

Valorisation of some Algerian medicinal plants; fenugreek (*Trigonella foenum graecum* L.) and cumin (*Cuminum cyminum* L.) seeds

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Natural products with their diverse biological and pharmacological activities represent a gold mine for scientists searching for lead compounds for the treatment of health disorders and infections, however the recent research activities are focused on finding natural sources of antioxidants. Therefore the present study aimed to determine the phytochemical profile of Algerian fenugreek (*Trigonella foenum-graecum* L.), and cumin (*Cuminum cyminum* L.) seeds, to characterize their phenolic compounds and to evaluate their antioxidant properties. Total phenolic, flavonoids, condensed and hydrolysable tannins contents were determined using Folin-Ciocalteu, aluminium chloride, vanillin and ferric chloride methods. Phenolic compounds were identified by HPLC method and antioxidant activity was measured using DPPH assay. Fenugreek gave the higher amounts of total phenolic compounds, flavonoids, condensed and hydrolysable tannins. Chromatographic analysis of the samples showed that eight phytochemical molecules were identified in cumin methanolic extract: (caffeic acid, isoquercetine, vanillic acid, myricetine 3-0 rutinoside, syringaresinol, citrusine, rosmarinic acid, and p-coumaric acid) and seven molecules in fenugreek methanolic extract: (gallic acid, sinapic acid, caffeic acid, asterogenic acid, pyrogallol, hyperoside and ferulic acid). Moreover, fenugreek possessed the higher antioxidant activity. This study affirmed that our plants are rich in phenolic contents and possessed a potent antioxidant activity.

Keywords: *Trigonella foenum-graecum* L., *Cuminum cyminum* L., Phytochemistry, Chromatographic analysis, Antioxidant activity.