

Effect of grape (*Vitis vinifera* L. cv. Dimrit) seed extract powder on total phenolic content and antioxidant properties of ayran drink

Rabia FAKI,¹ Kubra KOCA TURK,¹ Oguz GURSOY*,² and Yusuf YILMAZ²

¹Burdur Mehmet Akif Ersoy University, Institute of Natural and Applied Sciences, Division of Food Engineering, Burdur, Turkey

²Burdur Mehmet Akif Ersoy University, Faculty of Engineering and Architecture, Department of Food Engineering, Burdur, Turkey

Abstract. In this study, the lyophilized extracts of grape (*Vitis vinifera* L. cv. Dimrit) seeds [0 (control), 4, 5 and 6 mg/100 mL] were incorporated into ayran drinks, and the total solids, fat, pH, acidity (% lactic acid) and CIELAB color values, total phenolic content, antioxidant activity values, some microbiological and sensory properties of ayran drinks were determined during storage at 4±1 °C for 10 days. The addition of grape seed extract powder (GSEP) had an insignificant effect on the pH, acidity and L* values of ayran drinks ($p > 0.05$), but the a* and b* color values of drinks increased as its concentration increased. The incorporation of GSEP into ayran drinks increased the total phenolic content and antioxidant activity values of samples significantly in comparison to control samples ($p < 0.05$). Addition of GSEP to ayran drinks did not change the counts of lactobacilli and lactococci in ayran drinks during storage. Panelists in sensory evaluation liked the flavor and color properties of control and ayran drinks with 4 mg/100 mL GSEP more than other samples ($p < 0.05$). Results indicated that GSEP might have a great potential to increase the antioxidant activity of ayran drinks, but its concentration is primarily limited by its bitter taste in drinks.

Keywords: antioxidant activity; ayran; grape seed; phenolic content.

* Corresponding author. E-mail address: ogursoy@mehmetakif.edu.tr (Oguz Gursoy)