

A comparative study of microbial analysis of drinking water in Kothuru and Kondiba Panchayats in Ananthagiri Mandal, Visakhapatnam

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SUMMARY

A comparative study was conducted to find out the bacteriological characteristics of drinking water samples in Kothuru and Kondiba Panchayats of Ananthagiri mandal, Visakhapatnam district, Andhra Pradesh. Water quality is the degree of potability which is determined by the amount and kinds of suspended and dissolved substances in water. The microbial isolation was done by streak plate method on nutrient agar and on selective media for their identification. The final identification of resulted isolates was done by their biochemical testing mentioned in accordance to the Bergey's Manual. The total plate count was above the WHO guidelines values (<10CFU's/ml). In the water samples of Kothuru Panchayat studied, the highest count was during August. Increased presence of colifoms was noticed during August and October in stream; presence of coliforms was noticed in September in bore well while in well water it was during August. In the water samples of Kondiba Panchayat studied, the highest count was during August and September. Increased presence of colifoms was noticed during August and September in stream and bore well while in well water it was during June to August. The resulted bacterial isolates viz., *E.coli*, *Salmonella*, *Shigella*, *Staphylococcus*, *Klebsiella pneumoniae*, *Group D Streptococcus*, *Vibrio cholera* and *V. parahaemolyticus* are highly pathogenic. Poor quality of drinking water was recorded as the major risk factor for the large – scale water borne in the area.

Key Words : Drinking water, Pathogenic bacteria, Microbial analysis

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