DEVELOPMENT OF COCONUT MILK BASED YOGHURT ENRICHED WITH ALOE VERA (*Aloe barbadensis miller)* AND HIBISCUS *(Hibiscus sabdariffa)* EXTRACTS

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ABSTRACT

The increasing demand for dairy-free alternatives has led to a rise in the popularity of plant-based yoghurts, particularly among consumers with lactose intolerance, dairy allergies, or vegan dietary preferences. This study focuses on developing and evaluating coconut milk-based yoghurt enriched with aloe vera (*Aloe barbadensis miller*) and hibiscus (*Hibiscus sabdariffa*) extracts. The primary objectives were to analyze its nutritional composition, sensory attributes and storage stability to determine the most suitable formulation for consumer acceptance. Five yoghurt formulations were prepared by varying the percentage of aloe vera extracts (0%-20%) while keeping the hibiscus extract constant. Physicochemical analysis revealed that higher aloe vera content increased moisture, protein and ash levels but decreased pH which influenced the yoghurt's acidity and texture. Sensory evaluation was conducted by a trained panel of 20 individuals using a seven-point hedonic scale to assess taste, texture, aroma, color and overall acceptability. The results showed that the yoghurt containing 10% aloe vera extract (T_3) received the highest preference scores due to its balanced taste, smooth texture and appealing color. Additionally, microbial analysis demonstrated that aloe vera contributed to improved shelf stability as its natural antimicrobial properties helped slow down microbial growth. The study concludes that coconut milk-based yoghurt enriched with aloe vera and hibiscus is a viable dairy free alternative with enhanced nutritional and functional properties. It offers probiotic benefits, natural antioxidants and improved sensory appeal, making it suitable for health conscious consumers. This research provides valuable insights into the formulation of plant-based yoghurts and encourages further exploration of natural additives for improving both nutritional value and consumer satisfaction.

Keywords: Aloe vera extract, Coconut milk yoghurt, Consumer preference, Hibiscus extract, Physio-chemical properties, Sensory attributes.

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