

Supplementary Materials for:
**Selection of chromatographic separation conditions for reliable monitoring of
transformation of AgNPs/Ag(I) species by HPLC-ICP-MS in surface water and green
algae cells**

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Table 1S. The biosorption and uptake of Ag(I) and AgNPs by *Acutodesmus obliquus* determined by ICP-MS method

| | Added mass of Ag, μg | Mass of Ag in algae, μg | Biosorption, % | Average biosorption, % | Dry mass of algae, g | Uptake, $\mu\text{g/g}$ | Average uptake, $\mu\text{g/g}$ |
|------------|---------------------------------|------------------------------------|----------------|------------------------|----------------------|-------------------------|---------------------------------|
| Ag(I) | 2.5353 | 2.1407 | 84.4 | 82.3 | 0.0145 | 147.3 | 143.0 |
| | 2.5353 | 2.0311 | 80.1 | | 0.0146 | 138.7 | |
| 10nm AgNPs | 2.4840 | 1.9521 | 78.6 | 77.2 | 0.0147 | 132.9 | 131.2 |
| | 2.4820 | 1.8811 | 75.8 | | 0.0145 | 129.6 | |
| 30nm AgNPs | 2.5903 | 2.1798 | 84.2 | 82.7 | 0.0146 | 149.7 | 143.8 |
| | 2.4056 | 1.9557 | 81.3 | | 0.0142 | 137.8 | |

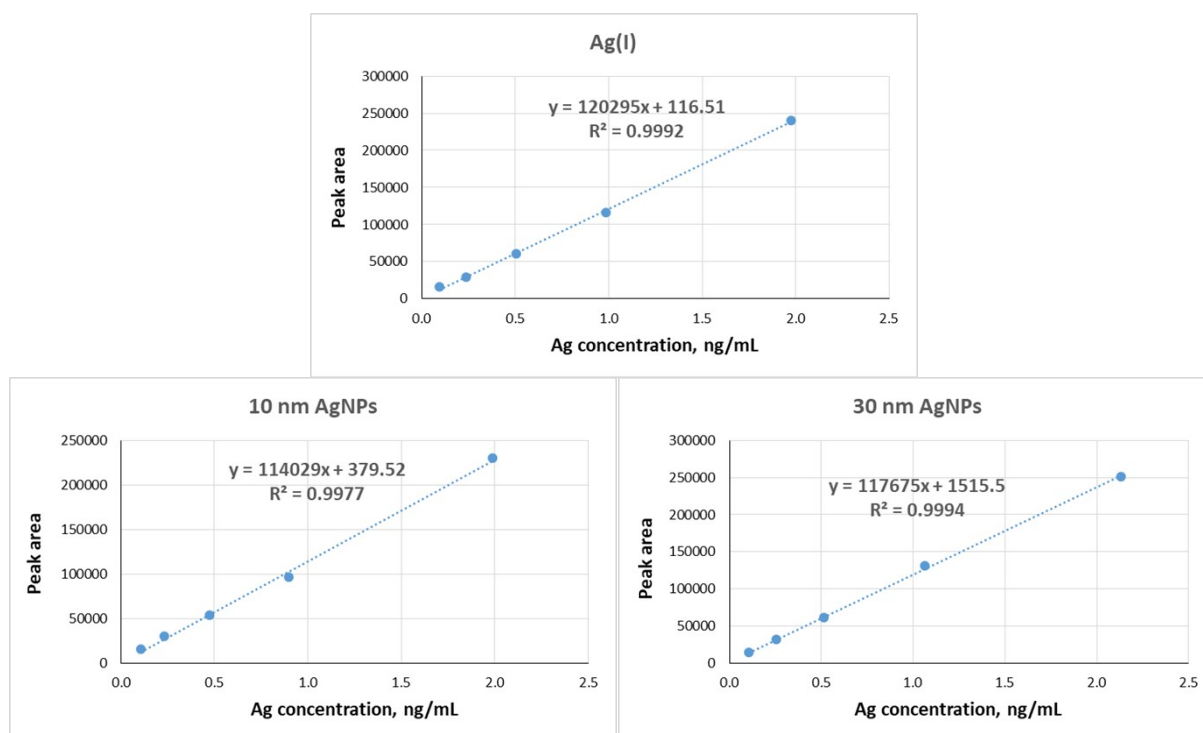


Figure 1S. Calibration graphs for Ag(I) and AgNPs determination by HPLC-ICP-MS method (column: Nucleosil C18 (250×4.6 mm, 7 μm particle size, 1000 \AA pore size), mobile phase: 10 mM SDS, 2 mM citrate buffer, 2 mM tiopronin, flow rate: 0.5 mL/min, injection volume: 50 μL)