



Viricidal Activity of Thermoplastic Polyurethane Materials with Silver Nanoparticles

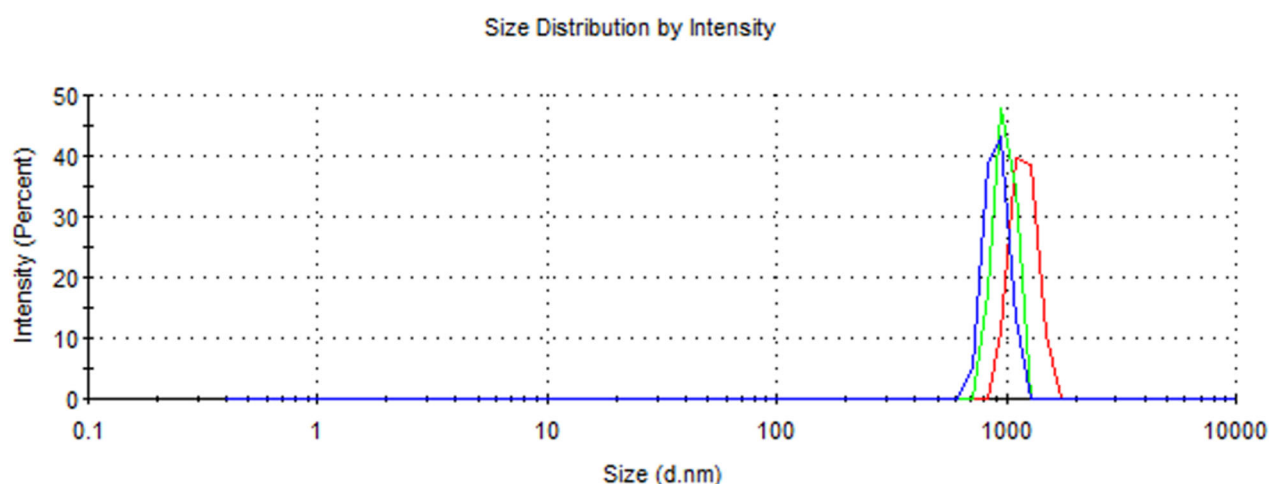


Figure S1. Hydrodynamic diameter (HDD) determined by dynamic light scattering (DLS) of NPs released into Milli-Q water inocula incubated with AgNP-TPU materials for 24 h at 20 °C. Results from three independent experiments, each shown in a different color.

$$\gamma_{Ag^+} = \frac{3}{4} \left(\frac{8\pi k_B T}{m_B} \right) p^{-1} \exp\left(\frac{-E_a}{k_B T}\right) [Ag]_r^{-1} [O_2]^{0.5} [H^+]^2 \quad (S1)$$

Equation S1: Kinetic model based on the hard sphere theory using the Arrhenius equation. γ_{Ag^+} : Ag^+ release rate; k_B : Boltzmann constant (1.38×10^{-23} J/K); T : temperature (298K); m_B : molecular weight of oxygen or protons; E_a : activation energy (J); $[Ag]_r$: released Ag^+ concentration. Developed by Zhang et al. (2011) [1].

References

1. Zhang, W.; Yao, Y.; Sullivan, N.; Chen, Y. Modeling the Primary Size Effects of Citrate-Coated Silver Nanoparticles on Their Ion Release Kinetics. *Environ. Sci. Technol.* **2011**, *45*, 4422–4428. <https://doi.org/10.1021/es104205a>.