



Sorption of copper (II) and cadmium (II) ions with the use of algae

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ABSTRACT

The study involved initiating the process of metal biosorption with the use of live algae by means of administering cadmium and copper. Cultures of algae from two different environments were used. *Pseudokirchmeriella subcapitata* algae bred in laboratory conditions from a pure culture were dominant in culture no. 1. Culture no. 2 was a mixed population of chlorophyta from a natural reservoir. The process was evaluated regarding changes in metal concentrations in the algal biomass after 10 min, and then, after 1, 2, 4, and 24 h of exposure. Changes of Cd(II) and Cu(II) concentrations in the culture medium were also determined. The research proved that the studied populations were good biosorbents. Mixed algal population from a natural water reservoir sorbed Cd(II) and Cu(II) more effectively than the population of algae from a laboratory culture. Mixed algal population retained nearly ten times more Cd(II) and over three times more of Cu(II) than the population bred from a pure culture of *P. subcapitata*.

Key words: Biosorption; Cadmium; Copper; Microprecipitation; *Pseudokirchmeriella subcapitata*; Algae

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