

KEY ASPECTS OF ENSURING THE QUALITY AND SAFETY OF FOOD PRODUCTS IN THE RESTAURANT BUSINESS

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The article argues that food safety is a key factor in the successful functioning of restaurant business establishments, and the quality of food products directly affects the success of the business. The main provisions of the regulatory and legal support of the HACCP system in Ukraine are clarified. The theoretical aspects of the system of quality management of products and services in the restaurant business are analyzed, taking into account the works of domestic and foreign scientists and specialists on ways to improve the quality of products and services. On the basis of the study, it is determined that an effective system for managing the quality of products and services in the restaurant business should include a set of HACCP principles, the application of which provides enterprises with a number of advantages. It is noted that the HACCP system covers product safety parameters at all stages of its life cycle - from obtaining raw materials to consuming finished products. In turn, it is emphasized that the prerequisite programs also cover other systems, such as: management of purchased materials; supplier approval programs; traceability systems for raw materials and final products; receipt, storage and distribution systems; product labeling; management of production equipment for its suitability; personnel training, etc.

Key words quality, safety, restaurant business, food products, prerequisite programs, quality management, HACCP.

КЛЮЧОВІ АСПЕКТИ ЗАБЕЗПЕЧЕННЯ ЯКОСТІ ТА БЕЗПЕЧНОСТІ ХАРЧОВИХ ПРОДУКТІВ У РЕСТОРАННОМУ БІЗНЕСІ

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У статті аргументовано, що харчова безпека є ключовим фактором успішного функціонування закладів ресторанного господарства, а якість харчових продуктів безпосередньо впливає на успішність бізнесу. З'ясовано основні положення нормативно-правового забезпечення системи HACCP в Україні, що спричинено формуванням низки нових завдань перед вітчизняними підприємствами ресторанного бізнесу, вирішення яких є досить актуальними щодо відповідності ресторанної продукції та послуг вимогам сьогодення в площині реального часу і змінних процесів різних сфер суспільства. Проаналізовано теоретичні аспекти системи управління якістю продукції та послуг у ресторанному бізнесі з огляду на праці вітчизняних та зарубіжних учених та фахівців щодо шляхів підвищення якості продукції та послуг. На основі проведеного дослідження визначено, що ефективна система управління якістю продукції та послуг у ресторанному бізнесі повинна включати в себе сукупність принципів HACCP, застосування яких надає підприємствам низку переваг. Визначено, що система HACCP охоплює параметри безпеки продукції на всіх етапах її життєвого циклу - від отримання сировини до споживання готової продукції. В свою чергу аргументовано, що програми передумови охоплюють і інші системи, такі як: керування закупленими матеріалами; програми погодження та схвалення постачальників; системи простежуваності сировини та кінцевих продуктів; системи надходження, зберігання та дистрибуції; маркування продукції; керування виробничим обладнанням щодо його придатності; навчання персоналу тощо. Наведено приклад застосування програм-передумов, які поєднують базові умови та комплекс дій, необхідні для підтримання у всьому харчовому ланцюгу гігієнічного навколишнього середовища, придатного для виробництва, оперування та постачання безпечних кінцевих продуктів і безпечних харчових продуктів для споживання людиною.

Ключові слова: якість, безпечність, ресторанний бізнес, харчові продукти, програми-передумови, управління якістю, HACCP.

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КЛЮЧОВІ АСПЕКТИ ЗАБЕЗПЕЧЕННЯ ЯКОСТІ ТА БЕЗПЕЧНОСТІ ХАРЧОВИХ ПРОДУКТІВ У РЕСТОРАННОМУ БІЗНЕСІ. *Development Service Industry Management*, (3), 102–106. [https://doi.org/10.31891/dsim-2023-3\(15\)](https://doi.org/10.31891/dsim-2023-3(15))

Statement of the problem in general terms and its connection with important scientific or practical tasks

Food safety stands as a pivotal cornerstone for the smooth functioning of restaurant enterprises. Irrespective of a restaurant's tenure or acclaim, the caliber of edibles fundamentally steers its triumph. A robust management framework spans the gamut of ensuring safety from raw material procurement to product dissemination, thereby fortifying the safety net across production stages. This efficacious management doctrine, buttressed by global entities, finds resonance within Ukraine's practices.

Upholding food safety within restaurant precincts emerges as a paramount obligation incumbent upon proprietors and stewards of such establishments. Recent times have amplified the import of food safety quandaries owing to a surge in populace grappling with food allergies, the upsurge in foodborne maladies, and the looming specter of contamination across diverse distribution channels.

Delving into the crux of food quality and safety within the restaurant domain unveils latent hazards, unveils chinks in the armor of quality control, and elucidates the strategic strides essential to sustain lofty benchmarks in both safety and quality. This proactive stance not only augments patron contentment but also fortifies the bedrock of customer allegiance.

Analysis of recent research and publications

The problems of food safety and quality have been considered by Ukrainian and foreign scientists in their works: O. Davydova [1], I. Pysarevskiy, R. Ladyzhenska, V. Rusavska [2], M. Taran, O. Kuzmin, S. Pozdniakov, V. Kiiko [3], L. Akimova and others [4-5].

The research of scientists has raised and analyzed various aspects of public nutrition safety, but this issue requires further research, especially in identifying the main problems of finding ways to optimize safe nutrition.

Identification of previously unresolved parts of the general problem to which the article is devoted

Despite the strides made in quality management within the restaurant industry by local and international experts, it's important to highlight a conspicuous gap in research. Specifically, there's a scarcity of comprehensive studies delving into the intricate facets of ensuring food safety and quality in this domain, meticulously considering the nuances inherent at every operational phase.

Definition of the research purposes

The aim of this article is to identify the key aspects of ensuring the quality and safety of food products in the restaurant business and to outline promising areas of quality management in the current conditions of operation and management of the restaurant business.

Summary of the main points

According to the Constitution of Ukraine, a person, his or her life and health are recognized as the highest social value (Article 3). Everyone is guaranteed the right of free access to information on the quality of food products (Article 50). [6]

The Law of Ukraine “On Basic Principles and Requirements for Food Safety and Quality” contains a general requirement for the safety of products manufactured by domestic producers. Section III of the Law, which defines the rights and obligations of market operators, states: “A market operator engaged in retail trade in food products or distribution of food products and does not carry out packaging or labeling or otherwise affect the safety and integrity of food products, within the framework of its activities, initiates procedures for withdrawal from circulation of food products that do not meet safety parameters. Such a market operator shall contribute to ensuring food safety, transmit information necessary to ensure the traceability of food products and any substances used for the production of food products at the request of the relevant persons, and cooperate with market operators and/or the competent authority” (Article 20, paragraph 4). [7]

According to Ukrainian law, food products must meet the minimum safety parameters and quality specifications established by the relevant state control authorities. One of the tools for achieving compliance with the minimum safety parameters is the HACCP system. The general requirement for mandatory implementation of the HACCP system by food producers is set forth in the Law of Ukraine “On Basic Principles and Requirements for Food Safety and Quality”; the current laws of Ukraine on certain categories of food products either contain a similar requirement in full or in part, but in no case negate it. Depending on the type of activity, companies must implement the HACCP system within the timeframe provided by law.

Effective legal and regulatory food control systems are essential for protecting consumer health. In addition, it is essential to create conditions in which countries can ensure food safety and quality, and verify that imported food meets national requirements.

HACCP is not a self-contained program, but a part of a more general system of control methods. The HACCP system cannot be an effective tool for ensuring the production of safe products without a solid foundation consisting of prerequisite programs that must be properly implemented and maintained. The phrase “prerequisite programs” is used as an acceptable term to describe a series of appropriately formalized activities required to establish the foundation of the HACCP system and ensure its ongoing maintenance. The hierarchy of management concepts and rules for the food industry may look like this on Fig.1.

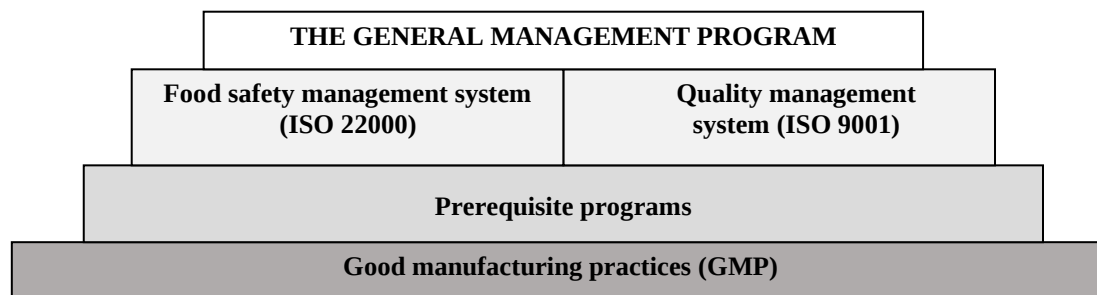


Fig. 1. Hierarchy of management concepts and rules for ensuring quality and safety of food products [8]

Many prerequisite programs are based on codes of good hygiene practice (GHP) and good manufacturing practice (GMP), and sanitary control procedures. After all, GMP and sanitary practices affect the production environment and therefore should be considered as prerequisite programs for the application of HACCP. [9]

Additionally, however, prerequisite programs cover other systems, such as: management of purchased materials (e.g., raw materials, ingredients, chemicals, packaging materials); supplier approval and acceptance programs; traceability systems for raw materials and final products; receiving, storage, and distribution systems; product labeling; management of production equipment for its suitability; personnel training, etc.

Prerequisite programs are the basic conditions and set of actions required to maintain a hygienic environment throughout the food chain suitable for the production, handling and supply of safe end products and safe food for human consumption. [10]

It should be considered that both the prerequisite programs and standard operating procedures and good practices are determined and developed by the company for its specific production, technology, equipment, taking into account its specific features, starting with the qualifications of personnel, supply features, production neighborhood, ecology of the location, intended consumer and consumption method, etc. An example of prerequisite programs is shown in Table 1.

The first step in implementing effective prerequisite programs is to gain support from top management. It is very necessary that senior management understands the importance of having a well-documented and understood prerequisite program for the production staff. It is also necessary for management to understand that this work will require time and resources. Management support must be ongoing and remain effective. It is a common misconception that such support is a one-time action and does not necessarily address the continued operation of the system, including changes to match processes, products, and technologies. Below is an example of defining prerequisite programs for an enterprise.

According to the requirements of DSTU ISO 22000:2007, an organization shall plan and develop the processes necessary to produce safe products, namely: introduce, use and ensure the effectiveness of the planned activities and any changes in such activities, which includes prerequisite programs, operational prerequisite programs and the HACCP plan.[11]

An important prerequisite program within the HACCP system may be the procedure for managing purchased materials (e.g., raw materials, ingredients, chemicals, packaging materials, etc.). [10]. In an attempt to achieve reasonable control of the hazards associated with raw material ingredients, manufacturers can use different strategies. Two of the most important strategies are (a) the use of specifications for all raw materials and (b) the use of a mechanism for selecting and evaluating suppliers of raw materials and supplies. Food safety-related specifications should be developed for all ingredients and packaging materials, as well as for other components or chemicals used in the equipment. A mechanism for supplier assessment and approval should be developed. The purpose of this assessment is to ensure that specifications are met and that relevant regulatory requirements are met. As a rule, the obligations to comply with specifications and applicable regulations are set out in the contract concluded with the supplier. The supplier assessment also includes an on-site inspection of the production facilities and equipment to provide evidence of the ability to consistently produce a safe product that meets specifications. Over the past few years, in order to have a highly qualified supplier, many companies have required their suppliers to develop HACCP

systems. Regardless of whether or not a HACCP system is required, manufacturers should periodically test new suppliers to verify that the raw materials and supplies they receive meet the established specifications.

Table 1

Program prerequisites for a food service enterprise [Formed by the author based on analysis [10]]

Title of the prerequisite program	The Purpose of application	Standard sanitary working procedures applied
Programs-prerequisites for general use		
Ensuring proper design of buildings and structures of the production unit, maintaining them in good condition, and servicing equipment	The design and organization of the interior should be aimed at implementing a prerequisite program that guarantees high hygiene standards. This includes measures to avoid contamination of food during processing and to maintain safety from cross-contamination between operations.	Layout of production facilities and equipment Equipment maintenance programs (EMP)
Ensuring proper staff health and personal hygiene	Ensuring that staff adhere to personal hygiene and health standards is an important part of the process. This includes being free of infectious diseases and paying close attention to the condition of their hands to avoid damage that could affect product purity and prevent contamination.	Instructions for hand sanitization Instruction on compliance with the rules of personal hygiene of personnel Instruction on personnel health control Instruction on compliance with the procedure for visiting the production unit by external visitors"
Ensuring proper sanitary condition of production facilities, equipment, inventory and prevent cross-contamination	Ensuring proper sanitary and hygienic conditions for production; Preventing physical, microbiological and chemical contamination of process containers, equipment, packaging materials, raw materials and/or finished products;	Scheme of sanitization and control Instructions for the preparation and use of detergents/disinfectants Instructions for preventing the appearance of foreign inclusions in products Instructions for maintenance and control of bactericidal emitters
Ensuring proper sanitary condition of warehouses and the surrounding area	Ensuring proper sanitary conditions for the storage of finished products, raw materials and supplies, determining the procedure for sanitizing and controlling warehouses adjacent to the production unit to ensure proper sanitary conditions for production	Instruction on the implementation of sanitary requirements for the storage of raw materials, auxiliary materials and finished products Instructions for sanitizing and controlling the surrounding area
Ensuring proper labeling, storage and use of chemicals	Prevent chemical contamination of equipment, process containers, package materials and finished products	Instructions for the preparation and use of detergents/disinfectants
Production waste Management	Ensuring proper storage and efficient disposal of production waste from production facilities to prevent contamination of raw materials and end products	Instructions for production waste management
Pest control	Prevent the spread of pests in the facilities and on the territory of the production department, prevent possible contamination of raw materials and ready-made products	Instructions for managing pest control measures

The main differences between the prerequisite programs and the issues covered by the HACCP plan may be summarized as follows. In particular, the prerequisite programs only indirectly affect the safety of the final product, while the HACCP plan focuses only on food safety issues. Also, the prerequisite programs are more general and can be applied to the entire enterprise regardless of the production line and product type, while the HACCP plan is based on the analysis of hazards for a specific product and process. Identified hazards that are inherent in the product or associated with a particular process step are controlled by the HACCP plan, while those related to the processing environment or personnel are controlled by the prerequisite programs. Differences from the requirements set out in the prerequisite programs will rarely result in nonconformity of the final product, while in the case of non-compliance with critical limits at critical control points, corrective action will usually involve product actions.

Conclusions from this article and prospects for further researches in this area

It can be concluded that in order to prevent, reduce or eliminate food contamination during storage and preparation, every stage of production and aspect of the production environment must be controlled. Control measures are implemented through prerequisite programs and the application of HACCP principles. As a rule, prerequisite programs are used to control hazards related to the production environment (premises and facilities, services, personnel, equipment, etc.), and HACCP principles are used to control hazards related directly to the technological processes (storage and preparation) that are considered significant according to the risk assessment. In many cases, prerequisite programs include programs and procedures that are already in place at the enterprise. Like the HACCP plan, the prerequisite programs should be thoroughly documented in the form of standard operating procedures and should be followed by all personnel. They should be reviewed and modified to ensure that they are adequate and meet the established objectives. Often these procedures have been in place for a long time and are not well documented. Or a program may be documented and implemented, but never reviewed and modified. In such cases, what is written in

the policies and procedures may not reflect the actual situation and established practices. Such practices are usually occasional and chaotic, so they are difficult to monitor and manage, and ultimately become ineffective. That is why the purpose of further research may be to conduct a thorough analysis of the implementation of prerequisite programs at a particular restaurant business enterprise for compliance with legal requirements based on HACCP principles.

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