



MINISTRY OF JIHAD-E-AGRICULTURE

Agricultural Research, Education and Extension Organization

Isfahan Agriculture and Natural Resources Research

and Education Center

**Isolation and molecular identification of lactic acid bacteria from honey  
in Isfahan province**

**Research worker: Sayyed Kamaledin Allameh**

**Abstract**

The present study isolated and identified lactic acid bacteria from honey to use as probiotic in Najafabad, Khaansaar and Fereidoonshahr (Isfahan province) and the honey samples were transferred to laboratory. From each sample was inoculated on MRS broth and then was cultured into MRS agar by spread technique and finally put in incubator at 37°C for 24 hours. Next, gram staining, catalase and oxidase tests were done for pure colonies and finally 9 bacteria were selected to identify by 16S-rRNA technique. After PCR products purification, the samples were sent to laboratory to determine nucleotide sequences. The sample sequences were analysed in National Center Of Biotechnology Information (NCBI). Eight bacteria (from 9 bacteria) were identified as lactic acid bacteria. Two of them were from Najafabad, three from Khansar and Fereidoonshahr for each. These bacteria were from three genera comprising *Gluconobacter*, *Weissella* and *Aerococcus* with 100 percent similarity.

**Key words:** honey, isolation, molecular identification, lactic acid bacteria