

DEVELOPMENT OF SET YOGHURT IN COMBINATION WITH GELATIN AND SAGO AS TEXTURIZERS

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Incorporation of sago starch powder with gelatin may reduce the cost of production, while improving the stability of yoghurt due to the low cost and texturing ability of sago powder. This study was conducted to develop sago starch and gelatin stabilized yoghurt and to evaluate the chemical and microbial quality of the product over storage. Plain set yoghurt samples were produced with different combinations of sago powder and gelatin (0.4% sago + 0.6% gelatin, 0.5% sago + 0.6% gelatin, 0.3% sago + 0.6% gelatin and 0.6% sago + 0.2% gelatin) and stored at three different temperature zones (11-13 °C, 5-7 °C and 3-5 °C). Titratable acidity and pH of the stored samples were measured every other day and microbial analysis was done at four day intervals, during storage period of 21 days. Best level of stabilizer combination was determined with the help of an untrained tasting panel using a five point hedonic scale. Based on the results of the sensory evaluation and changes in pH and titratable acidity values, 0.4% sago + 0.6% gelatin combined yoghurt was selected as the best quality product. There was no significant difference ($p > 0.05$) in colour, taste and texture while there was a significant difference ($p < 0.05$) in mouth feel and overall acceptability of 0.4% sago + 0.6% gelatin combined yoghurt and set yoghurts available in the market. During storage, pH of the yoghurt samples were found to decrease despite the storage temperatures, while an increasing trend was observed for the titratable acidity. Coliform, yeast and mould counts in the yoghurt samples were within the acceptable limits, according to the SLS specifications. However, appearance of the finished product was poor after 21 days of storage. Thus, incorporation of 0.4% sago + 0.6% gelatin combined stabilizers into set yoghurt is possible and the product can be stored for 21 days in refrigerated condition without major quality deterioration.

Key words: Gelatin, Sago starch powder, Set yoghurt, Stabilizers