

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF APPLIED SCIENCES

DEPARTMENT OF APPLIED BIOLOGY AND BIO - CHEMISTRY

Project Report Submitted In partial Fulfilment of the
Requirements of the

BACHELOR OF APPLIED SCIENCES HONOURS DEGREE

(APPLIED BIOLOGY AND BIO - CHEMISTRY)

BY CHRISPEN MUJAKACHI (N910157T)

PROJECT TITLE : Occurance of Aspergillus Flavus Toxins
in locally brewed beer.

PROJECT SUPERVISOR: MR. A.H SIWELA

NOVEMBER 1994

QK
625
.M7
MUJ

QR 129. B44

MuJ



* 9 2 0 0 3 0 1 0 1 7 9 *

NUST Library

LIBRARY
P.O. BOX 346
BULAWAYO

ABSTRACT

(iii)

This study was done to determine whether four types of AFLATOXINS (AF), Aflatoxin B₁, Aflatoxin B₂ aflatoxin G₁. and aflatoxin G₂ are carried over the brewing process. The study was carried out on three major types of beer consumed by many Zimbabweans, namely Traditional Kapoko Opaque Beer, Commercial opaque beer and clear beer together with their respective raw-materials.

The raw materials involved in the brewing of each of these beers provide the necessary nutrients (carbohydrates for energy through EMP-respiration, proteins for increase of biomass, that is cell growth, fats also for energy) after the Aspergillus have secreted the required enzymes for their breakdown.

If the raw-materials originally were not stored properly and contained aflatoxins, there is every reason to believe that these toxins should be transmitted to the final product unless if they are destroyed during or after the production due to for e.g. low pH in mature beer. Temperature increases can be ruled out since brewing temperature rarely exceeds 100°C and these toxins are known to be destroyed at temperatures well above this.

LIBRARY NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY P.O. BOX 346 BULAWAYO ZIMBABWE		
DATE	ACCESSION	CLASS No.
		QK 125