

Texture, hedonic test and fatty acid profile of goat cheese with *L. plantarum* TW14 and *L. rhamnosus* TW2 isolates stored at different temperature conditions

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Abstract	The purpose of this research was to investigate texture, hedonic test and fatty acids profile of goat cheese stored at cold and frozen temperatures for 60 days. Cheese was manufactured from goat milk with addition of probiotics bacteria <i>L. plantarum</i> TW14 and <i>L. rhamnosus</i> TW2 with a ratio of (1:1/v/v). Treatments were arranged in a factorial design, employing two factors, i.e. temperature (cold; frozen) and storage time (0; 15,30,45 and 60 days). Each treatment was repeated three times. Results showed that goat cheese stored at cold temperature has an average hardness-texture of 374.46 \bar{X} , $\hat{\sigma}$ ±77.69 gf while that of the cheese stored at frozen temperature has 221.66 \bar{X} , $\hat{\sigma}$ ±38.46 gf, which were significantly different ($P < 0.05$). In term of flavor, texture and overall acceptability, there were no significant effects ($P > 0.05$) of storage temperatures and storage time. However, the taste of cheese stored under cold and frozen temperatures was highly significant different ($P < 0.01$). Fatty acids composition of cheese stored for 60 days in a cold storage showed that the highest fatty acid content was SFA which was 64.34% and USFA was 16.76%. During the 60-day storage, the SFA percentage of was relatively stable while the percentage of oleic acid USFA increased.
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Author	Ir JUNI SUMARMO, S.Pt, Master of Science,