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## **BATCH COPPER (II) REMOVAL FROM AQUEOUS SOLUTION BY SPHAGNUM MOSS PEAT**

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### **Abstract**

The sorption of Copper (II) from aqueous solution at  $20 \pm 2^\circ\text{C}$  by sphagnum moss peat from Poiana Stampei has been studied, in order to establish the optimum conditions of Cu (II) sorption on peat. The influence of solution pH, initial metal concentration, peat dose and contact time was studied in batch experiments. The percent of Cu (II) sorption has a maximum at pH 5.0, increases with the increase of peat dose and decreases with increasing initial concentration of solution. The equilibrium sorption isotherms have been well described by the Langmuir model of monomolecular layer adsorption. The kinetic of the sorption was analyzed using the pseudo-first order and pseudo-second order kinetic models. The kinetic data fitted well to the second order kinetic model, indicating an intraparticle diffusion mechanism.

*Keywords:* peat moss, copper, sorption, equilibrium, kinetic

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