**ABSTRACT**

Batch equilibration studies are conducted to determine the nature of adsorption of zinc (II) over chitosan. The factors affecting the adsorption process like particle size, contact time, dosage, pH, effects of chloride and nitrate are identified. The influence of temperature and co-ions on the adsorption process is verified. The fraction of adsorption, *Yt*and the intraparticle diffusion rate constant, *kp*are calculated at different environments and the results are discussed. The nature of adsorption of the zinc (II)-chitosan system is explained using Freundlich, Langmuir isotherms and thermodynamic parameters