

A STUDY OF MICROBIAL CONTAMINANTS IN VENDED FOOD IN SELECTED

AREAS IN KAMPALA

BY

JOSEPHINE KITAKA

B.SC. (HONS.), MAK

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS OF THE AWARD OF DOCTOR OF PHILOSOPHY OF MAKERERE

UNIVERSITY

DECEMBER 2003

Abstract

A study of the microbial contaminants in cooked vended food was carried out from four locations that were selected within Kampala city (City Centre, Kawempe, Nakawa and Wandegaya). Food samples were microbiologically analyzed for mesophilic aerobic, *Escherichia coli*, *Staphylococcus aureus* and *Salmonella* bacterial counts. These were determined to indicate food quality and hygiene, personal hygiene of food vendors, food safety and cross-contaminations respectively. Findings showed that 25%, 63% and 13% had mesophilic aerobic, *S. aureus* and *E. coli* counts that were higher than the recommended limits of 5×10^3 , $<10^2$ and $<10^3$ respectively. No salmonella isolates were obtained in any of the food samples. Generally the City Centre and Wandegaya registered the highest counts for all the three bacterial loads (*mesophilic aerobic*, *E. coli* and *S. aureus*), indicating that foods sampled from these locations were of poorest quality. The high load of *E. coli* in food suggested faecal contamination, and the presence of *S. aureus* above limits indicated poor food safety. Poor food microbial quality and therefore poor food hygiene characterized the food sampled as indicated by the high loads of Mesophilic aerobic loads. Food safety and food hygiene measures are discussed, and recommendations on proper food handling

measures with suggestions to relevant authorities in this industry to educate both the consumers and food handlers on the proper handling of food are given.