

EVALUATION OF QUALITY OF FAT PRODUCT USED IN THE PRODUCTION OF BAKERY PRODUCTS

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When using fat products one must pay attention to the hardness of the product. Hardness is the ability of material to resist penetration of another material. To standardize hardness measurements, the industry adopted a method based on the establishment of the specific load necessary for the introduction of the string of a certain diameter at a certain depth in the prepared fat samples of the product crystallized in certain circumstances.

Hardness of fat products is carried out on a device named Kaminsky in accordance with the requirements of GOST R 52179-2003.

With modern manufacturing technology and the laboratory method for determining the hardness of the fat products, the Kaminsky does not meet modern requirements to control the level of automated controlled variables.

The aim of this work was to develop a modern, automated method of controlling the rheological characteristics of the fat products using the device "Struktrometr ST-2.

Using this device we analyzed five samples of margarine with different content of solid triglycerides, % (TSH). Samples have been made at various stages of manufacture.

Below are results of performed research:

- Developed a multivariate method of controlling the rheological characteristics of fatty foods, which includes:

- Determination of hardness (using the indenter "strings" in the implementation of the next mode of loading):

F_K - force touch, 5g;

V_d - speed of deployment, 0,5 mm / s;

F_{max} - maximum force loading, 400g.

- Determination of rate and duration of relaxation of mechanical stress and its residual value (using the indenter "cylinder" in the implementation of the next mode of loading):

F_K - force touches, 5 g;

V_d - speed of deployment, 15g / s;

F_H - force loading, 400g;

- The correlation relationship between the content of solid triglycerides in margarine and its hardness, developed a method that can be used at working mode mastication of a particular type of margarine in the manufacture of bakery buns and baked goods.