

Incorporation of Bael Fruit (*Aegle marmelos*) Syrup on the Microbiological and Physiochemical Properties for a Development of a Functional Drinking Yoghurt

Sethukali Anand Kumar^{1,2}*, Sivalingam Sivatharshan¹*, Sivajanani Thiruchchenthuran¹, Susanthaa Piratheepan¹, Dinesh Darshaka Jayasena³, and Cheorun Jo²

¹Department of Animal Science, University of Jaffna, Kilinochchi, Sri Lanka ²Department of Agricultural Biotechnology, Seoul National University, Seoul, Korea ³Department of Animal Science, Uva Wellassa University of Sri Lanka, Badulla, Sri Lanka

This study aimed to develop a functional drinking yoghurt incorporated with bael fruit (*Aegle marmelos*) syrup. The bael syrup was prepared using bael fruit pulp and water (2.5:1) by a preliminary study. The drinking yoghurt was then formulated with probiotic cultures of *Lactobacillus acidophilus* and *Bifidobacterium* species with conventional starter cultures. Four formulations of bael syrup added drinking yoghurt were developed as 5%, 10%, 15%, 20%, and control (0% v/v). Sensory evaluation, and microbial and physicochemical properties of the products were detected to select the best product. The average protein, fat, moisture, and ash contents of the developed drinking yoghurts were 2.51–2.92%; 2.34–2.83%; 75.13–79.18%, and 0.59–0.82%, respectively. Fat content was significantly higher in the control sample compared to bael syrup incorporated drinking yoghurt. Regarding sensory evaluation, 10% bael fruit syrup added drinking yoghurt had higher scores for color, flavor, consistency, and overall acceptability than other treatments. The pH showed a decreasing trend in all treatments during storage due to post–acidification. Total aerobic bacteria was (7 Log CFU/mL and coliform were absent in all samples during the 28-d storage. In conclusion, addition of 10% of bael fruit syrup to drinking yoghurt improved sensory and physiochemical properties compared to other treatments.