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ABSTRACTED AND INDEXED

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Characterization of some probiotic bacteria in traditional and commercial pickle and kefir samples

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Abstract

Background/aim: Probiotics are a part of natural microbiota of fermented food, and used internationally in food and dairy products for many decades. Recently, studies on using the probiotics in preventing and treatment of specific diseases attract great attention. Probiotics have been tested in a large number of clinical studies for the treatment of various diseases. It is known that probiotics are abundantly found in various dairy and fermented products. Especially pickles and kefir are becoming more popular as probiotic sources in many countries. Although, there are several studies for the characterization of probiotic bacteria found in pickles or kefir around the world, studies on local ones are quite limited in our country. The aim of this study was to determine the probiotics in some traditional and commercial pickle and kefir samples.

Materials and Methods: *Lactobacillus plantarum*, *L. curvatus* and *L. brevis* have been targeted as common probiotic microorganisms, and MRS-agar has been used as selective medium in cultivation of these microorganisms. To identify probiotics in 3 kefir and 8 pickle samples, PCR method was performed with species-specific primers on the isolates grown in MRS-agar. DNA samples obtained from reference *Lactobacillus* species, and PCR products were analyzed qualitatively using agarose gel electrophoresis.

Results: Considering the PCR results, *L. brevis* has been found in all kefir samples, in one commercial okra pickle and in one traditional cabbage pickle. *L. plantarum* has been found in commercial okra pickle and cabbage pickle. *L. curvatus* has been found in only one traditional cabbage pickle.

Conclusion: This study exhibited that Turkish okra and cabbage pickles and kefir contain common probiotics, and would be considered as good sources for these selected bacteria.

Keywords: Lactic acid bacteria, pickle, kefir, probiotic

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