

Effects of fermentation on the carbohydrate, mineral, and protein contents of cassava during “fufu” production

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Abstract

Investigations were carried out on the changes in the carbohydrate, mineral, and protein contents of cassava during the fermentation production of Wit, a pasty food material consumed in Africa with soup after cooking. Fermentation caused a reduction in the starch content. The total soluble and reducing sugar levels increased during the first 36 and 24 h, respectively, then fell in concentration for the remainder of the 96-h fermentation. The fermentation process caused an increase in the concentration of calcium (+12%) in cassava but reductions in the levels of magnesium (−53%), potassium (−71%), sodium (−68%), manganese (−60%), iron (−50%), copper (−7%), zinc (−85%), and phosphorus (−67%). Despite these losses, the fermented product, fufu, was found to contain appreciable quantities of calcium, magnesium, and potassium. The fermentation caused an overall 20% reduction in the protein content. The protein content which decreased during the first 72 h, showed a rapid increase during the last 24 h of the fermentation.