

عنوان مقاله:

Identification and Evaluation of the Antimicrobial Potential of Strains Derived from Traditional Fermented Dairy Products of Iran as A Biological Preservative Against *Listeria monocytogenes*, *Staphylococcus aureus*, *Salmonella enterica* and *Escherichia coli*

محل انتشار:

فصلنامه میکروب شناسی پزشکی ایران، دوره 13، شماره 5 (سال: 1398)

تعداد صفحات اصل مقاله: 14

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خلاصه مقاله:

Background: Today, despite improved food safety, nearly a quarter of the population is at risk for foodborne diseases. Therefore, the use of lactic acid bacteria and their metabolites due to their potential health benefits, safety and production of natural antimicrobial compounds is an appropriate solution to reduce microbial spoilage of food.

Materials & Methods: In this research, lactic isolates were first identified by PCR method and Micro-dilution method was used to evaluate the antimicrobial activity of the Cell Free spent Medium (CFSM). **Results:** The sequencing of PCR products showed that the species identified were *Lactobacillus* and *Enterococcus* species. The results of the evaluation of the antibacterial properties of the CFSM on the growth of Gram-positive bacteria showed that all isolates were able to prevent the growth of these pathogens and their inhibitory percentages varied from 86.81 to 38.81 percent. The results of inhibitory effects of lactic isolates on the growth of two gram-negative bacteria of *Escherichia coli* and *Salmonella enterica* also showed that the inhibitory levels of the isolates were varied from 2.43 to 36.43 percent and 14.1 to 31.97 percent, respectively. Comparison of the inhibitory effect of lactic isolates on pathogenic bacteria showed that the inhibitory effect of all lactic isolates on gram positive bacteria was significantly ($P < 0.05$) more than their effect on gram negative bacteria. **Conclusion:** The results of this study showed that native dairy lactic acid isolates and their metabolites can be used as biological preservatives or in combination with synthetic preservatives in the food and drug industry.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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