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## **Evaluation of the heavy metal content in samples of dry biomass of *Chlorella* destined for the food industry**

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### **Abstract**

Currently, chlorella is called "superfood" and it is difficult to argue with the beneficial properties of microalgae. On the market, manufacturers provide a wide range of products in the form of powders, tablets, drinks, so the question of the quality of microalgae products is relevant.

This article discusses the evaluation of the heavy metal content in microalgae biomass of the genus *Chlorella* destined for the food industry. The assessment of the heavy metal content (zinc, cadmium, lead, copper) in the biomass was determined by anodic stripping voltammetry. Three different samples of biomass have been selected as study objects: microalgae cultivated under laboratory conditions and samples of biomass produced by "Corporation Yu FIL GUD" (China) and "Forward" LLC (Russia, Kostroma). The first sample was grown in a nutrient medium containing macro- and microelements, which are known to accumulate in the microalgae cells during the cultivation process. Therefore, it is important to control the biomass heavy metal content before considering its use as a dietary supplement. Results have shown that all samples comply with the safety standards regarding the concentrations of zinc, cadmium, lead and copper. Zinc and copper are also microelements that are essential, at certain concentrations, to the good function of the human body. The sample of biomass obtained under laboratory conditions contained  $20.20 \pm 5.050$  mg/100 g of zinc, which partially exceeds the recommended daily rates. Nevertheless, this biomass could still be useful as a biologically active additive for functional foods.

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