

Determination of antioxidant activity and total phenolic contents in yogurt added with black cumin (*Nigella sativa* L.) honey

Özge Duygu OKUR*

Department of Food Engineering, Faculty of Engineering, Zonguldak Bulent Ecevit University, Zonguldak, Turkey

Abstract. This study aims to reveal the antioxidant activity and phenolic ingredients of yogurts added with black cumin (*Nigella sativa* L.) honey. Therefore, this study aimed to produce healthy food made with black cumin honey with increased total phenolic contents and antioxidant activity. The effect of varying degrees of black cumin honey addition (0, 2.5%, 5%, 10%, 15%) on the antioxidant activity and total phenolic contents of yogurt were examined for 28 days. The antioxidant activity was found between 14.33 and 17.41 mM TE. Total phenolic compounds were between 202.50 and 1415.00 mg GAE/kg. Some important differences were determined between yogurts with black cumin honey and the control with respect to phenolic contents during storage ($p < 0.05$). The results of study reveal that the augmentation of fortification rate increased the total phenolic characteristic and antioxidant activity of yogurt with black cumin honey. Significantly, these outcomes indicate that yogurt with black cumin honey have a high level of polyphenols and could be consumed as bioactive composition.

Keywords: black cumin honey; yogurt; antioxidant activity; total phenolic content.

* Corresponding author. *E-mail address:* oduyguokur@beun.edu.tr