

TITLE: MICROBIOLOGICAL ANALYSIS OF WATER IN THE MUNICIPALITY OF SÃO MIGUEL DOS CAMPOS, ALAGOAS

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ABSTRACT:

Freshwater is a finite resource on the planet, and its quality is worsening due to population increase and lack of care for its preservation. To ensure that the water is within the parameters acceptable for human consumption, it must, necessarily, undergo a treatment. Ministry of Health Ordinance No. 2,914/2011 informs that water for human consumption must be absent from heterotrophic bacteria, *E. coli* and total coliforms, the latter being mandatory its absence in 100 ML of sample after treatment. This research aimed to evaluate the level of microbiological contamination on the tap water of the residences in the city of São Miguel dos Campos, Alagoas. The AquaTest Coli®-ONPG MUG/Controlab Kit was used to identify the main microorganisms responsible for water contamination in the taps to verify if the water was within the parameters acceptable for human consumption. The water samples were stored in sterile glass collectors, identified, cooled in a thermal box and taken immediately to the laboratory for processing. For sample collection, the taps were previously cleaned with 70% alcohol and afterwards opened, allowing the water to run for 30 seconds, and then, the samples were collected. According to the results obtained with the microbiological analysis, the study demonstrated that 12 samples (60%) collected from the residences were satisfactory for human consumption and 8 (40%) were unsatisfactory according to the standards of potability required by the Sanitary Surveillance. The importance of supervising the quality of the water distributed to the residences of the city in question is remarkable. By having access to water and sewage treatment, the population has the opportunity to minimize the effects of possible contamination by waterborne pathogens. Poor sanitation of taps in homes and water tanks leads to biofilms of the microorganisms to remain in there, contributing to the contamination of the water after leaving the treatment station. It is necessary to improve the microbiological monitoring of the water treated for human consumption, in order to know the species that may be present in it and establish contamination control strategies, where the negative result of the tests proves the potability of the water by the processes of treatment undertaken.

Keywords: Freshwater treatment, Microbiological contamination, São Miguel dos Campos