

Bacteriological Quality of Commercially Prepared Fermented Ogi (AKAMU) Sold in Some Parts of South Eastern Nigeria

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Abstract : Food poisoning and infection by bacteria are of public health significance to both developing and developed countries. Samples of ogi (akamu) prepared from white and yellow variety of maize sold in Uturu and Okigwe were analyzed together with the laboratory prepared ogi for microbial quality using the standard microbiological methods. The analyses showed that both white and yellow variety had total bacterial counts (cfu/g) of 4.0×10^7 and 3.9×10^7 for the laboratory prepared ogi while the commercial ogi had 5.2×10^7 and 4.9×10^7 , 4.9×10^7 and 4.5×10^7 , 5.4×10^7 and 5.0×10^7 for Eke-Okigwe, Up-gate and Nkwo-Achara market respectively. The Staphylococcal counts ranged from 2.0×10^2 to 5.0×10^2 and 1.0×10^2 to 4.0×10^2 for the white and yellow variety from the different markets while Staphylococcal growth was not recorded on the laboratory prepared ogi. The laboratory prepared ogi had no Coliform growth while the commercially prepared ogi had counts of 0.5×10^3 to 1.6×10^3 for white variety and 0.3×10^3 to 1.1×10^3 for yellow variety respectively. The Lactic acid bacterial count of 3.5×10^6 and 3.0×10^6 was recorded for the laboratory ogi while the commercially prepared ogi ranged from 3.2×10^6 to 4.2×10^6 (white variety) and 3.0×10^6 to 3.9×10^6 (yellow). The presence of bacteria isolates from the commercial and laboratory fermented ogi showed that *Lactobacillus* sp, *Leuconostoc* sp and *Citrobacter* sp were present in all the samples, *Micrococcus* sp and *Klebsiella* sp were isolated from Eke-Okigwe and ABSU-up-gate markets varieties respectively, *E. coli* and *Staphylococcus* sp were present in Eke-Okigwe and Nkwo-Achara markets while *Salmonella* sp were isolated from the three markets. Hence, there are chances of contracting food borne diseases from commercially prepared ogi. Therefore, there is the need for sanitary measures in the production of fermented cereals so as to minimize the rate of food borne pathogens during processing and storage.

Keywords : ogi, fermentation, bacterial quality, lactic acid bacteria, maize

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