



Spirulina platensis as a model object for the environment bioremediation studies. Chapter 39

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Abstract

Spirulina platensis is an intensely studied biological object due to its valuable biotechnological qualities. *Spirulina* biomass is used for direct human and animal consumption as well as raw material for production of drugs and food supplements. Therefore, its use for environment remediation is unjustified. Instead, this cyanobacteria is a very suitable object to reveal the mechanisms of biosorption and bioaccumulation of metals and other pollutants. The chapter presents summarized data about the biosorption and bioaccumulation capacity of *Spirulina* for metal ions, including radioactive forms. The mechanisms of detoxification of persistent organic pollutants by *Spirulina* are underlined. Accumulated data can serve as a basis for the elaboration of bioremediation procedures based on the use of filamentous cyanobacteria or other types of cyanobacteria and microalgae.

Keywords: bioremediation, biosorption, bioaccumulation, biodegradation, cyanobacteria, detoxification, heavy metals, organic pollutants, wastewater treatment