

MICROBIOLOGICAL ASPECTS OF GOAT'S MILK YOGURT WITH THE ADDITION OF SCALD FRUITS

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Yogurt is a lactic acid product with valuable functional properties whose physico-chemical characteristics are the subject of numerous researches. In this paper the study object is goat's milk yogurt with the addition of scald fruits (peach, raspberry and strawberry). The aim of this research is to highlight the antimicrobial properties of goat's milk against pathogenic bacteria and increase these properties by adding scald fruit, thus transforming goat's milk yogurt with scald fruit into a microbiologically safe product. To perform the study, the growth rate of lactic acid bacteria measured by the optical density at 600 nm and the amount of lactic acid determined by titration. Growth rate of lactic acid bacteria during storage (15 days) showed the results: control sample $2,10 - 2,12 \cdot 10^7$ ucf/ml, yogurt sample with peach $2,72-2,75 \cdot 10^7$ ucf/ml, yogurt sample with raspberry $2,80-2,87 \cdot 10^7$ ucf/ml, yogurt sample with strawberries $2.25-2.26 \cdot 10^7$ ucf/ml. The growth rate of lactic acid bacteria in the samples of yogurt with added fruit compared to the control sample was an increase from 6.60% yogurt with strawberries to 35.37% for the sample of yogurt with raspberries. The difference in the lactic acid bacteria growth rate in the researched samples is probably due to the fact that the addition of scald fruits constitutes an improvement of the bacterial growth medium. The yield of lactic acid is directly proportional to the lactic acid bacteria vital activity of the starter culture. Respectively, the maximum amount of lactic acid was obtained for the yogurt sample with the addition of raspberries (0.094-0.116 g) followed by the sample of yogurt with the peach addition (0.080-0.103 g). At the same time, the intensive growth of bacteria does not lead to excessive accumulation of lactic acid, which favorably influences the physico-chemical and organoleptic parameters of dairy products. Based on the experimental study, it was shown that fruits have antimicrobial properties and form a synergism with starter culture microorganisms in goat's milk yogurt with scald fruits. The most relevant results were obtained for the yogurt sample with added raspberries followed by the yogurt sample with added peach.

Keywords: goats milk, fruits, lactic acid, lactic acid bacteria

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