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Research Article

Synthesis and characterization of Novel Cation exchange Adsorbent for the treatment of real samples for Metal ions

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ABSTRACT

Semicrystalline poly-o-toluidineZr (IV) iodate cation exchange adsorbent has been synthesized via simple chemical route and demonstrated selective sorption behavior towards environmental pollutants. FTIR spectra of composite material illustrate the conformation of bands that are present in individual spectra. SEM study shows that morphology of composite material has been changed after binding poly-o-toluidine with Zr(IV)iodate which is semicrystalline while TEM images indicate growing form of poly-o-toluidineZr(IV)iodate particles. However poly-o-toluidineZr (IV) iodate cation exchange material shows good ion exchange capacity and used for the separation of metal ions from natural water as well as synthetic mixture. The present paper describes synthesis and characterization of a novel poly-o-toluidineZr (IV) iodate adsorbent and its analytical applications for the removal of Zr (IV) and Cd (II) ions from the real water samples as well as synthetic mixture.

Keywords Poly-o-toluidineZr (IV) iodate SEM, TEM

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