

Method Path : Z:\SVOASRV\HPCHEM1\BNA\_G\METHODS\  
 Method File : 8270-BG010919.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Wed Jan 09 14:23:53 2019  
 Response Via : Initial Calibration

## Calibration Files

2.5 =BG039013.D 10 =BG039014.D 25 =BG039015.D 40 =BG039016.D 50 =BG039017.D 60 =BG039018.D 80 =BG039019.D

|       | Compound              | 2.5            | 10    | 25    | 40    | 50    | 60    | 80    | Avg   | %RSD  |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| ----- |                       |                |       |       |       |       |       |       |       |       |
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |
| 2)    | 1,4-Dioxane           | 0.444          | 0.440 | 0.417 | 0.408 | 0.395 | 0.408 | 0.378 | 0.413 | 5.70  |
| 3)    | Pyridine              |                | 1.053 | 1.184 | 1.156 | 1.166 | 1.163 | 1.010 | 1.122 | 6.42  |
| 4)    | n-Nitrosodimet...     |                | 0.465 | 0.500 | 0.526 | 0.506 | 0.517 | 0.516 | 0.505 | 4.32  |
| 5) S  | 2-Fluorophenol        | 1.042          | 1.042 | 1.094 | 1.093 | 1.053 | 1.052 | 1.005 | 1.054 | 2.96  |
| 6)    | Aniline               | 1.779          | 1.754 | 1.938 | 1.899 | 1.827 | 1.829 | 1.729 | 1.822 | 4.17  |
| 7) S  | Phenol-d6             | 1.505          | 1.458 | 1.579 | 1.566 | 1.529 | 1.518 | 1.467 | 1.517 | 3.01  |
| 8)    | 2-Chlorophenol        | 1.235          | 1.247 | 1.273 | 1.291 | 1.237 | 1.244 | 1.173 | 1.243 | 2.98  |
| 9)    | Benzaldehyde          | 1.037          | 0.960 | 0.952 | 0.827 | 0.760 | 0.713 |       | 0.875 | 14.56 |
| 10) C | Phenol                | 1.460          | 1.482 | 1.595 | 1.575 | 1.529 | 1.537 | 1.470 | 1.521 | 3.45  |
| 11)   | bis(2-Chloroet...     | 1.237          | 1.165 | 1.219 | 1.197 | 1.112 | 1.154 | 1.055 | 1.163 | 5.44  |
| 12)   | 1,3-Dichlorobe...     | 1.661          | 1.493 | 1.535 | 1.497 | 1.439 | 1.436 | 1.363 | 1.489 | 6.31  |
| 13) C | 1,4-Dichlorobe...     | 1.670          | 1.504 | 1.550 | 1.530 | 1.445 | 1.457 | 1.400 | 1.508 | 5.85  |
| 14)   | 1,2-Dichlorobe...     | 1.537          | 1.436 | 1.508 | 1.456 | 1.389 | 1.399 | 1.340 | 1.438 | 4.80  |
| 15)   | Benzyl Alcohol        | 0.933          | 1.114 | 1.230 | 1.211 | 1.168 | 1.193 | 1.150 | 1.143 | 8.79  |
| 16)   | 2,2'-oxybis(1-...     | 2.330          | 2.261 | 2.356 | 2.256 | 2.181 | 2.164 | 2.056 | 2.229 | 4.66  |
| 17)   | 2-Methylphenol        | 1.012          | 0.999 | 1.114 | 1.105 | 1.085 | 1.072 | 1.006 | 1.056 | 4.64  |
| 18)   | Hexachloroethane      | 0.541          | 0.530 | 0.520 | 0.519 | 0.498 | 0.502 | 0.475 | 0.512 | 4.32  |
| 19) P | n-Nitroso-di-n...     | 0.987          | 0.963 | 1.092 | 1.002 | 1.002 | 0.989 | 0.939 | 0.996 | 4.82  |
| 20)   | 3+4-Methylphenols     | 1.387          | 1.487 | 1.603 | 1.568 | 1.537 | 1.511 | 1.449 | 1.506 | 4.84  |
|       |                       |                |       |       |       |       |       |       |       |       |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |
| 22)   | Acetophenone          | 0.485          | 0.532 | 0.535 | 0.526 | 0.533 | 0.520 | 0.524 | 0.522 | 3.29  |
| 23) S | Nitrobenzene-d5       | 0.354          | 0.365 | 0.368 | 0.368 | 0.368 | 0.368 | 0.367 | 0.366 | 1.47  |
| 24)   | Nitrobenzene          | 0.362          | 0.371 | 0.378 | 0.367 | 0.370 | 0.373 | 0.365 | 0.369 | 1.42  |
| 25)   | Isophorone            | 0.600          | 0.627 | 0.645 | 0.633 | 0.651 | 0.629 | 0.622 | 0.630 | 2.66  |
| 26) C | 2-Nitrophenol         | 0.174          | 0.200 | 0.203 | 0.204 | 0.205 | 0.206 | 0.207 | 0.200 | 5.86  |
| 27)   | 2,4-Dimethylph...     | 0.254          | 0.284 | 0.295 | 0.287 | 0.287 | 0.281 | 0.281 | 0.281 | 4.66  |
| 28)   | bis(2-Chloroet...     | 0.351          | 0.385 | 0.396 | 0.384 | 0.381 | 0.377 | 0.373 | 0.378 | 3.68  |
| 29) C | 2,4-Dichloroph...     | 0.285          | 0.340 | 0.359 | 0.361 | 0.370 | 0.365 | 0.365 | 0.349 | 8.58  |
| 30)   | 1,2,4-Trichlor...     | 0.419          | 0.419 | 0.428 | 0.417 | 0.421 | 0.419 | 0.415 | 0.420 | 0.97  |
| 31)   | Naphthalene           | 1.061          | 1.005 | 1.009 | 0.990 | 0.989 | 0.990 | 0.978 | 1.003 | 2.75  |
| 32)   | Benzoic acid          |                | 0.067 | 0.136 | 0.146 | 0.171 | 0.177 | 0.197 | 0.149 | 30.82 |
| 33)   | 4-Chloroaniline       | 0.399          | 0.444 | 0.478 | 0.461 | 0.465 | 0.451 | 0.446 | 0.449 | 5.62  |
| 34) C | Hexachlorobuta...     | 0.285          | 0.286 | 0.294 | 0.291 | 0.291 | 0.290 | 0.284 | 0.289 | 1.38  |
| 35)   | Caprolactam           | 0.117          | 0.144 | 0.152 | 0.140 | 0.154 | 0.140 | 0.133 | 0.140 | 8.77  |
| 36) C | 4-Chloro-3-met...     | 0.337          | 0.369 | 0.382 | 0.376 | 0.399 | 0.381 | 0.371 | 0.374 | 5.07  |
| 37)   | 2-Methylnaphth...     | 0.780          | 0.764 | 0.759 | 0.745 | 0.750 | 0.738 | 0.728 | 0.752 | 2.29  |
| 38)   | 1-Methylnaphth...     | 0.706          | 0.740 | 0.738 | 0.718 | 0.732 | 0.713 | 0.706 | 0.722 | 2.01  |

Method Path : Z:\SVOASRV\HPCHEM1\BNA\_G\METHODS\  
 Method File : 8270-BG010919.M

|       |                   |                |       |       |       |       |       |       |       |       |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 39) I | Acenaphthene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 40)   | 1,2,4,5-Tetrac... | 0.742          | 0.728 | 0.747 | 0.757 | 0.756 | 0.767 | 0.762 | 0.751 | 1.80  |  |
| 41) P | Hexachlorocycl... | 0.259          | 0.343 | 0.381 | 0.383 | 0.421 | 0.428 | 0.369 | 16.82 |       |  |
| 42) S | 2,4,6-Tribromo... | 0.314          | 0.318 | 0.335 | 0.341 | 0.349 | 0.354 | 0.335 | 0.335 | 4.41  |  |
| 43) C | 2,4,6-Trichlor... | 0.411          | 0.432 | 0.475 | 0.487 | 0.497 | 0.509 | 0.499 | 0.473 | 7.86  |  |
| 44)   | 2,4,5-Trichlor... | 0.401          | 0.471 | 0.509 | 0.521 | 0.525 | 0.546 | 0.525 | 0.500 | 9.85  |  |
| 45) S | 2-Fluorobiphenyl  | 1.535          | 1.457 | 1.440 | 1.459 | 1.444 | 1.468 | 1.426 | 1.461 | 2.40  |  |
| 46)   | 1,1'-Biphenyl     | 1.545          | 1.614 | 1.558 | 1.590 | 1.589 | 1.623 | 1.573 | 1.585 | 1.78  |  |
| 47)   | 2-Chloronaphth... | 1.294          | 1.290 | 1.247 | 1.285 | 1.286 | 1.297 | 1.277 | 1.282 | 1.31  |  |
| 48)   | 2-Nitroaniline    | 0.293          | 0.351 | 0.373 | 0.375 | 0.375 | 0.383 | 0.366 | 0.359 | 8.64  |  |
| 49)   | Acenaphthylene    | 1.954          | 1.892 | 1.939 | 1.928 | 1.954 | 1.957 | 1.870 | 1.928 | 1.76  |  |
| 50)   | Dimethylphthalate | 1.713          | 1.737 | 1.716 | 1.672 | 1.700 | 1.698 | 1.594 | 1.690 | 2.76  |  |
| 51)   | 2,6-Dinitrotol... | 0.344          | 0.385 | 0.384 | 0.382 | 0.388 | 0.392 | 0.370 | 0.378 | 4.31  |  |
| 52) C | Acenaphthene      | 1.185          | 1.142 | 1.145 | 1.144 | 1.171 | 1.189 | 1.131 | 1.158 | 1.99  |  |
| 53)   | 3-Nitroaniline    | 0.346          | 0.386 | 0.391 | 0.386 | 0.406 | 0.399 | 0.369 | 0.383 | 5.27  |  |
| 54) P | 2,4-Dinitrophenol | 0.113          | 0.182 | 0.209 | 0.215 | 0.231 | 0.221 | 0.195 | 22.23 |       |  |
| 55)   | Dibenzofuran      | 2.159          | 2.058 | 2.046 | 2.018 | 2.041 | 2.056 | 1.940 | 2.045 | 3.15  |  |
| 56) P | 4-Nitrophenol     | 0.238          | 0.268 | 0.288 | 0.291 | 0.293 | 0.277 | 0.276 | 7.54  |       |  |
| 57)   | 2,4-Dinitrotol... | 0.531          | 0.547 | 0.552 | 0.539 | 0.559 | 0.553 | 0.513 | 0.542 | 2.90  |  |
| 58)   | Fluorene          | 1.580          | 1.573 | 1.540 | 1.527 | 1.549 | 1.541 | 1.468 | 1.540 | 2.39  |  |
| 59)   | 2,3,4,6-Tetrac... | 0.417          | 0.456 | 0.471 | 0.472 | 0.496 | 0.509 | 0.480 | 0.472 | 6.33  |  |
| 60)   | Diethylphthalate  | 1.801          | 1.807 | 1.758 | 1.714 | 1.741 | 1.739 | 1.629 | 1.741 | 3.43  |  |
| 61)   | 4-Chlorophenyl... | 0.942          | 0.991 | 0.974 | 0.974 | 0.982 | 0.980 | 0.947 | 0.970 | 1.88  |  |
| 62)   | 4-Nitroaniline    | 0.365          | 0.404 | 0.425 | 0.413 | 0.416 | 0.416 | 0.356 | 0.399 | 6.88  |  |
| 63)   | Azobenzene        | 1.367          | 1.423 | 1.380 | 1.332 | 1.373 | 1.366 | 1.291 | 1.362 | 3.03  |  |
| 64) I | Phenanthrene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 65)   | 4,6-Dinitro-2-... | 0.130          | 0.145 | 0.152 | 0.153 | 0.154 | 0.154 | 0.148 | 6.41  |       |  |
| 66) c | n-Nitrosodiphe... | 0.565          | 0.588 | 0.600 | 0.602 | 0.593 | 0.605 | 0.597 | 0.593 | 2.30  |  |
| 67)   | 4-Bromophenyl-... | 0.236          | 0.252 | 0.258 | 0.260 | 0.260 | 0.266 | 0.268 | 0.257 | 4.13  |  |
| 68)   | Hexachlorobenzene | 0.284          | 0.277 | 0.279 | 0.279 | 0.275 | 0.283 | 0.286 | 0.281 | 1.39  |  |
| 69)   | Atrazine          | 0.260          | 0.260 | 0.259 | 0.259 | 0.245 | 0.250 | 0.231 | 0.252 | 4.41  |  |
| 70) C | Pentachlorophenol | 0.098          | 0.138 | 0.158 | 0.163 | 0.169 | 0.175 | 0.150 | 19.03 |       |  |
| 71)   | Phenanthrene      | 1.095          | 1.057 | 1.069 | 1.060 | 1.042 | 1.048 | 1.028 | 1.057 | 2.02  |  |
| 72)   | Anthracene        | 1.055          | 1.062 | 1.063 | 1.049 | 1.040 | 1.029 | 1.019 | 1.045 | 1.60  |  |
| 73)   | Carbazole         | 1.060          | 1.056 | 1.060 | 1.031 | 1.012 | 1.020 | 0.983 | 1.032 | 2.82  |  |
| 74)   | Di-n-butylphth... | 1.201          | 1.197 | 1.160 | 1.150 | 1.129 | 1.123 | 1.075 | 1.148 | 3.83  |  |
| 75) C | Fluoranthene      | 1.394          | 1.369 | 1.337 | 1.308 | 1.276 | 1.271 | 1.218 | 1.311 | 4.67  |  |
| 76) I | Chrysene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 77)   | Benzidine         | 0.690          | 0.647 | 0.642 | 0.666 | 0.581 | 0.557 | 0.500 | 0.612 | 11.12 |  |
| 78)   | Pyrene            | 1.250          | 1.290 | 1.328 | 1.289 | 1.274 | 1.264 | 1.226 | 1.275 | 2.55  |  |
| 79) S | Terphenyl-d14     | 1.149          | 1.146 | 1.121 | 1.063 | 1.056 | 1.042 | 0.992 | 1.081 | 5.44  |  |
| 80)   | Butylbenzylpht... | 0.472          | 0.483 | 0.486 | 0.492 | 0.484 | 0.490 | 0.487 | 0.485 | 1.35  |  |
| 81)   | Benzo(a)anthra... | 1.217          | 1.221 | 1.246 | 1.234 | 1.206 | 1.209 | 1.190 | 1.217 | 1.53  |  |
| 82)   | 3,3'-Dichlorob... | 0.478          | 0.502 | 0.516 | 0.504 | 0.494 | 0.498 | 0.481 | 0.496 | 2.69  |  |
| 83)   | Chrysene          | 1.155          | 1.160 | 1.179 | 1.166 | 1.156 | 1.155 | 1.135 | 1.158 | 1.14  |  |
| 84)   | Bis(2-ethylhex... | 0.638          | 0.645 | 0.686 | 0.681 | 0.694 | 0.691 | 0.677 | 0.673 | 3.34  |  |
| 85) c | Di-n-octyl pht... | 1.072          | 1.098 | 1.163 | 1.163 | 1.157 | 1.172 | 1.143 | 1.138 | 3.37  |  |
| 86)   | Indeno(1,2,3-c... | 1.281          | 1.332 | 1.401 | 1.428 | 1.409 | 1.419 | 1.416 | 1.384 | 4.01  |  |

Method Path : Z:\SVOASRV\HPCHEM1\BNA\_G\METHODS\  
Method File : 8270-BG010919.M

|     |   | -----ISTD-----    |       |       |       |       |       |       |       |       |      |
|-----|---|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 87) | I | Perylene-d12      |       |       |       |       |       |       |       |       |      |
| 88) |   | Benzo(b)fluora... | 1.085 | 1.079 | 1.109 | 1.096 | 1.137 | 1.103 | 1.112 | 1.103 | 1.75 |
| 89) |   | Benzo(k)fluora... | 1.078 | 1.105 | 1.083 | 1.114 | 1.084 | 1.104 | 1.065 | 1.090 | 1.60 |
| 90) | C | Benzo(a)pyrene    | 1.030 | 1.053 | 1.074 | 1.073 | 1.085 | 1.078 | 1.069 | 1.066 | 1.74 |
| 91) |   | Dibenzo(a,h)an... | 1.027 | 1.056 | 1.057 | 1.068 | 1.072 | 1.080 | 1.062 | 1.060 | 1.60 |
| 92) |   | Benzo(g,h,i)pe... | 1.038 | 1.017 | 1.062 | 1.049 | 1.062 | 1.063 | 1.056 | 1.050 | 1.64 |

(#) = Out of Range