TITTLE: MICROBIOLOGICAL CHARACTERIZATION OF THE GRANDE WATER STREAM, BOA VISTA, RORAIMA

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ABSTRACT:

In the State of Roraima, has ocurred a crescent and progressive degradation of water bodies, due to anthropogenic actions. The disorganized urban expansion that has been ocurred in Boa Vista city over the past decades has contribute significantly with the degradation of this aquatic environment. The microbasin of Grande Stream is located in the municipality of Boa Vista, in the State of Roraima, on the right margin of Branco River, presents an area of 31,70 km^2 and your temperature vary between 20 and 38ºC. The lack of conservationist consistency has cooperated even more for its damage, being considerate as agents of degradation: the directly contribution of domestic sewer without treatment in this aquatic environment, the diffuse pollution of the population, frequent burningsin the surroundingsof water bodies and fabric installations near the stream. For this reason, the study aimed to verify the seasonal behavior of the Grande Stream, to this end it was used microbiological parameters, such as the determination of total coliforms, thermotolerant, and heterotrophic bacteria. For this study, it was selected five spots to collect water samples, which occurred bimonthly from August 2014 to June 2015. The collect, preservation and analyze techniques followed the recommendations established by *Standart Methods for Examinationof Waterand Wasterwater*. For the determination of bacteria of the coliform group, it was used the multiple tube fermentation technique (Most Probable Number – MPN) associated to Hoskins table, which occurred in three stages: presumptive test for coliform, confirmative test for total coliform and thermotolerant coliform. Meanwhile, for the heterotrophic bacteria detection, it was used plates containing Plate Count Agar – PCA medium. His technique was used aiming the isolation of colonies, and the colonies counting in plates (quantitative study) for the determination of the colony forming unity (CFU/mL). The results of microbiologic density were compared to the limits determined by the Resolution CONAMA 357/05 and showed that the stream pollution can be characterized as unstable due to its inconstancy in density of thermotolerant coliforms and heterotrophic bacteria. Based in the results found in the studied área, it was concluded that the density changeability of the in parameters microbiological the Grande Stream point to the concentrate pollution, which represents a risk to the population.

Keywords: Heterotrophic bacteria. Parameters microbiological. Thermotolerant coliforms. Watershed.