

Fig. 1S: The High-angle X-ray diffraction pattern of (a) Fe₃O₄ NPs and (b) Fe₃O₄-Mu nanosorbent.

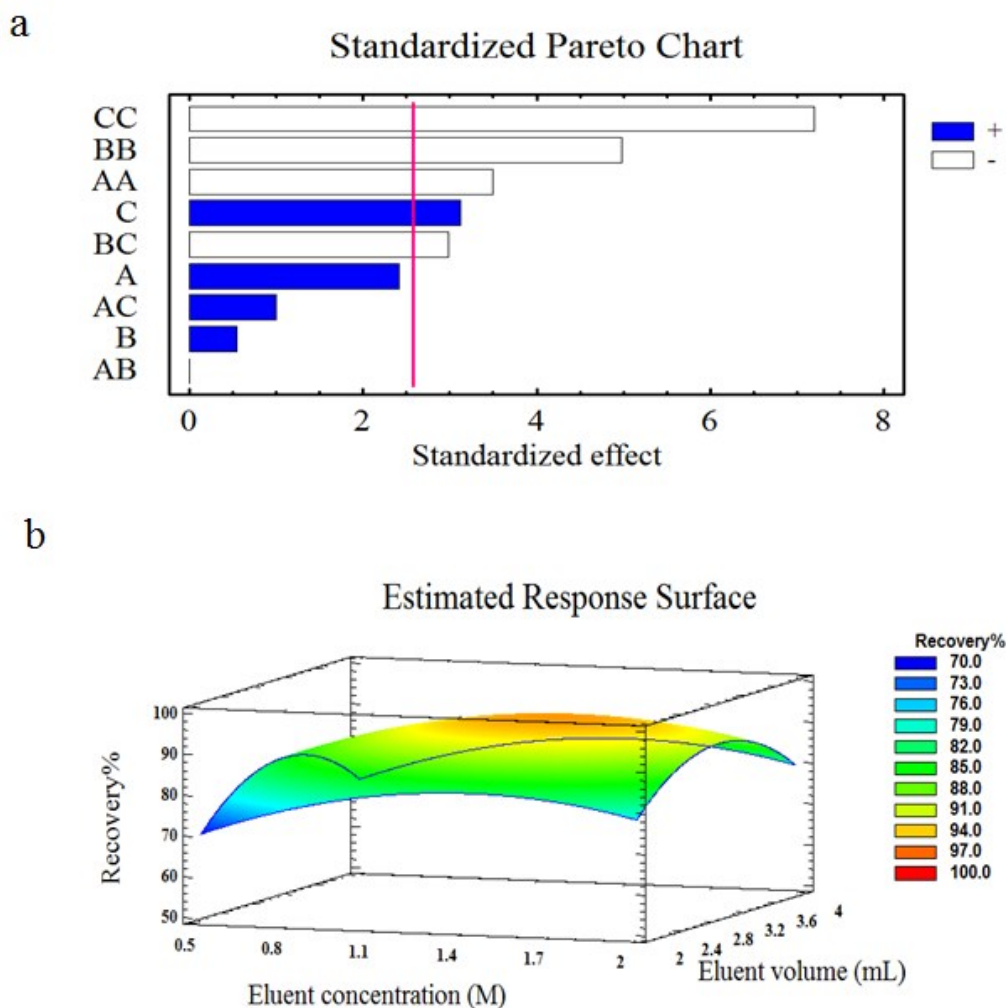


Fig. 2S: (a) Pareto chart of the main effects in the BBD. AA, BB and CC are the quadratic effects of eluent concentration, elution volume and elution time, respectively. AB, AC and BC are the interaction effects between eluent concentration and elution volume; eluent concentration and elution time and elution volume and elution time, respectively. (b) The estimated response surface of eluent concentration and elution volume.

Table 1S

The tolerance limit of potentially interfering ions in the determination of Pb(II) and Cd(II) ions.

Interfering Ions	Tolerable concentration ratio X/Pb(II) and Cd(II)	Recovery (%)	
		Pb(II)	Cd(II)
Na ⁺	10000	98 ± 2	99 ± 1
K ⁺	10000	96 ± 1	99 ± 2
Ca ²⁺	1000	97 ± 2	98 ± 2
Mg ⁺²	1000	95 ± 2	96 ± 1
Ag ⁺	200	96 ± 1	99 ± 1
Mn ²⁺	200	95 ± 1	95 ± 1
Zn ²⁺	200	97 ± 2	96 ± 1
Ni ²⁺	200	95 ± 1	94 ± 1
Co ²⁺	150	97 ± 2	96 ± 2
Hg ²⁺	130	95 ± 2	96 ± 1
Fe ³⁺	130	95 ± 2	96 ± 2
Cr ³⁺	130	96 ± 1	95 ± 1
CO ₃ ²⁻	2000	98 ± 2	99 ± 2
NO ₃ ⁻	2000	99 ± 2	98 ± 2