

**TITLE: PRELIMINARY CHARACTERIZATION OF LACTIC ACID BACTERIA ISOLATED FROM FRESH ORANGE JUICE SOLD IN SNACK BARS AT PRESIDENTE PRUDENTE-SP.**

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**ABSTRACT:** Several studies have associated orange consumption to lots of benefit including the prevention of chronic diseases. However, fresh orange juice may be a source of contamination by pathogen and microorganisms that cause food spoilage. Lactic acid bacteria are the main bacteria that cause spoilage in fruit juices but on the other hand it can produce bacteriocin like inhibitory substance and act as probiotic. The aim of this study was to quantify and characterize lactic acid bacteria isolated from fresh orange juice sold in snack bars at Presidente Prudente-SP. The analyzes were done in 30 fresh orange juice samples obtained from 10 different snack bars at Presidente Prudente - SP. The pH sample was evaluated by pHmeter. The lactic acid bacteria 'isolation was done by inoculation in Man Rogosa Sharpe (MRS) agar and incubation at 30 °C/24hrs. Ten colonies were selected and the positive Gram positive and negative catalase was selected to conduct the spot-on-lawn test. The inhibitory activity of potential bacteriocin producing strains was evaluated against *Escherichia coli* ATCC 25922 and *Listeria monocytogenes* ATCC 19115. The pH of the samples ranged from 3.40 to 4.20. The acidic environment and the high sugar levels found in orange juice contributed to the growth of lactic acid bacteria from  $3.54 \pm 0.03$  to  $5.76 \pm 0.09$  CFU / mL among the samples. The spot-on-lawn test demonstrated the presence of halo inhibition against *E. coli* and *L. monocytogenes*, the values ranged respectively from 1.9 to 2.7 cm and 2.3 to 2.7 cm. Characterization of bacteriocin like inhibitory substance and molecular analyzes will be held in the next step of this study. Bacteriocing producing strains can be useful as probiotic studies due to their application in food safety.

**Keywords:** deterioration, bacteriocin, probiotic, antagonism test.

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