

Effect of cold and frozen temperatures on artisanal goat cheese containing probiotic lactic acid bacteria isolates (*Lactobacillus plantarum* TW14 and *Lactobacillus rhamnosus* TW2)

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Title	Effect of cold and frozen temperatures on artisanal goat cheese containing probiotic lactic acid bacteria isolates (<i>Lactobacillus plantarum</i> TW14 and <i>Lactobacillus rhamnosus</i> TW2)
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Authors	Setyawardani, T; Sumarmono, J; Widayaka, K;
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Abstract	<p>a:4:{i:0;s:272:"Aim: The research was conducted to determine the effect of temperature and storage duration on the physicochemical, lipolytic, microbiological, and proteolytic characteristics of goat cheese made using <i>Lactobacillus plantarum</i> TW14 and <i>Lactobacillus rhamnosus</i> TW2 bacteria.";i:1;s:305:"Materials and Methods: The cheese was stored at 4 degrees C and -20 degrees C for 0, 15, 30, 45, and 60 days. Observations were made on its physicochemical, lipolysis, and microbiological characteristics. The proteolysis pattern was measured with sodium dodecyl sulfate-polyacrylamide gel electrophoresis.";i:2;s:635:"Results: The protein, fat, ash and total solids levels of cold-stored cheese were higher than the frozen-stored one. The frozen-stored cheese's free fatty acids (FFA) and acid degree value (ADV) levels are lower than those of the cold-stored cheese as indicated by the partial lipolysis event. The total yeast in the frozen-stored cheese is lower than that in the frozen-stored cheese. Finally, the electrophoresis profile indicates that proteolysis of the frozen-stored cheese is formed since there have been detected alpha(s1)-casein, alpha(s2)-casein, beta-casein, and kappa-casein in the casein breakdown during the 60-day storage.";i:3;s:244:"Conclusion: The physicochemical characteristics of cold-stored cheese are better than the cheese stored at frozen temperature. However, frozen-stored cheese produces lower FFA and ADV than cold-stored cheese and lipolysis occurs only partially.";}</p>
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