

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF APPLIED SCIENCES

DEPARTMENT OF APPLIED BIOLOGY AND BIOCHEMISTRY

PROJECT TITLE

Investigating the occurrence of Staphylococcus aureus and coliforms in creamdoughnuts.

BY

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ABSTRACT

A total of 25 creamdoughnut samples purchased from five popular retail outlets in Bulawayo were analysed for total aerobes using nutrient agar, coliforms using Mackonkey agar and for Staphylococcus aureus using mannitol salt agar. Generally the bacterial counts (per gram), ranged from  $1.6 \times 10^2$  to  $9.2 \times 10^3$  for aerobes,  $1.0 \times 10^2$  to  $5.6 \times 10^3$  for staphylococci and  $1.1 \times 10^2$  -  $1.17 \times 10^4$  for coliforms. 90% of the staphylococcal strains isolated were coagulase positive S. aureus and 40% of the coliforms were Escherichia coli. Only the cream component of the doughnuts was analysed in this study. Bacteriologically, the samples were found to be unacceptable by the Bulawayo city council standards.