

TITLE: QUALITY OF WATER CONSUMED BY THE INDIGENOUS PEOPLE FROM ALTO SÃO MARCOS, IN RORAIMA: characterization under different microbiological parameters

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ABSTRACT:

Indigenous peoples have an intimate relationship with nature and its resources, among them, water resources, fundamental for the maintenance of life. Despite the indigenous perception about the importance of water and its quality, external and/or internal factors can interfere in the microbiological characteristics of the water that they consume, sometimes leading to health problems. This study characterizes the water used for consumption of six indigenous communities from the Alto São Marcos, mesoregion, in the São Marcos Indigenous Land, in the state of Roraima, from three distinct microbiological parameters: bacteria of the coliform group, heterotrophic bacteria and *Clostridium perfringens*. The three bioindicators assist in the interpretation under different aspects: recent fecal contamination, remote and storage and/or transport conditions. Nineteen samples were collected in March 2019, the period of greatest drought in the region. For the counting of bacteria of the coliform group was used the technique of fermentation in multiple tubes; for heterotrophic bacteria the surface count technique was used and, finally, the presence/absence of *C. perfringens* was obtained from a biochemical test and Gram staining. The results obtained indicated the presence of total coliforms in 100% of the samples, whereas *Escherichia coli* was present in 63% of the total analyzed, which is in disagreement with that established by Directive n. 2,914/2011-MS. For the heterotrophic bacteria, approximately 42% of the samples were above the permitted level – 500 UFC/mL – by the same Directive. Taking into account the samples analyzed, 68% were positive for *C. perfringens*. Although this bacterium is an important indicator regarding remote contamination, it is not considered a parameter according to the Potability Directive. The results found for the water consumed by the studied communities demonstrate a scenario of insecurity regarding the health of the residents. Part of the population have consumed inappropriate water, reinforcing the importance of public health and sanitation policies being implemented, therefore providing the safety of a decent and healthy life for residents of indigenous communities.

Keywords: Amazon, indigenous health, potability, bioindicators

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