

Abstract Oral

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Section **Natural Bioactive Compounds, Functional and Traditional Food Products**

THE USE OF ROWAN BERRIES IN BREAD HEALTHY PRODUCTS

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One of the ways to increase the food value of products can be used as functional ingredients of wildy growing berries and products of their processing, as possible sources of vitamins, bioflavonoid, pectin and mineral substances.

The choice of wild rowan as the raw material for enriching of bakery products is conditioned by high maintenance of bioactive substances. They have a large source of raw materials, ecological cleanness, availability and low prime price. As fruit and berry raw materials are seasonal sources, it is expedient to dry out the berries. They can be restored before the use by wetting in different liquids where a swelling process will be.

For getting the high taste qualities, attractiveness and necessary consistency of berries pulp it is necessary to provide the maximal swelling of berries high-molecular substances. The swelling process of the dried up rowan was investigated in water, in the solution of salt by a concentration 5% and in the solution of sucrose by a concentration 5%.

The highest speed of swelling is observed in the sucrose solution, where at 20°C process is completed in 6.5 hours. In water a process lasts 7 hours and in salt solution - 10 hours.

The most fully rowan berry can be restored in water, where a maximum degree of swelling is 96%. In sucrose solution this index is 80%, and in salt solution - 71%.

The influence of water temperature was investigated in the range of 20...60°C. The speed of rowan swelling was increased twice for every 20°C. The time of complete swelling was reduced and made for 40°C 3,5 hour, and for 60°C 2 hours. The maximum degree of swelling is increased and at 20°C is 96%, at 40°C is 125%, and at 60°C is 145%.

Conclusions. The optimal terms of renewal swelling of process of the dried up rowan berries are: temperature is 60°C; time of contact is 120 minutes; a liquid for swelling is water.

KEY WORDS: rowan, swelling degree, functional ingredient.