

Fermentation of Pulses Towards the Production of Legume-Based Crackers

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Abstract

Fermentation has potential on improving the nutritional qualities of flours derived from legumes such as Cowpea (CP) and Bambara nuts (BN). However, further processing such as baking on these fermented legumes is limited as pulses are commonly consumed as boiled fresh pods, whole seeds or roasted (Mubaiwa et al., 2017). A challenge of malnutrition among children prompted the need to develop a product from bio-processed legumes. This led to the aim of the study which is to determine the nutritional quality of crackers developed from flours of fermented legumes.

Cowpea (Bira & Nakare) and Bambara nuts (red and cream) were each fermented for 72 hours and dried in the oven for 24 hours at 50°C until a required moisture was attained. Dried seeds were milled, and crackers were baked at 108°C.

Proximate and mineral content of flour and crackers were in range as reported by Elharadallou et al., (2015). Protein and mineral contents were improved as a result of fermentation. On the other hand, the effect of baking was not significant among the cultivars of both legumes. Fibre and fat content followed a decreased trend.

The development of legume-based crackers will aid in curbing the challenge of malnutrition among legume consumers, especially the protein and micronutrients.