

Microbial and Physicochemical Screening of Ready to Eat Street Foods

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ABSTRACT

Food samples (African salad, bread, jara, bread pudding, bread phumato, baki and mami) were collected in three locations along Choba, Okor and Nkukuha were analysed for their microbial load. Analysis of the food samples revealed Total viable count ranging from 1.0×10^5 cfu/g to 5.2×10^5 cfu/g. Coliform count, 2.4×10^5 cfu/g to 3.2×10^5 cfu/g. Staphy. 2.0×10^5 cfu/g to 3.4×10^5 cfu/g. Pseudomonas 3.4×10^5 cfu/g to 3.6×10^5 cfu/g. Shewanella 2.0×10^5 cfu/g to 3.2×10^5 cfu/g. Enterob. 1.0×10^5 cfu/g to 4.0×10^5 cfu/g to 3.3×10^5 cfu/g. These count from the various locations. The organisms isolated includes, *Staphylococcus aureus* (27%), *Enterobacteriaceae* (27%), *Pseudomonas* (27%), *Shewanella* (27%), *Bacillus cereus* (27%) and *Salmonella* sp (0%). The TVC count in these food samples exceeds the standard set by International Commission for Microbiology Specifications for Food (ICMSP) for ready-to-eat food which states that TVC count between 5×10^5 cfu/g is acceptable, 10^6 to 10^7 cfu/g is acceptable and 1×10^8 cfu/g is unacceptable. Therefore, these foods are not microbiologically fit for consumption. The occurrence of these harmful bacteria in the foods constitutes public health risk to consumers as these pathogens have been associated with foodborne infections. Therefore, government should enforce strong food safety regulations for street food vendors. In addition, street food vendors need to be educated on food safety and hygiene practices.

Keywords: Ready-to-eat foods, Foodborne pathogens, Microbiological quality, Food safety.

1. Introduction

Street foods are "ready-to-eat" foods and beverages prepared and sold by vendors and hawkers especially in the street and other similar public places. Street foods are an extremely heterogeneous food category encompassing meals, drinks and snacks. They also show great variation in terms of ingredients, methods of retail, processing and consumption and are sold on the streets from pushcarts or basket or balance poles or from stalls or shops having fewer than four permanent walls (FAO, 1997).

Nigeria had an history of developed supermarket industry until social and economic changes in early 1980s diminished the country's middle class significantly, since then most Nigerians shop at traditional open air markets or purchase their goods from traders and street vendors (Naeika, 2011). Extensive street-vending of foods in Nigeria as in most other cities arises from multiple causes; deterioration of rural living conditions, migration to the cities and accelerated urbanization leading to enormous urban congestion, long commuting distance between workplace and home, unemployment, lack of cooking skills, changes in family cohesion and shortage or absence of establishment that serves reasonable priced food close to the workplace (Tinker, 1997; Maxwell, 2000). Street-vended food provides a major source of income for vast number of persons particularly women; a chance of self-employment and opportunity to develop business skills with low capital investment, least expensive and most accessible means of obtaining a nutritionally balanced meal outside the home for many low-income earners.

Despite the economic and nutritional benefits of street foods, the consumption of these roadside foods has been suggested to potentially increase the risk of foodborne diseases as street foods are readily contaminated from different sources (Tambekar et al, 2006). In fact street foods have often been associated with traveller's diarrhea and other foodborne diseases. Many studies have revealed the frequent contamination of street foods in many

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The Boy's Own Annual ,1909
The Century Dictionary and Cyclopedia, with a New Atlas of the World: The Century dictionary ... prepared under the superintendence of William Dwight Whitney ... rev. & enl. under the superintendence of Benjamin E. Smith ,1911 **The Century Dictionary and Cyclopedia: The Century dictionary ... prepared under the superintendence of William Dwight Whitney** William Dwight Whitney,Benjamin Eli Smith,1899 *ThirdWay* ,1991-02 Monthly current affairs magazine from a Christian perspective with a focus on politics society economics and culture **Gramophone** ,2002 **Jose Raul Capablanca** Miguel A. Sánchez,2015-07-11 This is the most complete and thorough biography of Jose Raul Capablanca one of the greatest players in the history of chess Beginning with his family background birth childhood and introduction to the game in Cuba it examines his life and play as a young man follows his evolution as a player and rise to prominence first as challenger and then world champion his loss of the title to Alekhine and his efforts to recapture the championship in the last years of his too short life What emerges is a portrait of a complex man with far ranging interests and concerns in stark contrast to his robotic reputation as the chess machine Meticulously researched utilizing many sources available only in Capablanca s home country it puts truth to legend regarding a man who stood astride the chess world in of its most dynamic and dramatic eras Numerous games and diagrams complement the text as do a wealth of photographs *Justice of the Peace* ,1983 *The Gramophone* ,2002 *Flying Magazine* ,1941-08 *The Library Association Record* ,1991 Proceedings of the 22d 33d annual conference of the Library Association in volumes 1 12 proceedings of the 34th 44th 47th 57th annual conference issued as a supplement to volumes 13 23 new series volume 3 series 4 volume 1 *National Geographic Traveler* ,1997 *New Guard* ,1977 *Chess Life* ,1993

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