

Yield and Processing Properties of Concentrated Yogurt Manufactured from Cow's Milk: Effects of Enzyme and Thickening Agents

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First Author	Sumarmono, J.; Setyawardani, T.; Rahardjo, A. H. D.;
Last Author	
Authors	Sumarmono, J; Setyawardani, T; Rahardjo, AHD;
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Abstract	<p>The objective of the experiment was to investigate the yield and processing properties of concentrated yogurt manufactured from local cow's milk with the addition of microbial transglutaminase enzyme (mTGase) and several thickening agents. Concentrated yogurt was manufactured from local fresh milk, which were previously processed into plain yogurt by adding starter culture of lactic acid bacteria. The enzyme and four thickening agents (pectin, carrageenan, xantan, and inulin) were added before the fermentation process. The amount of mTGase was 0.03% (w/w), while the amount of each thickening agent was 1.5g/100g of milk. Partial removal of whey was conducted by modified in-bag straining method using nylon bags. Data was analyzed by the procedure of generalized linear model. Overall, the present study showed that yield and the processing properties of concentrated yogurt can be improved by the addition of enzyme (mTGase) and thickening agents: inulin, carrageenan, xanthan, and pectin. The use of xanthan resulted in the highest yield, whereas the use of inulin and mTGase produce yogurt curd with low syneresis and high water holding capacity.</p>
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Author	Prof. Dr. Ir TRIANA SETYAWARDANI, SPT, M.P. IPU