


**Physico- chemical characteristics and storage stability of breadfruit and cassava co-fermented into gari analogue****Amos-Awonyi Oluyinka Mary**  
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Cassava flakes (gari) is a staple food which could be eaten as snacks with coconut or groundnut and sugar, or it could be prepared into dough with hot water and eaten with varieties of soups. However, it is very poor in nutrients especially protein (0.7 to 1.2%). Prolonged consumption of gari without adequate protein and other vitamins supplements will eventually lead to malnutrition. Therefore, providing cassava based diets with supplemental high-quality protein for adults and growing children may be necessary. One way this could be accomplished is by blending gari with breadfruit, which is highly nutritious based on its high calorific value and relatively high in protein and essential vitamins. This study concentrated majorly on producing a nutritious and medicinal functional food; gari analogue from co-fermented breadfruit and cassava. A portion of both mature cassava tubers and matured but unripe breadfruit (*Artocarpus altilis*) was co-fermented (100: 0, 0: 100, 80: 20, 70: 30, and 60: 40 Cassava: Breadfruit) to obtain gari analogue. The physico-chemical characteristics (pH, titratable acidity and cyanide content) of the fermenting mash were examined daily till the end of the fermentation days, also on the final gari analogue after production. The final gari analogue were stored in a plastic covered container for six weeks during which pH, titratable acidity and cyanide evaluation were conducted weekly to determine if there could be any appreciable changes in acidity and taste of gari analogue samples. The pH of the samples decreased with increase in process time

of the fermenting mash, breadfruits samples had lower pH than those cassava samples. Titratable acidity increased with increase in fermenting days as all samples had higher acid content at the end of fermentation period comparable with the initial acid content while the co-fermented gari samples had lower cyanogenic glycosides than 100 % cassava gari. This study established that co-fermentation of breadfruit and cassava into analogue reduced the cyanogenic glycosides of gari with increase in titratable acidity (TTA) and decrease in pH values which in turn played a major role in altering the taste of the final gari analogue and its storage stability thus reduces rate of obesity and a natural cure of many diseases because breadfruit contains high amount of potassium which helps in muscle contraction and in maintaining the body cell electrolyte balance; it provides a very good source of Vitamin C which helps to prevent cells and tissues from free radicals, thereby helping to prevent diseases like cancer, diabetes and blood-related diseases. Also, breadfruit is a good source of niacin (Vitamin B3) which helps in lowering blood cholesterol levels. Vitamin B3 also helps to stabilize blood sugar. Breadfruit is also a good source of dietary fiber, with 11g per serving and this is about 43% of daily recommended amount of dietary fiber requirement. Fiber is needed in the diet to keep things moving along nicely and to help prevent bowel cancer. A small breadfruit contains around 99 kJcal-1.

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