Ministry of Education and Science of Ukraine

National University
of Food Technologies

85
International scientific conference of young scientists and students

"Youth Scientific Achievements to the 21st Century Nutrition Problem Solution"

April 11-12, 2019

Book of Abstracts

Kyiv, 2019

85 International *scientific conference of young scientists and students "Youth scientific achievements to the 21st century nutrition problem solution", April 11–12, 2019. Book of abstracts*. NUFT, Kyiv.

ISBN 978-966-612-213-4

The publication contains English language abstracts of 85 International scientific conference of young scientists and students "Youth scientific achievements to the 21st century Nutrition problem solution".

It was considered the problems of improving existing and creating new energy and resource saving technologies for food production based on modern physical and chemical methods, the use of unconventional raw materials, modern technological and energy saving equipment, improve of efficiency of the enterprises, and also the students research work results for improve quality training of future professionals of the food industry.

The publication is intended for young scientists and researchers who are engaged in definite problems in the food science and industry.

Scientific Council of the National University of Food Technologies recommends for printing, Protocol № 8, 28.03.2019

ISBN 978-966-612-213-4

50. Influence of technological factors on the properties of oil-fat composition (OFC KTIOL)

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Introduction. Wool grease is a natural lipid that softens the skin and sheep's wool fibers, as well as protects them from adverse weather conditions. The most widely used products are refined wool oil and its modifications, which are called lanolin. Lanolin and its derivatives have a wide range of applications.

Materials and methods. Research materials are anhydrous lanolin and oleinic sunflower oil. Research methods are standard methods for determining the physico-chemical parameters, in particular peroxide value (PV) and refractive index (n_D), and the method of thermooxidation of lipids.

Results. In its composition, lanolin is similar to the intercellular lipids of the stratum corneum, so lanolin plays an important role in regulating the moisture content of the human skin. In addition, it has emulsifying properties, anhydrous lanolin can absorb up to 200% of water to its mass, and is able to redistribute absorbed moisture to environments with a relatively low moisture content [1].

The mechanism of reaction and the factors affecting oxidation for emulsified lipids are significantly different from pure lipids [2]. The ability of lipids to oxidation is the main reason for the deterioration of the quality of many natural food, cosmetic and special products and preparations [3,4]. The research focuses on detecting the antioxidant properties of OFC KTIOL. The results are shown in Fig.

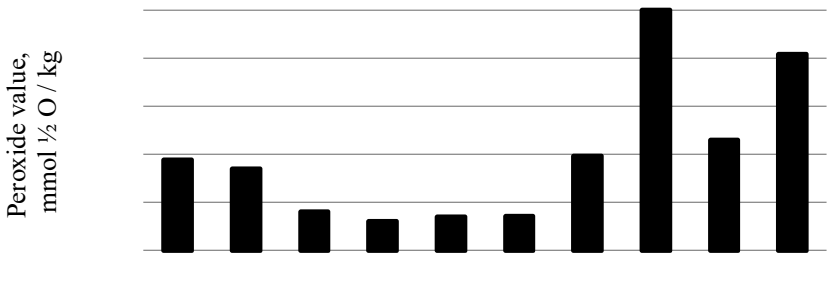

Fig. Dependence of the PV OFC KITOL on the conditions of thermooxidation

1 - *LD 120-0-4,5;* 2 - *LD 120-3-4,5;* 3 - *LD 80-1-3:* 4 - *LD 80-1-6;* 5 - *LD 80-5-3;* 6- *LD 80-5-6;* 7- *LD 160-1-3;* 8- *LD 160-1-6;* 9- *LD 160-5-3;* 10- *LD 160-5-6.*

In addition, a study of the change in optical density due to thermal oxidation has been carried out. It was found out that the investigated factors on the reduction of influence on thermoxidation are ranked (taking into account the received model): 1 - the temperature regime of the process; 2 - duration of the oxidation process; 3 - concentration of lanolin. Among the combined factors is the combined effect of temperature and duration of heat treatment.

An increase in the temperature of the heat treatment rises the optical density of the OFC KTIOL (maximum at λ = 340 nm). With an increase in the concentration of additive, the dependence is maintained.

Conclusions. It was found that the process of thermal oxidation is not standard, which confirms the results obtained earlier. On the basis of research data, the possibility of improving and reducing the techno-chemical control for OZHK KTIOL was discovered.