

## Development and Quality Evaluation of Ready to Bake Vegetarian Cake Mix

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Received : 08<sup>th</sup> July 2015 / Accepted : 25<sup>th</sup> September 2015

### ABSTRACT

Three different formulas of ready to bake vegetarian cake mixes were prepared and quality and storability were analyzed. Proximate composition, beta carotene, colour (Lightness, redness and yellowness) of flour mix in terms of  $L^*$ ,  $a^*$  and  $b^*$  and total plate count were determined ( $n=3$ ). The results were analyzed by completely randomized design using ANOVA by SAS statistical package and mean separation was done by using Least Significant Difference (LSD) at  $\alpha=0.05$ . The initial moisture content of cake mix 1, 2 and 3 were 5.23%, 6.41% and 5.61% and it was increased up to 5.63%, 6.79% and 5.84% respectively. High percentage of fat was recorded in Mix-1 (T1) and the least in Mix-3 (T3) and least in Mix 2 (T2). All three mixes were not exceeded the safe limit of water activity for microorganisms ( $a_w = 0.6$ ) and resulted low microbial load ( $1.8 \times 10^3$ ). Addition of pumpkin flour and bael powder proportionately increased the yellowness of flour mixes and the  $L^*$ ,  $a^*$  and  $b^*$  colour values were significantly ( $p < 0.05$ ). The prepared cakes were analyzed for physico-chemical properties and consumer acceptability using 5 point Hedonic scale. Mix-3 (T3) that containing wheat flour, rice flour, bael powder and pumpkin flour 10%, 17%, 3%, and 15% respectively was identified as the most suitable combination of ready to bake vegetarian cake mix (dry mix) and could be stored for 90 days without noticeable quality deterioration. According to the results obtained, the vegetarian ready to bake cake mix 3 was identified as the most preferable formula with the highest consumer acceptability.

**Keywords:** Pumpkin flour, Dehydration, ready to bake, vegetarian cake mix, bael

### INTRODUCTION

In Sri Lanka, postharvest losses in fruits and vegetables estimated to be 30-40%, due to climatic and seasonal variations. Sri Lanka is an agricultural country because majority of rural population is still engaged in agricultural sector. The vegetable sub-sector is considered as the second most important sub-sector. Vidanapathirana, 2008 reported that vegetable are produced on a year round basis and a large number of farmers are involved in the production process in Sri Lanka. The fruit can be stored up to 6 months hence it can play an important role providing nutrition to the consumers even the dry spells (Nisha and Veerarangavathatham, 2014). Pumpkin (*Cucurbita moschata*: *Cucurbitaceae*) is a known vegetable in many tropical and tropical countries due to high

content of vitamin A, the color of pumpkin pulp is orange. The main nutrients are lutein and both alpha and beta carotene, the latter of which generates vitamin A in human body (Ahmad *et al.*, 2011). Carotenoids are the primary source of vitamin A for most of the people in the developing countries (Boileau *et al.*, 1999) where vitamin A deficiency is still common (Chakravarty, 2000)

Pumpkin takes a prominent place among other vegetables because; it's high productivity, nutritional value, good storability, and long period of availability and better transport qualities. Fresh pumpkin is very susceptible for microbial spoilage after opening even at refrigerator conditions. But it has a possibility

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