



## IDENTIFICATION OF PHENOLIC COMPOUNDS AND CHANGES IN THEIR CONTENT DURING PROCESSES OF WHITE WINES

Seda Ceyhan<sup>1</sup>, Osman Erkmen<sup>2</sup> ✉

<sup>1</sup>Food Engineering Department, Faculty of Engineering, University of Gaziantep, 27310 Gaziantep, Turkey

<sup>2</sup>Nutrition and Dietetics Department, Faculty of Health Sciences, İstanbul Arel University 34010, Zeytinburnu, İstanbul, Turkey

✉ [osmerkmen@gmail.com](mailto:osmerkmen@gmail.com)

<https://doi.org/10.34302/crpfst/2023.15.4.17>

---

**Article history:**

**Received:** 6 June 2022

**Accepted:** 17 September 2023

**Keywords:**

*Phenolic compound;*

*White wine;*

*Vinification;*

*Vitis vinifera.*

**ABSTRACT**

Gaziantep (in Turkey) is one of the oldest cities in the World, in which the history of winemaking and viticulture began in ancient ages. It is home to wild white grapes *Vitis vinifera* Dökülgen and Paf. Three young white wines were produced from these two grapes. Ten phenolics and some chemical characteristics were quantitatively detected in the white wines and musts depending on white wine processes. Phenolic compounds significantly ( $p < 0.05$ ) increased during the fermentation process. After aging, (+)-catechin and procyanidin B2 contents of white wines were ranged from 1.12 to 1.35 and from 60.69 to 69.02 mg/L respectively. After aging, the quercetin, rutin and myricetin contents of white wines-1, 2 and 3 were ranged from 0.47 to 0.59, from 0.28 to 0.32 and from 0.11 to 13 mg/L respectively. White wines represented with abundant flavanols, tyrosol and chlorogenic acid produced from Dökülgen and Paf mixture with 7:3 ration. It was found that there is a significant difference between hydroxycinnamic acid and hydroxybenzoic acid content of white wines. Dökülgen and Paf white grapes contribute higher amount of phenolic characteristics, better acidity and sugar to white wine while Dökülgen grape contributed more sugar.

---