

Micro-biological and physico-chemical quality of potable water in Borra, agency area, Andhra Pradesh

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SUMMARY

The present study was undertaken to evaluate the water quality of the Borra Panchayat of Ananthagiri mandal in Visakhapatnam district with affable means. The physicochemical and the microbial studies are most important regions by which we are able to test the portability of water. The isolation and characterisation of the pathogenic microorganism from the water sample collected were the main emphasized area of the study. In this study drinking water samples were collected from a hand bore, a tap and a stream for a period of two years *i.e.*, from April 2011 to March 2013. The various constituents monitored include the physicochemical characters, the bacterial parameters like total plate count (TPC), most probable number (MPN) and isolation and identification of pathogenic bacteria. The physicochemical characters of all the three drinking water samples were within the recommended permissible level of WHO. The total plate count was above the WHO guidelines values (<10CFU's/ml) in the three water samples studied and the highest count was during August and September. The bacteria isolated were *E. coli*, *Salmonella*, *Shigella*, *Staphylococcus*, *Group D Streptococcus*, *Vibrio cholera* and *V. parahaemolyticus* and *Pseudomonas*. The samples were inoculated and were incubated at 37°C for 24 hrs or 48hrs. for appropriate bacterial growths. Thus this study can be used for the assessment of the water and to resolve the hygienic problems of the water.

Key Words : Drinking water, Quality assessment, Pathogenic bacteria, Borra Panchayat

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