

## DEVELOPMENT OF A NON-DAIRY PUMPKIN-BASED ICE CREAM

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Non-dairy alternatives for ice cream are becoming popular due to lactose intolerance and vegetarianism. A pumpkin-based ice cream is a better option when considering its nutritional value and its seasonal difficulties in sales. Therefore, this study was conducted to develop a soft ice cream using pumpkin pulp as the major ingredient. Three pumpkin varieties (*Rajah*, *Batana*, and *Mallbaro*) were used for the experiment. Three ice cream formulations which include different levels (35%, 30%, and 25%) of pumpkin pulp by changing the water with constant levels of other ingredients (sugar, margarine, glucose syrup, lecithin, salt, vanilla, cremodan, milk flavour) were tested using CRD statistical design. Sensory evaluation was conducted by using a Friedman nonparametric test, occupying 30 untrained panellists to select the best variety and proportion of pumpkin pulp. Sensory data revealed that most of the consumers preferred the ice cream made with 30% pumpkin pulp of *Batana* variety, which was used for further analysis. The total soluble solid, overrun, average melting time, colour L\*, a\*, b\* and moisture content were  $24.6 \pm 1.28$  °Brix,  $6 \pm 0.12\%$ ,  $35 \pm 1.32$  min,  $49.3 \pm 1.46$ ,  $10.5 \pm 0.84$ ,  $35.6 \pm 2.4$  and  $90 \pm 0.3\%$ , respectively. The analysis of the nutritional composition of the selected best treatment (i.e. 30% of *Batana* ice cream), revealed that it contained  $16.8 \pm 0.05\%$  crude fat,  $17.4 \pm 0.1$  ash, 6.6% crude fibre,  $3.72 \pm 7e-05$  crude protein and 85.5% carbohydrates (dry basis). The product contained 63 mg g<sup>-1</sup> of vitamin C and 4.9 IU of vitamin A. The results conclude that pumpkin-based ice cream can be successfully developed with high consumer preference and nutritional benefits.

**Keywords:** Nutritional properties, Pumpkin, Sensory properties, Vitamin C