TITLE: MICROBIOLOGICAL ANALYSIS OF BOTTLED WATERS IN THE TRIPLE BORDER OF BRAZIL, PARAGUAY AND ARGENTINA

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ABSTRACT: The consumption of bottled water from different countries often occurs in foz do Iguassu (Brazilian city bordered by Paraguay and Argentina) therefore the bottled water of this countries must respect the RDC nº 275 of bottled water quality valid in Brazil. The objective of this study was to characterize the microbiological quality of bottled water commercialized in triple border of Brazil, Paraguay and Argentina, in the cities of Foz do Iguaçu, Porto Iguaçu and Ciudad Del Este. A total of 23 samples proceeding from 20 different marks was bought randomly in supermarkets, 10 samples from Brazil, 6 of Argentina and 7 of Paraguay in bottles of 500 mL to gallons of 20L, were analyzed for microbial (*Escherichia Coli,* total coliforms, *Pseudomonas aeruginosa, Clostridium* sulfite reducers, enterococci and heterotrophic bacteria) characterization. The Brazilian regulation to water analysis doesn't oblige to analyze the heterotrophic bacteria in bottled water, but somehow this group can interfere the growth of other bacteria by competition. We follow the standard methods for the examination of water and wastewater and process the samples by membrane filtering method using chromogenic culture medium for each bacterium. We have found contamination by *Pseudomonas aeruginosa* in two samples of bottled water from Brazil (samples of 500 mL) and in gallons of 20L from Paraguay. The present study shown that has marks from Paraguay and Brazil is unfit for consumption, the analysis reveal higher count for heterotrophic bacteria in 2 marks from Paraguay and 1 mark from Brazil, though this analysis isn't compulsory the higher count of these microorganisms can be a health problem. The reference value for bottled water analysis is 0 for all groups of bacteria and is important to reveal the issues for consumers and authorities to get better quality of products.

Keywords: Bottled Water, Triple border, microbiological, Heterotrophic bacteria.

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