Assessment of bacteriological quality of ready to eat food (Meat pie) in Benin City metropolis, Nigeria


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Abstract

Eight triplicate samples of meat pie were randomly sampled from standard eatery and local kiosk in Benin City and analyzed microbiologically for the rates of Staphylococcus aureus and Escherichia coli. The mean microbial load on the fresh meat pie from the standard eatery ranged from 3x10³ – 5x10³ cfu/g while the air preserved and refrigerated meat pie for (2 days) ranged between 2.3 x10⁴ - 3.8 x10⁴ cfu/g and 8x 10³ - 1.5 x10⁴ cfu/g respectively. The mean microbial load of the fresh meat pie from the local kiosk ranged between 7x10³ - 2.8x10⁴ cfu/g while the air preserved and refrigerated meat pie for 2 days ranged between 3x10⁻⁴ to too numerous to count (TNTC) and 1.3 x10⁴ - 2.8x10⁴ cfu/g respectively. Six genera of the isolated bacteria include Staphylococcus, E. coli, klebsiella, Pseudomonas, Bacillus and Enterococcus. Statistical analysis of the mean microbial load showed a significant difference (P<0.05) between control and air preserved meat pie and no significant difference in the mean microbial load between control and refrigerated meat pie were (P>0.05).

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Bacteriological Quality Assessment of Meat Pie Sold in Yenagoa Metropolis, Nigeria. Lovet T Kigigha, Jennifer Berezi and Sylvester Chibueze Izah*.

Department of Biological Sciences, Faculty of Science, Niger Delta University, Wilberforce Island, Bayelsa state, Nigeria.Â In the recent times ready-to-eat foods are regarded as potentially hazardous, because such foods can support the growth of patho-gens [6]. This is because these foods are stored or preserved at ambient temperature that could encourage the growth of psychrophilic microbes. Also the handling processes are typically carried out in non-aseptic manner especially in the rural area in developing countries like Nigeria. This paper examines the microbial quality of ready-to-eat vegetable salads obtained from three fast food centres in Benin City, Edo state, Nigeria. Across the counter samples of salad were collected from randomly selected locations within the city and subjected to microbial culture in Nutrient and MacConkey agar media for isolation of bacteria. Three bacteria species were isolated, namely; Salmonella spp. Escherichia coli and Staphylococcus aureus.Â Results from the study shows that ready-to-eat salad samples obtained from fast food centres in Benin City have high microbial load and as such do not meet bacteriological quality standards. Consumption of such products may pose public health problem. Assessment of bacteriological quality of ready to eat food (Meat pie) in Benin City metropolis, Nigeria. Afr. J. Microbiol. Res., 3: 390-395. Direct Link |. Cohen, N., H. Ennaji, M. Hassar and H. Karib, 2006. The bacterial quality of red meat and offal in Casablanca (Morocco).Â The microbiological safety of ready-to-eat specialty meats from markets and specialty food shops: A UK wide study with a focus on Salmonella and Listeria monocytogenes. Food Microbiol., 27: 243-249. CrossRef |. Huda, N., Y.H. Shen, Y.L. Huey, R. Ahmad and A. Mardiah, 2010. Evaluation of physico-chemical properties of Malaysian commercial beef meatballs. Am. J. Food Technol., 5: 13-21.