

ABSTRACT

This study was done in order to assess the quality of water conserved in pans used as the main source of water used for domestic purposes by the residents of Chepalungu sub-county to supplement the lack of piped tap water in most parts of the sub-county. The study was accomplished by identifying 4 main pans used by many residents in theselected wards. Samples were collected and tested for quality in terms of physical, chemical and bacteriological parameters.

The quality of water is established on a defined basis, usually in terms of quality requirements for potable water. The water samples were tested for typical parameters such as; physical properties, chemical substances and bacterial quality. The values obtained were compared with either KEBS or WHO drinking water standards. Rigorous laboratory testing was carried out four times, once every month for the months of November and December 2018, January and February 2019. All the months lied on the raining season except February which was a bit dry. The parameters were found to lie within the following ranges; Turbidity 6.87-140 NTU, Colour 5-20 Hazen, Total suspended solids 40-280 mg/l, Total dissolved solids 160-720 mg/l, D.O 5.59-13.92 ppm, Iron 0.2-0.4 mg/l, Fluorides 0.4-0.99 mg/l, Chlorides 7-30 mg/l, Total hardness 48-88mgCaCO₃/l, Alkalinity 41-240mgCaCO₃/l. In the above conducted experiments, iron in Makimeny pan during the raining season was found to be in excess of the recommended Drinking water Quality Standards by WHO and in the same pan the samples had colour Hazen in excess. It is recommended that in order for the residents to get safer and clean water BOWASCO and LVSWSB should work on providing piped treated and safe water. Sensitizing the residents on clean water handling techniques and use of disinfectants and other safer ways of storing water.