DEVELOPMENT OF FORMULATIONS CREAM OF OLEOGEL-BASED FOR REPLACEMENT OF SOLID FAT

A. Goralchuk, S. Omel'chenko, O. Kotlyar, O. Riabets, L. Golovina

The use of vegetable oils allows to manufacture products of the improved structure, with the extended shelf life. At present, Ukraine has organized the manufacture of specialized fats, which are used mainly for making dough. Also, fat components are widely used for combination with raw milk – these are milk fat substitutes. The advantages of their use are the ability to adjust the melting point of the fat phase, high antioxidant stability and the ability to long-term storage. Disadvantages include unequal substitution of milk fat with fat-containing raw materials and products of its processing in terms of nutritional value, content of trans-isomers and refractory fats. Thus, the replacement of fat mixtures with liquid oils is impossible without changing the quality of food products, as it involves a change in manufacturing technology.

Therefore, in this aspect it is important to use oils without trans-isomers of fatty acids, without solid fats or with their reduced content, provided that cream retains its shape when forming various shaped decoration, meet the requirements of organoleptic, physicochemical and safety indicators.

The expediency of using a fatty semi-finished product based on refined sunflower oil in the form of oleo gel in the recipe composition of cream for surface decoration of flour confectionery is proved. The influence of food ingredients on technological properties of cream for surface decoration of flour confectionery is analyzed. The influence of sugar-containing raw materials (white sugar, powdered sugar, sugar syrup) is determined. The foaming ability and stability of the foam of cream for decorating the surface of the confectionery products depending on the type and content of food ingredients is studied. Determination of these technological factors allows to improve the recipe composition of cream for surface decoration of flour confectionery, to replace butter in the recipe composition with sunflower oil without reducing technological properties.

Keywords: flour confectionery, oleogels, creams finishing, foaming ability, foam resistance.