

## Adsorption Equilibrium Characteristics of Nickel, Zinc and Cadmium Ions onto Alginate Beads

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Alginate, which exist in natural polymer, is a polysaccharide from brown seaweed. Alginate is being applied in industry and engineering including the biomedical field because of its biocompatibility, non-toxicity and biodegradability.

In this study, adsorption equilibrium characteristics of nickel, zinc and cadmium ions from aqueous solution using alginate beads were studied. The heavy metals were removed through cationic adsorption to carboxyl group in alginate beads. Adsorption amounts of the heavy metals increased with increasing initial pH of the solution. The magnitude of adsorption capacity for the heavy metals onto alginate bead was in order of Cd > Zn > Ni.