

**A STUDY TO DETERMINE THE USE OF INDOMETHACIN AS  
A RODENTICIDE BY PEOPLE IN THIKA MUNICIPALITY  
AND TO DETERMINE THE MINIMUM LETHAL DOSE**

Research project submitted in partial fulfillment of the requirements for the  
award of the Degree of Bachelor of Pharmacy of Mount Kenya University

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## ABSTRACT

Rodenticides are pesticidal compounds that are used to destroy rodents particularly mice, field mice, rats and sewer rats. Rodents can consume substantial quantities of pre-harvest, post-harvest and stored grains, pulses, vegetables and fruits. They also render the foodstuffs unfit for consumption by soiling and contaminating with urine, faeces and pathogenic microorganisms which are capable of infecting other animals and man.

The aim of this study was to assess the use of indomethacin as a rodenticide by various people in Thika municipality and a descriptive study was carried out. The study also involved an experimental design whereby the killing dose required to cause death of the rodents was determined. The experiment involved the administration of different doses of indomethacin to albino rats and the dose that would cause death of the rats noted. From the experiment it was concluded that indomethacin took a long period of time before it caused death of the rats and its action is through causing gastrointestinal haemorrhage by inhibiting prostaglandin synthesis. It was carried out in Mount Kenya University Laboratories and the findings of the experiment were to be used in formulation of questionnaires. The data was collected by use of self-administered questionnaires consisting of close-ended and open-ended questions to allow the respondents the freedom to answer with ease. Data collected was analysed by Microsoft Excel and by using a calculator. The data was then represented in form of bar graphs and tables and from the data it was concluded that most people in Thika municipality had heard of indomethacin (INDOCID®) and are aware that indomethacin is a drug that can be used to relieve pain and also treat joint disorders like osteoarthritis and also can be used as a rodenticide by mixing it with flour and meat and placing it in an area that is accessible to the rodents. It is recommended that education is done to the general public whereby they are advised on proper disposal of waste material, to prevent spread of infectious diseases and also local authorities should ensure that waste materials are removed regularly to prevent accumulation of waste which may form breeding sites for the rodents.