

Title : The Isolation and Detection of β -Cryptoxanthin from Marigold by Ultrasonic Extraction and Chromatographic Techniques

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ABSTRACT

The marigold (*Tagetes erecta* L.) belongs to the Asteraceae family. The hexane crude extract from dried marigold flowers contains compounds with properties that may help treat and prevent cancer. In this research, β -cryptoxanthin was isolated and identify from marigold using ultrasonic extraction and chromatography techniques. The extraction of marigold with hexane yield at 6.51 %w/w. However, none of β -cryptoxanthin was found after the saponification reaction. The hexane extract from marigold was further separated using chromatography techniques, and the resulting pure compounds were analyzed via nuclear magnetic resonance (NMR) spectroscopy. Two pure compounds, **TEFL03** and **TEFL05**, were identified. **TEFL01–TEFL04** belong to the terpenoid group, while **TEFL05** is an isoflavone. The isolated pure compounds have potential for development into future medicine.