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P94. Phenolic compounds and antioxidant capacity of three *Thymus* species

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Thymus plants comprise distinct species with claimed health properties [1], commonly associated to their essential oils and phenolic compounds. Albeit that, the phenolic composition and the biological activities of many *Thymus* species remain unclear. This work aimed to elucidate the phenolic composition and antioxidant properties of aqueous extracts from aerial parts of *Thymus herba barona*, *Thymus caespititius* and *Thymus fragrantissimus*.

The aqueous extracts of the three *Thymus* species were evaluated for their total phenolic compounds by an adaptation of the Folin-Ciocalteu method [2], and individual phenolic compounds were identified by high performance liquid chromatography associated with electrospray mass spectrometry (HPLC-DAD-ESI-MSn) in the negative mode. The antioxidant activity of each extract was carried out by DPPH• scavenging assay and ferric reducing antioxidant power assays [3].

Total phenolic compounds in the three extracts ranged from 236±27 (*T. caespititius*) to 273±17 μg GAE/mg (*T. fragrantissimus*). Similarly to other *Thymus* species [1,4], these extracts were rich in caffeic acid derivatives (characteristic UV spectra maxima at 290 and 328 nm) and mainly composed of rosmarinic acid (MW 360). Other caffeic acid derivatives included salvianolic acid K (MW 556) and 3'-O-(8"-Z-caffeoyl)rosmarinic acid (MW 538). High amounts of the flavone luteolin-O-glucuronide ([M-H]− at m/z 461→285) were found in *T. caespetitus* while the others species contained moderate amounts of this compound.

T. herba barona, T. caespititius and *T. fragrantissimus* extracts showed high DPPH radical scavenge ability (EC50 values 11.6±0.9, 13.8±0.6 and 10.9±1.2 μg/mL respectively), as well as high reducing power (EC50 values of 35.1±4.5, 39.3±2.7 and 32.4±4.3 μg/mL, respectively), that were comparable to those of reference compounds.

This work is an important contribution for the phytochemical characterization and the antioxidant capacity of these three *Thymus* species.

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