

## THE INFLUENCE OF BERRY EXTRACTS ON YOGURT QUALITY

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The yogurt is a food that provides important nutrients consumers of all ages and is part of a balanced diet. The purpose of the research presented is to obtain an assortment of lactic acid products, with increased biological value by adding concentrated hydroalcoholic extracts from sea buckthorn, rosehip and chokeberry fruits. The plant extracts with a dry matter content of  $85\pm 1\%$  in a proportion of 1% were added. The evolution of sensory indices and physico-chemical indicators during the storage of fortified yogurt for fifteen days in relation to the control sample was studied. The antioxidant activity (*in vitro*) of yogurt on the eighth day of storage was analyzed. On the first ten days, the sensory characteristics of the tested samples did not change. On the fifteenth day of storage, the rosehip (RY) and chokeberry (CY) yogurts were rated as "good", and the control (CS) and sea buckthorn (SBY) samples were "satisfactory" with poorly defined sensory properties. It was found that SBY can be kept for a maximum of thirteen days, but RY and CY - fifteen days. It was observed that with the intensity of the fermentation process, the acidity of fermented dairy products gradually increases, in the first days being constant, then reaching higher values. During the storage of fifteen days, the acidity of the yogurt samples changed within the following intervals: CS ( $83 - 110.5^{\circ}\text{T}$ ); SBY ( $89.5 - 113.0^{\circ}\text{T}$ ); RY ( $85.5 - 111.5^{\circ}\text{T}$ ) and CY ( $84.5 - 110.0^{\circ}\text{T}$ ). Probably, berry extracts stimulate the growth of lactic acid bacteria from yogurt starter culture and as a result the accumulation of lactic acid. It was found that the viscosity values in all samples examined during storage decreased. The lowest viscosity values were determined in RY ( $725\text{mPa}\cdot\text{s}$ ). The values of the syneresis index decreased due to the reduction of water retention capacity in tested yogurts. The highest value of the syneresis index was obtained for SBY (66.78%), and the lowest for CY (63.11%). Positive and high values of antioxidant activity were demonstrated in all samples studied, especially in yogurts with extracts, the values of antioxidant activity being arranged in descending order:  $\text{RY} > \text{SBY} > \text{CY} > \text{CS}$ , presenting an important argument in favor of fortified products. In addition, the increased antioxidant activity values are attributed not only to the phytochemical content of the extracts, but also to the metabolic activity of lactic acid bacteria from the starter culture.

**Keywords:** yogurt, berry extracts, quality, antioxidant activity

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