

BIOACCUMULATION OF CADMIUM, COPPER AND LEAD BY
HYDRILLA (*Hydrilla verticillata*)

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Arjay Catalan Baniago

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ABSTRACT

Bioaccumulation of cadmium, copper and lead by *Hydrilla* (*Hydrilla verticillata*) were tested to 5 different initial concentrations. The water contaminant sample was composed of mixed cadmium, copper and lead metals supplied as nitrate salts. These were analyzed for the decrease in concentrations at 24 hours intervals for 5 days using SpectrAA 55B Atomic Absorption Spectrometer. Plants exposed only for 5 days were digested and analyzed. The plant growth was normal at lower concentrations and showed higher removal efficiency. *H. verticillata* showed maximum removal percentage on the 5th day of exposure at 5 mg L⁻¹ for cadmium (90.47%) and copper (95.20%) but for lead was on the 1st day (96.74%). The order of metal ion removal and the actual uptake for the three metals by *H. verticillata* is Pb>Cu>Cd but at lower concentration, cadmium was absorbed more than copper. The copper and lead uptakes by *H. verticillata* are superior as compared to other aquatic plants uptakes. Lead uptake at higher concentration might be due to physico-chemical adsorption of the metal to the plant components and not on metabolism mediated uptake because plant condition does not have an adverse effect on the uptake.