❖ **FOOD ENGINEERING AND TECHNOLOGY**

The impact of berries on the evolution of yoghurt acidity

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Abstract
Yogurt is a leading dairy product with a high consumption level and numerous nutritional benefits, with a history spanning over 100 years. In recent times, yogurt supplemented with fruits or berries has a higher antioxidant activity, the acid taste is mitigated, it has a richer nutritional value. Aronia (malic acid predominantes), raspberry and strawberry (citric acid predominantes) contain valuable organic acids that act as protective agents capable of reducing post-acidification process. According to the normative documents (GD No. 158 of 07.03.2019) the titratable acidity value for yogurt must be in the range of 75-140 oT.
The yogurt was obtained by the thermostat method in the laboratory of the Food Products Technology Department of the Technical University of Moldova, from cow's milk ("Ferma cu Origini" SRL, Horăști v., Ialoveni r.), goat's milk ("Vilador" SRL, Slobozia-Măgura v., Sângerei r.), starter culture (Lyofast YAB 205, consisting of Streptococcus thermophillus, Lactobacillus delb. Bulgaricus), aronia berries (collected from plantations in Cuizauca v., Rezina r.), or raspberry berries (collected from plantations in Elizavetovca v., Dondușeni r.), or strawberry berries (collected from plantations in Sadova v., Calarasi r.) and sugar ("Suedzucker Moldova").
In this context, the present study represents an important step in the assessment of yogurt quality, as it reflects the possibility of inhibiting the post-acidification process of yogurt thanks to the addition of berries. The results obtained for the samples titratable acidity after 15 days of storage showed increasing values, but remained within the maximum permissible value of 140ºT, as it was influenced by the berries lower acidity. Thus, for raspberry yogurt a maximum titratable acidity of 105 ºT was obtained, for strawberry yogurt 100 ºT and for aronia yogurt 92 ºT, compared to the classic yogurt 82 ºT. After yogurt storage during 20 days, the recorded values were the following: raspberry yogurt 119 ºT, strawberry yogurt 112ºT and aronia yogurt 108 ºT, compared to classic yogurt 93 ºT. After 25 days of yogurt storage the titratable acidity exceeded the maximum permissible value, with the following results: for raspberry yogurt 140 ºT, for strawberry yogurt 143 ºT and for aronia yogurt 142ºT, compared to classic yogurt 141 ºT. These results support the hypothesis that the berries chemical composition and its biologically active substances have the ability to inhibit the increase of yogurt acidity.

Keywords: organic acids, preservative, supplements, titratable acidity, berries.

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