Mwirichia, R.,Nancy, M.B and Hamadi, I. B. (2009):Isolation, Characterization and Identification of *Enterobacteriaceae* from well water in Juja Town in Kenya. *Journal of Tropical Microbiology and Biotechnology 5:*31-36

Abstract

Water for docmestic use is increasingly becoming a scarce resource forcing communities to resort to underground water sources. However, increasing wells and boreholes are facing threats of pullution from sewage. Water samples were collected from 12 different wells in Juja town, Kenya using pre-sterilized 100 ml plastic bottles. Sampling was done in May 2004 during the long rains and in September 2004 during the dry season. All the water samples had total coliform counts >1100 per 100 ml of water. The *Enterobacteriaceae* isolated from the wells were from the following genera: *Escherichia, Enterobacter, Citrobacter, Proteus, Edwardsiella, Erwinia, Kluyvera, Klebsiella, Salmonella, Shigella, Serratia, Rahnella, Cedecea, Morganella, and Yersinia*. Bacteria detected but not belonging to *Enterobacteriaceae* included the genera *Vibrio, Acinetobacter, and Chromobacterium.* Indiscriminate refuse disposals as well as the location of septic tanks, soak away pits and pit latrines in proximity to the wells could be the most probable cause of the overall high number of coliforms in the wells. Water treatment through chlorination or boiling was shown to reduce the microbial load to zero. Therefore it is recommended that water from the shallow wells be treated through chlorination or boiling before it can be used for domestic purposes.

Keywords: shallow wells, coliforms, fecal pollution, water treatment