

## **ABSTRACT**

Adsorption of Congo red (CR) from aqueous solution using dried roots of *Eichhornia crassipes* was studied. Batch experiments were carried out for sorption kinetics and isotherms. Experimental results obtained showed that adsorption process was highly dependent on contact time, adsorbent dosage, initial dye concentration and particle size. The sorption equilibrium for Congo red dye by *E. crassipes* (roots) was reached within 90 minutes and adsorption efficiency of up to 96% achieved. The sorption kinetics followed a pseudo-second-order kinetic model while Freundlich isotherm model was best applicable for obtaining the equilibrium parameters. These results demonstrate that roots of *E. crassipes* are effective, environmentally friendly and low-cost biomaterial for dye removal from aqueous dye solutions and industrial effluents.