

DEVELOPMENT OF BREAD AND BISCUITS USING BREADFRUIT FLOUR

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This study was conducted to develop bread and biscuits, using breadfruit (*Artocarpus altulis*) flour as an ingredient. Oven and solar drying techniques were evaluated to produce dried breadfruit pieces, which were then ground to produce breadfruit flour. Bread was developed by using three levels of breadfruit flour (0, 15% and 25%; w/w) whereas biscuits were produced using four levels of the flour (0, 50%, 75% and 100%; w/w). Microbiological, physico-chemical (moisture content, crude fibre, fat content, total ash and pH) and sensory properties of bread and biscuits were evaluated. The experiment was conducted in a Completely Randomized Design (CRD) with treatments in triplicate. Parametric data were analyzed using the Analysis of Variance (ANOVA) with Statistical Analysis Software and non-parametric data were analyzed using the Friedman test in MINITAB. The results revealed that oven drying produced good quality flour, though solar drying was cost effective for drying of breadfruit pieces. Bread containing 15% breadfruit flour and biscuits containing 50% breadfruit flour were rated as the best products ($p < 0.05$). The best bread had 7% moisture, 5% fat, 5.5% protein and 0.79% fiber, whereas the moisture, fat, protein and crude fibre contents of the best biscuit were 3%, 15%, 7.5% and 2.6%, respectively. The experiment revealed that the incorporation of breadfruit flour at 15% (w/w) and 50% (w/w) was successful for preparation of bread and biscuits, respectively with excellent sensory and product qualities.

Keywords: Biscuit, Bread, Breadfruit flour, Drying