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Prevalence and Resistance Profile of Strains of Bacteria Isolated from Meals in N'Djamena, Chad

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Abstract

Poorly preserved food is a favourable environment for the growth of microorganisms. This study is conducted to evaluate the microbiological and hygienic characteristics of household meals in the city of N'Djamena, Chad. Total of 180 samples were taken for the study. The samples consisted of sorghum, maize, rice, meat, fish, milk, okra and bean leaves. Standardized methods have been used to perform microbiological analyzes. The manual and automated methods with the Vitek Compact 15 were used to identify and characterise the seeds. For antibiotic susceptibility testing, antibiotics were chosen based on their use. The results showed that there is a significant difference ($p = 0.02$) in the contamination between fresh meat and dried okra sauce with fresh meat by *Escherichia coli* (40 %) and *Staphylococcus aureus* (13.3 %). There is also a significant difference ($p = 0.001$) of pathogen contamination between roasted beef and “Rhaïb” milk by *Streptococcus agalactiae* (33.3 %) and *Staphylococcus aureus* (26.7 %). No *Salmonella* was detected on all the foods collected. Compared to the susceptibility test of isolated organisms, multiresistant bacterial strains were observed. Good practices of hygiene and conservation of food are needed to ensure food quality.

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