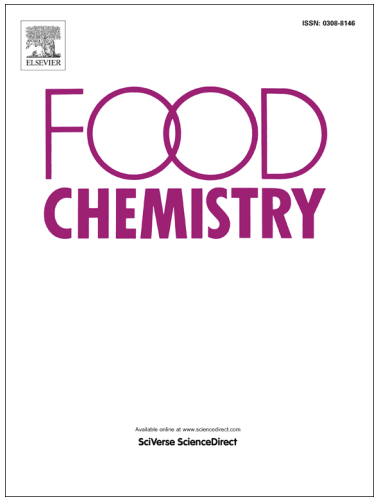

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Fahad AL Juhaimi, Mehmet Musa Özcan, Kashif Ghafoor, Elfadıl E Babiker

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The effect of microwave roasting on bioactive compounds, antioxidant activity and fatty acid composition of apricot kernel and oils

Fahad AL Juhaimi[a], Mehmet Musa Özcan[b*], Kashif Ghafoor[a], Elfadıl E Babiker[a]

[a]Department of Food Science & Nutrition, College of Food and Agricultural Sciences, King Saud University, Riyadh-Saudi Arabia.

[b]Department of Food Engineering, Faculty of Agricultural, Selcuk University, 42079 Konya-Turkey.

Corresponding address: e-mail: mozcan@selcuk.edu.tr; Tlf:+90.332.2232933;Fax:+90.332.2410108

Abstract

In this study, the effect of microwave (360W, 540W and 720W) oven roasting on oil yields, phenolic compounds, antioxidant activity, and fatty acid composition of some apricot kernel and oils was investigated. While total phenol contents of control group of apricot kernels change between 54.41mgGAE/100g (Soğancıoğlu) and 59.61 mgGAE/100g (Hasanbey), total phenol contents of kernel samples roasted in 720 W were determined between 27.41 mgGAE/100g (Çataloğlu) and 34.52 mgGAE/100g (Soğancıoğlu). Roasting process in microwave at 720W caused the reduction of some phenolic compounds of apricot kernels. The gallic acid contents of control apricot kernels ranged between 7.23 mg/100g (Kabaaşı) and 11.23 mg/100g (Çataloğlu) whereas the gallic acid contents of kernels roasted in 540 W changed between 15.35mg/100g (Soğancıoğlu) and 21.17 mg/100g (Çataloğlu). In addition, oleic acid contents of control group oils vary between 65.98% (Soğancıoğlu) and 71.86% (Hasanbey), the same fatty acid ranged from 63.48% Soğancıoğlu) to 70.36% (Hasanbey).

Key words: Apricot**,** roasting, microwave, bioactive properties, phenolic compounds, fatty acids

1.Introduction

Apricot (*Prunus armeniaca* L.) kernels are used as roasted cookie (Özcan, 2000; Demir & Cronin, 2005; Hussain, Gulzar, & Shakir 2011). Large quntities of fruit seeds are usually discarded by the food processing industry (Matthaus & Özcan, 2009; Manzoor, Anwar, Ashraf, & Alkharfy, 2012). The utilization of kernels (waste by-product) from *Prunus* species (apricot, peach, plum and almond etc.) could result in economic benefits and reduce waste