

Abstract

Subject of the study is establishing ecotoxicity (in the form of EC_{50}) and characterization factors (CF) of two real soil samples, contaminated by a mixture of heavy metals, by using terrestrial tests of ecotoxicity. The gained values are then compared to CF values nowadays used in life cycle assessment (LCA) studies and the differences are discussed. The heavy metals contents are assessed by sequential extraction with ICP-OES. To gain the EC_{50} values following organisms are used: enchytraeids *Enchytraeus crypticus*, collembolans *Folsomia candida* (determining inhibition of reproduction) and lettuce *Lactuca sativa* (determining inhibition of root growth). EC_{50} and CF values show higher ecotoxicity in the case of Vodárna sample than in the case of Rampa sample. A difference in CF assessment between the method of using terrestrial tests and mathematical method, which is used generally, is proved.