

THE INFLUENCE OF HEAVY METALS ON GROWTH AND DEVELOPMENT OF WATER FERN, *AZOLLA SPS*

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ABSTRACT

Rapid industrialization increases pollutants on earth, like heavy metals which causes number of disease in plants and animals. Several water ferns are capable of accumulating heavy metals, one of which is *Azolla* species. *Azolla* species are useful in the detoxification of industrial effluent. Roots of *Azolla* plant absorb Heavy Metals like Zn and Pb from water. Hence, *Azolla* species can be used for phytoremediation. The aim of this study was to assess the influence of heavy metal on the growth and development of water fern *Azolla*. Plants were grown in nutrient medium for 1 month containing heavy metals Zn 10% and Pb 10% separately. These Heavy metals transfer from root to the shoot which results in reducing the concentration of essential nutrients such as K⁺, Na⁺ and Mg⁺⁺ in plants and inhibits normal growth. Result of the experiment also shows that the high concentration of Zinc is more effective in retarding the growth of *Azolla sps*. Then Lead.

KEYWORDS: Increases Pollutants on Earth, Number of Disease in Plants and Animals, Several Water Ferns are Capable of Accumulating Heavy Metals