

Method Path : Z:\SVOASRV\HPCHEM1\BNA\_M\METHODS\  
 Method File : 8270-BM092019.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Fri Sep 20 16:34:01 2019  
 Response Via : Initial Calibration

## Calibration Files

10 =BM022723.D 20 =BM022724.D 40 =BM022725.D 50 =BM022726.D 60 =BM022727.D 80 =BM022728.D 100 =BM022729.D

| Compound |                       | 10             | 20    | 40    | 50    | 60    | 80    | 100   | Avg   | %RSD  |
|----------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| -----    |                       |                |       |       |       |       |       |       |       |       |
| 1) I     | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |
| 2)       | 1,4-Dioxane           | 0.512          | 0.512 | 0.493 | 0.511 | 0.505 | 0.507 | 0.511 | 0.507 | 1.38  |
| 3)       | Pyridine              | 1.387          | 1.437 | 1.386 | 1.244 | 1.267 | 1.321 | 1.321 | 1.338 | 5.20  |
| 4)       | n-Nitrosodimet...     | 0.472          | 0.473 | 0.469 | 0.494 | 0.497 | 0.499 | 0.504 | 0.487 | 3.09  |
| 5) S     | 2-Fluorophenol        | 1.254          | 1.271 | 1.237 | 1.279 | 1.259 | 1.270 | 1.257 | 1.261 | 1.10  |
| 6)       | Aniline               | 1.910          | 1.979 | 1.891 | 1.981 | 1.933 | 1.973 | 1.928 | 1.942 | 1.84  |
| 7) S     | Phenol-d6             | 1.596          | 1.668 | 1.581 | 1.658 | 1.610 | 1.632 | 1.593 | 1.620 | 2.08  |
| 8)       | 2-Chlorophenol        | 1.277          | 1.307 | 1.250 | 1.303 | 1.280 | 1.297 | 1.280 | 1.285 | 1.50  |
| 9)       | Benzaldehyde          | 1.047          | 1.056 | 1.045 | 0.937 | 0.863 | 0.796 | 0.712 | 0.922 | 14.86 |
| 10) C    | Phenol                | 1.528          | 1.573 | 1.487 | 1.548 | 1.509 | 1.535 | 1.494 | 1.525 | 1.99  |
| 11)      | bis(2-Chloroet...     | 1.186          | 1.218 | 1.164 | 1.225 | 1.195 | 1.211 | 1.187 | 1.198 | 1.79  |
| 12)      | 1,3-Dichlorobe...     | 1.568          | 1.548 | 1.495 | 1.545 | 1.521 | 1.536 | 1.537 | 1.536 | 1.50  |
| 13) C    | 1,4-Dichlorobe...     | 1.597          | 1.590 | 1.505 | 1.554 | 1.534 | 1.556 | 1.546 | 1.555 | 2.04  |
| 14)      | 1,2-Dichlorobe...     | 1.524          | 1.514 | 1.437 | 1.494 | 1.461 | 1.480 | 1.465 | 1.482 | 2.06  |
| 15)      | Benzyl Alcohol        | 0.961          | 1.039 | 0.985 | 1.043 | 1.014 | 1.038 | 1.015 | 1.013 | 3.04  |
| 16)      | 2,2'-oxybis(1-...     | 1.828          | 1.870 | 1.691 | 1.766 | 1.702 | 1.704 | 1.623 | 1.740 | 4.93  |
| 17)      | 2-Methylphenol        | 0.958          | 1.033 | 0.985 | 1.042 | 1.011 | 1.032 | 1.005 | 1.009 | 2.98  |
| 18)      | Hexachloroethane      | 0.580          | 0.577 | 0.552 | 0.577 | 0.565 | 0.571 | 0.568 | 0.570 | 1.69  |
| 19) P    | n-Nitroso-di-n...     | 0.886          | 0.975 | 0.887 | 0.929 | 0.898 | 0.901 | 0.854 | 0.904 | 4.24  |
| 20)      | 3+4-Methylphenols     | 1.270          | 1.366 | 1.307 | 1.393 | 1.352 | 1.377 | 1.347 | 1.344 | 3.17  |
|          |                       |                |       |       |       |       |       |       |       |       |
| 21) I    | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |
| 22)      | Acetophenone          | 0.505          | 0.502 | 0.531 | 0.485 | 0.475 | 0.485 | 0.474 | 0.494 | 4.13  |
| 23) S    | Nitrobenzene-d5       | 0.365          | 0.367 | 0.356 | 0.362 | 0.357 | 0.361 | 0.354 | 0.360 | 1.31  |
| 24)      | Nitrobenzene          | 0.358          | 0.352 | 0.341 | 0.347 | 0.338 | 0.341 | 0.335 | 0.345 | 2.40  |
| 25)      | Isophorone            | 0.560          | 0.600 | 0.583 | 0.610 | 0.593 | 0.607 | 0.592 | 0.592 | 2.88  |
| 26) C    | 2-Nitrophenol         | 0.125          | 0.137 | 0.145 | 0.154 | 0.154 | 0.162 | 0.164 | 0.149 | 9.44  |
| 27)      | 2,4-Dimethylph...     | 0.240          | 0.248 | 0.245 | 0.254 | 0.249 | 0.256 | 0.252 | 0.249 | 2.21  |
| 28)      | bis(2-Chloroet...     | 0.413          | 0.423 | 0.403 | 0.416 | 0.405 | 0.411 | 0.400 | 0.410 | 1.95  |
| 29) C    | 2,4-Dichloroph...     | 0.259          | 0.276 | 0.277 | 0.290 | 0.285 | 0.293 | 0.293 | 0.282 | 4.45  |
| 30)      | 1,2,4-Trichlor...     | 0.352          | 0.346 | 0.341 | 0.346 | 0.342 | 0.350 | 0.349 | 0.347 | 1.17  |
| 31)      | Naphthalene           | 1.024          | 1.012 | 0.972 | 0.988 | 0.972 | 0.981 | 0.969 | 0.988 | 2.18  |
| 32)      | Benzoic acid          | 0.107          | 0.132 | 0.183 | 0.172 | 0.171 | 0.181 | 0.176 | 0.160 | 17.99 |
| 33)      | 4-Chloroaniline       | 0.423          | 0.435 | 0.424 | 0.439 | 0.426 | 0.433 | 0.425 | 0.429 | 1.45  |
| 34) C    | Hexachlorobuta...     | 0.208          | 0.206 | 0.201 | 0.206 | 0.204 | 0.208 | 0.213 | 0.207 | 1.78  |
| 35)      | Caprolactam           | 0.063          | 0.079 | 0.081 | 0.089 | 0.087 | 0.093 | 0.092 | 0.084 | 12.19 |
| 36) C    | 4-Chloro-3-met...     | 0.255          | 0.276 | 0.270 | 0.285 | 0.276 | 0.283 | 0.280 | 0.275 | 3.70  |
| 37)      | 2-Methylnaphth...     | 0.687          | 0.709 | 0.673 | 0.700 | 0.679 | 0.690 | 0.678 | 0.688 | 1.87  |
| 38)      | 1-Methylnaphth...     | 0.654          | 0.676 | 0.643 | 0.662 | 0.645 | 0.651 | 0.640 | 0.653 | 1.91  |

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|       |                    |                |       |       |       |       |       |       |       |       |  |
|-------|--------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 39) I | Acenaphthene-d10   | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 40)   | 1,2,4,5-Tetrac...  | 0.661          | 0.654 | 0.760 | 0.656 | 0.657 | 0.670 | 0.686 | 0.678 | 5.58  |  |
| 41) P | Hexachlorocycl...  | 0.346          | 0.346 | 0.358 | 0.373 | 0.376 | 0.389 | 0.400 | 0.370 | 5.66  |  |
| 42) S | 2,4,6-Tribromo...  | 0.220          | 0.241 | 0.247 | 0.263 | 0.255 | 0.260 | 0.263 | 0.250 | 6.24  |  |
| 43) C | 2,4,6-Trichlor...  | 0.348          | 0.374 | 0.385 | 0.397 | 0.396 | 0.413 | 0.424 | 0.391 | 6.46  |  |
| 44)   | 2,4,5-Trichlor...  | 0.377          | 0.391 | 0.398 | 0.418 | 0.414 | 0.425 | 0.430 | 0.408 | 4.71  |  |
| 45) S | 2-Fluorobiphenyl   | 1.508          | 1.482 | 1.447 | 1.456 | 1.441 | 1.423 | 1.410 | 1.452 | 2.31  |  |
| 46)   | 1,1'-Biphenyl      | 1.689          | 1.662 | 1.804 | 1.618 | 1.605 | 1.604 | 1.605 | 1.655 | 4.43  |  |
| 47)   | 2-Chloronaphth...  | 1.272          | 1.250 | 1.215 | 1.233 | 1.215 | 1.221 | 1.229 | 1.234 | 1.69  |  |
| 48)   | 2-Nitroaniline     | 0.278          | 0.303 | 0.319 | 0.337 | 0.334 | 0.340 | 0.337 | 0.321 | 7.19  |  |
| 49)   | Acenaphthylene     | 1.771          | 1.835 | 1.799 | 1.864 | 1.823 | 1.841 | 1.855 | 1.827 | 1.78  |  |
| 50)   | Dimethylphthalate  | 1.451          | 1.473 | 1.412 | 1.479 | 1.429 | 1.440 | 1.434 | 1.445 | 1.67  |  |
| 51)   | 2,6-Dinitrotol...  | 0.274          | 0.298 | 0.296 | 0.313 | 0.306 | 0.314 | 0.315 | 0.302 | 4.82  |  |
| 52) C | Acenaphthene       | 1.202          | 1.204 | 1.183 | 1.223 | 1.197 | 1.213 | 1.144 | 1.195 | 2.15  |  |
| 53)   | 3-Nitroaniline     | 0.301          | 0.338 | 0.345 | 0.366 | 0.355 | 0.366 | 0.365 | 0.348 | 6.78  |  |
| 54) P | 2,4-Dinitrophenol  | 0.103          | 0.120 | 0.137 | 0.155 | 0.150 | 0.163 | 0.172 | 0.143 | 17.14 |  |
| 55)   | Dibenzofuran       | 1.812          | 1.794 | 1.713 | 1.753 | 1.707 | 1.721 | 1.716 | 1.745 | 2.44  |  |
| 56) P | 4-Nitrophenol      | 0.219          | 0.251 | 0.267 | 0.285 | 0.277 | 0.287 | 0.287 | 0.268 | 9.32  |  |
| 57)   | 2,4-Dinitrotol...  | 0.321          | 0.375 | 0.392 | 0.424 | 0.410 | 0.423 | 0.429 | 0.396 | 9.72  |  |
| 58)   | Fluorene           | 1.447          | 1.456 | 1.397 | 1.452 | 1.403 | 1.396 | 1.376 | 1.418 | 2.29  |  |
| 59)   | 2,3,4,6-Tetrac...  | 0.314          | 0.343 | 0.346 | 0.370 | 0.359 | 0.373 | 0.383 | 0.355 | 6.56  |  |
| 60)   | Diethylphthalate   | 1.361          | 1.424 | 1.368 | 1.460 | 1.407 | 1.409 | 1.408 | 1.405 | 2.38  |  |
| 61)   | 4-Chlorophenyl...  | 0.728          | 0.752 | 0.718 | 0.748 | 0.722 | 0.717 | 0.714 | 0.729 | 2.12  |  |
| 62)   | 4-Nitroaniline     | 0.301          | 0.354 | 0.364 | 0.392 | 0.375 | 0.385 | 0.384 | 0.365 | 8.52  |  |
| 63)   | Azobenzene         | 1.221          | 1.295 | 1.266 | 1.320 | 1.278 | 1.267 | 1.237 | 1.269 | 2.62  |  |
| 64) I | Phenanthrene-d10   | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 65)   | 4,6-Dinitro-2-...  | 0.067          | 0.079 | 0.091 | 0.100 | 0.100 | 0.107 | 0.111 | 0.094 | 16.75 |  |
| 66) c | n-Nitrosodiphe...  | 0.599          | 0.619 | 0.600 | 0.617 | 0.616 | 0.617 | 0.609 | 0.611 | 1.40  |  |
| 67)   | 4-Bromophenyl-...  | 0.211          | 0.220 | 0.216 | 0.225 | 0.225 | 0.229 | 0.230 | 0.222 | 3.06  |  |
| 68)   | Hexachlorobenzene  | 0.259          | 0.261 | 0.253 | 0.261 | 0.260 | 0.261 | 0.261 | 0.259 | 1.21  |  |
| 69)   | Atrazine           | 0.179          | 0.192 | 0.193 | 0.206 | 0.206 | 0.208 | 0.206 | 0.199 | 5.46  |  |
| 70) C | Pentachlorophenol  | 0.110          | 0.127 | 0.135 | 0.145 | 0.145 | 0.152 | 0.155 | 0.138 | 11.46 |  |
| 71)   | Phenanthrene       | 1.162          | 1.154 | 1.102 | 1.137 | 1.125 | 1.117 | 1.103 | 1.129 | 2.08  |  |
| 72)   | Anthracene         | 1.062          | 1.098 | 1.077 | 1.122 | 1.109 | 1.103 | 1.085 | 1.094 | 1.86  |  |
| 73)   | Carbazole          | 0.986          | 1.025 | 1.003 | 1.039 | 1.030 | 1.030 | 1.012 | 1.018 | 1.83  |  |
| 74)   | Di-n-butylphth...  | 1.017          | 1.121 | 1.128 | 1.222 | 1.204 | 1.199 | 1.186 | 1.154 | 6.20  |  |
| 75) C | Fluoranthene       | 1.241          | 1.277 | 1.243 | 1.305 | 1.283 | 1.290 | 1.274 | 1.273 | 1.85  |  |
| 76) I | Chrysene-d12       | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 77)   | Benzidine          | 0.520          | 0.555 | 0.546 | 0.620 | 0.546 | 0.555 | 0.499 | 0.549 | 6.86  |  |
| 78)   | Pyrene             | 1.293          | 1.332 | 1.298 | 1.322 | 1.321 | 1.316 | 1.292 | 1.311 | 1.20  |  |
| 79) S | Terphenyl-d14      | 1.086          | 1.112 | 1.051 | 1.044 | 1.025 | 0.978 | 0.935 | 1.033 | 5.91  |  |
| 80)   | Butylbenzylphth... | 0.405          | 0.462 | 0.485 | 0.528 | 0.527 | 0.543 | 0.537 | 0.498 | 10.15 |  |
| 81)   | Benzo(a)anthra...  | 1.297          | 1.323 | 1.281 | 1.315 | 1.302 | 1.286 | 1.268 | 1.296 | 1.48  |  |
| 82)   | 3,3'-Dichlorob...  | 0.398          | 0.449 | 0.463 | 0.487 | 0.479 | 0.478 | 0.463 | 0.460 | 6.53  |  |
| 83)   | Chrysene           | 1.293          | 1.291 | 1.243 | 1.269 | 1.254 | 1.244 | 1.204 | 1.257 | 2.47  |  |
| 84)   | Bis(2-ethylhex...  | 0.604          | 0.708 | 0.729 | 0.801 | 0.785 | 0.782 | 0.757 | 0.738 | 9.15  |  |
| 85) c | Di-n-octyl pht...  | 0.921          | 1.077 | 1.130 | 1.265 | 1.263 | 1.293 | 1.284 | 1.176 | 11.90 |  |
| 86)   | Indeno(1,2,3-c...  | 1.453          | 1.461 | 1.467 | 1.513 | 1.514 | 1.531 | 1.560 | 1.500 | 2.69  |  |

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| 87) I | Perylene-d12      |       |       |       |       |       |       |       |       |      |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 88)   | Benzo(b)fluora... | 1.171 | 1.248 | 1.200 | 1.215 | 1.232 | 1.218 | 1.191 | 1.211 | 2.13 |
| 89)   | Benzo(k)fluora... | 1.186 | 1.180 | 1.203 | 1.245 | 1.199 | 1.207 | 1.191 | 1.202 | 1.79 |
| 90) C | Benzo(a)pyrene    | 1.038 | 1.095 | 1.111 | 1.147 | 1.134 | 1.149 | 1.137 | 1.116 | 3.53 |
| 91)   | Dibenzo(a,h)an... | 1.139 | 1.156 | 1.168 | 1.192 | 1.181 | 1.170 | 1.165 | 1.167 | 1.46 |
| 92)   | Benzo(g,h,i)pe... | 1.077 | 1.089 | 1.094 | 1.119 | 1.110 | 1.131 | 1.140 | 1.109 | 2.09 |

(#) = Out of Range