

Development of Pumpkin (*Cucurbita maxima*. L) Based Ready-To-Serve (RTS) Beverage Flavored with Pineapple and Cinnamon: Evaluate its Physicochemical, Proximate, and Sensory Properties

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Pumpkin (*Cucurbita maxima*. L) is a seasonal crop in Sri Lanka. Due to its seasonality, wastage, and rapid price fluctuation, is a common sight in the market. In view of increasing the consumption of pumpkin as a beverage, this study was focused on developing a novel Ready-To-Serve (RTS) beverage using pumpkin flavoured with fruits and spices. A preliminary study conducted to select the most compatible fruit flavor with pumpkin. Pineapple was selected as the most suitable flavor. The study continued to optimize the flavor with 5%, 10%, 15%, and 20% of pineapple and pumpkin concentration. According to the sensory results, the most acceptable pineapple percentage was 20%. The cinnamon powder was added to obtain a spicy flavor. Through the third sensory evaluation, the highest acceptability was identified with 0.9% cinnamon powder. Based on proximate results, the novel RTS beverage contained 83.5% moisture, 0.2% ash, 0.2% protein, 16.1% carbohydrates, total sugar 16%, and 65 kcal/ 100 g energy. The pH, total soluble solid (TSS), and titratable acidity (TA) were evaluated and no significant difference ($P < 0.05$) was observed during the 3-month refrigerated condition (4°C). There was no microbial colony formation observed, with cinnamon Treatment 1 (T1) and without cinnamon Treatment 2 (T2). T1 has a total antioxidant capacity (TAC) of 1.05 ± 0.00 (mg TE/ g DW), total phenolic compound (TPC) of 2.91 ± 0.08 (mg GAE/ g DW), and total flavonoid content (TFC) of 3.09 ± 0.13 (mg RE/ g DW). Considering the results, pineapple-flavored pumpkin RTS showed a positive perception from consumers and can be recommended for commercial production.

Keywords: Fruit Flavor, Proximate Analysis, RTS, Sensory Evaluation