

Method Path : Z:\svoasrv\HPCHEM1\BNA\_F\Methods\  
 Method File : 8270-BF102523.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Thu Oct 26 03:58:01 2023  
 Response Via : Initial Calibration

## Calibration Files

2.5 =BF135936.D 5 =BF135937.D 10 =BF135938.D 20 =BF135939.D 40 =BF135940.D 50 =BF135941.D 60 =BF135942.D 80 =BF135943.D

|       | Compound              | 2.5            | 5     | 10    | 20    | 40    | 50    | 60    | 80    | Avg   | %RSD   |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |        |
| 2)    | 1,4-Dioxane           | 0.608          | 0.585 | 0.638 | 0.599 | 0.580 | 0.590 | 0.612 | 0.602 |       | 3.29   |
| 3)    | Pyridine              | 1.641          | 1.604 | 1.747 | 1.657 | 1.614 | 1.657 | 1.703 | 1.661 |       | 3.02   |
| 4)    | n-Nitrosodimet...     | 0.716          | 0.699 | 0.754 | 0.720 | 0.711 | 0.722 | 0.747 | 0.724 |       | 2.71   |
| 5) S  | 2-Fluorophenol        | 1.340          | 1.306 | 1.395 | 1.276 | 1.230 | 1.260 | 1.259 | 1.295 |       | 4.36   |
| 6)    | Aniline               | 2.247          | 2.169 | 2.322 | 2.149 | 2.084 | 2.109 | 2.118 | 2.171 |       | 3.91   |
| 7) S  | Phenol-d6             | 1.693          | 1.602 | 1.720 | 1.599 | 1.537 | 1.567 | 1.569 | 1.612 |       | 4.24   |
| 8)    | 2-Chlorophenol        | 1.395          | 1.324 | 1.442 | 1.335 | 1.289 | 1.305 | 1.296 | 1.341 |       | 4.24   |
| 9)    | Benzaldehyde          | 1.017          | 1.029 | 0.861 | 0.805 | 0.779 | 0.743 | 0.872 |       |       | 14.10  |
| 10) C | Phenol                | 1.753          | 1.690 | 1.796 | 1.648 | 1.614 | 1.623 | 1.677 | 1.686 |       | 4.01   |
| 11)   | bis(2-Chloroet...     | 1.384          | 1.333 | 1.404 | 1.291 | 1.249 | 1.262 | 1.263 | 1.312 |       | 4.77   |
| 12)   | 1,3-Dichlorobe...     | 1.535          | 1.416 | 1.537 | 1.396 | 1.353 | 1.369 | 1.365 | 1.424 |       | 5.56   |
| 13) C | 1,4-Dichlorobe...     | 1.562          | 1.435 | 1.545 | 1.412 | 1.360 | 1.345 | 1.354 | 1.430 |       | 6.30   |
| 14)   | 1,2-Dichlorobe...     | 1.458          | 1.358 | 1.455 | 1.303 | 1.245 | 1.247 | 1.231 | 1.328 |       | 7.35   |
| 15)   | Benzyl Alcohol        | 1.173          | 1.132 | 1.249 | 1.155 | 1.091 | 1.109 | 1.072 | 1.140 |       | 5.21   |
| 16)   | 2,2'-oxybis(1-...     | 2.068          | 1.958 | 2.097 | 1.896 | 1.833 | 1.847 | 1.827 | 1.932 |       | 5.82   |
| 17)   | 2-Methylphenol        | 1.226          | 1.167 | 1.254 | 1.169 | 1.131 | 1.155 | 1.169 | 1.182 |       | 3.62   |
| 18)   | Hexachloroethane      | 0.482          | 0.475 | 0.524 | 0.482 | 0.476 | 0.486 | 0.480 | 0.486 |       | 3.54   |
| 19) P | n-Nitroso-di-n...     | 0.901          | 0.964 | 0.925 | 0.967 | 0.908 | 0.878 | 0.889 | 0.903 | 0.917 | 3.58   |
| 20)   | 3+4-Methylphenols     | 1.544          | 1.498 | 1.567 | 1.423 | 1.342 | 1.325 | 1.284 | 1.426 |       | 7.92   |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |        |
| 22)   | Acetophenone          | 0.493          | 0.475 | 0.482 | 0.454 | 0.418 | 0.420 | 0.420 | 0.452 |       | 7.19   |
| 23) S | Nitrobenzene-d5       | 0.207          | 0.256 | 0.316 | 0.331 | 0.313 | 0.333 | 0.346 | 0.300 |       | 16.74  |
| 24)   | Nitrobenzene          | 0.635          | 0.617 | 0.658 | 0.644 | 0.605 | 0.617 | 0.649 | 0.632 |       | 3.10   |
| 25)   | Isophorone            | 0.036          | 0.046 | 0.076 | 0.105 | 0.117 | 0.130 | 0.085 |       |       | 45.52# |
| 26) C | 2-Nitrophenol         | 0.282          | 0.281 | 0.306 | 0.296 | 0.278 | 0.282 | 0.291 | 0.288 |       | 3.53   |
| 27)   | bis(2-Chloroet...     | 0.404          | 0.386 | 0.412 | 0.394 | 0.366 | 0.372 | 0.384 | 0.388 |       | 4.30   |
| 28)   | 2,4-Dichloroph...     | 0.227          | 0.237 | 0.273 | 0.274 | 0.258 | 0.265 | 0.271 | 0.258 |       | 7.17   |
| 29) C | 1,2,4-Trichlor...     | 0.304          | 0.291 | 0.308 | 0.296 | 0.277 | 0.282 | 0.287 | 0.292 |       | 3.90   |
| 30)   | Naphthalene           | 1.024          | 0.980 | 1.037 | 0.988 | 0.902 | 0.924 | 0.914 | 0.967 |       | 5.60   |
| 31)   | Benzoic acid          | 0.044          | 0.076 | 0.121 | 0.141 | 0.162 | 0.195 | 0.123 |       |       | 45.23  |
| 32)   | 4-Chloroaniline       | 0.441          | 0.424 | 0.457 | 0.438 | 0.406 | 0.409 | 0.417 | 0.427 |       | 4.39   |
| 33) C | Hexachlorobuta...     | 0.165          | 0.167 | 0.176 | 0.166 | 0.158 | 0.159 | 0.161 | 0.165 |       | 3.69   |
| 34)   | Caprolactam           | 0.070          | 0.075 | 0.090 | 0.094 | 0.087 | 0.090 | 0.095 | 0.086 |       | 11.00  |
| 35) C | 4-Chloro-3-met...     | 0.252          | 0.255 | 0.287 | 0.291 | 0.269 | 0.279 | 0.286 | 0.274 |       | 5.76   |
| 36)   | 2-Methylnaphth...     | 0.677          | 0.657 | 0.691 | 0.655 | 0.596 | 0.596 | 0.606 | 0.640 |       | 6.20   |
| 37)   | 1-Methylnaphth...     | 0.641          | 0.609 | 0.639 | 0.610 | 0.556 | 0.565 | 0.564 | 0.598 |       | 6.03   |

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|       |                   |                |       |       |       |       |       |       |       |       |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 39) I | Acenaphthene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 40)   | 1,2,4,5-Tetrac... | 0.597          | 0.578 | 0.606 | 0.571 | 0.530 | 0.528 | 0.544 | 0.565 | 5.58  |  |
| 41) P | Hexachlorocycl... | 0.220          | 0.238 | 0.282 | 0.302 | 0.287 | 0.301 | 0.320 | 0.279 | 13.07 |  |
| 42) S | 2,4,6-Tribromo... | 0.132          | 0.146 | 0.180 | 0.195 | 0.182 | 0.193 | 0.198 | 0.175 | 14.72 |  |
| 43) C | 2,4,6-Trichlor... | 0.262          | 0.298 | 0.350 | 0.353 | 0.337 | 0.348 | 0.366 | 0.331 | 11.23 |  |
| 44)   | 2,4,5-Trichlor... | 0.334          | 0.352 | 0.408 | 0.425 | 0.397 | 0.413 | 0.419 | 0.393 | 8.97  |  |
| 45) S | 2-Fluorobiphenyl  | 1.446          | 1.362 | 1.373 | 1.245 | 1.117 | 1.105 | 1.096 | 1.249 | 11.70 |  |
| 46)   | 1,1'-Biphenyl     | 1.636          | 1.558 | 1.637 | 1.538 | 1.408 | 1.428 | 1.402 | 1.515 | 6.80  |  |
| 47)   | 2-Chloronaphth... | 1.177          | 1.134 | 1.190 | 1.150 | 1.050 | 1.071 | 1.074 | 1.121 | 4.98  |  |
| 48)   | 2-Nitroaniline    | 0.100          | 0.141 | 0.237 | 0.298 | 0.301 | 0.329 | 0.350 | 0.251 | 38.42 |  |
| 49)   | Acenaphthylene    | 1.857          | 1.788 | 1.884 | 1.831 | 1.655 | 1.687 | 1.678 | 1.768 | 5.33  |  |
| 50)   | Dimethylphthalate | 1.346          | 1.287 | 1.375 | 1.333 | 1.225 | 1.240 | 1.273 | 1.297 | 4.34  |  |
| 51)   | 2,6-Dinitrotol... | 0.092          | 0.143 | 0.223 | 0.266 | 0.257 | 0.271 | 0.288 | 0.220 | 33.74 |  |
| 52) C | Acenaphthene      | 1.183          | 1.128 | 1.191 | 1.162 | 1.067 | 1.095 | 1.107 | 1.133 | 4.13  |  |
| 53)   | 3-Nitroaniline    | 0.125          | 0.189 | 0.272 | 0.315 | 0.303 | 0.328 | 0.343 | 0.268 | 30.21 |  |
| 54) P | 2,4-Dinitrophenol | 0.021          | 0.034 | 0.057 | 0.067 | 0.080 | 0.102 | 0.060 |       | 49.30 |  |
| 55)   | Dibenzofuran      | 1.759          | 1.661 | 1.744 | 1.691 | 1.530 | 1.537 | 1.539 | 1.637 | 6.15  |  |
| 56) P | 4-Nitrophenol     | 0.125          | 0.200 | 0.241 | 0.237 | 0.254 | 0.266 | 0.220 |       | 23.44 |  |
| 57)   | 2,4-Dinitrotol... | 0.093          | 0.148 | 0.254 | 0.318 | 0.320 | 0.340 | 0.360 | 0.262 | 39.38 |  |
| 58)   | Fluorene          | 1.352          | 1.292 | 1.327 | 1.250 | 1.120 | 1.131 | 1.101 | 1.225 | 8.60  |  |
| 59)   | 2,3,4,6-Tetrac... | 0.223          | 0.262 | 0.307 | 0.325 | 0.303 | 0.323 | 0.326 | 0.295 | 13.23 |  |
| 60)   | Diethylphthalate  | 1.243          | 1.203 | 1.318 | 1.297 | 1.182 | 1.202 | 1.213 | 1.237 | 4.20  |  |
| 61)   | 4-Chlorophenyl... | 0.668          | 0.617 | 0.640 | 0.600 | 0.540 | 0.544 | 0.527 | 0.591 | 9.25  |  |
| 62)   | 4-Nitroaniline    | 0.132          | 0.184 | 0.267 | 0.311 | 0.302 | 0.321 | 0.342 | 0.266 | 29.44 |  |
| 63)   | Azobenzene        | 1.311          | 1.253 | 1.346 | 1.293 | 1.183 | 1.192 | 1.208 | 1.255 | 5.07  |  |
| 64) I | Phenanthrene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 65)   | 4,6-Dinitro-2-... | 0.020          | 0.036 | 0.058 | 0.065 | 0.075 | 0.086 | 0.057 |       | 43.76 |  |
| 66) c | n-Nitrosodiphe... | 0.629          | 0.606 | 0.649 | 0.622 | 0.562 | 0.579 | 0.583 | 0.604 | 5.14  |  |
| 67)   | 4-Bromophenyl-... | 0.205          | 0.196 | 0.221 | 0.214 | 0.194 | 0.198 | 0.204 | 0.205 | 4.89  |  |
| 68)   | Hexachlorobenzene | 0.224          | 0.215 | 0.233 | 0.226 | 0.207 | 0.211 | 0.215 | 0.219 | 4.18  |  |
| 69)   | Atrazine          | 0.172          | 0.166 | 0.184 | 0.170 | 0.153 | 0.157 | 0.150 | 0.165 | 7.27  |  |
| 70) C | Pentachlorophenol | 0.087          | 0.119 | 0.133 | 0.129 | 0.135 | 0.141 | 0.124 |       | 15.65 |  |
| 71)   | Phenanthrene      | 1.072          | 1.022 | 1.102 | 1.051 | 0.938 | 0.947 | 0.951 | 1.012 | 6.58  |  |
| 72)   | Anthracene        | 1.088          | 1.032 | 1.131 | 1.085 | 0.964 | 0.991 | 0.962 | 1.036 | 6.44  |  |
| 73)   | Carbazole         | 0.958          | 0.923 | 1.004 | 0.969 | 0.864 | 0.873 | 0.879 | 0.924 | 5.90  |  |
| 74)   | Di-n-butylphth... | 0.916          | 0.953 | 1.095 | 1.052 | 0.951 | 0.960 | 0.957 | 0.983 | 6.56  |  |
| 75) C | Fluoranthene      | 1.107          | 1.066 | 1.181 | 1.109 | 0.994 | 0.998 | 0.997 | 1.065 | 6.77  |  |
| 76) I | Chrysene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 77)   | Benzidine         | 0.450          | 0.435 | 0.341 | 0.483 | 0.324 | 0.353 | 0.313 | 0.386 | 17.79 |  |
| 78)   | Pyrene            | 1.513          | 1.481 | 1.659 | 1.779 | 1.663 | 1.794 | 1.867 | 1.679 | 8.63  |  |
| 79) S | Terphenyl-d14     | 1.157          | 1.109 | 1.223 | 1.265 | 1.149 | 1.231 | 1.245 | 1.197 | 4.87  |  |
| 80)   | Butylbenzylpht... | 0.327          | 0.406 | 0.556 | 0.632 | 0.600 | 0.642 | 0.671 | 0.548 | 23.90 |  |
| 81)   | Benzo(a)anthra... | 1.326          | 1.299 | 1.434 | 1.419 | 1.304 | 1.352 | 1.385 | 1.360 | 4.00  |  |
| 82)   | 3,3'-Dichlorob... | 0.362          | 0.391 | 0.468 | 0.436 | 0.396 | 0.417 | 0.425 | 0.414 | 8.28  |  |
| 83)   | Chrysene          | 1.277          | 1.262 | 1.390 | 1.386 | 1.267 | 1.322 | 1.368 | 1.324 | 4.29  |  |
| 84)   | Bis(2-ethylhex... | 0.563          | 0.600 | 0.733 | 0.757 | 0.711 | 0.725 | 0.745 | 0.691 | 11.12 |  |
| 85) c | Di-n-octyl pht... | 0.817          | 1.087 | 1.135 | 1.103 | 1.143 | 1.241 | 1.088 |       | 13.16 |  |

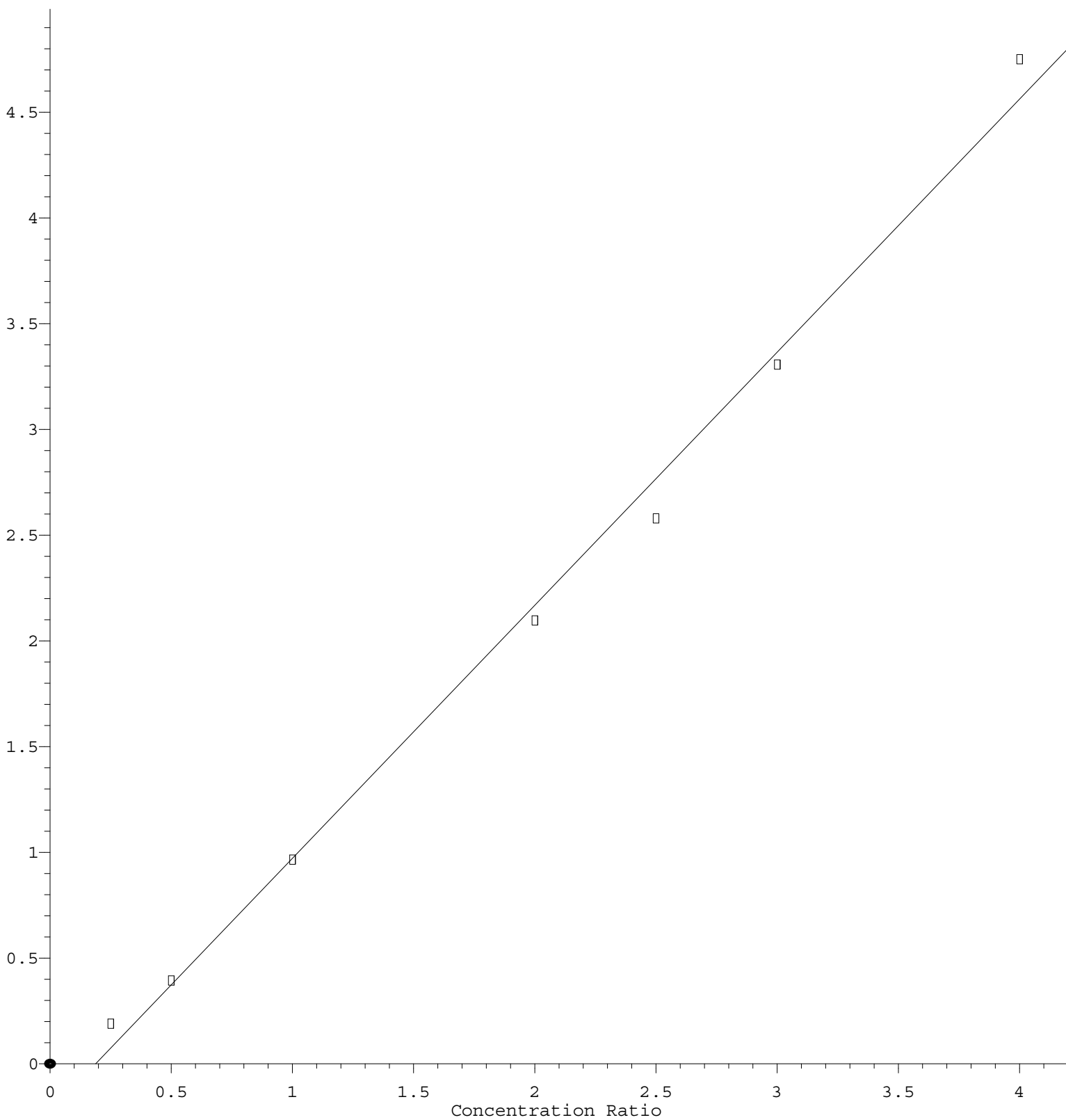
Method Path : Z:\svoasrv\HPCHEM1\BNA\_F\Methods\  
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|       |                   |                |       |       |       |       |       |       |       |       |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 86) I | Perylene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 87)   | Indeno(1,2,3-c... | 0.906          | 0.943 | 1.164 | 1.263 | 1.227 | 1.303 |       | 1.134 | 14.91 |  |
| 88)   | Benzo(b)fluora... | 1.204          | 1.181 | 1.250 | 1.189 | 1.114 | 1.200 | 1.194 | 1.190 | 3.40  |  |
| 89)   | Benzo(k)fluora... | 1.144          | 1.183 | 1.316 | 1.180 | 1.145 | 1.060 | 1.155 | 1.169 | 6.54  |  |
| 90) C | Benzo(a)pyrene    | 1.031          | 1.032 | 1.168 | 1.120 | 1.078 | 1.093 | 1.156 | 1.097 | 5.00  |  |
| 91)   | Dibenzo(a,h)an... | 0.775          | 0.788 | 0.970 | 1.037 | 1.010 | 1.072 | 1.138 | 0.970 | 14.34 |  |
| 92)   | Benzo(g,h,i)pe... | 0.757          | 0.788 | 0.965 | 1.048 | 1.032 | 1.102 | 1.188 | 0.983 | 16.20 |  |

-----  
(#) = Out of Range

# Benzo(g,h,i)perylene

Response Ratio



$$\text{Response} = 1.197\text{e}+000 * \text{Amt} - 2.248\text{e}-001$$

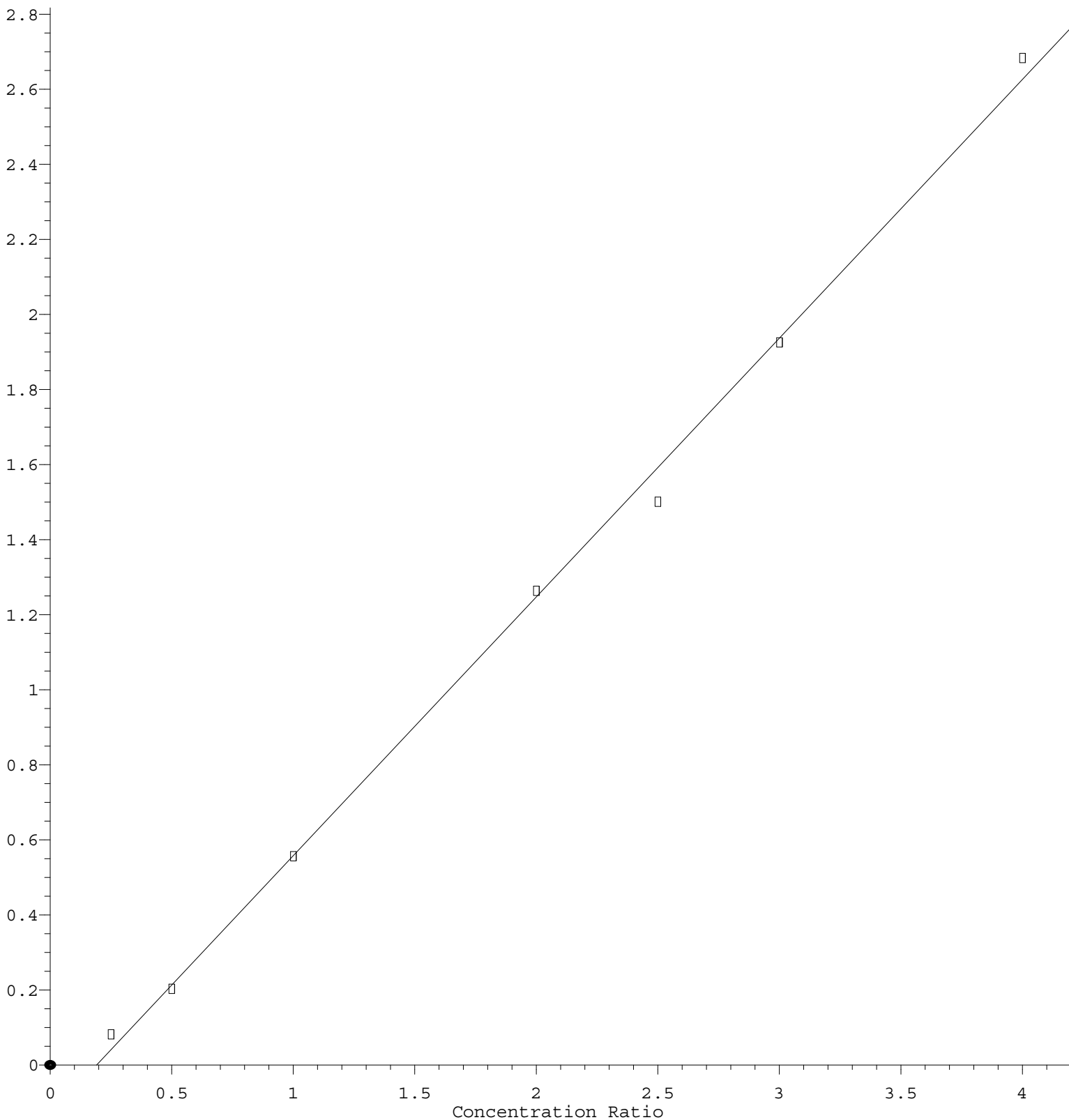
Coef of Det ( $r^2$ ) = 0.994370 Curve Fit: Linear

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# Butylbenzylphthalate

Response Ratio



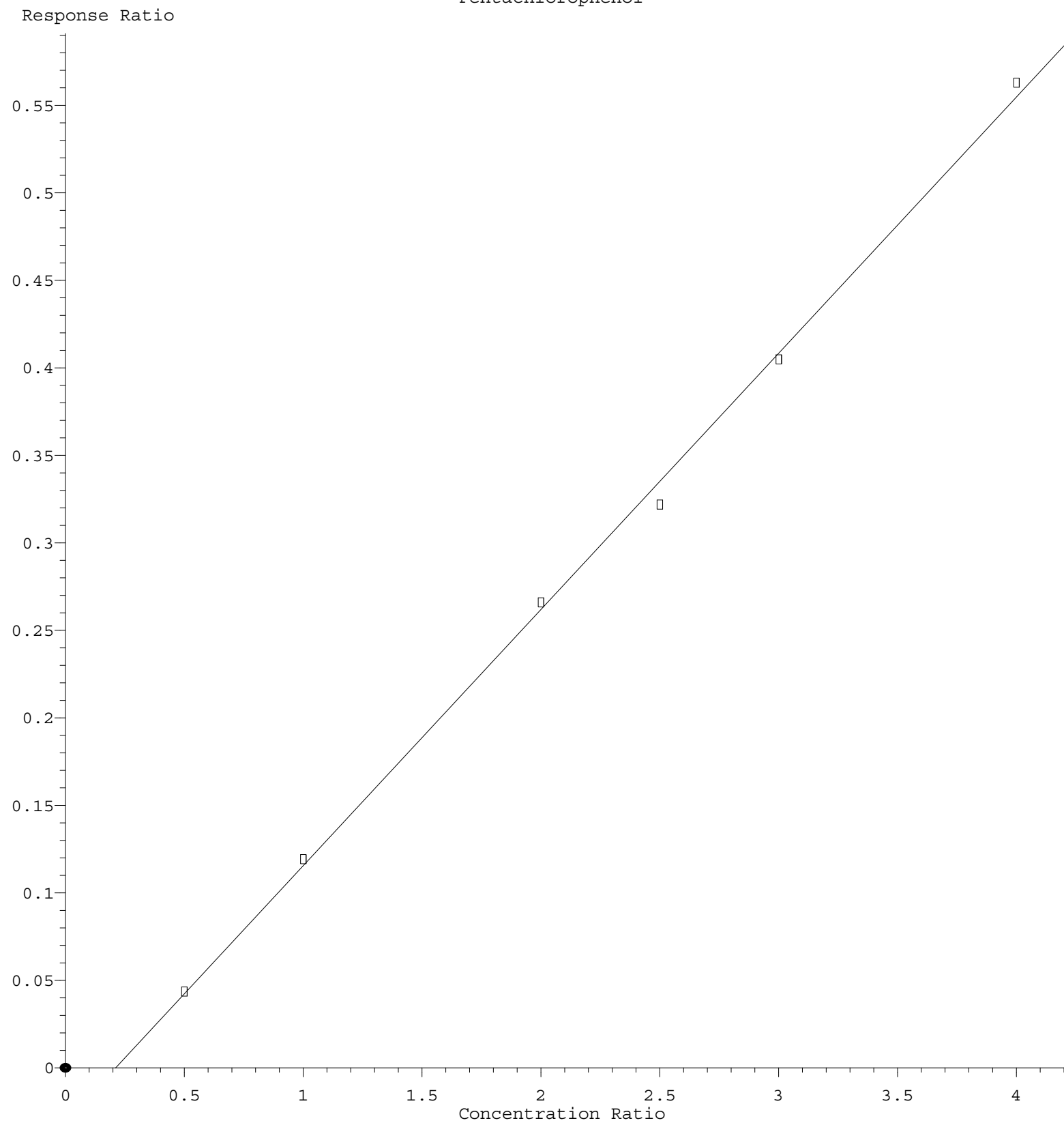
$$\text{Response} = 6.896\text{e-}001 * \text{Amt} - 1.320\text{e-}001$$

Coef of Det ( $r^2$ ) = 0.997490 Curve Fit: Linear

Method Name: Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M

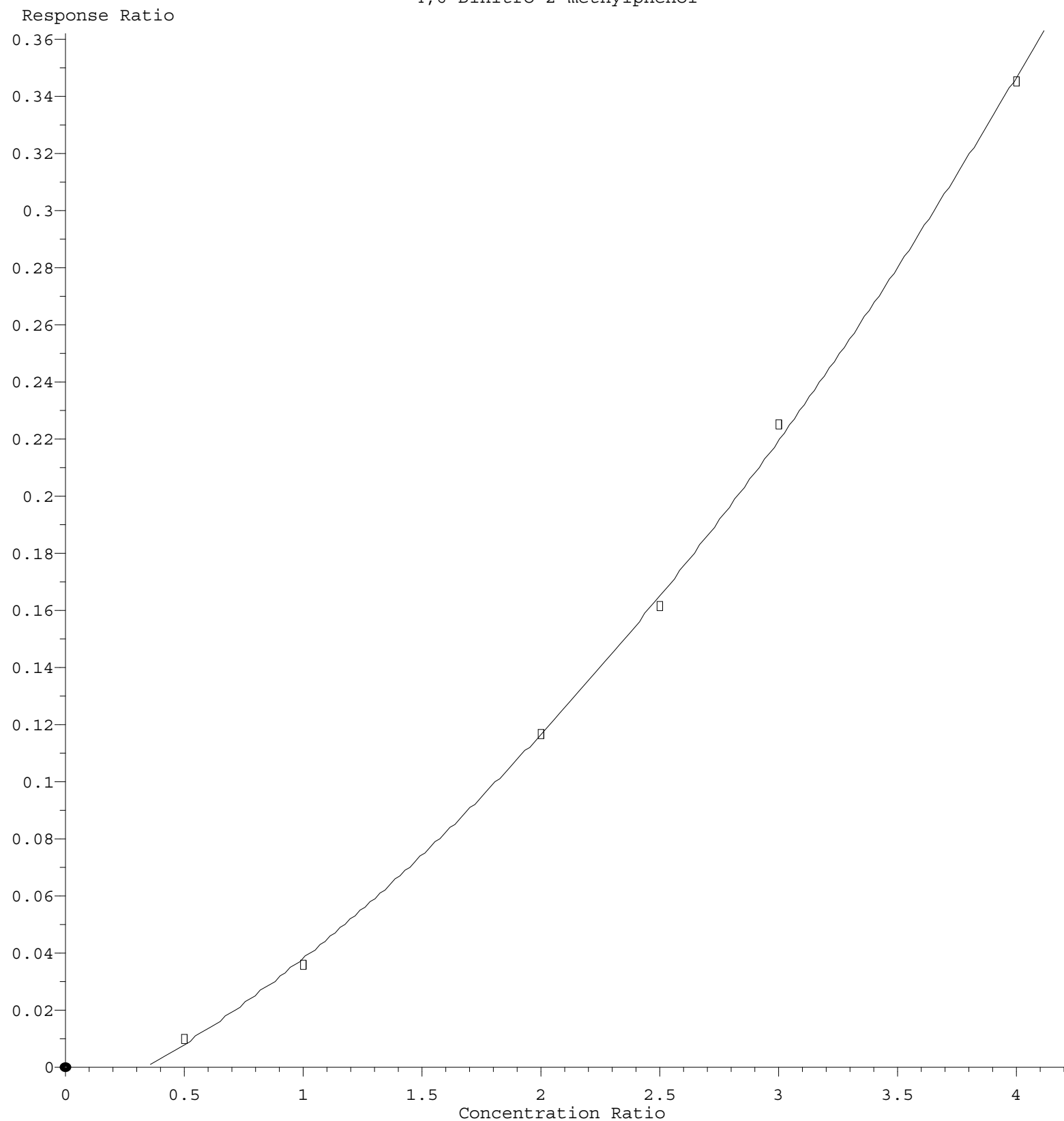
Calibration Table Last Updated: Thu Oct 26 03:58:01 2023

# Pentachlorophenol



Response = 1.465e-001 \* Amt - 3.094e-002  
 Coef of Det (r^2) = 0.998399    Curve Fit: Linear  
 Method Name:    Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M  
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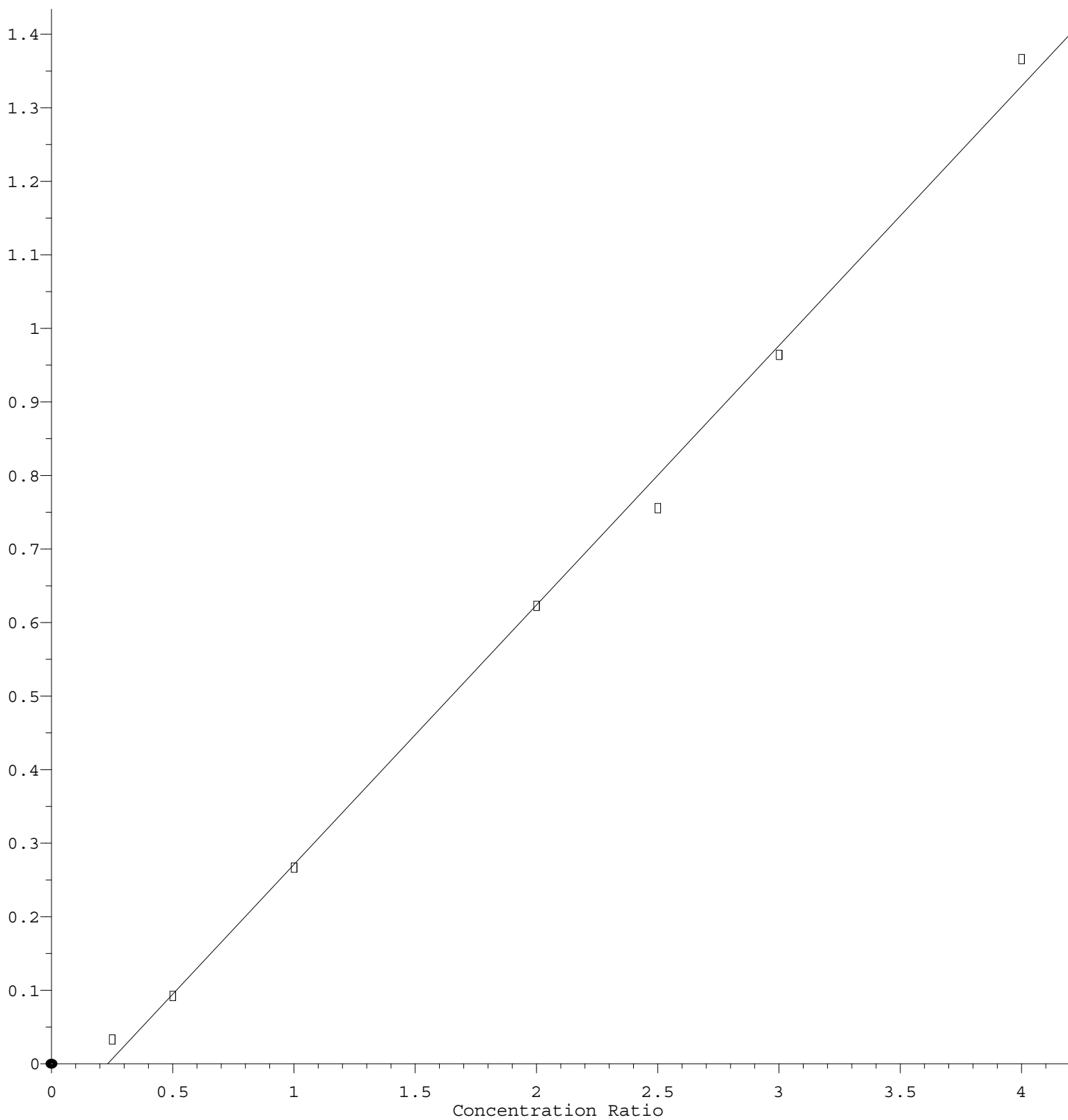
# 4,6-Dinitro-2-methylphenol



$R = 1.221e-002 A^2 + 4.187e-002 A - 1.594e-002$   
 Coef of Det ( $r^2$ ) = 0.999295    Curve Fit: Quadratic  
 Method Name:    Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M  
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## 4-Nitroaniline

Response Ratio



$$\text{Response} = 3.527\text{e-}001 * \text{Amt} - 8.200\text{e-}002$$

Coef of Det ( $r^2$ ) = 0.997040 Curve Fit: Linear

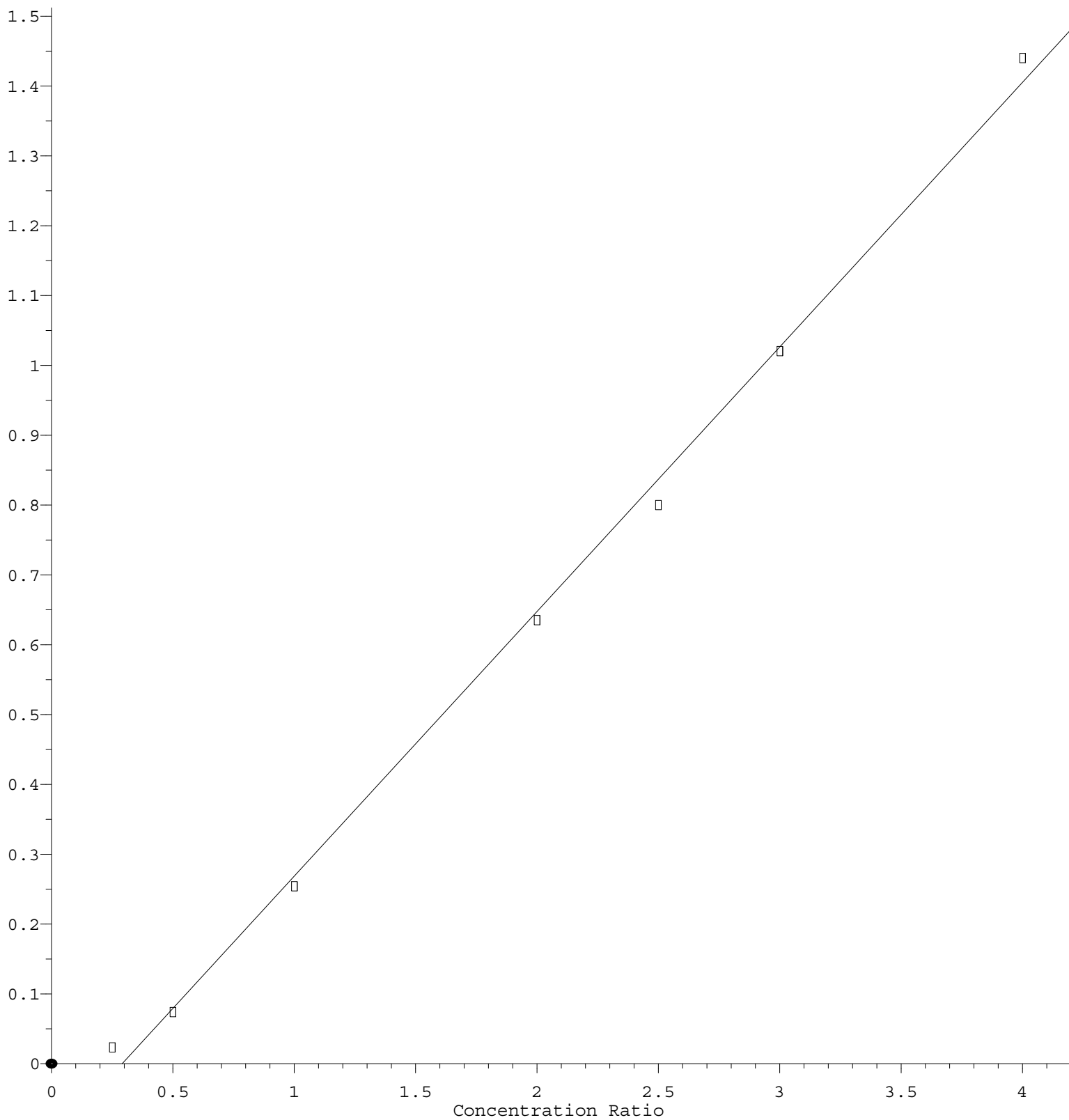
Method Name: Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M

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## 2,4-Dinitrotoluene

Response Ratio



$$\text{Response} = 3.788\text{e-}001 * \text{Amt} - 1.104\text{e-}001$$

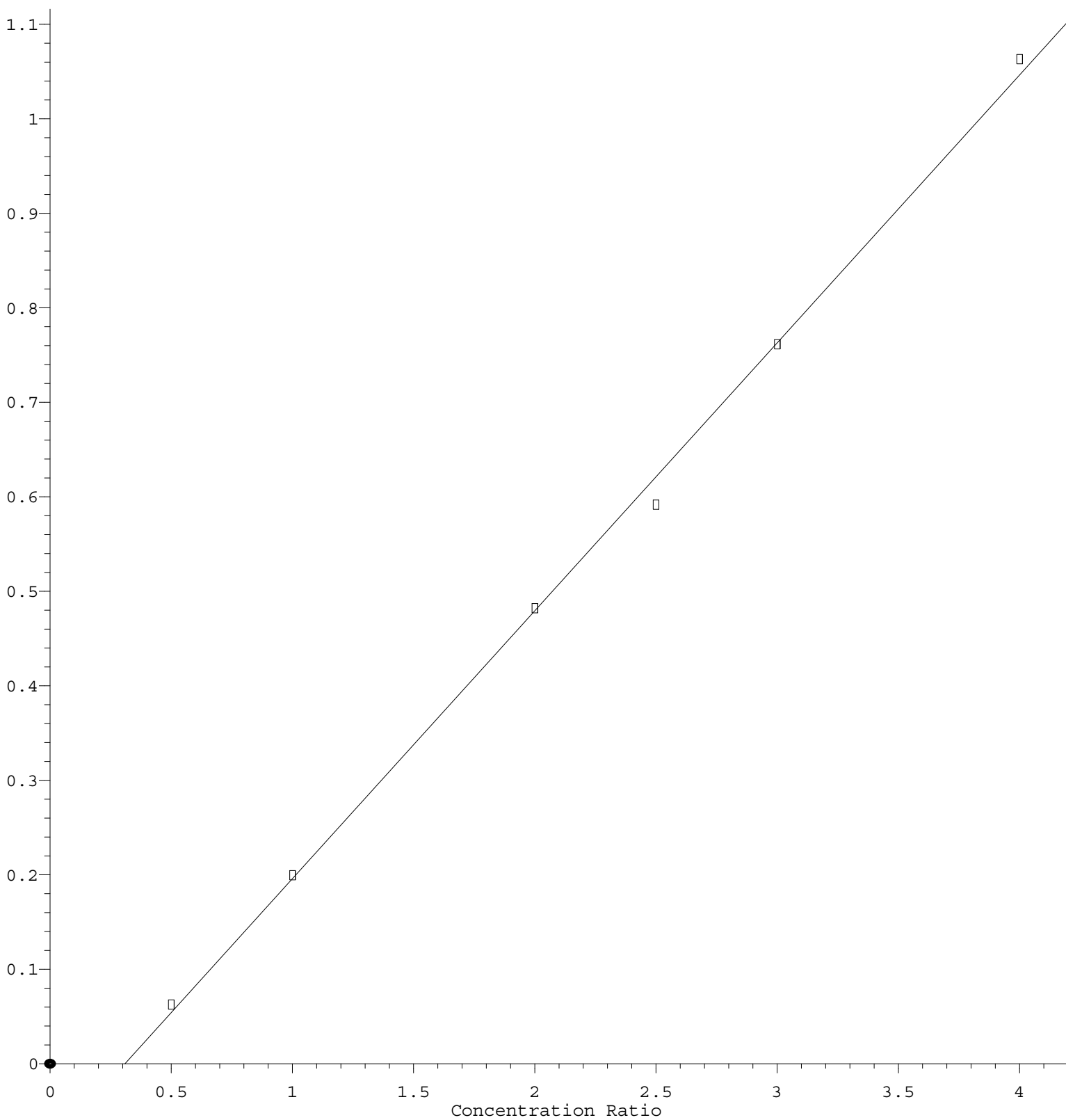
Coef of Det ( $r^2$ ) = 0.997271 Curve Fit: Linear

Method Name: Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M

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# 4-Nitrophenol

Response Ratio



$$\text{Response} = 2.836\text{e-}001 * \text{Amt} - 8.768\text{e-}002$$

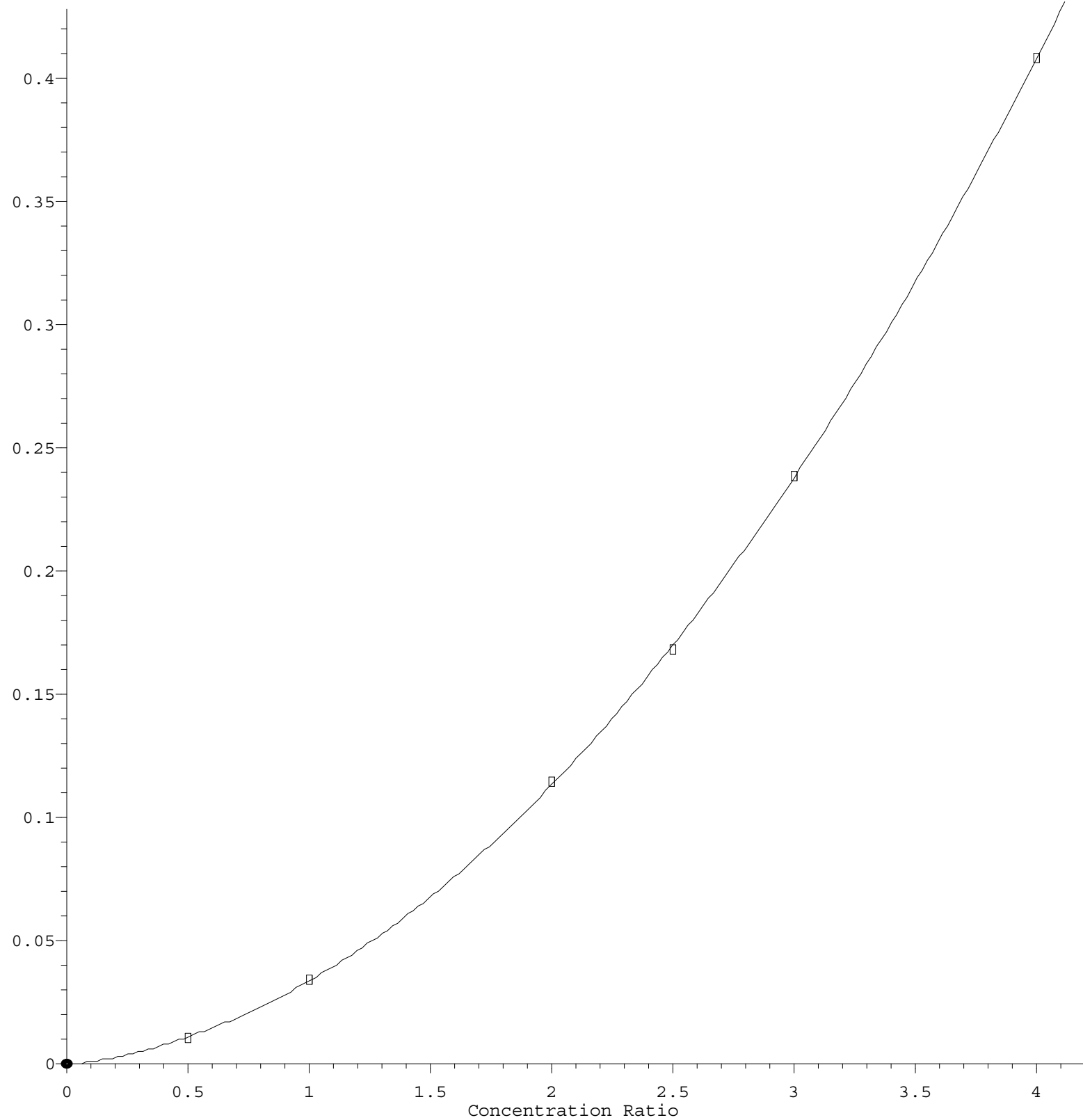
Coef of Det ( $r^2$ ) = 0.998143 Curve Fit: Linear

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# 2,4-Dinitrophenol

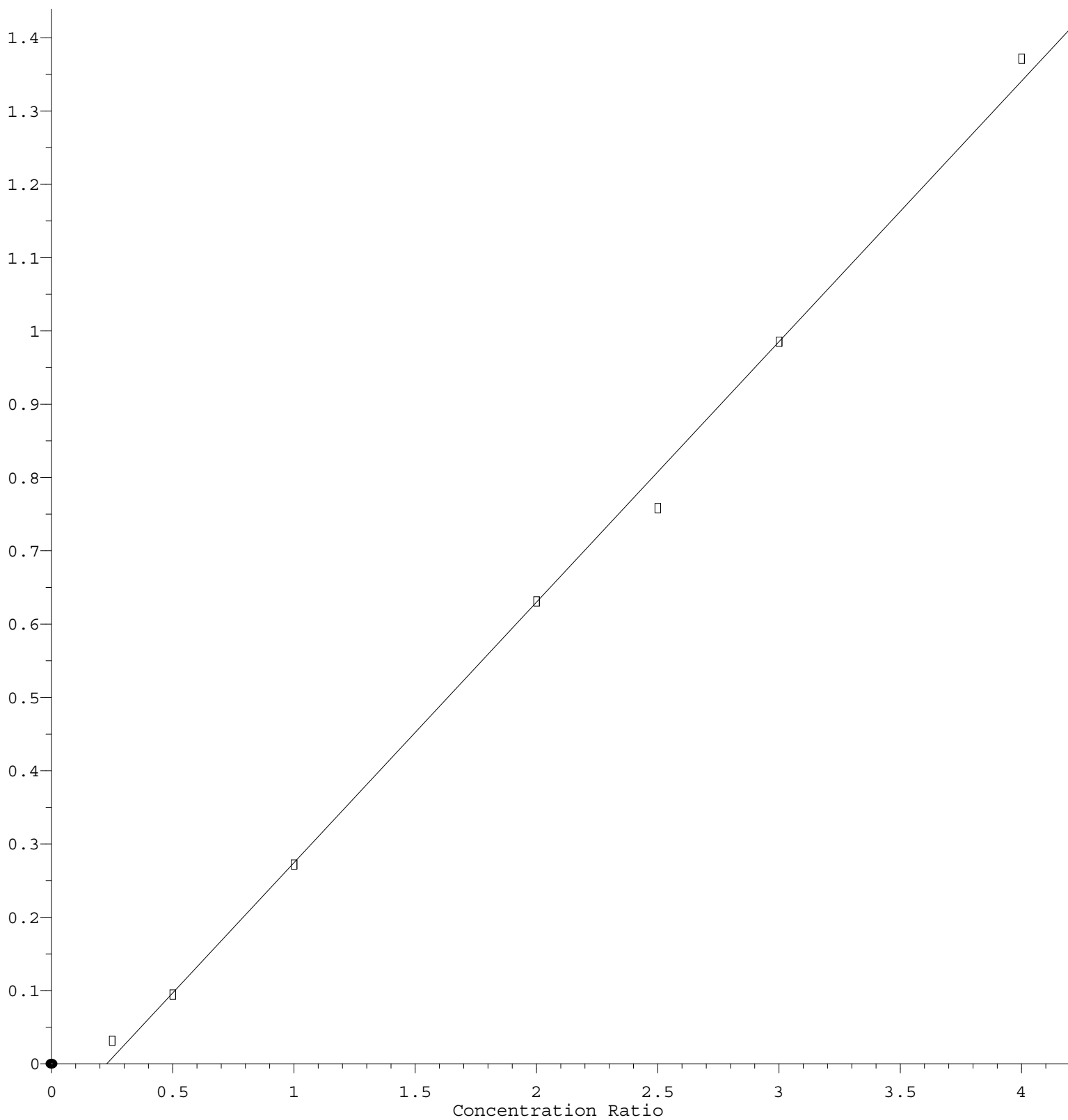
Response Ratio



$R = 2.263e-002 A^2 + 1.165e-002 A - 5.867e-004$   
 Coef of Det ( $r^2$ ) = 0.999949    Curve Fit: Quadratic  
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## 3-Nitroaniline

Response Ratio



$$\text{Response} = 3.555\text{e-}001 * \text{Amt} - 8.109\text{e-}002$$

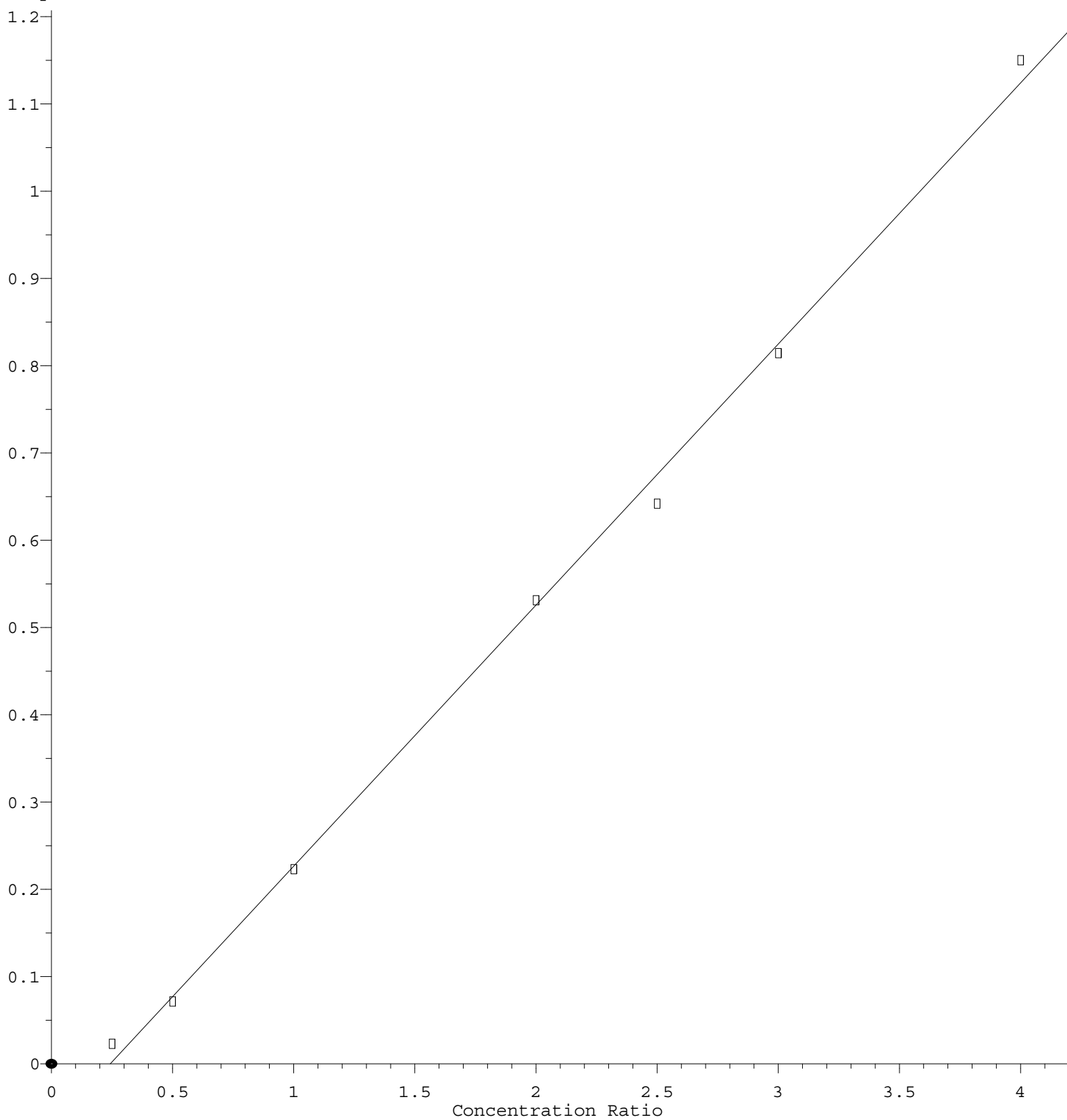
Coef of Det ( $r^2$ ) = 0.997290 Curve Fit: Linear

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## 2,6-Dinitrotoluene

Response Ratio



$$\text{Response} = 2.992\text{e-}001 * \text{Amt} - 7.273\text{e-}002$$

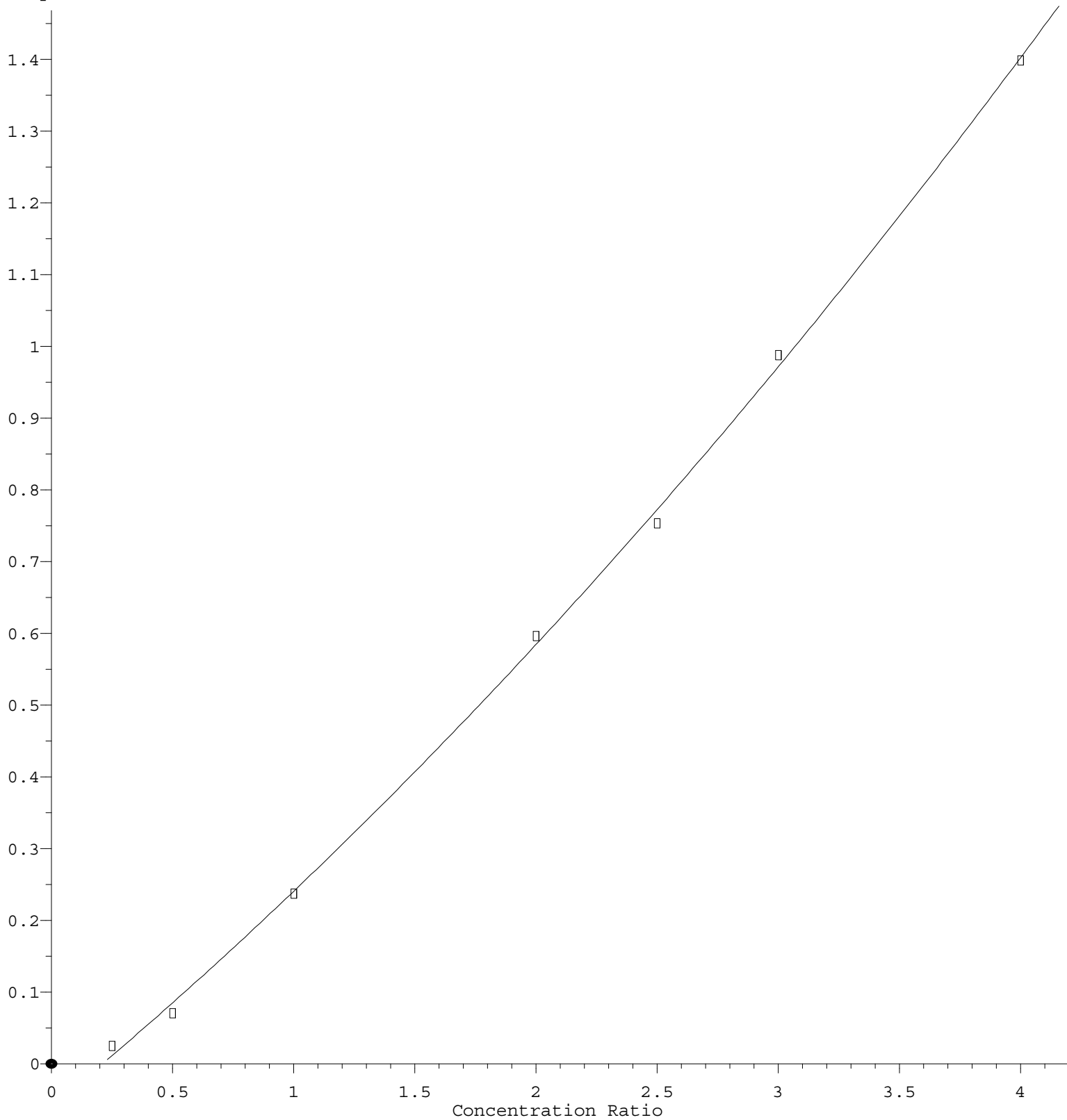
Coef of Det ( $r^2$ ) = 0.997667 Curve Fit: Linear

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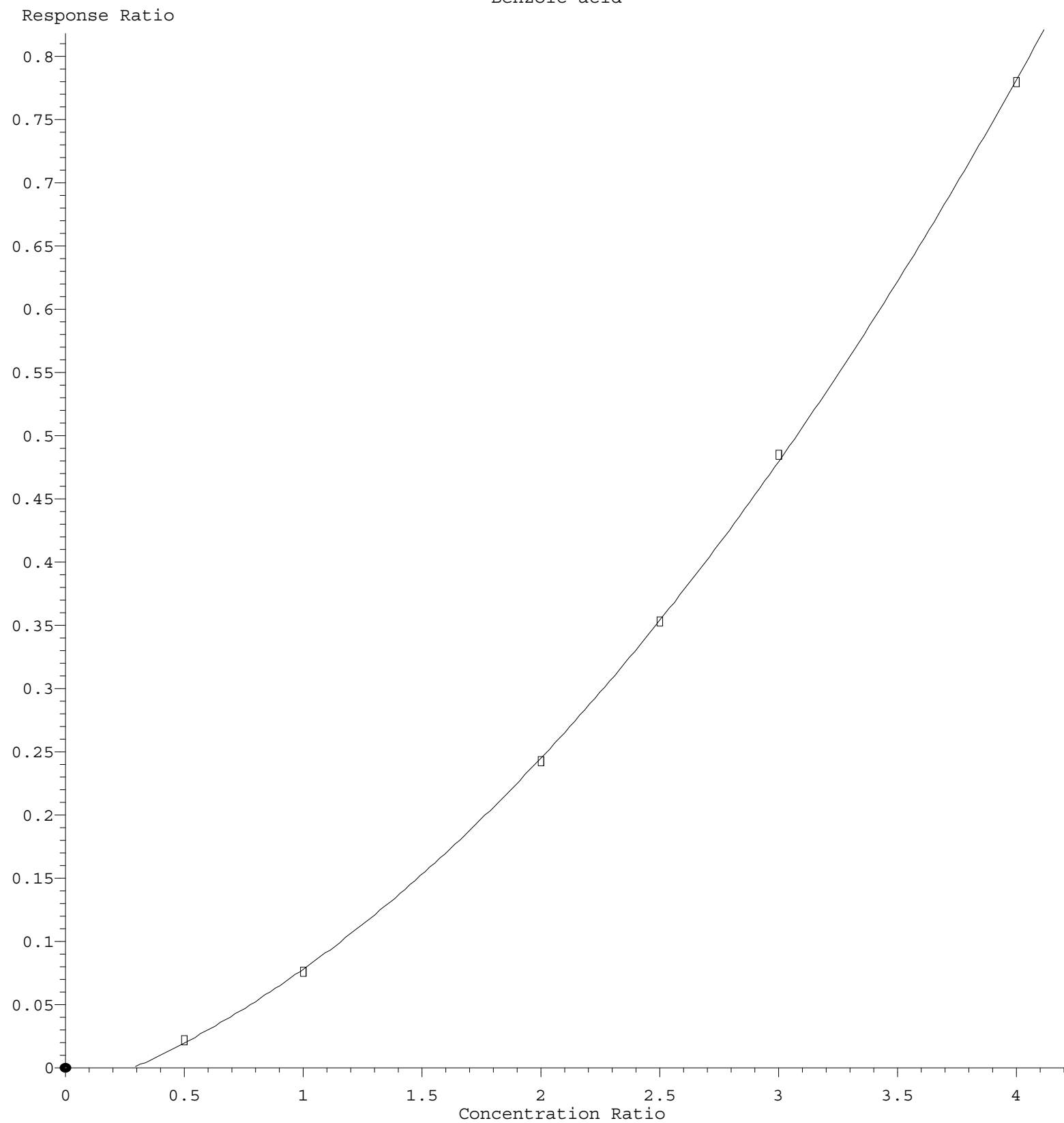
## 2-Nitroaniline

Response Ratio



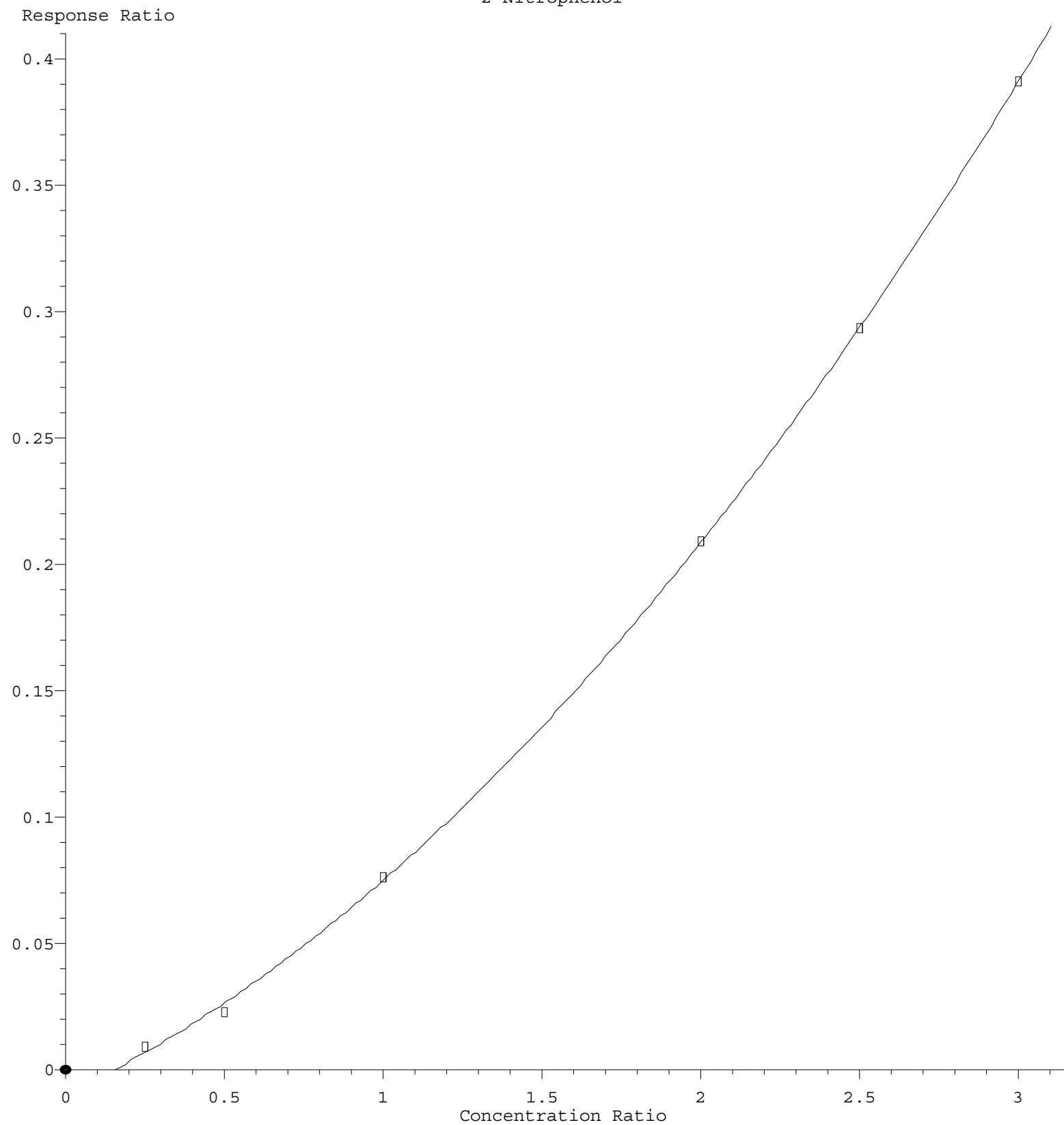
$R = 2.177e-002 A^2 + 2.784e-001 A - 5.956e-002$   
Coef of Det ( $r^2$ ) = 0.999226    Curve Fit: Quadratic  
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# Benzoic acid



$R = 3.374e-002 A^2 + 6.579e-002 A - 2.153e-002$   
 Coef of Det ( $r^2$ ) = 0.999880    Curve Fit: Quadratic  
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# 2-Nitrophenol

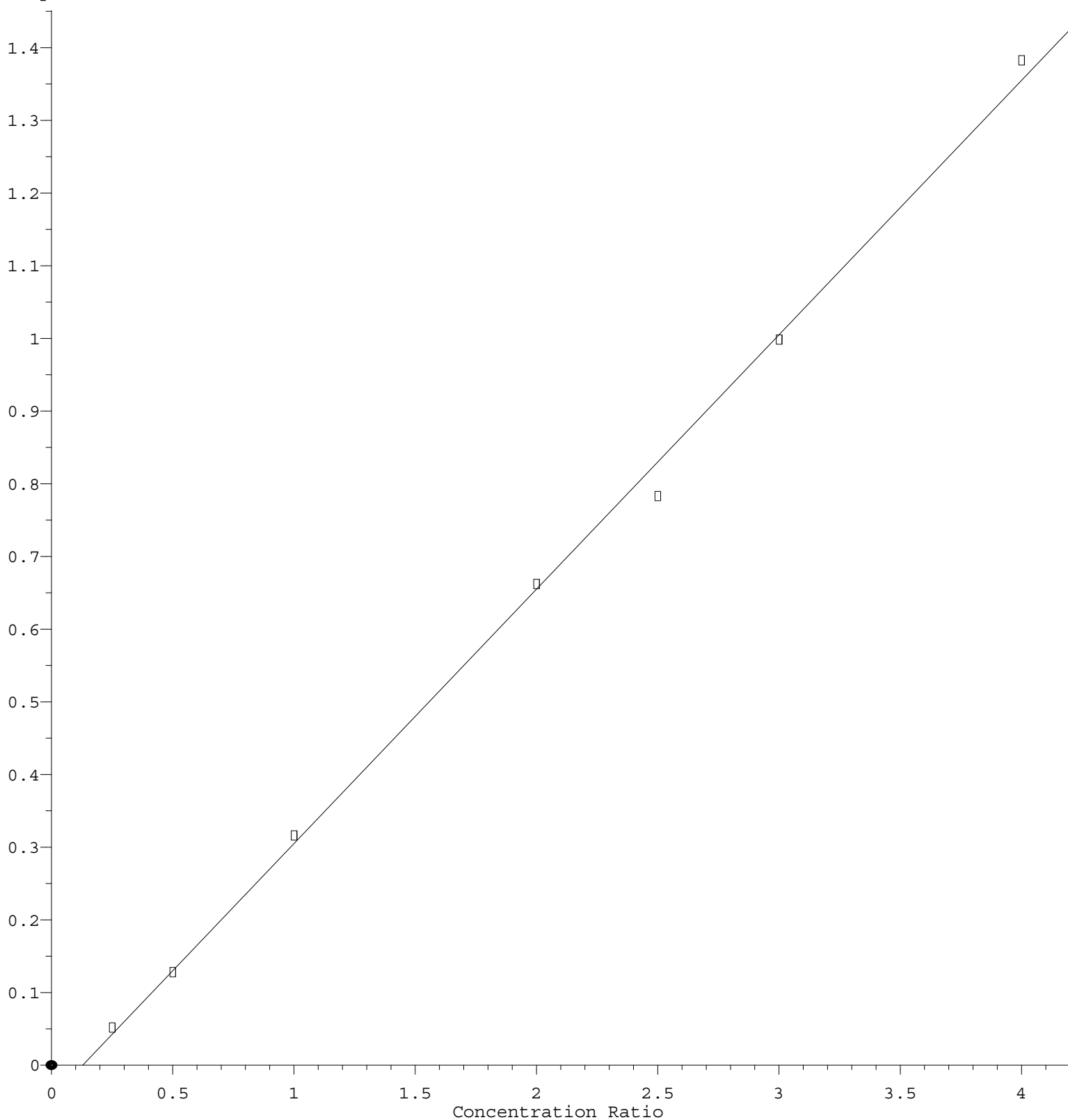


$R = 2.442e-002 A^2 + 6.040e-002 A - 9.879e-003$   
 Coef of Det ( $r^2$ ) = 0.999830    Curve Fit: Quadratic  
 Method Name: Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M  
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# Nitrobenzene

Response Ratio



$$\text{Response} = 3.500\text{e-}001 * \text{Amt} - 4.519\text{e-}002$$

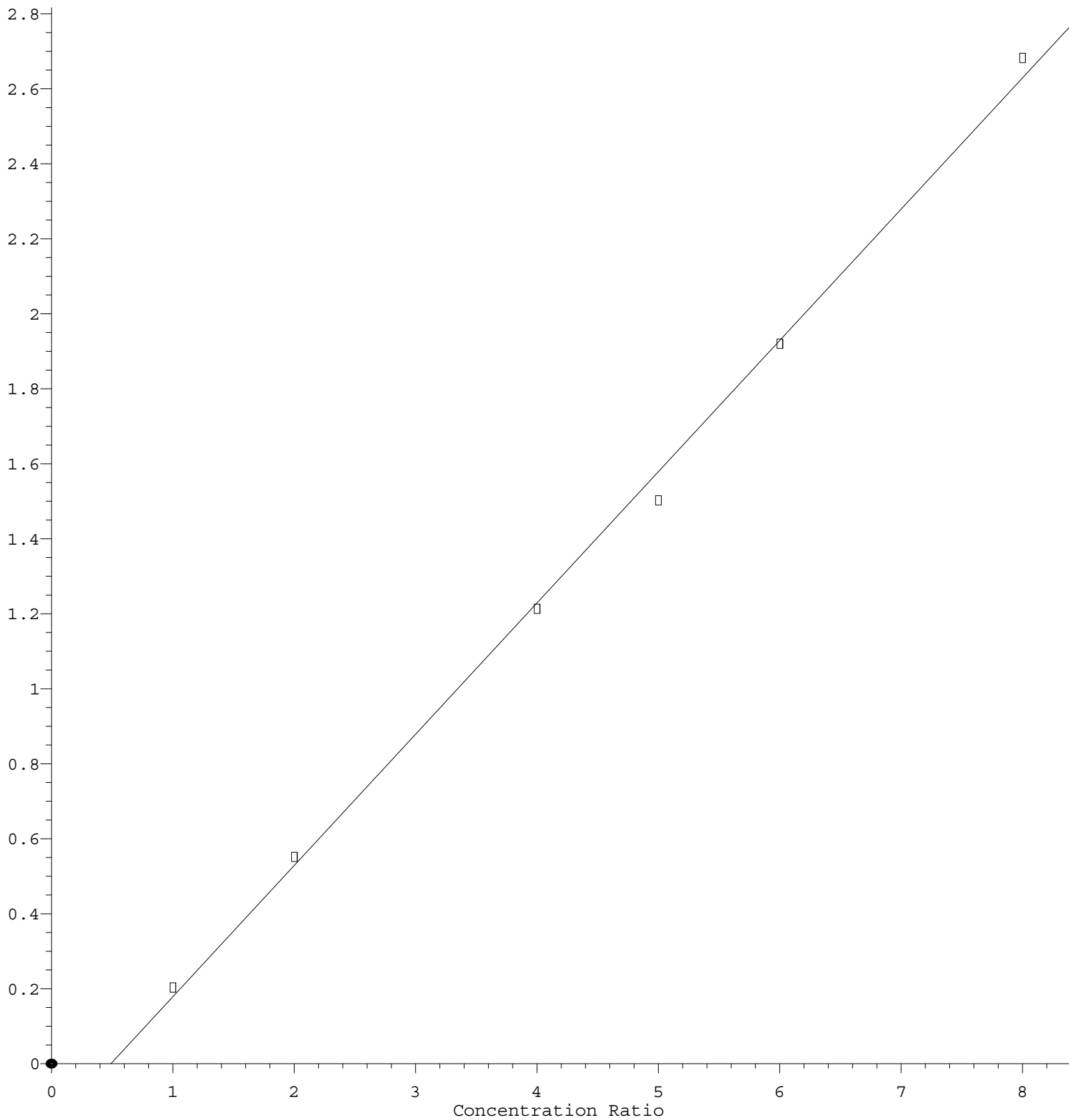
Coef of Det ( $r^2$ ) = 0.997674 Curve Fit: Linear

Method Name: Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M

Calibration Table Last Updated: Thu Oct 26 03:58:01 2023

## Nitrobenzene-d5

Response Ratio



$$\text{Response} = 3.500\text{e-}001 * \text{Amt} - 1.713\text{e-}001$$

Coef of Det ( $r^2$ ) = 0.997528 Curve Fit: Linear

Method Name: Z:\svoasrv\HPCHEM1\BNA F\Methods\8270-BF102523.M

Calibration Table Last Updated: Thu Oct 26 03:58:01 2023