

EUROPIUM BIOACCUMULATION BY *ARTROSPIRA PLATENSIS* AND ITS EFFECT ON BIOMASS

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Europium is one of the most reactive rare-earth elements, which due to its physical and chemical properties is widely applied in many technological processes. Nowadays, it is imperative to develop sustainable, eco-friendly and promising extraction techniques and explore alternative europium resources, along with protecting the environment and human health. The ability of cyanobacteria, *Artrospira platensis*, to accumulate europium and its effect on biomass biochemical composition was evaluated. Europium accumulation in biomass was traced by ICP-AES technique. At addition of europium ions in the cultivation medium in concentrations 10-30 mg/L, its accumulation in biomass was 9.8-29.8 mg/g (removal efficiency being) 98-99%. Europium ions in studied concentrations range did not affect productivity and content of carbohydrates and pigments in biomass, and led to the decrease of the content of protein and an increase in the amount of MDA. *Artrospira platensis* can be considered as a potential bioremediator for treatment of wastewater polluted with europium.

Keywords: *Artrospira platensis*, alternative europium resources, bioremediator, biomass, extraction techniques.