

TITLE: Microbiological quality of water samples from Piracicaba - SP

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ABSTRACT

The contamination of water with fecal material may result in an increased risk of disease transmission to humans. Water can be a carrier of pathogens including some that cause serious diseases. Efficiency in the basic sanitation system is a key element in reducing contamination and diseases. The aim of this research was to analyze the microbiological quality of water from different points of private and public establishments in Piracicaba city from January-April 2017. The results of 179 samples were evaluated, being 78 samples of taps water, 68 of water treatment station, 26 of water wells, 6 of water from nascent font and 1 from water tank housing. Microbiological analyzes were performed using the Colilert® method. Absence of total coliforms and *Escherichia coli* were observed in samples from the treatment station and the water tank housing. 40% (4/10) of water from taps samples were positive for total coliforms with one positive for *E. coli*. Total coliforms were also present in 53.8% of the water well samples (14/26), being 46.1% (12/26) positive for *E. coli*. The presence of *E. coli* was detected in 100% of water from nascent fonts samples. It was observed a high percentage of samples contaminated by coliforms in water from wells and nascent fonts, not meeting the standard for potable water established by regulation N° 2914/ 2011 (Ministry of Health - Brazil). The water from treatment station and from the water tank housing were considered bacteriologically potable according to the same regulation. To prevent foodborne and waterborne diseases it is extremely important to identify and avoid contamination at the points of water supply and distribution.

Keywords: *Escherichia coli*, Microbiology, Total coliforms, Water

Development agency: Unified scholarship program – University of São Paulo