
Abstract No. 57

PaperTitle **Contribution of Starter Cultures of Lactic Acid Bacteria to the Sensory Characteristics of Ting, A South African Fermented Food**

Main Author **Madoroba Evelyn Miss**

Presenter **Madoroba Evelyn Miss**

University of Pretoria Department of Microbiology & Plant Pathology 18 A Borrowdale Road, Box CY 551, Causeway, Harare ZIMBABWE emadoroba@yahoo.com

Co-Authors

ABSTRACT

Ting, a food popular amongst South Africans for its sour taste, is produced by cooking fermented sorghum into a thick porridge. With a view to selecting the most appropriate starter for use in Ting production, trial fermentations were performed using different experimental starter cultures. Lactic acid bacterial strains (*Lactococcus lactis*, *Lactobacillus fermentum*, *Lb. plantarum* and *Lb. rhamnosus*) used in the starters had been isolated previously from natural sorghum fermentations. All starter cultures showed an ability to ferment sorghum, as evidenced from lowering pH from 6.4 to 3.79 - 4.0 and increasing titratable acidity from 0.18% to 0.72 - 0.95% (w/w, lactic acid) in 24 h of fermentation. However, lowest pH (3.3) and highest lactic acid (1.44%) was produced fastest in untreated sorghum fermented by *L. lactis*. Ting produced from this fermented gruel had sensory properties preferred by panellists. The strong sour taste and aroma were especially appealing to panellists. Conversely, Ting prepared from naturally fermented sorghum in 54 h was least preferred by panellists. Of the different strains used, *L. lactis* is the most promising candidate Ting starter culture and can be used either in co-culture with *Lb. plantarum* for use in fermentation of sterilized sorghum or as monoculture to inoculate untreated sorghum.