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Storage Changes of Strawberry Set Yoghurt made from Milk Standardized Using Ultrafiltered Retentate

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Abstract

Strawberry set yoghurt was manufactured by standardizing milk solids (10.5%) and fat (1.5%) by addition of calculated amount of 5 fold ultrafiltered cow skim milk retentate and cow milk cream, respectively. Strawberry pulp and sugar levels were maintained at 6% and 8%, respectively. Physicochemical, physical and microbiological quality of the yoghurt was analyzed during storage at 4±1°C and compared with yoghurt made from milk standardized with skim milk powder. A significant ($p<0.05$) increase of acidity development and pH reduction was observed with advancing storage period irrespective of the type of yoghurt. Whey syneresis appeared only in control strawberry yoghurt on day sixteenth whilewater holding capacity (WHC) was significantly ($p<0.05$) higher in developed compared to control strawberry yoghurt and increased significantly ($p<0.05$) with advancing storage period. Acetaldehyde concentration significantly ($p<0.05$) decreased with advancing storage period and was significantly ($p<0.05$) higher in developed compared to control yoghurt throughout the storage. Lactic acid bacteria (LAB) count decreased significantly ($p<0.05$) while yeast and moulds increased significantly ($p<0.05$) with advancing storage period,irrespective of the type of yoghurt. Lactic acid bacteria count was significantly higher in control yoghurt while no difference was observed in yeast &mouldcountsin any of the yoghurts. Coliforms were not detected in any of the yoghurts during storage. On the basis of increased yeast and mould count, shelf life of developed yoghurt was observed to be 13 days at 4±1°C.

Keywords: *Ultrafiltration (UF), Strawberry yoghurt, retentate, water holding capacity, whey syneresis*