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Sustainable local production of a functional food based on *mutandabota*, a traditional dairy product in Southern Africa

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Abstract

To enable resource-poor populations in Southern Africa to benefit from a functional food, a probiotic dairy product was developed on the basis of a traditional dish called *mutandabota* which is widely consumed in rural Southern Africa. This product makes it an ideal food matrix to carry probiotics. Probiotic *mutandabota* was prepared in a village in Zimbabwe. Cow milk was boiled and cooled to ambient temperature. Dry pulp from the fruit of the baobab tree (*Adansonia digitata* L.) was added to the milk. This mixture was inoculated with a probiotic *Lactobacillus rhamnosus yoba* and left to ferment for 24 h. Thereafter, other ingredients were added to produce probiotic *mutandabota* that had 14 % pulp, 7 % sugar and 79 % milk. The pH of probiotic *mutandabota* was pH 3.5. *L. rhamnosus yoba* increased from 5.8±0.3 log cfu/mL at the point of inoculation to 8.8±0.4 log cfu/mL at the moment of consumption, thereby meeting the criterion for a probiotic food to have more than 6 log cfu/mL viable cells. Baobab pulp promoted growth of *L. rhamnosus yoba*, with a specific growth rate of 0.48 h^{-1}. The developed technology though specific for this particular product, can be duplicated elsewhere with appropriate modifications to suit other foods in different regions of the world. Probiotic *mutandabota* is expected to contribute to improved intestinal health of the population.

Biography

Augustine Mpofu is a final year Ph.D. student at Wageningen University and a Lecturer in Food Microbiology at Chinhoyi University of Technology, Zimbabwe. He has published papers in reputed journals. Augustine was a Food Technologist at the University of Zimbabwe and later Head of the Department of Food Science and Postharvest Technology at Chinhoyi University of Technology. He is a member of the National Taskforce on Food Fortification. His research interest includes probiotics and functional foods, food fermentations, fruit and vegetable technology.

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