VIABILITY OF LACTIC ACID BACTERIAAND QUALITY OF PROBIOTIC COCOGHURT PRODUCED BY THE VARIATION OFSTARTER CONCENTRATION AND FERMENTATION TIME

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Abstract - Indonesia is the largest coconut producer in the world with a production of 18.3 million tons per year. The main derivative products of coconut fruit are copra and coconut oil. Therefore, it is necessary to diversify coconut fruit products to increase their added value. One of the derivative products that have the potential and good economic prospects is cocoghurt which until now has not been widely marketed commercially. Lactobacillus casei subsp. casei R-68 isolated from dadih, traditional fermented milk from West Sumatra has the potential to be used as probiotic as well as starter combined with Streptococcus thermophilus. The purpose of the present study was to evaluate viability of lactic acid bacteria(LAB) and quality of probiotic cocoghurt during the fermentation using Lactobacillus casei subsp. casei R-68 and Streptococcus thermophilus. The fermentation conditions were the concentration of starters (1.5 to 7.5%) and fermentation time (6 to22 h. Parameters observed were total LAB, pH, total lactic acid, total solids, fat, protein and ash contents. The results showed that the starter concentration of 3% of Lactobacillus casei subsp. casei R-68 and Streptococcus thermophiles produced high LAB viability and the best quality of cocoghurt. The data also show that during the fermentation process there was a decrease in pH value and an increase in total lactic acid and protein content. The amount of LAB increased in fermentation 6 to14 h and decreased after 18 to 22 h of fermentation. Meanwhile the moisture, ash, total solid and fat contents as well as fat acid profiles were relatively stable during fermentation. Fermentation time for 10 h produced the high viability of LAB of 9.43 log cfu/g and good quality of probiotic cocoghurt with pH value of 5.29, total lactic acid 1.22%, protein 5.36%, moisture 45.94%,ash 1.27%, total solid 54.06%, and fat content 31.59%.

Keywords - Cocoghurt, Lactobacillus Casei, Coconut Milk, Viability