

DEVELOPMENT AND EVALUATION OF SET YOGHURT INCORPORATED WITH ALOE VERA GEL AS BIO-PRESERVATIVE

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Food safety and food security play a continual challenge in the dairy industry. In commercial yoghurt production, chemical preservatives are added to enhance the shelf life of the product. But present-day consumers are health conscious and find foods with functional properties additional to their nutritional requirement. The objective of this study was to evaluate the effect of *Aloe vera* gel as a bio preservative on physicochemical, microbiological and sensory properties of set yoghurt. For this, a yoghurt sample was prepared with 5% of *Aloe vera* gel and yoghurt incorporated with potassium sorbate was used as the control. All physicochemical, microbial and organoleptic properties were evaluated at weekly intervals. Parametric data were statistically analyzed using SPSS program and organoleptic data were analyzed through MINITAB. There were no significant differences in the titratable acidity, pH and organoleptic properties between bio preservative added yoghurt sample and the control. Coliform was not detected and yeast ($< 1,000$ cfu g⁻¹) and mold (< 1 cfu g⁻¹) counts were within the acceptable limits over the storage period of 28 days. This study concluded that all the physicochemical, microbial and sensory quality of the bio-preservative added new yoghurt product was not significantly different from the commercially available yoghurt products. Therefore, *Aloe vera* gel can be used as a bio-preservative instead of the chemical preservative (potassium sorbate) in commercial yoghurt production.

Keywords: *Aloe vera*, Bio-preservative, Yoghurt