

**TITLE:** EVALUATION OF TOTAL COLIFORMS AND *Escherichia coli* PRESENCE IN WATER SAMPLES IN RURAL AREAS OF BELA VISTA DO PARAÍSO – PR.

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**Abstract:**

According to OPAS BRAZIL in 2019, 2.1 billion people of the world, around 40.19%, do not have basic potable water service. Thus, a population chooses alternative sources for water supply, like artesian wells, reservoirs, and water springs. Although these sources are selected for consumption, has necessary to demystify this conception. The water found in nature can have impurities, like dust, animal waste, leaves, insects, and others sources of contamination, mainly in animal husbandry farms. Pathogenic microorganisms can be present in nature waters, as *Escherichia coli*, a Gram-negative bacillary enterobacterium, humans intestinal resident, and other animals, besides being an indicator species pathogenic microorganisms presence. Some *E. coli* strains, when ingested, can lead to infections. Therefore, the objective of this work was to investigate the presence of total Coliforms and *E. coli* in 55 water samples in the rural region of Bela Vista do Paraíso - PR, February 2017 - October 2020. The methodology used to identify the was chromogenic substrate Colilert®, where 100 ml of water were placed in a sachet with the substrate Colilert-18 to show the most probable number of total coliforms and *E. coli*. Among 55 samples, 50 (90.91%) were contaminated by total coliforms and 27 (54.00%) from *E. coli*. These data emphasize the need for frequency of microbiological monitoring, under the Brazilian Ordinance GM / MS No. 888, of May 4, 2021, recommends that in 100 ml of water there should not be the presence of total coliforms and *E. coli*. Thus, was possible to realize that for there to be quality water for consumption and the use of everyday activities, there is a need to use filters in wells, look for companies specialized in groundwater treatment, preservation around sources, monitoring technician in the drilling of wells. Has important remember to always boil water before consumption at home to minimize risks of contamination by various microorganisms.

**Keywords:** Water analysis, Colilert®, Microbiology quality of water,

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