

## **Development of a value added product from tilapia (*Oreochromis niloticus*) for local consumers**

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Tilapia (*Oreochromis niloticus*) is a relatively abundant fish that has a wide distribution in Sri Lanka due to its adaptability to different environments. However, the fish has a limited acceptance for consumption in the fresh form, due to its unacceptable flavor. This study was an attempt to identify consumer preferences for inland fish consumption, and to develop a value-added product from tilapia with a view to popularize tilapia fish consumption. Pre-tested questionnaire based survey was conducted in three cities namely Kurunegala (mainly inland fish are available), Hikkaduwa (only sea fish are available) and Mount Lavinia (both inland fish and sea fish are available) to assess the preferences of consumers to inland fish. Using the snow ball sampling technique, data were collected from seventy five housewives.

The mean value of the consumption of all kinds of inland fish was 0.437 kg/week/household while sea fish consumption was recorded as 1.763 kg/week/household. As the majority of the respondents (62%) showed their willingness to consume fish nuggets, nuggets formulated using four different new formulae were tested for sensory acceptance. The formula that includes 93.5% minced tilapia with salt, rice flour, garlic, pepper, peanut and ginger was selected as the best formula. Crude protein, lipid, ash and energy values of nuggets were 16%, 0.9%, 12% and 1464 cal/g respectively. Fresh nuggets were vacuum packed (bags made of poly amide, bioxylyary polypropylene and polyethylene tetraphthalate) and stored at refrigerated (4°C) and frozen (-18°C) conditions for four weeks. When compared with the freshly prepared nuggets, the Nuggets stored at 4°C showed a significantly ( $p < 0.05$ ) lower acceptable level with regard to the colour, odour, flavour and the texture. However, those were still within the acceptable limits. Nuggets tested for the same characteristics that were stored under frozen, did not show a significant difference when compared with the freshly prepared nuggets. Results concluded that the respondents preferred tilapia nuggets as a value added product and a better way to enhance the utilization of tilapia.

**Keywords:** consumer preferences; Tilapia, fish nuggets, frozen storage

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