Effect of Storage Conditions on The Characteristics and Composition of Fresh Goat Cheese Containing Probiotics

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Abstract	The objective of this study was to determine the characteristics and composition of soft cheese manufactured from goat milk, which contained probiotic bacteria, and stored at different temperatures for up to 90 days. Soft cheese was manufactured from fresh Indonesian Etawah goat milk, with a mix starter culture containing Lactobacillus casei and Bifidobacterium longum (1:1). Animal rennet was added to facilitate curding. Fresh cheese produced was wrapped in linen clothes and stored under two different temperature conditions, which were high temperature (H:13-15oC) and low temperature (L: 8-10oC) for up to 90 days.ÃƒÂ‚Ã‚Â Results showed that goat cheese was characterized as soft with mild goaty flavor, contained no less than 108 CFU of probiotic lactic acid bacteria, pH of 4.6, 0.5% free fatty acid, 57% moisture, crude 15% crude protein, 22% total fat and 2.5% mineral. Cheese underwent dehydration during storage which caused an increase in the relative proportion of protein, fat and mineral. The evolution of cheeseÃƒÂ‚Ã‚Â¢Ã‚Â¬Ã‚Â„Â¢s pH, titratable acidity and composition was partly affected by storage temperature. At the end of storage periods (90 days) goat cheese was characterized as semi hard and, on average, contained 1.3-1.5% titratable acidity, pH of 4.94-4.95, 31.22-37.06% moisture, 24.59-24.09% crude protein, 33.51-36.17% total fat, and 5.64-5.53% minerals.. Cheese stored at high temperature has slight growth of mold at its surface, which was anormal condition during for cheese ripening. In conclusion, acceptable characteristics and composition of probiotic-containing cheese can be manufactured from milk of Indonesian Etawah goats and stored at temperature of 8-10oC for 90 days.
Publisher Name	Universitas Jenderal Soedirman, Faculty of Animal Science, Purwokerto-Indonesia
Publish Date	2020-02-06
Publish Year	2019
Doi	DOI: 10.20884/1.jap.2019.21.1.776
Citation	
Source	ANIMAL PRODUCTION
Source Issue	Vol 21, No 1 (2019)
Source Page	56-63
Url	http://animalproduction.net/index.php/JAP/article/view/776/pdf_2
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