

عنوان مقاله:

Effects of *Enterococcus faecalis* and *Enterococcus faecium*, Isolated from Traditional Lighvan Cheese, on Physicochemical and Sensory Characteristics of Iranian UF White Cheese

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خلاصه مقاله:

The main objective of this study was to investigate the effect of enterococci isolated from traditional Lighvan cheese on the quality of Iranian UF white during ripening. Four samples of cheese were provided from four different cheese production units in Lighvan region. Strains of enterococci in these samples were isolated by standard microbiological methods and selective medium of Kanamycin Esclin Azide Agar and then identified by biochemical methods. In the second stage of research, the effect of adding isolated enterococci in traditional Lighvan cheese on the quality of Iranian UF white cheese was investigated in a ۶۰-day period. Addition of *Enterococcus* spp. did not significantly ($P > ۰.۰۱$) affect the pH and percentage of pH ۴.۶-Soluble nitrogen/total nitrogen. In the cheese produced with *E. faecalis* and *E. faecium* strains, lipolysis rate was higher and flavor properties were improved. Moreover, results of measuring percentage of soluble nitrogen at pH ۴.۶ and urea polyacrylamide gel electrophoresis indicated an increase in proteolysis rate in the cheese containing *E. faecalis* and *E. faecium* strains compared to the control cheese. Furthermore, the highest percentage of non- protein nitrogen was observed in the cheese containing *E. faecium*. In conclusion, the results showed the positive effect of the *E. faecalis* and *E. faecium* on secondary proteolysis during ripening. The proteolytic activity displayed by some enterococcal strains may contribute to cheese ripening and flavor development. Because of these interesting metabolic traits, enterococci have been proposed as part of defined starter culture combination for UF white cheeses.

کلمات کلیدی:

Enterococcus faecalis, *Enterococcus faecium*, Lighvan cheese, UF white cheese

