

Ministry of Education and Science of Ukraine

National University of Food Technologies

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**92<sup>th</sup>**  
**International scientific conference**  
**of young scientist and students**

**"Youth scientific achievements**  
**to the 21st century nutrition**  
**problem solution"**

**April, 20–24 2026**

**Part 2**

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**Kyiv, NUFT, 2026**

Міністерство освіти і науки України

Національний університет харчових технологій

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**92-а**  
**Міжнародна наукова**  
**конференція молодих учених,**  
**аспірантів і студентів**

**"Наукові здобутки молоді –**  
**вирішенню проблем**  
**харчування людства у ХХІ**  
**столітті"**

**20–24 квітня 2026 р.**

**Частина 2**

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**Київ НУХТ 2026**

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The publication contains materials of 91<sup>th</sup> 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.

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**Матеріали** 92-ї Міжнародної наукової конференції молодих учених, аспірантів і студентів "Наукові здобутки молоді – вирішенню проблем харчування людства у XXI столітті", 20–24 квітня 2026 р. – Київ: НУХТ, 2026. – Ч.2. – 499 с.

Видання містить матеріали 91-ї Міжнародної наукової конференції молодих учених, аспірантів і студентів "Наукові здобутки молоді – вирішенню проблем харчування людства у XXI столітті".

Розглянуто проблеми удосконалення існуючих та створення нових енерго- та ресурсощадних технологій для виробництва харчових продуктів на основі сучасних фізико-хімічних методів, використання нетрадиційної сировини, новітнього технологічного та енергозберігаючого обладнання, підвищення ефективності діяльності підприємств, а також результати науково-дослідних робіт студентів з метою підвищення якості підготовки майбутніх фахівців харчової промисловості.

Розраховано на молодих науковців і дослідників, які займаються означеними проблемами у харчовій науці та промисловості.

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## Prospects for the use of data analytics in food technology

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**Introduction.** Let's be honest: the era, when in large factories everything was kept under the "eyeball" of an experienced technologist, is gradually becoming a thing of the past. Before, we just got used to many decisions being made out of habit or based on how it was last year. But now it is too dangerous for the wallet. Data today is simply a way of seeing reality without rose-colored glasses. Producers now do not guess whether they will buy more oat milk tomorrow, but simply open the numbers from supermarkets in real time. They see that the demand is growing - they add momentum. They see that the product is lying dead weight - they slow down. This is basic common sense that has finally become technological.

**Materials and methods.** Logistics has always been a headache for anyone working with food. The sun burns - the milk goes sour, the truck is stuck at the border - the vegetables wither. Previously, such losses were attributed to a "bad day", but now we have learned to play with the weather and circumstances. If the forecast shows abnormal heat, companies simply look for more refrigerators in advance. Or let's take an ordinary bakery. Why should she fill the warehouse with flour a month in advance, if she can calculate the order for a week?

**Results and discussion.** As a result, warehouses are not bursting at the seams with unnecessary goods, and products do not end up in the trash. This is living money, which the business has stopped simply throwing out on the street. At the enterprises themselves, work has also become somewhat calmer. Sensors are placed on the equipment, which literally "listen" to its condition. For example, at a dairy plant, such a device will sense excess vibration in the mixer long before anything actually falls off. This saves you from accidents, when in the middle of a shift everything goes wrong and you need to urgently look for spare parts. The mechanic just comes and changes the bearing even before the smoke appears.

**Conclusion.** Quality control has also ceased to be a lottery game. Previously, every hundredth can was checked, but now cameras on the lines monitor each bottle individually. Underfill, a crooked lid or a bad label - the system sees it instantly. Marriage simply does not have time to go to the store. This saves nerves both for the manufacturer and for you and me.

Besides, our tastes change faster than we realize it. Someone suddenly wanted yogurt with a high protein content, someone is looking for a sugar-free drink. Companies now don't have to wait years to understand these trends. They look at what we search for on the Internet, what reviews we leave, and quickly adapt. Therefore, new flavors appear on the shelves much faster.

And one more important point - we finally began to understand what exactly is on our plate. All these QR codes on packages are not just a fad. This is an opportunity to see on which farm the meat was grown or when the grain for your bread was harvested. Transparency gives trust. If an error occurs somewhere, it is found in a matter of minutes. As a result, the food industry becomes clearer and more honest. Less waste, more sustainability and food that no one is ashamed of.