



Physico-chemical composition and radical-scavenging activity evaluation of the extracts of *Aristolochia albida* Duch. (Aristolochiaceae) of Benin

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ABSTRACT

Objective: To do the phytochemical screening and then to measure total phenols, condensed tannins, flavonoids of aqueous, hydroethanolic and ethanolic extracts of *Aristolochia albida* Duch. in order to identify the best preparation technique and extraction solvent. The antiradical activity of the different extracts of this plant were evaluated to determine the extract that has the best anti-radical activity.

Methodology and Results: *Aristolochia albida* Duch. is a medicinal plant from the Aristolochiaceae family, widely used in traditional medicine in Benin. In this work ethanolic, hydroethanolic and aqueous extract were prepared from the leaves of this plant. The quantitative estimation of total phenols, tannins and flavonoids by the colorimetric method showed that the extracts are rich in these compounds. Evaluation of antioxidant power was performed using the method of DPPH free radical trapping. The result indicated that The ethanolic extract of *Aristolochia albida* (IC₅₀ = 0.23 mg/ml, IC₅₀ = Concentration inhibiting 50% of reaction) showed more antioxidant and anti-radical capacity compared to hydroethanolic extract (IC₅₀ = 0, 62 mg/ml) and the aqueous extract (IC₅₀ = 0. 65 mg/ml).

Conclusion and application of results: Overall, there is a correlation between anti-radical powers and phenolic contents phytoconstituents (polyphenols, flavonoids, tannins) extracts of the plant studied.

KEYWORDS: *Aristolochia albida* Duch, Medicinal plant, total phenols, flavonoids, tannins, DPPH, antioxidant activity