Application of a new nanoporous sorbent for extraction and pre-concentration of lead and copper ions

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Figure 1S. The effect of sorption time in the retention of lead and copper ions by the synthesized sorbent.

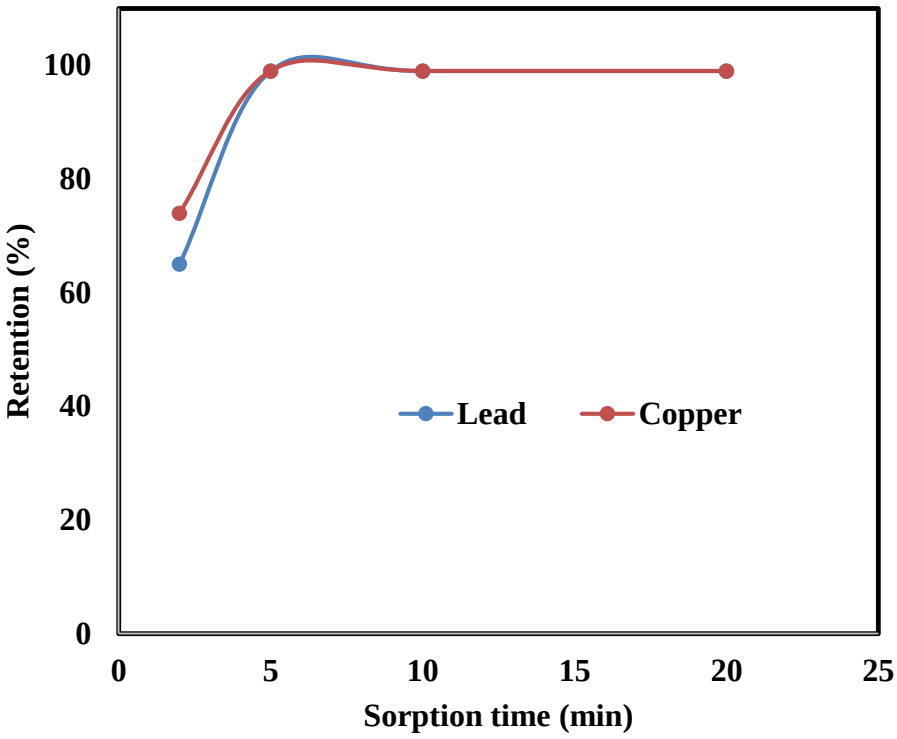

Figure 2S. The effect of sample volume on the recovery of target ions by the mesoporous sorbent.

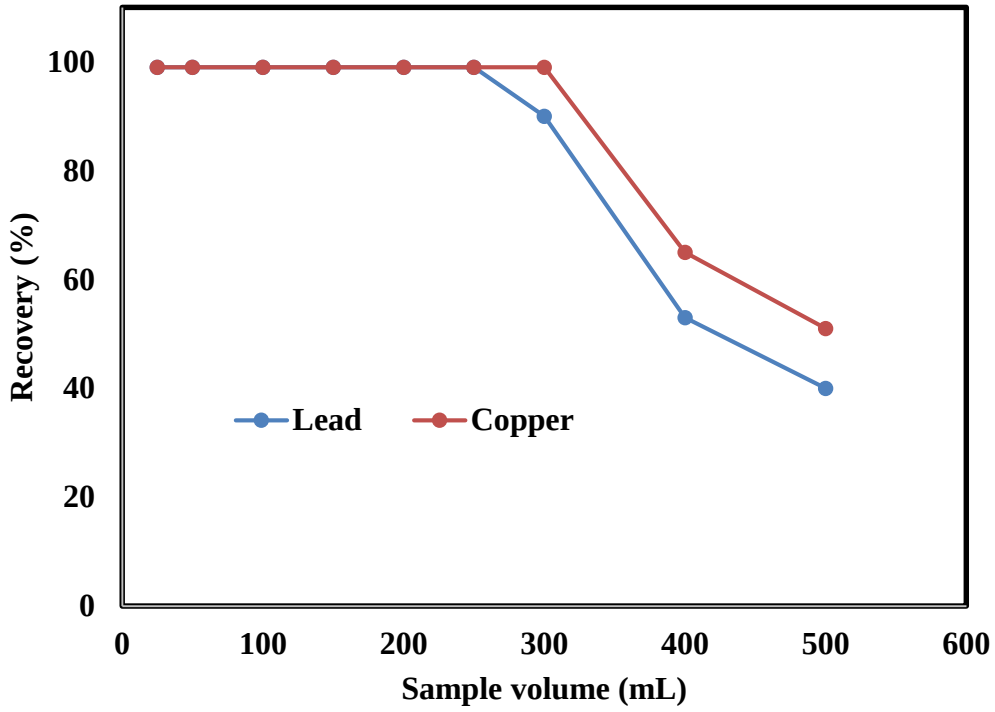

Table 1S. The effect of type, concentration, volume and time of the elution step on the extraction recovery of lead and copper ions.

Eluent	Concentration (mol L^{-1})	Desorption time (min)	Volume (mL)	R^a % $\pm S^b$	
				Lead	Copper
HNO_3	2	10	5.0	86.0 ± 1.2	90.0 ± 1.4
HCl	2	10	5.0	99.0 ± 1.0	99.0 ± 1.0
CH_3COOH	2	10	5.0	41.0 ±2.1	52.0 ± 1.3
HNO_3:HCl	1:1	10	5.0	81.0 ± 1.3	85.0 ± 1.4
HCl	1.5	10	5.0	99.0 ± 1.0	99.0 ± 1.0
HCl	1	10	5.0	99.0 ± 1.0	99.0 ± 1.0
HCl	0.5	10	5.0	83.0 ± 1.4	85.0 ± 1.2
HCl	0.25	10	5.0	70.0 ± 1.2	76.0 ± 1.4
HCl	1	10	4.0	99.0 ± 1.0	99.0 ± 1.0
HCl	1	10	3.0	99.0 ± 1.0	99.0 ± 1.0
HCl	1	10	2.0	99.0 ± 1.0	99.0 ± 1.0
HCl	1	10	1.5	88.0 ± 1.2	79.0 ± 1.4
HCl	1	5	2.0	99.0 ± 1.0	99.0 ± 1.0
HCl	1	3	2.0	99.0 ± 1.0	99.0 ± 1.0
HCl	1	2	2.0	99.0 ± 1.0	99.0 ± 1.0

[a] Recovery [b] Standard deviation