

Method Path : Z:\SVOASRV\HPCHEM1\BNA\_G\METHODS\  
 Method File : 8270-BG051520.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Fri May 15 15:45:48 2020  
 Response Via : Initial Calibration

## Calibration Files

10 =BG045392.D 20 =BG045393.D 40 =BG045394.D 50 =BG045395.D 60 =BG045396.D 80 =BG045397.D 100 =BG045398.D

|       | Compound              | 10             | 20    | 40    | 50    | 60    | 80    | 100   | Avg   | %RSD  |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |
| 2)    | 1,4-Dioxane           | 0.553          | 0.527 | 0.507 | 0.480 | 0.507 | 0.515 | 0.464 | 0.507 | 5.77  |
| 3)    | Pyridine              | 1.395          | 1.422 | 1.472 | 1.360 | 1.456 | 1.428 | 1.361 | 1.413 | 3.08  |
| 4)    | n-Nitrosodimet...     | 0.463          | 0.446 | 0.471 | 0.460 | 0.465 | 0.482 | 0.451 | 0.462 | 2.59  |
| 5) S  | 2-Fluorophenol        | 1.053          | 1.067 | 1.049 | 0.984 | 1.036 | 1.025 | 0.949 | 1.023 | 4.13  |
| 6)    | Aniline               | 2.010          | 1.983 | 1.917 | 1.818 | 1.932 | 1.873 | 1.777 | 1.901 | 4.44  |
| 7) S  | Phenol-d6             | 1.538          | 1.478 | 1.496 | 1.396 | 1.499 | 1.434 | 1.355 | 1.457 | 4.42  |
| 8)    | 2-Chlorophenol        | 1.197          | 1.171 | 1.136 | 1.061 | 1.152 | 1.104 | 1.034 | 1.122 | 5.26  |
| 9)    | Benzaldehyde          | 1.054          | 1.089 | 0.990 | 0.930 | 0.945 | 0.888 | 0.747 | 0.949 | 11.96 |
| 10) C | Phenol                | 1.580          | 1.552 | 1.549 | 1.433 | 1.536 | 1.457 | 1.400 | 1.501 | 4.64  |
| 11)   | bis(2-Chloroet...     | 1.190          | 1.231 | 1.219 | 1.094 | 1.197 | 1.160 | 1.106 | 1.171 | 4.57  |
| 12)   | 1,3-Dichlorobe...     | 1.462          | 1.384 | 1.362 | 1.288 | 1.368 | 1.330 | 1.247 | 1.349 | 5.15  |
| 13) C | 1,4-Dichlorobe...     | 1.422          | 1.357 | 1.354 | 1.273 | 1.359 | 1.305 | 1.247 | 1.331 | 4.48  |
| 14)   | 1,2-Dichlorobe...     | 1.384          | 1.360 | 1.281 | 1.205 | 1.297 | 1.249 | 1.184 | 1.280 | 5.81  |
| 15)   | Benzyl Alcohol        | 1.183          | 1.218 | 1.230 | 1.171 | 1.241 | 1.214 | 1.166 | 1.203 | 2.47  |
| 16)   | 2,2'-oxybis(1-...     | 1.206          | 1.179 | 1.113 | 1.054 | 1.125 | 1.080 | 1.023 | 1.111 | 5.89  |
| 17)   | 2-Methylphenol        | 1.165          | 1.138 | 1.160 | 1.091 | 1.148 | 1.100 | 1.064 | 1.124 | 3.46  |
| 18)   | Hexachloroethane      | 0.521          | 0.536 | 0.524 | 0.492 | 0.517 | 0.504 | 0.474 | 0.510 | 4.17  |
| 19) P | n-Nitroso-di-n...     | 1.087          | 1.066 | 1.030 | 0.939 | 1.024 | 0.972 | 0.934 | 1.007 | 6.00  |
| 20)   | 3+4-Methylphenols     | 1.598          | 1.555 | 1.578 | 1.443 | 1.574 | 1.497 | 1.466 | 1.530 | 3.98  |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |
| 22)   | Acetophenone          | 0.500          | 0.489 | 0.477 | 0.467 | 0.475 | 0.462 | 0.448 | 0.474 | 3.59  |
| 23) S | Nitrobenzene-d5       | 0.386          | 0.371 | 0.371 | 0.360 | 0.368 | 0.360 | 0.351 | 0.367 | 3.06  |
| 24)   | Nitrobenzene          | 0.426          | 0.408 | 0.387 | 0.383 | 0.391 | 0.383 | 0.372 | 0.393 | 4.61  |
| 25)   | Isophorone            | 0.756          | 0.751 | 0.737 | 0.703 | 0.728 | 0.695 | 0.687 | 0.722 | 3.84  |
| 26) C | 2-Nitrophenol         | 0.167          | 0.169 | 0.169 | 0.167 | 0.173 | 0.167 | 0.166 | 0.168 | 1.37  |
| 27)   | 2,4-Dimethylph...     | 0.264          | 0.255 | 0.254 | 0.240 | 0.249 | 0.246 | 0.237 | 0.249 | 3.68  |
| 28)   | bis(2-Chloroet...     | 0.414          | 0.391 | 0.378 | 0.374 | 0.377 | 0.361 | 0.357 | 0.379 | 5.07  |
| 29) C | 2,4-Dichloroph...     | 0.296          | 0.300 | 0.292 | 0.291 | 0.304 | 0.290 | 0.287 | 0.294 | 1.99  |
| 30)   | 1,2,4-Trichlor...     | 0.361          | 0.356 | 0.348 | 0.344 | 0.348 | 0.343 | 0.335 | 0.348 | 2.46  |
| 31)   | Naphthalene           | 1.013          | 0.973 | 0.935 | 0.899 | 0.933 | 0.902 | 0.869 | 0.932 | 5.22  |
| 32)   | Benzoic acid          | 0.078          | 0.101 | 0.142 | 0.160 | 0.180 | 0.193 | 0.194 | 0.150 | 30.34 |
| 33)   | 4-Chloroaniline       | 0.395          | 0.395 | 0.399 | 0.384 | 0.390 | 0.387 | 0.379 | 0.390 | 1.84  |
| 34) C | Hexachlorobuta...     | 0.264          | 0.253 | 0.246 | 0.237 | 0.246 | 0.240 | 0.236 | 0.246 | 4.05  |
| 35)   | Caprolactam           | 0.104          | 0.120 | 0.112 | 0.103 | 0.108 | 0.105 | 0.104 | 0.108 | 5.77  |
| 36) C | 4-Chloro-3-met...     | 0.340          | 0.342 | 0.335 | 0.323 | 0.333 | 0.326 | 0.323 | 0.332 | 2.39  |
| 37)   | 2-Methylnaphth...     | 0.732          | 0.735 | 0.703 | 0.679 | 0.695 | 0.665 | 0.653 | 0.695 | 4.55  |
| 38)   | 1-Methylnaphth...     | 0.717          | 0.692 | 0.667 | 0.633 | 0.650 | 0.624 | 0.611 | 0.656 | 5.83  |

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|       |                   |                |       |       |       |       |       |       |       |       |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 39) I | Acenaphthene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 40)   | 1,2,4,5-Tetrac... | 0.616          | 0.544 | 0.555 | 0.552 | 0.555 | 0.556 | 0.533 | 0.559 | 4.79  |  |
| 41) P | Hexachlorocycl... | 0.257          | 0.277 | 0.325 | 0.337 | 0.346 | 0.359 | 0.357 | 0.322 | 12.46 |  |
| 42) S | 2,4,6-Tribromo... | 0.256          | 0.258 | 0.262 | 0.252 | 0.251 | 0.260 | 0.251 | 0.256 | 1.73  |  |
| 43) C | 2,4,6-Trichlor... | 0.395          | 0.373 | 0.394 | 0.381 | 0.393 | 0.398 | 0.382 | 0.388 | 2.46  |  |
| 44)   | 2,4,5-Trichlor... | 0.442          | 0.445 | 0.452 | 0.432 | 0.450 | 0.453 | 0.431 | 0.443 | 2.04  |  |
| 45) S | 2-Fluorobiphenyl  | 1.324          | 1.220 | 1.215 | 1.144 | 1.161 | 1.142 | 1.048 | 1.179 | 7.26  |  |
| 46)   | 1,1'-Biphenyl     | 1.322          | 1.241 | 1.241 | 1.209 | 1.223 | 1.218 | 1.148 | 1.229 | 4.22  |  |
| 47)   | 2-Chloronaphth... | 1.093          | 1.010 | 0.999 | 0.966 | 0.983 | 0.996 | 0.939 | 0.998 | 4.81  |  |
| 48)   | 2-Nitroaniline    | 0.306          | 0.330 | 0.344 | 0.326 | 0.332 | 0.337 | 0.324 | 0.328 | 3.60  |  |
| 49)   | Acenaphthylene    | 1.701          | 1.660 | 1.627 | 1.566 | 1.593 | 1.578 | 1.495 | 1.603 | 4.20  |  |
| 50)   | Dimethylphthalate | 1.469          | 1.449 | 1.425 | 1.312 | 1.341 | 1.338 | 1.269 | 1.372 | 5.52  |  |
| 51)   | 2,6-Dinitrotol... | 0.319          | 0.313 | 0.321 | 0.298 | 0.305 | 0.311 | 0.300 | 0.310 | 2.85  |  |
| 52) C | Acenaphthene      | 1.020          | 1.080 | 1.102 | 1.058 | 1.088 | 1.101 | 1.061 | 1.073 | 2.71  |  |
| 53)   | 3-Nitroaniline    | 0.309          | 0.324 | 0.319 | 0.307 | 0.316 | 0.322 | 0.305 | 0.315 | 2.45  |  |
| 54) P | 2,4-Dinitrophenol | 0.121          | 0.153 | 0.190 | 0.185 | 0.199 | 0.205 | 0.206 | 0.180 | 17.62 |  |
| 55)   | Dibenzofuran      | 1.736          | 1.656 | 1.643 | 1.542 | 1.551 | 1.562 | 1.465 | 1.593 | 5.64  |  |
| 56) P | 4-Nitrophenol     | 0.203          | 0.240 | 0.255 | 0.228 | 0.245 | 0.256 | 0.241 | 0.238 | 7.70  |  |
| 57)   | 2,4-Dinitrotol... | 0.460          | 0.462 | 0.456 | 0.429 | 0.444 | 0.456 | 0.432 | 0.448 | 2.99  |  |
| 58)   | Fluorene          | 1.391          | 1.381 | 1.345 | 1.269 | 1.286 | 1.278 | 1.213 | 1.309 | 4.97  |  |
| 59)   | 2,3,4,6-Tetrac... | 0.376          | 0.391 | 0.401 | 0.377 | 0.390 | 0.406 | 0.391 | 0.390 | 2.86  |  |
| 60)   | Diethylphthalate  | 1.549          | 1.522 | 1.479 | 1.358 | 1.387 | 1.385 | 1.316 | 1.428 | 6.20  |  |
| 61)   | 4-Chlorophenyl... | 0.801          | 0.749 | 0.767 | 0.722 | 0.744 | 0.743 | 0.717 | 0.749 | 3.80  |  |
| 62)   | 4-Nitroaniline    | 0.319          | 0.339 | 0.343 | 0.320 | 0.328 | 0.334 | 0.317 | 0.329 | 3.11  |  |
| 63)   | Azobenzene        | 1.432          | 1.378 | 1.369 | 1.278 | 1.313 | 1.316 | 1.234 | 1.332 | 5.02  |  |
| 64) I | Phenanthrene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 65)   | 4,6-Dinitro-2-... | 0.107          | 0.115 | 0.120 | 0.116 | 0.119 | 0.121 | 0.117 | 0.116 | 3.94  |  |
| 66) c | n-Nitrosodiphe... | 0.520          | 0.503 | 0.477 | 0.465 | 0.478 | 0.468 | 0.450 | 0.480 | 4.98  |  |
| 67)   | 4-Bromophenyl-... | 0.226          | 0.218 | 0.217 | 0.214 | 0.216 | 0.215 | 0.211 | 0.217 | 2.23  |  |
| 68)   | Hexachlorobenzene | 0.242          | 0.231 | 0.227 | 0.218 | 0.228 | 0.222 | 0.218 | 0.227 | 3.73  |  |
| 69)   | Atrazine          | 0.216          | 0.209 | 0.201 | 0.192 | 0.194 | 0.192 | 0.182 | 0.198 | 5.76  |  |
| 70) C | Pentachlorophenol | 0.091          | 0.105 | 0.121 | 0.123 | 0.125 | 0.130 | 0.128 | 0.118 | 12.26 |  |
| 71)   | Phenanthrene      | 0.961          | 0.927 | 0.888 | 0.842 | 0.862 | 0.841 | 0.791 | 0.873 | 6.56  |  |
| 72)   | Anthracene        | 0.975          | 0.944 | 0.890 | 0.846 | 0.859 | 0.841 | 0.783 | 0.877 | 7.46  |  |
| 73)   | Carbazole         | 0.925          | 0.928 | 0.876 | 0.828 | 0.833 | 0.829 | 0.764 | 0.855 | 6.90  |  |
| 74)   | Di-n-butylphth... | 1.147          | 1.147 | 1.068 | 0.982 | 0.995 | 0.952 | 0.889 | 1.026 | 9.59  |  |
| 75) C | Fluoranthene      | 1.244          | 1.251 | 1.156 | 1.059 | 1.076 | 1.042 | 0.946 | 1.111 | 10.09 |  |
| 76) I | Chrysene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 77)   | Benzidine         | 0.669          | 0.614 | 0.586 | 0.545 | 0.596 | 0.486 | 0.437 | 0.562 | 14.11 |  |
| 78)   | Pyrene            | 1.210          | 1.259 | 1.175 | 1.127 | 1.138 | 1.055 | 1.018 | 1.140 | 7.37  |  |
| 79) S | Terphenyl-d14     | 0.976          | 0.976 | 0.891 | 0.844 | 0.842 | 0.761 | 0.714 | 0.858 | 11.61 |  |
| 80)   | Butylbenzylpht... | 0.530          | 0.515 | 0.509 | 0.483 | 0.492 | 0.469 | 0.447 | 0.492 | 5.82  |  |
| 81)   | Benzo(a)anthra... | 1.228          | 1.192 | 1.120 | 1.084 | 1.105 | 1.060 | 1.011 | 1.114 | 6.72  |  |
| 82)   | 3,3'-Dichlorob... | 0.466          | 0.453 | 0.443 | 0.427 | 0.441 | 0.425 | 0.404 | 0.437 | 4.67  |  |
| 83)   | Chrysene          | 1.175          | 1.128 | 1.098 | 1.053 | 1.064 | 1.018 | 0.962 | 1.071 | 6.60  |  |
| 84)   | Bis(2-ethylhex... | 0.733          | 0.704 | 0.686 | 0.658 | 0.679 | 0.652 | 0.624 | 0.676 | 5.28  |  |
| 85) c | Di-n-octyl pht... | 1.247          | 1.197 | 1.171 | 1.143 | 1.180 | 1.130 | 1.065 | 1.162 | 4.93  |  |
| 86)   | Indeno(1,2,3-c... | 1.403          | 1.396 | 1.388 | 1.381 | 1.449 | 1.421 | 1.368 | 1.401 | 1.93  |  |

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| 87) I | Perylene-d12      |       |       |       |       |       |       |       |       |  |      |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|------|
|       |                   |       |       |       |       |       |       |       |       |  |      |
| 88)   | Benzo(b)fluora... | 1.150 | 1.076 | 1.095 | 1.057 | 1.072 | 1.055 | 1.003 | 1.073 |  | 4.15 |
| 89)   | Benzo(k)fluora... | 1.084 | 1.087 | 1.016 | 0.995 | 0.991 | 0.959 | 0.923 | 1.008 |  | 6.02 |
| 90) C | Benzo(a)pyrene    | 1.068 | 1.030 | 1.006 | 0.984 | 0.994 | 0.982 | 0.928 | 0.999 |  | 4.36 |
| 91)   | Dibenzo(a,h)an... | 1.100 | 1.019 | 0.996 | 0.983 | 0.996 | 0.986 | 0.947 | 1.004 |  | 4.75 |
| 92)   | Benzo(g,h,i)pe... | 1.067 | 1.020 | 1.004 | 0.982 | 1.002 | 0.998 | 0.955 | 1.004 |  | 3.46 |

(#) = Out of Range