



TITLE: Development of technology of sauces from wild and cultivated berries with iodine-containing additives

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ABSTRACT (upto 300 words)

The research is devoted to the development and scientific substantiation of the technology of sauces from wild and cultivated berries with the addition of iodine-containing additives.

Technologies of sauces were developed: cornel-blueberry sauce with guilder-rose juice with a content of hydrated Laminaria 8%; blueberry-cranberry sauce with guilder-rose juice with a content of hydrated Fucus 3%; blueberry-buckthorn sauce with guilder-rose juice with a content of hydrated Undaria pinnatifida 3%.

Rheological studies have established that the use of Laminaria, Fucus, Undaria pinnatifida has a positive effect on the consistency and structure of the finished product, which allows not to use starch or other thickeners in recipes and, thus, reduce the energy value of sauces. Thus, test samples with the introduction of hydrated Laminaria 8% and Fucus and Undaria pinnatifida 3% have a similar consistency to control samples. Sauces with the addition of experimental additives better restore the structure compared to those on traditional structurants. The introduction of the proposed seaweed also improves the structural properties of sauces during pasteurization, which can be explained by the structural changes that occur with alginates under the action of elevated temperatures.

The high content of flavonoids, sucrose, glucose and organic acids in berry raw materials was confirmed by IR studies. Also, as a result of deciphering the IR spectra, it was found that technological factors do not affect the destruction of iodine in the introduced iodine-containing raw materials, which is extremely relevant in the enrichment of products with this trace element.

It is established that all sauces have high sensory quality indicators, meet the requirements of regulatory documentation on physical and chemical parameters. The possibility of producing sauces without preservatives has been confirmed by microbiological studies. The quality and safety of the developed sauces were confirmed by the calculation of a comprehensive quality indicator.

BIOGRAPHY (upto 200 words)

Tamara Lystopad is currently a freelance researcher. She has completed her PhD at the age of 33 years from State Biotechnological University, Ukraine. Before the war, she worked as an Assistant at the Department of Food Technology of Oles Honchar Dnipro National University, Ukraine. She has almost 50 publications, is a co-author of 4 patents for inventions and 6 patents for utility models. She has 7 years of practical experience in a food research center.



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