

Phytochemical analysis and assesment of antioxidant activity of *Tetraclinis articulata* (Vahl) Masters leaves

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Abstract. In Algeria, many plants are used traditionally to treat various diseases. Among these plants, *Tetraclinis articulata* (Vahl) Masters belongs to the Cupressaceous family. *Tetraclinis* is endemic of south western Mediterranean and is an unexplored genus recognized for its great bioactive potential ^[1-2] that could be explored as a medicinal herb. In this work dried leaves of *T. articulata* have been analysed for their polyphenol and flavonoid composition, and antioxidant activity. The influence of extraction time (30-240 min), concentration of ethanol (40, 60 and 80 %) on the extraction yield of phenolic and flavonoid compounds of extracts were investigated. The contents in total phenolics (TPC) and flavonoids (FLV) were evaluated by the Folin–Ciocalteu and the aluminum chloride methods, respectively In addition, the antioxidant activity was determined and measured by 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging assay. The Maximum extraction yield regarding TPC (95.28 mg EAG/g) and FLV (46.70 mgEQ/g) was achieved with 60 % ethanol for an extraction time of 210 min and 120 min respectively. In addition, the best anti-radical activity, with values of IC₅₀ of 0.14 mg/ml was obtained from the *T. articulata* leaves extracted with 80 % ethanol.

Keywords: Phytochemical, Polyphenol, flavonoid, *Tetraclinis articulata*

References

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