

# Beneficial Microbes: Food, Pharma, Aqua & Beverages Industry

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## Antimicrobial activity and properties of *Enterococcus faecium* strains isolated from kefir

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Kefir is a refreshing, naturally carbonated fermented milk beverage with a slightly acidic taste, yeasty flavour and creamy consistency. Beneficial bacteria and yeast, kefir contains minerals and essential amino acids that help the body with healing and maintenance functions. Bacteria of the genus *Enterococcus* are ubiquitous Gram-positive, catalase-negative cocci that often occur in large numbers in vegetables, plant materials and foods especially those of animal origin such as dairy products. Enterococci have been used in many different applications as starters or adjunct cultures and in foods they seem to have a major role in improving flavour development and quality of cheese. *Enterococcus faecium* isolated from kefir for isolation of Enterococci the diluted homogenates were placed on M-17 medium and azide agar medium was used aerobically. The plates were incubated at 37°C for 2-3 days. Carbohydrate fermentation tests were carried out using the API 50CHL kit according to the manufacturer's instruction (BioMerieux, France). Ribotyping was performed with a RiboPrinter Microbial Characterization System (Qualicon Inc., Wilmington, DE) and the standard EcoRI DNA preparation kit as described in the manufacturer's operations. Antagonistic activity screening was investigated by two methods. The agar spot test and well diffusion assay as described by Schillinger and Lüche (1989), Tagg et al. (1976) and Harris et al. (1989), respectively. The amount of produced lactic acid, hydrogen peroxide, proteolytic activity of the lactic acid bacteria was determined. The use of *Enterococcus* strains as starter cultures, co-cultures or protective cultures is becoming an important aspect that can lead to the production of safer food. However it will be beneficial to evaluate risk/benefit analysis for safety use.

### Biography

Erdogan Cakir is currently working as researcher in Anadolu University, Turkey.

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