

**NUTRITIONAL AND ORGANOLEPTIC EVALUATIONS OF  
CASSAVA (*Manihot esculenta* Crantz) FLOUR SUBSTITUTED**

**NAAN**



**BY**

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## ABSTRACT

A research was carried to develop the Naan supplemented with cassava flour and assess its nutritional and sensory qualities. The MU 51 variety cassava purchased in Vantharumoolai market was used. The fresh roots were peeled, washed and cut into thin slices about 5 mm thickness. The slices were soaked into clean water for 8 hours after sun dried for 11 hours. The flour of cassava is much more difficult to make because the reducing sugars readily released from the starch combine with free amino acids to produce disagreeable colour, odour and flavor. Cyanide content of the cassava was the other problem during processing. To avoid those problems peeled cassava were shredded and the shreds were immersed in water for 8 hours. The water was changed 2-3 times. The shreds were drained and then dried in the sun. The chips were ground into flour using an electric grinder, sieved through 710 nm sieve and packed in plastic buckets which were stored in cool and dry place until required for further analysis. This cassava flour was added in different amounts as an ingredient during the preparation of Naan.

The nutritional and sensory properties of Naan supplemented with 10%, 30%, 50%, 70%, 90% and 100% cassava flour and control 100% wheat flour were evaluated. Nutritional analysis was done to cassava flour for moisture, ash, fat and protein content. The fiber content of cassava flour was higher than that of wheat flour. The moisture, ash and fat content of composite flour Naan were higher than that of 100% wheat flour. Higher fiber content of cassava flour was possibly the reason for a less white color of the flour. Protein value was highest for the Naan of 100% wheat flour. Nutritional assessment was done in every 2 weeks interval for up to 3 months to study the storage period of Naan. For that Naan were allowed to store under freezing

temperature of  $-10^{\circ}$  C. During the storage period the ash, fat, fiber and protein contents were decreased exception of moisture.

Five perceived sensory attributes, which could be used to differentiate the taste, colour, aroma, texture and overall acceptability of cassava Naan were assessed. Seven points hedonic scale ranking method was used to evaluate the organoleptic properties. The results revealed that, there was significant difference among the treatments of Naan for colour, taste, aroma, texture and overall acceptability at 5% significant level. The findings of the research revealed that the 30% cassava flour contained Naan had the higher score in nutritional, organoleptical and economic point of view compared to other combinations and also composite flour Naan can be stored up to 3 months under freezing temperature.



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