

**PROSPECTS AND MODERN VISION OF THE DISCIPLINE**  
**«FOOD AND SANITARY TOXICOLOGY»**

**Kuzmin O. V.**

Candidate of Technical Sciences,  
Associate professor of the Department of Technology of Restaurant and Ayurvedic  
Products

National University of Food Technologies

Kyiv, Ukraine

**Kuts A. M.**

Candidate of Technical Sciences, Associate professor,  
Head of the Department of Biotechnology of Fermentation Products and Winemaking  
National University of Food Technologies

Kyiv, Ukraine

In modern conditions of human life, the problem of the negative impact of harmful substances on his health becomes very urgent. The reasons for its aggravation are the intensive development of industry, the chemicalization of agriculture and the negative side effects of the development of civilization [1, 2].

Ukraine's desire to become a part of a civilized society requires the state and business structures to comply with agreements already adopted at the international level on food safety issues and take on additional obligations in order to increase the competitiveness of its products.

High quality and safety of food products can and should be ensured by a well-organized system of production and supply of food raw materials, technological processes of its processing into food products and public catering products. Such a system should ensure that agricultural raw materials that are contaminated with hazardous chemicals and compounds are not processed and further processed, and as a result, the specified level of food safety is ensured.

The danger is created by toxic substances and pathogenic microorganisms. These

include heavy metals, radionuclides, mycotoxins, pesticides, nitrosamines and other chemical compounds, the number of which is constantly increasing. Therefore, information on the content of harmful substances in food is of great importance.

The discipline «Food and Sanitary Toxicology» is devoted to the study of the ways of ingress of toxic substances in food products, their effect on the human body, ways to reduce their concentration and methods of their identification and determination. Highly qualified specialists are capable of solving these problems. It should be recalled that today the status of a specialist is significantly increasing. The specialist must be able to solve fundamentally new problems facing the food industry, taking into account the new economic conditions, modern technologies for processing agricultural raw materials, the achievements of science, technology and the requirements of standards that guarantee the quality of products at the level of the best world samples.

The aim of the course is the formation of risk-oriented thinking, in which the issues of safety, health and performance are considered as the most important priorities in human life and activities; determination of the nature of the interaction of the human body with potential hazards coming from food, taking into account the specifics of the mechanism of the toxic effect of chemicals; principles and methods of preventive nutrition for various categories of the population who are in contact with toxic substances in the course of their activities, or living in environmentally unfavorable conditions.

The task of the discipline is the acquisition of knowledge by applicants on the assimilation of the causes and consequences of food contamination with toxic substances; ideas about toxic substances that show harmful effects; ways to reduce the harmful effects of toxic substances in food; basic principles of toxicity or food safety and their impact on nutritional quality; research skills to assess the toxicity or safety of food raw materials, food products, diets.

According to the requirements of the educational and professional program, applicants must acquire the ability to acquire competencies:

– integral: to solve complex problems and problems in the field of restaurant management or in the learning process, involves research and / or implementation of

innovations and is characterized by the uncertainty of conditions and requirements;

– general: solve a wide range of problems by understanding their fundamental foundations and using both theoretical and experimental methods learned from curricula; to adaptation in modern economic conditions; work in the context of international integration; to abstract thinking, analysis and synthesis of information in technical sciences, generation of new ideas, formulation and substantiation of scientific hypotheses; to search, process and analyze information from various sources; possession of the state and, at least, one of the foreign languages at the level of professional and everyday communication;

– professional: knowledge of theory, laws, methods (algorithms) and methods of activity, sufficient for the formation and implementation of their own model of professional activity, including in extreme conditions; independently plan to organize and conduct scientific research, including multidisciplinary, in the conditions of educational, research laboratories and in production conditions; draw up and draw up reports on the results of research work and scientific works: reports, reports, articles, etc.; to present the results of scientific research and design solutions in Ukrainian and foreign languages; analyze and summarize information on the assessment of toxicity and safety of food raw materials, food products, food rations.

It can be concluded that the study of the discipline «Food and Sanitary Toxicology» will allow applicants to develop risk-based thinking, in which the issues of safety, health and performance are considered as the most important priorities in human life and activities; principles and methods of preventive nutrition for various categories of the population who come into contact with harmful substances in the course of their activities, or living in environmentally unfavorable conditions.

### **References:**

1. Харчова та санітарна токсикологія : навчальний посібник / О.В. Кузьмін, В.М. Ісаєнко, Л.М. Акімова та ін. Херсон : ОЛДІ-ПЛЮС, 2020. 556 с.

2. Михалевська Т.В., Ісаєнко В.М., Криворотько В.М., Гроза В.А. Моделювання і прогнозування стану довкілля : підручник. К.: НАУ, 2006. 212 с.