

A survey of the microflora of Hibiscus sabdariffa (Roselle) and the resulting "Zobo" juice.

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Abstract

To determine the effects of co-cultures of lactic acid bacteria and yeast as starters on the nutritional content, physical properties and shelf life of bread produced using mixture of wheat and cassava flour. Methodology and results: Lactic acid bacteria (LAB) isolated from retted cassava were screened for the production of antimicrobial compounds against bread spoilage moulds. Starter cultures of LAB in combination with *Saccharomyces cerevisiae* were selected for bread production. The quantity of lactic acid produced by LAB species ranged between 2.25 and 10.7 g/l. *L. fermentum* produced the highest (12.7 g/l) diacetyl while the highest amount of hydrogen peroxide (51 mg/l) was produced by *Leuconostoc mesenteroides*. Composite flour of 10% cassava and 90% wheat compared favourably with pure wheat bread. Combined cultures of *Saccharomyces cereviceae* and *Lactobacillus* species produced the best bread in terms of sensory quality, nutritional contents and shelf life. Conclusion and applications of findings: *Lactobacillus* species in combination with *Saccharomyces cerevisiae* can be used as starter culture to improve the nutritional contents, physical properties and extend the shelf life of cassava-wheat bread. The mixture of 90% wheat and 10% cassava flour blend will reduce the cost of production and make bread more affordable. The increased shelf life of bread will reduce wastage especially among rural dwellers who may not have storage facilities.