

Micromorphological Traits and Essential Oil Contents of *Valeriana tuberosa* L.

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Abstract : *Valeriana* is a genus of the well-known medicinal plant of Valerianacea family and growing wild in the sub-Mediterranean area. This abstract reports the types and distribution of trichomes and phyto-active composition of the essential oil of the *Valeriana tuberosa* from mountain Kozjak, near Split, Croatia. Two types of glandular trichomes: peltate (one basal epidermal cell, one short stalk cell and a small head) and capitate trichomes (one basal epidermal cell, one elongated stalk cell) were observed on leaf, using light microscopy. We analyzed the composition of the essential oil of stems and leaves of *V. tuberosa* species. Water distilled essential oils from aerial parts of investigation plant have been analysed by GC and GC/MS using VF-5ms capillary column. The total yield of oil was 0.2%, based on dry weight of samples. Forty compounds representing 94.1% of the total oil of *V. tuberosa*. This essential oil was characterized by a high concentration of isovaleric acid (17.2%), geranyl isovalerate (12.2%) and caryophyllene oxide (7.7%). The present study gives additional knowledge about micromorphological traits and secondary metabolites contents on the genus *Valeriana*.

Keywords : essential oil, isovaleric acid, *Valeriana tuberosa*, Croatia

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