LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

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-BF043015.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 | 1.473 | 23 | 25 | 28 | rVB | 728099 | 911138 | 12.32% | 1.627% |
| 2 | 1.621 | 36 | 38 | 49 | rVB | 136449 | 335390 | 4.54% | 0.599% |
| 3 | 1.884 | 60 | 61 | 108 | rVB | 3056640 | 7392753 | 100.00% | 13.199% |
| 4 | 5.644 | 387 | 390 | 392 | rBV | 242595 | 290526 | 3.93% | 0.519% |
| 5 | 6.902 | 497 | 500 | 502 | rBV | 225583 | 324332 | 4.39% | 0.579% |
| 6 | 7.050 | 511 | 513 | 516 | rBV | 362387 | 327886 | 4.44% | 0.585% |
| 7 | 7.336 | 536 | 538 | 541 | rBV | 251528 | 333825 | 4.52% | 0.596% |
| 8 | 7.530 | 552 | 555 | 557 | rBV | 243410 | 238749 | 3.23% | 0.426% |
| 9 | 8.033 | 596 | 599 | 601 | rBV | 172738 | 180566 | 2.44% | 0.322% |
| 10 | 8.913 | 674 | 676 | 678 | rBV | 359321 | 508398 | 6.88% | 0.908% |
| 11 | 10.262 | 792 | 794 | 796 | rBV | 479212 | 410725 | 5.56% | 0.733% |
| 12 | 10.674 | 827 | 830 | 832 | rBV | 65341 | 75306 | 1.02% | 0.134% |
| 13 | 10.925 | 849 | 852 | 854 | rVB | 101581 | 127294 | 1.72% | 0.227% |
| 14 | 11.096 | 864 | 867 | 869 | rBV | 630041 | 612395 | 8.28% | 1.093% |
| 15 | 11.131 | 869 | 870 | 873 | rVV | 238975 | 275006 | 3.72% | 0.491% |
| 16 | 11.348 | 887 | 889 | 892 | rVB | 193946 | 218444 | 2.95% | 0.390% |
| 17 | 11.782 | 924 | 927 | 929 | rVV3 | 227389 | 311115 | 4.21% | 0.555% |
| 18 | 11.862 | 931 | 934 | 935 | rVV | 57392 | 94823 | 1.28% | 0.169% |
| 19 | 11.976 | 942 | 944 | 948 | rVV2 | 123500 | 150666 | 2.04% | 0.269% |
| 20 | 12.079 | 950 | 953 | 956 | rVV | 375387 | 461495 | 6.24% | 0.824% |
| 21 | 12.239 | 965 | 967 | 972 | rVB3 | 42496 | 78181 | 1.06% | 0.140% |
| 22 | 12.468 | 982 | 987 | 988 | rBV2 | 64278 | 146796 | 1.99% | 0.262% |
| 23 | 12.628 | 997 | 1001 | 1002 | rBV2 | 97682 | 130416 | 1.76% | 0.233% |
| 24 | 12.708 | 1006 | 1008 | 1011 | rVB | 122074 | 158219 | 2.14% | 0.282% |
| 25 | 12.765 | 1011 | 1013 | 1015 | rBV2 | 111585 | 163200 | 2.21% | 0.291% |
| 26 | 12.811 | 1015 | 1017 | 1022 | rVB | 177072 | 243592 | 3.30% | 0.435% |
| 27 | 12.948 | 1026 | 1029 | 1030 | rBV | 598871 | 721002 | 9.75% | 1.287% |
| 28 | 12.982 | 1030 | 1032 | 1034 | rVV | 2327825 | 3051273 | 41.27% | 5.448% |
| 29 | 13.039 | 1034 | 1037 | 1039 | rVV | 882499 | 875650 | 11.84% | 1.563% |
| 30 | 13.085 | 1039 | 1041 | 1044 | rVV2 | 78857 | 97316 | 1.32% | 0.174% |
| 31 | 13.211 | 1050 | 1052 | 1053 | rBV | 77072 | 82908 | 1.12% | 0.148% |
| 32 | 13.245 | 1053 | 1055 | 1056 | rVV | 247316 | 255945 | 3.46% | 0.457% |
| 33 | 13.268 | 1056 | 1057 | 1061 | rVV3 | 40863 | 83779 | 1.13% | 0.150% |
| 34 | 13.325 | 1061 | 1062 | 1064 | rVV2 | 77161 | 78612 | 1.06% | 0.140% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

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-BF043015.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35 | 13.359 | 1064 | 1065 | 1067 | rVB2 | 74984 | 79625 | 1.08% | 0.142% |
| 36 | 13.577 | 1081 | 1084 | 1085 | rVV | 391998 | 406657 | 5.50% | 0.726% |
| 37 | 13.611 | 1085 | 1087 | 1090 | rVB | 591206 | 591076 | 8.00% | 1.055% |
| 38 | 13.668 | 1090 | 1092 | 1094 | rBV | 295235 | 295074 | 3.99% | 0.527% |
| 39 | 13.714 | 1094 | 1096 | 1097 | rVV | 526594 | 715399 | 9.68% | 1.277% |
| 40 | 13.954 | 1115 | 1117 | 1121 | rVB2 | 294818 | 521413 | 7.05% | 0.931% |
| 41 | 14.045 | 1121 | 1125 | 1127 | rBV4 | 34081 | 82804 | 1.12% | 0.148% |
| 42 | 14.137 | 1129 | 1133 | 1135 | rBV2 | 98371 | 164095 | 2.22% | 0.293% |
| 43 | 14.205 | 1137 | 1139 | 1140 | rVB | 69922 | 89500 | 1.21% | 0.160% |
| 44 | 14.262 | 1142 | 1144 | 1146 | rBV | 225751 | 303527 | 4.11% | 0.542% |
| 45 | 14.308 | 1146 | 1148 | 1151 | rVV2 | 132824 | 277160 | 3.75% | 0.495% |
| 46 | 14.365 | 1151 | 1153 | 1158 | rVB | 221210 | 346504 | 4.69% | 0.619% |
| 47 | 14.457 | 1158 | 1161 | 1164 | rBV | 2983042 | 4012475 | 54.28% | 7.164% |
| 48 | 14.537 | 1166 | 1168 | 1169 | rBV | 97628 | 123661 | 1.67% | 0.221% |
| 49 | 14.571 | 1169 | 1171 | 1173 | rVB2 | 66396 | 95005 | 1.29% | 0.170% |
| 50 | 14.640 | 1173 | 1177 | 1179 | rBV2 | 206433 | 330301 | 4.47% | 0.590% |
| 51 | 14.742 | 1183 | 1186 | 1188 | rVV | 3302782 | 4185693 | 56.62% | 7.473% |
| 52 | 14.800 | 1188 | 1191 | 1197 | rVB2 | 127252 | 304290 | 4.12% | 0.543% |
| 53 | 14.891 | 1197 | 1199 | 1201 | rBV | 209243 | 268055 | 3.63% | 0.479% |
| 54 | 14.937 | 1201 | 1203 | 1207 | rVB | 623698 | 788744 | 10.67% | 1.408% |
| 55 | 15.017 | 1207 | 1210 | 1212 | rBV2 | 219103 | 470671 | 6.37% | 0.840% |
| 56 | 15.154 | 1220 | 1222 | 1224 | rVB | 446264 | 542152 | 7.33% | 0.968% |
| 57 | 15.211 | 1224 | 1227 | 1228 | rBV2 | 54670 | 121882 | 1.65% | 0.218% |
| 58 | 15.234 | 1228 | 1229 | 1231 | rVB | 188494 | 245299 | 3.32% | 0.438% |
| 59 | 15.280 | 1231 | 1233 | 1235 | rBV | 427661 | 546057 | 7.39% | 0.975% |
| 60 | 15.325 | 1235 | 1237 | 1238 | rVB | 59440 | 79648 | 1.08% | 0.142% |
| 61 | 15.394 | 1241 | 1243 | 1245 | rVB | 201552 | 200929 | 2.72% | 0.359% |
| 62 | 15.440 | 1245 | 1247 | 1248 | rBV | 158045 | 217284 | 2.94% | 0.388% |
| 63 | 15.531 | 1253 | 1255 | 1258 | rBV3 | 94043 | 176982 | 2.39% | 0.316% |
| 64 | 15.668 | 1262 | 1267 | 1268 | rBV3 | 93113 | 272707 | 3.69% | 0.487% |
| 65 | 15.783 | 1275 | 1277 | 1281 | rVB | 237213 | 333335 | 4.51% | 0.595% |
| 66 | 15.920 | 1286 | 1289 | 1291 | rBV2 | 260144 | 414800 | 5.61% | 0.741% |
| 67 | 15.965 | 1291 | 1293 | 1296 | rVV2 | 295592 | 512825 | 6.94% | 0.916% |
| 68 | 16.045 | 1299 | 1300 | 1303 | rVB | 251204 | 313615 | 4.24% | 0.560% |
| 69 | 16.114 | 1303 | 1306 | 1307 | rBV3 | 77398 | 141092 | 1.91% | 0.252% |
| 70 | 16.240 | 1312 | 1317 | 1319 | rVV2 | 1674686 | 3413995 | 46.18% | 6.095% |
| 71 | 16.274 | 1319 | 1320 | 1322 | rVV | 1429613 | 1664104 | 22.51% | 2.971% |

LSC Area Percent Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

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-BF043015.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72 | 16.377 | 1325 | 1329 | 1330 | rBV2 | 245405 | 400481 | 5.42% | 0.715% |
| 73 | 16.423 | 1330 | 1333 | 1334 | rVV2 | 88199 | 207085 | 2.80% | 0.370% |
| 74 | 16.491 | 1337 | 1339 | 1342 | rVV3 | 120020 | 241631 | 3.27% | 0.431% |
| 75 | 16.537 | 1342 | 1343 | 1345 | rVB | 147355 | 141458 | 1.91% | 0.253% |
| 76 | 16.663 | 1351 | 1354 | 1355 | rBV3 | 90139 | 171608 | 2.32% | 0.306% |
| 77 | 16.697 | 1355 | 1357 | 1358 | rVV | 117639 | 137630 | 1.86% | 0.246% |
| 78 | 16.743 | 1358 | 1361 | 1363 | rVB | 347206 | 447034 | 6.05% | 0.798% |
| 79 | 16.777 | 1363 | 1364 | 1367 | rVB | 115649 | 156158 | 2.11% | 0.279% |
| 80 | 16.857 | 1370 | 1371 | 1373 | rVB | 160243 | 128121 | 1.73% | 0.229% |
| 81 | 16.891 | 1373 | 1374 | 1375 | rBV | 97831 | 123205 | 1.67% | 0.220% |
| 82 | 17.006 | 1382 | 1384 | 1387 | rVB2 | 93542 | 124458 | 1.68% | 0.222% |
| 83 | 17.131 | 1393 | 1395 | 1397 | rBV | 149274 | 207111 | 2.80% | 0.370% |
| 84 | 17.531 | 1427 | 1430 | 1436 | rBV | 1348045 | 3295521 | 44.58% | 5.884% |
| 85 | 17.646 | 1439 | 1440 | 1442 | rVB | 300480 | 325200 | 4.40% | 0.581% |
| 86 | 17.691 | 1442 | 1444 | 1447 | rBV4 | 67937 | 155298 | 2.10% | 0.277% |
| 87 | 17.851 | 1456 | 1458 | 1461 | rBV | 823967 | 1054228 | 14.26% | 1.882% |
| 88 | 17.920 | 1461 | 1464 | 1467 | rVB | 1405672 | 1719345 | 23.26% | 3.070% |
| 89 | 17.989 | 1467 | 1470 | 1471 | rBV | 486000 | 776672 | 10.51% | 1.387% |
| 90 | 19.486 | 1598 | 1601 | 1607 | rVB2 | 520140 | 1179722 | 15.96% | 2.106% |
| 91 | 19.680 | 1615 | 1618 | 1620 | rBV | 144406 | 290731 | 3.93% | 0.519% |
| 92 | 19.943 | 1637 | 1641 | 1649 | rVB | 409588 | 945055 | 12.78% | 1.687% |
| 93 | 20.172 | 1659 | 1661 | 1670 | rVB2 | 149208 | 384780 | 5.20% | 0.687% |

Sum of corrected areas: 56008688

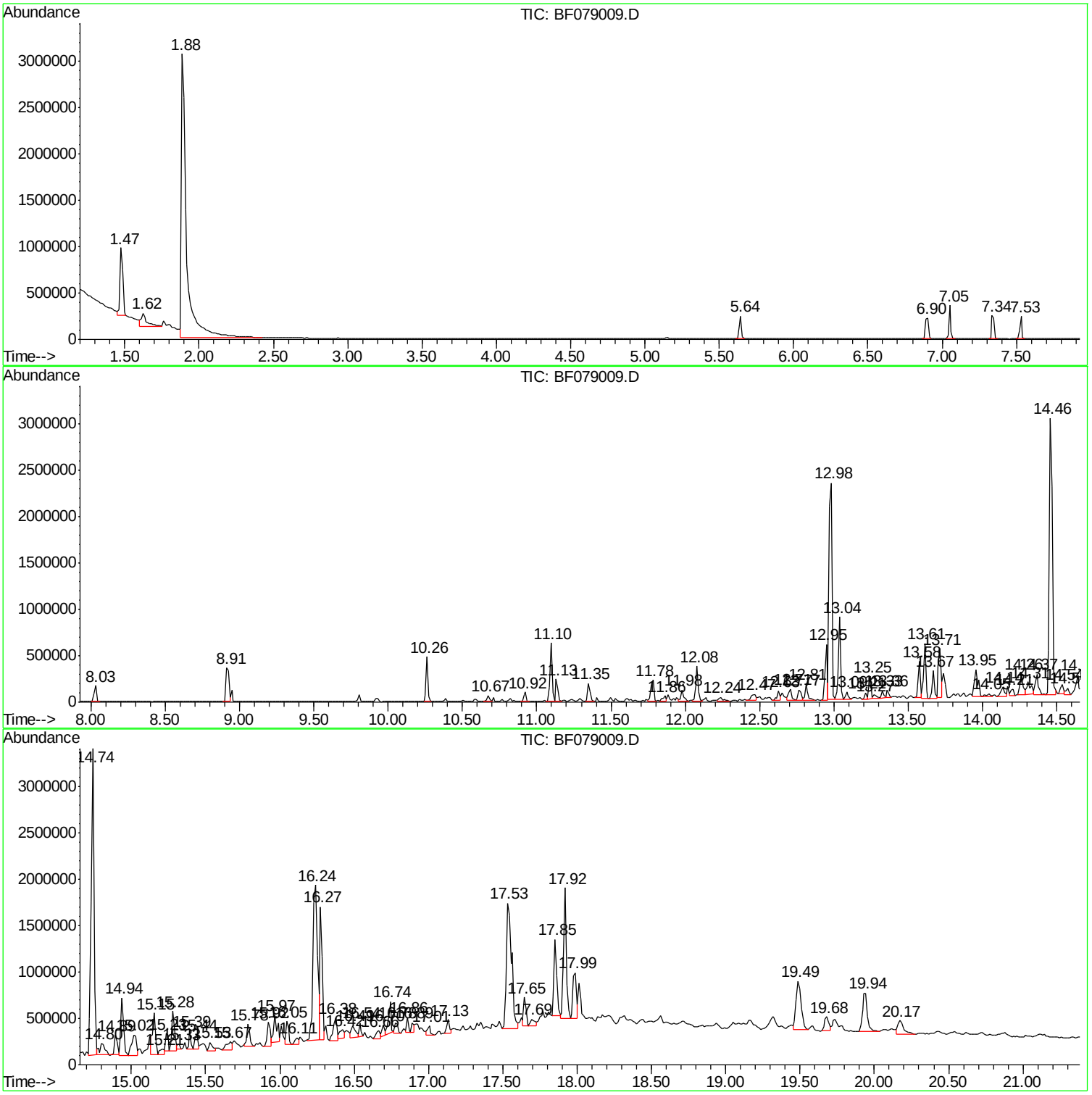
LSC Report - Integrated Chromatogram

Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

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



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

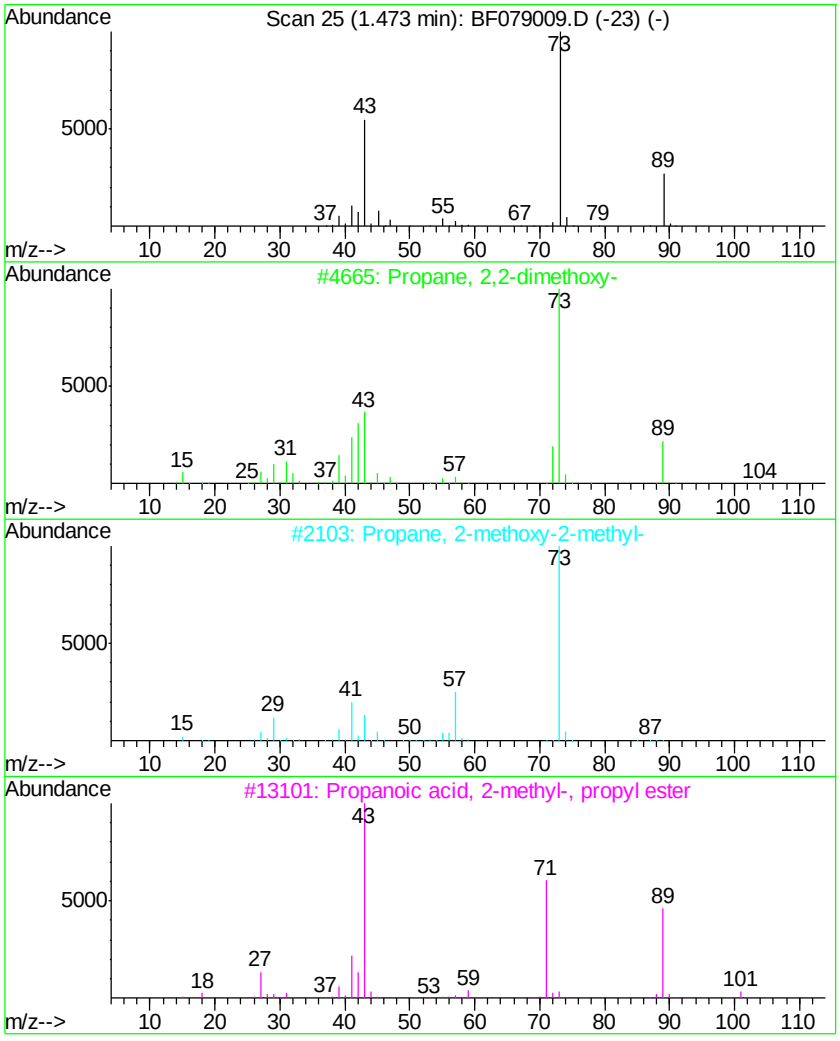
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

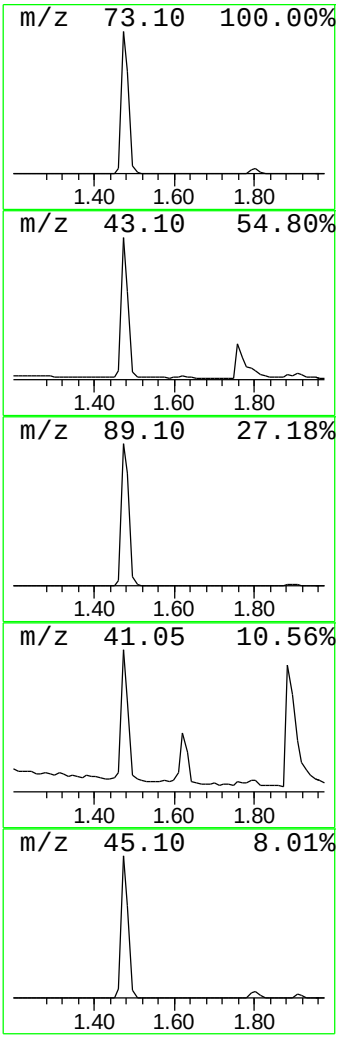
**********

Peak Number 1 Propane, 2,2-dimethoxy- Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 1.47 | 54.59 ng | 911138 | 1,4-Dichlorobenzene-d4 | 7.35 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Propane, 2,2-dimethoxy- | 104 | C5H12O2 | 000077-76-9 | 56 |
| 2 | Propane, 2-methoxy-2-methyl- | 88 | C5H12O | 001634-04-4 | 9 |
| 3 | Propanoic acid, 2-methyl-, propy... | 130 | C7H14O2 | 000644-49-5 | 9 |
| 4 | 1-Hexen-4-ol, 1-chloro-3,5-dimet... | 162 | C8H15ClO | 100244-09-5 | 9 |
| 5 | Methane, isothiocyanato- | 73 | C2H3NS | 000556-61-6 | 7 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

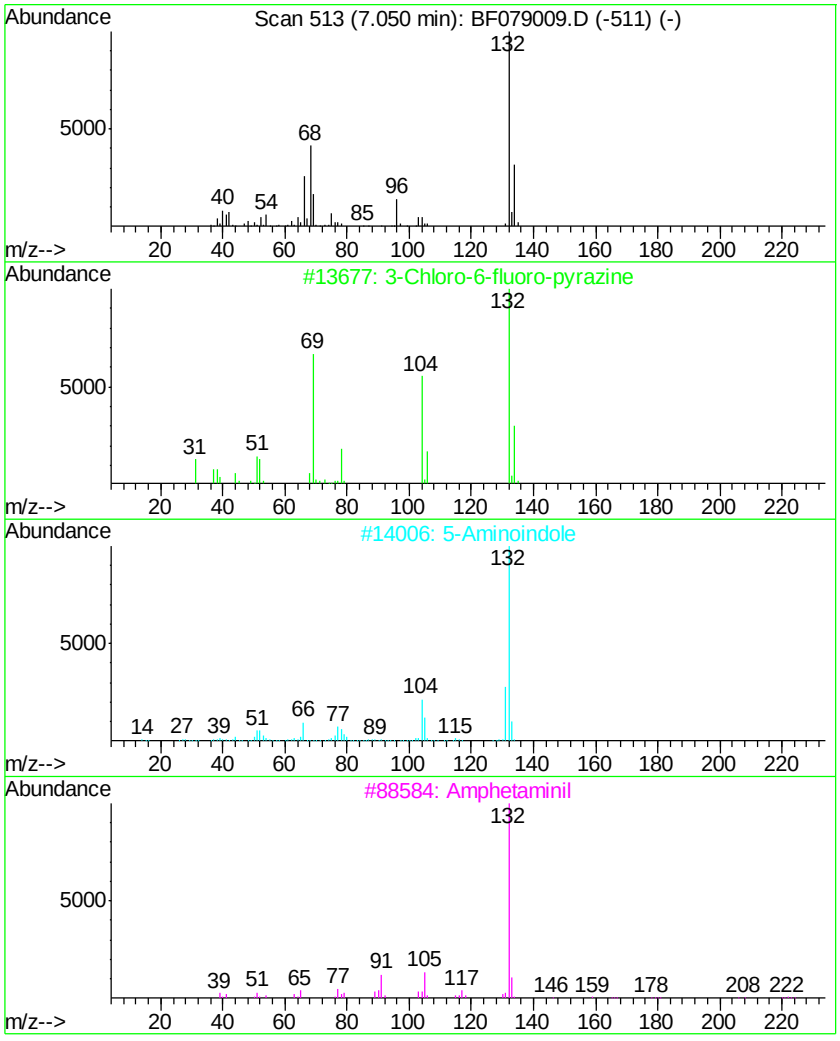
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

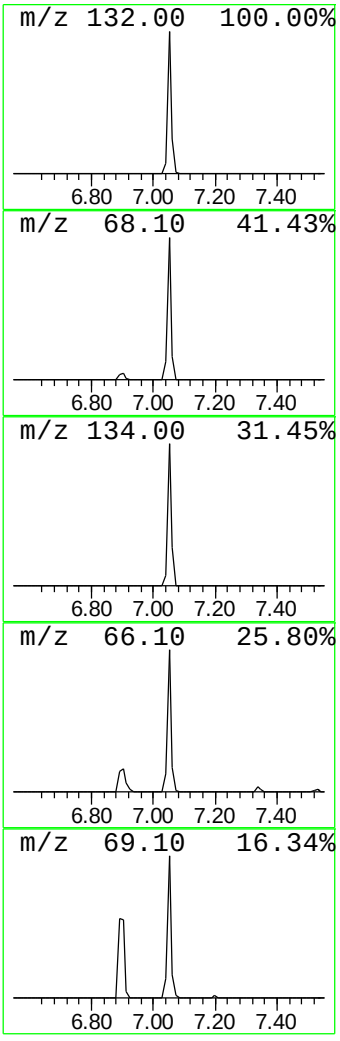
**********

Peak Number 4 unknown7.05 Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.05 | 19.64 ng | 327886 | 1,4-Dichlorobenzene-d4 | 7.35 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Chloro-6-fluoro-pyrazine | 132 | C4H2ClFN2 | 1000146-10-7 | 27 |
| 2 | 5-Aminoindole | 132 | C8H8N2 | 005192-03-0 | 12 |
| 3 | Amphetaminil | 250 | C17H18N2 | 017590-01-1 | 10 |
| 4 | Tranylcypromine-propionyl | 189 | C12H15NO | 1000123-86-3 | 10 |
| 5 | Bicyclo[4.2.0]octa-1,3,5-triene,... | 132 | C10H12 | 028749-81-7 | 9 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

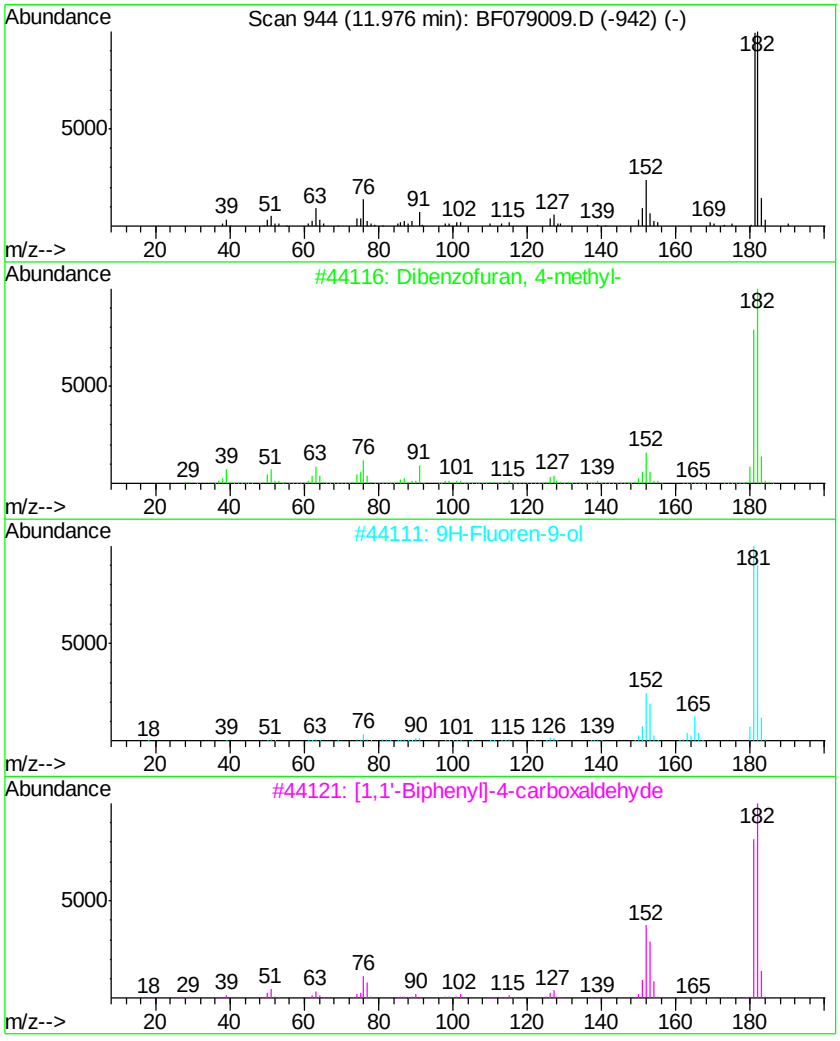
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

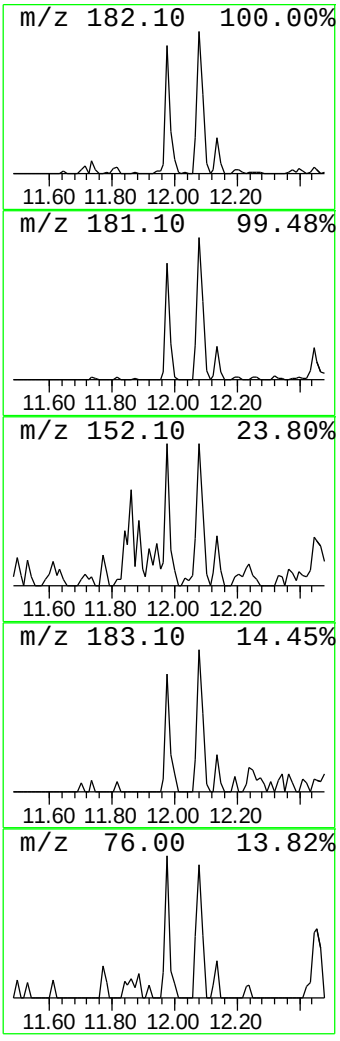
**********

Peak Number 6 Dibenzofuran, 4-methyl- Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.98 | 4.92 ng | 150666 | Acenaphthene-d10 | 11.10 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dibenzofuran, 4-methyl- | 182 | C13H10O | 007320-53-8 | 94 |
| 2 | 9H-Fluoren-9-ol | 182 | C13H10O | 001689-64-1 | 90 |
| 3 | [1,1'-Biphenyl]-4-carboxaldehyde | 182 | C13H10O | 003218-36-8 | 87 |
| 4 | 3-(2-Naphthyl)acrylaldehyde | 182 | C13H10O | 020884-05-3 | 72 |
| 5 | 2-Hydroxyfluorene | 182 | C13H10O | 002443-58-5 | 64 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

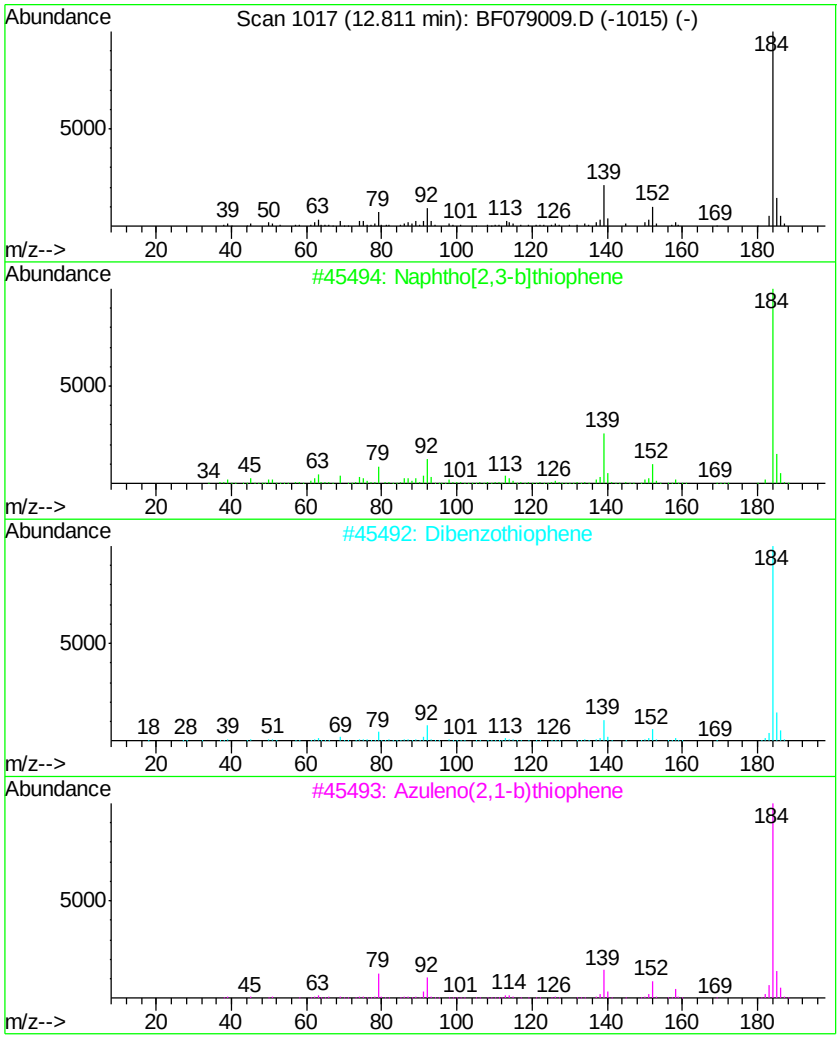
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

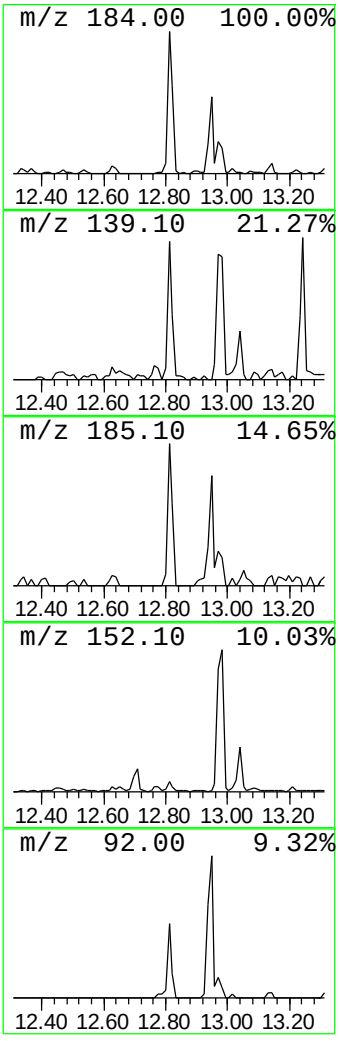
**********

Peak Number 7 Naphtho[2,3-b]thiophene Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.81 | 6.76 ng | 243592 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphtho[2,3-b]thiophene | 184 | C12H8S | 000268-77-9 | 96 |
| 2 | Dibenzothiophene | 184 | C12H8S | 000132-65-0 | 96 |
| 3 | Azuleno(2,1-b)thiophene | 184 | C12H8S | 000248-13-5 | 91 |
| 4 | 2,7-Diamino-quinoline-3-carbonit... | 184 | C10H8N4 | 1000187-24-4 | 53 |
| 5 | Dibenzo-p-dioxin | 184 | C12H8O2 | 000262-12-4 | 50 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

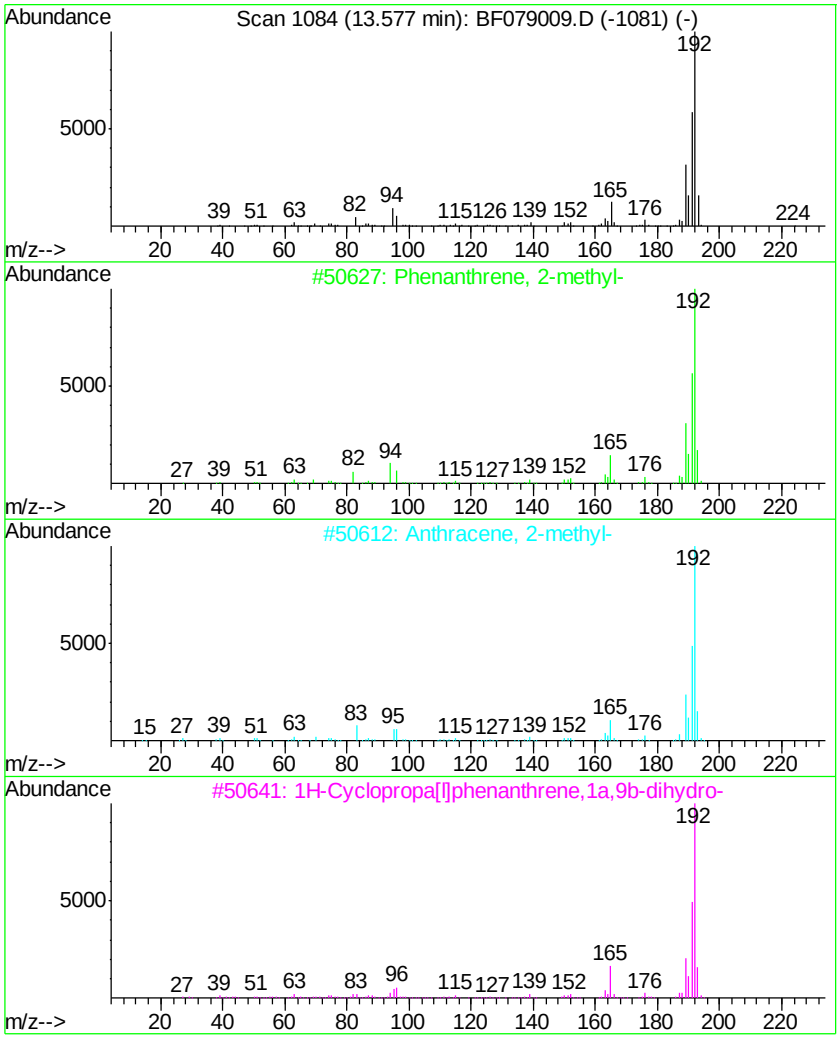
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

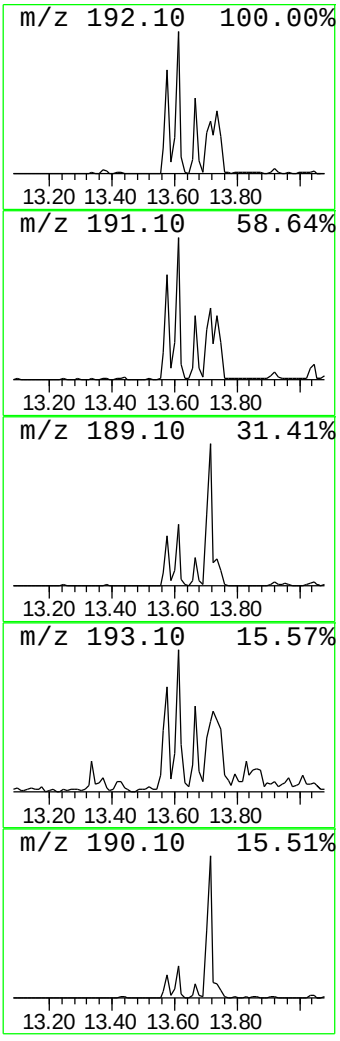
**********

Peak Number 8 Phenanthrene, 2-methyl- Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.58 | 11.28 ng | 406657 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 98 |
| 2 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 96 |
| 3 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 95 |
| 4 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 95 |
| 5 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 91 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

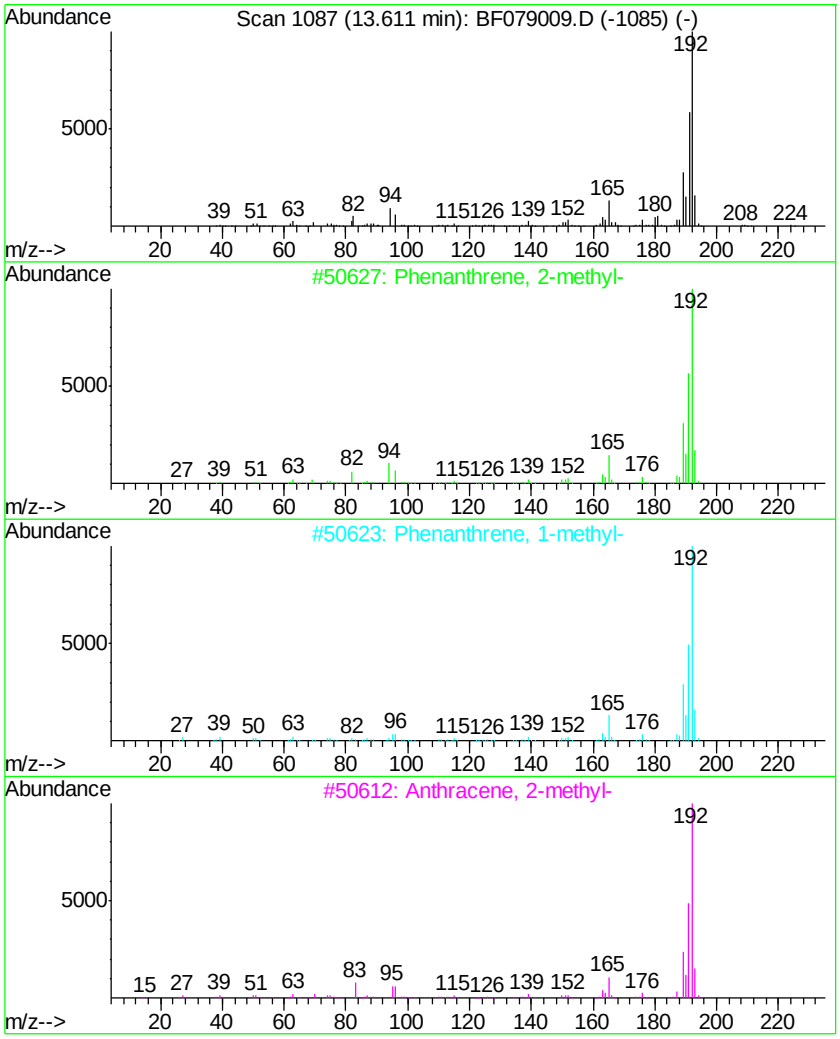
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

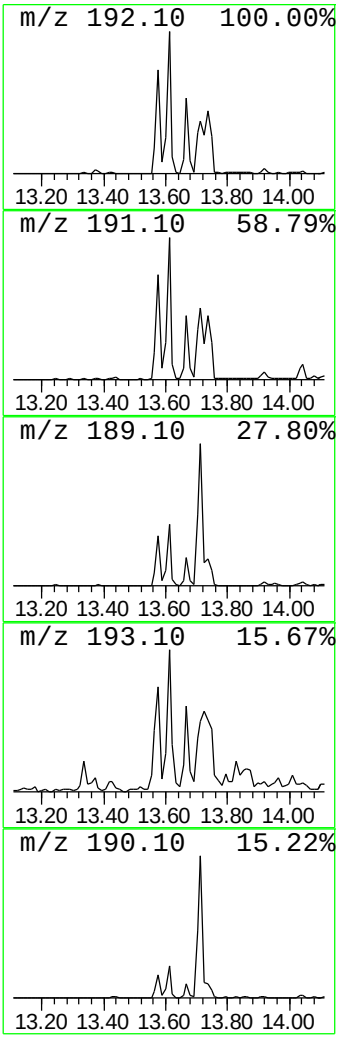
**********

Peak Number 9 Phenanthrene, 1-methyl- Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.61 | 16.40 ng | 591076 | Phenanthrene-d10 | 12.95 |

| 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 | 97 |
| 3 | Anthracene, 2-methyl- | 192 | C15H12 | 000613-12-7 | 96 |
| 4 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 95 |
| 5 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 95 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

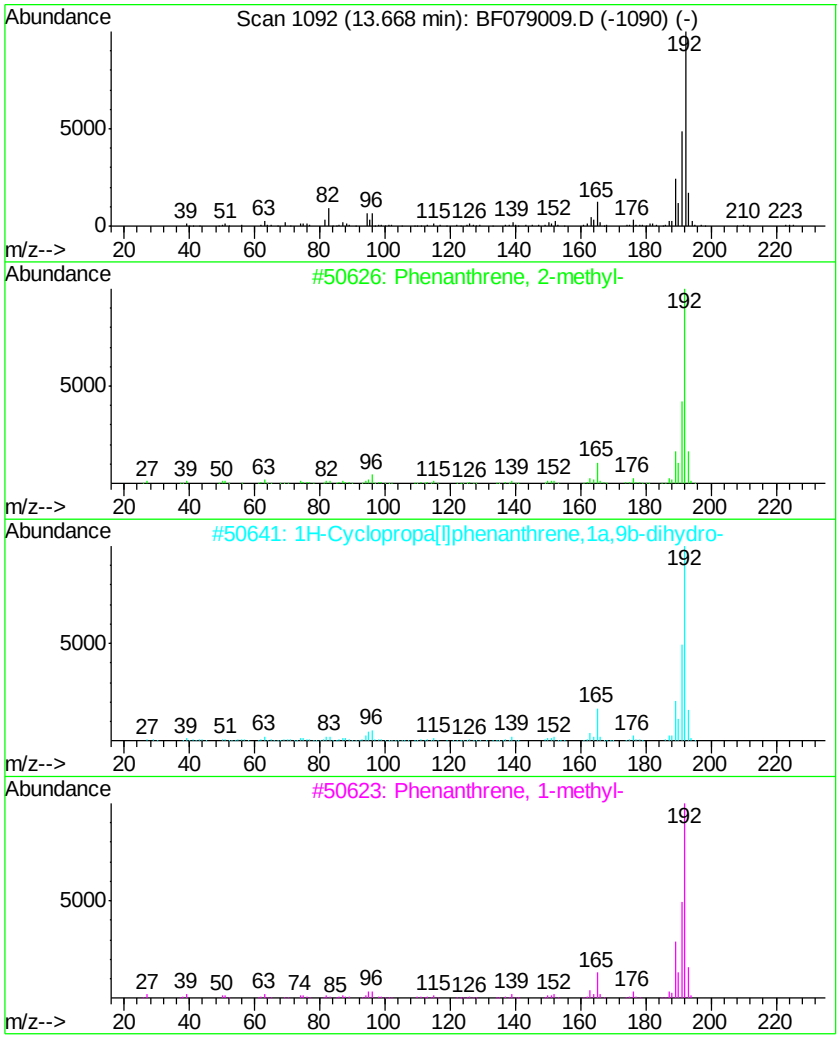
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

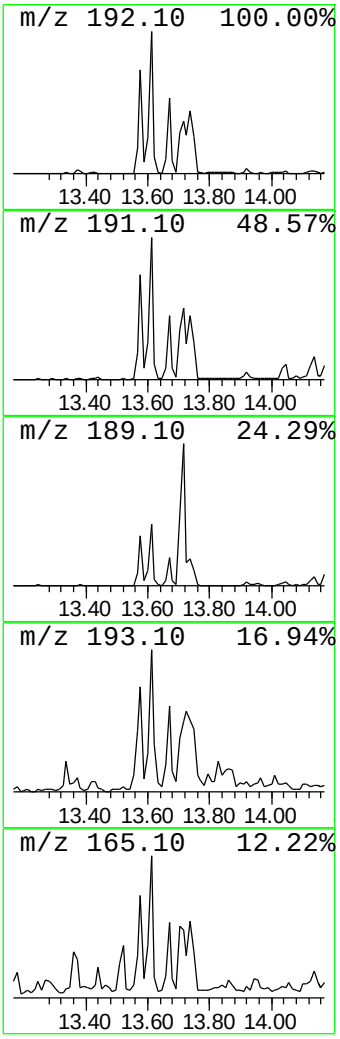
**********

Peak Number 10 1H-Cyclopropa[l]phenanthren... Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.67 | 8.19 ng | 295074 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 97 |
| 2 | 1H-Cyclopropa[l]phenanthrene,1a,... | 192 | C15H12 | 000949-41-7 | 96 |
| 3 | Phenanthrene, 1-methyl- | 192 | C15H12 | 000832-69-9 | 96 |
| 4 | Anthracene, 1-methyl- | 192 | C15H12 | 000610-48-0 | 96 |
| 5 | Anthracene, 9-methyl- | 192 | C15H12 | 000779-02-2 | 95 |



# Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

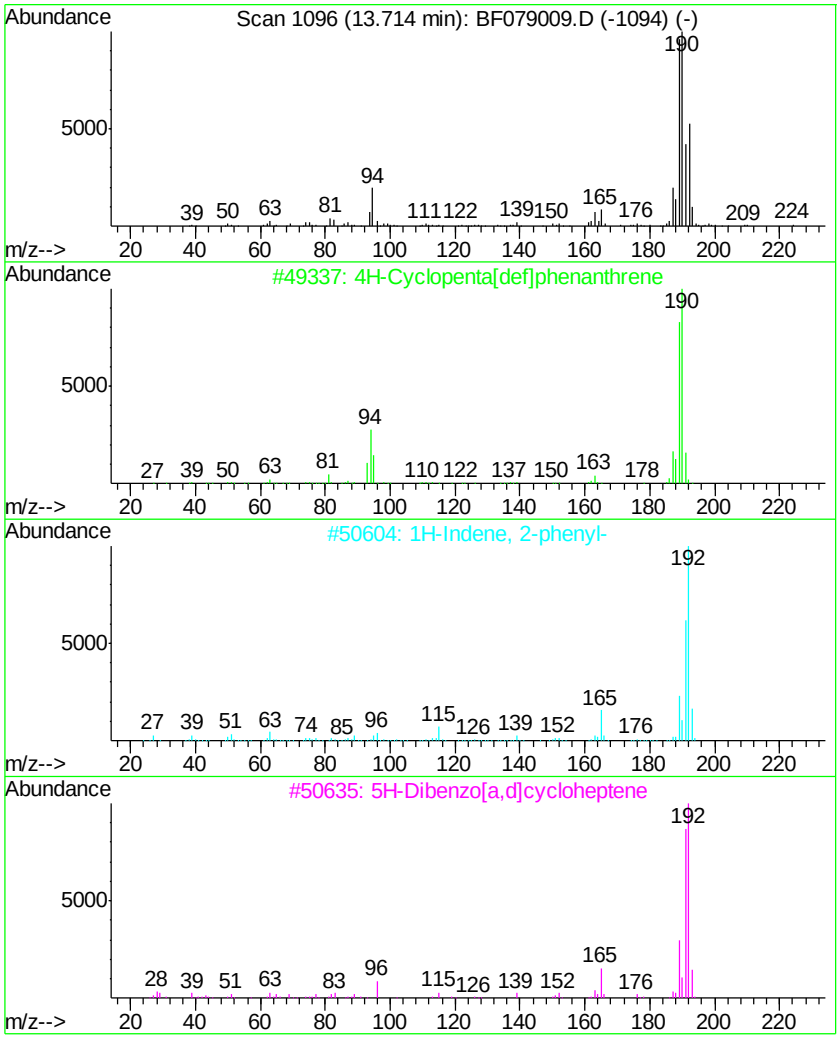
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

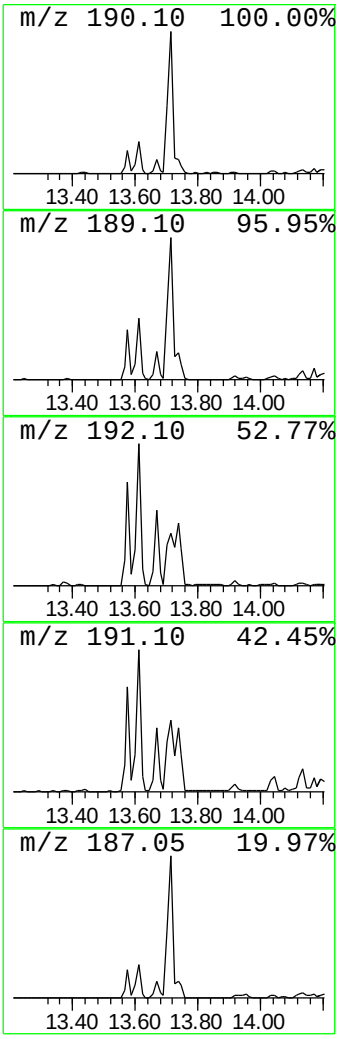
**********

Peak Number 11 4H-Cyclopenta[def]phenanthrene Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.71 | 19.84 ng | 715399 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-Cyclopenta[def]phenanthrene | 190 | C15H10 | 000203-64-5 | 64 |
| 2 | 1H-Indene, 2-phenyl- | 192 | C15H12 | 004505-48-0 | 35 |
| 3 | 5H-Dibenzo[a,d]cycloheptene | 192 | C15H12 | 000256-81-5 | 18 |
| 4 | Propyne, 1,3-diphenyl- | 192 | C15H12 | 004980-70-5 | 18 |
| 5 | Phenanthrene, 2-methyl- | 192 | C15H12 | 002531-84-2 | 15 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

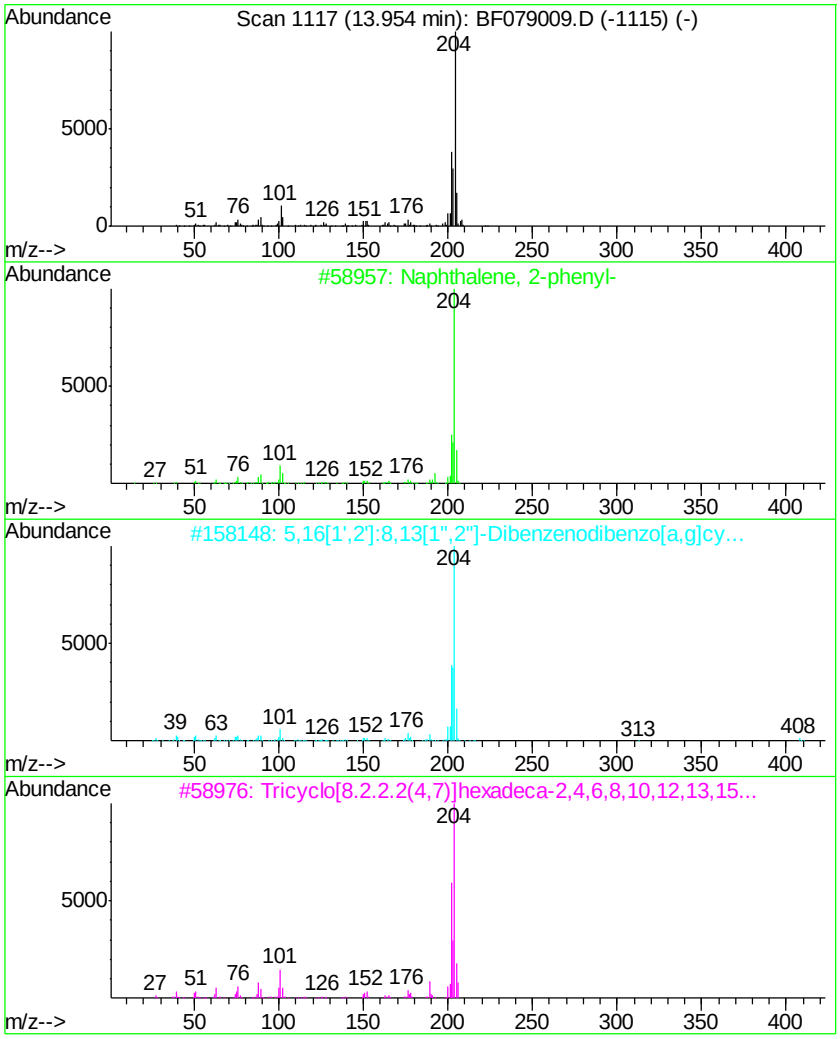
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

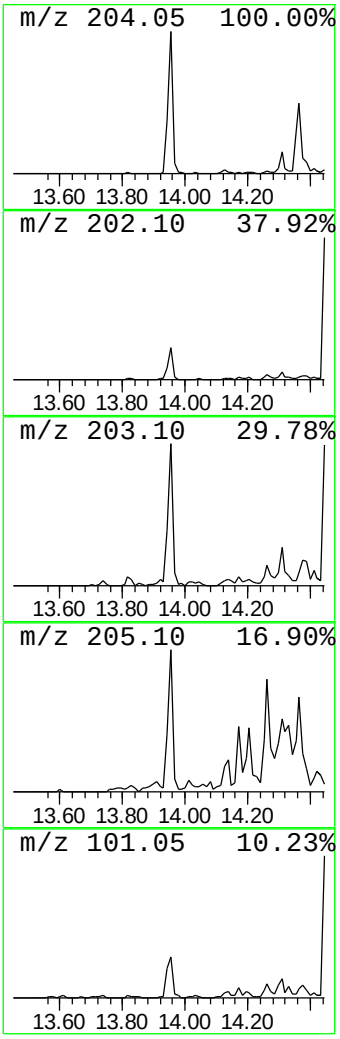
**********

Peak Number 12 Naphthalene, 2-phenyl- Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.95 | 14.46 ng | 521413 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Naphthalene, 2-phenyl- | 204 | C16H12 | 000612-94-2 | 90 |
| 2 | 5,16[1',2']:8,13[1'',2'']-Dibenz... | 408 | C32H24 | 005672-97-9 | 87 |
| 3 | Tricyclo[8.2.2.2(4,7)]hexadeca-2... | 204 | C16H12 | 006572-60-7 | 74 |
| 4 | Naphthalene, 1-phenyl- | 204 | C16H12 | 000605-02-7 | 64 |
| 5 | 9,10-Bis(bromomethyl)anthracene | 362 | C16H12Br2 | 034373-96-1 | 53 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

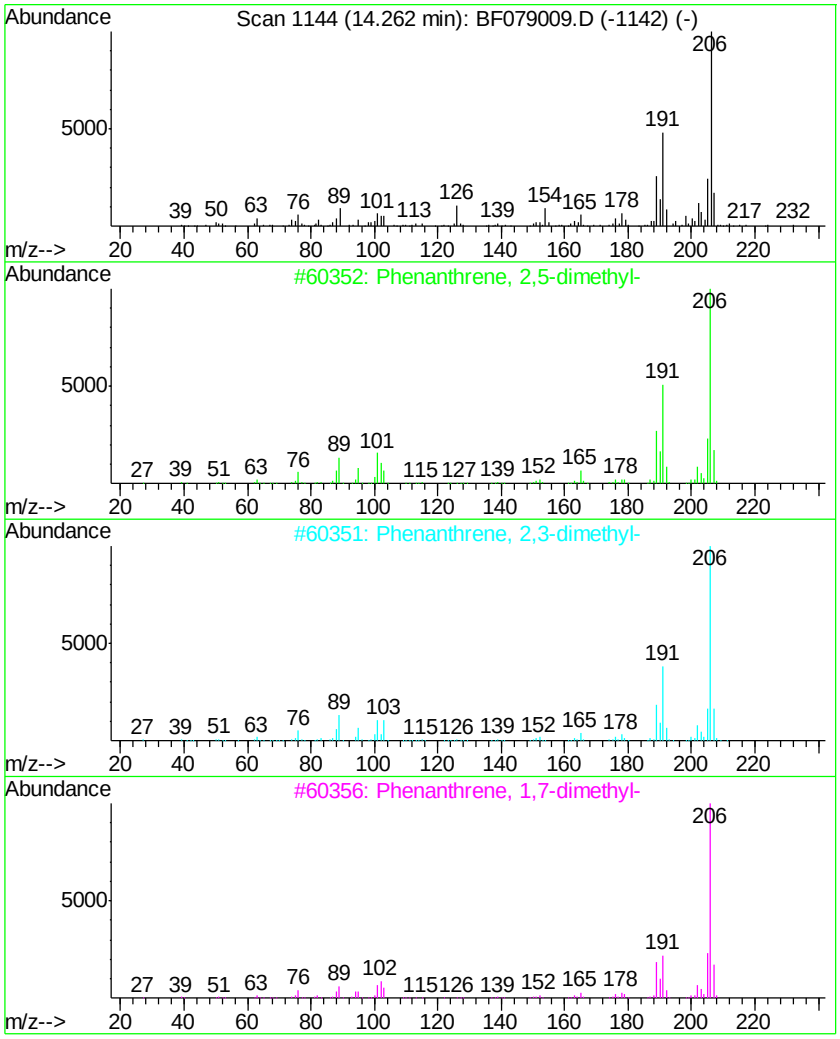
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

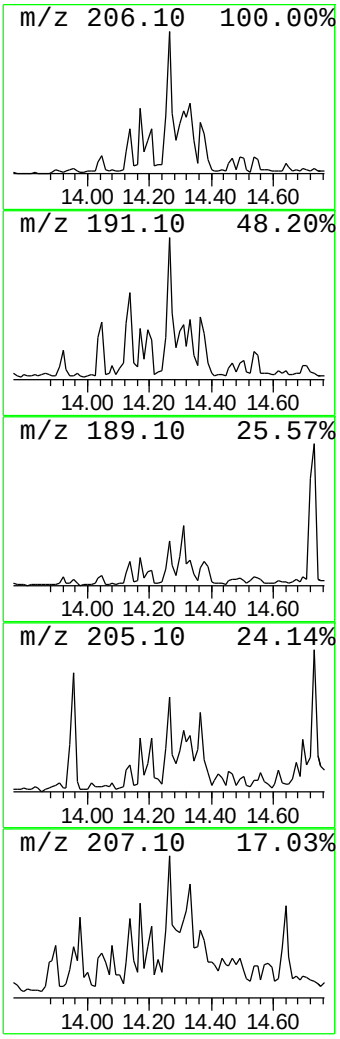
**********

Peak Number 13 Phenanthrene, 2,5-dimethyl- Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.26 | 8.42 ng | 303527 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene, 2,5-dimethyl- | 206 | C16H14 | 003674-66-6 | 93 |
| 2 | Phenanthrene, 2,3-dimethyl- | 206 | C16H14 | 003674-65-5 | 91 |
| 3 | Phenanthrene, 1,7-dimethyl- | 206 | C16H14 | 000483-87-4 | 89 |
| 4 | di-p-Tolylacetylene | 206 | C16H14 | 002789-88-0 | 83 |
| 5 | 9,10-Dimethylanthracene | 206 | C16H14 | 000781-43-1 | 81 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

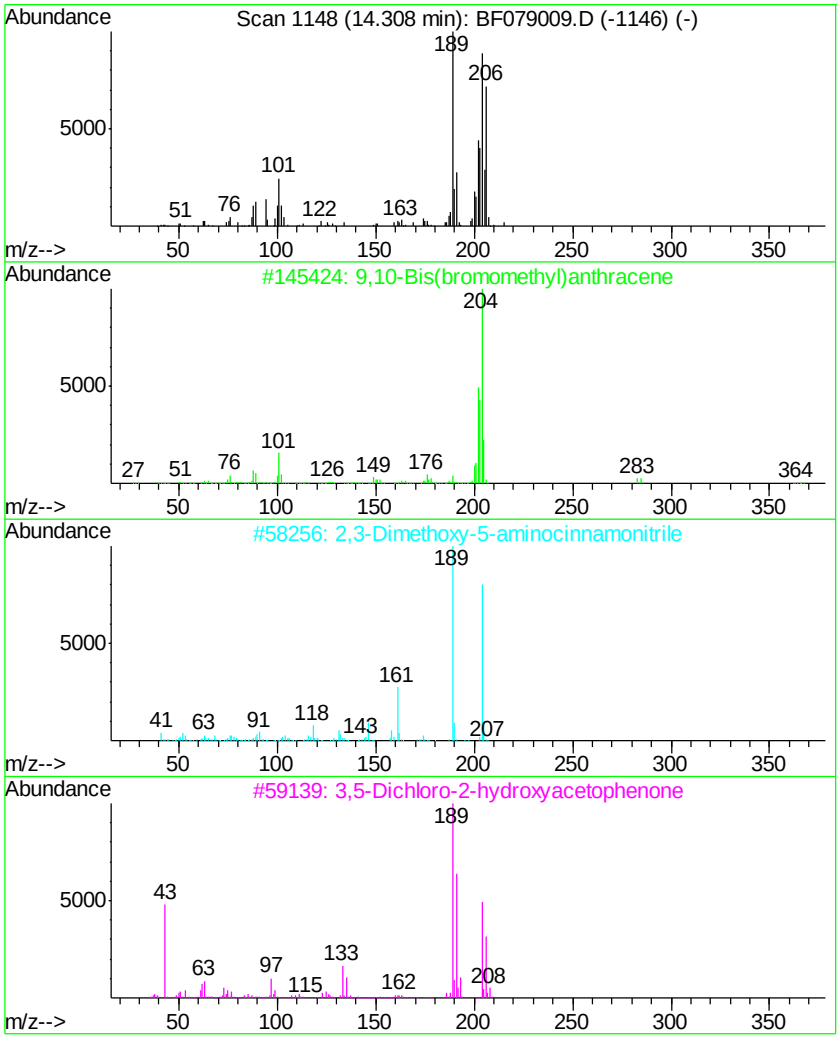
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

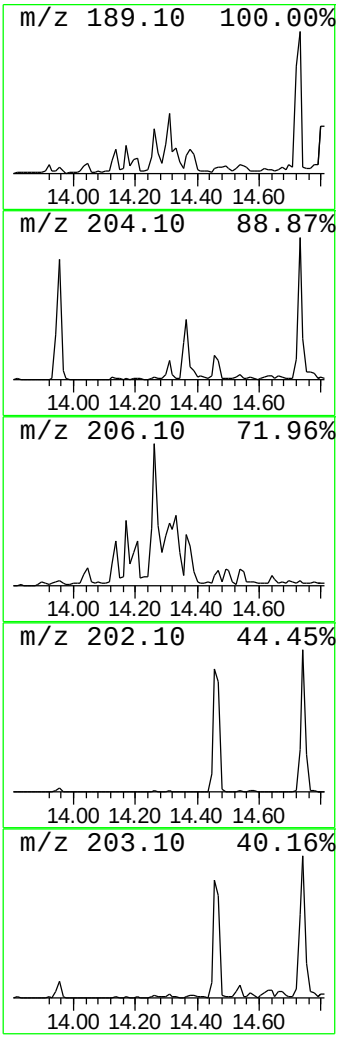
**********

Peak Number 14 unknown14.31 Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.31 | 7.69 ng | 277160 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9,10-Bis(bromomethyl)anthracene | 362 | C16H12Br2 | 034373-96-1 | 43 |
| 2 | 2,3-Dimethoxy-5-aminocinnamonitrile | 204 | C11H12N2O2 | 1000214-46-5 | 38 |
| 3 | 3,5-Dichloro-2-hydroxyacetophenone | 204 | C8H6Cl2O2 | 003321-92-4 | 37 |
| 4 | Phenanthrene, 3,6-dimethyl- | 206 | C16H14 | 001576-67-6 | 35 |
| 5 | Acephenanthrylene, 4,5-dihydro- | 204 | C16H12 | 006232-48-0 | 27 |



Library Search Compound Report

Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

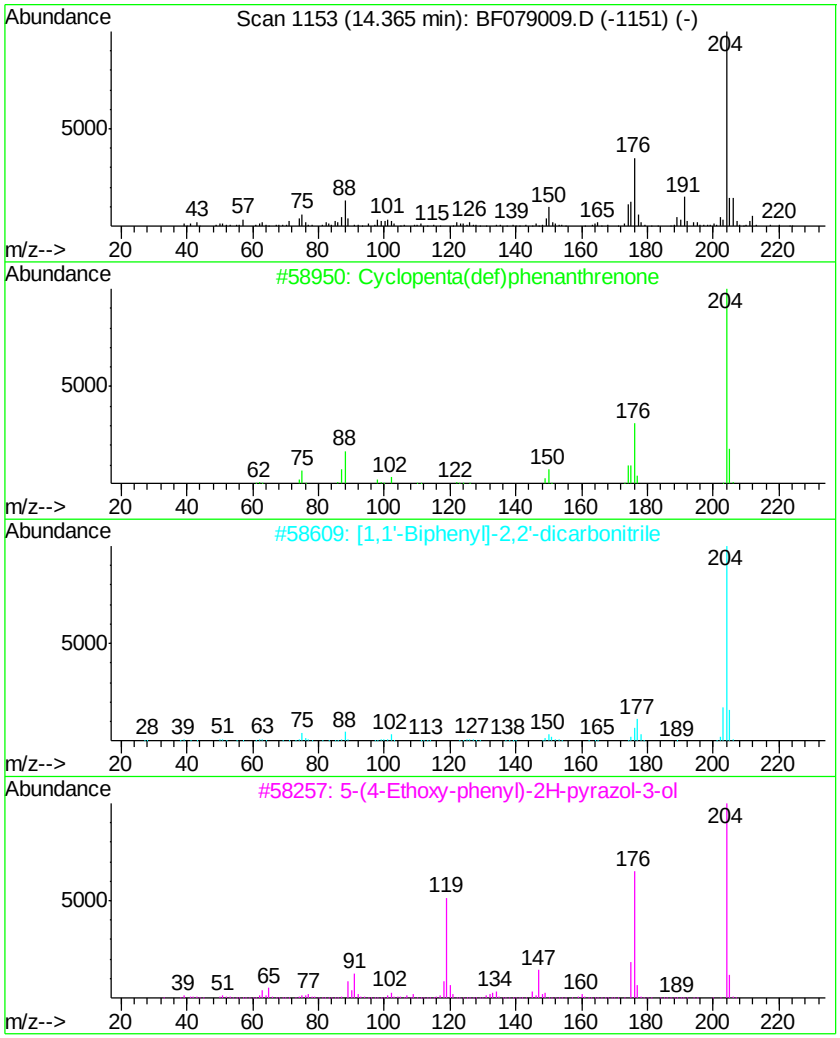
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

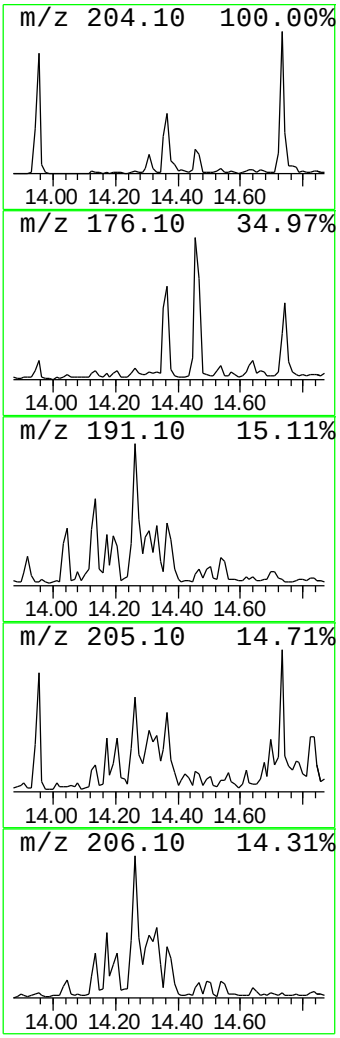
**********

Peak Number 15 Cyclopenta(def)phenanthrenone Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.37 | 9.61 ng | 346504 | Phenanthrene-d10 | 12.95 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopenta(def)phenanthrenone | 204 | C15H8O | 005737-13-3 | 91 |
| 2 | [1,1'-Biphenyl]-2,2'-dicarbonitrile | 204 | C14H8N2 | 004341-02-0 | 50 |
| 3 | 5-(4-Ethoxy-phenyl)-2H-pyrazol-3-ol | 204 | C11H12N2O2 | 1000278-26-8 | 50 |
| 4 | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2 | 001591-30-6 | 50 |
| 5 | 1,4,6-Trimethyl-1,2,3,4-tetrahyd... | 204 | C11H12N2O2 | 004951-03-5 | 47 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

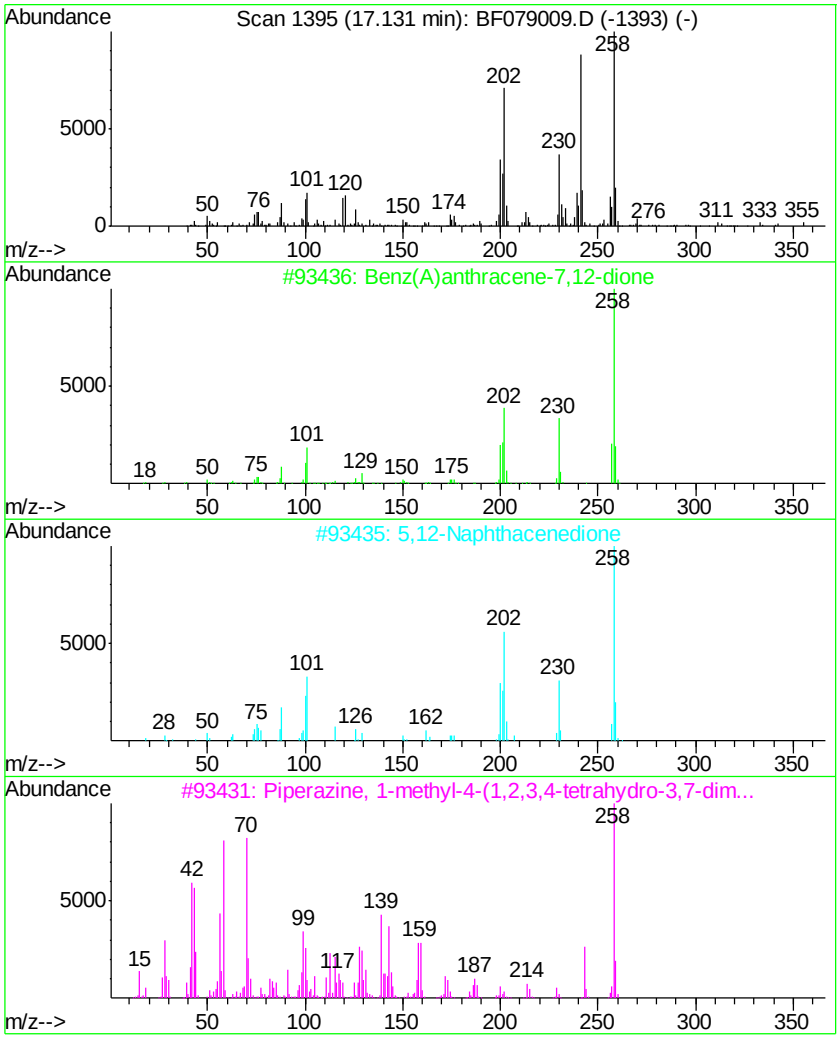
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

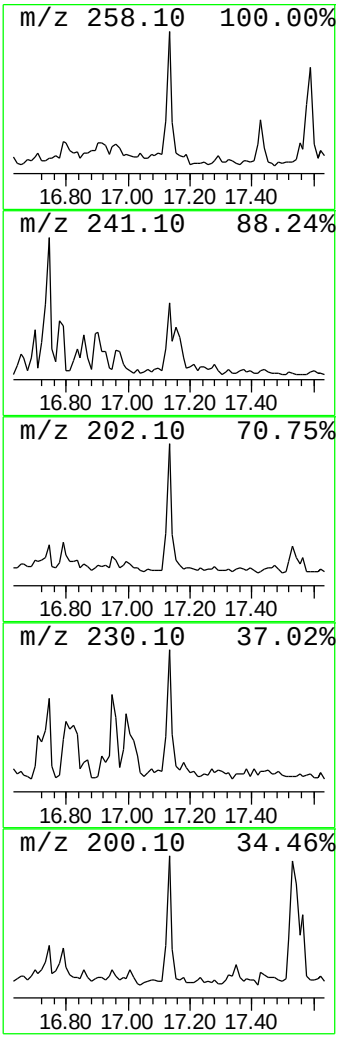
**********

Peak Number 16 Benz(A)anthracene-7,12-dione Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 17.13 | 5.33 ng | 207111 | Perylene-d12 | 17.99 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benz(A)anthracene-7,12-dione | 258 | C18H10O2 | 002498-66-0 | 91 |
| 2 | 5,12-Naphthacenedione | 258 | C18H10O2 | 001090-13-7 | 91 |
| 3 | Piperazine, 1-methyl-4-(1,2,3,4-... | 258 | C17H26N2 | 055591-14-5 | 53 |
| 4 | 2,5-Dihydro-2,2-dimethyl-5-oxo-4... | 258 | C15H14O4 | 1000242-69-2 | 30 |
| 5 | 4,5,7,8,9,10-Hexahydrobenzo[a]py... | 258 | C20H18 | 073712-75-1 | 27 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

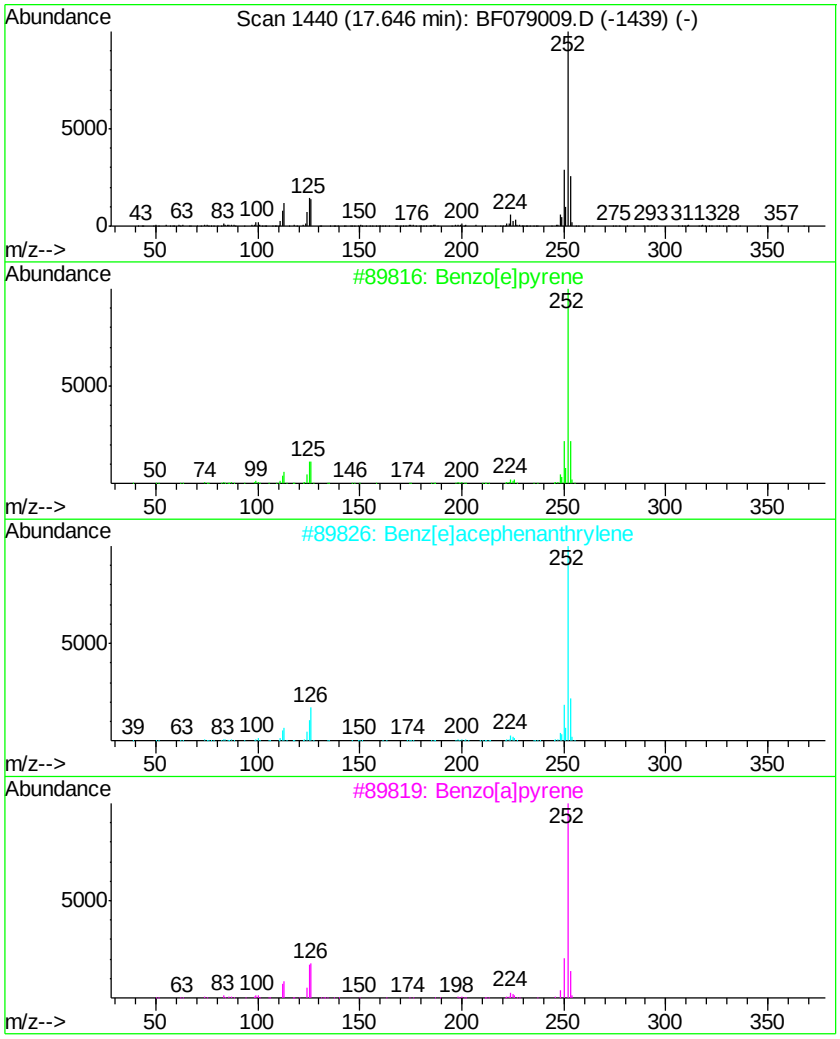
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

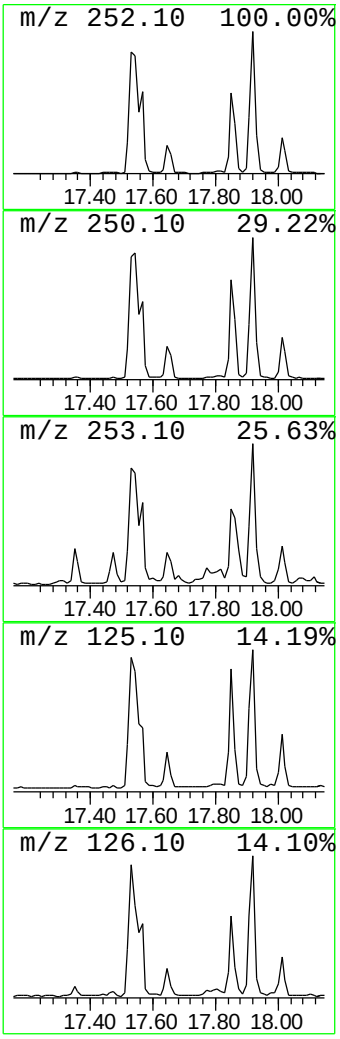
**********

Peak Number 17 Benzo[e]pyrene Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 17.65 | 8.37 ng | 325200 | Perylene-d12 | 17.99 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzo[e]pyrene | 252 | C20H12 | 000192-97-2 | 98 |
| 2 | Benz[e]acephenanthrylene | 252 | C20H12 | 000205-99-2 | 96 |
| 3 | Benzo[a]pyrene | 252 | C20H12 | 000050-32-8 | 93 |
| 4 | Benzo[k]fluoranthene | 252 | C20H12 | 000207-08-9 | 93 |
| 5 | Benzo[j]fluoranthene | 252 | C20H12 | 000205-82-3 | 93 |



Data Path : Z:\HPCHEM1\BNA F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION

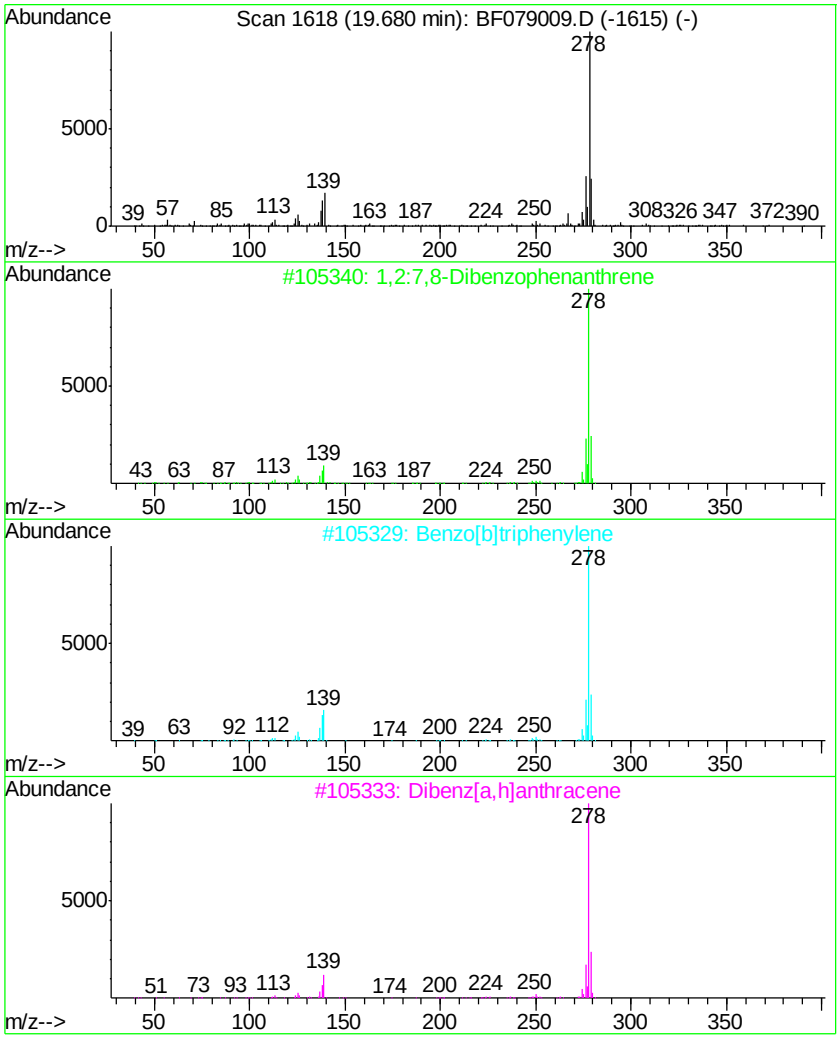
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

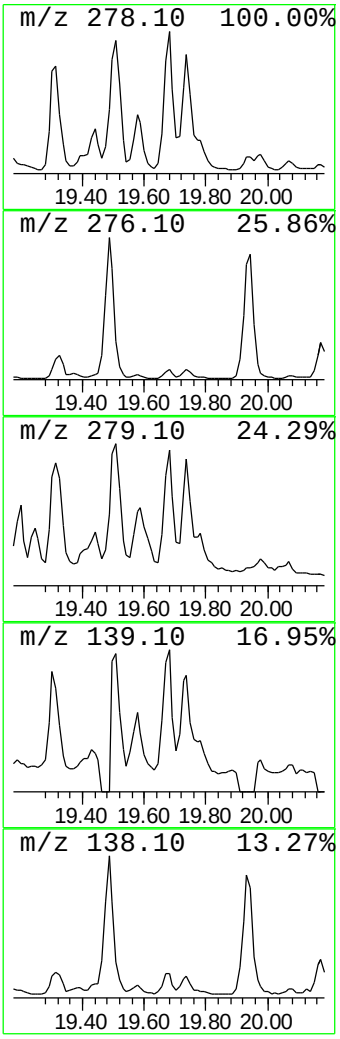
**********

Peak Number 19 1,2:7,8-Dibenzophenanthrene Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.68 | 7.49 ng | 290731 | Perylene-d12 | 17.99 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,2:7,8-Dibenzophenanthrene | 278 | C22H14 | 000213-46-7 | 99 |
| 2 | Benzo[b]triphenylene | 278 | C22H14 | 000215-58-7 | 98 |
| 3 | Dibenz[a,h]anthracene | 278 | C22H14 | 000053-70-3 | 97 |
| 4 | Benzo[b]chrysene | 278 | C22H14 | 000214-17-5 | 97 |
| 5 | Pentacene | 278 | C22H14 | 000135-48-8 | 96 |



Tentatively Identified Compound (LSC) summary

Data Path : Z:\HPCHEM1\BNA_F\DATA\BF050715\
Data File : BF079009.D
Acq On : 7 May 2015 21:32
Operator : TP/IZ
Sample : G2116-12 5X
Misc :
ALS Vial : 20 Sample Multiplier: 1

**Instrument :** BNA_F
**ClientSampleId :** SB-44S

Quant Method : Z:\HPCHEM1\BNA_F\METHODS\8270-BF043015.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 |
| Propane, 2,2-dime... | 1.47 | 54.6 | ng | 911138 | 1 | 7.35 | 333825 | 20.0 |
| unknown7.05 | 7.05 | 19.6 | ng | 327886 | 1 | 7.35 | 333825 | 20.0 |
| Dibenzofuran, 4-m... | 11.98 | 4.9 | ng | 150666 | 3 | 11.10 | 612395 | 20.0 |
| Naphtho[2,3-b]thi... | 12.81 | 6.8 | ng | 243592 | 4 | 12.95 | 721002 | 20.0 |
| Phenanthrene, 2-m... | 13.58 | 11.3 | ng | 406657 | 4 | 12.95 | 721002 | 20.0 |
| Phenanthrene, 1-m... | 13.61 | 16.4 | ng | 591076 | 4 | 12.95 | 721002 | 20.0 |
| 1H-Cyclopropa[l]p... | 13.67 | 8.2 | ng | 295074 | 4 | 12.95 | 721002 | 20.0 |
| 4H-Cyclopenta[def... | 13.71 | 19.8 | ng | 715399 | 4 | 12.95 | 721002 | 20.0 |
| Naphthalene, 2-ph... | 13.95 | 14.5 | ng | 521413 | 4 | 12.95 | 721002 | 20.0 |
| Phenanthrene, 2,5... | 14.26 | 8.4 | ng | 303527 | 4 | 12.95 | 721002 | 20.0 |
| unknown14.31 | 14.31 | 7.7 | ng | 277160 | 4 | 12.95 | 721002 | 20.0 |
| Cyclopenta(def)ph... | 14.37 | 9.6 | ng | 346504 | 4 | 12.95 | 721002 | 20.0 |
| Benz(A)anthracene... | 17.13 | 5.3 | ng | 207111 | 6 | 17.99 | 776672 | 20.0 |
| Benzo[e]pyrene | 17.65 | 8.4 | ng | 325200 | 6 | 17.99 | 776672 | 20.0 |
| 1,2:7,8-Dibenzoph... | 19.68 | 7.5 | ng | 290731 | 6 | 17.99 | 776672 | 20.0 |