

**MICRO- AND MACROELEMENTS IN *URTICA DIOICA L.*
(*URTICACEAE*)**

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Different nutrients displaying beneficial medicinal or therapeutic properties have been recently identified in plants, especially medicinal plants. The elucidation of element specification in medicinal plants helps interpret the therapeutic actions and may help in designing chemically pure medications. Besides, analytical control of metals in plants is part of quality control, which should establish their purity, safety and efficacy, as a WHO recommended in a number of resolutions. Information on metal content of medicinal and aromatic plants from all over the world are available, but reports are scanty with respect to plants growing in the Republic of Macedonia. It was therefore imperative to explore the present status of one of the widely used local plant, *Urtica dioica L. (Urticaceae)*, in terms of selected trace metals and macronutrients.

A total of eight elements (Zn, Cu, Fe, Cr, Ca, K, Li and Mg) were determined in different organs (leaves and stems) from *Urtica dioica L. (Urticaceae)*, sampled from Plačkovica Mountain, by atomic emission spectrometry with inductively coupled plasma (ICP-AES). Elemental studies of the plants showed that they contain large amounts of nutrients and were rich in Mg, Ca, and K. It is expected that plants with high content of the above-mentioned macro and micronutrients, might play an important role in maintenance of human health. In this study, all of the detected values are below the WHO permissible levels and may not constitute a health hazard for consumers. Therefore, it can be recommended *Urtica dioica L.* growing in Plačkovica Mountain as suitable for phytotherapeutical purposes.

Keywords: Microelements; macroelements; medicinal plants; *Urtica dioica*