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# Monoterpenes variability in *Teucrium montanum* L. essential oils

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The aim of this study was to determine the qualitative variability and relative presence of oxygenated monoterpenes in essential oils from *Teucrium montanum* L. collected from different habitat substrates. Plant material was sampled from twenty different populations with serpentinite and calcareous habitat substrate. *T. montanum* essential oils were obtained by hydrodistillation of the aboveground plant parts and analysed by GCxGC-MS chromatographic technique. The sum of the total relative presence of the oxygenated monoterpenes in the essential oil samples from serpentinite and calcareous habitats was 5.1% and 2.1% respectively. Limonen-10-ol (2.4%) was the most abundant compound from the group of oxygenated monoterpenes. The results also indicate that decanol (0.7%) and limonen-10-ol (0.5%) are the oxygenated monoterpenes with the highest relative presence in the analysed *T. montanum* samples from the calcareous substrate, as well as limonen-10-ol (2.0%) and mentha-1(7),8-diene-2-ol (0.8%) in the samples from serpentinite substrate. Carvone and 3-caren-2-ol were monoterpenes identified only in the *T. montanum* essential oil samples from serpentinite habitats. The determined variability indicates a significant influence of the geological substrate on *T. montanum* essential oil synthesis. One of the important reasons for such variability is the difference between the chemical characteristics of serpentinite and calcareous soils [1]. Soils formed on a serpentinite substrate are characterized by a lack of macroelements and higher content of heavy metals which has a positive effect on terpene synthesis.

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## References

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