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**Phenolic Acids, Flavonoids, and Antioxidant Properties of an Algerian
Medicinal Astragalus Plant**

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This work is devoted to the phytochemical and biological study of a medicinal plant belonging to the Algerian flora astragalus genus. This research was conducted to assess the phytochemical composition of methanolic extract using LCESIMS:MS, following by testing in vitro antioxidant ability using DPPH and β -caroten assays.

The liquid chromatography results showed that methanolic extract identified the presence of sixteen bioactive compounds of the type phenolic acids and flavonoids. Rutin detected as a major flavonoid with a concentration 6388.6090 mg/ml. And shikimic acid was detected as a major phenolic acid with a concentration 325.9176 mg/ml. Moreover, the result of total content of polyphenols and flavonoids 175.83 \pm 1.95 μ gGAE/mg extract and 43.10 \pm 0.27 μ g EQ/mg extract respectively. Concerning antioxidant activity, the methanolic extract has a good activity in all tests used with IC₅₀ of DPPH, β -caroten tests IC₅₀=3.74 \pm 1.04 μ g/ml and 4.64 \pm 0.62 μ g/ml respectively. Indeed, the presence of phenolic compounds may contribute to their antioxidant activity.

Keywords: Astragalus, Phenolic acids, Flavonoids, Antioxidant activity.

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