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PROTECTIVE EFFECT OF EDIBLE *CUCURBITACEAE* SEED EXTRACT FROM CAMEROON AGAINST OXIDATIVE STRESS

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Abstract

Among foods that possess potent medicinal properties, Cucurbitaceae seeds stand as a promising source, since they are assumed to have a protective effect against oxidative stress. In order to analyze the antioxidant compounds of the seeds of *Citrullus lanatus, Lagenaria siceraria, Telfaria occidentalis, Cucurbita maxima, Cucumis sativus, Cucumeropsis mannii,* and *Cucurbita moschata*, the dried seeds were extracted in MeOH-H_2O (50 %; v/v) mixture at constant mixing rate. Qualitative phytochemical analyses were done followed by quantitative analyses. Total phenolic and flavonoid contents were determined using the Folin-Ciocalteu reagent and the aluminium chloride colorimetric method respectively. The alkaline precipitation method was used for alkaloid analysis, while the tannin content was evaluated using Butanol-HCl. The gravimetric method was used to determine saponin content. The antioxidant properties were found in all the seeds. The content in alkaloids (669 mg/100 g fw), flavonoids (881 mg CE/100 g fw) and phenols (303.858 mg GAE/100 g fw) were significantly higher in the seeds of *T. occidentalis. C. sativus* had significantly higher amounts of saponins (8.5 mg/100 g fw) and also higher amounts of tannins (145 mg LCE/100 g fw), while *C. maxima* showed higher anthocyanin concentration (222 mg, c-3-gE/100 g fw). Condensed tannins (93.78 mg LCE E/100 g fw) were most present in the seeds of *C. sativus.* The Friedman test allowed us to classify the seeds according to their content in phenolics, ($p < 0.001$): *T. occidentalis >C. maxima > C. manni*. These results show that our seeds have potential protective effect against oxidative stress.

Key words: antioxidative property, *Cucurbitaceae* seeds, oxidative stress, phytochemical compounds, classification

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