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Synthesis of Ion Imprinted Polymer for Removal of Chromium(III) Ion in Environmental Samples

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Abstract : In this study, ion imprinted poly urea-formaldehyde was prepared. The morphology imprinted polymer was studied by scanning electron microscopy. Then, the effects of various parameters on Cr(III) sorption such as pH, contact time were investigated. The optimum pH value for sorption of Cr(III) was 6. The sorption capacity of imprinted poly urea-formaldehyde for Cr(III) were 4 mg.g−1. A Cr(III) removal of 97-98% was obtained. The profile of Cr(III) uptake on this sorbent reflects good accessibility of the chelating sites in the imprinted poly urea-formaldehyde. The developed method was utilized for determination of Cr(III) in environmental water samples by flame atomic absorption spectrometry with satisfactory results.

Keywords : chromium ion, environmental sample, elimination, imprinted poly urea-formaldehyde, polymeric sorbent
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