DEVELOPMENT AND EVALUATION OF SET YOGHURT BY USING PROBIOTIC CULTURE (*Lactobacillus paracasei* and *Lactobacillus rhamnosus* AS A BIO-PRESERVATIVE

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Yoghurt is one of the most popular food, produced by bacterial fermentation of milk which plays a major role in dairy industry. The objective of this study was to evaluate the effect of bio-preservative cultures (*Lactobacillus paracasei* and *Lactobacillus rhamnosus*) on physicochemical, microbiological and sensory properties of set yoghurt. Yoghurt incorporated with Potassium sorbate was used as the control. All the yoghurt samples were prepared with three replicates using fresh cow milk having 3.7% fat content with thermophilic starter cultures. Samples were stored at 4°C for 28 days and all physicochemical and microbial properties were evaluated at weekly intervals. Sensory evaluation was conducted using day old produce up to 28 days at weekly intervals. Parametric data were statistically analyzed using SAS program. The organoleptic data were analyzed by Friedman test using MINITAB. There was no significant difference ($p>0.05$) in the titratable acidity and pH between Bio preservative added yoghurt sample and the control. Sensory data revealed that replacing Bio preservative has no significance effect ($p>0.05$) on the overall acceptability of yoghurt during the storage time. Coliform was not detected and yeast (<1000 cfu/g) and mold (<1 cfu/g) counts were within the acceptable level over the storage period of 28 days at refrigerated storage. This study concluded that the Bio-preservative culture could be used instead of the chemical preservative (Potassium sorbate) in commercial yoghurt production.

Keywords: Bio-preservation, Bio-protective culture, Physicochemical properties, Yoghurt