

THE USAGE OF HERB SPECIES FOR IDENTIFICATION OF THE MERCURY LOAD IN THE ENVIRONMENT

Hana OLLEROVÁ¹, Andrea MARUŠKOVÁ¹, Oľga KONTRIŠOVÁ¹ & Jaroslav KONTRIŠ²

¹ Department of Environmental Engineering, Faculty of Ecology and Environmental Sciences, Technical University in Zvolen, T. G. Masaryka 24, 960 53 Zvolen, Slovak Republic, e-mail: ollerova@vsld.tuzvo.sk, andrea.maruskova@gmail.com, kontris@vsld.tuzvo.sk

² Department of Phytology, Faculty of Forestry, Technical University in Zvolen, T. G. Masaryka 24, 960 53 Zvolen, Slovak Republic, e-mail: jkontris@vsld.tuzvo.sk

ABSTRACT

Ollerová, H., Marušková, A., Kontrišová, O., Kontriš, J.: **The Usage of Herb Species for Identification of the Mercury Load in the Environment**

The paper is focused on investigation of mercury accumulation in synanthropic herb species at chosen localities in Slovakia. Mercury, which incomes to plants by atmospheric deposition, belongs to the important environmental pollutants. In general, there is low availability of the soil Hg for plants. With the view to determination of Hg content, there were sampled leaves of *Achillea millefolium* L., *Artemisia vulgaris* L. and *Tanacetum vulgare* L. from 56 localities in Slovenské stredohorie Mts, Slovenské rudohorie Mts, Fatransko-tatranská Area and Podunajská Lowland. Soil was sampled at the same localities from the depth 5–20 cm. All samples were analysed with AMA 254. Hg concentrations in plants were in range from 0.010 to 9.857 mg.kg⁻¹. Over-limited values (upper than 0.12 mg.kg⁻¹) were noticed in Slovenské rudohorie Mts and in Fatransko-tatranská Area. On the basis of transfer factors, it is possible to speak about fact, that these species are not active accumulators of Hg from soil. Despite it, they are species with great area of occurrence, so they are very useful for comparing Hg accumulation within many areas in Slovakia.

Key words: mercury, accumulation, leaves, herb species