LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

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:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.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 | 5.487 | 574 | 578 | 592 | rBV | 3701336 | 3480826 | 7.73% | 1.965% |
| 2 | 6.498 | 745 | 750 | 768 | rBV | 3805276 | 3661073 | 8.13% | 2.067% |
| 3 | 6.628 | 768 | 772 | 775 | rBV | 4420711 | 3811774 | 8.46% | 2.152% |
| 4 | 6.851 | 806 | 810 | 817 | rBV | 1261794 | 1015255 | 2.25% | 0.573% |
| 5 | 7.010 | 833 | 837 | 840 | rBV | 3442141 | 2915957 | 6.47% | 1.646% |
| 6 | 7.410 | 901 | 905 | 910 | rBV | 2292352 | 2158396 | 4.79% | 1.219% |
| 7 | 8.134 | 1022 | 1028 | 1031 | rBV | 1440118 | 1364786 | 3.03% | 0.771% |
| 8 | 9.210 | 1206 | 1211 | 1214 | rBV | 4402585 | 4130829 | 9.17% | 2.332% |
| 9 | 9.886 | 1323 | 1326 | 1329 | rVB | 1525050 | 1297081 | 2.88% | 0.732% |
| 10 | 9.928 | 1329 | 1333 | 1336 | rVB2 | 960391 | 999533 | 2.22% | 0.564% |
| 11 | 10.092 | 1357 | 1361 | 1365 | rBV | 635646 | 541464 | 1.20% | 0.306% |
| 12 | 10.433 | 1416 | 1419 | 1425 | rVB | 1250086 | 1132880 | 2.52% | 0.640% |
| 13 | 10.681 | 1455 | 1461 | 1466 | rBV | 2886947 | 2747096 | 6.10% | 1.551% |
| 14 | 10.892 | 1494 | 1497 | 1501 | rVB | 2141487 | 1651784 | 3.67% | 0.933% |
| 15 | 11.269 | 1557 | 1561 | 1567 | rVB | 496917 | 512574 | 1.14% | 0.289% |
| 16 | 11.375 | 1576 | 1579 | 1581 | rBV | 1286899 | 1269790 | 2.82% | 0.717% |
| 17 | 11.404 | 1581 | 1584 | 1587 | rVV | 6263593 | 5655325 | 12.56% | 3.193% |
| 18 | 11.451 | 1589 | 1592 | 1595 | rVB | 2049093 | 1665093 | 3.70% | 0.940% |
| 19 | 11.669 | 1626 | 1629 | 1630 | rBV2 | 506127 | 484567 | 1.08% | 0.274% |
| 20 | 11.686 | 1630 | 1632 | 1635 | rVB | 2590159 | 1933378 | 4.29% | 1.092% |
| 21 | 11.780 | 1641 | 1648 | 1651 | rBV | 14586643 | 22549626 | 50.07% | 12.732% |
| 22 | 11.880 | 1661 | 1665 | 1667 | rBV | 697615 | 659546 | 1.46% | 0.372% |
| 23 | 11.910 | 1667 | 1670 | 1675 | rVV2 | 1477710 | 1718503 | 3.82% | 0.970% |
| 24 | 11.992 | 1681 | 1684 | 1686 | rVV | 1621167 | 1497905 | 3.33% | 0.846% |
| 25 | 12.086 | 1697 | 1700 | 1703 | rVB | 655705 | 552781 | 1.23% | 0.312% |
| 26 | 12.169 | 1711 | 1714 | 1718 | rBV2 | 1009302 | 1037603 | 2.30% | 0.586% |
| 27 | 12.492 | 1755 | 1769 | 1770 | rBV5 | 15765115 | 45037422 | 100.00% | 25.429% |
| 28 | 12.545 | 1777 | 1778 | 1779 | rVB | 1343431 | 473559 | 1.05% | 0.267% |
| 29 | 12.575 | 1779 | 1783 | 1785 | rBV | 11679926 | 11350111 | 25.20% | 6.408% |
| 30 | 12.604 | 1785 | 1788 | 1790 | rBV | 5779487 | 5582905 | 12.40% | 3.152% |
| 31 | 12.833 | 1822 | 1827 | 1834 | rVB | 4262612 | 6277773 | 13.94% | 3.544% |
| 32 | 12.969 | 1844 | 1850 | 1853 | rBV2 | 3284950 | 3225806 | 7.16% | 1.821% |
| 33 | 13.057 | 1859 | 1865 | 1871 | rBV4 | 406955 | 920259 | 2.04% | 0.520% |
| 34 | 13.133 | 1874 | 1878 | 1879 | rBV3 | 389820 | 481791 | 1.07% | 0.272% |

LSC Area Percent Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

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:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 13.157 | 1879 | 1882 | 1885 | rVV | 1235525 | 1124196 | 2.50% | 0.635% |
| 36 | 13.204 | 1885 | 1890 | 1891 | rVV | 1325279 | 1425668 | 3.17% | 0.805% |
| 37 | 13.222 | 1891 | 1893 | 1896 | rVB | 1100614 | 882680 | 1.96% | 0.498% |
| 38 | 13.263 | 1896 | 1900 | 1901 | rBV2 | 420500 | 452269 | 1.00% | 0.255% |
| 39 | 13.280 | 1901 | 1903 | 1906 | rVB | 1029859 | 750783 | 1.67% | 0.424% |
| 40 | 13.386 | 1917 | 1921 | 1926 | rVV2 | 523065 | 611325 | 1.36% | 0.345% |
| 41 | 13.769 | 1983 | 1986 | 1989 | rVV2 | 492419 | 562267 | 1.25% | 0.317% |
| 42 | 13.822 | 1993 | 1995 | 1998 | rVV2 | 442861 | 597108 | 1.33% | 0.337% |
| 43 | 13.851 | 1998 | 2000 | 2007 | rVB2 | 574826 | 866671 | 1.92% | 0.489% |
| 44 | 13.945 | 2013 | 2016 | 2021 | rVB2 | 959463 | 941850 | 2.09% | 0.532% |
| 45 | 14.016 | 2021 | 2028 | 2032 | rBV2 | 3720045 | 5429195 | 12.05% | 3.065% |
| 46 | 14.051 | 2032 | 2034 | 2041 | rVB | 3014415 | 2446589 | 5.43% | 1.381% |
| 47 | 14.169 | 2051 | 2054 | 2058 | rVV3 | 422536 | 453216 | 1.01% | 0.256% |
| 48 | 14.245 | 2064 | 2067 | 2072 | rBV2 | 328865 | 467524 | 1.04% | 0.264% |
| 49 | 14.404 | 2090 | 2094 | 2097 | rVB | 496295 | 576740 | 1.28% | 0.326% |
| 50 | 14.557 | 2118 | 2120 | 2124 | rVB2 | 393540 | 537881 | 1.19% | 0.304% |
| 51 | 15.074 | 2202 | 2208 | 2210 | rBV | 2400824 | 3798431 | 8.43% | 2.145% |
| 52 | 15.121 | 2214 | 2216 | 2222 | rVB2 | 512269 | 561198 | 1.25% | 0.317% |
| 53 | 15.174 | 2222 | 2225 | 2229 | rBV | 527948 | 537858 | 1.19% | 0.304% |
| 54 | 15.374 | 2255 | 2259 | 2265 | rVB | 1457078 | 1846000 | 4.10% | 1.042% |
| 55 | 15.439 | 2265 | 2270 | 2275 | rBV | 2306913 | 2766941 | 6.14% | 1.562% |
| 56 | 15.498 | 2276 | 2280 | 2283 | rVV | 1365222 | 1800333 | 4.00% | 1.016% |
| 57 | 15.527 | 2283 | 2285 | 2292 | rVB2 | 593345 | 815920 | 1.81% | 0.461% |
| 58 | 15.939 | 2351 | 2355 | 2359 | rVB2 | 401904 | 549679 | 1.22% | 0.310% |
| 59 | 16.980 | 2526 | 2532 | 2538 | rBV2 | 729176 | 1495165 | 3.32% | 0.844% |
| 60 | 17.433 | 2603 | 2609 | 2618 | rVB | 505125 | 1021058 | 2.27% | 0.576% |

Sum of corrected areas: 177113596

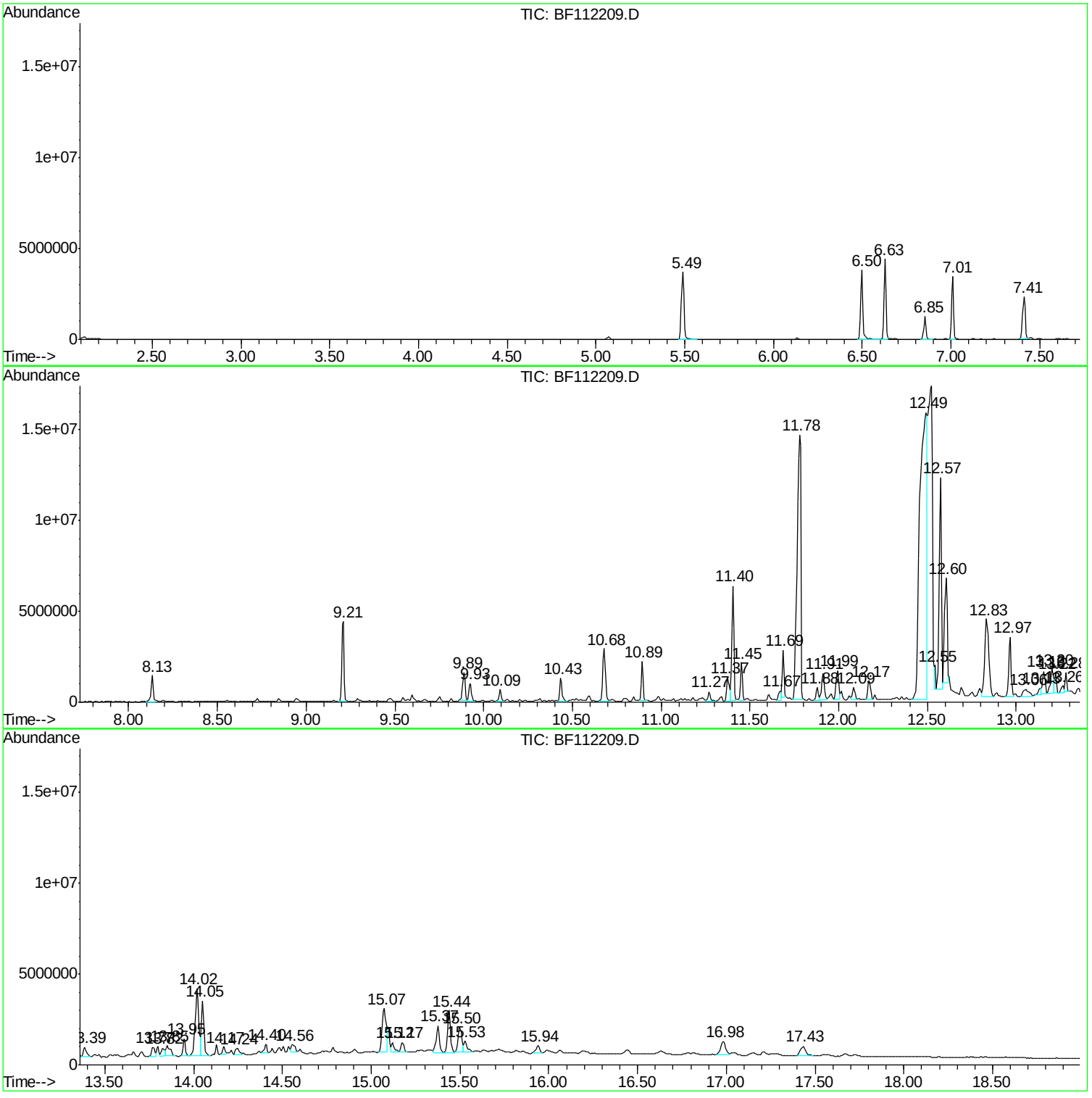
LSC Report - Integrated Chromatogram

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :**
BNA_F
**ClientSampleId :**
TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

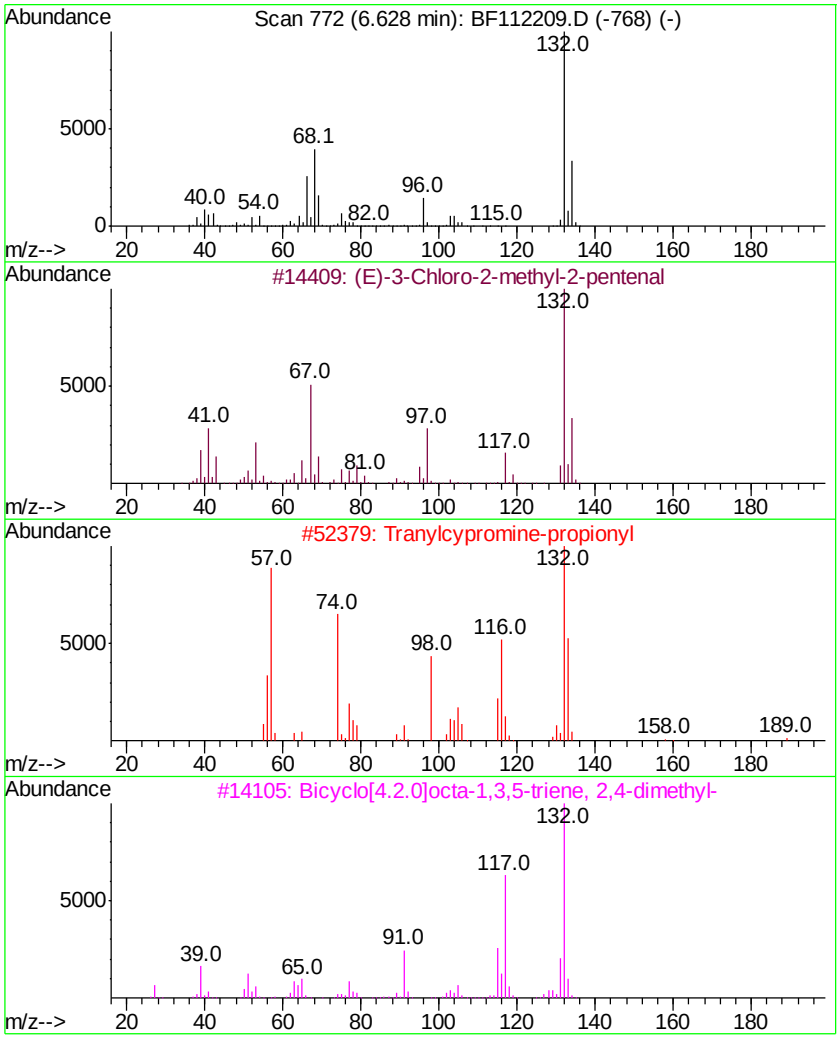
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

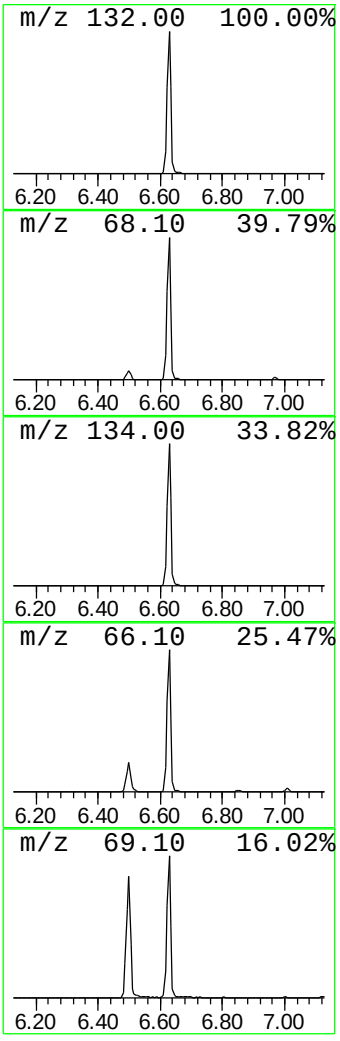
**********

Peak Number 1 unknown6.63 Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.63 | 75.09 ng | 3811770 | 1,4-Dichlorobenzene-d4 | 6.85 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | (E)-3-Chloro-2-methyl-2-pentenal | 132 | C6H9ClO | 031357-76-3 | 12 |
| 2 | Tranylcypromine-propionyl | 189 | C12H15NO | 1000123-86-3 | 12 |
| 3 | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12 | 028749-81-7 | 9 |
| 4 | 4-Chloro-2-fluoro-pyrimidine | 132 | C4H2ClFN2 | 051422-00-5 | 9 |
| 5 | 5-Fluoro-2-chloropyrimidine | 132 | C4H2ClFN2 | 062802-42-0 | 9 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

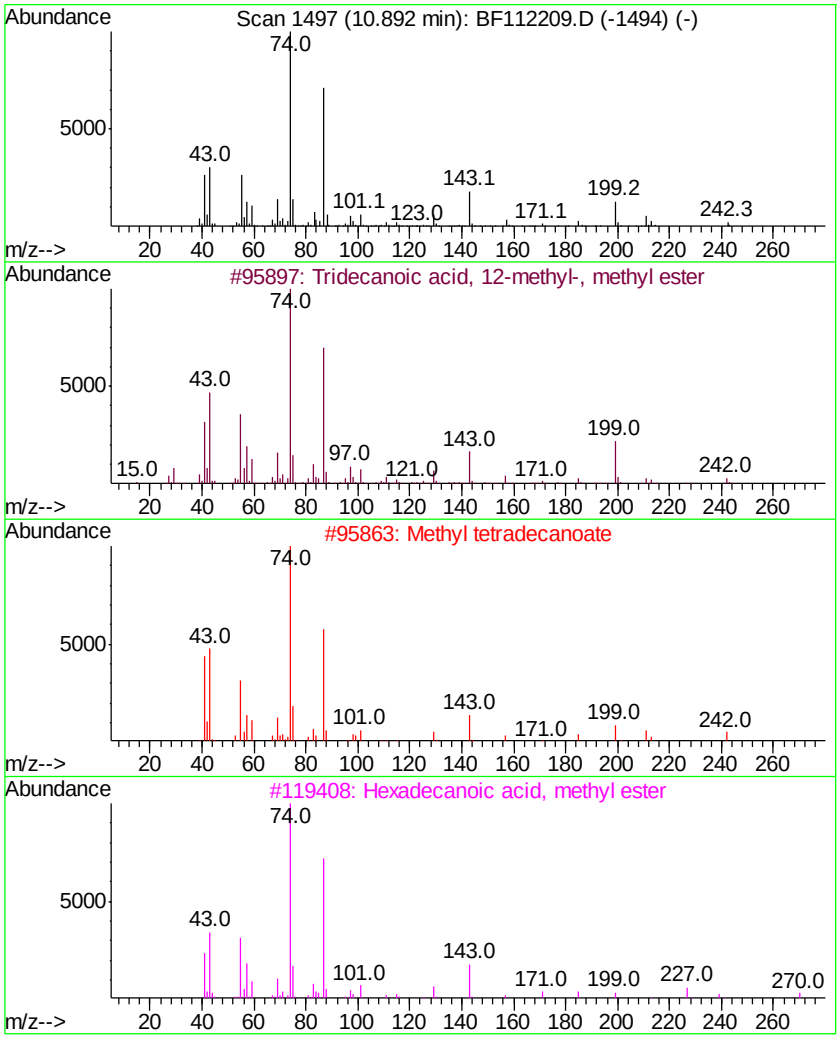
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

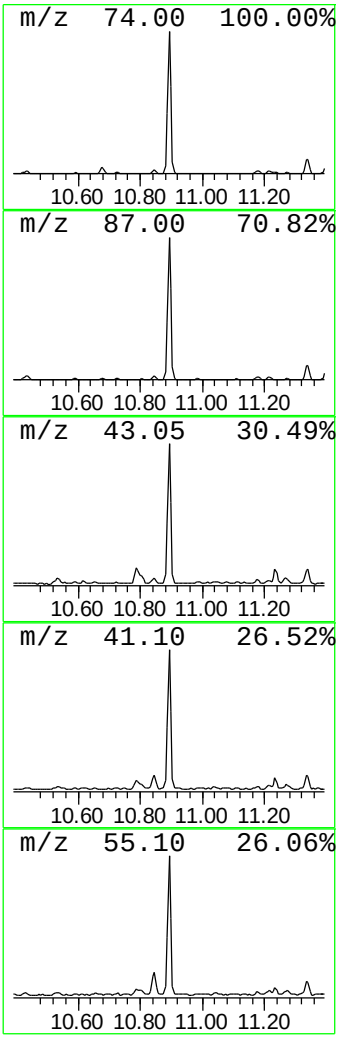
**********

Peak Number 3 Tridecanoic acid, 12-methyl... Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.89 | 26.02 ng | 1651780 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Tridecanoic acid, 12-methyl-, me... | 242 | C15H30O2 | 005129-58-8 | 94 |
| 2 | Methyl tetradecanoate | 242 | C15H30O2 | 000124-10-7 | 91 |
| 3 | Hexadecanoic acid, methyl ester | 270 | C17H34O2 | 000112-39-0 | 87 |
| 4 | Decanoic acid, methyl ester | 186 | C11H22O2 | 000110-42-9 | 86 |
| 5 | Tridecanoic acid, methyl ester | 228 | C14H28O2 | 001731-88-0 | 86 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

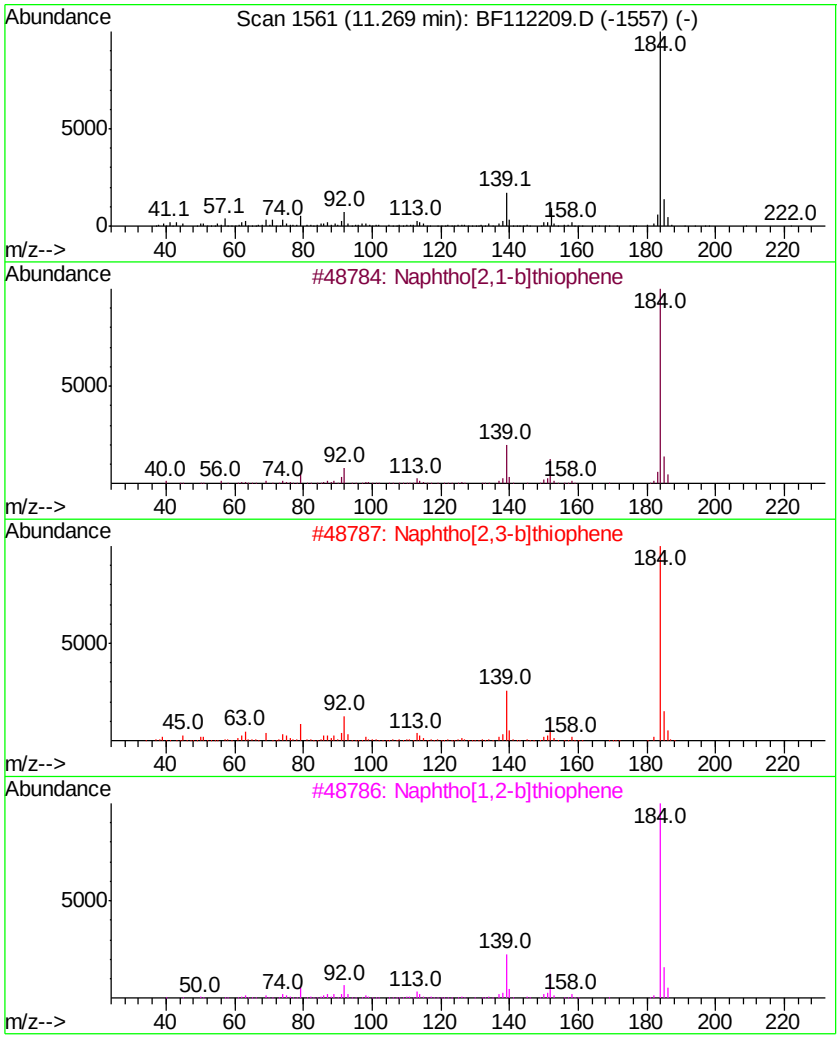
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

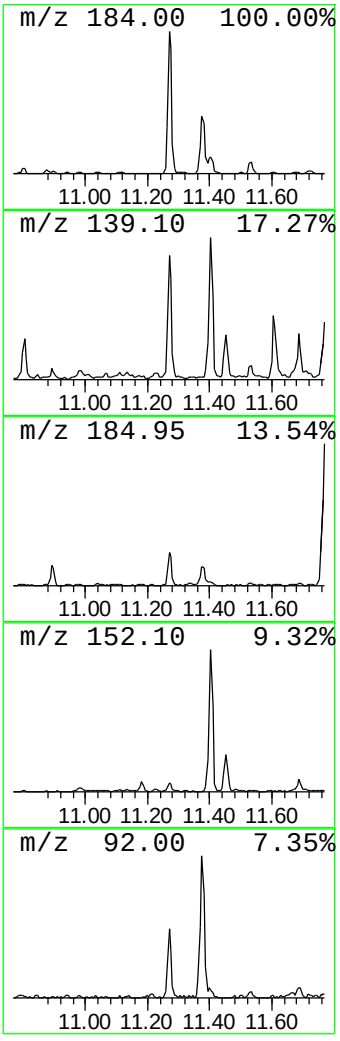
**********

Peak Number 4 Naphtho[2,1-b]thiophene Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.27 | 8.07 ng | 512574 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphtho[2,1-b]thiophene | 184 | C12H8S | 000233-02-3 | 97 |
| 2 | Naphtho[2,3-b]thiophene | 184 | C12H8S | 000268-77-9 | 97 |
| 3 | Naphtho[1,2-b]thiophene | 184 | C12H8S | 000234-41-3 | 96 |
| 4 | Dibenzothiophene | 184 | C12H8S | 000132-65-0 | 96 |
| 5 | Azuleno(2,1-b)thiophene | 184 | C12H8S | 000248-13-5 | 87 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

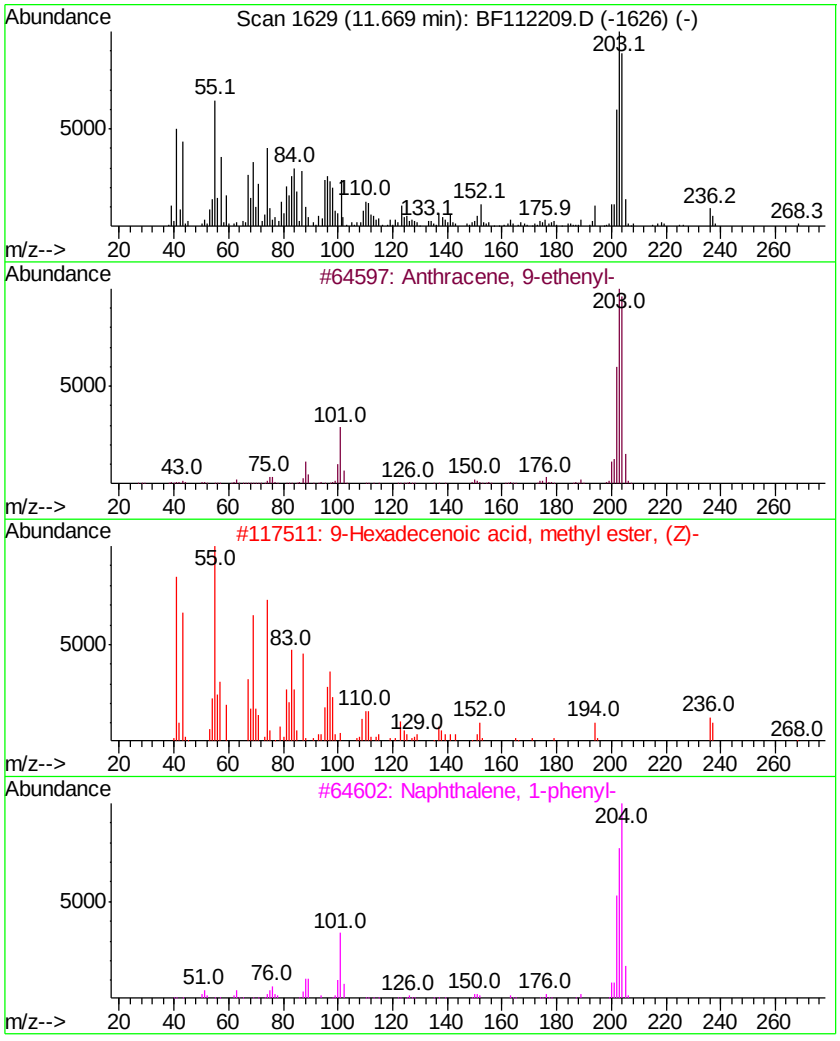
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

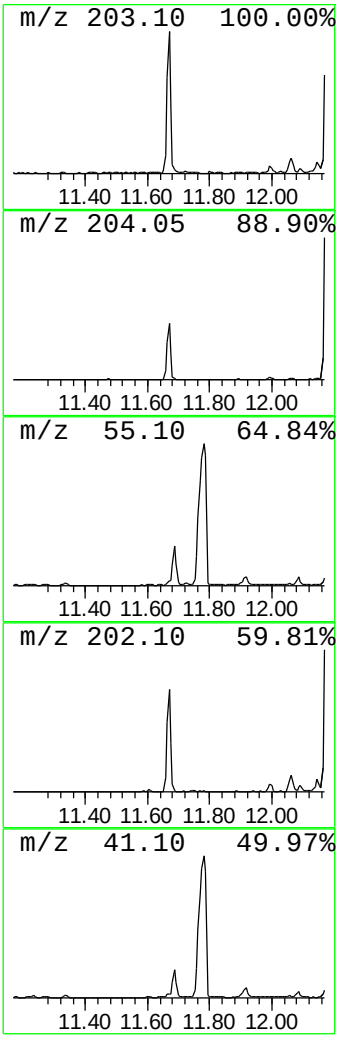
**********

Peak Number 5 Anthracene, 9-ethenyl- Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.67 | 7.63 ng | 484567 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 9-ethenyl- | 204 | C16H12 | 002444-68-0 | 95 |
| 2 | 9-Hexadecenoic acid, methyl este... | 268 | C17H32O2 | 001120-25-8 | 90 |
| 3 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 81 |
| 4 | 1H-Indene, 1-(phenylmethylene)- | 204 | C16H12 | 005394-86-5 | 70 |
| 5 | Dibenzo[a,e]cyclooctene | 204 | C16H12 | 000262-89-5 | 70 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

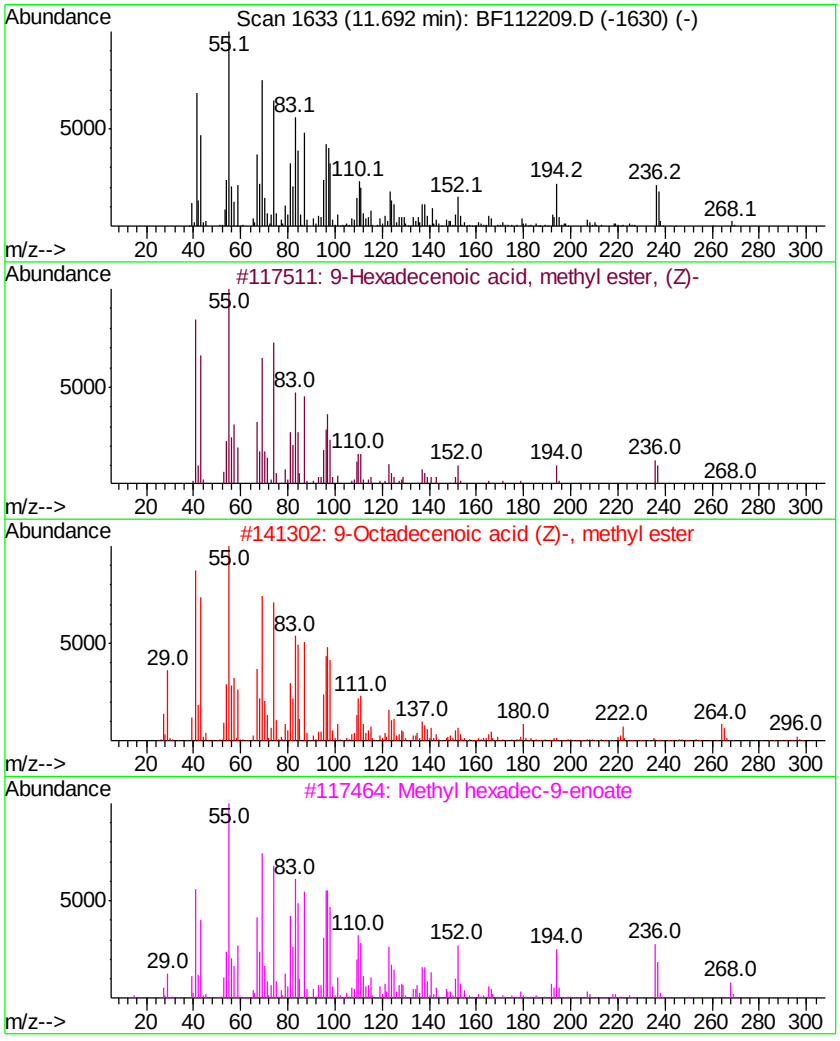
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

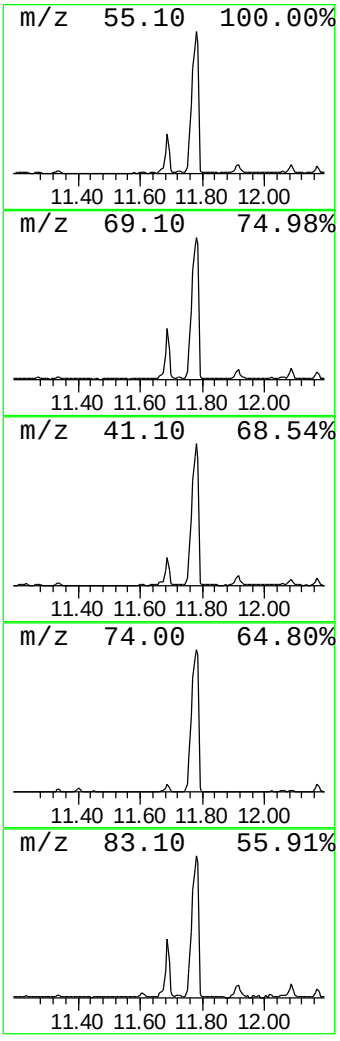
**********

Peak Number 6 9-Hexadecenoic acid, methyl... Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.69 | 30.45 ng | 1933380 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9-Hexadecenoic acid, methyl este... | 268 | C17H32O2 | 001120-25-8 | 99 |
| 2 | 9-Octadecenoic acid (Z)-, methyl... | 296 | C19H36O2 | 000112-62-9 | 93 |
| 3 | Methyl hexadec-9-enoate | 268 | C17H32O2 | 010030-74-7 | 91 |
| 4 | 14-Methylpentadec-9-enoic acid m... | 268 | C17H32O2 | 1000365-89-7 | 91 |
| 5 | 11-Hexadecenoic acid, methyl ester | 268 | C17H32O2 | 055000-42-5 | 87 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

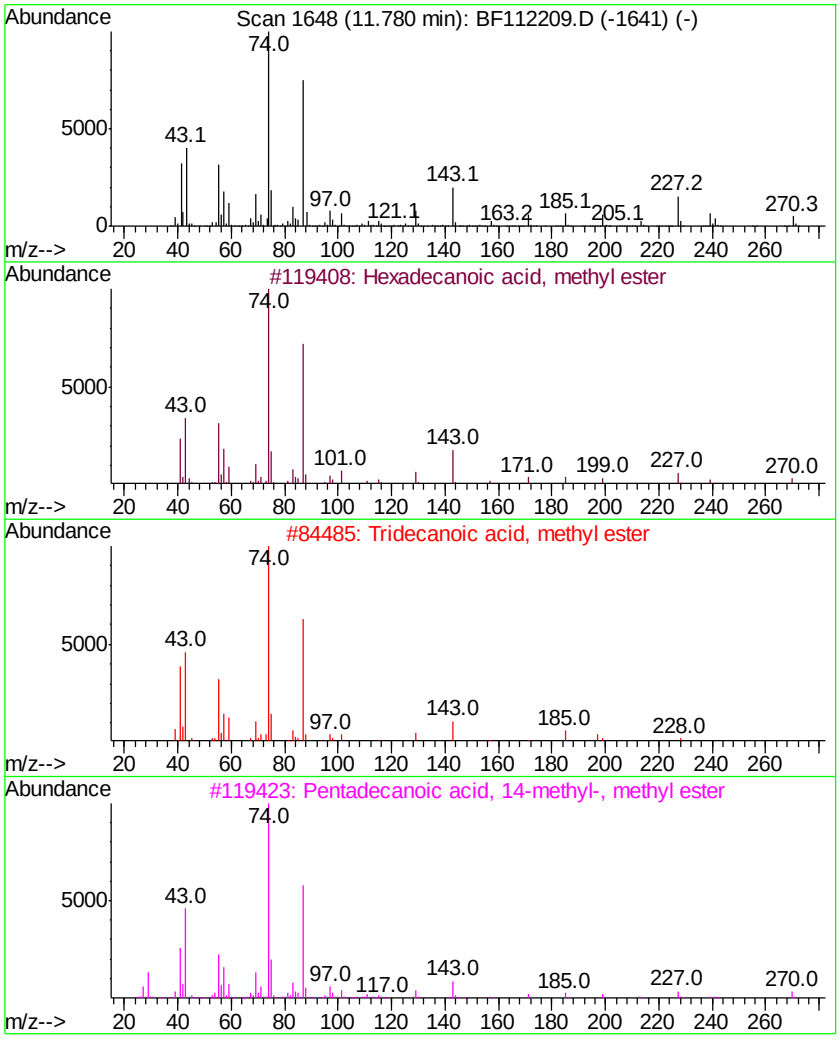
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

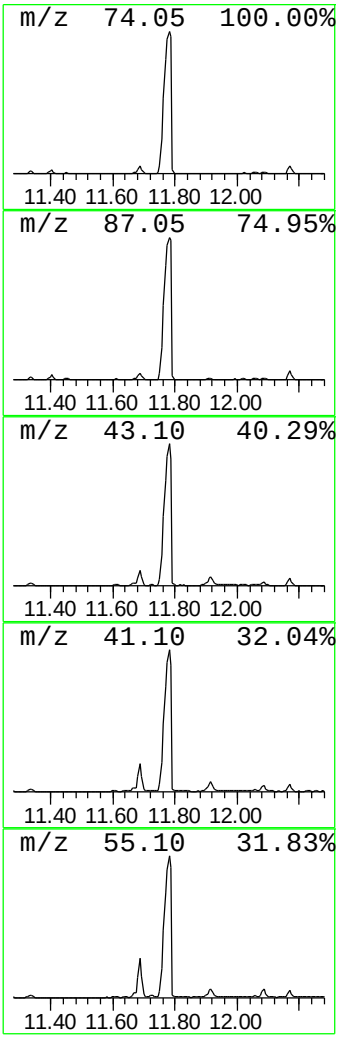
**********

Peak Number 7 Hexadecanoic acid, methyl e... Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.78 | 355.17 ng | 22549600 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexadecanoic acid, methyl ester | 270 | C17H34O2 | 000112-39-0 | 97 |
| 2 | Tridecanoic acid, methyl ester | 228 | C14H28O2 | 001731-88-0 | 96 |
| 3 | Pentadecanoic acid, 14-methyl-, ... | 270 | C17H34O2 | 005129-60-2 | 95 |
| 4 | Hexadecanoic acid, 2-methyl- | 270 | C17H34O2 | 027147-71-3 | 83 |
| 5 | Methyl 9-methyltetradecanoate | 256 | C16H32O2 | 213617-69-7 | 83 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

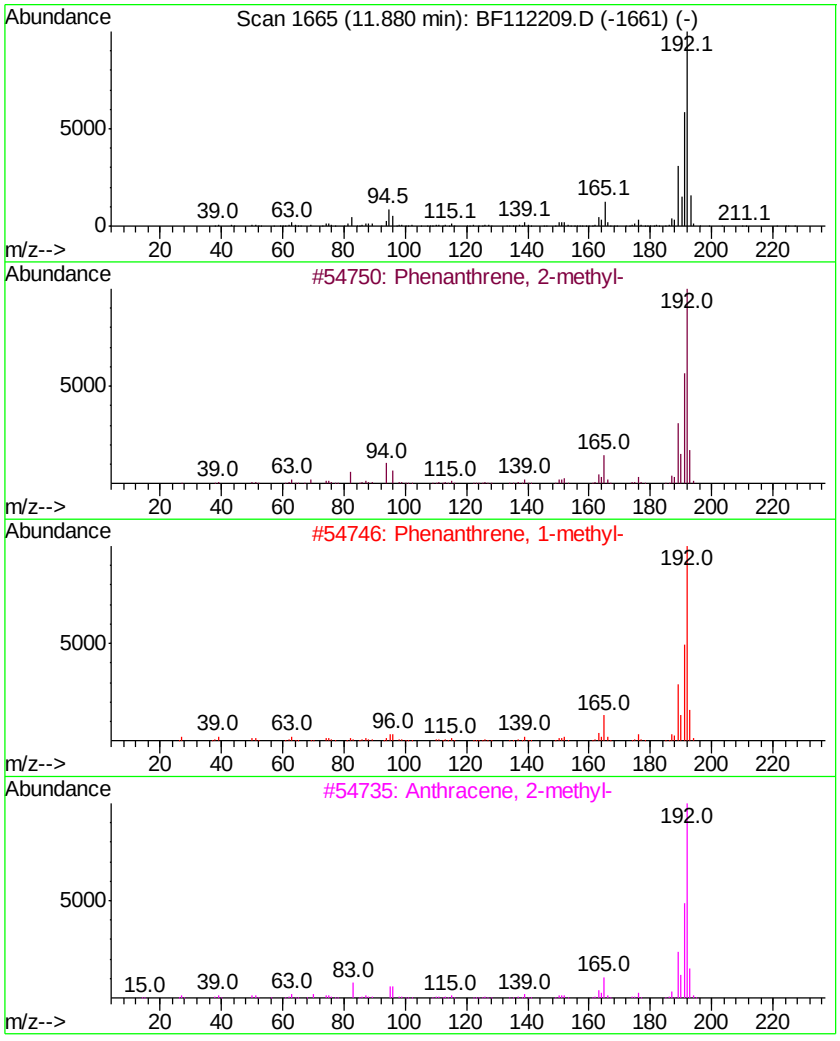
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

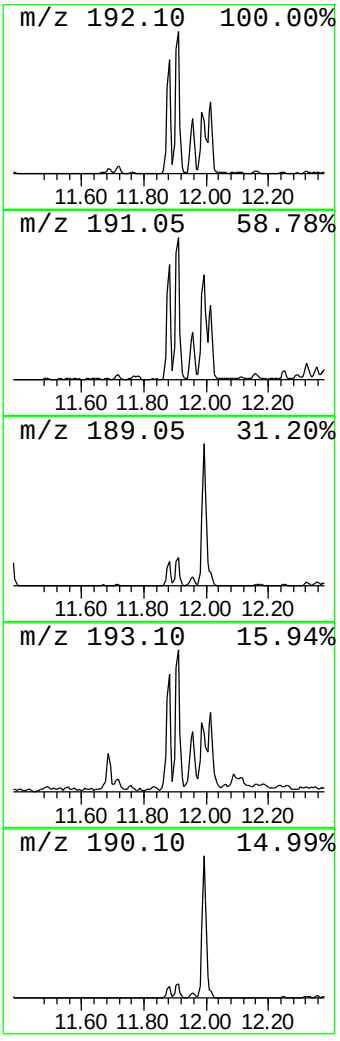
**********

Peak Number 8 Phenanthrene, 2-methyl- Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.88 | 10.39 ng | 659546 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 98 |
| 2 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 96 |
| 3 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 95 |
| 4 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 95 |
| 5 | Phenanthrene, 4-methyl- | 192 | C15H12 | 000832-64-4 | 94 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

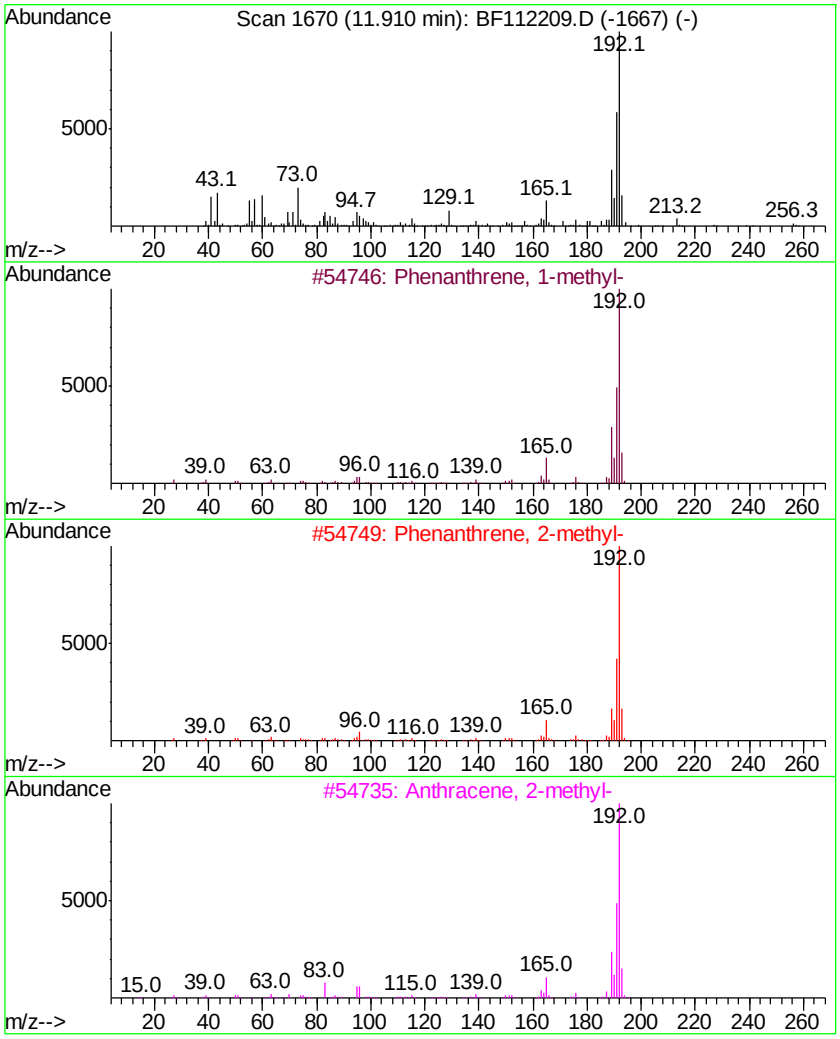
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

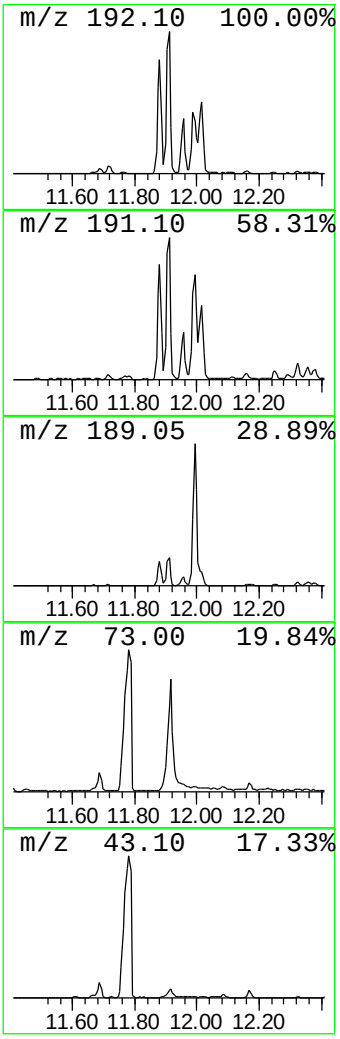
**********

Peak Number 9 Phenanthrene, 1-methyl- Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.91 | 27.07 ng | 1718500 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 97 |
| 2 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 97 |
| 3 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 97 |
| 4 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 96 |
| 5 | 1H-Indene, 1-phenyl- | 192 | C15H12 | 001961-96-2 | 93 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

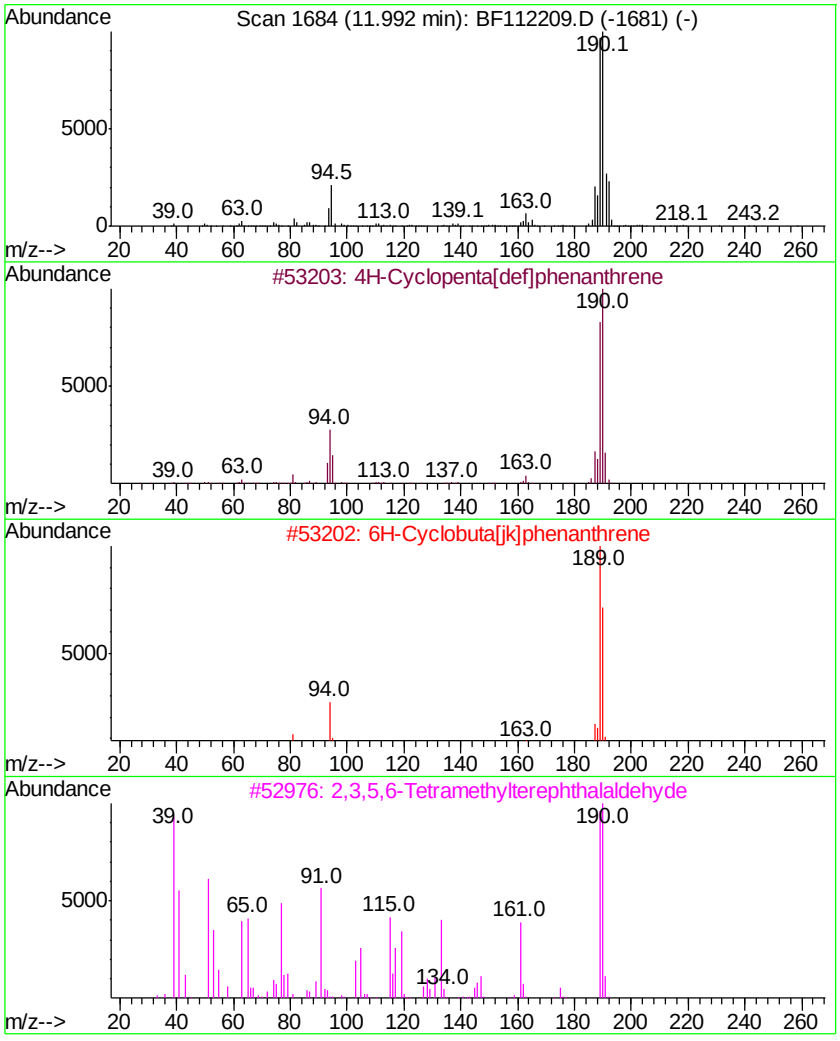
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

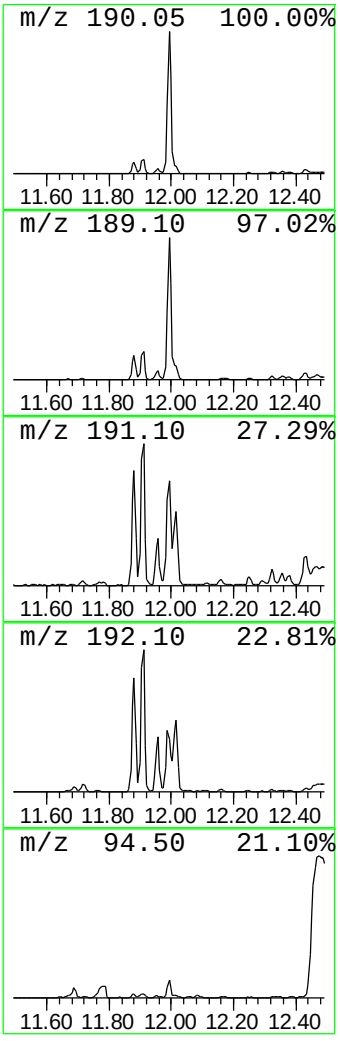
**********

Peak Number 10 4H-Cyclopenta[def]phenanthrene Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.99 | 23.59 ng | 1497910 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10 | 000203-64-5 | 93 |
| 2 | 6H-Cyclobuta[jk]phenanthrene | 190 | C15H10 | 083469-43-6 | 64 |
| 3 | 2,3,5,6-Tetramethylterephthalald... | 190 | C12H14O2 | 007072-01-7 | 50 |
| 4 | Methyl diselenide | 190 | C2H6Se2 | 007101-31-7 | 49 |
| 5 | 2,2'-Bis(4,5-dimethylimidazole) | 190 | C10H14N4 | 069286-06-2 | 45 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

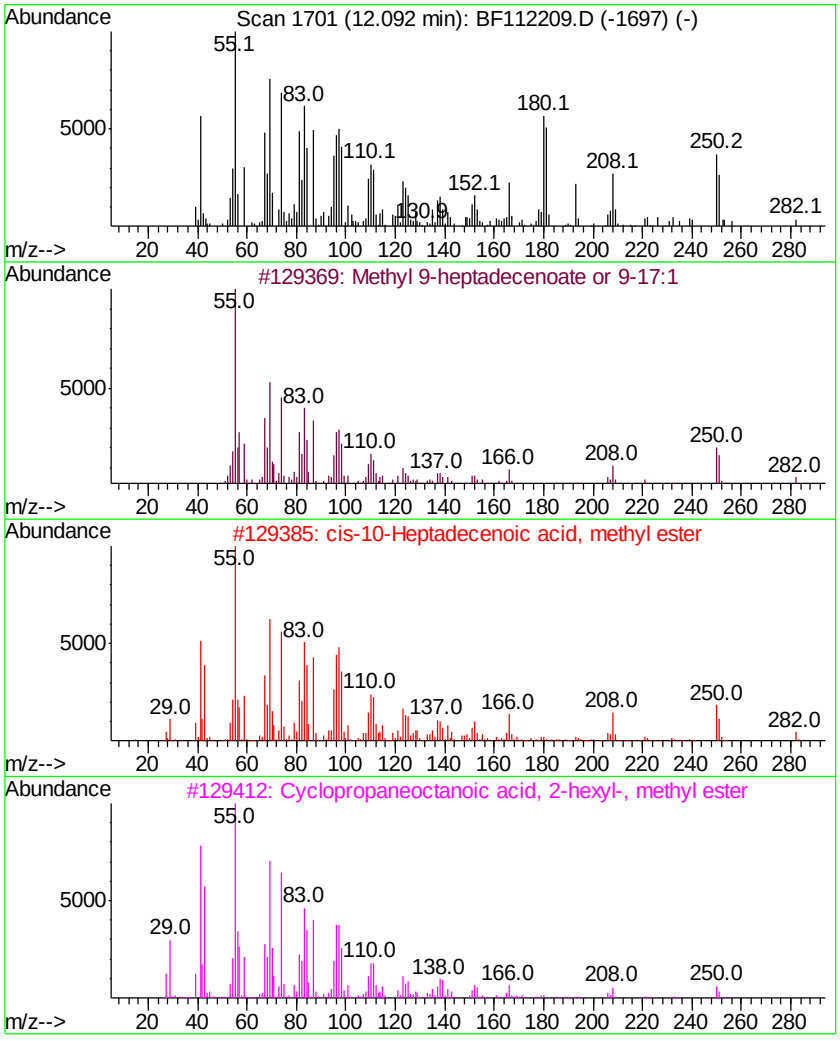
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

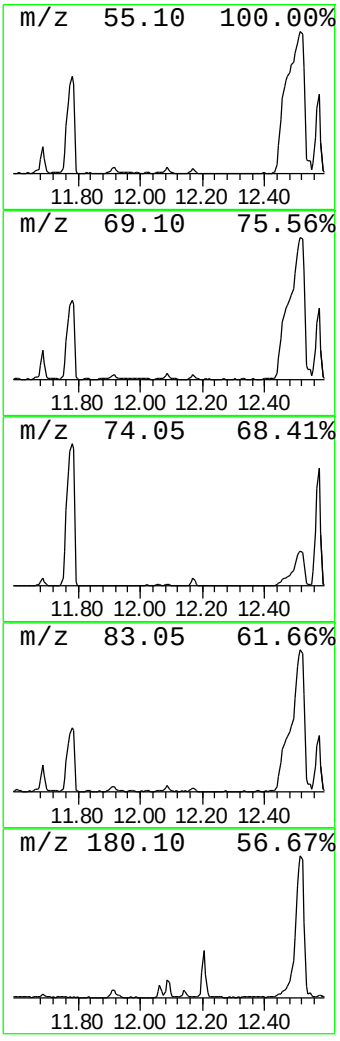
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

**********
Peak Number 11 Methyl 9-heptadecenoate or ... Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.09 | 8.71 ng | 552781 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Methyl 9-heptadecenoate or 9-17:1 | 282 | C18H34O2 | 1000336-38-0 | 95 |
| 2 | cis-10-Heptadecenoic acid, methy... | 282 | C18H34O2 | 1000333-62-1 | 90 |
| 3 | Cyclopropaneoctanoic acid, 2-hex... | 282 | C18H34O2 | 010152-61-1 | 62 |
| 4 | 9-Octadecenoic acid (Z)-, methyl... | 296 | C19H36O2 | 000112-62-9 | 60 |
| 5 | 7-Hexadecenoic acid, methyl este... | 268 | C17H32O2 | 056875-67-3 | 49 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

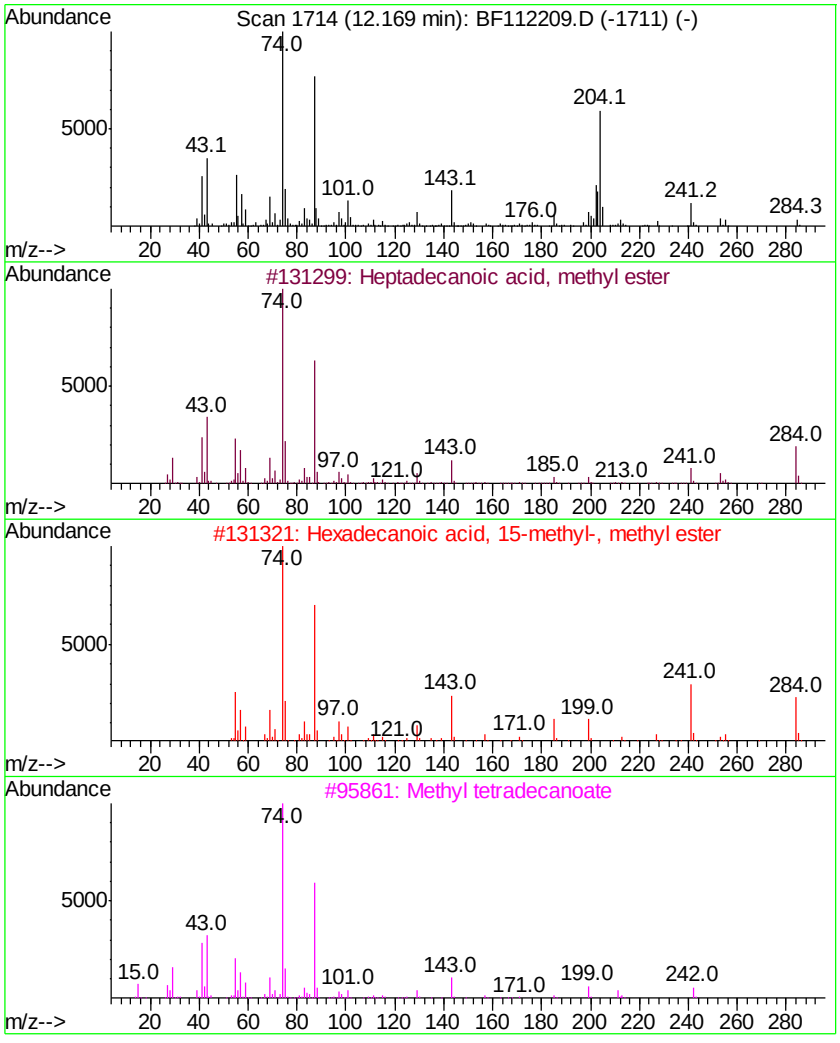
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

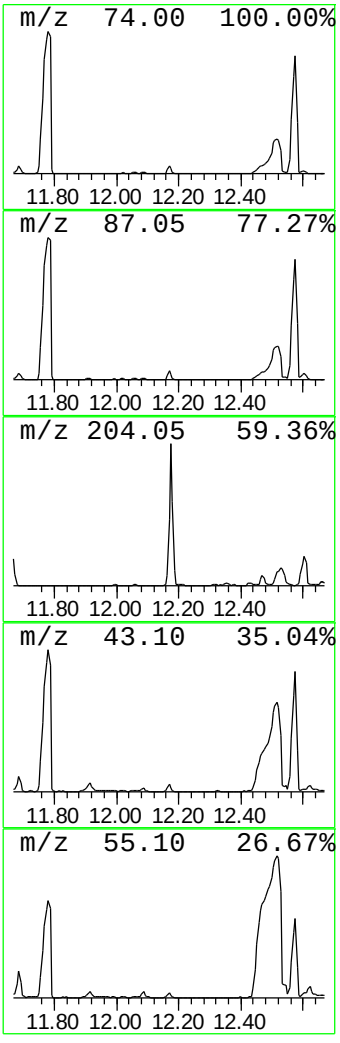
**********

Peak Number 12 Heptadecanoic acid, methyl ... Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.17 | 16.34 ng | 1037600 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Heptadecanoic acid, methyl ester | 284 | C18H36O2 | 001731-92-6 | 95 |
| 2 | Hexadecanoic acid, 15-methyl-, m... | 284 | C18H36O2 | 006929-04-0 | 93 |
| 3 | Methyl tetradecanoate | 242 | C15H30O2 | 000124-10-7 | 60 |
| 4 | Undecanoic acid, methyl ester | 200 | C12H24O2 | 001731-86-8 | 58 |
| 5 | Hexadecanoic acid, 14-methyl-, m... | 284 | C18H36O2 | 002490-49-5 | 55 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

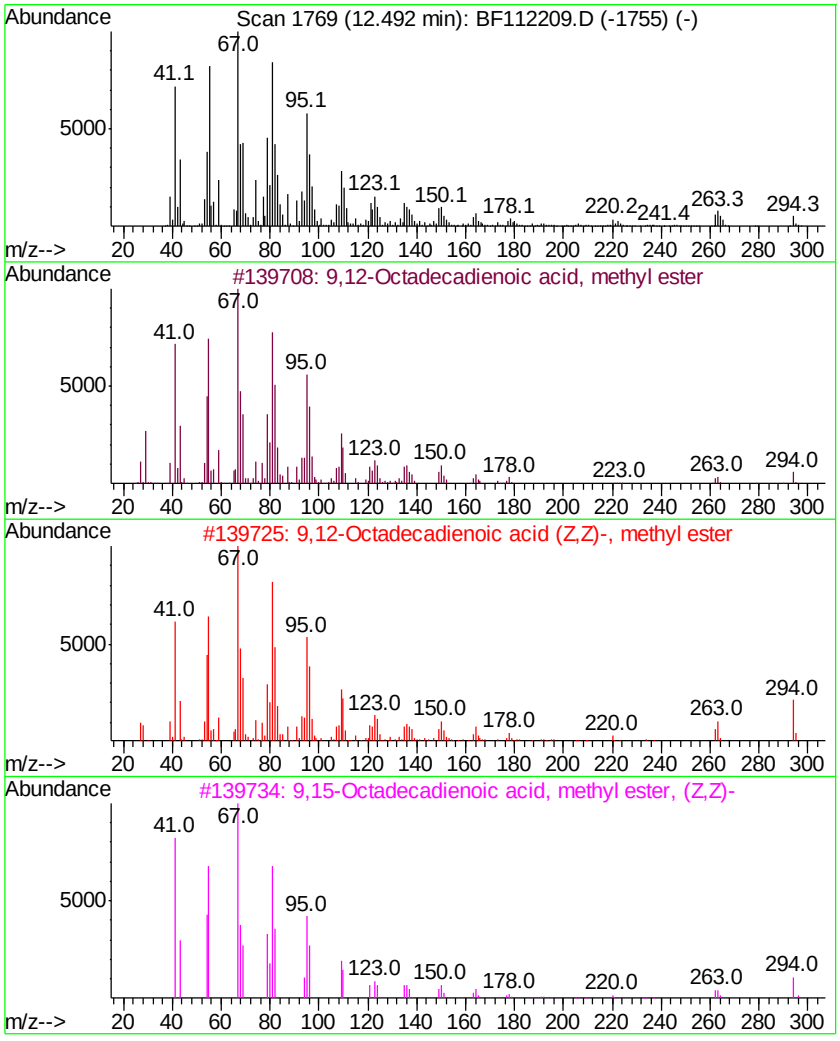
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

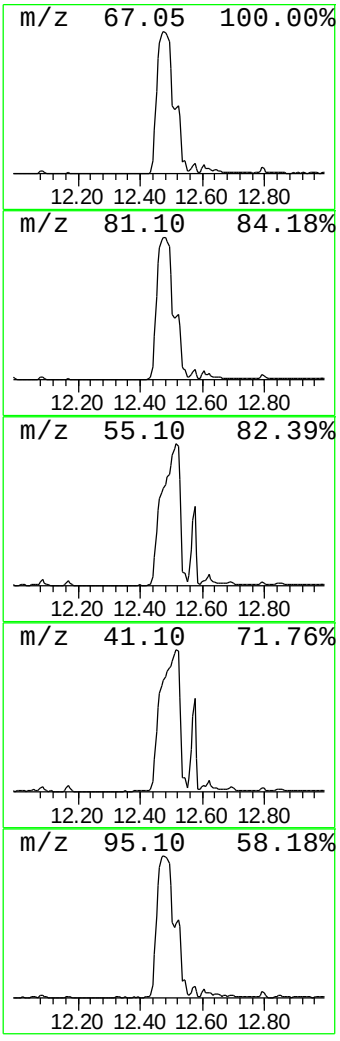
**********

Peak Number 13 9,12-Octadecadienoic acid, ... Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.49 | 709.37 ng | 45037400 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9,12-Octadecadienoic acid, methy... | 294 | C19H34O2 | 002462-85-3 | 99 |
| 2 | 9,12-Octadecadienoic acid (Z,Z)-... | 294 | C19H34O2 | 000112-63-0 | 99 |
| 3 | 9,15-Octadecadienoic acid, methy... | 294 | C19H34O2 | 017309-05-6 | 99 |
| 4 | Methyl 9-cis,11-trans-octadecadi... | 294 | C19H34O2 | 1000336-44-0 | 99 |
| 5 | 10,13-Octadecadienoic acid, meth... | 294 | C19H34O2 | 056554-62-2 | 99 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

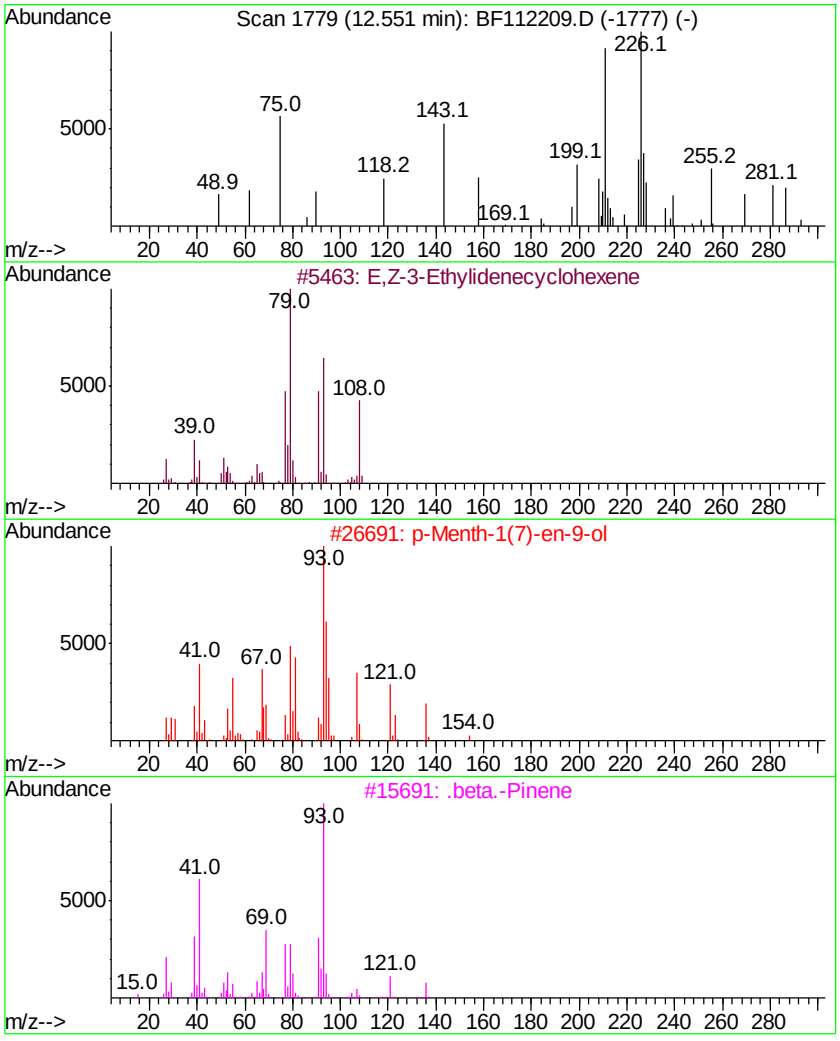
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

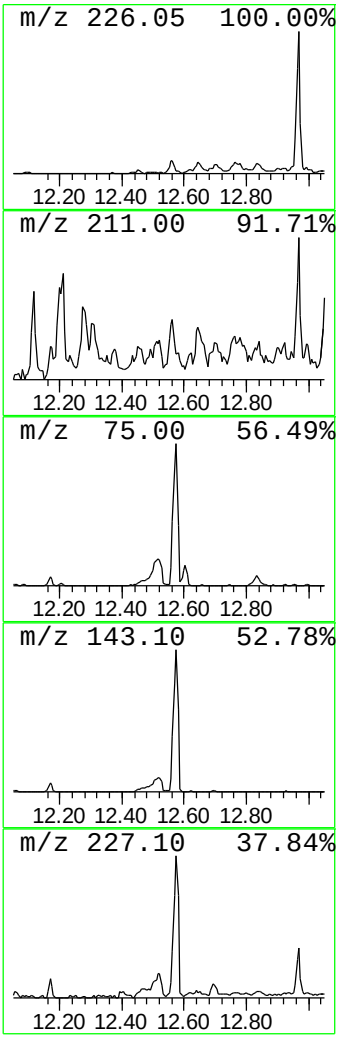
**********

Peak Number 14 unknown12.55 Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.55 | 7.46 ng | 473559 | Phenanthrene-d10 | 11.37 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | E,Z-3-Ethylidenecyclohexene | 108 | C8H12 | 016631-62-2 | 43 |
| 2 | p-Menth-1(7)-en-9-ol | 154 | C10H18O | 029548-16-1 | 43 |
| 3 | .beta.-Pinene | 136 | C10H16 | 000127-91-3 | 38 |
| 4 | Cycloheptene, 5-ethylidene-1-met... | 136 | C10H16 | 015402-94-5 | 35 |
| 5 | E,Z-4-Ethylidenecyclohexene | 108 | C8H12 | 016631-66-6 | 35 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

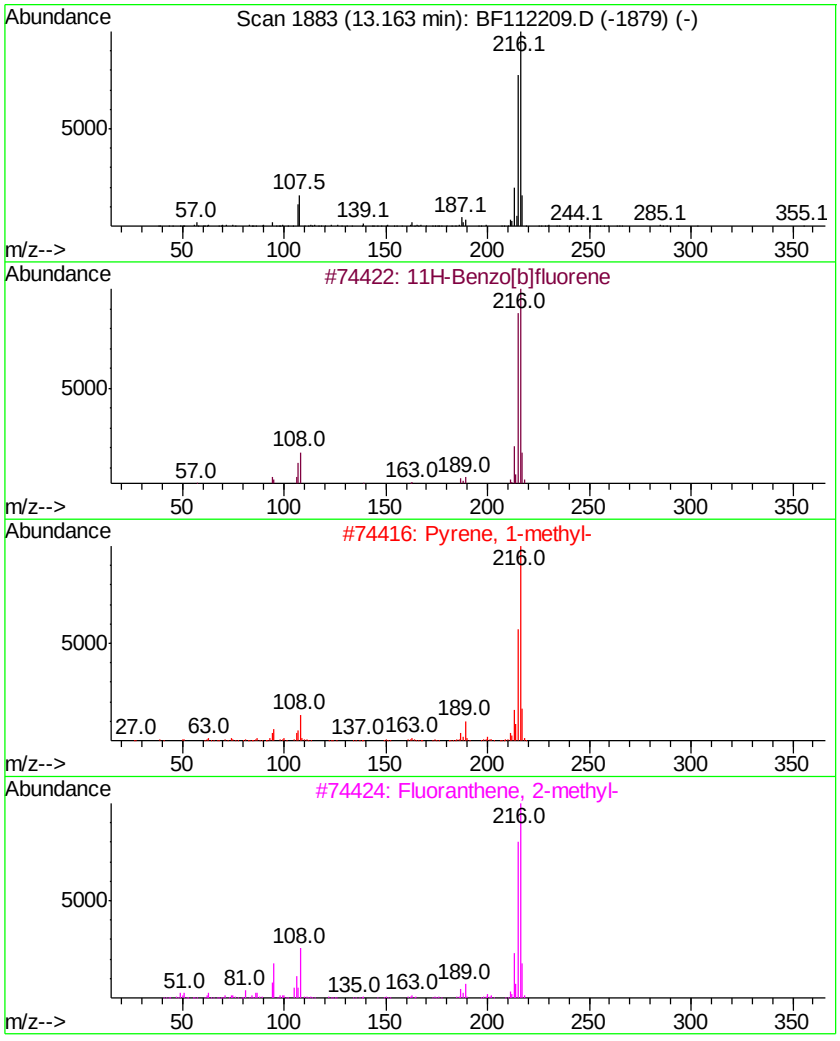
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

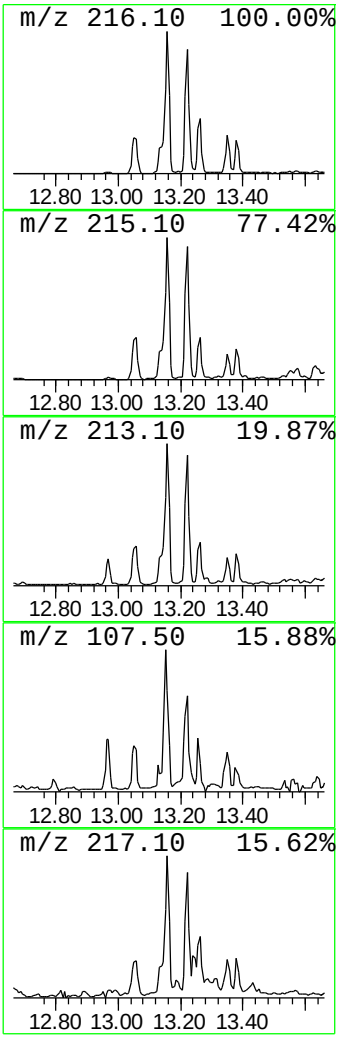
**********

Peak Number 15 11H-Benzo[b]fluorene Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.16 | 4.14 ng | 1124200 | Chrysene-d12 | 14.03 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 11H-Benzo[b]fluorene | 216 | C17H12 | 000243-17-4 | 91 |
| 2 | Pyrene, 1-methyl- | 216 | C17H12 | 002381-21-7 | 87 |
| 3 | Fluoranthene, 2-methyl- | 216 | C17H12 | 033543-31-6 | 83 |
| 4 | 11H-Benzo[a]fluorene | 216 | C17H12 | 000238-84-6 | 83 |
| 5 | 7H-Benzo[c]fluorene | 216 | C17H12 | 000205-12-9 | 81 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

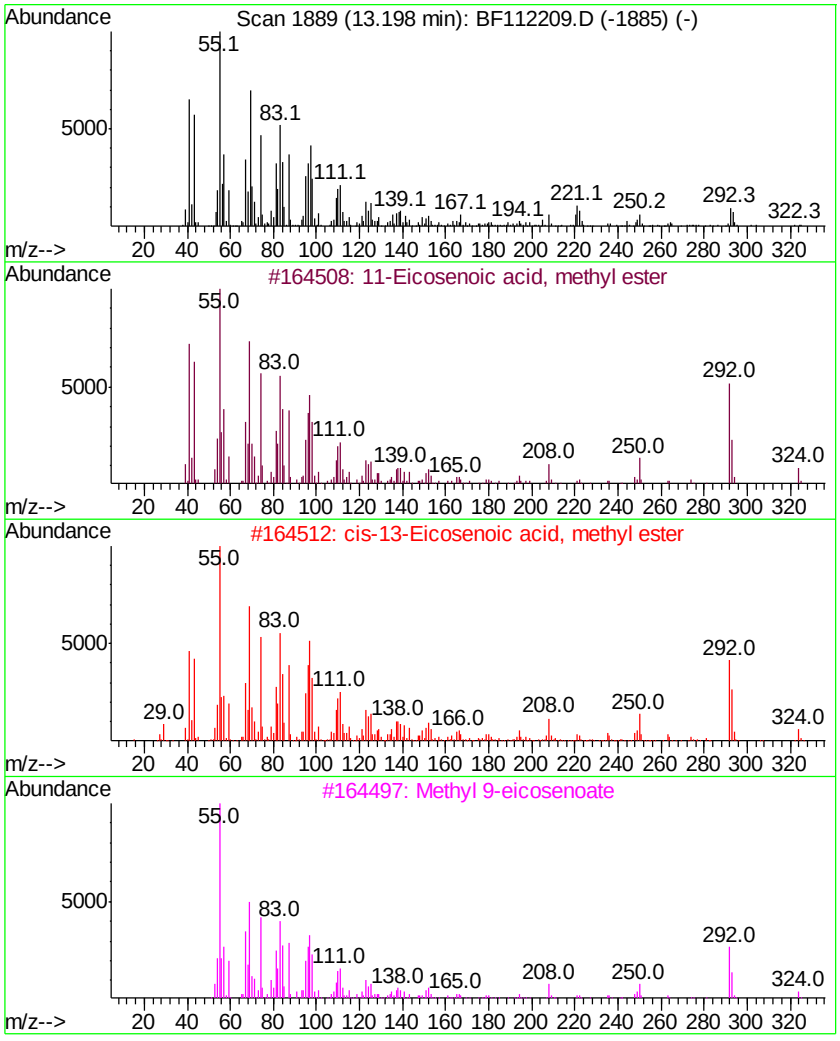
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

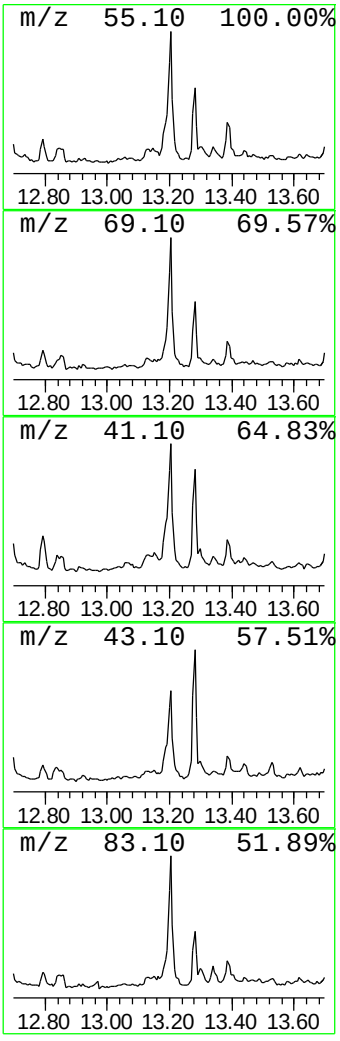
**********

Peak Number 16 11-Eicosenoic acid, methyl ... Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.20 | 5.25 ng | 1425670 | Chrysene-d12 | 14.03 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 11-Eicosenoic acid, methyl ester | 324 | C21H40O2 | 003946-08-5 | 99 |
| 2 | cis-13-Eicosenoic acid, methyl e... | 324 | C21H40O2 | 1000333-52-1 | 99 |
| 3 | Methyl 9-eicosenoate | 324 | C21H40O2 | 1000336-50-5 | 98 |
| 4 | cis-11-Eicosenoic acid, methyl e... | 324 | C21H40O2 | 1000333-63-8 | 91 |
| 5 | trans-13-Octadecenoic acid, meth... | 296 | C19H36O2 | 1000333-61-3 | 90 |



Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

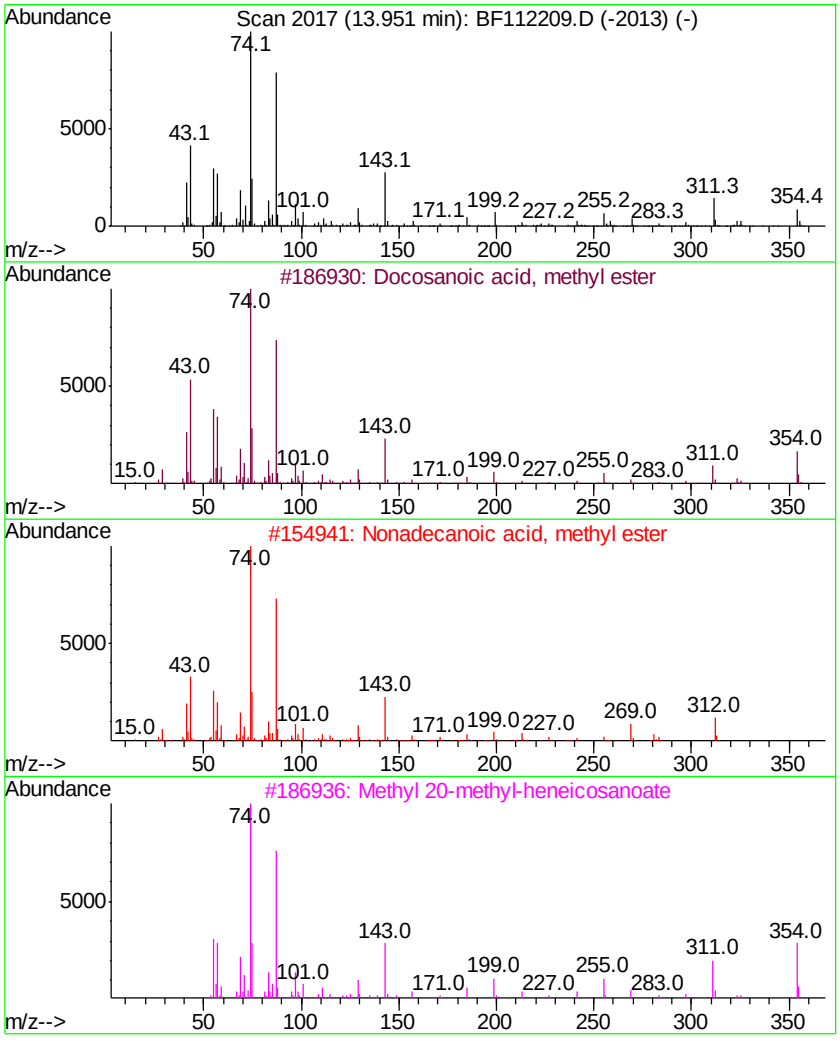
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

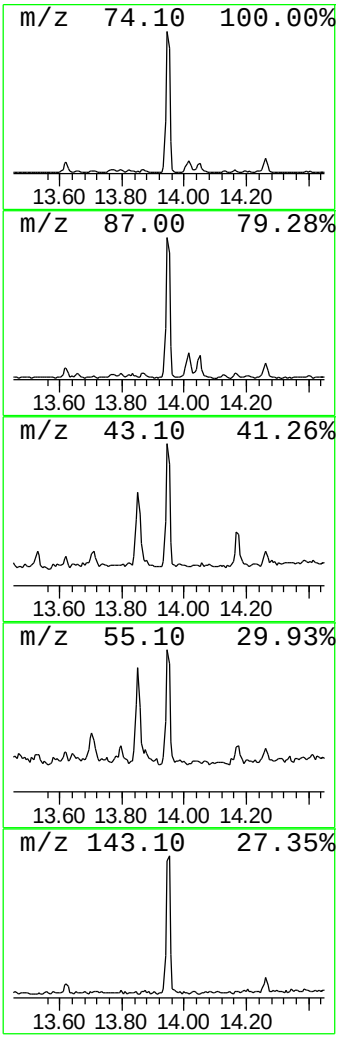
**********

Peak Number 17 Docosanoic acid, methyl ester Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.95 | 3.47 ng | 941850 | Chrysene-d12 | 14.03 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Docosanoic acid, methyl ester | 354 | C23H46O2 | 000929-77-1 | 99 |
| 2 | Nonadecanoic acid, methyl ester | 312 | C20H40O2 | 001731-94-8 | 87 |
| 3 | Methyl 20-methyl-heneicosanoate | 354 | C23H46O2 | 1000336-47-4 | 86 |
| 4 | Methyl stearate | 298 | C19H38O2 | 000112-61-8 | 86 |
| 5 | Heptadecanoic acid, 16-methyl-, ... | 298 | C19H38O2 | 005129-61-3 | 83 |



Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

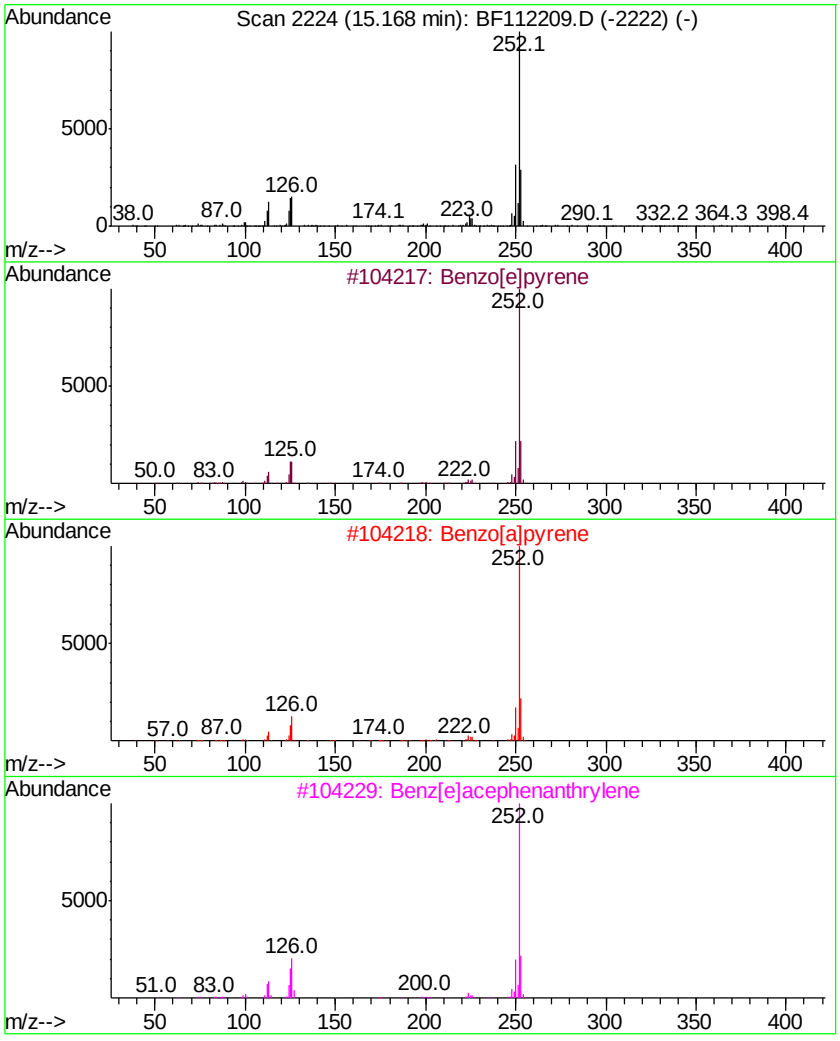
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

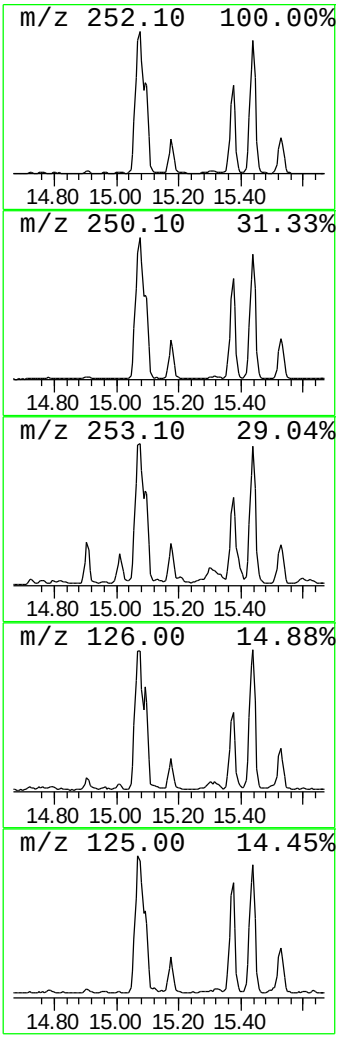
**********

Peak Number 18 Benzo[e]pyrene Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.17 | 5.98 ng | 537858 | Perylene-d12 | 15.50 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 98 |
| 2 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 95 |
| 3 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 94 |
| 4 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 93 |
| 5 | Perylene | 252 | C20H12 | 000198-55-0 | 81 |



# Library Search Compound Report

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

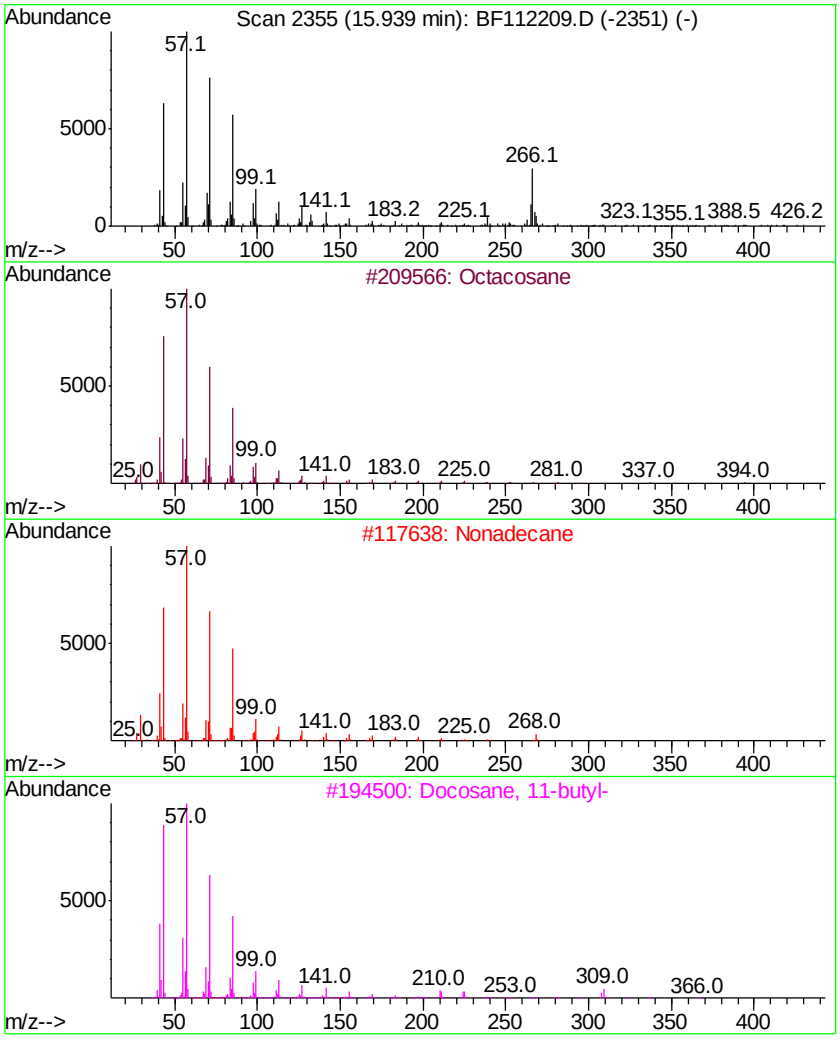
TIC Library : C:\DATABASE\NIST11.L
TIC Integration Parameters: LSCINT.P

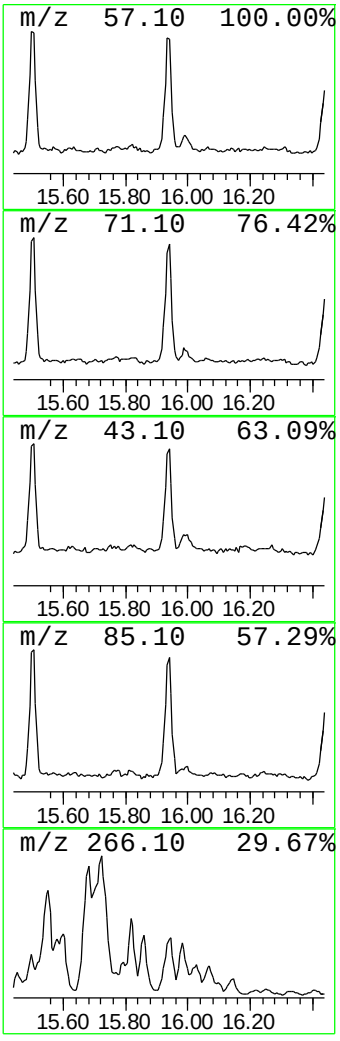
**********

Peak Number 20 Octacosane Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.94 | 6.11 ng | 549679 | Perylene-d12 | 15.50 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Octacosane | 394 | C28H58 | 000630-02-4 | 93 |
| 2 | Nonadecane | 268 | C19H40 | 000629-92-5 | 92 |
| 3 | Docosane, 11-butyl- | 366 | C26H54 | 013475-76-8 | 90 |
| 4 | 2-methyloctacosane | 408 | C29H60 | 1000376-72-8 | 81 |
| 5 | Eicosane, 7-hexyl- | 366 | C26H54 | 055333-99-8 | 72 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\SVOASRV\HPCHEM1\BNA_F\DATA\BF012419\
Data File : BF112209.D
Acq On : 24 Jan 2019 15:24
Operator : JU/SJ
Sample : K1016-03
Misc :
ALS Vial : 6 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** TR-05-RO-1-012319

Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF011619.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 |
| unknown6.63 | 6.63 | 75.1 | ng | 3811770 | 1 | 6.85 | 1015260 | 20.0 |
| Tridecanoic acid,... | 10.89 | 26.0 | ng | 1651780 | 4 | 11.37 | 1269790 | 20.0 |
| Naphtho[2,1-b]thi... | 11.27 | 8.1 | ng | 512574 | 4 | 11.37 | 1269790 | 20.0 |
| Anthracene, 9-eth... | 11.67 | 7.6 | ng | 484567 | 4 | 11.37 | 1269790 | 20.0 |
| 9-Hexadecenoic ac... | 11.69 | 30.4 | ng | 1933380 | 4 | 11.37 | 1269790 | 20.0 |
| Hexadecanoic acid... | 11.78 | 355.2 | ng | 22549600 | 4 | 11.37 | 1269790 | 20.0 |
| Phenanthrene, 2-m... | 11.88 | 10.4 | ng | 659546 | 4 | 11.37 | 1269790 | 20.0 |
| Phenanthrene, 1-m... | 11.91 | 27.1 | ng | 1718500 | 4 | 11.37 | 1269790 | 20.0 |
| 4H-Cyclopenta[def... | 11.99 | 23.6 | ng | 1497910 | 4 | 11.37 | 1269790 | 20.0 |
| Methyl 9-heptadec... | 12.09 | 8.7 | ng | 552781 | 4 | 11.37 | 1269790 | 20.0 |
| Heptadecanoic aci... | 12.17 | 16.3 | ng | 1037600 | 4 | 11.37 | 1269790 | 20.0 |
| 9,12-Octadecadien... | 12.49 | 709.4 | ng | 45037400 | 4 | 11.37 | 1269790 | 20.0 |
| unknown12.55 | 12.55 | 7.5 | ng | 473559 | 4 | 11.37 | 1269790 | 20.0 |
| 11H-Benzo[b]fluorene | 13.16 | 4.1 | ng | 1124200 | 5 | 14.03 | 5429200 | 20.0 |
| 11-Eicosenoic aci... | 13.20 | 5.3 | ng | 1425670 | 5 | 14.03 | 5429200 | 20.0 |
| Docosanoic acid, ... | 13.95 | 3.5 | ng | 941850 | 5 | 14.03 | 5429200 | 20.0 |
| Benzo[e]pyrene | 15.17 | 6.0 | ng | 537858 | 6 | 15.50 | 1800330 | 20.0 |
| Octacosane | 15.94 | 6.1 | ng | 549679 | 6 | 15.50 | 1800330 | 20.0 |