FACTA UNIVERSITATIS



Series: **Physics, Chemistry and Technology** Vol. 16, N° 1, Special Issue, 2018, p. 120 49th International Symposium on Essential Oils (ISEO2018) • Book of Abstracts

PP56. New natural products from *Clinopodium thymifolium* (Scop.) Kuntze (Lamiaceae) essential oil

*Milan Dekić*¹*, Niko Radulović², Enisa Selimović¹, Dušica Dekić³, Marko Antonijević¹, Braho Ličina⁴

Keywords: Clinopodium thymifolium, Micromeria thymifolia, essential oil, new natural products

Clinopodium thymifolium (Scop.) Kuntze (syn. Micromeria thymifolia (Scop.) Fritsch) is an aromatic plant species widespread in the Mediterranean region, from north-eastern Italy across the Western Balkans to Hungary and Albania [1,2]. C. thymifolium has been used in folk medicine of the Mediterranean area for a long time [3]. Also, due to a high content of the essential oil in its leaves, it is used as a condiment and sometimes used in cooking [4,5]. For this reason, and the marked tendency to broaden the use of condiments and spices, some efforts are being made to introduce this plant as a new crop species (currently successfully cultivated in northern Italy) [4]. The beneficial effects of Lamiaceae species on human health have been frequently ascribed to essential-oil ingredients. Volatiles of C. thymifolium have been well studied – previous studies showed that the qualitative compositions of the investigated C. thymifolium oils were very mutually similar and dominated by oxygenated pmenthane monoterpenoids [6,7]. However, in this work, a comprehensive chemical analysis, in combination with detailed spectral analyses and chemical synthesis of selected compounds, has led to the identification of a series of esters of menthol stereoisomers in C. thymifolium essential oil, including some new natural products.

References:

- [1] Diklić, N., 1974. *Micromeria* Benth. In: *Flora SR Srbije*, Josifović, M. (ed.) Vol. 6., SANU, pp. 458–462.
- [2] Bräuchler, C. et al., 2006. Taxon 55, 977–981.
- [3] Redžić, S.S., 2007. Collegium Antropol. 31, 869–890.
- [4] Hammer, K. et al., 2005. Genet. Resour. Crop. Ev. 52, 215–219.
- [5] Seidemann, J., 2005. World Spice Plants, Springer-Verlag, pp. 233.
- [6] Slavkovska, V. et al., 2005. Pl. Syst. Evol. 255, 1–15.
- [7] Dunkić, V. et al., 2017. S. Afr. J. Bot. 111, 232–241.

Acknowledgments: This work was supported by the Ministry of Education, Science and Technological Development of Serbia [Project No. 172061].

¹Department of Chemical and Technological Sciences, State University of Novi Pazar, Novi Pazar, Serbia; ²Department of Chemistry, Faculty of Sciences and Mathematics, University of Niš, Niš, Serbia; ³Faculty of Agronomy, University of Kragujevac, Čačak, Serbia; ⁴Department of Biomedical Sciences, State University of Novi Pazar, Novi Pazar, Serbia.

^{*}Corresponding author: dekicmilan@gmail.com