



Adsorption of Zinc Ions in Fixed Beds[#]

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Abstract: In this study the removal of zinc from aqueous solutions was investigated. Horse chessnut, oak valonia, peduncle of oak valonia, pericarp of oak valonia, seed of oak valonia, diatomite, brownish and beige sepiolites were used as adsorbents. Zn²⁺ solution which is prepared by dissolving the pure Zinc nitrate in distilled water, was used as the wastewater sample. Experiments were carried out at continuously operating fixed bed. As a result of this study, adsorption capacities of horse chessnut, oak valonia, peduncle of oak valonia, pericarp of oak valonia, seed of oak valonia, diatomite, brownish and beige sepiolites were found that the maximum amounts of zinc adsorbed by 1 gram of adsorbent are 12.25 mg, 22.75 mg, 87.75 mg, 49.14 mg, 3.34 mg, 5.81 mg, 6.55 mg and 7.15 mg respectively. It was concluded that the oak valonia was an effective adsorbent for the removal of zinc ions from aqueous solutions.

Keywords: *Adsorption, water pollution, zinc, fixed bed*

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