



REMOVAL OF ZINC (II) FROM AQUEOUS SOLUTIONS BY ROMANIAN SPHAGNUM PEAT MOSS

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Abstract

In recent years the removal of toxic substances especially heavy metals from water and wastewater by using of non-conventional low-cost sorbent (industrial wastes and some natural material including microorganisms, plant-derived materials, agricultural products and by-products, mineral oxides, clays) has received much attention. In this paper efficiency of Zn (II) removal from aqueous solutions by sorption onto Romanian sphagnum peat moss was studied in batch experiments involving process parameters such as initial solution pH, concentration of metal ions and of peat sorbent, temperature solution and phases contact time. The sorption of Zn (II) is highest at pH 5.5, increases with peat dose and solution temperature and decreases with increase of concentration of solution; the required time for equilibrium establish is of maximum 2 hours. Therefore, use of sphagnum peat moss as potential sorbent for the removal of Zn (II) can be a promising alternative in the decontamination of aqueous effluents.

Keywords: Romanian sphagnum peat moss, zinc, sorption, batch experiments

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