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Study of Physical and Cultural Parameters on the Bacteriocins Produced by Lacti Bacteria Isolated from Traditional Indian Fermented Foods

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Abstract: Lactic Acid Bacteria (LAB) predominates the micro flora of fermented They produce metabolites that inhibit the growth of food-borne pathogens and s microorganisms. The objectives of the present study were isolation, identification traditional Indian fermented foods and study of physical and cultural parameters bacteriocins produced by them. Seven isolates of bacteriocin producing LAB were from curd, dosa batter and idli batter and were identified as species of *Lactobaci* culture supernatants of the seven isolates were evaluated for their antimicrobial against pathogens like *Staphylococcus aureus* and *Pseudomonas* sp. The stabilit bacteriocins was tested at different temperatures, pH, presence of bile salt like s deoxycholate and storage period at 4°C. The diameters of the inhibitory zones ra between 9 and 12 mm for *Staphylococcus aureus*, with no effect on *Pseudomon* bacteriocins produced by the isolates were stable at temperatures ranging betw 80°C and over a wide range of pH from 2 to10, with the highest activity at pH 6 found that the bacteriocins were stable at different concentrations of the bile sa remained active even after a storage period of 30 days at 4°C. Sodium Dodecyl S polyacrylamide gel electrophoretic analysis of the partially purified bacteriocins s their apparent molecular weights between 16.5 to 48 kDa. These bacteriocins ma potential use as food biopreservatives and may help in improving the gut environ combating several pathogenic microorganisms.

[Abstract] [Fulltext PDF] [Fulltext HTML] [References] [View Citation] [Report

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