

## **Bioaccumulation of toxic elements in floating aquatic macrophytes of Guarapiranga Reservoir, São Paulo, Brazil**

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In this study, the contents of the potentially toxic elements As, Cd, Cr, Cu, Hg, Ni, Pb, Zn, and other elements of interest, were determined in samples of four species of macrophytes (*E. crassipes*, *P. stratiotes*, *S. herzogii* and *S. molesta*), sediments and water samples in Guarapiranga reservoir, aiming to assess metallic elements contamination. Toxic element concentration results in macrophytes presented higher values than reference values for aquatic plants for most elements, mainly for Cu. The toxic elements content in water samples were below the quantification limits of the analytical techniques applied. Nevertheless, the level of the toxic elements analyzed in sediment samples exceeded TEL values (*Threshold Effect Level*) for most elements. The geoaccumulation index indicated sediments moderate to highly polluted by Zn and moderate to extremely polluted by Cu. The results obtained for As, Cd, Cr, Cu, Hg, Ni, Pb and Zn in the sediment samples were compared to the results obtained for the macrophyte samples, and a positive correlation was obtained, indicating bioaccumulation of these elements in aquatic macrophytes. These results may indicate potential risk of the reservoir water quality.