

Investigating the Effect of Height on Essential Oils of *Urtica diocia* L.: Case Study of Ramsar, Mazandaran, Iran

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Abstract : *Urtica Diocia* L. from the Urticaceae family is a plant of herbal value and of a noticeable distribution in the north of Iran. The growth of different plants in various natural environments and ecosystems seems to be affected by factors such as the height (from sea surface). To investigate the effect of height on *Urtica Diocia* L. medicine compounds in its natural environment, three areas with the height of zero, 800 and 1800m were selected. The samples were randomly gathered three times and were dried; also, their compounds was extracted using the Clivenger with the water-distilling method. To determine the medicine compounds, the GC-MS as well as the GC machines were used. The analysis of variance was done in the form of the random-full-block design. The results indicated that there was a significant difference between the percent of EOs in the selected heights; however, such difference was not significant within each height. From among the eight flavors of the study, the phytol compound was more in terms of percentage. By increasing the height the percent of EOs would decrease. lower heights could be considered most appropriate for producing the studied effective materials despite of the moistened climate and soil there.

Keywords : *Urtica diocia* L., height, EOs, medicine

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