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Czech J. Food Sci. KšicovᆠK., Dušková

M., Karpí šková R.:

Differentiation of *Lactobacillus* species by ARDRA

Czech J. Food Sci., 31 (2013): 180-188

The Lactobacillus species by 16S **Amplified Ribosomal DNA Restriction** Analysis (16S-ARDRA) was identified. Lactobacilli are bacteria often found in foodstuffs of both animal and vegetable origins. On one hand, they play an important role in the food spoilage and, on the other hand, they are used as starter cultures in food fermentation processes. The species-specific identification by traditional biochemical methods is time consuming and not always fully effective. Therefore, more efficient techniques are searched for. We focused on rapid identification of Lactobacillus isolates from different habitats. Forty-nine collection strains and isolates belonging to the genus Lactobacillus were discriminated. ARDRA was carried out with two restriction endonucleases. For the comparison of similarity, the Jaccard coefficient and

method with arithmetic averages (UPGMA) were used. The percentages of similarity between profiles varied from 22% to 100% (*Alul*) and from 27% to 100% (*Mspl*). This method proved applicable to the differentiation of 10 species.

Keywords:

restriction analysis of the 16S rDNA gene; *Alul*; *Mspl*; *in silico* fragmentation; species identification

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