

## **ABSTRACT**

Diseases are the worst enemy to man currently. This study was aimed at isolating pathogenic bacteria from water obtained from shallow wells in Dundori Kenya. Also, the study aimed at testing the isolates for sensitivity to antibiotic metabolites previously extracted from Actinomycetes isolates from soils of Egerton University. Water samples were collected from shallow wells randomly selected from Dundori and abbreviated as A, B, C, D, and E. Bacterial pathogens were isolated from the water samples using the membrane filtration technique. The isolates were characterized using biochemical means. Antimicrobial sensitivity testing was carried out using Kirby Bauer disk diffusion method. Data analysis was carried out using the Statistical Package for Social Sciences (SPSS). Comparison of means was carried out using one way ANOVA. Shallow wells B, D and E were highly contaminated with pathogenic bacteria. Biochemical characterization of the isolates indicated that the most common isolates were *Vibrio cholera*, *Klebsiella pneumoniae*, *Proteus* sp, *Escherichia coli*, and *Staphylococcus aureus*. There was no significant difference between the zones of inhibition produced by the antibiotic metabolites ( $F=2.149$   $P=1340$ ) when tested against the test isolates. There were no significant differences between the MIC's of the antibiotic metabolites on the bacterial pathogens ( $F=2.01$   $P=0.15$ ). Water from some shallow wells in Dundori is highly contaminated with *Klebsiella pneumoniae*, *Escherichia coli*, *Proteus* sp., *Vibrio cholerae* and *Staphylococcus aureus*. The pathogens can effectively be controlled using antibiotics from the Actinomycetes. There is a need to sensitize the residents of the study area on ways of preventing seepage of contaminants into the shallow wells.

### **Keywords**

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