

Antioxidant activity of carob seeds and chemical composition of their bean gum by-products

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Description

Background

The carob (*Ceratonia siliqua* L.) is very old edible fruit, flavorful and often used in foods and beverages. In this present study the composition of phenolic compounds, the antioxidant activity and the production locust bean gum (LBG) of seeds grown in Algeria was explored.

Methods

The phenolic contents (total phenolics, total tannins, total flavonoids, condensed tannins and flavonols) and the antioxidant activity of the aqueous methanolic, ethanolic and acetic extracts (70, 80 and 80v/v, respectively) of the seeds were determined using colorimetric methods. Furthermore, the carob bean gum from seeds was extracted and its chemical composition was evaluated.

Results

Aqueous acetic extract of carob seeds give the highest contents of total phenolics, total flavonoids, flavonols, total tannins and condensed tannins which were 12.24 ± 0.02 , 1.33 ± 0.01 , 2.97 ± 0.01 , 4.29 ± 0.2 and 0.53 ± 0.01 mg/g of dry ...