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Phytochemical screening and antioxidant activity of *cardiospermum corindum* l faux persil from botswana

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The aim of this study was to compare the phytochemical composition and antioxidant activity of roots and shoots of *Cardiospermum corindum* collected from two geographically distant regions of Botswana (Tswapong Hills and Kgale Hills). Qualitative phytochemical analysis revealed presence of alkaloids, reducing sugars, saponins, phytosterols, phenols, flavonoids and terpenoids. Analysis by thin layer chromatography, revealed that both shoots and roots of plant collected from the two respective regions showed no differences in phytochemical constituents. Total phenol and flavonoid contents were quantitatively estimated. Total phenolic content measured by Folin-Ciocalteu method varied from 164.4±2.2 to 364.2±3.1mg/L (GAE) Gallic Acid Equivalents. The order of total phenol contents were [364.2±3.1](Roots from Tswapong Hills)>[356.0±4.5] (Roots from Kgale Hills)>[169.1±2.6](Shoots from Tswapong Hills)>[164.4±2.2mg/lGAE](Shoots from Kgale Hills). The total flavonoid contents as measured by aluminium Chloride method varied from 56.7±1.1 to 124.1±1.5mg/L(QE) Quercetin Equivalents. The order of the total flavonoid contents were [124.1±1.5](Shoots from Kgale Hills)>[118.8±2.6](Shoots from Tswapong Hills)>[63.3±1.6](Roots from Tswapong Hills)>[56.7±1.1mg/l QE](Roots from Kgale Hills). The antioxidant activity as determined by the DPPH radical scavenging assay, revealed that, at all tested concentrations, root extracts exhibited greater (≥86%) scavenging potency than shoot extracts (≤83%). A direct correlation between total phenolic content and free radical scavenging activity was revealed. This work has validated the use of this plant as a health improving tool. However, structural identification of the bioactive constituents should be carried out.

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