POTENTIAL PROBIOTIC YEAST: ANALYSIS OF RESISTANCE TO BILE SALTS

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Probiotics are live microorganisms that confer health benefits to the host. The use of these stimulates the proliferation of beneficial microorganisms in the host and assist in reducing the population of pathogenic bacteria in the gut. Several authors have focused on the selection of certain strains of lactic acid bacteria as probiotics. However, few data are available on probiotic yeast. To date, *Saccharomyces cerevisiae* var. *boulardii* yeast is the only recognized as a probiotic, characterized as non-pathogenic and resistant thermotolerant action of gastric, pancreatic and enteric juice capable of exerting inhibitory effect against pathogens and to improve the absorption of nutrients from the host. The aim of this study was to evaluate the resistance of five yeast exposure to a solution of bile salts, simulating the present condition in the enteric juice. Yeasts were reactivated in YEPG to reach concentrations of 10^8 cells/mL, centrifuged and resuspended in oxbile solution of 0.1% and 1% in PBS pH 7.0 buffer. Samples were collected at time of inoculation and after 4 h of incubation at 37 °C, and plated on YEPG broth to check the effect of exposure to bile salts. The survival rate was expressed by the population of viable cells growth in YEPG. The five yeast tested (named 1, 2, 3, 4 and 5), all were resistant to exposure to solutions oxbile 0.1% and 1%, with survival rates ranging from 100% (3, 4 and 5), 96.21% (2) and 91,21% (1) when exposed to a 0.1% solution; and 93.18% and (1) 100% (2, 3, 4 and 5) when exposed to oxbile 1%. From the obtained results, it can be concluded that yeasts showed high survival rates when exposed to bile salts are promising for use as a probiotic microorganism; however, further tests are needed to analysis the functional properties attributed to probiotics to confirm this potential.

Keywords: Probiotic yeast. Survival in bile salts. Probiotic potential.

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