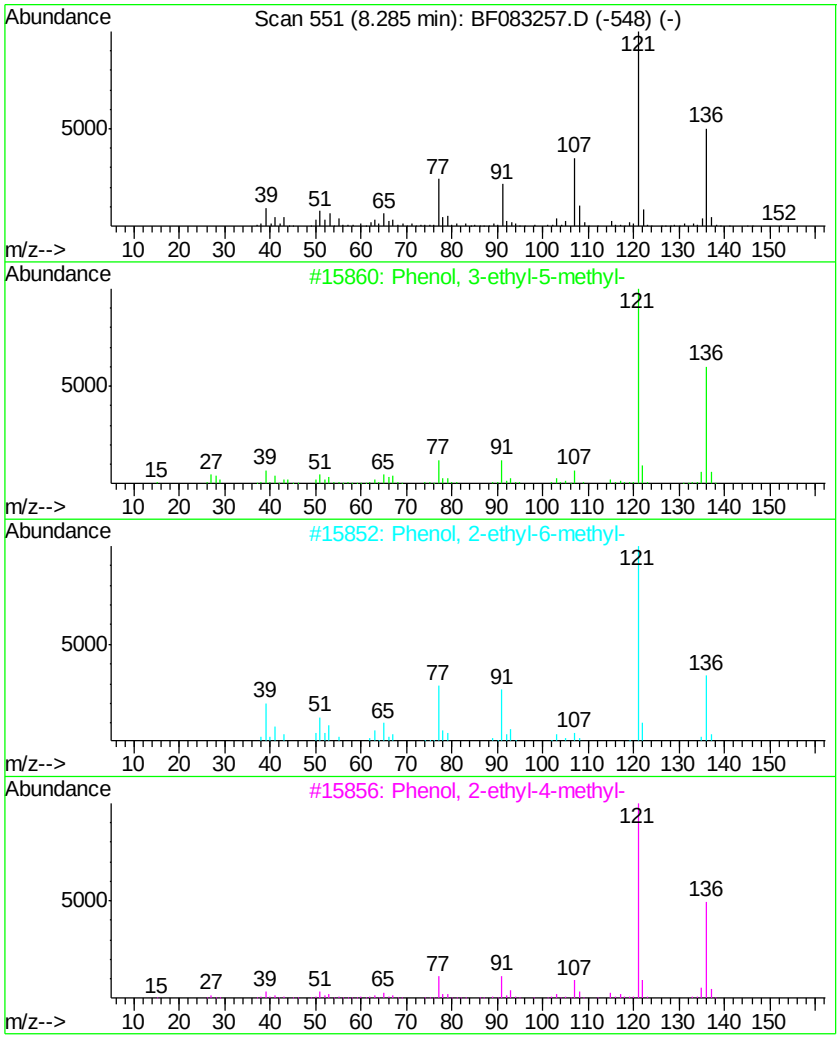
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

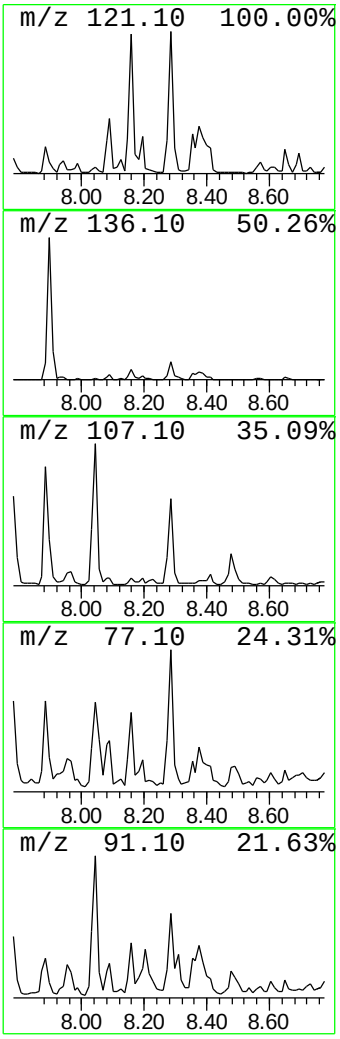
**********

Peak Number 13 Phenol, 3-ethyl-5-methyl- Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.28 | 8.64 ng | 886823 | Naphthalene-d8 | 7.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenol, 3-ethyl-5-methyl- | 136 | C9H12O | 000698-71-5 | 87 |
| 2 | Phenol, 2-ethyl-6-methyl- | 136 | C9H12O | 001687-64-5 | 83 |
| 3 | Phenol, 2-ethyl-4-methyl- | 136 | C9H12O | 003855-26-3 | 83 |
| 4 | Benzene, 1-ethyl-4-methoxy- | 136 | C9H12O | 001515-95-3 | 74 |
| 5 | Phenol, 2,4,5-trimethyl- | 136 | C9H12O | 000496-78-6 | 72 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

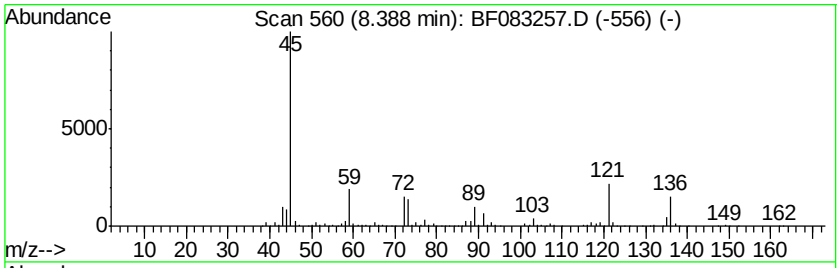
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

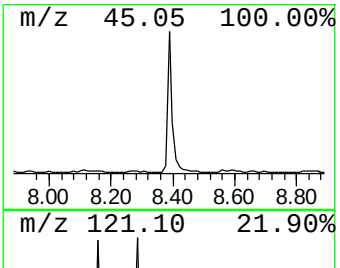
**********

Peak Number 14 Ethanol, 2-[2-(2-ethoxyetho... Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.39 | 11.57 ng | 1186720 | Naphthalene-d8 | 7.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Ethanol, 2-[2-(2-ethoxyethoxy)et... | 178 | C8H18O4 | 000112-50-5 | 80 |
| 2 | Ethane, 1-isothiocyanato-2-methoxy- | 117 | C4H7NOS | 038663-85-3 | 53 |
| 3 | Ethanol, 2,2'-[oxybis(2,1-ethane... | 194 | C8H18O5 | 000112-60-7 | 50 |
| 4 | 2-Propanol, 1-bromo- | 138 | C3H7BrO | 019686-73-8 | 47 |
| 5 | Ethane, 1,1'-oxybis[2-ethoxy-] | 162 | C8H18O3 | 000112-36-7 | 42 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

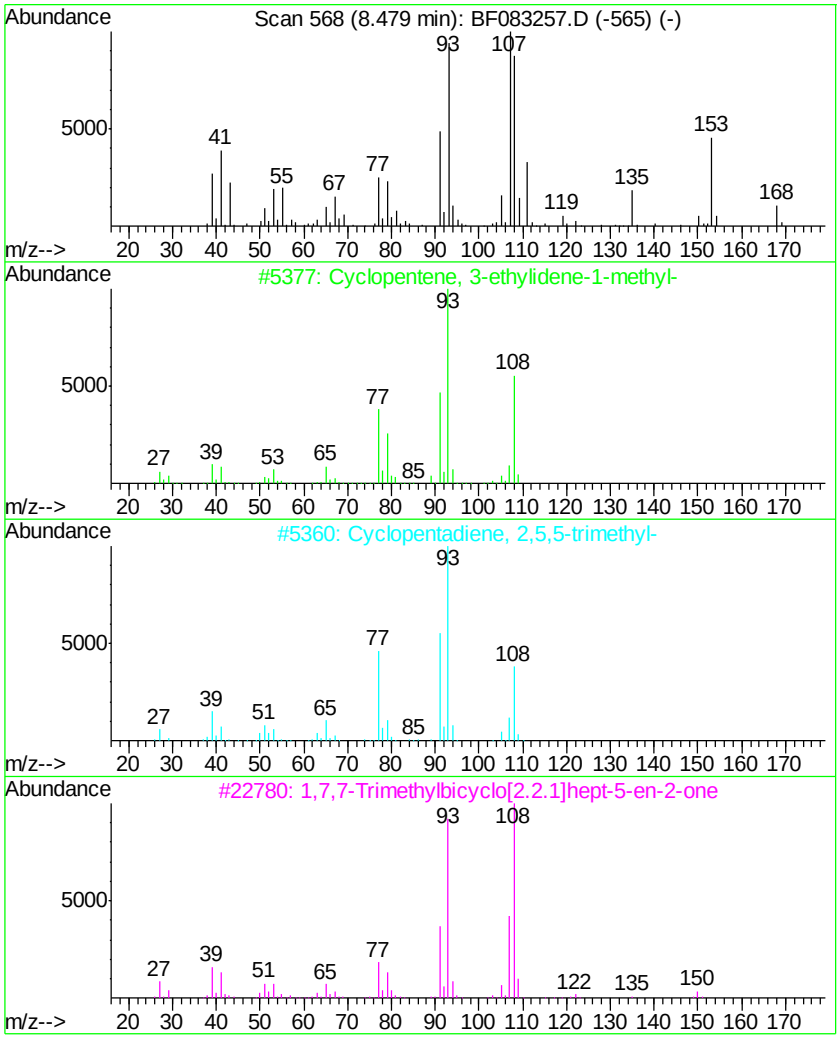
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

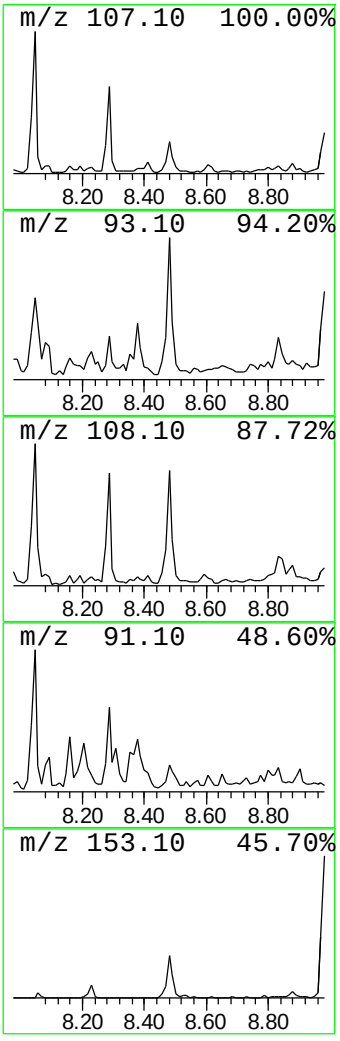
**********

Peak Number 15 Cyclopentene, 3-ethylidene-... Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.48 | 3.45 ng | 353696 | Naphthalene-d8 | 7.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopentene, 3-ethylidene-1-met... | 108 | C8H12 | 062338-00-5 | 87 |
| 2 | Cyclopentadiene, 2,5,5-trimethyl- | 108 | C8H12 | 007086-15-9 | 55 |
| 3 | 1,7,7-Trimethylbicyclo[2.2.1]hep... | 150 | C10H14O | 022516-10-5 | 55 |
| 4 | Camphenone, 6- | 150 | C10H14O | 055659-42-2 | 53 |
| 5 | 1-Methyltricyclo[2.2.1.0(2,6)]he... | 108 | C8H12 | 004601-85-8 | 49 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

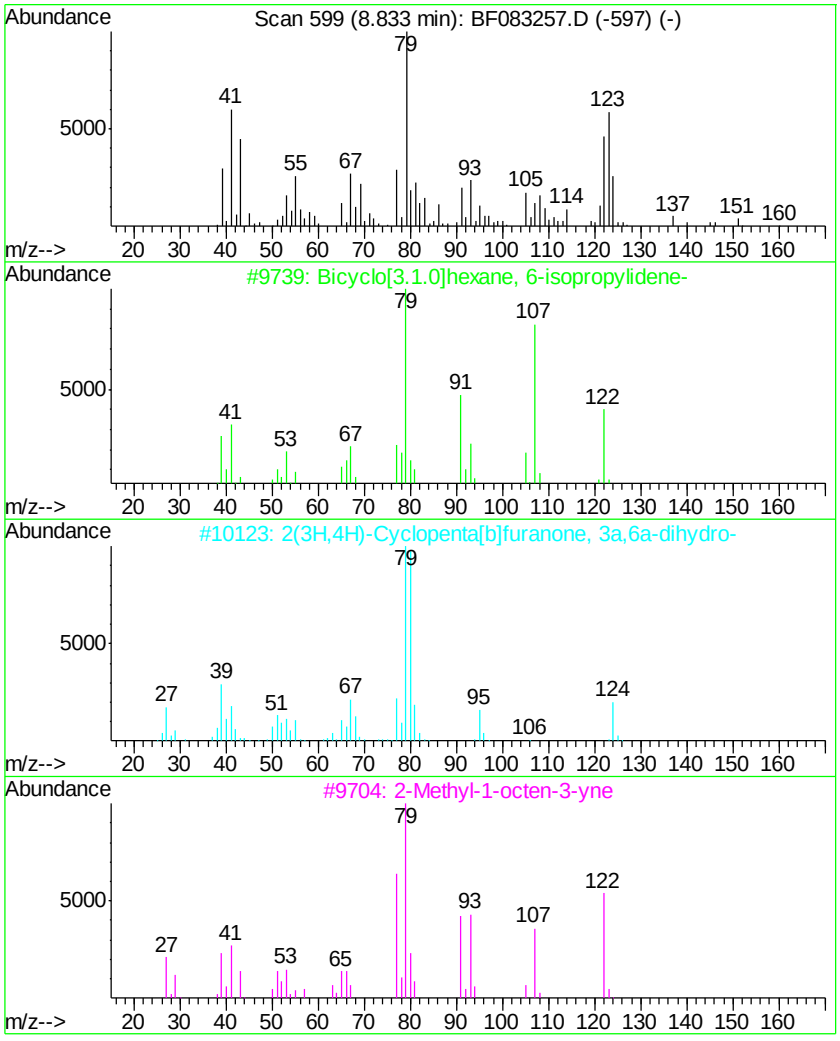
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

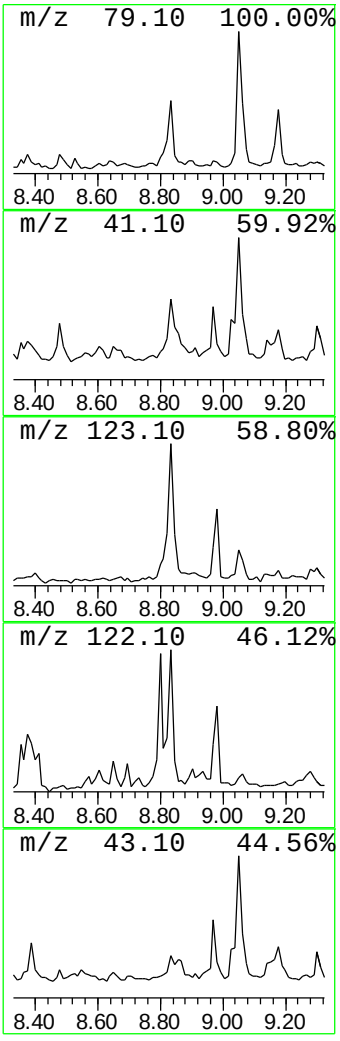
**********

Peak Number 16 Bicyclo[3.1.0]hexane, 6-iso... Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.83 | 5.41 ng | 468780 | Acenaphthene-d10 | 9.64 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Bicyclo[3.1.0]hexane, 6-isopropy... | 122 | C9H14 | 024524-58-1 | 53 |
| 2 | 2(3H,4H)-Cyclopenta[b]furanone, ... | 124 | C7H8O2 | 1000197-37-2 | 38 |
| 3 | 2-Methyl-1-octen-3-yne | 122 | C9H14 | 017603-76-8 | 32 |
| 4 | E,Z-4-Ethylidenecyclohexene | 108 | C8H12 | 016631-66-6 | 27 |
| 5 | Spiro[cyclopropane-1,6'-[3]oxatr... | 136 | C9H12O | 107079-37-8 | 25 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

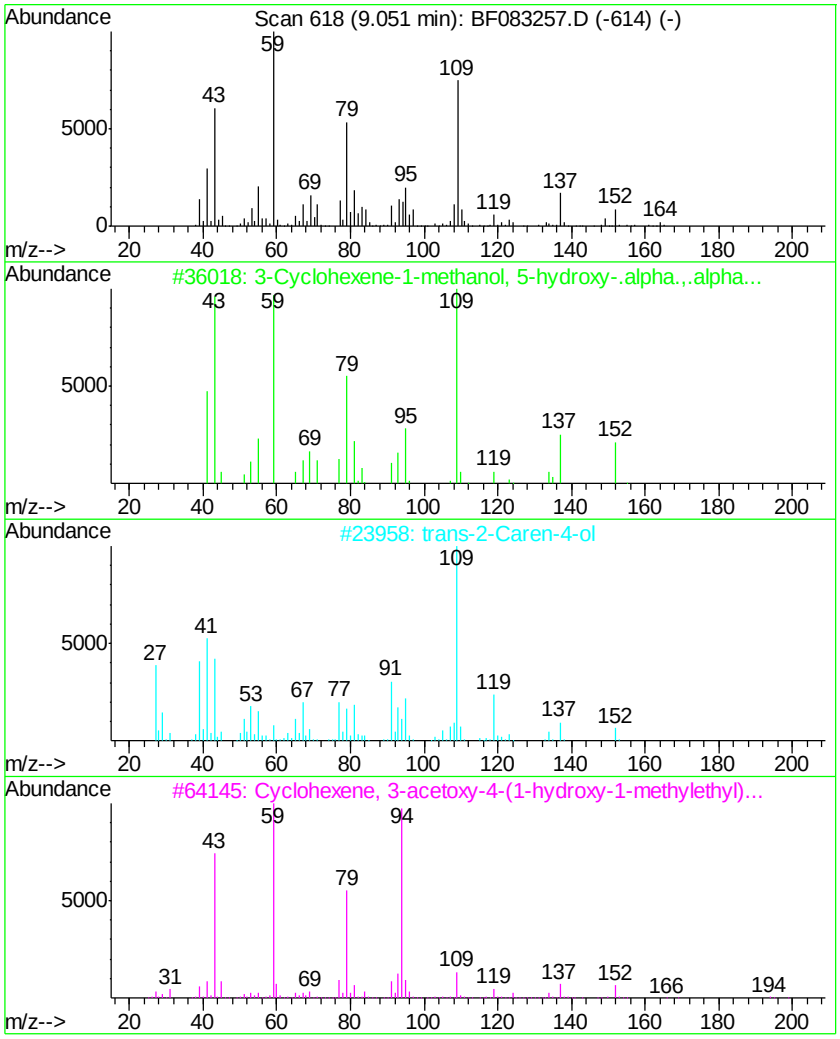
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

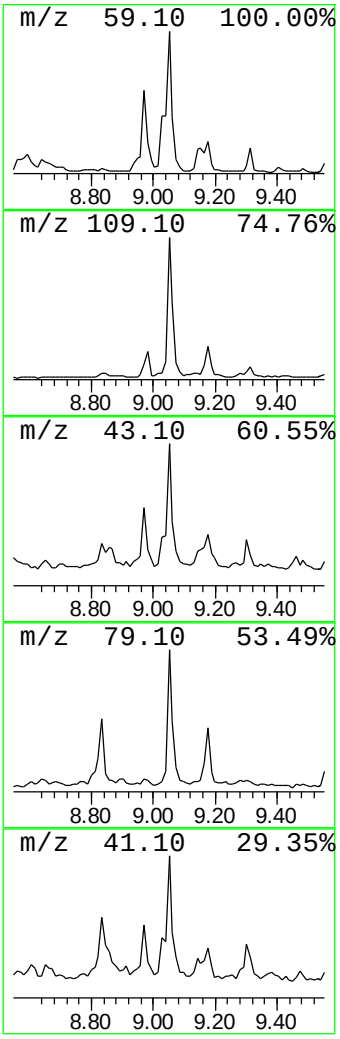
**********

Peak Number 17 3-Cyclohexene-1-methanol, 5... Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.05 | 14.94 ng | 1293480 | Acenaphthene-d10 | 9.64 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Cyclohexene-1-methanol, 5-hydr... | 170 | C10H18O2 | 032226-54-3 | 86 |
| 2 | trans-2-Caren-4-ol | 152 | C10H16O | 004017-82-7 | 45 |
| 3 | Cyclohexene, 3-acetoxy-4-(1-hydr... | 212 | C12H20O3 | 1000196-01-7 | 43 |
| 4 | 2-Hydrazinopyridine | 109 | C5H7N3 | 004930-98-7 | 38 |
| 5 | Ethanone, 1-(1,4-dimethyl-3-cycl... | 152 | C10H16O | 043219-68-7 | 27 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

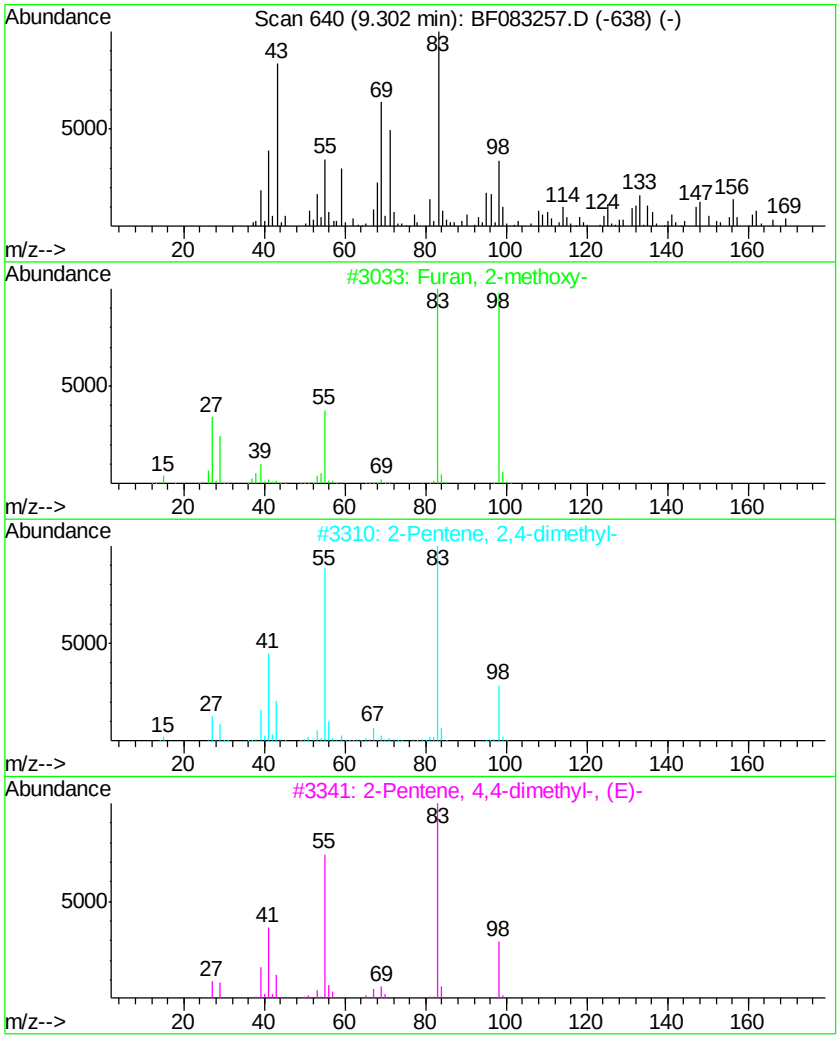
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

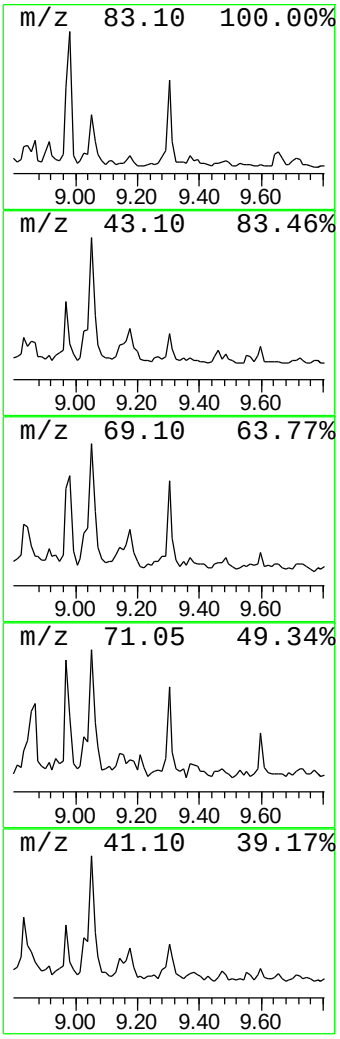
**********

Peak Number 18 unknown9.30 Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.30 | 4.15 ng | 359786 | Acenaphthene-d10 | 9.64 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Furan, 2-methoxy- | 98 | C5H6O2 | 025414-22-6 | 38 |
| 2 | 2-Pentene, 2,4-dimethyl- | 98 | C7H14 | 000625-65-0 | 38 |
| 3 | 2-Pentene, 4,4-dimethyl-, (E)- | 98 | C7H14 | 000690-08-4 | 38 |
| 4 | 3-Hexen-2-one | 98 | C6H10O | 000763-93-9 | 38 |
| 5 | 2-Pentene, 3,4-dimethyl-, (E)- | 98 | C7H14 | 004914-92-5 | 38 |



Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

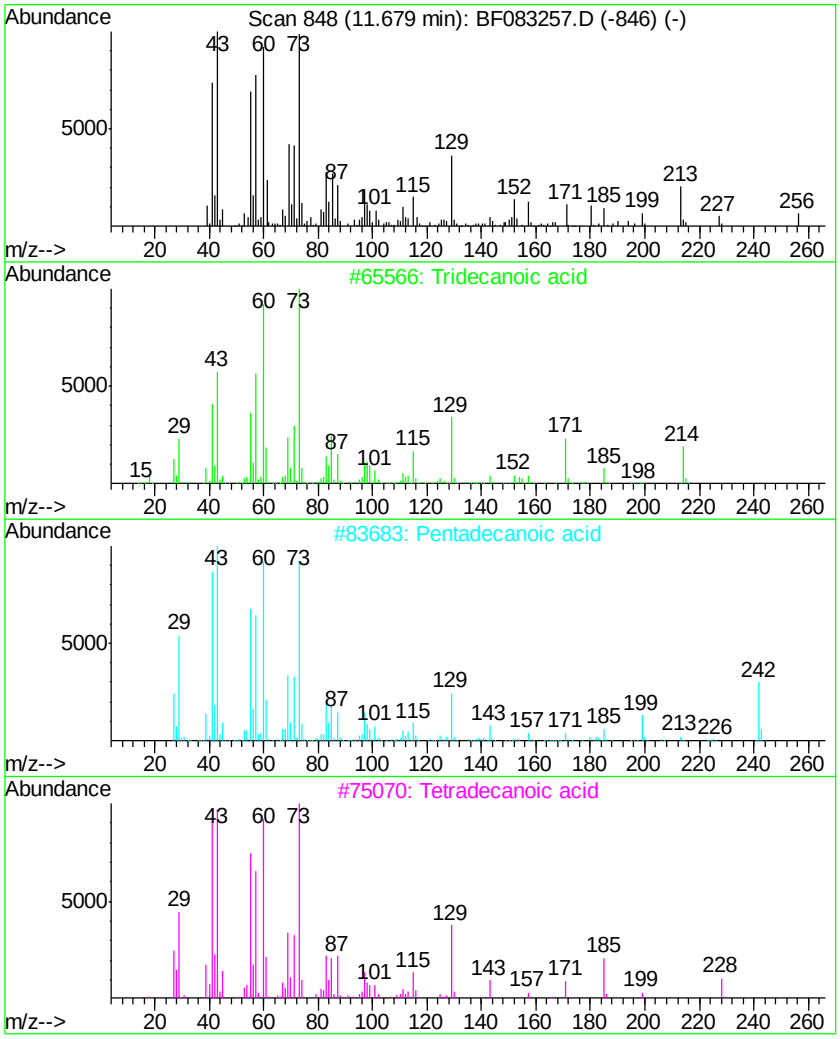
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

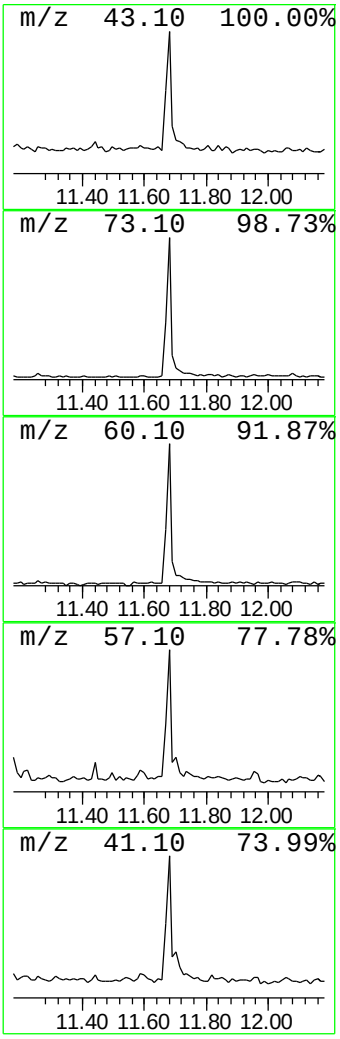
**********

Peak Number 19 Tridecanoic acid Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.68 | 5.12 ng | 429959 | Phenanthrene-d10 | 11.12 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 87 |
| 2 | Pentadecanoic acid | 242 | C15H30O2 | 001002-84-2 | 86 |
| 3 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 86 |
| 4 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 72 |
| 5 | Undecane | 156 | C11H24 | 001120-21-4 | 11 |



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

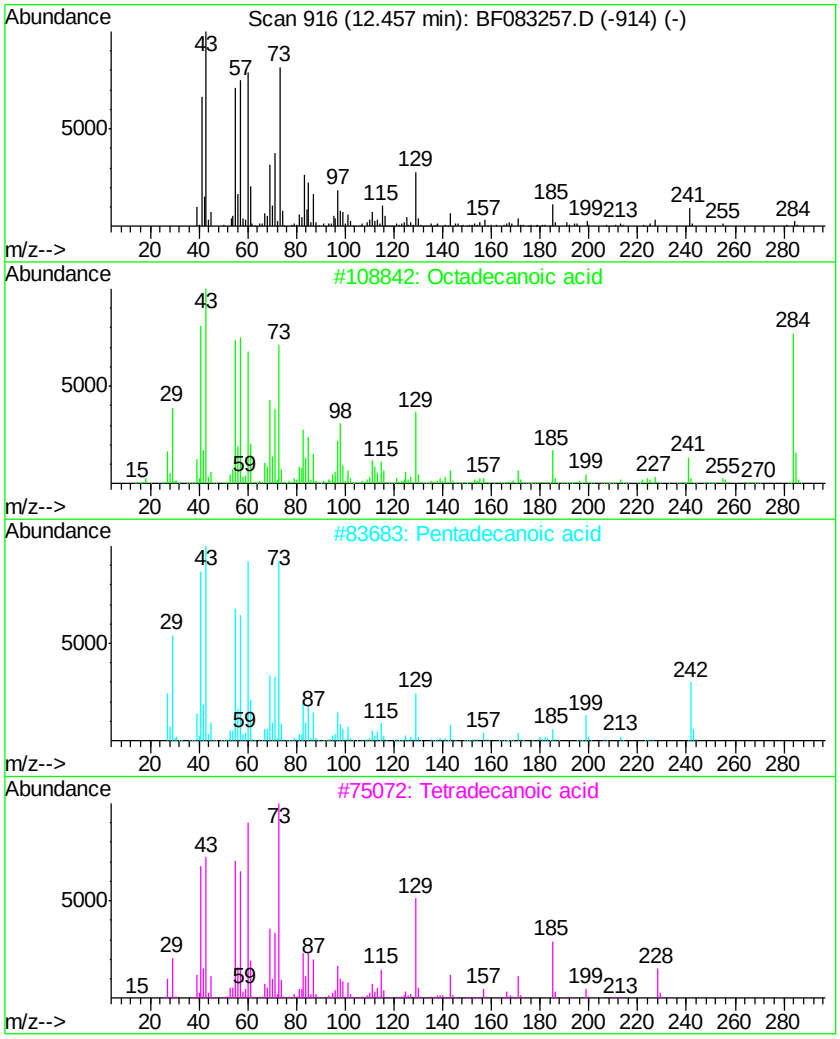
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

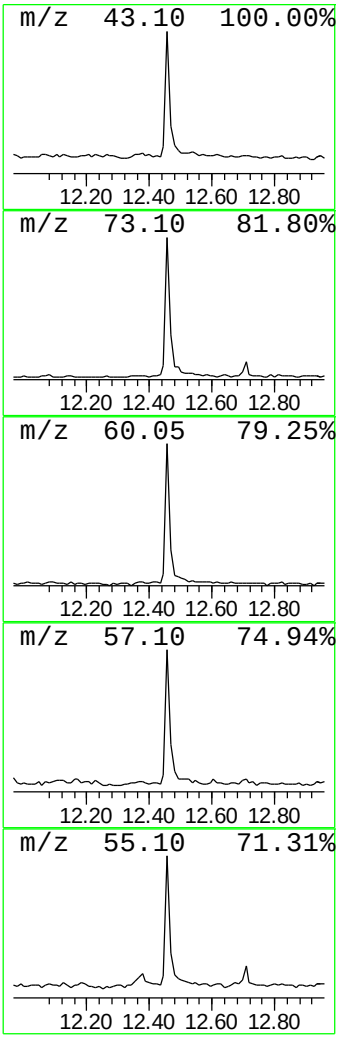
**********

Peak Number 20 Octadecanoic acid Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.46 | 5.59 ng | 421681 | Chrysene-d12 | 13.75 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Octadecanoic acid | 284 | C18H36O2 | 000057-11-4 | 95 |
| 2 | Pentadecanoic acid | 242 | C15H30O2 | 001002-84-2 | 91 |
| 3 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 86 |
| 4 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 64 |
| 5 | 12-Bromododecanoic acid | 278 | C12H23BrO2 | 073367-80-3 | 59 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF112415\
Data File : BF083257.D
Acq On : 25 Nov 2015 1:06
Operator : UM/IZ
Sample : G4527-09
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TP3(GREASE CYLINDER)

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF112115.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 |
| Butanoic acid | 4.10 | 3.2 | ng | 178914 | 1 | 6.60 | 1132220 | 20.0 |
| 2-Pentanone, 4-hy... | 4.75 | 66.6 | ng | 3769370 | 1 | 6.60 | 1132220 | 20.0 |
| Benzene, 1,3,5-tr... | 6.43 | 3.5 | ng | 198975 | 1 | 6.60 | 1132220 | 20.0 |
| Ethanol, 2-(2-eth... | 6.48 | 3.6 | ng | 202011 | 1 | 6.60 | 1132220 | 20.0 |
| Phenol, 3,5-dimet... | 7.72 | 19.6 | ng | 2013850 | 2 | 7.90 | 2052060 | 20.0 |
| Phenol, 2,3-dimet... | 7.78 | 4.6 | ng | 469348 | 2 | 7.90 | 2052060 | 20.0 |
| unknown8.06 | 8.06 | 24.3 | ng | 2495450 | 2 | 7.90 | 2052060 | 20.0 |
| Phenol, 4-ethyl-3... | 8.16 | 4.6 | ng | 471548 | 2 | 7.90 | 2052060 | 20.0 |
| Phenol, 3-ethyl-5... | 8.28 | 8.6 | ng | 886823 | 2 | 7.90 | 2052060 | 20.0 |
| Ethanol, 2-[2-(2-... | 8.39 | 11.6 | ng | 1186720 | 2 | 7.90 | 2052060 | 20.0 |
| Cyclopentene, 3-e... | 8.48 | 3.5 | ng | 353696 | 2 | 7.90 | 2052060 | 20.0 |
| Bicyclo[3.1.0]hex... | 8.83 | 5.4 | ng | 468780 | 3 | 9.64 | 1731880 | 20.0 |
| 3-Cyclohexene-1-m... | 9.05 | 14.9 | ng | 1293480 | 3 | 9.64 | 1731880 | 20.0 |
| unknown9.30 | 9.30 | 4.2 | ng | 359786 | 3 | 9.64 | 1731880 | 20.0 |
| Tridecanoic acid | 11.68 | 5.1 | ng | 429959 | 4 | 11.12 | 1679390 | 20.0 |
| Octadecanoic acid | 12.46 | 5.6 | ng | 421681 | 5 | 13.75 | 1508560 | 20.0 |