

ABSTRACT

In the present study were used 43 samples of lactic acid bacteria derived from fermented milk, lees and grapes sorting table.

In this study the 43 samples were characterized, and the experiments performed were: (a) the isolation of pure cultures, (b) Gram staining, (c) catalase test, (d) production of CO₂ from glucose and (e) growth at different temperatures.

Additionally, the 43 samples were tested for potential probiotic activity, which in the present study was performed as growth at low pH and in the presence of bile salts. Additionally, the 43 samples were tested for potential antimicrobial activity, which in this study was tested by the ability of the strains to produce bacteriocins and inhibit the growth of three pathogenic microorganisms, i.e. *Staphylococcus aureus* 6571, *Listeria monocytogenes* 33411 and *Listeria monocytogenes* 1994.

In addition the molecular identification of 43 lactic acid bacteria samples was performed to determine the species of lactic acid bacteria that corresponds to each sample.

Keywords: lactic acid bacteria, probiotic activity, antimicrobial activity, fermentation of foods.