# NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

## FACULTY OF APPLIED SCIENCES

# **DEPARTMENT OF APPLIED BIOLOGY AND BIOCHEMISTRY**

### **PROJECT TITLE**

Investigating the occurrence of <u>Staphylococcus</u> aureus and coliforms in creamdoughnuts.

BY

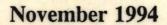
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#### N910128N

Submitted in partial fulfillment of the requirements for the Bachelor of Applied Science Honours Degree in Applied Biology and Biochemistry.

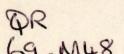
**Project Supervisor** 

Prof. R.N. Okagbue.





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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 using Mackonkey nutrient coliforms and for agar, agar Staphylococcus aureus using mannitol salt agar. Generally the bacterial counts (per gram), ranged from 1.6x10<sup>2</sup> to 9.2x10<sup>3</sup> for aerobes, 1.0 x  $1/0^2$  to  $5.6 \times 10^3$  for staphylococci and  $1.1 \times 10^2$  -1.17x10<sup>4</sup> 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 found to be unacceptable by the Bulawayo city samples were council standards.