An important task of the food industry is expanding the range of quality products with a long shelf life. However, lipids (including fats and oils) from plants and animals in the process of receiving, storing and the production of food products subject to different, sometimes profound, changes. Thus, fats and fatty foods depending on their chemical composition possess different resistance to oxidation, hydrolytic and other chemical transformations. The presence of oxidation products in fats worsens their quality and complicates processing. It is therefore necessary to take measures to prevent these changes, and control lipids quality in order to maintain the products’ consumer characteristics and biological value.

In this context, the solution of the problem of lipids oxidation for the prevention of destructive processes in lipids and fats protection against damage is actual. For this purpose, “passive” and “active” methods of preventing the factors that cause or catalyze processes of deterioration are used. “Active” methods of fats oxidation – substances interrupting oils oxidation, which are designed to extend their storage.

A finely divided magnetite, which was used as a dietary supplement, which exhibits antioxidant effect on lipids, is synthesized by condensation. The influence of magnetite additive on the oxidation of crude and refined deodorized oils, rendered edible animal and confectionery fats during storage at 20°C for 2160 hours, namely, addition of physical, chemical and optical properties of pure fats and oils with the addition of magnetite in an amount of 0.05 wt.% is studied. It is found that the addition of magnetite increases the storage term of fats and oils.

**Keywords:** magnetite, oil, fat, oxidation, stabilizer, suspension, properties.