

SUMMARY

This paper presents the extensive characteristics of selected types of fermented milk with the addition of wild fruits, with particular emphasis on their potential health promoting properties. The paper contains characteristics of fruits of wild plants used for supplementation, in which special attention was paid to their bioactive components and their antioxidant potential, as well as use of these fruits in food processing.

The scientific goal of the study was to verify the research hypothesis assuming that the addition of puree from fruits of sea buckthorn (*Hippophae rhamnoides* L.), elderberry (*Sambucus nigra* L.) and blackthorn (*Prunus spinosa* L.) will significantly increase health promoting properties, while maintaining appropriate numbers of characteristic microflora in yogurt, probiotic yogurt and kefir. It was assumed that the applied fruit additives will enhance the antioxidant properties of these products by increasing the content of bioactive substances, such as polyphenols and anthocyanins. It was also assumed that enriching fermented milk with selected wild growing fruits will favorably affect their sensory properties and microflora, and the products obtained will have the desired texture, color and level of aromatic compounds. The practical objective of the research was to develop a method of production of selected types of fermented milk with plant additive, taking into account the type and level of the additive, which will enable the possible implementation of these innovative fermented products in the food industry, thus increasing the diversity of the functional foodstuffs.

Supplementation with fruit puree resulted in an increase in antioxidant activity, especially in products with the addition of unsweetened purees from the fruits of elderberry and blackthorn, while increasing the content of polyphenols and anthocyanins, which confirmed the research hypothesis formulated in this work.

The use of sweetened wild fruit purees improved the sensory quality of products and supplementation with unsweetened purees did not significantly affect the overall sensory quality of the individual types of fermented milk. These products were characterized by an attractive color, which in all cases remained stable throughout the entire time of cold storage. In addition, the content of aromatic compounds remained, in most cases, unchanged.

The addition of fruit purees did not hinder the number of specific microflora of particular types of fermented milk and in some cases stimulated their growth.

Different types of fermented milk with the addition of wild fruits can be innovative products on the dairy market, while increasing the variety of the functional food. From the point of view of sensory quality as well as potential pro-health properties, the most favorable addition was

fruit of blackthorn. This makes it possible to use indigenous wild fruits in the food processing, which has been processed so far on a small scale.