

Poly Urea-Formaldehyde for Preconcentration and Determination of Cadmium Ion in Environmental Samples

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Abstract : In this research, poly urea-formaldehyde was prepared. The poly urea-formaldehyde was characterized by fourier transform infra-red spectroscopy. Then the effects of various parameters on Cd (II) sorption such as pH, contact time were studied. The optimum pH value for sorption of Cd(II) was 5.5. The sorption capacity of poly urea-formaldehyde for Cd (II) were 76.3 mg g⁻¹. A Cd (II) removal of 55% was obtained. The profile of Cd (II) uptake on this sorbent reflects good accessibility of the chelating sites in the poly urea-formaldehyde. The developed method was utilized for determination of Cd (II) in environmental water samples by flame atomic absorption spectrometry with satisfactory results.

Keywords : poly urea-formaldehyde, cadmium ion, environmental sample, determination

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