DEVELOPMENT AND QUALITY EVALUATION OF STIRRED YOGHURT BY YELLOW SAPOTE (*Pouteria campechiana*) PULP

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ABSTRACT

This study aimed to formulate and evaluate stirred yoghurt supplemented with yellow sapote (*Pouteria campechiana*) pulp by assessing its physicochemical, sensory, microbial, and shelf-life properties. The incorporation of this underutilized tropical fruit pulp was explored to enhance the nutritional, functional, and sensory qualities of yoghurt. Three treatments were prepared. Two containing varying concentrations of sapote pulp and other one was the control. (T1, T2, T3). Physicochemical analyses included pH, titratable acidity, total solids, moisture, fat, protein, fiber, ash, and carbohydrate content. Sensory evaluation was conducted using a semi-trained panel on a 5-point hedonic scale. Statistical analysis showed no significant differences ($P > 0.05$) in most physicochemical parameters, indicating consistent fermentation and compositional uniformity among treatments. T2 exhibited the highest sensory acceptability in color, flavor, texture, and overall preference. Shelf-life assessment confirmed that pulp-supplemented yoghurt maintained acceptable quality for up to 20 days under refrigerated storage (4 ± 1 °C). The results demonstrate that yellow sapote pulp can be successfully incorporated into stirred yoghurt to improve nutritional value, functional properties, and consumer acceptability, while promoting the utilization of an underutilized tropical fruit in functional dairy product development.

Keywords: Physicochemical properties, Sensory evaluation, Shelf-life, Stirred yoghurt, Yellow sapote.

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