TITLE: MICROBIOLOGICAL ANALYSIS OF WATER FROM DRINKING FOUNTAINS IN A PUBLIC INSTITUTION OF HIGHER EDUCATION

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ABSTRACT:
The water is essential to maintaining life, been necessary to be free of microorganisms and impurities, otherwise, will be vehicle for diseases. Thus, the microbiologic exams of water for consumption it is elementary to verify your quality. In Brazil, the microbiologic parameters used to analyze water are defined by the ordinance Nº 2.914/2011 of the Ministry of Health. Therefore, one of the biologic indicators of water quality are Gram negatives bacilli called “total coliforms” belonging to the genus *Citrobacter* sp, *Klebsiella* sp, *Enterobacter* sp and the specie *Escherichia coli*, considered the most important indicator of sanitary quality of water and aliment, because indicates contamination by feces. The methodology utilized was the Presence/Absence test by the method of Enzymatic Substrate Defined – Chromogenic, which is based on specific enzymatic activities of coliforms (β-galactosidase) and of *E. coli* (β-glucuronidase) deriving in colorimetric products during the metabolization of specific substrates. For this study, volumes of 100 mL were collected from 15 public fountains previously selected of the Institution of Higher Education obeying all the procedures of collect established on Manual Prático de Análise de Água da Fundação Nacional de Saúde. At the laboratory, the samples were transferred to sterile plastic bags containing sodium thiosulphate, it was added to them ampoules containing the substrate, and then they were placed in the heater at 35 ± 0,5 ºC for 24 hours. The results interpretation occurred by the waters color observation; thereby, all the samples kept themselves without yellow tones, which indicates the presence of total coliforms, and fluorescence, which confirms *E. coli*. These results differ from others found in two researches about the same theme in the institution, which reported the presence of the microbiologic indicators searched. These differences might be related to the different periods of the analyses and the maintaining and sanitation procedures of the water reservoirs and drinking fountains that the institution took, after the reported contamination previously. Wherefore, the findings reveal that, according to current legislation of the country, these waters present a satisfactory quality for consumption, once that were verified the absence of the sanitary indicators analyzed. Thus, this study aimed to contribute with information about the microbiologic quality of water consumed by the students, technicians and professors of the institution.

Keywords: Drinking Fountain. Microbiologic analyses. University. Water.