

Method Path : Z:\svoasrv\HPCHEM1\BNA\_F\Methods\  
 Method File : 8270-BF121923.M  
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 Last Update : Wed Dec 20 04:16:58 2023  
 Response Via : Initial Calibration

## Calibration Files

2.5 =BF136630.D 5 =BF136631.D 10 =BF136632.D 20 =BF136633.D 40 =BF136634.D 50 =BF136635.D 60 =BF136636.D 80 =BF136637.D

|       | Compound              | 2.5            | 5     | 10    | 20    | 40    | 50    | 60    | 80    | Avg   | %RSD |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1) I  | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |      |
| 2)    | 1,4-Dioxane           | 0.547          | 0.546 | 0.561 | 0.524 | 0.504 | 0.516 | 0.504 | 0.529 | 4.28  |      |
| 3)    | Pyridine              | 1.375          | 1.293 | 1.396 | 1.276 | 1.272 | 1.259 | 1.226 | 1.300 | 4.80  |      |
| 4)    | n-Nitrosodimet...     | 0.694          | 0.700 | 0.747 | 0.694 | 0.679 | 0.702 | 0.689 | 0.701 | 3.10  |      |
| 5) S  | 2-Fluorophenol        | 1.400          | 1.349 | 1.411 | 1.275 | 1.219 | 1.204 | 1.160 | 1.288 | 7.76  |      |
| 6)    | Aniline               | 1.781          | 1.720 | 1.818 | 1.623 | 1.541 | 1.545 | 1.455 | 1.640 | 8.30  |      |
| 7) S  | Phenol-d6             | 1.791          | 1.716 | 1.780 | 1.637 | 1.551 | 1.566 | 1.500 | 1.649 | 7.04  |      |
| 8)    | 2-Chlorophenol        | 1.509          | 1.497 | 1.512 | 1.411 | 1.322 | 1.330 | 1.278 | 1.408 | 7.06  |      |
| 9)    | Benzaldehyde          | 1.114          | 1.056 | 1.081 | 0.917 | 0.782 |       |       | 0.990 | 13.96 |      |
| 10) C | Phenol                | 1.906          | 1.832 | 1.924 | 1.720 | 1.669 | 1.658 | 1.594 | 1.758 | 7.39  |      |
| 11)   | bis(2-Chloroet...     | 1.412          | 1.372 | 1.433 | 1.391 | 1.287 | 1.326 | 1.269 | 1.356 | 4.65  |      |
| 12)   | 1,3-Dichlorobe...     | 1.645          | 1.604 | 1.647 | 1.517 | 1.440 | 1.445 | 1.400 | 1.528 | 6.80  |      |
| 13) C | 1,4-Dichlorobe...     | 1.705          | 1.612 | 1.674 | 1.530 | 1.461 | 1.474 | 1.403 | 1.552 | 7.39  |      |
| 14)   | 1,2-Dichlorobe...     | 1.583          | 1.540 | 1.598 | 1.427 | 1.372 | 1.334 | 1.282 | 1.448 | 8.74  |      |
| 15)   | Benzyl Alcohol        | 1.194          | 1.167 | 1.288 | 1.167 | 1.092 | 1.093 | 1.035 | 1.148 | 7.24  |      |
| 16)   | 2,2'-oxybis(1-...     | 2.349          | 2.300 | 2.439 | 2.238 | 2.091 | 2.098 | 2.012 | 2.218 | 7.04  |      |
| 17)   | 2-Methylphenol        | 1.241          | 1.142 | 1.253 | 1.151 | 1.092 | 1.091 | 1.053 | 1.146 | 6.67  |      |
| 18)   | Hexachloroethane      | 0.587          | 0.578 | 0.615 | 0.571 | 0.534 | 0.538 | 0.522 | 0.563 | 5.92  |      |
| 19) P | n-Nitroso-di-n...     | 1.087          | 1.060 | 1.073 | 1.106 | 1.028 | 0.952 | 0.954 | 0.919 | 1.022 | 6.96 |
| 20)   | 3+4-Methylphenols     | 1.600          | 1.550 | 1.614 | 1.429 | 1.341 | 1.309 | 1.259 | 1.443 | 10.10 |      |
| 21) I | Naphthalene-d8        | -----ISTD----- |       |       |       |       |       |       |       |       |      |
| 22)   | Acetophenone          | 0.542          | 0.532 | 0.530 | 0.498 | 0.466 | 0.478 | 0.457 | 0.500 | 6.91  |      |
| 23) S | Nitrobenzene-d5       | 0.396          | 0.389 | 0.403 | 0.391 | 0.367 | 0.382 | 0.367 | 0.385 | 3.62  |      |
| 24)   | Nitrobenzene          | 0.401          | 0.403 | 0.406 | 0.394 | 0.368 | 0.391 | 0.375 | 0.391 | 3.66  |      |
| 25)   | Isophorone            | 0.760          | 0.733 | 0.756 | 0.729 | 0.665 | 0.708 | 0.678 | 0.718 | 5.11  |      |
| 26) C | 2-Nitrophenol         | 0.180          | 0.178 | 0.197 | 0.191 | 0.179 | 0.191 | 0.181 | 0.185 | 4.10  |      |
| 27)   | 2,4-Dimethylph...     | 0.249          | 0.239 | 0.246 | 0.231 | 0.216 | 0.232 | 0.216 | 0.233 | 5.63  |      |
| 28)   | bis(2-Chloroet...     | 0.476          | 0.435 | 0.451 | 0.443 | 0.407 | 0.425 | 0.407 | 0.435 | 5.66  |      |
| 29) C | 2,4-Dichloroph...     | 0.296          | 0.294 | 0.308 | 0.294 | 0.274 | 0.285 | 0.268 | 0.288 | 4.75  |      |
| 30)   | 1,2,4-Trichlor...     | 0.347          | 0.337 | 0.345 | 0.329 | 0.299 | 0.314 | 0.299 | 0.325 | 6.35  |      |
| 31)   | Naphthalene           | 1.199          | 1.139 | 1.154 | 1.102 | 1.011 | 1.046 | 0.998 | 1.093 | 7.01  |      |
| 32)   | Benzoic acid          | 0.174          | 0.188 | 0.232 | 0.227 | 0.229 | 0.239 | 0.221 | 0.216 | 11.43 |      |
| 33)   | 4-Chloroaniline       | 0.429          | 0.418 | 0.424 | 0.412 | 0.380 | 0.401 | 0.382 | 0.407 | 4.81  |      |
| 34) C | Hexachlorobuta...     | 0.217          | 0.203 | 0.209 | 0.202 | 0.184 | 0.191 | 0.182 | 0.198 | 6.51  |      |
| 35)   | Caprolactam           | 0.103          | 0.098 | 0.105 | 0.093 | 0.091 | 0.095 | 0.090 | 0.096 | 5.94  |      |
| 36) C | 4-Chloro-3-met...     | 0.343          | 0.337 | 0.347 | 0.337 | 0.309 | 0.323 | 0.302 | 0.328 | 5.30  |      |
| 37)   | 2-Methylnaphth...     | 0.776          | 0.728 | 0.746 | 0.710 | 0.646 | 0.676 | 0.635 | 0.702 | 7.48  |      |
| 38)   | 1-Methylnaphth...     | 0.774          | 0.728 | 0.735 | 0.696 | 0.632 | 0.657 | 0.622 | 0.692 | 8.26  |      |

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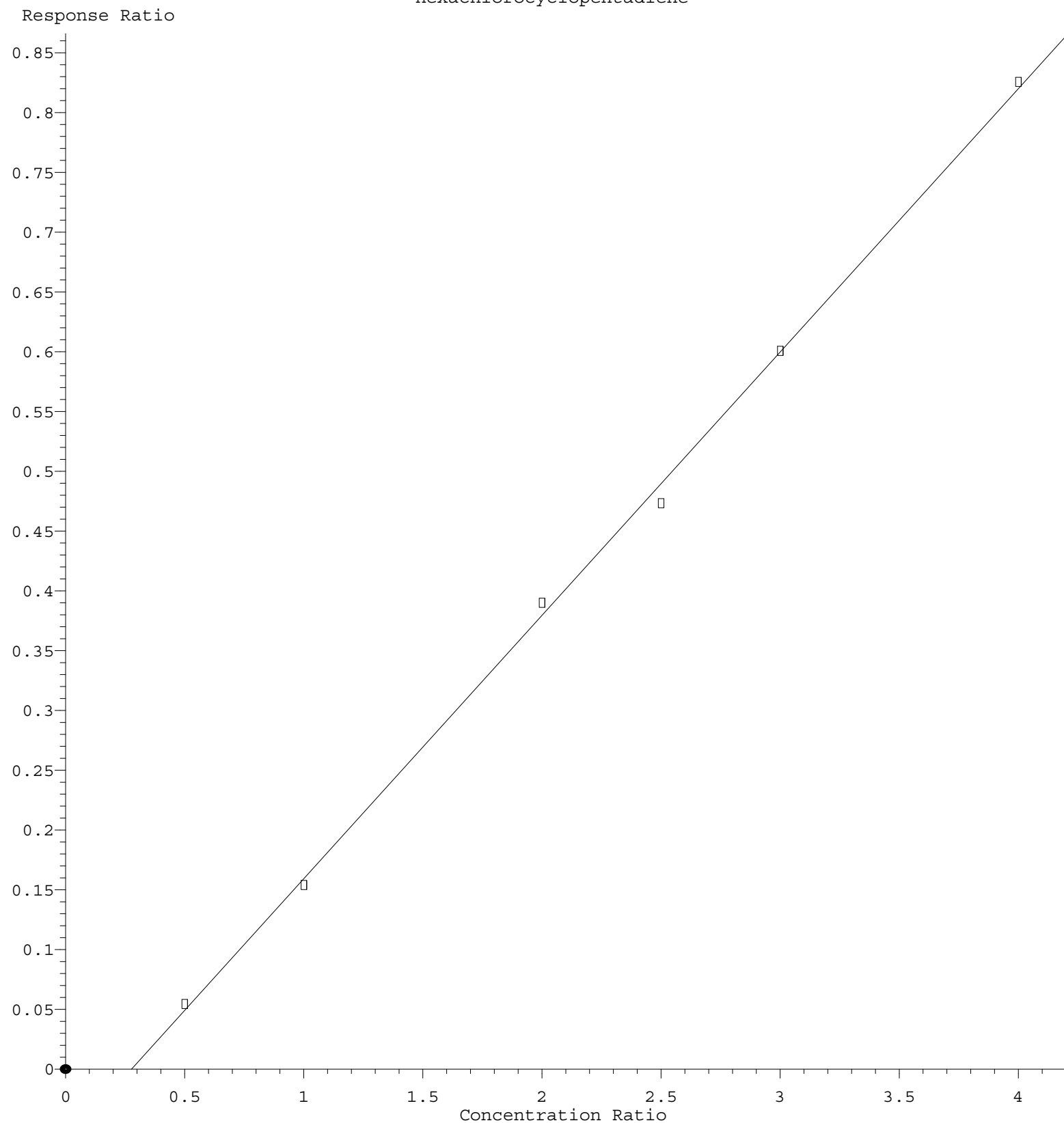
|       |                   |                |       |       |       |       |       |       |       |       |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 39) I | Acenaphthene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 40)   | 1,2,4,5-Tetrac... | 0.644          | 0.608 | 0.639 | 0.620 | 0.578 | 0.585 | 0.574 | 0.607 | 4.78  |  |
| 41) P | Hexachlorocycl... |                | 0.109 | 0.154 | 0.195 | 0.189 | 0.200 | 0.206 | 0.176 | 21.34 |  |
| 42) S | 2,4,6-Tribromo... | 0.261          | 0.241 | 0.251 | 0.231 | 0.220 | 0.219 | 0.209 | 0.233 | 8.10  |  |
| 43) C | 2,4,6-Trichlor... | 0.408          | 0.404 | 0.418 | 0.409 | 0.380 | 0.389 | 0.379 | 0.398 | 3.86  |  |
| 44)   | 2,4,5-Trichlor... | 0.457          | 0.435 | 0.468 | 0.456 | 0.418 | 0.423 | 0.415 | 0.439 | 4.91  |  |
| 45) S | 2-Fluorobiphenyl  | 1.690          | 1.569 | 1.557 | 1.460 | 1.360 | 1.326 | 1.286 | 1.464 | 10.14 |  |
| 46)   | 1,1'-Biphenyl     | 1.850          | 1.730 | 1.775 | 1.693 | 1.556 | 1.570 | 1.528 | 1.672 | 7.35  |  |
| 47)   | 2-Chloronaphth... | 1.352          | 1.274 | 1.335 | 1.288 | 1.196 | 1.207 | 1.186 | 1.263 | 5.34  |  |
| 48)   | 2-Nitroaniline    | 0.413          | 0.400 | 0.422 | 0.401 | 0.385 | 0.387 | 0.387 | 0.399 | 3.53  |  |
| 49)   | Acenaphthylene    | 2.119          | 2.014 | 2.083 | 1.960 | 1.819 | 1.833 | 1.744 | 1.939 | 7.37  |  |
| 50)   | Dimethylphthalate | 1.574          | 1.454 | 1.507 | 1.426 | 1.351 | 1.385 | 1.342 | 1.434 | 5.90  |  |
| 51)   | 2,6-Dinitrotol... | 0.352          | 0.333 | 0.348 | 0.321 | 0.311 | 0.314 | 0.309 | 0.327 | 5.49  |  |
| 52) C | Acenaphthene      | 1.346          | 1.228 | 1.287 | 1.194 | 1.131 | 1.122 | 1.085 | 1.199 | 7.91  |  |
| 53)   | 3-Nitroaniline    | 0.373          | 0.363 | 0.371 | 0.346 | 0.331 | 0.338 | 0.336 | 0.351 | 5.02  |  |
| 54) P | 2,4-Dinitrophenol |                | 0.126 | 0.162 | 0.175 | 0.171 | 0.183 | 0.183 | 0.167 | 12.82 |  |
| 55)   | Dibenzofuran      | 2.064          | 1.907 | 1.946 | 1.812 | 1.681 | 1.667 | 1.577 | 1.808 | 9.68  |  |
| 56) P | 4-Nitrophenol     | 0.236          | 0.234 | 0.251 | 0.246 | 0.236 | 0.243 | 0.231 | 0.239 | 3.04  |  |
| 57)   | 2,4-Dinitrotol... | 0.454          | 0.432 | 0.457 | 0.423 | 0.403 | 0.398 | 0.378 | 0.421 | 7.03  |  |
| 58)   | Fluorene          | 1.635          | 1.538 | 1.546 | 1.420 | 1.330 | 1.332 | 1.244 | 1.435 | 9.90  |  |
| 59)   | 2,3,4,6-Tetrac... | 0.363          | 0.340 | 0.379 | 0.341 | 0.327 | 0.327 | 0.313 | 0.342 | 6.63  |  |
| 60)   | Diethylphthalate  | 1.696          | 1.550 | 1.574 | 1.471 | 1.406 | 1.394 | 1.349 | 1.491 | 8.20  |  |
| 61)   | 4-Chlorophenyl... | 0.799          | 0.727 | 0.753 | 0.686 | 0.631 | 0.638 | 0.604 | 0.691 | 10.34 |  |
| 62)   | 4-Nitroaniline    | 0.377          | 0.356 | 0.370 | 0.342 | 0.331 | 0.342 | 0.313 | 0.347 | 6.42  |  |
| 63)   | Azobenzene        | 1.504          | 1.433 | 1.470 | 1.408 | 1.326 | 1.333 | 1.278 | 1.393 | 5.96  |  |
| 64) I | Phenanthrene-d10  | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 65)   | 4,6-Dinitro-2-... | 0.095          | 0.106 | 0.125 | 0.130 | 0.121 | 0.127 | 0.123 | 0.118 | 10.95 |  |
| 66) c | n-Nitrosodiphe... | 0.725          | 0.676 | 0.683 | 0.676 | 0.611 | 0.628 | 0.602 | 0.657 | 6.79  |  |
| 67)   | 4-Bromophenyl-... | 0.239          | 0.229 | 0.232 | 0.235 | 0.211 | 0.216 | 0.204 | 0.224 | 5.97  |  |
| 68)   | Hexachlorobenzene | 0.267          | 0.254 | 0.263 | 0.259 | 0.234 | 0.240 | 0.230 | 0.249 | 5.97  |  |
| 69)   | Atrazine          | 0.187          | 0.178 | 0.167 | 0.136 | 0.114 |       |       | 0.156 | 19.43 |  |
| 70) C | Pentachlorophenol | 0.108          | 0.119 | 0.128 | 0.133 | 0.120 | 0.125 | 0.116 | 0.121 | 6.94  |  |
| 71)   | Phenanthrene      | 1.160          | 1.084 | 1.091 | 1.039 | 0.957 | 0.987 | 0.913 | 1.033 | 8.34  |  |
| 72)   | Anthracene        | 1.165          | 1.109 | 1.098 | 1.054 | 0.964 | 0.985 | 0.936 | 1.044 | 8.15  |  |
| 73)   | Carbazole         | 1.113          | 1.047 | 1.047 | 0.970 | 0.887 | 0.925 | 0.859 | 0.978 | 9.62  |  |
| 74)   | Di-n-butylphth... | 1.325          | 1.256 | 1.260 | 1.206 | 1.130 | 1.130 | 1.061 | 1.195 | 7.76  |  |
| 75) C | Fluoranthene      | 1.310          | 1.212 | 1.190 | 1.076 | 0.990 | 1.002 | 0.927 | 1.101 | 12.67 |  |
| 76) I | Chrysene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 77)   | Benzidine         | 1.126          | 0.912 | 0.264 | 0.541 | 0.391 | 0.337 | 0.299 | 0.553 | 60.79 |  |
| 78)   | Pyrene            | 1.938          | 1.882 | 2.082 | 2.154 | 1.850 | 2.031 | 1.873 | 1.973 | 5.95  |  |
| 79) S | Terphenyl-d14     | 1.519          | 1.399 | 1.513 | 1.500 | 1.318 | 1.403 | 1.290 | 1.420 | 6.63  |  |
| 80)   | Butylbenzylpht... | 0.671          | 0.656 | 0.719 | 0.748 | 0.687 | 0.729 | 0.692 | 0.700 | 4.71  |  |
| 81)   | Benzo(a)anthra... | 1.549          | 1.429 | 1.453 | 1.413 | 1.267 | 1.337 | 1.258 | 1.387 | 7.60  |  |
| 82)   | 3,3'-Dichlorob... | 0.436          | 0.413 | 0.406 | 0.388 | 0.346 | 0.330 | 0.310 | 0.376 | 12.60 |  |
| 83)   | Chrysene          | 1.441          | 1.345 | 1.404 | 1.376 | 1.264 | 1.299 | 1.249 | 1.340 | 5.39  |  |
| 84)   | Bis(2-ethylhex... | 0.857          | 0.788 | 0.893 | 0.949 | 0.884 | 0.890 | 0.868 | 0.875 | 5.53  |  |
| 85) c | Di-n-octyl pht... | 1.262          | 1.164 | 1.340 | 1.479 | 1.433 | 1.405 | 1.468 | 1.364 | 8.54  |  |

Method Path : Z:\svoasrv\HPCHEM1\BNA\_F\Methods\  
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|       |                   |                |       |       |       |       |       |       |       |       |  |
|-------|-------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 86) I | Perylene-d12      | -----ISTD----- |       |       |       |       |       |       |       |       |  |
| 87)   | Indeno(1,2,3-c... | 1.265          | 1.222 | 1.425 | 1.556 | 1.473 | 1.537 | 1.476 | 1.422 | 9.14  |  |
| 88)   | Benzo(b)fluora... | 1.492          | 1.412 | 1.395 | 1.392 | 1.261 | 1.277 | 1.171 | 1.343 | 8.21  |  |
| 89)   | Benzo(k)fluora... | 1.372          | 1.352 | 1.358 | 1.225 | 1.139 | 1.206 | 1.140 | 1.256 | 8.20  |  |
| 90) C | Benzo(a)pyrene    | 1.224          | 1.153 | 1.178 | 1.150 | 1.077 | 1.106 | 1.057 | 1.135 | 5.15  |  |
| 91)   | Dibenzo(a,h)an... | 1.035          | 1.022 | 1.187 | 1.280 | 1.201 | 1.249 | 1.188 | 1.166 | 8.58  |  |
| 92)   | Benzo(g,h,i)pe... | 1.037          | 1.021 | 1.199 | 1.334 | 1.247 | 1.306 | 1.255 | 1.200 | 10.38 |  |

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

## Hexachlorocyclopentadiene



$$\text{Response} = 2.204\text{e-}001 * \text{Amt} - 6.114\text{e-}002$$

Coef of Det ( $r^2$ ) = 0.998848 Curve Fit: Linear

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Calibration Table Last Updated: Wed Dec 20 04:16:58 2023