

## Abstract

Njoro River drains an agricultural catchment whose main livelihood activities are livestock rearing and employment in light industries. The limited quantities of piped water supplies coupled with inadequate sanitary facilities experienced in the area can contribute to the spread of antibiotic resistance from antibiotic use in agriculture and human. The objective of the current study was to isolate common waterborne enteric pathogens and test them for antibiotic resistance on some commonly used antibiotics. The organisms that were found to be resistant were also tested for the presence resistant genes. This was done by filtering known quantities of water through membrane filters and plating them on selective and differential media and these were tested for sensitivity to antibiotics. Isolates that showed antibiotic resistance were tested for the presence of tetracycline (Tet A), Sulfamethoxazole (Sul2) genes class 1 intergrase gene and SXT element resistance genes using PCR with appropriate primers. Pathogens including *E. coli* strains, *Salmonella* spp, *Vibrio cholera* and *V. parahaemolyticus* were recorded in this study. Sulfamethoxazole (Sul2) genes were detected in *Klebsiella pneumonia*, *Klebsiella oxytoca* isolates and Entero- aggregative strains of *E. coli*. Tetracycline (tet A) genes were detected in ETEC and EAEC pathogenic strains of *E. coli*. Class 1 integrase was detected in an EAEC strain. The SXT (int) element was not detected in any of the isolates tested.