

Drying of persimmons (*Diospyros kaki L.*) and the following changes in the studied bioactive compounds and the total radical scavenging activities

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Abstract

Fresh persimmons were subjected to two different processes: sun-drying during 1 month and dehydration at 60 °C during 12 h. To assess the effect of this process on nutritional and health-related properties of persimmons dietary fibers, minerals, trace elements, polyphenols and the total radical scavenging activities (TRSAs) were determined before and after processing. It was found that the contents of dietary fibers, minerals and trace elements in fresh and dried persimmons fruits were comparable. Total polyphenols in fresh persimmons was higher than in dried fruits (1.3 vs. 0.9 and 0.8 mg/100 g FW, respectively) and percentage of inhibition was higher than in dried fruits (70% vs. 59% and 55% and 58% vs. 53% and 46% for 1,1-diphenyl-2-picrylhydrazyl (DPPH) and 2,2'-azino-bis (3-ethylbenzthiazoline-6-sulfonic acid) [ABTS] radicals, respectively ($P > 0.05$ in all cases). In conclusion: (1) the differences in the contents of dietary fibers, minerals and trace elements in fresh and dried persimmons are not significant; (2) the contents of polyphenols and the level of the TRSA are higher in fresh persimmons than in dried fruits; however, both variables are also high in dried persimmons; (3) when fresh fruits are not available, proper dried persimmons could be used as a valuable substitute. © 2005 Swiss Society of Food Science and Technology. Published by Elsevier Ltd. All rights reserved.

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1. Introduction

The nutritional antioxidants and particularly phenolics are able to prevent oxidation of LDL-C and

therefore to delay development of atherosclerosis in general and coronary atherosclerosis in particular (Gaziano, 1994; Kromhout, Menottim, Kesteloot, & Sans, 2002). Therefore, diets containing these nutritional antioxidants are in demand (Longeril et al., 1994; Partiff et al., 1994). The most known among them is the Mediterranean diet, which was proposed for prevention and treatment of hyperlipidemia (Longeril et al., 1994;

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