

Potential Probiotic Bacteria Isolated from Dairy Products of Saudi Arabia

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Abstract : The aims of the study were to isolate and identify potential probiotic lactic acid bacteria due to their therapeutic and food preservation importance. Sixty-three suspected lactic acid bacteria (LAB) strains were isolated from thirteen different raw milk and fermented milk product samples of various animal origins manufactured indigenously in the Kingdom of Saudi Arabia using de Man, Rogosa and Sharpe (MRS) agar medium and various incubation conditions. The identification of forty-six selected LAB strains was performed using molecular methods (16S rDNA gene sequencing). The LAB counts in certain samples were higher under microaerobic incubation conditions than under anaerobic conditions. The identified LAB belonged to the following genera: Enterococcus (16 strains), Lactobacillus (9 strains), Weissella (10 strains), Streptococcus (8 strains) and Lactococcus (3 strains), constituting 34.78%, 19.57%, 21.74%, 17.39% and 6.52% of the suspected isolates, respectively. This study noted that the raw milk and traditional fermented milk products of Saudi Arabia, especially stirred yogurt (Laban) made from camel milk, could be rich in LAB. The obtained LAB strains in this study will be tested for their probiotic potentials in another ongoing study.

Keywords : dairy, LAB, probiotic, Saudi Arabia

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