

1 **Acetylcholinesterase inhibition-based colorimetric determination of Hg²⁺ using**
2 **unmodified silver nanoparticles**

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8 **Supplementary Information**

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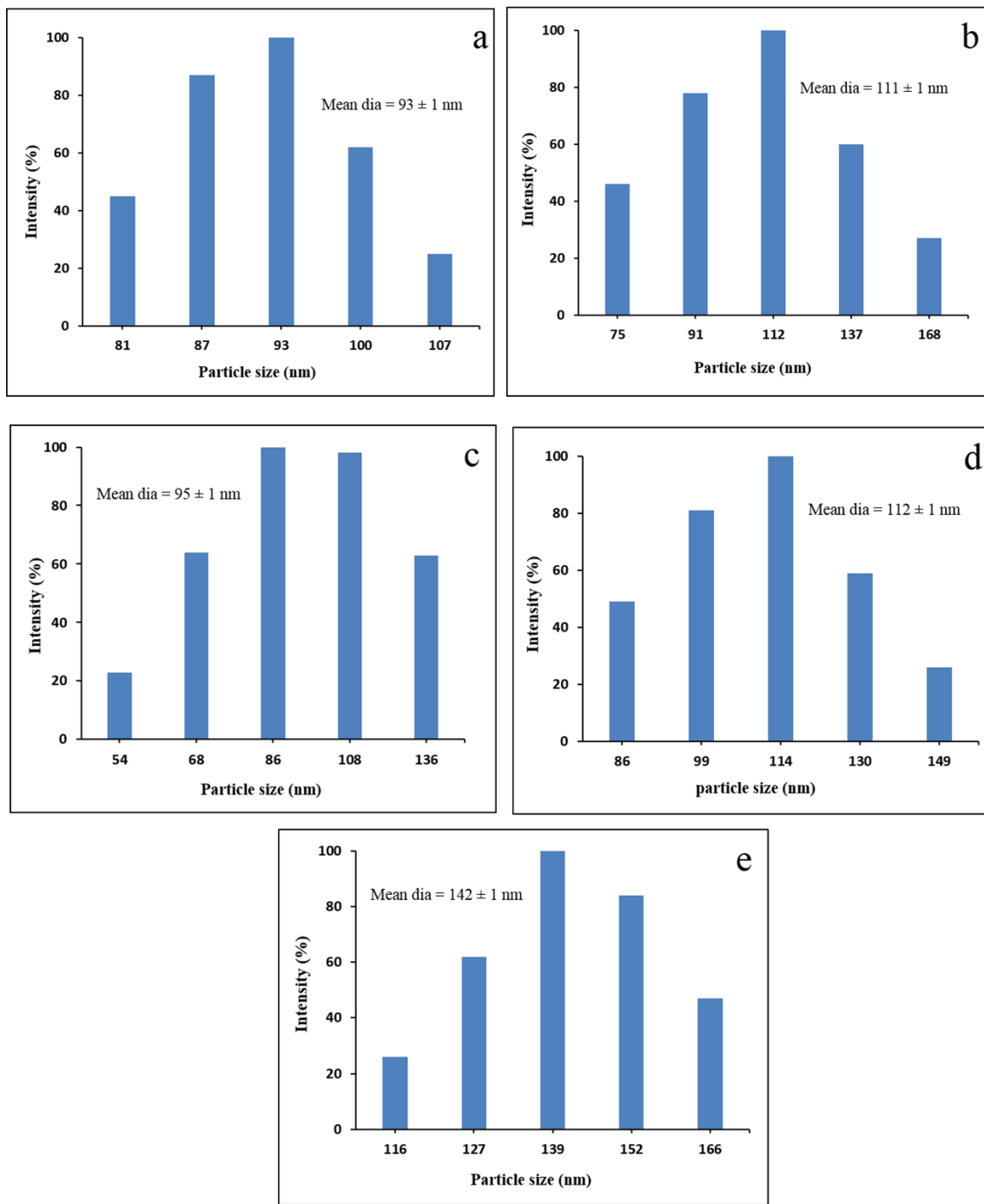
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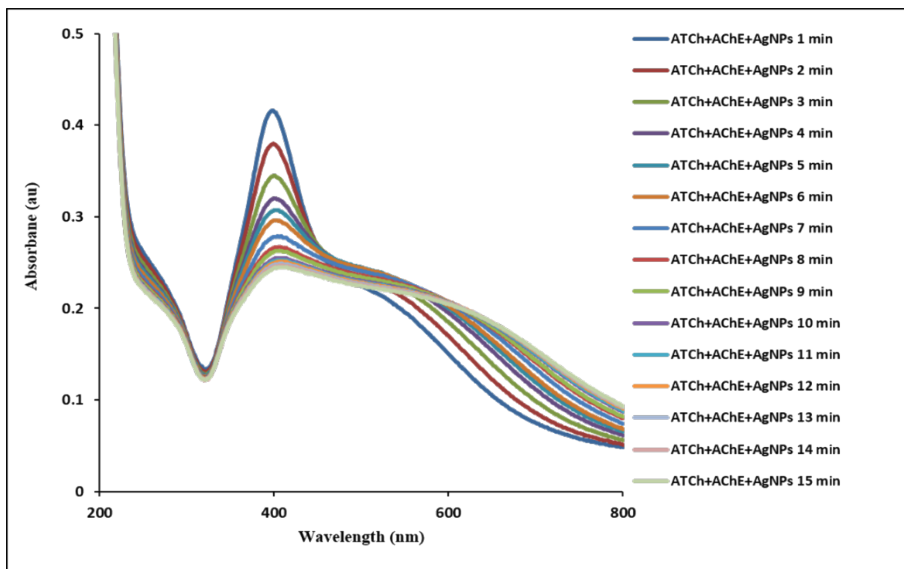
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24 **Figure S1** Hydrodynamic distribution for (A) AgNPs and water, (b) AgNPs and AChE (400 mU
 25 mL⁻¹), (c) AgNPs and Hg²⁺ (1 nM) in presence of AChE (400 mU mL⁻¹), (d) AgNPs and Hg²⁺ (1
 26 nM), (e) AgNPs and Hg²⁺ (1 nM) in presence of ATCh (80 μM), after addition of AChE (400 mU
 27 mL⁻¹).

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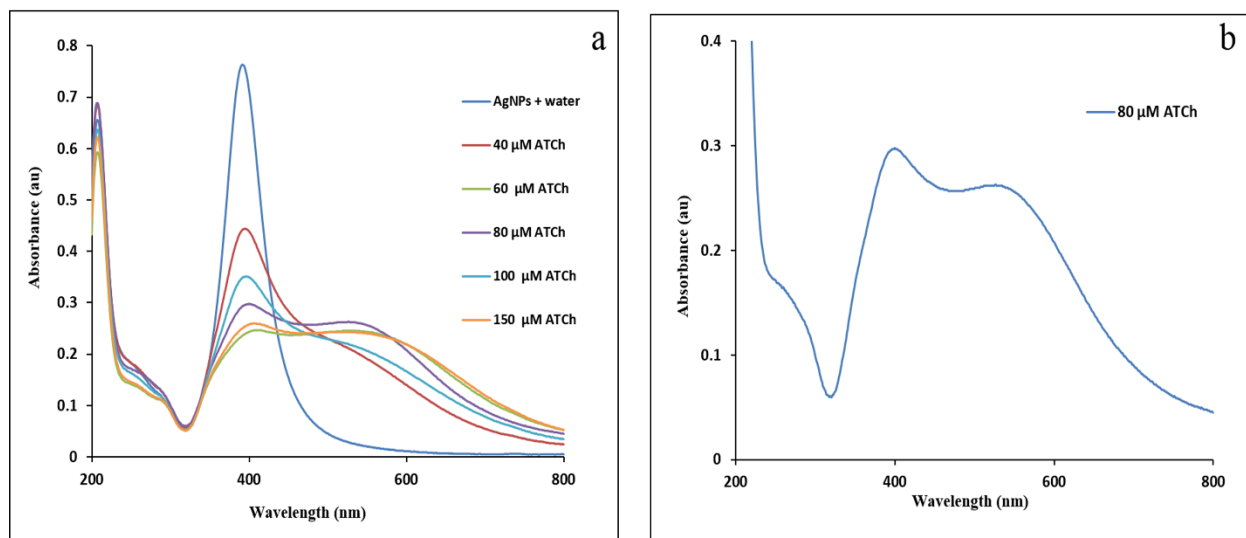


32 **Figure S2** UV-visible spectra for AgNPs after addition of ATCh (80 μ M) and AChE (400 mU
33 mL⁻¹) recorded for every 1 min.



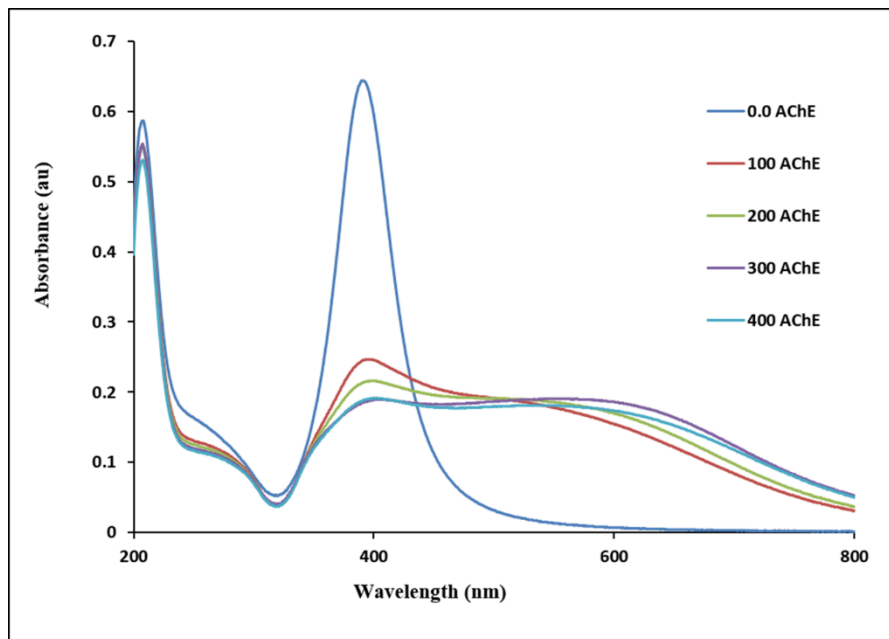
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50 **Figure S3** (a) UV-visible spectra for AgNPs in the presence of different concentrations of ATCh
51 (40-150 μM) and AChE (400 mU mL^{-1}) and (b) ATCh (80 μM); all the samples were allowed to
52 incubate for 5 min at 37 $^{\circ}\text{C}$.



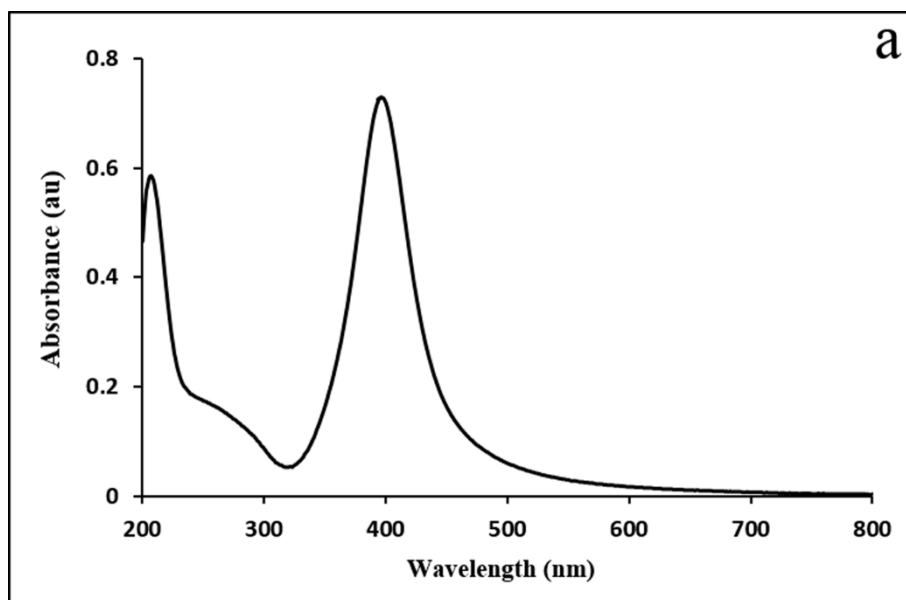
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68 **Figure S4** UV-visible spectra for AgNPs in the presence of different concentrations of AChE
69 (0-400 mU mL⁻¹) and ATCh (80 μM); and the samples were incubated for 5 min at 37 °C.

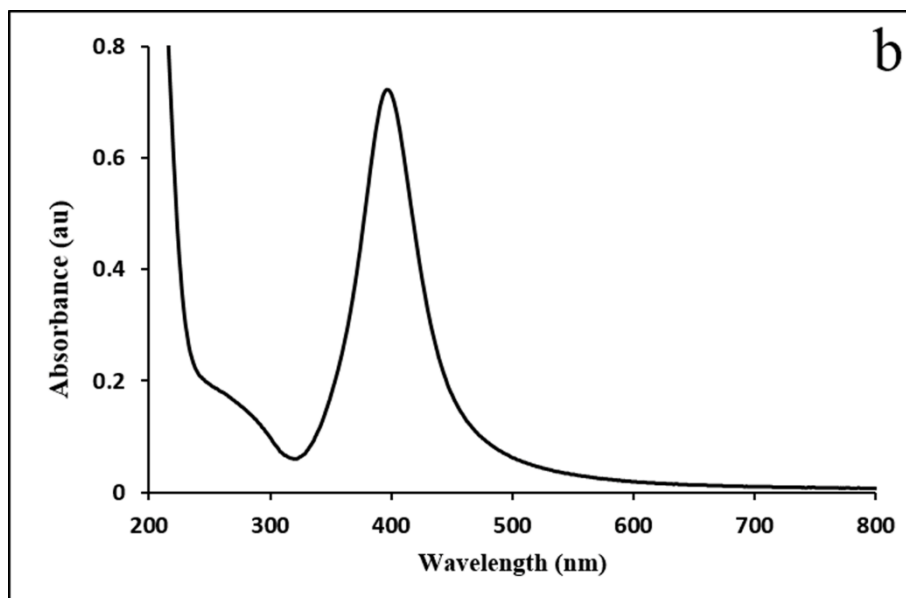


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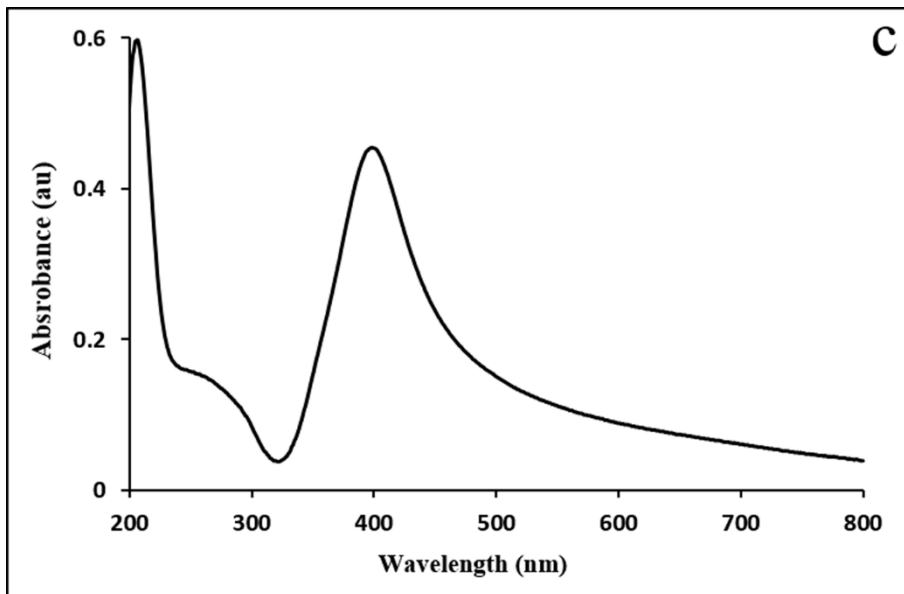
87 **Figure S5** UV-visible spectra for AgNPs in the presence of (a) lake water (b) ground water and
88 (c) sea water



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