

Isolation and molecular identification of lactic acid bacteria from Iranian traditional apple vinegar-like solution called D.sap

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Traditional apple vinegar is a popular condiment in Iran. Vinegar contains lactic acid bacteria, acetic acid bacteria and yeast. Lactic acid bacteria improve the flavor of vinegar. According to the US Food and Drug Administration, vinegar is a solution that contains not less than 4 grams of acetic acid in 100 mL. But, the subject studied in this article is an apple vinegar-like solution containing 2.5% acetic acid and 1.1% lactic acid because the production process is different from vinegar. This product called Dezhakam sap (D.sap). This study was aimed at isolating and identifying Lactic acid bacteria from the D.sap. 16s rRNA gene sequencing was performed to identify the lactic acid bacteria isolates. The bacterial isolates were identified as *Lactobacillus fructivorans*, *Lactobacillus garri* and *Lactobacillus hilgardii*. *Lactobacillus garri* were isolated from *gari*, a traditional West African fermented food derived from cassava for the first time. In the present study, we report for the first time the *Lactobacillus garri* isolated from vinegar-like solution (D.sap)