

Method Path : Z:\SVOASRV\HPCHEM1\BNA\_F\METHODS\  
 Method File : 8270-BF101518.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Mon Oct 15 18:09:48 2018  
 Response Via : Initial Calibration

## Calibration Files

2.5 =BF109878.D 10 =BF109879.D 25 =BF109880.D 40 =BF109881.D 50 =BF109882.D 60 =BF109883.D 80 =BF109884.D

|       | Compound              | 2.5            | 10    | 25    | 40    | 50    | 60    | 80    | Avg   | %RSD  |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |
| 2)    | 1,4-Dioxane           | 0.800          | 0.729 | 0.706 | 0.715 | 0.693 | 0.691 | 0.683 | 0.717 | 5.55  |
| 3)    | Pyridine              | 1.620          | 1.634 | 1.613 | 1.607 | 1.573 | 1.564 | 1.573 | 1.598 | 1.71  |
| 4)    | n-Nitrosodimet...     | 0.640          | 0.655 | 0.661 | 0.663 | 0.645 | 0.648 | 0.650 | 0.652 | 1.31  |
| 5) S  | 2-Fluorophenol        | 1.445          | 1.373 | 1.299 | 1.243 | 1.185 | 1.165 | 1.122 | 1.262 | 9.28  |
| 6)    | Aniline               | 2.295          | 2.158 | 2.110 | 2.123 | 2.044 | 2.032 | 2.017 | 2.111 | 4.56  |
| 7) S  | Phenol-d6             | 1.804          | 1.690 | 1.624 | 1.543 | 1.475 | 1.434 | 1.396 | 1.567 | 9.42  |
| 8)    | 2-Chlorophenol        | 1.560          | 1.519 | 1.474 | 1.422 | 1.356 | 1.306 | 1.257 | 1.413 | 7.95  |
| 9)    | Benzaldehyde          |                | 1.218 | 1.105 | 1.012 | 0.935 | 0.821 |       | 1.018 | 15.00 |
| 10) C | Phenol                | 1.929          | 1.819 | 1.753 | 1.682 | 1.593 | 1.555 | 1.511 | 1.692 | 8.94  |
| 11)   | bis(2-Chloroet...     | 1.577          | 1.518 | 1.465 | 1.405 | 1.346 | 1.305 | 1.285 | 1.414 | 7.82  |
| 12)   | 1,3-Dichlorobe...     | 1.754          | 1.664 | 1.601 | 1.540 | 1.477 | 1.422 | 1.389 | 1.550 | 8.54  |
| 13) C | 1,4-Dichlorobe...     | 1.782          | 1.664 | 1.638 | 1.559 | 1.478 | 1.424 | 1.380 | 1.561 | 9.21  |
| 14)   | 1,2-Dichlorobe...     | 1.652          | 1.575 | 1.512 | 1.438 | 1.353 | 1.298 | 1.233 | 1.437 | 10.58 |
| 15)   | Benzyl Alcohol        | 1.290          | 1.285 | 1.238 | 1.219 | 1.165 | 1.137 | 1.104 | 1.205 | 5.99  |
| 16)   | 2,2'-oxybis(1-...     | 2.605          | 2.439 | 2.398 | 2.325 | 2.218 | 2.144 | 2.122 | 2.321 | 7.51  |
| 17)   | 2-Methylphenol        | 1.249          | 1.199 | 1.168 | 1.134 | 1.094 | 1.076 | 1.057 | 1.140 | 6.13  |
| 18)   | Hexachloroethane      | 0.572          | 0.574 | 0.575 | 0.557 | 0.540 | 0.526 | 0.517 | 0.552 | 4.40  |
| 19) P | n-Nitroso-di-n...     | 1.160          | 1.102 | 1.036 | 0.988 | 0.937 | 0.908 | 0.911 | 1.006 | 9.75  |
| 20)   | 3+4-Methylphenols     | 1.637          | 1.597 | 1.521 | 1.461 | 1.365 | 1.300 | 1.242 | 1.446 | 10.35 |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |
| 22)   | Acetophenone          | 0.552          | 0.522 | 0.482 | 0.456 | 0.426 | 0.418 | 0.391 | 0.464 | 12.57 |
| 23) S | Nitrobenzene-d5       | 0.260          | 0.293 | 0.308 | 0.310 | 0.302 | 0.307 | 0.299 | 0.297 | 5.83  |
| 24)   | Nitrobenzene          | 0.289          | 0.325 | 0.335 | 0.335 | 0.325 | 0.331 | 0.317 | 0.323 | 4.97  |
| 25)   | Isophorone            | 0.637          | 0.622 | 0.585 | 0.578 | 0.554 | 0.557 | 0.550 | 0.583 | 5.91  |
| 26) C | 2-Nitrophenol         |                | 0.100 | 0.125 | 0.139 | 0.140 | 0.149 | 0.150 | 0.134 | 13.97 |
| 27)   | 2,4-Dimethylph...     | 0.303          | 0.299 | 0.286 | 0.281 | 0.268 | 0.269 | 0.260 | 0.281 | 5.81  |
| 28)   | bis(2-Chloroet...     | 0.443          | 0.439 | 0.413 | 0.401 | 0.370 | 0.375 | 0.361 | 0.400 | 8.32  |
| 29) C | 2,4-Dichloroph...     | 0.278          | 0.283 | 0.282 | 0.275 | 0.266 | 0.267 | 0.257 | 0.273 | 3.52  |
| 30)   | 1,2,4-Trichlor...     | 0.338          | 0.331 | 0.312 | 0.307 | 0.289 | 0.288 | 0.272 | 0.305 | 7.85  |
| 31)   | Naphthalene           | 1.072          | 1.029 | 0.958 | 0.905 | 0.845 | 0.833 | 0.777 | 0.917 | 11.80 |
| 32)   | Benzoic acid          |                | 0.133 | 0.166 | 0.185 | 0.189 | 0.188 | 0.189 | 0.175 | 12.81 |
| 33)   | 4-Chloroaniline       | 0.461          | 0.450 | 0.429 | 0.409 | 0.389 | 0.382 | 0.366 | 0.412 | 8.70  |
| 34) C | Hexachlorobuta...     | 0.188          | 0.183 | 0.173 | 0.167 | 0.159 | 0.157 | 0.150 | 0.168 | 8.30  |
| 35)   | Caprolactam           | 0.096          | 0.095 | 0.098 | 0.097 | 0.094 | 0.096 | 0.102 | 0.097 | 2.49  |
| 36) C | 4-Chloro-3-met...     | 0.301          | 0.313 | 0.296 | 0.288 | 0.275 | 0.276 | 0.264 | 0.288 | 5.86  |
| 37)   | 2-Methylnaphth...     | 0.687          | 0.655 | 0.623 | 0.588 | 0.553 | 0.543 | 0.509 | 0.594 | 10.84 |

|        |                                          |                |       |       |       |       |       |       |       |       |
|--------|------------------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
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| Method | File : 8270-BF101518.M                   |                |       |       |       |       |       |       |       |       |
| 38)    | 1-Methylnaphth...                        | 0.675          | 0.641 | 0.602 | 0.564 | 0.535 | 0.525 | 0.486 | 0.575 | 11.74 |
| 39) I  | Acenaphthene-d10                         | -----ISTD----- |       |       |       |       |       |       |       |       |
| 40)    | 1,2,4,5-Tetrac...                        | 0.730          | 0.662 | 0.642 | 0.608 | 0.576 | 0.563 | 0.532 | 0.616 | 10.96 |
| 41) P  | Hexachlorocycl...                        | 0.265          | 0.287 | 0.307 | 0.309 | 0.308 | 0.307 | 0.300 | 0.297 | 5.44  |
| 42) S  | 2,4,6-Tribromo...                        | 0.166          | 0.180 | 0.183 | 0.181 | 0.173 | 0.167 | 0.162 | 0.173 | 4.79  |
| 43) C  | 2,4,6-Trichlor...                        | 0.386          | 0.383 | 0.399 | 0.393 | 0.383 | 0.379 | 0.373 | 0.385 | 2.27  |
| 44)    | 2,4,5-Trichlor...                        | 0.383          | 0.412 | 0.414 | 0.414 | 0.397 | 0.400 | 0.378 | 0.400 | 3.73  |
| 45) S  | 2-Fluorobiphenyl                         |                | 1.508 | 1.347 | 1.193 | 1.132 | 1.086 |       | 1.253 | 13.81 |
| 46)    | 1,1'-Biphenyl                            | 2.136          | 2.018 | 1.880 | 1.745 | 1.641 | 1.585 | 1.468 | 1.782 | 13.53 |
| 47)    | 2-Chloronaphth...                        | 1.535          | 1.433 | 1.367 | 1.284 | 1.232 | 1.201 | 1.136 | 1.313 | 10.70 |
| 48)    | 2-Nitroaniline                           |                | 0.259 | 0.327 | 0.350 | 0.354 | 0.369 | 0.361 | 0.337 | 12.03 |
| 49)    | Acenaphthylene                           | 2.228          | 2.098 | 1.979 | 1.901 | 1.781 | 1.738 | 1.622 | 1.907 | 11.12 |
| 50)    | Dimethylphthalate                        | 1.623          | 1.541 | 1.440 | 1.394 | 1.331 | 1.325 | 1.260 | 1.416 | 9.09  |
| 51)    | 2,6-Dinitrotol...                        |                | 0.213 | 0.261 | 0.284 | 0.283 | 0.288 | 0.285 | 0.269 | 10.80 |
| 52) C  | Acenaphthene                             | 1.398          | 1.326 | 1.257 | 1.196 | 1.149 | 1.119 | 1.053 | 1.214 | 9.95  |
| 53)    | 3-Nitroaniline                           |                | 0.272 | 0.323 | 0.343 | 0.339 | 0.351 | 0.336 | 0.327 | 8.77  |
| 54) P  | 2,4-Dinitrophenol                        |                | 0.040 | 0.057 | 0.069 | 0.075 | 0.083 | 0.088 | 0.069 | 25.90 |
| 55)    | Dibenzofuran                             | 2.046          | 1.940 | 1.798 | 1.682 | 1.617 | 1.565 | 1.470 | 1.731 | 11.98 |
| 56) P  | 4-Nitrophenol                            |                | 0.207 | 0.241 | 0.258 | 0.259 | 0.272 | 0.260 | 0.250 | 9.28  |
| 57)    | 2,4-Dinitrotol...                        |                | 0.228 | 0.293 | 0.329 | 0.338 | 0.357 | 0.351 | 0.316 | 15.44 |
| 58)    | Fluorene                                 | 1.543          | 1.410 | 1.319 | 1.231 | 1.158 | 1.127 | 1.035 | 1.260 | 13.96 |
| 59)    | 2,3,4,6-Tetrac...                        | 0.298          | 0.315 | 0.333 | 0.330 | 0.319 | 0.320 | 0.303 | 0.317 | 4.08  |
| 60)    | Diethylphthalate                         | 1.604          | 1.523 | 1.451 | 1.381 | 1.322 | 1.291 | 1.219 | 1.399 | 9.70  |
| 61)    | 4-Chlorophenyl...                        | 0.779          | 0.750 | 0.687 | 0.651 | 0.608 | 0.579 | 0.541 | 0.656 | 13.39 |
| 62)    | 4-Nitroaniline                           |                | 0.261 | 0.301 | 0.326 | 0.320 | 0.332 | 0.319 | 0.310 | 8.46  |
| 63)    | Azobenzene                               | 1.731          | 1.618 | 1.527 | 1.430 | 1.360 | 1.321 | 1.240 | 1.461 | 11.90 |
| 64) I  | Phenanthrene-d10                         | -----ISTD----- |       |       |       |       |       |       |       |       |
| 65)    | 4,6-Dinitro-2-...                        |                | 0.036 | 0.056 | 0.067 | 0.070 | 0.076 | 0.080 | 0.064 | 24.99 |
| 66) c  | n-Nitrosodiphe...                        | 0.764          | 0.726 | 0.687 | 0.660 | 0.630 | 0.613 | 0.583 | 0.666 | 9.64  |
| 67)    | 4-Bromophenyl-...                        | 0.240          | 0.232 | 0.225 | 0.218 | 0.208 | 0.201 | 0.195 | 0.217 | 7.66  |
| 68)    | Hexachlorobenzene                        | 0.265          | 0.250 | 0.239 | 0.226 | 0.219 | 0.214 | 0.205 | 0.231 | 9.17  |
| 69)    | Atrazine                                 | 0.229          | 0.227 | 0.213 | 0.212 | 0.197 | 0.195 | 0.184 | 0.208 | 8.17  |
| 70) C  | Pentachlorophenol                        | 0.101          | 0.127 | 0.136 | 0.142 | 0.138 | 0.140 | 0.137 | 0.132 | 10.90 |
| 71)    | Phenanthrene                             | 1.242          | 1.160 | 1.083 | 1.020 | 0.954 | 0.922 | 0.867 | 1.035 | 12.98 |
| 72)    | Anthracene                               | 1.237          | 1.166 | 1.083 | 1.025 | 0.965 | 0.931 | 0.879 | 1.041 | 12.42 |
| 73)    | Carbazole                                | 1.204          | 1.149 | 1.063 | 1.003 | 0.955 | 0.939 | 0.849 | 1.023 | 12.14 |
| 74)    | Di-n-butylphth...                        | 1.338          | 1.300 | 1.202 | 1.139 | 1.058 | 1.023 | 0.931 | 1.142 | 13.02 |
| 75) C  | Fluoranthene                             | 1.244          | 1.167 | 1.084 | 1.006 | 0.957 | 0.944 | 0.838 | 1.034 | 13.52 |
| 76) I  | Chrysene-d12                             | -----ISTD----- |       |       |       |       |       |       |       |       |
| 77)    | Benzidine                                | 0.919          | 0.819 | 0.847 | 0.799 | 0.685 | 0.661 | 0.638 | 0.767 | 13.85 |
| 78)    | Pyrene                                   | 1.507          | 1.482 | 1.512 | 1.491 | 1.428 | 1.411 | 1.450 | 1.469 | 2.69  |
| 79) S  | Terphenyl-d14                            | 1.126          | 1.053 | 0.979 | 0.943 | 0.870 | 0.833 | 0.862 | 0.952 | 11.37 |
| 80)    | Butylbenzylphth...                       | 0.533          | 0.572 | 0.599 | 0.622 | 0.603 | 0.616 | 0.613 | 0.594 | 5.31  |
| 81)    | Benzo(a)anthra...                        | 1.312          | 1.227 | 1.195 | 1.160 | 1.120 | 1.131 | 1.102 | 1.178 | 6.24  |
| 82)    | 3,3'-Dichlorob...                        | 0.448          | 0.452 | 0.437 | 0.423 | 0.388 | 0.384 | 0.359 | 0.413 | 8.67  |

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|       |                   |                |       |       |       |       |       |       |       |       |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 83)   | Chrysene          | 1.286          | 1.188 | 1.134 | 1.105 | 1.069 | 1.043 | 1.024 | 1.121 | 8.16  |
| 84)   | Bis(2-ethylhex... | 0.780          | 0.783 | 0.797 | 0.798 | 0.774 | 0.777 | 0.761 | 0.781 | 1.67  |
| 85) c | Di-n-octyl pht... | 1.069          | 1.089 | 1.115 | 1.127 | 1.089 | 1.133 | 1.089 | 1.102 | 2.14  |
| 86)   | Indeno(1,2,3-c... | 0.932          | 0.798 | 0.807 | 0.850 | 0.895 | 0.944 | 1.094 | 0.903 | 11.28 |
| 87) I | Perylene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |
| 88)   | Benzo(b)fluora... | 1.229          | 1.193 | 1.160 | 1.210 | 1.135 | 1.106 | 1.038 | 1.153 | 5.77  |
| 89)   | Benzo(k)fluora... | 1.189          | 1.202 | 1.218 | 1.123 | 1.108 | 1.080 | 1.036 | 1.137 | 6.01  |
| 90) C | Benzo(a)pyrene    | 1.087          | 1.081 | 1.087 | 1.079 | 1.052 | 1.037 | 1.001 | 1.060 | 3.06  |
| 91)   | Dibenzo(a,h)an... | 0.853          | 0.826 | 0.901 | 0.966 | 0.982 | 0.995 | 1.054 | 0.940 | 8.74  |
| 92)   | Benzo(g,h,i)pe... | 0.836          | 0.780 | 0.889 | 0.979 | 1.009 | 1.021 | 1.133 | 0.950 | 12.81 |

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(#) = Out of Range