LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

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-BF071317.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 | 4.116 | 357 | 362 | 371 | rBV | 212786 | 329440 | 3.71% | 0.415% |
| 2 | 4.593 | 439 | 443 | 447 | rBV | 141374 | 158279 | 1.78% | 0.199% |
| 3 | 4.687 | 455 | 459 | 465 | rVB | 261097 | 344720 | 3.88% | 0.434% |
| 4 | 4.746 | 465 | 469 | 475 | rBV | 273080 | 346720 | 3.90% | 0.437% |
| 5 | 4.969 | 502 | 507 | 511 | rBV2 | 324303 | 452638 | 5.09% | 0.570% |
| 6 | 5.069 | 520 | 524 | 526 | rBV | 349267 | 393967 | 4.43% | 0.496% |
| 7 | 5.093 | 526 | 528 | 534 | rVB | 428362 | 439478 | 4.95% | 0.554% |
| 8 | 5.146 | 534 | 537 | 539 | rBV | 113622 | 118176 | 1.33% | 0.149% |
| 9 | 5.175 | 539 | 542 | 543 | rVV | 550808 | 555643 | 6.25% | 0.700% |
| 10 | 5.193 | 543 | 545 | 553 | rVB | 871640 | 943584 | 10.62% | 1.188% |
| 11 | 5.257 | 553 | 556 | 563 | rVB2 | 126904 | 187208 | 2.11% | 0.236% |
| 12 | 5.351 | 567 | 572 | 576 | rBV2 | 426900 | 647270 | 7.29% | 0.815% |
| 13 | 5.393 | 576 | 579 | 581 | rBV | 287941 | 229644 | 2.58% | 0.289% |
| 14 | 5.422 | 581 | 584 | 594 | rVB2 | 514477 | 1053284 | 11.86% | 1.327% |
| 15 | 5.510 | 594 | 599 | 610 | rBV | 2579632 | 3300948 | 37.16% | 4.157% |
| 16 | 5.610 | 610 | 616 | 620 | rBV2 | 549553 | 668189 | 7.52% | 0.842% |
| 17 | 5.675 | 620 | 627 | 635 | rBV3 | 266853 | 716240 | 8.06% | 0.902% |
| 18 | 5.751 | 635 | 640 | 646 | rBV3 | 800230 | 1191965 | 13.42% | 1.501% |
| 19 | 5.810 | 646 | 650 | 654 | rBV3 | 333164 | 508874 | 5.73% | 0.641% |
| 20 | 5.857 | 654 | 658 | 664 | rBV2 | 2045957 | 3524948 | 39.68% | 4.440% |
| 21 | 5.916 | 664 | 668 | 671 | rBV2 | 824145 | 863700 | 9.72% | 1.088% |
| 22 | 6.051 | 685 | 691 | 696 | rBV4 | 762333 | 1487805 | 16.75% | 1.874% |
| 23 | 6.098 | 696 | 699 | 700 | rBV | 341165 | 310963 | 3.50% | 0.392% |
| 24 | 6.122 | 700 | 703 | 706 | rVV3 | 1549803 | 2410605 | 27.13% | 3.036% |
| 25 | 6.157 | 706 | 709 | 715 | rVV2 | 1815069 | 3075862 | 34.62% | 3.874% |
| 26 | 6.210 | 715 | 718 | 722 | rVV | 2148838 | 2605237 | 29.32% | 3.281% |
| 27 | 6.245 | 722 | 724 | 728 | rVV2 | 690354 | 832649 | 9.37% | 1.049% |
| 28 | 6.292 | 729 | 732 | 739 | rVB | 1436435 | 2154792 | 24.25% | 2.714% |
| 29 | 6.351 | 739 | 742 | 743 | rBV2 | 823338 | 853214 | 9.60% | 1.075% |
| 30 | 6.375 | 743 | 746 | 750 | rVB3 | 755461 | 1018760 | 11.47% | 1.283% |
| 31 | 6.434 | 754 | 756 | 757 | rBV | 227183 | 143642 | 1.62% | 0.181% |
| 32 | 6.469 | 757 | 762 | 770 | rBV | 4462733 | 8884212 | 100.00% | 11.189% |
| 33 | 6.610 | 783 | 786 | 789 | rBV2 | 577414 | 663142 | 7.46% | 0.835% |
| 34 | 6.645 | 789 | 792 | 794 | rBV2 | 2479287 | 2644370 | 29.76% | 3.331% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

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-BF071317.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 6.675 | 794 | 797 | 807 | rVB3 | 1439377 | 3416668 | 38.46% | 4.303% |
| 36 | 6.775 | 810 | 814 | 823 | rVB6 | 1249835 | 2809266 | 31.62% | 3.538% |
| 37 | 6.869 | 827 | 830 | 831 | rBV3 | 465266 | 470665 | 5.30% | 0.593% |
| 38 | 6.898 | 831 | 835 | 839 | rBV2 | 1434299 | 2773946 | 31.22% | 3.494% |
| 39 | 6.939 | 839 | 842 | 845 | rBV2 | 1762066 | 2483258 | 27.95% | 3.128% |
| 40 | 7.016 | 852 | 855 | 865 | rVB3 | 1740587 | 3383749 | 38.09% | 4.262% |
| 41 | 7.163 | 875 | 880 | 882 | rBV2 | 1530924 | 2647961 | 29.81% | 3.335% |
| 42 | 7.245 | 889 | 894 | 897 | rBV | 2448351 | 4844525 | 54.53% | 6.102% |
| 43 | 12.986 | 1865 | 1870 | 1872 | rVB | 2188697 | 2803181 | 31.55% | 3.531% |
| 44 | 13.310 | 1920 | 1925 | 1928 | rVB | 2430570 | 2759794 | 31.06% | 3.476% |
| 45 | 13.621 | 1975 | 1978 | 1987 | rVB | 2386539 | 2887715 | 32.50% | 3.637% |
| 46 | 13.745 | 1996 | 1999 | 2004 | rVB2 | 833108 | 1005162 | 11.31% | 1.266% |
| 47 | 13.927 | 2027 | 2030 | 2034 | rVB | 1334032 | 1299632 | 14.63% | 1.637% |
| 48 | 14.227 | 2078 | 2081 | 2084 | rBV | 753874 | 662956 | 7.46% | 0.835% |
| 49 | 14.521 | 2128 | 2131 | 2137 | rVB | 424289 | 495408 | 5.58% | 0.624% |
| 50 | 14.821 | 2179 | 2182 | 2187 | rVB | 223876 | 259002 | 2.92% | 0.326% |
| 51 | 15.110 | 2228 | 2231 | 2234 | rVB | 292790 | 334875 | 3.77% | 0.422% |

Sum of corrected areas: 79397931

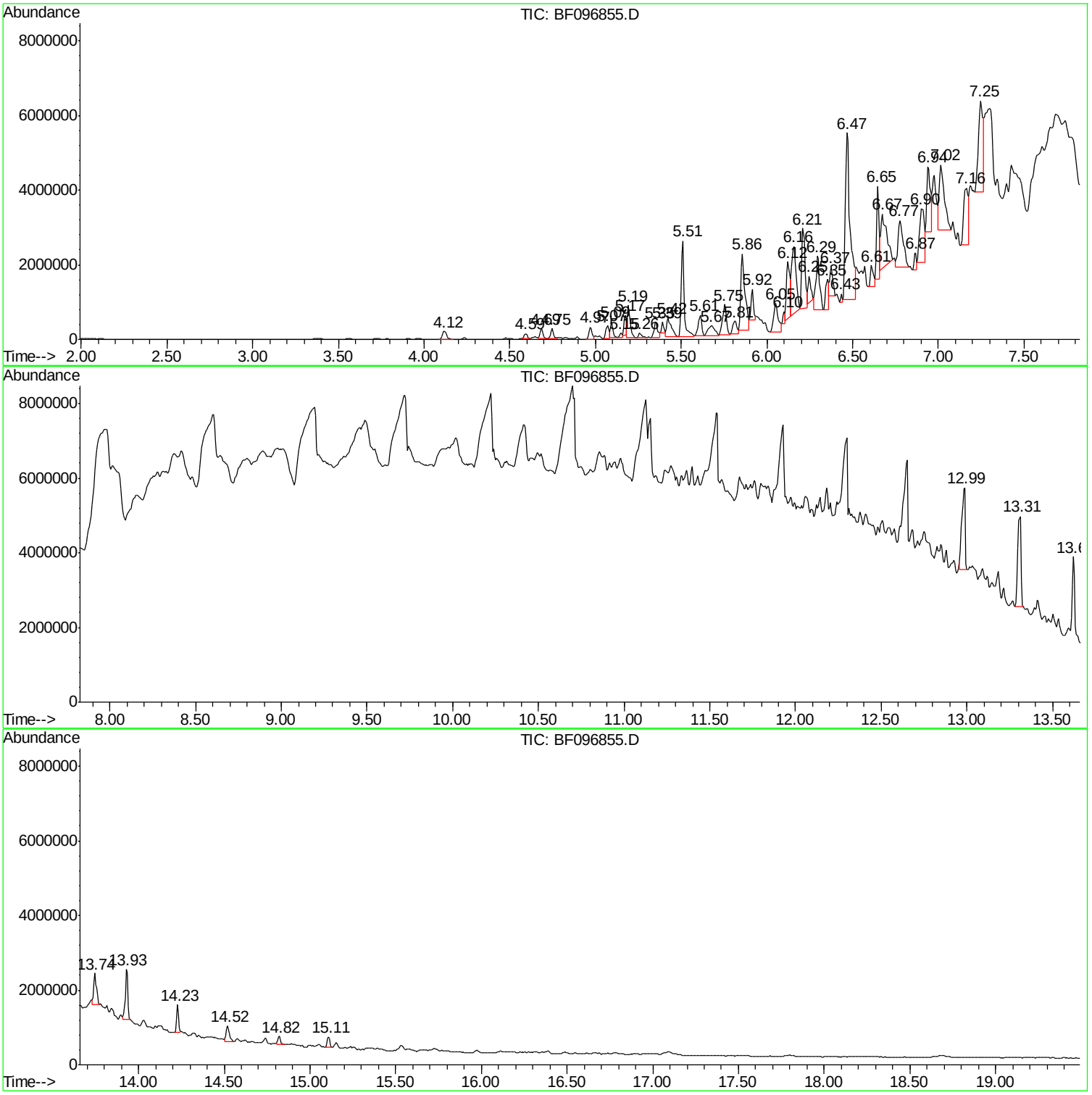
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

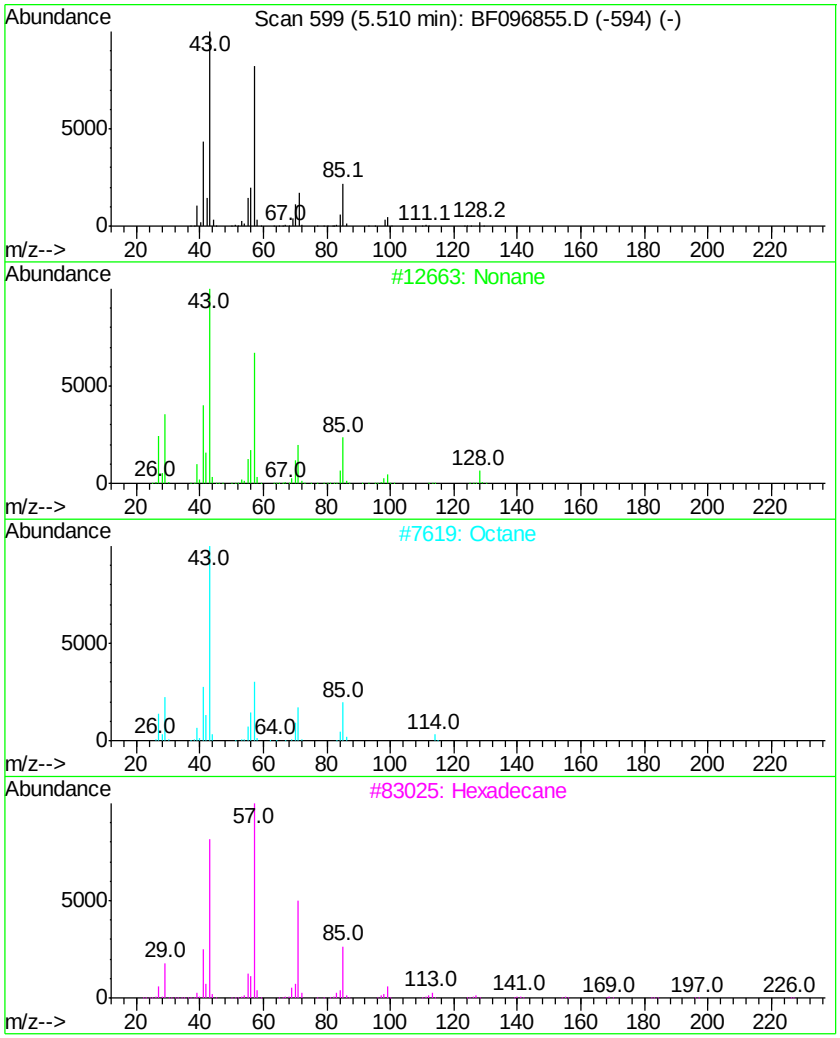
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

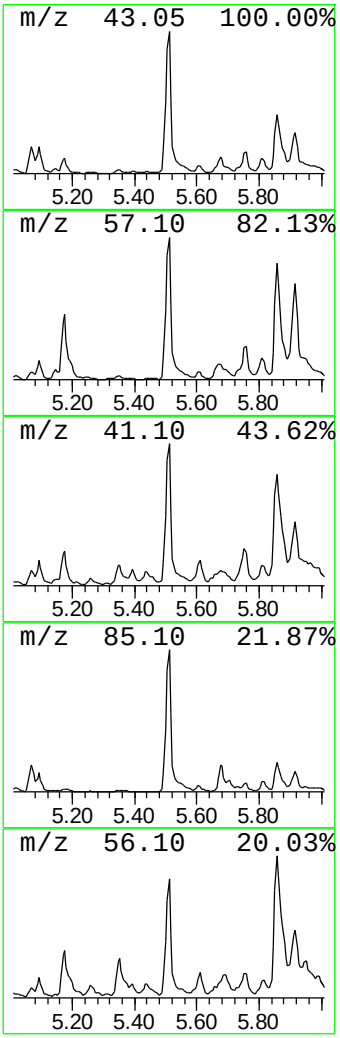
**********

Peak Number 2 Nonane Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.51 | 99.55 ng | 3300950 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Nonane | 128 | C9H20 | 000111-84-2 | 90 |
| 2 | Octane | 114 | C8H18 | 000111-65-9 | 64 |
| 3 | Hexadecane | 226 | C16H34 | 000544-76-3 | 53 |
| 4 | Hexane, 2,4-dimethyl- | 114 | C8H18 | 000589-43-5 | 53 |
| 5 | Heptane, 4-ethyl- | 128 | C9H20 | 002216-32-2 | 53 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

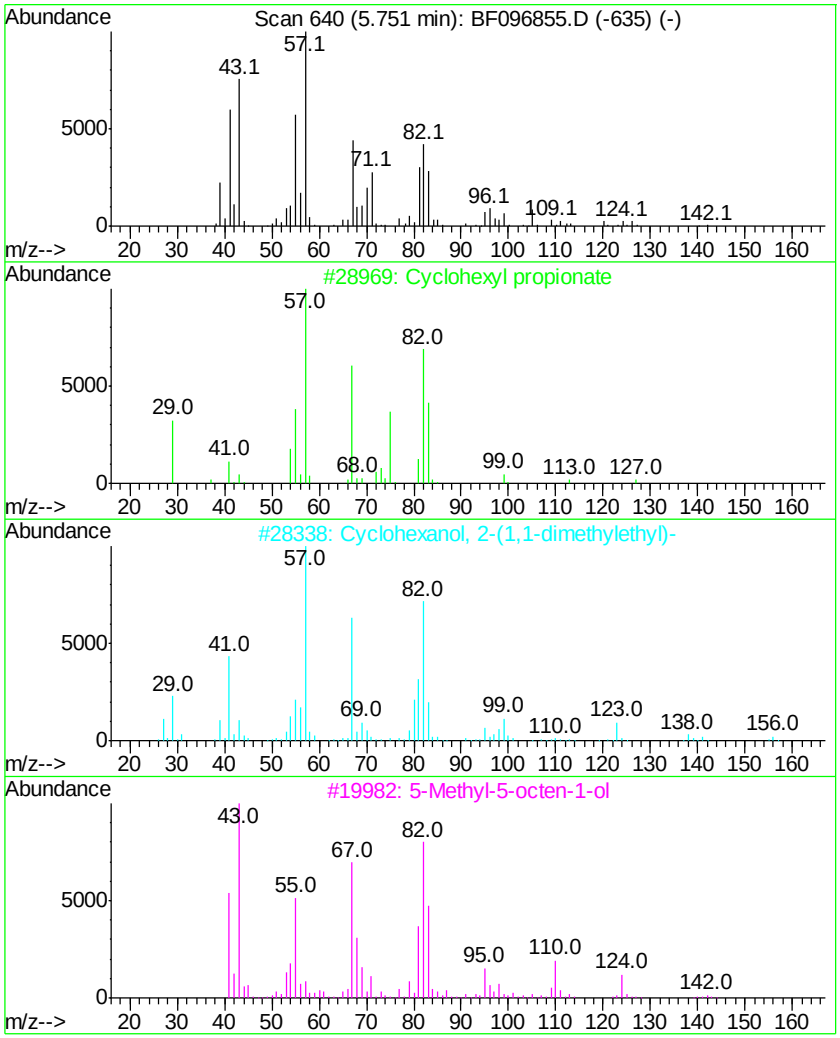
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

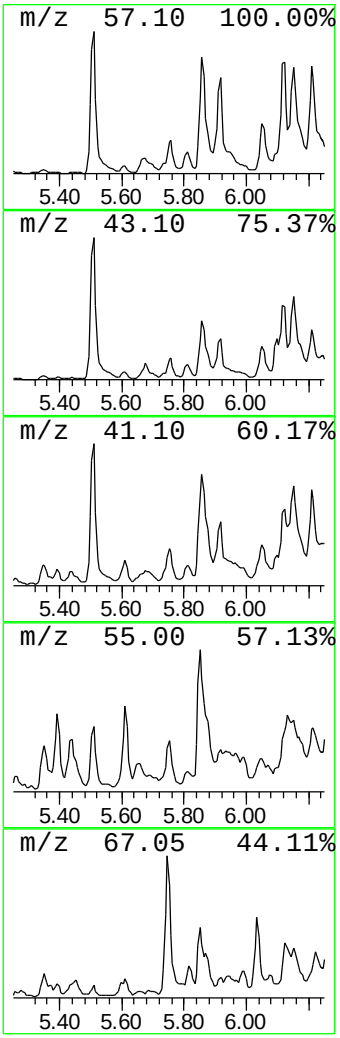
**********

Peak Number 3 Cyclohexyl propionate Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.75 | 35.95 ng | 1191970 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclohexyl propionate | 156 | C9H16O2 | 006222-35-1 | 53 |
| 2 | Cyclohexanol, 2-(1,1-dimethyleth... | 156 | C10H20O | 013491-79-7 | 50 |
| 3 | 5-Methyl-5-octen-1-ol | 142 | C9H18O | 1000132-13-6 | 47 |
| 4 | 2-Hexen-1-ol, (Z)- | 100 | C6H12O | 000928-94-9 | 43 |
| 5 | Cyclohexane, isocyanato- | 125 | C7H11NO | 003173-53-3 | 38 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

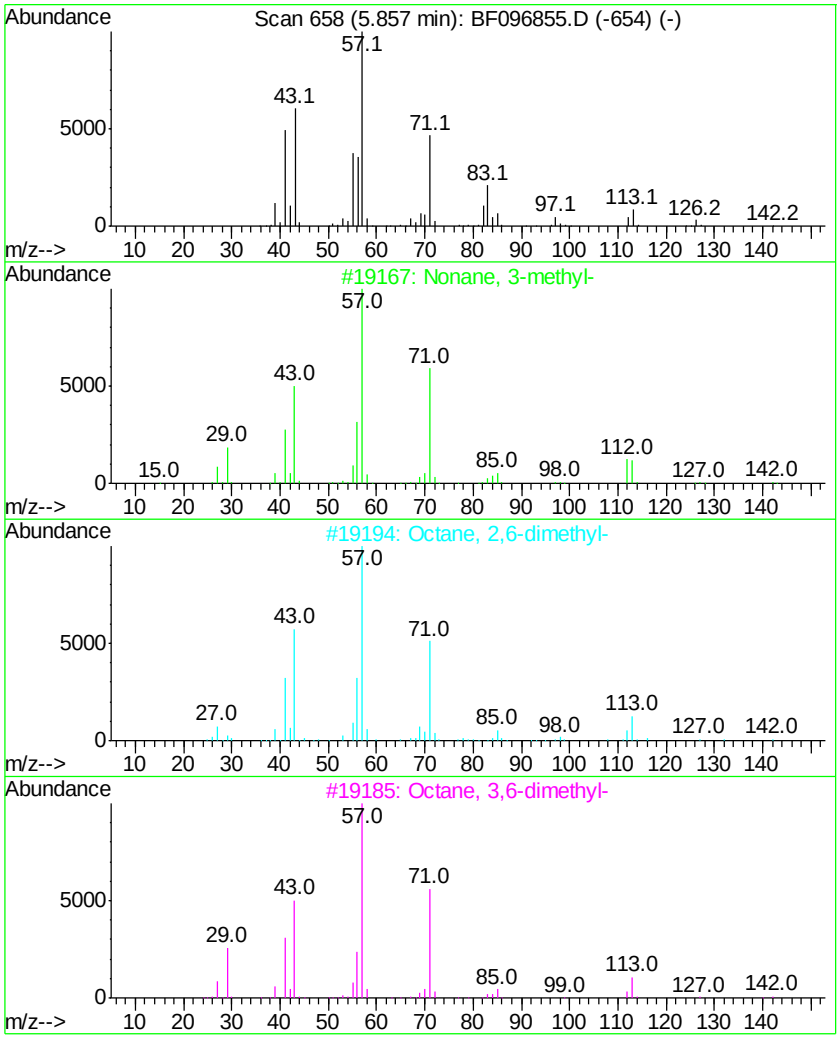
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

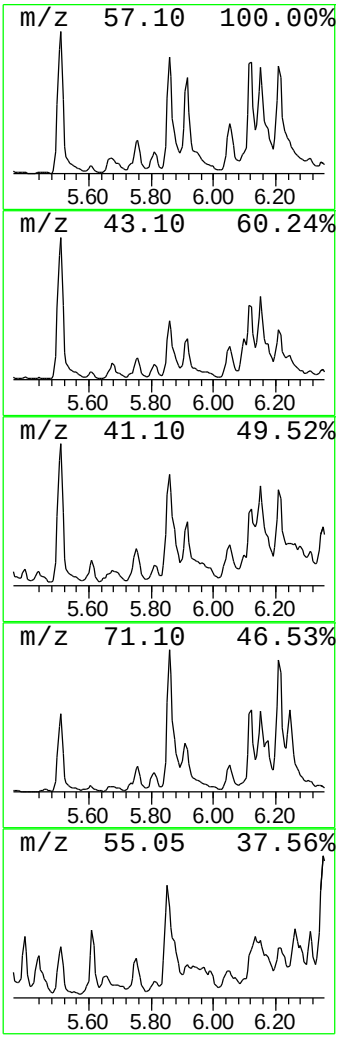
**********

Peak Number 4 Nonane, 3-methyl- Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.86 | 106.31 ng | 3524950 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Nonane, 3-methyl- | 142 | C10H22 | 005911-04-6 | 59 |
| 2 | Octane, 2,6-dimethyl- | 142 | C10H22 | 002051-30-1 | 58 |
| 3 | Octane, 3,6-dimethyl- | 142 | C10H22 | 015869-94-0 | 53 |
| 4 | Undecane, 2,6-dimethyl- | 184 | C13H28 | 017301-23-4 | 50 |
| 5 | Sulfurous acid, butyl 2-ethylhex... | 250 | C12H26O3S | 1000309-18-8 | 50 |



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

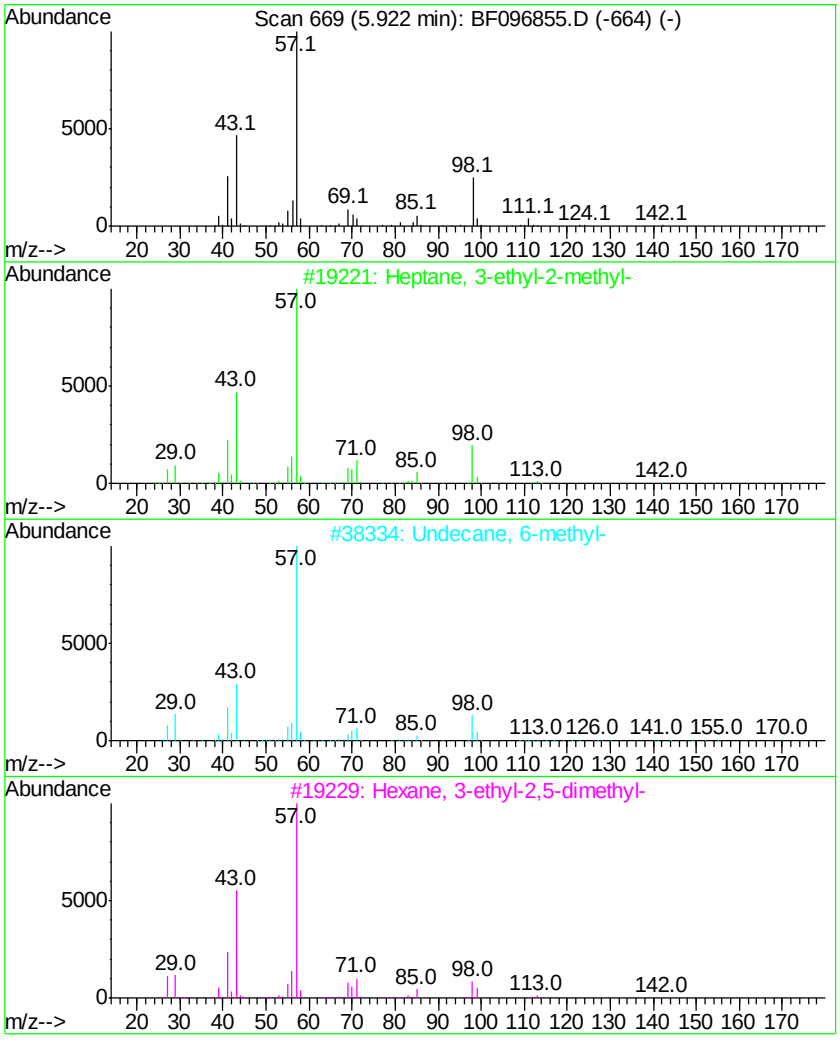
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

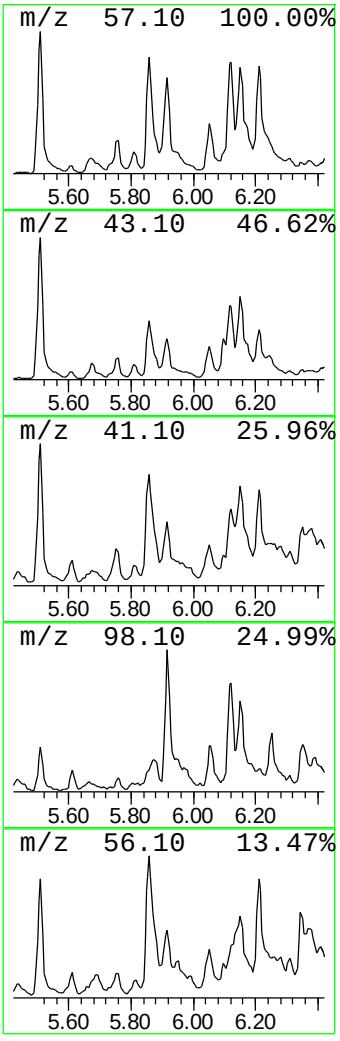
**********

Peak Number 5 Heptane, 3-ethyl-2-methyl- Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.92 | 26.05 ng | 863700 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Heptane, 3-ethyl-2-methyl- | 142 | C10H22 | 014676-29-0 | 90 |
| 2 | Undecane, 6-methyl- | 170 | C12H26 | 017302-33-9 | 59 |
| 3 | Hexane, 3-ethyl-2,5-dimethyl- | 142 | C10H22 | 052897-04-8 | 58 |
| 4 | Decane, 2,5-dimethyl- | 170 | C12H26 | 017312-50-4 | 53 |
| 5 | Tridecane, 2,2,4,10,12,12-hexame... | 394 | C28H58 | 003035-75-4 | 50 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

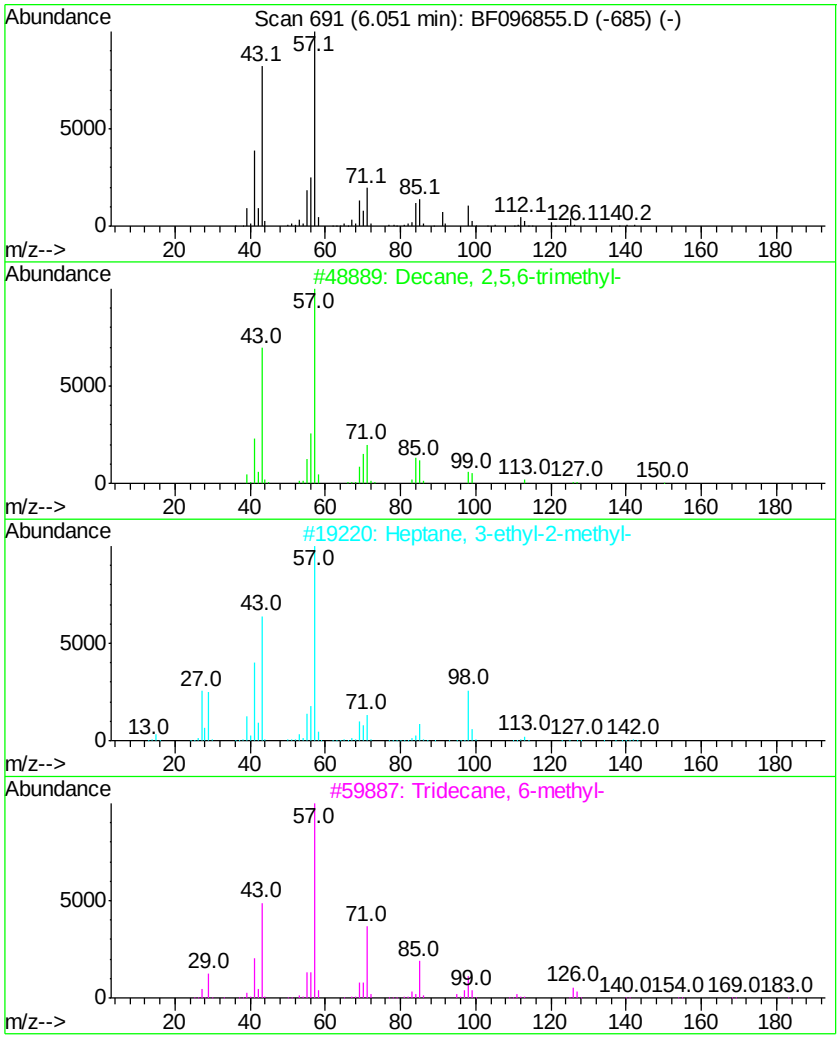
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

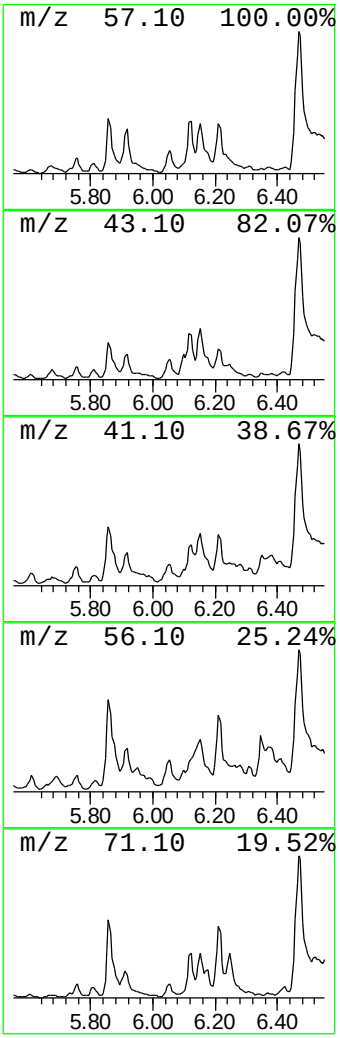
**********

Peak Number 6 Decane, 2,5,6-trimethyl- Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.05 | 44.87 ng | 1487810 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Decane, 2,5,6-trimethyl- | 184 | C13H28 | 062108-23-0 | 86 |
| 2 | Heptane, 3-ethyl-2-methyl- | 142 | C10H22 | 014676-29-0 | 59 |
| 3 | Tridecane, 6-methyl- | 198 | C14H30 | 013287-21-3 | 53 |
| 4 | Hexane, 2,2,3,3-tetramethyl- | 142 | C10H22 | 013475-81-5 | 53 |
| 5 | Sulfurous acid, hexyl heptyl ester | 264 | C13H28O3S | 1000309-12-9 | 50 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

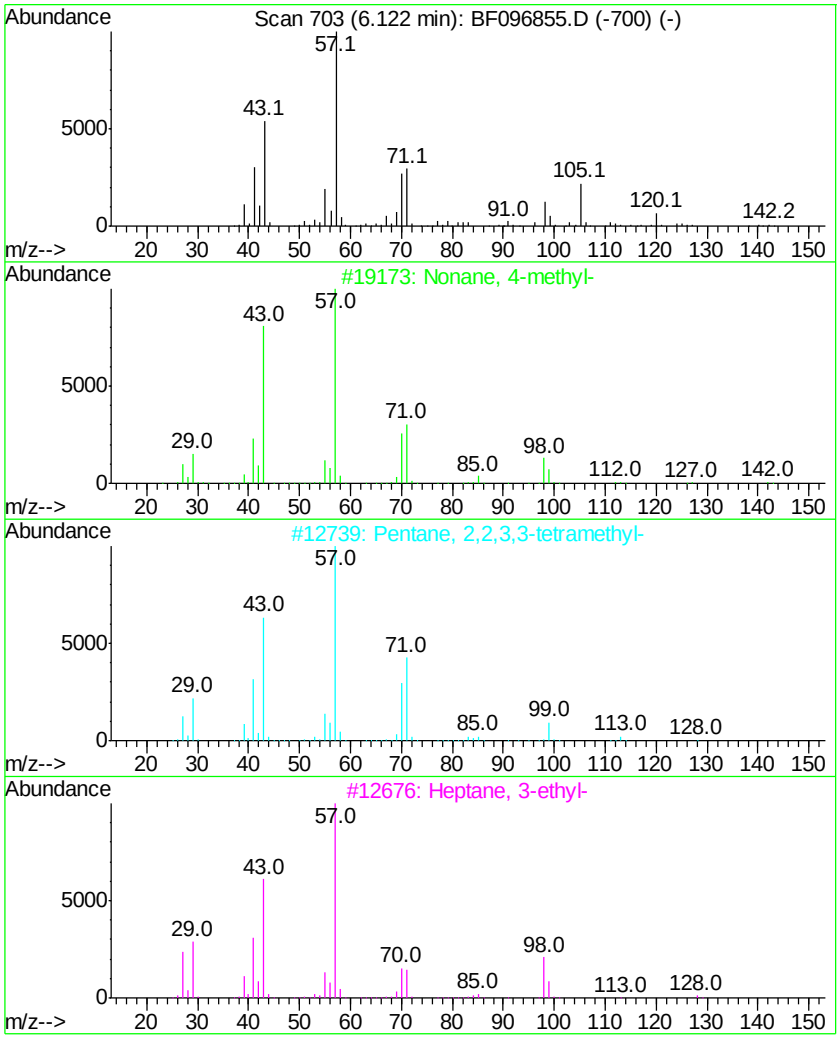
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

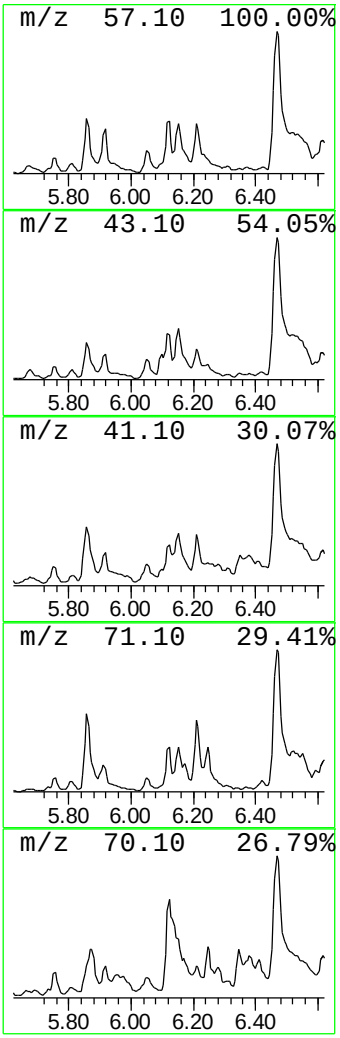
**********

Peak Number 7 Nonane, 4-methyl- Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.12 | 72.70 ng | 2410610 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Nonane, 4-methyl- | 142 | C10H22 | 017301-94-9 | 58 |
| 2 | Pentane, 2,2,3,3-tetramethyl- | 128 | C9H20 | 007154-79-2 | 43 |
| 3 | Heptane, 3-ethyl- | 128 | C9H20 | 015869-80-4 | 43 |
| 4 | Nonane, 2-methyl- | 142 | C10H22 | 000871-83-0 | 43 |
| 5 | Heptane, 2,3,4-trimethyl- | 142 | C10H22 | 052896-95-4 | 43 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

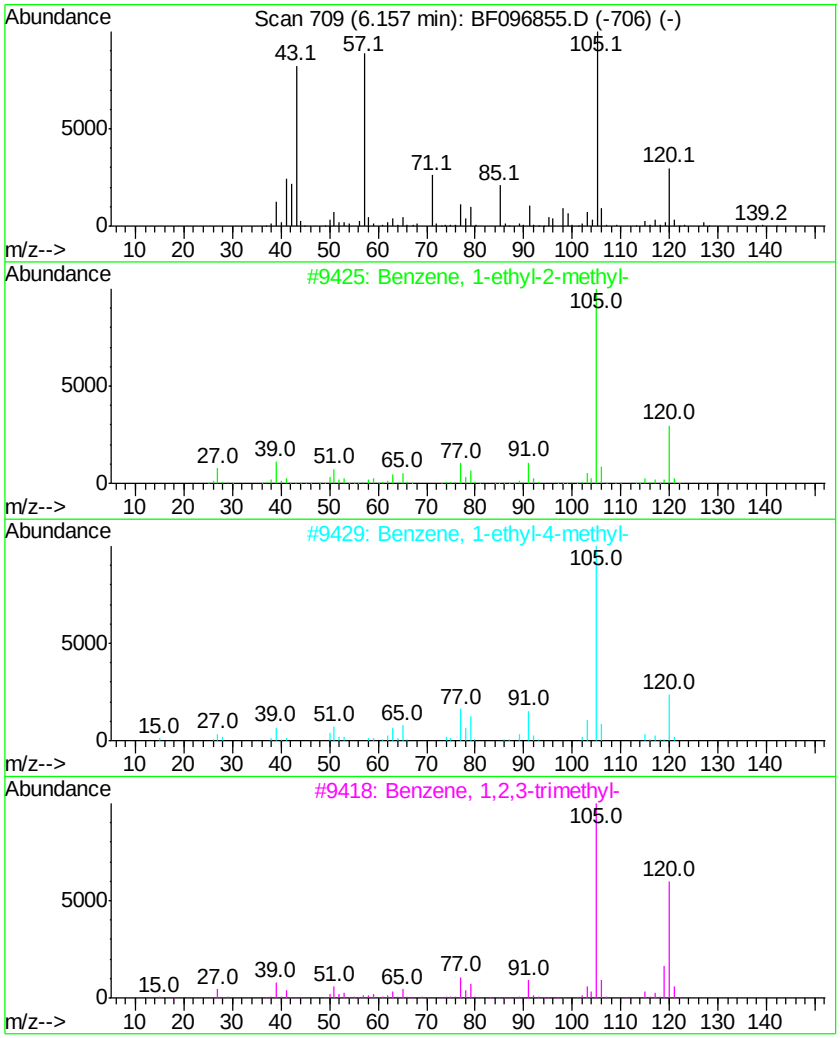
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

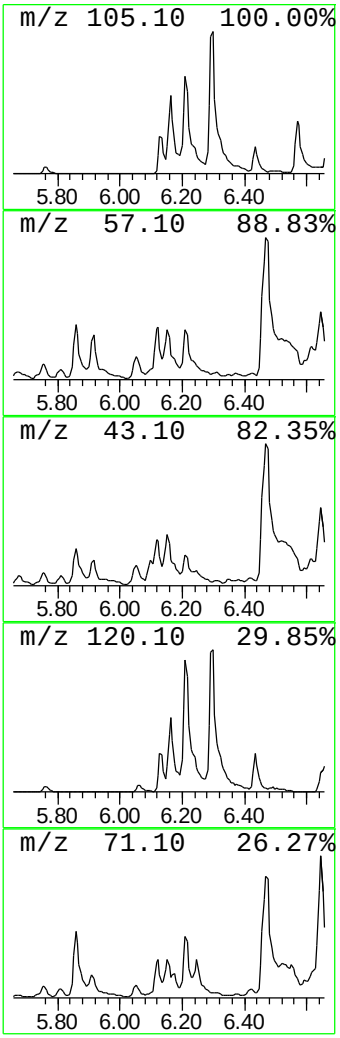
**********

Peak Number 8 Benzene, 1-ethyl-2-methyl- Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.16 | 92.77 ng | 3075860 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1-ethyl-2-methyl- | 120 | C9H12 | 000611-14-3 | 70 |
| 2 | Benzene, 1-ethyl-4-methyl- | 120 | C9H12 | 000622-96-8 | 38 |
| 3 | Benzene, 1,2,3-trimethyl- | 120 | C9H12 | 000526-73-8 | 38 |
| 4 | Mesitylene | 120 | C9H12 | 000108-67-8 | 38 |
| 5 | Benzene, (1-methylethyl)- | 120 | C9H12 | 000098-82-8 | 38 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

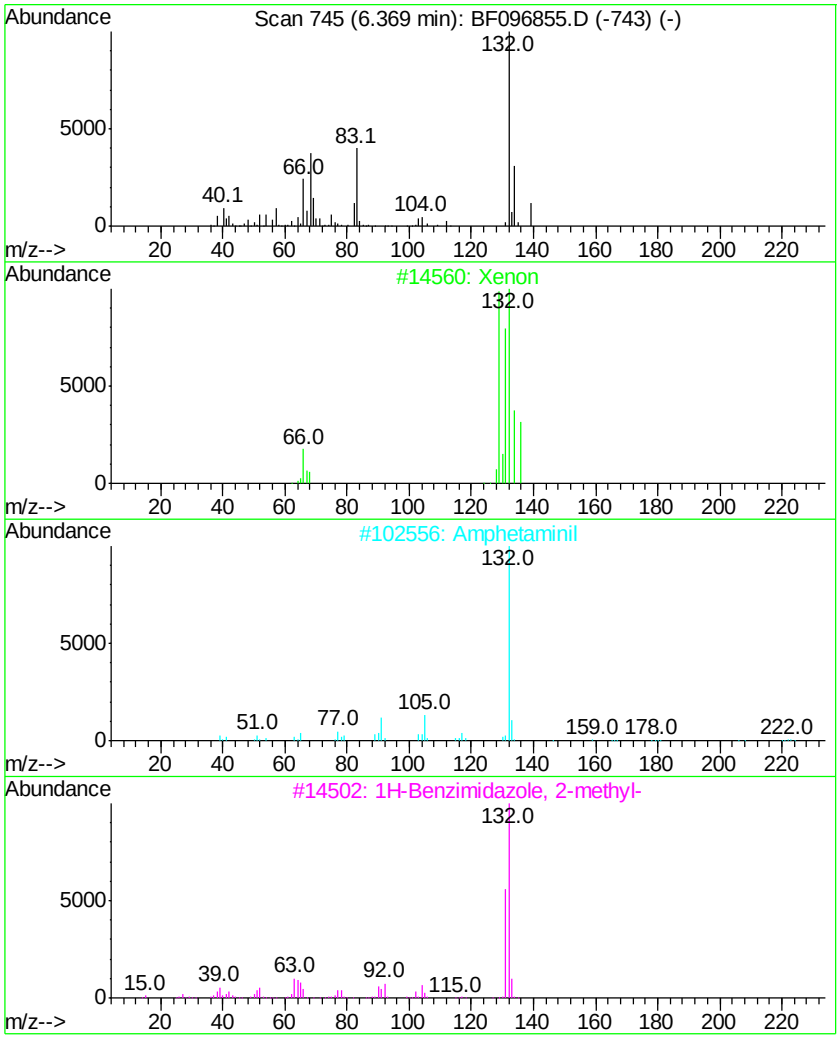
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

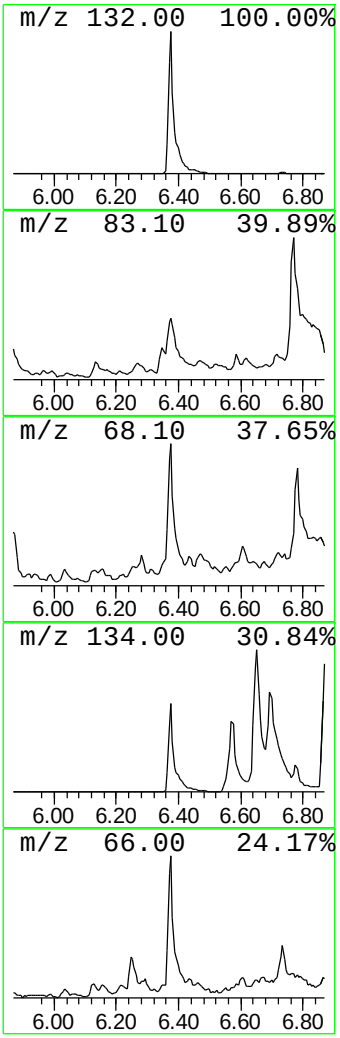
**********

Peak Number 9 unknown6.37 Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.37 | 30.73 ng | 1018760 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Xenon | 132 | Xe | 007440-63-3 | 45 |
| 2 | Amphetaminil | 250 | C17H18N2 | 017590-01-1 | 10 |
| 3 | 1H-Benzimidazole, 2-methyl- | 132 | C8H8N2 | 000615-15-6 | 9 |
| 4 | 4-Methylpyrrolo[1,2-a]pyrazine | 132 | C8H8N2 | 064608-60-2 | 9 |
| 5 | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO | 031357-76-3 | 9 |



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Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

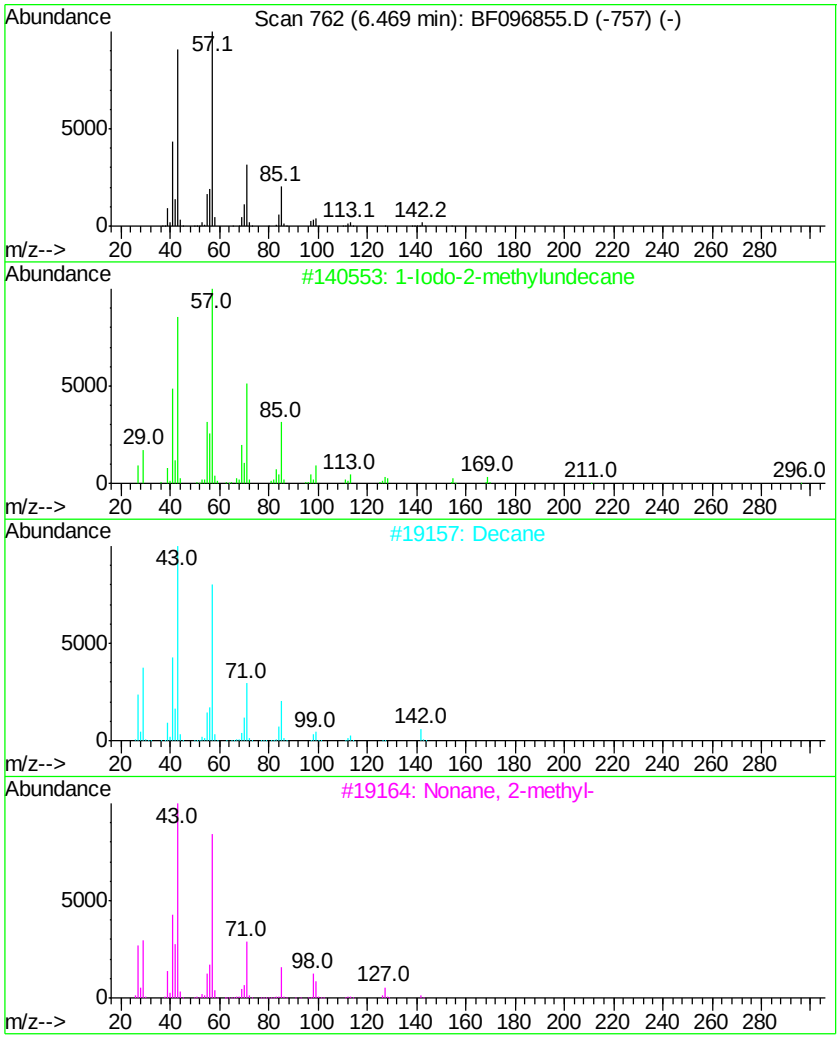
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

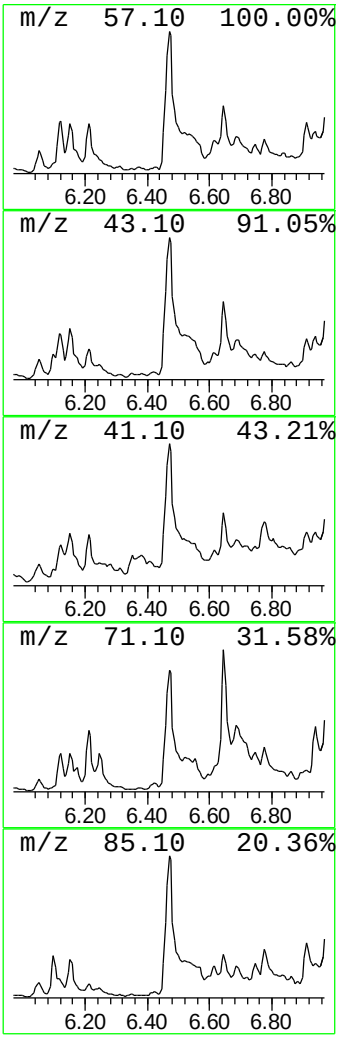
**********

Peak Number 10 1-Iodo-2-methylundecane Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.47 | 267.94 ng | 8884210 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Iodo-2-methylundecane | 296 | C12H25I | 073105-67-6 | 83 |
| 2 | Decane | 142 | C10H22 | 000124-18-5 | 78 |
| 3 | Nonane, 2-methyl- | 142 | C10H22 | 000871-83-0 | 72 |
| 4 | Pentadecane | 212 | C15H32 | 000629-62-9 | 72 |
| 5 | Heptadecane, 2,6,10,14-tetramethyl- | 296 | C21H44 | 018344-37-1 | 64 |



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Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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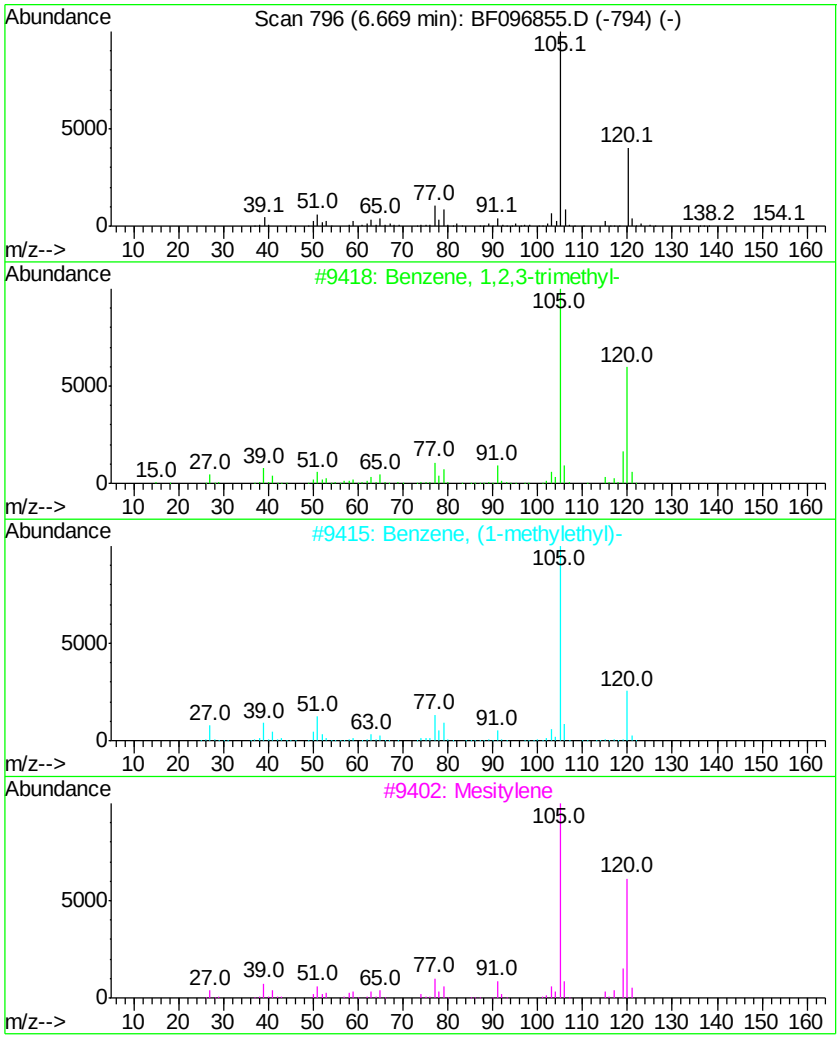
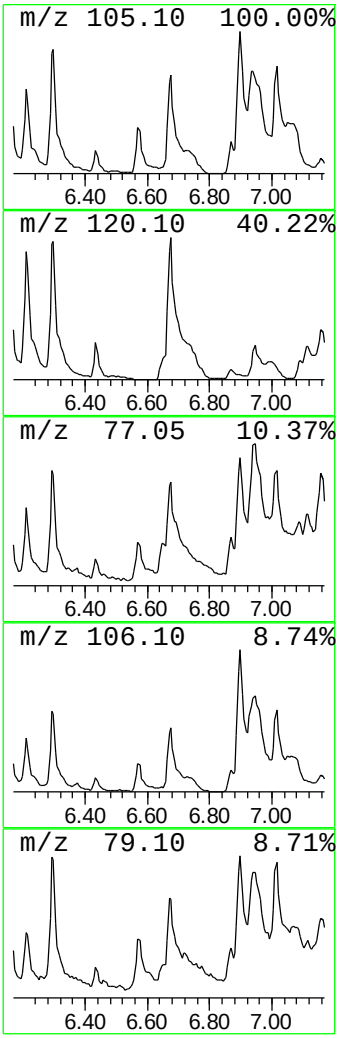
Peak Number 11 Benzene, 1,2,3-trimethyl- Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.67 | 103.05 ng | 3416670 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1,2,3-trimethyl- | 120 | C9H12 | 000526-73-8 | 90 |
| 2 | Benzene, (1-methylethyl)- | 120 | C9H12 | 000098-82-8 | 90 |
| 3 | Mesitylene | 120 | C9H12 | 000108-67-8 | 90 |
| 4 | Benzene, 1-ethyl-2-methyl- | 120 | C9H12 | 000611-14-3 | 86 |
| 5 | Benzene, 1-ethyl-3-methyl- | 120 | C9H12 | 000620-14-4 | 86 |



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Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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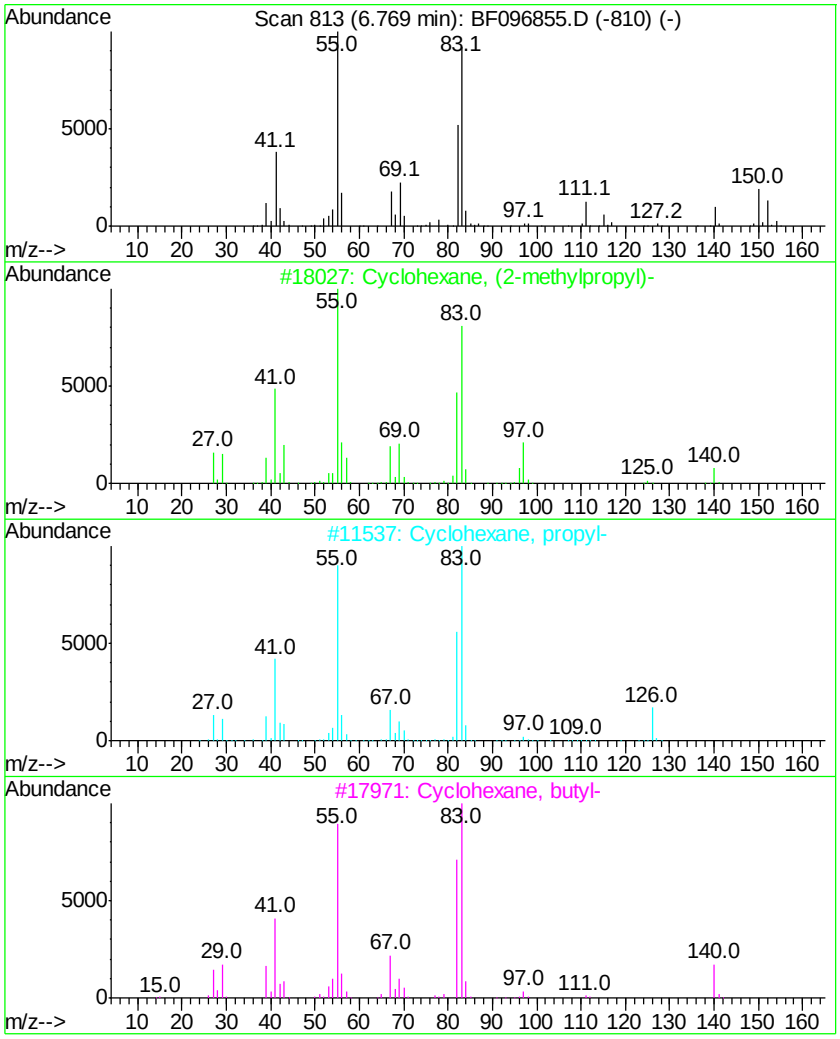
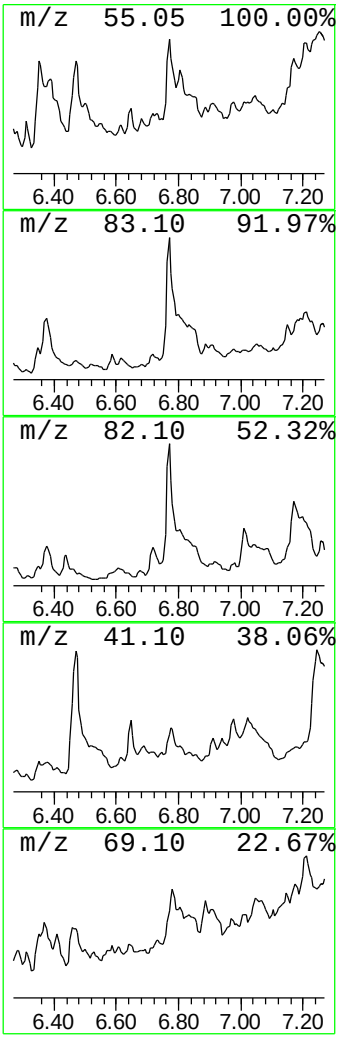
Peak Number 12 Cyclohexane, (2-methylpropyl)- Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.77 | 84.73 ng | 2809270 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclohexane, (2-methylpropyl)- | 140 | C10H20 | 001678-98-4 | 58 |
| 2 | Cyclohexane, propyl- | 126 | C9H18 | 001678-92-8 | 50 |
| 3 | Cyclohexane, butyl- | 140 | C10H20 | 001678-93-9 | 47 |
| 4 | Cyclohexanone, 3,3,5-trimethyl- | 140 | C9H16O | 000873-94-9 | 46 |
| 5 | 1,4-Pentadien-3-ol | 84 | C5H8O | 000922-65-6 | 38 |



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Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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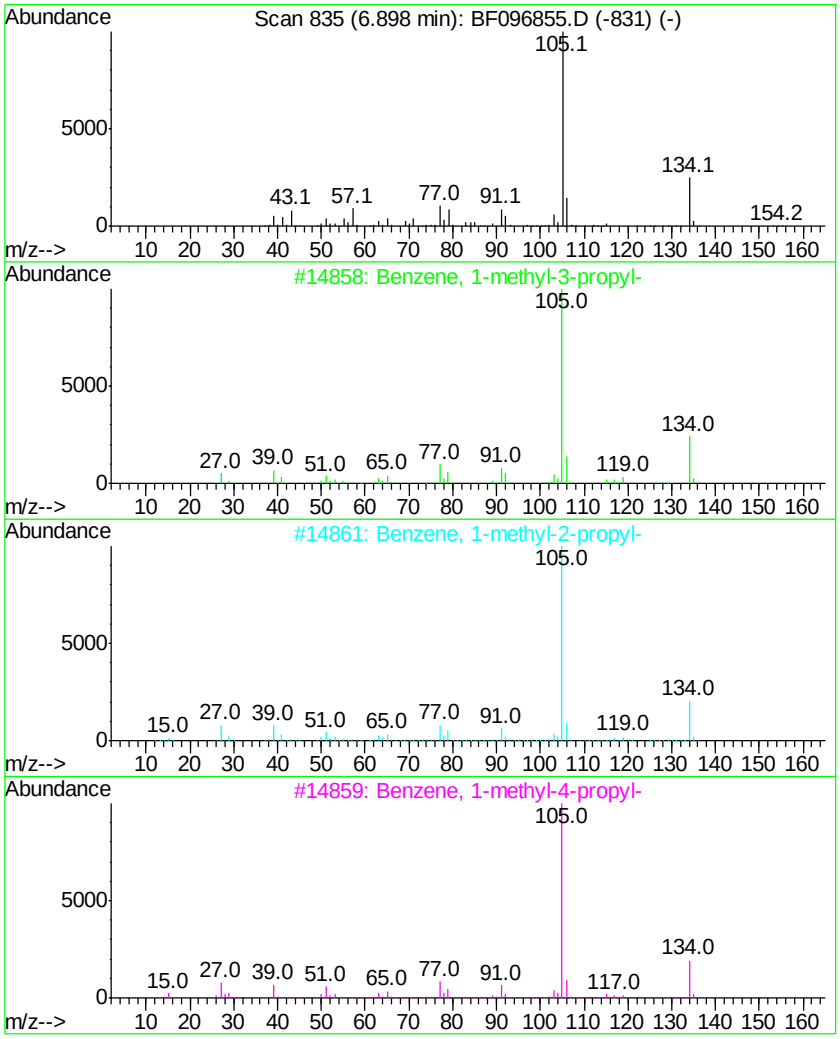
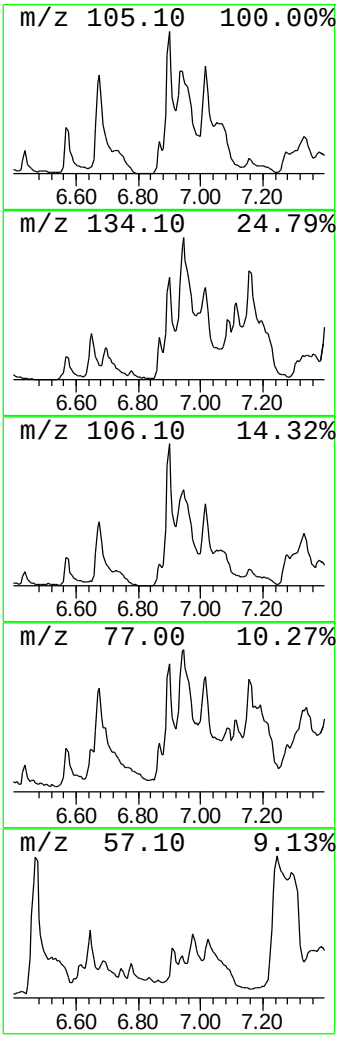
Peak Number 13 Benzene, 1-methyl-3-propyl- Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.90 | 83.66 ng | 2773950 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1-methyl-3-propyl- | 134 | C10H14 | 001074-43-7 | 87 |
| 2 | Benzene, 1-methyl-2-propyl- | 134 | C10H14 | 001074-17-5 | 87 |
| 3 | Benzene, 1-methyl-4-propyl- | 134 | C10H14 | 001074-55-1 | 80 |
| 4 | Benzene, (1-methylpropyl)- | 134 | C10H14 | 000135-98-8 | 64 |
| 5 | 2-Tolyloxirane | 134 | C9H10O | 002783-26-8 | 62 |



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Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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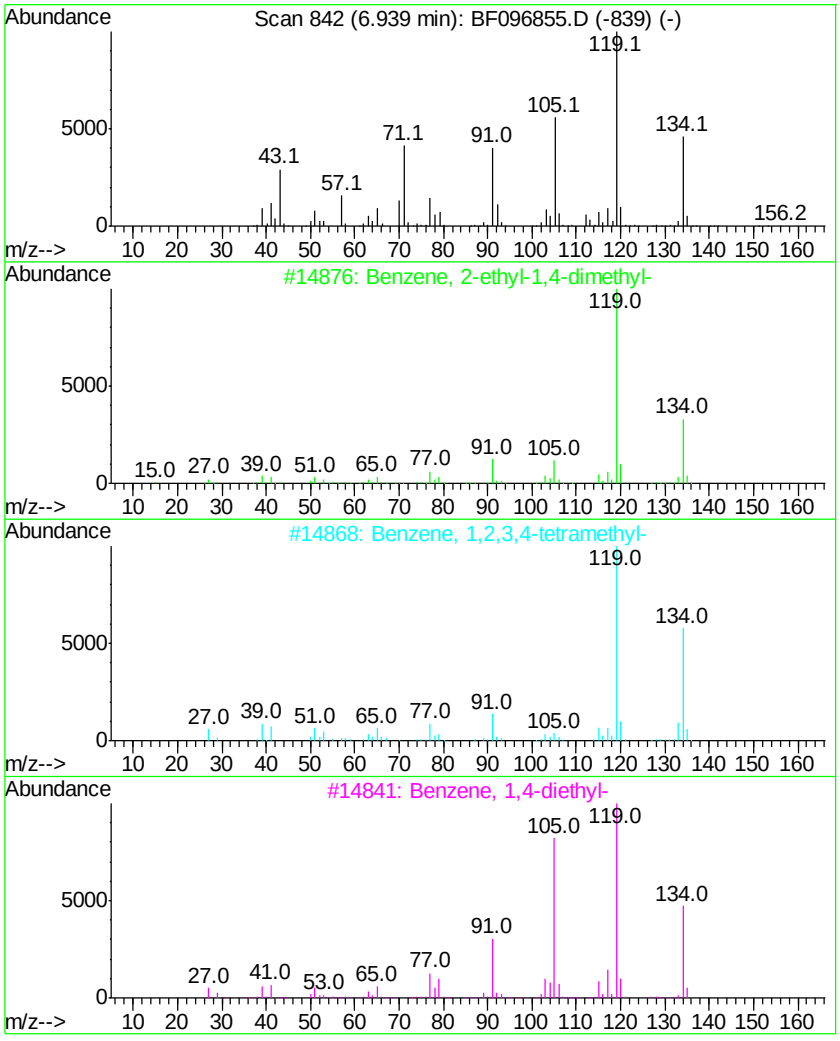
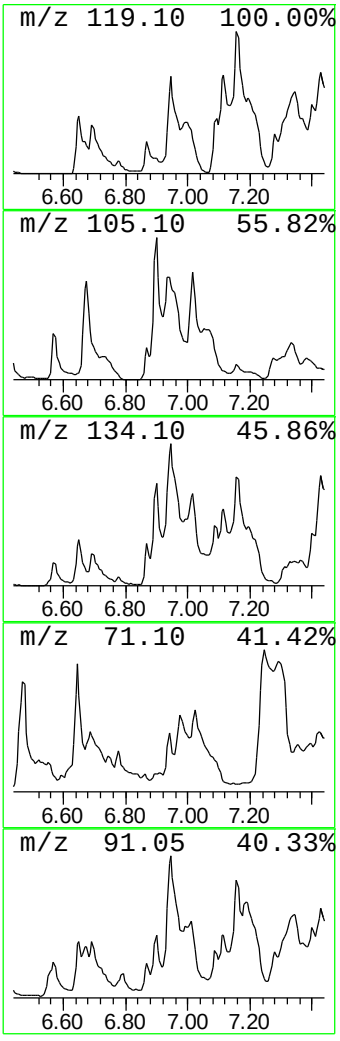
Peak Number 14 Benzene, 2-ethyl-1,4-dimethyl- Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.94 | 74.89 ng | 2483260 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 2-ethyl-1,4-dimethyl- | 134 | C10H14 | 001758-88-9 | 94 |
| 2 | Benzene, 1,2,3,4-tetramethyl- | 134 | C10H14 | 000488-23-3 | 93 |
| 3 | Benzene, 1,4-diethyl- | 134 | C10H14 | 000105-05-5 | 87 |
| 4 | o-Cymene | 134 | C10H14 | 000527-84-4 | 83 |
| 5 | Benzene, 1-ethyl-3,5-dimethyl- | 134 | C10H14 | 000934-74-7 | 76 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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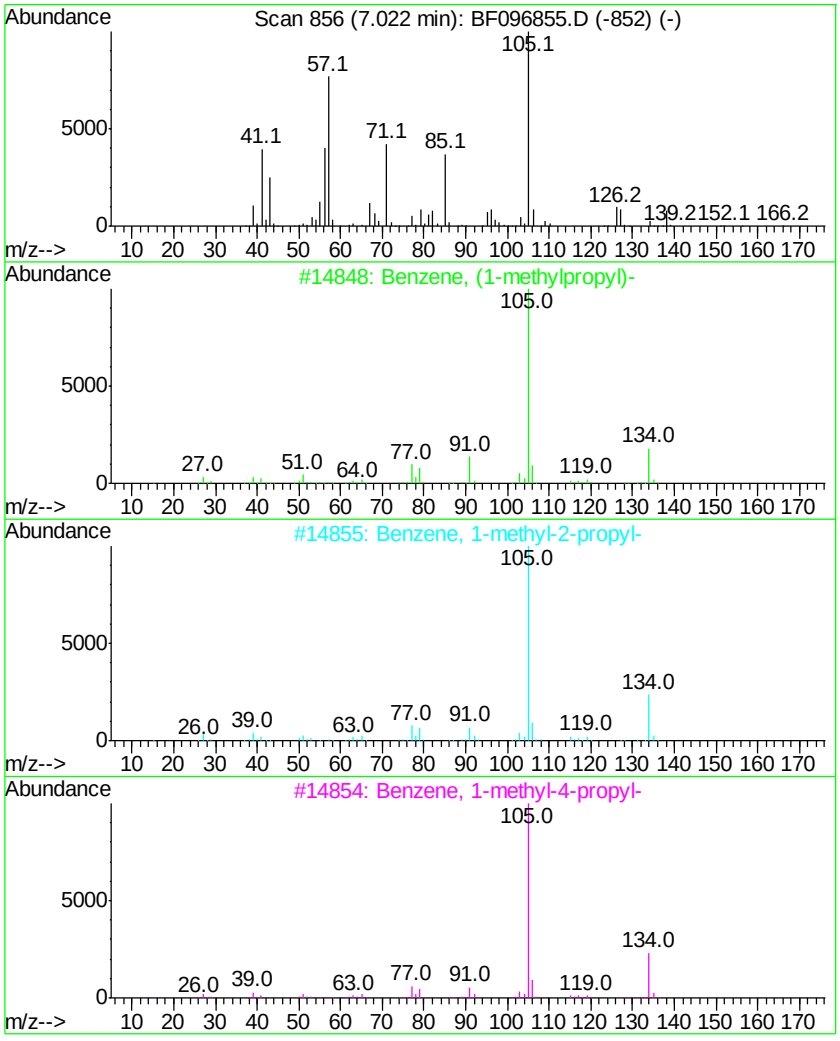
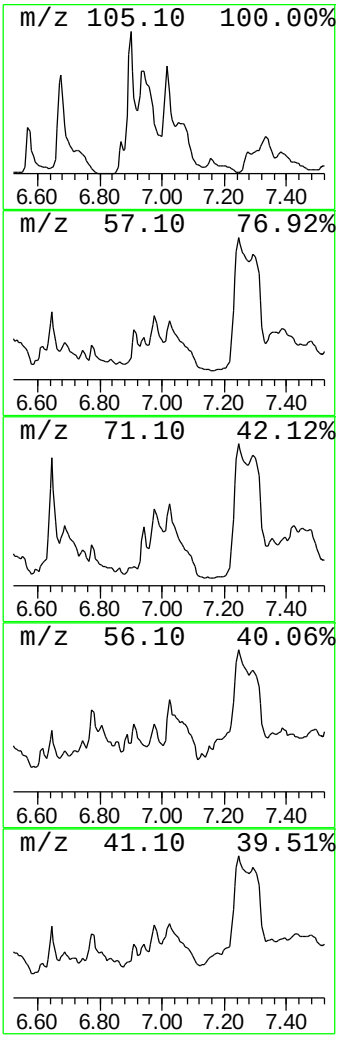
Peak Number 15 Benzene, (1-methylpropyl)- Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.02 | 102.05 ng | 3383750 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, (1-methylpropyl)- | 134 | C10H14 | 000135-98-8 | 53 |
| 2 | Benzene, 1-methyl-2-propyl- | 134 | C10H14 | 001074-17-5 | 47 |
| 3 | Benzene, 1-methyl-4-propyl- | 134 | C10H14 | 001074-55-1 | 47 |
| 4 | Benzene, 1-methyl-3-propyl- | 134 | C10H14 | 001074-43-7 | 46 |
| 5 | 3a,6-Methano-3aH-indene, 2,3,4,5... | 134 | C10H14 | 098640-10-9 | 43 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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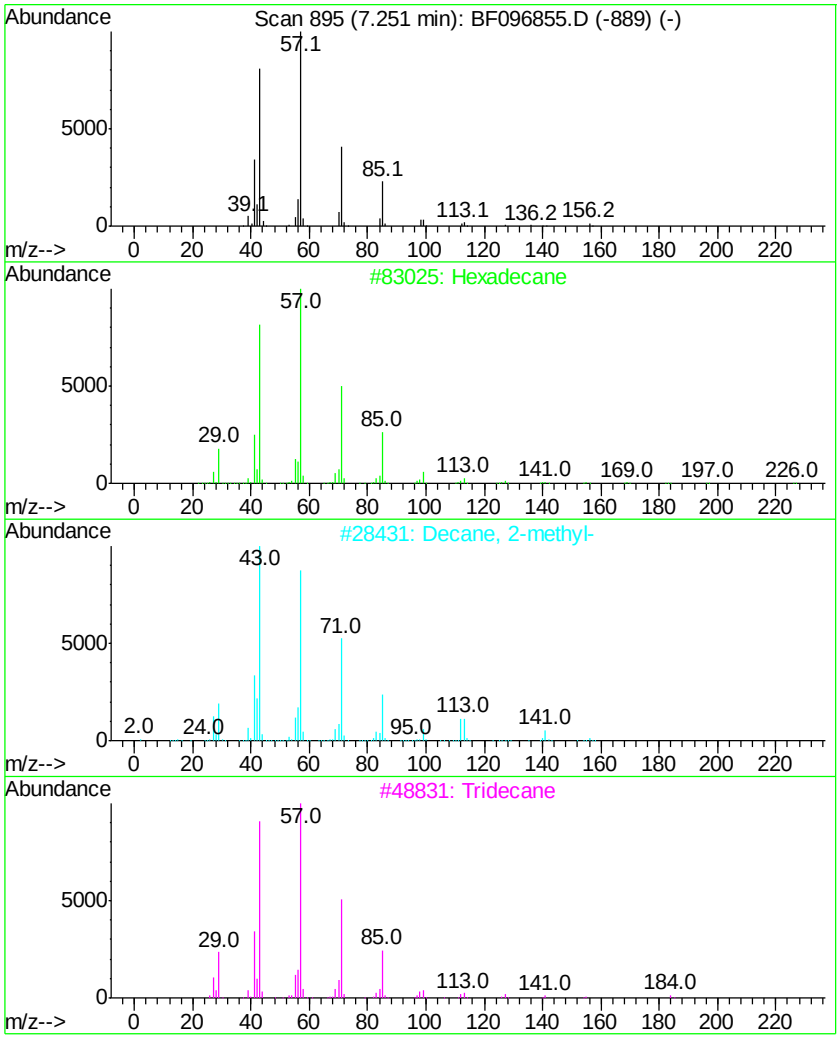
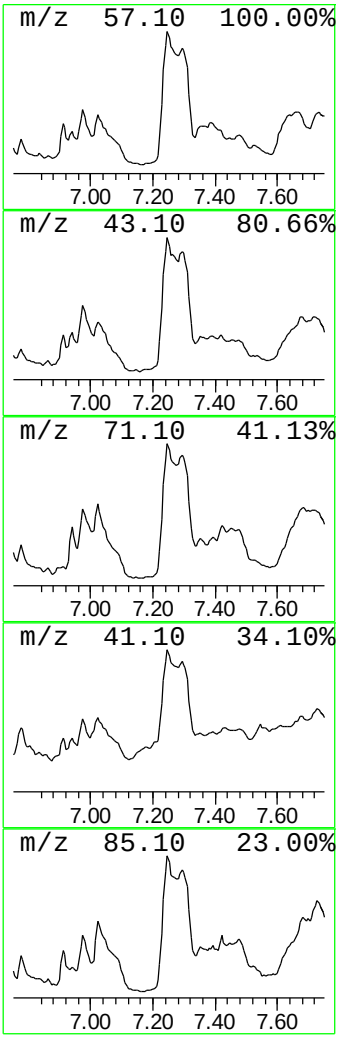
Peak Number 16 Hexadecane Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.25 | 146.11 ng | 4844530 | 1,4-Dichlorobenzene-d4 | 6.61 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexadecane | 226 | C16H34 | 000544-76-3 | 90 |
| 2 | Decane, 2-methyl- | 156 | C11H24 | 006975-98-0 | 80 |
| 3 | Tridecane | 184 | C13H28 | 000629-50-5 | 78 |
| 4 | Decane, 6-ethyl-2-methyl- | 184 | C13H28 | 062108-21-8 | 78 |
| 5 | Sulfurous acid, 2-propyl undecyl... | 278 | C14H30O3S | 1000309-12-2 | 72 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF071817\
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Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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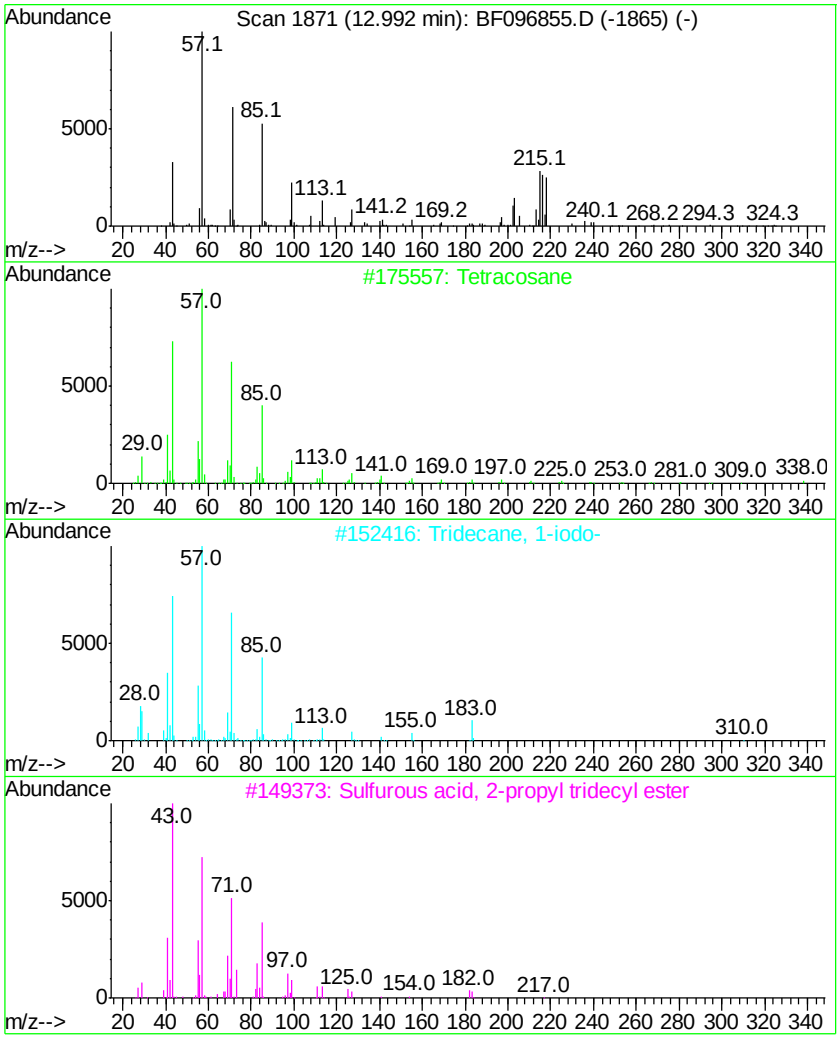
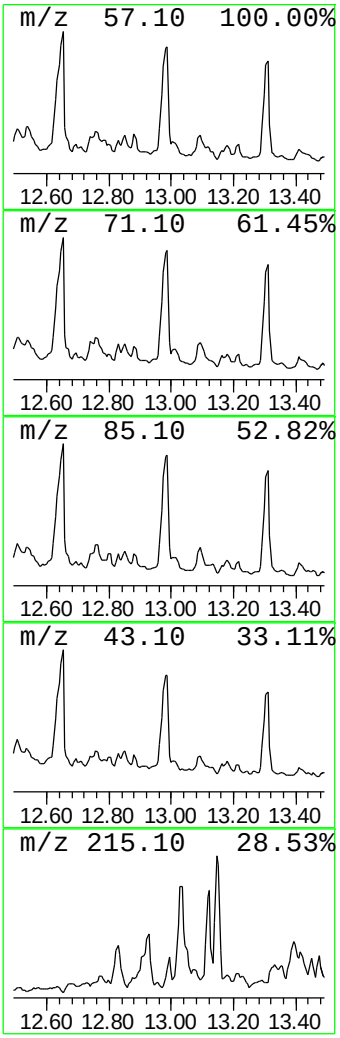
Peak Number 17 Tetracosane Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.99 | 55.78 ng | 2803180 | Chrysene-d12 | 13.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Tetracosane | 338 | C24H50 | 000646-31-1 | 90 |
| 2 | Tridecane, 1-iodo- | 310 | C13H27I | 035599-77-0 | 90 |
| 3 | Sulfurous acid, 2-propyl tridecy... | 306 | C16H34O3S | 1000309-12-4 | 72 |
| 4 | Sulfurous acid, 2-propyl undecyl... | 278 | C14H30O3S | 1000309-12-2 | 64 |
| 5 | Tetratetracontane | 619 | C44H90 | 007098-22-8 | 64 |



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Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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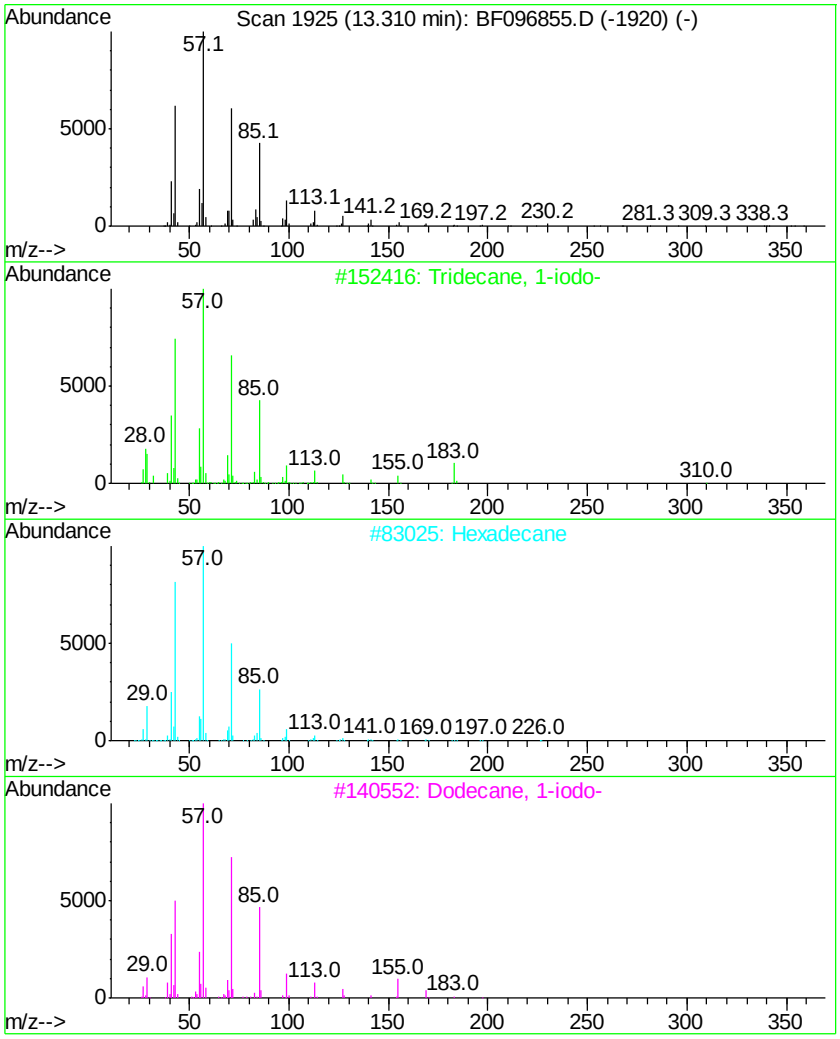
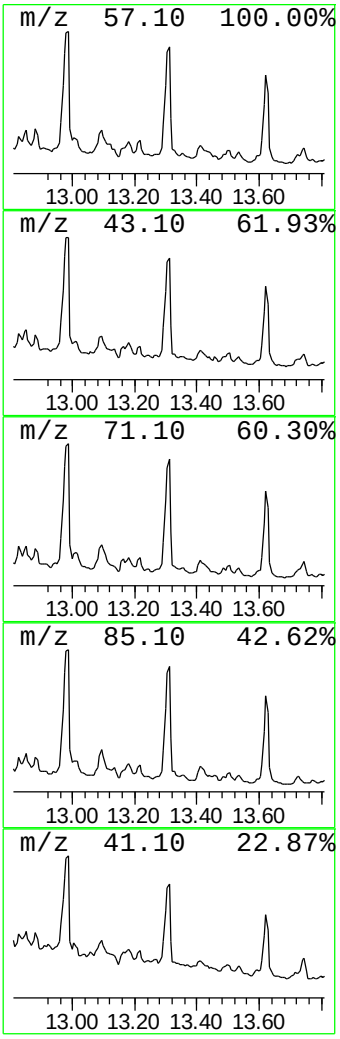
Peak Number 18 Tridecane, 1-iodo- Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.31 | 54.91 ng | 2759790 | Chrysene-d12 | 13.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Tridecane, 1-iodo- | 310 | C13H27I | 035599-77-0 | 90 |
| 2 | Hexadecane | 226 | C16H34 | 000544-76-3 | 90 |
| 3 | Dodecane, 1-iodo- | 296 | C12H25I | 004292-19-7 | 80 |
| 4 | Heptacosane | 380 | C27H56 | 000593-49-7 | 74 |
| 5 | Pentadecane | 212 | C15H32 | 000629-62-9 | 72 |



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Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

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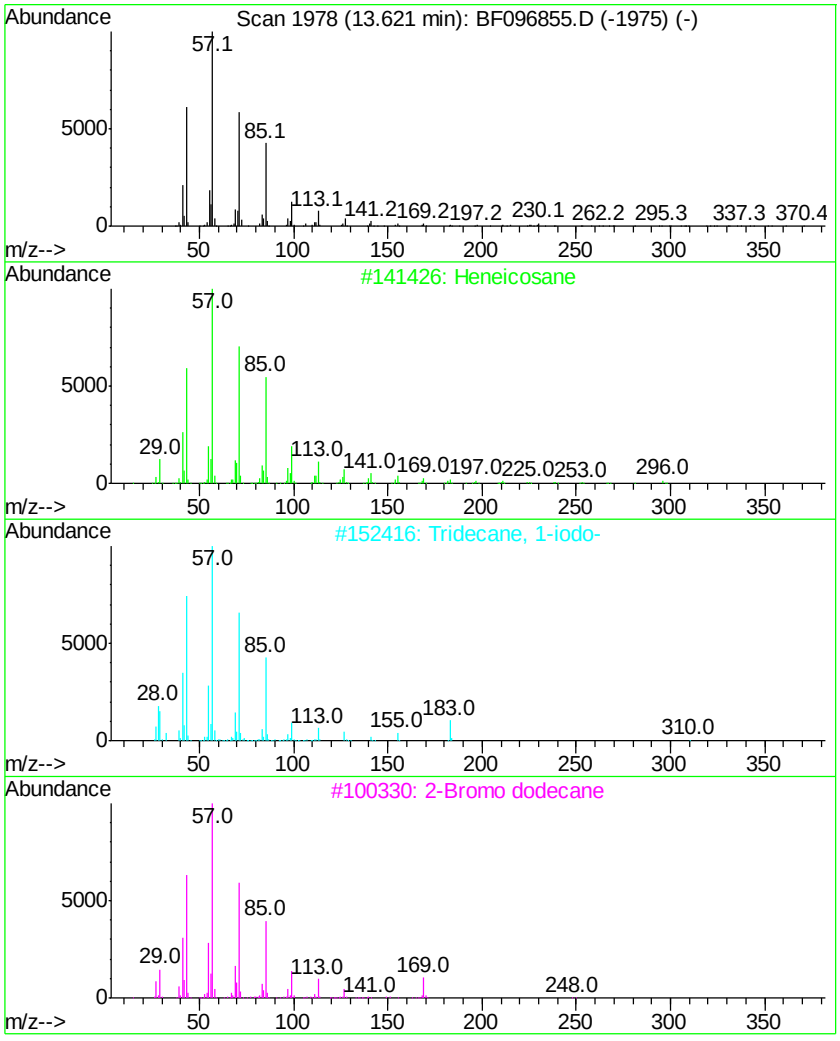
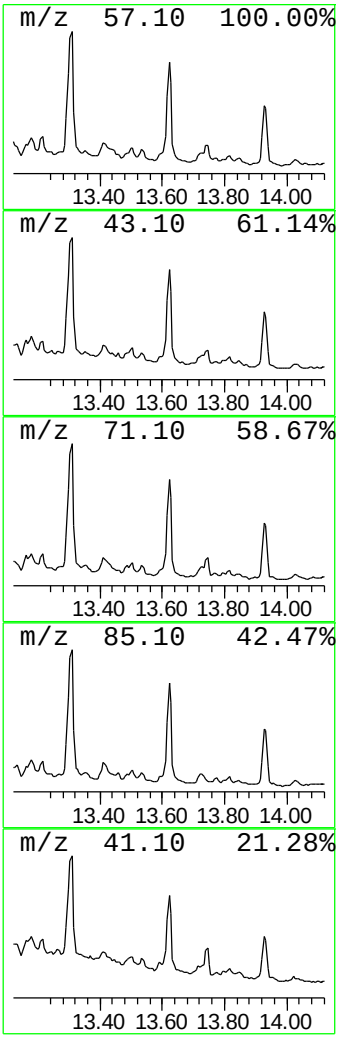
Peak Number 19 Heneicosane Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.62 | 57.46 ng | 2887720 | Chrysene-d12 | 13.76 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Heneicosane | 296 | C21H44 | 000629-94-7 | 90 |
| 2 | Tridecane, 1-iodo- | 310 | C13H27I | 035599-77-0 | 90 |
| 3 | 2-Bromo dodecane | 248 | C12H25Br | 013187-99-0 | 90 |
| 4 | Hexacosane | 366 | C26H54 | 000630-01-3 | 80 |
| 5 | Hexadecane | 226 | C16H34 | 000544-76-3 | 76 |



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Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

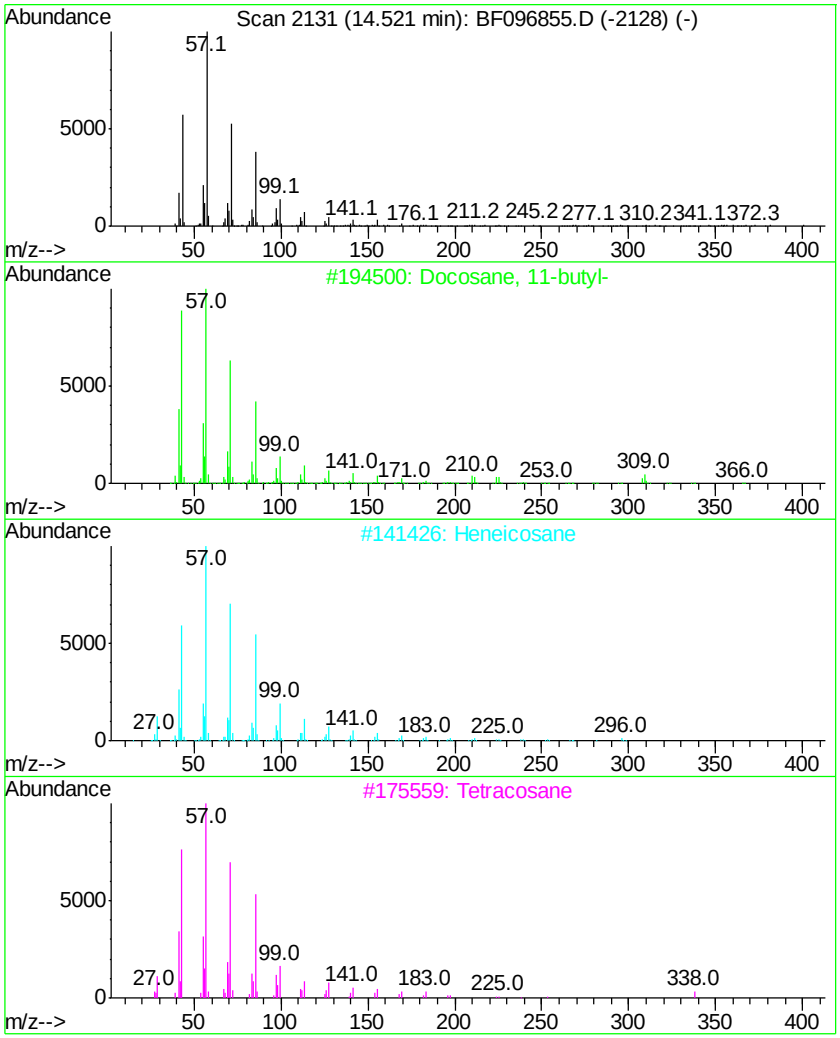
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

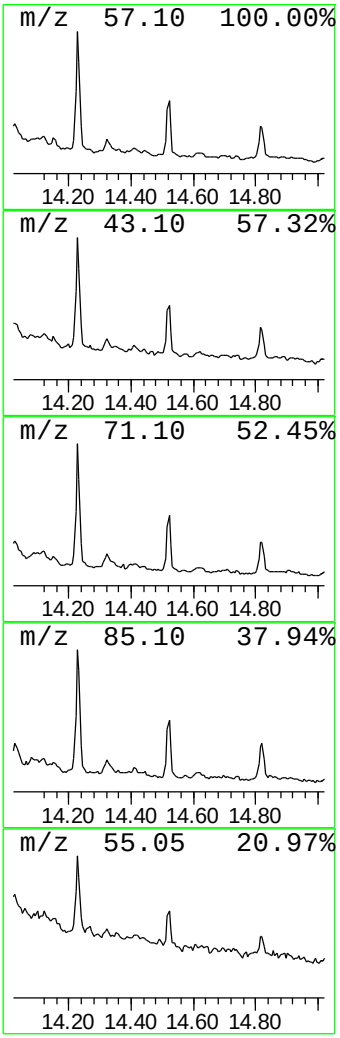
**********

Peak Number 20 Docosane, 11-butyl- Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.52 | 29.59 ng | 495408 | Perylene-d12 | 15.11 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Docosane, 11-butyl- | 366 | C26H54 | 013475-76-8 | 91 |
| 2 | Heneicosane | 296 | C21H44 | 000629-94-7 | 90 |
| 3 | Tetracosane | 338 | C24H50 | 000646-31-1 | 87 |
| 4 | Hexacosane | 366 | C26H54 | 000630-01-3 | 87 |
| 5 | Heptadecane, 9-octyl- | 352 | C25H52 | 007225-64-1 | 87 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF071817\
Data File : BF096855.D
Acq On : 18 Jul 2017 19:09
Operator : SJ/JU
Sample : I4244-01 2X
Misc :
ALS Vial : 23 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** PENNSYLVANIA-ANALYTICAL

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF071317.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Nonane | 5.51 | 99.5 | ng | 3300950 | 1 | 6.61 | 663142 | 20.0 |
| Cyclohexyl propio... | 5.75 | 36.0 | ng | 1191970 | 1 | 6.61 | 663142 | 20.0 |
| Nonane, 3-methyl- | 5.86 | 106.3 | ng | 3524950 | 1 | 6.61 | 663142 | 20.0 |
| Heptane, 3-ethyl-... | 5.92 | 26.1 | ng | 863700 | 1 | 6.61 | 663142 | 20.0 |
| Decane, 2,5,6-tri... | 6.05 | 44.9 | ng | 1487810 | 1 | 6.61 | 663142 | 20.0 |
| Nonane, 4-methyl- | 6.12 | 72.7 | ng | 2410610 | 1 | 6.61 | 663142 | 20.0 |
| Benzene, 1-ethyl-... | 6.16 | 92.8 | ng | 3075860 | 1 | 6.61 | 663142 | 20.0 |
| unknown6.37 | 6.37 | 30.7 | ng | 1018760 | 1 | 6.61 | 663142 | 20.0 |
| 1-Iodo-2-methylun... | 6.47 | 267.9 | ng | 8884210 | 1 | 6.61 | 663142 | 20.0 |
| Benzene, 1,2,3-tr... | 6.67 | 103.1 | ng | 3416670 | 1 | 6.61 | 663142 | 20.0 |
| Cyclohexane, (2-m... | 6.77 | 84.7 | ng | 2809270 | 1 | 6.61 | 663142 | 20.0 |
| Benzene, 1-methyl... | 6.90 | 83.7 | ng | 2773950 | 1 | 6.61 | 663142 | 20.0 |
| Benzene, 2-ethyl-... | 6.94 | 74.9 | ng | 2483260 | 1 | 6.61 | 663142 | 20.0 |
| Benzene, (1-methy... | 7.02 | 102.1 | ng | 3383750 | 1 | 6.61 | 663142 | 20.0 |
| Hexadecane | 7.25 | 146.1 | ng | 4844530 | 1 | 6.61 | 663142 | 20.0 |
| Tetracosane | 12.99 | 55.8 | ng | 2803180 | 5 | 13.76 | 1005160 | 20.0 |
| Tridecane, 1-iodo- | 13.31 | 54.9 | ng | 2759790 | 5 | 13.76 | 1005160 | 20.0 |
| Heneicosane | 13.62 | 57.5 | ng | 2887720 | 5 | 13.76 | 1005160 | 20.0 |
| Docosane, 11-butyl- | 14.52 | 29.6 | ng | 495408 | 6 | 15.11 | 334875 | 20.0 |