


Abstract

Quantitative Analysis of Total Phenolic and Flavonoid Contents from *Stachys mouretii* Leaf Extracts [†]

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Abstract: *Stachys mouretii* leaf extracts were analyzed for total phenolic and flavonoid contents. These components are responsible for antioxidant activity. The plant material was collected in April 2018 at the forest of Talasemtane in the region of Ouazzane, Morocco. Dried and crushed leaves were subjected to sequential extraction with hexane, ethyl acetate, and methanol in order of increasing polarity. The amount of total phenolic and flavonoid content were determined with Folin–Ciocalteu and aluminum chloride (AlCl₃) reagents, respectively. For the total phenolic content, gallic acid was used as a standard compound and the results were expressed as µg/mL gallic acid equivalent (GAE), while for the total flavonoids, quercetin was used as a standard compound and the results were expressed as mg/mL quercetin equivalent (QE). The total phenolic content of *Stachys mouretii* leaf extracts varied from 14.13 to 26.91 µg/mL GAE and the total flavonoid content ranges from 0.04 to 0.08 mg/mL QE. The maximum phenolic and flavonoid contents were found in the ethyl acetate extract. The findings suggested that phytochemicals present in *Stachys mouretii* are potentially beneficial as therapeutic and antioxidative agents in pharmaceuticals, foods and other related industries.

Keywords: *Stachys mouretii*; quantitative analysis; total phenolic; total flavonoids; Folin–Ciocalteu



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