

**NUTRITIONAL QUALITIES AND STORAGE STUDIES OF
CEREAL BAR FUSED WITH KURRAKKAN FLAKE AND
POPPED CORN**



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ABSTRACT

Intake of balanced diet is the correct way to prevent or even remedy health problems, such as obesity, diabetes, malnutrition, cardiovascular and others, which largely originate from dietary mistakes. Production of Cereal bar using Kurakkan flakes and popped corn with different recipes including Kithul treacle, Milk powder and Ghee provide better nutritional and health value for the consumers, in developing country like Sri Lanka. Therefore this research study was carried out to produce high nutritional cereal bar using different combination of Kurakkan flakes and popped corn with constant amount of other ingredients. The freshly made formulations were subjected to physico-chemical analysis such as moisture, fiber, ash, protein, reducing sugar and total sugar content were analyzed according to AOAC method while Minerals (Ca, Fe, Mg, F, Na and K) were analyzed using atomic absorption spectrometry (AAS) method. Microbial assessment including total plate count and yeast and molds count and sensory evaluation of developed cereal bar carried out by using 7 point hedonic scale with 35 semi-trained judges with respect to different quality attributes such as color, taste, flavor, texture and overall acceptability. Results of the Nutritional and Organoleptic qualities of freshly prepared cereal bars and most preferred three formulations (90% kurakkan flakes, 80% kurakkan flakes and 70% kurakkan flakes) were selected for storage studies. The results were analyzed statistically by using SPSS statistical package.

Based on the physico-chemical analysis and sensory evaluation, Treatment 3 (70% kurakkan flakes and 30% popped corn) was selected as the best formulation followed by Treatment 2 (80% kurakkan flakes and 20% popped corn) and Treatment 1 (90% kurakkan flakes and 10% popped corn). Different temperature at Refrigerator and room temperature with different packaging materials (Polythene bag and Food

wrapped aluminum foil) used for storage studies. The physico-chemical organoleptic characteristics and microbial assessment were measured in one month interval up to 3 months. The results showed there were no any significant difference ($P < 0.05$) between different Temperature and different packaging materials. According DMRT, treatment 3 (70% Kurakkan flake with 30% popped corn) Showed highest value up to 90 days of stored and all samples in stored had not significantly different with time.

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