

## Development of a Ripened Jack (*Artocarpus heterophyllus*) Fruit Incorporated Set Yoghurt

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**Abstract:** Yoghurt is one of the most popular fermented dairy products widely consumed all over the world. In majority of the countries, the increase in the per capita annual consumption of yoghurt has been attributed to both the ever-increasing availability of fruit or flavoured yoghurt, and to the diversity of presentations of the product. This study was conducted to develop a value added set type fruit yoghurt with the acceptable combination of milk and ripened jack fruit (*Artocarpus heterophyllus* Lain). Various levels of jack fruit chunks (3-5 mm) viz. 3, 5, and 7 percent (w/v) were used in the preparation of fruit yoghurt. On the basis of various sensory attributes, yoghurt containing 5 % jack fruit chunks was selected as optimum. Selected yoghurt sample from sensory panel and control (Plain yoghurt) were analysed for proximate composition, E-coli count, shelf life and sensory attributes such as appearance, aroma, colour, fruit distribution, mouth feel, texture, taste and overall acceptability. The means for total solids, fat, protein and fibre % for the control samples were 19.73±0.12, 4.00±0.06, 3.30±0.02 and 0.00±0.00, respectively whereas for the 5% jack fruit chunks added yoghurt samples the means were 21.98±0.05, 4.11±0.03, 3.31±0.01 and 0.04±0.01, respectively. The products were packaged in plastic cartons and stored under refrigerated conditions at 4±1<sup>0</sup>C for a period of three weeks. The pH and syneresis increased significantly (p<0.05) and titratable acidity decreased significantly (p<0.05) with storage. *E-coli* were not detected on first day of storage at 10<sup>-1</sup> dilution. The samples comply with the Sri Lankan Standards for solids- non-fat content (Minimum % by mass 8) and *E-coli* counts. The product was acceptable for a period of 15 day at 4±1<sup>0</sup>C. Yoghurt sample prepared by incorporating 5% jack fruit chunks resulted in superior organoleptic properties and nutritional qualities when compared to control sample, thus illustrating the sustainability of jack fruit incorporation in commercial yoghurt production at a low cost.

**Keywords:** Yoghurt, Jack fruit, Milk, Shelf life