

EFFECT ON PHYSICOCHEMICAL AND SENSORY ATTRIBUTES OF STIRRED YOGHURT ADDED WITH JAMUN (*Syzygium cumini*) FRUIT PULP

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*Department of Animal Science, Faculty of Agriculture, Eastern University, Sri Lanka***Abstract**

This study aims to evaluate the effect of adding different levels of Jamun (*Syzygium cumini*) fruit pulp into the stirred yoghurt as a source of antioxidants. The most suitable concentration of Jamun pulp was determined to be added to produce stirred yoghurt. Three different concentrations (5%, 10%, and 15%) of Jamun fruit pulp (w/w%) was added. The physicochemical properties such as pH, titratable acidity, syneresis, total solids, protein, fat, colour (L, a*, b*) and sensory properties of the yoghurt developed were evaluated. The treatments were assigned according to completely randomized design (CRD). The experimental data were analysed by one way ANOVA in Minitab 17.1.0 software. Tukey's method was used to determine a significant difference between treatments at a level of significance ($p < 0.05$). The findings of this study revealed that the physicochemical parameters such as pH, lightness (L), yellowness (b*), protein and fat content were significantly reduced ($p < 0.05$) while acidity and redness (a*) values were increased significantly ($p < 0.05$) with the increasing level of Jamun pulp incorporation. The average fat content, protein content, total solids, titratable acidity, syneresis and pH of the prepared samples were determined as 3.15 to 3.56%, 4.10 to 4.52%, 18.25 to 18.50%, 0.88 to 1.30%, 2.95 to 4.70%, and 4.31 to 4.56 respectively. The results showed that yoghurt with 15% Jamun pulp added had the lowest pH value (4.31), protein content (4.10%), fat content (3.15%), lightness (76.05) and yellowness (-2.9). On the other hand, 15% Jamun pulp added yoghurt showed a higher value for titratable acidity (1.30%) and redness (5.45). However, total solid and syneresis were not significantly ($p > 0.05$) impacted by the inclusion of Jamun fruit pulp. Sensory attributes revealed that 10% Jamun pulp added yoghurt was the most preferred by the panellists according to its overall acceptability. According to this study, yoghurt with 10% and 15% Jamun pulp added had the desirable physicochemical composition. However, for the large-scale production yoghurt containing 10% Jamun pulp could be suggested due to its higher overall acceptability by consumers.

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