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Microbiological assessment of traditional fermentation methods used in the production of flour from sweet potato in Nigeria

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Microbiological assessment of traditional fermentation methods used in the production of flour from sweet potato in Nigeria. The aim of the study was to document the microbial content during traditional fermentation methods used in the production of flour from sweet potato. Two traditional methods of fermenting sweet potato slices were used (cold water fermentation (soaking) and hot water fermentation (parboiling). A rapid drop in pH was measured over the period of the fermentations. The microbial count increased rapidly at the start of the fermentation and gradually declined as the fermentation continued for both processes. The bacteria isolated from the sweet potato in the cold water fermentation process were initially dominated by *Enterobacter cloacae*, while those in the hot water fermentation were mainly made up of *Enterobacter cloacae* and *Bacillus cereus*. Thereafter, *Leuconostoc mesenteroides* became the predominant organism in both processes. Yeasts or moulds were not isolated from either fermentation. The microbial content in flour produced from both fermentation methods was mainly *Leuconostoc mesenteroides*. The results indicate that there is need to further process the fermented flour into other food products in order to completely eliminate or reduce any potential hazards to a level considered safe for consumption.

Biography

Abbas Bazata Yusuf has completed his Bachelor of Science and Master of Science degree in Microbiology from the Usmanu Danfodiyo University in 1996 and 2006 respectively and obtained his PhD in Food Microbiology at University of Greenwich, United Kingdom in 2014. He is currently working as a Lecturer at the Department of Microbiology, Federal University Birnin Kebbi, Nigeria. He has published more than 6 papers; some of which are from reputable journals and has also attended conferences.

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