

Isolation and Characterization of Ant-Salmonella Lactic Acid Bacteria from Dairy Products

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Abstract : Dairy products have been regarded as the natural source of lactic acid bacteria with potential characteristics of probiotics; therefore, a lot of research and practical works have been carried out about the isolation of lactic acid bacteria (LAB) from dairy products, especially traditional yogurt and related products. Interest in traditional dairy products continues in the area of isolation of new LAB that can complement or replace currently used starters and/or that can be candidates as beneficial microorganisms for prevention or treatment purposes. In this perspective, such products are potentially good candidates for isolating new strains of probiotics. On the other hand, some infectious diseases such as salmonellosis have expressed resistance against many antibiotics; therefore, many attempts have been performed to use an alternative approach to overcome antibiotic resistance. The current research focuses on the isolation of LAB from dairy products, especially traditional dairy products and screening of them for anti-Salmonella activities. Twenty-five samples, including 15 sheep milk samples, one camel milk sample and seven cow milk samples from different areas of Iran and 2 yogurt samples from Herat, Afghanistan are collected. 20 bacteria are isolated by culturing the samples on MRS agar specific medium; among them 4 Lactobacillus strains, including 3L. plantarum strains and one L.gasseri strain, are identified by analyzing the biochemical tests and PCR tests in which 27F and 1492R primers are used. Then, their effects against Salmonella typhimurium using the well-diffusion method are evaluated.

Keywords : lactic acid bacteria, probiotics, dairy products Salmonella

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