CHEMICAL AND MICROBIOLOGICAL CHARACTERISTICS OF GOAT MILK KEFIR DURING STORAGE UNDER DIFFERENT TEMPERATURES

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Abstract	This research was conducted to study the chemical and microbiogical properties of goat milk kefir stored under different temperatures and storage time. A completely randomized design, factorial pattern 3 x 3 was used in this study. The first factor was storage temperature (-1 to -5; 1 to 5 and 6 to 10oC) and the second factor was storage time (10; 20 and 30 days). Each treatment has three replicates. Variables observed included pH, water activity (aw), total lactic acid bacteria (LAB), and total yeast. Data were subject to analysis of variance and DuncanÃ¢Â€Â™s multiple range test. Results showed that storage time and temperature had significant effects on pH. The lowest pH of Kefir was obtained by storing it for 10 days at 6 to 10oC. Titratable acidity was significantly affected by temperature, and kefir stored at 6 to 10oC has the highest titratable acidity. Storage time and temperature had no significant effects on water activity, and the average water activity of kefir was 0.875Ã‚Â±0.028. Total LAB and total yeast were significantly affected by temperature, but not by storage time. In average, total LAB and total yeast in kefir were 7.17Ã‚Â± 0.92 log cfu/ml and 6.76Ã‚Â± 0.39 log cfu/ml, respectively. In conclusion, this study confirmed that temperature of storage has a major contribution to the characteristics of kefir made from goat milk; hence it has to be considered when handling kefir for a longer period of time.
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Author	Ir JUNI SUMARMONO, S.Pt, Master of Science,