

BIOACCUMULATION STUDIES OF CD AND ZN IN LICHENS TISSUE

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Abstract

To highlight the influence of the level of pollution on the bioaccumulation capacity of metals in lichenicolous biosensors, laboratory studies have been performed with lichens *Parmelia spp.*, which grow naturally on different species of trees with wide spreading area. The 110 day study demonstrated the ability to accumulate Zn and Cd metals in lichen exposed to pollution with these metals. The amount of bio accumulated metals was dependent of the composition and concentration of pollutants in the environment. Accumulation of quantities up to 2.4 mg/kg d.m. of Cd in 110 days caused the reduction of Zn bioaccumulations in lichen tissue 2-3 times. The correlation between the concentration of bio accumulated cations in lichens and the pollution of the environment in which he lives shows that *Parmelia spp.* can be used as a bio indicator for the level of pollution in that medium.

Keywords: lichens, metal pollution, *Parmelia spp.*, Zn and Cd bioaccumulation