

Method Path : Z:\svoasrv\HPCHEM1\BNA\_G\Methods\  
 Method File : 8270-BG122123.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Fri Dec 22 03:42:04 2023  
 Response Via : Initial Calibration

## Calibration Files

2.5 =BG060120.D 5 =BG060121.D 10 =BG060122.D 20 =BG060123.D 40 =BG060124.D 50 =BG060125.D 60 =BG060126.D 80 =BG060127.D

|       | Compound              | 2.5            | 5     | 10    | 20    | 40    | 50    | 60    | 80    | Avg   | %RSD  |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |       |
| 2)    | 1,4-Dioxane           | 0.525          | 0.633 | 0.555 | 0.529 | 0.508 | 0.501 | 0.460 | 0.530 | 10.18 |       |
| 3)    | Pyridine              | 1.716          | 1.795 | 1.677 | 1.875 | 1.661 | 1.625 | 1.650 | 1.714 | 5.25  |       |
| 4)    | n-Nitrosodimet...     | 0.819          | 0.754 | 0.783 | 0.832 | 0.748 | 0.761 | 0.754 | 0.779 | 4.38  |       |
| 5) S  | 2-Fluorophenol        | 1.224          | 1.212 | 1.297 | 1.289 | 1.268 | 1.329 | 1.266 | 1.269 | 3.22  |       |
| 6)    | Aniline               | 2.033          | 2.103 | 2.227 | 2.468 | 2.227 | 2.275 | 2.282 | 2.231 | 6.24  |       |
| 7) S  | Phenol-d6             | 1.912          | 1.931 | 2.136 | 2.323 | 2.133 | 2.237 | 2.280 | 2.136 | 7.60  |       |
| 8)    | 2-Chlorophenol        | 1.267          | 1.328 | 1.411 | 1.500 | 1.390 | 1.481 | 1.468 | 1.406 | 6.09  |       |
| 9)    | Benzaldehyde          | 1.385          | 1.315 | 1.295 | 1.196 | 1.070 | 1.062 | 0.972 | 1.185 | 13.02 |       |
| 10) C | Phenol                | 1.892          | 1.818 | 2.184 | 2.326 | 2.164 | 2.288 | 2.270 | 2.134 | 9.39  |       |
| 11)   | bis(2-Chloroet...     | 1.680          | 1.585 | 1.679 | 1.780 | 1.604 | 1.715 | 1.687 | 1.676 | 3.92  |       |
| 12)   | 1,3-Dichlorobe...     | 1.520          | 1.602 | 1.664 | 1.617 | 1.522 | 1.580 | 1.498 | 1.572 | 3.85  |       |
| 13) C | 1,4-Dichlorobe...     | 1.647          | 1.642 | 1.724 | 1.669 | 1.567 | 1.613 | 1.518 | 1.626 | 4.16  |       |
| 14)   | 1,2-Dichlorobe...     | 1.630          | 1.604 | 1.702 | 1.695 | 1.590 | 1.638 | 1.603 | 1.637 | 2.74  |       |
| 15)   | Benzyl Alcohol        | 1.392          | 1.443 | 1.516 | 1.794 | 1.521 | 1.643 | 1.668 | 1.568 | 8.95  |       |
| 16)   | 2,2'-oxybis(1-...     | 3.210          | 3.096 | 3.198 | 3.329 | 2.930 | 3.093 | 2.962 | 3.117 | 4.54  |       |
| 17)   | 2-Methylphenol        | 1.333          | 1.352 | 1.502 | 1.610 | 1.454 | 1.551 | 1.566 | 1.481 | 7.21  |       |
| 18)   | Hexachloroethane      | 0.539          | 0.528 | 0.584 | 0.548 | 0.515 | 0.555 | 0.508 | 0.540 | 4.76  |       |
| 19) P | n-Nitroso-di-n...     | 1.276          | 1.611 | 1.723 | 1.681 | 1.924 | 1.613 | 1.714 | 1.746 | 1.661 | 11.06 |
| 20)   | 3+4-Methylphenols     | 1.898          | 1.861 | 2.108 | 2.386 | 2.116 | 2.248 | 2.265 | 2.126 | 9.09  |       |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |       |
| 22)   | Acetophenone          | 0.535          | 0.574 | 0.584 | 0.583 | 0.563 | 0.585 | 0.570 | 0.570 | 3.07  |       |
| 23) S | Nitrobenzene-d5       | 0.400          | 0.383 | 0.417 | 0.420 | 0.399 | 0.424 | 0.414 | 0.408 | 3.59  |       |
| 24)   | Nitrobenzene          | 0.390          | 0.401 | 0.432 | 0.435 | 0.423 | 0.439 | 0.432 | 0.422 | 4.49  |       |
| 25)   | Isophorone            | 1.103          | 1.029 | 0.962 | 1.051 | 0.948 | 0.927 | 0.945 | 0.995 | 6.68  |       |
| 26) C | 2-Nitrophenol         | 0.140          | 0.152 | 0.174 | 0.178 | 0.168 | 0.180 | 0.177 | 0.167 | 9.09  |       |
| 27)   | 2,4-Dimethylph...     | 0.216          | 0.212 | 0.232 | 0.246 | 0.233 | 0.238 | 0.233 | 0.230 | 5.15  |       |
| 28)   | bis(2-Chloroet...     | 0.527          | 0.515 | 0.537 | 0.547 | 0.494 | 0.527 | 0.510 | 0.522 | 3.38  |       |
| 29) C | 2,4-Dichloroph...     | 0.296          | 0.316 | 0.355 | 0.369 | 0.347 | 0.363 | 0.356 | 0.343 | 7.87  |       |
| 30)   | 1,2,4-Trichlor...     | 0.357          | 0.362 | 0.389 | 0.376 | 0.361 | 0.373 | 0.361 | 0.368 | 3.12  |       |
| 31)   | Naphthalene           | 1.050          | 1.064 | 1.102 | 1.117 | 1.035 | 1.052 | 1.034 | 1.065 | 3.04  |       |
| 32)   | Benzoic acid          |                | 0.139 | 0.182 | 0.269 | 0.269 | 0.263 | 0.302 | 0.237 | 26.35 |       |
| 33)   | 4-Chloroaniline       | 0.428          | 0.443 | 0.452 | 0.514 | 0.474 | 0.445 | 0.466 | 0.460 | 6.14  |       |
| 34) C | Hexachlorobuta...     | 0.198          | 0.207 | 0.224 | 0.207 | 0.203 | 0.207 | 0.194 | 0.206 | 4.63  |       |
| 35)   | Caprolactam           | 0.178          | 0.194 | 0.150 | 0.205 | 0.191 | 0.153 | 0.185 | 0.179 | 11.62 |       |
| 36) C | 4-Chloro-3-met...     | 0.393          | 0.371 | 0.403 | 0.457 | 0.429 | 0.389 | 0.428 | 0.410 | 7.19  |       |
| 37)   | 2-Methylnaphth...     | 0.812          | 0.801 | 0.848 | 0.883 | 0.808 | 0.809 | 0.824 | 0.826 | 3.53  |       |
| 38)   | 1-Methylnaphth...     | 0.823          | 0.818 | 0.840 | 0.877 | 0.813 | 0.814 | 0.822 | 0.829 | 2.75  |       |

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|       |                   |                |       |       |       |       |       |       |       |       |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 39) I | Acenaphthene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |
| 40)   | 1,2,4,5-Tetrac... | 0.531          | 0.515 | 0.566 | 0.513 | 0.481 | 0.551 | 0.509 | 0.524 | 5.42  |
| 41) P | Hexachlorocycl... | 0.152          | 0.163 | 0.201 | 0.175 | 0.172 | 0.200 | 0.176 | 0.177 | 10.27 |
| 42) S | 2,4,6-Tribromo... | 0.261          | 0.270 | 0.256 | 0.292 | 0.272 | 0.263 | 0.272 | 0.269 | 4.31  |
| 43) C | 2,4,6-Trichlor... | 0.376          | 0.368 | 0.422 | 0.406 | 0.369 | 0.405 | 0.389 | 0.391 | 5.35  |
| 44)   | 2,4,5-Trichlor... | 0.456          | 0.407 | 0.443 | 0.462 | 0.428 | 0.452 | 0.455 | 0.443 | 4.41  |
| 45) S | 2-Fluorobiphenyl  | 1.478          | 1.403 | 1.471 | 1.346 | 1.215 | 1.239 | 1.172 | 1.332 | 9.37  |
| 46)   | 1,1'-Biphenyl     | 1.586          | 1.440 | 1.544 | 1.439 | 1.343 | 1.449 | 1.371 | 1.453 | 5.95  |
| 47)   | 2-Chloronaphth... | 1.231          | 1.146 | 1.264 | 1.208 | 1.119 | 1.222 | 1.151 | 1.192 | 4.47  |
| 48)   | 2-Nitroaniline    | 0.372          | 0.355 | 0.373 | 0.411 | 0.391 | 0.400 | 0.420 | 0.389 | 6.02  |
| 49)   | Acenaphthylene    | 1.865          | 1.840 | 1.971 | 1.951 | 1.790 | 1.822 | 1.798 | 1.863 | 3.88  |
| 50)   | Dimethylphthalate | 1.987          | 1.863 | 1.706 | 1.837 | 1.677 | 1.594 | 1.649 | 1.759 | 7.96  |
| 51)   | 2,6-Dinitrotol... | 0.311          | 0.330 | 0.343 | 0.377 | 0.356 | 0.363 | 0.382 | 0.352 | 7.32  |
| 52) C | Acenaphthene      | 1.181          | 1.130 | 1.165 | 1.184 | 1.091 | 1.138 | 1.129 | 1.145 | 2.92  |
| 53)   | 3-Nitroaniline    | 0.332          | 0.358 | 0.347 | 0.408 | 0.391 | 0.372 | 0.408 | 0.374 | 7.98  |
| 54) P | 2,4-Dinitrophenol |                | 0.116 | 0.163 | 0.218 | 0.218 | 0.206 | 0.241 | 0.194 | 23.79 |
| 55)   | Dibenzofuran      | 2.044          | 1.951 | 1.968 | 1.999 | 1.864 | 1.855 | 1.824 | 1.929 | 4.28  |
| 56) P | 4-Nitrophenol     | 0.258          | 0.268 | 0.275 | 0.336 | 0.349 | 0.320 | 0.366 | 0.310 | 13.94 |
| 57)   | 2,4-Dinitrotol... | 0.437          | 0.483 | 0.487 | 0.568 | 0.542 | 0.516 | 0.584 | 0.517 | 10.04 |
| 58)   | Fluorene          | 1.697          | 1.693 | 1.654 | 1.701 | 1.583 | 1.526 | 1.571 | 1.632 | 4.36  |
| 59)   | 2,3,4,6-Tetrac... | 0.383          | 0.385 | 0.410 | 0.424 | 0.404 | 0.382 | 0.399 | 0.398 | 3.99  |
| 60)   | Diethylphthalate  | 2.138          | 2.099 | 1.783 | 2.014 | 1.833 | 1.661 | 1.774 | 1.900 | 9.61  |
| 61)   | 4-Chlorophenyl... | 0.811          | 0.785 | 0.781 | 0.816 | 0.748 | 0.749 | 0.757 | 0.778 | 3.64  |
| 62)   | 4-Nitroaniline    | 0.402          | 0.423 | 0.395 | 0.482 | 0.470 | 0.420 | 0.480 | 0.439 | 8.58  |
| 63)   | Azobenzene        | 1.771          | 1.769 | 1.681 | 1.778 | 1.657 | 1.596 | 1.622 | 1.696 | 4.49  |
| 64) I | Phenanthrene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |
| 65)   | 4,6-Dinitro-2-... | 0.071          | 0.092 | 0.112 | 0.122 | 0.115 | 0.123 | 0.122 | 0.108 | 18.27 |
| 66) c | n-Nitrosodiphe... | 0.531          | 0.524 | 0.573 | 0.549 | 0.493 | 0.537 | 0.486 | 0.528 | 5.81  |
| 67)   | 4-Bromophenyl-... | 0.197          | 0.185 | 0.199 | 0.192 | 0.175 | 0.194 | 0.178 | 0.188 | 5.02  |
| 68)   | Hexachlorobenzene | 0.217          | 0.217 | 0.230 | 0.220 | 0.200 | 0.222 | 0.205 | 0.216 | 4.79  |
| 69)   | Atrazine          | 0.254          | 0.239 | 0.186 | 0.174 | 0.176 | 0.198 | 0.146 | 0.196 | 19.47 |
| 70) C | Pentachlorophenol | 0.111          | 0.120 | 0.139 | 0.149 | 0.135 | 0.142 | 0.138 | 0.134 | 10.06 |
| 71)   | Phenanthrene      | 1.123          | 1.048 | 1.090 | 1.055 | 0.929 | 0.941 | 0.867 | 1.008 | 9.45  |
| 72)   | Anthracene        | 1.082          | 1.072 | 1.094 | 1.064 | 0.947 | 0.959 | 0.883 | 1.014 | 8.20  |
| 73)   | Carbazole         | 1.171          | 1.175 | 1.116 | 1.120 | 1.017 | 0.998 | 0.942 | 1.077 | 8.48  |
| 74)   | Di-n-butylphth... | 1.542          | 1.525 | 1.306 | 1.336 | 1.165 | 1.081 | 0.984 | 1.277 | 16.71 |
| 75) C | Fluoranthene      | 1.542          | 1.516 | 1.407 | 1.376 | 1.209 | 1.137 | 1.074 | 1.323 | 13.96 |
| 76) I | Chrysene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |
| 77)   | Benzidine         | 0.611          | 0.483 | 0.585 | 0.485 | 0.560 | 0.599 | 0.463 | 0.541 | 11.50 |
| 78)   | Pyrene            | 1.531          | 1.456 | 1.950 | 1.601 | 1.381 | 1.509 | 1.260 | 1.527 | 14.21 |
| 79) S | Terphenyl-d14     | 1.268          | 1.192 | 1.373 | 1.043 | 0.853 | 0.903 |       | 1.105 | 18.72 |
| 80)   | Butylbenzylpht... | 0.442          | 0.443 | 0.526 | 0.554 | 0.529 | 0.554 | 0.533 | 0.512 | 9.47  |
| 81)   | Benzo(a)anthra... | 1.481          | 1.383 | 1.444 | 1.353 | 1.230 | 1.277 | 1.134 | 1.329 | 9.23  |
| 82)   | 3,3'-Dichlorob... | 0.398          | 0.381 | 0.411 | 0.404 | 0.384 | 0.402 | 0.379 | 0.394 | 3.29  |
| 83)   | Chrysene          | 1.375          | 1.304 | 1.348 | 1.290 | 1.159 | 1.194 | 1.065 | 1.248 | 8.98  |
| 84)   | Bis(2-ethylhex... | 0.627          | 0.578 | 0.762 | 0.710 | 0.684 | 0.727 | 0.686 | 0.682 | 9.08  |
| 85) c | Di-n-octyl pht... | 1.034          | 0.982 | 1.283 | 1.198 | 1.135 | 1.216 | 1.106 | 1.136 | 9.28  |

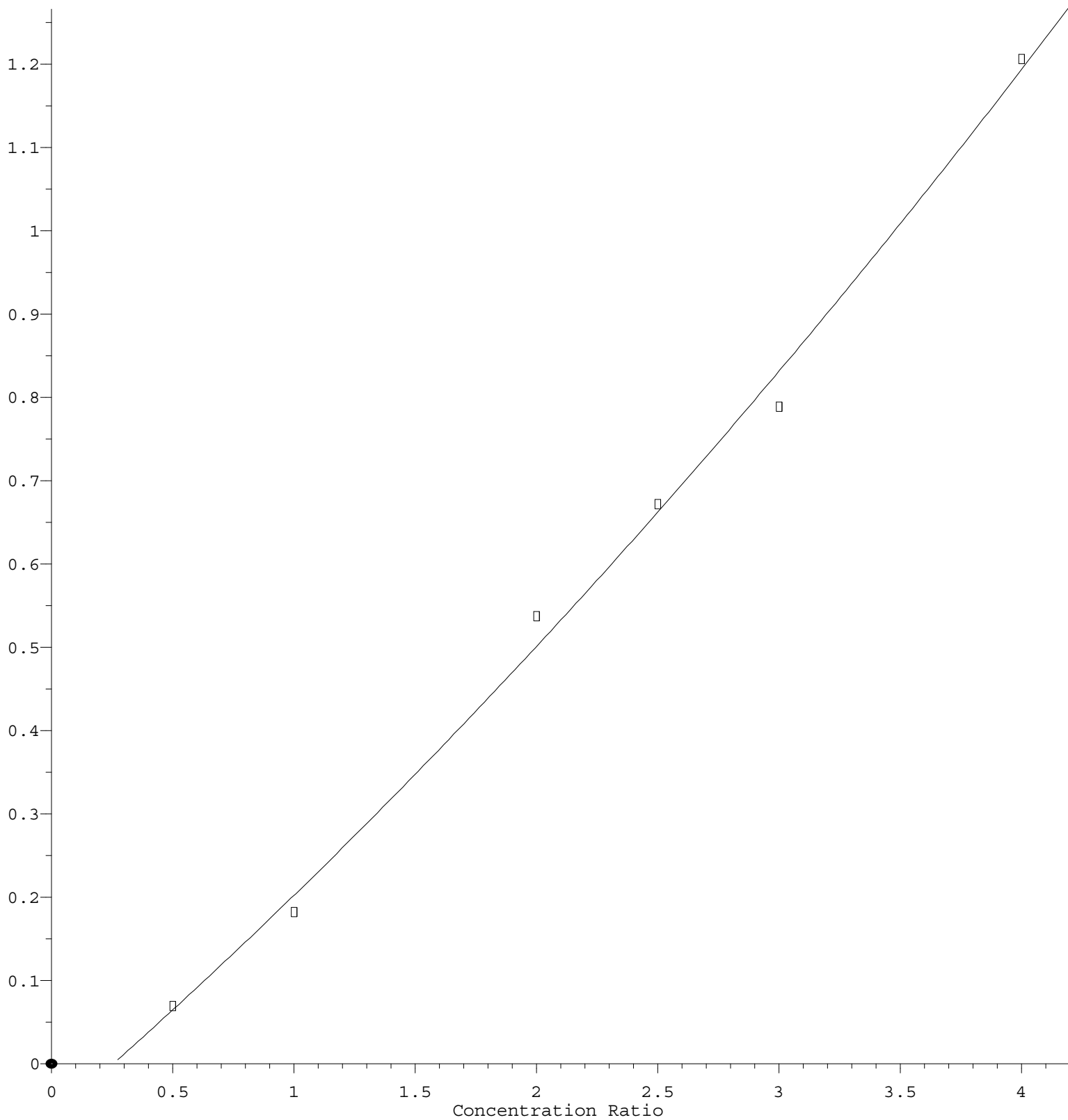
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|       |                   |                |       |       |       |       |       |       |       |      |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|------|--|
| 86) I | Perylene-d12      | -----ISTD----- |       |       |       |       |       |       |       |      |  |
| 87)   | Indeno(1,2,3-c... | 1.407          | 1.323 | 1.422 | 1.455 | 1.344 | 1.435 | 1.385 | 1.396 | 3.45 |  |
| 88)   | Benzo(b)fluora... | 1.372          | 1.283 | 1.318 | 1.310 | 1.160 | 1.234 | 1.175 | 1.265 | 6.17 |  |
| 89)   | Benzo(k)fluora... | 1.379          | 1.280 | 1.263 | 1.232 | 1.156 | 1.235 | 1.130 | 1.239 | 6.64 |  |
| 90) C | Benzo(a)pyrene    | 1.158          | 1.109 | 1.152 | 1.138 | 1.060 | 1.124 | 1.059 | 1.114 | 3.69 |  |
| 91)   | Dibenzo(a,h)an... | 1.153          | 1.114 | 1.178 | 1.196 | 1.103 | 1.187 | 1.138 | 1.153 | 3.15 |  |
| 92)   | Benzo(g,h,i)pe... | 1.211          | 1.093 | 1.189 | 1.180 | 1.124 | 1.205 | 1.150 | 1.165 | 3.77 |  |

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(#) = Out of Range

# Benzoic acid

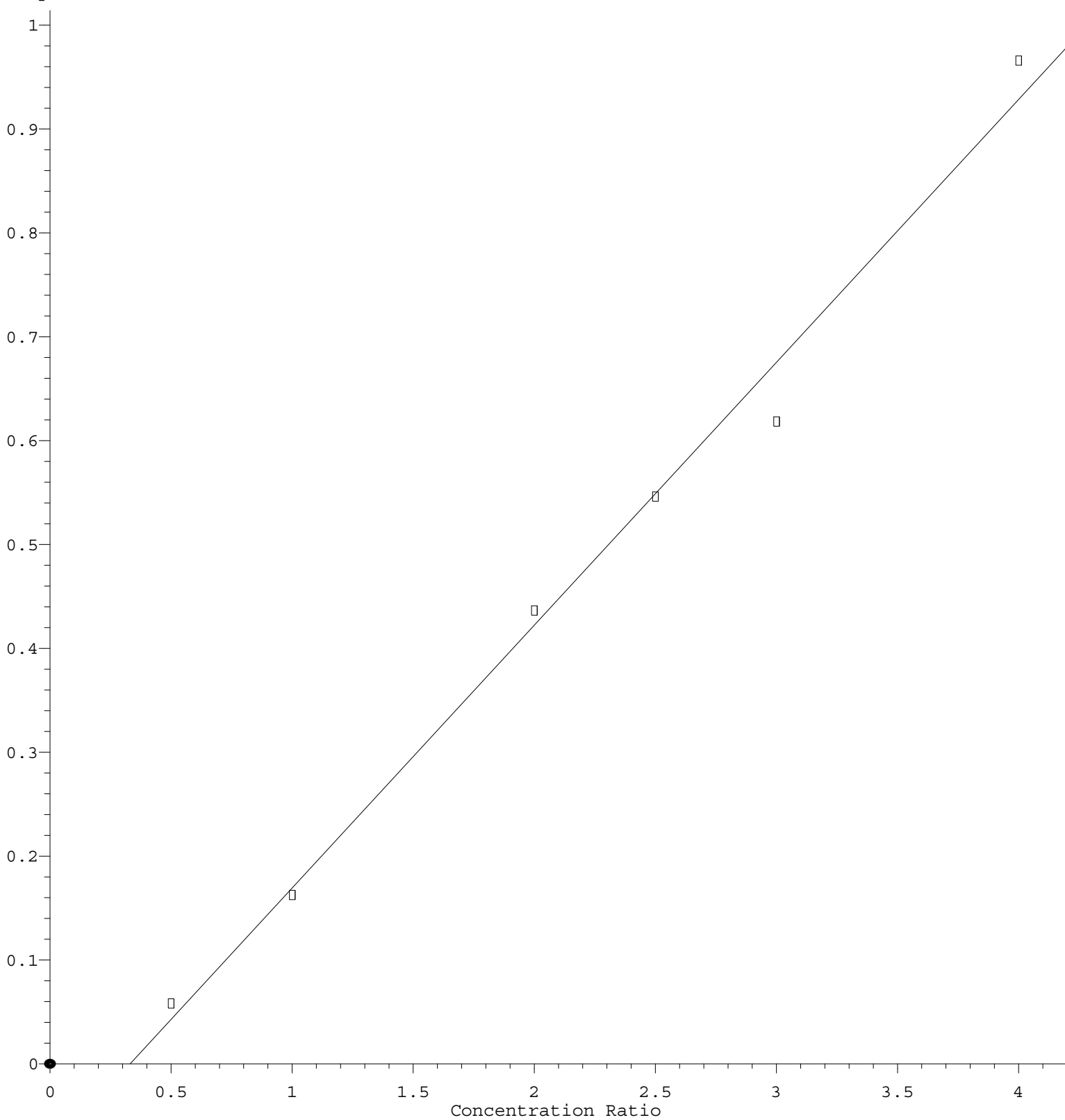
Response Ratio



$R = 1.583e-002 A^2 + 2.513e-001 A - 6.495e-002$   
 Coef of Det ( $r^2$ ) = 0.995592    Curve Fit: Quadratic  
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# 2,4-Dinitrophenol

Response Ratio



$$\text{Response} = 2.531\text{e-}001 * \text{Amt} - 8.375\text{e-}002$$

Coef of Det ( $r^2$ ) = 0.990475 Curve Fit: Linear

Method Name: Z:\svoasrv\HPCHEM1\BNA G\Methods\8270-BG122123.M

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