Department of Biology and Ecology,
Faculty of Sciences and Mathematics
University of Niš
Institute for Nature Conservation of Serbia

ABSTRACTS
APSTRAKTI

14th Symposium on the Flora of Southeastern Serbia and Neighboring Regions

Kladovo 26 to 29 June 2022

14. Simpozijum o flori jugoistočne Srbije i susednih regiona

Kladovo 26. do 29. jun 2022.

Niš-Belgrade, 2022

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Chemical composition and antioxidant potential of *Teucrium scorodonia* L. (Lamiaceae) from Serbia

Milutinović, V.[1], Ušjak, Lj.[1], Niketić, M.[2], Petrović, S.[1]

[1]Department of Pharmacognosy, University of Belgrade, Faculty of Pharmacy, Vojvode Stepe 450, 11221 Belgrade, Serbia

[2]Natural History Museum, Njegoševa 51, 11000 Belgrade, Serbia

[3]Serbian Academy of Sciences and Arts, Kneza Mihaila 35/II, 11000 Belgrade, Serbia

* *vmilutinovic@pharmacy.bg.ac.rs*

The wood-sage (woodland germander) *Teucrium scorodonia* L. is widespread in European Atlantic coast and in the western part of Central Europe, with some isolated populations in Mediterranean. Recently discovered population on the territory of Serbia, in the valley of Štavica river (vicinity of Loznica), represents the most eastern enclave in the species range. Preliminary chemical analysis of aerial flowering parts and its dried ethanol and hydroethanol (70% v/v) extracts, and assessment of antioxidant potential of selected (hydroethanol) extract were performed. Using appropriate spectrophotometrical methods, total polyphenols in herb (3.48%, expressed as pyrogallol), ethanol and hydroethanol extracts (100.05 and 96.65 mg gallic acid equivalents - GAE/g), tannins in herb (0.96%, expressed as pyrogallol), ethanol and hydroethanol extracts (11.86 and 12.31 mg GAE/g), flavonoids in herb, ethanol and hydroethanol extracts (0.19%, 0.83% and 0.74%, expressed as hyperoside) were quantified. Also, in ethanol and hydroethanol extracts dihydroxycinnamic acid derivatives were determined (8.96% and 8.37%, expressed as acteoside). By LC-MS, in selected (hydroethanol) extract, four flavonoid and five phenylethanoid glycosides were detected; verbascoside (acteoside) was identified and quantified (4.42%) using external standard. This extract exhibited significant total antioxidant activity (1.37 mmol Fe^{2+}/g) and moderate anti-DPPH potential (SC_{50}=51.28 μg/mL).

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