

## PRODUCTION AND QUALITY EVALUATION OF SOY MILK-BASED SET YOGHURT

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Non-dairy milk alternatives have gained increasing demand mainly due to health reasons and widely explored in recent years. Soy is abundant in functional ingredients and is extensively produced in Sri Lanka. Therefore, a soy milk-based set yoghurt was developed in the present study. A modification to the standard cow milk yoghurt recipe was made by adding 0.5% corn starch along with gelatin to achieve a thicker yoghurt. Two types of soy milk-based set yoghurts were developed; one with 100% soy milk and the other with soy milk supplemented with 8% pre-prepared cow milk curd that is made by adding 4% natural vinegar to cow milk. A mixed yoghurt starter culture with *Streptococcus thermophilus* and *Lactobacillus bulgaricus* was used for fermentation. A standard cow milk yoghurt was used as the control. The sensory properties of the developed yoghurts were evaluated using 30 untrained panellists and a series of laboratory analyses were carried out to evaluate physiochemical properties and shelf life for 21 days at 4°C. The soy yoghurt incorporated with 8% cow milk curd scored the highest for sensory properties. This yoghurt had a significantly higher ( $p<0.05$ ) protein percentage of  $3.4\pm.01\%$  and a fat percentage of  $4.3\pm.27\%$  than the control and the yoghurt made with 100% soy milk. During the storage, the pH values were significantly decreased ( $p<0.05$ ) while titratable acidity and syneresis were significantly increased ( $p<0.05$ ) in both yoghurts. After 21 days of storage, both yoghurts were microbially safe for consumption. The results of this study suggest that consumer-preferred soy milk-based yoghurt can be effectively manufactured.

**Keywords:** Corn starch, Organoleptic quality, Soy milk, Yoghurt