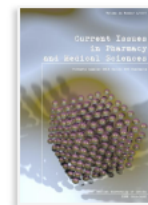


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Quantification of chlorogenic acid in *Pluchea indica* L. stem ethanolic extracts and its antioxidant activity

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Chlorogenic acid (CA) is an important phenolic acid antioxidant. It is found in *Pluchea indica* L. (Asteraceae). However, it has only been extensively studied in the leaves, while studies on the stems have not been reported. This study aimed to identify and measure the levels of CA in the stem extract of *P. indica*. The extract was also determined for its antioxidant activities. In the course of the work, *P. indica* stems powder was extracted using the ultrasonic-assisted extraction (UAE) technique employing 50%-ethanol as solvent directly and sequentially. The extract was then measured for total phenolic content (TPC) and CA content using RP-HPLC. Meanwhile, antioxidant activities were determined by the DPPH, ABTS, and reducing power (RP) methods. TPC in the sequential and the direct of *P. indica* stems ethanol extracts were 1.4694±0.0228 and 1.9314±0.0318 mgGAE/g DW, respectively. We found that the CA content of 50%-ethanol extract of *P. indica* stems from sequential extraction (0.2045±0.0128%, w/w) was higher than 50%-ethanol extract from direct extraction (0.1984±0.0113%, w/w). The two extracts demonstrated good antioxidant capacity, while the ethyl acetate and *n*-hexane extracts did not. Identifying of other antioxidants phenolics using other extracting methods still needs further study.

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Beluntas, chlorogenic acid, DPPH, ultrasonic-assisted extraction, sequential extraction.

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