

Evaluating the Quality Characteristics and Shelf Life of Pre-packed of Cassava Flour Naan During Frozen Storage

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Cassava (*Manihot esculenta* Crantz) grows well in the tropical soil and can withstand drought. In Sri Lanka, cassava is consumed mainly by the poor people, primarily because it is one of the cheapest sources of food. A study was conducted to reduce the wastage and improve the utilization of cassava through the formulation of cassava flour supplemented Naan. The cassava flour was prepared and supplemented with wheat flour at different percentages of 10, 30, 70 and 90% for the Naan preparation. The prepared Naans were packed in low density polyethylene (350 μ) and stored at the temperature of -10°C in a freezer. The nutritional, microbial and organoleptic characteristics of the cassava flour substituted Naan were assessed during storage to evaluate the shelf life.

The nutritional analyses revealed that the mineral, fat and protein contents of the cassava flour Naan decreased whereas moisture content increased and fibre content remained constant. The Naan made with 30% of cassava flour had 1.42% of mineral, 8.63% of protein, 27.13% of moisture, 2.88% of fibre and 0.95% of fat content. Microbial studies showed that there was no any total plate count observed in the stored samples. The findings of sensory assessment showed that the Naan prepared with 30% cassava flour obtained higher score for all sensory attributes. Therefore, the Naan made with 30% of cassava flour packed in low density polyethylene and stored at -10°C was selected as best treatment based on the nutritional, microbial and organoleptical point of view compared to other combinations and could be stored for a period of 12 weeks without any significant changes in quality attributes.