

The quality of water sample from Maungani community domestic water
pots, Limpopo Province,
South Africa

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ABSTRACT

This study aimed at determining the quality of water sample from Maungani community domestic water pots, which includes tests for temperature, pH value, total solids, total suspended solids, hardness, acidity, alkalinity, chloride, chlorine, jar test, BOD and DO. The community consists of approximately one thousand five hundred households and a population of about ten thousand peoples. Maungani community is supplied with water from Vondo dam which is on the Mutshindudi River near Sibasa, Limpopo province. The dam was built in 1982 to provide domestic and industrial water for Thohoyandou and its surrounding communities. Over 260 samples were collected randomly using a systematic random sampling technique. The samples were collected from 26 households and 2 samples were collected from each household, making 52 samples obtained per day.

Based on the analysis, the average temperature, concentration of pH value, turbidity, TDS (Total Dissolved Solids), TSS (Total Suspended Solids), DO (Dissolved Oxygen), BOD (Biochemical Oxygen Demand), total hardness, alkalinity and chloride were found to be 27.38 °C, 7.37, 2.438 NTU, 156.8 mg/l, 2.653 mg/l, 42.156 mg/l, 3.6 mg/l, 8.65 mg/l, 102.3mg/l and 21.2 mg/l respectively. Conclusively, the results obtained from the water quality criteria parameter are within domestic use/ drinking water standard (IS: 10500).

Keywords:

Water quality, IS: 10500, pH, hardness, total solids, turbidity, TDS (total dissolved solids), TSS (total suspended solids), DO (dissolved oxygen), BOD (biochemical oxygen demand) and chloride.