

Abstract

The effects of free radicals and active oxygen species on biological molecules have created very problems in recent years. These compounds are known to be responsible for oxidative deterioration of vital molecules such as proteins, lipids and nucleic acids. Antioxidants protect biological systems against these factors and have been suggested to play a preventing role in human health. In the present study, the antioxidant activity of water and alcoholic extracts of *carum copticum* was determined. The extracts obtained by ultrasonic and traditional methods. 2,2-Diphenyl-1-picrylhydrazyl (DPPH) was added to the extracts and the antioxidant activity was determined by amount of reagent consumption. For tracking the progress of the reaction, high performance liquid chromatography was used. In order to optimize the extraction conditions, effective parameters such as extracting solvent, temperature and time were investigated. Finally, the results were analyzed by Excel software.

Keywords: *Carum copticum*, Antioxidant activity, Ultrasonic extraction, Traditional method



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**The Thesis Submitted for the Degree of M. Sc
In the field of Analytical Chemistry**

Title

**Comparison of ultrasonic extraction of
Carum copticum antioxidant compounds
using traditional method**

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June 2014