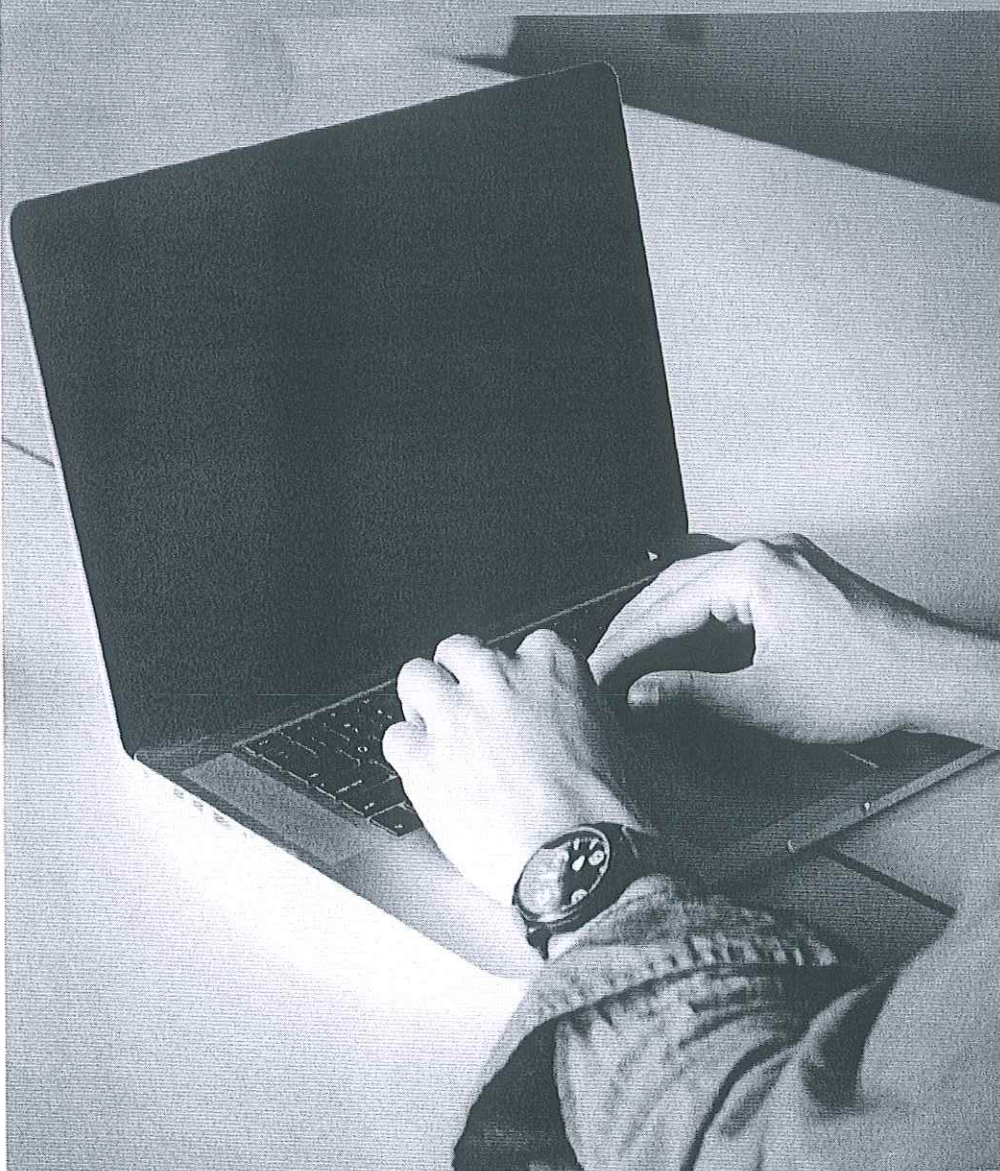




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4TH NORTH AND EAST EUROPEAN CONGRESS ON FOOD



ABSTRACT BOOK

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4TH NEEFOOD CONGRESS AIMS TO ANSWER AT LOCAL AND GLOBAL CHALLENGES BY THE FOLLOWING TOPICS:

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PP02

Some properties of probiotic yoghurt fortified with liquorice extract

M. Serdar AKIN^{1*}, Aslı ÇELIKEL¹, Büşra GÖNCÜ¹, Mutlu B. AKIN¹

¹ Harran University Engineering Faculty Department of Food Engineering, Sanliurfa, Turkey

*Corresponding author, e-mail: sakin@harran.edu.tr

Liquorice, is the root of *Glycyrrhiza glabra* from which a sweet flavour can be extracted. Liquorice is used as a flavouring agent for tobacco, candies, sweeteners, yogurt or ice cream. In this study, the effects of liquorice extract level on the some properties of probiotic yoghurt were investigated.

For this purpose three different probiotic yoghurts, which contain 0% (as control), 0.25, % 0.5 and 1% liquorice extract, were produced according to Tamime and Robinson. Two different trials were performed for the manufacture of probiotic yogurt. After addition 3% non fat milk powder, milk was divided into four portions (A, B, C, and D), followed by addition of and 0.25, % 0.5 and 1% liquorice extract B, C and D, respectively. Then the milks were heat-treated at 90°C for 10 min, cooled to 45°C and were inoculated with yoghurt and probiotic cultures at a rate of 2 and 5%, respectively. Then they dispensed into plastic cups (200 ml). and incubated at 37 °C until reaching pH 4.6. Then they were immediately transferred to a cold store (4±1°C). Physicochemical and microbiological properties of probiotic yoghurt were determined at 1st, 10th and 20th days of storage.

The rate of liquorice extract and storage period significantly affected all properties of probiotic yoghurts. With the increase in liquorice extract content, pH, viscosity, *L. acidophilus*, *Bifidobacterium* BB-12 counts of yoghurts were increased, but titratable acidity (%L.A.), whey separation, *S. thermophilus* and *L.delbrueckii subsp. bulgaricus* counts of the samples decreased.

During storage period whilst pH, viscosity, whey separation, *S. thermophilus* *L.delbrueckii subsp. bulgaricus*, *L. acidophilus*, *Bifidobacterium* BB-12 counts of yoghurts were declined, titratable acidity (%L.A.) of the samples were increased. According to the results, addition of 0.5% liquorice extract can be recommended for probiotic yogurt production.

Key Words: Yoghurt, probiotic, liquorice extract.