

TITLE: MICROBIOLOGICAL ANALYSIS OF WATER IN A PERIPHERAL NEIGHBORHOOD OF THE CITY OF BELEM-PA

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ABSTRACT:

The water distributed to the population can suffer physical, chemical and biological alterations that compromise the quality standard established by the country's present legislation, compromising the water's potability for public supply ends, considering the consumption of low quality water affects public health for containing microorganisms responsible for diseases aired through water. In the evaluation of fecal contamination on water are used the sanitary indicators, emphasizing the coliforms and the *Escherichia coli* bacteria, which presence in water impairs its use for human consumption ends, domestic chores, among other usages. The project's objective was to evaluate the houses tap water microbiological quality and the water that is ingested in a peripheric neighborhood of Belem (PA). The collection was realized on ten residences at two points: tap water from the kitchen sink and one that is ingested (through filters, pots, bottles). The research on total coliforms and *E.coli* was realized through the Defined Enzyme Substrate technique. The results revealed that in the analysis of the tap water, the presence of total coliforms was observed in 50% of the samples, which 20% of them tested positive for *E. coli*. In the water samples that were being used as drinking water, collected from filters, mineral water and water without any treatment, it was observed total coliforms in all the ten samples, and *E. coli* for two of them. It was also possible to observe through the results that the presence of total coliforms not always occurred confirmation of *E.coli*, that it was found only in 20% of the samples positives for coliforms. That way, it's necessary to expand the water vigilancy actions that is distributed by the public water supply system, and practice awareness campaigns about the rational use of water, educational about the care of usage and storage of water at home. That way, the population can make use of a water that is proper for human consumption, and reduction of contamination by pathogenic microorganisms.

Keywords: Water quality, microbiological analysis, total coliforms, *Escherichia coli*

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