**Supporting information**

**Table 1: Concentration-response models and corresponding parameter estimates**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Particles*** | ***Model*** | ***a*** | ***b*** | ***c*** | ***lower*** | ***upper*** | ***EC05 [µg/L)*** | ***EC10 (µg/L)*** | ***EC50 (µg/L)*** |
| Silver Nitrate | 3-P | 1.73418 | 2.56611 |  | 0 | 1.3048 | 0.043 (0.053 -0.036) | 0.059 (0.071 – 0.05) | 0.16 (0.18 – 0.14) |
| nAg1 (3-8 nm, non-coated) | 3-MMF | 2.737 | 4.02723 |  | 0 | 1.38173 | 0.73 (0.94 – 0.59) | 1.11 (1.36 – 0.92) | 3.46 (3.84 -3.10) |
| nAg2 (10 nm, non coated) | 3-W | -4.12859 | 3.29169 |  | 0 | 1.20954 | 1.96 (2.42 - 1.63) | 3.24 (3.75 - 2.77) | 11.6 (12.5 – 10.8) |
| nAg3 (20 nm, non-coated) | 4-MMF | -4.0185 | 7.32884 |  | -0.04839 | 1.29667 | 0.13 (0.15 – 0.11) | 0.15 (0.17 – 0.13) | 0.25 (0.28 – 0.23) |
| nAg4 (20 nm citrate coated) | 3-MMF | 5.73575 | 4.55618 |  | 0 | 1.41638 | 3.41 (4.82- 2.59) | 4.93 (6.52 - 3.88) | 13.4 (15.3 - 11.6) |
| nAg5 (20 nm tannic acid coated) | 3-MMF | 0.59153 | 4.08383 |  | 0 | 1.3514 | 0.22 (0.29 – 0.18) | 0.34 (0.41 – 0.28) | 1.03 (1.16 – 0.93) |
| nAg6 (40 nm, citrate coated) | 4-GL2 | -2.80372 | 3.4325 | 2.09515 | 0 | 1.45093 | 0.42 (0.57 – 0.33) | 0.69 (0.86 – 0.55) | 2.40 (2.68 -2.13) |
| nAg8 (50 nm, uncoated, powder) | 3-MMF | 3.29022 | 3.16936 |  | 0 | 1.44023 | 0.98 (1.43 – 0.71) | 1.66 (2.22 - 1.25) | 6.90 (7.95 - 5.90) |

Probit: 

Generalized Logit 2: 

Morgan-Mercer-Flodin: 

Weibull: 

Table 2: Medium composition according to ISO guideline 10712 (1995).

|  |  |  |
| --- | --- | --- |
| **Nutrients** | **Preculture Solution**  mg/l | **Test Nutrient Solution**  mg/l |
| NaNO3 | 500 | 500 |
| K2HPO4 × 3H2O | 120 | 120 |
| KH2PO4 | 60 | 60 |
| yeast extract | 50 | - |
| C6H12O6 | 2000 | 2000 |
| MgSO4 × 7H2O | 200 | 200 |
| iron(III) citrate | 0,5 | 0,5 |

Stock solutions are prepared from autoclaved or sterile filtered MilliQ water. According to the standard the solutions can be stored for several weeks in the refrigerator at 2° C to 4° C.