

1 **Supplementary Information**

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3 **Detection and characterization of biogenic selenium**
4 **nanoparticles in selenium-rich yeast by single particle ICPMS**

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34 **Table S1** Isotopic abundance and spectral interferences for Se isotopes

Isotope	Abundance (%)	Interference
⁷⁴ Se	0.89	³⁷ Cl ₂ ⁺ , ³⁸ Ar ³⁶ Ar ⁺ , ³⁸ Ar ³⁶ S ⁺ , ⁴⁰ Ar ³⁴ S ⁺ , ⁷⁴ Ge ⁺
⁷⁶ Se	9.36	⁴⁰ Ar ³⁶ Ar ⁺ , ³⁸ Ar ³⁸ Ar ⁺ , ⁴⁰ Ar ³⁶ S ⁺ , ⁷⁶ Ge ⁺ , ³⁹ K ³⁷ Cl ⁺
⁷⁷ Se	7.63	⁴⁰ Ar ³⁶ ArH ⁺ , ⁴⁰ Ar ³⁷ Cl ⁺ , ³⁸ Ar ₂ H ⁺ , ⁴¹ K ³⁶ Ar ⁺ , ⁴² Ca ³⁵ Cl ⁺
⁷⁸ Se	23.78	⁴⁰ Ar ³⁸ Ar ⁺ , ⁷⁸ Kr ⁺ , ³⁸ Ar ⁴⁰ Ca ⁺ , ⁶⁴ Zn ¹⁴ N ⁺ , ⁴⁴ Ca ³⁴ S ⁺
⁸⁰ Se	49.61	⁴⁰ Ar ₂ ⁺ , ⁷⁹ BrH ⁺ , ⁸⁰ Kr ⁺ , ⁴⁰ Ar ⁴⁰ Ca ⁺
⁸² Se	8.73	⁸¹ BrH ⁺ , ⁴⁰ Ar ⁴² Ca ⁺ , ⁴⁰ Ar ₂ H ₂ ⁺ , ⁸² Kr ⁺ , ¹² C ³⁵ Cl ₂ ⁺

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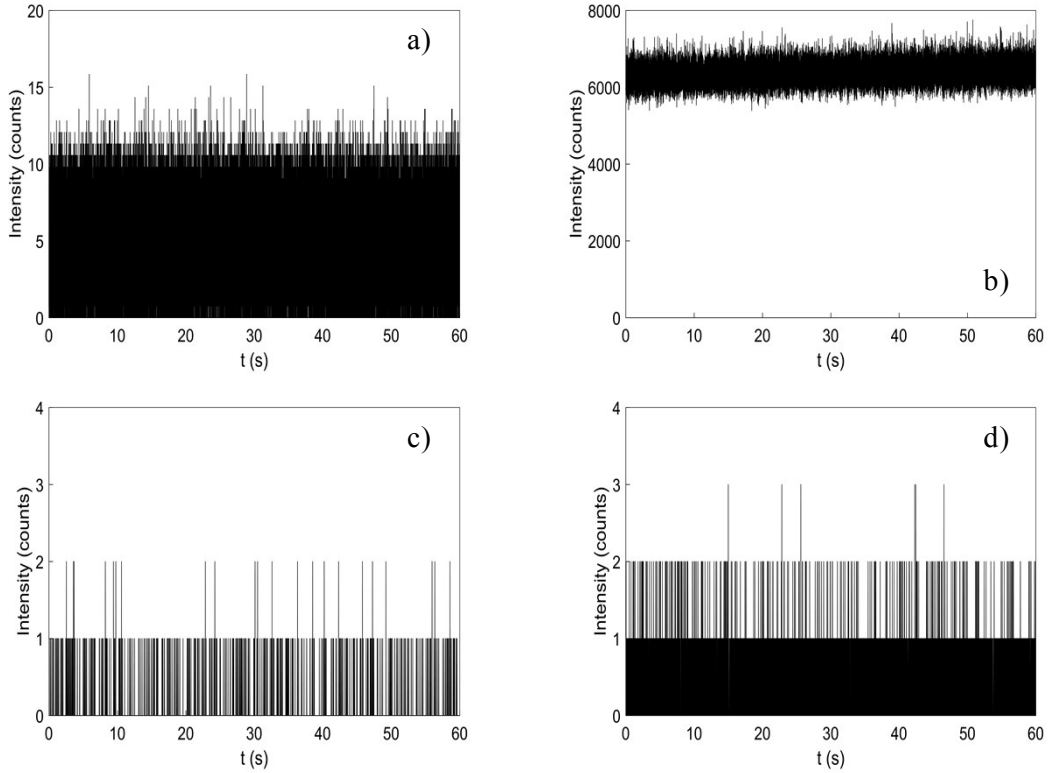
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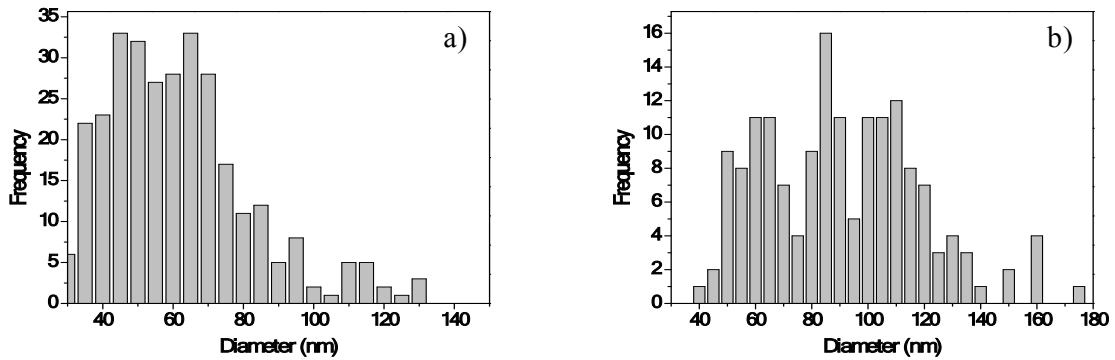
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54 **Fig. S1** Time scans of ultrapure water monitoring (a) ^{78}Se and (b) ^{80}Se without reaction cell; (c) ^{78}Se
 55 and (d) ^{80}Se with reaction cell. Dwell time: 100 μs .

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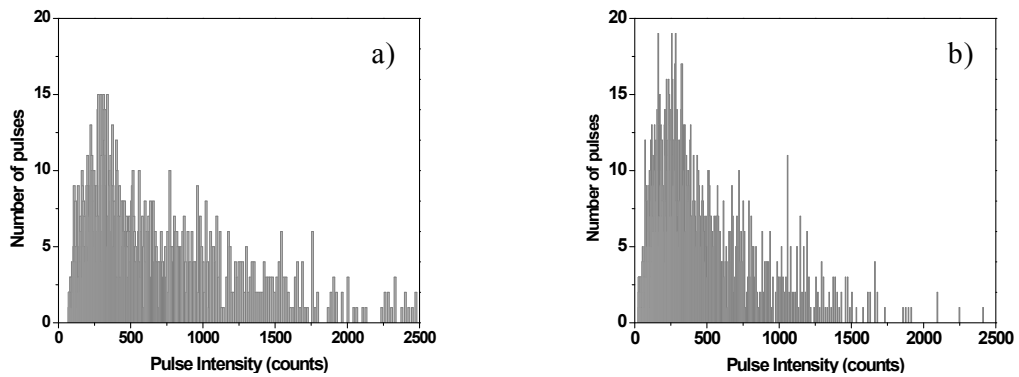


58 **Fig. S2** Size distributions obtained by TEM for a) 50-nm Se nanoparticle suspension; b) 100-nm Se.

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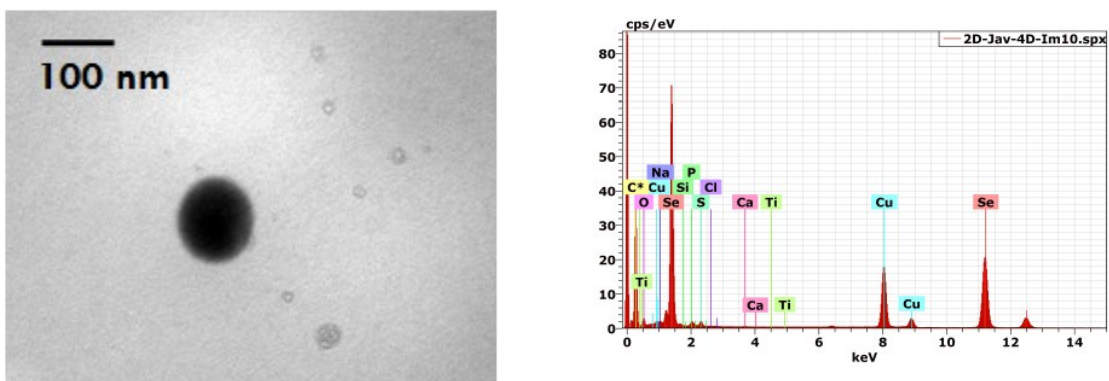


62 **Fig. S3** Signal distribution histograms corresponding to a) Sample A; b) Sample A post column.

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66 **Fig. S4** Transmission electron microscope image and EDS spectrum obtained for Sample A.

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