Heavy metals bioaccumulation in species of wild growing mushrooms

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The study of some wild growing species of mushrooms from the Bucegi Mountain show important concentrations of heavy metals in the fruiting bodies. The zinc concentration range between 6.92 and 74.25 mg/kg (the highest concentration was for Calvatia excipuliformis); copper has concentration between 16.24 - 226.30 mg/kg (the highest values was also for species Calvatia excipuliformis); and tin concentration range between 16.23 - 14048.1 mg/kg (the highest values was for Hygrophorus virgineus species). The bioaccumulation factor of these metals in the fruiting body of analyzed species of mushrooms range according the metal concentrations in macrofungus and the metal content in soil. For the analyzed mushrooms, the bioaccumulation factor of zinc has values between 0.04 and 0.46, no results are important for bioremediation. The highest value was for Calvatia excipuliformis species. The copper bioaccumulation factor range between 0.83 and 3.19, the majority of analyzed species shows values of this factor higher than 1, and the most important results was for species Collybia butyracea. The bioaccumulation factor of tin has values between 0.06 and 49.61, only few species have this factor higher than 1. Hygrophorus virgineus species shows a very important value of tin bioaccumulation factor, up to 50, which make this species very efficient in bioremediation technologies.