



**Bioaccumulation of Heavy Metals from Wastewaters
(Pb, Zn, Cd, Cu and Cr) in Water Hyacinth
(*Eichhornia crassipes*) and Water Lettuce (*Pistia stratiotes*).**

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Abstract: Aquatic macrophytes are well known accumulators for heavy metals from wetlands. The objective of this study is to evaluate the capacity of lead (Pb), zinc (Zn), cadmium (Cd), copper (Cu) and chromium (Cr) uptake and bioaccumulation factor of *Eichhornia crassipes* and *Pistia stratiotes* from wastewaters. Young plants of *Eichhornia crassipes* and *Pistia stratiotes* of equal size were grown in industrial wastewater effluents for 20 days. The plants in the experiment removed more than 50 % of Zn, Cu, Cr and Pb. Removal of metals from water was fast especially in the first ten days. Metals accumulation in water hyacinth and water lettuce was in the order of Zn> Pb> Cr > Cu> Cd. Roots of *Eichhornia crassipes* proved better accumulator of the metals than leaves. Bioconcentration factor (BCF) of Pb, Zn and Cu was more than 1000 in two species. The translocation factor (TF) of Cr, Pb, Cu and Zn in water hyacinth was low (0.07 – 0.46) except for Cd (3.35). *Eichhornia crassipes* and *Pistia stratiotes* are found to be suitable candidates for effective removal of heavy metals from wastewaters.

Keywords: Aquatic macrophytes, Phytoremediation, Bioconcentration factor, Trace metals.

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