

## البحث الثاني

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<b>Title</b>	<b>Biochemical and molecular identification of <i>Enterococcus</i> isolated from traditional fermented milk and assessment of their antimicrobial activity against some pathogens.</b>
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### ABSTRACT

The purpose of the present work was to characterize promising starter culture strains of *Enterococcus faecium* and *Enterococcus durans* isolated from traditional fermented milk. The antimicrobial activity of *E. faecium* and *E. durans* against *Staphylococcus aureus* (MRSA), *Pasteurella multocida* and *Pseudomonas fluorescens* was evaluated. A total of 20 isolates of lactic acid bacteria were characterized using morphological characters and all the isolates were Gram-positive and catalase-negative lactic acid bacteria. Eight isolates were identified as *Enterococcus* spp using API kit and confirmed by using *Enterococcus* genus-specific primers (Sod A). Based on 16SrRNA gene analysis, four isolates were identified as *E. faecium* and four isolates were identified as *E. durans*. The plasmid contents and profiles of the strains were showed, all tested strains carried a certain number of plasmids ranged from 2 to 8 with different molecular sizes. The effectiveness of the antimicrobial activity of *Enterococcus* is strictly related to the species and strain of the target microorganism.

Commercial kits for species identification of *E. durans* and *E. faecium* are in some cases incorrect to distinguish species of enterococci, so the molecular identification of *Enterococcus* strain play an important role in food industry as starter cultures to improve food quality and safety.