

**THE ROLE AND IMPORTANCE OF THE ISO 22000 STANDARD IN ENSURING
FOOD SAFETY**

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Abstract

This article examines the essence and content of the international food safety management standard ISO 22000, the stages of its implementation in enterprises, and its advantages. It also analyzes the relationship between the standard and HACCP principles and its role in protecting consumer health.

Annotatsiya

Ushbu maqolada oziq-ovqat xavfsizligini boshqarishning xalqaro standarti hisoblangan ISO 22000 ning mazmun-mohiyati, uning korxonalarda joriy etilish bosqichlari va afzalliklari yoritilgan. Shuningdek, standartning HACCP tamoyillari bilan bog'liqligi va iste'molchilar salomatligini himoya qilishdagi roli tahlil qilingan.

Аннотация

В данной статье рассматриваются сущность и содержание международного стандарта управления безопасностью пищевых продуктов ISO 22000, этапы его внедрения на предприятиях и его преимущества. Также проанализирована взаимосвязь стандарта с принципами HACCP и его роль в защите здоровья потребителей.

Keywords

ISO 22000, food safety, HACCP, quality management, monitoring, hazard analysis, technical regulation.

Today, providing the population with safe and high-quality food products remains one of the most pressing issues on a global scale. In an environment where the food chain is becoming increasingly complex, there is a need to control safety at each stage of the product from the field to the table. The ISO 22000 international standard was developed to meet these needs, minimize risks associated with food products, and strengthen confidence in international trade.

Ensuring food safety is also one of the priorities of state policy in the Republic of Uzbekistan. The introduction of international standards is important for local producers to enter foreign markets and increase their competitiveness.

ISO 22000 is a food safety management system (FSMS) standard designed for all organizations participating in the food production chain. This standard includes several important elements:

1. Interactive communication.
2. Systematic management.
3. Program requirements (PRPs).
4. HACCP (Hazard Analysis and Critical Control Points) principles.



Interactive communication- is a process of information exchange between employees within the enterprise, as well as between the enterprise and suppliers, consumers and regulatory authorities. It serves to provide timely information about hazards, quickly identify problems and take action to ensure food safety.

Systemic management - is the organization and management of all processes in the enterprise as a single system. In it, planning, control, documentation and continuous improvement are carried out in an interconnected manner. This approach helps to sustainably ensure quality and safety.

PRPs - are the basic sanitary and hygienic conditions that must be created in the enterprise before implementing the HACCP system. These include measures such as cleaning workplaces, washing and disinfecting equipment, personal hygiene of employees, pest control. They create the basis for the prevention of hazards.

HACCP - is a system aimed at identifying, evaluating and controlling biological, chemical and physical hazards in food products. It ensures product safety by identifying critical control points, setting regulatory limits for them, monitoring and taking corrective action.

The updated version of the standard in 2018 (ISO 22000:2018) is based on a high-level structure (HLS), which allows easy integration with other ISO standards (such as ISO 9001). This helps the enterprise save resources and increase management efficiency.

HACCP principles - as the basis of the standardThe HACCP system is at the heart of the ISO 22000 standard. The HACCP system allows you to identify, evaluate and control biological, chemical and physical hazards that can affect product safety. The system is based on the following seven principles:

- Hazard analysis.
- Identification of critical control points (CCPs).
- Setting critical limits.
- Establish a monitoring system.
- Determine corrective actions.
- Conduct verification procedures.
- Document and maintain records.

Applying these principles within the framework of ISO 22000 allows the enterprise to not only verify the final product, but also prevent errors in the production process itself.

Economic and social benefits of implementing the standard.

Enterprises that implement the ISO 22000 standard will have a number of advantages. Firstly, consumer confidence increases as a result of guaranteed product quality and safety. Secondly, the volume of production defects and product returns is reduced, which prevents economic losses.

Thirdly, having an international standard certificate dramatically increases the export potential of the enterprise. ISO 22000 certificate is often mandatory when entering the markets of the European Union and other developed countries

The implementation of the ISO 22000 food safety management system in Uzbekistan is an important step toward ensuring public health, increasing the competitiveness of national products, and integrating into international markets. However, many enterprises in the republic face a number of serious challenges in the process of introducing this standard. These problems are mainly related to human resources, technical infrastructure, and financial capacity.

One of the main difficulties is the **shortage of qualified personnel** who have sufficient knowledge and practical experience in food safety management systems and international standards. Many specialists are familiar with traditional quality control approaches, but ISO 22000 requires a систематический и процессный подход based on risk analysis, HACCP



principles, documentation, and continuous improvement. As a result, enterprises often lack competent internal auditors, food safety team leaders, and technical experts.

Another important problem is the **weak laboratory base**. Reliable implementation of ISO 22000 requires regular testing of raw materials, intermediate products, and finished goods for microbiological, chemical, and physical hazards. In many regions, enterprises do not have access to modern, well-equipped laboratories, or the existing laboratories do not meet international accreditation requirements. This limits the ability to conduct objective monitoring and verification.

In addition, **limited financial resources** seriously affect the implementation process. ISO 22000 introduction involves costs related to staff training, documentation development, equipment modernization, laboratory testing, certification audits, and consultancy services. For small and medium-sized enterprises, these expenses can be a significant burden and may delay or completely prevent the adoption of the standard.

To overcome these challenges, a number of practical and strategic measures should be taken.

First, it is necessary to focus on **retraining and upgrading specialists** in accordance with international requirements. This can be achieved through professional development courses, workshops, and cooperation with international experts and training centers. Universities and vocational institutions should also integrate ISO 22000 and HACCP-related subjects into their curricula to prepare future professionals.

Second, the **state should support standardization processes** through subsidies and incentive programs. Financial assistance for certification, laboratory testing, and staff training would encourage more enterprises to adopt ISO 22000. In addition, tax benefits or preferential loans for companies investing in food safety infrastructure could significantly accelerate implementation.

Third, it is important to **establish and develop modern testing laboratories** at enterprises or at regional levels. These laboratories should be equipped with up-to-date analytical instruments and operate according to international standards (such as ISO/IEC 17025). This will ensure reliable monitoring, verification, and continuous control of food safety hazards.

Moreover, cooperation between enterprises, research institutions, and international organizations should be strengthened. Sharing experience, best practices, and technical knowledge will help Uzbek companies adapt ISO 22000 requirements to local conditions more effectively.

In conclusion, the ISO 22000 standard is one of the most effective and reliable tools for ensuring food safety. It introduces a systematic approach aimed not only at controlling the quality of finished products, but also at identifying and eliminating risks in advance throughout the entire production chain. This makes business processes at enterprises more transparent, responsibilities are defined, and management efficiency increases.

The main advantage of the ISO 22000 standard is that it allows for the analysis of biological, chemical and physical hazards at each stage of production, based on the principles of HACCP. This guarantees that the product is safe until it reaches the consumer. As a result, food poisoning cases are reduced, public health is strengthened, and trust in society increases.

At the same time, enterprises that have implemented the ISO 22000 standard strengthen their internal control system, improve documentation and monitoring processes. The knowledge and skills of employees are increased, and a culture of compliance with hygiene and sanitation rules is formed in the workplace. This improves not only safety, but also general production discipline.



Another important aspect of the standard is its international recognition. Enterprises operating in accordance with the requirements of ISO 22000 have a greater opportunity to enter foreign markets. Export potential increases, product competitiveness increases, and the image of the enterprise is strengthened. This, in turn, will encourage investment in the country's economy and create new jobs.

From the consumer's point of view, the ISO 22000 standard means providing the population with safe, high-quality and reliable food products. This will help to form a healthy lifestyle in society, prevent diseases and improve the overall quality of life.

Therefore, the widespread implementation of the ISO 22000 standard is a matter of strategic importance not only for individual enterprises, but also for the entire country. It plays an important role in strengthening national food security, ensuring economic stability and protecting public health.

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