

ANTIMICROBIAL SUSCEPTIBILITY TESTING OF NEEM [*AZADIRCHTA INDICA*] PLANT LEAF EXTRACTS AGAINST STANDARD BACTERIAL STRAINS

By Abdihakim Abdullahi Guyo, B132/15023/2017

Supervisor: Dr J Mugweru

ABSTRACT

Neem is fast growing tree of the mahogany family Meliaceae used in traditional medicine as a source of many therapeutic agents by many communities and grows well in tropical countries. The aim of the study was to evaluate the antimicrobial activity of *Azadirachta indica* against standard bacterial strains, *Escherichia coli*, *staphylococcus aureus* and *Candida albicans*. *Azadirachta indica* leaves and stem bark were used in the preparation of extracts. Disc diffusion method was used to determine the antimicrobial activity of *Azadirachta indica* extract which was extracted using the water extraction method. The results were obtained by measuring the clear zones that had formed around the bacterial and fungal growth of the isolates at different concentrations of *Azadirachta indica* extract. The extract concentration showed no antimicrobial activity on *E. coli* both at low and high concentrations. the average zone of inhibition formed on *Staphylococcus aureus* showed a decrease in antimicrobial activity with descending plant extract concentration as compared to *Candida albicans*. The study provides useful information and insights into antimicrobial activities on plant extract that can be used in drug development.

Key words: phytochemicals, antimicrobial, herbal medicine