

Method Path : Z:\svoasrv\HPCHEM1\BNA\_F\Methods\  
 Method File : 8270-BF090925.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Tue Sep 09 05:18:16 2025  
 Response Via : Initial Calibration

## Calibration Files

2.5 =BF143665.D 5 =BF143666.D 10 =BF143667.D 20 =BF143668.D 40 =BF143669.D 50 =BF143670.D 60 =BF143671.D 80 =BF143672.D

|       | Compound              | 2.5            | 5     | 10    | 20    | 40    | 50    | 60    | 80    | Avg   | %RSD |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |      |
| 2)    | 1,4-Dioxane           | 0.566          | 0.520 | 0.521 | 0.528 | 0.489 | 0.498 | 0.507 | 0.518 | 4.84  |      |
| 3)    | Pyridine              | 1.272          | 1.315 | 1.374 | 1.403 | 1.321 | 1.352 | 1.362 | 1.343 | 3.22  |      |
| 4)    | n-Nitrosodimet...     | 0.494          | 0.519 | 0.538 | 0.511 | 0.531 | 0.528 | 0.520 | 0.520 | 3.06  |      |
| 5) S  | 2-Fluorophenol        | 1.164          | 1.165 | 1.187 | 1.178 | 1.096 | 1.158 | 1.151 | 1.157 | 2.55  |      |
| 6)    | Aniline               | 1.886          | 1.891 | 1.947 | 1.950 | 1.839 | 1.907 | 1.866 | 1.898 | 2.15  |      |
| 7) S  | Phenol-d6             | 1.429          | 1.411 | 1.439 | 1.444 | 1.335 | 1.423 | 1.402 | 1.412 | 2.61  |      |
| 8)    | 2-Chlorophenol        | 1.227          | 1.213 | 1.281 | 1.309 | 1.213 | 1.299 | 1.257 | 1.257 | 3.22  |      |
| 9)    | Benzaldehyde          | 0.938          | 0.845 | 1.109 | 0.847 | 1.118 | 0.971 | 13.89 |       |       |      |
| 10) C | Phenol                | 1.561          | 1.534 | 1.580 | 1.703 | 1.579 | 1.648 | 1.592 | 1.599 | 3.58  |      |
| 11)   | bis(2-Chloroet...     | 1.174          | 1.191 | 1.196 | 1.199 | 1.106 | 1.174 | 1.160 | 1.171 | 2.74  |      |
| 12)   | 1,3-Dichlorobe...     | 1.480          | 1.489 | 1.465 | 1.487 | 1.388 | 1.428 | 1.399 | 1.448 | 2.95  |      |
| 13) C | 1,4-Dichlorobe...     | 1.521          | 1.487 | 1.455 | 1.489 | 1.379 | 1.430 | 1.399 | 1.451 | 3.56  |      |
| 14)   | 1,2-Dichlorobe...     | 1.394          | 1.361 | 1.392 | 1.402 | 1.306 | 1.367 | 1.340 | 1.366 | 2.52  |      |
| 15)   | Benzyl Alcohol        | 1.016          | 1.066 | 1.071 | 1.017 | 1.073 | 1.053 | 1.050 | 2.51  |       |      |
| 16)   | 2,2'-oxybis(1-...     | 1.613          | 1.630 | 1.627 | 1.601 | 1.466 | 1.569 | 1.506 | 1.573 | 4.06  |      |
| 17)   | 2-Methylphenol        | 1.032          | 1.002 | 1.059 | 1.063 | 0.994 | 1.055 | 1.027 | 1.033 | 2.68  |      |
| 18)   | Hexachloroethane      | 0.487          | 0.444 | 0.477 | 0.487 | 0.460 | 0.476 | 0.476 | 0.472 | 3.27  |      |
| 19) P | n-Nitroso-di-n...     | 0.871          | 0.894 | 0.884 | 0.920 | 0.901 | 0.828 | 0.888 | 0.869 | 0.882 | 3.09 |
| 20)   | 3+4-Methylphenols     | 1.371          | 1.376 | 1.359 | 1.251 | 1.326 | 1.282 | 1.328 | 3.87  |       |      |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |      |
| 22)   | Acetophenone          | 0.485          | 0.461 | 0.464 | 0.450 | 0.423 | 0.437 | 0.425 | 0.449 | 5.10  |      |
| 23) S | Nitrobenzene-d5       | 0.306          | 0.315 | 0.333 | 0.329 | 0.318 | 0.329 | 0.319 | 0.321 | 3.02  |      |
| 24)   | Nitrobenzene          | 0.327          | 0.323 | 0.343 | 0.336 | 0.325 | 0.333 | 0.327 | 0.331 | 2.13  |      |
| 25)   | Isophorone            | 0.633          | 0.618 | 0.636 | 0.621 | 0.610 | 0.626 | 0.614 | 0.623 | 1.55  |      |
| 26) C | 2-Nitrophenol         | 0.129          | 0.140 | 0.158 | 0.168 | 0.170 | 0.176 | 0.172 | 0.159 | 11.18 |      |
| 27)   | 2,4-Dimethylph...     | 0.299          | 0.291 | 0.296 | 0.296 | 0.282 | 0.295 | 0.284 | 0.292 | 2.25  |      |
| 28)   | bis(2-Chloroet...     | 0.387          | 0.379 | 0.399 | 0.385 | 0.362 | 0.380 | 0.372 | 0.380 | 3.11  |      |
| 29) C | 2,4-Dichloroph...     | 0.293          | 0.287 | 0.301 | 0.296 | 0.290 | 0.303 | 0.289 | 0.294 | 2.05  |      |
| 30)   | 1,2,4-Trichlor...     | 0.312          | 0.309 | 0.315 | 0.304 | 0.295 | 0.303 | 0.294 | 0.305 | 2.71  |      |
| 31)   | Naphthalene           | 1.039          | 1.012 | 1.004 | 0.990 | 0.940 | 0.974 | 0.926 | 0.984 | 4.09  |      |
| 32)   | Benzoic acid          | 0.112          | 0.168 | 0.186 | 0.197 | 0.211 | 0.191 | 0.177 | 19.80 |       |      |
| 33)   | 4-Chloroaniline       | 0.364          | 0.346 | 0.362 | 0.349 | 0.330 | 0.338 | 0.324 | 0.345 | 4.41  |      |
| 34) C | Hexachlorobuta...     | 0.210          | 0.197 | 0.203 | 0.201 | 0.195 | 0.199 | 0.195 | 0.200 | 2.65  |      |
| 35)   | Caprolactam           | 0.076          | 0.085 | 0.083 | 0.079 | 0.082 | 0.080 | 0.081 | 3.79  |       |      |
| 36) C | 4-Chloro-3-met...     | 0.290          | 0.296 | 0.306 | 0.300 | 0.288 | 0.300 | 0.285 | 0.295 | 2.57  |      |
| 37)   | 2-Methylnaphth...     | 0.739          | 0.689 | 0.711 | 0.669 | 0.641 | 0.658 | 0.634 | 0.677 | 5.61  |      |
| 38)   | 1-Methylnaphth...     | 0.698          | 0.665 | 0.672 | 0.657 | 0.611 | 0.632 | 0.605 | 0.648 | 5.26  |      |

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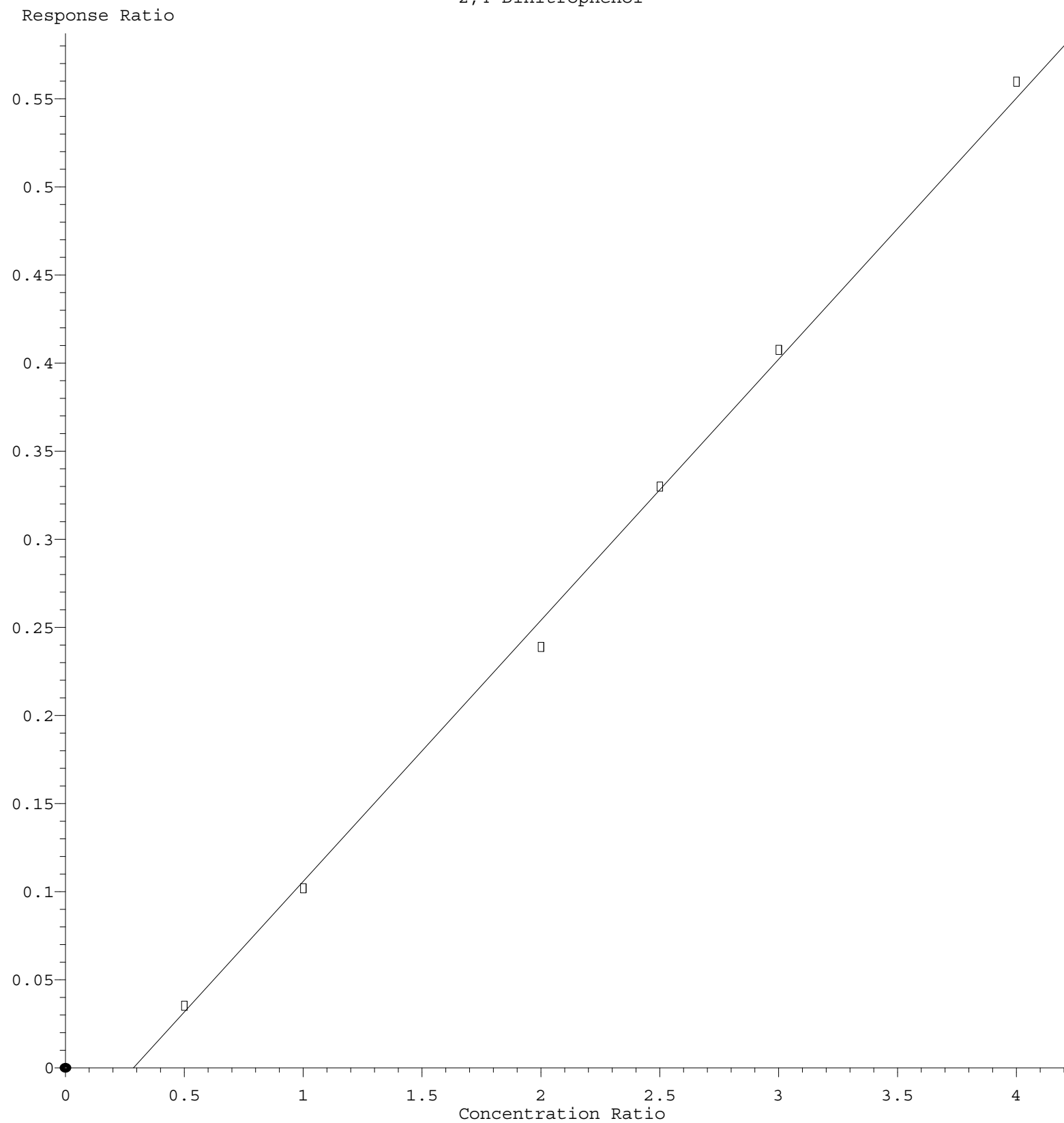
|       |                   |                |       |       |       |       |       |       |       |       |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 39) I | Acenaphthene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |
| 40)   | 1,2,4,5-Tetrac... | 0.597          | 0.545 | 0.591 | 0.579 | 0.550 | 0.566 | 0.539 | 0.567 | 4.06  |
| 41) P | Hexachlorocycl... |                | 0.263 | 0.290 | 0.305 | 0.302 | 0.315 | 0.299 | 0.296 | 6.04  |
| 42) S | 2,4,6-Tribromo... | 0.196          | 0.200 | 0.214 | 0.212 | 0.197 | 0.202 | 0.198 | 0.203 | 3.61  |
| 43) C | 2,4,6-Trichlor... | 0.363          | 0.348 | 0.376 | 0.388 | 0.383 | 0.395 | 0.379 | 0.376 | 4.22  |
| 44)   | 2,4,5-Trichlor... | 0.375          | 0.380 | 0.411 | 0.388 | 0.376 | 0.387 | 0.385 | 0.386 | 3.16  |
| 45) S | 2-Fluorobiphenyl  | 1.385          | 1.318 | 1.362 | 1.296 | 1.204 | 1.241 | 1.171 | 1.283 | 6.25  |
| 46)   | 1,1'-Biphenyl     | 1.542          | 1.456 | 1.497 | 1.457 | 1.356 | 1.421 | 1.347 | 1.440 | 4.93  |
| 47)   | 2-Chloronaphth... | 1.157          | 1.114 | 1.164 | 1.130 | 1.075 | 1.121 | 1.069 | 1.119 | 3.28  |
| 48)   | 2-Nitroaniline    | 0.267          | 0.281 | 0.323 | 0.322 | 0.309 | 0.321 | 0.310 | 0.305 | 7.24  |
| 49)   | Acenaphthylene    | 1.708          | 1.606 | 1.668 | 1.612 | 1.527 | 1.564 | 1.512 | 1.600 | 4.48  |
| 50)   | Dimethylphthalate | 1.354          | 1.299 | 1.365 | 1.335 | 1.247 | 1.302 | 1.263 | 1.309 | 3.40  |
| 51)   | 2,6-Dinitrotol... | 0.203          | 0.223 | 0.261 | 0.267 | 0.259 | 0.270 | 0.267 | 0.250 | 10.54 |
| 52) C | Acenaphthene      | 1.156          | 1.097 | 1.151 | 1.114 | 1.067 | 1.099 | 1.050 | 1.105 | 3.57  |
| 53)   | 3-Nitroaniline    | 0.240          | 0.259 | 0.281 | 0.281 | 0.262 | 0.276 | 0.272 | 0.267 | 5.53  |
| 54) P | 2,4-Dinitrophenol |                | 0.071 | 0.102 | 0.119 | 0.132 | 0.136 | 0.140 | 0.117 | 22.68 |
| 55)   | Dibenzofuran      | 1.713          | 1.622 | 1.661 | 1.602 | 1.490 | 1.520 | 1.474 | 1.583 | 5.72  |
| 56) P | 4-Nitrophenol     |                | 0.195 | 0.228 | 0.229 | 0.214 | 0.223 | 0.220 | 0.218 | 5.74  |
| 57)   | 2,4-Dinitrotol... | 0.272          | 0.301 | 0.357 | 0.358 | 0.339 | 0.350 | 0.343 | 0.331 | 9.81  |
| 58)   | Fluorene          | 1.361          | 1.298 | 1.327 | 1.252 | 1.136 | 1.178 | 1.133 | 1.241 | 7.52  |
| 59)   | 2,3,4,6-Tetrac... | 0.295          | 0.301 | 0.335 | 0.327 | 0.318 | 0.324 | 0.313 | 0.316 | 4.53  |
| 60)   | Diethylphthalate  | 1.304          | 1.247 | 1.304 | 1.259 | 1.164 | 1.199 | 1.155 | 1.233 | 5.01  |
| 61)   | 4-Chlorophenyl... | 0.663          | 0.643 | 0.665 | 0.643 | 0.584 | 0.610 | 0.578 | 0.627 | 5.73  |
| 62)   | 4-Nitroaniline    | 0.233          | 0.256 | 0.275 | 0.271 | 0.252 | 0.255 | 0.257 | 0.257 | 5.33  |
| 63)   | Azobenzene        | 1.126          | 1.096 | 1.147 | 1.105 | 1.033 | 1.058 | 1.027 | 1.085 | 4.27  |
| 64) I | Phenanthrene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |
| 65)   | 4,6-Dinitro-2-... |                | 0.068 | 0.094 | 0.104 | 0.111 | 0.117 | 0.119 | 0.102 | 18.46 |
| 66) c | n-Nitrosodiphe... | 0.657          | 0.633 | 0.657 | 0.666 | 0.643 | 0.655 | 0.649 | 0.651 | 1.67  |
| 67)   | 4-Bromophenyl-... | 0.244          | 0.223 | 0.247 | 0.238 | 0.240 | 0.242 | 0.241 | 0.239 | 3.26  |
| 68)   | Hexachlorobenzene | 0.251          | 0.241 | 0.254 | 0.254 | 0.248 | 0.254 | 0.247 | 0.250 | 1.98  |
| 69)   | Atrazine          | 0.211          | 0.210 | 0.223 | 0.214 | 0.208 | 0.209 | 0.202 | 0.211 | 3.10  |
| 70) C | Pentachlorophenol |                | 0.129 | 0.157 | 0.160 | 0.162 | 0.163 | 0.160 | 0.155 | 8.25  |
| 71)   | Phenanthrene      | 1.180          | 1.090 | 1.145 | 1.107 | 1.035 | 1.067 | 1.036 | 1.094 | 4.97  |
| 72)   | Anthracene        | 1.190          | 1.107 | 1.167 | 1.104 | 1.049 | 1.075 | 1.038 | 1.104 | 5.16  |
| 73)   | Carbazole         | 1.021          | 0.939 | 0.976 | 0.943 | 0.857 | 0.874 | 0.859 | 0.924 | 6.83  |
| 74)   | Di-n-butylphth... | 1.119          | 1.129 | 1.194 | 1.142 | 1.046 | 1.093 | 1.062 | 1.112 | 4.53  |
| 75) C | Fluoranthene      | 1.145          | 1.065 | 1.118 | 1.026 | 0.898 | 0.933 | 0.911 | 1.013 | 9.99  |
| 76) I | Chrysene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |
| 77)   | Benzidine         |                | 0.625 | 0.621 | 0.473 | 0.301 | 0.254 | 0.323 | 0.433 | 37.99 |
| 78)   | Pyrene            | 1.664          | 1.659 | 1.755 | 1.700 | 1.492 | 1.497 | 1.474 | 1.606 | 7.17  |
| 79) S | Terphenyl-d14     | 1.302          | 1.299 | 1.327 | 1.280 | 1.114 | 1.129 | 1.090 | 1.220 | 8.48  |
| 80)   | Butylbenzylpht... | 0.420          | 0.457 | 0.520 | 0.542 | 0.533 | 0.541 | 0.535 | 0.507 | 9.58  |
| 81)   | Benzo(a)anthra... | 1.291          | 1.287 | 1.292 | 1.324 | 1.225 | 1.256 | 1.276 | 1.279 | 2.43  |
| 82)   | 3,3'-Dichlorob... |                | 0.327 | 0.365 | 0.384 | 0.362 | 0.362 | 0.365 | 0.361 | 5.10  |
| 83)   | Chrysene          | 1.182          | 1.149 | 1.229 | 1.171 | 1.149 | 1.183 | 1.096 | 1.166 | 3.50  |
| 84)   | Bis(2-ethylhex... | 0.523          | 0.580 | 0.666 | 0.732 | 0.741 | 0.782 | 0.752 | 0.682 | 14.25 |
| 85) c | Di-n-octyl pht... |                | 0.841 | 1.007 | 1.219 | 1.342 | 1.379 | 1.346 | 1.189 | 18.38 |

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|       |                   | -----ISTD----- |       |       |       |       |       |       |       |      |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|------|
| 86) I | Perylene-d12      |                |       |       |       |       |       |       |       |      |
| 87)   | Indeno(1,2,3-c... | 1.206          | 1.238 | 1.380 | 1.413 | 1.403 | 1.427 | 1.375 | 1.349 | 6.61 |
| 88)   | Benzo(b)fluora... | 1.262          | 1.236 | 1.229 | 1.244 | 1.195 | 1.242 | 1.128 | 1.219 | 3.71 |
| 89)   | Benzo(k)fluora... | 1.108          | 1.027 | 1.193 | 1.081 | 1.011 | 1.036 | 1.033 | 1.070 | 5.97 |
| 90) C | Benzo(a)pyrene    | 1.015          | 1.018 | 1.080 | 1.088 | 1.028 | 1.077 | 1.015 | 1.046 | 3.24 |
| 91)   | Dibenzo(a,h)an... | 1.021          | 1.012 | 1.139 | 1.187 | 1.159 | 1.174 | 1.132 | 1.118 | 6.41 |
| 92)   | Benzo(g,h,i)pe... | 0.980          | 0.958 | 1.078 | 1.105 | 1.091 | 1.124 | 1.063 | 1.057 | 6.00 |

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(#) = Out of Range

# 2,4-Dinitrophenol



Response =  $1.483 \times 10^{-1} \times \text{Amt} - 4.237 \times 10^{-2}$   
 Coef of Det ( $r^2$ ) = 0.998290    Curve Fit: wlr(1/a)  
 Method Name: Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF090925.M  
 Calibration Table Last Updated: Tue Sep 09 05:18:16 2025