FORMULATION OF SYNBIOTIC YOGHURT MADE WITH BANANA PUREE AND INULIN

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ABSTRACT

Recently, one of functional food which has become popular in the market is probiotic, prebiotic and or synbiotic yoghurt. Synbiotic yoghurt is fermented milk containing both probiotic and prebiotic. Many innovations in yoghurt production by food scientists were developed by adding local ingredients. Banana is abundant local commodity in West Java. Besides having high nutrient, banana also contains 0.5-1.4 g/100g inulin which is a good source of prebiotic. The purpose of this research was to make synbiotic yoghurt containing banana puree and inulin as a functional food using local commodity. In this research, the synbiotic yoghurt was made from banana puree added with Lactobacillus casei as probiotic and commercial inulin as prebiotic. This research was divided into three steps, first step was to obtain an optimum ratio between skim milk and banana puree to produce an acceptable yoghurt by sensory evaluation (hedonic ranking test), second step was to obtain an optimum one by addition of commercial inulin to the previous formula based on sensory evaluation (hedonic rating test), and the third step was to determine chemical and microbiology quality of the synbiotic yoghurt. Result of the first step of the research, suggested that skim milk : banana puree ratio = 1:1 was the most preferred product by panelists. Addition of 2% inulin yoghurt resulted in the highest rank yoghurt likened by the panelists. Based on the chemical and microbiological analysis, the resulted synbiotic yoghurt complied standard requirement yoghurt in Indonesia (SNI 01.2981-2009). The synbiotic yoghurt contained BAL 3.6 x 10^9 cfu/ml probiotic lactic acid bacteria and approximately about 3.88 g/100g prebiotic. Based on proximate analysis, the fat content of this synbiotic yoghurt is less than 5% thus it can be classified as non fat yoghurt.

Keywords: Lactobacillus casei, synbiotic yoghurt, banana, inulin, synbiotic food