

Method Path : Z:\SVOASRV\HPCHEM1\BNA\_G\METHODS\  
 Method File : 8270-BG032719.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Thu Mar 28 05:47:00 2019  
 Response Via : Initial Calibration

## Calibration Files

20 =BG040176.D 10 =BG040175.D 100 =BG040181.D 40 =BG040177.D 50 =BG040178.D 60 =BG040179.D 80 =BG040180.D

|       | Compound              | 20             | 10    | 100   | 40    | 50    | 60    | 80    | Avg   | %RSD  |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |
| 2)    | 1,4-Dioxane           | 0.594          | 0.579 | 0.550 | 0.571 | 0.563 | 0.553 | 0.550 | 0.566 | 2.95  |
| 3)    | Pyridine              | 1.554          | 1.584 | 1.447 | 1.638 | 1.522 | 1.483 | 1.435 | 1.523 | 4.88  |
| 4)    | n-Nitrosodimet...     | 0.684          | 0.647 | 0.714 | 0.714 | 0.726 | 0.726 | 0.722 | 0.705 | 4.16  |
| 5) S  | 2-Fluorophenol        | 1.205          | 1.236 | 1.161 | 1.238 | 1.216 | 1.201 | 1.164 | 1.203 | 2.59  |
| 6)    | Aniline               | 2.184          |       | 2.103 | 2.246 | 2.166 | 2.168 | 2.094 | 2.160 | 2.58  |
| 7) S  | Phenol-d6             | 1.696          | 1.719 | 1.577 | 1.717 | 1.672 | 1.657 | 1.601 | 1.663 | 3.34  |
| 8)    | 2-Chlorophenol        | 1.430          | 1.461 | 1.342 | 1.456 | 1.401 | 1.406 | 1.362 | 1.408 | 3.17  |
| 9)    | Benzaldehyde          | 1.252          |       | 1.095 | 1.219 | 1.162 | 1.111 | 1.004 | 1.140 | 7.88  |
| 10) C | Phenol                | 1.824          | 1.882 | 1.737 | 1.855 | 1.806 | 1.805 | 1.726 | 1.805 | 3.17  |
| 11)   | bis(2-Chloroet...     | 1.429          | 1.482 | 1.406 | 1.498 | 1.465 | 1.439 | 1.399 | 1.445 | 2.61  |
| 12)   | 1,3-Dichlorobe...     | 1.562          | 1.572 | 1.483 | 1.588 | 1.509 | 1.530 | 1.472 | 1.531 | 2.93  |
| 13) C | 1,4-Dichlorobe...     | 1.539          | 1.562 | 1.480 | 1.566 | 1.526 | 1.523 | 1.479 | 1.525 | 2.30  |
| 14)   | 1,2-Dichlorobe...     | 1.498          | 1.515 | 1.415 | 1.496 | 1.432 | 1.459 | 1.393 | 1.458 | 3.21  |
| 15)   | Benzyl Alcohol        | 1.335          |       | 1.326 | 1.389 | 1.335 | 1.340 | 1.310 | 1.339 | 2.01  |
| 16)   | 2,2'-oxybis(1-...     | 2.809          | 2.873 | 2.679 | 2.870 | 2.788 | 2.766 | 2.634 | 2.774 | 3.26  |
| 17)   | 2-Methylphenol        | 1.247          | 1.335 | 1.207 | 1.297 | 1.228 | 1.234 | 1.194 | 1.249 | 4.03  |
| 18)   | Hexachloroethane      | 0.577          | 0.601 | 0.574 | 0.593 | 0.582 | 0.571 | 0.561 | 0.580 | 2.33  |
| 19) P | n-Nitroso-di-n...     | 1.226          | 1.266 | 1.139 | 1.215 | 1.176 | 1.189 | 1.133 | 1.192 | 4.01  |
| 20)   | 3+4-Methylphenols     | 1.737          | 1.665 | 1.650 | 1.761 | 1.709 | 1.685 | 1.635 | 1.692 | 2.74  |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |
| 22)   | Acetophenone          | 0.510          | 0.559 | 0.466 | 0.498 | 0.484 | 0.497 | 0.477 | 0.499 | 6.05  |
| 23) S | Nitrobenzene-d5       | 0.385          | 0.396 | 0.360 | 0.382 | 0.370 | 0.378 | 0.364 | 0.376 | 3.36  |
| 24)   | Nitrobenzene          | 0.396          | 0.409 | 0.376 | 0.394 | 0.382 | 0.388 | 0.382 | 0.390 | 2.83  |
| 25)   | Isophorone            | 0.807          | 0.816 | 0.734 | 0.779 | 0.764 | 0.771 | 0.749 | 0.774 | 3.81  |
| 26) C | 2-Nitrophenol         | 0.181          | 0.180 | 0.186 | 0.187 | 0.184 | 0.189 | 0.185 | 0.185 | 1.79  |
| 27)   | 2,4-Dimethylph...     | 0.304          | 0.307 | 0.281 | 0.295 | 0.289 | 0.291 | 0.286 | 0.293 | 3.26  |
| 28)   | bis(2-Chloroet...     | 0.474          | 0.488 | 0.428 | 0.469 | 0.451 | 0.455 | 0.440 | 0.458 | 4.51  |
| 29) C | 2,4-Dichloroph...     | 0.315          | 0.325 | 0.309 | 0.327 | 0.318 | 0.322 | 0.314 | 0.318 | 2.01  |
| 30)   | 1,2,4-Trichlor...     | 0.350          | 0.376 | 0.335 | 0.351 | 0.346 | 0.351 | 0.338 | 0.350 | 3.81  |
| 31)   | Naphthalene           | 1.047          | 1.113 | 0.958 | 1.046 | 1.010 | 1.023 | 0.979 | 1.025 | 4.95  |
| 32)   | Benzoic acid          | 0.139          |       | 0.200 | 0.166 | 0.176 | 0.182 | 0.200 | 0.177 | 12.94 |
| 33)   | 4-Chloroaniline       | 0.452          |       | 0.418 | 0.449 | 0.436 | 0.441 | 0.428 | 0.437 | 2.87  |
| 34) C | Hexachlorobuta...     | 0.228          | 0.232 | 0.218 | 0.225 | 0.219 | 0.225 | 0.218 | 0.224 | 2.45  |
| 35)   | Caprolactam           | 0.130          | 0.129 | 0.121 | 0.130 | 0.126 | 0.129 | 0.120 | 0.126 | 3.32  |
| 36) C | 4-Chloro-3-met...     | 0.368          | 0.384 | 0.352 | 0.372 | 0.360 | 0.369 | 0.357 | 0.366 | 2.88  |
| 37)   | 2-Methylnaphth...     | 0.793          | 0.825 | 0.701 | 0.767 | 0.740 | 0.757 | 0.725 | 0.758 | 5.53  |
| 38)   | 1-Methylnaphth...     | 0.760          | 0.799 | 0.681 | 0.743 | 0.726 | 0.734 | 0.705 | 0.735 | 5.18  |

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|       |                   |                |       |       |       |       |       |       |       |       |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 39) I | Acenaphthene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 40)   | 1,2,4,5-Tetrac... | 0.659          | 0.644 | 0.610 | 0.650 | 0.630 | 0.636 | 0.622 | 0.636 | 2.66  |  |
| 41) P | Hexachlorocycl... | 0.322          |       | 0.362 | 0.346 | 0.349 | 0.358 | 0.358 | 0.349 | 4.23  |  |
| 42) S | 2,4,6-Tribromo... | 0.220          | 0.208 | 0.214 | 0.220 | 0.216 | 0.220 | 0.215 | 0.216 | 1.94  |  |
| 43) C | 2,4,6-Trichlor... | 0.405          | 0.393 | 0.406 | 0.419 | 0.416 | 0.420 | 0.410 | 0.410 | 2.30  |  |
| 44)   | 2,4,5-Trichlor... | 0.457          | 0.447 | 0.438 | 0.450 | 0.439 | 0.458 | 0.439 | 0.447 | 1.89  |  |
| 45) S | 2-Fluorobiphenyl  | 1.437          | 1.527 | 1.184 | 1.394 | 1.338 | 1.330 | 1.237 | 1.350 | 8.64  |  |
| 46)   | 1,1'-Biphenyl     | 1.655          | 1.682 | 1.467 | 1.615 | 1.557 | 1.582 | 1.504 | 1.580 | 4.92  |  |
| 47)   | 2-Chloronaphth... | 1.232          | 1.299 | 1.145 | 1.231 | 1.205 | 1.216 | 1.157 | 1.212 | 4.26  |  |
| 48)   | 2-Nitroaniline    | 0.413          | 0.397 | 0.404 | 0.422 | 0.409 | 0.415 | 0.403 | 0.409 | 2.00  |  |
| 49)   | Acenaphthylene    | 2.136          | 2.235 | 1.872 | 2.119 | 2.050 | 2.037 | 1.938 | 2.055 | 5.98  |  |
| 50)   | Dimethylphthalate | 1.629          | 1.704 | 1.430 | 1.599 | 1.545 | 1.578 | 1.473 | 1.565 | 5.94  |  |
| 51)   | 2,6-Dinitrotol... | 0.350          | 0.358 | 0.342 | 0.356 | 0.351 | 0.361 | 0.343 | 0.351 | 2.04  |  |
| 52) C | Acenaphthene      | 1.223          | 1.254 | 1.099 | 1.197 | 1.170 | 1.174 | 1.127 | 1.178 | 4.54  |  |
| 53)   | 3-Nitroaniline    | 0.370          | 0.381 | 0.360 | 0.380 | 0.371 | 0.379 | 0.365 | 0.372 | 2.17  |  |
| 54) P | 2,4-Dinitrophenol | 0.156          |       | 0.205 | 0.179 | 0.184 | 0.197 | 0.200 | 0.187 | 9.54  |  |
| 55)   | Dibenzofuran      | 1.993          | 2.082 | 1.711 | 1.928 | 1.875 | 1.878 | 1.779 | 1.892 | 6.59  |  |
| 56) P | 4-Nitrophenol     | 0.288          |       | 0.299 | 0.303 | 0.302 | 0.310 | 0.299 | 0.300 | 2.40  |  |
| 57)   | 2,4-Dinitrotol... | 0.500          | 0.475 | 0.477 | 0.500 | 0.489 | 0.502 | 0.477 | 0.488 | 2.49  |  |
| 58)   | Fluorene          | 1.571          | 1.669 | 1.337 | 1.514 | 1.467 | 1.470 | 1.386 | 1.488 | 7.48  |  |
| 59)   | 2,3,4,6-Tetrac... | 0.405          | 0.402 | 0.401 | 0.416 | 0.398 | 0.417 | 0.398 | 0.405 | 1.99  |  |
| 60)   | Diethylphthalate  | 1.680          | 1.755 | 1.461 | 1.632 | 1.576 | 1.604 | 1.506 | 1.602 | 6.24  |  |
| 61)   | 4-Chlorophenyl... | 0.833          | 0.863 | 0.738 | 0.817 | 0.780 | 0.792 | 0.744 | 0.795 | 5.77  |  |
| 62)   | 4-Nitroaniline    | 0.408          | 0.410 | 0.378 | 0.405 | 0.397 | 0.411 | 0.387 | 0.399 | 3.20  |  |
| 63)   | Azobenzene        | 1.573          | 1.673 | 1.376 | 1.532 | 1.497 | 1.505 | 1.420 | 1.511 | 6.47  |  |
| 64) I | Phenanthrene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 65)   | 4,6-Dinitro-2-... | 0.100          |       | 0.120 | 0.109 | 0.113 | 0.115 | 0.117 | 0.112 | 6.26  |  |
| 66) c | n-Nitrosodiphe... | 0.611          | 0.630 | 0.549 | 0.605 | 0.579 | 0.575 | 0.549 | 0.585 | 5.31  |  |
| 67)   | 4-Bromophenyl-... | 0.232          | 0.233 | 0.219 | 0.232 | 0.224 | 0.220 | 0.217 | 0.225 | 3.03  |  |
| 68)   | Hexachlorobenzene | 0.232          | 0.237 | 0.219 | 0.231 | 0.223 | 0.222 | 0.219 | 0.226 | 3.11  |  |
| 69)   | Atrazine          | 0.230          | 0.239 | 0.199 | 0.225 | 0.214 | 0.214 | 0.203 | 0.218 | 6.58  |  |
| 70) C | Pentachlorophenol | 0.115          |       | 0.140 | 0.131 | 0.131 | 0.132 | 0.135 | 0.131 | 6.41  |  |
| 71)   | Phenanthrene      | 1.125          | 1.170 | 0.942 | 1.086 | 1.044 | 1.021 | 0.971 | 1.051 | 7.77  |  |
| 72)   | Anthracene        | 1.140          | 1.184 | 0.936 | 1.093 | 1.036 | 1.016 | 0.962 | 1.052 | 8.68  |  |
| 73)   | Carbazole         | 1.081          | 1.110 | 0.888 | 1.034 | 0.981 | 0.965 | 0.911 | 0.996 | 8.39  |  |
| 74)   | Di-n-butylphth... | 1.281          | 1.345 | 1.033 | 1.224 | 1.172 | 1.150 | 1.058 | 1.180 | 9.58  |  |
| 75) C | Fluoranthene      | 1.355          | 1.447 | 1.081 | 1.294 | 1.220 | 1.200 | 1.117 | 1.245 | 10.43 |  |
| 76) I | Chrysene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 77)   | Benzidine         | 0.769          | 0.838 | 0.629 | 0.750 | 0.678 | 0.703 | 0.689 | 0.722 | 9.55  |  |
| 78)   | Pyrene            | 1.386          | 1.450 | 1.172 | 1.354 | 1.324 | 1.293 | 1.229 | 1.315 | 7.16  |  |
| 79) S | Terphenyl-d14     | 0.991          | 1.116 | 0.734 | 0.906 | 0.872 | 0.834 | 0.770 | 0.889 | 14.80 |  |
| 80)   | Butylbenzylpht... | 0.567          | 0.578 | 0.537 | 0.577 | 0.569 | 0.564 | 0.548 | 0.563 | 2.66  |  |
| 81)   | Benzo(a)anthra... | 1.282          | 1.351 | 1.128 | 1.261 | 1.234 | 1.204 | 1.164 | 1.232 | 6.10  |  |
| 82)   | 3,3'-Dichlorob... | 0.477          | 0.490 | 0.436 | 0.487 | 0.474 | 0.462 | 0.454 | 0.469 | 4.11  |  |
| 83)   | Chrysene          | 1.226          | 1.310 | 1.074 | 1.213 | 1.185 | 1.159 | 1.120 | 1.184 | 6.48  |  |
| 84)   | Bis(2-ethylhex... | 0.833          | 0.862 | 0.750 | 0.817 | 0.809 | 0.786 | 0.774 | 0.805 | 4.68  |  |
| 85) c | Di-n-octyl pht... | 1.403          | 1.466 | 1.262 | 1.413 | 1.383 | 1.356 | 1.311 | 1.371 | 4.97  |  |
| 86)   | Indeno(1,2,3-c... | 1.424          | 1.455 | 1.426 | 1.466 | 1.467 | 1.455 | 1.442 | 1.448 | 1.23  |  |

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|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|--|
| 87) I | Perylene-d12      |       |       |       |       |       |       |       |       |      |  |
|       |                   |       |       |       |       |       |       |       |       |      |  |
| 88)   | Benzo(b)fluora... | 1.270 | 1.354 | 1.122 | 1.250 | 1.212 | 1.191 | 1.172 | 1.224 | 6.13 |  |
| 89)   | Benzo(k)fluora... | 1.191 | 1.281 | 1.029 | 1.135 | 1.109 | 1.092 | 1.045 | 1.126 | 7.78 |  |
| 90) C | Benzo(a)pyrene    | 1.179 | 1.267 | 1.061 | 1.172 | 1.142 | 1.129 | 1.094 | 1.149 | 5.80 |  |
| 91)   | Dibenzo(a,h)an... | 1.078 | 1.116 | 1.021 | 1.082 | 1.069 | 1.059 | 1.045 | 1.067 | 2.83 |  |
| 92)   | Benzo(g,h,i)pe... | 1.103 | 1.128 | 1.066 | 1.112 | 1.095 | 1.096 | 1.078 | 1.097 | 1.87 |  |

(#) = Out of Range