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Distribution Processes Management of Canned Beverage Packaging: An Analysis of Microbiological Purity*

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Abstract

The main problem addressed in this work is the possible impact that the distribution processes may have on microbiological contamination on the outside of beverage cans sold in stores. Literature study shows lack of detailed microbiological research of canned beverages, that can occur on the top during supply and logistic chain.The purpose of the conducted research was to assess the level of microbiological threat it may be posing to humans consuming said drinks. This threat may be due to the presence of microflora on the surface of beverage cans that depends on the ways in which products are stored and distributed in stores or wholesalers. In a research, direct bacterial and fungal growth method was used - with inoculation on VRGB, MEA and broth medium. The amounts of colonies or CFUs (colony forming units) per milliliter of microorganisms cultured from collected can swabs were compared in terms of beverage type (“cola”, “energy drink”, beer) as well as the type of store they were obtained at (small, medium or large). The most contaminated cans were found at stores of a smaller size. Then an analysis was made of factors that could have influenced the results such as customer traffic or product turnover. Research shows many microorganisms that in high quantities can be dangerous to human and animal health.

Keywords: aluminum packaging, cans, microbiological purity, logistics, fungus, bacteria, microbiology

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