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Viability of lactic acid bacteria, fatty acid profile and quality of cocoghurt made using local and commercial starters during fermentation

Pato U.^a [✉](#), Yusuf Y.^a, Panggabean I.P.^a, Handayani N.P.^a, Kusuma A.N.^a, Adawiyah N.^a, Jaswir I.^b[📁 Save all to author list](#)^a Department of Agricultural Technology, Faculty of Agriculture, Universitas Riau, Kampus Bina Widya KM 12.5, Simpang Baru, Pekanbaru, Indonesia^b International Institute for Halal Research and Training, International Islamic University Malaysia, 53100 Jalan Gombak, Selangor, Malaysia[Abstract](#)[Author keywords](#)[Reaxys Chemistry database information](#)[SciVal Topics](#)[Metrics](#)[Funding details](#)

Abstract

Cocoghurt is a novel fermentation product with coconut milk as the main raw ingredient. In this study, the starter concentration and fermentation time on the viability of lactic acid bacteria (LAB) and the fatty acid profile and quality of the cocoghurt were examined. *Lactobacillus casei* sub sp. *casei* R-68 and *Streptococcus thermophilus* were used as starter cultures. The results showed that 3.0% of the *L. casei* subsp. *casei* R-68 and *S. thermophilus* starters resulted in the optimal growth of LAB. Fermentation time significantly affected pH, total lactic acid, total LAB, and protein content but did not significantly influence ash, moisture, fat, and total solid content. The duration of fermentation also did not significantly affect the fatty acid profile. The probiotic cocoghurt fatty acid profiles consisted mainly of medium-chain saturated fatty acids followed by long-chain saturated fatty acids and finally unsaturated fatty acids. Cocoghurt produced using skim milk 3.0% starter and fermentation time for 10 hours had the characteristic of being slightly white, tasting sour and sweet, with an aroma of coconut milk; the texture was relatively thick and preferred by the panelists. © 2021 Association of Agricultural Technology in Southeast Asia. All rights reserved.

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🔗 Pato, U.; Department of Agricultural Technology, Faculty of Agriculture, Universitas Riau, Kampus Bina Widya KM 12.5, Simpang Baru, Pekanbaru, Indonesia;
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