

TITLE: MICROBIOLOGICAL EVALUATION OF THE SURFACE AREA OF THE ALUMINUM BEVERAGE PACKAGING COMMERCIALIZED IN THE CITY OF PATOS, PARAÍBA.

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ABSTRACT: Aluminum packaging is broadly used by the beverage industry, ensuring integrity, security and health to the consumer. However, this packaging can eventually serve as a vehicle for the transmission of pathogenic microorganisms. The objective of the present study was to evaluate the presence of microorganisms in the surface area of aluminum beverage packaging commercialized in the municipality of Patos, Paraíba. Thirty and six drinks packaged in aluminum cans were collected from six different locations in the city, such as street vendors, supermarkets and bars & restaurants. The samples of surface areas of the aluminum packaging were collected with the aid of a sterile swab, and were grown in specific media and submitted to biochemical tests for the identification of genus and species. The research evaluated the presence or absence of total and faecal coliforms, of *Staphylococcus spp.*, as well as the aerobic mesophilic microorganism counts. In order to compare the results the research used as a negative control aluminum packaging sanitized with neutral soap and alcohol 70%. The results revealed the existence of total and faecal coliforms in 69.44% of the aluminum packaging and an average of 6.40×10^7 CFU/cm² for aerobic mesophilic microorganisms. Coagulase-negative *Staphylococcus* was identified in 86.11% of the analyzed packaging. In addition to these microorganisms were identified *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter aerogenes*, *Enterobacter cloacae* and *Serratia marcescens* in the analyzed aluminum packaging. The control group showed satisfactory results for the sanitation, and there was no growth in any of the inoculated media. Based on the results, it can be concluded that, all the aluminum packaging analyzed were contaminated by potentially pathogenic microorganisms, representing a high risk for the consumer of these drinks without a previous sanitation of these packaging. Therefore, it is relevant to highlight the importance of carrying out the sanitation of the aluminum can packaging before consumption, especially if the product is ingested directly from the packaging.

Keywords: Aluminum packaging; contamination; pathogenic bacteria.