



Comparison of Some Physicochemical Properties of Holstein Cow Milk Raised in the Districts of Uşak (Eşme) and İzmir (Çiğli)

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Abstract

Cattle breeding is an important livestock production activity both worldwide and in Türkiye. Milk and dairy products play a significant role in healthy and balanced human nutrition. It is known that cattle breeds raised in different regions of Türkiye gradually adapt to the climatic and environmental conditions of their environments. Even in animals belonging to the same breed, environmental factors may cause significant differences in milk yield and milk quality. This study aimed to compare some physicochemical properties of milk samples obtained from Holstein cows raised in small family farms located in the districts of Eşme (Uşak) and Çiğli (İzmir). The research material consisted of milk samples collected from a total of 160 randomly selected lactating cows from each district. The cows from which samples were taken were selected from the same lactation period; 80 from Çiğli district and 80 from Eşme district. Analyses of milk fat, protein, lactose, total solids, and solids-not-fat were performed. The obtained data were evaluated using the independent samples t-test. According to the analysis results, statistically significant differences were detected between the farms in terms of fat, lactose, total solids, and solids-not-fat values ($p < 0.05$). However, no significant difference was found in protein content ($p > 0.05$). In conclusion, environmental conditions and management differences were determined to have significant effects on milk composition.

Keywords: *Holstein, milk quality, physicochemical properties, fat, protein, lactose*

