

VARIATION OF pH, TITRATABLE ACIDITY AND VITALITY OF *L. PLANTARUM* U-14, *L. FERMENTUM* U-5 STRAINS, AND THEIR MIXTURE

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Summary. Variation of pH, titratable acidity and vitality of *Lactobacillus fermentum* U-5, *Lactobacillus plantarum* U-14, and their mixture was analysed for 6 days cultivating them in sterile skim milk in 30 °C and 37 °C temperature. Titratable acidity was measured using Terner method, pH - using potentiometric method and vitality - cultivating cultures in solid nutritional medium MRS from different dilutions. The number of colonies was counted. The most intensive increase of titratable acidity and decrease of pH was observed during the first 3 days. After the first day reliable increase of titratable acidity, decrease of pH and the most intensive proliferation in both temperatures were observed. The acidity of *L. fermentum* U-5 at the optimal temperature of 37 °C reaches the limit - 107,9 °T on the 6-th day, pH decreases to 3,5; and if they are cultivated at 30 °C the acidity reaches 189,2 °T, pH - 3,64. The more optimal condition for *L. fermentum* U-5 is the temperature of 37 °C, for *L. plantarum* U-14 - 30 °C. In these temperatures even after the first day of cultivation more intensive production of acids and higher number of lactobacillus was observed. It can be concluded from the experiments, that both strains are not very active producers of acid. When both strains are cultivated together, production of acids and proliferation in both temperatures increases.

Keywords: *L. fermentum*, *L. plantarum*, pH, titratable acidity, vitality, temperature.