

**DEVELOPMENT OF HIGH NUTRITIOUS VALUE  
ADDED BAKERY PRODUCT FROM COMPOSITE  
FLOUR**

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## Abstract

This study was carried out to investigate proximate composition, physical parameters, sensory evaluation and shelf life determination of *Xanthosoma sagittifolium* (Kiriala), *Caryota urens* (kitul) and *Triticum aestivum* (wheat) composite breads at different levels of flour substitution. Six blends were prepared by homogenously mixing wheat, *X. sagittifolium* and *C. urens* flour in the percentage proportions 50:0:0, 50:50:0, 50:0:50, 50:40:10, 50:30:20, 50:20:30, 50:10:40 and later used to bake triplicate of bread.

The result of the analysis showed that the preferred bread in terms of loaf weight, volume and specific volume was given by control sample containing 100% wheat flour with a specific volume of 1.54 cm<sup>3</sup>/g. This was closely followed by sample G containing 40% substitution level of *C. urens* 10% substitution level of *X. sagittifolium* with specific volume of 1.50 cm<sup>3</sup>/g.

The sensory quality statistics also showed that the control sample (100% wheat) was superior in all sensory characteristics compared with the composite flour bread and sample G with 40% substitution level of *C. urens* 10% substitution level of *X. sagittifolium* was rated good and maintained better performance among the six composite breads.

The results of the proximate composition showed that the moisture content of the control (100% wheat) bread and selected sample G are 30.64 and 25.75 g/100g; ash, 1.56 and 2.72 g/100g; protein, 10.27 and 7.79 g/100g; fat, 4.23 and 3.80 g/100 g; fiber, 1.48 and 2.54 g/100g; carbohydrate, 54.64 and 67.68 g/100 g respectively.

The results of the shelf life determination showed that the both yeast- mould and bacteria count increased after the fifth day and it was increased in seventh day from the production. Bread could be stored with original package at room temperature and be used within 2-5 days.

Developed bread has high nutritious content and provides health effectiveness rather than the normal wheat bread.

**Key words:** Composite flour; proximate analysis; *X. sagittifolium*; *C. urens* ; sensory evaluation