

**Title: Densities of thermotolerant coliform and heterotrophic bacteria in the distributed drinking water of the city of Diadema (SP).**

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**Abstract:**

The characteristic necessary for distributed drinking water is the potability, should be treated, cleaned and be free of any contamination (microbiological, chemical, physical or radiative origin) and should not, under any circumstances, offer risks to human health. The presence of pathogenic agents may lead to microbiological gastro-intestinal disorders, being a large scale problem due to the reach of the water distribution. This study aimed to evaluate the water quality for human consumption, provided. The water quality were analyzed by the evaluation of thermotolerant coliforms, *Escherichia coli*, heterotrophic bacteria, free residual chlorine, turbidity and apparent color. Were analyzed nine hydraulic systems from different districts of the municipality and evaluated in accordance to the standard of the Ministry of Health 2914/11. The analysis of thermotolerant coliforms determinations ranged between absent in most cases and 14 UFC/100ml<sup>-1</sup>, the *Escherichia coli* strains between absent in most analyzes and 11 UFC/100ml<sup>-1</sup> and the density of heterotrophic bacteria showed a band between 8 UFC/ml<sup>-1</sup> and 987 UFC/ml<sup>-1</sup>. The results of the analysis showed gaps in treatment management and distribution of water, evidenced by frequent supply failures. It was expected to demonstrate a higher correlation between the biological and physical-chemical parameters. However it was not possible to establish a strong correlation. A prominent factor is independent of color and turbidity in relation to microbiological parameters, showing that the appearance of the water does not constitute a reliable indication of contamination.

**Keywords:** Sanitation, thermotolerant coliforms, heterotrophic bacteria.