EFFECT OF MILK RATIO AND SKIM MILK POWDER CONCENTRATION ON THE CHARACTERISTICS OF MILK-SOY YOGHURT

The production of yoghurt from either cow milk or soymilk has commonly been performed. However, production of yoghurt from the mixture of cow milk and soymilk has not been performed commercially. On the yoghurt production, addition of ingredients is sometimes needed to improve the characteristics of final product. Skim milk powder is usually added in yoghurt production to improve viscosity and prevent syneresis. The objectives of this research were to obtain best sugar concentration, milk ratio and skim milk powder concentration to make the milk-soy yoghurt, and also to study the effect of ratio of cow milk and soymilk and skim milk powder towards the characteristics of final yoghurt. Milk-soy yoghurt was made by inoculation of yoghurt culture consisting of Lactobacillus bulgaricus and Streptococcus thermophilus to the mixture of cow milk and soymilk with five different ratio (100:0, 75:25, 50:50, 25:75, 0:100) and sugar was added on 5% levels based on the result of preliminary research, while skim milk powder was incorporated on three levels of 1, 3, and 5%. The results showed that 5% sugar addition was the optimum concentration for yoghurt fermentation. The addition of skim milk powder enhanced the fermentation and produce yoghurt with desirable viscosity. In terms of milk ratio, higher cow milk proportion showed better result, especially on TTA, pH, viscosity and sensory analysis. However, the best formulation was found on cow milk : soymilk ratio of 75:25 and 5% skim milk powder addition. This formulation exhibits the best result in terms of sensory analysis and relatively good results on other analyses as compared to other formulations.

Keyword : Yoghurt, cow milk, soymilk, skim milk powder, lactic acid fermentation