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Optimization of β -cyclodextrin-based extraction of antioxidant and anti-browning activities from thyme leaves by response surface methodology

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Abstract

Thyme (*Thymus vulgaris*) has been demonstrated to extend the shelf-life of food products, being also a potential source of bioactive compounds. The aim of this research was to optimize the ultrasound assisted extraction employing β -cyclodextrin aqueous solutions as no-contaminant technology and Response Surface Methodology to obtain thyme extracts with the maximum antioxidant capacity. The optimal extraction conditions were: a solution of β -ciclodextrin 15mM, an ultrasonic treatment time of 5.9 min at a temperature of 36.6°C. They resulted in an extract with a polyphenolic content of 189.3 mg GAE/mL,

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