Electronic Supplementary Information

Effect propagation after silver nanoparticle exposure in zebrafish (Danio rerio)

embryos: a correlation to internal concentration and distribution patterns

Steffi Böhme¹, Hans-Joachim Stärk², Thorsten Reemtsma², Dana Kühnel^{1*}

¹ Helmholtz Centre for Environmental Research - UFZ, Department of Bioanalytical Ecotoxicology,

Permoserstrasse 15, 04318 Leipzig (Germany)

² Helmholtz Centre for Environmental Research - UFZ, Department of Analytical Chemistry, Permoserstrasse 15, 04318 Leipzig (Germany)

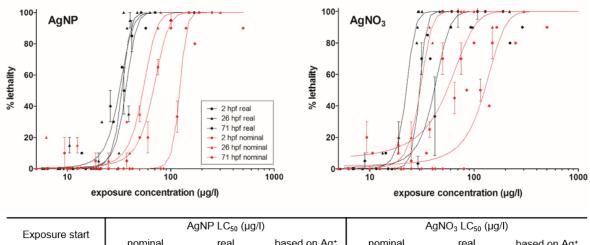
* Correspondence: <u>dana.kuehnel@ufz.de</u>

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Results and Discussion

Toxicity assessment and correction to real exposure concentrations

The following steps were performed for a complete toxicity assessment: (1) ZFE toxicity testing of AgNPs and AgNO₃ according to the OECD test guideline 236, (2) correction of calculated dose-response curves and the LC₅₀-values using measured, real silver concentrations, and (3) comparison of the obtained results based on nominal and corrected exposure concentrations. The corrected compared to the nominal effect concentrations after 48 h of exposure were shown in **Fig. S1**. A concentration-dependent toxicity was observed for AgNP and AgNO₃ treated ZFEs.



Exposure start	Agine LO ₅₀ (µg/I)			AginO ₃ LO ₅₀ (μ g/I)		
	nominal	real	based on Ag⁺	nominal	real	based on Ag⁺
2 hpf	66.0 ± 3.7	31.3 ± 1.4	1.4	49.9 ± 12.8	29.8 ± 0.8	3.0
26 hpf	52.8 ± 5.7	33.4 ± 4.3	1.5	30.1 ± 1.7	22.2 ± 1.3	2.2
71 hpf	121.1 ± 5.3	36.3 ± 3.4	1.6	118.8 ± 22.8	40.6 ± 4.9	4.1

Fig. S1: Dose-response curves based on nominal (red) and corrected real exposure concentrations (black) for the respective developmental stages of the ZFE. The calculated nominal and real LC_{50} values of the respective AgNP or AgNO₃ exposure as well as the developmental stage are listed in the table below. The LC_{50} values based on the dissolved Ag⁺ were calculated according to the ionic silver content in the exposure solution.