Thiolated Eggshell Membranes Sorb and Speciate Inorganic Selenium

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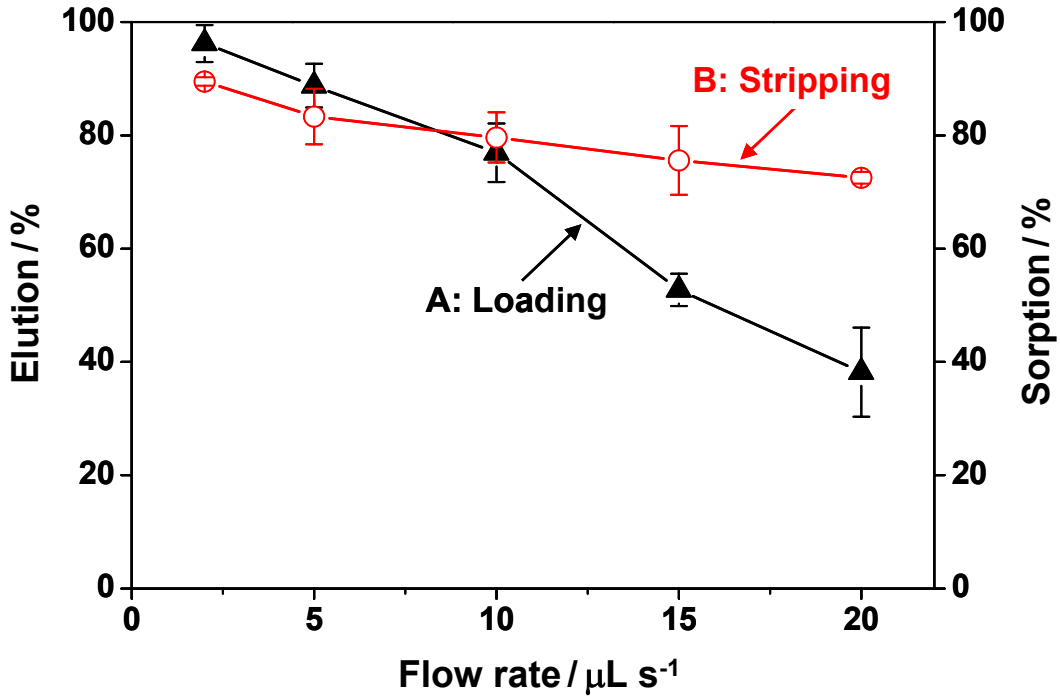

Fig. S1. (A) The dependence of adsorption efficiency of Se(VI) on the sampling flow rate and (B) the dependence of elution efficiency of the retained Se(VI) on the elution flow rate. Sample volume: 1000 μL, 1.5 μg L^{-1} Se(VI); Sample loading flow rate: 5.0 μg L^{-1}; Eluent (0.5 M HNO_3): 50 μL; Elution flow rate: 5.0 μL s^{-1}.

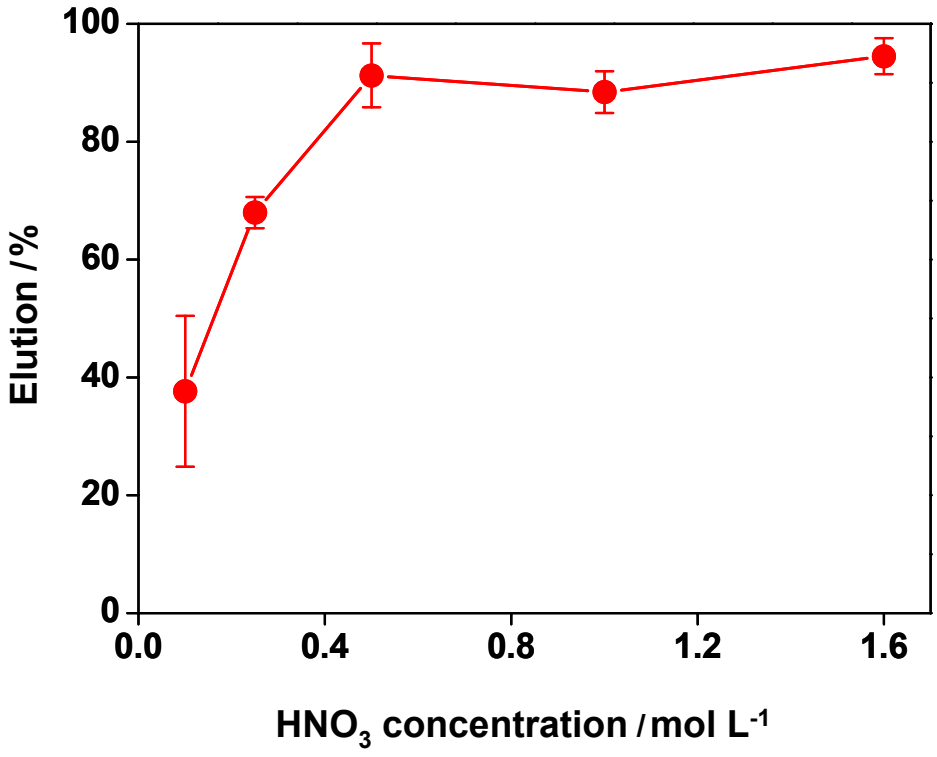

Fig. S2. The dependence of elution efficiency of Se(VI) on the concentration of eluent (HNO_3). Sample volume: 1000 μL, 3.0 μg L^{-1} Se(VI); Sample loading flow rate: 5.0 μg L^{-1}; Eluent (HNO_3 with various concentrations): 100 μL; Elution flow rate: 2.0 μL s^{-1}. Note that the % elution refers to the original amount of Se(VI) taken, 89% is retained in the preconcentration process.

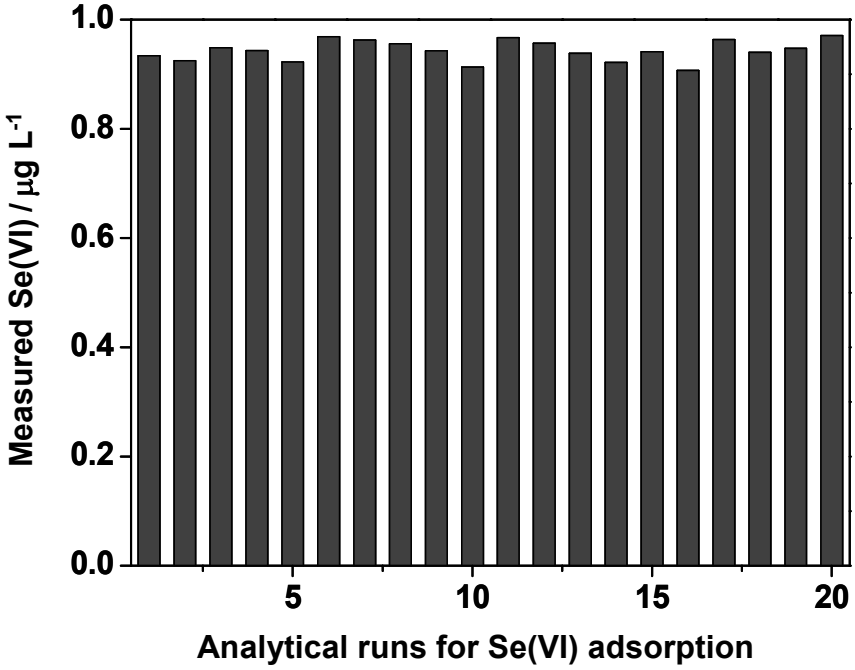

Fig. S3. The adsorption of Se(VI) in the presence of Se(IV) retention/Se(0) accumulation on the thio-ESM. Sample: a mixture of 1.0 μg L^{-1} Se(IV) and 1.0 μg L^{-1} Se(VI), 1000 μL; Sample loading flow rate: 5.0 μg L^{-1}; Eluent (0.5 mol L^{-1} HNO_3): 50 μL; Elution flow rate: 2.0 μL s^{-1}.