ANTIOXIDANT ACTIVITY AND CONTENT OF PHENOLIC COMPOUNDS AND FLAVONOIDS FROM *JUSTICIA SPICIGERA.*

ABSTRACT

Aerial parts of *Justicia spicigera* are used in Mexican traditional medicine. Antioxidant activity of aqueous and methanolic extracts obtained from leaf, stem and flower of *J. spicigera* and their contents of phenolic compounds and flavonoids were evaluated in this study. Antiradical activity was proven for the capacity to scavenge the DPPH radical of each extract. The amount of total phenolic compounds was determined using the Folin-Ciocalteu reagent. Total flavonoid content was evaluated with aluminum chloride under basic conditions. For a same plant organ, extracts prepared with methanol possess a higher antiradical activity than those obtained with water. The antiradical activity of leaf and flower extracts was superior to that found for the stem extract prepared with the same solvent. Total phenolic content ranged from 1.33-5.01 g gallic acid equivalents/100 g dry weight. Leaf and flower extracts obtained with methanol or water had higher amounts of phenolic compounds than stem extract. Total flavonoid content is between 0.18 and 1.30 g catechin equivalents/100 g dry weight and the order for methanol extracts is leaf>flower>stem, whereas for the aqueous extracts this sequence is stem>flower>leaf. This is the first study describing the antioxidant activity from *J. spicigera*. Phenolic compounds and flavonoids contribute to this activity. The results suggest that *J. spicigera* is a source of antioxidant and support its use as an anti-inflammatory for the treatment of uterine cancer and against various free radical-related disorders.

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