

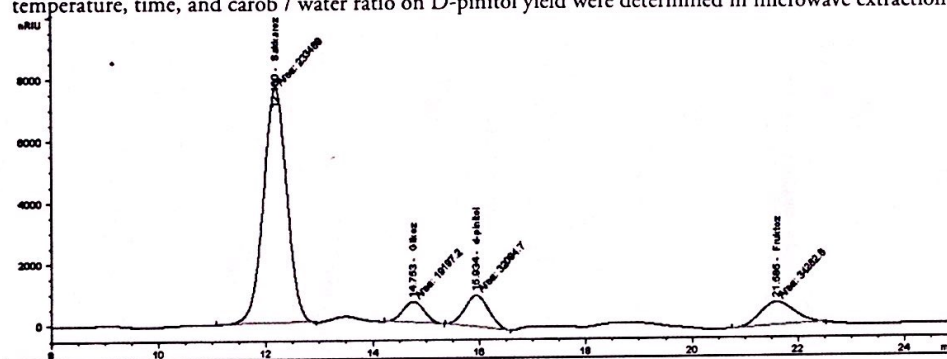
## Microwave-assisted D-pinitol extraction from carob fruit.

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### Abstract

Carob (*Ceratonia Siliqua*) is a family of legumes (Fabaceae) that naturally grows in the Mediterranean climate. The fruit of the tree grows up to 15-20 cm and becomes green in the first time and then turns brown. The middle layer of the tree fruit is fresh and sweet and soft. D-Pinitol is specially extracted and purified from rich sources including carob and soy bean commercially [1]. D-pinitol is a type of functionalized cyclitol with high water solubility [1]. Studies have shown that D-chiro inositol and its derivatives (especially D-pinitol) decrease blood sugar levels in Diabetes Mellitus Type 2 patients [2]. In the extraction of D-pinitol at high concentration, it is necessary to optimize the conditions to increase the transition from material matrix to the extract. In this study, the effects of temperature, time, and carob / water ratio on D-pinitol yield were determined in microwave extraction.



**Keywords:** D-pinitol, microwave, extraction, Optimization.

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