OBMEDZENIA POUŽITEĽNOSTI METÓD FYTOEXTRAKCIE NA REMEDIÁCIU PÔDY KONTAMINOVANEJ RÁDIOCÉZIOM

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ABSTRACT

Horník M., Lesný J., Pipíška M. & Augustín J.: **Limitations of applicability of phytoextraction methods in remediation of soil contaminated with radiocesium**

The sorption and desorption experiments with $^{137}Cs^{+}$ on different sands and soils in laboratory conditions were performed in order to obtain some data for prediction of phytoremediation efficiency of radiocesium contaminated soils. Only the radiocesium adsorbed on thoroughly cleaned river sands, not on the sands for building purposes or sandy soils, was extracted by saline. Sequential extraction of radiocesium from the contaminated meadow soils according to the Tessier and BCR methods revealed low extractability with the salt solutions within the range 0,3–1,1 % and with acids and oxidizing agents within the range 4,5–10,3 % even at elevated temperatures. In the case of biosorption of ^{137}Cs from water solution by *Taraxacum officinale* growing in hydroponic culture, radionuclide was trapped in root tissues and only lower part (up to 20 % of the total) was translocated to the above – ground parts of plants. It can be concluded, that irreversible bonding of radiocesium to a soil matrix